RGC EXPLORATION PTY. LIMITED

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E.L. 42/87, INCORPORATING M.L.'s

43M/85 AND 123M/47 - ZEEHAN AREA

ANNUAL REPORT FOR THE PERIOD

OCT. 1990 TO SEPT. 1991

91-3309

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- o RGC Exploration Hobart
- o RGC Exploration Zeehan
- ● Div. of Mines & Mineral Resources
- o Oceania Tas Amended

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SUMMARY

EL 42/87 is centred on the old silver-lead mining centre of Zeehan, and completely encloses the Aberfoyle/Gippsland joint venture M.L.'s over Queen Hill, where a reported geological resource of 3.6 Mt at 1.2% Sn has been defined. Work on the EL was deferred whilst RGC negotiated to acquire the Queen Hill M.L.'s, but these negotiations ultimately failed.

Work began in 1989 and was initially aimed at delineating areas with potential for Queen Hill/Renison style tin mineralisation, and as a result the Sylvester and Parting Lake grids were established. Early results from the Sylvester area were sufficiently encouraging for RGC to sign an Option to Purchase agreement with Oceania (Tas) P/L over two MLs they hold in the area. Since then, exploration has mainly focussed on the Sylvester grid.

The Sylvester area extends west of Queen Hill and occurs in a similar geological setting. Three major regional faults transect structurally deformed psammo-pelites and carbonates of the Upper Oonah Formation, and Crimson Creek turbidites. A regional gravity survey undertaken during 1990/91 suggests that a ridge of granite extends E-W across the area toward the Pine Hill cupola. Significant base metal and tin anomalism is associated with the Balstrup Fault, which is a major structure that probably communicates at depth with the granite ridge, providing fluid access to the Upper Oonah carbonates.

The 1989/90 exploration programme on the Sylvester grid culminated in the drilling of two diamond holes, SY002 and SY003. Drillhole SY003 tested a 1.2km long Zn-Pb-(Sn-Au) anomaly associated with ironstones and decomposed carbonates of the Upper Oonah Formation in the footwall of the Balstrup Fault. It intersected a 9.5 metre lens of pyrite in the immediate footwall of the fault which included 7.0m averaging 4.4% Pb, 8.8% Zn and 52 ppm Ag. The Upper Oonah carbonates were recrystallised over a large area, with patchy pyrite-pyrrhotite-magnetite mineralisation suggestive of proximity to a major skarn.

During 1990/91 these carbonates were extensively costeaned south of SY003, where they are decomposed to clays and ironstone. Highly anomalous Pb-Zn-Ag (Au, Sn) values were encountered over an area measuring 200m x 200m, with grades up to 5% Pb, 2% Zn and 200 ppm Ag.

Meanwhile two additional holes (SY004,005) were drilled west of SY003 to test the source of two intense magnetic anomalies associated with the Balstrup Fault. SY005 intersected a major magnetite-serpentinite skarn with a 28.4m thick core of pyrrhotite averaging 1.9% Pb, 3% Zn and 18 ppm Ag. Further drilling (SY008, 009) resulted in one additional skarn intersection, and the intersection of base metal veins stockworking in the fault zone. The magnetite-serpentinite skarn replaces Upper Oonah carbonates in the immediate Footwall of the Balstrup Fault, and its core in turn is replaced (retrogressively) by the base metal-pyrrhotite skarn. Based on magnetic data, the magnetite-serpentinite skarn has a probable strike length of 1.5 km, and the base metal anomalism targeted by SY003 extends another 1.5 km east.

Encouraged by these results, RGCE successfully tendered for ETA 219 which adjoins EL 42/87 to the west, to cover the western extension of the Balstrup Fault. The area was incorporated into EL 42/87 and during 1990/91 the Sylvester Grid was extended onto the area as far west as the Old Tenth Legion mine. Mapping, soil geochem, and ground magnetics were undertaken on the new gridlines.

It is recommended that drilling of the Balstrup mineralisation be continued to determine the potential size of base metal replacement body and to delineate its grade distribution and any metal zonation. In particular the possibility of copper and/or tin mineralisation at depth or alongstrike to the west needs to be examined. Additionally, more exploratory work needs to be directed toward locating similar mineralisation in similar geological settings along other major structures.

Elsewhere on the E.L., the 1990/91 gravity survey outlined two adjoining deep seated granite cupolas north of Zeehan. One is centred below the base-metal/tin mining centre of Queen Hill and the other occurs at the south end of the Parting Lake grid. Weak tin-base metal anomalies occur above the latter cupola, with no corresponding magnetic anomalism. The area is seen to have potential for tin and/or base metal replacement and skarn mineralisation, with pyrrhotite retrograde alteration to pyrite as at Queen Hill. However deep seated tin replacement bodies are the most likely target, and bearing in mind the Company's present attitude to tin exploration the area is of secondary interest to the Sylvester area for the time being.

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4	5521/038	Zeehan Project, Drillhole & Grid Location Plan	1:25,000
5	5521/056	Geological Fact Map, Sheet A	1:5,000
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7	5521/033	Geological Fact Map, Sheet C	1:5,000
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31	5521/108	SY005 & SY008 Drillhole Section 357170mE	1:500
32	5521/109	SY006 & SY007 Drillhole Section 357800mE	1:500
33	5521/110	SY009 Drillhole Section 357400mE	1:500
34	5521/087	Sylvester Grid, Composite Section 7200mE	1:2,500
35	5521/086	Sylvester Grid, Composite Section 7400mE	1:2,500
36	5521/088	Sylvester Grid, Composite Section 7600mE	1:2,500
37	5521/089	Sylvester Grid, Composite Section 7800mE	1:2,500
38	5521/003	Geological Interpretation, Sheet C	1:5,000

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1. Comparison of major skarn types.

2. Comparison of base metal skarns.

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1. SY004; 187.2-193.5m; Typical Єc turbidites

2. SY004; 287.7-294.1m; Єc mudstone and dolomite, which in weathered outcrop resembles Pou. Similar to Єc at Zeehan Golf Course.

3. SY005; 86.8-91.7m; Typical interbedded graphitic shale and dolomite of the Upper Oonah (Pou)

4. SY005; 255.5-261.9m; First appearance of Serpentinite-magnetite (greenish colour) in dolomite adjacent to major fault (259.8-279m)

5. SY005; 504.0-509.9m; Massive magnetite adjacent to massive pyrrhotite

6. SY005; 571.9-577.9m; Intensely silicified, pyrrhotite rich zone at base of skarn. Annealed Fault?

7. SY005; 621.1-627.5m; Typical Po (? lower) sediments. Note crenulation cleavage.

8. SY009; 159.1-164.9m; Contact between Єc turbidites and Po melange.

9. Trial Rd; Pom spilite demonstrating disconformable contacts with Posh (? high level intrusion/extrusion).

10. Trial Rd; Boudinaged Po sandstone bands in highly strained interbedded Poss/Posh "Incipient" melange.

11. Comstock opencut; Highly strained graphitic shales and relatively unstrained shales interdigitating. "Incipient" melange.

12. Oonah Hill Rd; Decomposed? porphyry dyke (Dp) cross-cuts Po shales.

13. Doric Rd; Shallowly SE plunging D2 parasitic folds in finely interbedded Po psammo-pelites.

14. Comstock opencut; Late (?D2) thrust cuts earlier ductile deformation fabric (melange). Note rotated Z-shaped boudins above fault surface.

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15.	Near Tasmanian Tram;	Melange in Tenth Legion Thrust zone with both Po boudins (LHS) and Єc boudins (RHS).
16.	Comstock Opencut;	Shallow thrusts (Upper LHS) cut by SSE trending D2 fault.
17.	Montana SL;	Post Permian thrust in Po sediments.
18.	Tenth Legion;	Weathered carbonate hosted skarn lens dipping north at a low angle.
19.	N. Comstock;	Decomposed Po carbonate with cherty inclusions.
20.	Doric Rd;	Sole markings indicating overturning of Po sediments.

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3. Zeehan Project Rock Chip/Costean Sampling Analytical Results (1990/91).
4. Interpretation of Ground Magnetic data from the Sylvester Prospect, Zeehan, Tasmania.
5. Magnetic Properties of Magnetite/Pyrrhotite Skarns, Sylvester Prospect, Zeehan, Tasmania.
6. An Interpretation Form of Heemskirk Granite, Zeehan EL 42/87.
7. Interpretation of Down-Hole Geophysical Results from the Sylvester Grid, Zeehan, Tasmania.
8. Sylvester Drilling Programme, Drill Logs and Analytical Results.
9. Gold Standards.

1. INTRODUCTION

EL 42/87 was acquired by Renison Ltd. in August 1987 as the result of a successful tender application. The EL encloses the Aberfoyle/ Gippsland joint venture consolidated M.L.s over Queen Hill, and Renison's interest in the area was initially linked to negotiations with the joint venture partners over the possible acquisition of the MLs (Figures 1 and 2).

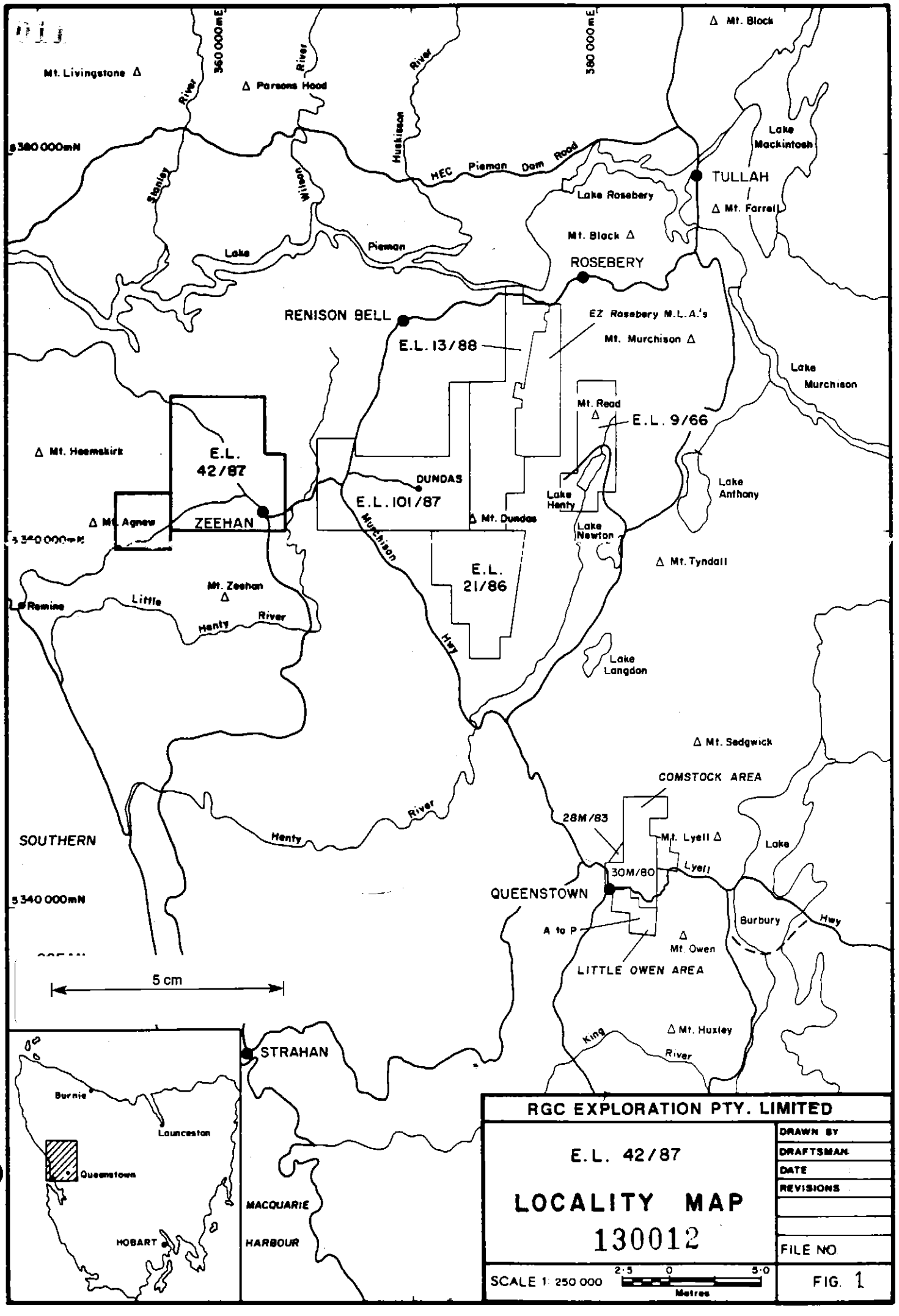
Work on the EL was deferred while negotiations continued, with the intention that once the MLs were in Renison's control, a combined exploration programme would be conducted over both the MLs and the surrounding EL. However negotiations fell through, and in 1989 RGC Exploration began an exploration programme on behalf of Renison Ltd., without control of Queen Hill having been obtained.

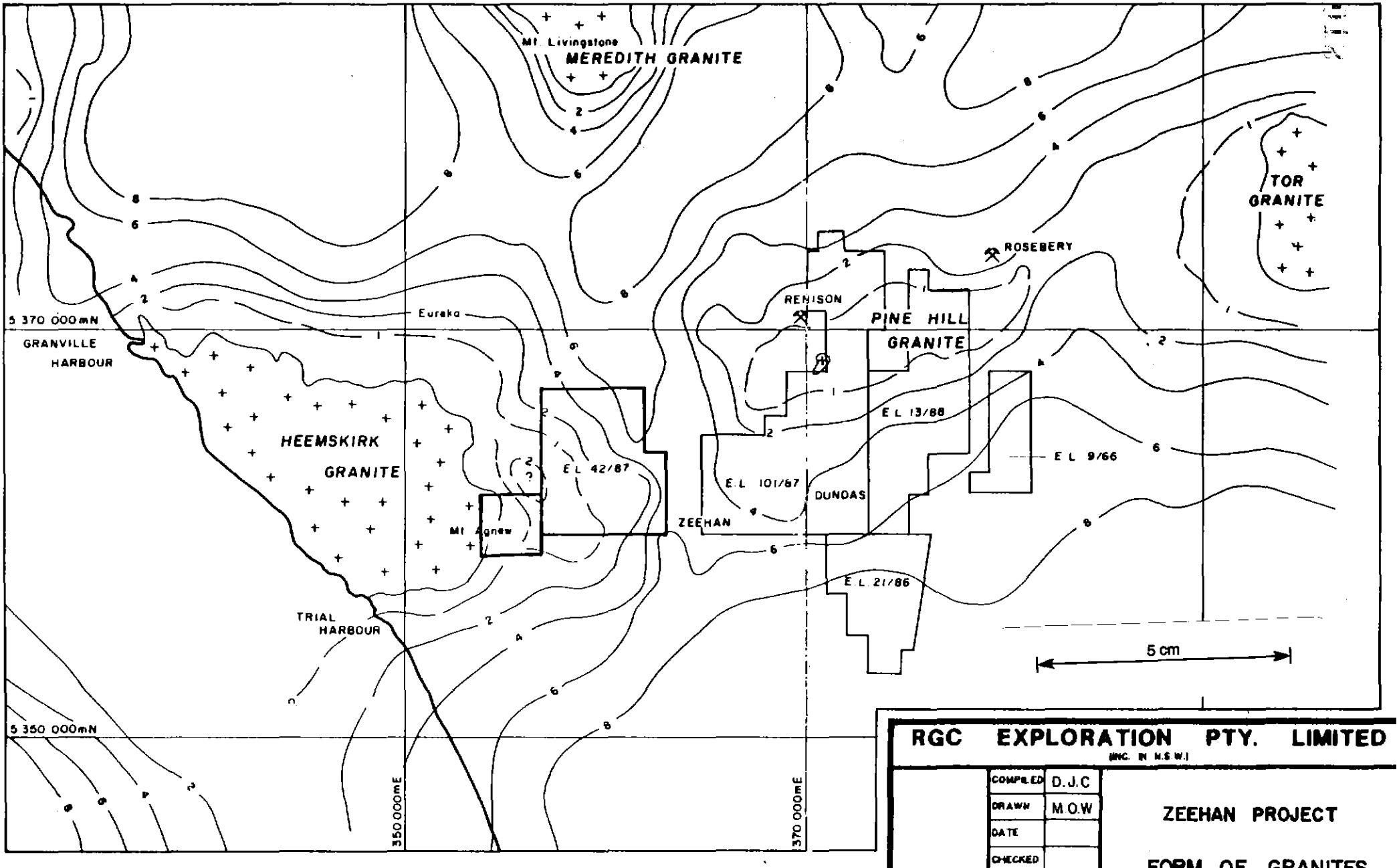
As a result of detailed mapping, rock chip geochemistry and an aeromagnetic survey, conducted during 1988/89, two areas were chosen as warranting more detailed follow-up work. The Comstock and Parting Lake grids were established to cover these two areas, however the Comstock area was later renamed the Sylvester area to avoid confusion with the Comstock prospect near Queenstown.

In the Sylvester area, three major regional faults intersect highly deformed psammo-pelites and carbonates of the Upper Oonah Formation and less deformed turbidites of the Crimson Creek Formation. Several lines of evidence suggest a granitoid ridge extends E-W beneath the area, toward the postulated Queen Hill cupola. The Sylvester, Balstrup and Tenth Legion faults could reasonably be expected to communicate at depth with such a ridge and provide fluid access to sedimentary carbonates.

Two MLs in the area, held by Oceania (Tas.) P/L., were considered to cover a portion of the prospective geology and as a result RGC signed an Option to Purchase agreement with the holders of the MLs to secure tenure of the area.

During 1990 former EL 95/87, which adjoined EL 42/87 to the west of the Sylvester area, became available as ETA 219. RGCE tendered for the area


Mt. Livingstone
Parsons Hood
Mt. Block
360 000mE
380 000mE
5380 000mN
Stanley River
Wilson River
Huskisson River
HEC Pieman Dam Road
Lake Mackintosh
TULLAH
Mt. Farrell
Lake Rosebery
Mt. Block
Lake
Pieman
ROSEBERY
RENISON BELL
EZ Rosebery M.L.A.'s
Mt. Murchison
E.L. 13/88
Lake Murchison
Mt. Read
E.L. 9/66
Mt. Heemskirk
E.L. 42/87
DUNDAS
E.L. 101/87
Lake Henty
Lake Anthony
Mt. Agnew
ZEEHAN
Mt. Dundas
Lake Newton
5340 000mN
Murchison Hwy
E.L. 21/86
Mt. Tyndall
Mt. Zeehan
Remine
Little Henty River
Lake Langdon
Mt. Sedgwick
COMSTOCK AREA
Henty River
28M/83
Mt. Lyell
Lake
SOUTHERN
30M/80
Lyell
QUEENSTOWN
5340 000mN
Burbury
Hwy
A to P
Mt. Owen
LITTLE OWEN AREA
5 cm
Mt. Huxley
King River
STRAHAN
Burnie
Launceston
Queenstown
HOBART
MACQUARIE HARBOUR
RGC EXPLORATION PTY. LIMITED
E.L. 42/87
LOCALITY MAP
130012
DRAWN BY
DRAFTSMAN
DATE
REVISIONS
FILE NO.
SCALE 1: 250 000
2·5 0 5·0
Metres
FIG. 1



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Provisional interpretation : contours showing top of granite below surface in km.

(Leaman, Jan. 1988)

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(INC. IN N.S.W.)

COMPILED	D.J.C	ZEEHAN PROJECT
DRAWN	M.O.W	FORM OF GRANITES
DATE		
CHECKED		
1:25,000 Reference		
BASE PLAN No		SCALE 1:250,000 2.5 0 5.0 Kilometres
OVERLAY PLAN No.		FIG. 2

because it covered the westward extension of the major regional faults mentioned above. The area was granted to RGCE and ultimately amalgamated into EL 42/87.

The expanded EL covers 40 square kilometres of countryside that varies from buttongrass and tea-tree swamp to partially forested hilly terrain. It covers Zeehan townsite and many of the old silver-lead mines of the now abandoned Zeehan field. Access is provided by a number of all-weather roads, as well as numerous 4WD tracks and old, partially overgrown tramways.

Work on the EL was initially targeted at locating economic concentrations of tin of the style typified by the Montana deposit (carbonate replacement), the Severn deposit (Fault stockwork) and Queen Hill (fault and carbonate replacement). The Upper Oonah Formation and the so-called Poverty Point Beds (also called Montana Beds) were considered the most prospective units because of the presence within them of significant carbonate beds capable of hosting replacement-style deposits.

However as a result of the location of a significant base metal skarn on the Sylvester grid, the emphasis shifted toward testing the base metal potential of the prospect. This trend was reinforced during 1990/91 when RGCE decided to drastically reduce its tin exploration programme as a result of continued low tin prices and the consequent poor performance of the Renison Bell tin mine.

Exploration now centres on continued exploration of the Sylvester-Tenth Legion area targetted at locating large tonneage base metal skarn and/or replacement bodies similar to those mined in North America (e.g. Darwin, California), South America (e.g. Uchucchacua, Peru) and various other parts of the world.

2. LAND TENURE

EL 42/87 is held solely by Renison Ltd. and explored by RGC Exploration Ltd. (RGCE). It covers 40 square kilometres, most of which is vacant Crown land. The following mining leases are excluded from the EL (Figure 2):

35M/72; C.R.A. Exploration P/L (Oonah Hill)
36M/81; Aberfoyle Exp. P/L & Gippsland Oil & Min.s NL (Queen Hill)
43M/85; Oceania (Tas) P/L (Sylvester Mine)
123M/47; Oceania (Tas) P/L (Comstock Mine)
64M/73; Kynance P/L (Kynance Mine)

In May, 1990 an Option Agreement to purchase MLs 43M/85 and 123M/47 was signed with Oceania (Tas.) P/L. Under the terms of the agreement Renison may explore the area for up to five years.

In December, 1990, RGCE successfully tendered for ETA 219 which adjourned EL 42/87 to the west. The ETA was given EL No. 39/90, and in April 1991 was amalgamated into EL 42/87.

3. PREVIOUS WORK

Silver-lead veins were discovered near the present day town of Zeehan in 1882, resulting in the rapid development of the Zeehan field, which flourished until 1914. In subsequent years the Tasmanian Government carried out exploration in a number of areas and assisted many tributing parties, but no new discoveries were made. A brief resurgence of silver-lead mining occurred during the period 1947-1960, when the Montana SL mine was opened and the Oceania lodes were re-developed. By 1960, the field had produced 194,816 tons of lead and 26,585 ozs of silver. Since that date small tonneages of silver-lead-zinc ore have been mined by Oceania at Sylvester and Comstock, and shipped to Rosebery. (refer Plan 1).

The presence of tin in the Zeehan field was recognised early, and small quantities of stannite were mined from the Stannite Lode of the Oonah mine and Clarkes Lode of the Zeehan-Queen mine. Small quantities of cassiterite were mined from the Stormsdown lode at various times, and in the early 1980s Aberfoyle extracted 2,900 tonnes for matte fuming trials (Anderson, 1986). By 1960, tin production totalled 5.3 tons tin metal, although no figures are available for tin contained in stannite.

Modern exploration began during the period 1946-47, when Zeehan Explorations NL drilled a number of holes in the Oceana, Despatch and King-Bell areas, with the main target being replacement-style galena mineralisation in the Gordon Limestone. Exploration was successful at Oceana, and the mine re-opened for a while as a result. Tenneco (1971-72) and Aberfoyle (1984-87) also explored the Gordon Limestone for similar mineralisation but without success, (refer Plan 2).

The BMR conducted geophysical surveys around the Montana SL and Tasmanian Crown mines in 1954, and over Oonah and Queen Hill during 1963-64. Montana SL completed some follow-up drilling after the 1954 survey, but located only graphitic shales.

During 1963-70, 20 diamond drillholes were completed in the Oonah area, firstly by Clutha then by subsequent tenement holder Minops P/L. As a result of this work Minops reported indicated reserves of 674,000 tonnes grading 1.1%Sn, 1.25%Cu and 3.7 g/t Ag contained at depth within the Stannite lode. Further drilling was conducted during 1979-81 under a

joint-venture agreement between Minops and current tenement holders C.R.A. Exploration.

Clutha and Minops also conducted exploration in the Spray mine area aimed at locating mineable reserves of silver-lead-antimony. In 1971 Tenneco took over and completed four underground holes without success. Stannite was identified in one of the lodes.

Exploration of Queen Hill began in earnest in 1970 when Gippsland Minerals acquired tenure over the area, and in 1971 signed a joint-venture agreement with Cominco (later to become Aberfoyle). During 1970-73 Clutha drilled 18 diamond holes, outlining an inferred resource of 600,000 tons at 1.64% Sn. Aberfoyle became operators in 1974 and by 1982 they had completed ore characterisation studies and a geological resource assessment that reported 7.3 Mt at 0.7% Sn, including 3.6 Mt at 1.2% Sn (Anderson, 1989). The resource is contained in three deposits, namely the Queen Hill, Montana and Severn deposits.

The RGC Group has shown an interest in the area since 1967, when a brief assessment was made of the Oonah leases then held by C. Loftus-Hill. In 1974 the area south and west of EL 42/87 was pegged by Mt. Lyell as S.P.L. 129, which was converted into EL 11/76 and explored by Gold Fields Exploration (later to become RGC Exploration) until 1986. Work completed in the area included the drilling of six unsuccessful diamond holes on the Stonehenge grid, immediately south of the current Sylvester grid. The target at Stonehenge was replacement-style tin, hosted by dolomite horizons within the faulted Upper Oonah Formation. Another six unsuccessful holes were targetted at magnetite skarns in Area D and on the Heemskirk grid (Plan 2).

Exploration in the Tenth Legion area was initially targetted at the magnetite skarns as a potential source of iron ore. In 1958 The Tasmanian Mines Department drilled two holes through the largest skarn, and subsequently Industrial and Mining Investigations Pty. Ltd. drilled thirteen shallow vertical diamond holes over nine of the larger bodies. CRA Exploration formed a joint venture with IMI in 1979, and during 1980-1982 drilled fourteen diamond holes targetted at tin and combined zinc-geochemical/geophysical anomalies. A small, metallurgically difficult potential tin resource was delineated.

4. REGIONAL GEOLOGY (Plans 2, 3)

4.1 Stratigraphy

Proterozoic

The oldest rocks in the area are psammo-pelitic sediments of the Oonah Formation (Po), which form the core of the Heemskirk Anticlinorium northwest of Zeehan. It has been interpreted as a distal turbidite sequence (Brown, 1986). The sequence typically consists of a monotonous repetition of the following components, in order of relative abundance.

a) Thin bedded grey, micaceous sandstones and siltstones.
b) Massive grey, saccharoidal, quartzitic sandstones.
c) Black, carbonaceous shales.

Toward the top of the Oonah Formation, finer grained lithologies become more dominant and carbonates and spilitic volcanics appear. The Upper Oonah Formation (Pou) has been defined to include these distinctive lithologies, which include:

a) Thinly bedded grey, micaceous sandstones and siltstones.
b) Black, carbonaceous shales.
c) Finely interbedded, laminated sandstones, siltstones, shales. (Posp).
d) Massive grey, saccharoidal, quartzitic sandstones.
e) Dolomites, limestones and calcareous sediments.
f) Spilites, including vesicular lavas, tuffs and breccias (Montana Melaphyre Volcanics - Pom).

The prevalence of the various lithologies shows marked lateral variation. In the Queen Hill area, irregular lenses of spilitic volcanics form a significant proportion of the stratigraphic column, whilst in the Comstock mine area spilites are rare and carbonates are the dominant lithology.

Many of the lithologies encountered in the Upper Oonah are indicative of deposition in a shallow water environment. For example finely interlaminated calcareous shales, siltstones and sandstones encountered in SY001 exhibit intraformational slump

structures commonly occurring in tidal flat environments and attributed to tidal drag. Additionally the reported occurrence of gypsum psuedomorphs in carbonates at Queen Hill (Anderson, 1986) indicates that at least some of the carbonates were deposited in a sabkha-type (evaporite) environment.

The spilites consist of lavas and tuffs that form lenses of great lateral variation in thickness, intercalated mostly with pelitic units. The lavas are massive, grey-green, weathering to brown clay. They are generally vesicular, with at least some discordant (intrusive) contacts, (Plate 19). Occasional coarse pyroclastic bands are present. The occurrence of spilitic lavas, which are widely regarded as products of submarine extrusion (e.g. Hatch et al, 1975), interbedded with shallow-water and evaporitic facies rocks, such as those reported at Queen Hill, presents a problem of interpretation.

The greatest thickness of spilite occurs NE of the Sylvester mine, which is probably close to the volcanic source. SW of Sylvester mine, the vesicular flows are absent, and tuffs/tuffaceous siltstones become dominant.

The carbonates are deeply weathered and decomposed except at North Comstock, and are thus difficult to recognise (Plate 18). It is known from drilling that they vary from fine beds interbedded with calcareous siltstones/shales to massive beds up to 100m+ thick interbedded with graphitic shales (Plate 3). They vary in composition from limestone to dolomite, and are extensively altered (talcose) at Comstock and recrystallised NE of Comstock to a coarse grained mixture of ferroan dolomite, magnetite and siderite.

The carbonates host magnetite skarns in the Tenth Legion Area, and at depth near Comstock where they are accompanied by base metal replacement bodies.

Oonah Formation sediments have been affected by two main periods of deformation and exhibit a higher degree of deformation than

overlying units. The early (D1) deformation involved an intense flattening strain and flat thrusting, resulting in boudinaging of more competent beds (Plate 10). This effect is most intense in the pelitic units of the Upper Oonah, where boudinaging of sandstone interbeds in pelitic sequences grades with increasing strain into distinctive melanges (Plates 14, 15). These melanges occur throughout the Pou, but are much more common near major Thrust faults (e.g. Tenth Legion) and near the contact with the overlying Crimson Creek Formation. They also increase in prevalence toward the Comstock area, sympathetically to the increase in carbonates. The flattening strain is also responsible for the development of numerous graphitic shales in the Upper Oonah Formation.

Devonian deformation fabrics are most strongly developed in Pou sediments in the nose of the Heemskirk Anticlinorium, west of Zeehan, where a strong NW trending (axial planar) penetrative cleavage and schistosity is present in pelitic sediments, overprinting earlier Cambrian fabrics.

Cambrian

The Crimson Creek Formation (Єc) consists of a poorly outcropping sequence of weathered turbidites. The dominant lithologies are light brown labile lithic arenites, wackestones and tuffs of (intermediate to mafic) volcanic origin, and mudstones. Massive, poorly bedded siltstones and shales are also present, along with occasional carbonate interbeds. The lithic arenites intercepted by SY002 commonly displayed rythmically graded beds typical of turbiditic sequences. Volcaniclastics in the Argent Flat area were described by Twelvetrees and Ward (1910) as "Keratophyric Tuffs and Breccias", and petrographic descriptions in Blissett & King (1968) identify the main-constituents as fragments of altered plagioclase and quartz, with minor glass, pyroxene, muscovite etc.

A 45 metre thick sequence of massive dolomites interbedded with shales and interlaminated sandstone and siltstone has been recorded at the base of the Crimson Creek Formation at two locations as a result of drilling by Aberfoyle (Anderson, 1986). Anderson

correlates the sequence, referred to as the Poverty Point Beds (or Montana Beds), with the Success Creek Group (Ꞓs) at Renison because of its conformable relationship with overlying Ꞓc lithologies. These Cs beds are mostly faulted out at the surface by the Severn fault.

The main occurrence of Ꞓs forms a Y-shaped outcrop stretching from the old Sylvester mine to Argent flat via Manganese Hill. Blissett (1962) claims the sequence occupies the core of a syncline in the Sylvester area but lack of reasonable outcrop makes this difficult to verify (refer Sub-section 6.1.1).

Regionally, an unconformity is inferred at the base of the Cambrian sequence because the underlying Oonah Formation sediments appear to have been affected by the Proterozoic Penguin Orogeny.

On the Argent Flat, the contact between Cambrian units and Pou sediments is faulted and pseudo-conformable (Plate 22). Ꞓs beds are generally faulted out along the contact at the surface, but are more extensive at depth. Sheared shales and siltstones dominate the Ꞓc sequence near the contact.

In the Sylvester-Comstock area the contacts are poorly exposed and hence not as well understood. Near the Sylvester mine the Ꞓc turbidites appear psuedo-conformable to, and even seem to interdigitate with, underlying Pou lithologies. When intersected during drilling (DDHs SY002, 003 & 009), significant thicknesses of melange were found to be present in the Pou immediately adjacent to the Ꞓc-Pou contact in all cases.

Sheared grey shales, siltstone and greywacke exposed in the summit cutting of the Comstock tram were assigned to the Dundas Group (Ꞓd) by Opik (1951) on the basis of fossil evidence. However identical lithologies occur in the enclosing Crimson Creek sequence. Insufficient mapping has been done at this location to determine the affinity of these rocks.

South of Comstock mine is a large area of poorly outcropping basic volcanics, shales, siltstones, sandstones, grits, conglomerates and cherts bound to the north by the Tenth Legion Fault. The sequence has been variously ascribed to the Crimson Creek Formation (Blissett, 1962) and the Dundas Group (Poltock, 1981) based on lithological criteria. The monotonous turbidites that are characteristic of Єc elsewhere in the Zeehan area are absent, and this combined with the presence of conglomerates suggests that the rocks do in fact mostly belong to the Dundas Group. However distinguishing between Єc lithologies and non-fossiliferous portions of Єd is often impossible, and some Єc may be present. Mafic (spilitic) volcanics south of Comstock opencut are currently interpreted as belonging to Єc, on the basis of mapping by Poltock (1981). However Brown (1986) has studied mafic rocks from Comstock Creek and determined them to be high magnesian andesitic lavas rather than typical Єc tholeiites.

On Dunkley's tramway, north of Parting Lake, are scattered outcrops of siltstone, mudstone and shale which Blissett ascribed to the Crimson Creek Formation.

Palaeozoic

The east and southeastern portions of the EL are occupied by the large Zeehan Syncline, which has a core of Devonian, Silurian and Ordovician sediments (DSO). The base of the sedimentary sequence within and north of Zeehan townsite is occupied by the Gordon Limestone, which is poorly exposed and can only be described on the basis of material from old mine dumps (e.g. Tasmanian Crown). It varies from a massive, grey limestone to a black, arenaceous limestone which decomposes to dark clay that resembles deeply weathered shale in outcrop.

The contact between the Gordon Limestone and older units in the area was previously interpreted to be a major regional structure, the Despatch Fault, which marks the boundary between the Zeehan Syncline and the Heemskirk Anticlinorium to the west. However

mapping along the west shore of Parting Lake during 1990/91 identified a conglomerate bed composed of Pou quartzite detritus which is conformable to overlying Siluro-Ordovician units. This suggests that the contact in this area is unconformable, though it is probably faulted south of Parting Lake (Plan 6).

Apart from the Gordon Limestone, units of the sequence are considered to have little prospectivity for hosting significant tin mineralisation. Therefore for a detailed lithological description, readers are referred to Blissett (1962).

Permian

Tillites (Pt) of the Zeehan Glacial Formation unconformably overly part of the Oonah Formation north and west of Zeehan.

Intrusives

Cambrian gabbros (Єg) occur in outcrop SW of Comstock (McIvor Hill gabbro). A highly altered gabbro (or mafic extrusive?) was intersected at the bottom of drillhole SY001. Additionally, an ultramafic dyke (Єus) was mapped in the summit cutting of the Comstock tramway, where it is associated with a significant shear. Other parallel dykes are suspected from ground magnetic data. The McIvor Hill gabbro is chemically similar to gabbros in the Serpentine Hill mafic-ultramafic complex (Brown, 1986).

A Devonian granitoid ridge is interpreted to extend regionally from the Heemskirk granite toward Pine Hill (Figure 2). Along this ridge, a culmination (cupola) is interpreted beneath Queen Hill, and another culmination may occur beneath the Sylvester grid. However the only granitoid rocks exposed at the surface are a number of thin quartz-porphyry dykes.

4.2 Structure

Proterozoic sediments of the Oonah Formation display evidence of an early phase of tectonism that is absent from Cambrian and younger units. Its main features are:

a) Isoclinal folds in well bedded units, with refolded fold axes (rarely observed at Zeehan).

b) Broad melange zones in Po psammo-pelites. These are overprinted by later Devonian deformation.

The D1 deformation is assigned to the Proterozoic Orogeny on the basis of its "absence" from Cambrian sequences so far drilled by RGCE. Some of the early fabrics may however be related to a period of thrusting during the Cambrian that resulted in the emplacement of sheared mafic-ultramafic allochthons of ophiolitic affinity (Berry, 1988). This is based on the presence of the McIvor Hill gabbro which is interpreted to be part of a dismembered M-UM complex that includes the Trial Harbour ultramafics.

The Po melanges are the most significant D1 features. They are virtually restricted to the Upper Oonah Formation, and are most prevalent in the Comstock-Sylvester area. They occur in psammo-pelites throughout the Pou, but are mainly found adjacent to the Proterozoic-Cambrian boundary as discussed in the previous Sub-section. They are the end-product of intense flattening strain and flat thrusts that produce the following observed features (in approximate order of increasing deformation):

1) Boudinaging of Po sandstone (Poss) interbeds - Plate 10.
2) Development of irregular, graphitic ductile deformation zones in pelitic units - Plate 11.
3) Development of melange with increased strain as Poss bands completely break up - Plates 14, 15.
4) Rotation of boudins during thrusting - Plate 14.

The rotation of boudins at Comstock mine, combined with the preponderance of melanges near the Proterozoic-Cambrian boundary is consistent with thrusting of Po sediments over Cambrian units. Away from the thrust contact, strain is less intense and occasional boudinaging of more competent beds is characteristic, but as the thrust is approached the strain becomes more intense resulting in melange formation. Subsequent folding and faulting during the

Devonian (discussed below) has complicated this simple picture, such that early ductile deformation fabrics do not indicate a consistent direction of thrust, and a significant portion of the fabric is parallel to the main Devonian cleavage.

The D2 deformation of the mid-Devonian Tabberabberan orogeny was the most significant period of deformation in the area. It involved two main phases of deformation:

a) NE-SW compression that produced tight NW trending folds including the Zeehan Syncline and Heemskirk Anticlinorium.

b) NW-SE compression that produced open NE trending folds.

The superimposition of these two phases of deformation produced strong interference patterns of folds that can be clearly seen in Lower Palaeozoic units of the Zeehan area. The more significant NE-SW compression resulted in the development in some areas of a strong NW axial plane cleavage (e.g. Oonah-Queen Hill).

The D2 orogeny also produced a series of faults with trends that vary systematically from NNW near Montana SL to WNW around Comstock, giving the appearance of convergence toward a point SE of EL 42/87. A conjugate fracture set trends ENE to NE. The D2 faults vary from small fractures to major regional structures such as the Sylvester Fault, and appear to involve mainly oblique slip displacement (Sub-section 6.3). Some structures however reportedly show evidence of reverse movement, for example the Zeehan-Montana Main Slide (Blissett, 1962).

The numerous relatively small displacement faults that extend NW from Zeehan, including the Zeehan Montana Main Slide and perhaps the Oonah Main Slide, form a structural corridor that extends a considerable distance and is visible on airphoto mosaics. They probably reflect a deep seated structure represented as a series of relatively minor "splays" at the surface.

The Balstrup fault is a major regional structure dipping approximately 70 degrees ENE, and involves apparent oblique slip displacement over most of its length except west of Comstock mine, where the apparent displacement is overthrusting of Lower Oonah psammo-pelites over Upper Oonah carbonates and pelites. The fault is spacially associated with melanges at the western end.

The Tenth Legion fault is also a regional structure, dipping approximately 45 degrees ENE (based on its intersection by DDH SY001). In the Comstock mine area, displacement has involved the overthrusting of Upper Oonah sediments over Cambrian Units. Both ductile and brittle structural features are associated with the fault (Plate 15), including "brittle" thrusts that post-date the early ductile deformation (Plate 14).

Both the Balstrup and Tenth Legion faults are composite structures that exhibit both early (D1) ductile features and later (D2) brittle features. They were probably initially Cambrian thrusts that were reactivated as Devonian oblique-slip structures. Post-Cambrian thrusting is also inferred for the Tenth Legion fault and possibly the western end of the Balstrup Fault. Late Devonian or Post-Devonian displacement is required to account for the 2km of faulted contact between Єo sediments and Dg west of Tenth Legion mine.

The dominance of D2 deformation has resulted in folding and dislocation of D1 features to the extent that they cannot be mapped with any confidence, given the amount of outcrop available.

The Heemskirk batholith is thought to have intruded toward the end of the D2 event, and is known from regional gravitational data (Figure 3) to extend as a ridge beneath Zeehan townsite. The form of the intrusion appears to have been controlled by major D2 folds and regional structures, with culminations occurring between major anticlinal axes where they cross the regional trend. A NNW trending elongate cupola is interpreted from gravity data at a depth of 1.7km beneath Queen Hill and Zeehan-Montana. The shape of this cupola may be controlled to some extent by the Zeehan-

Montana structural corridor mentioned above.

The numerous NW and NNE trending fissure veins and lodes of the Zeehan silver-lead field developed as the granite cooled. The main producers are spatially associated with major deep-seated feeder structures such as the Zeehan-Montana "structural corridor" (Oonah, Montana, Zeehan-Western mines) and the Balstrup-Tenth Legion faults (Comstock, Boss, Britannia, Spray etc.). The Lodes appear to occupy small faults and tensional fissures connected at depth to the main structures.

Finally, there is evidence of post-Permian thrusting 4km NW of Zeehan townsite, where Proterozoic quartzites of the Oonah Formation are thrust over Permian tillites of the Zeehan Glacial Formation in the vicinity of the abandoned Montana SL mine. (Plate 17). This thrusting reportedly displaces base metal veins (Blissett, 1962).

4.3 Mineralisation

Virtually all economic production from the Zeehan Field was silver-lead, and most of the major mines were located within the boundaries of EL 42/87. The ore occurred as lodes occupying small faults and impersistent tensional fissures that mostly trend NW and NNE. Host lithologies have little effect on mineralisation, and wallrock alteration is mostly absent.

A regional mineralogical zonation pattern has long been recognised for the lodes, based primarily on distance from the Heemskirk granite. Beyond the limits of contact metasomatism, the following generalised zones were recognised:

a) Pyritic Belt; lodes contain sphalerite-galena in a pyritic gangue;
b) Sideritic Belt; lodes contain mainly galena in a sideritic gangue;

The Pyritic Belt occurs closer to the granite, with the anomalous exception of the Queen Hill area. With increasing distance from

the granite, galena becomes dominant over sphalerite, and siderite becomes the dominant gangue mineral. Systematic changes in sphalerite geochemistry is parallel to this zonation, and involves a decline in Fe-S content, and a sudden drop in Mn-S content with the first appearance of siderite.

Queen Hill is anomalous firstly in that pyritic lodes dominate within a portion of the regional "Sideritic Belt", and secondly in that economic concentrations of tin occur in many of them. Three main styles of mineralisation are present:

a) Fissure Lode; e,g, Stannite Lode, Clarkes Lode.
b) Shear hosted stockworks; e.g. Severn.
c) Carbonate replacement; e.g. Montana, Queen Hill.

In the three main Queen Hill orebodies (Severn, Queen Hill, Montana) tin occurs principally as fine grained cassiterite in the range 20-70 micron. Despite differing ore morphologies, all three exhibit upward and outward zonation from sellaite-tourmaline-pyrrhotite-arsenopyrite (minor pyrite-marcasite-topaz) to siderite-flourite-pyrite (minor pyrrhotite) reflecting the general paragenetic sequence (Anderson, 1986). Cassiterite grainsize is reported to increase with depth, and the stannite content declines. Pyrite is the dominant sulphide as a result of the retrogressive alteration of pyrrhotite.

Fissure lodes at Oonah and Queen Hill exhibit complex mineral assemblages, including various combinations of stannite, cassiterite, chalcopyrite, arsenopyrite, galena and sphalerite in a gangue of pyrite and/or quartz, and to a lesser extent siderite. Some lodes exhibit internal mineral zonation, for example the so-called Silver Lode of the Oonah mine changes from a galena-siderite to a tetrahedrite-chalcopyrite-siderite lode at depth and a similar zonation was noted with lodes of the Zeehan-Western mine.

The mineralogical zonation and distribution of orebody morphologies at Queen Hill is consistent with the postulated presence of a cupola located at depth beneath the area.

In the Comstock mine-Tenth Legion area, mineralisation is spatially associated both with the Heemskirk granite and with major structures, noteably the Balstrup and Tenth Legion faults. Three main styles of mineralisation are present:

1) Magnetite-serpentinite skarns hosted by carbonates mostly within the contact metamorphic aureole (Tenth Legion).

2) Base metal sulphide skarns hosted by carbonates mostly outside the contact metamorphic aureole (Kynance, SY003, 005 & 009).

3) Sphalerite rich base metal-pyrite veins hosted by various lithologies (Kynance, Comstock, Boss, Britannia etc.)

Base metal veins begin toward the outer margin of contact metamorphism, and the major historical producers are located between the Balstrup and Tenth Legion faults. They are independent of host rock lithology except at the Boss mine where stockwork veining is restricted to relatively brittle recrystallised carbonates which behaved more competently than surrounding lithologies during deformation. In accordance with the mineralogical zonation of the Zeehan Field galena becomes dominant and siderite replaces pyrite as the principle gangue with increasing distance from the granite. East of the Boss mine, antimonial sulphides (principally boulangerite) are a common constituent, especially at the Spray Mine.

5. WORK COMPLETED 1990/91

5.1 Land Acquisition

ETA 219 was acquired by RGCE to cover potential westward extension of the base metal mineralisation first encountered in SY003. As soon as the ETA was incorporated into EL 42/87, in April 1991, a programme of gridding, geological mapping, ground magnetics and C-Horizon soil sampling was begun.

5.2 Access, Gridding and Surveying

A total of 20 line-km of infill and extension gridding was completed on the existing Sylvester grid. This improved grid coverage to 25m x 100m over the most prospective western two-thirds of the grid, and lines 400m apart were extended 1km northward to cover an area below which a granite ridge is interpreted from gravity data.

Additionally, the grid was extended westward as far as the Tenth Legion area once ETA 219 was acquired. This involved 10.2 line-km of gridding with a 25m x 200m coverage.

Two infill lines were completed at the south end of the Parting Lake grid, and an additional line was pegged at the north end. This involved 4 line-km of pegging.

All pegging was completed by contractor Mark Freeman, in accordance with environmental guidelines. All lines were surveyed using compass and clinometers, with some follow-up theodolite surveying in the Tenth Legion area to correct for magnetic interference from magnetite skarns. All grid locations were then plotted and digitised into RGCE's GEOCHEM and AUTOCAD computer databases.

All drillhole collars and selected grid co-ordinates and topographic features (mostly roads) were surveyed by contractor Len McKenzie. The results were used to establish drillhole collar

co-ordinates for the GEOLOG computer database, and to improve accuracy of grid plotting.

Minor road up-grading was undertaken and drill pads and sumps were constructed in the Comstock mine area to facilitate the drilling programme.

5.3 Aerial Photography

Approximately 105 km of colour aerial photography at 1:10,000 scale was flown over the Zeehan area by the Department of Environment and Planning (Mapping Division). Standard specifications of 60% foward overlap and 25% side overlap applied.

5.4 Geological Mapping

All additional gridlines were mapped and detailed 1:1000 scale mapping completed along roads, creeks etc. in areas of interest (mainly in the Upper Oonah Formation). Airphoto interpretation and some 1:5000 follow-up mapping was extended over amenable (unforested) portions of the EL, with special emphasis on understanding the structure of the Heemskirk Anticlinorium. The results are presented as Factual Geology Plans (Plans 5-14) and as Geological Interpretation Plans (Plans 3 and 38).

All structural data from the Zeehan area was compiled, tabulated and then plotted onto a series of stereonets. The data was contoured using a Kalsbeek counting net, and is presented as Figures 16-22. This was done to aid interpretation of the complex structure of the Zeehan area.

A single sample of magnetite skarn from SY009 was submitted to Amdel for petrographic description (Appendix 1).

5.5 Geochemistry

All additional gridlines have been sampled at 25m intervals from the (nominal) C-Horizon utilising a hand auger, by contractor Chris

Cooney. Samples (up to 2kg) were then dried and submitted to Analabs where the whole sample was pulverised to -200# and a portion of the sample pulp analysed for Cu, Pb, Zn (AAS-Method 101) and Sn (XRF-Method 401). A portion of each pulp was forwarded to Becquerel and analysed for Sb, As, Ba, Br, Ce, Cs, Cr, Co, Eu, Au, Hf, Ir, Fe, La, Lu, Mo, K, Rb, Sm, Sc, Se, Ag, Na, Ta, Th, Sn, W, U, Yt, Zn and Zr using Neutron Activation (Method 1801-Gold+26). Altogether, 1,243 samples were collected and analysed. Locations are shown on Plans 15-20, and the results included as Appendix 2. Selected results are plotted as Figures 3-15.

In addition 46 rock chip samples were collected during mapping and these were dried and submitted to Analabs where they were crushed and pulverised to -150#. The samples were then analysed for the same range of elements, utilising the same methods, as the abovementioned soil samples. Locations are shown on Plans 15-20 and results included as Appendix 3.

Samples collected from costeans, and drill core samples were also submitted, however these are covered under Subsections 5.7 and 5.8 respectively.

All sample results were entered into the RGCE GEOCHEM computer database.

5.6 Geophysics

All additional gridlines except for the three additional Parting Lake lines were covered by ground magnetic surveys using a Proton Precession magnetometer operated by contractor Brendon Stedman. Readings were collected at 5m intervals using a sensor height of 3m, and results were digitially recorded onto floppy discs. These discs were forwarded to Tesla 10 for processing into contour plans and stack-profiles, and to Bruce Wyatt for modelling and interpretation. The results are included as Plans 26-29 and the interpretation as Appendix 4.

Downhole Sirotem surveys were conducted down drillholes SY002, SY003, SY004 and SY005 and along Costean #1 by McSkimming Geophysics in an attempt to delineate any missed (off-hole) conductors. In addition SY003 and SY004 were logged for IP and Apparent Resistivity by the N.S.W. Mines Department using close-spaced electrodes. The results and interpretation are included as Appendix 7.

Dr. David Leaman was contracted to provide a detailed interpretation of the form of the Heemskirk granite beneath the area, using existing gravity data obtained from the gravity database Tasgrav which is maintained by the Department of Mineral Resources and Energy. The results are included as Appendix 6.

Three orientated samples of magnetite skarn and one sample of pyrrhotite were submitted to the CSIRO Division of Exploration Geophysics to study their magnetic properties as an aid to magnetic interpretation. The results are included as Appendix 5.

5.7 Costeaning

Six costeans were constructed during the year in areas generally devoid of outcrop but known to be mineralised. The costeans were excavated to a nominal depth of 2m using excavators belonging to Macwest and to Stan Laffer. The costeans totalled 625m in length altogether. They were mapped in detail and sampled along the sidewalls at a depth of 1m. The mostly soft, clayey material was sampled by scraping the sample from the wall along a line 1m from the top into a bag using a hand trowel supplemented where necessary with a geopick. The samples were taken over continuous 1m intervals where there was visual evidence of mineralisation, otherwise over selected 2m intervals elsewhere. Check samples were collected from the material excavated from Costean #1, over 2m intervals, to confirm the high values obtained from the initial sampling. The homogeneous nature of the decomposed carbonate rock probably minimises any sampling bias.

Altogether 530 samples were collected, dried, and submitted to Analabs, where they were whole-pulverised to -200#. The initial sample batch from Costean #1 (T27425-500 & 27601-671) was analysed for Cu, Pb, Zn (AAS-Method 101) and Sn (XRF-401), and then submitted to Becquerel and analysed for "Gold + 26" using neutron activation (Method 1801). However neutron activation was omitted for all subsequent sampling, which was restricted to Cu, Pb, Zn, Ag (AAS-Method 101), Sn, Sb (XRF-Method 401) and Au (FA/AAS-Method 309).

All results were entered into the RGCE GEOCHEM computer database, and sample locations and selected results are summarised as Plans 20-25.

5.8 Drilling

SY004 was drilled from the Comstock Tram - Trial Harbour Road intersection to intersect the source of a magnetic anomaly, which was modelled as an 80m wide body inclined steeply SSE at a depth of about 140m in Crimson Creek turbidites. The hole was inclined at -50 degrees bearing 340 degrees AMG, and drilled to TD 343.5m, by Diamond Drilling (Tas) using an LY38 skid mounted rig.

SY005 was drilled from the Comstock-Tenth Legion road 200m west of the Comstock line of lodes, and was aimed at the source of a very large, deep seated magnetic anomaly, modelled as a 450m wide body steeply inclined SSW at a depth of about 430m in the Upper Oonah Formation. The hole was inclined at -50 degrees bearing 350 degrees AMG and was drilled to TD 666.8m by Longyear Aust. using a skid-mounted LY44.

SY006 and SY007 were drilled from the NE end and middle of Costean #1 respectively, using a Mole D.D.2 multi-purpose portable rig belonging to Nick Poltock. Both holes were part of a 2-3 hole programme with two aims:

1) To test the suitability of the rig for pattern drilling very decomposed material to about 50 metres depth with minimal environmental impact.

2) To gain some idea of the sub-surface distribution of base metal mineralisation below the significant lead mineralisation intersected by Costean #1.

The two holes were inclined at -50 degrees and drilled WSW parallel to the Costean (approx. 240 degrees AMG). The holes penetrated to 48.6m and 37.2m respectively, and both were abandoned as a consequence of very poor recovery (5-25%).

SY008 was collared 125m north of SY005, and was targetted at the uppermost limit of the modelled magnetic source intersected by SY005. The hole was inclined at -50 degrees bearing 360 degrees AMG and was drilled to 421.0m by Diamond Drilling (Tas) using a skid-mounted LY38 rig.

SY009 was collared just north of the old Comstock tram, near where it swings around to cross Comstock Creek across a wooden bridge that has long since collapsed. It was targetted at the upper limits of the modelled magnetic source intersected by SY005, some 200m east of that intersection. The hole was drilled to 597.9m by Diamond Drilling (Tas) using an LY38 rig.

Holes SY004, SY005, SY008 and SY009 were surveyed every 30m using an Eastman downhole survey camera, and the drillers provided core orientation marks at the same intervals where the core conditions were suitable. The orientation tool used by Longyear (SY005) marked the base of the in-situ core, whereas the tool used by D.D.T. marked the top of in-situ core.

The abovementioned holes were then cased with slotted PVC to facilitate wireline logging (Subsection 5.6).

All core was removed to RGCE's Zeehan coreshed where it was photographed, geologically logged and estimates made of recoveries and RQD. Additionally all holes except SY006 and SY007 were measured with a magnetic susceptibility meter, and structural measurements were made on orientated core mounted on a core orientation cradle.

Selected core intervals from all holes were split, usually over 1m intervals, and submitted to Analabs. Here the whole sample was crushed and pulverised to -150#, and a portion of the pulp then analysed for Cu, Pb, Zn, Ag (AAS-Method 101) Sn, W (XRF-Method 401) and Au (FA/AAS-Method 309).

The drill logs and analytical results are included as Appendix 8, and selected results are presented as Plans 30-37 (Sections).

5.9 Rehabilitation

All six costean sites were completely rehabilitated within two months of construction, then fertilised. The method used was to place topsoil to one side and subsoil to the other when constructing the costeans, then rehabilitate as soon as possible to ensure seeds and plants in the topsoil pile remain viable. Vegetative regrowth is already well established.

SY004 drillsite has been completely rehabilitated, however rehabilitation of other drillsites has been delayed in anticipation of further drilling. All sites have however been cleaned up, and "hay bale" oil traps removed etc. Sumps were used on all sites to contain drilling fluids.

All roads used by RGCE existed before the provisions for rehabilitation came into effect, and will therefore be left open. Most will be required for future access.

6. RESULTS

6.1 Sylvester Grid

6.1.1. Geology

The results of geological mapping over most of the Sylvester grid has already been detailed in the 1989/90 Annual Report. This Subsection mainly covers mapping on extensions to the grid (e.g. Tenth Legion), and any other results that substantially alter previous interpretations. Refer to Plans 3 and 38.

In the Tenth Legion area, the main structural feature mapped is a major E-W trending thrust fault along which psammo-pelites of the Lower Oonah Formation have been thrust over decomposed carbonates and interbedded carbonaceous shales, siltstones and minor sandstones of the Upper Oonah Formation. To the west, in the vicinity of the Kynance mine, the structure appears to merge with the WNW trending Tenth Legion Fault, another major thrust. To the east, just north of North Comstock (357400mE), the structure is joined by another significant NW trending structure to become the ESE trending Balstrup Fault. As the Balstrup Fault east of 357400mE, the structure forms the contact between Crimson Creek turbidites and the carbonate rich Upper Oonah Formation, indicating an apparent normal displacement.

In effect this structural feature which I will refer to as the West Balstrup Fault splay forms the contact between carbonate and non-carbonate sequences all the way from west of the Tenth Legion mine to east of the Boss mine (about 358000mE), a total distance in excess of 3km. Where measurable, the structure appears to dip northward at 65-75 degrees.

West of the Kynance mine, a number of magnetite-serpentinite skarn lenses (including the Tenth Legion skarn) occur in the immediate footwall of the structure (Plate 18). East of Kynance, a strong

but deep seated magnetic anomaly follows the contact as far as 357400mE, then begins to dissipate. The anomaly source was intersected by DDH's SY005 and SY009 and as a result is known to be caused by a massive magnetite-serpentinite skarn with a core of massive sulphides (Subsection 6.1.5). SY003, on line 57800mE, intersected disseminated magnetite-pyrite-pyrrhotite mineralisation in recrystallised carbonate, which is now thought to be the diffuse, easternmost margin of the skarn. The decomposed, mineralised carbonates cut by Costeans #1 and #4 are probably the deeply weathered surface expression of this diffuse mineralisation.

The other major structure in the Tenth Legion Area is the Tenth Legion Fault itself, another major regional thrust that trends ESE and at the Comstock mine is estimated to dip north at about 45 degrees (based on DDH SY001). East of Kynance, carbonate-rich sediments of the Upper Oonah Formation are thrust over Cambrian gabbros and other Cambrian units, along this structure. West of Kynance it merges with the West Balstrup Fault, and becomes the faulted contact along which Lower Oonah psammo-pelites are thrust over Upper Oonah carbonate-rich sediments. Two kilometres west of Tenth Legion mine the fault appears to form the contact along which Lower Oonah psammo-pelites are faulted against Devonian granite (Heemskirk granite). The outer limit of hornfelsing around the granite also seems to be sharply displaced across the fault. The fault must have remained active after intrusion of the granite.

South of Tenth Legion mine, sediments of the Upper Oonah Formation are strongly hornfelsed. Limited mapping to date has located a number of magnetite skarns in the area, hosted by decomposed carbonates. Ironstones formed by deep weathering of the altered carbonates and related skarns cover wide areas. Inspection of an E-W trending adit at the southern end of line 55600mE revealed that a major NNE trending shallow-easterly dipping fault forms the western margin of a large NNE trending magnetite skarn that parallels the Upper Oonah-Gabbro contact which is located about 150m to the east. Other skarns in the area trend ESE, conformable to host carbonates.

An unusual SE trending (?) magnetite-sphalerite skarn was noted in the vicinity of 360000mN/354700mE (AMG). Associated minerals included coarse phlogopite crystals, tremolite and serpentinite. This mineralisation has been drilled by CRAE (Dickson, 1981) but the drillhole (T.L.C5) appears to have been drilled in the wrong direction. Small pits have been sunk on the mineralisation (Davern's Prospect, ref. Twelvetrees & Reid, 1919).

The wedge of Upper Oonah Formation sediments between the Tenth Legion Fault and the E-W thrust east of Kynance is dominated by generally shallow dipping carbonates with interbeds of carbonaceous shales. As mentioned previously these are in faulted contact with the E-W thrust but not with the Tenth Legion fault, which normally contains sandstone, siltstone and melange in its footwall. This may explain why no skarns have been located along it except for diopside-chlorite-anthophyllite-talc-magnetite skarn, garnet skarn and actinolite-chlorite-epidote skarn assemblages in relatively thin carbonates near the fault in SY001 (Crossing, 1990).

Within this Upper Oonah wedge, the sediments exhibit a high degree of structural complexity. In general terms, as the Tenth Legion Fault is approached the sediments display an increasingly well developed tectonic fabric. In sandstone units between Kynance and the Trial Harbour road this is expressed as a penetrative foliation that parallels the fault, and siltstones SE of Comstock opencut become more phyllitic in appearance. Where there is continuous exposure along the Trial Harbour road, increasing strain is evident as a progression from tight folding of pelites and boudinaging of sandstone bands (Plates 10, 11) to the development of a melange fabric that interfingers with less deformed sediments. The fault itself is marked by a decomposed "breccia" zone. Further east on the Tasmanian Tramway a similar progressive deformation occurs but is less obvious. A well developed melange occurs in the footwall wherever it is exposed (Plate 15) in this area.

These early (D1) features have later deformational events superimposed upon them, including the following (Ref. Plan 12):

1) Normal faults trending mostly ENE and ESE (parallel to Tenth Legion Fault)

2) Reverse faults of various orientation (mostly NNE to E trending) - Plates 25, 26.

3) Folding, which results in variations in the attitude of the melange fabric.

The carbonate-shale sequence in the footwall of the Balstrup Fault and the South Balstrup Splay appears to be mostly shallow dipping though locally open folded. The shales are generally highly strained and graphitised as a result of strain partitioning? (Plate 11). The carbonates are massive, mostly dolomitic and deeply weathered to a brownish clay. Cherty fragments occur disseminated through this brown clay in a zone stretching from about 357300mE/360750mN to 356900mE/360600mN. Erosional degradation of this clay results in the formation of a cherty agglomerate at the surface (Qss). The sequence is well exposed in the Comstock opencut and surrounding workings.

A NE trending fault appears to truncate this sequence east of the Boss mine, although scattered limestone outcrops are seen around the Susannite mine (360400mN/358000mE). East of this location outcrop is in general very poor and it is not known reliably how much carbonate occurs in the sequence. However outcrop is reasonable adjacent to the Balstrup Fault, where the footwall sequence east of 358000mE appears to be dominated by siltstone and sandstone. Costeans #5 and #6 confirmed that significant quantities of melange are also present.

Numerous ironstone/pyrite lenses have been mapped in this area east of 358100mE. They are developed in fault/breccia zones in sandstones, in highly strained graphitic shales, and at one

location (360250mN/358850mE) ironstone caps a sequence that includes decomposed carbonates. These ironstones are base metal anomalous, and some cap lodes that have been mined (Plan 13). East of the Britannia Mine they appear to cap more disseminated "stockwork" veining and become more manganiferous. In this area siderite is probably replacing pyrite as the main source of the iron.

Additional mapping in the Sylvester grid area has identified more extensive occurrences of Crimson Creek turbidites than previously mapped. These occurrences of Єc appear to interdigitate with Upper Oonah sediments, the latter containing spilitic tuffaceous siltstones that are similar in appearance to some Єc lithologies. The area remains extremely difficult to interpret, especially with respect to the nature of the Єc-Po contact. Where intersected by drillholes (SY002, SY009) or by costeans (Costean #5 and #6) melanges are invariably present in Po sediments immediately adjacent to the contact. In SY009, the melange fabric is conformable to overlying Єc turbidites, and actually incorporates shards of Єc (Plate 8). One interpretation is that an early (D1) thrust forms the contact, and later (D2) deformational events have caused the observed complexity.

Mapping of the northern extensions of the Sylvester grid, and of infill gridlines elsewhere has otherwise generally confirmed the geological interpretation outlined in the 1989/90 Annual Report.

6.1.2 Geochemistry

The extensive C-Horizon sampling programme had three main initial aims:

1) To delineate areas with anomalous concentrations of economic metals (Cu, Pb, Zn, Sb, Ag, Au, Sn, W).

2) To utilise pathfinder elements in an attempt to outline "blind" Sn deposits (Cs, Rb, Sc).

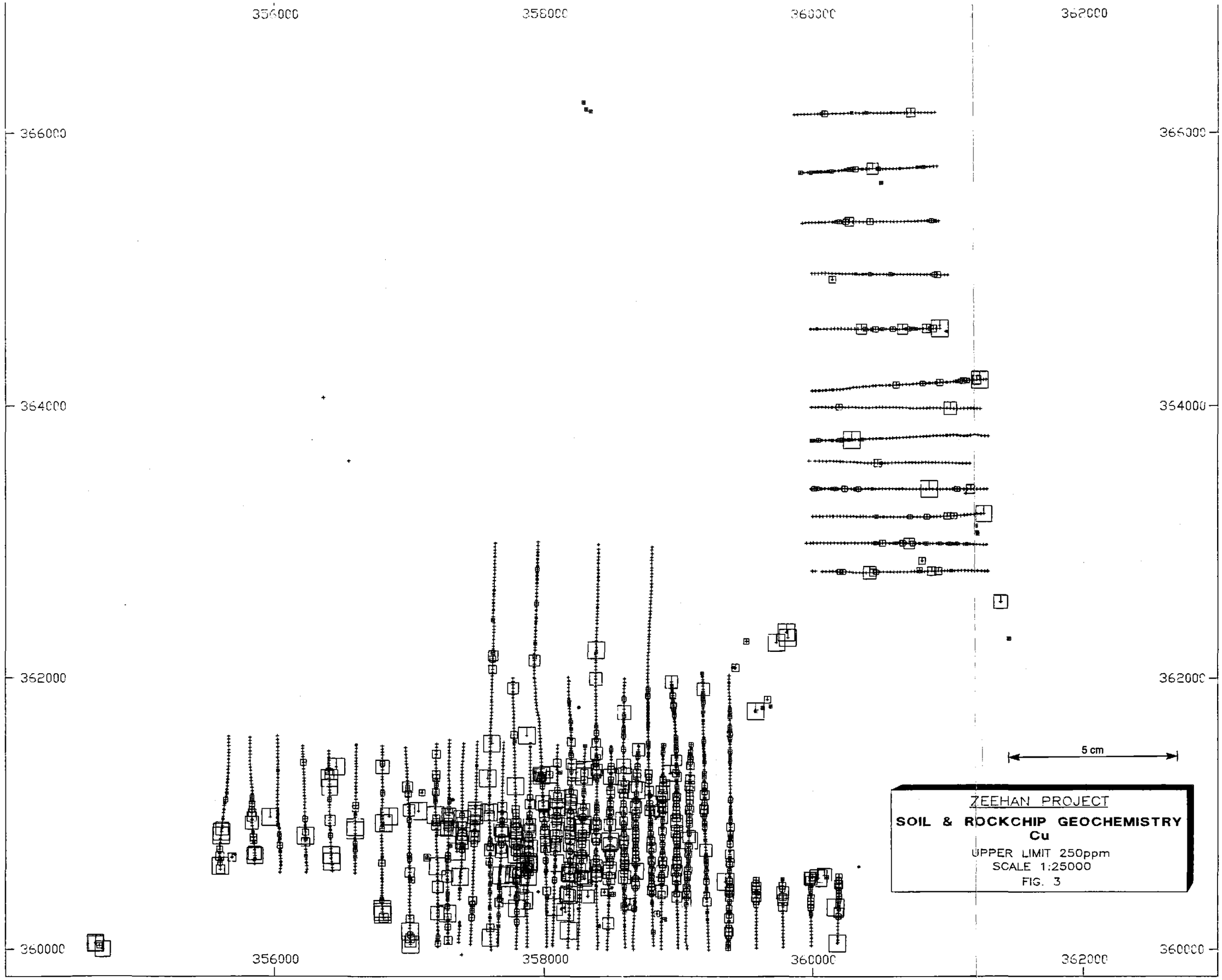
3) To use trace elements as an aid to geological mapping and interpretation.

The results of all sampling to date for selected elements are summarised as Figures 3-15, and all significant anomalies are numbered. Most have already been discussed in the 1989/90 Annual Report.

Sampling of infill lines 57300mE to 59100mE provided a more detailed picture of known base metal anomalism, but failed to detect any new anomalies. Anomaly 1 (Pb, Zn ± Cu, Sn, W, Au) coincides with the Sylvester mine workings and Anomaly 2 (Sn, W, Au, As) was tested by SY002. Anomalies 3-6 (Pb, Sb ± Zn, Sn, Au) are associated with base metal veins, patches and stockworks in decomposed Upper Oonah Formation carbonates in the footwall of the Balstrup Fault, and Anomaly 4 has been tested by SY003, SY006, SY007 and Costeans #1-4. Anomalies 7 and 8 (Zn) occur in swampy ground and probably represent secondary enrichment of Zn mobilised from other anomalous areas to the south. Cu levels are elevated within Crimson Creek turbidites and gabbros (Figure 3).

Sampling of the northern extensions of lines 57600mE, 58000mE, 58400mE and 58800mE located a single Sn, W anomaly associated with the Doric line of mineralisation (Anomaly 8). This anomaly is of interest, as a gravity interpreted ridge of granite extends beneath the area, and the Doric veins may occupy a "tin leakage structure" connected at depth to the granite.

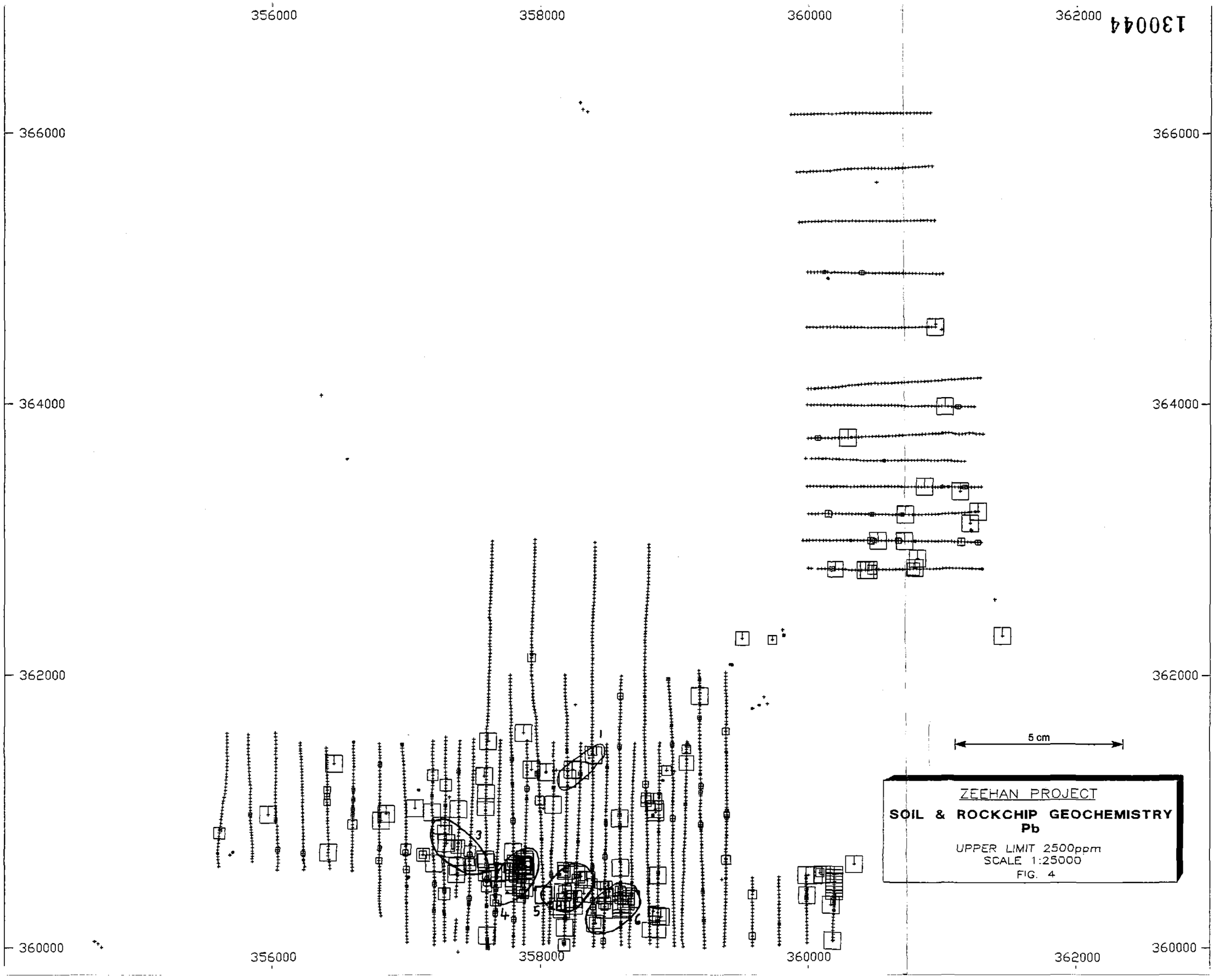
Sampling of the grid extensions over the Tenth Legion area (55600mE-56800mE) located patchy Cu Pb Zn anomalism broadly centred on the Tenth Legion/West Balstrup fault corridor. About half coincide with known N-S trending base metal veins. A large Sn, W anomaly is located over the Tenth Legion skarn (Fig 8-9, Anomaly 9).

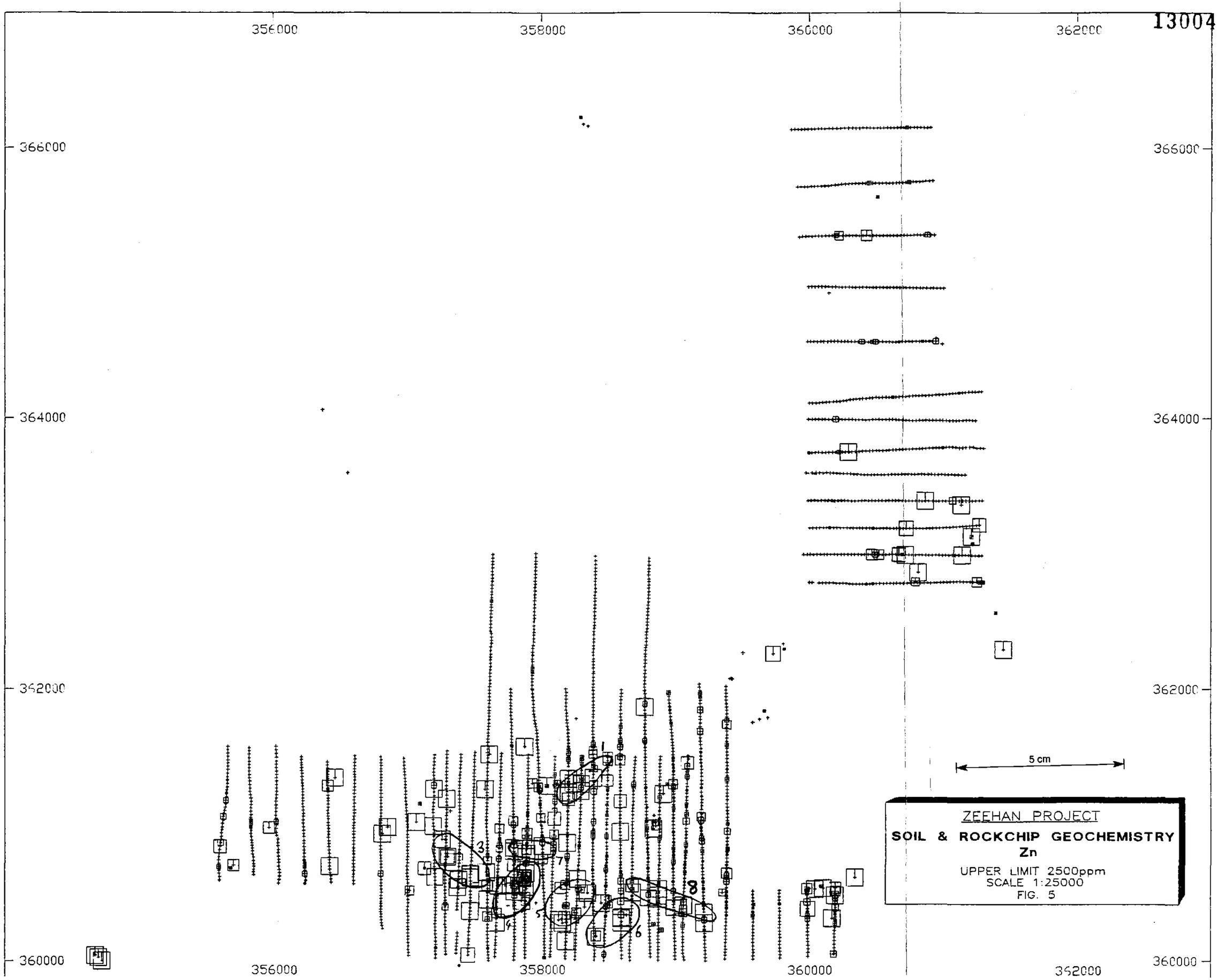


ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Cu

UPPER LIMIT 250ppm
SCALE 1:25000
FIG. 3


356000
358000
360000
362000
366000
364000
362000
360000
1
3
4
5
6
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
Pb
UPPER LIMIT 2500ppm
SCALE 1:25000
FIG. 4

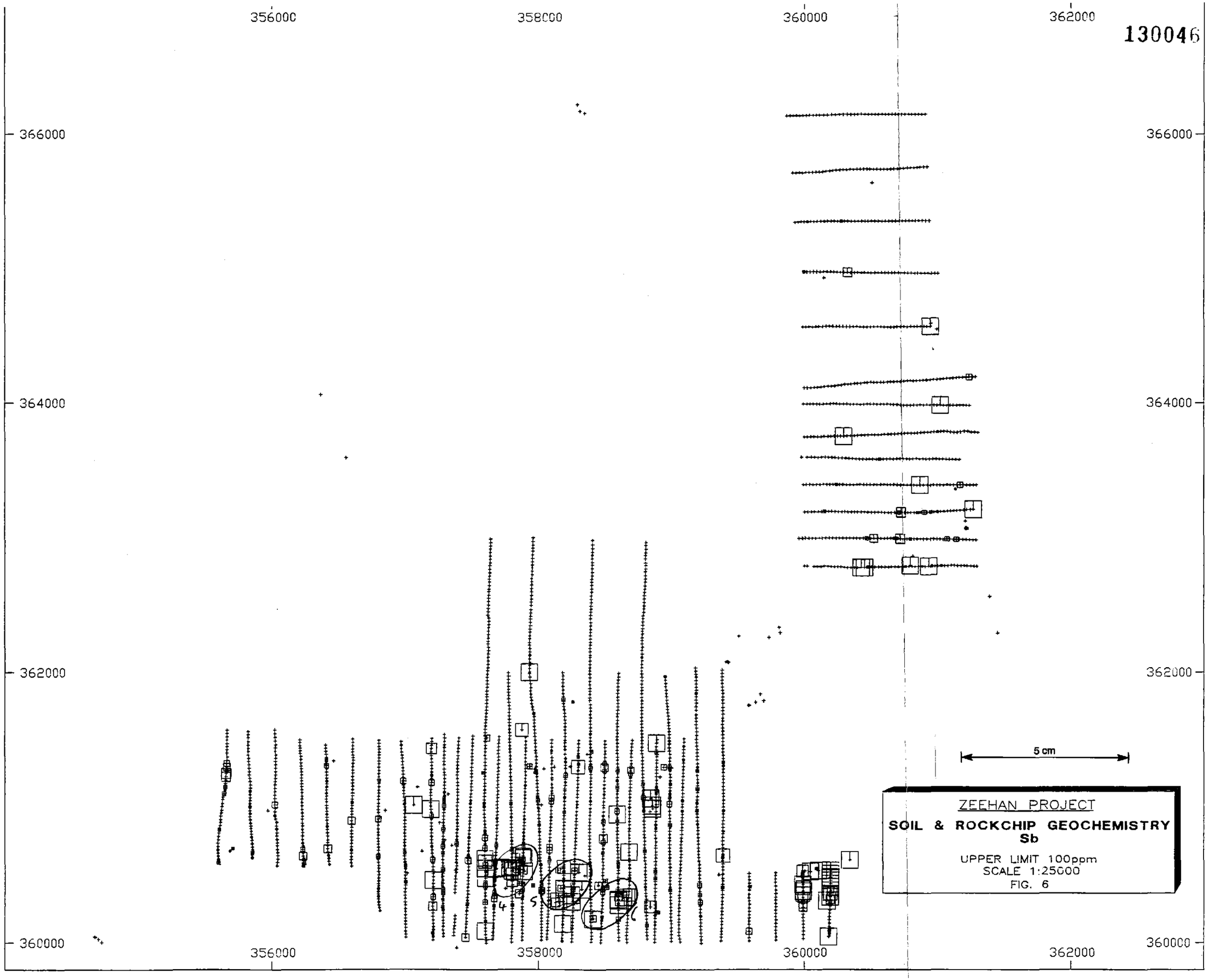


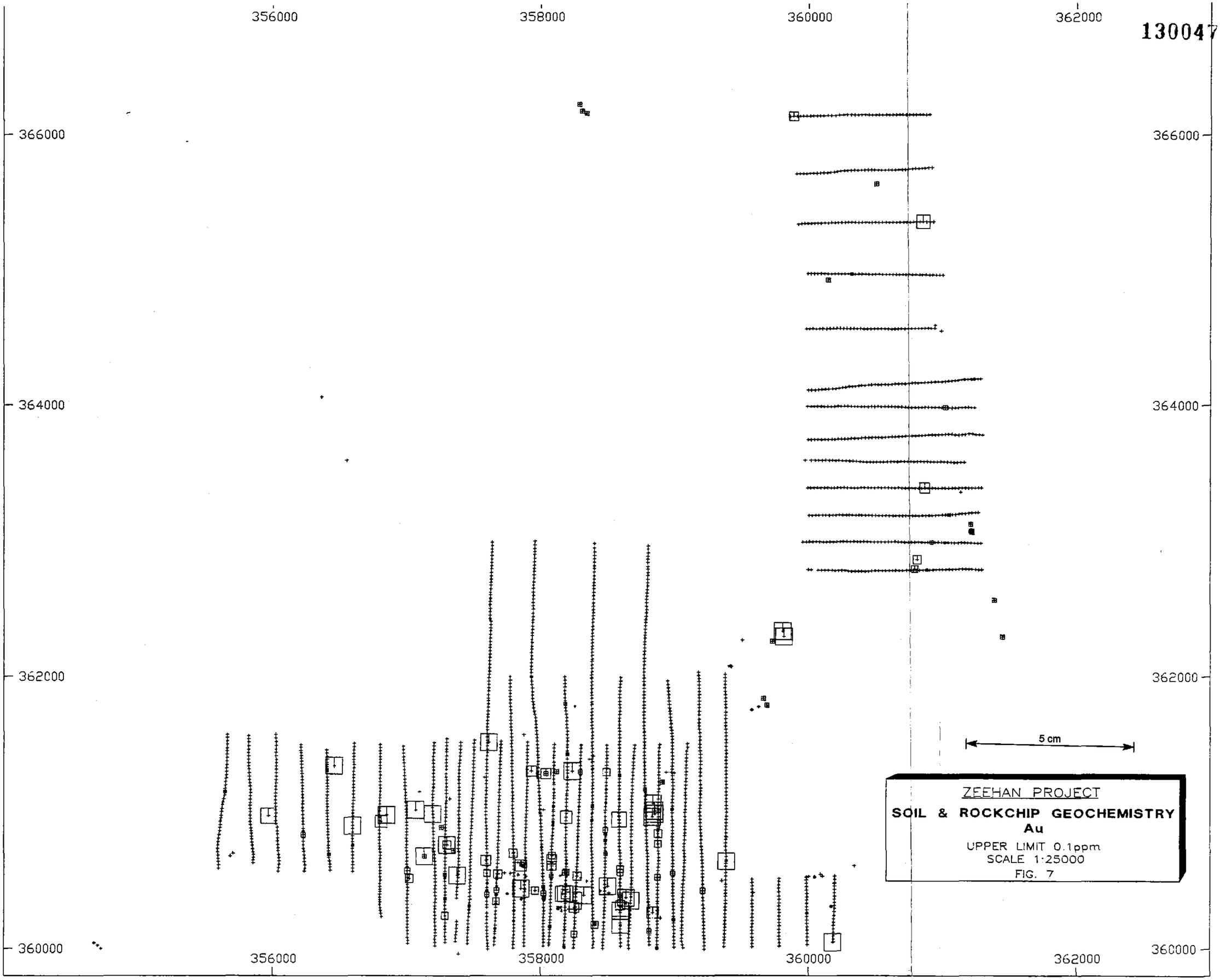
ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY

Zn

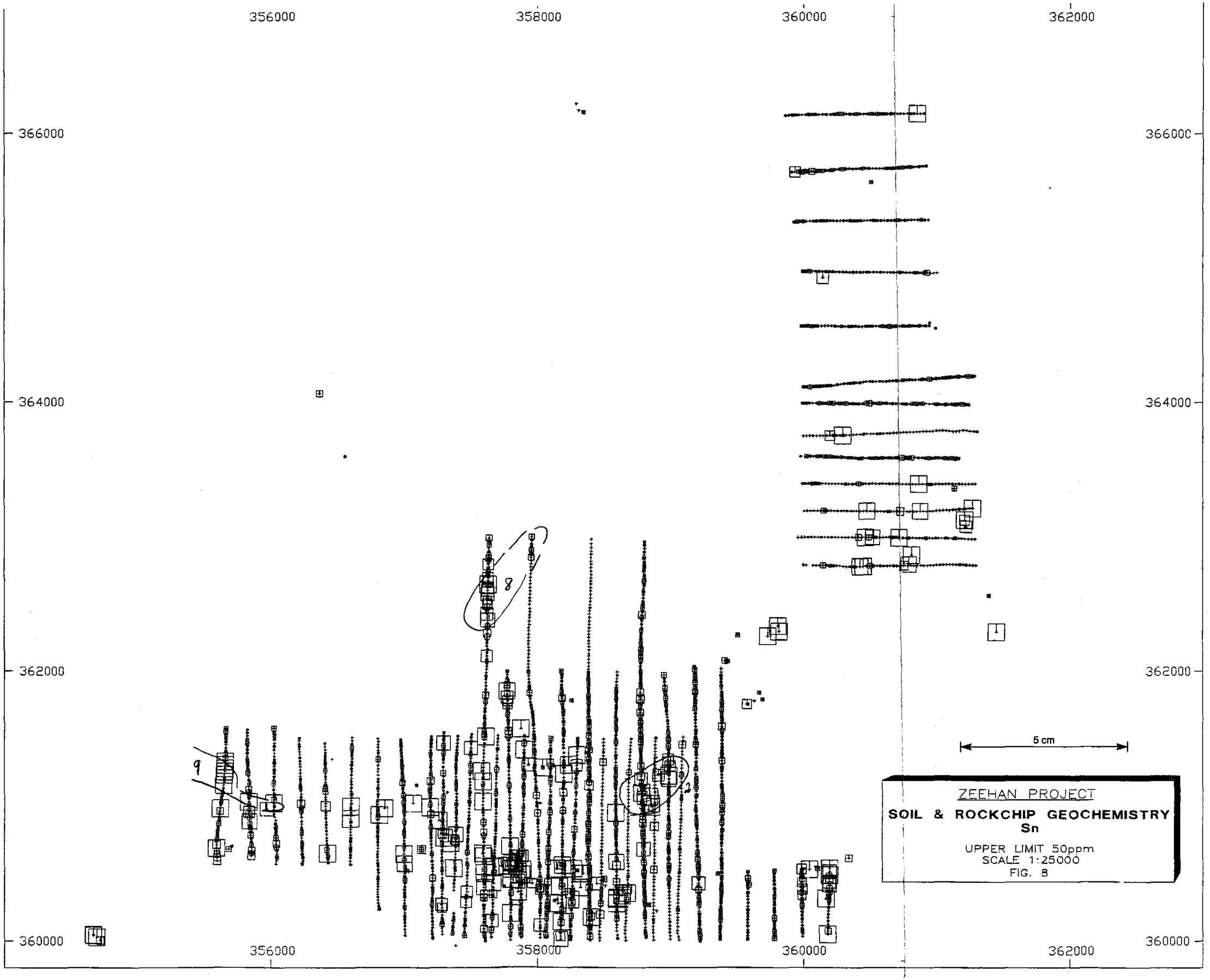
UPPER LIMIT 2500ppm
SCALE 1:25000
FIG. 5


356000
358000
360000
362000
366000
364000
362000
360000
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
Sb
UPPER LIMIT 100ppm
SCALE 1:25000
FIG. 6


356000
358000
360000
362000
366000
364000
362000
360000
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
Au
UPPER LIMIT 0.1ppm
SCALE 1:25000
FIG. 7

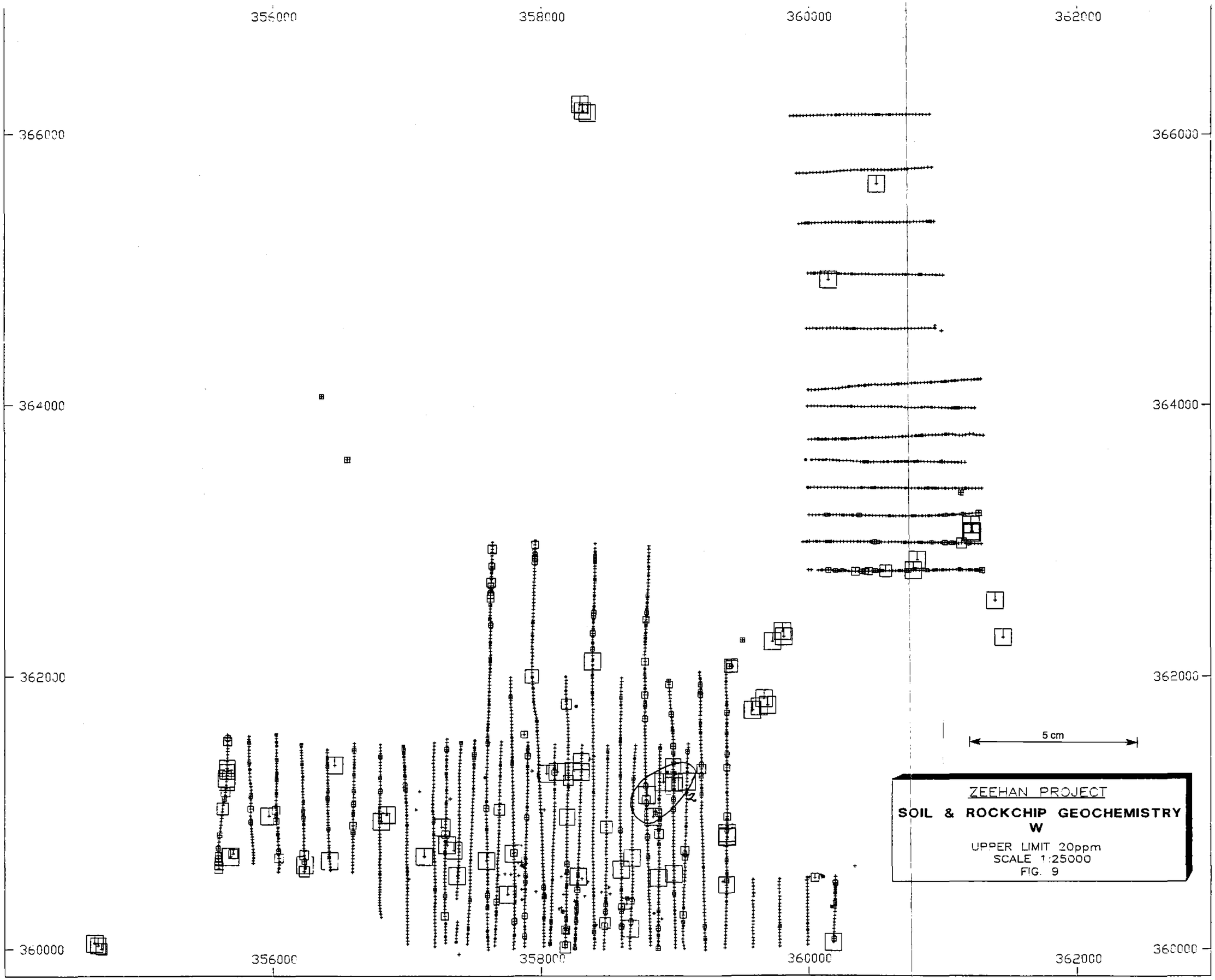
047

130046

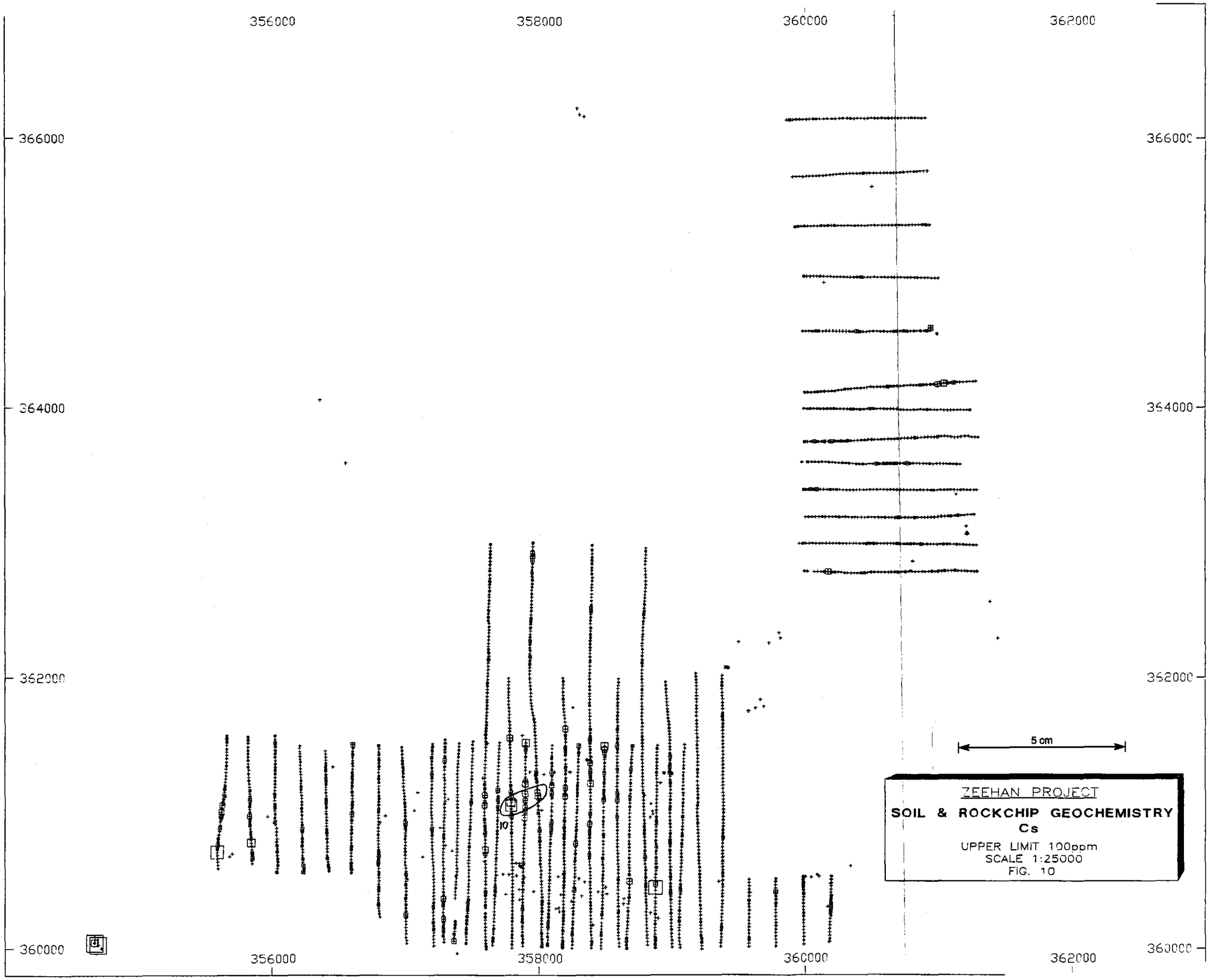

356000
358000
360000
362000
366000
364000
362000
360000
8
9
2
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
Sn
UPPER LIMIT 50ppm
SCALE 1:25000
FIG. 8

940

130049


356000
358000
360000
362000
366000
364000
362000
360000
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
W
UPPER LIMIT 20ppm
SCALE 1:25000
FIG. 9

130050



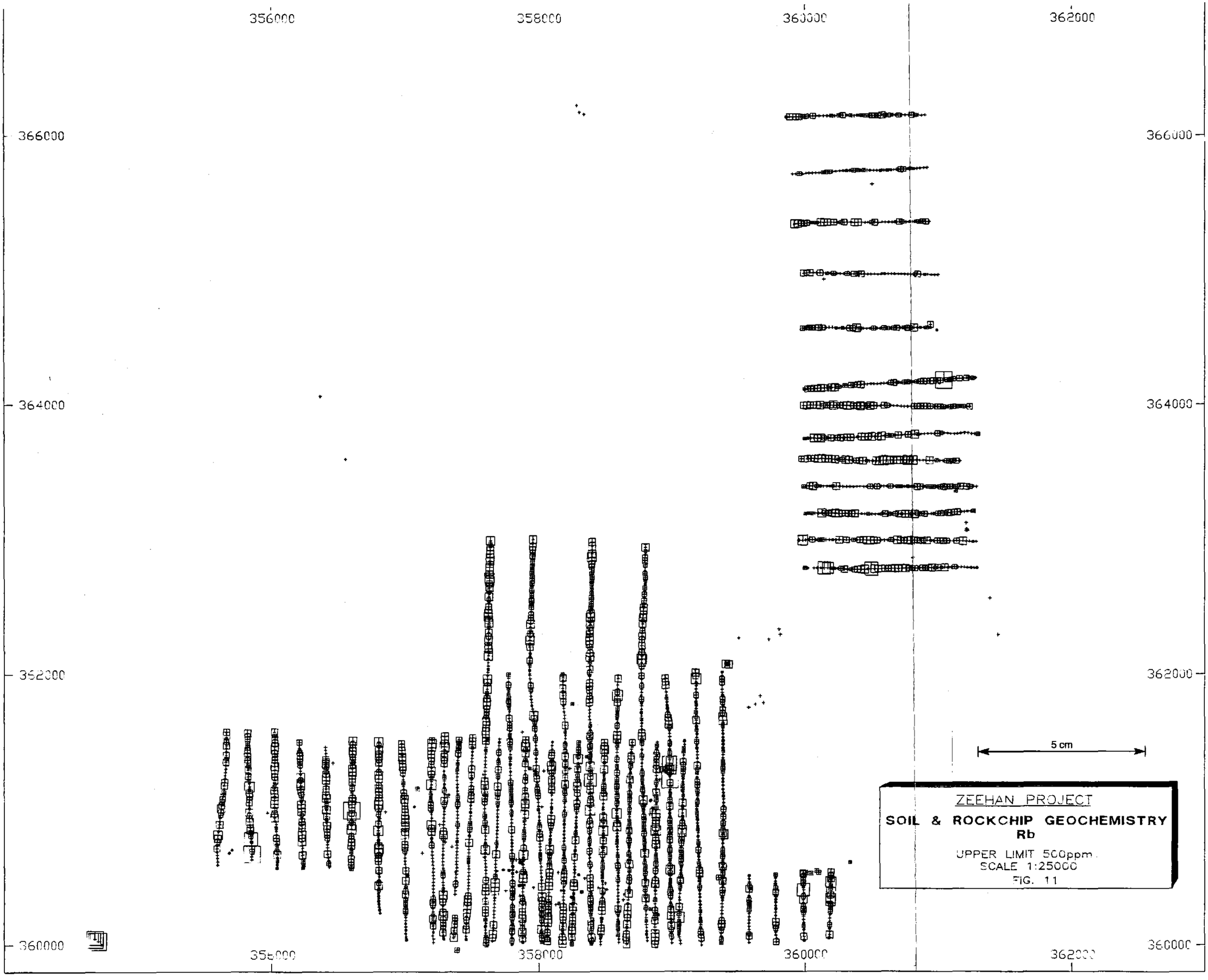
ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY

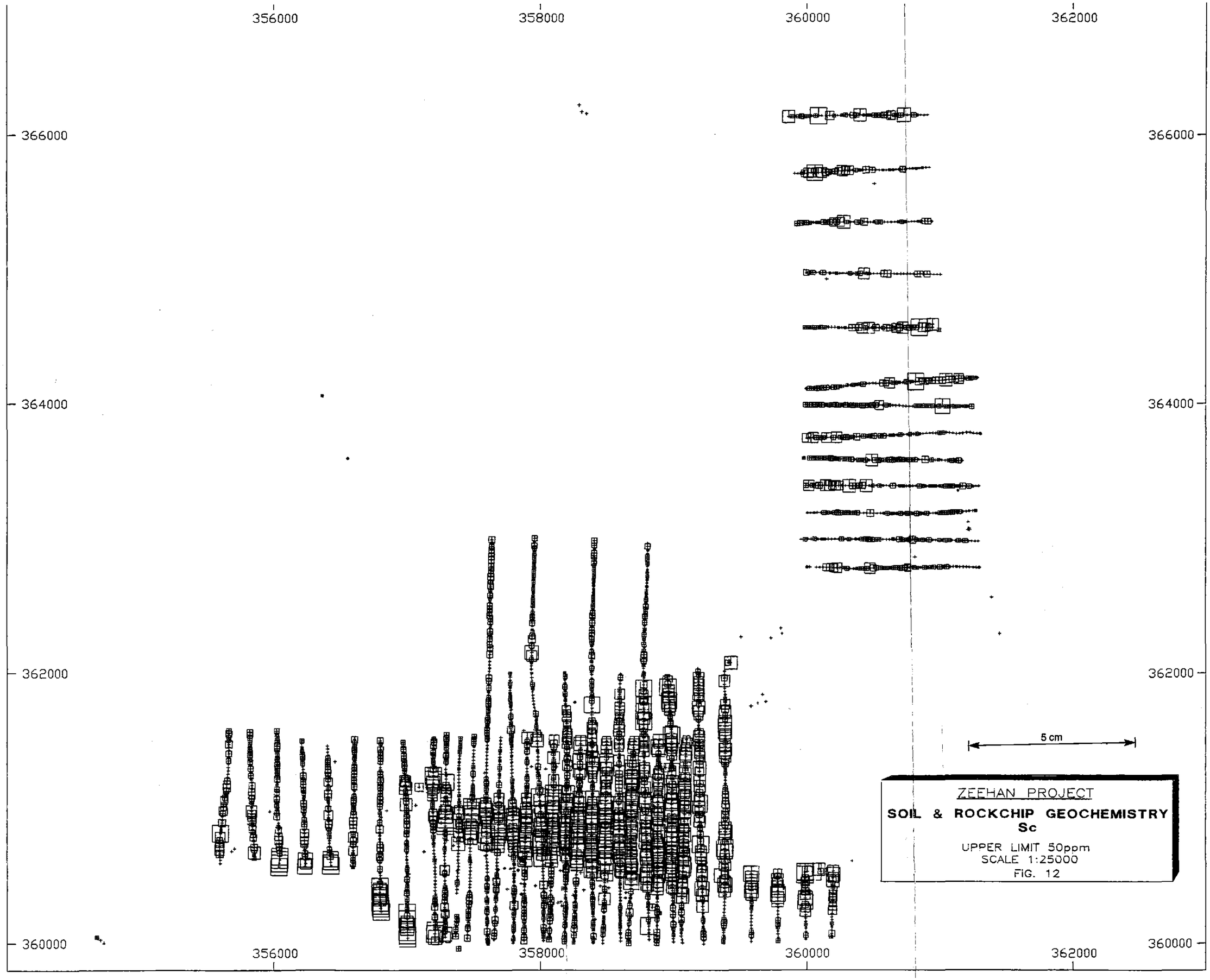
Cs

UPPER LIMIT 100ppm
SCALE 1:25000
FIG. 10

130051


356000
358000
360000
362000
366000
364000
362000
360000
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
Rb
UPPER LIMIT 500ppm
SCALE 1:25000
FIG. 11

130052



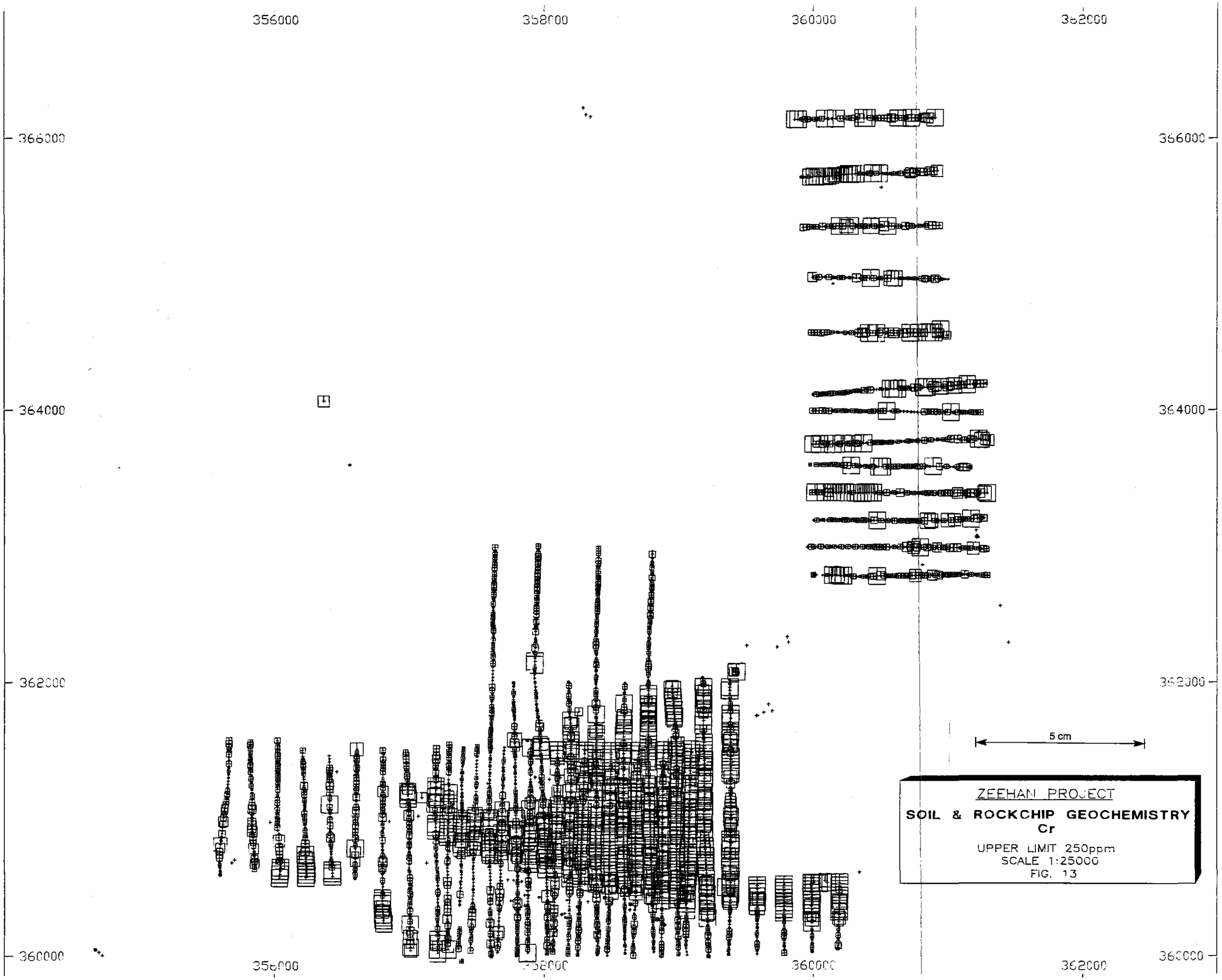
ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Sc

UPPER LIMIT 50ppm
SCALE 1:25000
FIG. 12

052

130053



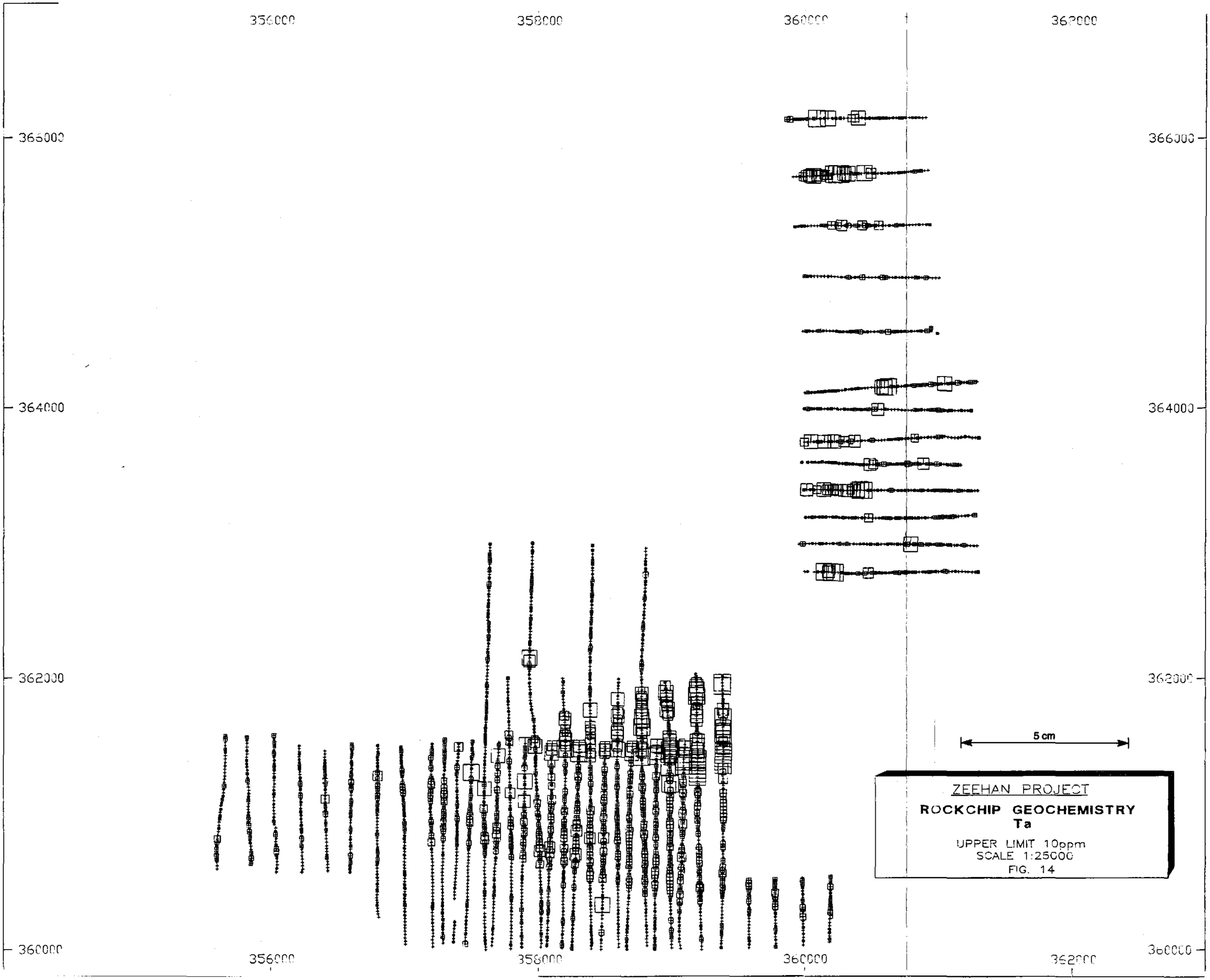
ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Cr

UPPER LIMIT 250ppm
SCALE 1:25000
FIG. 13

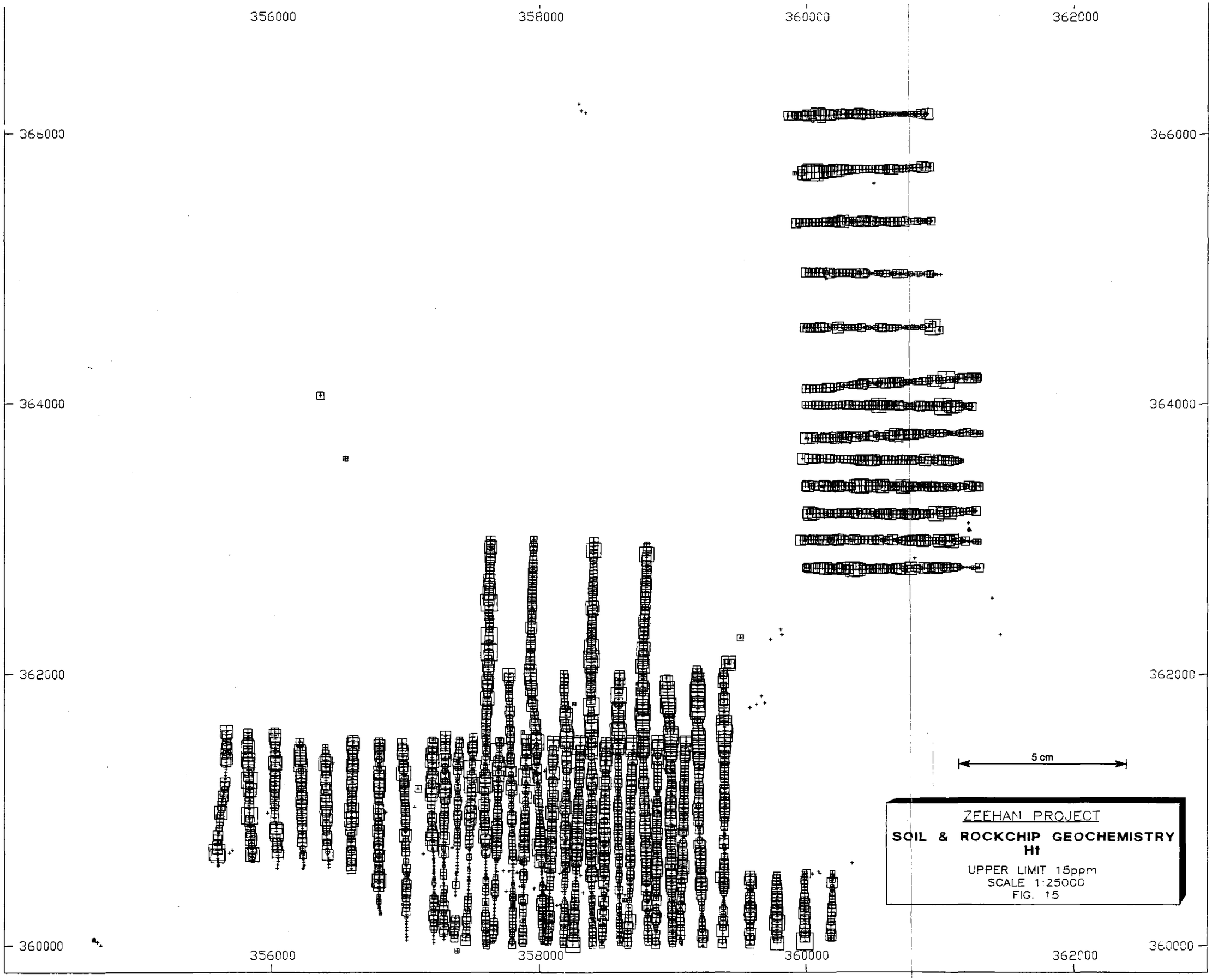
053

130054


356000
358000
360000
362000
366000
364000
362000
360000
5 cm
ZEEHAN PROJECT
ROCKCHIP GEOCHEMISTRY
Ta
UPPER LIMIT 10ppm
SCALE 1:25000
FIG. 14

054

130055


356000
358000
360000
362000
366000
364000
362000
360000
5 cm
ZEEHAN PROJECT
SOIL & ROCKCHIP GEOCHEMISTRY
Hf
UPPER LIMIT 15ppm
SCALE 1:25000
FIG. 15

The use of Cs, Rb and Sc as pathfinders for blind Sn deposits was mostly unsuccessful. In general the distribution of these elements is strongly correlated to host rock lithology as a result of processes such as substitution in micas, masking any variation in abundance due to magmatic hydrothermal processes. However a single Cs anomaly was delineated on the basis of departure from correlation with mica content (as evidenced by the level of K). It is centred on 361150mN/358000mE, trending ENE, (Anomaly 10).

Trace elements were used as an aid to mapping in the Tenth Legion area, where they were successful in delineating gabbros (high Sc, Hf) and carbonates (trace element deficient) in areas of poor outcrop. There was insufficient difference between trace element patterns of the Upper and Lower Oonah Formation to aid in mapping the West Balstrup Fault, which forms the contact between them.

6.1.3 Geophysics (Plans 24-27)

The 1990/91 ground magnetics surveys were successful in completely delineating the main magnetic anomalies present on the Sylvester grid. In the Tenth Legion area, the outcropping magnetite skarns produce sharp anomalies up to 20,000 nT above background levels. With these extreme magnetic gradients, the proton precession magnetometer is at the limits of its resolution. These intense near surface anomalies "drown out" any anomalies due to deeper sources. They are useless except as an aid to mapping the skarns in areas of poor outcrop.

East of Kynance (356000mE), the sharp spikes begin to disappear, and the magnetic landscape becomes dominated by a broad deep sourced anomaly. This anomaly trends ESE as far as about 357500mE where it reaches maximum amplitude, then it trends ESE (100 degrees AMG) to 357500mE beyond which it rapidly attenuates on an E-W trend, finally disappearing beyond 358200mE. It is caused by the magnetite-serpentinite skarn intersected by SY005.

To aid in modelling, orientated samples of magnetite skarn from SY005 were analysed by the CSIRO Division of Exploration Geoscience (Appendix 5). Their study demonstrated strong remnance in the magnetite with a Koenigsberger ratio of 1 (Remnance/Induced Magnetism), and intense remanence in the pyrrhotite with a ratio of 7.7. This means that observed anomalies are dominated by remanence which must be taken into account in modelling the source. Because of the orientation of its remnant magnetism the pyrrhotite actually produces a magnetic component that reduces the observed field. This enables the presence of pyrrhotite to be recognised despite the much greater magnetic susceptibility of the magnetite.

Bruce Wyatt modelled the source using the remnance results as a constraint (Appendix 4). The resultant model explains the source as two tabular bodies, one of pyrrhotite and one of magnetite, inclined N at -75 degrees, with a trend of 100 degrees AMG.

This agrees reasonably well with the observed distribution of magnetite and pyrrhotite in SY005 and SY009, and the mapped trend of the Balstrup Fault and West Balstrup Fault. The model however assumes a sharp cut-off between 357400mE and 357500mE, however the occurrence of extensive disseminated magnetite in SY003 suggests the body continues beyond 357500mE as a more diffuse magnetite skarn centred below the collar of SY003.

Once the component of magnetism estimated as due to this source is subtracted, the residual magnetic field suggests three additional sources:

1) A linear feature 10m wide, 750 metres long trending ENE from 357400mE/360900mN to 359000mE/361050mN. SY004 was drilled to intercept this source at a depth of 150m, but failed to encounter magnetic material. The model was reviewed to account for this, however SY009, drilled subsequently, also failed to intersect it and its source remains unknown. East of 357400mE it correlates closely with the Ꞓc/Po contact.

2) A similar linear feature at shallow depth trends ESE from 357000mE/360650mN to 358000mE/360550mN. This does not coincide with any mapped feature, but may represent a dyke or magnetite vein.

3) A broad feature 300m north of the main anomaly, which can be explained by a 20m wide body with similar magnetic properties and orientation, at a depth of 280m.

East of 358400mE the magnetic landscape is relatively flat with the exception of a number of noisy low amplitude and short wavelength anomalies that may relate to pyrrhotite in veins, similar to the 3.6m wide vein intersected by SY002 that had a remnant core of pyrrhotite surrounded by replacive pyrite as the main gangue. The replacement of pyrrhotite by pyrite is of course a magnetically destructive trend that appears to become more complete with increasing distance from the granite, in the Sylvester grid area.

Some relatively more substantial anomalies at the SE corner of the grid are known from mapping (and drilling by Aberfoyle) to be caused by ultramafic dykes and a non-outcropping gabbro.

The downhole Sirotem and IP logs produced the following results:

SY002; Anomalous TEM results centred at 270m downhole are consistent with the base metal/pyrite intersection at 272.4-276.0m. No "off-hole" anomalies are evident.

SY003; A short-wavelength TEM anomaly centred at 170m downhole appears to be caused by the base metal mineralisation at 148.7-158.2m. It is modelled as a small steeply dipping zone of sulphides west of the hole and plunging north.

A broad "in-hole" anomaly at 350m downhole occurs near a graphitic fault zone within carbonates (360.3-361.4m). The source is modelled as a shallow east dipping sheet, and this is consistent with results from Costean #1. The abovementioned graphitic fault is at 71 degrees to C.A., consistent with such an attitude. Thus the source may be a graphitic thrust, though another source cannot be excluded.

SY004; The TEM detected a broad, weak off-hole conductor which is interpreted to be caused by the pyrrhotite body associated with the magnetite skarn to the SW.

Electric logging (IP and resistivity) by the NSW Mines Department detected anomalies at 78-84m and 177-180m, both of which conform to minor pyrite-pyrrhotite mineralisation in siltstones and mudstones respectively.

The apparent resistivity logs provide some useful lithological information, as they are able to readily distinguish between lithic arenites (200-500 ohm.m) and siltstones/mudstones (500-5000 ohm.m).

SY005; The TEM responses are dominated by the "in-hole" responses of massive pyrrhotite and magnetite. Some of the responses in magnetite are, however, inconsistent with the response expected from magnetite alone. An extension of the conductive

bodies up dip and possibly to the east is inferred, however it is possible that the broad decomposed fault/melange zone traversed by follow-up hole SY008 could account for this apparent conductivity.

Broad responses higher in the hole (at 50m, 100m and 200m) are attributed to graphitic shales intersected by the hole.

In general, the downhole geophysics results tend to support the interpretation based on ground magnetics, with respect to the magnetite-serpentinite skarn and massive pyrrhotite in the Comstock mine area.

6.1.4 Costeaning

Costean #1 intersected significant base metal mineralisation within highly decomposed carbonates and ironstones of the Upper Oonah Formation that form a low rise immediately south of the Balstrup Fault in the vicinity of the Boss mine (Plan 21). The ironstones form discrete moderate to steeply dipping bands that represent decomposed base metal veins including the Boss NW Lode (Twelvetrees, 1901). The brownish, massive, featureless clays are interpreted as decomposed carbonates on the basis of trace element deficiencies (Subsection 6.1.2) and by correlation with SY003, which passes beneath the Costean. Disseminated ferruginous specks and irregular patches are interpreted to be the weathered equivalent of the disseminated mineralisation encountered by SY003 over the interval 167-265m (Crossing, 1990). Visible mineralisation occurs along the entire length of the Costean (150m).

Best intersections are listed below:

	Cu	Pb	Zn	Ag	Sb	Sn	Au
	ppm	%	%	ppm	ppm	ppm	ppb
15E-21E	400	1.9	.04	199	307	400	166
15E-21E (RPT)	509	1.5	.07	308	229	536	214
33E-36E	788	3.4	.05	682	200	824	727
33E-36E (RPT)	380	1.6	.02	173	190	472	185
26W-34W	162	4.9	.86	101	297	159	22
75W-80W	326	3.17	.37	17	99	69	15
75W-80W (RPT)	133	1.58	.38	15	94	50	24

Costean #2 traversed across the Balstrup Fault from the end of Costean #1. The NE half of Costean #1 and all of Costean #2 were situated on low, swampy ground, and base metal mineralisation was associated with recrystallised pyrite as well as ironstone. Although the pyrite is secondary, its gross distribution shows a spatial association with mapped faults and fractures. In Costean #2 it is replacing decomposed carbonate bands in a siltstone sequence. The Balstrup Fault zone is marked by a decomposed carbonate breccia.

The best intersection was:

	Cu	Pb	Zn	Ag	Sb	Sn	Au
	ppm	%	%	ppm	ppm	ppm	ppb
8N-14N	702	.85	.04	88	72	128	16
8N-14N RPT	140	.25	.03	15	57	43	18

Costean #3 was designed to intersect the Balstrup Fault in line with SY003. It failed to intersect any significant mineralisation and it is unclear if a major fault is present in the Costean. The zone of weak pyritic mineralisation in carbonaceous Cc clays at the northern end may correlate with the pyritic fault in Cc intersected by SY003 over the interval 91.1-106.5m (Plan 37). The indifferently bedded greenish-grey fine sediments at the south end were logged initially as Cc turbidites, but based on trace element geochemistry it is probably Po psammo-pelites, with the contact

between Cc and Po occurring at 27S. To the north of this point the samples have elevated Cr, Sc whereas to the west of the level of these elements it sharply reduced and the levels of Rb, K, Sm rise antipathetically. Refer Subsection 6.1.2 for a discussion of lithogeochemical units.

Costean #4 was parallel to #1 and intersected similar lithologies and mineralisation. Visible mineralisation (including disseminated mineralisation) occurs over the first 180m.

Best intersections:

	Cu	Pb	Zn	Ag	Sn	Au
	ppm	%	%	ppm	ppm	ppb
65-69m	142	4.06	2.01	11	77	20
116-123m	188	5.43	.37	63	61	53
171-175m	99	2.87	.35	163	14	30

In both costeans #1 and #4, the best intersections generally coincide fairly closely with bands of ironstone/and occasionally pyrite). However, broad "haloes" of highly anomalous Pb, Zn, Ag extend well beyond these bands, and correlate with mineralisation in the form of ferruginous staining, disseminated ferruginous specks and patches, and disseminated euhedral (secondary) pyrite. For example, the interval 45-65m (20m) averages 1.34% Pb, 0.28% Zn amd 13 ppm Ag.

The Pb: Zn ratio in the costeans generally exceeds 2:1 and often exceeds 10:1. This contrasts sharply with downhole base metal intersections where the ratio is generally around 1:2 (e.g. SY003). Historical records from the old workings in the area also refer to the ore as having a "preponderance of zinc blende" (e.g. Twelvetrees, 1901). An additional feature is that no Pb or Zn minerals were observed. These features suggest that primary base metal sulphides have been leached out by supergene processes, the lead re-deposited more or less in-situ as fine grained sedondary minerals dispersed through the ironstone and clays, and the zinc

mostly removed from the profile in the watertable.

These results are consistent with the expected relative mobility of base metals in highly weathered terrains with acid groundwater. At pH levels below 6.1, Zn is geochemically more mobile than Pb, and below a pH of about 4.5 (depending on the nature of the electrolyte) no secondary Zn minerals are stable although Pb can still precipitate as Anglesite (Mann, 1982). In western Tasmania humus-rich soil processes, pH levels are generally in the range 4-4.5 (Bill Baker-pers. comm.), due to biological production of humic acids. In the Boss mine area the carbonates have been completely decomposed to at least 50m depth and are no longer capable of buffering pH to higher levels. The development of humic complexes of Pb, Zn is also possible, and more work needs to be done to determine how the base metals have been redistributed in the profile and what secondary minerals of Pb have precipitated.

Unfortunately, as a result largely of the failure of SY006 and SY007 nothing is really known about the vertical zonation of base metal grades down to the base of oxidation.

Costeans #5 and #6 were dug across base metal anomalous ironstone sub-parallel to and 20-40 metres south of the Balstrup Fault, in Upper Oonah sediments NW of the Britannia mine. The sequences intersected are dominated by decomposed melange with occasional large boudins of sandstone. This was not anticipated from surface mapping where only sandstone subcrop and scree is visible. The mineralisation in Costean #5 occurs in a steeply dipping brittle fault, but grades are low. In Costean 6 the mineralisation has Pb grades up to 3% in a mineralised zone that appears conformable to the melange fabric (Plan 25). The latter Costean intersects the Balstrup Fault which dips north at about 40 degrees and forms the Po/Єc contact. It is sub-parallel to the melange fabric.

6.1.5 Drilling

SY004 summary log:

0.0-77.1m;	Ꞓc mudstone & lithic arenite
77.1-82.9m;	Ꞓc siltstone (10% replacive Py + Sl-Gl veins)
82.9-156.7m;	Ꞓc mudstone
156.7-293.3m;	Ꞓc mudstone & lithic arenite
293.3-306.2m;	Ꞓc dolomite
	301.9-304.9 Talcose alteration with dissem. Sl-Gl
306.2-343.5m;	Ꞓc siltstone & mudstone

SY004 was designed to test the source of an ENE trending magnetic anomaly, which was anticipated at a depth of 140m. However the hole failed to intersect any magnetic material and remained in Cc turbidites throughout, with only minor base metal mineralisation. The turbidites have a fairly consistent ENE trend and generally dip steeply south. Graded beds exhibit a consistent southerly facing.

SY005 summary log:

0.0-59.6m;	Po shale, graphitic, faulted
59.6-65.8m;	Fault pug
65.8-70.7m;	Po sandstone
70.7-89.8m;	Po shale, highly strained, graphitic
89.9-189.1m;	Po dolomite
189.1-238.9m;	Po shale, graphitic
238.9-256.5m;	Po dolomite
256.5-296.5m;	Fault zone and core loss
296.5-429.1m;	Po dolomite with minor Se, Py, Po, Mg
429.1-454.6m;	Skarn, magnetite-serpentinite
454.6-465.7m;	Po dolomite
465.7-507.4m;	Skarn, magnetite-serpentinite
507.4-514.0m;	Massive sulphide (Po-Qz-Sl-Gl)
	0.28% Cu, 4.17% Pb, 3.60% Zn, 45ppm Ag

514.0-518.0m;	Skarn, magnetite-serpentinite
518.0-535.8m;	Massive sulphide (Po-Py-Sl-Gl)
	0.14%Cu, 3.24%Pb, 3.24%Zn, 12ppm Ag
535.8-551.0m;	Carbonate, partly recrystallised (+Se-Po-Py)
551.0-561.2m;	Massive sulphide & skarn intermixed
561.2-565.0m;	Po mudstone & carbonate
565.0-579.9m;	Rock, intensely silicified (Qz-Cb-Po-Tr)
579.9-586.6m;	Po melange
586.6-666.8m;	Po mudstone, sandstone, minor shale

SY005 was designed to intersect the modelled source of the major magnetic anomaly NW of Comstock mine at a downhole depth of about 300-400m. After passing through a thick sequence of folded but mostly shallow dipping Upper Oonah Formation dolomites and graphitic shales the hole intersected a massive magnetite-serpentinite skarn over the interval 429.1-561.2m (132.1m), with a core zone dominated by massive sulphides over the interval 507.4-561.2m (53.8m). The skarn occurs in the footwall of the faulted contact between the carbonate rich Upper Oonah Formation and the psammo-pelites of the Lower Oonah Formation. The intensely silicified interval 565.0-579.9 is the interpreted position of the fault, which appears to have been annealed by the intense metasomatism. Below this structure, which dips north at about 75 degrees, the hole entered the Lower Oonah Formation. (Plan 31).

Preliminary estimates of true thickness are 38.7m for the overall skarn, which includes a 15.8m thick core zone of mainly massive sulphides and a 22.9m thick outer zone of magnetite-serpentinite. The thickest interval of massive sulphides (518.0-535.8m) has an estimated true thickness of 5.2m.

SY006 summary log:

0.0-6.5m;	Siltstone
6.5-9.5m;	Massive sulphides (secondary Py)
9.5-29.4m;	No recovery
29.4-48.6m;	Sandstone, very low recovery

SY007 summary log:

0.0-16.0m;	No recovery
16.0-24.4m:	Sandstone
24.4-31.2m;	Ironstone
31.2-37.2m;	Sandstone, very low recovery

Both holes were abandoned because of very low core recovery and thus failed to fulfil the aim of determining the distribution of base metal mineralisation in the weathered zone below Costean #1.

SY008 summary log:

0.0-24.5m;	Po Shale, decomposed, & minor sandstone
24.5-55.4m;	Po melange, decomposed, poor recovery
55.4-74.0m;	Po sandstone, shale, decomposed
74.0-84.9m;	No recovery except for minor shale, veining
84.9-92.0m;	Shear zone and veins, poor recovery
92.0-105.6m;	Po melange and veins (Py-Sl-Gl)
105.6-121.6m;	Po sandstone, clay
121.0-139.9m;	Po melange, carbonated, veins (Py-Sl-Gl) inc. 10.9m x 3.68%Pb, 5.81%Zn, 25ppmAg
139.9-177.0m;	Po sandstone, shale interbedded
177.0-193.0m;	Fault, pyritic
193.0-421.0m;	Sandstone, siltstone interbedded

SY008 was a "follow-up" hole designed to test at shallower depth the mineralisation intersected by SY005. Magnetic modelling suggested the top of the body would be intersected at about 300-350m downhole and interpretation from downhole Sirotem in SY005 supported the interpretation that significant mineralisation extended updip from the SY005 intersection. However the hole failed to intersect the skarn.

For the first 139.9m the hole remained in a mixture of decomposed melange, shale, sandstone and clay with very low recoveries (average 25%) in the very difficult ground conditions. This interval is interpreted to represent the major fault that is the hangingwall to the skarn, intersected by the hole at a shallow angle (Plan 31). The "melange" over the interval 121-139.9m, which contains decomposed carbonate fragments, is probably a fault breccia. Below 139.9m the hole enters Lower Oonah psammo-pelites with a distinctive pearly sheen (due to microscale crenulation cleavage) also observed at the bottom of SY005. These display generally low dips (20-60 deg.) but variable dip direction.

The carbonate-rich breccia over the interval 121-139.9 contains significant quantities of sphalerite and galena which appear to consist of disseminated fragments and vein stockworks. However the poor recovery and very broken nature of the core makes positive identification of the morphology of the mineralisation impossible. The quantity of base metal sulphides in core has probably been biased by the tendency of the soft decomposed clayey host rock to break up and be lost in drilling fluid circulation more than the "fresh" hard sulphides.

SY009 summary log:

0.0-101.3m;	Ꞓc mudstone & lithic-arenite, interbedded
101.3-156.6m;	Ꞓc mudstone & siltstone, interbedded
156.6-160.3m;	Ꞓc lithic arenite & mudstone, interbedded
160.3-166.3m;	Po melange
166.3-175.7m;	Po siltstone, sheared
175.7-204.4m;	Po siltstone, variable BCA
204.4-210.7m;	Fault
210.7-338.6m;	Po sandstone & siltstone, interbedded
338.6-376.9m;	Po sandstone & mudstone
376.9-378.7m;	Fault breccia, calcareous
378.7-395.1m;	Skarn & massive sulphides intermixed 0.08% Cu, 0.60%Pb, 1.06%Zn, 9ppm Ag inc. 2.25m x 4.02%Pb, 7.72%Zn, 51 ppm Ag

395.1-528.4m;	Skarn, magnetite, serpentinite, brucite
528.4-535.6m;	Shear zone
535.6-546.1m;	Skarn & massive sulphides intermixed
546.1-581.0m;	Po melange & minor skarn
581.0-582.6m;	Fault
582.6-596.3m;	Po sandstone & siltstone interbedded

SY009 was sited to test the mineralisation intersected by SY005 200m along strike to the east at an estimated depth of 300-450m based on magnetic modelling. The hole traversed steeply NNE dipping and northerly facing Crimson Creek turbidites to 160.3m where the hole traverses a melange with a gradational upper contact that contains shards of Єc (Plate 8). The hole then traversed psammo-pelites of the Upper Oonah (?) before passing through a fault breccia to enter the skarn. The massive sulphide core in SY009 is not as extensive as in SY005, occurring as a number of "lenses" intermixed with magnetite-serpentinite skarn within a zone with an estimated true thickness of 8.6m. The overall skarn (including sulphides) has an estimated true thickness of 85.8m.

There is textural evidence that the pyrrhotite-sphalerite-galena replaces the magnetite clusters, retaining the same morphology, and at the margins pyrite in turn replaces a portion of the pyrrhotite. Between 395.1 and 528.4m (133.3m) the magnetite-serpentinite skarn becomes more intense toward <u>both</u> contacts, and includes significant quantities of brucite ($Mg(OH)_2$ - a source of Mg metal) over the interval 389.7-499.3m (5-20%). Below the skarn the hole traversed melange before passing through a fault to enter Lower Oonah at 582.6m. Once again the Lower Oonah possessed a pearly sheen due to micro-crenulation cleavage.

Attitudes in the Po sediments in the hangingwall of the skarn are generally shallow dipping with variable dip direction except close to the hangingwall where the average dip is approx. 25 degrees NNE.

Cu levels remain fairly constant in the massive sulphides whilst levels of Pb, Zn and Ag vary sympathetically over a wide range. These levels approach economic limits over broad intervals. Highly anomalous W levels occur in the massive sulphides in SY005, but vary independently of Pb, Zn and Ag. Highly anomalous Sn values occur both in the sulphides and adjoining magnetite-serpentinite skarn.

6.2 Parting Lake Grid

6.2.1 Geology

Additional mapping during 1990/91 resulted in only minor changes to the interpretation of the area. The most significant outcome was the discovery of a conglomerate band along the western shore of Parting Lake which consists of boulders derived by erosion of Oonah Formation sandstones. It is conformable to Sc (Crotty Quartzite) and probably represents a basal conglomerate on an unconformity at the base of the Ordovician.

6.2.2 Geochemistry

C-Horizon sampling of the two infill lines at the south end of the grid (3600N, 4000N) detected minor Cu Pb Zn mineralisation associated with known small Ag-Pb-Zn vein workings. Additionally a cluster of high Pb (Cu Sb Au) values occurs on line 4000N just east of the baseline in an area devoid of outcrop and old workings. They do not occur on neighbouring lines, and probably relate to minor base metal veining in Oonah Formation psammo-pelites.

No Sn or W mineralisation was detected and no other useful information was derived from the additional sampling.

6.3 Regional

6.3.1 Geology

Stereographic analysis of over 550 bedding readings from the Oonah Formation show that ESE-WNW Devonian folds dominate the sequence north of the Balstrup Fault (Figure 16). The readings indicate an average fold axis plunge of 30 degrees toward 100 degrees AMG (Lower Oonah) and 46 degrees toward 097 degrees (Upper Oonah). Average cleavage orientation is axial planar, and is vertical, trending 112 degrees AMG (Figure 17). Measurements of axes of small scale folds confirmed two sets of folds, one conformable to the abovementioned folds, and a second set with average fold axes plunge of 54 degrees toward 041 degrees AMG.

There is a reasonably wide spread of data in all the Oonah readings, a result of earlier phases of deformation. This is somewhat more obvious in measurements in the Upper Oonah.

Over 150 bedding readings of the Upper Oonah Formation south of the Balstrup show a wide spread of attitudes, with an average dip of 16 degrees SE (Figure 18). This contrasts with the steeper dips to the north, indicating a separate structural domain. No consistent pattern of folding is indicated, although the data is consistent with open fold axes plunging at 20 degrees NE, and 40 degrees E. Good fold axis and cleavage measurements were not available.

75 bedding readings of Cambrian sediments (mostly Crimson Creek Formation) give indication of a fold axis plunging approximately east, but insufficient data is available to be conclusive. (Figure 19).

A total of 307 readings of fault and fracture surfaces gave indication of four main fault sets (Figure 2D). Dominant conjugate sets "A" and "B" indicate a principal stress direction plunging 45 degrees NW, and oblique slip displacement. The faults of the principle set (A) trend NW-SE and dip at 58 degrees NE. This set includes most of the major faults, such as the Sylvester, Balstrup etc., and the indicated displacement is sinistral, and northern block down (i.e. oblique slip). Shear trends are sub-parallel to this major fault orientation (Figure 21).

Also apparent in these results are shallow dipping faults (Set D) which have an average trend SSW (217 degrees) and dip 52 degrees SE. The well exposed Post-Permia faults at Montana SL trend south and dip 45 degrees east (Figure 22).

Attitudes of the fabric of the Upper Oonah melanges were also measured, mostly south of the Balstrup Fault. Two principal attitudes are present (Figure 23). One set (Set A) broadly conformable to the host rocks, the other is sub-vertical trending 122 degrees AMG. The latter is indicative of development of a secondary fabric during Devonian deformation.

Airphoto interpretation and reconnaissance mapping of Oonah sediments in the Heemskirk Anticlinorium outlined a series of major folds with ESE plunging fold axes. These folds have a wavelength of about 1-1.5km and the axial planes are inclined northward. These folds are reflected in the Stereoplots of Figures 16, 17. More complex folding is observeable in the Upper Oonah NE of Oonah Hill, where earlier easterly to ESE trending fold axes are refolded around a N-S trending axis.

Evidence of facing is rare in the Oonah Formation, and only two unambiguous facings were found. Both indicated overturned bedding (Plate 20).

6.3.2 Gravity

The interpretation of existing GRAVITY data by Dr. Leaman (Appendix 6) has provided a more detailed model of the form of the Heemskirk granite than previously available, as a result of the many extra gravity stations now publically available. In general the granite surface is fairly smooth with the exception of three significant features;

1) A north-south trending ridge west of Zeehan with a culmination at each end, one below Queen Hill and the other NE of the Zeehan Western mine.

2) An east-west trending "rib" along 5364000mN, plunging to the east.

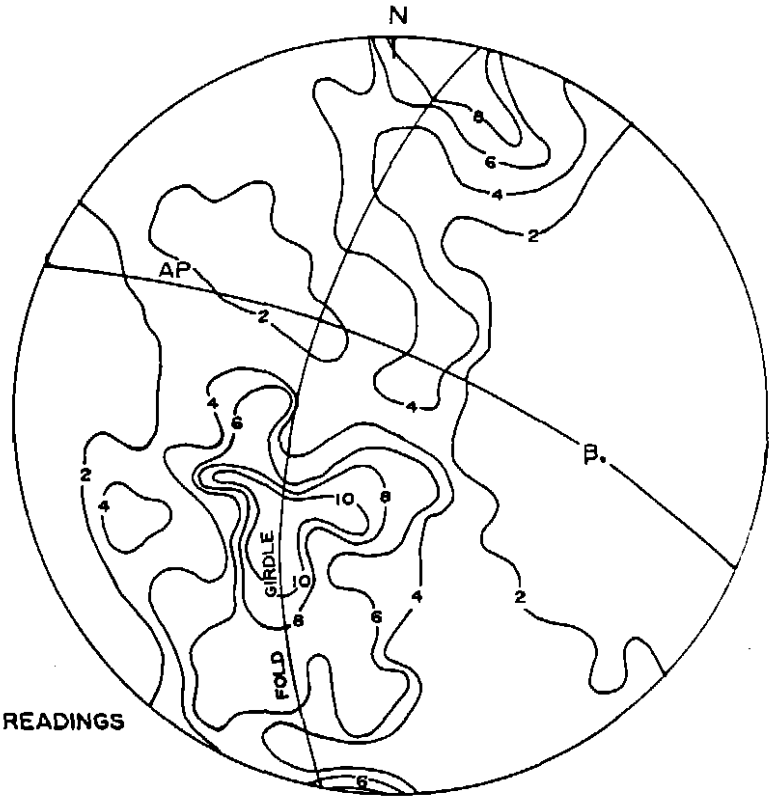
3) An east-west trending "rib" along 5362500mN, with a culmination east of the Doric mine.

Comparing the modelled granite form to the geological interpretation it can be seen that the two "ribs" run parallel to and slightly north of E-W trending anticlinal fold axes in the Lower Oonah Formation. These fold axes, which plunge steeply north, probably influenced the form of the granite during intrusion.

The culmination below Queen Hill is centred on the tin deposits outlined by Aberfoyle's drillholes, and on a weak magnetic anomaly with a deep source (Anderson 1989). The second culmination on this ridge occurs at the south end of the Parting Lake grid, beneath an area that has not been drilled. Both culminations occur in the nose of the Heemskirk Anticlinorium.

072

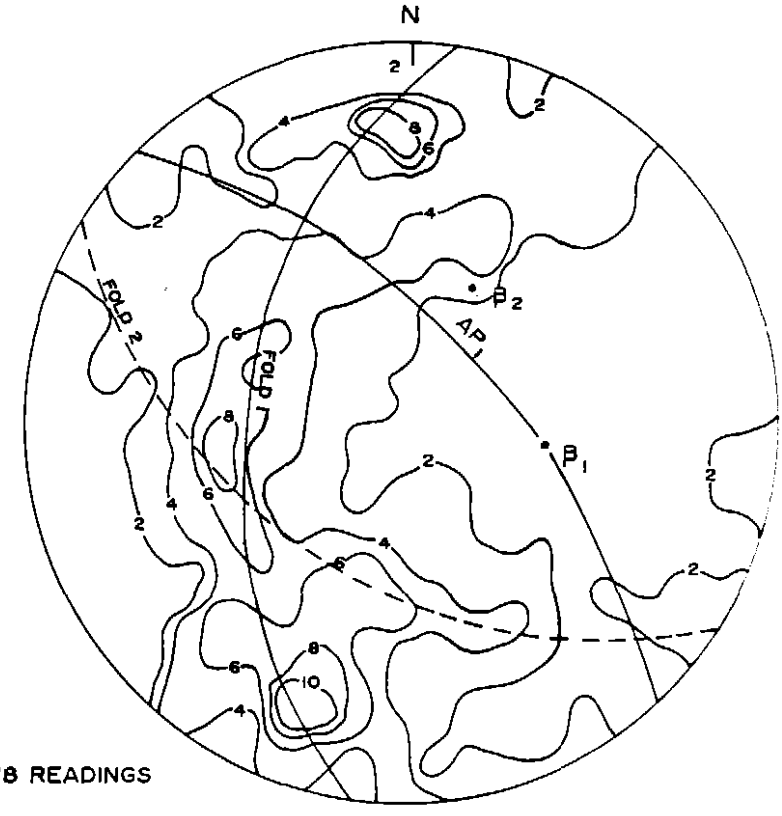
130073



LOWER OONAH FM. NORTH OF BALSTRUP FAULT

Average fold axis (β);
30→100° AMG
(Heemskirk Anticlinorium)

Axial Plane (AP); 70.113° AMG



UPPER OONAH FM. NORTH OF BALSTRUP FAULT

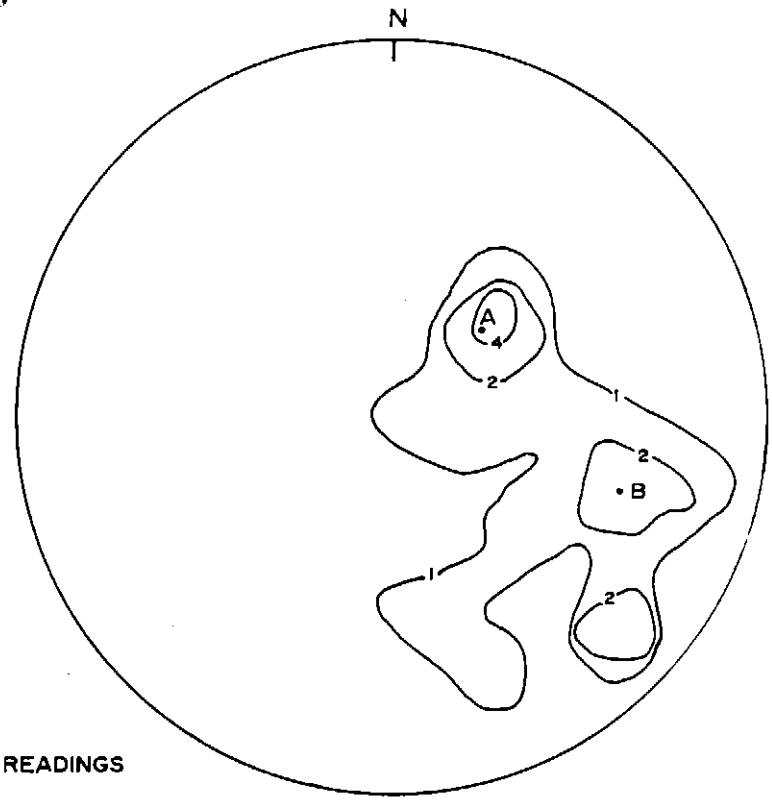
Fold 1: Average fold axes (β_1)
46→097 (Heemskirk Anticlinorium)
Axial Plane (AP_1) 60.134

Fold 2: Average fold axes (β_2)
44→028
Not well developed

5 cm

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
COMPILED		ZEEHAN AREA POLES TO BEDDING
DRAWN	J.B.	
DATE		
CHECKED		
1:250,000 Reference		
BASE PLAN No 5521/092	SCALE	FIG 16

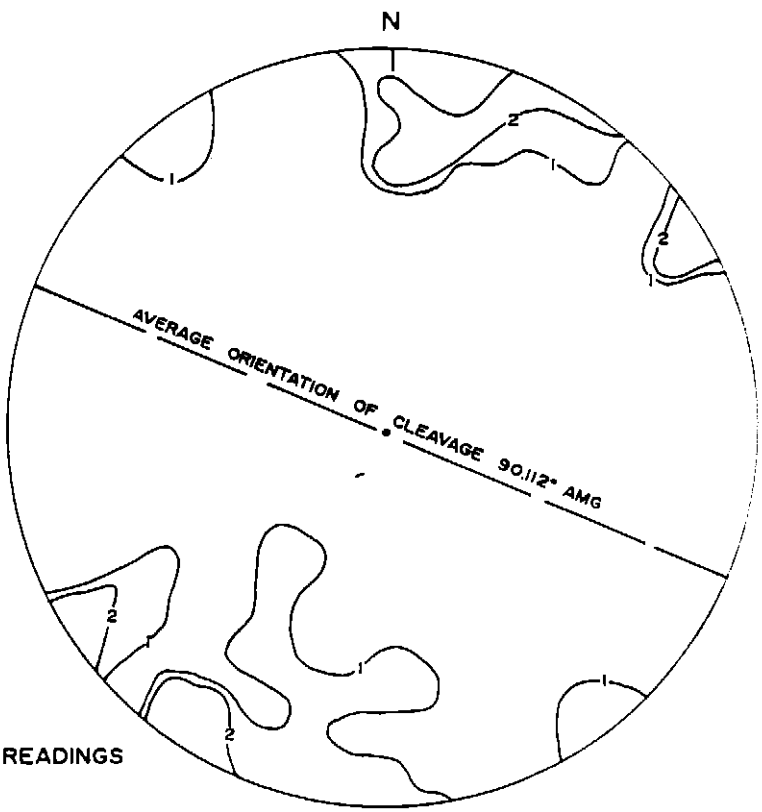
130074



27 READINGS

OONAH FM. NORTH OF BALSTRUP FAULT FOLD AXES

Average fold axes A: 54:041
B: 22→108



26 READINGS

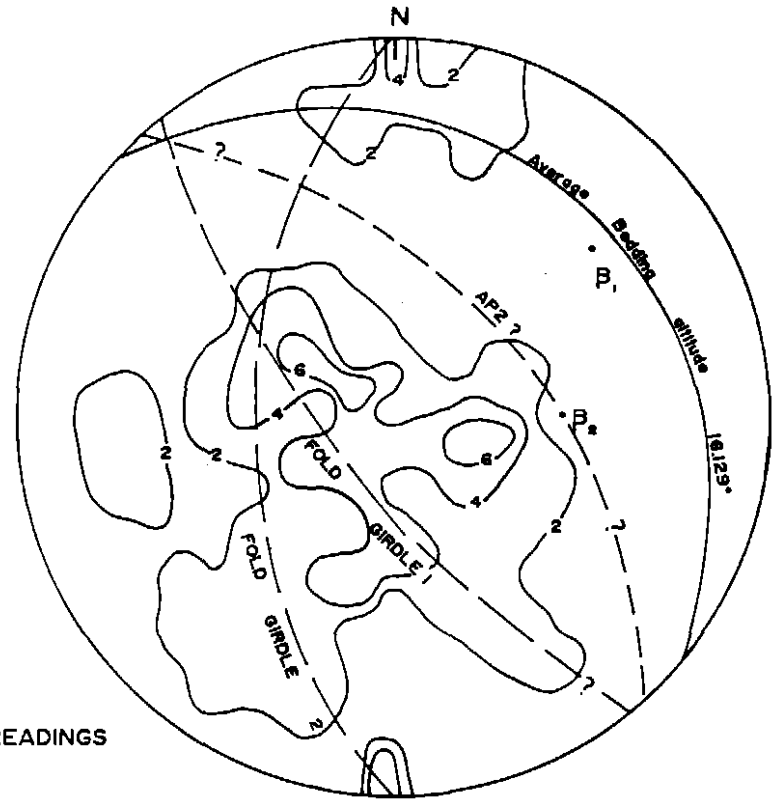
POLES TO CLEAVAGE NORTH OF BALSTRUP FAULT

5 cm

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES			
	COMPILED		ZEEHAN AREA
	DRAWN	J B	
	DATE		
	CHECKED		
	1:250,000 Reference		
BASE PLAN No. 5521/093	SCALE		FIG 17
OVERLAY PLAN No.			

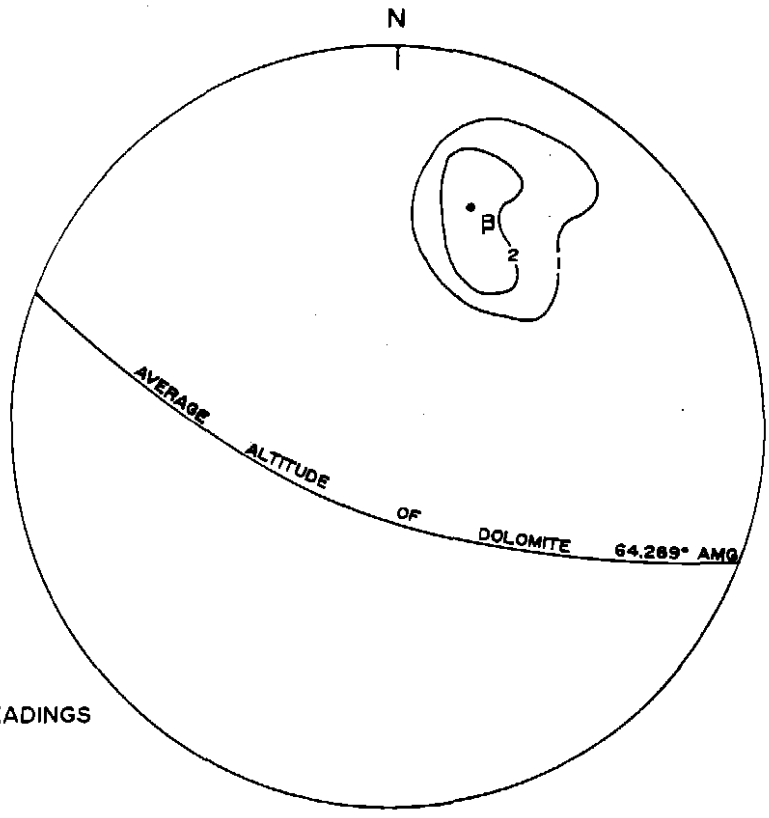
074

130075



UPPER OONAH FM. SOUTH OF BALSTRUP FAULT

Average Bedding Altitude 16.129°
Poorly designed Open Folds ? –
β_1 20→050° ? AMG
β_2 40→090° ? AMG
AP_2 50.135 ?



UPPER OONAH CARBONATES SOUTH OF BALSTRUP FAULT

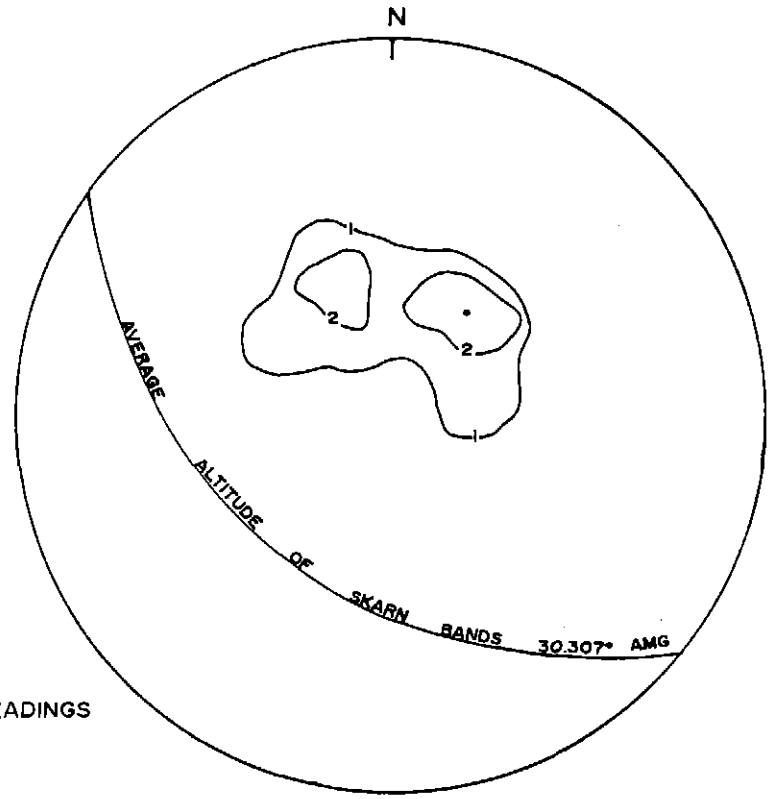
5 cm

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
	COMPILED	
	DRAWN	J.B.
	DATE	
	CHECKED	
	1:250,000 Reference	
BASE PLAN No. 5521/094	SCALE	FIG 18
OVERLAY PLAN No.		

ZEEHAN AREA
POLES TO BEDDING

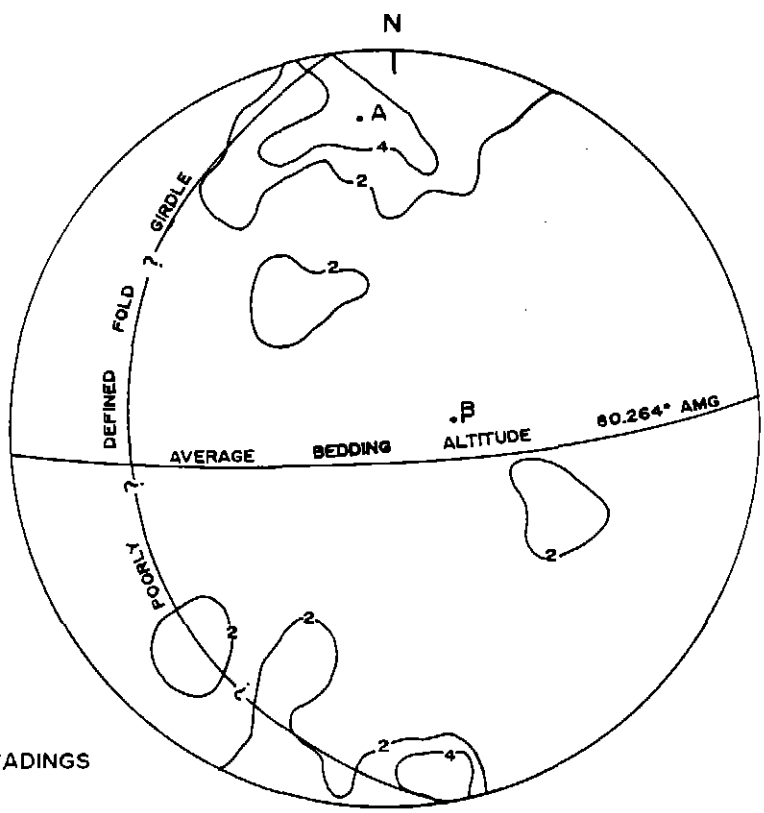
070

130076



16 READINGS

SKARN BANDS IN UPPER OONAH
SOUTH OF BALSTRUP FAULT



75 READINGS

CAMBRIAN SEDIMENTS/TURBIDITES

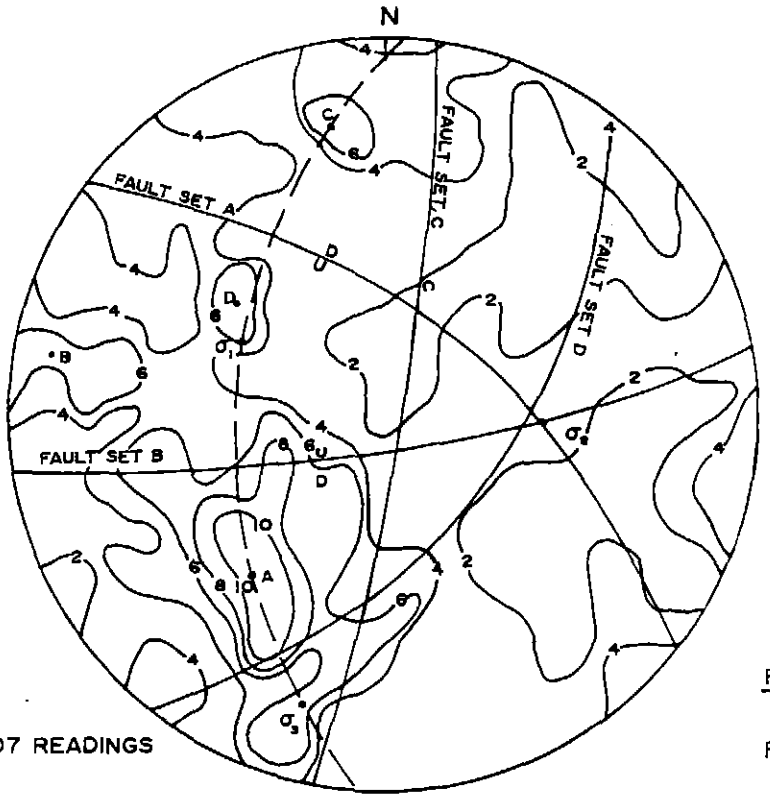
Average Bedding Altitude 80.264° AMG
Poorly designed fold axis (β) —
80 → 080° AMG

5 cm

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES			
	COMPILED		ZEEHAN AREA POLES TO BEDDING
	DRAWN	J.B.	
	DATE		
	CHECKED		
	1:250,000 Reference		
BASE PLAN No. 5521/095		SCALE	FIG 19
OVERLAY PLAN No.			

070

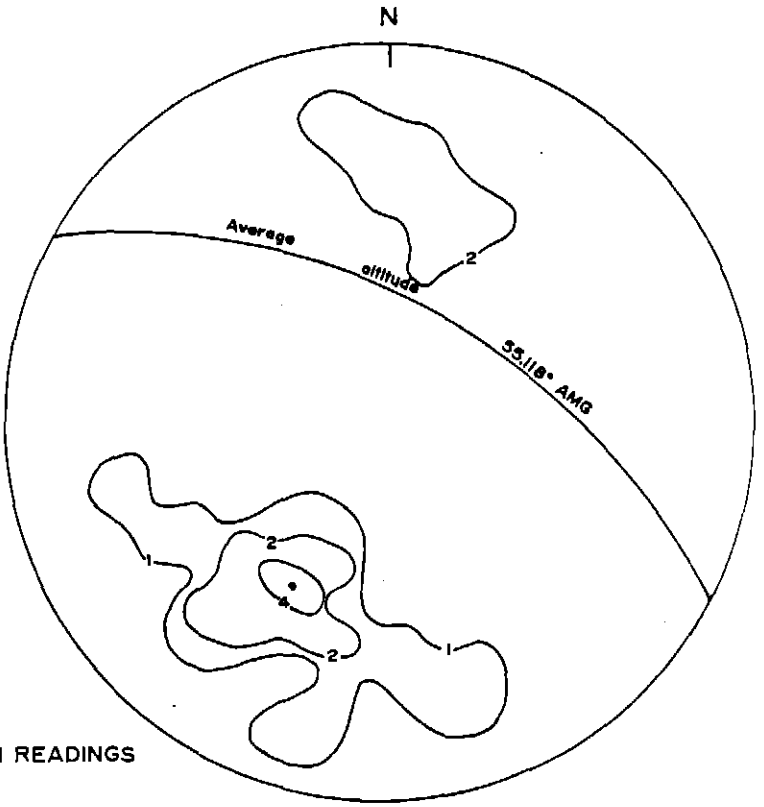
130077



POLES TO FAULTS / FRACTURES

Fault Set A 58.126° AMG (NE) } conj.
B 87.260° AMG (S) }
C 84.188° AMG (E)
D 52.217 AMG (SE)

σ_1 is principal stress direction for conjugates A & B



POLES TO MAJOR FAULTS

Major fault altitude 55.118° NE

5 cm

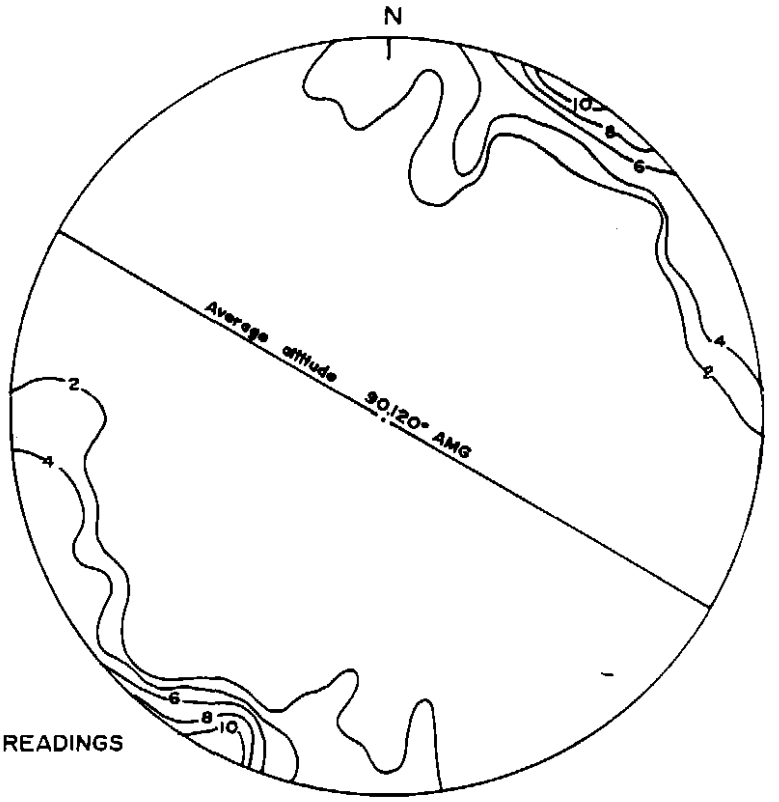
RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
	COMPILED	
	DRAWN	J.B.
	DATE	
	CHECKED	
	1:250,000 Reference	
BASE PLAN No. 5521/096	SCALE	
OVERLAY PLAN No.		

ZEEHAN AREA

FIG 20

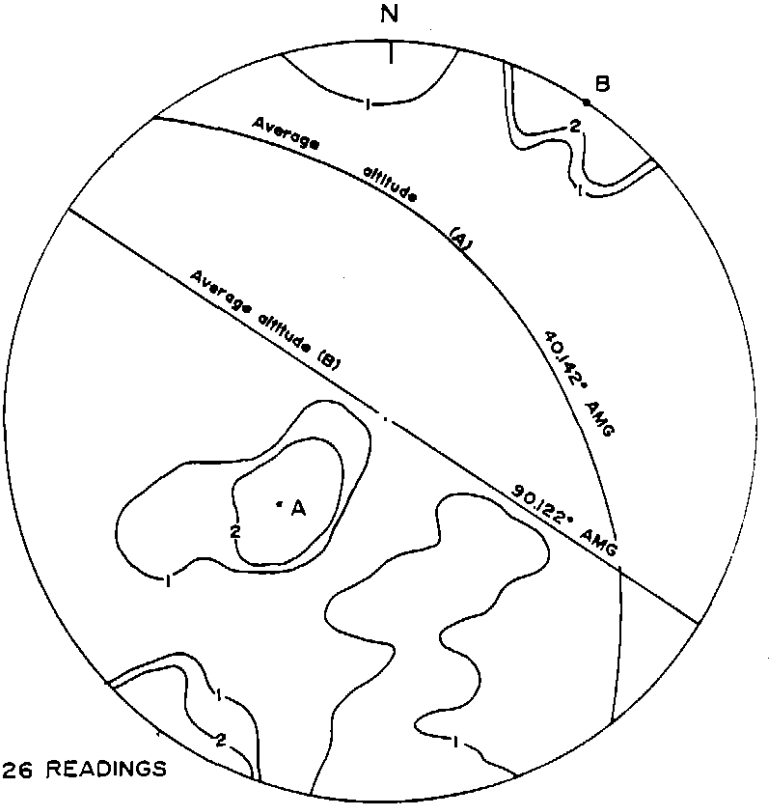
077

130078



80 READINGS

POLES TO SHEAR FABRIC



26 READINGS

POLES TO UPPER OONAH MELANGE FABRIC

NOTE: Insufficient data

5 cm

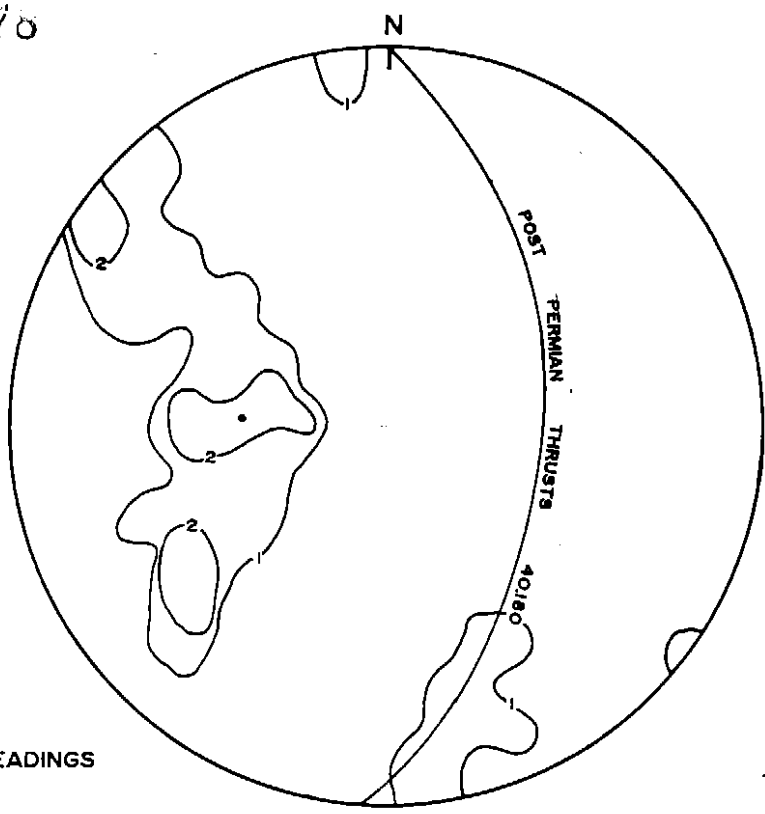
RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
	COMPILED	
	DRAWN	J.B
	DATE	
	CHECKED	
	1:250,000 Reference	
BASE PLAN No 5521/097	SCALE	
OVERLAY PLAN No		

ZEEHAN AREA

FIG 21

070

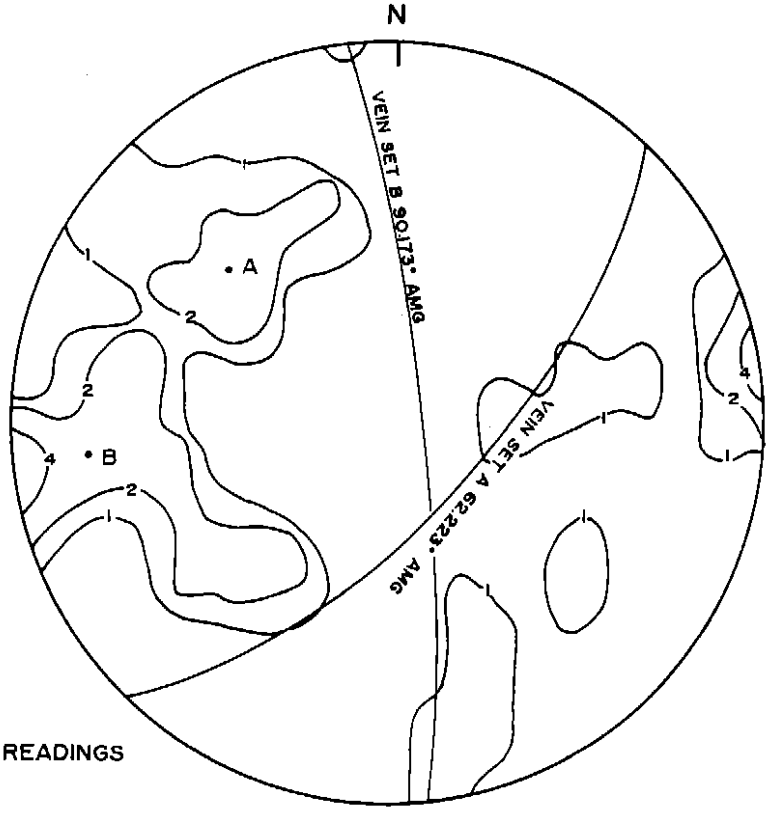
130079



31 READINGS

BARNETTS/MONTANA S.L.

POLES TO POST-PERMIAN THRUST FAULT



50 READINGS

ZEEHAN AREA

POLES TO VEINS/LODES

A : 62.223 SE
B : 90.173

5 cm

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES			
	COMPILED		ZEEHAN AREA
	DRAWN	J.B.	
	DATE		
	CHECKED		
	1:250,000 Reference		
BASE PLAN No 5521/098	SCALE		FIG 22
OVERLAY PLAN No			

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Sylvester Grid

The most significant result of the work completed to date on the Sylvester Grid has been the identification of a large, deep seated skarn complex hosted by Upper Oonah Formation carbonates in the immediate footwall of the Balstrup-Balstrup West fault system. A strike distance of 1.5km from the Kynance mine to North Comstock is indicated by magnetic data, with the potential for substantial (untested) down dip extent.

The main magnetite-serpentinite skarn is modelled as a steeply dipping tabular body about 50 to 100m thick, divided by cross-faults into two segments with similar attitudes but with tops at depths varying from 240m to 360m. At the distal eastern end, this skarn appears to have a diffuse margin, passing eastward into recrystallised carbonate with very patchy magnetite mineralisation in the Boss mine area east of Comstock mine. Assuming an average density of 3.7 g/cc and width of 50m, the modelled body would contain 27,750,000 tonnes of skarn for every 100m of vertical height.

The lateral extent of the massive pyrrhotite-pyrite-sphalerite-galena mineralisation that constitutes the core of this skarn where intersected by SY005 and SY009 cannot be predicted at this stage of exploration. The strong magnetic resonance of the pyrrhotite has an observable effect on the total field intensity which can be modelled, and based on this the pyrrhotite core is interpreted as having the same areal extent as the enclosing magnetite-serpentinite skarn. However this interpretation is based on a <u>single</u> pyrrhotite sample measured for resonance, and should not be relied on until confirmed by further drilling.

The massive pyrite-sphalerite-galena mineralisation encountered in the Boss mine area by SY003 occurs at the same stratigraphic/structural position as the massive sulphides

intersected by SY005 and SY009, and possibly represents a lateral extension of the latter beyond the limits of the main magnetite-serpentinite skarn. It is also highly probable that the numerous large base metal veins and ironstones outcropping in the footwall of the Balstrup Fault east of Comstock mine are genetically related to the skarn complex. The Pb-Zn-Ag (Au, W) anomaly associated with this latter mineralisation is 200-300m wide and extends 1.5km eastward from the eastern limit of the magnetite-serpentinite skarn.

The Comstock-Tenth Legion skarn complex has been compared with the numerous base-metal and magnetite skarns mentioned in the literature of skarn deposits. The main magnetite-serpentinite skarn complex is in most respects typical of dolomite hosted (magnesian) magnetite skarns, however although such skarns typically contain low levels of Zn, the association with massive pyrrhotite-pyrite-sphalerite-galena is unusual. This is because Pb-Zn skarns worldwide are nearly always hosted by limestones (Einanldi, 1981). Table 1 summarises skarn deposit types and Table 2 provides a comparison between the Comstock-Tenth Legion skarn and other base metal skarns.

Aided by a comparison of skarn morphology and mineralogy with other skarns for which the paragenetic sequence has been determined, the following paragenetic sequence is postulated for the Comstock-Tenth Legion skarn:

1) During the Devonian, the area was intruded at depth by the Heemskirk granite. Essentially isochemical contact metamorphism accompanied the intrusion, producing an aureole of hornfelsed psammo-pelites and calc-silicate marbles within about 1km of the contact (west and SW of Tenth Legion).

2) During crystallisation, magmatic derived hydrothermal fluids rose along the pluton margins and migrated outward along lithological contacts, fissures and pre-existing faults (Balstrup/Tenth Legion). Interaction with Upper Oonah

Formation dolomites/limestones during prograde metasomatism produced magnesian exoskarns characterised by Diopside-Andraditic Garnet-Actinolite-Chlorite. This mineralogy was noted in SY001 (Crossing, 1990) and in skarns south of Tenth Legion (Dickson, 1981). No sulphides accompanied this phase.

3) Toward the end of prograde metasomatism, magnetite deposition began, replacing Upper Oonah dolomites in the contact aureole and along the West Balstrup Fault. Magnetite deposition was accompanied by serpentinite, talc and minor amounts of low-sulphur sulphides (Po, Cpy). Patchy Sn, W mineralisation may have accompanied this stage. Early skarns are overprinted.

4) During retrograde metasomatism, magnetite-serpentinite deposition peaks then begins to wane. The main period of sulphide deposition begins, associated with retrograde alteration of early skarn assemblages. Massive pyrrhotite-sphalerite-galena replaces the core of the magnetite-serpentinite skarn immediately adjacent to the West Balstrup Fault and extends beyond this skarn into marble east of Comstock mine. The sulphide deposition is strongly controlled by the Balstrup fault system, which is still active, and sulphides precipitate as a result of declining temperatures, local redox reactions and neutralisation of hydrothermal fluids at the marble interface. The hydrothermal fluid involved is probably a mixture of magmatic and meteoric fluids, and base metal zonation occurs as a consequence of early precipitation of chalcopyrite in the Kynance area, with consequent relative enrichment in Pb Zn which are precipitated more distally.

During the same general time frame, genetically related distal base metal veins develop selectively in marbles east of Comstock mine as a consequence of competency contrast between the marbles and surrounding pelites and non-crystalline carbonates. The continued movement of the Balstrup fault provided structural preparation.

TABLE 1. Comparison of Major Skarn Types

Type	Calcic Fe	Magnesian Fe	Calcic W	Calcic Cu	Calcic Zn-Pb	Calcic Mo	Calcic Sn	Magnesian Sn
Relative abundance (number of examples listed in text)	Abundant (20)	Abundant (8)	Abundant (54)	Abundant (43)	Abundant (51)	Very rare (14)	Rare (14)	Rare (14)
Size: largest known (million tons ore)	Sarbai, U.S.S.R., 725 m.t., 47% Fe	Sherogesh, U.S.S.R., 234 m.t. 35% Fe	MacMillan Pass, Canada, 63 m.t., 0.95% WO_3	Twin Buttes, Ariz., 500 m.t., 0.8% Cu	Naica, Mexico 10 m.t., 10% Zn, 13% Pb, 13 oz/ton Ag	Little Boulder Creek, Idaho, 0.15% MoS_2	Moina, Tasmania 30 m.t., 0.15% Sn	?
Typical size	5–200 m.t.	5–100 m.t.	0.1–2 m.t.	1–100 m.t.	0.2–3 m.t.	0.1–2 m.t.	0.1–3 m.t.	1 m.t.
Typical grade	40% Fe	40% Fe	0.7% WO_3	2% Cu u.g., 1% Cu o.p.	9% Zn, 6% Pb, 5 oz/ton Ag			
Metal association (minor metals)	Fe (Cu, Co, Au)	Fe (Cu, Zn)	W, Mo, Cu (Zn, Bi)	Cu, Mo (W, Zn)	Zn, Pb, Ag (Cu, W)	Mo, W (Cu, Bi, Zn)	Sn, F (Be, W)	Sn, F (Be, B)
Tectonic setting	Oceanic island arc; rifted continental margins	Continental margin; synorogenic	Continental margin; syn-orogenic to late orogenic	Continental margin; syn-orogenic to late orogenic	Continental margin; syn-orogenic to late orogenic	Continental margin; late orogenic	Continental margin; late orogenic to postorogenic	Continental margin; late orogenic to postorogenic
Associated igneous rocks								
Intrusive rock composition	Gabbro to syenite, mostly diorite, some with diabase	Granodiorite to granite	Quartz diorite to quartz monzonite; rarely alaskite	Granodiorite to quartz monzonite; rarely monzonite	Granodiorite to granite; diorite to syenite	Quartz monzonite to granite	Granite	Granite
Co-genetic volcanics	Common: basalt, andesite	Absent	Absent? (eroded)	Common: andesite	Absent?	Absent	Mostly absent	Mostly absent
Intrusive texture	Medium to fine grained; equigranular	Medium to fine grained; equigranular	Coarse to medium grained; porphyritic	Medium grained to aphanitic; porphyritic	Coarse grained to aphanitic; equigranular to porphyritic	Coarse to fine grained; equigranular to porphyritic	Coarse to fine grained; equigranular to porphyritic	Coarse to fine grained; equigranular to porphyritic
Intrusive morphology	Large to small stocks, dikes	Small stocks, dikes, sills	Large batholithic plutons	Stocks, dikes	Large stocks to dikes	Stocks	Stocks, batholiths	Stocks, batholiths
Intrusive alteration	Na-silicates, extensive endoskarn	Minor endoskarn; propylitic	Endoskarn; local mica calcite pyrite	K-silicate, sericitic, local endoskarn	Extensive endoskarn	Quartz veins; K-silicate	Greisen	Greisen
Mineralogy:								
Prograde	Grandite, salite, ferrosalite, epidote, magnetite	Forsterite, calcite, spinel, diopside, magnetite	Grandite/spessartine-almandine garnet, hedenbergitic pyroxene, idocrase, wollastonite	Andraditic garnet, salitic pyroxene, local wollastonite	Johannsenitic pyroxene, andraditic garnet, bustamite, local idocrase	Hedenbergitic pyroxene, grandite garnet, quartz	Malayaite, danburite, datolite, grandite, idocrase	Spinel, fassaite, forsterite, phlogopite, magnetite, humite, ludwigite, paigeite
Retrograde	Amphibole, chlorite (ilvaite)	Amphibole, humite serpentine, pholgopite	Hornblende, biotite, plagioclase, epidote	Actinolite, chlorite, montmorillonoids	Mn-actinolite, ilvaite, epidote, chlorite, danburite	Amphibole, chlorite	Amphibole, mica, chlorite, tourmaline, fluorite	Cassiterite, fluoborite, magnetite, micas, fluorite
Ore	Magnetite (chalcopyrite, cobaltite, pyrrhotite)	Magnetite (pyrite, chalcopyrite, sphalerite, pyrrhotite)	Scheelite, molybdenite, chalcopyrite, pyrrhotite, pyrite	Chalcopyrite, bornite, pyrite, hematite, magnetite	Sphalerite, galena, chalcopyrite, arsenopyrite	molybdenite, scheelite, bismuthinite, pyrite, chalcopyrite	Cassiterite, arsenopyrite, stannite, pyrrhotite	Cassiterite, minor arsenopyrite, pyrrhotite, stannite, sphalerite

Abbreviations: m.t. = million tons, o.p. = open pit, u.g. = underground mining methods.

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TABLE 2
COMPARISON OF BASE METAL SKARNS

LOCALITY	TONNES	METALS	OPAQUE. MIN.S	OTHER MIN.S	INTRUSIVES	HOST ROCKS	SKARN MORPHOLOGY
N Comstock Zeehan	?	3.2% Zn 3.2% Pb 12ppm Ag .2% Cu	Po, Sl, Gl, Py, Mt	Se, Cb, Br	Granite	Dolomite, Limestone	Replacement body adjacent to major fault contact and genetically related veins in recrystallised carbonates.
Darwin California	?	?	Gl, Sl, Py, Cp, Po, Mg, Ap	Cc, Fl, Dp, Gn Id	Quartz Monzonite Stock	Limestone	Replacement body adjacent to major fault contact and genetically related veins.
Uchucchacua Peru	> 3.9Mt	3% Zn 3% Pb 600ppm Ag .1% Cu	Sl, Gl, Cp, Po, Py, Al, Wu	Kneb, Px, Gn, Bu, Rh	Porphyry Dyke	Limestone, Shale	Replacement bodies parallel to faults near fault bends, and in genetically related veins in minor faults.
Santa Eulalia Mexico	32Mt	11% Zn 10% Pb 190ppm Ag	Sl, Gl, Py, Cp, Mg, Po, Ap	Ov, Hd, Px, Rh, Il, Am, Chl	Rhyolite dyke, Quartz Monzonite Stock	Limestone	Along fault contacts and dyke contacts, and in chimneys.
San Martin Mexico	21Mt	5.3% Zn .6% Pt 150ppm Ag 1.2% Cu	Sl, Cp, Gl, Po, Py, Tet, Ap	Hd, Tr, Wol, Ep, Chl	Quartz Monzonite Stock	Limestone	Replacement bodies in recrystallised fractured limestones beneath shales, and related veins.
Sarbai USSR (MAGNETITE-SKARN)	725Mt	45.6% Fe .04% Cu .05% Zn .02% Pb	Mg, Py, Po, Cp, Sl	Gn, Px, Chl, Cc, Ze	Diorite	Andesite, Tuff, Limestone, Argillite	Lensoid 185mx2km.

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5) Continued temperature decline results in continued retrograde alteration characterised by partial replacement of pyrrhotite by pyrite and serpentinite by brucite (SY009). Complete replacement of pyrrhotite occurs where fluid movement is most active. Pb-Zn values are probably enhanced during this phase.

6) Movement continued on the Balstrup fault after alteration ceased, resulting eventually in displacement of the granite contact and the contact metamorphic aureole.

The base metal mineralisation associated with the skarn complex, and to a lesser extent the vein systems represent an attractive target for large tonneages of low grade Ag-Pb-Zn (Cu) mineralisation with good metallurgical properties. It is therefore recommended that exploration be continued on the grid with the following aims, in order of precedence:

1) To determine the maximum tonneage potential of the base metal skarn with widely spaced drillholes alongstrike and downdip.

2) To provide a better estimate of global grades, and at the same time to quantify the extent of metal zonation to determine if there is potential for localised areas of higher grade Ag-Pb-Zn, or if economic grades of Cu, Sn, W etc occur at depth.

3) To explore for similar skarn systems along other structures (e.g. Sylvester Fault, Tenth Legion Fault).

4) To further explore the weathered base metal vein sets east of Comstock mine to determine if they represent a mineable resource.

The first two aims would have to be successfully achieved before attempting 3) and 4). The grades so far achieved would have to improve or a very large tonneage potential be demonstrated to suggest an economic resource exists, and there is no justification for finding similar systems elsewhere until this is achieved.

Likewise the vein systems east of Comstock mine could only be considered an economic proposition in conjunction with an economic resource in the skarn.

Four holes totalling about 2,000 m should achieve the first two aims to the point where a decision can be made as to whether to proceed toward defining a resource, or to discontinue exploration completely.

7.2 Parting Lake Grid

The only target delineated so far that warrants follow-up work is located in the southern part of the grid, where subtle Sn-W anomalism occurs associated with base metal vein deposits above a gravity defined granitoid cupola at a depth of about 1.7km. The most likely economic mineralisation would be tin in skarns and/or replacement deposits, replacing Upper Oonah carbonates or possibly Gordon Limestone. Potential also exists for Severn-style mineralisation.

However any such mineralisation is expected to be more deeply seated than the Queen Hill deposits, based on the low levels of soil Sn-W, the absence of old tin workings and absence of tin bearing veins similar to those on which Queen Hill is centred. Bearing in mind the depressed state of the tin market and Renison's poor performance, this area is considered low priority for the time being.

7.3 Regional

The recognition of significant thrusting in the Sylvester area raises the probability that slices of Upper Oonah carbonates or other carbonate bearing units may occur beneath areas mapped at the surface as carbonate deficient Lower Oonah Formation.

If work in the Sylvester area is successful in delineating a possible resource, then we should consider targetting areas of Lower Oonah Formation in the Heemskirk Anticlinorium. Prospectivity would be determined on the basis of gravity defined granite "highs" and related magnetic anomalism.

8. REFERENCES

Anderson, J.A., 1986 — The Geology of the Zeehan Cassiterite-Sulphide Deposits, Tasmania. Genesis of Tin-Tung. Dep. & Assoc. Granitoids.

Anderson, J.A., 1989 — Case History of the Zeehan Tin Field. Geol. Soc. of Aust. Sp. Publ. 15.

Berry, R.F., 1988 — The tectonic significance of Cambrian allochthonous Mafic-Ultramafic Complexes in Tasmania. ust. Jour. Earth Sci. 35.

Blissett, A.H., 1962 — Geological Survey Explanatory Report-Zeehan. Tas. Dept. of Mines.

Brown, A.V., 1986 — Geology of the Dundas-Mt. Lindsay-Mt. Youngbuck region. Tas. Dept. Mines Geol. Surv. Bull. 62

Crossing, D.J.F., 1990 — E.L. 42/87, Zeehan Area, Annual Report 1989/90. RGC, Unpubl.

Dickson, T.W., 1981 — Tenth Legion Prospect (IMI JKoint Venture) Interim Report November 1980-August 1981 CRA Exp. Unpubl.

Einauldi, M.T., et al; 1981 — Skarn Deposits. Econ. Geol. 75th Ann. Vol.

Hatch, F.H. et al, 1975 — Petrology of the Igneous rocks Thomas Murby & Co.

King, D. & Blissett, A.H., 1968 — A statistical and Geological Review of the Zeehan Silver-Lead Mines, West Tasmania. Proc. Aust. Inst. Min. Met. No. 228.

Mann, A.W., 1982 — Mobilities of metal ions; in Geochemical Exploration in Deeply Weathered Terrain. CSIRO Inst. Energy & Earth Res. Div. Min,. Floreat Park.

Opik, A.A., 1951 — Notes on the stratigraphy and palaeontology of Cambrian, Ordovician and Silurian rocks in Tasmania. Rec. Burea Min. Res. Aust. 1951/5.

Poltock, R., 1981 — Geological Mapping, Comstock-Swansea, Spray-Nubeena District, Zeehan, Tasmania. RGC, Unpubl.

Twelvetrees, W.H., — Report on the mineral districts of Zeehan 1901 and neighbourhood. Rep. Sec. Min. Tas. (1900-01).

Twelvetrees, W.H., — The Orebodies of the Zeehan Field. Bull. Geol. Surv. Tas.,8.

Twelvetrees, W.H., — The iron ore deposits of Tasmania. Min. Res. Geol. Surv. Tas., 6.

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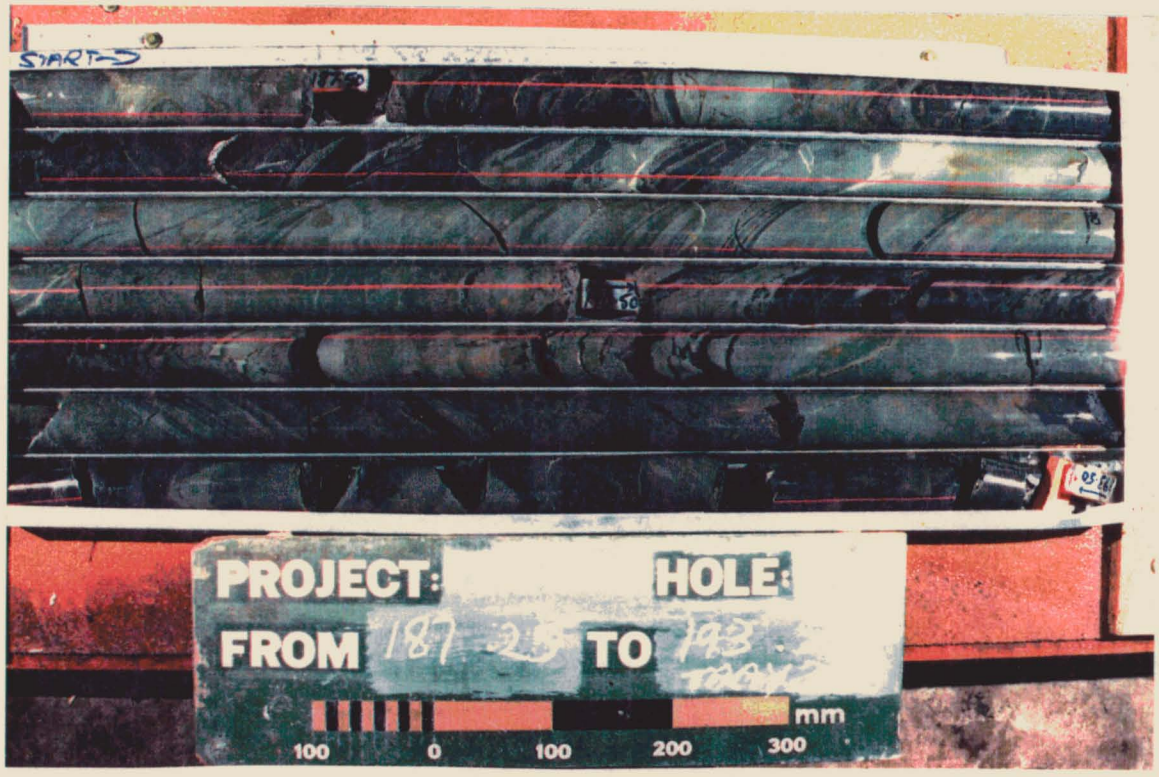
PLATES



1: SY004; 187.2-193.5m; Typical Єc turbidites.

2: SY004; 289.7-294.1m; Єc mudstone & dolomite.
Resembles Єou in weathered outcrop.

3: SY005; 86.8-91.7m; Typical interbedded graphitic shale & dolomite of the Upper Oonah (ℰou)

4: SY005; 255.5-261.9m; First appearance of serpentinite-magnetite (greenish colour) in dolomite adjacent to major fault (259.8-279m).

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PLATES

5: SY005; 504.0-509.9m; Massive magnetite adjacent to massive pyrrhotite.

6: SY005; 571.9-577.9m; Intensely silicifide, pyrrhotite rich zone at base of skarn. Annealed fault?

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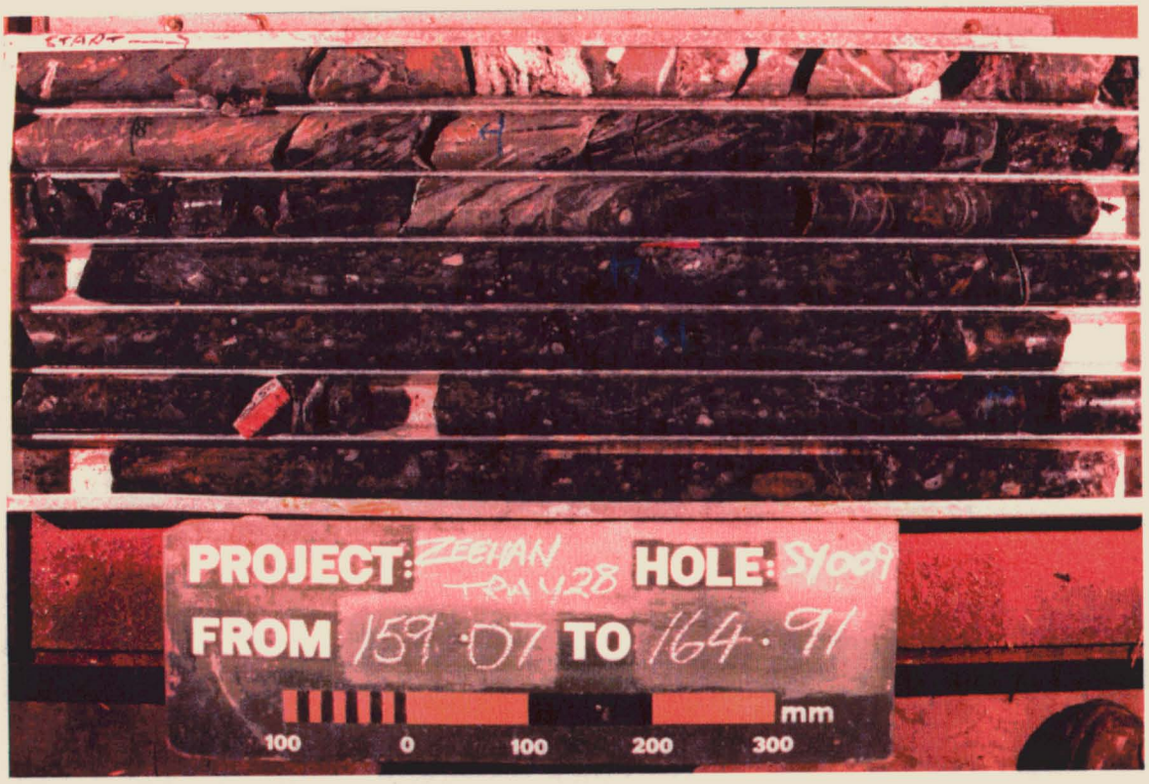
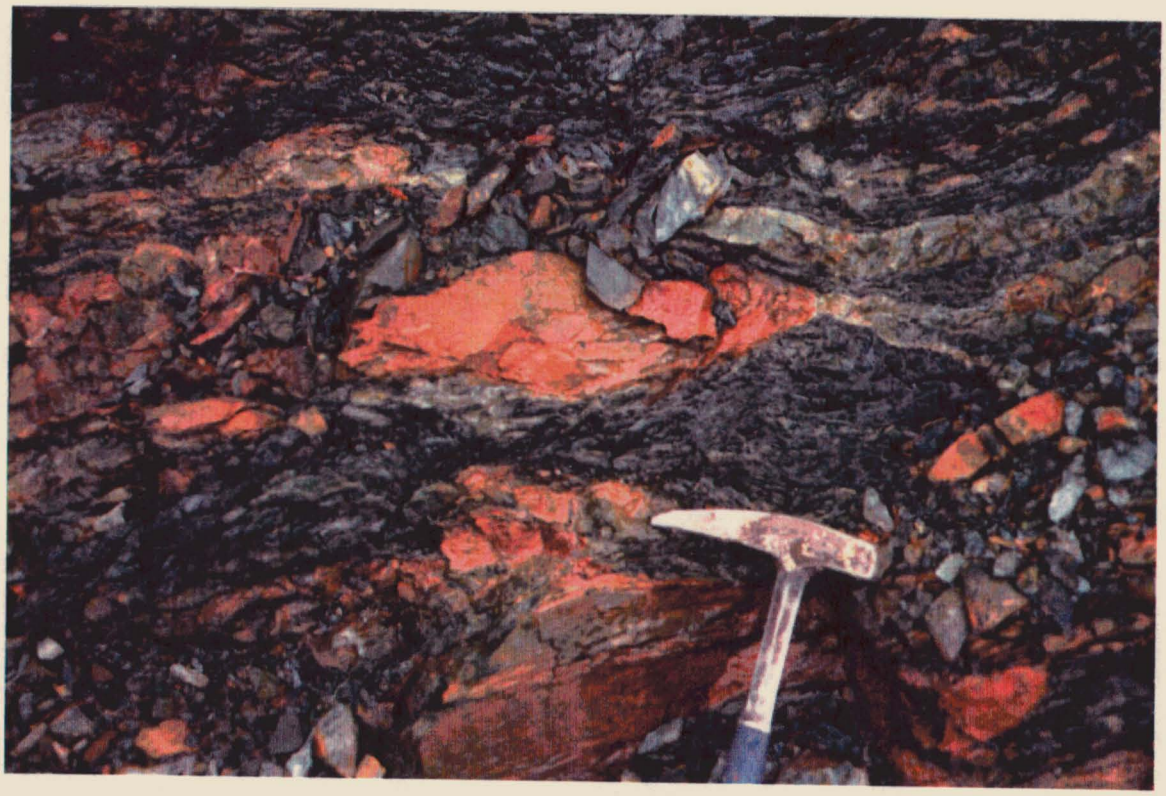
PLATES

7: SY005; 621.1-627.5m; Typical ℮o sediments. Note crenulation cleavage.



8: SY009; 159.1-164.9m; Contact between ℮c turbidites & ℮o melange.

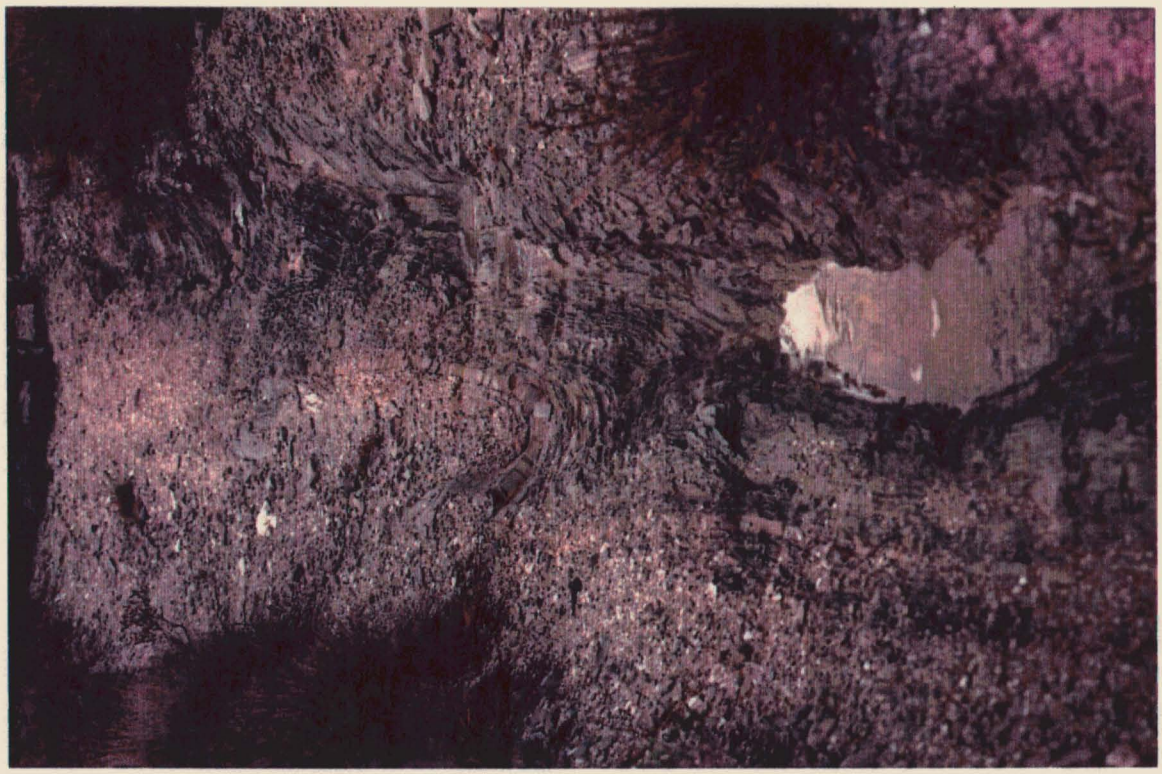
9: Trial Rd; ℓom spilite demonstrating disconformable contacts with ℓosh.



10: Trial Rd; Boudinaged ℓo sandstone bands in highly strained interbedded ℓoss/ℓosh. Incipient melange.

11: Comstock Opencut; Highly strained graphitic shales & relatively unstrained shales interdigitating. Incipient melange.

12: Oonah Hill Rd; Decomposed porphyry dyke? (Dp) Cross-cuts $\mathcal{e}$o shales.



13: Doric Rd; Shallow SE plunging D2 parasitic folds in finely interbedded $\mathcal{E}o$ psammo-pelites.

14: Comstock Opencut; Late (D2?) thrust cuts early ductile deformation fabric. Note rotated Z-shaped boudins above fault surface.

15: Near Tasmanian Tram; Melange in Tenth Legion thrust zone with both Єo boudins (LHS) and Єc boudins (RHS).

16: Comstock Opencut; Shallow thrusts (Upper LHS) but by SSE trending D2 brittle fault.

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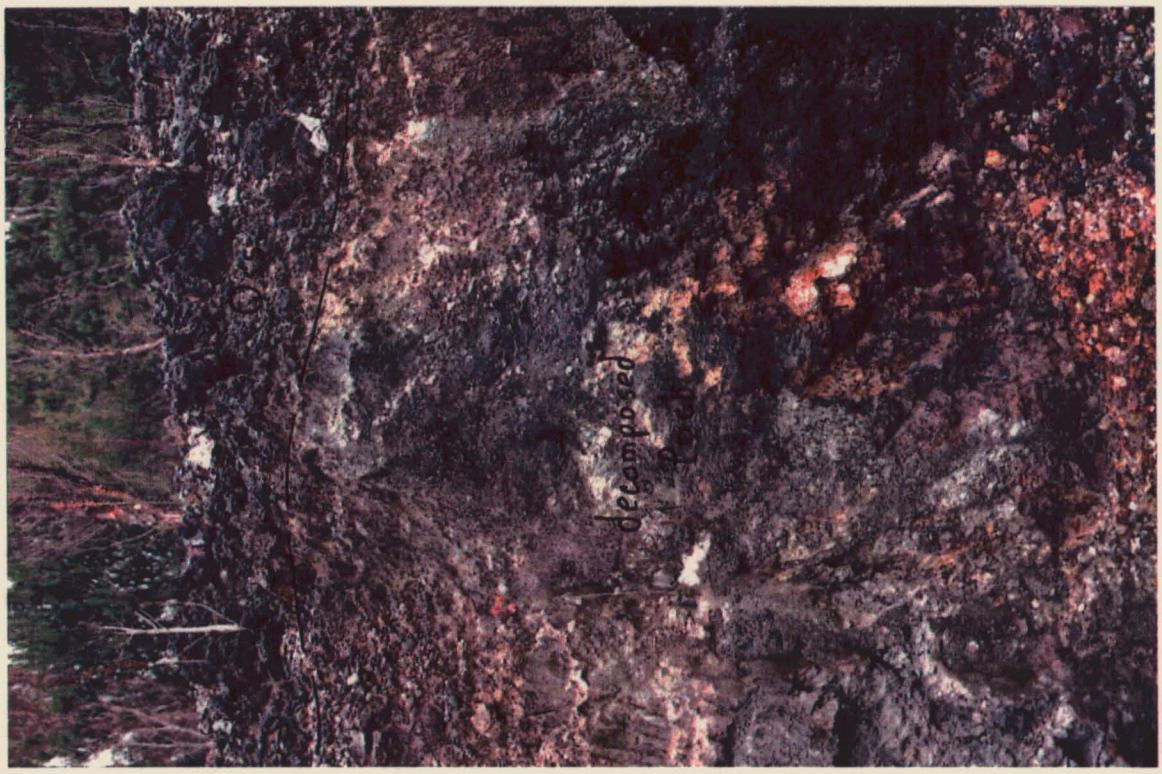
17: Montana S.L.; Post Permian thrust in Ꝑo sediments.

18: Tenth Legion; Weathered carbonate hosted skarn lense dipping north at low angle.



19: North Comstock; Decomposed ℮o carbonate with cherty inclusions.

20: Doric Rd; Sole markings indicating overturned ℮o sediments.

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BECQUEREL JOB # 427

ELEMENT	DL	# 35888R	# 35913R	# 35938R	# 35943R.
ANTIMONY	.2	44.10	13.00	.86	11.80
ARSENIC	2.0	808.00	798.00	-2.00	44.80
BARIUM	100.0	340.0	-100.0	-100.0	-100.0
BROMINE	2.0	53.90	56.70	7.76	8.80
CERIUM	2.0	85.20	13.20	17.40	51.90
CAESIUM	1.0	10.50	-1.00	2.23	1.87
CHROMIUM	5.0	78.7	106.0	22.2	90.4
COBALT	1.0	1.66	-1.00	-1.00	34.10
EUROPIUM	.5	1.77	-.50	-.50	15.20
GOLD, ppb	5.0	171.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.56	2.24	7.98	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0
[illegible], %	.05	11.500	16.000	.636	17.700
LANTHANUM	.5	51.80	8.38	8.73	18.00
LUTETIUM	.2	.79	-.20	.35	.68
MOLYBDENUM	5.0	-11.0	11.9	-5.0	-5.0
POTASSIUM, %	.2	1.630	-.200	.359	-.200
RUBIDIUM	20.0	133.0	36.7	-20.0	30.9
SAMARIUM	.20	7.78	2.57	1.55	15.80
SCANDIUM	.10	23.90	25.40	2.14	19.20
SELENIUM	5.0	6.2	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.053	.034	.057	.041
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	50.40	15.40	3.01	-.50
TIN	500.0	769.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-4.60	-2.00	-2.00	18.90
URANIUM	2.0	6.05	8.10	-2.00	-2.00
YTTERBIUM	.5	4.07	.70	1.91	4.78
ZINC	100.0	-100.0	267.0	-100.0	142.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	792.0

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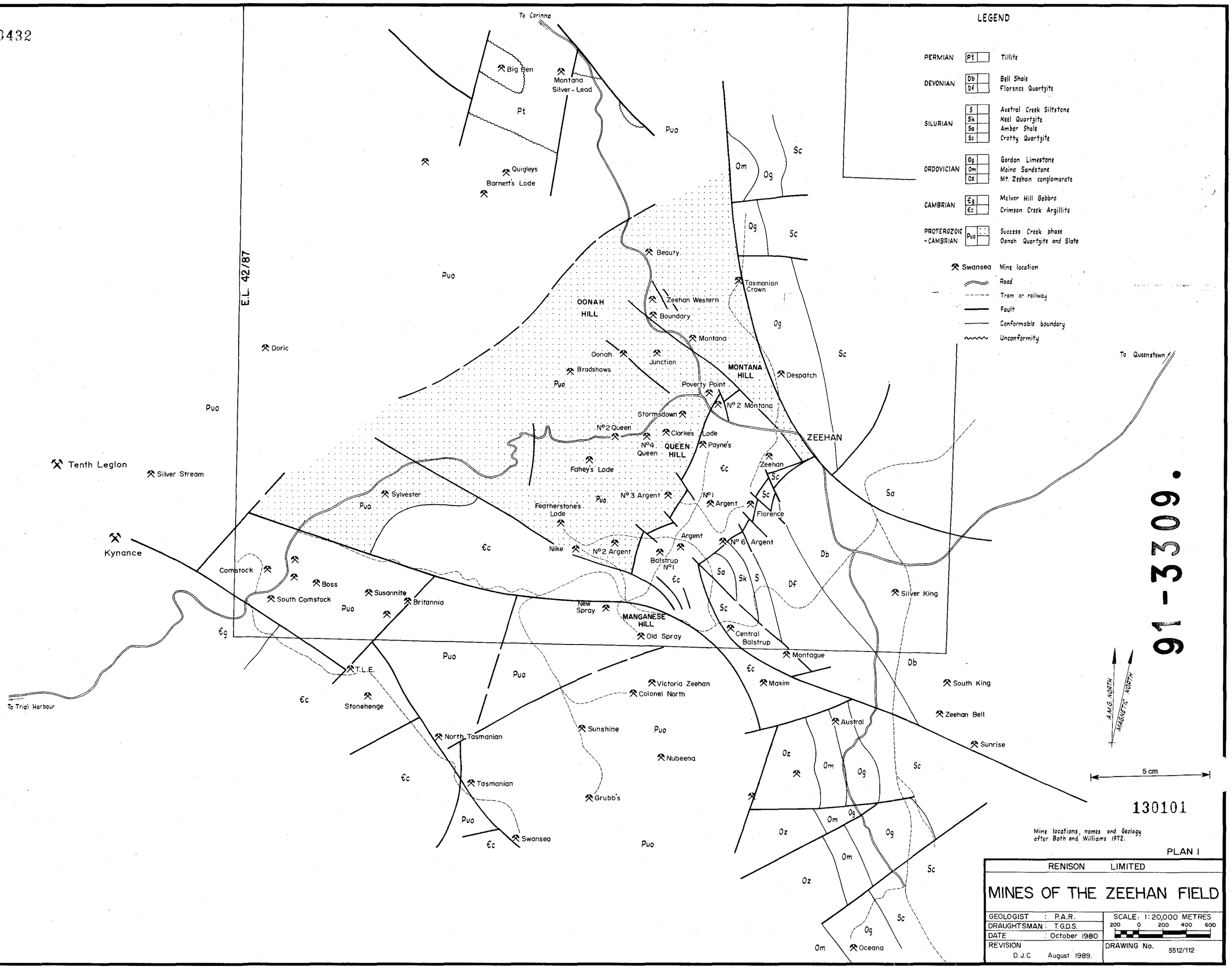

LEGEND
PERMIAN
Pt Tillite
DEVONIAN
Db Bell Shale
Df Florence Quartzite
SILURIAN
S Austral Creek Siltstone
Sk Keel Quartzite
Sa Amber Shale
Sc Crotty Quartzite
ORDOVICIAN
Og Gordon Limestone
Om Moina Sandstone
Oz Mt. Zeehan conglomerate
CAMBRIAN
€g McIvor Hill Gabbro
€c Crimson Creek Argillite
PROTEROZOIC - CAMBRIAN
Puo Success Creek phase
Oonah Quartzite and Slate
Swansea Mine location
Road
Tram or railway
Fault
Conformable boundary
Unconformity
To Corinna
To Queenstown
To Trial Harbour
E.L. 42/87
Big Ben
Montana Silver - Lead
Quigleys
Barnetts Lode
Beauty
Tasmanian Crown
Zeehan Western
Boundary
OONAH HILL
Montana
Doric
Oonah
Junction
Bradshaws
MONTANA HILL
Despatch
Poverty Point
N° 2 Montana
Stormsdown
N° 2 Queen
Clarke's Lode
N° 4 Queen
QUEEN HILL
Payne's
ZEEHAN
Zeehan
Tenth Legion
Silver Stream
Faheys Lode
Sylvester
N° 3 Argent
N° 1 Argent
Florence
Featherstone's Lode
Argent
Kynance
Nike
N° 2 Argent
Balstrup N° 1
N° 6 Argent
Comstock
Boss
South Comstock
Susannite
Britannia
New Spray
MANGANESE HILL
Old Spray
Central Balstrup
Silver King
Montague
T.L.E.
Victoria Zeehan
Colonel North
Maxim
South King
Stonehenge
Zeehan Bell
Austral
Sunrise
North Tasmanian
Sunshine
Nubeena
Tasmanian
Grubb's
Swansea
Oceana
A.M.G. NORTH
MAGNETIC NORTH
5 cm
91-3309.6
130101
Mine locations, names and Geology after Both and Williams 1972.
PLAN I
RENISON LIMITED
MINES OF THE ZEEHAN FIELD
GEOLOGIST : P.A.R.
DRAUGHTSMAN : T.G.D.S.
DATE : October 1980
REVISION D.J.C. August 1989.
SCALE: 1:20,000 METRES
200 0 200 400 600
DRAWING No. 5512/112

10433

EXPLORATION TARGETS :

TRIAL HARBOUR	~ Ni deposits in ultramafics (Gum)
AGNEW, FEDERATION	~ large tonnage, low grade Sn deposits in granite (Dg) ~ "Sweeneys" style Sn, Zn, Ag sulphide deposits in Dg
AREA D, E. HEEMSKIRK	~ Renison style Sn deposits replacing Oonah Fm carbonates ~ Sn skarns
TENTH LEGION	~ Iron deposits in magnetite skarns ~ Base metal skarns
STONEHENGE	~ Renison style Sn deposits
SYLVESTER / DORIC MONTANA S.L.	~ Pb ~ Zn ~ Ag veins
OONAH	~ Polymetallic veins (Cu, Pb, Zn, Ag, Sn)
QUEEN HILL	~ Renison style Sn deposits ~ Fault related Sn (Severn deposit)
CUNI	~ Cu~Ni deposits in gabbro silt
BLACK JACKS, MARIPOSA, BANNOCKBURN, PYRAMID, OCEANA, AUSTRAL, NUBEENA	"Irish" style Pb~Zn~Ag deposits replacing Gordon Limestone (Og)

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	DJC
DRAWN	JB
DATE	9/91
CHECKED	
1:250,000 REFERENCE	

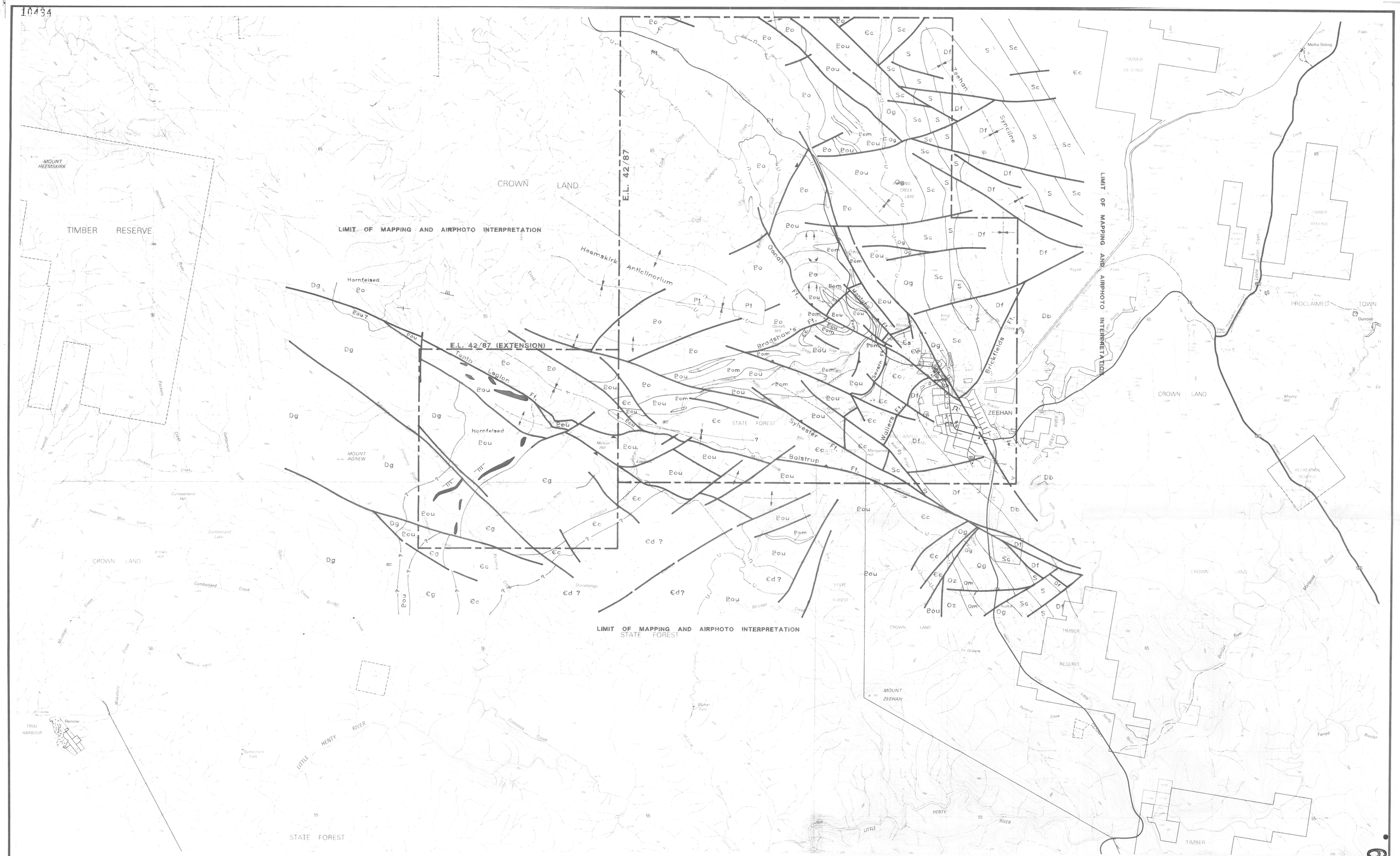
ZEEHAN EL 42/87
130102 PREVIOUS WORK LOCALITY PLAN

5 cm
0 500 1000m

BASE PLAN No. 5521/090
OVERLAY PLAN No.
SCALE 1:25000
PLAN 2

91-3309.

10434



PERMIAN	Pt	ZEEHAN GLACIAL FM.
DEVONIAN	Db	BELL SHALE
	Df	FLORENCE QUARTZITE
SILURIAN	S	UNDIFFERENTIATED SEDIMENTS
	Sc	CROTTY QUARTZITE
ORDOVICIAN	Og	GORDON LIMESTONE
	Om	MOINA SANDSTONE
	Oz	MT. ZEEHAN CONGLOMERATE
CAMBRIAN	Ꞓd	DUNDAS GP. SEDIMENTS
	Ꞓc	CRIMSON CK. FM. TURBIDITES
	Ꞓs	SUCCESS CK. GP. SEDIMENTS
PROTEROZOIC	Pou	UPPER OONAH FM. SEDIMENTS
	Pom	MONTANA SPILITE
	Po	(LOWER) OONAH FM. SEDIMENTS
INTRUSIVES	Dg	DEVONIAN GRANITE
	Ꞓg	CAMBRIAN GABBRO

GEOLOGICAL CONTACT
UNCONFORMITY
LIMIT OF HORNFELSING
BEDDING 0–30°
" 31–60°
" 61–90°
MAGNETIC SKARNS

ANTICLINE
ANTICLINE, RECLINED
SYNCLINE
SYNCLINE, RECLINED
FAULT, NORMAL
FAULT, REVERSE

5 cm

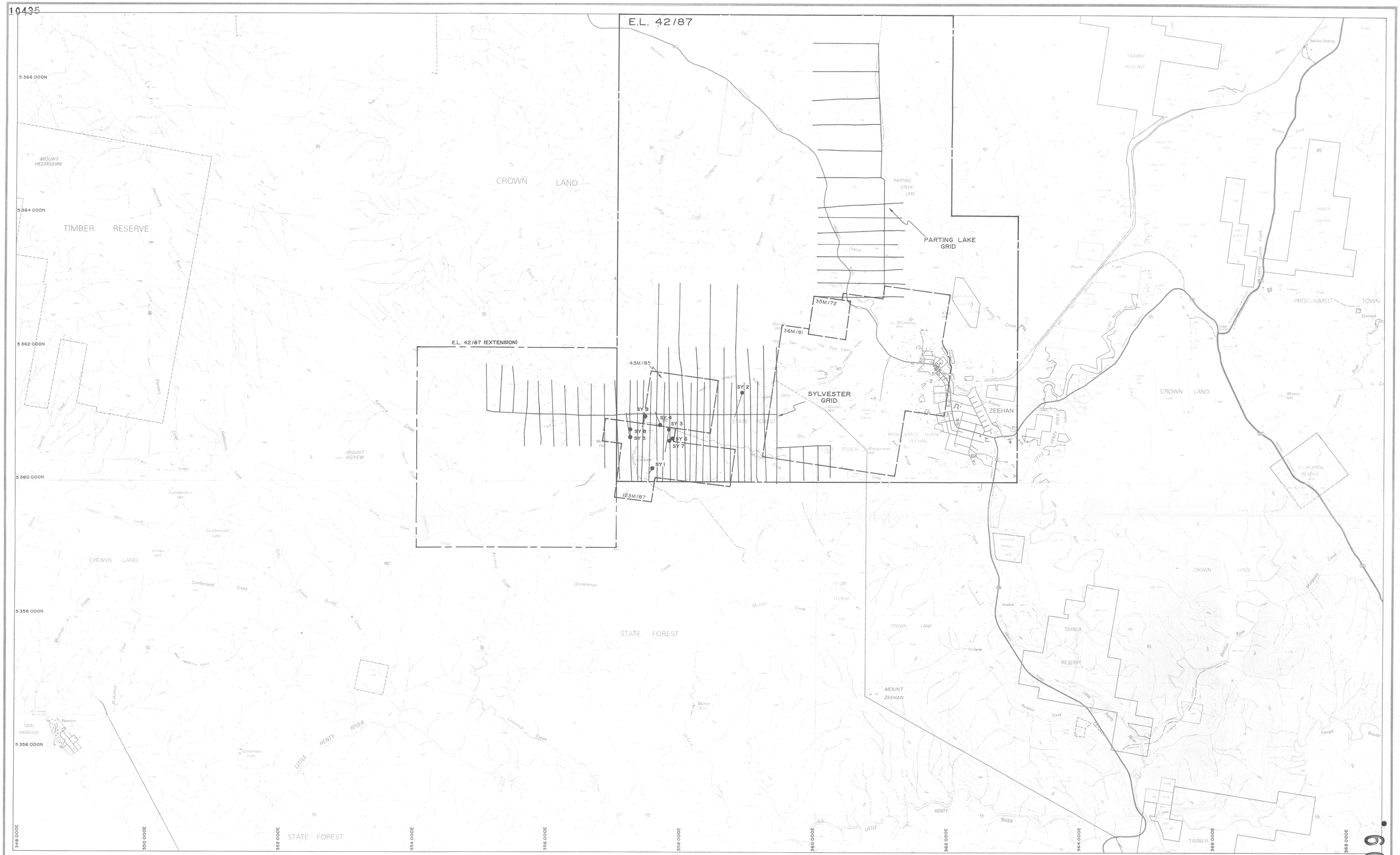
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED		ZEEHAN PROJECT E.L. 42/87
DRAWN	M.O.W.	REGIONAL GEOLOGICAL INTERPRETATION
DATE	9/91	130103
CHECKED		
1:250,000 REFERENCE		

BASE PLAN No. 5521/051
OVERLAY PLAN No.
SCALE 1:25 000 — 0 250 500 1000
PLAN 3

91-3309.

10435



EXCLUSIONS

123M/87 - OCEANIA TASMANIA P/L.
43M/85 - OCEANIA TASMANIA P/L.
35M/72 - CRA EXPLORATION P/L.
36M/81 - GIPPSLAND OIL & MINERALS N/L
& ABERFOYLE EXPLORATION P/L.

5 cm

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	M.O.W.
DRAWN	M.O.W.
DATE	Aug. 1990
CHECKED	
1:250,000 REFERENCE	

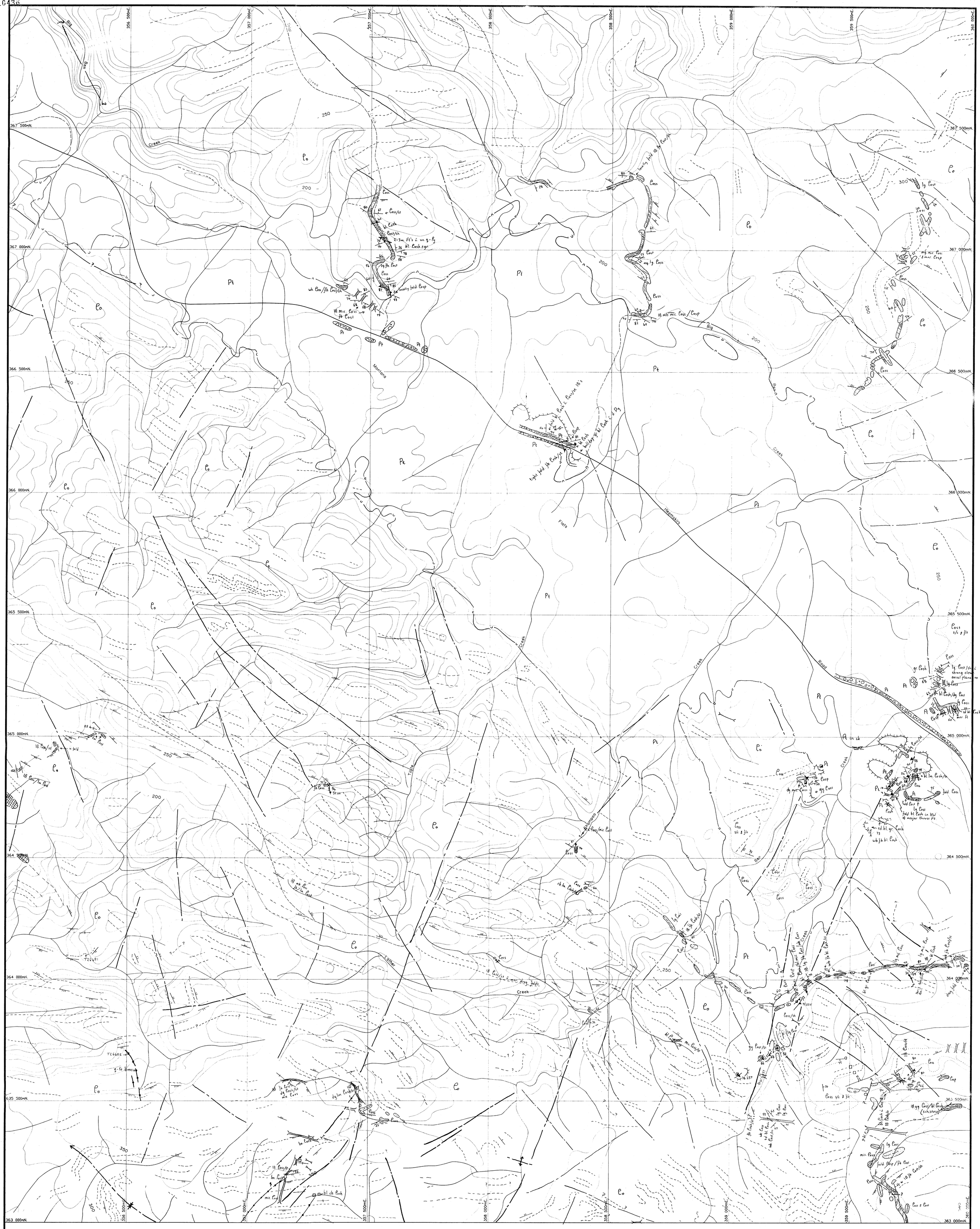
ZEEHAN PROJECT
E.L. 42/87.

DRILLHOLE & GRID LOCATION PLAN

130104

BASE PLAN No. 5521/038
OVERLAY PLAN No.
SCALE 1:25 000
PLAN 4.

91-3309



PERMIAN	Pt	tillite
	Pos	sediments, undiff
	Posh	shale
	Post	siltstone
PROTEROZOIC OONAH FM.	Poss	sandstone
	Pogw	greywacke
	Pol	limestone / carbonate
	Pom	Montana spilite
	Pom	Melange
	Poch	Chert

Bedding trend
Bedding attitude; measured
; 0 - 29°
30 - 59°
60 - 89°
Vertical
Joint ; Vertical
Inclined
Shear ; Vertical
Inclined
Cleavage ; Vertical
Inclined
Fault ; Vertical
Inclined
Small anticline / antiform
syncline / synform
Plunge of minor fold
Vein, inclined
Outcrop
Float / Scree

Trench
Pit
Shaft
Adit
Airphoto Lineament
Unconformity

agglom	agglomerate	graph	graphitic	Rx	rock
bd	band	Gt	grit	sacch	saccharoidal
bl	black	gy	grey	s/c	sub-crop
boxw	boxwork	IB	interbedded	silic	siliceous
br	brown	lam	laminated	Sl	sphalerite
brecc.	breccia (ted)	lg	light grey	sm	semi - massive
Carb/cc	carbonated/calcareous	Larenite/la	lithic - arenite	Ss	sandstone
cg	coarse grained	Lwacke/lw	lithic - wacke	St	siltstone
d	disseminated	m, mx	massive	stockw	stockwork
dg	dark grey	mic	micaceous	Tf	tuff
fb	fine bedded	mg	medium grained	Tst	tuffaceous siltstone
Fe	iron, ferruginous	mudst/md	mudstone	txt	texture
Fest	ironstone	mv	mafic volcanic	v	very
fg	fine grained	mx	massive	vesic	vesicular
flt	float	or	orange	vfg	very fine grained
Ft	fault	Py	pyrite	vn	vein
Gn	galena	Qt/q	quartz	wd	weathered
gn	green	remn	remnant	wh	white

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.6°
5 cm

91-3309.

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

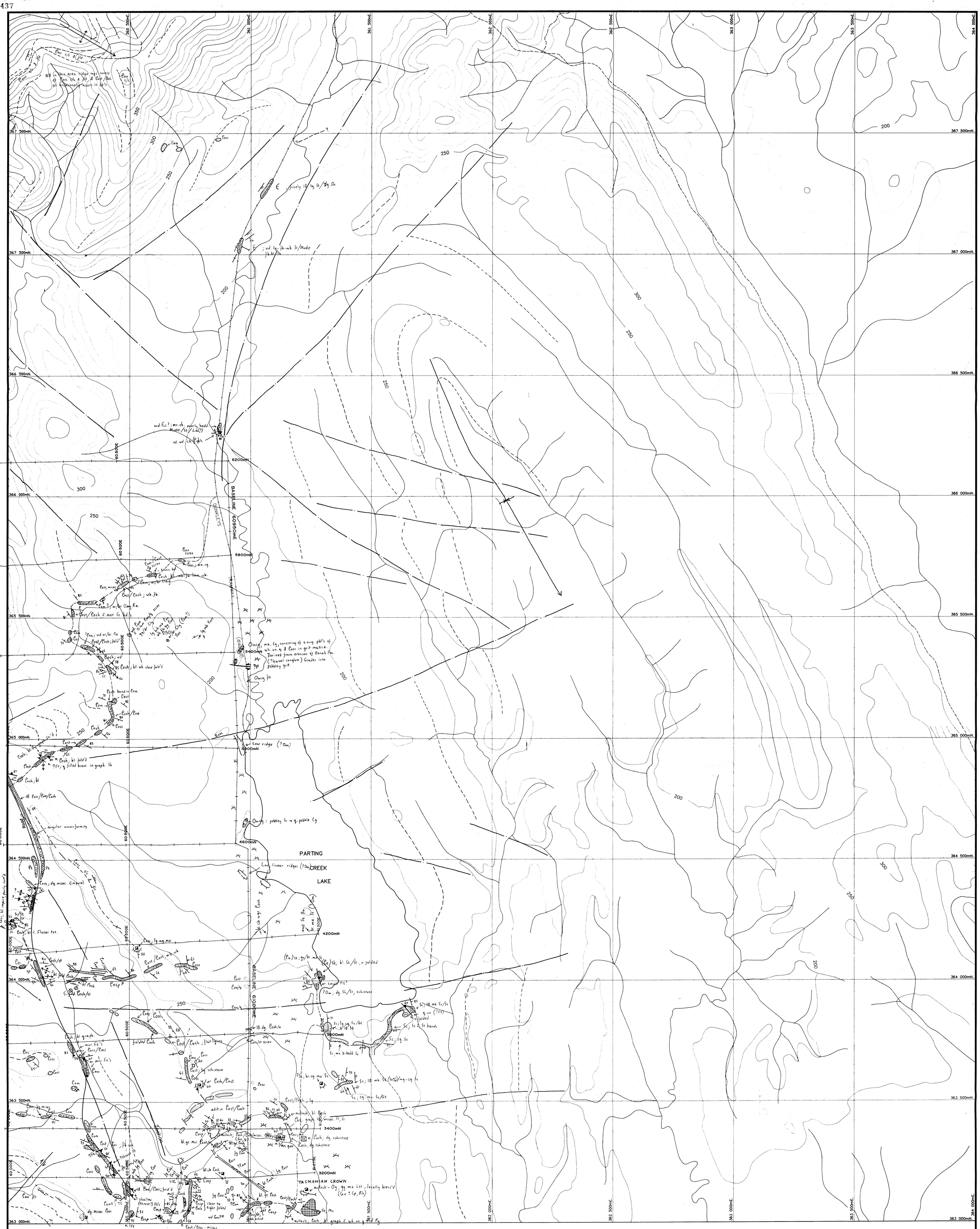
COMPILED:	D.J.C.
DRAWN:	D.J.C.
DATE:	Feb. '91
CHECKED:	
1:25,000 REFERENCE:	DUNDAS OCEANA HEEM. BATHAL

ZEEHAN AREA
SHEET A
GEOLOGICAL FACT MAP

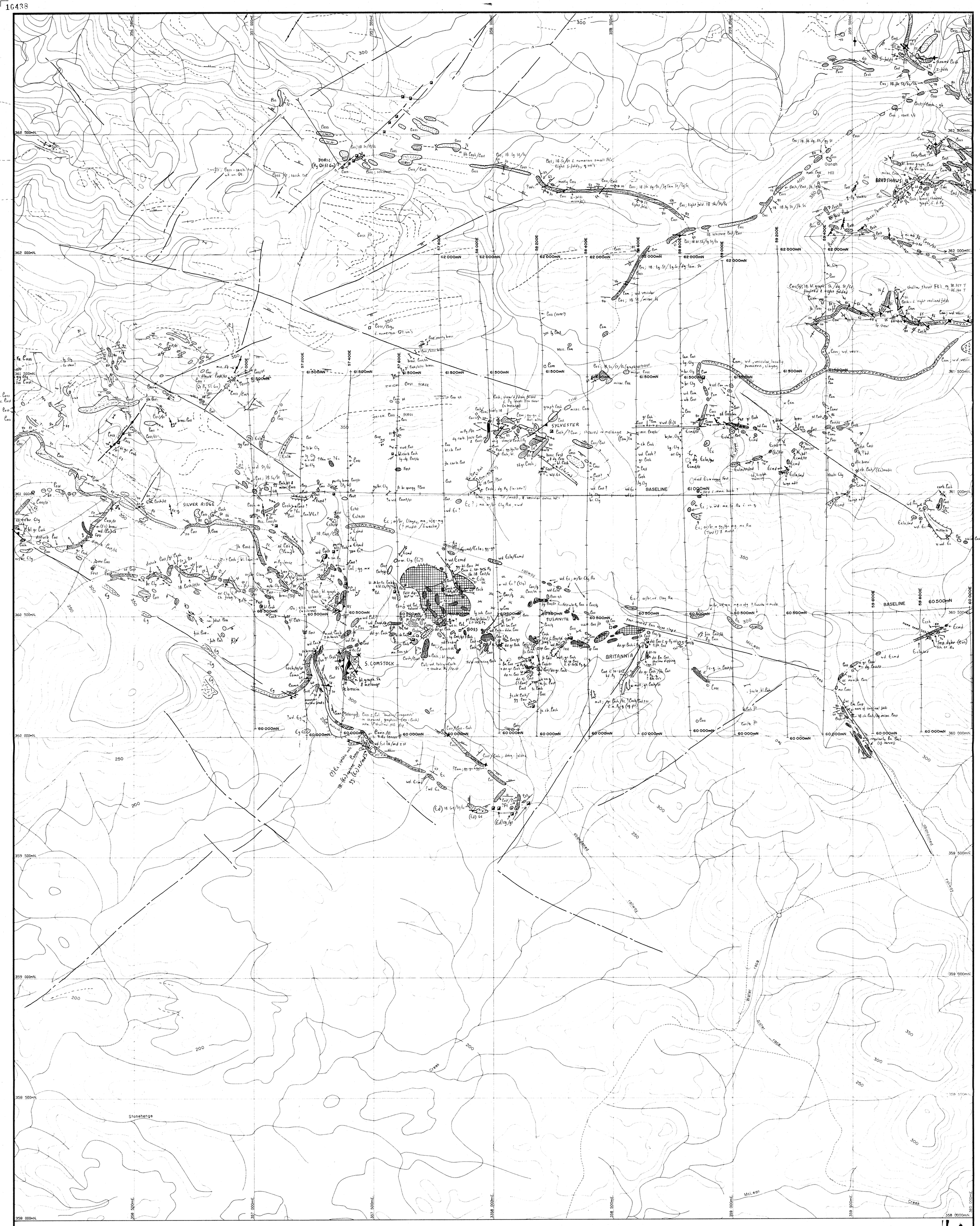
130105

BASE PLAN No. 5521/056 | OVERLAY PLAN No. | SCALE: 1 : 5,000 | FIGURE No. PLAN 5

16437


BASELINE 60950mE
DUNKLEYS
TRAMWAY
PARTING CREEK
LAKE
TASMANIAN CROWN
Road
Section
Omcg; mx. Cg, consisting of s.ang. pbl's of wh. vn. q. & Cost in grit matrix. Derived from erosion of Oonah Fm. (?basal conglom.) Grades into pebbley grit.
Omcg flt.
Low ridge (?Om)
Omcg : pebbley Ss → q. pebble Cg
Low linear ridges (?Om)
angular unconformity
NB in this area ridge tops consist of Coss s/c & flt & Cost/Cosh o/c occasionally occurs in dr's
wd. Ꞓc? ; mx. cb. poorly bedd. mudst/st/La(?)
sd. wd. cb. Cogh
finely lg. lg. St/Mg. Sh
wd. lg. fb-mb. St/Mudst fb. bl/Sh
Cosh; bl. fb. graph. St
?Fe; q. filled brecc. in graph. Sh
angular unconformity
Coss; dg. micac. (impure)
Cosh; bl. c. Flaser txt.
(Co)ss; gy/br. mx. Ss
(Co)Sh; bl. Sh/St., v. folded
?Om; dg. Sh/St, schistose
Sc; 18. mb. Ss/St
Sc; lg. cg. Ss/Gt
Sc; mx. X-bedd. Ss
Sc; cg. mx. Ss/Gt
?St; br. cg. mx. Ss
Sc; 18. mb. St (70%)/mg-cg. Ss
Cost/Cosh; lg
Cost; graph. St/micac. St, Ss
Cosh; dg. schistose
Cost/Coss; micac.
Cost/Coss; mx. cg
Cosh; bl. mb-fb. lam. wb.
Cost/Cosh; wb. fb.
Cost/Cosh E. mnr. Ss. bd's
Cosh; bl. wb. close fold'd
Cosh band in Com
Cosh; bl. fold'd
Cosh; bl
18. Cos/Cog/Cosh
Cosh; bl. c. Flaser txt.
Coss; lg. mg. mx
Cosh/st
bl. fold Cosh
S. fold Cosh/st
Cost/Coss; mb. wb
Cost/Cosh; flat lying
folded Cosh
Cosh; bl. graph.
mnr. Ft's
Cost; lg. schistose
Cosh/Cost
adit in Cost/Cosh
Cosh; dg. schistose
bl. gr. mic. Cost/Cosh
bl. gr. Cosh
bl. cb Cosh
Cost/Cosh
Cosh/Cost; fold'd
shallow (thrust?) Ft's
close to tight folded
wd. Com?
Cost/Coss; micac.
Cosh; bl. graph. c. wh. vn. q. & Py
Fe Mn
Coss; flt
dg. micac. Coss
Com; TL
Cosp
Cosh
Coss
Com
Cost
Cos
Coss
Cosh
Cosp
Com
Cosh
Cosp
Cosh
Cosp
Cosh
Cosp

10438



STRATIGRAPHY

	Ec	undiff.	
CAMBRIAN CRIMSON CK. FM.	Ect	turbidite	
	Ecg	greywacke	
	Ecla	lithic arenite (volc. ss)	
	Ecmd	mudstone	
	Pos	sediments, undiff	
	Posh	shale	
	Post	siltstone	
PROTEROZOIC OONAH FM.	Poss	sandstone	
	Pogw	greywacke	
	Pol	limestone / carbonate	
	Pom	Montana spilite	
	Pomn	melange	
	Poch	chert	
INTRUSIVE	Eus	serpentinite	
	Eg	gabbro	

Bedding trend
Bedding attitude, measured
, 0 - 29°
30 - 59°
60 - 89°
vertical
Joint, vertical
inclined
Shear, vertical
inclined
Cleavage, vertical
inclined
Fault, vertical
inclined
Small anticline
syncline
Plunge of minor fold
Vein, inclined
Outcrop
Float / Scree

Trench
Pit
Shaft
Adit
Ironstone
Massive sulphides
Airphoto lineament (?Fault)
Auger hole / cuttings

agglom	agglomerate	graph	graphitic	Rx	rock		
bd	band	Gt	grit	sacch	saccharoidal		
bl	black	gy	grey	s/c	sub-crop		
boxw	boxwork	IB	interbedded	silic	siliceous		
br	brown	lam	laminated	Sl	sphalerite		
brecc.	breccia (ted)	lg	light grey	sm	semi-massive		
carb/cc	carbonated/calcareous	larenite	lithic-arenite	Ss	sandstone		
cg	coarse grained	lwacke	lithic-wacke	St	siltstone		
d	disseminated	m, mass	massive	stockw	stockwork		
dg	dark grey	micac	micaceous	Tf	tuff		
fb	fine bedded	mg	medium grained	Tst	tuffaceous siltstone		
Fe	iron, ferruginous	mdst	mudstone	txt	texture		
Fe-st	ironstone	mv	mafic volcanic	v	very		
fg	fine grained	mx	massive texture	Vesic.	vesicular		
flt	float	or	orange	vfg	very fine grained		
Ft	fault	Py	pyrite	vn	vein		
Gn	galena	Qt, q	quartz	wd	weathered		
gn	green	remn	remnant	wh	white		

N.B. Mapping was by traverses along roads, tramways, creeks and ridge tops, and around old workings. The geology was then plotted against topography, and the position of any point could err by up to 50m. with respect to the local grid.

ADDITIONS

sp	spongy
tc	talcose
tf	tuffaceous
vg	vuggy

GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.5°

5 cm

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

ADDITIONS

BM	base metal
dolm	dolomitic
dp	dipping
fs	fissile
pr	porous
sch	schistose

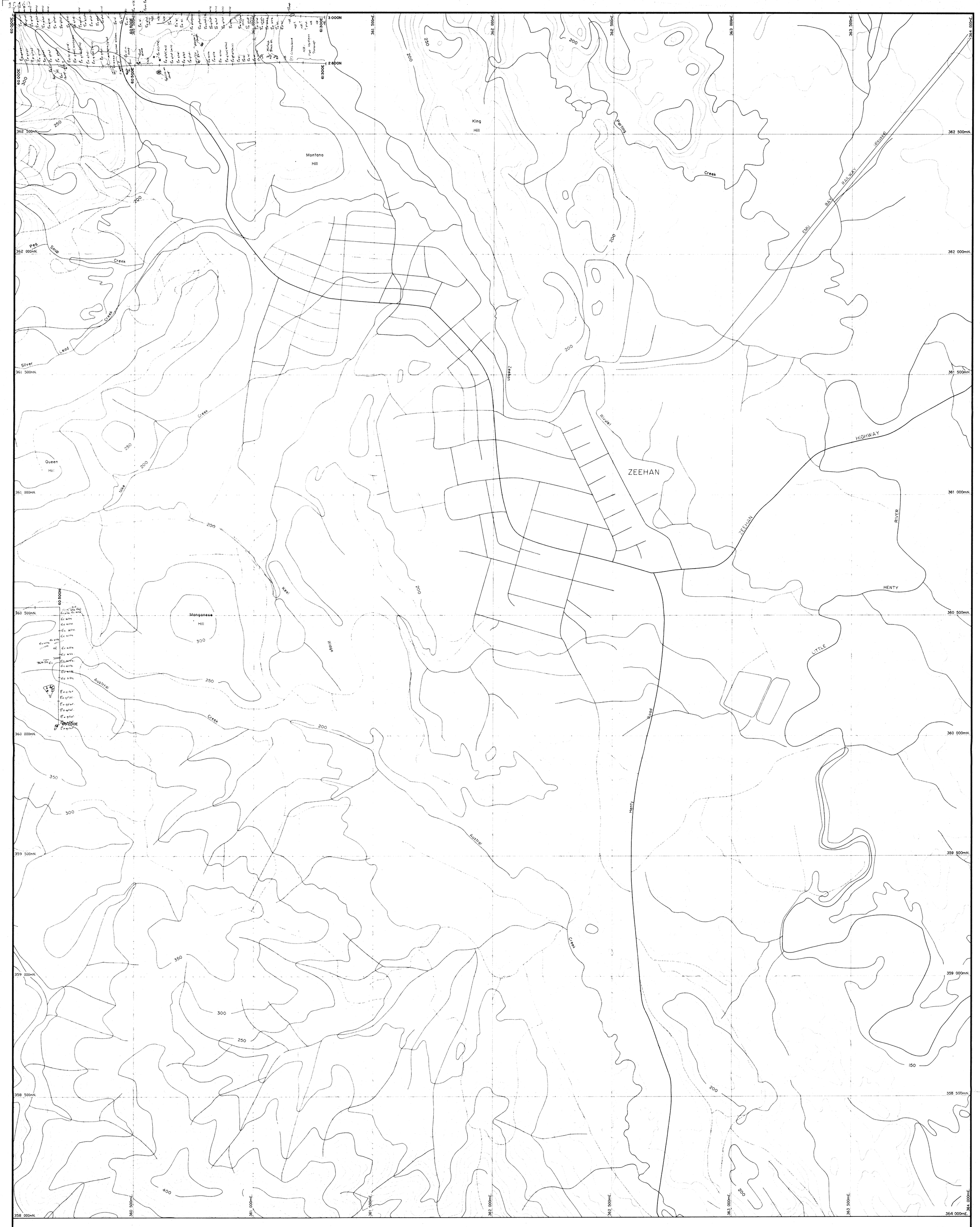
91-3309

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED:	D.J.C.	ZEEHAN AREA
DRAWN:	D.J.C.	SHEET C 130107
DATE:	July 90	GEOLOGICAL FACT MAP
CHECKED:		
1:25,000 REFERENCE:	DUNDAS OCEANA HEEM. & TRIAL	

BASE PLAN No. 5521/033 | OVERLAY PLAN No. | 100 0 100 200 500 SCALE: 1 : 5,000 | PLAN 7

OONAH
ARGENT
ZEEHAN
QUEEN HILL
King Hill
Montana Hill
Queen Hill
Manganese Hill
Old Mill
Pea Soup Creek
Silver Lead
Parting Creek
Zeehan Rivulet
Austral Creek
Henty Road
ZEEHAN HIGHWAY
LITTLE HENTY RIVER
ZEEHAN RAILWAY (disused)
Manganiferous Lateritic scree
Mn. gossan
Mn. (scree?)
Mn. (E) sh/ss
Mn. (E) ss
Mn. (E) sh/ss
Mn. (E) sh/ss
Mn. (E) sh/



LEGEND

OONAH Qtzt & SLATE	Po sh	SHALE
	Po sl	SLATE
	Po slts	SILTSTONES
	Po qtzt	QUARTZITE
	Po phyll	PHYLLITE
	Pov	SPILITE
	€c	CRIMSON CK FORMATION
	€c slts	SILTSTONES
	€c ss	SANDSTONE
	Dss	DEVONIAN SANDSTONE
	Pl	PERMIAN TILLITE
	(mic)	MICACEOUS

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

GN
TN
MN
GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.6°
5 cm

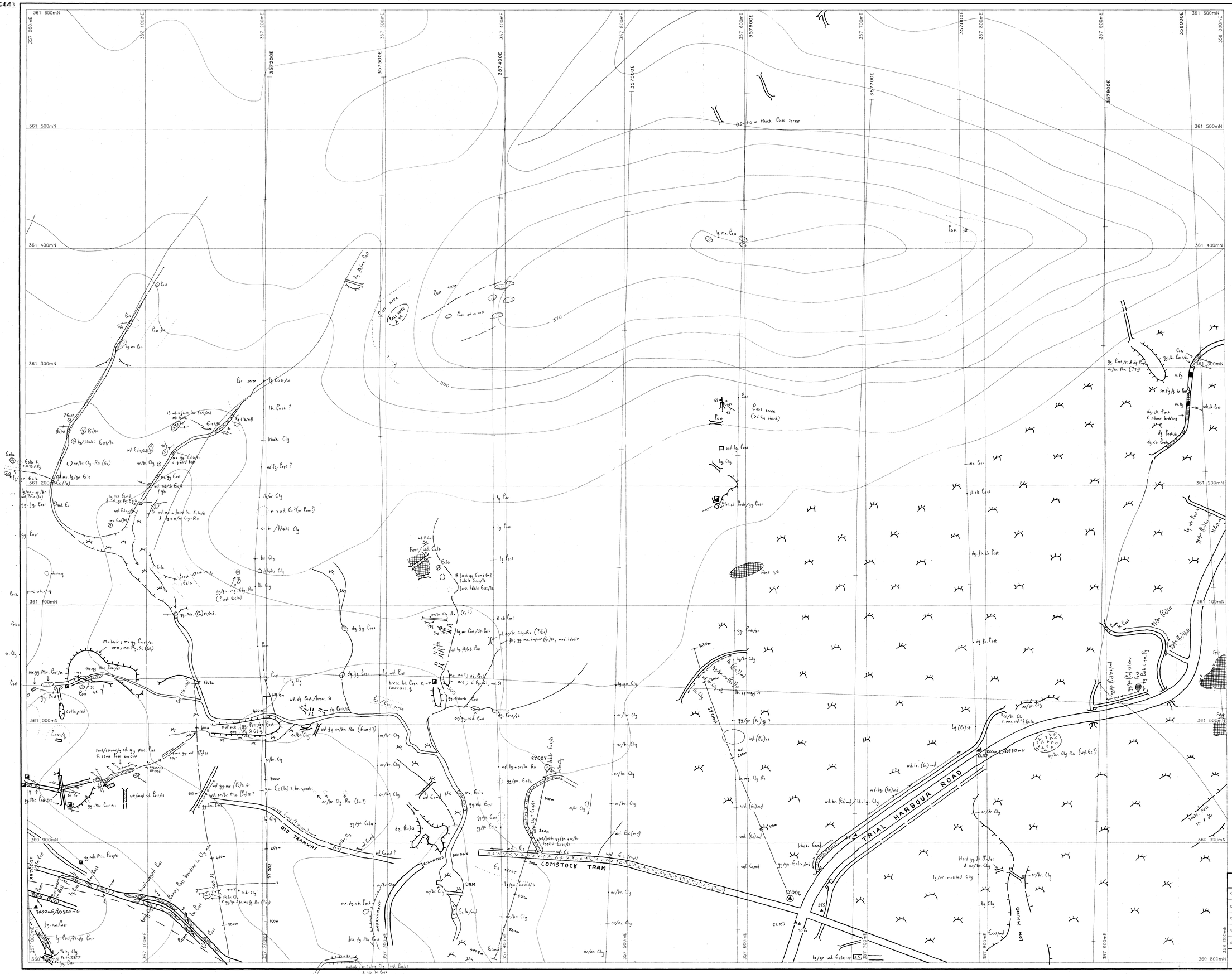
91-3309

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED:	D.C.S.
DRAWN:	T.G.D.S.
DATE:	Aug '89
CHECKED:	
1:25,000 REFERENCE:	DUNDAS OCEANA HEEM.&TRIAL

ZEEHAN AREA
SHEET D 130109
GEOLOGICAL FACT. MAP
(GRID BASED)

BASE PLAN No. 5521/036
OVERLAY PLAN No.
50 0 50 100 250
SCALE: 1 : 1000
FIGURE No. PLAN 9



SHEET LAYOUT

SHEET 7	SHEET 1	SHEET 2	SHEET 3
	SHEET 4	SHEET 5	SHEET 6

5cm

PLAN 10

91-3309.

RGC EXPLORATION PTY. LIMITED

COMPILED	J.C
DRAWN	M.O.W.
DATE	3/91
CHECKED	
SCALE	1:1000

ZEEHAN E.L. 21/86

130110

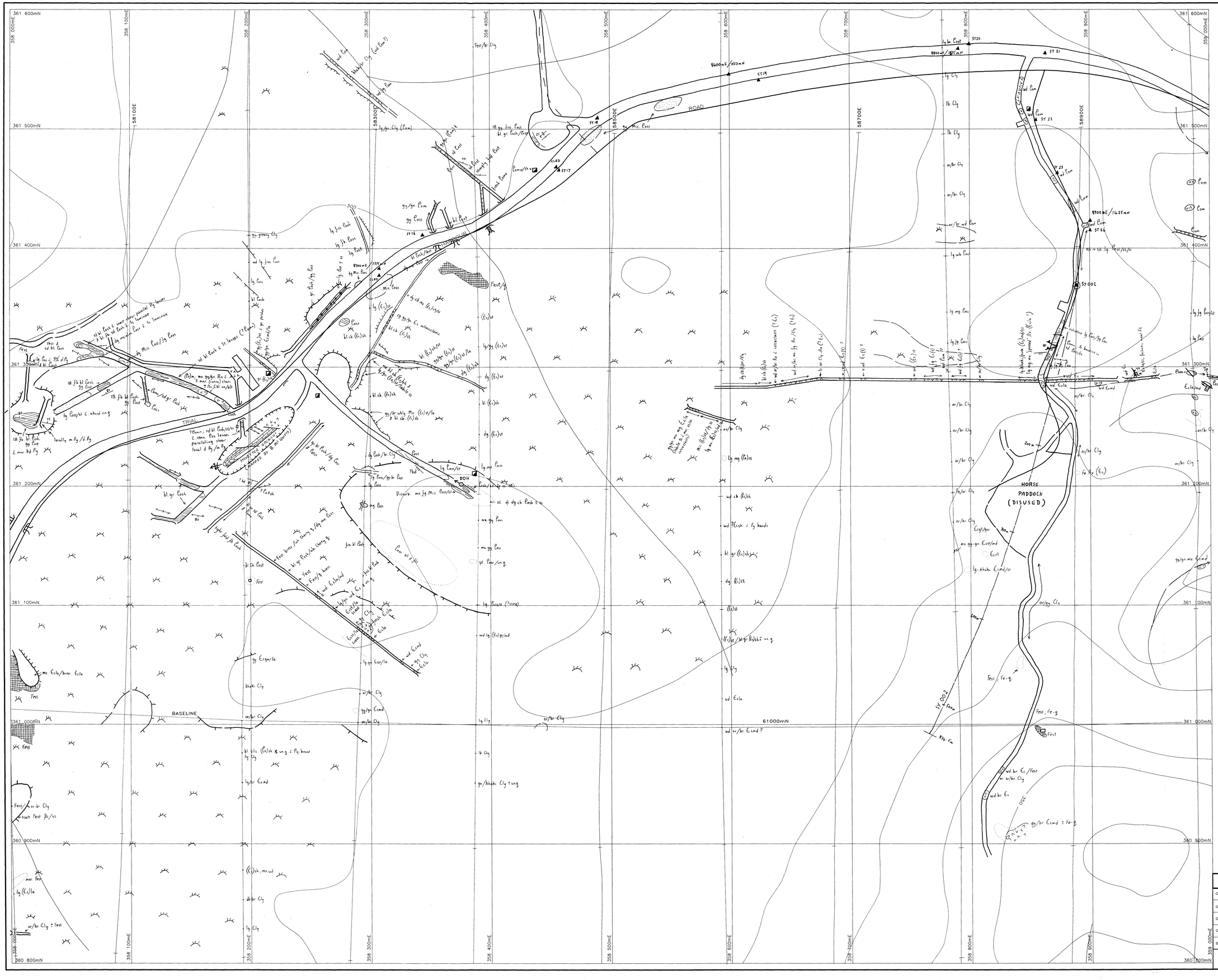
FACTUAL GEOLOGY

SHEET 1

0 10 20 40m

DRAWING ID. 5521/057

10442



SHEET LAYOUT

SHEET 7	SHEET 1	SHEET 2	SHEET 3
	SHEET 4	SHEET 5	SHEET 6

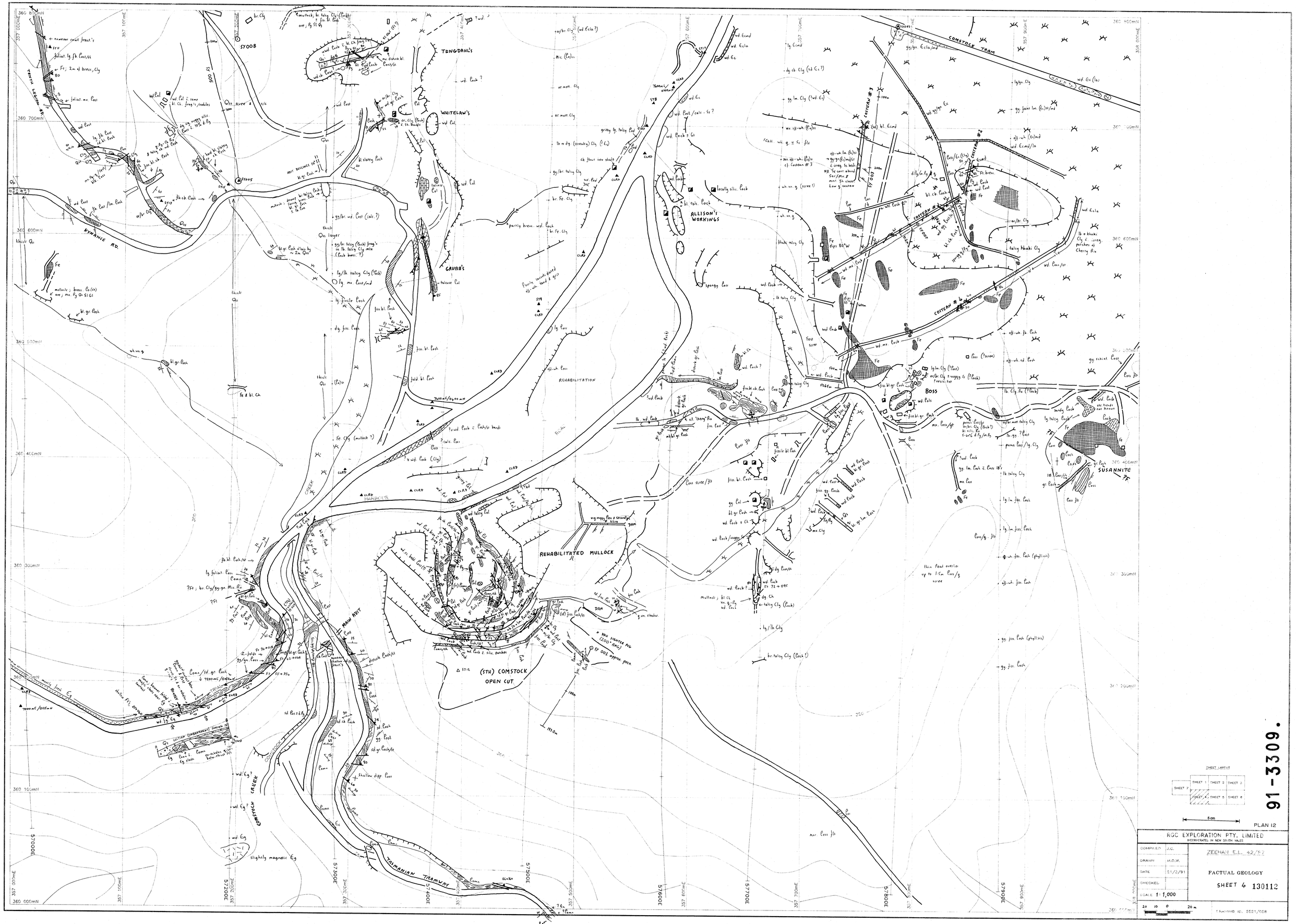
5cm

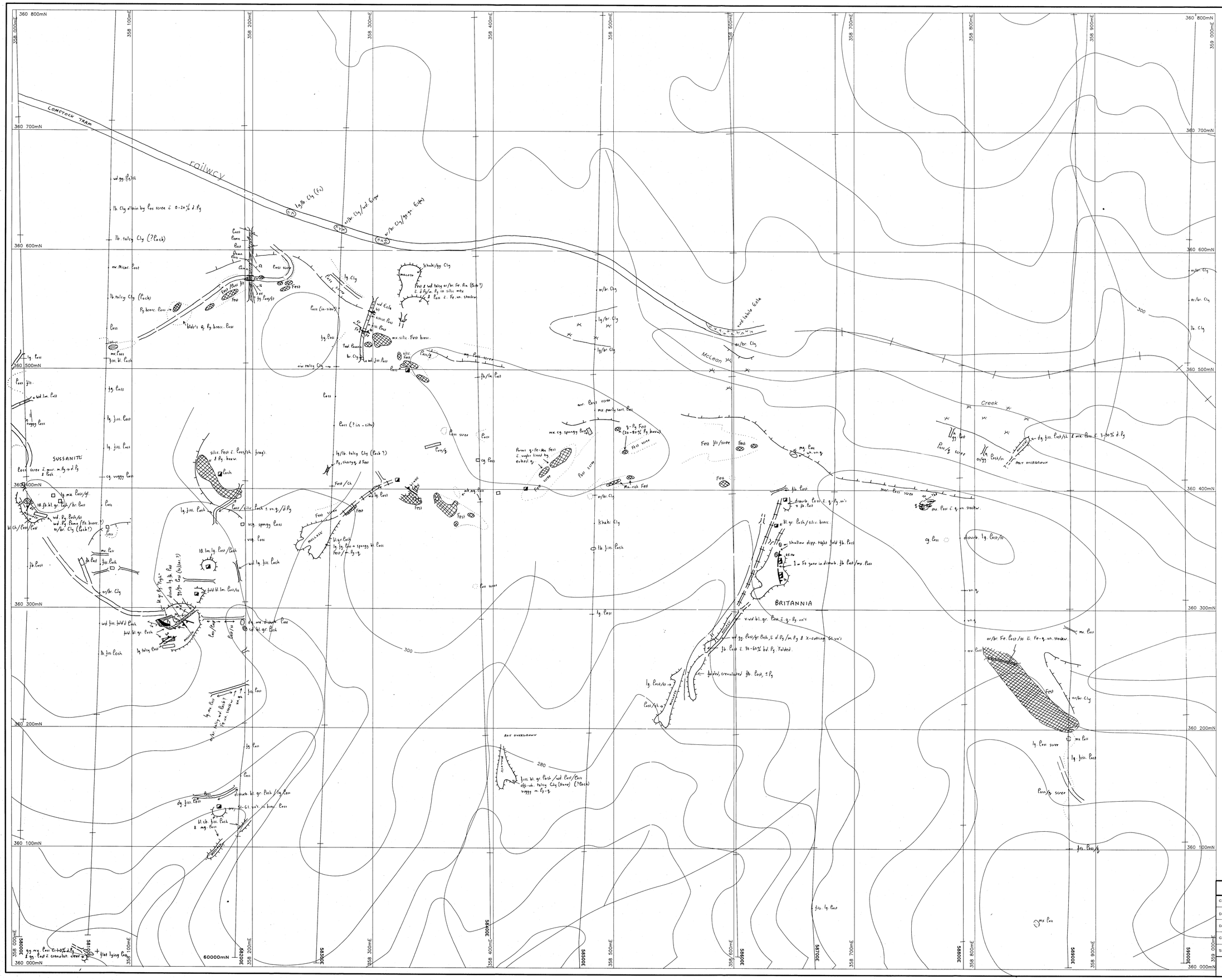
PLAN II

91-3309.

RGC EXPLORATION PTY. LIMITED		
COMPILED	J.Crossing	ZEEHAN E.L. 21/86
DRAWN	M.Walter	
DATE	3/91	FACTUAL GEOLOGY SHEET 2
CHECKED		
SCALE 1:1000		130111
0 10 20 40 m.		DRAWING ID. 5521/069

10443


COMSTOCK TRAM
TENTH LEGION RD.
KYWANLE RD.
TENGDAHL'S
WHITELAW'S
GRUBB'S
ALLISON'S WORKINGS
REHABILITATION
HARBOUR
REHABILITATED MULLOCK
(STH) COMSTOCK OPEN CUT
MAIN ADIT
COMSTOCK CREEK
TASMANIAN TRAMWAY
COTTERN #1
COTTERN #2
COTTERN #3
COTTERN #4
BOSS
SUSANNITE PK
SHEET LAYOUT
PLAN 12
91-3309.
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES
COMPILED J.C.
DRAWN M.O.W.
DATE 21/2/91
CHECKED
SCALE 1:1,000
ZEEHAN E.L. 42/82
FACTUAL GEOLOGY
SHEET 4 130112
DRAWING ID. 5521/058



6cm

SHEET LAYOUT

SHEET 7	SHEET 1	SHEET 2	SHEET 3
	SHEET 4	SHEET 5	SHEET 6

91-3309.

PLAN 13

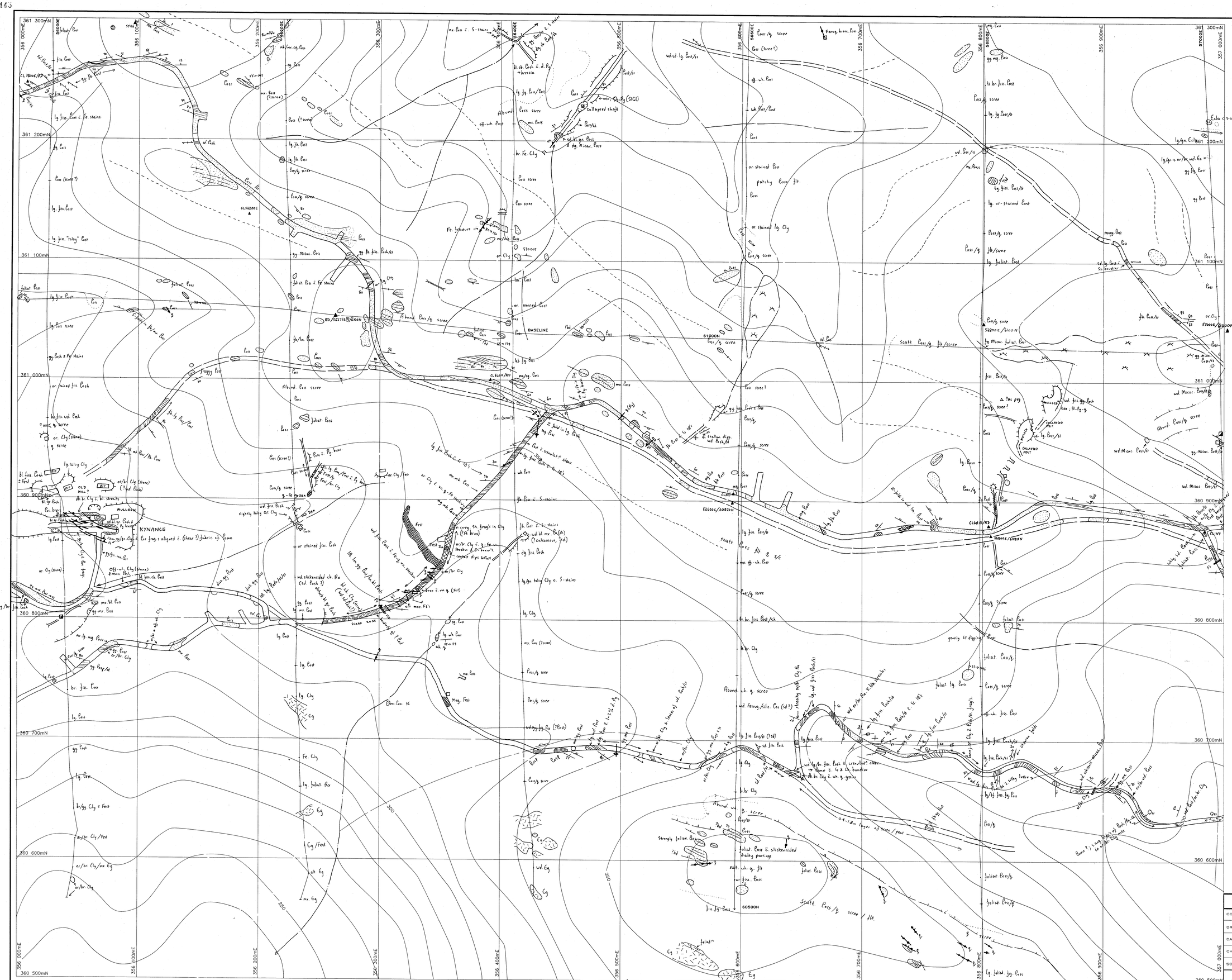
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	J.Crossing	SYLVESTER PROSPECT E.L. 42/87
DRAWN	M.W./DJC	FACTUAL GEOLOGY
DATE	June 1981	
CHECKED		SHEET 5
SCALE	1:1000	130113

0 10 20 40m

DRAWING ID. 5521/077

10445



5cm

SHEET LAYOUT

SHEET	SHEET 1	SHEET 2	SHEET 3
	SHEET 4	SHEET 5	SHEET 6

91-3309.

PLAN 14

RGC EXPLORATION PTY. LIMITED

COMPILED	J.Crossing
DRAWN	M.Walter
DATE	22/3/91
CHECKED	
SCALE	1:1000

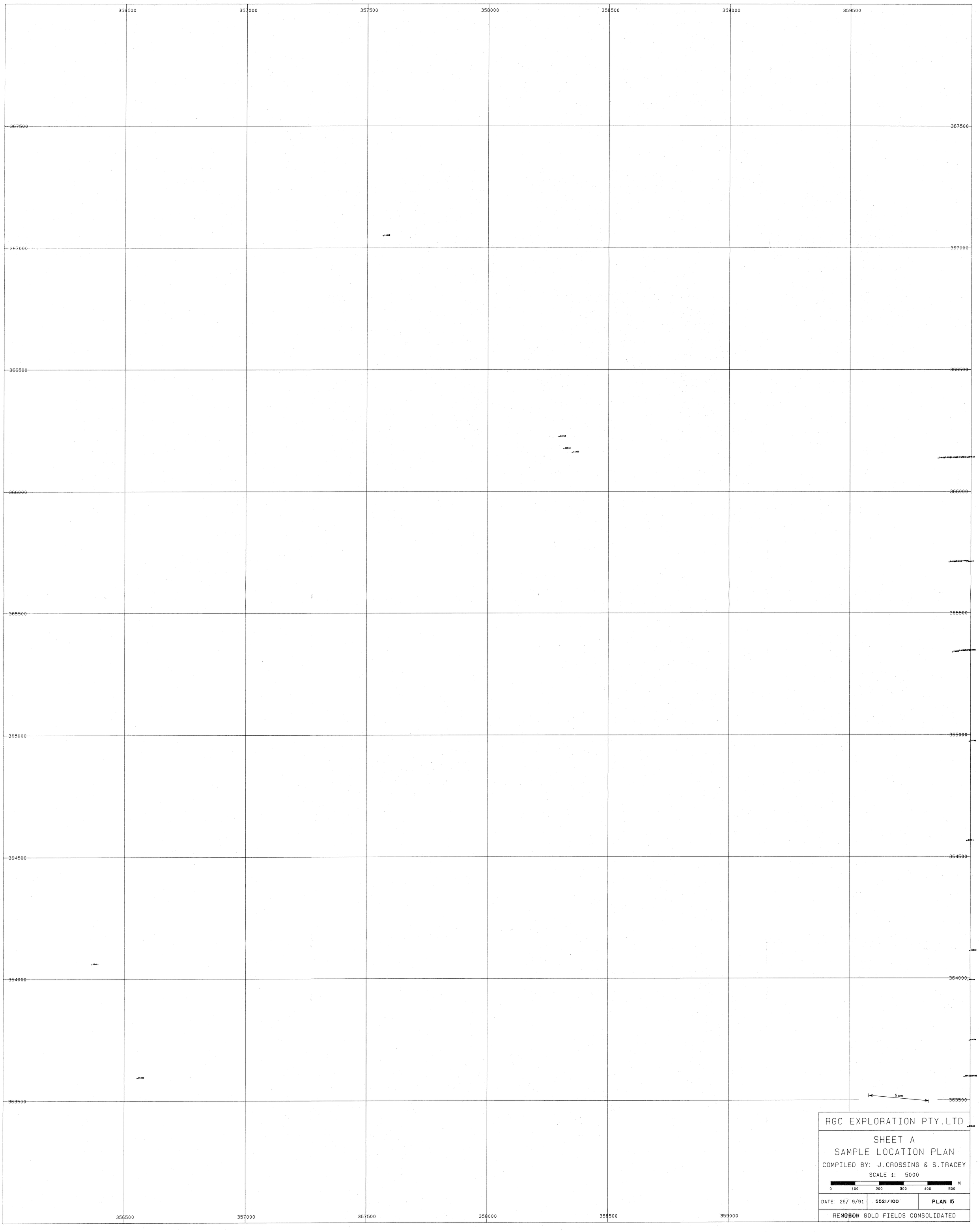
ZEEHAN PROJECT E.L. 42/87

FACTUAL GEOLOGY

SHEET 7 139114

DRAWING ID. 5521/059

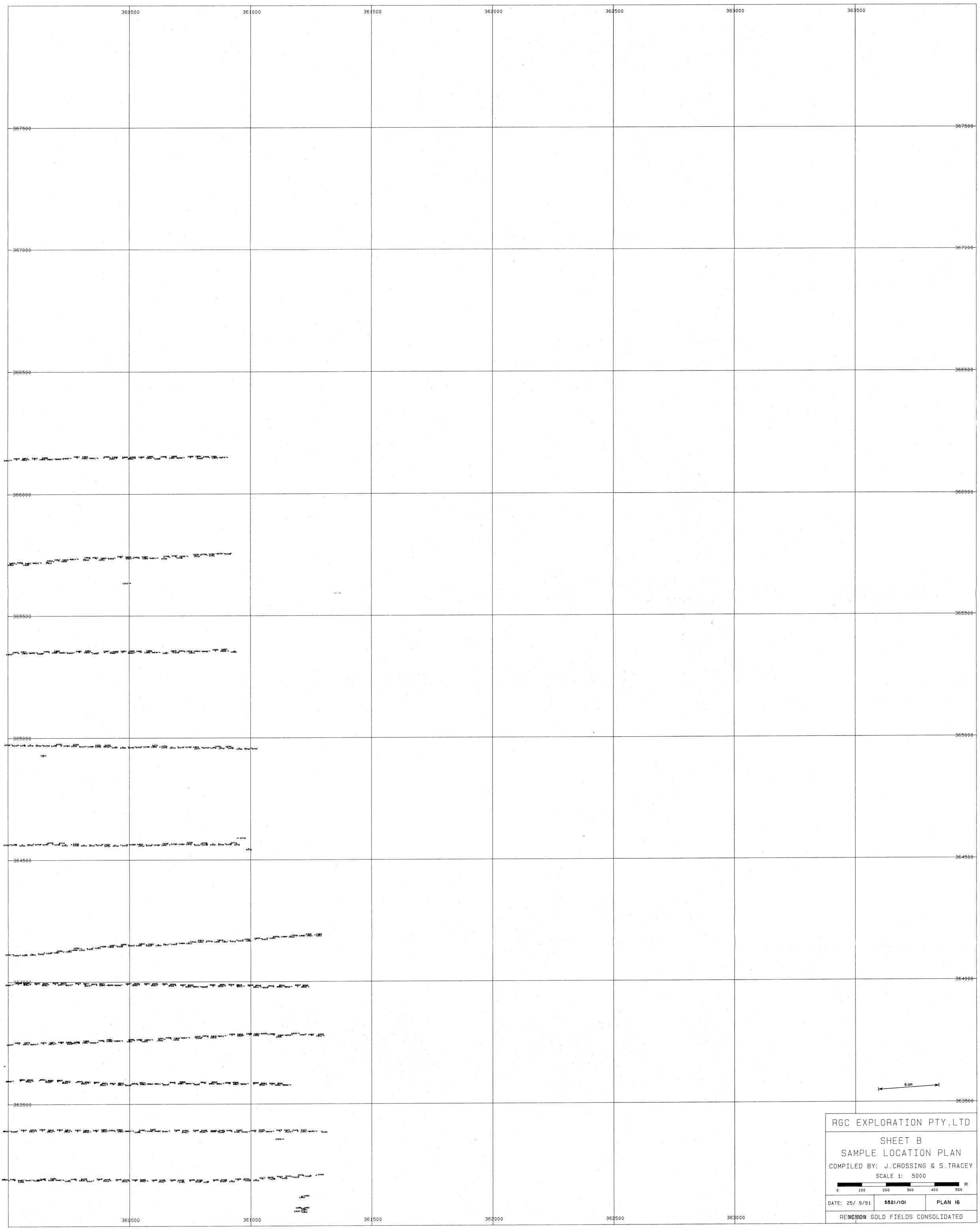
10446



130115

91-3309.

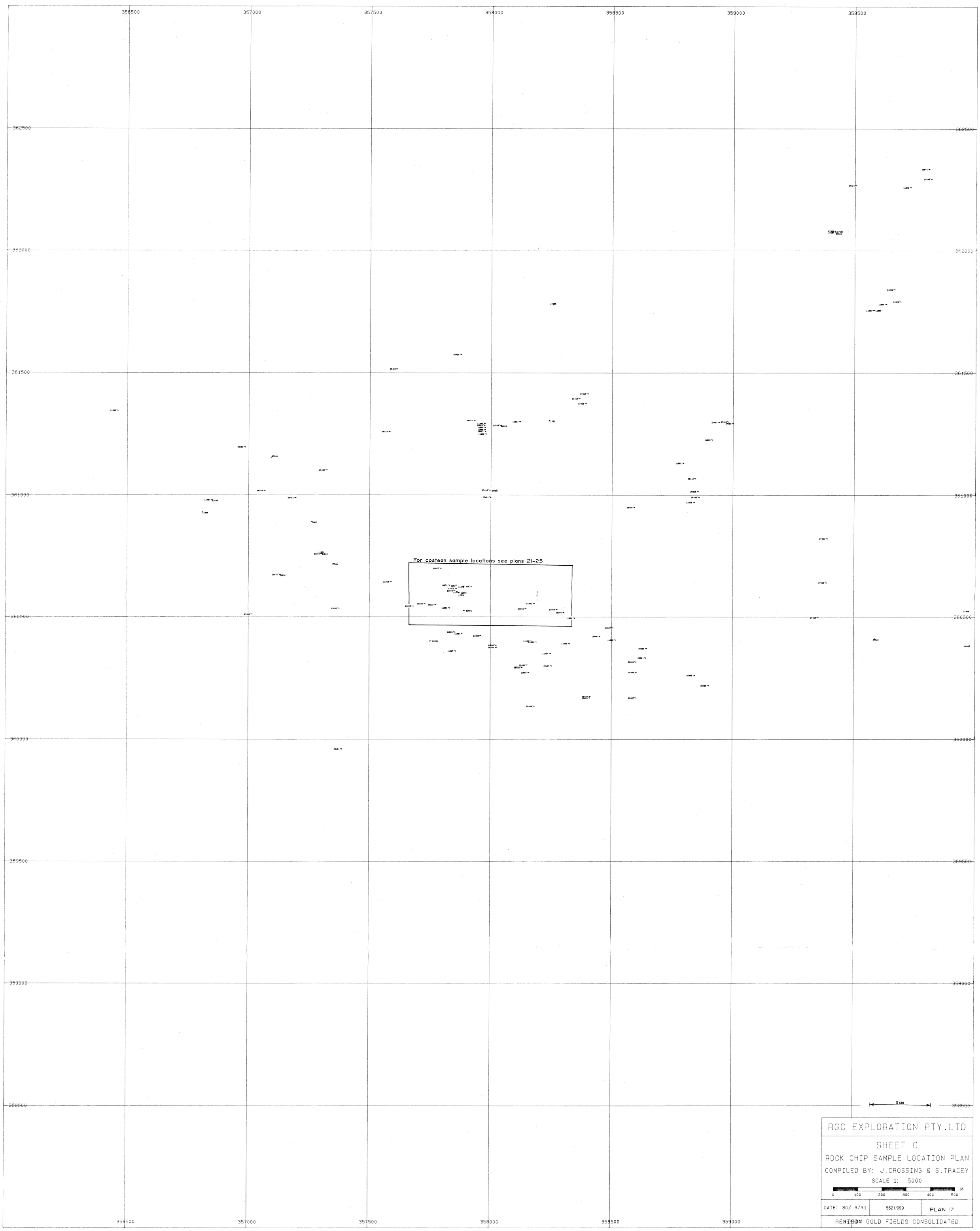
10447



91-3309.

130116

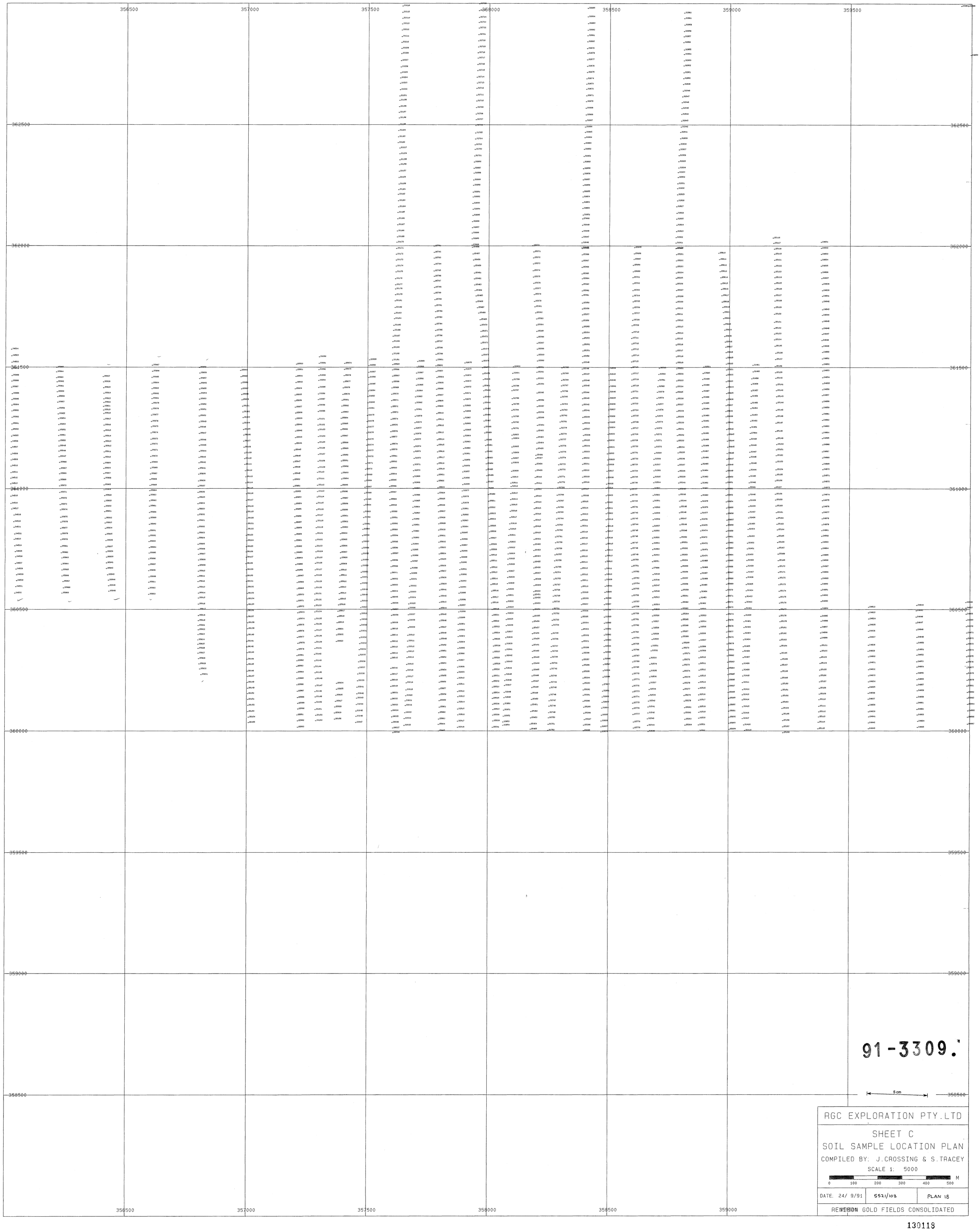
10448



130117

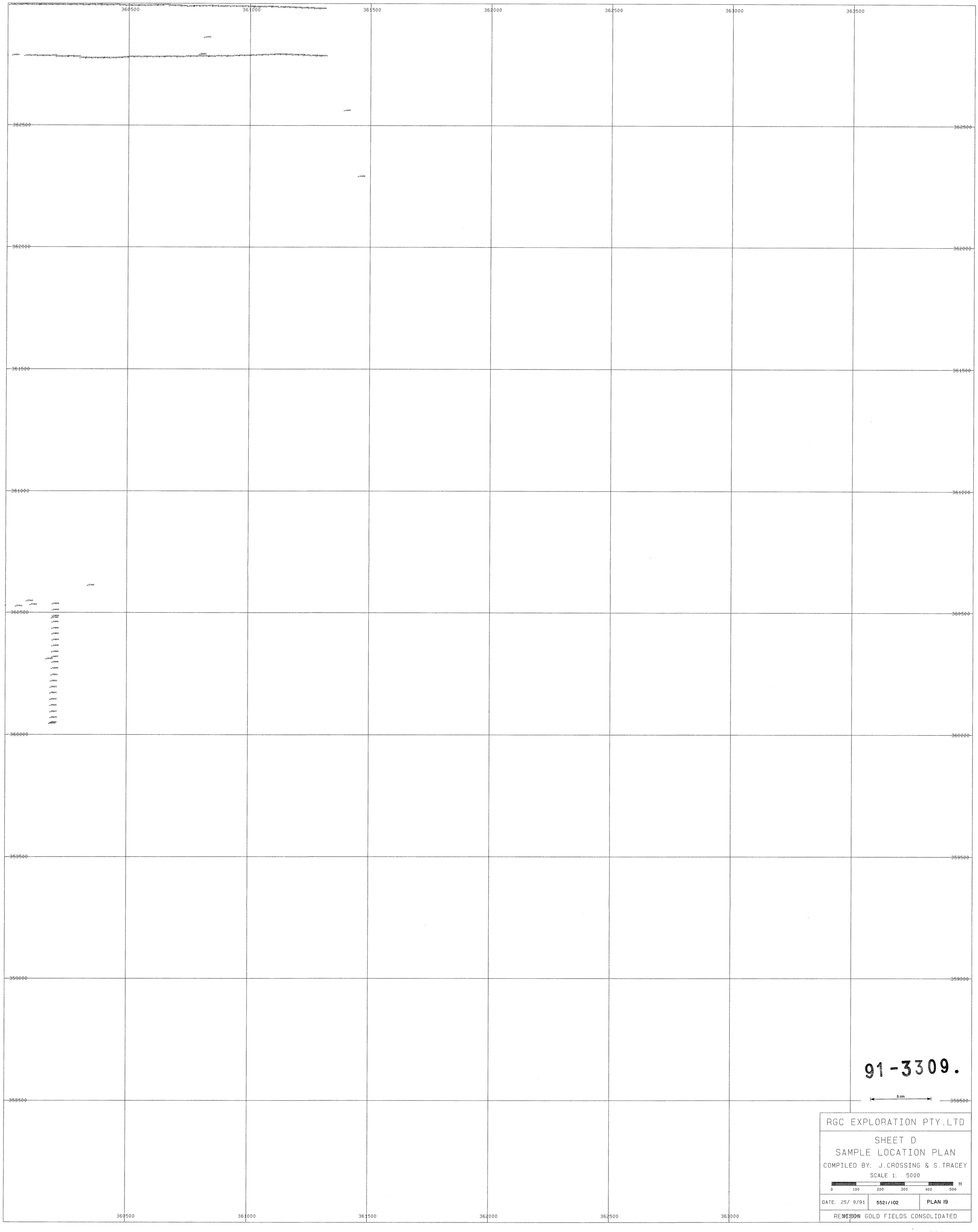
91-3309.

10443



130118

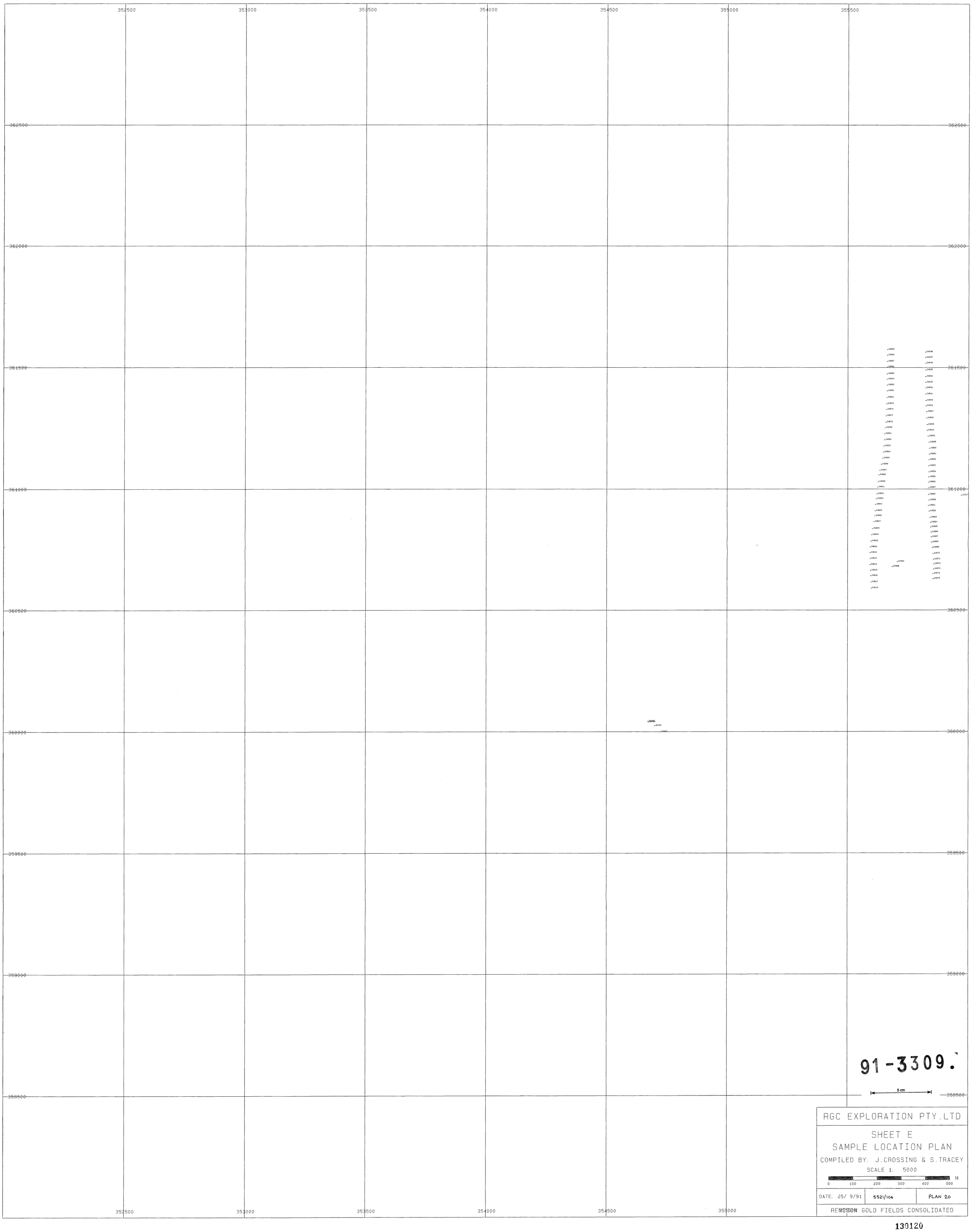
16450



91-3309.

130119

10451



130120

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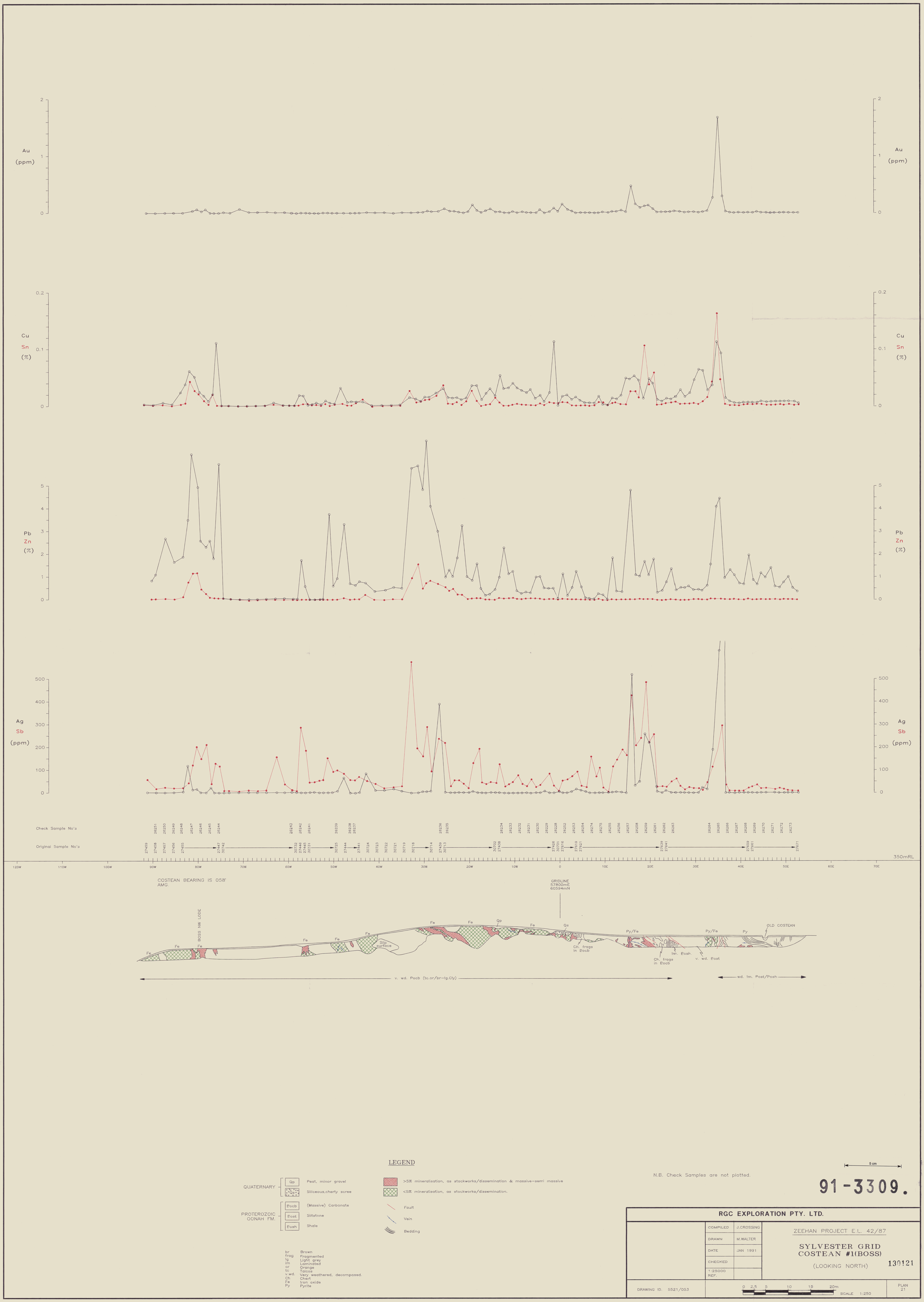
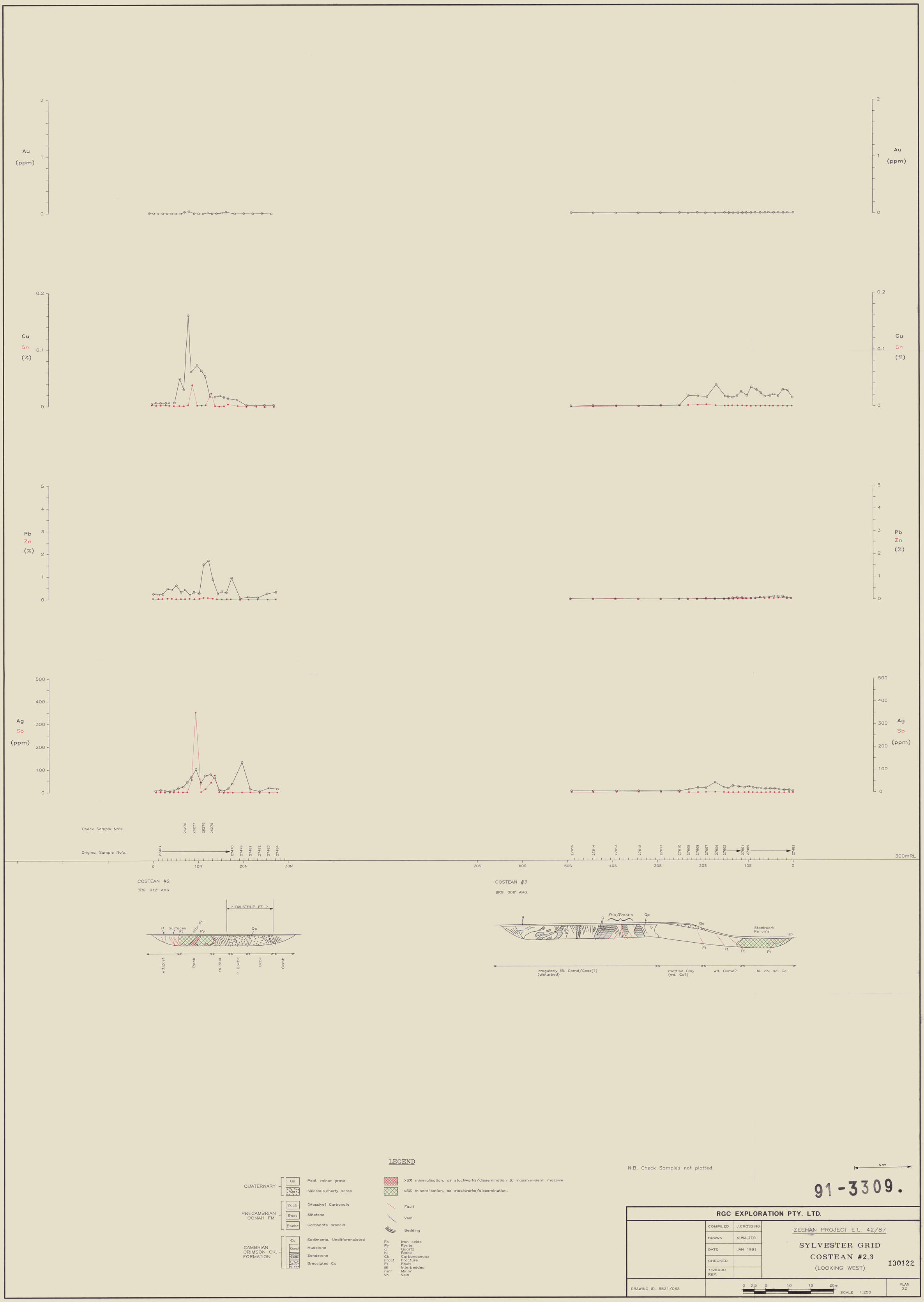

Au (ppm)
Cu Sn (%)
Pb Zn (%)
Ag Sb (ppm)
Check Sample No's
Original Sample No's
350mRL
COSTEAN BEARING IS 058° AMG.
GRIDLINE 57800mE 60594mN
BOSS NW LODE
Slip surface
Ch. frags in Pocb
Py/Fe
Py
OLD COSTEAN
Im. Posh.
v. wd. Post
v. wd. Pocb (tc.or/br-lg.Cly)
wd. Im. Post/Posh
LEGEND
QUATERNARY
Qp Peat, minor gravel
Qs Siliceous,cherty scree
PROTEROZOIC OONAH FM.
Pocb (Massive) Carbonate
Post Siltstone
Posh Shale
>5% mineralisation, as stockworks/dissemination & massive-semi massive
<5% mineralisation, as stockworks/dissemination.
Fault
Vein
Bedding
br Brown
frag Fragmented
lg Light grey
lm Laminated
or Orange
tc Talcos
v.wd. Very weathered, decomposed.
Ch Chert
Fe Iron oxide
Py Pyrite
N.B. Check Samples are not plotted.
5 cm
91-3309.
RGC EXPLORATION PTY. LTD.
COMPILED J.CROSSING
DRAWN M.WALTER
DATE JAN 1991
CHECKED
1:25000 REF.
ZEEHAN PROJECT E.L. 42/87
SYLVESTER GRID
COSTEAN #1(BOSS)
(LOOKING NORTH)
130121
DRAWING ID. 5521/053
0 2.5 5 10 15 20m
SCALE 1:250
PLAN 21

10453


Au (ppm)
Cu Sn (%)
Pb Zn (%)
Ag Sb (ppm)
Check Sample No's
26276 26277 26278 26279
Original Sample No's.
27461 27478 27479 27481 27482 27483 27484
27615 27614 27613 27612 27611 27610 27609 27608 27607 27606 27605 27601 27499 27489
0 10N 20N 30N
70S 60S 50S 40S 30S 20S 10S 0
300mRL
COSTEAN #2
BRG. 012° AMG
? BALSTRUP FT ?
Ft. Surfaces
Ft
mnr Ft.
Py
Qp
wd.Eost
Eocb
fb.Eost
? Eocbr
€cbr
€cmb
COSTEAN #3
BRG. 006° AMG.
q
Ft's/Fract's
Qp
Qs
Stockwork Fe vn's
Ft
irregularly IB. Ccmd/Ccss(?) (disturbed)
mottled Clay (wd. Cc?)
wd. Ccmd?
bl. cb. sd. Cc
LEGEND
QUATERNARY
Qp Peat, minor gravel
Qs Siliceous,cherty scree
PRECAMBRIAN OONAH FM.
Eocb (Massive) Carbonate
Eost Siltstone
Eocbr Carbonate breccia
CAMBRIAN CRIMSON CK. FORMATION
€c Sediments, Undifferenciated
€cmd Mudstone
Sandstone
€cbr Brecciated €c
>5% mineralisation, as stockworks/dissemination & massive-semi massive
<5% mineralisation, as stockworks/dissemination.
Fault
Vein
Bedding
Fe Iron oxide
Py Pyrite
q Quartz
bl Black
Cb Carbonaceous
Fract Fracture
Ft Fault
IB Interbedded
mnr Minor
vn Vein
N.B. Check Samples not plotted.
5 cm
91-3309.
RGC EXPLORATION PTY. LTD.
COMPILED J.CROSSING
DRAWN M.WALTER
DATE JAN 1991
CHECKED
1:25000 REF.
ZEEHAN PROJECT E.L. 42/87
SYLVESTER GRID
COSTEAN #2,3
(LOOKING WEST)
130122
DRAWING ID. 5521/063
0 2.5 5 10 15 20m
SCALE 1:250
PLAN 22

.99

RGC EXPLORATION PTY. LIMITED

130123

OPEN FILE

E.L. 42/87, INCORPORATING M.L.'s

43M/85 AND 123M/47 - ZEEHAN AREA

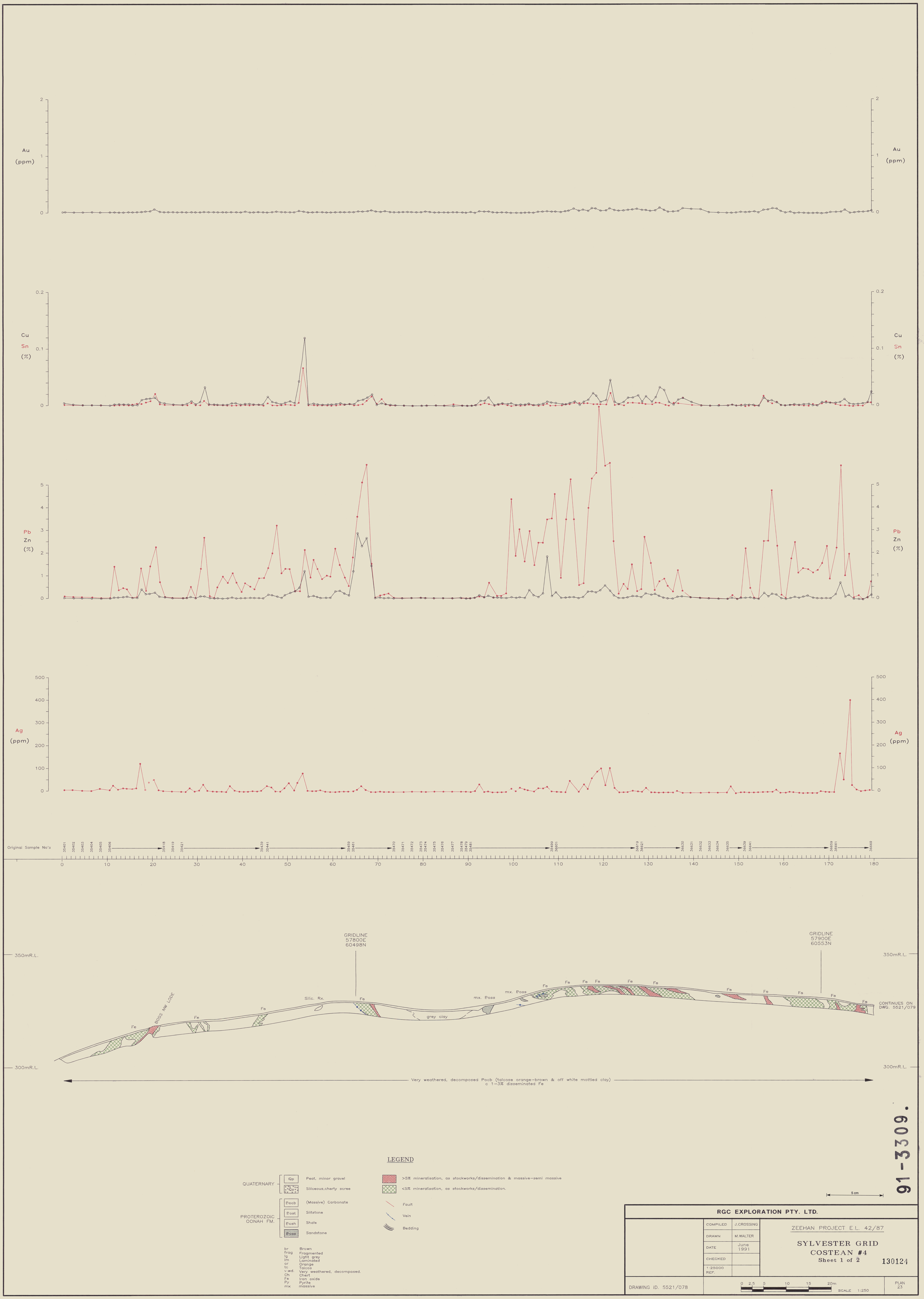
ANNUAL REPORT FOR THE PERIOD

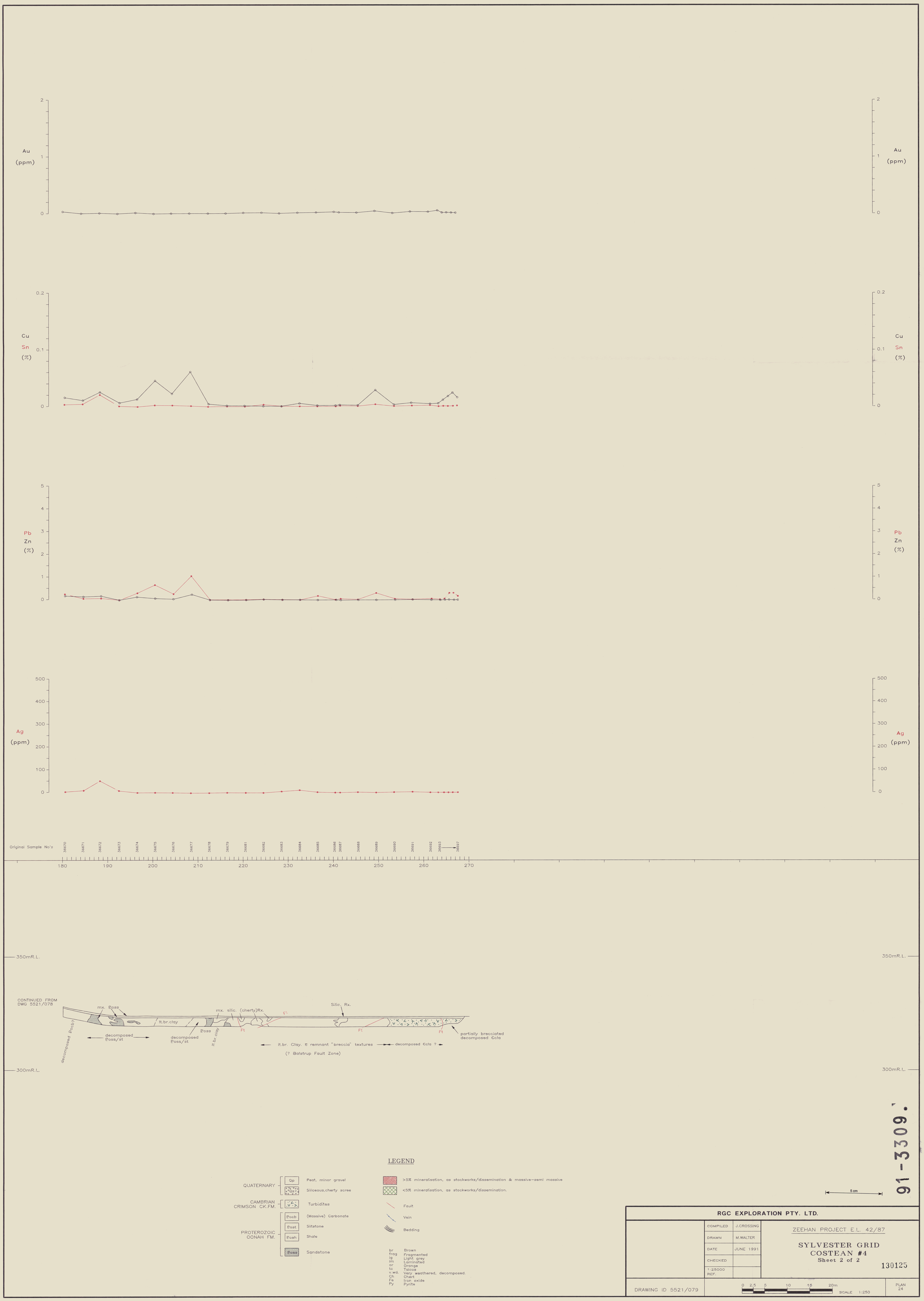
OCT. 1990 TO SEPT. 1991

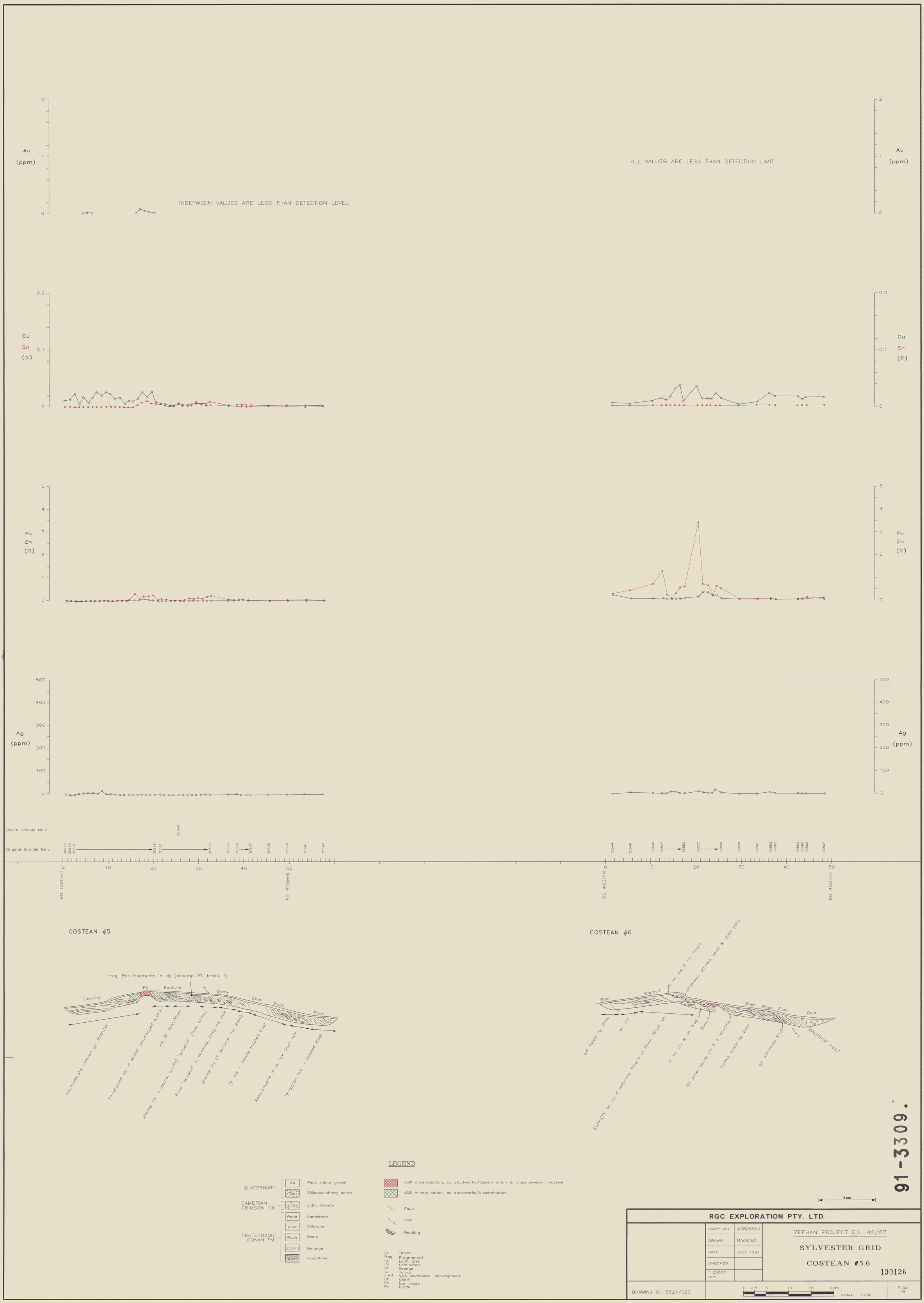
VOLUME 2

File EL 42/87
- 8 NOV 1991
Doc Ref.
Action Officer
Folio 64
ON FILE
REFERS

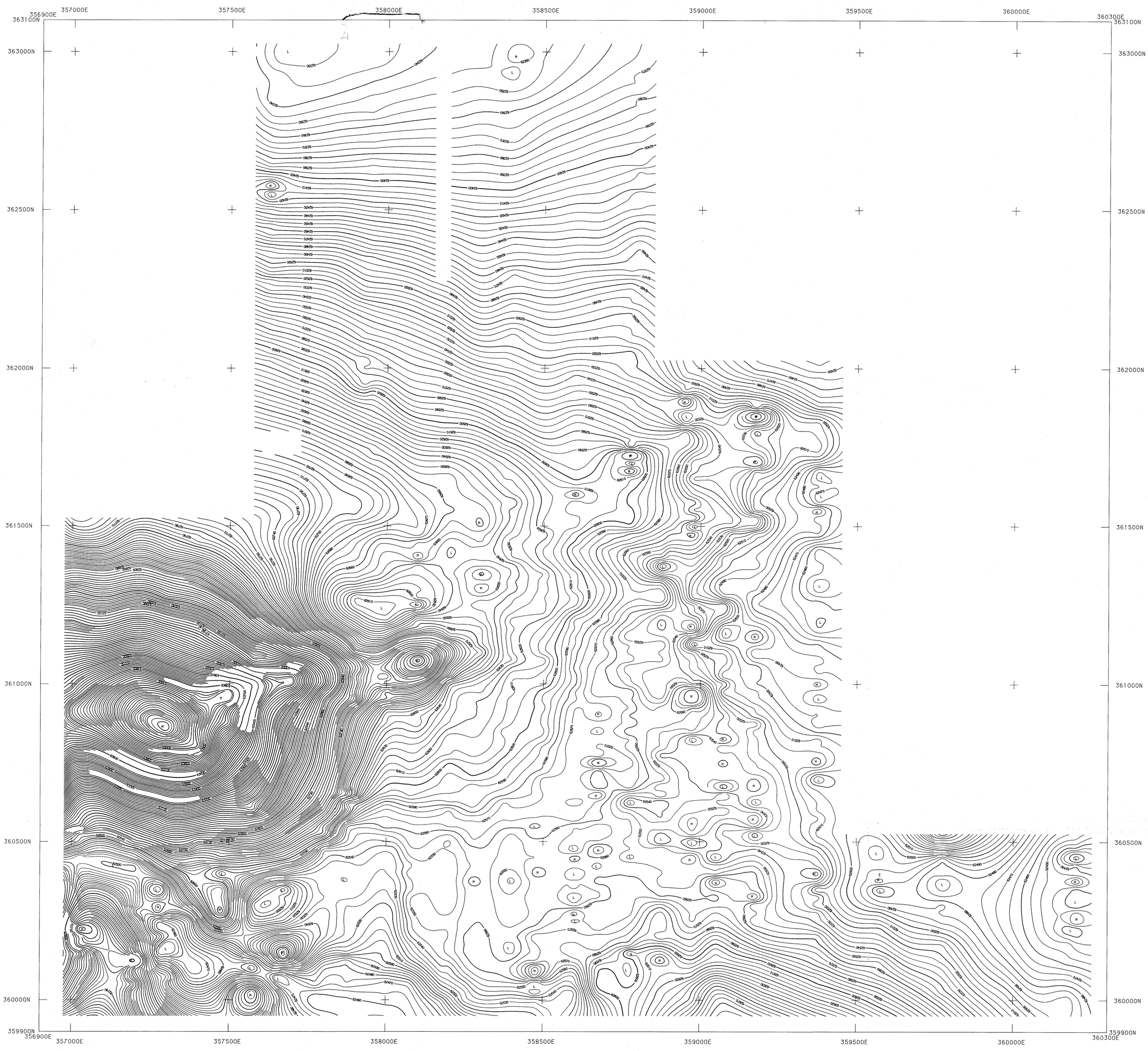
91-3309.1


Au (ppm)
Cu Sn (%)
Pb Zn (%)
Ag (ppm)
Original Sample No's
GRIDLINE 57800E 60498N
GRIDLINE 57900E 60553N
350mR.L.
300mR.L.
BOSS NW LODE
Silic. Rx.
mx. Poss
grey clay
Fe
CONTINUES ON DWG. 5521/079
Very weathered, decomposed Pocb (talcose orange-brown & off white mottled clay) c 1-3% disseminated Fe
LEGEND
QUATERNARY
Qp Peat, minor gravel
Qs Siliceous,cherty scree
PROTEROZOIC OONAH FM.
Pocb (Massive) Carbonate
Post Siltstone
Posh Shale
Sandstone
br Brown
frag Fragmented
lg Light grey
lm Laminated
or Orange
tc Talcos
v.wd. Very weathered, decomposed.
Ch Chert
Fe Iron oxide
Py Pyrite
mx massive
>5% mineralisation, as stockworks/dissemination & massive-semi massive
<5% mineralisation, as stockworks/dissemination.
Fault
Vein
Bedding
5 cm
91-3309.
RGC EXPLORATION PTY. LTD.
COMPILED J.CROSSING
DRAWN M.WALTER
DATE June 1991
CHECKED
1:25000 REF.
ZEEHAN PROJECT E.L. 42/87
SYLVESTER GRID
COSTEAN #4
Sheet 1 of 2
130124
DRAWING ID. 5521/078
SCALE 1:250
PLAN 23


Au (ppm)
Cu Sn (%)
Pb Zn (%)
Ag (ppm)
Original Sample No's
36670 36671 36672 36673 36674 36675 36676 36677 36678 36679 36681 36682 36683 36684 36685 36686 36687 36688 36689 36690 36691 36692 36693 36697
180 190 200 210 220 230 240 250 260 270
350mR.L.
CONTINUED FROM DWG 5521/078
mx. Pass
lt.br.clay
mx. silic. (cherty)Rx.
Silic. Rx.
Ft
decomposed Pacb?
decomposed Pass/st
decomposed Pass/st
Pass
lt.br.clay
partially brecciated decomposed Ꞓcla
lt.br. Clay. & remnant "breccia" textures
decomposed Ꞓcla ?
(? Balstrup Fault Zone)
300mR.L.
LEGEND
QUATERNARY
Qp Peat, minor gravel
Siliceous,cherty scree
CAMBRIAN CRIMSON CK.FM.
Turbidites
PROTEROZOIC OONAH FM.
Pacb (Massive) Carbonate
Past Siltstone
Pash Shale
Pass Sandstone
>5% mineralisation, as stockworks/dissemination & massive-semi massive
<5% mineralisation, as stockworks/dissemination.
Fault
Vein
Bedding
br Brown
frag Fragmented
lg Light grey
lm Laminated
or Orange
tc Talcos
v.wd. Very weathered, decomposed.
Ch Chert
Fe Iron oxide
Py Pyrite
5 cm
91-3309
RGC EXPLORATION PTY. LTD.
COMPILED J.CROSSING
DRAWN M.WALTER
DATE JUNE 1991
CHECKED
1:25000 REF.
ZEEHAN PROJECT E.L. 42/87
SYLVESTER GRID
COSTEAN #4
Sheet 2 of 2
130125
DRAWING ID 5521/079
0 2.5 5 10 15 20m
SCALE 1:250
PLAN 24


Au (ppm)
INBETWEEN VALUES ARE LESS THAN DETECTION LEVEL
ALL VALUES ARE LESS THAN DETECTION LIMIT
Cu Sn (%)
Pb Zn (%)
Ag (ppm)
Check Sample No's
Original Sample No's
60 550mN
60 600mN
60 400mN
60 450mN
COSTEAN #5
COSTEAN #6
irreg. Pos fragments in cly (decomp. Ft. brecc. ?)
Posh/st
Fe
Posh/st
Pomn
Post
Post
Post
wd.,moderatly cleaved gy. Posh/st
Fe-stained cly. c abund. boudinaged q.vn's
wd. lB. Post/Poss
streaky cly. c abund. q-(Fe) "boudins" (?wd. shear)
Poss "boudins" in sheared, talcy cly mtx
streaky cly (? decomp. sd. Poss)
lg mx - faintly foliated Post
Poss boudins in lg. mx. Post mtx.
lg-gy/gn mx. - foliated Post
Pomn ?
lt. br. cly & ch. frag's.
unconsol. off-wd. sand & chert pbl's.
Post
Pomn ?
Post
Poss
Post
€cla
wd. fissile lg. Post
br. cly.
Pomn(?), br. cly c lenticular frag's of Poss. ?Post. Ch
lt. br. cly & ch. frag's
Pomn?
?ft zone, sandy cly c q. boudins
folded, fissile lg. Post
gy. schistose Post
BALSTRUP FAULT
LEGEND
QUATERNARY
Qp Peat, minor gravel
Siliceous,cherty scree
CAMBRIAN CRIMSON CK.
€cla Lithic Arenite
PROTEROZOIC OONAH FM.
Pocb Sandstone
Post Siltstone
Posh Shale
Pomn Melange
sandstone
>5% mineralisation, as stockworks/dissemination & massive-semi massive
<5% mineralisation, as stockworks/dissemination.
Fault
Vein
Bedding
br Brown
frag Fragmented
lg Light grey
lm Laminated
or Orange
tc Talcos
v.wd. Very weathered, decomposed.
Ch Chert
Fe Iron oxide
Py Pyrite
5 cm
91-3309.
RGC EXPLORATION PTY. LTD.
COMPILED J.CROSSING
DRAWN M.WALTER
DATE JULY 1991
CHECKED
1:25000 REF.
ZEEHAN PROJECT E.L. 42/87
SYLVESTER GRID
COSTEAN #5,6
130126
DRAWING ID. 5521/080
0 2.5 5 10 15 20m
SCALE 1:250
PLAN 25

10454



SURVEY SPECIFICATIONS

1989 1990 SURVEY

SURVEYED BY	:	HIGHLAND EXPLORATION SERVICES.
MAGNETOMETER	:	GSM8 LA MONTAQUE MAGNETOMETER.
LINE SPACING	:	approx 200 METRES.
READING INTERVAL	:	5 METRES.
SENSOR HIEGHT	:	2 METRES

1991 SURVEY

SURVEYED BY	:	
MAGNETOMETER	:	
LINE SPACING	:	approx 200 METRES.
READING INTERVAL	:	5 METRES.
SENSOR HIEGHT	:	

PROCESSING SEQUENCE

1989 1990 SURVEY

1. Diurnal coorection.
2. 3 Point Median
3. 21 Point (0.00-0.25) Bandpass filter

1991 SURVEY

1. Diurnal coorection.
2. 3 Point Median
3. 21 Point (0.00-0.25) Bandpass filter

LEGEND

Contour interval 5.0 nT

100 nT Contour
20 nT Contour
5 nT Contour

N

0 100 200 300 400 500m

Scale 1:5000

5 cm

91-3309.

PROCESSING BY TESLA-IO PTY. LTD.
JOB No. TA1737

RGC EXPLORATION PTY. LIMITED

SYLVESTER 130127

TASMANIA
GROUND MAGNETIC SURVEY
CONTOURS OF MERGED TOTAL
FIELD MAGNETIC INTENSITY

Drawn TESLA-IO	Scale 1:5000	PLAN 26
DATE May 1991	Drawing No.	5521/070

130128

APPENDIX 1

Petrological Reports

130129

amdel

Amdel Limited
(Incorporated in S.A.)
A.C.N. 008 127 802
31 Flemington Street,
Frewville, S.A. 5063

Telephone: (08) 372 2700

P.O. Box 114,
Eastwood, S.A. 5063

Telex: AA82520
Facsimile: (08) 79 6623

12 August 1991

RGC Exploration Pty Limited
PO Box 320
ROSNY PARK TAS 7018

ATT: MR JOHN CROSSING

REPORT G 6244/92

YOUR REFERENCE:	Letter reference DJC/5522/282
IDENTIFICATION:	T26493
MATERIAL:	Drill core and grab rock samples
LOCATION:	Tasmania
DATE RECEIVED:	12 July 1991
WORK REQUIRED:	Thin sections, routine petrographic descriptions, photomicrographs

Investigation and Report by: Dr Douglas R Mason

Keith Henley

Dr Keith J Henley
Manager, Geological Services

hk

N.B. Pages 4 & 5 have been deliberately omitted as they relate to a sample on another tenement

PETROGRAPHIC DESCRIPTIONS FOR TWO ROCK SAMPLES

1. INTRODUCTION

Two (2) rock samples were received from Mr. John Crossing (Senior Geologist - Tas., RGC Exploration Pty. Ltd., Rosny Park, Tas.) on 7 July, 1991.

Specific requests were:

1) To prepare a thin section and routine petrographic descriptions for each sample;

2) To forward the report to Mr. Crossing at the Rosny Park office of RGC.

This report presents the results of this work.

2. METHODS

Conventional thin sections (C55679-680) were prepared from the rock samples provided. The sections were stained for calcite using alizarin red-S solution prior to cover-slipping.

Petrographic descriptions were prepared using conventional transmitted polarised light microscopy.

A limited number of photomicrographs were selected to illustrate the principal mineralogical and microtextural features of the samples.

3. PETROGRAPHIC DESCRIPTIONS

The routine petrographic descriptions are presented in following pages.

SAMPLE: T26493 ("Skarn in Upper Oonah Fm. carbonates west of Zeehan")
Located Drill hole SY009 390.8 - 390.9 m.
Thin Section: C55679

Rock Name:
Dolomite-magnesite-brucite-magnetite skarn

Hand Specimen:
The drill core rock sample contains large (cm-sized) angular dark brown to black fragments that lie in an irregular matrix, and are net-veined by, white crystalline material.

The sample reacts only very slightly to dilute HCl, suggesting that minor calcite may be present. The sample responds weakly to the hand magnet, especially in areas where minute black specks occur.

Petrography:

Mineral	Vol.%	Origin
Carbonate (incl. dolomite, magnesite, ?calcite)	79	metamorphic
Brucite	20	metamorphic
Opaques (?magnetite)	1	metamorphic

[NOTE: The mineralogy of this sample was confirmed by rapid X-ray diffraction methods. A thin slice of the section offcut was placed in the X-ray beam, and resulting peaks checked. Phases identified were dolomite, magnesite, and brucite.]

In thin section, this sample displays a heterogeneous xenoblastic metamorphic texture with probably breccia structure.

Carbonate is abundant. It occurs as anhedral grains in a polycrystalline mosaic present throughout much of the rock. In some areas it is exceedingly fine-grained, but in others it is medium-grained (average grain size ~0.2 mm). In places, elongate grains and aggregates define a bladed structure over areas as large as 2-3 mm. This may represent replaced patches of brucite (see below). Although X-ray diffraction distinguished dolomite and magnesite, no optical distinction can be made between the two. It is likely, however, that magnesite occurs as the elongate, bladed aggregates after possible brucite. In places, pinkish staining from the alizarin red-S depicts small carbonate aggregates that most likely represent minor calcite.

Brucite occurs as ragged, interlocking aggregates of elongate blades and flakes that range up to ~6 mm in size. It displays its characteristic anomalous interference colours, and extinction characteristics that are very similar to mica. Within some blades, very fine-grained buff-coloured carbonate has partly replaced the brucite: it is likely to be magnesite.

Opaques occur as equant euhedra of cubic morphology, mostly ~0.1-0.4 mm in size. In places, they tend to be concentrated in discontinuous, poorly-defined veinlets of carbonate. Their morphology, and magnetic response of the hand specimen, suggest that magnetite is present, but other opaque phases may also be present.

Interpretation:

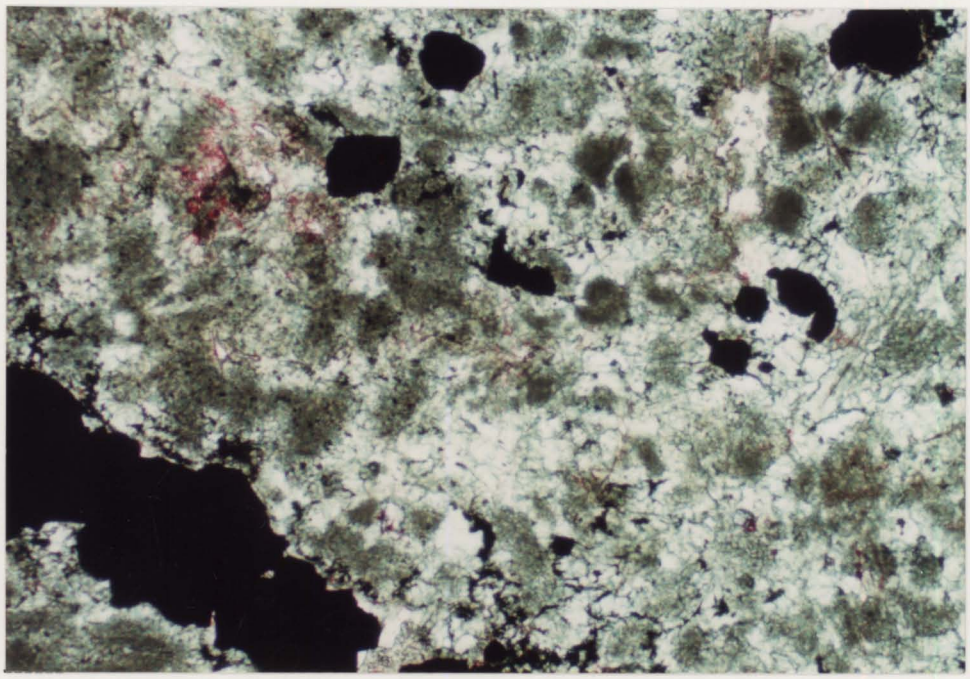
This sample represents a carbonate rock that has suffered complete recrystallisation, possibly under contact metamorphic conditions, to the assemblage dolomite + brucite + magnetite + minor calcite. Subsequent partial replacement of brucite by magnesite occurred. The irregular, vein-like and patchy distribution of white carbonate matrix in hand specimen suggests that rock body suffered brecciation prior to recrystallisation.

PHOTOMICROGRAPHS

A limited number of photomicrographs are presented in the following pages. They illustrate the principal mineralogical and microtextural features of the samples.

PLATE 1: SAMPLE T26493

130134



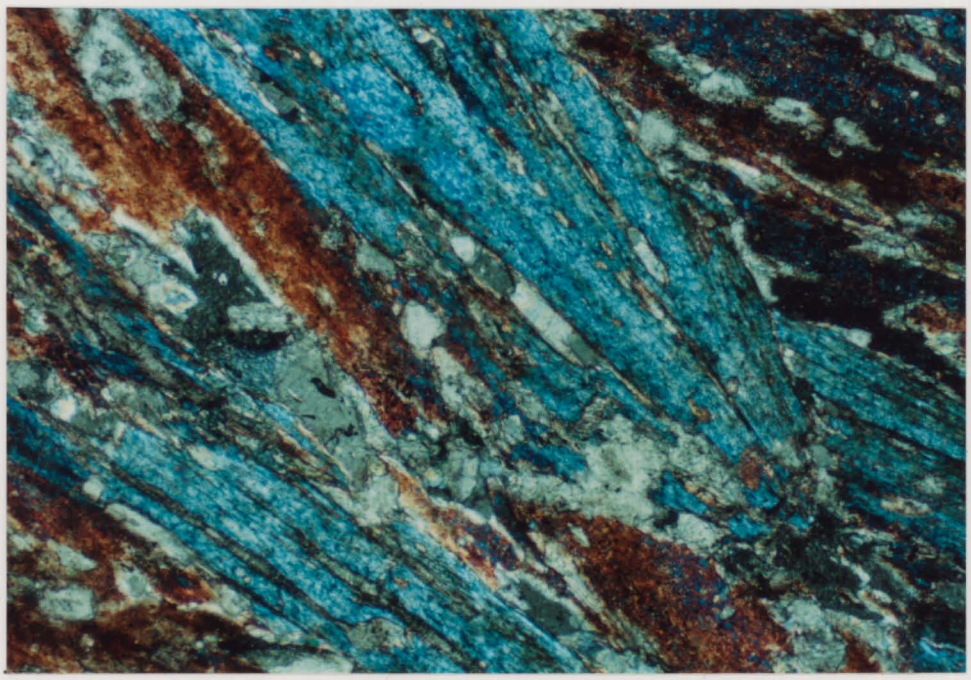
500 μm

a) Transmitted plane polarised light (1/2a,5)

This view shows massive, fine-grained carbonated (dolomite, magnesite) with a minor amount of opaques (probably mainly magnetite) both in disseminated (upper right) and veinlet (lower left) form.

PLATE 2: SAMPLE T26493 (contd..)

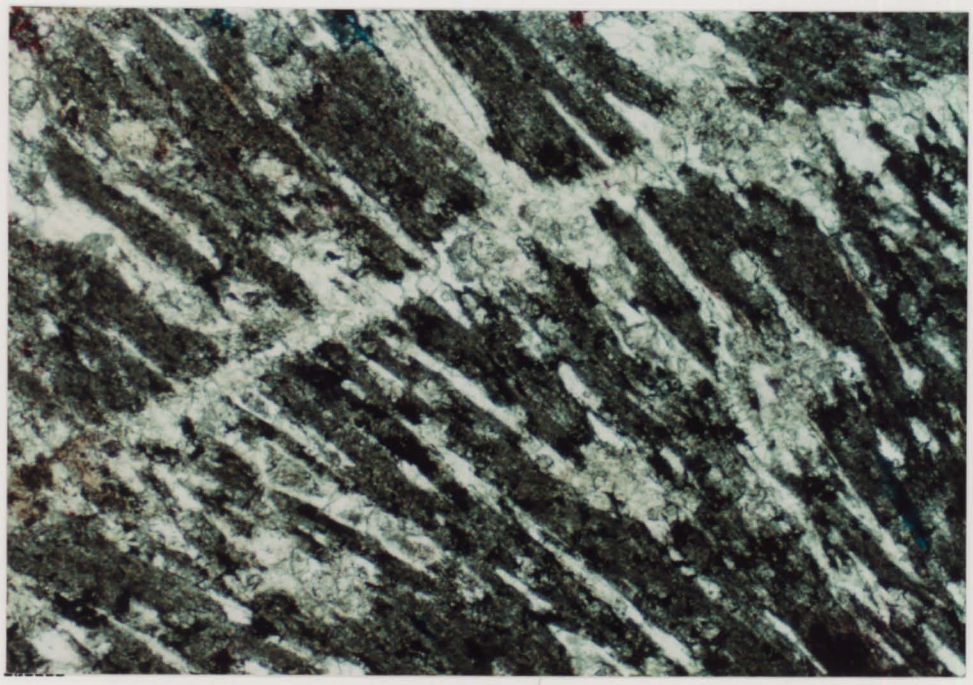
130135



500 μm

a) Transmitted light, crossed polarisers (1/3a,5)

Dense intergrown plates of brucite (blue, reddish-brown) display incipient replacement by carbonate (probably mainly magnesite, high pastel colours).



500 μm

b) Transmitted plane polarised light (1/4a,5)

Fine-grained carbonate (turbid dark magnesite, coarser colourless dolomite) have completely replaced brucite, leaving a relict bladed structure (compare 2(a) above).

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APPENDIX 2

Zeehan Project C-horizon soil sampling programme analytical results (1990/91).

130137

NAME:CODE

5521 ZEEHAN (EL 42/87)

NAME:COLOUR

1	DARK	2	MEDIUM	3	LIGHT
A	GREY	B	BLUE	G	GREEN
L	LIME	M	MAUVE	N	BLACK(NOIR)
O	ORANGE	P	PURPLE	Q	AQUA
R	RED	T	TAN(KHAKI)	U	BROWN(UMBER)
V	VIOLET	W	WHITE	Y	YELLOW

NAME:COMPOS

COB	COBBLY	CY	CLAYEY	PEB	PEBBLY
SIL	SILTY	SN	SANDY		

NAME:GRID

PTL	PARTING LAKE GRID	SYL	SYLVESTER GRID	TLG	TENTH LEGION GRID

NAME:KIND

OC	OUTCROP	RC	ROCK CHIP SAMPLE	SL	SOIL SAMPLE

NAME:QCONT

STD	STANDARD

NAME:SAMPLR

CC	CHRISTOPHER COONEY	JC	JOHN CROSSING

NAME:SLOPE

1	FLAT	2	GENTLE	3	MODERATE
4	STEEP	5	VERY STEEP		

NAME:SOIL

G	GLACIAL	R	RESIDUAL	T	TRANSPORTED

130138

NAME:ALTER

FE	IRON OXIDE	PY	PYRITIC	SI	SILICIFIED
WT	WEATHERED				

NAME:CODE

5521	ZEEHAN (EL 42/87)

NAME:GRID

AMG	AUST. MAP GRID	CST	COMSTOCK GRID	SYL	SYLVESTER GRID

NAME:KIND

CO	COSTEAN SAMPLE	CORC	COSTEAN/ROCK CHIP SAMPLE	RC	ROCK CHIP SAMPLE
RD	ROCK DUMP SAMPLE	RF	ROCK FLOAT SAMPLE		

NAME:OREMIN

FE	IRON OXIDE	GL	GALENA	MG	MAGNETITE
MN	MANGANITE	PY	PYRITE	QT	QUARTZ-TOURMALINE
QZ	QUARTZ				

NAME:QCONT

STD	STANDARD

NAME:ROCK

ARLI	LITHIC ARENITE	CARB	CARBONATE	CLAY	CLAY
DOLM	DOLOMITE	FALT	FAULT ZONE	FEST	IRONSTONE
GABR	GABBRO	GOSS	GOSSAN	LIMS	LIMESTONE
MSSX	MASSIVE SULPHIDES	MUDS	MUDSTONE	SAND	SANDSTONE
SHAL	SHALE	SULF	SULPHIDES	VEIN	VEIN

NAME:UNIT

CC	CAMBRIAN CRIMSON CREEK FORMATION	PO	PRECAMBRIAN OONAH FORMATION

NAME:VEINS

FE	IRONSTONE	MN	MANGANITE	PY	PYRITE
QZ	QUARTZ				

130139

NAME:UNIT

A	HIGH ORGANIC COMPOUND	B	CLAY CONCENTRATION	C	WEATHERED BEDROCK

114

130140

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 27684	361228	359088		SL	R	C	1A2T	SIL/SN	1	50	60	150	6.4	13	-0.005	50
T 27685	361475	358891		SL	R	C	1T2T20	SIL/SN	1	50	180	75	516.0	-3	-0.005	3
T 27686	360670	358684		SL	R	C	2R202T	SIL/SN	1	90	60	80	649.0	8	-0.005	19
T 27687	360190	358478		SL	R	C	1U1T2U	SIL/SN	1	165	330	190	14.8	23	0.008	12
T 27688	362113	358388		SL	R	C	PB	SIL/SN	1	10	-5	25	0.5	-3	-0.005	27
T 27689	362003	357930		SL	R	C	3A3U	SIL/SN	1	5	-5	10	805.0	8	-0.005	15
T 32401	360450	359064		SL	R	C	3U1UO	SIL/CY	3	105	100	350	1.3	-3	-0.005	-2
T 32402	360426	359064		SL	R	C	3U 0	CY/SIL	1	75	40	900	1.6	-3	-0.005	-2
T 32403	360401	359064		SL	R	BC	1A U	CY/SIL	1	120	35	4100	7.0	-3	-0.005	-2
T 32404	360375	359062		SL	R	BC	1A U	CY/SIL	1	65	50	1050	3.1	-3	-0.005	-2
T 32405	360347	359061		SL	R	C	2A 3A	CY/SIL	1	140	5	1200	2.9	-3	-0.005	-2
T 32406	360327	359060		SL	R	BC	OT1U2A	SIL/SN	2	55	160	125	3.0	-3	-0.005	-2
T 32407	360302	359061		SL	R	B	3A2U	CY/SIL	2	5	5	15	1.7	-3	-0.005	2
	Remark:SEVERAL ATTEMPTS.UNABLE TO PENETRATE SILICEOUS CAP.															
T 32408	360276	359059		SL	R	C	2A 2U	CY/SIL	2	5	320	10	2.3	-3	-0.005	-2
	Remark:MICA SCHIST															
T 32409	360250	359059		SL	R	B	2A U	CY/SIL	1	10	5	570	4.0	-3	-0.005	7
T 32410	360226	359059		SL	R	C	3U2U	CY/SIL	2	5	25	35	3.2	10	-0.005	-2
T 32411	360199	359058		SL	R	C	3T1TO	CY/SIL	2	5	15	30	6.5	-3	-0.005	4
T 32412	360170	359059		SL	R	C	3UW	CY/PEB	1	5	25	40	3.4	-3	0.006	2
T 32413	360149	359058		SL	R	C	1A	SILPEB	1	5	10	10	1.5	-3	-0.005	-2
T 32414	360128	359058		SL	R	BC	1A	SIL/SN	1	5	20	10	1.5	-3	-0.005	-2
T 32415	360100	359059		SL	R	C	2A1A	SILPEB	3	5	40	10	1.0	-3	-0.005	-2
T 32416	360073	359058		SL	R	C	2A	SIL/SN	1	5	10	10	0.7	-3	-0.005	-2
T 32417	360051	359058		SL	R	B	2UW	CY/SIL	2	5	10	10	1.0	-3	-0.005	-2
	Remark:SEVERAL ATTEMPTS. UNABLE TO PENETRATE GRAVELS.															
T 32418	360025	359064		SL	R	C	3A	SIL/SN	3	-5	10	10	1.3	-3	-0.005	-2
T 32419	360002	359068		SL	R	B	2AW	CY/SN	3	5	10	10	0.8	-3	-0.005	-2
	Remark:SEVERAL ATTEMPTS. UNABLE TO PENETRATE GRAVELS.															
T 32420	360475	359066		SL	R	C	3T2T3U	CY/SIL	1	60	80	105	4.5	-3	-0.005	-2
T 32421	360503	359068		SL	R	C	2TR2U	CY/SIL	1	65	70	85	4.3	8	0.007	-2
T 32422	360529	359070		SL	R	C	2T1T3A	CY/SIL	1	90	50	185	5.0	-3	-0.005	-2
T 32423	360552	359071		SL	R	C	RON1U	SN/PEB	1	85	35	200	0.9	-3	-0.005	-2
T 32424	360577	359073		SL	R	C	AGN1U	PEBCOB	1	115	70	280	8.0	4	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32425	360603	359073		SL	R	C	2U	CY/SIL	3	65	110	185	5.2	-3	-0.005	-2
T 32426	360631	359074		SL	R	C	3U2TN	SILPEB	2	50	55	220	6.4	-3	-0.005	-2
T 32427	360653	359076		SL	R	C	0N1N2A	SILPEB	3	55	35	390	5.5	3	-0.005	-2
T 32428	360678	359075		SL	R	C	2TR2U	CY/SIL	2	60	80	290	6.4	9	-0.005	7
T 32429	360702	359075		SL	R	C	1T2U	SILPEB	2	100	75	385	6.0	-3	-0.005	4
T 32430	360725	359074		SL	R	C	R2U2TN	CY/SIL	1	65	65	285	2.8	-3	-0.005	10
T 32431	360751	359077		SL	R	C	2T2UN	CY/SIL	1	110	95	295	7.6	-3	-0.005	-2
T 32432	360775	359077		SL	R	C	N1T3T	CY/SIL	1	70	185	315	6.5	4	-0.005	-2
T 32433	360802	359080		SL	R	C	2UN2T	SIL/SN	1	270	70	455	3.0	-3	-0.005	-2
T 32434	360832	359080		SL	R	C	3T1T2U	SN/SIL	1	185	60	235	1.6	-3	-0.005	-2
T 32435	360853	359081		SL	R	C	2A3T2T	SIL/SN	1	55	125	550	6.0	-3	-0.005	-2
T 32436	360879	359082		SL	R	C	R3T1T	SIL/SN	1	55	25	110	2.5	-3	-0.005	-2
T 32437	360902	359082		SL	R	C	2T	SIL/SN	3	50	80	100	5.0	7	-0.005	2
T 32438	360926	359083		SL	R	C	2U1T	CY/SIL	3	95	40	230	1.7	-3	-0.005	-2
T 32439	360950	359084		SL	R	C	1TGU	CY/SIL	3	80	50	200	1.8	-3	-0.005	-2
T 32440	360974	359083		SL	R	C	R3A2T	SIL/SN	3	90	90	55	13.0	-3	-0.005	-2
T 32441	361004	359083		SL	R	C	1U1T	SIL/SN	3	85	45	165	2.2	-3	-0.005	-2
T 32442	361024	359084		SL	R	C	1T2U1U	CY/SIL	1	125	50	935	6.1	-3	-0.005	-2
T 32443	361050	359084		SL	R	C	2T	CY/SIL	1	65	445	140	16.0	9	-0.005	-2
T 32444	361076	359086		SL	R	C	N3A	SIL/SN	3	100	115	590	4.1	7	-0.005	-2
T 32445	361103	359087		SL	R	C	3A1T2U	SIL/SN	5	110	40	135	1.2	-3	-0.005	-2
T 32446	361129	359086		SL	R	C	1T2U	CY/SIL	5	110	95	310	2.3	-3	-0.005	-2
T 32447	361150	359086		SL	R	C	1U1A2U	CY/SIL	5	95	245	415	7.1	-3	-0.005	2
T 32448	361177	359086		SL	R	C	N2U1T	CY/SIL	5	100	60	140	2.2	-3	-0.005	-2
T 32449	361203	359087		SL	R	C	AG2T	CY/SIL	1	145	65	130	3.2	-3	-0.005	-2
T 32450			STD	STD								810	2.5	-500	0.230	2
	Remark:STD FMC1															
T 32451	361252	359088		OC	R	C	N3T2T	PEB	4	130	35	310	1.2	-3	-0.005	-2
T 32452	361278	359089		SL	R	C	3A3T2T	CY/SIL	5	35	55	45	8.0	-3	-0.005	-2
T 32453	361302	359090		SL	R	C	3A2A1A	CY/SIL	2	5	-5	5	1.2	-3	-0.005	2
T 32454	361330	359090		SL	R	C	3A2A3U	CY/SIL	2	10	15	10	1.5	-3	-0.005	2
T 32455	361352	359091		OC	R	C	2T2UNR	PEB	3	110	2200	625	13.0	-3	-0.005	-2
T 32456	361380	359091		SL	R	BC	N1T1U	CY/SIL	1	70	270	460	5.3	3	-0.005	-2
T 32457	361403	359092		SL	R	BC	2UN2T	CY/SIL	5	85	60	500	3.9	-3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87. SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32458	361430	359092		OC	R	C	N2A2T	PEB	5	65	260	760	3.6	-3	-0.005	-2
T 32459	361453	359093		OC	R	C	N2T3A	PEB	3	65	1300	1850	11.0	20	-0.005	4
	Remark:SAMPLE TAKEN FROM CUTTING ON NTH SIDE OF ROAD.															
T 32460	361482	359099		SL	R	C	2T1TR	CY/SIL	1	35	580	210	4.2	4	-0.005	-2
T 32461	361509	359098		SL	R	C	3UAGR	CY/SIL	3	65	75	175	1.8	-3	-0.005	-2
T 32462	360523	358878		SLRC	R	C	N1R2A	/PEB	1	100	7200	2900	19.0	20	0.034	39
T 32463	360547	358880		RC	R	C	3RN2T	PEB	2	75	475	450	6.5	-3	-0.005	-2
T 32464	360572	358882		RC	R	C	N2T2B	PEB	2	175	50	390	1.4	5	-0.005	-2
T 32465	360599	358883		SL	R	C	2T2U	CY/SIL	1	80	115	145	3.9	-3	-0.005	-2
T 32466	360625	358885		SL	R	C	2U2T2R	SIL/SN	4	105	25	160	2.1	-3	-0.005	-2
T 32467	360648	358884		RC	R	C	2A1U1T	PEB	2	130	10	195	1.1	-3	-0.005	-2
T 32468	360672	358885		SL	R	C	2U	CY/SIL	1	40	15	70	2.2	-3	-0.005	-2
T 32469	360699	358884		RC	R	C	1R2O2A	PEB	1	80	5	275	1.3	-3	-0.005	-2
T 32470	360720	358884		SL	R	C	1T2U1U	CY/SIL	3	60	70	115	2.8	-3	-0.005	-2
T 32471	360746	358885		RC	R	C	3R2R1R	PEB	2	50	25	115	2.8	-3	-0.005	-2
T 32472	360772	358883		SL	R	C	2T3T3A	SIL/SN	3	75	175	70	6.6	-3	0.041	3
T 32473	360797	358882		SL	R	C	2T3A2U	SIL/SN	4	40	115	75	2.9	-3	-0.005	-2
T 32474	360825	358883		SL	R	C	2R2T	SIL/SN	3	75	50	130	7.1	-3	-0.005	-2
T 32475	360847	358883		SL	R	C	2A2T	CY/SIL	3	35	345	55	14.0	25	0.047	11
T 32476	360872	358883		SL	R	C	1T2UN	SIL/SN	1	115	210	265	12.0	-3	0.013	3
T 32477	360898	358884		RC	R	C	N1O2TU	PEB	1	50	25	540	5.5	-3	0.020	4
T 32478	360921	358885		RC	R	C	N1O2T	PEB	1	45	45	195	4.4	-3	-0.005	-2
T 32479	360946	358885		SL	R	C	2T	SIL/SN	2	60	230	200	6.3	-3	-0.005	3
T 32480	360971	358886		SL	R	C	2T	SIL/SN	2	50	55	110	4.1	-3	-0.005	2
T 32481	361000	358886		SL	R	C	1O3A2T	CY/SIL	2	90	50	125	5.0	3	-0.005	-2
T 32482	361022	358885		SL	R	C	2T1T3T	SIL/SN	2	90	65	100	8.3	5	0.008	-2
T 32483	361047	358885		SL	R	C	2R2T1T	SIL/SN	1	150	85	280	6.3	3	-0.005	-2
T 32484	361073	358885		SL	R	C	2T3T3A	SIL/SN	2	100	95	115	5.0	-3	-0.005	-2
T 32485	361100	358886		SL	R	C	2T	CY/SIL	1	95	290	310	13.0	5	-0.005	2
T 32486	361126	358887		SL	R	C	2A1T2T	SIL/SN	1	145	440	35	19.0	3	-0.005	-2
T 32487	361152	358887		SL	R	C	N/1R1T	SIL/SN	1	205	130	90	13.0	-3	-0.005	-2
T 32488	361175	358888		SL	R	C	2TA2G	CY/SIL	1	120	50	120	2.5	-3	-0.005	-2
T 32489	361200	358888		SL	R	C	2TN/1U	CY/SIL	1	105	95	550	6.0	-3	-0.005	-2
T 32490	361226	358888		SL	R	C	2R2T2U	SIL/SN	1	40	40	160	2.8	-3	-0.005	2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32491	361252	358889		SL	R	C	2T2R2U	CY/SIL	1	90	65	140	2.9	-3	-0.005	-2
T 32492	361277	358888		SL	R	C	2U3T2T	SIL/SN	1	50	35	130	2.6	-3	-0.005	-2
T 32493	361299	358889		SL	R	C	1A2A3A	SIL/SN	3	25	40	5	3.9	-3	-0.005	-2
T 32494	361327	358889		SL	R	C	2A2U3T	SIL/SN	1	25	20	20	5.0	-3	-0.005	-2
T 32495	361350	358889		SL	R	C	3A	SIL/SN	1	5	25	15	2.5	-3	-0.005	-2
T 32496	361375	358889		SL	R	C	2A2T	SIL/SN	1	5	10	10	5.8	-3	-0.005	-2
T 32497	361400	358889		SL	R	C	2T3A	CY/SIL	1	25	15	15	20.0	-3	0.006	2
T 32498	361425	358889		SL	R	C	2T	SIL/SN	1	30	60	195	4.0	-3	-0.005	-2
T 32499	361450	358889		SL	R	C	2U2T1T	SIL/SN	1	60	45	140	3.0	3	-0.005	-2
T 32500			STD	STD								100	0.2	-500	0.044	5
	Remark:STD B3															
T 32501	361501	358894		SL	R	C	2T3T2U	SIL/SN	2	65	20	65	0.7	7	-0.005	-2
T 32502	360500	358878		SL	R	C	2T 2R	SIL/SN	3	85	335	430	5.0	-3	-0.005	-2
T 32503	360473	358879		SL	R	C	A2G2T	SIL/SN	1	50	195	6000	19.0	-3	-0.005	-2
T 32504	360449	358879		SL	R	C	1A	SIL/SN	1	5	55	4400	2.6	-3	-0.005	-2
T 32505	360427	358879		SL	R	C	2T2U	SIL/SN	1	175	140	430	1.4	-3	-0.005	-2
T 32506	360399	358878		SL	R	C	2T2U	SIL/SN	4	110	175	205	3.9	-3	-0.005	-2
T 32507	360372	358879		SL	T	B	3A	SIL/SN	2	5	5	5	0.9	-3	-0.005	-2
	Remark:SEVERAL ATTEMPTS. UNABLE TO PENETRATE GRAVEL CAP.															
T 32508	360345	358878		SL	R	C	2U2A	SIL/SN	1	-5	10	5	0.8	-3	-0.005	-2
T 32509	360328	358878		SL	R	C	2A	SIL/SN	1	-5	10	5	1.4	-3	-0.005	-2
T 32510	360301	358878		SL	R	C	2A3A2U	SIL/SN	2	-5	5	5	3.6	-3	-0.005	-2
T 32511	360276	358878		SL	R	C	2U1U	SIL/SN	2	5	20	55	3.9	-3	0.009	3
T 32512	360250	358878		SL	R	C	2U2A	SIL/SN	1	5	170	20	2.0	-3	-0.005	-2
T 32513	360225	358878		SL	R	C	N/3A2U	SIL/SN	2	5	4700	180	4.1	-3	-0.005	-2
T 32514	360199	358877		SL	R	C	3A2T3T	SIL/SN	3	30	665	180	12.0	-3	0.006	2
T 32515	360175	358877		SL	R	C	2A	SIL/SN	2	5	660	5	2.1	-3	-0.005	2
T 32516	360149	358877		SL	R	C	2A	SIL/SN	1	5	75	5	5.6	7	-0.005	5
T 32517	360127	358877		SL	R	BC	2U2A	SIL/SN	3	5	4200	15	8.9	5	-0.005	2
T 32518	360099	358877		SL	R	B	2A	CY/SIL	2	-5	25	5	1.3	-3	-0.005	3
	Remark:SEVERAL ATTEMPTS UNABLE TO PENETRATE CLAYS & GRAVELS.															
T 32519	360077	358877		SL	R	C	2A2U	SIL/SN	1	5	40	5	1.7	-3	-0.005	-2
T 32520	360053	358877		SL	R	C	2A3U	SIL/SN	1	5	45	5	2.4	-3	-0.005	2
T 32521	360025	358876		SL	R	C	2U1T2A	SIL/SN	1	5	75	5	1.8	-3	-0.005	2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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130144

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32522	360000	358876		SL	R	C	1A2A2U	SIL/SN	1	-5	50	20	5.2	-3	0.016	5
T 32523	360548	358685		RC	R	BC	N/2T1T	SN/PEB	2	40	-5	1900	11.0	-3	-0.005	-2
T 32524	360518	358685		SOIL	R	C	A2G	SIL/SN	1	85	-5	610	1.1	4	-0.005	-2
T 32525	360498	358685		SOIL	R	C	G2A/2T	SIL/SN	1	125	100	6750	3.8	-3	-0.005	-2
T 32526	360473	358684		SOIL	R	C	2T3T2U	SIL/SN	3	115	360	325	18.0	9	0.009	-2
T 32527	360449	358683		RC	R	C	1A2T2U	PEB	1	70	75	245	0.8	-3	-0.005	-2
T 32528	360423	358683		SOIL	R	C	2B1B	SIL/SN	3	5	5	10	2.8	-3	-0.005	2
T 32529	360398	358682		SOIL	R	BC	2A2U	SIL/SN	1	5	-5	-5	1.4	-3	-0.005	-2
T 32530	360376	358682		SOIL	R	C	2A2U	SIL/SN	1	5	375	15	4.2	25	0.008	2
T 32531	360349	358680		SOIL	R	C	1AN1U	SIL/SN	1	40	7700	135	73.6	65	0.130	5
T 32532	360329	358678		SOIL	R	C	3T2A3A	SIL/SN	1	35	1000	75	5.9	-3	-0.005	-2
T 32533	360299	358673		SOIL	R	C	2T2U	SIL/SN	2	80	560	235	43.7	15	-0.005	-2
T 32534	360274	358674		SOIL	R	C	2A1A	SIL/SN	2	5	65	5	1.6	-3	0.005	-2
T 32535	360246	358674		SOIL	R	C	2A2U1U	SIL/SN	1	5	30	10	5.0	4	0.010	-2
T 32536	360222	358673		SOIL	R	C	2U1T2T	SIL/SN	3	20	260	85	7.7	-3	0.007	-2
T 32537	360197	358672		SOIL	R	C	1U2T2A	SIL/SN	1	5	370	10	4.9	-3	-0.005	5
T 32538	360171	358671		SOIL	R	C	2U	SIL/SN	2	5	25	10	1.8	-3	-0.005	2
T 32539	360146	358670		SOIL	R	C	1A	SIL/SN	3	5	205	15	2.1	-3	-0.005	22
T 32540	360123	358668		SOIL	R	C	2A	SIL/SN	1	5	20	5	1.4	-3	-0.005	2
T 32541	360099	358666		SOIL	R	BC	2A	SIL/SN	2	-5	15	5	1.2	-3	-0.005	-2
T 32542	360074	358666		SOIL	R	C	2A3U	SIL/SN	1	-5	170	5	1.5	-3	-0.005	-2
T 32543	360050	358664		SOIL	R	C	2A2U	SIL/SN	1	-5	15	10	2.1	-3	-0.005	-2
T 32544	360023	358665		SOIL	R	C	2A	SIL/SN	2	-5	20	5	0.8	-3	-0.005	-2
T 32545	359998	358667		SOIL	R	C	1A2A	SIL/SN	2	-5	25	5	1.3	-3	-0.005	-2
	Remark:8M NTH OF STATION.UNABLE TO PENETRATE QUARTZ GRAVEL IN BETWEEN.															
T 32546	360573	358685		SOIL	R	C	2T2U	SIL/SN	2	235	110	550	10.0	-3	-0.005	-2
T 32547	360597	358685		SOIL	R	C	3A2T3T	SIL/SN	1	45	90	225	6.3	-3	-0.005	-2
T 32548	360620	358684		SOIL	R	C	3U2T1T	SIL/SN	1	65	105	100	7.4	-3	-0.005	-2
T 32549	360644	358685		SOIL	R	C	1T2T2U	SIL/SN	2	115	105	165	5.1	-3	-0.005	-2
T 32550			STD	STD	STD							100	0.3	-500	0.230	5
	Remark:STD B4															
T 32551	360697	358684		SL	R	C	1T3R	SIL/SN	1	95	10	75	0.3	-3	-0.005	-2
T 32552	360723	358684		SL	R	C	1T2T2R	SIL/SN	1	100	25	185	0.5	-3	-0.005	-2
T 32553	360748	358684		SL	R	C	1T2T2R	SIL/SN	1	75	50	115	1.4	-3	-0.005	-2

	CU	PB	ZN	SB	SN	AU	W
Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32554	360773	358684		SL	R	C	2R1T2T	SIL/SN	1	75	25	90	1.7	-3	-0.005	-2
T 32555	360796	358684		SL	R	C	2T2R3U	SIL/SN	1	80	95	175	1.3	-3	-0.005	-2
T 32556	360824	358684		SL	R	C	2T2R2U	SIL/SN	2	100	100	330	3.4	-3	-0.005	-2
T 32557	360844	358685		SL	R	C	2R2T1T	SIL/SN	1	95	125	110	8.6	-3	-0.005	-2
T 32558	360872	358685		SL	R	C	2R2G2T	SIL/SN	1	95	170	280	5.3	6	-0.005	-2
T 32559	360897	358685		SL	R	C	2T2U	SIL/SN	1	65	145	110	7.8	-3	-0.005	-2
T 32560	360921	358686		SL	R	C	2T	SIL/SN	1	80	65	85	2.2	-3	-0.005	-2
T 32561	360948	358686		SL	R	C	2O2T	CY/SIL	1	40	45	45	4.8	-3	-0.005	-2
T 32562	360972	358685		SL	R	C	2A2T1T	SIL/SN	1	80	35	65	4.7	-3	-0.005	-2
T 32563	361000	358686		SL	R	C	2U2T3T	SIL/SN	1	120	65	115	11.0	-3	-0.005	-2
T 32564	361024	358687		SL	R	C	2A2T2U	SIL/SN	1	25	70	30	6.3	-3	-0.005	2
T 32565	361047	358687		SL	R	C	2R2T	SIL/SN	1	170	15	140	3.3	-3	-0.005	-2
T 32566	361073	358688		SL	R	C	2T3T3A	CY/SIL	1	125	115	175	9.0	-3	-0.005	-2
T 32567	361097	358687		SL	R	C	2A1T2U	SIL/SN	2	80	40	120	3.8	-3	-0.005	-2
T 32568	361121	358688		SL	R	C	1A	SIL/SN	1	40	35	130	3.4	-3	-0.005	-2
T 32569	361145	358691		SL	R	C	1A	SIL/SN	1	65	25	230	3.7	-3	-0.005	-2
T 32570	361171	358692		SL	R	C	1A	SIL/SN	1	320	30	25	1.2	-3	-0.005	-2
T 32571	361197	358692		SL	R	C	1T2T2U	SIL/SN	1	165	20	100	2.9	-3	-0.005	-2
T 32572	361222	358692		SL	R	C	2A3A3T	SIL/SN	1	50	250	40	15.0	-3	-0.005	-2
T 32573	361247	358693		SL	R	C	3A2U2T	SIL/SN	1	50	125	190	23.2	15	-0.005	4
T 32574	361273	358696		SL	R	C	1T2T2U	SIL/SN	1	105	75	550	38.7	3	-0.005	-2
T 32575	361297	358696		SL	R	C	2A2U	SIL/SN	1	115	120	675	17.0	4	-0.005	-2
T 32576	361323	358698		SL	R	C	1A2A	SIL/SN	1	40	15	135	8.6	-3	-0.005	-2
T 32577	361346	358699		SL	R	C	2A1T	SIL/SN	2	80	45	110	6.7	-3	-0.005	-2
T 32578	361372	358700		SL	R	C	3A2U	SIL/SN	1	5	45	5	4.9	-3	-0.005	-2
T 32579	361397	358701		SL	R	C	1A2A3A	SIL/SN	1	-5	15	5	3.8	-3	0.008	2
T 32580	361420	358703		SL	R	C	1A	SIL/SN	1	65	200	15	3.9	-3	-0.005	-2
T 32581	361446	358705		SL	R	C	2U	SIL/SN	1	50	30	65	2.1	-3	-0.005	-2
T 32582	361471	358707		SL	R	C	3A3T3U	SIL/SN	1	185	15	175	3.0	-3	-0.005	-2
T 32583	361497	358709		SL	R	C	3A3T3U	SIL/SN	1	35	15	45	4.4	-3	-0.005	-2
T 32584	360595	358487		SL	R	C	2R2T2U	SIL/SN	1	190	95	90	3.0	-3	-0.005	-2
T 32585	360570	358486		SL	R	C	2R2T	SIL/SN	1	200	170	215	2.6	6	-0.005	-2
T 32586	360544	358485		SL	R	C	2A3T2U	SIL/SN	1	85	230	440	2.8	-3	-0.005	-2
T 32587	360519	358484		SL	R	C	2U3U2T	SIL/SN	3	175	135	85	3.0	-3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32588	360496	358483		SL	R	C	3R1U2U	SIL/SN	4	60	65	150	3.9	-3	-0.005	-2
T 32589	360468	358484		SL	R	C	2T2U	SIL/SN	4	-5	35	10	1.5	-3	-0.005	2
T 32590	360443	358484		SL	R	C	3AW	SIL/SN	1	-5	20	5	1.2	5	-0.005	-2
Remark:UNABLE TO PENETRATE THE SANDSTONE CAP.																
T 32591	360418	358484		SL	R	B	3A	SIL/SN	1	-5	20	5	1.6	-3	-0.005	-2
Remark:SEVERAL ATTEMPTS, UNABLE TO PENETRATE GRAVELS.																
T 32592	360394	358484		SL	R	C	2A3U2U	SIL/SN	2	40	500	650	24.3	-3	0.008	-2
T 32593	360372	358484		SL	R	C	1U2U3U	SIL/SN	2	10	2275	145	27.9	10	-0.005	2
T 32594	360347	358483		SL	R	C	PB2T2O	SIL/SN	2	5	290	75	11.0	10	-0.005	3
T 32595	360322	358483		SL	R	C	2T	SIL/SN	3	35	1750	410	7.5	9	-0.005	4
T 32596	360295	358482		SL	R	C	2U1A2A	SIL/SN	2	-5	1075	40	3.1	7	-0.005	-2
T 32597	360272	358481		SL	R	C	2A	SIL/SN	2	-5	2500	50	6.8	15	0.006	5
T 32598	360247	358480		SL	R	C	1U2U2A	SIL/SN	1	-5	235	20	1.7	-3	-0.005	-2
T 32599	360221	358479		SL	R	C	3U3T3A	SIL/SN	1	-5	30	25	1.6	-3	-0.005	-2
T 32600				SL	R	C	1U1T2U	SIL/SN	1			820	2.8	-500	0.230	-2
T 32601	360164	358477		SL	R	C	2O1U2U	SIL/SN	2	5	185	100	13.0	-3	-0.005	7
T 32602	360140	358476		SL	R	C	3A2T3T	SIL/SN	2	5	335	85	3.2	-3	-0.005	-2
T 32603	360118	358476		SL	R	C	2A	SIL/SN	1	-5	200	25	1.0	-3	-0.005	-2
T 32604	360094	358474		SL	R	C	1A2A	SIL/SN	4	-5	55	15	1.6	-3	-0.005	-2
T 32605	360065	358473		SL	R	C	1U2A2U	SIL/SN	3	15	165	25	3.3	-3	-0.005	-2
T 32606	360041	358471		SL	R	C	N/1U2U	SIL/SN	2	5	745	650	7.8	3	-0.005	-2
Remark:SAMPLE TAKEN 6M SOUTH OF STATION PEG IN CREEK.																
T 32607	360017	358471		SL	R	BC	2A2U2T	SIL/SN	1	5	180	60	3.1	5	-0.005	-2
Remark:SEVERAL ATTEMPTS																
T 32608	359996	358471		SL	R	B	2A	SIL/SN	2	-5	20	5	1.3	-3	-0.005	-2
Remark:UNABLE TO PENETRATE GRAINS.																
T 32609	360621	358487		SL	R	C	2A2T2O	SIL/SN	1	95	80	110	0.8	-3	-0.005	-2
T 32610	360643	358487		SL	R	C	3A2T2R	SIL/SN	1	110	80	190	1.0	-3	-0.005	-2
T 32611	360667	358487		SL	R	C	2A2T	SIL/SN	1	70	665	580	17.0	7	-0.005	-2
T 32612	360696	358489		SL	R	C	2T2U	CY/SIL	1	125	300	370	9.4	-3	0.021	-2
T 32613	360720	358489		SL	R	C	2A2T2R	CY/SIL	1	150	295	290	6.8	4	-0.005	-2
T 32614	360744	358489		SL	R	C	3U1T2T	CY/SIL	1	95	85	285	25.6	-3	-0.005	-2
T 32615	360770	358491		SL	R	C	2T3T3U	CY/SIL	1	205	260	415	49.6	-3	-0.005	-2
T 32616	360795	358490		SL	R	C	2A2T3U	SIL/SN	1	250	130	170	2.2	-3	0.018	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32617	360822	358491		SL	R	C	3U3T2R	SIL/SN	1	55	110	100	1.8	4	-0.005	-2
T 32618	360843	358491		SL	R	C	3A	SIL/SN	1	10	80	50	1.6	-3	0.018	-2
T 32619	360871	358490		SL	R	C	2A3A3U	SIL/SN	1	30	150	75	9.4	-3	0.030	-2
T 32620	360896	358490		SL	R	C	2A2T1O	SIL/SN	1	50	260	115	23.6	-3	-0.005	14
T 32621	360917	358489		SL	R	C	1G2A1T	SIL/SN	1	170	485	580	6.7	-3	-0.005	-2
T 32622	360941	358489		SL	R	C	1A	SIL/SN	1	90	280	55	11.0	-3	-0.005	-2
T 32623	360970	358490		SL	R	C	3A3U1T	SIL/SN	1	65	100	140	3.1	-3	-0.005	-2
T 32624	361001	358490		SL	R	C	2U1T2T	SIL/SN	1	110	215	190	2.4	-3	-0.005	-2
T 32625	361018	358491		SL	R	C	3U1T2T	SIL/SN	1	100	100	195	2.4	3	-0.005	-2
T 32626	361044	358492		SL	R	C	1A3A	SIL/SN	1	50	70	135	1.7	-3	-0.005	-2
T 32627	361071	358493		SL	R	C	G/1A1A	SIL/SN	1	95	70	450	3.0	-3	0.011	-2
T 32628	361097	358494		SL	R	C	1A	SIL/SN	1	55	120	260	12.0	-3	-0.005	-2
	Remark:SULPHIDES VISIBLE															
T 32629	361118	358496		SL	R	C	1A2A	SIL/SN	1	40	40	170	4.2	-3	-0.005	-2
T 32630	361143	358494		SL	R	C	1A	SIL/SN	1	120	50	435	9.1	-3	-0.005	-2
T 32631	361169	358496		SL	R	C	1A	SIL/SN	1	115	50	75	7.8	-3	0.010	-2
T 32632	361197	358496		SL	R	C	1A2U	SIL/SN	1	50	55	240	4.6	-3	-0.005	-2
T 32633	361223	358497		SL	R	C	1A	SIL/SN	1	70	45	235	4.2	-3	-0.005	-2
T 32634	361250	358498		SL	R	C	A2G2A	SIL/SN	1	80	50	305	1.8	-3	-0.005	-2
T 32635	361271	358498		SL	R	C	1A	SIL/SN	1	225	215	465	22.2	-3	-0.005	-2
T 32636	361296	358498		SL	R	C	1T1A	SIL/SN	1	40	245	75	44.6	-3	0.044	-2
T 32637	361324	358499		SL	R	C	W/2A3A	CY/SIL	1	100	420	1650	22.6	20	-0.005	-2
T 32638	361346	358499		SL	R	C	2R2T	SIL/SN	1	90	70	130	0.5	-3	-0.005	-2
T 32639	361371	358500		SL	R	C	2A	SIL/SN	1	10	30	15	1.5	-3	-0.005	-2
T 32640	361397	358500		SL	R	C	1A2A1U	SIL/SN	2	20	40	80	2.0	6	0.007	2
T 32641	361420	358501		SL	R	C	2A3A3U	SIL/SN	1	20	90	5	2.7	-3	-0.005	-2
T 32642	361445	358500		SL	R	C	G/3A2A	SIL/SN	1	30	40	505	3.5	-3	-0.005	3
T 32643	361470	358500		SL	R	C	G3A2A	SIL/SN	1	55	130	1400	5.3	-3	-0.005	-2
T 32644	361495	358500		SL	R	C	G/3A2A	SIL/SN	1	25	95	1500	4.6	-3	-0.005	-2
T 32645	361992	358386		SL	R	C	2A	SN/PEB	2	185	20	-5	0.6	-3	0.006	-2
T 32646	362013	358386		SL	R	BC	3A3U	SIL/SN	1	10	40	15	0.9	-3	-0.005	2
T 32647	362036	358387		SL	R	C	2A	SIL/SN	1	10	40	10	1.6	-3	-0.005	-2
T 32648	362061	358388		SL	R	C	3A	SIL/SN	3	10	25	-5	0.4	-3	-0.005	-2
T 32649	362087	358388		SL	R	C	3A3U3U	SIL/SN	4	10	25	5	0.5	-3	-0.005	2
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32650			STD	STD								120	0.3		0.053	7
Remark:STD B3																
T 32651	362129	358390		SL	R	C	2A2U	SIL/SN	3	5	25	5	0.6	-3	-0.005	2
T 32652	362156	358389		SL	R	C	2A3U2U	SIL/SN	2	5	30	10	0.8	-3	-0.005	-2
T 32653	362180	358389		SL	R	B	3A	SIL/SN	3	50	25	5	0.3	-3	-0.005	-2
Remark:SEVERAL ATTEMPTS UNABLE TO PENETRATE DEEPER.																
T 32654	362203	358389		SL	R	C	2A2T	PEB	4	250	20	10	0.4	-3	-0.005	4
T 32655	362224	358390		SL	R	C	2A3A	SIL/SN	3	10	30	5	0.8	-3	-0.005	-2
T 32656	362250	358390		SL	R	C	2A3A	SIL/SN	1	10	25	10	1.0	-3	-0.005	3
T 32657	362273	358390		SL	R	C	2A3A	SIL/SN	3	10	85	5	0.6	-3	-0.005	-2
T 32658	362297	358391		SL	R	C	1A	SIL/SN	1	15	35	10	1.6	-3	-0.005	2
T 32659	362319	358391		SL	R	C	2A	SIL/SN	1	10	30	15	1.2	-3	-0.005	6
T 32660	362346	358392		SL	R	C	3A3U	SIL/SN	1	10	30	5	0.8	-3	-0.005	3
T 32661	362370	358393		SL	R	C	2A2U	SIL/SN	1	10	35	10	0.6	-3	-0.005	-2
T 32662	362399	358394		SL	R	C	2A2U	SIL/SN	2	10	20	5	0.4	3	-0.005	2
T 32663	362423	358395		SL	R	C	2A2U	SIL/SN	1	5	35	20	1.5	-3	-0.005	2
T 32664	362447	358397		SL	R	C	2A	SIL/SN	1	10	30	5	0.7	-3	-0.005	5
T 32665	362469	358398		SL	R	C	2A2U	SIL/SN	1	10	30	10	1.2	4	-0.005	6
T 32666	362491	358398		SL	R	C	1A2A	SIL/SN	1	10	35	10	0.9	-3	-0.005	2
T 32667	362517	358400		SL	R	BC	1A2A	CY/SIL	1	35	50	105	1.7	-3	-0.005	2
T 32668	362541	358401		SL	R	BC	2A	CY/SIL	1	15	35	50	1.8	-3	0.006	-2
T 32669	362569	358401		SL	R	C	2A	CY/SIL	1	25	45	55	1.6	-3	-0.005	-2
T 32670	362596	358402		SL	R	C	2A1U2U	SIL/SN	1	15	40	25	1.0	-3	0.009	2
T 32671	362620	358403		SL	R	C	2AY	SIL/SN	1	10	25	10	1.0	-3	-0.005	-2
T 32672	362647	358403		SL	R	C	2A	SIL/SN	1	10	25	15	1.0	-3	-0.005	2
T 32673	362668	358403		SL	R	C	2A2T2U	SIL/SN	1	10	30	25	0.8	-3	-0.005	-2
T 32674	362690	358404		SL	R	C	2A	SIL/SN	1	15	35	40	0.9	-3	-0.005	-2
T 32675	362716	358406		SL	R	C	2A	SIL/SN	1	25	45	45	1.5	-3	-0.005	3
T 32676	362741	358406		SL	R	C	2A2U	SIL/SN	1	30	45	100	2.0	-3	0.006	-2
T 32677	362768	358406		SL	R	C	2A2U	SIL/SN	1	20	40	45	1.4	-3	-0.005	-2
T 32678	362794	358407		SL	R	C	2U	SIL/SN	1	25	45	65	1.6	-3	-0.005	-2
T 32679	362814	358406		SL	R	C	1A	SIL/SN	1	15	45	20	1.6	-3	0.008	-2
T 32680	362842	358407		SL	R	C	1A	SIL/SN	1	25	40	5	4.3	-3	-0.005	3
T 32681	362867	358407		SL	R	C	2A3A	SIL/SN	1	10	30	-5	0.6	-3	-0.005	3
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32682	362890	358408		SL	R	C	2A3A	SIL/SN	1	15	45	5	0.6	-3	-0.005	4
T 32683	362917	358409		SL	R	B	2A	PEB	1	25	20	5	0.7	-3	-0.005	2
	Remark:UNABLE TO PENETRATE SCREE.															
T 32684	362945	358408		SL	R	C	3A	SIL/SN	1	10	30	10	0.8	-3	-0.005	-2
T 32685	362980	358408		SL	R	C	3A	SIL/SN	1	10	30	15	0.3	-3	-0.005	-2
T 32686	362346	357938		RC	R	B	2A	PEB	1	25	25	5	0.5	-3	-0.005	-2
	Remark:SEVERAL ATTEMPTS UNABLE TO PENETRATE SCREE															
T 32687	362320	357937		SL	R	B	2A2U2T	SIL/SN	4	10	35	25	0.8	-3	-0.005	-2
T 32688	362300	357937		SL	R	BC	1A2A	SIL/SN	1	20	30	35	0.7	-3	-0.005	2
T 32689	362272	357936		SL	R	C	2A	SIL/SN	1	15	40	15	0.8	-3	-0.005	-2
T 32690	362250	357935		SL	R	C	1A	SIL/SN	2	45	55	200	2.9	-3	0.008	-2
T 32691	362222	357934		SL	R	C	3A3U	SIL/SN	1	10	30	5	0.9	-3	-0.005	-2
T 32692	362202	357934		SL	R	C	2A2T	SIL/SN	3	20	40	30	1.1	-3	-0.005	-2
T 32693	362176	357933		SL	R	B	2A1U	SIL/SN	1	10	35	5	0.7	-3	-0.005	-2
T 32694	362152	357934		SL	R	C	A2G	SIL/SN	2	55	370	465	3.0	-3	-0.005	-2
T 32695	362127	357933		SL	R	C	3U2A1A	SIL/SN	1	160	1200	430	11.0	-3	-0.005	-2
T 32696	362101	357931		SL	R	BC	1A2A2U	SIL/SN	1	15	35	15	1.3	-3	-0.005	-2
T 32697	362076	357931		SL	R	C	2A2T2U	SIL/SN	3	25	40	15	1.9	-3	-0.005	-2
T 32698	362053	357930		SL	R	C	3A	SIL/SN	3	10	25	10	0.6	-3	-0.005	-2
T 32699	362029	357930		SL	R	C	3A	SIL/SN	1	10	30	5	1.0	-3	-0.005	-2
T 32700			STD	STD								-100	0.2	-500	0.260	7
	Remark:STD B4															
T 32701	362371	357939		SL	R	C		SIL/SN	1	15	40	10	1.2	-3	-0.005	-2
T 32702	362398	357941		SL	R	B	1A2A	SIL/SN	1	30	35	25	0.9	-3	-0.005	3
T 32703	362417	357941		SL	R	C	1A	SIL/SN	1	20	30	30	0.6	-3	-0.005	-2
T 32704	362441	357943		SL	R	C	2A	CY/SIL	1	35	65	140	1.7	-3	-0.005	-2
T 32705	362466	357943		SL	T	B	1U3A	SIL/SN	1	10	30	5	0.7	-3	-0.005	-2
	Remark:SEVERAL ATTEMPTS, UNABLE TO PENETRATE QUARTZ.															
T 32706	362497	357944		SL	R	C	2A	SIL/SN	1	25	50	40	1.2	-3	-0.005	-2
T 32707	362521	357945		SL	R	C	3A3U	SIL/SN	1	15	45	30	0.7	3	-0.005	-2
T 32708	362544	357945		SL	R	C	2A2U2T	SIL/SN	1	60	30	40	0.8	3	-0.005	-2
T 32709	362571	357946		SL	R	C	A2G	SIL/SN	1	15	30	20	0.7	-3	-0.005	-2
T 32710	362598	357947		SL	R	C	2A	SIL/SN	1	15	30	20	1.0	-3	-0.005	-2
T 32711	362622	357947		SL	R	C	2A	SIL/SN	1	20	25	30	0.9	-3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32712	362650	357947		SL	R	BC	2A2U	SIL/SN	1	10	25	20	0.7	-3	-0.005	-2
T 32713	362672	357949		SL	R	C	2A	SIL/SN	1	15	35	45	1.2	-3	-0.005	-2
T 32714	362696	357949		SL	R	C	2U	SIL/SN	1	30	50	60	1.8	-3	-0.005	-2
T 32715	362723	357951		SL	R	BC	2A	CY/SIL	1	35	50	70	2.4	-3	-0.005	-2
T 32716	362748	357951		SL	R	C	2A	SIL/SN	1	35	60	115	2.1	-3	-0.005	-2
T 32717	362774	357952		SL	R	C	1A2A	SIL/SN	1	35	50	65	2.1	-3	-0.005	-2
T 32718	362796	357952		SL	R	C	2U	SIL/SN	1	55	65	55	3.4	-3	-0.005	-2
T 32719	362820	357954		SL	R	C	2U	SIL/SN	1	30	45	35	1.9	-3	-0.005	-2
T 32720	362845	357954		SL	R	C	2A3U	SIL/SN	1	25	20	65	2.7	17	-0.005	6
T 32721	362871	357955		SL	R	BC	2A	SIL/SN	1	30	20	45	1.8	11	-0.005	6
T 32722	362898	357956		SL	R	C	1A2A3A	SIL/SN	1	30	25	55	1.6	14	-0.005	4
T 32723	362921	357956		SL	R	C	2A	CY/SIL	1	30	10	65	1.5	7	-0.005	6
T 32724	362942	357957		SL	R	C	2A	SIL/SN	1	5	-5	15	0.6	7	-0.005	2
T 32725	362970	357957		SL	R	B	3A	SIL/SN	2	5	5	10	1.1	5	-0.005	8
T 32726	362998	357958		SL	R	C	2A	SIL/SN	2	10	40	15	1.7	16	-0.005	2
T 32727	360600	358273		SL	R	C	1G	SIL/SN	1	130	-5	2850	1.6	-3	-0.005	-2
T 32728	360578	358272		SL	R	C	2U2T3A	SIL/SN	1	35	140	90	1.1	4	-0.005	-2
T 32729	360554	358272		SL	R	C	3U2U	SIL/SN	2	5	45	10	0.9	7	-0.005	3
T 32730	360530	358271		SL	R	C	1G2A10	SIL/SN	1	80	6100	360	33.1	5	-0.005	3
T 32731	360501	358270		SL	R	C	2U	SIL/SN	1	5	1250	340	4.8	-3	-0.005	-2
T 32732	360481	358269		SL	R	B	3A	SIL/SN	1	-5	-5	10	0.9	10	-0.005	2
	Remark:SEVERAL ATTEMPTS UNABLE TO PENETRATE GRAVELS & SAND.															
T 32733	360455	358268		SL	R	C	2A2U	SIL/SN	2	80	285	80	14.0	5	0.008	2
T 32734	360434	358268		SL	R	C	3U	SIL/SN	1	-5	55	40	6.2	4	0.006	6
T 32735	360400	358266		SL	R	C	1A2A3A	SIL/SN	1	20	535	50	20.4	4	0.006	-2
T 32736	360376	358265		SL	R	C	3A3T	SIL/SN	1	15	300	190	4.6	5	-0.005	-2
T 32737	360347	358264		SL	R	C	2A3U3A	SIL/SN	1	10	625	1450	6.3	10	-0.005	2
	Remark:SAMPLE TAKEN 12M TO STH OF PEG DUE TO OLD WORKINGS AT PEG.															
T 32738	360326	358264		SL	R	C	1A2A	SIL/SN	1	5	15	40	2.0	8	-0.005	3
T 32739	360302	358263		SL	R	C	2A	SIL/SN	1	5	5	30	2.4	12	-0.005	4
T 32740			STD	STD								121	-0.2	-500	0.054	3
	Remark:STD B3															
T 32741	360277	358262		SL	R	C		SIL/SN	1	-5	20	40	5.0	20	-0.005	4
T 32742	360254	358261		SL	R	C	2A	SIL/SN	3	5	-5	45	2.8	12	-0.005	3

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32743	360225	358259		SL	R	C	2U	SIL/SN	3	5	55	55	1.5	7	-0.005	3
T 32744	360199	358259		SL	R	C	1A2A	SIL/SN	1	-5	-5	20	1.6	3	-0.005	4
T 32745	360177	358259		SL	R	C	1A2A3U	SIL/SN	2	-5	-5	20	2.4	13	0.007	-2
T 32746	360148	358257		SL	R	C	2A3A2U	SIL/SN	1	-5	-5	15	1.6	8	-0.005	2
T 32747	360124	358256		SL	R	C	2T2U2U	SIL/SN	1	10	-5	15	6.9	3	-0.005	-2
T 32748	360102	358255		SL	R	C	2A3A3T	SIL/SN	1	5	55	25	9.9	8	0.035	2
T 32749	360075	358254		SL	R	C	3A3U	SIL/SN	1	-5	200	15	1.0	5	-0.005	3
T 32750	360054	358253		SL	R	C	2U3U	SIL/SN	1	-5	5	15	1.1	5	-0.005	2
T 32751	360027	358252		SL	R	C	2U3U	SIL/SN	1	-5	110	15	1.8	9	-0.005	2
T 32752	360002	358251		SL	R	C	3U	SIL/SN	1	-5	90	20	1.6	7	-0.005	3
T 32753	360625	358275		SL	R	C	1A2A3A	SIL/SN	1	590	20	125	3.8	6	-0.005	-2
T 32754	360651	358275		SL	R	C	3U	SIL/SN	1	65	85	40	1.3	11	-0.005	-2
T 32755	360673	358277		SL	R	C	3A3U	SIL/SN	1	160	155	35	1.3	7	0.009	-2
T 32756	360700	358278		SL	R	C	2T2A3A	SIL/SN	1	120	95	280	1.8	6	-0.010	-4
T 32757	360725	358279		SL	R	C	G/3A3T	SIL/SN	1	55	5	45	1.5	4	-0.005	-2
T 32758	360750	358280		SL	R	C	G/3A2A	SIL/SN	1	220	-5	70	0.8	6	-0.005	-2
T 32759	360776	358281		SL	R	C	G/3A3T	SIL/SN	1	105	430	60	3.1	10	-0.005	-2
T 32760			STD	STD								-100	-0.2	-500	0.254	6
T 32761	360800	358281		SL	R	C	G/3A2A	SIL/SN	1	110	80	125	6.1	5	-0.005	-2
T 32762	360826	358282		SL	R	C	3U2T	SIL/SN	1	125	205	50	2.1	17	-0.005	-2
T 32763	360848	358283		SL	R	C	2A3A3U	SIL/SN	1	125	-5	395	0.6	5	-0.005	-2
T 32764	360874	358285		SL	R	C	G/3A2T	SIL/SN	1	200	10	260	3.7	4	-0.005	-2
T 32765	360900	358285		SL	R	BC	3A3U	CY/SIL	1	230	10	220	1.1	6	-0.005	-2
T 32766	360921	358286		SL	R	C	1A2A3A	CY/SIL	1	300	5	125	1.1	4	-0.005	-2
T 32767	360947	358287		SL	R	C	2A3A3U	SIL/SN	1	60	-5	60	0.8	11	-0.005	-2
T 32768	360972	358287		SL	R	C	2A	SIL/SN	1	95	-5	165	1.1	4	-0.005	-2
T 32769	361002	358289		SL	R	C	1A2A3A	SIL/SN	1	150	-5	80	5.3	9	-0.005	-2
T 32770	361024	358291		SL	R	C	3A2T3T	SIL/SN	1	195	95	100	9.7	4	-0.005	-2
T 32771	361047	358291		SL	R	C	2T3T	SIL/SN	1	85	80	105	7.4	-3	0.009	-2
T 32772	361076	358293		SL	R	C	1T2T	SIL/SN	1	35	75	145	4.3	-3	-0.005	-2
T 32773	361098	358293		SL	R	C	2R2U2T	SIL/SN	1	25	-5	180	1.0	7	-0.005	-2
T 32774	361125	358294		RC	R	C	1A	PEB	1	25	-5	25	1.5	4	-0.005	-2
T 32775	361149	358295		SL	R	C	1A	SIL/SN	1	65	25	65	3.4	11	-0.005	-2
T 32776	361174	358295		SL	R	C	M	SIL/SN	1	55	220	30	1.7	5	0.009	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32777	361200	358295		SL	R	C	2A	SIL/SN	1	5	-5	15	1.5	8	0.005	-2
T 32778	361223	358297		SL	R	C	1A2A3U	SIL/SN	1	30	-5	30	3.5	3	-0.005	-2
T 32779	361248	358298		SL	R	C	1A2A3A	SIL/SN	1	100	230	3000	7.6	12	-0.005	-2
	Remark:SAMPLE TAKEN 10M NORTH OF PEG DUE TO OLD WORKINGS.															
T 32780			STD	STD								-100	-0.2	-500	0.062	5
	Remark:STD B3															
T 32781	361274	358298		SL	R	C	2A2T	SIL/SN	1	390	560	750	11.5	-3	-0.005	-2
	Remark:STD B3															
T 32782	361299	358299		SL	R	C	1A	SIL/SN	1	110	4800	4450	80.1	34	0.025	22
T 32783	361322	358300		RC	R	C	1A2U	PEB	1	465	270	665	15.3	5	-0.005	-2
T 32784	361346	358301		SL	R	C	G/3A3T	SIL/SN	1	10	-5	670	1.0	3	-0.005	-2
T 32785	361376	358301		SL	R	C	2A	SIL/SN	1	-5	10	20	17.3	73	0.007	19
T 32786	361399	358302		SL	R	C	2A	SIL/SN	1	-5	-5	15	1.3	3	-0.005	-2
T 32787	361423	358303		SL	R	C	2A	SIL/SN	1	-5	-5	25	1.1	5	-0.005	-2
T 32788	361446	358304		SL	R	C	A/3G3A	SIL/SN	1	10	-5	500	1.5	8	-0.005	-2
T 32789	361473	358304		SL	R	B	2A2G3G	CY/SIL	1	5	-5	615	3.6	9	-0.005	-2
T 32790	361498	358305		SL	R	C	2A2G	CY/SIL	1	50	-5	560	3.4	8	0.010	-2
T 32791	361246	358098		SL	R	BC	1U2U	CY/SIL	1	15	175	50	5.3	5	-0.005	-2
T 32792	361271	358098		SL	R	C	2A	SIL/SN	1	-5	5	20	2.6	9	-0.005	-2
T 32793	361295	358098		SL	R	C	1A2A	SIL/SN	1	15	355	555	6.3	14	0.006	6
T 32794	361322	358097		RC	R	C	1A2A	SN/PEB	1	25	145	110	3.4	21	-0.005	3
T 32795	361346	358099		RC	R	C	2A	SN/PEB	1	25	35	60	5.5	6	-0.005	2
	Remark:SULPHIDES PRESENT															
T 32796	361370	358098		SL	R	C	3A	CY/SIL	1	115	20	530	1.9	4	-0.005	-2
	Remark:SAMPLE TAKEN 10M NTH OF PEG DUE TO DEEP PATCHES OF WATER AND MUD.															
T 32797	361403	358097		SL	R	C	1A2A	SIL/SN	1	20	5	55	3.2	11	-0.005	-2
T 32798	361421	358098		SL	R	C	1A2A	SIL/SN	1	-5	45	30	11.6	9	-0.005	-2
T 32799	361448	358100		SL	R	C	2T	SIL/SN	1	20	20	105	2.6	5	-0.005	-2
T 32800			STD	STD								-100	-0.2	-500	0.234	6
	Remark:STD B4															
T 32801	361475	358100		SL	R	C	1T2U20	SIL/SN	1	15	25	95	2.8	10	-0.005	-2
T 32802	361502	358103		SL	R	C	1T2U	SIL/SN	1	15	-5	125	2.7	14	-0.005	-2
T 32803	361220	358098		SL	R	C	N	SIL/SN	1	15	50	30	3.8	9	-0.005	-2
T 32804	361205	358099		SL	R	C	2A3A	SIL/SN	1	5	5	620	1.3	14	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32805	361171	358098		SL	R	C	2A1A	SIL/SN	1	80	510	725	5.8	12	-0.005	2
T 32806	361146	358099		SL	R	C	N	SIL/SN	1	10	55	35	4.3	3	-0.005	-2
T 32807	361123	358098		SL	R	C	2GA 2T	SIL/SN	1	115	15	265	3.0	-3	-0.005	-2
T 32808	361105	358098		SL	R	C	2A3A3U	SIL/SN	1	940	55	770	7.7	5	-0.005	-2
	Remark:SULPHIDES PRESENT.															
T 32809	361071	358097		SL	R	BC	1BG3BG	SIL/SN	1	150	-5	175	31.2	9	-0.005	-2
	Remark:SULPHIDES PRESENT															
T 32810	361046	358096		SL	R	B	3U1A	CY/SIL	1	2600	2600	1950	29.0	5	0.013	-2
T 32811	361022	358094		SL	R	C	2O	SIL/SN	1	225	10	130	0.6	11	-0.005	-2
T 32812	361008	358095		SL	R	C	2O	SIL/SN	1	110	15	90	6.6	2	-0.005	-2
T 32813	360979	358094		SL	R	C	W 2T2O	SIL/SN	1	95	20	55	1.8	10	-0.005	-2
T 32814	360954	358094		SL	R	C	2T102U	SIL/SN	1	150	-5	195	1.1	15	-0.005	-2
T 32815	360931	358093		SL	R	C	1A	SIL/SN	1	140	80	1350	10.6	6	0.014	-2
	Remark:SULPHIDES PRESENT.															
T 32816	360906	358092		SL	R	C	1A2A	SIL/SN	1	125	40	635	8.7	9	0.011	-2
	Remark:SULPHIDES PRESENT.															
T 32817	360880	358091		SL	R	C	1A2A3A	SIL/SN	1	215	35	145	1.4	10	-0.005	-2
T 32818	360854	358090		SL	R	C	2A3A	SIL/SN	1	100	20	855	4.6	8	-0.005	-2
T 32819	360831	358088		SL	R		2A	SIL/SN	1	170	-5	850	1.8	8	-0.005	-2
T 32820			STD									-100	-0.2	-500	0.245	6
	Remark:STD B4 0.25 g/t															
T 32821	360806	358086		SL	R	C	3A	SIL/SN	1	110	5	400	1.8	15	-0.005	-2
T 32822	360778	358086		SL	R	C	1A	CY/SIL	1	140	30	350	1.7	9	-0.005	-2
T 32823	360754	358084		SL	R	C	2A3A	SIL/SN	1	145	40	155	8.6	9	-0.005	-2
T 32824	360729	358084		SL	R	B	3U	CY	1	150	15	135	1.6	8	-0.005	-2
T 32825	360707	358083		SL	R	C	3U	SIL/SN	1	60	330	65	34.1	9	-0.005	-2
T 32826	360684	358083		SL	R	C	3TU	CY/SIL	1	30	290	65	33.0	16	0.041	-2
T 32827	360656	358082		SL	R	C	1A	SIL/SN	1	40	235	80	6.0	13	0.058	-2
T 32828	360631	358082		SL	R	C	3TU	SIL/SN	1	1300	220	185	12.9	11	0.009	-2
T 32829	360606	358081		SL	R	C	2U2A	SIL/SN	1	50	135	55	21.1	10	0.055	-2
T 32830	360581	358080		SL	R	C	3A3U	SIL/SN	1	5	120	25	1.4	16	-0.005	-2
T 32831	360556	358079		SL	R	C	2U1U	SIL/SN	1	30	60	55	4.6	8	-0.005	-2
T 32832	360531	358079		SL	R	C	3A	SIL/SN	1	10	570	60	5.3	8	0.022	-2
T 32833	360507	358079		SL	R	C	2A1A	SIL/SN	1	70	90	40	4.7	6	0.010	2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32834	360482	358078		SL	R	C	3A3U	SIL/SN	1	5	30	55	1.8	8	-0.005	-2
T 32835	360458	358077		SL	R	C	2A	SIL/SN	2	-5	15	30	4.1	7	0.010	-2
T 32836	360433	358077		SL	R	C	3A	SIL/SN	1	-5	75	25	3.4	20	-0.005	-2
T 32837	360406	358076		SL	R	B	1A	SIL/SN	1	-5	-5	20	1.4	9	-0.005	-2
	Remark:UNABLE TO PENETRATE CEMENTED GRAVELS.															
T 32838	360383	358075		SL	R	C	2AU	SIL/SN	1	-5	-5	35	5.3	7	-0.005	-2
T 32839	360357	358074		SL	R	B	3A	SIL/SN	1	-5	-5	25	1.0	6	-0.005	-2
	Remark:SEVERAL ATTEMPTS TO PENETRATE GRAVELS UNSUCCESSFUL.															
T 32840			STD									-100	0.2	-500	0.064	6
	Remark:STD B3 0.05 g/t															
T 32841	360333	358074		SL	R	C	3A	SIL/SN	1	-5	130	20	2.1	10	0.005	-2
T 32842	360308	358074		SL	R		1T2T3T	SIL/SN	1	300	840	65	10.7	3	-0.005	-2
T 32843	360283	358074		SL	R	C	3A	SIL/SN	1	5	485	30	3.3	12	-0.005	-2
T 32844	360256	358072		SL	R	C	2U3U	SIL/SN	1	-5	200	25	2.0	13	-0.005	-2
T 32845	360231	358072		SL	R	C	3A3U	SIL/SN	1	-5	10	20	1.0	14	-0.005	-2
T 32846	360207	358071		SL	R	C	2U3U	SIL/SN	1	-5	85	15	1.9	13	-0.005	3
T 32847	360187	358070		SL	R	C	3A	SIL/SN	1	-5	15	20	1.3	9	-0.005	3
T 32848	360159	358069		SL	R	C	3A	SIL/SN	1	-5	60	25	1.6	12	0.018	2
T 32849	360137	358068		SL	R	C	3A	SIL/SN	1	-5	-5	25	1.8	4	-0.005	2
T 32850	360111	358067		SL	R	C	3A	SIL/SN	1	-5	-5	15	0.7	10	-0.005	-2
T 32851	360086	358066		SL	R	C	2A3A	SIL/SN	2	-5	15	20	1.2	11	-0.005	-2
T 32852	360061	358065		SL	R	C	2A	SIL/SN	2	-5	-5	20	0.9	7	-0.005	-2
T 32853	360037	358063		SL	R	C	1A	SIL/SN	3	-5	15	20	2.0	15	-0.005	3
T 32854	360023	358063		SL	R			SIL/SN		-5	25	20	2.6	11	-0.005	-2
T 32855	361016	357895		SL	R	C	1T1U2U	SIL/SN	1	25	10	160	2.4	4	-0.005	-2
	Remark:SAMPLE TAKEN 10m N OF PEG DUE TO ROAD DISTURBANCES.															
T 32856	361042	357895		SL	R	C	1A1R1U	SIL/SN	1	45	125	140	4.0	-3	-0.005	2
T 32857	361068	357895		SL	R	C	2A	SIL/SN	1	140	125	385	8.6	5	-0.005	-2
T 32858	361092	357896		SL	R	C	2A	SIL/SN	1	25	425	380	7.3	9	-0.005	-2
T 32859	361116	357897		SL	T	B	2U	SIL/SN	1	85	80	165	1.8	9	-0.005	-2
T 32860			STD									-100	-0.2	-500	0.057	5
	Remark:STD B3 0.05 g/t															
T 32861	361142	357897		SL	R	C	2A	SIL/SN	1	10	55	165	1.6	11	-0.005	-2
T 32862	361165	357898		SL	R	C	2A3A	SIL/SN	1	15	685	145	11.0	7	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32863	361191	357898		SL	T	B	2U	SIL/SN	1	-5	45	40	1.1	4	-0.005	-2
	Remark:UNABLE TO PENETRATE HARD C - HORIZON.															
T 32864	361216	357899		SL	R	C	2A	SIL/SN	1	10	70	60	2.2	13	-0.005	-2
T 32865	361240	357900		SL	R	C	2A	SIL/SN	1	-5	45	25	2.7	10	-0.005	-2
T 32866	361266	357899		SL	R	BC	2U	SIL/SN	1	-5	55	20	1.0	7	-0.005	-2
T 32867	361290	357899		SL	R	C	3A	SIL/SN	2	-5	20	20	1.4	3	-0.005	2
T 32868	361317	357899		SL	R	B	3A2U	SIL/SN	3	-5	20	20	0.6	3	-0.005	-2
T 32869	361340	357898		SL	R	C	3U	SIL/SN	4	-5	85	25	1.4	6	-0.005	3
T 32870	361366	357899		SL	R	C	3U	SIL/SN	4	-5	35	20	0.9	7	-0.005	-2
T 32871	361391	357899		RC	R	C	3A	PEB	4	-5	25	20	0.5	7	-0.005	-2
T 32872	361417	357900		SL	R	C	3A	SIL/SN	4	-5	60	25	2.2	79	-0.005	6
T 32873	361441	357900		SL	R	C	3A	SIL/SN	4	-5	30	20	0.9	5	-0.005	2
T 32874	361465	357900		SL	R	C	2A3A2U	SIL/SN	2	-5	30	20	1.1	15	-0.005	3
T 32875	361491	357901		SL	R	C	1A2A	SIL/SN	2	30	170	20	7.1	6	-0.005	2
T 32876	361518	357902		SL	R	C	1U2U3U	SIL/SN	1	25	215	100	3.4	7	-0.005	-2
T 32877	360990	357893		SL	R	C	2A2U2T	SIL/SN	1	80	50	400	0.8	10	-0.005	-2
T 32878	360965	357892		SL	R	C	3T 2BA	SIL/SN	1	65	45	600	2.8	4	-0.005	5
T 32879	360939	357892		SL	R	C	2A3A	SIL/SN	1	95	45	1500	0.5	8	-0.005	-2
T 32880			STD									-100	-0.2	-500	0.255	5
	Remark:STD 84 0.25 g/t															
T 32881	360915	357891		SL	R	C	2A	SIL/SN	1	180	75	575	10.4	-3	-0.005	-2
T 32882	360890	357891		SL	R	C	2A3A1T	SIL/SN	1	140	70	1400	5.5	-3	-0.005	-2
	Remark:SULPHIDES PRESENT.															
T 32883	360866	357890		SL	R	C	3A3U3T	SIL/SN	1	190	45	370	3.3	8	-0.005	-2
T 32884	360841	357890		SL	R	C	3A3T	SIL/SN	1	70	100	250	7.6	7	-0.005	-2
T 32885	360816	357888		SL	R	C	2A	SIL/SN	1	110	55	1400	9.8	7	-0.005	-2
T 32886	360789	357888		SL	R	C	2A3A W	SIL/SN	1	125	70	3450	10.6	15	-0.005	-2
T 32887	360764	357887		SL	R	B	3A	CY/SIL	1	115	65	4900	11.2	3	-0.005	-2
T 32888	360740	357887		SL	R	C	3A	CY/SIL	1	305	300	950	14.3	8	-0.005	-2
T 32889	360714	357886		SL	R	C	2A	SIL/SN	1	140	310	800	20.0	12	-0.005	-2
T 32890	360692	357885		SL	R	C	3A3T3U	SIL/SN	1	70	410	85	2.8	5	-0.005	-2
T 32891	360664	357884		SL	R	C	3T3A3U	CY/SIL	1	30	190	45	7.3	16	0.011	3
T 32892	360642	357884		SL	R	C	2U1U2T	SIL/SN	1	240	8700	10900	92.2	14	-0.005	-2
T 32893	360615	357883		SL	R	C	2D2U2R	SIL/SN	1	160	2100	600	30.9	-3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32894	360590	357882		SL	R	C	1U2U3U	CY/SIL	1	85	2950	470	22.7	7	-0.005	-2
T 32895	360566	357881		SL	R		20 N1A	SIL/SN	1	5	9600	60	10.3	4	-0.005	-2
T 32896	360538	357881		SL	R	C	10202U	SIL/SN	1	85	415	180	52.9	26	-0.005	4
T 32897	360515	357880		SL	R	C	3A	SIL/SN	1	5	110	20	3.1	9	-0.005	-2
T 32898	360489	357880		SL	R	C	3A	SIL/SN	1	-5	105	20	2.8	59	0.007	4
T 32899	360464	357878		SL	R	C	2U	SIL/SN	1	-5	120	25	1.8	31	-0.005	-2
T 32900			STD									-100	0.3	-500	0.257	5
	Remark:STD B4 0.25 g/t															
T 32901	360438	357878		SL	R	BC	3A2A3T	CY/SIL	1	5	70	35	11.7	10	-0.005	-2
T 32902	360414	357878		SL	R	B	3A	CY/SIL	1	-5	25	10	1.3	10	-0.005	-2
T 32903	360388	357878		SL	R	C	1U2U	SIL/SN	1	10	1350	40	23.4	2	-0.005	-2
T 32904	360364	357877		SL	T	B	W 3A	SIL/SN	3	-5	25	10	0.8	3	-0.005	-2
T 32905	360339	357877		SL	R	C	2R3A2T	SIL/SN	1	30	40	15	2.4	7	-0.005	-2
T 32906	360316	357876		SL	R	C	3A2T	SIL/SN	1	90	50	25	7.1	4	-0.005	-2
T 32907	360289	357876		SL	R	C	3A	SIL/SN	2	-5	70	15	2.1	12	-0.005	-2
T 32908	360262	357876		SL	T	A	3A W	SIL/SN	3	-5	25	10	1.0	9	-0.005	-2
T 32909	360240	357876		SL	R	C	2A3A	SIL/SN	2	-5	35	10	5.4	11	0.009	6
T 32910	360216	357876		SL	R	C		SIL/SN	2	-5	55	10	2.0	7	-0.005	-2
T 32911	360191	357876		SL	R	C	2A 3A	SIL/SN	2	-5	60	10	1.3	8	-0.005	-2
T 32912	360162	357876		SL	R	C	3A 3U	SIL/SN	2	-5	35	15	1.0	8	-0.005	2
T 32913	360141	357877		SL	T	B	2A W	SIL/SN	2	-5	20	10	0.7	7	-0.005	-2
T 32914	360118	357877		SL	R	C	3A 3U	SIL/SN	2	-5	50	10	1.1	7	-0.005	-2
T 32915	360090	357876		SL	R	C	U	SIL/SN	1	-5	35	10	4.0	15	-0.005	5
T 32916	360066	357877		SL	R	BC	2U 3U	SIL/SN	1	-5	40	10	1.5	13	-0.005	-2
T 32917	360040	357876		SL	R	C	3A 3U	SIL/SN	1	-5	50	15	2.2	12	-0.005	-2
T 32918	360015	357876		SL	R	C	2U 1U	SIL/SN	1	-5	130	145	4.2	-3	-0.005	-2
T 32919	361989	358776		SL	R	C	2A 3A	SIL/SN	1	-5	90	15	1.2	5	-0.005	-2
T 32920												-100	0.3	-500	0.057	4
T 32921	362012	358777		SL	T	B	3A	SIL/SN	3	-5	20	10	0.9	6	-0.005	3
T 32922	362035	358777		SL	T	B	3A	SIL/SN	2	-5	25	10	0.5	5	-0.005	-2
T 32923	362060	358778		SL	R	C	2A 3A	SIL/SN	1	-5	135	10	1.4	6	-0.005	2
T 32924	362087	358779		SL	R	C	2A3A3U	SIL/SN	1	-5	55	15	1.8	12	-0.005	-2
T 32925	362112	358779		SL	R	C	2A	SIL/SN	1	5	145	15	11.2	13	-0.005	8
T 32926	362136	358780		SL	R	C	2A 3A	SIL/SN	1	-5	30	10	3.2	13	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32927	362163	358779		SL	R	C	2A 3A	SIL/SN	1	-5	25	10	1.0	14	-0.005	-2
T 32928	362187	358782		RC	R	C	3A	PEB	1	-5	25	10	0.3	9	-0.005	-2
T 32929	362212	358782		SL	R	C	3A	SIL/SN	1	-5	25	10	0.6	10	-0.005	-2
T 32930	362237	358782		SL	R	B	3A	SIL/SN	2	-5	25	10	0.5	6	-0.005	-2
T 32931	362257	358783		SL	R	C	2A 3A	SIL/SN	2	-5	30	10	1.4	6	-0.005	2
T 32932	362283	358785		SL	R	C	2A 3A	SIL/SN	4	-5	25	10	0.7	8	-0.005	3
T 32933	362303	358785		SL	R	C	3A	SN/PEB	4	-5	20	10	0.3	10	-0.005	-2
T 32934	362322	358787		SL	R	C	2A3A	SIL/SN	4	-5	25	10	1.0	4	-0.005	2
T 32935	362348	358787		SL	R	C	3A	SIL/SN	4	-5	15	10	0.4	6	-0.005	-2
T 32936	362373	358788		SL	R	C	2A 3A	SIL/SN	3	-5	25	10	1.0	4	-0.005	3
T 32937	362397	358789		SL	R	C	3U 3A	SIL/SN	3	-5	20	10	1.2	11	-0.005	3
T 32938	362419	358790		SL	R	C	2A	PEB	1	5	60	30	0.8	21	-0.005	7
T 32939	362443	358794		RC	R	C	A1 A2	PEB	1	15	40	20	4.8	7	0.006	2
T 32940												-100	-0.2	-500	0.238	5
T 32941	362469	358794		SL	R	C	2U3U3A	SIL/SN	2	-5	25	10	1.8	11	-0.005	4
T 32942	362491	358796		SL	R	C	2A	SIL/SN	1	-5	35	15	7.2	9	-0.005	3
T 32943	362516	358797		SL	R	C	2A 2U	SIL/SN	1	-5	30	30	0.8	7	-0.005	2
T 32944	362543	358798		SL	R	C	2A	SIL/SN	1	5	35	50	1.5	4	0.006	2
	Remark:SAMPLE TAKEN 8m SOUTH OF PEG, DUE TO A CREEK.															
T 32945	362568	358799		SL	R	C	2A	SIL/SN	1	-5	20	15	0.9	5	-0.005	-2
T 32946	362592	358800		SL	R	C	2A2U1T	SIL/SN	1	-5	35	30	1.1	9	-0.005	3
T 32947	362616	358802		SL	R	B	3A	SIL/SN	1	-5	20	10	0.9	4	-0.005	-2
	Remark:UNABLE TO PENETRATE DEEPER															
T 32948	362640	358804		SL	R	C	2A	SIL/SN	1	-5	25	25	1.0	8	-0.005	-2
T 32949	362667	358805		SL	T	B	3A 3U	SIL/SN	1	-5	20	15	0.8	12	-0.005	-2
	Remark:SEVERAL ATTEMPTS, UNABLE TO PENETRATE DEEPER.															
T 32950	362691	358806		SL	R	BC	2A3A2T	SIL/SN	2	-5	25	20	0.9	9	-0.005	-2
T 32951	362715	358807		SL	R	C	2A3A2U	SIL/SN	1	-5	20	15	0.8	6	-0.005	-2
T 32952	362743	358807		SL	R	C	2A	SIL/SN	1	-5	20	10	0.5	9	-0.005	2
T 32953	362764	358808		SL	R	C	2A3A3U	SIL/SN	1	-5	35	45	0.8	9	-0.005	-2
T 32954	362790	358808		SL	R	B	2U	SIL/SN	1	-5	15	15	0.5	8	-0.005	-2
	Remark:UNABLE TO PENETRATE															
T 32955	362809	358808		SL	R	C	2A	SIL/SN	2	5	25	10	0.8	7	-0.005	2
T 32956	362839	358806		SL	R	C	3A	SIL/SN	1	-5	50	10	1.1	10	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32957	362863	358807		SL	R	C	3A 3U	SIL/SN	2	-5	20	10	0.7	-3	-0.005	-2
T 32958	362885	358808		SL	R	BC	3A	SIL/SN	3	-5	20	10	0.7	6	-0.005	2
T 32959	362911	358810		SL	R	BC	3A	SIL/SN	3	-5	15	10	0.3	4	-0.005	-2
T 32960												-100	0.4	-500	0.062	6
T 32961	362938	358809		SL	R	C	2A	SIL/SN	2	-5	30	10	1.8	7	-0.005	-2
T 32962	362961	358809		SL	R	C	3A	SIL/SN	1	-5	20	10	0.2	6	-0.005	-2
T 32963	360897	357690		SL	R	C	3A 3U	SIL/SN	1	365	235	370	5.7	4	-0.005	-2
	Remark:SAMPLE TAKEN FROM BOTTOM OF DRAIN PEG															
T 32964	360922	357689		SL	R	C	3T	CY/SIL	1	70	140	60	12.0	2	-0.005	-2
T 32965	360947	357690		SL	R	BC	3A 3U	CY/SIL	1	70	35	60	4.4	6	-0.005	-2
T 32966	360971	357690		SL	R	BC	3T3U3A	CY/SIL	1	150	105	1350	3.8	-3	-0.005	-2
T 32967	360999	357690		SL	R	BC	3T3U	CY/SIL	1	45	45	50	1.3	8	-0.005	-2
T 32968	361023	357690		SL	R	BC	2T2U	CY/SIL	1	15	40	35	0.9	8	-0.005	12
T 32969	361048	357690		SL	R	BC	3T3U3A	CY/SIL	2	135	55	85	0.4	7	-0.005	-2
T 32970	361073	357691		SL	R	C	2U	SIL/SN	1	25	50	60	0.3	-3	-0.005	-2
T 32971	361097	357691		SL	R	C	2A 2U	SIL/SN	1	-5	40	10	0.9	11	-0.005	-2
T 32972	361124	357693		SL	R	C	2A3A	SIL/SN	1	-5	45	10	0.7	7	-0.005	-2
T 32973	361151	357692		SL	T	AB	2U	SIL/SN	1	-5	40	10	0.7	4	-0.005	-2
T 32974	361172	357693		SL	R	C	2A	SIL/SN	2	-5	45	20	1.1	5	-0.005	-2
T 32975	361201	357693		SL	T	B	W	SN/PEB	3	-5	15	10	0.6	4	-0.005	-2
	Remark:UNABLE TO PENETRATE															
T 32976	361224	357694		SL	T	B	W/3A	SIL/SN	3	-5	20	10	0.6	4	-0.005	-2
	Remark:SEVERAL ATTEMPTS, UNABLE TO PENETRATE SANDS & GRAVEL															
T 32977	361247	357695		SL	R	C	3U 3T	SIL/SN	3	-5	45	15	0.9	6	-0.005	-2
	Remark:SAMPLE TAKEN FROM BOTTOM OF OLD PIT															
T 32978	361271	357696		RC	R	C	3A	PEB	4	-5	30	30	1.2	14	-0.005	2
T 32979	361297	357697		RC	R	C	3A	PEB	5	-5	220	20	3.4	7	-0.005	-2
	Remark:SAMPLE TAKEN 5m SOUTH OF PEG.															
T 32980												-100	0.2	-500	0.254	4
T 32981	361324	357697		SL	T	B	3A	SIL/SN	5	-5	45	10	0.7	5	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL															
T 32982	361352	357698		SL	R	C	3A 3T	SIL/SN	4	-5	80	10	1.2	7	-0.005	3
T 32983	361377	357698		SL	T	B	3A 3U	SIL/SN	4	-5	30	10	0.8	-3	-0.005	-2
T 32984	361401	357699		RC	R	C	3A	PEB	1	-5	25	10	0.6	-3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 32985	361425	357701		SL	R	C	3A 3T	SIL/SN	5	-5	35	15	1.9	9	-0.005	-2
T 32986	361451	357702		SL	R	C	3A 3T	SIL/SN	5	-5	15	10	0.7	-3	-0.005	-2
T 32987	361476	357702		SL	R	C	3A 3T	SIL/SN	5	-5	20	15	0.8	-3	-0.005	-2
T 32988	361501	357704		SL	R	C	2U	SIL/SN	4	-5	30	15	1.0	5	-0.005	-2
T 32989	361524	357706		SL	R	C	2A3A	SIL/SN	4	-5	20	5	0.5	3	-0.005	-2
T 32990	360872	357688		SL	R	C	2T	CY/SIL	1	180	110	510	7.9	8	-0.005	-2
	Remark:SAMPLE TAKEN FROM BOTTOM OF DRAIN NEAR PEG															
T 32991	360848	357688		SL	R	C	3A3U3T	SIL/SN	1	210	40	705	1.8	7	-0.010	-4
T 32992	360822	357687		SL	R	C	2A 2T	SIL/SN	1	95	85	960	1.3	8	-0.005	-2
T 32993	360795	357687		SL	R	BC	3A3T30	CY/SIL	1	115	50	300	1.0	-3	-0.005	-2
T 32994	360769	357684		SL	R	C	2A	SIL/SN	1	75	55	280	1.2	7	-0.005	-2
T 32995	360745	357683		SL	R	C	1A	SIL/SN	1	150	220	730	5.9	7	-0.005	-2
T 32996	360721	357683		SL	R	BC	3T 3A	CY/SIL	1	185	145	90	20.4	7	-0.005	-2
T 32997	360697	357682		SL	R	B	W 3U	SIL/SN	1	-5	45	20	6.5	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVELS															
T 32998	360669	357681		SL	R	C	3A3U	SIL/SN	1	-5	85	25	4.4	3	-0.005	-2
T 32999	360647	357679		SL	T	B	W 3A	SIL/SN	2	-5	25	10	1.9	5	-0.005	-2
	Remark:SEVERAL ATTEMPTS, UNABLE TO PENETRATE GRAVELS															
T 33000												110	0.2	-500	0.052	-2
T 33001	360623	357678		SL	R	B	3A W	SIL/SN	2	-5	25	15	1.2	7	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVELS															
T 33002	360595	357676		SL	R	C	3T 3U	SIL/SN	1	-5	40	20	1.3	-3	-0.005	-2
T 33003	360570	357675		SL	R	C	3T3U	SIL/SN	1	25	125	65	2.9	5	-0.005	-2
T 33004	360547	357674		SL	R	C	2A3A3T	SIL/SN	1	-5	20	20	4.1	6	-0.005	-2
T 33005	360522	357673		SL	R	B	3T3U	SIL/SN	1	5	150	30	2.8	6	-0.005	-2
	Remark:SAMPLE TAK EAST OF PEG, DUE TO EARTH WORKS.															
T 33006	360504	357672		SL	?	?	2A3A2T	SIL/SN	1	35	225	20	8.7	15	0.007	-2
	Remark:SAMPLE TAKEN AT EARTH WORKS.															
T 33007	360477	357671		SL	R	C	1U	SIL/SN	3	50	1550	425	16.3	3	-0.005	-2
T 33008	360454	357671		SL	R	C	2A 3A	SIL/SN	1	60	325	35	11.3	6	0.008	-2
T 33009	360425	357671		SL	R	C	2A 3A	SIL/SN	3	15	555	15	7.8	45	0.030	-2
T 33010	360393	357669		SL	R	C	1A2A	SIL/SN	1	50	175	25	12.3	4	0.016	-2
T 33011	360369	357668		SL	R	C	1U2T3T	SIL/SN	2	65	325	185	23.0	8	-0.005	-2
T 33012	360345	357668		SL	R	C	1A2A N	SIL/SN	1	125	1600	1450	26.6	23	0.040	6
	Remark:SULPHIDES VISIBLE.SAMPLE TAKEN AT OLD WORKINGS.															
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33013	360325	357667		SL	R	B	2U1T2T	SIL/SN	1	20	880	300	35.0	8	0.012	-2
T 33014	360301	357666		SL	R	C	1T2U	SIL/SN	1	-5	10	45	3.4	-3	-0.005	-2
T 33015	360273	357665		SL	R	C	3T 3O	SIL/SN	2	10	570	5350	17.0	6	-0.005	3
T 33016	360248	357664		SL	R	C	2A3A2U	SIL/SN	1	55	740	110	7.9	-3	-0.005	2
T 33017	360222	357664		SL	R	C	3T	CY/SIL	2	5	150	15	5.6	5	-0.005	-2
T 33018	360198	357663		SL	R	B	3A W	SIL/SN	3	-5	10	15	1.4	9	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 33019	360169	357662		SL	R	C	2T3T1T	CY/SIL	1	50	200	100	5.1	12	-0.005	-2
T 33020	360145	357661		SL	R	C	3A	SIL/SN	1	5	100	20	8.3	37	0.011	2
T 33021	360124	357659		SL	R	C	3T	SIL/SN	1	5	75	10	3.1	-3	-0.005	-2
T 33022	360105	357659		SL	R	C	3A	SIL/SN	3	5	280	10	1.2	-3	-0.005	-2
T 33023	360075	357657		SL	R	C	1A2A	SIL/SN	3	5	60	50	4.0	15	0.009	2
T 33024	360051	357655		SL	R	C	3A3U3T	SIL/SN	3	-5	75	15	1.7	5	-0.005	-2
T 33025	360023	357654		SL	T	B	3A W	SIL/SN	3	5	45	10	3.2	5	-0.005	-2
	Remark:SEVERAL ATTEMPTS , UABLE TO PENETRATE GRAVEL.															
T 33026	360533	357475		SL	R	B	3A W	SN/PEB	1	-5	5	5	1.3	4	-0.005	-2
T 33027	360507	357474		SL	R	B	3T 3A	SIL/SN	1	-5	5	5	1.3	-3	-0.005	-2
T 33028	360481	357473		SL	R	B	T 3U	CY/SIL	1	5	5	25	2.2	6	-0.005	-2
T 33029	360457	357473		SL	R	C	W 3A	SIL/SN	1	-5	5	5	3.6	-3	-0.005	-2
T 33030	360434	357472		SL	R	C	2A 3A	SIL/SN	1	5	10	175	2.2	-3	-0.005	-2
T 33031	360410	357471		SL	R	C	2A3A1T	SIL/SN	1	15	175	160	8.5	5	-0.005	-2
	Remark:SAMPLE TAKEN 8M TO EAST OF PEG,DUE TO MAJOR EARTH WORKS.															
T 33032	360383	357470		SL	R	C	1T2T2O	SIL/SN	1	5	25	240	2.1	-3	-0.005	-2
	Remark:SAMPLE TAKEN AT BOTTOM OF DRAIN 10m WEST OF PEG. DUE TO EARTH WORKS.															
T 33033	360359	357470		SL	R	C	1A2A1T	SIL/SN	1	120	640	28700	6.3	35	-0.005	3
	Remark:SAMPLE TAKEN AT SITE OF EARTH WORKS.															
T 33034	360334	357468		SL	R	C	1A2A3A	SIL/SN	1	75	460	85	4.3	6	-0.005	-2
	Remark:SAMPLE TAKEN AT SITE OF EARTH WORKS.															
T 33035	360311	357467		SL	R	C	2A3A2T	SIL/SN	4	55	365	130	9.7	9	0.016	-2
	Remark:SAMPLE TAKEN FROM CUTTING 10m SOUTH OF PEG.															
T 33036	360284	357466		SL	R	C	1U2U3U	SIL/SN	1	65	210	60	18.2	33	0.010	-2
T 33037	360259	357465		SL	R	C	T 3U	SIL/SN	3	5	30	10	2.5	-3	-0.005	-2
T 33038	360234	357462		SL	R	C	2T3T3A	SIL/SN	2	85	120	15	10.4	3	-0.005	-2
T 33039	360206	357461		SL	R	C	2U	SIL/SN	1	5	60	10	2.8	8	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33040												101	-0.2	-500	0.264	6
T 33041	360180	357459		SL	R	C	2A3A3T	SIL/SN	1	10	165	10	4.2	3	-0.005	-2
T 33042	360153	357459		SL	R	C	3A3T	SIL/SN	3	10	45	20	2.1	9	-0.005	3
T 33043	360135	357458		SL	R	C	2A3A	SIL/SN	3	10	465	20	2.1	6	-0.005	-2
T 33044	360109	357457		SL	R	C	2A3A	SIL/SN	4	5	80	20	2.3	10	-0.005	2
T 33045	360082	357455		SL	R	B	3A	CY/SIL	4	5	30	10	1.6	3	-0.005	-2
	Remark:UNABLE TO PENETRATE CEMENTED GRAVELS.															
T 33046	360060	357455		SL	R	B	3A	SIL/SN	4	5	15	10	1.0	7	-0.005	-2
	Remark:UNABLE TO PENETRATE CEMENTED GRAVELS.															
T 33047	360035	357454		SL	R	C	1A2A3A	SIL/SN	3	20	115	2100	45.2	13	-0.005	-2
	Remark:SAMPLE TAKEN AT 10m SOUTH ON ROAD CUTTING.															
T 33048	360558	357475		SL	R	B	3A W	SIL/SN	1	5	5	15	1.5	10	-0.005	-2
T 33049	360580	357475		SL	R	B	3A W	SIL/SN	1	5	5	10	1.0	5	-0.005	-2
T 33050	360606	357474		SL	R	BC	1T 2T	CY/SIL	1	20	1800	4350	36.3	-3	-0.005	-2
T 33051	360631	357475		SL	R	BC	1T 2T	CY/SIL	1	10	1400	4700	18.4	3	-0.005	-2
T 33052	360653	357476		SL	R	BC	2A3A2T	CY/SIL	1	20	350	180	9.6	13	-0.005	2
T 33053	360679	357477		SL	R	C	2A	SIL/SN	1	20	745	60	10.1	9	-0.005	-2
T 33054	360703	357477		SL	R	C	20 3A	CY/SIL	1	15	1650	35	9.6	7	-0.005	-2
T 33055	360729	357477		SL	R	C	3A2T	CY/SIL	2	15	85	30	7.5	7	-0.005	-2
T 33056	360753	357479		SL	R	C	3A 3T	SIL/SN	1	10	365	25	3.3	7	-0.005	-2
T 33057	360779	357480		SL	R	C	20 2T	SIL/SN	1	95	130	105	14.4	4	-0.005	-2
T 33058	360805	357481		SL	R	C	2T2R3A	CY/SIL	1	110	65	75	6.7	7	-0.005	-2
T 33059	360831	357482		SL	R	C	2T	CY/SIL	1	160	45	320	5.8	7	-0.005	-2
T 33060												113	0.3	-500	0.055	3
T 33061	360852	357484		SL	R	C	2T3T1R	SIL/SN	1	105	50	100	5.6	8	-0.005	-2
T 33062	360880	357485		SL	R	C	3A 3T	CY/SIL	1	40	40	135	3.0	4	-0.005	-2
T 33063	360903	357486		SL	R	C	2R 2T	SIL/SN	2	150	210	180	4.5	8	-0.005	-2
T 33064	360930	357487		SL	R	C	3A2T3T	SIL/SN	1	70	70	60	4.7	5	-0.005	-2
T 33065	360953	357488		SL	R	C	2T	CY/SIL	1	145	25	85	5.0	4	-0.005	-2
T 33066	360980	357489		SL	R	C	2A	SIL/SN	1	225	5	255	5.1	4	-0.005	-2
T 33067	361005	357490		SL	R	BC	2T	CY/SIL	1	215	45	85	8.0	6	-0.005	-2
T 33068	361031	357490		SL	R	C	3A3T	SIL/SN	1	215	140	240	12.0	10	-0.005	-2
T 33069	361055	357492		SL	R	C	2A3A3T	SIL/SN	1	40	20	212	8.8	3	-0.005	-2
T 33070	361079	357492		SL	R	C	1A	SIL/SN	1	15	200	45	3.7	7	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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130162

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33071	361103	357494		SL	R	C	2A	SN/PEB	1	20	50	20	1.5	9	-0.005	-2
T 33072	361130	357496		SL	R	C	3A	SIL/SN	1	10	30	20	1.3	6	-0.005	-2
T 33073	361155	357496		SL	R	C	2A3A	SIL/SN	1	5	-5	20	0.8	5	-0.005	-2
T 33074	361178	357496		SL	R	C	1U2U	SIL/SN	1	5	25	15	0.9	4	-0.005	2
T 33075	361201	357497		SL	R	C	3A	SN/PEB	2	5	5	15	0.6	5	-0.005	-2
T 33076	361229	357497		SL	R	C	2U3U	SIL/SN	1	5	30	15	1.1	3	-0.005	-2
T 33077	361252	357498		SL	R	C	2U3U	SIL/SN	1	10	85	25	2.0	10	-0.005	-2
T 33078	361276	357498		SL	T	B	3A	SIL/SN	4	5	-5	20	0.7	-3	-0.005	-2
T 33079	361301	357499		SL	R	C	3T 3U	SIL/SN	4	10	170	25	2.6	12	-0.005	-2
T 33080												-100	-0.2	-500	0.249	6
T 33081	361329	357500		SL	R	C	3U 2A	SIL/SN	4	5	-5	15	0.9	5	-0.005	2
T 33082	361353	357501		SL	R	C	3A	SIL/SN	4	40	5	15	0.9	4	-0.005	3
T 33083	361379	357501		RC	R	C	3A	PEB	1	20	-5	15	1.4	10	-0.005	-2
T 33084	361402	357502		RC	R	C	3A	PEB	1	10	10	15	2.1	8	-0.005	3
T 33085	361429	357503		SL	R	C	3U 3A	SIL/SN	4	5	10	15	1.6	39	-0.005	4
T 33086	361458	357504		SL	R	C	3A 3T	SIL/SN	4	15	80	30	2.4	4	-0.005	-2
T 33087	361479	357504		SL	R	C	3U 3T	SIL/SN	3	10	10	20	2.4	8	-0.005	2
T 33088	361507	357504		SL	R	C	2A3A	SIL/SN	3	5	60	20	1.1	6	-0.005	-2
T 33089	361531	357507		SL	R	C	2A 3A	SIL/SN	3	5	5	15	0.5	6	-0.005	2
T 33090	361543	357299		SL	R	C	3A	SIL/SN	3	-5	25	10	1.4	7	-0.005	-2
T 33091	361516	357298		SL	R	C	3A	SIL/SN	1	-5	40	10	1.1	7	-0.005	-2
T 33092	361490	357297		SL	R	C	3T	SIL/SN	1	5	35	10	1.5	9	-0.005	-2
T 33093	361465	357297		SL	R	C	3A 3T	SIL/SN	1	10	5	10	8.1	42	0.009	5
T 33094	361445	357296		SL	R	C	2T3T3A	SIL/SN	3	15	65	15	7.6	12	-0.005	2
T 33095	361416	357296		SL	R	C	2A3A3T	CY/SIL	3	5	25	15	2.6	8	-0.005	-2
T 33096	361389	357295		SL	R	C	3A	SIL/SN	2	-5	25	10	1.1	12	-0.005	2
T 33097	361366	357295		SL	R	C	3A3T	SIL/SN	1	20	10	15	4.2	7	-0.005	-2
T 33098	361342	357295		SL	R	C	2A3A	CY/SIL	3	-5	60	10	3.3	7	-0.005	2
T 33099	361317	357295		SL	R	C	3A	SIL/SN	3	-5	-5	5	0.7	3	-0.005	-2
T 33100												-100	-0.2	-500	0.265	5
T 33101	361285	357294		SL	R	C	3A	SIL/SN	2	5	5	10	0.8	5	-0.005	3
T 33102	361261	357294		SL	R	C	2U2T3T	SIL/SN	3	-5	10	10	2.5	-3	-0.005	2
T 33103	361241	357296		SL	R	C	2U	SIL/SN	2	-5	20	5	1.3	16	-0.005	-2
T 33104	361214	357296		SL	T	B	3A	SIL/SN	1	-5	-5	-5	0.7	-3	-0.005	-2

Remark:UNABLE TO PENETRATE SAND AND GRAVEL'S.

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33105	361189	357296		SL	R	C	2U1T	SIL/SN	1	25	1750	3600	4.3	6	-0.005	-2
T 33106	361165	357295		SL	R	BC	203T	CY/SIL	1	10	130	65	4.5	8	-0.005	2
T 33107	361140	357296		SL	R	C	3A 3T	SIL/SN	1	25	120	130	3.2	9	-0.005	-2
T 33108	361112	357295		SL	R	C	3T2T1T	CY/SIL	1	40	155	185	12.5	5	-0.005	-2
T 33109	361086	357296		SL	R	C	2T 3T	SIL/SN	1	55	165	115	12.4	6	-0.005	-2
T 33110	361066	357293		SL	R	C	3A 3T	SIL/SN	1	10	90	15	17.5	13	0.008	3
T 33111	361039	357293		SL	R	C	3A2T2U	SIL/SN	1	55	450	20	16.4	10	-0.005	-2
T 33112	361013	357293		SL	R	BC	2A 2T	CY/SIL	3	100	120	110	20.8	11	-0.005	-2
T 33113	360987	357293		SL	R	C	2T 3R	SIL/SN	1	210	75	255	10.6	5	-0.005	-2
T 33114	360964	357292		SL	R	C	2D 3R	SY/SIL	1	165	50	85	1.8	9	-0.005	-2
T 33115	360938	357290		SL	R	C	2T 3T	SIL/SN	1	115	20	50	2.0	8	-0.005	-2
T 33116	360912	357290		SL	R	C	2T 3R	SIL/SN	1	145	10	80	2.7	5	-0.005	-2
T 33117	360888	357288		SL	R	C	2T2U3R	SIL/SN	1	230	255	270	4.1	10	-0.005	-2
T 33118	360865	357289		SL	R	C	2T3T	SIL/SN	1	125	20	140	4.3	6	-0.005	-2
T 33119	360838	357288		SL	R	C	1A2A3A	SIL/SN	1	15	2150	95	21.9	13	-0.005	8
T 33120			STD									117	1.0	-500	0.053	5
	Remark:STD B3 0.05 g/t															
T 33121	360813	357288		SL	R	C	2A	SIL/SN	2	5	30	15	5.0	11	-0.005	-2
T 33122	360787	357287		SL	R	C	3A3T2U	SIL/SN	1	10	300	130	3.9	26	-0.005	3
T 33123	360761	357286		SL	R	C	1U2U1A	SIL/SN	1	-5	125	55	8.1	-3	-0.005	-2
	Remark:SAMPLE TAKEN IN CUTTING 10m SOUTH OF PEG.															
T 33124	360738	357286		SL	T	B	2A3A	SIL/SN	1	-5	5	10	16.9	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 33125	360712	357285		SL	R	C	1U3A3U	SIL/SN	1	25	120	300	23.0	11	0.009	2
T 33126	360690	357285		SL	R	C	1A	SIL/SN	1	80	205	325	6.7	-3	-0.005	2
T 33127	360663	357285		SL	R	C	1A2A3A	SIL/SN	2	85	145	75	18.1	8	0.006	-2
T 33128	360639	357284		SL	T	B	3A	SIL/SN	2	-5	-5	10	2.3	5	-0.005	-2
	Remark:SAMPLE TAKEN 10m TO SOUTH OF PEG.UNABLE TO PENETRATE GRAVELS.															
T 33129	360613	357284		SL	R	C	3AU	SIL/SN	1	5	-5	20	2.8	5	-0.005	-2
T 33130	360588	357284		SL	R	C	3A	CY/SIL	1	-5	5	50	3.4	8	-0.005	-2
T 33131	360563	357283		SL	R	C	1A2A3A	SIL/SN	1	-5	150	30	2.4	3	-0.005	-2
T 33132	360538	357283		SL	R	C	1R1T2U	SIL/SN	2	155	240	50	21.7	7	0.020	-2
T 33133	360514	357283		RC	R	C	2A1T	SN/PEB	1	30	65	65	4.0	9	0.010	-2
T 33134	360489	357283		SL	T	B	2A3A	SIL/SN	1	-5	-5	10	0.8	3	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33135	360460	357284		SL	T	B	3A	SIL/SN	1	-5	-5	5	0.6	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 33136	360438	357284		SL	R	C	1U2A3A	SIL/SN	1	-5	30	40	0.8	5	-0.005	-2
T 33137	360413	357285		SL	R	B	2A	CY/SIL	1	50	545	495	7.7	8	-0.005	-2
T 33138	360389	357285		SL	T	B	2U2T3T	CY/SIL	1	45	1750	935	22.1	9	-0.005	4
	Remark:SAMPLE TAKEN NEAR EDGE OF MAIN ROAD.															
T 33139	360364	357285		RC	R	C	1A	PEB	1	45	20	30	21.2	4	0.017	2
	Remark:SAMPLE TAKEN FROM CUTTING ON SOUTH SIDE OF ROAD.															
T 33140			STD									-100	-0.2	-500	0.249	5
	Remark:STD B4 0.25 g/t															
T 33141	360339	357284		SL	R	C	2A	SIL/SN	2	5	-5	20	5.2	3	0.006	-2
T 33142	360315	357283		SL	R	C	2A2T	SIL/SN	1	70	220	30	17.2	6	0.006	2
T 33143	360288	357284		SL	R	C	3A	SIL/SN	4	-5	-5	10	1.4	4	-0.005	-2
T 33144	360263	357282		SL			3T1T1A	SIL/SN	3	290	400	130	17.6	36	-0.005	-2
	Remark:SAMPLE TAKEN FROM ROAD CUTTING															
T 33145	360239	357285		RC	R	C	1A2A1U	PEB	3	100	380	70	14.7	28	0.042	9
	Remark:SULPHIDES VISIBLE, SAMPLE TAKEN FROM OUTCROP IN CREEK BED.															
T 33146	360214	357287		RC	R	C	1A	PEB	4	40	-5	80	1.1	7	-0.005	-2
	Remark:SAMPLE TAKEN FROM CUTTING NORTH SIDE OF OLD WORKINGS.															
T 33147	360185	357287		RC	R	C	2U2A3A	SN/PEB	1	20	-5	45	1.1	4	-0.005	2
	Remark:SAMPLE TAKEN FROM CUTTING ON SIDE OF ROAD.															
T 33148	360162	357285		RC	R	C	2A3A2T	PEB	1	85	-5	30	1.3	6	0.005	-2
	Remark:SAMPLE TAKEN FROM CUTTING ON SIDE OF ROAD.															
T 33149	360140	357286		SL	R	C	2A3A1U	SIL/SN	1	30	-5	15	3.9	11	-0.005	-2
T 33150	360117	357286		SL	R	C	3A3T2T	SIL/SN	1	30	25	15	8.7	14	-0.005	-2
T 33151	360088	357285		SL	R	C	3A	SIL/SN	2	10	-5	20	3.9	4	-0.005	2
T 33152	360064	357288		SL	R	C	2U	SIL/SN	3	120	60	90	8.4	3	-0.005	-2
T 33153	360042	357288		SL	R	C	1U2U2T	SIL/SN	3	30	25	215	5.6	-3	-0.005	-2
T 33154	362380	357629		SL	R	C	3A3T	CY/SIL	2	5	5	5	5.0	42	-0.005	5
T 33155	362355	357629		SL	R	BC	3A3T	CY/SIL	3	5	5	30	2.9	6	-0.005	-2
T 33156	362335	357628		SL	T	B	2A3A3T	CY/SIL	1	5	15	15	1.3	14	-0.005	-2
	Remark:UNABLE TO PENETRATE FURTHER.															
T 33157	362308	357627		SL	R	C	2U3U2A	SIL/SN	3	5	-5	35	0.8	5	-0.005	-2
T 33158	362282	357626		SL	T	B	3A	SIL/SN	3	-5	-5	10	0.4	23	-0.005	-2
	Remark:UNABLE TO PENETRATE FURTHER.															
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87. SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33159	362255	357626		SL	R	C	2A	SIL/SN	2	-5	-5	10	0.5	15	-0.005	2
T 33160			STD									106	-0.2	-500	0.060	3
	Remark:STD B3 0.05 g/t															
T 33161	362232	357625		SL	R	C	3A	SIL/SN	2	-5	-5	5	0.4	5	-0.005	2
T 33162	362213	357623		SL	R	BC	2A3A	CY/SIL	1	10	15	15	3.8	6	-0.005	-2
T 33163	362187	357624		RC	R	C	2A	PEB	3	60	-5	25	0.9	4	0.006	-2
T 33164	362162	357625		RC	R	C	2R3R3U	PEB	3	145	10	20	0.4	6	-0.005	-2
T 33165	362139	357622		RC	R	C	2A3A2U	PEB	2	90	10	90	1.2	6	-0.005	3
	Remark:SAMPLE TAKEN FROM CREEK SIDE NEAR PEG.															
T 33166	362113	357621		RC	R?	C?	3A2T	PEB	2	10	-5	15	0.7	34	-0.005	3
T 33167	362088	357621		RC	R?	C?	3A	PEB	2	5	-5	10	0.3	8	-0.005	-2
T 33168	362062	357620		RC	R?	C?	3A	PEB	2	120	-5	10	0.5	7	-0.005	2
T 33169	362037	357620		RC	R	C	1U2U3T	PEB	3	20	-5	10	0.6	4	-0.005	-2
T 33170	362015	357618		RC	R?	C?	3A	PEB	3	5	-5	10	0.4	-3	-0.005	-2
T 33171	361989	357617		SL	T?	B?	3A	SIL/SN	3	-5	-5	10	0.4	3	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 33172	361965	357616		SL	R	C	2A3A	SIL/SN	2	5	5	10	2.2	7	-0.005	-2
T 33173	361941	357616		SL	R	C	3T	SIL/SN	1	-5	-5	10	0.7	6	-0.005	-2
T 33174	361916	357615		SL	R?	C?	3A3T	SIL/SN	1	-5	-5	10	0.5	-3	-0.005	-2
T 33175	361892	357615		SL	R	C	2A	SIL/SN	1	-5	-5	10	0.8	4	-0.005	2
T 33176	361864	357613		SL	R	C	2U3U	SIL/SN	4	-5	-5	10	0.4	6	-0.005	-2
T 33177	361839	357613		SL	T?	B?	3A W	SIL/SN	2	-5	-5	5	0.3	5	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 33178	361822	357613		SL	R	C	3A	SIL/SN	2	-5	-5	10	0.6	19	-0.005	2
T 33179	361798	357613		SL	R	C	3A	SIL/SN	1	-5	100	10	0.8	8	-0.005	2
T 33180			STD									-100	-0.2	-500	0.257	5
	Remark:STD B4 0.25 g/t															
T 33181	361773	357612		SL	R	C	2T	SIL/SN	1	15	50	15	2.5	12	-0.005	-2
T 33182	361746	357612		SL	R	C	3A	SIL/SN	1	-5	25	15	0.3	-3	-0.005	2
T 33183	361722	357610		SL	R	C	3A	SIL/SN	1	-5	-5	10	0.8	7	-0.005	-2
T 33184	361700	357609		SL	R	C	3U	SIL/SN	3	-5	10	10	0.5	7	-0.005	-2
T 33185	361673	357607		RC	R	C	2A	PEB	3	25	-5	110	0.7	5	-0.005	-2
T 33186	361652	357606		SL	R	C	2A2T	SIL/SN	3	-5	-5	10	1.2	8	0.006	2
T 33187	361628	357604		SL	R	C	1A	SIL/SN	4	5	25	10	2.5	4	-0.005	2
	Remark:SULPHIDES VISIBLE.															
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 33188	361606	357603		SL	R	C	2A	SIL/SN	3	-5	10	10	3.2	9	-0.005	2
T 33189	361581	357602		SL	R	C	2A	SIL/SN	3	5	15	15	1.3	8	-0.005	-2
T 33190	361555	357602		SL	R	C	2A3A	SIL/SN	2	-5	10	10	1.1	13	-0.005	3
T 33191	361530	357602		SL	R	BC	2A	CY/SIL	3	5	25	15	3.1	15	-0.005	2
T 33192	362426	357622		SL	R	C	2A	SN/PEB	1	50	210	80	3.8	37	-0.005	3
T 33193	362450	357623		SL	R	C	2A	SIL/SN	1	5	35	35	1.3	10	-0.005	-2
T 33194	362476	357624		RC	R	C	2A	PEB	1	13	20	40	0.6	17	-0.005	-2
T 33195	362500	357625		SL	R	C	2A	SIL/SN	1	30	60	105	1.1	29	-0.005	-2
T 33196	362528	357626		SL	R?	B?	3A	SIL/SN	2	-5	5	10	1.2	24	-0.005	3
T 33197	362551	357626		SL	R	BC	2A	CY/SIL	2	25	125	50	3.1	8	-0.005	-2
T 33198	362575	357627		SL	R	C	2A3A	SIL/SN	1	-5	15	10	2.7	40	0.009	8
T 33199	362601	357628		SL	R?	C?	2T3A	SN/PEB	1	-5	35	15	0.7	36	-0.005	7
T 33200			STD									114	0.3	-500	0.084	4
	Remark:STD B3 0.05 g/t															
T 33201	362619	357628		SL	R	BC	2T 2U	CY SIL	3	25	145	25	7.0	35	-0.005	5
T 33202	362645	357630		SL	R	C	2A2T	PEB	4	35	75	415	2.6	58	-0.005	3
T 33203	362671	357630		SL	R	C	2A	SIL SN	1	-5	30	10	1.0	30	-0.005	6
T 33204	362693	357631		SL	R	C	2A	SIL SN	1	-5	45	15	2.4	32	-0.005	10
T 33205	362714	357632		SL	R	C	2A	SIL SN	1	-5	20	10	1.1	12	-0.005	-2
T 33206	362738	357633		SL	R	C	2A3A3T	SIL SN	1	-5	35	15	1.2	12	-0.005	-2
T 33207	362764	357634		SL	R	C	3A	SIL SN	1	-5	20	15	1.8	10	-0.005	2
T 33208	362793	357635		SL	R	C	2A3A2U	SIL SN	1	-5	40	25	1.3	32	-0.005	3
T 33209	362814	357636		SL	R	C	2U3A3T	SIL SN	1	-5	35	35	1.0	10	-0.005	7
T 33210	362839	357636		SL	R	C	3A	SIL SN	2	-5	5	20	0.9	17	-0.005	2
T 33211	362863	357637		SL	R	C	3A	SIL SN	3	-5	25	15	0.7	13	-0.005	-2
T 33212	362890	357637		SL	R	C	3A	SIL SN	2	5	-5	15	1.0	6	-0.005	-2
T 33213	362915	357638		SL	R	C	3A3T	SIL SN	2	-5	-5	25	0.5	4	-0.005	-2
T 33214	362938	357639		SL	R	C	3A3T	SIL SN	1	-5	5	10	1.2	13	-0.005	10
T 33215	362963	357639		SL	R	C	3A3T	SIL SN	1	-5	-5	10	0.7	11	-0.005	-2
T 33216	362989	357640		SL	R	C	2A3A	SIL SN	1	5	20	15	0.7	19	-0.005	-2
T 33217	362404	357629		RC	R	C	3A	PEB	2	-5	10	10	1.2	10	-0.005	-2
T 34501	361493	356027		SL	R	B	3A	CY/SIL	4	6	37	15	1.8	7	-0.005	2
T 34502	361520	356026		SL	R	C	2T3T3A	CY/SIL	4	16	33	20	1.5	10	-0.005	2
T 34503	361547	356025		SL	R	BC	3A	CY/SIL	2	15	15	12	0.9	9	-0.005	-2
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 34504	361574	356024		SL	R	C	20303T	SIL/SN	3	8	15	12	1.4	14	-0.005	3
T 34505	361216	356026		SL	R	C	3A2T3T	SIL/SN	4	6	52	22	1.7	7	-0.005	-2
T 34506	361193	356025		SL	R	B?	3A	SIL/SN	3	-5	6	5	0.5	3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34507	361169	356024		SL	R	B	3A	CY/SIL	4	-5	39	9	1.6	12	-0.005	-2
T 34508	361142	356024		SL	R	C	3A3U	SIL/SN	4	-5	28	9	2.1	-3	-0.005	3
T 34509	361118	356024		SL	R	C	3A	SIL/SN	2	-5	70	-5	1.1	6	-0.005	-2
T 34510	361093	356024		SL	R	B?	3A	SIL/SN	4	-5	10	-5	0.8	5	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34511	361066	356024		SL	R	C	3A	SIL/SN	3	13	49	29	1.2	9	-0.005	-2
T 34512	361043	356023		SL	R	BC	1O1U	CY/SIL	4	-5	23	20	1.7	16	-0.005	3
T 34513	361020	356023		SL	R	BC	1U2U1T	CY/SIL	3	25	206	655	34.6	208	-0.005	9
T 34514	360995	356026		SL	R	C	1U2U2T	CY/SIL	3	33	102	38	6.7	7	-0.005	3
T 34515	360969	356024		SL	R	C	1U2U3U	SIL/SN	1	37	85	13	6.5	3	-0.005	3
T 34516	360939	356024		SL	R	C	3A2T	CY/SIL	1	12	514	62	14.1	5	-0.005	7
	Remark:SAMPLE TAKEN FROM OLD PROSPECT PIT.															
T 34517	360916	356027		SL	R	BC	3A3T	CY/SIL	1	47	179	18	5.7	-3	-0.005	-2
	Remark:SAMPLE TAKEN FROM SIDE OF OLD PROSPECT PIT.															
T 34518	360891	356037		SL	R	C	2A3A2U	SIL/SN	1	29	70	97	9.0	3	-0.005	2
	Remark:SAMPLE TAKEN FROM CUTTING IN BANK, 4m SOUTH OF PEG.															
T 34519	360864	356036		SL	R	C	3A2T3T	SIL/SN	1	13	88	18	2.2	8	-0.005	-2
T 34520			STD									-100	-0.2	-500	3.520	7
	Remark:STD B12 3.28 g/t															
T 34521	360841	356037		SL	R	C	20303U	CY/SIL	1	57	51	83	11.6	11	-0.005	3
T 34522	360813	356040		RC	R	C	1U2U1T	PEB	1	37	178	36	2.6	7	-0.005	2
	Remark:RC TAKEN 1.2m FROM TOP OF CUTTING IN BANK.															
T 34523	360791	356038		SL	R	C	2U3U1T	SIL/SN	1	43	51	80	1.6	9	-0.005	-2
	Remark:SAMPLE TAKEN FROM CUTTING 3m SOUTH OF PEG.															
T 34524	360764	356040		SL	R	C	2A1U2U	SIL/SN	1	81	96	53	8.2	15	-0.005	-2
	Remark:SAMPLE TAKEN ON SIDE OF ROAD 5m TO THE SOUTH OF THE PEG.															
T 34525	360740	356042		SL	R	C	1U2U3U	SIL/SN	1	22	29	15	5.0	5	-0.005	-2
T 34526	360718	356043		SL	R	C	3A2U2T	SIL/SN	1	40	644	29	6.7	20	-0.005	4
T 34527	360690	356043		SL	R	C	2A3A2T	SIL/SN	2	20	131	25	3.1	14	-0.005	-2
T 34528	360667	356046		SL	R	C	2A3A2U	SIL/SN	3	7	27	35	6.7	7	-0.005	10

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 34529	360643	356048		SL	R	BC	3U2A3A	CY/SIL	1	31	20	89	3.4	-3	-0.005	-2
T 34530	360619	356048		SL	R	BC	3GR/2T	CY/SIL	2	28	20	215	5.9	10	0.007	-2
T 34531	360594	356045		SL	R	C	N/303A	SIL/SN	1	11	20	216	5.4	-3	-0.005	-4
T 34532	360567	356041		SL	R	BC	W/N/20	CY/SIL	1	17	48	127	5.9	3	-0.005	-2
T 34533	361218	355832		SL	R	C?	3A	SIL/SN	2	5	16	14	0.8	-3	-0.005	2
T 34534	361242	355828		SL	R	C	3A3T3U	CY/SIL	2	6	62	27	1.9	13	-0.005	-2
T 34535	361266	355828		SL	R	BC	2U3A	SIL/SN	3	-5	15	19	1.0	9	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34536	361293	355826		SL	R	C	2A3A	CY/SIL	4	7	20	19	1.1	7	-0.005	-2
T 34537	361319	355826		SL	R	C	2U3U	SIL/SN	4	-5	37	6	1.4	9	-0.005	2
T 34538	361343	355823		SL	R	C	2A3A	CY/SIL	1	12	20	51	2.7	9	-0.005	-2
T 34539	361365	355823		SL	R	C	3T	CY/SIL	2	-5	6	7	1.8	3	-0.005	3
T 34540			STD									-100	0.3	-500	0.318	6
	Remark:STD B4 0.25 g/t															
T 34541	361391	355822		SL	R	C	3A	CY/SIL	2	-5	95	5	0.9	7	-0.005	-2
T 34542	361416	355822		SL	R	C	3A	SIL/SN	2	-5	13	7	0.8	7	-0.005	-2
T 34543	361439	355822		SL	R	C	3T	CY/SIL	1	-5	14	11	1.3	5	-0.005	-2
T 34544	361463	355822		SL	R	C	3A	CY/SIL	1	-5	28	11	1.4	11	-0.005	-2
T 34545	361490	355822		SL	R	B	3A	CY/SIL	1	-5	19	11	1.4	9	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34546	361518	355822		SL	R	BC	3A3T3U	CY/SIL	1	-5	8	15	0.8	4	-0.005	3
T 34547	361541	355822		SL	R	C	3A	CY/SIL	1	9	23	24	1.5	6	-0.005	-2
T 34548	361564	355822		SL	R	C	2A3A	SIL/SN	1	5	-5	17	1.0	5	-0.005	-2
T 34549	361193	355836		SL	R	BC	3A3U3T	SIL/SN	3	5	16	9	1.1	4	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34550	361168	355838		SL	R	C	3A	SIL/SN	3	5	9	33	4.4	11	-0.005	-2
T 34551	361144	355837		SL	R	B?	3A3T	SIL/SN	3	5	8	9	1.7	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34552	361121	355836		SL	R	BC	3A2T3T	CY/SIL	2	59	35	24	14.1	18	-0.005	4
T 34553	361096	355835		SL	R	C	103A2T	CY/SIL	1	53	62	29	8.7	13	-0.005	-2
T 34554	361071	355836		SL	R	C	2U3A2T	CY/SIL	2	83	41	97	2.7	11	-0.005	-2
T 34555	361050	355834		SL	R	C	2A3A2T	CY/SIL	3	17	21	27	5.4	5	-0.005	-2
T 34556	361029	355834		SL	R	C	N/1U2T	CY/SIL	3	77	73	476	11.3	51	-0.005	6
T 34557	361006	355835		SL	R	C	2A2T	CY/SIL	1	113	146	509	14.9	11	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 34558	360978	355834		SL	R	C	3A3T3U	PEB	1	139	530	398	3.5	12	-0.005	-2
	Remark:SAMPLE TAKEN FROM AN OLD CUTTING IN A BANK.															
T 34559	360955	355836		SL	R	C	3A3T3O	CY/SIL	2	29	78	41	9.4	33	-0.005	-2
T 34560			STD									-100	-0.2	-500	0.067	4
	Remark:STD B3 0.05 g/t															
T 34561	360933	355834		SL	R	C	2A2T	SIL/SN	2	194	144	95	4.4	19	-0.005	4
T 34562	360910	355837		SL	R	C	20303A	SIL/SN	1	10	11	34	2.8	12	-0.005	-2
T 34563	360884	355840		SL	R	C	3A	SIL/SN	1	6	50	96	9.2	45	-0.005	-2
T 34564	360864	355842		SL	R	C	1T2T2U	SIL/SN	1	41	114	52	1.2	14	-0.005	-2
T 34565	360845	355843		SL	R	C	2A3A	CY/SIL	3	11	10	16	1.7	9	-0.005	-2
T 34566	360824	355845		SL	R	C	202R3A	SIL/SN	4	100	18	53	7.5	13	-0.005	-2
T 34567	360804	355846		SL	R	C	2T3T	CY/SIL	3	101	34	26	2.0	8	-0.005	-2
T 34568	360782	355848		SL	R	C	3A2U1R	SIL/SN	2	35	43	52	11.3	17	-0.005	-2
	Remark:SAMPLE TAKEN FROM CUTTING ON SIDE OF TRACK.															
T 34569	360759	355851		SL	R	BC	1A2A3A	CY/SIL	2	5	7	16	5.1	7	-0.005	-2
T 34570	360733	355853		SL	R	BC	2A3A2T	CY/SIL	1	8	19	48	9.5	7	-0.005	-2
T 34571	360709	355855		SL	R	BC	3A2T2U	CY/SIL	1	194	14	54	6.7	12	-0.005	-2
T 34572	360690	355856		SL	R	BC	2A2R2T	CY/SIL	1	237	11	32	2.5	-3	-0.005	-2
T 34573	360669	355856		SL	R	C	3A	CY/SIL	1	36	108	78	17.7	20	-0.005	-4
T 34574	360650	355853		SL	R	C	3A3T	SIL/SN	1	6	29	132	8.3	14	-0.005	-2
T 34575	360629	355854		RC	R	C	N/3A1A	PEB	3	8	-5	117	12.6	22	-0.005	-2
T 34576	361276	355658		SL	R	C	N/1U1T	SIL/SN	3	20	42	191	19.5	130	-0.005	10
T 34577	361302	355659		SL	R	C	N 1U	SIL/SN	3	22	81	206	42.4	101	-0.005	17
T 34578	361328	355660		SL	R	C	N/1U1R	SIL/SN	2	22	61	242	34.0	129	-0.005	18
T 34579	361351	355661		SL	R	C	3A	SIL/SN	4	5	12	7	1.9	15	-0.005	-2
T 34580			STD									-100	-0.2	-500	5.550	-2
	Remark:STD B11 5.05 g/t															
T 34581	361377	355662		SL	R	C?	3A	SIL/SN	1	8	46	14	1.4	14	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34582	361404	355663		SL	R	C	2A3A	SIL/SN	1	27	29	28	1.5	7	-0.005	-2
T 34583	361428	355663		SL	R	B?	3A	SIL/SN	1	15	59	50	1.7	3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34584	361452	355663		SL	R	B?	3A	SIL/SN	2	19	15	10	1.2	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 34585	361474	355663		SL	R	C	3T3U	SIL/SN	2	16	15	28	1.5	8	-0.005	-2
T 34586	361502	355663		SL	R	BC	3A2U	SIL/SN	2	-5	10	5	0.9	9	-0.005	-2
T 34587	361525	355663		SL	R	C	1T2T	CY/SIL	1	8	84	-100	2.3	8	-0.005	10
T 34588	361551	355664		SL	R	C	3T	SIL/SN	1	5	17	10	1.0	13	-0.005	6
T 34589	361574	355664		SL	R	C	3A3T	SIL/SN	2	15	14	15	6.3	11	-0.005	-2
T 34590	361253	355656		SL	R	C	N/1U1T	SN/PEB	3	25	79	179	59.1	74	-0.011	27
T 34591	361228	355653		SL	R	C	N/2U2T	SIL/SN	3	30	79	309	55.2	61	-0.005	23
T 34592	361203	355652		SL	R	BC	3A3T	CY/SIL	3	6	43	26	7.9	6	-0.005	-2
T 34593	361177	355649		SL	R	C	1A3T	CY/SIL	1	26	24	753	5.8	7	-0.005	-2
T 34594	361152	355648		SL	R	C?	N/2T3T	CY/SIL	2	39	78	213	21.0	539	0.017	10
T 34595	361127	355645		SL	R	BC	3A3T	CY/SIL	1	24	38	23	10.3	5	-0.005	-2
T 34596	361102	355639		SL	R	C	3T	CY/SIL	1	68	17	27	23.1	9	-0.005	5
T 34597	361077	355633		SL	R	C	2A3A2T	SIL/SN	1	35	20	12	3.7	8	-0.005	-2
T 34598	361058	355629		SL	R	BC	2A3A	CY/SIL	1	10	9	867	1.6	7	-0.005	-2
T 34599	361030	355627		SL	R	C	2A	SIL/SN	1	27	12	165	2.4	11	-0.005	13
T 34600			STD									-100	0.6	-500	3.470	4
	Remark:STD B9 3.14 g/t															
T 34601	361008	355624		SL	R	C	3A	CY/SIL	1	9	9	204	1.9	7	-0.005	-2
T 34602	360980	355621		SL	R	C	2T3T3U	CY/SIL	1	10	25	63	6.1	60	-0.005	-2
T *34603	360960	355619		SL	R	C	2T3T	CY/SIL	1	37	40	124	3.2	20	-0.005	-2
T 34604	360937	355615		SL	R	B?	3A1U	CY/SIL	1	8	13	9	2.1	7	-0.005	-2
	Remark:UNABLE TO PENETRATE															
T 34605	360911	355614		SL	R	B?	3A	SIL/SN	3	5	5	-5	0.3	3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 34606	360890	355612		SL	R	C	2A3A	SIL/SN	1	192	51	106	2.1	9	-0.005	-2
T 34607	360866	355609		SL	T	AB	2A	CY/SIL	1	309	555	892	4.7	13	-0.005	-2
T 34608	360838	355604		SL	T	AB	2A	CY/SIL	1	617	1684	1902	17.4	7	-0.005	6
T 34609	360812	355600		SL	R	C	W/2T3T	CY/SIL	1	29	18	43	3.2	9	-0.005	-2
T 34610	360786	355598		SL	R	C	1U2O3A	SIL/SN	1	18	16	12	1.8	8	-0.005	-2
T 34611	360761	355595		SL	R	B	3A	CY/SIL	1	25	62	125	2.5	11	-0.005	-2
T 34612	360737	355593		SL	R	C	2O3O/W	CY/SIL	1	90	59	38	4.2	9	-0.005	5
T 34613	360712	355593		SL	R	C	W/3T3O	CY/SIL	1	45	76	65	5.4	23	-0.005	-2
T 34614	360687	355593		SL	R	C	N/1U2T	CY/SIL	1	123	335	600	11.8	158	-0.005	7
T 34615	360663	355595		SL	R	C	W/ 3T	CY	1	53	52	134	9.3	15	-0.005	7
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 34616	360641	355596		SL	R	C	N/1U	SIL/SN	1	74	23	97	9.4	19	-0.005	8
T 34617	360615	355598		RC	R	C	N/1R1T	SN/PEB	1	354	43	114	13.4	21	-0.005	10
T 34618	360590	355598		SL	R	C	N/1T	CY/SIL	3	130	138	191	19.5	23	-0.005	9
	Remark:SAMPLE TAKEN FROM CUTTING ON OLD TRACK.															
T 35335	363978	361240		SL	R	C	3A	SIL/SN	2	5	20	15	1.2	8	-0.005	-2
T 35336	363979	361216		SL	R	C	3A2T	SIL/SN	2	-5	-5	10	1.0	8	-0.005	-2
T 35337	363980	361193		SL	R	C	3A2T	CY/SIL	3	30	55	15	3.8	12	-0.005	-2
T 35338	363980	361169		SL	R	B	W 3A	CY/SIL	3	5	5	10	0.9	8	-0.005	-2
T 35339	363979	361145		SL	R	C	3A 3T	SIL/SN	3	5	15	10	0.4	10	-0.005	-2
T 35340			STD										-0.2		0.055	5
	Remark:STD B3 0.05 g/t															
T 35341	363979	361118		SL	R	C	3A3T	SIL/SN	2	5	660	10	3.0	8	-0.005	3
T 35342	363978	361094		SL	R	C	3A3T	SIL/SN	2	5	35	15	2.5	3	-0.005	3
T 35343	363979	361070		SL	R	B	3A3U	CY/SIL	1	5	70	15	6.1	9	-0.005	2
	Remark:UNABLE TO PENETRATE.															
T 35344	363978	361042		SL	R	C	3A	SIL/SN	1	-5	100	15	1.5	5	-0.005	-2
T 35345	363980	361019		SL	R	C	2T 3A	CY/SIL	1	185	3900	35	106.0	5	0.026	-2
T 35346	363981	360994		SL	R	C	3A	SIL/SN	1	5	90	10	2.7	10	-0.005	-2
T 35347	363982	360972		SL	R	C	2A3A	SIL/SN	2	-5	5	5	1.3	-3	-0.005	-2
T*35348	363982	360944		SL	R	C	2A3A	SIL/SN	1	-5	25	10	5.1	-3	-0.005	-2
T 35349	363983	360919		SL	R	C	3A	CY/SIL	1	-5	20	15	4.5	3	-0.005	2
T 35350	363983	360894		SL	R	C	3A	SIL/SN	1	-5	20	10	1.7	11	-0.005	-2
T 35351	363984	360869		SL	R	C	3A	SIL/SN	1	-5	20	10	2.4	8	-0.005	-2
T 35352	363982	360845		SL	R	C	3A2A	SIL/SN	3	-5	15	10	1.0	12	-0.005	2
T 35353	363982	360820		SL	R	C	2A1A	SIL/SN	3	-5	5	10	2.0	11	-0.005	-2
T 35354	363980	360795		SL	R	B	3T	SIL/SN	3	-5	-5	5	0.4	3	-0.005	-2
T 35355	363980	360769		SL	R	C	3A3T	SIL/SN	3	-5	-5	10	0.9	8	-0.005	-2
T 35356	363981	360743		SL	R	B	3A3U	SIL/SN	3	-5	-5	10	0.8	7	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35357	363982	360720		SL	R	B	3A2U	SIL/SN	4	-5	-5	10	0.5	-3	-0.005	-2
T 35358	363985	360691		SL	R	C	3T	SIL/SN	4	-5	-5	5	0.7	3	-0.005	-2
T 35359	363986	360665		SL	R	C	3A3U	SIL/SN	5	-5	5	5	0.6	7	-0.005	-2
T 35360			STD										-0.2		0.246	21
	Remark:STD B4 0.25 g/t															

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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130172

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35361	363987	360642		SL	R	C?	3A3T	SIL/SN	1	-5	5	10	0.8	3	-0.005	-2
T 35362	363988	360616		SL	R	C	3A3T	SIL/SN	1	-5	20	10	1.7	8	-0.005	2
T 35363	363988	360593		SL	R	C	3A	SIL/SN	3	-5	20	10	1.1	5	-0.005	-2
T 35364	363988	360567		SL	R	BC	3A2U	CY/SIL	4	-5	15	10	2.1	11	-0.005	-2
T 35365	363988	360540		SL	R	B	3U2U3T	CY	5	10	80	25	6.5	7	-0.005	-2
T 35366	363989	360515		SL	R	C	3A 3T	SIL/SN	2	5	30	15	2.5	8	-0.005	-2
T 35367	363988	360491		SL	R	C	3A	SIL/SN	2	-5	10	15	1.4	17	-0.005	-2
T 35368	363989	360468		SL	R	C	3A3T	SIL/SN	2	-5	5	5	0.7	12	-0.005	-2
T 35369	363987	360442		SL	R	C	3A3T	SIL/SN	3	10	10	30	1.6	6	-0.005	-2
T 35370	363986	360415		RC	R	C	2A3T	PEB	3	-5	-5	10	0.5	7	-0.005	-2
	Remark:SAMPLE TAKEN IN WASH OUT ON ROAD, NEXT TO PEG.															
T 35371	363987	360391		RC	R	C	3U	PEB	3	-5	10	10	0.6	7	-0.005	-2
	Remark:SAMPLE TAKEN FROM WASHOUT ON TRACK.															
T 35372	363987	360365		SL	R	C	2A	SIL/SN	1	20	10	50	1.9	8	-0.005	-2
T 35373	363987	360342		SL	R	C	3A	SIL/SN	2	-5	10	25	0.8	6	-0.005	-2
T 35374	363989	360317		SL	R	C	2A	SIL/SN	1	-5	10	10	0.8	12	-0.005	2
T 35375	363990	360291		SL	R	C	3A3T3U	SIL/SN	2	5	15	55	1.0	10	-0.005	-2
T 35376	363990	360264		SL	R	BC	2A2U	SIL/SN	1	10	20	55	0.8	10	-0.005	-2
T 35377	363989	360240		SL	R	C	3A	SIL/SN	1	10	15	55	0.5	5	-0.005	-2
T 35378	363991	360217		SL	R	C	2A3A	SIL/SN	1	5	25	20	1.0	13	-0.005	-2
T 35379	363991	360194		SL	R	C	2A	SIL/SN	1	90	25	825	2.4	12	-0.005	-2
T 35380			STD										0.3		2.990	5
	Remark:STD B20 1.77 g/t															
T 35381	363990	360167		SL	R	C	3A	SIL/SN	1	15	10	55	0.9	6	-0.005	2
T 35382	363990	360142		RC	R	C	2A3A	PEB	5	30	-5	120	1.2	9	-0.005	-2
	Remark:SAMPLE TAKEN FROM ROAD CUTTING W-SIDE OF PEG,DUE TO MAJOR ROAD WORKS.															
T 35383	363990	360115		SL	R	C	2T3T3A	SIL/SN	2	10	5	35	3.5	11	-0.005	-2
	Remark:SAMPLE TAKEN 8m TO NORTH OF PEG, DUE TO EARTH WORKS.															
T 35384	363991	360092		SL	R	C	3A3T	SIL/SN	3	-5	-5	15	0.6	-3	-0.005	-2
T 35385	363991	360066		SL	R	C	2T3T3A	SIL/SN	1	20	30	15	3.3	-3	-0.005	-2
T 35386	363991	360042		SL	R	C	3A3T	SIL/SN	2	25	35	25	2.1	6	-0.005	-2
T 35387	363990	360019		SL	R	C	3A3T	SIL/SN	3	5	25	15	1.1	8	0.007	-2
T 35388	363991	359991		SL	R	C	3U3T3A	SIL/SN	2	15	45	25	3.8	8	-0.005	-2
T 35389	363577	361164		SL	T	B	2A2U	CY/SIL	1	5	15	35	0.7	7	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35390	363577	361138		SL	R	C	3A3T	SIL/SN	2	-5	5	10	1.8	11	-0.005	-2
T 35391	363578	361112		SL	R	C	3A	SIL/SN	2	-5	15	5	0.8	10	0.005	2
T 35392	363578	361087		SL	R	C	3A	SIL/SN	3	20	15	5	4.3	9	0.008	2
T 35393	363579	361064		SL	R	C	3A	SIL/SN	4	-5	15	5	3.0	10	-0.005	-2
T 35394	363580	361038		SL	R	B	3A2U	SIL/SN	4	-5	5	-5	0.9	6	-0.005	-2
T 35395	363581	361012		SL	R	C	3A2U	SIL/SN	4	-5	5	-5	1.5	6	-0.005	-2
T 35396	363583	360988		SL	R	C	3A	SIL/SN	3	-5	15	-5	3.1	8	-0.005	3
T 35397	363581	360962		SL	R	B	3A	SIL/SN	1	10	10	-5	1.4	6	-0.005	-2
	Remark:UNABLE TO PENETRATE															
T 35398	363582	360936		SL	R	C	3T3U3A	SIL/SN	1	5	15	10	2.5	11	-0.005	-2
T 35399	363582	360912		SL	R	B	3A	SIL/SN	1	-5	5	-5	1.6	8	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35400			STD										0.4		0.050	6
	Remark:STD 83 0.05 g/t															
T 35601	363584	360888		SL	R	C	2T2O2U	CY/SIL	2	20	20	100	2.8	5	-0.005	-2
T 35602	363583	360862		SL	R?	B	3A	SIL/SN	3	5	-5	5	1.2	6	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35603	363585	360838		SL	R?	B	3A	SIL/SN	3	-5	-5	5	1.5	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35604	363584	360811		SL	R	C	3A	SIL/SN	3	-5	35	5	1.6	14	-0.005	3
T 35605	363583	360787		SL	R	C	1A2A	SIL/SN	2	5	20	15	2.0	12	-0.005	2
T 35606	363584	360764		SL	R	C	1A2A3T	SIL/SN	2	10	40	35	7.2	11	-0.005	-2
T 35607	363584	360738		SL	R	BC	2A3A3T	CY/SIL	3	5	20	35	5.7	15	-0.005	2
T 35608	363584	360713		SL	R	C	3A	SIL/SN	1	5	5	5	2.8	9	-0.005	2
T 35609	363584	360687		SL	R	C	3A3T	SIL/SN	3	-5	10	5	1.8	8	-0.005	2
T 35610	363582	360662		SL	R	C	2A3A	CY/SIL	3	5	30	30	1.9	5	-0.005	2
T 35611	363583	360637		SL	R	C	2O2A3A	SIL/SN	3	5	20	30	1.3	8	-0.005	2
T 35612	363583	360612		SL	R	C	2A3T	SIL/SN	3	5	10	40	1.1	5	-0.005	-2
T 35613	363582	360587		SL	R	C	1A2A	SIL/SN	1	5	65	15	2.7	9	-0.005	2
T 35614	363581	360557		SL	R	C	1A2A1U	SIL/SN	1	10	450	25	15.7	8	-0.005	2
T 35615	363580	360534		SL	R	C	2A	SIL/SN	1	20	30	65	1.5	10	-0.005	-2
T 35616	363580	360507		SL	R	C	2U1T2A	SIL/SN	1	45	50	145	1.1	9	-0.005	-2
T 35617	363580	360482		SL	R	C	N/1U2U	SIL/SN	2	110	160	150	5.3	6	-0.005	-2
T 35618	363580	360459		SL	R	C?	3A	SIL/SN	3	-5	5	5	1.2	3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35619	363580	360433		SL	R	C	2A3A3T	SIL/SN	1	-5	15	5	1.5	10	-0.005	2
T 35620	363580	360408		SL	R	C	3A	SIL/SN	1	-5	20	5	1.7	8	-0.005	3
T 35621	363582	360383		SL	R	C	3A	SIL/SN	3	-5	15	5	1.9	7	-0.005	-2
T 35622	363585	360356		SL	R?	B	3A	SIL/SN	4	-5	5	-5	0.7	8	-0.005	-2
T 35623	363586	360330		RC	R	C	1A2A	PEB	1	20	20	45	2.3	7	-0.005	-2
T 35624	363588	360307		SL	R	C	1A2A2T	SIL/SN	2	20	20	15	9.5	5	-0.005	-2
T 35625	363589	360280		SL	R	C	2A	SIL/SN	1	15	10	60	1.5	9	-0.005	-2
T 35626	363589	360252		SL	R	C	3T3A2T	SIL/SN	1	5	35	30	0.4	7	-0.005	-2
T 35627	363591	360226		SL	R	C	2T3T2U	SIL/SN	2	5	5	10	1.7	8	-0.005	-2
T 35628	363593	360204		SL	R	C	3A	SIL/SN	3	-5	-5	5	1.5	10	-0.005	-2
T 35629	363594	360178		SL	R	C	3T3A2O	SIL/SN	3	-5	15	10	1.6	11	-0.005	2
T 35630	363595	360155		SL	R	C	2T3A2U	SIL/SN	3	15	30	5	4.1	11	-0.005	-2
T 35631	363597	360128		SL	R	B	3A2T	CY/SIL	3	-5	130	5	3.3	8	-0.005	2
T 35632	363595	360102		SL	R	C	3A	SIL/SN	3	-5	265	-5	1.4	10	-0.005	2
T 35633	363596	360075		SL	R	C	3A	SIL/SN	3	5	15	20	0.7	4	-0.005	2
T 35634	363596	360050		SL	R	C	3A	SIL/SN	3	-5	15	5	0.6	6	-0.005	-2
T 35635	363596	360020		SL	R	C	3A	SIL/SN	3	5	15	10	1.3	11	-0.005	2
T 35637	363596	359975		SL	R	C	3A	SIL/SN	3	5	10	5	1.2	-3	-0.005	2
T 35801	360867	356797		SL	R	C?	3A	SN/PEB	1	7	42	30	2.0	5	-0.005	-2
T 35802	360841	356797		SL	R	C	3A3T	SIL/SN	4	5	31	10	2.4	8	-0.005	-2
T 35803	360816	356798		SL	R	C	2T2U	SIL/SN	4	12	58	11	3.2	9	-0.005	-2
T 35804	360795	356798		SL	R	C	2T	SIL/SN	4	25	28	7	7.3	6	-0.005	-2
T 35805	360770	356798		SL	R	C	3U3T	SIL/SN	1	6	28	8	1.5	8	-0.005	-2
T 35806	360749	356799		SL	R	C	3T	SIL/SN	3	-5	98	-5	0.9	5	-0.005	-2
T 35807	360728	356800		SL	R	C	3A2T2O	SIL/SN	2	13	594	8	1.1	6	-0.005	-2
T 35808	360704	356801		SL	R	C	2A3A	SIL/SN	3	6	43	-5	1.6	5	-0.005	-2
T 35809	360681	356801		SL	R	C	3A2T3T	SIL/SN	3	38	35	15	4.1	-3	-0.005	-2
	Remark:SAMPLE TAKEN FROM ROAD CUTTING.															
T 35810	360658	356800		SL	R	C	3A3T	SIL/SN	2	5	140	-5	1.7	-3	-0.005	2
T 35811	360636	356798		SL	R	C	N	SIL/SN	2	96	930	782	23.0	6	-0.005	-2
T 35812	360615	356798		SL	R	C	2A	SIL/SN	3	-5	32	-5	2.1	4	-0.005	2
	Remark:SAMPLE TAKEN FROM CUTTING NEAR PEG.															
T 35813	360591	356799		SL	R?	B	3T	SIL/SN	3	-5	11	-5	1.4	3	-0.005	-2
	Remark:SEVERAL ATTEMPTS, UNABLE TO PENETRATE QUARTZ PIECES.															

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	NORTH metres	EAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35814	360567	356800		SL	R?	B	3A	SIL/SN	4	-5	5	-5	1.3	7	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 35815	360547	356800		SL	R	C	3A	SIL/SN	2	-5	13	-5	1.4	5	-0.005	2
T 35816	360522	356800		SL	R	C	2T3T	SIL/SN	1	32	15	-5	1.8	6	-0.005	-2
T 35817	360500	356802		SL	R	C?	3A2T3U	SIL/SN	1	5	14	-5	2.4	4	-0.005	-2
T 35818	360475	356800		SL	R	C?	3A	SIL/SN	5	5	-5	-5	1.3	-3	-0.005	-2
T 35819	360454	356800		SL	R	C	2U2T2A	SIL/SN	5	14	48	-5	3.4	8	-0.005	-2
T 35820			STD									103	0.4	-500	0.052	8
	Remark:STD															
T 35821	360434	356799		SL	R	C	2A	SIL/SN	5	-5	5	-5	1.2	4	-0.005	-2
T 35822	360417	356800		SL	R	C	2U2T	SIL/SN	5	12	10	161	4.8	3	-0.005	-2
T 35823	360397	356799		SL	R	C	3GR/3A	SIL/SN	5	5	33	162	13.2	4	-0.005	-2
	Remark:SAMPLE TAKEN FROM CUTTING ON SIDE OF ROAD.															
T 35824	360375	356798		SL	R	C	2T3T	SIL/SN	3	47	18	130	9.4	-3	-0.005	-2
T 35825	360357	356798		SL	R	C	2T3T	SIL/SN	2	63	18	61	4.1	-3	-0.005	-2
T 35826	360340	356799		SL	R	C	2T3T	SIL/SN	3	29	21	98	12.2	-3	-0.005	-2
T 35827	360320	356799		SL	R	C	2O2T3T	CY/SIL	3	13	37	51	7.5	5	-0.005	-2
T 35828	360298	356801		SL	R	C	2R2T	CY/SIL	2	504	21	31	9.0	3	-0.005	-2
T 35829	360276	356803		SL	R	C	2R2T	CY/SIL	3	276	14	45	7.9	-3	-0.005	-2
T 35830	360255	356806		SL	R	C	2T	CY/SIL	3	410	21	68	6.6	6	-0.005	-2
T 35831	360232	356811		SL	R	C	2T	CY	3	136	5	28	8.5	9	-0.005	-2
T 35832	360891	356797		SL	R	C	3A2T3T	CY/SIL	3	68	284	-5	2.2	-3	-0.005	-2
T 35833	360914	356798		SL	R	C	2T	SIL/SN	3	30	120	-5	34.8	12	-0.005	-2
T 35834	360937	356797		SL	R	C?	3A	SIL/SN	3	5	18	-5	1.1	-3	-0.005	-2
T 35835	360962	356798		SL	R	C	2U3U	SIL/SN	3	-5	337	8	1.6	7	-0.005	-2
T 35836	360984	356797		SL	R?	B	3T	CY/SIL	4	-5	42	-5	1.5	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35837	361009	356798		SL	R	C	2A3A3T	SIL/SN	3	-5	44	8	2.7	-3	0.008	-2
T 35838	361031	356799		SL	R	C	3A	SIL/SN	4	-5	54	-5	0.8	-3	-0.005	-2
T 35839	361059	356800		SL	R	C	3T	SIL/SN	2	-5	250	9	1.6	4	-0.005	-2
T 35840			STD									834	2.6	-500	0.213	-2
	Remark:STD															
T 35841	361082	356800		SL	R	C	3T	SIL/SN	3	-5	156	8	1.8	7	-0.005	-2
T 35842	361106	356801		SL	R	C	3A3T	SIL/SN	1	-5	229	10	1.5	3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35843	361128	356801		SL	R	C	3A3T	SIL/SN	1	5	133	9	4.9	8	-0.005	-2
T 35844	361153	356802		SL	R	C	3A3T20	CY/SIL	1	63	55	11	6.6	-3	-0.005	4
T 35845	361177	356802		SL	R	C	3A3T	SIL/SN	1	5	73	11	0.9	6	-0.005	-2
T 35846	361199	356802		SL	R	C	3T	CY/SIL	1	5	55	22	18.9	5	-0.005	-2
T 35847	361227	356802		SL	R	C	3T3A	SIL/SN	1	-5	41	8	6.3	3	-0.005	-2
T 35848	361252	356801		SL	R	C	3A	SIL/SN	2	5	25	16	2.6	3	-0.005	3
T 35849	361274	356802		SL	R	C	3T	SIL/SN	2	-5	13	7	3.5	-3	-0.005	-2
T 35850	361299	356801		SL	R?	B?	3A3U	SIL/SN	4	5	-5	9	0.8	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35851	361324	356802		SL	R?	B?	3A	SN/PEB	3	-5	-5	9	0.5	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35852	361345	356802		SL	R	C	2A	SIL/SN	3	200	573	109	4.3	14	-0.005	-2
T 35853	361368	356802		SL	R	C	2A	SIL/SN	1	68	53	55	2.6	-3	-0.005	-2
T 35854	361391	356803		SL	R	C	2A3A2T	SIL/SN	3	11	143	17	1.1	6	-0.005	-2
T 35855	361410	356802		SL	R	C	3T30	SIL/SN	4	-5	99	11	1.1	3	-0.005	4
T 35856	361433	356803		SL	R	C	3T	CY/SIL	4	-5	24	10	1.0	4	-0.005	-2
T 35857	361453	356802		SL	R	C?	3A3T	SIL/SN	1	-5	-5	7	0.6	4	-0.005	-2
T 35858	361476	356803		SL	R	C	3T3A	SIL/SN	1	5	14	6	0.7	4	-0.005	-2
T 35859	361499	356801		SL	R	C	2A3A	SIL/SN	3	5	6	10	3.0	4	-0.005	-2
T 35860			STD									-100	-0.2	-500	5.480	-2
	Remark:STD															
T 35861	360927	356597		SL	R	C?	3A3T	PEB	1	-5	67	7	1.2	7	-0.005	-2
T 35862	360949	356598		SL	R	C	3A3T	SIL/SN	3	7	68	15	2.3	4	-0.005	-2
T 35863	360972	356597		SL	R	C	3A3U	SIL/SN	4	7	521	22	2.9	7	-0.005	-2
T 35864	360991	356598		SL	R	C	203U	SIL/SN	3	45	197	90	8.2	497	0.009	3
T 35865	361013	356599		SL	R	C	2A3A	CY/SIL	2	6	503	10	2.2	7	-0.005	-2
T 35866	361037	356599		SL	R	C	3A3T2A	CY/SIL	3	91	299	11	14.2	4	-0.005	-2
T 35867	361060	356601		SL	R	C	3A2A3T	CY/SIL	3	86	126	12	4.0	4	-0.005	5
T 35868	361084	356602		SL	R	C	2A3A3T	SIL/SN	2	10	552	15	2.9	9	-0.005	-2
T 35869	361107	356602		SL	T?	B	3A3U	SIL/SN	1	5	70	11	1.3	5	-0.005	-2
T 35870	361132	356602		SL	R	C	20303T	SIL/SN	1	10	295	23	7.4	5	-0.005	-2
T 35871	361157	356603		SL	R	C	2A3A3T	SIL/SN	4	17	489	28	4.1	5	-0.005	4
T 35872	361182	356602		SL	R	C	2T	SIL/SN	1	24	63	22	1.2	6	-0.005	-2
T 35873	361203	356603		SL	R	C	2A	SIL/SN	3	11	58	11	1.7	-3	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35874	361229	356603		SL	R	C	3A3T	SIL/SN	3	18	40	10	2.2	5	-0.005	-2
T 35875	361254	356604		SL	R	C	3A3T	SIL/SN	2	5	12	13	2.7	3	-0.005	-2
T 35876	361276	356604		SL	R	C	3A	SIL/SN	1	7	80	5	4.3	6	-0.005	3
T 35877	361302	356604		SL	R	C	2A3A2T	SIL/SN	1	18	94	11	6.0	8	-0.005	-2
T 35878	361327	356606		SL	R	C?	3T3A	SIL/SN	1	-5	225	7	1.4	5	-0.005	2
T 35879	361350	356607		SL	R	C?	3A3U	SIL/SN	2	5	23	8	1.3	4	-0.005	2
T 35880			STD									-100	-0.2	-500	0.253	6
	Remark:STD															
T 35881	361370	356606		SL	R	C	3A	SIL/SN	5	-5	95	6	2.1	5	-0.005	-2
T 35882	361389	356606		SL	R	C?	3A3T	SIL/SN	5	-5	104	7	0.8	6	-0.005	-2
T 35883	361411	356606		SL	R	C	2A	SIL/SN	5	-5	-5	5	0.6	9	-0.005	-2
T 35884	361434	356606		SL	R	C	3A	SIL/SN	4	5	81	11	1.4	11	-0.005	-2
T 35885	361458	356606		SL	R	C	3T	SIL/SN	1	6	35	13	2.3	5	-0.005	4
T 35886	361483	356608		SL	R	C	2T3T3U	SIL/SN	3	-5	109	9	0.9	4	-0.005	-2
T 35887	361508	356607		SL	R	C	N/1A	SIL/SN	3	32	312	71	6.1	-3	-0.005	-2
T 35888	360901	356597		SL	R	C	2T	SIL/SN	1	687	1385	50	43.9	623	0.192	8
T 35889	360878	356597		SL	R	C	3A3T2T	SIL/SN	1	489	114	38	3.5	7	-0.005	-2
T 35890	360852	356597		SL	R	C	3A	SIL/SN	2	15	54	10	1.9	3	-0.005	4
T 35891	360825	356596		SL	R	B?	3A3T	SIL/SN	3	8	-5	6	0.8	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35892	360804	356596		SL	R	C	2T3T3U	SIL/SN	3	29	35	11	3.3	-3	-0.005	-2
T 35893	360781	356596		SL	R	C	2U3U3T	CY/SIL	3	60	30	11	5.5	-3	-0.005	-2
T 35894	360756	356597		SL	R	C	2T3T3A	CY/SIL	3	53	39	25	5.3	7	0.015	-2
T 35895	360733	356596		SL	R	C	2U2T1T	CY/SIL	1	60	19	12	4.1	8	-0.005	-2
T 35896	360708	356595		SL	R	C?	3A3T	SIL/SN	1	5	49	-5	1.9	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35897	360684	356596		SL	R	C	2U2T	SIL/SN	2	47	225	59	13.2	9	-0.005	-2
T 35898	360660	356595		SL	R	C	2T2U3T	CY/SIL	4	-5	14	53	3.6	6	-0.005	-2
T 35899	360634	356596		SL	R	C	3A3T	SIL/SN	1	-5	11	-5	1.4	6	-0.005	-2
T 35900			STD									-100	-0.2	-500	3.640	5
	Remark:STD															
T 35901	360612	356595		SL	R	C	3A3T2A	SIL/SN	1	11	10	5	1.2	5	-0.005	-2
T 35902	360587	356595		SL	R	C	2A3A3T	SIL/SN	1	-5	-5	-5	0.6	-3	-0.005	-2
T 35903	360562	356595		SL	R	C	3U3T	SIL/SN	1	17	-5	-5	1.1	5	-0.005	-2

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35904	360995	356409		SL	R	C	3A3T	SIL/SN	1	-5	54	-5	5.9	28	-0.005	2
T 35905	361015	356409		SL	R	C	3T	SIL/SN	5	-5	11	-5	1.2	3	-0.005	-2
T 35906	361042	356410		SL	R	B?	3A3T3R	SIL/SN	5	-5	143	15	4.2	4	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35907	361062	356408		SL	R	C	20303A	SIL/SN	5	10	965	29	3.2	-3	-0.005	-2
T 35908	361083	356408		SL	R	C	3A	SIL/SN	3	9	167	113	1.0	-3	-0.005	3
T 35909	361104	356408		SL	R	C	3A2T3T	SIL/SN	5	59	841	30	9.3	16	-0.005	4
T 35910	361128	356409		SL	T?	B?	W/3A	SIL/SN	5	-5	123	-5	1.0	14	-0.005	-2
	Remark:UNABLE TO PENETRATE GRAVEL'S.															
T 35911	361151	356409		SL	R	C?	3A2A	CY/SIL	5	9	1013	127	11.1	9	-0.005	3
T 35912	361174	356410		SL	T?	B?	3A/W	SIL/SN	4	-5	81	7	2.7	3	-0.005	2
	Remark:UNABLE TO PENETRATE.															
T 35913	361193	356410		SL	R	C	201T2T	CY/SIL	1	233	124	205	12.9	4	-0.005	-2
T 35914	361215	356409		SL	R	C	3A2A	SIL/SN	3	14	83	8	5.8	6	-0.005	2
T 35915	361238	356409		SL	R	C	2A3A	CY/SIL	3	-5	152	-5	3.3	-3	-0.005	-2
T 35916	361261	356408		SL	R	C	1A2A/N	CY/SIL	3	1589	206	392	6.5	11	-0.005	-2
	Remark:SOME SULPHIDE VISIBLE.															
T 35917	361285	356408		SL	R	C	3T	CY/SIL	1	133	14	1640	8.7	5	-0.005	-2
T 35918	361309	356407		SL	R	C	2A3A2T	SIL/SN	5	96	49	6	26.0	8	0.015	-2
T 35919	361323	356406		SL	R	C	3T	SIL/SN	5	18	45	6	11.9	5	-0.005	-2
T 35920			STD									-100	-0.2	-500	0.080	4
	Remark:STD															
T 35921	361338	356406		SL	R	C	3A3T30	SIL/SN	5	10	13	-5	4.3	7	-0.005	3
T 35922	361354	356407		SL	R	C	3A3T20	SIL/SN	4	12	43	-5	18.1	-3	-0.005	2
T 35923	361369	356407		SL	R	C	2A3A	SIL/SN	4	-5	58	-5	6.2	7	-0.005	-2
T 35924	361392	356407		SL	R	B?	3A	SIL/SN	4	6	-5	-5	1.0	5	-0.005	2
	Remark:UNABLE TO PENETRATE.															
T 35925	361415	356406		SL	R?	B?	3A	SIL/SN	2	6	-5	-5	0.8	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35926	361439	356405		SL	R?	B	3A	SIL/SN	3	6	-5	-5	0.7	-3	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35927	361461	356404		SL	T?	B?	3A2U	SIL/SN	4	-5	-5	-5	0.6	5	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35928	360971	356412		RC	R	B?	3A3T3U	PEB	1	-5	-5	-5	0.6	-3	-0.005	-2
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35929	360948	356412		SL	R	C	3A1T2T	CY/SIL	1	151	39	9	8.2	6	-0.005	-2
T 35930	360926	356412		SL	R	C?	3A	SIL/SN	4	6	-5	8	0.9	4	-0.005	-2
T 35931	360905	356412		SL	R	C?	2T	SIL/SN	4	30	60	26	1.7	6	-0.005	-2
T 35932	360878	356414		SL	R	C	3A3T	CY/SIL	3	34	65	20	4.6	-3	-0.005	3
T 35933	360858	356414		SL	R	C	1A2A	SIL/SN	1	10	37	-5	11.4	6	-0.005	-2
T 35934	360836	356415		SL	R	C	3T3A2T	SIL/SN	3	63	24	66	2.5	3	-0.005	-2
T 35935	360811	356416		SL	R	C	3A3T10	CY/SIL	2	10	11	5	5.7	6	-0.005	-2
T 35936	360786	356418		SL	R?	B?	3A	SIL/SN	1	5	87	-5	1.5	-3	-0.005	-2
T 35937	360759	356418		SL	R	C	3T	SIL/SN	3	-5	11	-5	0.8	3	-0.005	-2
T 35938	360739	356419		SL	R	C?	3A3T	SIL/SN	3	-5	-5	-5	0.8	4	-0.005	-2
T 35939	360716	356420		SL	R	BC	2A3A3T	CY/SIL	3	-5	-5	-5	7.0	5	-0.005	-2
T 35940			STD									-100	-0.2	-500	5.370	-2
	Remark:STD															
T 35941	360692	356420		SL	R	C	1A2A3A	SIL/SN	1	923	2800	9023	48.0	-3	0.018	-2
T 35942	360669	356420		SL	R	C	3A3T30	SIL/SN	3	11	52	20	5.2	14	-0.005	3
T 35943	360643	356425		SL	R	C	N/1U2U	CY/SIL	1	263	33	90	11.8	123	-0.005	20
T 35944	360621	356428		SL	R	BC	3T2T3A	CY/SIL	3	13	25	152	9.7	11	-0.005	-2
T 35945	360598	356429		SL	R	C	2U2T3T	SIL/SN	3	6	55	168	5.4	5	-0.005	-2
T 35946	360575	356430		RC	R	C	W/2GR	PEB	5	7	14	85	9.4	6	-0.005	-2
T 35947	361131	356223		SL	R	C	3T3A2T	SIL/SN	1	21	151	15	3.6	10	-0.005	-2
T 35948	361154	356222		SL	R	B?	3A/W	SIL/SN	4	-5	10	7	1.2	8	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35949	361175	356222		SL	R	C	3A	SIL/SN	4	-5	10	5	0.8	3	-0.005	-2
T 35950	361196	356222		SL	R	C	3A	SIL/SN	3	-5	137	11	2.7	7	-0.005	-2
T 35951	361218	356221		SL	R	C	3A	SIL/SN	4	-5	78	12	1.2	-3	-0.005	-2
T 35952	361240	356221		SL	R	C	3A	SIL/SN	5	-5	37	7	2.1	-3	-0.005	-2
T 35953	361263	356221		SL	R	B?	3A3U	SIL/SN	5	5	49	14	1.1	-3	-0.005	2
T 35954	361287	356220		SL	R	B?	3A	SIL/SN	1	6	6	-5	0.6	-3	-0.005	-2
T 35955	361307	356218		SL	R	B?	3A	SIL/SN	4	-5	8	-5	1.0	-3	-0.005	-2
T 35956	361329	356217		SL	R	C	3A	SIL/SN	4	-5	10	5	2.0	6	-0.005	-2
T 35957	361355	356216		SL	R	C	2A3A	SIL/SN	4	21	18	35	7.5	6	-0.005	3
T 35958	361378	356216		SL	R	C	3T3A	CY/SIL	4	88	25	10	2.7	-3	-0.005	-2
T 35959	361398	356214		SL	R	C	3A	CY/SIL	5	8	28	5	1.3	-3	-0.005	-2
T 35960			STD									831	2.9	-500	0.225	5
	Remark:STD															
Laboratory:										ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :										101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:										5.000	5.000	5.000	0.200	3.000	0.005	2.000

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RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35961	361420	356213		SL	R	C	3A	SIL/SN	4	16	29	5	1.2	4	-0.005	-2
T 35962	361439	356213		SL	R	C	3A	SIL/SN	4	10	19	5	1.2	6	-0.005	-2
T 35963	361456	356211		SL	R?	B	3A/W	CY/SIL	4	-5	6	-5	0.5	4	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35964	361480	356211		SL	R?	B?	3A/W	SIL/SN	4	-5	-5	-5	0.4	-3	-0.005	-2
T 35965	361499	356212		SL	R	C	2A3A	SIL/SN	4	-5	36	-5	1.5	6	-0.005	3
T 35966	361108	356225		SL	R	C	2A3A	SIL/SN	2	9	40	8	5.0	3	0.007	-2
T 35967	361082	356226		SL	R	BC	3A3T	CY/SIL	4	8	58	18	1.4	-3	-0.005	3
T 35968	361061	356225		SL	R	B	3U3T3A	CY/SIL	4	6	69	11	1.0	6	-0.005	-2
	Remark:UNABLE TO PENETRATE.															
T 35969	361035	356224		SL	R	C	3A3U	CY/SIL	4	7	78	12	5.4	8	0.007	-2
T 35970	361011	356225		SL	R	BC	3U3A	CY/SIL	3	5	86	8	2.2	23	-0.005	4
T 35971	360984	356226		SL	R	C	3A3T3U	SIL/SN	3	12	160	7	2.0	12	-0.005	3
T 35972	360959	356227		SL	R	C	2T3T3U	CY/SIL	3	75	218	34	8.1	12	-0.005	4
T 35973	360934	356228		SL	R	C?	3A2T3T	SIL/SN	4	24	185	6	0.6	3	-0.005	-2
T 35974	360912	356229		SL	R	C	3T3U3A	SIL/SN	5	30	27	7	3.3	4	-0.005	2
T 35975	360882	356230		SL	R	C	3A2T3T	CY/SIL	4	41	20	10	3.6	4	-0.005	-2
T 35976	360862	356231		SL	R	C	2T1T2R	CY/SIL	3	92	99	63	3.7	-3	0.011	-2
T 35977	360836	356230		SL	R	C	1U1A2T	SIL/SN	3	411	103	8	6.3	5	0.027	-2
T 35978	360813	356232		SL	R	C	1A2A2T	SIL/SN	2	52	41	51	1.4	9	-0.005	-2
T 35979	360789	356231		SL	R	C	1U2T	SIL/SN	2	125	196	23	6.5	10	-0.005	-2
T 35980			STD									-100	-0.2	-500	0.051	4
	Remark:STD 83 0.05 g/t															
T 35981	360761	356231		SL	R	C	2A3A3T	CY/SIL	2	13	15	16	3.4	3	-0.005	-2
T 35982	360735	356232		SL	R	C	2U3T2U	SIL/SN	1	15	75	314	10.7	4	-0.005	-2
T 35983	360713	356235		RC	R	C	N/1A2U	PEB	4	12	215	433	8.6	10	-0.005	-2
T 35984	360687	356234		SL	R	C	N/2R2T	CY/SIL	3	46	645	441	25.8	9	-0.005	10
T 35985	360663	356236		SL	R	C	3A2T3T	CY/SIL	2	16	103	66	8.5	4	-0.005	-2
T 35986	360638	356236		SL	R	BC	2T3T2U	CY/SIL	3	25	348	705	45.2	8	-0.005	5
T 35987	360615	356240		SL	R	BC	2T/N1A	CY/SIL	3	12	192	250	14.6	8	-0.005	30
T 35988	360589	356242		SL	R	C	2T3T	CY/SIL	3	13	100	253	22.9	4	-0.005	-4
T 35989	360567	356236		SL	R	B	3A	CY	4	10	103	308	17.7	8	-0.005	12
T 35990	361242	356027		SL	R	C	3A2T2U	SIL/SN	2	8	32	19	2.9	6	-0.005	3
T 35991	361266	356027		SL	R	C	2A3A3T	SIL/SN	4	22	14	8	4.1	8	-0.005	3

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

130181

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	QCONT	KIND	SOIL	UNIT	COLOUR	COMPOS	SLOPE	CU PPM	PB PPM	ZN PPM	SB PPM	SN PPM	AU PPM	W PPM
T 35992	361293	356027		SL	R	C	2U2T3T	SIL/SN	5	15	19	16	1.5	4	-0.005	3
T 35993	361319	356027		SL	R	C	2U1T2T	SIL/SN	5	41	78	131	1.4	9	-0.005	-2
T 35994	361343	356027		SL	R	C	3A3T	SIL/SN	4	12	58	7	2.5	5	-0.005	-2
T 35995	361366	356027		SL	R	C	3A	SIL/SN	4	6	57	5	1.1	4	-0.005	-2
T 35996	361390	356028		SL	R	C	3A	SIL/SN	4	-5	43	-5	1.3	-3	-0.005	3
T 35997	361417	356025		SL	R	BC	3A3T	CY/SIL	4	8	44	9	2.9	4	-0.005	-2
T 35998	361442	356026		SL	R	C	3A	SIL/SN	4	5	47	7	1.0	7	-0.005	-2
T 35999	361465	356027		SL	R	C	3A	SIL/SN	4	-5	27	6	0.9	-3	-0.005	-2
T 36000			STD									-100	-0.2	-500	3.560	8

Remark:STD B12 3.28 g/t

Laboratory:	ANALAB	ANALAB	ANALAB	BECQ	ANALAB	BECQ	BECQ
Method :	101	101	101	INAA30	401	INAA30	INAA30
Det. Limit:	5.000	5.000	5.000	0.200	3.000	0.005	2.000

NEUTRON ACTIVATION ANALYSIS

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BECQUEREL LABORATORIES PTY. LIMITED

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 05-04-91

RGC TASMANIA

BECQUEREL JOB # 326

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
- ELEVATED D.L. FOR SOME ELEMENTS IN SAMPLES WITH HIGH R.E.E.
- ALL SAMPLE IDs PREFIXED WITH "T"

ELEMENT	DL	# 27684	# 27685	# 27686	# 27687	# 27688	# 27689	# 32720	# 32721	# 32722	# 32723
ANTIMONY	.2	6.38	3.46	2.92	14.80	.54	.62	2.72	1.82	1.61	1.54
ARSENIC	2.0	51.90	10.80	15.10	465.00	2.92	-2.00	7.47	12.70	9.62	9.10
BARIUM	100.0	145.0	138.0	-100.0	125.0	186.0	-100.0	549.0	638.0	496.0	624.0
BROMINE	2.0	59.80	87.80	11.60	9.77	3.07	6.00	6.87	-2.00	-2.00	-2.00
CERIUM	2.0	65.50	87.20	64.00	34.30	62.40	14.70	74.30	75.20	65.90	83.20
CAESIUM	1.0	3.63	12.40	10.80	3.22	2.32	-1.00	9.48	24.00	27.90	25.80
CHROMIUM	5.0	142.0	241.0	299.0	62.0	37.1	24.1	73.0	80.3	64.9	91.0
COBALT	1.0	8.72	14.10	27.40	-1.00	-1.00	-1.00	6.04	4.13	8.56	3.80
EUROPIUM	.5	1.72	2.97	1.64	.85	.93	-.50	.90	1.21	1.09	1.19
GOLD, ppb	5.0	-5.0	-5.0	-5.0	7.5	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.50	9.61	8.63	4.91	18.60	10.90	6.80	6.14	4.92	5.89
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	10.100	10.700	11.800	13.800	.366	.259	1.920	1.440	1.020	1.480
LANTHANUM	.5	35.50	49.00	33.30	19.20	32.20	7.63	39.70	40.10	34.40	44.30
LUTETIUM	.2	.58	.38	.71	.33	.66	.38	.54	.55	.60	.58
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.468	1.420	1.430	.522	.953	.469	1.930	2.420	2.220	2.850
RUBIDIUM	20.0	63.6	104.0	127.0	84.7	53.5	21.1	120.0	164.0	151.0	179.0
SAMARIUM	.20	7.46	10.80	8.82	2.97	6.14	1.53	7.08	7.84	7.23	7.87
SCANDIUM	.10	26.50	27.70	36.00	7.69	4.12	2.37	9.85	10.80	9.46	11.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.037	.038	.039	.026	.048	.015	.087	.061	.034	.044
TANTALUM	1.0	4.00	5.19	3.60	-1.00	-1.00	-1.00	1.00	-1.00	-1.00	1.06
THORIUM	.5	6.28	9.14	9.29	9.62	7.03	3.37	13.20	14.60	13.40	15.80
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	50.60	3.46	19.80	12.80	27.30	15.80	6.54	6.45	4.99	6.01
URANIUM	2.0	-2.00	-2.00	-2.00	2.22	2.11	-2.00	-2.00	-2.00	2.36	4.34
YTTERBIUM	.5	2.88	2.21	3.45	1.50	3.20	1.91	2.71	2.80	2.94	2.93
ZINC	100.0	159.0	-100.0	148.0	228.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	516.0	649.0	-500.0	-500.0	805.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32724	# 32725	# 32726	# 32727	# 32728	# 32729	# 32730	# 32731	# 32732	# 32733
ANTIMONY	.2	.55	1.05	1.72	1.60	1.05	.93	33.10	4.77	.85	14.00
ARSENIC	2.0	-2.00	-2.00	-2.00	8.58	-2.00	-2.00	15.30	17.10	-2.00	5.02
BARIUM	100.0	593.0	158.0	779.0	-100.0	-100.0	191.0	-100.0	-100.0	-100.0	836.0
BROMINE	2.0	6.36	2.64	6.00	2.13	26.40	7.96	23.20	4.92	2.70	3.79
CERIUM	2.0	95.30	28.90	102.00	76.90	30.50	21.60	20.20	-2.00	-2.00	83.50
CAESIUM	1.0	10.60	3.21	13.80	1.53	1.68	3.99	-1.00	-1.00	-1.00	11.90
CHROMIUM	5.0	65.3	38.2	68.5	1160.0	1180.0	25.9	44.6	-5.0	-5.0	96.5
COBALT	1.0	1.20	-1.00	-1.00	53.10	3.76	-1.00	-1.00	-1.00	-1.00	1.74
EUROPIUM	.5	1.39	-.50	1.54	4.15	1.83	-.50	-.50	-.50	-.50	1.67
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	8.2
HAFNIUM	1.0	7.05	4.18	6.04	4.75	6.36	5.98	1.91	-1.00	-1.00	4.87
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.617	.392	.619	5.750	1.980	.385	1.450	.758	.183	.382
LANTHANUM	.5	49.60	15.20	53.80	41.80	12.70	11.10	5.44	-.50	-.50	45.80
LUTETIUM	.2	.88	.31	.75	.71	.40	.37	-.20	-.20	-.20	.75
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.700	.940	4.110	-.200	-.200	1.270	-.200	-.200	-.200	3.580
RUBIDIUM	20.0	201.0	55.3	227.0	-20.0	-20.0	60.0	-20.0	-20.0	-20.0	199.0
SAMARIUM	.20	9.50	2.67	10.60	13.10	6.23	2.41	1.17	-.20	-.20	9.68
SCANDIUM	.10	16.40	4.23	15.70	37.00	35.40	4.54	1.41	.20	-.10	17.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	5.89	-5.00
SODIUM, %	.01	.078	.026	.052	.025	.010	.025	.023	.019	.012	.030
TANTALUM	1.0	1.58	-1.00	1.61	1.81	2.54	-1.00	-1.00	-1.00	-1.00	2.79
THORIUM	.5	14.90	4.71	14.40	2.31	5.06	4.53	2.55	-.50	-.50	15.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.32	8.29	2.84	-2.00	-2.00	3.22	3.00	-2.00	2.54	2.60
URANIUM	2.0	3.95	-2.00	-2.00	-2.00	-2.00	-2.00	2.45	-2.00	-2.00	8.55
YTTERBIUM	.5	4.19	1.52	3.59	4.18	2.19	1.91	.61	-.50	-.50	3.83
ZINC	100.0	-100.0	-100.0	-100.0	2790.0	142.0	-100.0	370.0	397.0	-100.0	110.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32734	# 32735	# 32736	# 32737	# 32738	# 32739	# 32740	# 32741	# 32742	# 32743
ANTIMONY	.2	6.23	20.40	4.55	6.33	2.03	2.42	-.20	5.04	2.83	1.45
ARSENIC	2.0	122.00	104.00	67.10	30.40	3.88	-2.00	2.31	2.97	-2.00	-2.00
BARIUM	100.0	412.0	-100.0	317.0	122.0	238.0	206.0	529.0	447.0	349.0	536.0
BROMINE	2.0	-2.00	12.70	12.70	3.78	4.31	3.73	-2.00	5.57	5.41	11.10
CERIUM	2.0	77.80	3.40	51.70	41.30	55.80	59.80	60.10	80.70	89.10	94.70
CAESIUM	1.0	24.10	-1.00	8.73	6.64	7.16	4.50	16.20	10.50	12.20	4.89
CHROMIUM	5.0	71.2	7.2	48.9	43.6	30.6	36.2	426.0	64.5	55.2	73.2
COBALT	1.0	8.30	-1.00	7.48	6.73	-1.00	-1.00	22.60	1.47	-1.00	-1.00
EUROPIUM	.5	1.41	-.50	.75	.83	.81	.86	1.10	1.14	1.19	1.27
GOLD, ppb	5.0	6.1	5.8	-5.0	-5.0	-5.0	-5.0	54.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.98	-1.00	6.64	6.87	6.94	7.73	7.99	5.76	6.74	9.48
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.980	4.490	2.930	2.170	.533	.323	4.050	.623	.550	.282
LANTHANUM	.5	39.30	1.77	27.10	20.80	28.80	29.80	34.40	41.50	46.70	51.60
LUTETIUM	.2	.74	-.20	.48	.36	.50	.51	.41	.64	.73	.47
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.210	-.200	1.390	1.500	2.020	1.850	1.700	4.520	3.780	1.890
RUBIDIUM	20.0	240.0	-20.0	73.9	78.6	94.7	84.2	202.0	226.0	186.0	92.6
SAMARIUM	.20	8.86	.46	4.85	4.19	4.89	5.49	7.03	7.46	7.96	8.66
SCANDIUM	.10	13.40	1.21	7.00	7.90	6.21	5.50	11.00	13.20	12.90	6.79
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.083	.024	.401	.020	.035	.042	1.480	.071	.070	1.060
TANTALUM	1.0	1.47	-1.00	1.10	-1.00	1.18	-1.00	3.73	1.19	1.56	2.41
THORIUM	.5	15.30	1.15	9.13	7.54	7.14	7.20	13.10	13.20	12.40	16.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	6.39	-2.00	-2.00	2.91	3.47	4.46	3.81	4.60	3.34	3.10
URANIUM	2.0	3.30	-2.00	2.59	-2.00	2.18	-2.00	3.53	3.36	-2.00	2.25
YTTERBIUM	.5	3.73	-.50	2.24	1.77	2.46	2.44	1.95	3.12	3.58	2.10
ZINC	100.0	579.0	-100.0	206.0	1470.0	-100.0	-100.0	121.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32744	# 32745	# 32746	# 32747	# 32748	# 32749	# 32750	# 32751	# 32752	# 32753
ANTIMONY	.2	1.64	2.37	1.59	6.85	9.88	.96	1.10	1.75	1.64	3.79
ARSENIC	2.0	2.03	-2.00	2.17	5.08	2.81	-2.00	-2.00	3.23	-2.00	7.17
BARIUM	100.0	679.0	546.0	506.0	395.0	579.0	161.0	400.0	240.0	357.0	144.0
BROMINE	2.0	2.78	2.89	7.48	14.20	4.89	6.49	17.20	11.50	9.10	7.01
CERIUM	2.0	43.10	63.30	56.50	45.30	69.30	44.40	58.80	59.80	116.00	234.00
CAESIUM	1.0	11.80	10.00	14.20	12.60	17.80	4.62	14.70	6.50	7.38	5.12
CHROMIUM	5.0	67.7	89.5	67.3	63.5	82.5	19.3	74.1	26.5	45.6	141.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.47	28.50
EUROPIUM	.5	.76	1.23	.70	.63	.86	-.50	.99	.93	1.36	6.95
GOLD, ppb	5.0	-5.0	6.6	-5.0	-5.0	34.6	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.79	7.51	5.63	7.75	6.54	9.90	7.20	10.50	13.00	8.73
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.541	.352	.707	.615	.688	.304	.613	.375	.436	5.870
LANTHANUM	.5	22.30	31.30	29.30	23.80	35.90	24.10	30.70	29.50	59.40	120.00
LUTETIUM	.2	.84	.76	.56	.63	.77	.46	.74	.61	.89	.86
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.530	3.120	3.620	2.940	4.230	1.050	3.400	1.500	1.950	.611
RUBIDIUM	20.0	191.0	179.0	201.0	171.0	221.0	72.3	201.0	78.0	106.0	38.4
SAMARIUM	.20	4.49	6.20	4.95	4.18	6.40	3.33	5.60	4.99	11.10	29.20
SODIUM	.10	13.50	12.70	15.30	11.90	18.20	4.34	15.00	6.62	9.02	36.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.133	.092	.093	.074	.174	.036	.140	.052	.071	.013
TANTALUM	1.0	1.19	1.15	1.18	1.06	1.08	-1.00	1.28	1.41	1.82	4.00
THORIUM	.5	8.35	11.10	12.80	10.60	14.90	4.76	12.40	7.96	16.10	9.04
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	4.05	-2.00	2.68	-2.00	2.70	3.25	2.43	2.82	3.99	-2.00
URANIUM	2.0	2.61	5.41	-2.00	3.41	-2.00	2.01	2.62	2.05	-2.00	-2.00
YTTERBIUM	.5	4.02	3.73	2.76	3.14	3.51	2.21	3.67	2.90	4.33	4.05
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	173.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	531.0	648.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32754	# 32755	# 32756	# 32757	# 32758	# 32759	# 32760	# 32761	# 32762	# 32763
ANTIMONY	.2	1.33	1.30	1.84	1.45	.77	3.06	-.20	6.12	2.08	.57
ARSENIC	2.0	-2.00	18.10	5.11	4.75	34.90	24.80	3.91	18.50	7.24	26.60
BARIUM	100.0	382.0	105.0	-100.0	126.0	-100.0	227.0	569.0	-100.0	-100.0	317.0
BROMINE	2.0	6.70	4.77	2.67	4.27	2.58	2.86	-2.00	3.57	4.61	5.03
CERIUM	2.0	168.00	108.00	478.00	92.40	68.40	96.60	80.10	89.80	75.20	34.70
CAESIUM	1.0	15.80	9.81	15.40	7.09	10.10	27.40	9.63	13.20	13.20	8.57
CHROMIUM	5.0	140.0	184.0	317.0	242.0	274.0	144.0	339.0	243.0	294.0	642.0
COBALT	1.0	-1.00	5.34	12.70	1.80	4.51	4.20	33.20	3.49	3.16	4.64
EUROPIUM	.5	2.74	5.33	30.60	7.24	3.43	9.48	1.63	6.84	9.34	4.95
GOLD, ppb	5.0	-5.0	9.0	-10.0	-5.0	-5.0	-5.0	254.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.53	10.10	10.70	8.70	10.90	7.57	8.65	10.60	8.43	2.65
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.772	.626	2.010	.920	.916	1.310	5.580	1.160	.954	1.180
LANTHANUM	.5	69.20	56.80	432.00	75.80	42.60	91.90	45.50	66.30	76.70	45.30
LUTETIUM	.2	.77	.98	2.39	.89	.89	1.46	.58	1.24	1.15	.66
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.920	.890	1.150	.312	.536	3.070	1.080	.513	1.420	.853
[illegible]DIUM	20.0	177.0	61.5	74.1	32.9	34.5	210.0	107.0	51.1	110.0	45.4
SAMARIUM	.20	16.20	21.30	128.00	33.40	13.20	34.30	8.69	24.90	35.10	18.30
SCANDIUM	.10	27.90	44.10	67.20	43.30	59.80	34.00	12.80	51.10	41.90	66.20
SELENIUM	5.0	-5.0	-5.0	-10.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.037	.015	.017	.020	.024	.034	1.160	.018	.020	.020
TANTALUM	1.0	2.50	4.96	6.85	3.42	3.99	3.83	1.87	3.66	3.45	1.40
THORIUM	.5	16.50	11.50	8.39	7.63	8.42	14.90	17.70	8.31	8.75	4.45
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-4.00	-2.00	-2.00	-2.00	6.06	-2.00	-2.00	-2.00
URANIUM	2.0	5.08	-2.00	-2.00	-2.00	-2.00	-2.00	2.74	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.78	5.13	12.60	4.68	4.42	7.72	2.75	6.43	6.13	3.29
ZINC	100.0	108.0	124.0	378.0	115.0	158.0	118.0	-100.0	212.0	116.0	527.0
ZIRCONIUM	500.0	-500.0	642.0	1280.0	771.0	650.0	651.0	-500.0	-500.0	826.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32764	# 32765	# 32766	# 32767	# 32768	# 32769	# 32770	# 32771	# 32772	# 32773
ANTIMONY	.2	3.73	1.08	1.05	.84	1.09	5.30	9.68	7.41	4.26	1.04
ARSENIC	2.0	33.00	14.40	13.70	6.88	7.72	21.40	29.20	31.90	66.40	17.60
BARIUM	100.0	193.0	128.0	199.0	235.0	-100.0	210.0	-100.0	-100.0	254.0	-100.0
BROMINE	2.0	3.44	-2.00	3.14	2.40	4.29	5.96	35.80	35.20	108.00	52.40
CERIUM	2.0	172.00	87.10	124.00	62.60	61.10	72.20	72.70	43.90	41.80	34.90
CAESIUM	1.0	15.40	10.70	9.59	8.62	6.23	12.20	7.71	10.30	4.50	3.76
CHROMIUM	5.0	256.0	222.0	468.0	311.0	520.0	248.0	354.0	322.0	380.0	665.0
COBALT	1.0	4.37	2.13	17.60	1.12	24.90	1.13	-1.00	4.01	37.50	23.60
EUROPIUM	.5	9.21	3.10	4.51	.78	1.32	1.08	1.29	.65	.77	.61
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	8.8	-5.0	-5.0
HAFNIUM	1.0	10.90	10.00	9.79	10.30	7.40	6.97	8.67	7.97	8.04	5.15
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.500	.979	.653	.740	5.320	2.830	12.800	12.400	12.500	9.480
LANTHANUM	.5	98.70	38.10	79.10	41.00	30.40	36.40	37.90	23.70	20.10	17.40
LUTETIUM	.2	1.40	.67	.81	.74	.58	.68	.73	.51	.47	.40
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.090	.803	.407	.873	.655	2.180	1.570	1.500	.501	.398
RUBIDIUM	20.0	78.4	56.3	38.9	54.3	44.3	139.0	132.0	192.0	77.7	47.5
SAMARIUM	.20	38.20	12.90	21.80	3.59	4.66	6.05	8.28	3.67	4.56	3.62
SCANDIUM	.10	52.80	47.50	49.60	43.40	28.40	26.10	41.00	29.60	37.30	18.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.017	.020	.030	.021	.019	.019	.019	.018	.099	.013
TANTALUM	1.0	6.44	4.23	4.52	4.24	2.66	2.93	3.46	2.65	2.97	2.04
THORIUM	.5	9.41	8.66	10.90	10.90	9.05	11.10	12.20	10.80	6.03	6.08
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	2.28	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	6.98	3.46	3.77	3.59	3.01	3.36	3.72	2.60	2.50	1.93
ZINC	100.0	356.0	289.0	184.0	121.0	222.0	111.0	133.0	120.0	193.0	211.0
ZIRCONIUM	500.0	570.0	522.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32774	# 32775	# 32776	# 32777	# 32778	# 32779	# 32780	# 32781	# 32782	# 32783
ANTIMONY	.2	1.48	3.36	1.66	1.47	3.50	7.62	-.20	11.50	80.10	15.30
ARSENIC	2.0	4.64	11.90	-2.00	-2.00	2.48	302.00	2.13	39.60	498.00	19.10
BARIUM	100.0	552.0	353.0	378.0	542.0	277.0	195.0	418.0	118.0	115.0	179.0
BROMINE	2.0	-2.00	5.65	5.09	5.50	14.30	10.40	-2.00	12.90	13.70	5.67
CERIUM	2.0	96.40	79.10	69.60	96.10	92.30	72.70	61.70	87.50	57.30	57.60
CAESIUM	1.0	13.50	12.60	13.70	13.50	9.32	6.93	17.00	8.97	8.56	4.71
CHROMIUM	5.0	75.3	89.1	114.0	72.9	111.0	209.0	429.0	234.0	146.0	239.0
COBALT	1.0	3.08	9.15	-1.00	-1.00	3.88	121.00	21.20	22.00	75.10	19.20
EUROPIUM	.5	1.29	.76	1.02	1.36	1.40	2.57	.81	2.49	1.65	1.49
GOLD, ppb	5.0	-5.0	-5.0	8.9	5.4	-5.0	-5.0	61.9	-5.0	25.2	-5.0
HAFNIUM	1.0	6.35	4.97	4.50	7.93	5.90	6.78	7.82	9.56	6.02	6.62
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.060	1.560	.671	.565	1.310	4.970	4.000	5.120	6.530	5.500
LANTHANUM	.5	55.90	42.70	35.70	51.70	48.80	33.40	34.40	41.10	32.20	33.10
LUTETIUM	.2	.73	.55	.66	.80	.58	.54	.43	.91	.44	.54
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.340	2.790	3.020	3.390	1.620	1.370	1.760	.766	2.090	1.200
RUBIDIUM	20.0	184.0	156.0	231.0	191.0	121.0	124.0	196.0	82.0	189.0	103.0
SAMARIUM	.20	7.82	5.11	6.11	8.21	8.90	9.75	7.03	12.30	5.57	6.37
SCANDIUM	.10	12.50	11.90	18.90	13.50	18.40	30.60	11.00	38.80	16.10	16.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.057	.042	.037	.086	.145	.053	1.470	.054	.048	.030
TANTALUM	1.0	2.16	1.14	1.18	2.34	1.93	3.01	3.82	4.24	2.04	2.73
THORIUM	.5	14.90	10.80	14.80	14.80	12.70	14.00	13.60	11.70	8.96	7.72
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	5.10	-2.00	22.60	-2.00
URANIUM	2.0	4.46	2.77	5.01	3.20	-2.00	5.11	3.38	-2.00	2.82	-2.00
YTTERBIUM	.5	3.53	2.70	3.24	3.82	3.00	2.84	2.07	4.61	2.08	2.82
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	2920.0	-100.0	763.0	4590.0	712.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	633.0	-500.0	500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32784	# 32785	# 32786	# 32787	# 32788	# 32789	# 32790	# 32791	# 32792	# 32793
ANTIMONY	.2	1.03	17.30	1.31	1.06	1.48	3.56	3.41	5.29	2.61	6.29
ARSENIC	2.0	10.80	2.50	-2.00	-2.00	28.50	22.60	29.60	7.05	2.96	123.00
BARIUM	100.0	-100.0	514.0	288.0	443.0	1800.0	2020.0	605.0	-100.0	568.0	416.0
BROMINE	2.0	2.38	-2.00	5.06	4.86	4.10	-2.00	-2.00	39.60	6.07	-2.00
CERIUM	2.0	85.00	71.70	66.10	67.70	184.00	197.00	173.00	8.77	116.00	87.40
CAESIUM	1.0	6.80	9.86	5.93	8.98	16.10	11.10	24.30	1.11	11.20	24.30
CHROMIUM	5.0	123.0	109.0	56.3	76.5	336.0	415.0	343.0	28.8	56.5	69.7
COBALT	1.0	40.80	-1.00	-1.00	-1.00	93.60	56.40	56.50	1.37	-1.00	8.38
EUROPIUM	.5	3.27	.86	.82	.92	4.58	6.02	5.34	-.50	.66	1.43
GOLD, ppb	5.0	-5.0	7.3	-5.0	-5.0	-5.0	-5.0	10.2	-5.0	-5.0	6.2
HAFNIUM	1.0	7.88	5.37	7.59	5.63	7.65	14.70	12.50	3.10	11.40	6.04
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	6.790	.413	.364	.443	2.720	2.480	2.440	1.570	.588	3.980
LANTHANUM	.5	41.20	41.20	35.20	35.50	111.00	115.00	96.50	6.54	56.30	39.70
LUTETIUM	.2	.82	.53	.66	.59	.49	.79	.75	-.20	.80	.75
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.282	3.830	2.210	2.800	1.930	1.800	1.790	-.200	3.240	3.250
RUBIDIUM	20.0	37.8	272.0	127.0	137.0	142.0	113.0	120.0	-20.0	144.0	232.0
SAMARIUM	.20	12.20	5.18	5.82	6.35	16.40	23.10	20.10	1.11	8.45	8.91
SCANDIUM	.10	44.00	16.00	8.66	10.60	41.40	40.20	30.60	2.19	10.90	13.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.010	.059	.041	.055	.032	.036	.028	.042	.048	.084
TANTALUM	1.0	2.87	1.28	1.63	1.57	11.50	8.54	7.21	-1.00	3.97	1.48
THORIUM	.5	7.50	11.50	8.47	10.70	15.80	12.50	10.40	5.44	14.40	15.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	19.20	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.35
URANIUM	2.0	-2.00	3.50	-2.00	-2.00	-2.00	-2.00	-2.00	3.08	3.50	3.34
YTTERBIUM	.5	4.37	2.38	3.20	2.99	2.44	3.98	3.75	.85	4.04	3.91
ZINC	100.0	738.0	-100.0	-100.0	-100.0	583.0	724.0	594.0	-100.0	-100.0	585.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	634.0	928.0	847.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32794	# 32795	# 32796	# 32797	# 32798	# 32799	# 32800	# 32801	# 32802	# 32803
ANTIMONY	.2	3.37	5.46	1.85	3.19	11.60	2.55	-.20	2.81	2.65	3.80
ARSENIC	2.0	12.90	13.40	41.10	3.64	8.97	25.70	3.71	14.90	3.63	3.58
BARIUM	100.0	553.0	351.0	256.0	483.0	246.0	128.0	584.0	300.0	145.0	537.0
BROMINE	2.0	-2.00	-2.00	5.20	4.15	6.18	78.10	-2.00	122.00	15.30	8.01
CERIUM	2.0	94.10	76.00	100.00	73.20	75.60	122.00	74.70	115.00	164.00	55.00
CAESIUM	1.0	12.40	9.83	13.00	13.10	9.29	1.78	9.29	5.54	6.32	18.30
CHROMIUM	5.0	69.3	59.1	209.0	70.7	57.6	199.0	322.0	224.0	242.0	103.0
COBALT	1.0	6.66	8.96	52.00	2.47	-1.00	21.10	31.20	25.70	21.50	1.22
EUROPIUM	.5	.88	1.11	2.55	.89	.92	1.76	.91	2.04	5.29	.70
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	234.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.76	7.42	9.04	7.31	6.38	6.42	8.17	9.78	10.40	6.09
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.020	3.140	8.550	.663	1.530	8.660	5.250	7.520	3.110	.626
LANTHANUM	.5	50.10	40.90	52.20	38.00	40.80	78.50	42.60	66.40	89.50	30.70
LUTETIUM	.2	.69	.68	.76	.68	.56	.38	.54	.51	.51	.73
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.710	2.470	1.020	3.280	2.350	.329	1.310	.534	.813	3.540
RUBIDIUM	20.0	260.0	138.0	116.0	187.0	157.0	27.1	94.8	31.1	49.9	194.0
SAMARIUM	.20	7.81	7.06	13.80	6.66	6.92	7.99	8.12	9.65	20.10	4.42
SCANDIUM	.10	13.20	11.00	35.40	12.70	10.80	17.80	12.20	21.40	30.10	13.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.097	.080	.077	.085	.046	.032	1.100	.212	.015	.046
TANTALUM	1.0	2.03	2.30	4.08	1.07	1.98	8.56	1.90	6.77	5.87	1.75
THORIUM	.5	14.70	12.20	8.21	12.20	13.50	11.30	16.30	8.33	8.93	13.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.39	2.07	-2.00	-2.00	-2.00	-2.00	6.45	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	3.10	-2.00	3.00	3.72	-2.00	3.19	-2.00	-2.00	5.98
YTTERBIUM	.5	3.09	3.28	3.70	3.42	2.73	1.97	2.71	2.42	2.65	3.50
ZINC	100.0	139.0	-100.0	523.0	-100.0	-100.0	100.0	-100.0	-100.0	165.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	669.0	743.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32804	# 32805	# 32806	# 32807	# 32808	# 32809	# 32810	# 32811	# 32812	# 32813
ANTIMONY	.2	1.33	5.78	4.33	3.01	7.71	31.20	29.00	.62	6.62	1.83
ARSENIC	2.0	47.00	77.50	8.67	25.60	150.00	934.00	550.00	56.90	99.20	16.70
BARIUM	100.0	739.0	278.0	486.0	293.0	-100.0	250.0	150.0	254.0	-100.0	-100.0
BROMINE	2.0	-2.00	-2.00	3.62	7.70	-2.00	2.49	4.51	28.30	34.00	22.20
CERIUM	2.0	103.00	70.20	68.20	93.00	75.30	236.00	107.00	5.83	16.80	13.50
CAESIUM	1.0	28.30	13.30	23.70	19.20	6.31	4.74	5.70	7.94	4.80	9.23
CHROMIUM	5.0	162.0	92.8	99.1	92.7	214.0	302.0	314.0	312.0	161.0	203.0
COBALT	1.0	45.30	36.50	1.51	30.80	116.00	324.00	223.00	6.97	4.36	4.36
EUROPIUM	.5	2.68	1.07	.64	2.98	3.01	10.60	3.11	.60	.64	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	12.7	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.15	5.80	5.90	6.08	9.44	6.39	9.18	7.10	6.76	11.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	6.850	4.130	1.240	6.080	2.760	9.480	5.600	18.300	14.200	4.050
LANTHANUM	.5	52.90	35.30	36.80	46.40	34.70	127.00	69.80	3.72	11.00	7.51
LUTETIUM	.2	1.02	.59	.68	.73	.98	1.07	.80	.43	.55	.73
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.790	2.490	3.220	1.300	-.200	-.200	-.200	-.200	.560	.754
RUBIDIUM	20.0	195.0	174.0	191.0	79.4	-20.0	26.1	-20.0	40.0	70.9	61.4
SAMARIUM	.20	12.90	6.98	5.71	12.10	12.50	37.60	13.10	2.36	2.02	1.79
SODIUM	.10	30.90	16.10	13.60	31.40	52.30	47.40	63.50	59.70	36.90	42.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.047	.030	.043	.294	.017	.061	.016	.015	.010	.021
TANTALUM	1.0	3.91	1.23	1.59	2.04	4.95	2.96	3.57	2.65	2.25	3.53
THORIUM	.5	11.70	14.60	13.90	9.78	9.46	3.99	11.00	5.66	7.28	10.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.90	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	2.02	3.92	-2.00	-2.00	-2.00	5.54	-2.00	-2.00	-2.00
YTTERBIUM	.5	5.05	3.02	3.43	3.86	4.92	5.83	3.70	2.02	2.64	3.21
ZINC	100.0	682.0	762.0	-100.0	306.0	786.0	240.0	2160.0	183.0	148.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	654.0	606.0	618.0	-500.0	-500.0	665.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32814	# 32815	# 32816	# 32817	# 32818	# 32819	# 32820	# 32821	# 32822	# 32823
ANTIMONY	.2	1.09	10.60	8.65	1.39	4.63	1.83	-.20	1.79	1.65	8.63
ARSENIC	2.0	26.30	233.00	323.00	41.90	27.30	104.00	3.60	8.02	84.50	65.70
BARIUM	100.0	242.0	827.0	434.0	476.0	361.0	328.0	614.0	740.0	268.0	-100.0
BROMINE	2.0	71.30	3.55	2.99	2.91	2.59	-2.00	-2.00	-2.00	-2.00	2.19
CERIUM	2.0	16.00	87.90	71.80	79.40	72.80	84.30	80.20	103.00	96.90	386.00
CAESIUM	1.0	8.10	23.20	21.60	19.50	17.20	8.70	11.00	7.99	12.60	5.66
CHROMIUM	5.0	241.0	137.0	228.0	118.0	157.0	441.0	343.0	388.0	167.0	213.0
COBALT	1.0	15.40	83.90	62.10	27.30	34.40	180.00	33.40	50.60	376.00	62.40
EUROPIUM	.5	.81	2.16	2.06	2.71	4.08	3.27	1.12	3.54	4.48	12.40
GOLD, ppb	5.0	-5.0	14.4	11.1	-5.0	-5.0	-5.0	245.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.71	5.37	7.55	8.61	6.98	7.21	8.57	10.70	7.05	9.10
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	11.400	8.310	4.220	1.790	2.180	2.510	5.570	.736	7.160	7.500
LANTHANUM	.5	7.21	45.00	37.30	39.70	39.80	41.60	44.90	58.80	51.10	213.00
LUTETIUM	.2	.41	.57	.77	.74	1.30	.57	.56	.79	.65	1.21
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.471	2.640	2.090	1.990	1.160	.757	1.470	1.390	.866	1.130
RUBIDIUM	20.0	34.0	222.0	193.0	149.0	91.8	37.0	110.0	54.7	84.7	69.3
SAMARIUM	.20	3.44	10.10	9.79	11.70	14.50	13.10	8.51	14.60	17.50	55.00
SCANDIUM	.10	67.70	25.70	37.20	29.80	32.60	40.40	12.90	51.10	34.50	39.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.677	.032	.023	.031	.049	.371	1.160	.281	.056	.017
TANTALUM	1.0	3.54	1.49	2.72	3.56	2.33	2.18	2.55	3.03	3.06	6.14
THORIUM	.5	6.47	8.46	8.72	10.50	8.73	6.52	17.00	8.53	6.65	8.53
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.50	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	2.80	2.08	-2.00	-2.00	4.16	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.27	2.71	3.92	4.21	6.98	3.17	2.84	4.12	3.97	5.56
ZINC	100.0	300.0	1220.0	648.0	211.0	849.0	918.0	-100.0	466.0	334.0	245.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	570.0	-500.0	620.0	580.0	1020.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32824	# 32825	# 32826	# 32827	# 32828	# 32829	# 32830	# 32831	# 32832	# 32833
ANTIMONY	.2	1.59	34.10	33.00	6.01	12.90	21.10	1.37	4.64	5.32	4.67
ARSENIC	2.0	4.40	10.00	8.49	3.50	77.30	3.41	-2.00	3.66	3.33	-2.00
BARIUM	100.0	152.0	-100.0	243.0	280.0	164.0	293.0	718.0	-100.0	727.0	426.0
BROMINE	2.0	2.31	-2.00	3.63	4.07	5.92	13.00	8.22	24.90	4.57	8.03
CERIUM	2.0	227.00	130.00	77.40	69.30	100.00	25.60	59.70	18.50	90.80	118.00
CAESIUM	1.0	8.43	12.40	8.29	9.04	7.91	6.36	9.33	-1.00	11.40	10.60
CHROMIUM	5.0	248.0	721.0	223.0	511.0	324.0	438.0	66.8	15.6	124.0	129.0
COBALT	1.0	2.45	1.08	-1.00	5.58	15.30	-1.00	-1.00	1.25	-1.00	-1.00
EUROPIUM	.5	6.47	2.69	.93	1.80	1.98	.61	.94	1.09	1.01	3.17
GOLD, ppb	5.0	-5.0	-5.0	41.0	58.1	9.1	54.6	-5.0	-5.0	22.2	10.4
HAFNIUM	1.0	10.20	10.70	10.50	8.40	7.53	9.32	9.75	1.98	6.36	6.71
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.995	.646	.445	.629	1.260	.517	.322	1.530	.441	.456
LANTHANUM	.5	179.00	72.70	38.10	32.40	44.30	14.90	31.40	21.10	49.40	50.60
LUTETIUM	.2	1.29	.94	.84	.71	.60	.57	.66	-.20	.70	.73
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.607	2.290	1.870	2.050	1.480	1.570	2.660	-.200	3.950	3.190
RUBIDIUM	20.0	51.1	247.0	157.0	127.0	98.9	124.0	154.0	-20.0	214.0	171.0
SAMARIUM	.20	30.70	11.70	4.63	8.08	8.85	2.72	5.43	6.05	6.08	15.60
SCANDIUM	.10	45.90	50.40	30.30	35.40	35.90	37.50	10.40	1.04	16.70	15.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM,* %	.01	.023	.024	.020	.022	.017	.020	.040	.050	.035	.033
TANTALUM	1.0	3.58	5.32	4.13	2.83	2.57	3.36	2.05	-1.00	1.20	1.00
THORIUM	.5	11.60	10.80	11.90	11.00	8.38	11.80	10.60	3.59	23.80	19.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.51
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	3.23	3.75	-2.00	3.35	2.67
YTTERBIUM	.5	5.63	4.47	4.08	3.68	3.18	3.09	3.45	-.50	3.50	4.07
ZINC	100.0	247.0	144.0	135.0	129.0	228.0	106.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	744.0	-500.0	-500.0	572.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32834	# 32835	# 32836	# 32837	# 32838	# 32839	# 32840	# 32841	# 32842	# 32843
ANTIMONY	.2	1.80	4.09	3.36	1.38	5.29	1.04	.23	2.12	10.70	3.27
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	2.62	-2.00	2.27	-2.00	104.00	2.31
BARIUM	100.0	-100.0	503.0	626.0	-100.0	-100.0	-100.0	439.0	419.0	223.0	456.0
BROMINE	2.0	20.10	6.08	2.61	2.74	4.62	5.15	-2.00	3.44	14.30	7.34
CERIUM	2.0	44.30	85.40	105.00	2.41	3.36	3.84	62.80	78.20	84.90	106.00
CAESIUM	1.0	1.19	8.94	11.60	-1.00	-1.00	-1.00	16.10	12.60	6.83	12.60
CHROMIUM	5.0	16.0	116.0	72.1	25.0	-5.0	26.4	416.0	114.0	111.0	60.1
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	1.61	-1.00	20.40	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	.93	.96	-.50	-.50	-.50	.71	.99	1.05	1.43
GOLD, ppb	5.0	-5.0	9.8	-5.0	-5.0	-5.0	-5.0	64.2	5.1	-5.0	-5.0
HAFNIUM	1.0	5.47	5.81	6.04	-1.00	1.00	1.69	7.55	5.75	6.23	7.54
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.238	.333	.441	.183	1.450	.216	3.860	.334	14.500	.460
LANTHANUM	.5	22.70	41.30	53.10	1.22	1.97	1.78	33.10	38.30	53.90	52.50
LUTETIUM	.2	.35	.64	.70	-.20	-.20	-.20	.40	.66	.42	.73
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-17.0	-5.0
POTASSIUM, %	.2	-.200	4.050	4.400	-.200	-.200	-.200	1.410	3.500	1.900	3.450
RUBIDIUM	20.0	-20.0	215.0	220.0	-20.0	-20.0	-20.0	188.0	180.0	113.0	180.0
SAMARIUM	.20	3.42	7.80	8.88	.30	.37	.38	6.94	7.17	7.56	9.68
SCANDIUM	.10	2.29	15.30	14.10	.44	.52	.45	10.70	13.30	21.10	14.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	16.8	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	7.28	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	-.010	.036	.052	-.010	.031	.013	1.430	.031	.043	.050
TANTALUM	1.0	-1.00	1.19	2.03	-1.00	-1.00	-1.00	2.50	2.02	1.29	1.88
THORIUM	.5	8.70	14.20	15.00	.58	.80	.60	13.20	13.10	79.40	16.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.89	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	4.13	4.32	-2.00	-2.00	-2.00	4.26	5.07	9.44	2.73
YTTERBIUM	.5	1.70	3.37	3.45	-.50	-.50	-.50	2.09	3.19	2.55	3.48
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32844	# 32845	# 32846	# 32847	# 32848	# 32849	# 32850	# 32851	# 32852	# 32853
ANTIMONY	.2	2.03	1.02	1.91	1.27	1.56	1.77	.67	1.16	.87	1.95
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	2.22	-2.00	2.03	-2.00	4.62
BARIUM	100.0	325.0	354.0	418.0	613.0	478.0	175.0	147.0	469.0	182.0	520.0
BROMINE	2.0	13.20	7.74	8.93	4.31	5.49	2.15	3.08	-2.00	2.32	2.63
CERIUM	2.0	86.10	90.50	56.80	90.80	110.00	24.10	22.40	88.50	36.00	59.80
CAESIUM	1.0	12.90	16.50	9.66	17.50	18.00	3.47	3.55	13.10	6.31	9.62
CHROMIUM	5.0	60.1	100.0	52.3	77.9	112.0	31.1	15.4	59.8	23.0	50.4
COBALT	1.0	-1.00	-1.00	-1.00	1.33	-1.00	-1.00	-1.00	2.01	-1.00	1.54
EUROPIUM	.5	1.23	1.23	.85	1.24	1.14	-.50	-.50	1.27	-.50	.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	18.1	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.06	6.06	9.80	7.60	6.13	9.15	5.18	7.81	7.17	6.47
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.524	.514	.352	.621	.449	.331	.288	.642	.405	.642
LANTHANUM	.5	43.60	45.50	33.30	45.20	58.00	12.20	11.10	43.10	17.30	29.50
LUTETIUM	.2	.70	.72	.78	.83	.77	.52	.34	.86	.51	.49
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.630	4.140	3.550	5.010	4.180	1.040	.911	3.290	1.480	2.880
RUBIDIUM	20.0	170.0	195.0	177.0	250.0	224.0	55.4	42.7	169.0	81.8	145.0
SAMARIUM	.20	7.92	8.26	5.14	8.11	8.95	2.46	2.05	8.69	3.14	4.89
SCANDIUM	.10	13.10	14.10	12.10	19.50	16.30	4.26	3.50	13.50	6.19	10.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.063	.089	.062	.087	.050	.053	.025	.074	.043	.048
TANTALUM	1.0	1.45	-1.00	1.32	-1.00	-1.00	1.04	-1.00	1.62	1.00	-1.00
THORIUM	.5	12.30	13.80	11.30	14.90	12.60	3.54	2.96	12.10	4.96	7.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	3.40	3.21	2.36	2.49	-2.00	-2.00	-2.00	3.45
URANIUM	2.0	2.59	-2.00	2.85	2.54	3.59	2.31	-2.00	2.38	2.12	2.35
YTTERBIUM	.5	3.61	3.78	3.88	4.22	3.81	2.57	1.72	4.18	2.56	2.36
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32854	# 32855	# 32856	# 32857	# 32858	# 32859	# 32860	# 32861	# 32862	# 32863
ANTIMONY	.2	2.64	2.38	3.96	8.59	7.27	1.78	-.20	1.57	11.00	1.06
ARSENIC	2.0	7.10	49.30	14.30	74.60	37.60	15.40	2.41	24.20	13.10	2.54
BARIUM	100.0	476.0	1520.0	2190.0	1760.0	420.0	134.0	454.0	592.0	160.0	-100.0
BROMINE	2.0	4.97	22.90	11.60	-2.00	2.61	10.70	-2.00	2.13	-2.00	11.30
CERIUM	2.0	62.80	54.80	72.70	77.00	150.00	19.90	64.30	116.00	39.10	13.10
CAESIUM	1.0	15.80	26.00	26.80	9.35	27.60	7.18	17.60	34.00	3.41	1.62
CHROMIUM	5.0	68.5	78.8	79.3	575.0	92.5	158.0	439.0	100.0	43.7	76.2
COBALT	1.0	-1.00	18.80	13.50	67.40	10.20	25.50	21.00	49.20	8.50	-1.00
EUROPIUM	.5	.81	1.34	2.08	2.84	1.96	.62	.83	1.26	2.05	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	56.6	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.63	4.10	5.27	5.13	10.30	3.38	8.16	5.78	1.63	3.41
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.671	18.100	15.800	13.800	4.010	3.330	4.030	1.420	2.750	.265
LANTHANUM	.5	31.30	28.00	34.60	33.70	81.50	9.71	34.10	58.50	23.40	7.10
LUTETIUM	.2	.55	.51	.55	.47	.84	.22	.43	.57	.42	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-14.0	-5.0
POTASSIUM, %	.2	3.670	3.000	3.800	1.630	2.940	.203	1.710	3.100	-.200	-.200
RUBIDIUM	20.0	202.0	207.0	239.0	109.0	194.0	-20.0	196.0	155.0	-20.0	-20.0
SAMARIUM	.20	5.59	7.25	8.97	11.80	12.00	2.67	7.16	9.29	8.63	1.23
SCANDIUM	.10	15.10	21.10	25.60	30.40	10.10	12.50	11.10	12.70	12.90	1.86
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.072	.107	.083	.098	.039	.539	1.480	.044	.047	.032
TANTALUM	1.0	1.13	1.46	2.35	1.79	7.28	-1.00	3.70	1.93	-1.00	-1.00
THORIUM	.5	10.30	9.70	8.50	4.75	17.90	2.24	13.60	13.00	3.99	1.78
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	2.87	-2.00	-2.00	-2.00	5.37	-2.00	-2.00	-2.00
URANIUM	2.0	3.73	-2.00	-2.00	-2.00	3.46	-2.00	4.17	-2.00	7.89	-2.00
YTTERBIUM	.5	2.76	2.94	3.24	2.81	4.56	1.21	2.14	2.99	2.29	.65
ZINC	100.0	-100.0	139.0	128.0	433.0	402.0	166.0	-100.0	157.0	213.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	706.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32864	# 32865	# 32866	# 32867	# 32868	# 32869	# 32870	# 32871	# 32872	# 32873
ANTIMONY	.2	2.15	2.69	.97	1.41	.56	1.42	.93	.49	2.16	.89
ARSENIC	2.0	11.30	4.14	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.04	-2.00
BARIUM	100.0	433.0	342.0	129.0	-100.0	-100.0	543.0	935.0	252.0	1090.0	401.0
BROMINE	2.0	-2.00	4.26	11.00	6.81	4.23	6.33	5.89	-2.00	6.10	3.48
CERIUM	2.0	87.40	176.00	38.20	34.90	16.50	75.40	81.90	45.90	114.00	74.80
CAESIUM	1.0	35.10	22.30	2.42	-1.00	-1.00	9.02	5.91	1.56	12.10	7.32
CHROMIUM	5.0	70.6	45.0	32.7	7.2	7.6	64.6	38.9	27.6	70.3	34.7
COBALT	1.0	7.25	-1.00	-1.00	-1.00	-1.00	1.39	-1.00	-1.00	1.17	-1.00
EUROPIUM	.5	1.00	.70	-.50	-.50	-.50	1.04	.88	-.50	2.45	.74
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.11	14.30	5.99	6.74	3.17	10.20	9.27	3.28	6.91	8.11
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.380	.685	.249	.203	.107	.570	.420	.271	.431	.337
LANTHANUM	.5	45.00	98.10	20.10	18.90	8.92	42.00	45.70	23.30	55.60	38.30
LUTETIUM	.2	.67	.87	.28	.24	-.20	.82	.60	.23	.78	.58
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.990	2.580	.731	-.200	-.200	3.140	2.070	.649	3.780	2.170
RUBIDIUM	20.0	156.0	136.0	36.3	-20.0	-20.0	174.0	111.0	39.3	214.0	121.0
SAMARIUM	.20	7.25	11.70	3.20	2.03	1.28	7.34	6.31	3.55	10.10	5.30
SCANDIUM	.10	13.10	8.89	3.03	.94	.53	12.60	7.00	2.51	14.70	8.39
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.052	.034	.017	.012	-.010	.053	.045	.020	.101	.057
TANTALUM	1.0	1.69	8.93	1.51	1.06	-1.00	3.30	2.08	-1.00	2.11	1.81
THORIUM	.5	12.00	20.20	4.92	2.79	1.68	12.60	10.30	4.66	18.00	8.88
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	2.69	-2.00	3.20	-2.00	-2.00	6.61	2.69
URANIUM	2.0	3.28	2.34	-2.00	-2.00	-2.00	2.01	3.26	-2.00	2.74	2.80
YTTERBIUM	.5	3.48	4.46	1.46	1.13	.56	4.27	3.15	1.16	3.98	2.84
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	664.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	522.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32874	# 32875	# 32876	# 32877	# 32878	# 32879	# 32880	# 32881	# 32882	# 32883
ANTIMONY	.2	1.11	7.13	3.35	.82	2.79	.51	-.20	10.40	5.47	3.25
ARSENIC	2.0	-2.00	-2.00	-2.00	20.70	17.60	57.00	3.66	136.00	29.70	44.90
BARIUM	100.0	642.0	406.0	259.0	563.0	1030.0	-100.0	588.0	727.0	157.0	167.0
BROMINE	2.0	5.47	3.39	11.30	-2.00	-2.00	-2.00	-2.00	2.40	-2.00	-2.00
CERIUM	2.0	120.00	113.00	126.00	149.00	104.00	108.00	83.60	81.30	95.30	116.00
CAESIUM	1.0	20.00	20.20	44.60	10.80	32.20	6.85	10.70	12.00	5.99	4.87
CHROMIUM	5.0	88.6	76.8	270.0	130.0	100.0	137.0	332.0	228.0	384.0	182.0
COBALT	1.0	-1.00	-1.00	24.30	60.30	40.50	125.00	32.00	108.00	96.40	34.90
EUROPIUM	.5	1.17	1.37	5.16	5.34	3.33	4.62	.98	2.82	3.32	4.21
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	255.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.66	8.10	9.57	7.38	6.34	7.90	8.36	5.24	6.62	8.09
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.526	.455	3.880	6.460	4.150	10.100	5.440	7.710	8.890	8.340
LANTHANUM	.5	65.40	59.70	62.30	69.00	54.70	51.00	43.70	37.90	43.80	47.90
LUTETIUM	.2	.79	.81	.57	.97	.79	.91	.55	.58	.78	.80
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.460	3.560	1.840	1.050	3.340	.640	1.170	1.550	.435	.355
RUBIDIUM	20.0	260.0	205.0	181.0	50.8	234.0	36.4	125.0	87.7	32.1	34.9
SAMARIUM	.20	9.09	10.40	18.10	21.50	15.00	17.00	8.62	11.70	14.00	16.90
SCANDIUM	.10	16.60	13.50	32.90	34.00	31.00	38.50	12.70	30.80	34.30	43.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.122	.079	.021	.945	.077	1.940	1.130	.345	.214	.117
TANTALUM	1.0	2.16	2.02	7.23	3.05	2.68	4.13	1.35	2.13	2.80	4.51
THORIUM	.5	19.20	20.60	9.78	6.29	11.80	7.40	16.50	8.70	6.73	7.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.76	2.25	-2.00	-2.00	5.47	-2.00	5.45	-2.00	-2.00	-2.00
URANIUM	2.0	2.06	5.28	-2.00	-2.00	-2.00	-2.00	2.60	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.99	4.22	3.05	5.45	4.38	4.95	2.84	3.12	4.47	4.39
ZINC	100.0	-100.0	-100.0	190.0	490.0	689.0	1370.0	-100.0	681.0	1260.0	461.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	591.0	587.0	-500.0	-500.0	-500.0	-500.0	614.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32884	# 32885	# 32886	# 32887	# 32888	# 32889	# 32890	# 32891	# 32892	# 32893
ANTIMONY	.2	7.59	9.78	10.60	11.20	14.30	20.00	2.83	7.26	92.20	30.90
ARSENIC	2.0	15.20	38.30	84.50	28.70	17.90	122.00	7.21	10.20	980.00	317.00
BARIUM	100.0	320.0	465.0	400.0	691.0	-100.0	289.0	360.0	972.0	2910.0	-100.0
BROMINE	2.0	31.40	4.16	-2.00	-2.00	-2.00	2.27	5.70	3.43	18.10	25.40
CERIUM	2.0	47.80	132.00	109.00	119.00	78.20	84.20	107.00	23.00	149.00	27.20
CAESIUM	1.0	5.82	10.10	8.21	3.43	1.12	8.49	5.11	6.68	1.13	1.52
CHROMIUM	5.0	192.0	164.0	340.0	306.0	253.0	215.0	286.0	319.0	13.7	71.6
COBALT	1.0	12.60	37.40	96.30	44.30	22.30	65.50	2.52	1.29	28.00	25.90
EUROPIUM	.5	1.74	3.79	3.13	4.10	2.39	1.49	3.24	.54	2.40	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	11.4	-5.0	-5.0
HAFNIUM	1.0	7.03	9.26	6.54	9.58	7.31	7.11	9.55	9.50	-1.00	5.31
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	8.580	5.670	7.150	8.250	8.710	4.150	.328	.440	24.800	27.000
LANTHANUM	.5	23.80	66.80	53.00	55.40	34.90	38.90	50.00	8.98	23.50	8.34
LUTETIUM	.2	.65	.91	.59	.68	.62	.68	.87	.71	.39	.38
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	18.7
POTASSIUM, %	.2	1.200	1.080	1.090	.272	-.200	2.260	.439	4.110	-.200	.256
RUBIDIUM	20.0	96.8	123.0	112.0	34.1	31.3	173.0	59.9	276.0	61.4	52.0
SAMARIUM	.20	7.34	15.60	13.00	16.20	10.00	8.21	14.60	2.61	6.42	2.14
SCANDIUM	.10	35.20	34.00	32.90	42.70	32.90	30.50	45.60	39.10	13.70	41.90
[illegible]NIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	17.60	-5.00
SODIUM, %	.01	.020	.019	.021	.017	-.010	.024	.019	.036	.020	.013
TANTALUM	1.0	2.65	2.82	3.29	3.39	2.52	2.49	3.61	3.81	-1.00	1.03
THORIUM	.5	10.30	11.20	10.00	8.13	6.43	10.00	8.43	12.80	.55	12.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.62	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.71	-2.00	5.08
YTTERBIUM	.5	3.54	4.71	3.29	3.99	3.18	3.35	4.11	3.86	1.92	1.72
ZINC	100.0	202.0	1230.0	3240.0	4650.0	872.0	799.0	142.0	-100.0	10200.0	574.0
ZIRCONIUM	500.0	534.0	690.0	-500.0	-500.0	-500.0	-500.0	604.0	-500.0	-500.0	577.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32894	# 32895	# 32896	# 32897	# 32898	# 32899	# 32900	# 32901	# 32902	# 32903
ANTIMONY	.2	22.70	10.30	52.90	3.14	2.83	1.83	.29	11.70	1.26	23.40
ARSENIC	2.0	149.00	145.00	608.00	2.89	-2.00	9.09	3.84	185.00	-2.00	9.94
BARIUM	100.0	-100.0	-100.0	427.0	673.0	940.0	-100.0	620.0	-100.0	-100.0	-100.0
BROMINE	2.0	3.52	4.34	16.80	4.82	7.56	20.00	-2.00	15.60	6.69	18.40
CERIUM	2.0	-2.00	24.90	31.60	104.00	97.70	2.25	84.00	2.77	-2.00	-2.00
CAESIUM	1.0	-1.00	-1.00	7.19	11.60	15.30	-1.00	10.20	-1.00	-1.00	-1.00
CHROMIUM	5.0	-5.0	-5.0	84.6	73.3	80.6	8.5	337.0	14.8	15.7	6.7
COBALT	1.0	-1.00	21.40	-1.00	1.21	-1.00	-1.00	32.50	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	-.50	-.50	.99	.89	-.50	1.18	-.50	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	7.3	-5.0	257.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	-1.00	-1.00	5.56	7.22	5.74	-1.00	8.24	3.32	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.180	3.240	7.030	.417	.420	.373	5.450	3.940	.254	.536
LANTHANUM	.5	.64	1.48	15.00	51.30	49.50	1.45	43.50	2.38	-.50	.82
LUTETIUM	.2	-.20	-.20	.54	.79	.71	-.20	.59	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	11.2	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	2.290	3.920	4.250	-.200	1.450	-.200	-.200	-.200
RUBIDIUM	20.0	-20.0	-20.0	140.0	216.0	244.0	-20.0	110.0	-20.0	-20.0	-20.0
SAMARIUM	.20	.43	.28	2.86	9.41	8.74	.28	8.65	.64	-.20	.23
SCANDIUM	.10	2.85	4.98	16.40	15.90	16.70	.51	12.80	1.10	.29	.74
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	13.00	-5.00
SODIUM, %	.01	-.010	-.010	.030	.093	.047	.010	1.130	.058	-.010	-.010
TANTALUM	1.0	-1.00	-1.00	1.41	1.42	1.08	-1.00	1.11	-1.00	-1.00	-1.00
THORIUM	.5	-.50	1.13	15.90	16.50	13.80	-.50	17.10	4.16	-.50	.68
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	4.64	-2.00	4.39	-2.00	5.08	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	5.09	3.57	3.22	-2.00	2.20	6.27	-2.00	-2.00
YTTERBIUM	.5	-.50	-.50	2.68	3.98	3.60	-.50	2.94	.59	-.50	-.50
ZINC	100.0	500.0	-100.0	188.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32904	# 32905	# 32906	# 32907	# 32908	# 32909	# 32910	# 32911	# 32912	# 32913
ANTIMONY	.2	.76	2.38	7.05	2.08	1.00	5.36	2.03	1.28	1.02	.66
ARSENIC	2.0	-2.00	23.70	72.60	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	-100.0	378.0	358.0	512.0	-100.0	444.0	660.0	698.0	506.0	-100.0
BROMINE	2.0	9.09	27.60	21.90	4.88	9.00	7.46	4.53	4.09	3.96	4.92
CERIUM	2.0	6.00	36.50	45.00	116.00	3.36	85.30	86.70	101.00	35.30	4.14
CAESIUM	1.0	-1.00	9.18	12.60	19.60	-1.00	13.10	13.60	16.20	11.50	-1.00
CHROMIUM	5.0	35.1	52.6	74.8	67.7	23.2	74.0	83.7	77.7	78.4	9.7
COBALT	1.0	-1.00	-1.00	-1.00	1.64	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	.71	.98	1.68	-.50	1.50	1.85	2.37	.54	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	9.1	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	2.03	8.29	4.80	5.96	1.48	6.24	5.49	5.61	4.99	1.30
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.201	3.040	9.390	.485	.214	.444	.438	.483	.485	.131
LANTHANUM	.5	2.89	17.80	24.20	56.40	1.78	43.30	48.60	56.80	18.50	1.83
LUTETIUM	.2	-.20	.62	.50	.75	-.20	.74	.73	.79	.55	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	2.570	2.950	3.640	-.200	3.410	3.080	3.740	2.480	-.200
RUBIDIUM	20.0	-20.0	128.0	154.0	210.0	-20.0	184.0	187.0	221.0	144.0	-20.0
SAMARIUM	.20	.72	4.12	5.26	10.60	.45	8.49	10.30	12.80	3.10	.47
SCANDIUM	.10	1.05	11.20	14.50	15.50	.56	14.50	15.00	15.80	11.70	.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.022	.056	.084	.104	.028	.130	.130	.156	.136	.027
TANTALUM	1.0	-1.00	1.12	-1.00	2.30	-1.00	1.35	1.03	1.76	-1.00	-1.00
THORIUM	.5	1.39	17.00	21.00	13.60	.81	9.43	11.20	13.60	5.38	.89
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	6.24	-2.00	-2.00	2.57	-2.00
URANIUM	2.0	-2.00	2.84	-2.00	2.81	-2.00	-2.00	2.17	-2.00	2.06	-2.00
YTTERBIUM	.5	.70	3.29	2.79	3.78	-.50	3.69	3.85	4.16	2.76	-.50
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32914	# 32915	# 32916	# 32917	# 32918	# 32919	# 32920	# 32921	# 32922	# 32923
ANTIMONY	.2	1.14	3.99	1.53	2.16	4.23	1.24	.34	.85	.48	1.43
ARSENIC	2.0	-2.00	3.87	-2.00	-2.00	-2.00	-2.00	2.50	-2.00	-2.00	-2.00
BARIUM	100.0	382.0	664.0	360.0	590.0	1570.0	475.0	515.0	-100.0	-100.0	408.0
BROMINE	2.0	7.65	4.70	10.00	11.90	42.30	4.74	-2.00	2.36	4.04	6.21
CERIUM	2.0	35.00	22.40	35.90	78.30	212.00	69.10	66.10	26.90	25.70	95.70
CAESIUM	1.0	10.90	15.30	11.20	14.40	4.44	8.12	17.30	1.10	1.71	5.64
CHROMIUM	5.0	57.2	68.3	49.3	63.8	551.0	68.8	446.0	28.7	15.2	57.8
COBALT	1.0	-1.00	-1.00	-1.00	1.28	6.18	-1.00	21.90	-1.00	-1.00	-1.00
EUROPIUM	.5	.68	.52	.62	.77	4.46	.86	.83	-.50	-.50	1.29
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	56.7	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.09	7.57	5.57	7.90	5.89	7.84	8.15	7.32	7.87	12.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.411	.590	.320	.745	.989	.412	4.130	.221	.186	.398
LANTHANUM	.5	18.40	10.90	17.80	39.10	92.70	34.90	35.10	14.20	13.40	47.30
LUTETIUM	.2	.62	.66	.45	.82	.43	.59	.39	.32	.39	.72
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.240	3.770	1.790	3.600	1.310	2.570	1.670	.308	.540	2.440
RUBIDIUM	20.0	132.0	224.0	117.0	192.0	73.9	166.0	205.0	22.1	33.9	149.0
SAMARIUM	.20	3.29	2.47	3.33	6.24	25.20	6.23	7.30	2.34	2.41	8.86
SCANDIUM	.10	10.70	15.10	8.01	15.90	18.70	10.60	11.40	2.27	3.01	9.73
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.147	.172	.079	.083	.027	.069	1.510	.019	.028	.074
TANTALUM	1.0	1.15	1.86	-1.00	1.48	1.28	1.15	4.37	-1.00	1.00	1.83
THORIUM	.5	6.43	6.88	7.39	10.80	30.70	9.02	13.60	3.39	3.88	8.81
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	5.24	-2.00	-2.00	-2.00	-2.00	4.99	3.55	-2.00	2.57
URANIUM	2.0	2.53	3.54	2.45	-2.00	2.69	2.92	5.29	-2.00	-2.00	2.78
YTTERBIUM	.5	3.31	3.54	2.36	4.10	2.36	3.00	2.12	1.64	1.93	3.74
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	172.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	641.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32924	# 32925	# 32926	# 32927	# 32928	# 32929	# 32930	# 32931	# 32932	# 32933
ANTIMONY	.2	1.83	11.20	3.22	.99	.31	.61	.48	1.41	.65	.31
ARSENIC	2.0	-2.00	3.20	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	671.0	838.0	735.0	479.0	117.0	611.0	-100.0	482.0	504.0	-100.0
BROMINE	2.0	5.25	-2.00	2.18	7.04	2.74	3.82	2.55	2.52	3.86	5.83
CERIUM	2.0	117.00	122.00	90.90	76.90	50.90	62.20	22.40	71.70	81.00	18.70
CAESIUM	1.0	10.30	14.50	10.70	9.87	2.56	8.93	1.12	9.90	9.25	-1.00
CHROMIUM	5.0	63.0	92.9	81.0	56.4	16.3	61.5	15.0	55.8	57.3	20.6
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	1.28	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	1.22	1.83	1.21	1.11	.78	.95	-.50	.89	1.10	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	9.72	8.31	9.00	6.80	12.00	7.72	6.73	6.70	7.07	9.30
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.506	.550	.463	.437	.198	.463	.128	.392	.408	.175
LANTHANUM	.5	58.00	62.40	46.80	39.10	26.00	32.60	12.00	37.60	42.40	10.10
LUTETIUM	.2	.93	.82	.93	.62	.51	.75	.36	.67	.77	.39
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.990	4.650	4.080	2.810	1.050	3.550	.366	3.010	3.750	.401
RUBIDIUM	20.0	224.0	289.0	226.0	166.0	58.8	190.0	-20.0	161.0	204.0	20.6
SAMARIUM	.20	10.40	11.60	8.52	7.10	4.66	5.68	2.02	6.48	6.98	1.86
SCANDIUM	.10	14.90	20.20	17.10	10.80	3.92	13.20	2.25	10.50	12.40	2.05
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.106	.170	.149	.093	.027	.108	.023	.093	.087	.015
TANTALUM	1.0	2.54	2.37	1.43	1.27	-1.00	1.70	-1.00	1.28	1.46	-1.00
THORIUM	.5	12.30	19.20	14.40	9.85	5.87	9.29	3.64	9.62	10.30	3.47
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	8.24	-2.00	-2.00	-2.00	-2.00	-2.00	2.58	3.07	-2.00
URANIUM	2.0	3.81	4.14	2.31	-2.00	2.63	2.65	-2.00	2.75	2.80	-2.00
YTTERBIUM	.5	4.75	4.13	4.73	3.30	2.82	3.56	1.77	3.29	3.55	1.85
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32934	# 32935	# 32936	# 32937	# 32938	# 32939	# 32940	# 32941	# 32942	# 32943
ANTIMONY	.2	1.04	.37	1.01	1.21	.77	4.84	-.20	1.77	7.22	.78
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	5.02	33.90	3.79	3.97	9.83	2.12
BARIUM	100.0	341.0	-100.0	598.0	374.0	626.0	444.0	628.0	369.0	488.0	464.0
BROMINE	2.0	6.18	6.71	3.31	6.09	-2.00	3.40	-2.00	4.59	-2.00	10.00
CERIUM	2.0	56.80	9.41	41.60	41.50	101.00	78.50	77.10	55.80	77.30	79.10
CAESIUM	1.0	7.75	-1.00	7.51	3.40	10.30	10.10	10.10	15.10	16.60	7.84
CHROMIUM	5.0	42.2	23.8	62.2	46.8	61.1	59.9	327.0	59.1	90.3	51.9
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	2.54	2.35	29.30	-1.00	-1.00	2.35
EUROPIUM	.5	.87	-.50	.71	.71	1.30	1.08	1.04	.80	1.31	1.09
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	6.0	238.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.35	6.84	7.64	10.00	7.09	8.25	8.35	7.06	5.66	8.52
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.321	.191	.429	.291	.701	2.270	5.350	.510	.581	1.290
LANTHANUM	.5	30.10	4.98	22.20	21.80	52.30	41.70	43.10	30.20	41.40	42.10
LUTETIUM	.2	.64	.27	.79	.68	.82	.76	.58	.64	.78	.61
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.660	-.200	3.670	1.870	3.620	3.100	1.170	3.180	3.340	1.490
RUBIDIUM	20.0	149.0	-20.0	202.0	102.0	226.0	195.0	124.0	221.0	215.0	105.0
SAMARIUM	.20	5.43	.95	4.25	3.94	9.46	7.84	8.36	5.54	7.92	7.15
SCANDIUM	.10	9.42	1.01	14.00	7.92	15.10	12.30	12.40	11.20	15.40	7.65
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.066	.011	.104	.089	.082	.083	1.120	.035	.062	.351
TANTALUM	1.0	1.41	-1.00	2.26	2.00	1.12	1.09	1.01	1.41	1.01	-1.00
THORIUM	.5	9.46	2.38	8.75	6.44	15.40	11.00	16.70	8.32	11.80	12.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.30	-2.00	3.02	3.60	7.53	2.50	5.70	4.62	3.41	2.50
URANIUM	2.0	2.92	-2.00	3.56	3.14	2.75	2.24	3.01	8.55	2.92	-2.00
YTTERBIUM	.5	3.13	1.31	3.84	3.41	4.01	3.68	2.71	3.12	3.76	2.98
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	509.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 32944	# 32945	# 32946	# 32947	# 32948	# 32949	# 32950	# 32951	# 32952	# 32953
ANTIMONY	.2	1.49	.86	1.06	.87	1.00	.79	.89	.83	.52	.82
ARSENIC	2.0	6.02	2.09	3.27	-2.00	-2.00	-2.00	2.05	-2.00	-2.00	7.78
BARIUM	100.0	727.0	426.0	646.0	231.0	444.0	300.0	374.0	555.0	307.0	174.0
BROMINE	2.0	2.31	6.42	6.63	3.34	2.94	4.50	3.64	4.41	3.08	13.50
CERIUM	2.0	83.80	66.40	63.40	49.50	66.90	58.60	64.30	72.80	51.90	71.80
CAESIUM	1.0	12.30	6.09	6.38	3.94	7.98	6.21	7.46	8.80	7.09	6.58
CHROMIUM	5.0	84.3	55.1	86.2	45.3	74.6	49.4	67.7	60.4	47.9	87.6
COBALT	1.0	4.61	1.12	2.65	-1.00	2.89	-1.00	1.74	-1.00	-1.00	2.42
EUROPIUM	.5	1.41	.93	1.00	.66	.84	.82	.70	1.13	.65	.62
GOLD, ppb	5.0	5.7	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.14	9.24	5.88	9.18	8.02	9.61	7.50	7.73	7.68	8.22
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	2.110	.521	1.850	.285	1.110	.303	.809	.570	.323	1.400
LANTHANUM	.5	45.30	36.40	35.80	27.50	36.90	32.10	35.80	40.80	26.80	40.90
LUTETIUM	.2	.62	.50	.41	.44	.49	.50	.47	.58	.59	.36
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.390	1.490	2.030	.863	1.850	.824	1.610	2.340	2.060	.819
RUBIDIUM	20.0	156.0	72.6	139.0	53.8	120.0	58.3	91.1	130.0	124.0	61.8
SAMARIUM	.20	8.98	6.06	5.56	4.13	6.12	4.98	5.91	6.74	4.19	4.47
SCANDIUM	.10	10.70	6.20	8.53	4.16	7.64	4.78	6.72	9.34	7.93	5.46
[illegible]NIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.635	.583	.877	.242	.354	.286	.523	.565	.049	.025
TANTALUM	1.0	1.30	-1.00	2.15	1.11	1.40	-1.00	1.23	1.64	1.09	3.26
THORIUM	.5	16.20	9.83	11.00	6.80	10.50	7.90	9.37	11.90	6.91	7.44
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.67	-2.00	3.58	-2.00	-2.00	-2.00	-2.00	-2.00	2.37	-2.00
URANIUM	2.0	2.98	-2.00	2.03	2.21	-2.00	2.84	-2.00	-2.00	-2.00	2.14
YTTERBIUM	.5	3.23	2.57	2.23	2.34	2.39	2.37	2.42	2.70	2.91	1.84
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 326

ELEMENT	DL	# 32954	# 32955	# 32956	# 32957	# 32958	# 32959	# 32960	# 32961	# 32962	# 32963
ANTIMONY	.2	.51	.84	1.07	.68	.66	.33	.37	1.76	.24	5.65
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.11	-2.00	-2.00	17.00
BARIUM	100.0	105.0	363.0	472.0	409.0	137.0	183.0	417.0	562.0	-100.0	-100.0
BROMINE	2.0	7.36	5.71	6.72	6.55	6.87	9.41	-2.00	5.37	9.36	2.07
CERIUM	2.0	40.30	55.90	71.90	56.90	34.20	26.30	60.50	86.10	15.90	164.00
CAESIUM	1.0	4.19	6.04	6.81	8.78	1.79	3.97	16.60	11.80	1.04	7.95
CHROMIUM	5.0	45.8	48.1	66.5	55.2	31.1	29.8	438.0	98.1	6.7	959.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	1.07	-1.00	22.40	-1.00	-1.00	25.10
EUROPIUM	.5	.62	.97	1.10	.78	.66	.56	.89	1.08	-.50	12.90
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	61.7	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.43	7.70	8.56	8.16	13.00	7.72	8.10	6.89	4.19	7.36
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.283	.323	.421	.361	.297	.255	3.980	.584	.237	1.400
LANTHANUM	.5	22.30	30.70	37.00	30.10	16.30	13.70	34.60	45.80	8.11	117.00
LUTETIUM	.2	.41	.62	.69	.68	.63	.52	.43	.76	.25	1.35
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.724	2.450	2.900	3.040	.923	1.710	1.530	4.700	.395	-.200
RUBIDIUM	20.0	39.0	126.0	152.0	158.0	54.5	87.7	203.0	229.0	20.3	-20.0
SAMARIUM	.20	3.62	4.86	6.84	5.20	4.03	2.72	6.99	8.70	1.62	51.00
SCANDIUM	.10	3.35	10.00	11.40	10.90	4.15	6.81	11.00	16.50	1.85	53.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.072	.052	.063	.068	.031	.054	1.490	.113	.018	-.010
TANTALUM	1.0	1.38	1.41	1.52	1.32	-1.00	-1.00	3.35	-1.00	-1.00	4.76
THORIUM	.5	5.31	8.67	9.68	8.79	5.46	5.34	13.60	14.20	2.56	4.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.32	-2.00	-2.00	2.10	-2.00	6.03	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	2.36	2.08	2.77	2.51	5.75	4.64	-2.00	-2.00
YTTERBIUM	.5	1.93	3.14	3.55	3.38	3.11	2.78	2.01	3.81	1.25	6.70
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	507.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	518.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32964	# 32965	# 32966	# 32967	# 32968	# 32969	# 32970	# 32971	# 32972	# 32973
ANTIMONY	.2	12.00	4.35	3.84	1.25	.92	.35	.29	.93	.74	.67
ARSENIC	2.0	5.79	8.10	28.70	4.71	-2.00	7.53	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	-100.0	-100.0	-100.0	-100.0	210.0	347.0	-100.0	402.0	480.0	142.0
BROMINE	2.0	5.88	7.70	5.88	10.50	9.76	5.29	61.00	8.28	11.40	39.60
CERIUM	2.0	36.50	19.50	58.90	33.80	47.90	84.30	35.50	73.10	79.40	37.40
CAESIUM	1.0	2.05	11.60	2.42	3.99	13.00	17.80	3.85	19.40	13.40	2.72
CHROMIUM	5.0	94.3	119.0	90.0	100.0	152.0	108.0	212.0	72.0	61.2	35.1
COBALT	1.0	1.25	3.73	301.00	2.43	2.11	14.90	8.83	-1.00	-1.00	-1.00
EUROPIUM	.5	1.52	.96	4.19	1.26	.68	1.93	.67	.65	.98	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.68	7.28	8.14	6.95	6.02	5.37	4.36	6.41	6.77	6.57
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.773	.965	1.110	.876	.688	3.120	2.660	.549	.497	.259
LANTHANUM	.5	24.20	10.90	51.30	21.60	24.70	43.60	22.00	39.00	43.50	20.60
LUTETIUM	.2	.40	.48	.77	.46	.46	.62	.39	.61	.59	.29
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	.766	-.200	-.200	1.040	2.260	.282	2.700	3.250	.668
RUBIDIUM	20.0	-20.0	47.3	-20.0	-20.0	50.1	110.0	-20.0	129.0	154.0	25.4
SAMARIUM	.20	5.66	3.35	16.10	5.15	4.21	9.06	4.15	5.87	6.01	2.93
SCANDIUM	.10	24.30	31.90	37.40	29.30	16.50	27.30	29.60	9.85	10.20	3.01
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.011	.020	.019	.019	.027	.038	.014	.044	.046	.026
TANTALUM	1.0	2.36	2.24	2.54	2.65	1.57	1.87	1.13	1.81	1.88	1.36
THORIUM	.5	8.17	9.79	8.42	5.30	10.90	13.20	5.83	10.40	11.00	4.49
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	12.70	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.06	2.48	4.10	2.41	2.42	3.12	1.97	2.86	2.90	1.43
ZINC	100.0	116.0	112.0	1150.0	116.0	-100.0	132.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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ELEMENT	DL	# 32974	# 32975	# 32976	# 32977	# 32978	# 32979	# 32980	# 32981	# 32982	# 32983
ANTIMONY	.2	1.07	.58	.60	.87	1.21	3.42	.24	.67	1.24	.77
ARSENIC	2.0	2.50	-2.00	-2.00	-2.00	2.61	5.18	3.74	-2.00	-2.00	-2.00
BARIUM	100.0	508.0	-100.0	-100.0	440.0	-100.0	1590.0	584.0	-100.0	528.0	373.0
BROMINE	2.0	3.66	-2.00	6.68	7.52	2.35	-2.00	-2.00	6.81	3.93	2.51
CERIUM	2.0	143.00	23.20	22.40	88.20	45.70	106.00	79.80	39.30	78.90	71.90
CAESIUM	1.0	24.30	-1.00	-1.00	7.14	-1.00	10.90	9.90	1.28	5.91	2.25
CHROMIUM	5.0	89.2	5.1	20.9	44.3	21.9	54.7	338.0	25.4	38.9	30.7
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	32.50	-1.00	-1.00	-1.00
EUROPIUM	.5	1.15	-.50	-.50	.95	-.50	.81	.84	-.50	1.10	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	254.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	9.11	3.25	3.33	9.73	4.87	11.40	8.40	4.96	8.97	6.54
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.913	.120	.169	.393	.207	.546	5.540	.180	.370	.230
LANTHANUM	.5	78.20	12.50	12.50	48.60	25.50	62.90	44.50	21.60	44.70	41.30
LUTETIUM	.2	1.05	-.20	-.20	.66	-.20	.81	.56	.23	.62	.35
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.820	-.200	-.200	2.000	-.200	3.370	1.390	.420	1.990	.991
RUBIDIUM	20.0	208.0	-20.0	-20.0	119.0	-20.0	184.0	111.0	24.0	114.0	59.8
SAMARIUM	.20	9.63	1.69	1.73	7.16	3.22	6.92	8.53	2.92	6.33	5.24
SODIUM	.10	15.20	.49	.48	8.69	.87	11.90	12.80	1.96	7.65	3.03
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.057	.012	.017	.041	.021	.051	1.150	.022	.046	.034
TANTALUM	1.0	3.29	-1.00	-1.00	2.94	1.08	3.34	1.36	1.60	3.14	2.09
THORIUM	.5	16.90	1.81	2.02	10.80	3.83	18.80	17.40	4.18	11.60	7.85
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	2.80	-2.00	4.35	-2.00	3.19	-2.00
URANIUM	2.0	2.54	-2.00	-2.00	-2.00	-2.00	3.88	4.00	-2.00	3.39	-2.00
YTTERBIUM	.5	4.90	.64	.60	3.35	.91	4.04	2.92	1.20	3.01	1.69
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	511.0	-500.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES
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130209

NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32984	# 32985	# 32986	# 32987	# 32988	# 32989	# 32990	# 32991	# 32992	# 32993
ANTIMONY	.2	.61	1.87	.72	.84	1.04	.45	7.87	1.79	1.29	.98
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	11.70	3.83	2.52	21.80
BARIUM	100.0	-100.0	456.0	-100.0	-100.0	225.0	-100.0	137.0	-100.0	-100.0	105.0
BROMINE	2.0	16.30	9.30	3.74	7.26	9.69	6.03	-2.00	-2.00	3.54	15.80
CERIUM	2.0	40.40	184.00	57.30	35.80	81.90	18.80	65.30	509.00	156.00	38.80
CAESIUM	1.0	-1.00	7.35	-1.00	-1.00	2.82	-1.00	11.70	12.40	9.70	4.50
CHROMIUM	5.0	11.6	56.3	8.7	23.9	25.1	16.5	168.0	122.0	237.0	176.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	14.10	15.60	14.10	18.20
EUROPIUM	.5	-.50	1.53	.65	-.50	1.02	-.50	3.32	21.40	6.61	1.49
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-10.0	-5.0	-5.0
HAFNIUM	1.0	5.30	15.70	4.52	4.77	7.12	3.08	9.80	9.06	7.91	7.59
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.202	.471	.186	.130	.303	.116	1.320	9.280	6.230	6.690
LANTHANUM	.5	21.60	98.30	30.10	19.10	41.90	10.50	37.40	299.00	97.70	16.10
LUTETIUM	.2	.22	1.08	.23	.25	.42	-.20	1.11	3.62	.80	.49
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.238	2.690	-.200	.369	1.140	-.200	.808	-.810	-.420	.417
[illegible]IDIUM	20.0	-20.0	141.0	-20.0	-20.0	61.1	-20.0	52.3	38.7	39.1	21.9
SAMARIUM	.20	3.50	13.80	5.06	3.17	6.96	1.48	12.30	74.90	26.40	6.25
SCANDIUM	.10	1.22	8.86	1.16	1.66	4.76	.51	45.80	48.50	47.30	44.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.023	.078	.023	.027	.049	.015	.029	.028	1.280	.300
TANTALUM	1.0	-1.00	8.24	-1.00	1.22	2.19	-1.00	3.56	4.81	5.12	2.78
THORIUM	.5	4.54	23.40	4.77	4.73	9.40	1.67	11.40	6.68	5.08	6.80
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-4.00	-2.00	-2.00
URANIUM	2.0	-2.00	2.38	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	1.09	5.49	1.06	1.33	2.16	.52	6.25	19.60	4.59	2.68
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	551.0	827.0	955.0	328.0
ZIRCONIUM	500.0	-500.0	769.0	-500.0	-500.0	-500.0	-500.0	-500.0	1080.0	844.0	525.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32994	# 32995	# 32996	# 32997	# 32998	# 32999	# 33000	# 33001	# 33002	# 33003
ANTIMONY	.2	1.21	5.87	20.40	6.52	4.44	1.88	.24	1.23	1.26	2.88
ARSENIC	2.0	15.60	28.30	30.50	4.69	-2.00	-2.00	2.75	-2.00	6.63	7.58
BARIUM	100.0	-100.0	219.0	176.0	190.0	1220.0	-100.0	444.0	-100.0	-100.0	-100.0
BROMINE	2.0	13.60	4.19	19.90	8.92	8.81	2.86	-2.00	2.05	7.62	7.05
CERIUM	2.0	72.70	74.80	59.00	7.09	19.70	4.48	64.00	2.98	-2.00	2.52
CAESIUM	1.0	1.66	6.47	5.01	5.71	11.60	1.31	16.50	-1.00	-1.00	-1.00
CHROMIUM	5.0	156.0	183.0	205.0	28.8	68.2	28.7	436.0	11.8	-5.0	-5.0
COBALT	1.0	36.40	18.00	1.01	-1.00	1.27	-1.00	23.10	-1.00	-1.00	-1.00
EUROPIUM	.5	2.49	2.29	.90	-.50	.51	-.50	.88	-.50	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	52.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.67	7.74	9.31	7.38	7.49	4.50	8.09	2.88	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	8.960	3.970	3.900	.193	.579	.260	4.040	.233	.556	1.040
LANTHANUM	.5	32.30	33.40	35.50	4.02	19.60	2.22	35.10	1.51	.60	1.50
LUTETIUM	.2	.52	.63	.58	.35	.66	-.20	.38	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	1.090	.904	.561	4.720	.212	1.840	-.200	-.200	-.200
RUBIDIUM	20.0	36.0	101.0	51.7	42.5	219.0	-20.0	204.0	-20.0	-20.0	-20.0
SAMARIUM	.20	10.30	9.24	4.08	.70	2.87	.51	7.11	.43	-.20	.32
SCANDIUM	.10	37.30	38.00	39.90	4.58	16.40	1.38	11.10	.76	.32	.58
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.014	.017	.014	.012	.047	.015	1.520	.024	.020	.032
TANTALUM	1.0	2.98	2.55	3.24	-1.00	1.52	-1.00	3.75	-1.00	-1.00	-1.00
THORIUM	.5	6.64	11.00	15.50	5.98	13.80	1.82	13.70	1.40	-.50	.63
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	2.22	-2.00	3.23	-2.00	5.49	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.34	3.54	2.92	1.62	3.42	.82	2.20	.67	-.50	-.50
ZINC	100.0	298.0	736.0	180.0	-100.0	-100.0	-100.0	110.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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QUEREL JOB # 326

ELEMENT	DL	# 33004	# 33005	# 33006	# 33007	# 33008	# 33009	# 33010	# 33011	# 33012	# 33013
ANTIMONY	.2	4.14	2.80	8.71	16.30	11.30	7.78	12.30	23.00	26.60	35.00
ARSENIC	2.0	-2.00	3.00	16.40	20.80	8.37	3.54	-2.00	25.70	1620.00	435.00
BARIUM	100.0	-100.0	-100.0	225.0	-100.0	589.0	505.0	364.0	-100.0	-100.0	-100.0
BROMINE	2.0	4.21	5.71	6.35	13.00	2.86	4.03	5.47	-2.00	4.09	31.60
CERIUM	2.0	-2.00	3.49	43.10	4.29	74.80	81.90	86.70	107.00	75.20	48.30
CAESIUM	1.0	-1.00	-1.00	7.59	-1.00	17.20	17.80	17.00	1.40	5.14	-1.00
CHROMIUM	5.0	16.8	-5.0	83.9	6.0	124.0	88.3	110.0	40.9	70.9	38.1
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.50	53.30	2.21
EUROPIUM	.5	-.50	-.50	.65	-.50	1.31	1.31	1.59	2.08	2.13	4.54
GOLD, ppb	5.0	-5.0	-5.0	7.4	-5.0	7.6	29.6	15.5	-5.0	40.0	11.5
HAFNIUM	1.0	-1.00	-1.00	4.44	-1.00	5.99	5.44	6.86	4.76	3.41	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.060	.879	1.210	.969	.648	.408	.606	2.810	12.300	7.410
LANTHANUM	.5	-.50	1.73	22.00	3.32	44.50	45.70	45.40	59.20	34.10	15.90
LUTETIUM	.2	-.20	-.20	.43	-.20	.77	.68	.73	.58	.40	.36
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	1.730	-.200	5.050	3.520	4.120	-.200	.309	-.200
RUBIDIUM	20.0	-20.0	-20.0	116.0	-20.0	262.0	253.0	231.0	-20.0	48.5	-20.0
SAMARIUM	.20	-.20	.76	4.01	.58	6.54	7.92	9.05	10.20	8.46	16.00
[illegible]DIUM	.10	-.10	.45	11.20	1.11	20.90	14.20	17.10	9.81	9.62	11.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	18.6	-5.0
SILVER	5.0	-5.00	16.10	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.020	.024	.036	.034	.049	.035	.046	.018	.014	.016
TANTALUM	1.0	-1.00	-1.00	1.35	-1.00	1.64	1.89	1.98	-1.00	-1.00	-1.00
THORIUM	.5	-.50	-.50	11.20	1.97	16.50	13.80	12.80	14.00	11.20	3.31
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.83	-2.00
URANIUM	2.0	-2.00	-2.00	3.25	-2.00	5.81	3.75	4.92	3.84	3.49	4.65
YTTERBIUM	.5	-.50	-.50	2.29	-.50	3.87	3.51	3.84	3.04	1.97	2.40
ZINC	100.0	-100.0	-100.0	-100.0	471.0	-100.0	-100.0	-100.0	213.0	1280.0	336.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 33014	# 33015	# 33016	# 33017	# 33018	# 33019	# 33020	# 33021	# 33022	# 33023
ANTIMONY	.2	3.42	17.00	7.87	5.62	1.36	5.06	8.26	3.14	1.20	4.04
ARSENIC	2.0	3.44	171.00	25.10	4.61	-2.00	18.10	3.98	-2.00	-2.00	2.48
BARIUM	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	708.0	135.0	187.0	679.0
BROMINE	2.0	8.84	10.50	6.43	5.09	3.35	17.60	-2.00	6.55	5.19	4.51
CERIUM	2.0	3.84	25.10	30.80	4.52	3.39	28.20	32.80	50.90	30.20	19.90
CAESIUM	1.0	1.29	-1.00	-1.00	1.48	-1.00	-1.00	13.20	3.51	3.67	15.90
CHROMIUM	5.0	12.0	16.3	20.0	9.2	11.0	168.0	130.0	28.1	22.8	87.9
COBALT	1.0	1.09	31.50	1.57	1.27	-1.00	4.83	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	1.00	1.61	-.50	-.50	.60	-.50	-.50	.57	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	10.9	-5.0	-5.0	9.2
HAFNIUM	1.0	1.58	1.29	1.15	1.23	1.85	6.38	7.22	6.07	8.11	6.51
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.210	4.470	1.110	.679	.233	12.900	.556	.201	.278	.465
LANTHANUM	.5	2.02	10.40	12.80	2.34	1.71	11.30	26.50	43.10	21.00	9.80
LUTETIUM	.2	-.20	-.20	-.20	-.20	-.20	.38	.62	.35	.43	.68
MOLYBDENUM	5.0	-5.0	-5.0	-11.0	-5.0	-5.0	-14.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	-.200	-.200	-.200	-.200	3.790	.728	.812	4.270
RUBIDIUM	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	28.2	204.0	43.2	52.4	228.0
SAMARIUM	.20	.40	3.69	6.43	.46	.46	2.91	2.73	3.37	2.76	2.36
SCANDIUM	.10	1.41	3.23	11.50	1.16	.55	19.10	14.10	3.81	3.96	16.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	9.22	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	23.30
SODIUM, %	.01	.032	.030	.054	.055	.029	.041	.038	.025	.042	.130
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.70	-1.00	1.20	1.13
THORIUM	.5	1.60	3.15	6.42	1.39	.96	24.70	20.80	6.07	3.62	11.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.18	2.66	-2.00	-2.00	-2.00	2.49	-2.00	-2.00	2.51
URANIUM	2.0	-2.00	2.71	5.79	-2.00	-2.00	7.81	6.60	-2.00	-2.00	3.46
YTTERBIUM	.5	-.50	.55	1.01	-.50	-.50	2.17	3.03	1.80	2.10	3.34
ZINC	100.0	109.0	5130.0	126.0	-100.0	-100.0	137.0	-100.0	-100.0	-100.0	103.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 326

ELEMENT	DL	# 33024	# 33025	# 33026	# 33027	# 33028	# 33029	# 33030	# 33031	# 33032	# 33033
ANTIMONY	.2	1.67	3.18	1.33	1.29	2.19	3.64	2.16	8.46	2.07	6.27
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	8.36	15.90	178.00	40.90
BARIUM	100.0	387.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	119.0	329.0
BROMINE	2.0	7.26	4.99	-2.00	2.37	13.40	-2.00	3.96	5.39	15.90	2.07
CERIUM	2.0	63.00	7.00	-2.00	-2.00	3.28	-2.00	-2.00	10.70	5.38	83.80
CAESIUM	1.0	15.30	1.53	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	15.60
CHROMIUM	5.0	65.3	11.6	12.6	8.0	32.6	-5.0	-5.0	10.6	31.8	62.9
COBALT	1.0	1.41	-1.00	-1.00	-1.00	-1.00	-1.00	1.49	1.16	-1.00	3.31
EUROPIUM	.5	.84	-.50	-.50	-.50	-.50	-.50	-.50	-.50	-.50	1.71
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.87	3.15	-1.00	1.59	2.65	-1.00	-1.00	1.40	1.46	5.51
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.582	.204	.211	.171	.482	.117	1.550	1.950	12.000	2.030
LANTHANUM	.5	32.40	3.93	-.50	1.00	1.70	-.50	.67	6.76	1.49	39.90
LUTETIUM	.2	.73	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20	.66
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.640	-.200	-.200	-.200	-.200	-.200	-.200	-.200	-.200	2.740
RUBIDIUM	20.0	189.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	25.1	164.0
SAMARIUM	.20	5.83	.85	-.20	.22	.38	-.20	.44	.60	.57	10.70
SCANDIUM	.10	15.50	1.34	-.10	.51	.51	.13	.42	1.53	6.57	14.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.074	.025	.015	.015	.023	-.010	.023	.041	.022	.042
TANTALUM	1.0	1.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.03
THORIUM	.5	11.10	1.58	-.50	.74	1.16	-.50	-.50	2.30	3.06	14.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.92
URANIUM	2.0	2.68	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.47
YTTERBIUM	.5	3.64	.92	-.50	-.50	-.50	-.50	-.50	-.50	-.50	3.42
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	217.0	194.0	259.0	23400.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	530.0

BECQUEREL LABORATORIES
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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 33034	# 33035	# 33036	# 33037	# 33038	# 33039	# 33040	# 33041	# 32730R	# 32748R
ANTIMONY	.2	4.33	9.72	18.20	2.50	10.40	2.80	-.20	4.20	31.90	9.69
ARSENIC	2.0	31.30	58.60	23.20	4.00	78.50	2.33	4.41	-2.00	15.00	3.76
BARIUM	100.0	534.0	426.0	468.0	-100.0	515.0	403.0	674.0	454.0	-100.0	560.0
BROMINE	2.0	3.17	6.44	12.60	8.14	7.98	14.30	-2.00	7.03	23.40	5.13
CERIUM	2.0	187.00	100.00	71.50	10.10	18.80	35.60	81.80	30.90	18.90	67.90
CAESIUM	1.0	18.70	15.10	18.00	2.15	16.20	15.20	10.10	14.30	-1.00	17.70
CHROMIUM	5.0	74.4	111.0	109.0	24.7	113.0	73.0	341.0	58.5	41.0	82.2
COBALT	1.0	1.71	-1.00	-1.00	-1.00	-1.00	-1.00	33.20	-1.00	-1.00	-1.00
EUROPIUM	.5	2.45	1.52	1.11	-.50	-.50	.64	1.13	.52	-.50	.91
GOLD, ppb	5.0	-5.0	16.1	9.6	-5.0	-5.0	-5.0	264.0	-5.0	-5.0	32.1
HAFNIUM	1.0	6.62	6.12	6.49	3.66	6.51	6.64	8.42	8.35	2.02	6.82
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.860	2.140	2.230	.845	2.400	.499	5.540	.457	1.410	.699
LANTHANUM	.5	49.80	48.50	39.70	6.41	7.46	23.40	45.20	15.90	5.31	35.40
LUTETIUM	.2	.86	.64	.62	-.20	.61	.70	.58	.66	-.20	.70
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.310	3.320	3.630	.291	3.800	3.920	1.340	2.660	-.200	4.220
RUBIDIUM	20.0	211.0	184.0	225.0	-20.0	213.0	199.0	101.0	156.0	-20.0	238.0
SAMARIUM	.20	14.50	9.16	6.36	.69	1.77	3.68	8.53	2.75	1.10	6.16
SCANDIUM	.10	17.60	18.80	15.40	1.87	14.60	14.70	13.00	12.20	1.38	17.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.052	.038	.048	.041	.038	.059	1.150	.058	.022	.169
TANTALUM	1.0	1.80	1.51	1.05	-1.00	1.23	1.26	1.55	1.38	-1.00	1.77
THORIUM	.5	18.40	26.20	56.20	2.99	37.10	10.40	17.10	10.60	2.29	14.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.18	-2.00	2.15	-2.00
URANIUM	2.0	4.87	9.00	4.16	2.15	5.11	3.80	-2.00	2.05	3.06	2.41
YTTERBIUM	.5	4.47	3.34	3.28	.92	3.17	3.52	2.88	3.42	.59	3.42
ZINC	100.0	111.0	154.0	-100.0	-100.0	-100.0	-100.0	101.0	-100.0	396.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL J08 # 326

ELEMENT	DL	# 3276R	# 32778R	# 32812R	# 32816R	# 32852R	# 32864R	# 32887R	# 32907R	# 32928R	# 32952R
ANTIMONY	.2	5.94	3.26	6.59	8.20	.80	2.10	10.70	2.05	.37	.51
ARSENIC	2.0	16.80	3.29	101.00	319.00	-2.00	10.30	28.10	-2.00	-2.00	-2.00
BARIUM	100.0	-100.0	221.0	-100.0	458.0	202.0	420.0	623.0	417.0	196.0	412.0
BROMINE	2.0	3.22	14.20	34.20	3.88	-2.00	-2.00	2.08	4.95	2.62	3.38
CERIUM	2.0	89.10	92.70	16.80	71.70	34.80	82.80	107.00	111.00	49.70	53.10
CAESIUM	1.0	14.10	8.86	3.68	22.50	6.02	33.50	3.53	19.90	2.13	6.86
CHROMIUM	5.0	244.0	112.0	164.0	226.0	23.2	66.5	310.0	63.6	16.9	48.2
COBALT	1.0	2.42	3.68	4.65	62.30	-1.00	6.66	43.30	1.35	-1.00	-1.00
EUROPIUM	.5	6.99	1.33	.73	2.37	.54	1.00	4.14	1.33	.72	.71
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	10.40	6.11	6.89	7.53	7.04	6.66	9.12	6.09	11.70	7.85
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.200	1.320	14.400	4.170	.391	1.310	8.250	.457	.206	.320
LANTHANUM	.5	67.20	48.20	11.10	36.50	16.90	44.10	55.80	56.30	25.30	27.50
LUTETIUM	.2	1.25	.58	.55	.75	.47	.67	.66	.76	.53	.57
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.624	1.960	.713	2.270	1.660	2.730	-.200	4.000	.973	2.500
RUBIDIUM	20.0	57.4	124.0	67.0	186.0	80.2	169.0	35.7	205.0	57.4	120.0
SAMARIUM	.20	25.00	8.80	2.07	9.68	3.00	6.84	15.50	10.20	4.50	4.28
SCANDIUM	.10	51.50	18.10	37.50	36.80	6.05	12.60	42.10	15.40	3.78	8.07
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.019	.146	.013	.023	.044	.047	.017	.106	.025	.052
TANTALUM	1.0	4.18	2.30	2.33	2.22	-1.00	-1.00	3.30	-1.00	1.25	1.30
THORIUM	.5	8.64	12.90	7.60	9.09	5.04	11.80	8.22	13.30	5.69	7.22
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.01
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.23	-2.00	-2.00
YTTERBIUM	.5	6.32	3.03	2.70	3.79	2.43	3.34	3.77	3.86	2.66	2.91
ZINC	100.0	237.0	-100.0	147.0	666.0	-100.0	-100.0	4660.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 326

ELEMENT	DL	# 32967R	# 32990R	# 32998R	# 33029R	# 33034R
ANTIMONY	.2	1.21	7.64	4.31	3.76	4.15
ARSENIC	2.0	3.98	10.80	-2.00	-2.00	30.80
BARIUM	100.0	-100.0	106.0	1200.0	-100.0	488.0
BROMINE	2.0	11.00	-2.00	9.04	-2.00	4.01
CERIUM	2.0	35.20	57.80	20.80	-2.00	187.00
CAESIUM	1.0	3.47	12.50	11.80	-1.00	18.50
CHROMIUM	5.0	99.5	159.0	68.3	-5.0	75.4
COBALT	1.0	2.95	14.20	1.11	-1.00	2.31
EUROPIUM	.5	1.32	3.17	.54	-.50	2.48
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.00	9.09	7.56	-1.00	6.52
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.900	1.330	.592	.103	1.830
LANTHANUM	.5	21.70	37.40	19.80	-.50	49.10
LUTETIUM	.2	.45	1.12	.67	-.20	.84
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	.750	4.160	-.200	3.220
RUBIDIUM	20.0	-20.0	53.0	224.0	-20.0	188.0
SAMARIUM	.20	5.11	11.90	2.92	-.20	14.40
SCANDIUM	.10	29.50	45.50	16.60	.13	17.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.021	.028	.050	.010	.051
TANTALUM	1.0	2.58	2.93	1.54	-1.00	1.79
THORIUM	.5	5.39	10.90	14.20	-.50	18.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	3.57	-2.00	5.78
YTTERBIUM	.5	2.26	6.04	3.29	-.50	4.47
ZINC	100.0	112.0	574.0	-100.0	-100.0	110.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL LABORATORIES PTY. LIMITED

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 27-02-91

RGC TASMANIA , SAMPLES T32401 - T32719.

BECQUEREL JOB # 302

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
- ALL SAMPLES PREFIXED "T".
- ELEVATED D.L. FOR Mo DUE TO U FISSION.

ELEMENT	DL	# 32401	# 32402	# 32403	# 32404	# 32405	# 32406	# 32407	# 32408	# 32409	# 32410
ANTIMONY	.2	1.30	1.60	7.00	3.10	2.90	3.00	1.70	2.30	4.00	3.20
ARSENIC	2.0	222.00	100.00	150.00	211.00	41.00	78.00	-2.00	2.00	120.00	3.90
BARIUM	100.0	140.0	230.0	470.0	210.0	330.0	-100.0	-100.0	540.0	38700.0	430.0
BROMINE	2.0	25.00	2.60	2.60	3.60	-2.00	12.00	5.90	12.00	2.40	11.00
CERIUM	2.0	71.00	71.00	47.00	30.00	59.00	36.00	11.00	99.00	55.00	71.00
CAESIUM	1.0	16.00	20.00	8.10	8.60	4.20	1.40	1.60	14.00	4.60	12.00
CHROMIUM	5.0	190.0	120.0	430.0	930.0	791.0	561.0	13.0	56.0	57.0	85.0
COBALT	1.0	14.00	43.00	41.00	63.00	141.00	17.00	-1.00	-1.00	91.00	-1.00
EUROPIUM	.5	2.20	1.90	2.50	1.40	2.40	.76	-.50	1.20	.73	.93
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.10	7.00	5.60	4.40	6.10	6.60	4.10	8.30	4.60	6.20
INDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	13.100	10.400	10.800	12.200	9.070	7.430	.310	.600	2.300	.580
LANTHANUM	.5	39.00	24.00	26.00	16.00	29.00	17.00	5.40	51.40	31.00	37.00
LUTETIUM	.2	.84	.66	.58	.34	.60	.40	.24	1.00	.43	.61
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.820	1.500	.550	-.200	.630	-.200	.550	4.200	.250	2.600
RUBIDIUM	20.0	83.0	110.0	53.0	30.0	44.0	30.0	-20.0	200.0	25.0	130.0
SAMARIUM	.20	9.50	8.10	8.80	4.80	9.40	4.20	1.20	9.20	5.30	5.70
SCANDIUM	.10	32.40	34.00	32.90	27.10	42.80	30.60	1.90	14.40	8.30	16.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.50	2.60	4.00	-1.00	3.30	2.10	-1.00	2.30	-1.00	1.50
THORIUM	.5	9.30	9.20	3.80	2.20	3.90	5.70	2.40	17.00	11.00	16.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.90	-2.00	7.60	-2.00
URANIUM	2.0	-2.00	2.10	-2.00	-2.00	-2.00	-2.00	-2.00	5.00	-2.00	3.30
YTTERBIUM	.5	4.10	3.40	2.70	1.70	3.00	1.90	1.20	4.80	1.80	2.80
ZINC	100.0	460.0	940.0	4000.0	1100.0	1100.0	170.0	-100.0	-100.0	620.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	590.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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QUEREL JOB # 302

ELEMENT	DL	# 32411	# 32412	# 32413	# 32414	# 32415	# 32416	# 32417	# 32418	# 32419	# 32420
ANTIMONY	.2	6.50	3.40	1.50	1.50	1.00	.69	.95	1.30	.81	4.50
ARSENIC	2.0	33.00	2.90	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	54.00
BARIUM	100.0	350.0	150.0	290.0	390.0	320.0	300.0	-100.0	-100.0	-100.0	370.0
BROMINE	2.0	24.00	-2.00	10.00	2.60	2.90	3.30	4.70	3.90	3.30	17.00
CERIUM	2.0	96.00	89.00	68.00	59.00	54.00	50.00	4.40	3.10	5.20	65.00
CAESIUM	1.0	17.00	7.30	4.30	6.20	7.10	5.80	-1.00	-1.00	-1.00	12.00
CHROMIUM	5.0	100.0	82.0	86.0	38.0	43.0	39.0	8.7	11.0	7.7	130.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.50
EUROPIUM	.5	1.30	1.30	.89	1.00	.95	.72	-.50	-.50	-.50	1.50
GOLD, ppb	5.0	-5.0	5.8	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.20	7.10	5.10	5.20	7.60	8.10	1.80	3.50	1.50	5.40
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.600	1.000	.500	.490	.440	.510	.430	.410	.480	7.400
LANTHANUM	.5	50.70	47.00	36.00	29.00	27.00	24.00	2.00	1.60	2.60	38.00
LUTETIUM	.2	.63	.60	.66	.49	.65	.58	-.20	-.20	-.20	.59
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.800	2.400	2.800	1.800	2.000	1.600	-.200	-.200	-.200	3.000
RUBIDIUM	20.0	310.0	98.0	120.0	96.0	100.0	85.0	-20.0	-20.0	-20.0	190.0
SAMARIUM	.20	7.90	8.50	6.80	5.70	5.60	5.00	.47	.51	.58	7.80
SCANDIUM	.10	7.00	17.00	10.30	7.60	8.80	6.70	.57	.56	.63	24.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.20	1.40	-1.00	1.40	-1.00	1.20	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	22.00	19.00	9.20	8.40	8.80	7.20	.88	1.20	1.00	16.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	4.00	2.50	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	5.20	3.20	2.80	2.20	-2.00	-2.00	-2.00	-2.00	3.90
YTTERBIUM	.5	2.80	2.90	3.40	2.40	3.10	2.80	.58	1.00	.53	3.00
ZINC	100.0	-100.0	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	170.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32421	# 32422	# 32423	# 32424	# 32425	# 32426	# 32427	# 32428	# 32429	# 32430
ANTIMONY	.2	4.30	5.00	.92	8.00	5.20	6.40	5.50	6.40	6.00	2.80
ARSENIC	2.0	130.00	40.00	10.00	9.20	38.00	130.00	24.00	140.00	258.00	65.00
BARIUM	100.0	-100.0	-100.0	200.0	170.0	200.0	420.0	240.0	100.0	220.0	-100.0
BROMINE	2.0	40.00	41.00	5.90	7.80	41.00	21.00	16.00	79.00	47.00	31.00
CERIUM	2.0	88.00	48.00	41.00	92.00	64.00	66.00	51.00	58.00	55.00	55.00
CAESIUM	1.0	10.00	5.10	5.70	5.10	7.60	5.60	7.40	12.00	11.00	6.20
CHROMIUM	5.0	220.0	240.0	200.0	554.0	210.0	210.0	290.0	290.0	350.0	330.0
COBALT	1.0	2.10	8.00	16.00	35.00	13.00	19.00	24.00	7.80	13.00	37.00
EUROPIUM	.5	2.40	1.40	1.80	3.60	1.70	2.10	1.40	1.40	1.60	1.80
GOLD, ppb	5.0	7.2	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	10.00	9.10	8.20	12.00	7.90	7.90	8.90	8.40	8.00	8.70
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	9.020	12.800	10.700	12.700	8.720	10.600	10.800	7.970	10.900	11.200
LANTHANUM	.5	50.00	23.00	15.00	59.00	38.00	35.00	30.00	31.00	30.00	33.00
LUTETIUM	.2	.70	.64	.72	.85	.65	.84	.72	.74	.71	.65
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.100	.350	1.000	.920	1.400	2.100	1.400	1.000	1.100	.830
RUBIDIUM	20.0	120.0	59.0	67.0	75.0	120.0	140.0	130.0	140.0	130.0	72.0
SAMARIUM	.20	12.00	5.90	6.00	14.00	8.80	9.00	6.30	6.50	7.50	7.70
SCANDIUM	.10	22.00	37.90	46.00	46.90	31.40	32.10	38.70	24.20	32.30	32.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	3.60	2.90	3.00	4.20	3.10	1.70	3.30	5.30	2.70	3.60
THORIUM	.5	12.00	8.70	8.20	10.00	8.10	9.00	8.60	11.00	9.00	7.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	7.00	4.60	10.00
URANIUM	2.0	-2.00	2.20	-2.00	-2.00	-2.00	-2.00	2.50	2.00	-2.00	-2.00
YTTERBIUM	.5	3.40	3.10	3.70	4.20	3.20	3.90	3.50	3.60	3.40	3.20
ZINC	100.0	120.0	250.0	310.0	390.0	270.0	290.0	480.0	380.0	450.0	380.0
ZIRCONIUM	500.0	-500.0	720.0	690.0	-500.0	-500.0	-500.0	-500.0	530.0	540.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32431	# 32432	# 32433	# 32434	# 32435	# 32436	# 32437	# 32438	# 32439	# 32440
ANTIMONY	.2	7.60	6.50	3.00	1.60	6.00	2.50	5.00	1.70	1.80	13.00
ARSENIC	2.0	350.00	412.00	90.00	91.00	110.00	44.00	78.00	48.00	43.00	51.00
BARIUM	100.0	300.0	100.0	470.0	330.0	340.0	270.0	160.0	130.0	-100.0	280.0
BROMINE	2.0	57.00	60.00	15.00	4.30	12.00	8.80	74.00	45.00	63.00	47.00
CERIUM	2.0	47.00	33.00	13.00	64.00	71.00	42.00	84.00	71.00	55.00	88.00
CAESIUM	1.0	7.20	14.00	11.00	14.00	13.00	10.00	9.00	3.70	4.10	15.00
CHROMIUM	5.0	606.0	420.0	503.0	130.0	230.0	240.0	200.0	350.0	310.0	470.0
COBALT	1.0	26.00	43.00	62.00	20.00	26.00	22.00	4.80	43.00	37.00	2.90
EUROPIUM	.5	1.10	.75	.90	2.00	1.90	1.70	1.80	2.10	1.80	1.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.80	4.20	2.10	6.20	9.10	7.60	8.40	8.30	7.00	8.20
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	9.070	8.130	10.800	10.800	10.100	12.700	8.350	14.900	14.400	9.070
LANTHANUM	.5	25.00	16.00	5.50	35.00	37.00	24.00	47.00	39.00	35.00	43.00
LUTETIUM	.2	.67	.53	.55	.69	.74	.61	.67	.60	.56	.62
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.300	1.200	1.300	3.600	2.800	1.600	1.500	.590	.340	2.800
RUBIDIUM	20.0	140.0	180.0	160.0	250.0	260.0	170.0	150.0	78.0	70.0	230.0
SAMARIUM	.20	5.70	3.70	2.50	7.90	8.40	6.50	10.00	9.20	7.70	7.60
SCANDIUM	.10	29.40	31.60	40.70	30.70	26.20	39.20	21.00	37.10	26.90	40.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.70	1.70	-1.00	2.50	3.20	2.60	3.70	5.10	2.40	3.10
THORIUM	.5	7.70	5.40	1.60	11.00	10.00	7.80	11.00	8.30	7.70	8.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.70	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	2.30	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.90	2.20	2.90	3.20	3.70	3.00	3.30	3.10	2.60	3.00
ZINC	100.0	350.0	360.0	560.0	300.0	620.0	190.0	160.0	300.0	260.0	120.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	500.0	520.0	-500.0	-500.0	-500.0	-500.0	600.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32441	# 32442	# 32443	# 32444	# 32445	# 32446	# 32447	# 32448	# 32449	# 32450
ANTIMONY	.2	2.20	6.10	16.00	4.10	1.20	2.30	7.10	2.20	3.20	2.50
ARSENIC	2.0	47.00	20.00	150.00	100.00	25.00	26.00	140.00	19.00	24.00	281.00
BARIUM	100.0	-100.0	290.0	-100.0	780.0	170.0	250.0	240.0	300.0	200.0	330.0
BROMINE	2.0	50.00	20.00	73.00	100.00	70.00	39.00	92.00	50.00	100.00	-2.00
CERIUM	2.0	49.00	70.00	64.00	72.00	92.00	84.00	88.00	87.00	36.00	36.00
CAESIUM	1.0	5.10	6.10	10.00	11.00	10.00	8.30	10.00	10.00	3.90	-1.00
CHROMIUM	5.0	290.0	240.0	230.0	320.0	180.0	310.0	240.0	260.0	280.0	50.0
COBALT	1.0	22.00	108.00	6.60	96.00	57.00	89.00	98.00	41.00	23.00	15.00
EUROPIUM	.5	1.80	1.90	1.80	2.10	1.70	1.70	2.20	2.10	.85	.84
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	230.0
HAFNIUM	1.0	8.50	9.00	8.30	7.90	6.40	7.60	6.60	8.40	7.50	2.30
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	12.500	15.800	11.300	12.300	9.120	11.100	10.700	9.770	16.600	4.300
LANTHANUM	.5	26.00	26.00	33.00	34.00	28.00	25.00	32.00	38.00	17.00	13.00
LUTETIUM	.2	.63	.65	.67	.68	.62	.56	.79	.75	.61	.34
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.700	.510	1.500	.720	1.200	.640	1.000	1.300	.570	1.700
RUBIDIUM	20.0	56.0	76.0	210.0	68.0	90.0	50.0	110.0	100.0	54.0	28.0
SAMARIUM	.20	6.70	7.60	7.90	7.90	6.70	7.10	9.30	9.10	4.40	4.10
SCANDIUM	.10	35.60	25.30	27.30	39.90	27.10	37.20	34.00	33.60	35.70	12.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	4.60	3.30	3.00	1.90	2.70	2.90	4.30	3.50	2.40	-1.00
THORIUM	.5	7.50	8.60	8.80	8.70	10.00	6.40	12.00	10.00	7.60	2.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.70	-2.00	-2.00	2.70
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.70	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.00	3.50	3.10	3.20	3.10	3.10	4.10	4.00	3.40	1.50
ZINC	100.0	240.0	890.0	190.0	700.0	190.0	350.0	470.0	170.0	150.0	810.0
ZIRCONIUM	500.0	-500.0	700.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32451	# 32452	# 32453	# 32454	# 32455	# 32456	# 32457	# 32458	# 32459	# 32460
ANTIMONY	.2	1.20	8.00	1.20	1.50	13.00	5.30	3.90	3.60	11.00	4.20
ARSENIC	2.0	21.00	49.00	-2.00	8.50	58.00	22.00	17.00	13.00	57.00	18.00
BARIUM	100.0	1000.0	290.0	370.0	310.0	670.0	340.0	820.0	290.0	710.0	180.0
BROMINE	2.0	8.20	42.00	5.00	17.00	11.00	81.00	51.00	7.60	2.90	190.00
CERIUM	2.0	61.00	75.00	66.00	92.00	140.00	180.00	239.00	120.00	120.00	170.00
CAESIUM	1.0	6.80	11.00	8.30	10.00	6.80	3.00	2.80	8.30	3.50	6.90
CHROMIUM	5.0	270.0	140.0	49.0	180.0	270.0	280.0	330.0	310.0	270.0	310.0
COBALT	1.0	50.00	2.00	-1.00	-1.00	31.00	66.00	77.00	54.00	40.00	15.00
EUROPIUM	.5	2.60	1.00	.89	1.50	3.60	4.90	3.90	2.30	4.10	4.70
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.80	7.30	6.60	7.40	7.20	7.90	9.10	7.10	9.10	13.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	13.600	5.630	.550	1.700	9.640	8.370	7.650	8.930	11.200	10.000
LANTHANUM	.5	24.00	38.00	35.00	49.00	85.40	111.00	134.00	66.30	60.90	92.90
LUTETIUM	.2	.65	.68	.63	.66	.53	.57	.55	.37	.49	.64
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.900	2.000	2.500	2.200	2.200	.270	1.600	1.500	.640	.760
RUBIDIUM	20.0	96.0	140.0	140.0	130.0	180.0	-20.0	34.0	110.0	110.0	46.0
SAMARIUM	.20	9.00	7.00	6.20	8.10	12.00	17.00	17.00	8.90	13.00	19.00
SCANDIUM	.10	35.70	15.90	10.10	11.70	33.60	33.30	38.40	31.50	25.30	30.90
[illegible]NIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	3.60	2.40	1.30	1.90	10.00	9.30	10.00	8.80	6.00	8.90
THORIUM	.5	6.20	13.00	9.50	10.00	14.00	15.00	18.00	13.00	7.50	13.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	2.70	2.20	-2.00	-2.00	-2.00	-2.00	4.70	-2.00
URANIUM	2.0	-2.00	-2.00	2.40	-2.00	-2.00	2.10	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.60	3.20	3.20	3.20	2.70	3.10	2.80	2.20	2.90	3.20
ZINC	100.0	370.0	-100.0	-100.0	-100.0	700.0	490.0	530.0	850.0	1900.0	260.0
ZIRCONIUM	500.0	620.0	-500.0	-500.0	-500.0	620.0	530.0	530.0	-500.0	560.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32461	# 32462	# 32463	# 32464	# 32465	# 32466	# 32467	# 32468	# 32469	# 32470
ANTIMONY	.2	1.80	19.00	6.50	1.40	3.90	2.10	1.10	2.20	1.30	2.80
ARSENIC	2.0	5.90	1300.00	62.00	23.00	62.00	15.00	7.80	8.20	5.50	51.00
BARIUM	100.0	530.0	680.0	290.0	120.0	290.0	200.0	140.0	170.0	240.0	160.0
BROMINE	2.0	98.00	13.00	9.10	7.30	17.00	65.00	8.80	55.00	6.50	56.00
CERIUM	2.0	130.00	140.00	71.00	96.00	83.00	80.00	66.00	64.00	51.00	70.00
CAESIUM	1.0	4.00	2.40	8.60	3.50	16.00	13.00	8.40	13.00	4.20	10.00
CHROMIUM	5.0	250.0	340.0	270.0	410.0	240.0	180.0	190.0	150.0	300.0	160.0
COBALT	1.0	29.00	66.00	15.00	40.00	24.00	35.00	42.00	19.00	67.00	27.00
EUROPIUM	.5	3.60	3.10	3.70	2.50	1.80	2.20	2.30	2.30	2.20	2.20
GOLD, ppb	5.0	-5.0	34.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	9.30	7.80	10.00	11.00	9.10	7.70	7.60	7.50	7.00	8.20
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	8.840	16.000	12.400	10.100	11.200	11.000	11.800	12.100	13.200	13.000
LANTHANUM	.5	71.50	72.90	41.00	41.00	40.00	41.00	32.00	32.00	30.00	34.00
LUTETIUM	.2	.48	.75	.87	.74	.71	.67	.80	.69	.59	.67
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.860	-.200	1.600	.400	1.600	1.300	1.300	1.100	.730	1.000
RUBIDIUM	20.0	71.0	41.0	150.0	42.0	140.0	110.0	94.0	89.0	44.0	84.0
SAMARIUM	.20	13.00	13.00	13.00	13.00	8.90	10.00	9.20	8.30	8.20	8.70
SCANDIUM	.10	22.00	33.10	36.50	31.50	38.30	33.10	39.20	35.50	43.50	37.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	6.80	3.40	4.00	4.40	2.20	3.40	3.90	3.60	3.10	2.80
THORIUM	.5	8.00	7.00	10.00	10.00	11.00	9.50	7.80	7.00	5.00	7.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	39.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.50	3.50	4.70	4.10	3.70	3.70	4.50	3.50	3.30	3.60
ZINC	100.0	190.0	2900.0	490.0	440.0	180.0	190.0	250.0	110.0	340.0	140.0
ZIRCONIUM	500.0	560.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 302

EMENT	DL	# 32471	# 32472	# 32473	# 32474	# 32475	# 32476	# 32477	# 32478	# 32479	# 32480
ANTIMONY	.2	2.80	6.60	2.90	7.10	14.00	12.00	5.50	4.40	6.30	4.10
ARSENIC	2.0	8.90	476.00	170.00	47.00	202.00	342.00	170.00	110.00	180.00	81.00
BARIUM	100.0	540.0	460.0	270.0	-100.0	320.0	340.0	490.0	260.0	370.0	300.0
BROMINE	2.0	3.50	25.00	32.00	15.00	11.00	21.00	5.90	37.00	32.00	48.00
CERIUM	2.0	71.00	94.00	89.00	38.00	73.00	68.00	79.00	77.00	91.00	67.00
CAESIUM	1.0	19.00	11.00	12.00	7.80	10.00	11.00	6.60	18.00	15.00	12.00
CHROMIUM	5.0	92.0	180.0	170.0	240.0	110.0	270.0	260.0	230.0	280.0	160.0
COBALT	1.0	28.00	8.00	6.00	10.00	4.80	31.00	51.00	13.00	6.70	6.10
EUROPIUM	.5	2.00	2.80	2.70	.92	1.90	1.50	1.80	2.10	2.10	1.20
GOLD, ppb	5.0	-5.0	41.0	-5.0	-5.0	47.0	13.0	20.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.20	7.70	7.90	10.00	6.40	7.10	7.80	8.50	8.10	5.70
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	6.820	7.110	6.120	11.200	3.700	10.900	10.300	9.030	8.710	7.290
LANTHANUM	.5	35.00	46.00	46.00	15.00	36.00	35.00	40.00	40.00	61.20	34.00
LUTETIUM	.2	.70	.68	.59	.72	.50	.70	.65	.82	.68	.52
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.100	2.500	2.300	1.000	3.100	1.500	1.900	2.000	2.600	3.000
RUBIDIUM	20.0	230.0	190.0	190.0	120.0	290.0	200.0	220.0	190.0	220.0	250.0
SAMARIUM	.20	8.90	12.00	11.00	4.50	7.80	8.00	8.10	9.30	11.00	6.50
SCANDIUM	.10	32.10	28.80	22.80	42.20	21.50	34.10	26.60	33.50	37.80	22.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
VER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.70	2.70	2.10	3.50	2.40	2.50	2.40	3.10	2.60	1.80
THORIUM	.5	13.00	11.00	12.00	10.00	9.30	9.10	9.10	11.00	10.00	14.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.70	-2.00	-2.00	11.00	3.20	4.30	-2.00	3.10	2.70
URANIUM	2.0	-2.00	2.10	-2.00	-2.00	3.50	-2.00	-2.00	-2.00	-2.00	3.10
YTTERBIUM	.5	3.60	3.60	3.00	4.00	2.60	3.70	3.60	4.20	3.30	2.70
ZINC *	100.0	180.0	120.0	120.0	180.0	-100.0	320.0	610.0	240.0	250.0	150.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 302

ELEMENT	DL	# 32481	# 32482	# 32483	# 32484	# 32485	# 32486	# 32487	# 32488	# 32489	# 32490
ANTIMONY	.2	5.00	8.30	6.30	5.00	13.00	19.00	13.00	2.50	6.00	2.80
ARSENIC	2.0	76.00	180.00	69.00	120.00	763.00	140.00	72.00	21.00	200.00	31.00
BARIUM	100.0	170.0	140.0	-100.0	-100.0	-100.0	290.0	130.0	-100.0	-100.0	-100.0
BROMINE	2.0	26.00	51.00	30.00	17.00	29.00	3.20	14.00	4.80	43.00	77.00
CERIUM	2.0	45.00	60.00	37.00	42.00	41.00	32.00	39.00	61.00	32.00	41.00
CAESIUM	1.0	2.90	8.10	4.40	6.30	5.90	8.60	2.30	4.60	6.70	5.80
CHROMIUM	5.0	240.0	270.0	160.0	230.0	140.0	120.0	260.0	190.0	130.0	180.0
COBALT	1.0	16.00	9.50	63.00	5.70	48.00	2.80	5.40	14.00	52.00	9.00
EUROPIUM	.5	1.20	2.00	1.70	1.20	2.20	1.60	1.90	2.40	.91	1.20
GOLD, ppb	5.0	-5.0	7.7	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.50	8.50	5.70	6.50	4.10	3.80	4.70	6.50	6.50	6.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	13.400	11.400	18.900	11.200	16.300	7.410	8.900	7.350	16.000	10.000
LANTHANUM	.5	23.00	42.00	18.00	26.00	22.00	19.00	21.00	36.00	17.00	26.00
LUTETIUM	.2	.51	.63	.48	.41	.36	.39	.37	.54	.49	.37
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.240	.760	.270	.820	.600	2.700	.540	.760	1.100	.390
RUBIDIUM	20.0	53.0	120.0	52.0	120.0	110.0	210.0	56.0	56.0	120.0	46.0
SAMARIUM	.20	5.00	6.80	6.10	5.30	5.80	4.80	5.70	8.60	3.90	4.30
SCANDIUM	.10	31.00	43.40	32.00	28.40	22.70	25.70	26.00	29.50	37.00	19.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.40	3.80	2.70	3.10	2.10	1.70	1.80	3.20	2.60	2.70
THORIUM	.5	6.30	7.10	5.00	5.00	4.80	11.00	4.90	6.10	6.90	5.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	2.90	-2.00	-2.00	-2.00	-2.00	2.10
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	4.20	-2.00	-2.00	2.00	-2.00
YTTERBIUM	.5	2.60	3.00	2.50	2.10	1.80	2.00	2.00	2.90	2.60	1.90
ZINC	100.0	130.0	140.0	330.0	140.0	300.0	-100.0	110.0	140.0	550.0	150.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 302

ELEMENT	DL	# 32491	# 32492	# 32493	# 32494	# 32495	# 32496	# 32497	# 32498	# 32499	# 32500
ANTIMONY	.2	2.90	2.60	3.90	5.00	2.50	5.80	20.00	4.00	3.00	.22
ARSENIC	2.0	55.00	17.00	12.00	60.00	3.00	3.50	10.00	36.00	15.00	2.10
BARIUM	100.0	-100.0	-100.0	540.0	440.0	400.0	400.0	420.0	490.0	350.0	380.0
BROMINE	2.0	89.00	60.00	7.10	12.00	3.50	4.30	2.60	32.00	18.00	-2.00
CERIUM	2.0	36.00	55.00	82.00	60.00	89.00	79.00	56.00	150.00	130.00	66.00
CAESIUM	1.0	5.20	5.30	14.00	10.00	8.90	9.50	10.00	7.50	7.40	17.00
CHROMIUM	5.0	220.0	100.0	91.0	59.0	50.0	49.0	85.0	240.0	230.0	400.0
COBALT	1.0	8.20	7.80	-1.00	-1.00	-1.00	-1.00	-1.00	14.00	125.00	22.00
EUROPIUM	.5	1.00	1.80	1.20	1.10	1.80	1.40	.88	3.50	5.70	1.00
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.8	-5.0	-5.0	44.0
HAFNIUM	1.0	6.90	6.80	6.60	6.60	11.00	9.40	4.80	7.10	12.00	7.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	15.100	7.760	1.600	2.400	.540	.790	4.000	11.600	12.000	4.000
LANTHANUM	.5	22.00	36.00	52.60	38.00	52.20	48.00	36.00	122.00	120.00	35.00
LUTETIUM	.2	.43	.41	.71	.62	.81	.76	.67	.44	.56	.41
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.260	.250	3.700	3.000	2.800	2.800	3.100	1.200	1.000	1.700
RUBIDIUM	20.0	39.0	30.0	200.0	160.0	160.0	150.0	190.0	130.0	72.0	190.0
SAMARIUM	.20	4.10	6.20	7.80	5.60	9.30	7.50	5.30	11.00	17.00	6.30
SCANDIUM	.10	29.70	23.10	15.00	14.00	11.40	11.20	15.60	37.40	44.40	11.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.80	4.40	1.90	1.60	2.10	1.80	1.60	12.00	8.10	3.90
THORIUM	.5	6.50	5.10	19.00	13.00	12.00	13.00	13.00	14.00	10.00	13.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.30	-2.00	-2.00	5.30
URANIUM	2.0	-2.00	-2.00	2.70	2.40	2.60	3.30	4.50	-2.00	-2.00	4.10
YTTERBIUM	.5	2.40	2.30	3.50	3.10	4.20	3.80	3.40	2.00	2.20	1.90
ZINC *	100.0	120.0	150.0	-100.0	-100.0	-100.0	-100.0	-100.0	270.0	290.0	100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 302

ELEMENT	DL	# 32501	# 32502	# 32503	# 32504	# 32505	# 32506	# 32507	# 32508	# 32509	# 32510
ANTIMONY	.2	.71	5.00	19.00	2.60	1.40	3.90	.89	.80	1.40	3.60
ARSENIC	2.0	5.30	150.00	140.00	120.00	379.00	51.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	700.0	-100.0	540.0	1100.0	-100.0	-100.0	-100.0	130.0	200.0	-100.0
BROMINE	2.0	29.00	21.00	-2.00	-2.00	15.00	42.00	2.20	2.20	6.40	3.30
CERIUM	2.0	224.00	51.00	55.00	86.00	59.00	57.00	3.10	21.00	41.00	-2.00
CAESIUM	1.0	3.40	6.40	26.00	82.00	5.40	5.10	-1.00	2.50	5.80	-1.00
CHROMIUM	5.0	370.0	180.0	230.0	210.0	210.0	310.0	13.0	16.0	35.0	5.1
COBALT	1.0	19.00	34.00	49.00	102.00	11.00	2.10	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	6.30	2.00	34.00	2.80	1.70	1.80	-.50	-.50	1.00	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	12.00	6.30	5.70	6.50	5.00	6.70	4.30	5.00	8.60	1.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	13.000	14.800	14.500	7.810	19.200	13.700	.310	.390	.440	.310
LANTHANUM	.5	141.00	28.00	451.00	53.80	36.00	37.00	2.00	13.00	23.00	1.00
LUTETIUM	.2	.50	.67	1.70	.63	.57	.53	-.20	.30	.58	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	.830	1.700	2.100	.890	.730	-.200	1.000	2.400	-.200
RUBIDIUM	20.0	27.0	67.0	180.0	220.0	73.0	61.0	-20.0	46.0	110.0	-20.0
SAMARIUM	.20	19.00	7.00	119.00	11.00	6.60	6.50	.51	1.90	3.90	.26
SCANDIUM	.10	36.40	45.60	27.00	34.10	38.50	36.90	.71	3.50	7.60	.33
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	7.90	1.80	3.80	3.40	2.40	2.10	-1.00	-1.00	1.20	-1.00
THORIUM	.5	11.00	6.00	5.90	6.20	7.60	8.60	1.50	3.40	7.20	.75
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.0	-2.00	-2.00	-2.00	-2.00	-2.00	2.40	-2.00
YTTERBIUM	.5	2.60	3.20	7.20	3.50	2.70	2.80	.90	1.50	3.10	-.50
ZINC *	100.0	-100.0	500.0	6100.0	4600.0	440.0	240.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	580.0	-500.0	1100.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

EMENT	DL	# 32511	# 32512	# 32513	# 32514	# 32515	# 32516	# 32517	# 32518	# 32519	# 32520
ANTIMONY	.2	3.90	2.00	4.10	12.00	2.10	5.60	8.90	1.30	1.70	2.40
ARSENIC	2.0	2.40	2.10	86.00	460.00	7.20	5.10	41.00	-2.00	-2.00	-2.00
BARIUM	100.0	-100.0	250.0	7000.0	210.0	580.0	-100.0	170.0	-100.0	650.0	540.0
BROMINE	2.0	20.00	18.00	19.00	19.00	2.40	2.00	4.70	4.10	12.00	8.00
CERIUM	2.0	51.00	58.00	75.00	36.00	74.00	18.00	44.00	16.00	79.00	71.00
CAESIUM	1.0	-1.00	12.00	5.90	5.10	12.00	1.80	1.60	2.70	16.00	16.00
CHROMIUM	5.0	42.0	63.0	55.0	64.0	72.0	14.0	17.0	15.0	73.0	73.0
COBALT	1.0	2.20	-1.00	171.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	1.20	1.00	.79	1.20	-.50	2.20	-.50	1.20	1.30
GOLD, ppb	5.0	9.0	-5.0	-5.0	5.5	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.00	5.30	6.50	8.60	6.50	4.50	3.40	2.70	6.90	6.20
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.300	1.000	4.400	6.790	.610	.310	.370	.370	.550	.540
LANTHANUM	.5	32.00	38.00	18.00	21.00	44.00	11.00	27.00	10.00	48.00	44.00
LUTETIUM	.2	.35	.43	.46	.45	.70	.30	.46	.21	.83	.73
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.800	2.200	2.100	3.900	.440	.270	.630	4.200	4.200
RUBIDIUM	20.0	-20.0	160.0	110.0	120.0	190.0	31.0	22.0	36.0	230.0	230.0
SAMARIUM	.20	3.30	5.80	3.60	4.20	6.90	1.80	7.70	1.60	8.00	7.20
SCANDIUM	.10	5.00	13.50	16.00	12.10	13.60	1.70	5.60	2.80	18.30	18.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
VER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.40	-1.00	1.80	1.40	1.50	1.70	-1.00	-1.00	1.70	1.40
THORIUM	.5	9.10	12.00	12.00	14.00	13.00	3.30	3.40	3.00	16.00	15.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.60	-2.00	-2.00	2.10	2.10	5.30	2.10	3.30	-2.00	2.30
URANIUM	2.0	3.00	-2.00	-2.00	2.80	-2.00	-2.00	-2.00	-2.00	2.30	2.80
YTTERBIUM	.5	1.70	2.10	2.30	2.00	3.40	1.50	2.60	1.00	3.90	3.50
ZINC	100.0	-100.0	-100.0	460.0	250.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32521	# 32522	# 32523	# 32524	# 32525	# 32526	# 32527	# 32528	# 32529	# 32530
ANTIMONY	.2	1.80	5.20	11.00	1.10	3.80	18.00	.84	2.80	1.40	4.20
ARSENIC	2.0	-2.00	2.30	610.00	11.00	225.00	535.00	9.10	-2.00	-2.00	-2.00
BARIUM	100.0	500.0	560.0	120.0	290.0	320.0	-100.0	330.0	120.0	140.0	790.0
BROMINE	2.0	8.80	15.00	7.10	-2.00	2.90	64.00	3.90	11.00	6.60	8.40
CERIUM	2.0	72.00	76.00	42.00	58.00	77.00	40.00	14.00	35.00	30.00	70.00
CAESIUM	1.0	16.00	11.00	16.00	9.00	33.00	11.00	10.00	4.10	7.10	15.00
CHROMIUM	5.0	67.0	64.0	170.0	310.0	140.0	160.0	190.0	24.0	21.0	72.0
COBALT	1.0	-1.00	-1.00	39.00	53.00	234.00	4.20	45.00	-1.00	-1.00	-1.00
EUROPIUM	.5	1.40	1.70	2.40	3.00	2.70	1.50	1.50	.70	.54	.82
GOLD, ppb	5.0	-5.0	16.0	-5.0	-5.0	-5.0	9.4	-5.0	-5.0	-5.0	8.4
HAFNIUM	1.0	5.60	7.20	5.80	7.30	5.20	5.90	2.50	5.80	4.40	4.90
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.610	.640	17.600	8.050	4.600	12.300	9.380	.440	.280	.490
LANTHANUM	.5	51.70	50.00	28.00	43.00	44.00	40.00	10.00	21.00	18.00	44.00
LUTETIUM	.2	.70	.75	.63	.77	.62	.51	.43	.42	.29	.56
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.000	3.600	1.100	.820	1.800	1.400	.410	1.400	1.400	4.100
RUBIDIUM	20.0	210.0	180.0	110.0	50.0	130.0	160.0	77.0	64.0	100.0	220.0
SAMARIUM	.20	8.00	7.70	7.70	10.00	11.00	5.30	3.30	3.30	2.70	5.70
SCANDIUM	.10	16.50	14.30	29.50	34.30	27.10	36.70	45.70	5.10	4.10	14.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.90	1.70	2.20	2.80	3.90	3.10	3.10	-1.00	-1.00	1.40
THORIUM	.5	14.00	13.00	6.40	7.20	7.90	6.30	.80	6.00	4.30	12.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.80	5.40	-2.00	-2.00	-2.00	-2.00	-2.00	2.20	-2.00	2.50
URANIUM*	2.0	2.80	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.00	-2.00	2.70
YTTERBIUM	.5	3.40	3.50	2.70	3.10	2.60	2.10	1.70	2.10	1.40	2.50
ZINC	100.0	-100.0	-100.0	2000.0	770.0	6900.0	450.0	490.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	540.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32531	# 32532	# 32533	# 32534	# 32535	# 32536	# 32537	# 32538	# 32539	# 32540
ANTIMONY	.2	73.60	5.90	43.70	1.60	5.00	7.70	4.90	1.80	2.10	1.40
ARSENIC	2.0	20.00	14.00	2590.00	6.70	140.00	150.00	27.00	-2.00	6.60	-2.00
BARIUM	100.0	-100.0	-100.0	-100.0	720.0	-100.0	410.0	690.0	2600.0	530.0	170.0
BROMINE	2.0	19.00	3.10	50.00	4.00	14.00	24.00	8.40	12.00	4.40	3.40
CERIUM	2.0	6.00	15.00	5.40	82.00	-2.00	87.00	68.00	56.00	68.00	67.00
CAESIUM	1.0	-1.00	-1.00	-1.00	12.00	-1.00	6.10	10.00	5.80	8.90	3.20
CHROMIUM	5.0	10.0	28.0	26.0	62.0	5.9	100.0	60.0	75.0	55.0	28.0
COBALT	1.0	1.30	1.30	-1.00	-1.00	-1.00	3.40	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	.77	-.50	1.30	-.50	1.60	1.30	.86	1.30	1.10
GOLD, ppb	5.0	130.0	-5.0	-5.0	5.0	10.0	7.4	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	1.40	3.80	1.40	5.70	-1.00	5.70	6.50	13.00	7.30	9.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.700	1.000	29.600	.490	5.650	7.170	1.000	.570	.830	.380
LANTHANUM	.5	3.30	9.40	3.50	50.50	1.10	63.80	45.00	36.00	43.00	42.00
LUTETIUM	.2	-.20	-.20	-.20	.64	-.20	.68	.50	.57	.68	.66
MOLYBDENUM	5.0	6.4	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	-.200	4.400	-.200	4.800	2.400	1.100	3.500	1.200
RUBIDIUM	20.0	-20.0	-20.0	64.0	200.0	-20.0	220.0	170.0	52.0	220.0	68.0
SAMARIUM	.20	.53	1.90	1.10	7.90	.27	8.80	6.30	5.10	6.80	6.90
SCANDIUM	.10	1.50	7.70	8.70	14.00	1.70	21.50	12.30	8.40	12.80	5.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	69.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	1.20	-1.00	1.40	1.20	1.50	1.70	1.40
THORIUM	.5	2.40	6.60	2.30	13.00	1.40	14.00	10.00	11.00	12.00	8.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	5.90	-2.00	-2.00	-2.00	-2.00	-2.00	5.70	2.30	22.00	2.10
URANIUM	2.0	-2.00	2.60	-2.00	3.10	-2.00	-2.00	-2.00	2.50	2.10	-2.00
YTTERBIUM	.5	-.50	.55	-.50	3.10	-.50	3.00	2.40	2.60	3.20	3.30
ZINC	100.0	230.0	180.0	240.0	-100.0	110.0	150.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 302

ELEMENT	DL	# 32541	# 32542	# 32543	# 32544	# 32545	# 32546	# 32547	# 32548	# 32549	# 32550
ANTIMONY	.2	1.20	1.50	2.10	.76	1.30	10.00	6.30	7.40	5.10	.27
ARSENIC	2.0	-2.00	-2.00	2.90	-2.00	-2.00	487.00	742.00	37.00	130.00	3.80
BARIUM	100.0	-100.0	410.0	410.0	350.0	460.0	-100.0	220.0	-100.0	-100.0	660.0
BROMINE	2.0	8.10	4.40	5.10	2.80	4.90	35.00	19.00	36.00	69.00	-2.00
CERIUM	2.0	17.00	75.00	78.00	60.00	56.00	8.40	61.00	72.00	45.00	84.00
CAESIUM	1.0	2.40	14.00	18.00	12.00	14.00	3.50	10.00	8.10	10.00	10.00
CHROMIUM	5.0	11.0	48.0	60.0	44.0	82.0	2540.0	200.0	210.0	220.0	310.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	33.00	27.00	3.80	12.00	33.00
EUROPIUM	.5	-.50	1.40	1.50	1.20	1.00	1.00	2.70	2.20	1.90	1.10
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	230.0
HAFNIUM	1.0	5.60	6.80	6.40	8.00	5.80	1.40	7.20	9.00	7.20	8.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.270	.580	.670	.400	.530	18.000	13.000	9.120	17.800	5.530
LANTHANUM	.5	10.00	48.00	49.00	37.00	34.00	5.20	44.00	51.20	30.00	46.00
LUTETIUM	.2	.27	.76	.76	.69	.64	.30	.78	.74	.68	.58
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.500	3.700	4.200	3.100	4.100	-.200	2.800	1.900	1.100	1.500
RUBIDIUM	20.0	31.0	180.0	210.0	150.0	200.0	43.0	230.0	120.0	130.0	82.0
SAMARIUM	.20	1.60	7.80	8.30	6.40	5.50	3.10	10.00	10.00	7.40	7.50
SCANDIUM	.10	2.40	14.70	17.30	11.10	14.80	39.10	33.30	33.80	37.20	12.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	1.80	1.20	1.60	1.10	-1.00	2.50	3.90	3.30	2.40
THORIUM	.5	2.90	13.00	14.00	10.00	9.20	2.40	8.40	9.30	8.50	16.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	5.50
URANIUM	2.0	-2.00	2.30	-2.00	2.00	2.40	-2.00	-2.00	-2.00	-2.00	3.20
YTTERBIUM	.5	1.30	3.60	3.50	3.40	3.10	1.30	3.40	3.40	3.10	2.50
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	600.0	330.0	200.0	240.0	100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	700.0	530.0	-500.0

BECQUEREL LABORATORIES
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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32551	# 32552	# 32553	# 32554	# 32555	# 32556	# 32557	# 32558	# 32559	# 32560
ANTIMONY	.2	.27	.46	1.40	1.70	1.30	3.40	8.60	5.30	7.80	2.20
ARSENIC	2.0	3.10	10.00	42.00	9.30	9.20	85.00	94.00	19.00	3.40	48.00
BARIUM	100.0	160.0	130.0	-100.0	180.0	160.0	170.0	120.0	170.0	210.0	310.0
BROMINE	2.0	19.00	28.00	34.00	17.00	12.00	34.00	35.00	19.00	5.50	38.00
CERIUM	2.0	47.00	48.00	58.00	95.00	45.00	54.00	56.00	72.00	74.00	42.00
CAESIUM	1.0	6.70	10.00	10.00	11.00	7.10	6.00	13.00	7.80	8.30	6.70
CHROMIUM	5.0	260.0	280.0	330.0	190.0	240.0	350.0	260.0	240.0	240.0	230.0
COBALT	1.0	6.60	14.00	6.40	26.00	8.00	5.00	3.90	11.00	7.40	16.00
EUROPIUM	.5	1.90	1.80	2.30	2.40	2.50	2.10	1.80	2.80	3.50	1.60
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.60	7.70	8.20	7.00	7.50	8.40	8.00	8.40	8.90	7.90
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	13.700	13.000	12.200	11.900	15.600	15.400	12.000	12.200	10.800	12.400
LANTHANUM	.5	26.00	36.00	42.00	68.40	30.00	35.00	37.00	51.80	69.60	30.00
LUTETIUM	.2	.70	.65	.67	.70	.67	.67	.61	.69	.73	.69
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.910	.460	1.300	1.800	1.100	1.100	2.400	1.000	1.200	1.100
RUBIDIUM	20.0	59.0	71.0	98.0	150.0	93.0	91.0	180.0	130.0	110.0	96.0
SAMARIUM	.20	6.80	6.70	8.90	9.20	7.90	8.60	8.50	11.00	13.00	5.90
SCANDIUM	.10	35.80	33.70	33.60	32.10	33.50	39.10	40.60	29.60	32.50	41.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.90	3.00	3.40	3.30	3.60	3.70	3.90	4.60	2.90	2.90
THORIUM	.5	7.60	8.00	9.20	8.80	7.80	8.10	9.20	9.00	8.50	9.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.10	2.90	3.00	3.30	3.30	3.30	3.00	3.50	3.30	3.30
ZINC *	100.0	150.0	260.0	200.0	170.0	260.0	410.0	190.0	370.0	190.0	180.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	550.0	-500.0	-500.0	750.0	-500.0	630.0	-500.0

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N E U T R O N A C T I V A T I O N A N A L Y S I S

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BECQUEREL JOB # 302

ELEMENT	DL	# 32561	# 32562	# 32563	# 32564	# 32565	# 32566	# 32567	# 32568	# 32569	# 32570
ANTIMONY	.2	4.80	4.70	11.00	6.30	3.30	9.00	3.80	3.40	3.70	1.20
ARSENIC	2.0	50.00	47.00	140.00	99.00	43.00	140.00	58.00	12.00	10.00	16.00
BARIUM	100.0	-100.0	-100.0	120.0	130.0	360.0	270.0	160.0	310.0	-100.0	130.0
BROMINE	2.0	50.00	38.00	49.00	16.00	34.00	30.00	11.00	2.20	7.10	6.00
CERIUM	2.0	56.00	66.00	65.00	54.00	65.00	54.00	97.00	73.00	79.00	120.00
CAESIUM	1.0	7.40	7.50	5.40	5.80	11.00	7.70	12.00	18.00	5.00	14.00
CHROMIUM	5.0	230.0	210.0	220.0	250.0	250.0	210.0	120.0	160.0	300.0	290.0
COBALT	1.0	5.40	3.00	1.00	1.20	3.10	2.40	2.10	19.00	19.00	12.00
EUROPIUM	.5	1.20	1.00	1.10	.89	2.00	1.20	2.50	1.80	1.70	4.10
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.60	8.70	5.20	4.90	8.30	7.60	8.60	7.50	8.50	10.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	6.780	12.400	17.900	3.500	15.600	12.000	9.200	5.500	6.930	2.200
LANTHANUM	.5	28.00	37.00	33.00	28.00	31.00	27.00	48.00	36.00	38.00	53.60
LUTETIUM	.2	.58	.63	.38	.33	.49	.45	.93	.69	.57	1.00
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.590	1.100	1.300	.700	1.800	1.300	1.800	1.800	.560	1.900
RUBIDIUM	20.0	38.0	92.0	120.0	81.0	110.0	130.0	120.0	130.0	44.0	97.0
SAMARIUM	.20	6.00	5.90	7.10	5.20	8.50	5.90	11.00	8.50	8.70	17.00
SCANDIUM	.10	23.10	34.80	36.90	11.00	52.00	37.50	30.30	27.10	27.90	36.20
[illegible]ENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.60	3.60	2.60	2.30	2.40	2.60	3.30	2.40	3.80	4.00
THORIUM	.5	8.40	10.00	8.60	5.60	6.70	7.40	12.00	9.30	6.50	12.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	2.90	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	2.30	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.00	3.50	2.10	1.60	2.80	2.60	4.60	3.90	3.10	5.10
ZINC	100.0	-100.0	120.0	140.0	-100.0	180.0	220.0	150.0	180.0	300.0	-100.0
ZIRCONIUM	500.0	-500.0	550.0	-500.0	-500.0	550.0	-500.0	-500.0	520.0	-500.0	730.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32571	# 32572	# 32573	# 32574	# 32575	# 32576	# 32577	# 32578	# 32579	# 32580
ANTIMONY	.2	2.90	15.00	23.20	38.70	17.00	8.60	6.70	4.90	3.80	3.90
ARSENIC	2.0	140.00	6.30	79.00	84.00	56.00	13.00	6.50	2.30	-2.00	20.00
BARIUM	100.0	160.0	340.0	490.0	140.0	200.0	320.0	390.0	540.0	400.0	210.0
BROMINE	2.0	15.00	2.10	28.00	12.00	5.60	2.10	18.00	12.00	12.00	-2.00
CERIUM	2.0	63.00	190.00	92.00	56.00	72.00	47.00	14.00	120.00	100.00	53.00
CAESIUM	1.0	4.20	13.00	7.10	8.10	10.00	20.00	5.30	12.00	10.00	3.00
CHROMIUM	5.0	260.0	280.0	190.0	190.0	180.0	120.0	1860.0	89.0	120.0	31.0
COBALT	1.0	3.10	1.60	3.50	10.00	25.00	12.00	42.00	-1.00	-1.00	303.00
EUROPIUM	.5	1.80	3.00	1.60	1.60	2.70	1.30	-.50	1.60	1.50	.70
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.8	-5.0
HAFNIUM	1.0	6.60	9.20	7.90	6.40	8.30	5.80	2.00	9.10	6.80	3.40
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	25.200	1.700	8.090	19.600	5.620	1.700	8.070	.730	.360	21.800
LANTHANUM	.5	32.00	110.00	50.00	28.00	34.00	22.00	6.50	62.50	56.80	29.00
LUTETIUM	.2	.64	.82	.63	.57	.63	.48	.26	.91	.93	.23
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.400	3.100	1.900	.540	.800	1.700	1.500	3.600	2.800	.800
RUBIDIUM	20.0	74.0	200.0	130.0	72.0	45.0	130.0	97.0	200.0	180.0	81.0
SAMARIUM	.20	8.30	18.00	9.20	6.70	10.00	5.40	1.20	11.00	11.00	4.70
SCANDIUM	.10	46.30	42.20	28.70	43.90	46.10	21.10	32.70	14.40	15.50	7.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.90	2.90	3.00	2.70	3.20	1.80	-1.00	3.00	2.90	1.10
THORIUM	.5	7.30	15.00	12.00	8.30	7.20	9.10	8.20	19.00	14.00	7.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	4.40	-2.00	-2.00	-2.00	-2.00	-2.00	2.60	-2.00
URANIUM	2.0	-2.00	4.20	2.00	-2.00	-2.00	-2.00	-2.00	3.00	5.10	-2.00
YTTERBIUM	.5	3.60	4.60	3.40	3.20	3.50	2.50	1.30	4.60	4.60	1.50
ZINC	100.0	120.0	-100.0	250.0	590.0	720.0	190.0	150.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	560.0	-500.0	510.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 302

ELEMENT	DL	# 32581	# 32582	# 32583	# 32584	# 32585	# 32586	# 32587	# 32588	# 32589	# 32590
ANTIMONY	.2	2.10	3.00	4.40	3.00	2.60	2.80	3.00	3.90	1.50	1.20
ARSENIC	2.0	3.30	7.00	2.40	30.00	150.00	42.00	6.80	5.20	-2.00	-2.00
BARIUM	100.0	420.0	220.0	250.0	-100.0	-100.0	250.0	250.0	240.0	200.0	-100.0
BROMINE	2.0	6.90	6.70	4.30	5.30	20.00	-2.00	11.00	34.00	8.90	-2.00
CERIUM	2.0	234.00	190.00	203.00	53.00	59.00	100.00	81.00	34.00	47.00	-2.00
CAESIUM	1.0	3.00	10.00	19.00	7.80	7.60	12.00	11.00	7.00	3.80	-1.00
CHROMIUM	5.0	210.0	330.0	250.0	240.0	310.0	180.0	260.0	210.0	23.0	-5.0
COBALT	1.0	3.20	14.00	6.50	20.00	6.70	54.00	4.10	27.00	-1.00	-1.00
EUROPIUM	.5	8.60	6.60	6.00	2.60	2.00	4.10	3.50	.76	.80	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	13.00	14.00	13.00	8.60	7.80	6.90	10.00	3.90	9.30	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.910	2.200	2.200	15.300	21.600	2.800	4.200	6.650	.320	.120
LANTHANUM	.5	118.00	91.70	101.00	26.00	25.00	52.20	30.00	17.00	23.00	-.50
LUTETIUM	.2	.86	.77	.65	.74	.63	.69	.92	.43	.45	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	1.300	3.200	1.200	.510	1.300	1.000	1.100	1.000	-.200
RUBIDIUM	20.0	-20.0	87.0	180.0	110.0	110.0	93.0	87.0	86.0	64.0	-20.0
SAMARIUM	.20	31.00	22.60	20.90	10.00	9.50	16.00	14.00	3.80	4.40	-.20
SCANDIUM	.10	35.50	31.80	26.10	55.60	48.90	28.80	80.10	21.30	4.30	.14
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	8.50	8.00	6.60	2.30	2.80	3.10	4.50	1.10	1.10	-1.00
THORIUM	.5	12.00	11.00	11.00	10.00	6.80	7.60	7.40	7.10	6.50	-.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	4.60	4.30	3.70	4.20	3.90	3.90	5.20	2.30	2.40	-.50
ZINC	100.0	150.0	240.0	-100.0	130.0	270.0	500.0	180.0	180.0	-100.0	-100.0
ZIRCONIUM	500.0	1000.0	610.0	580.0	-500.0	-500.0	-500.0	560.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32591	# 32592	# 32593	# 32594	# 32595	# 32596	# 32597	# 32598	# 32599	# 32600
ANTIMONY	.2	1.60	24.30	27.90	11.00	7.50	3.10	6.80	1.70	1.60	2.80
ARSENIC	2.0	-2.00	98.00	407.00	130.00	26.00	3.80	12.00	-2.00	-2.00	298.00
BARIUM	100.0	-100.0	310.0	240.0	180.0	230.0	390.0	370.0	400.0	-100.0	530.0
BROMINE	2.0	-2.00	3.40	48.00	14.00	5.80	4.80	5.60	13.00	6.50	-2.00
CERIUM	2.0	2.20	75.00	55.00	35.00	89.00	74.00	69.00	100.00	27.00	36.00
CAESIUM	1.0	-1.00	12.00	4.30	3.30	8.50	13.00	10.00	16.00	2.40	-1.00
CHROMIUM	5.0	8.7	110.0	70.0	29.0	52.0	56.0	50.0	66.0	17.0	47.0
COBALT	1.0	-1.00	3.30	25.00	-1.00	2.90	-1.00	-1.00	1.60	-1.00	16.00
EUROPIUM	.5	-.50	1.10	.70	.73	1.60	1.40	1.40	1.60	-.50	1.00
GOLD, ppb	5.0	-5.0	8.3	-5.0	-5.0	-5.0	-5.0	6.3	-5.0	-5.0	230.0
HAFNIUM	1.0	1.20	5.60	3.90	3.60	9.30	6.10	4.10	6.00	10.00	2.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.100	6.890	12.200	2.900	2.900	.520	.430	.600	.670	4.400
LANTHANUM	.5	1.20	36.00	19.00	18.00	51.00	40.00	45.00	51.50	14.00	14.00
LUTETIUM	.2	-.20	.62	.30	.24	.73	.64	.47	.73	.37	.32
MOLYBDENUM	5.0	-5.0	-13.0	-5.0	-5.0	-28.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.100	.800	1.000	1.300	3.300	3.000	3.600	.680	1.500
RUBIDIUM	20.0	-20.0	160.0	81.0	61.0	140.0	180.0	190.0	220.0	34.0	46.0
SAMARIUM	.20	.27	7.20	3.60	3.40	8.60	8.20	7.40	10.00	2.60	4.20
SCANDIUM	.10	.30	14.10	5.70	4.20	34.90	13.80	12.40	15.40	3.20	12.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	1.40	1.30	-1.00	9.00	1.40	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	-.50	14.00	7.40	5.50	30.00	11.00	8.60	15.00	6.70	1.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	2.90	3.20	4.60	-2.00	5.20	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	6.80	2.20	-2.00	16.00	-2.00	-2.00	2.40	-2.00	-2.00
YTTERBIUM	.5	-.50	3.40	1.30	1.30	4.00	3.10	2.40	3.70	1.80	1.70
ZINC	100.0	-100.0	640.0	170.0	130.0	1100.0	-100.0	130.0	-100.0	-100.0	820.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 302

ELEMENT	DL	# 32601	# 32602	# 32603	# 32604	# 32605	# 32606	# 32607	# 32608	# 32609	# 32610
ANTIMONY	.2	13.00	3.20	1.00	1.60	3.30	7.80	3.10	1.30	.75	1.00
ARSENIC	2.0	64.00	36.00	-2.00	2.00	44.00	233.00	92.00	-2.00	19.00	17.00
BARIUM	100.0	210.0	150.0	510.0	480.0	120.0	1300.0	100.0	-100.0	-100.0	-100.0
BROMINE	2.0	40.00	10.00	4.10	5.20	17.00	59.00	15.00	-2.00	4.50	69.00
CERIUM	2.0	45.00	52.00	160.00	96.00	66.00	27.00	6.20	3.70	72.00	57.00
CAESIUM	1.0	4.60	3.50	11.00	15.00	7.90	6.90	-1.00	-1.00	11.00	7.00
CHROMIUM	5.0	46.0	47.0	64.0	59.0	67.0	78.0	28.0	15.0	330.0	511.0
COBALT	1.0	3.00	8.90	-1.00	1.60	-1.00	56.00	2.90	-1.00	12.00	6.10
EUROPIUM	.5	.70	.75	2.10	1.30	1.40	-.50	-.50	-.50	2.20	1.30
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.90	4.40	7.20	6.40	7.00	4.70	2.50	4.60	8.50	10.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.800	5.080	.600	.890	1.300	28.300	10.000	.200	9.650	15.800
LANTHANUM	.5	23.00	27.00	88.30	48.00	34.00	8.20	3.60	1.80	40.00	26.00
LUTETIUM	.2	.45	.31	.70	.78	.60	.27	-.20	-.20	.63	.59
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.200	.880	3.600	3.700	2.200	-.200	-.200	-.200	.840	-.400
RUBIDIUM	20.0	66.0	42.0	180.0	200.0	96.0	59.0	23.0	-20.0	71.0	53.0
SAMARIUM	.20	3.40	5.00	13.00	9.00	7.20	1.90	.76	.50	8.30	6.30
SCANDIUM	.10	9.20	8.60	12.90	14.40	14.20	3.60	.76	.46	37.90	61.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.2	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	21.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.30	-1.00	3.20	1.00	1.30	-1.00	-1.00	-1.00	2.70	2.80
THORIUM	.5	10.00	10.00	15.00	15.00	13.00	5.10	1.50	1.20	7.10	8.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	7.60	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	3.10	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.20	1.60	3.70	3.90	2.80	1.70	.73	1.10	3.80	3.50
ZINC	100.0	160.0	130.0	-100.0	-100.0	-100.0	680.0	-100.0	-100.0	150.0	250.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	580.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 302

ELEMENT	DL	# 32611	# 32612	# 32613	# 32614	# 32615	# 32616	# 32617	# 32618	# 32619	# 32620
ANTIMONY	.2	17.00	9.40	6.80	25.60	49.60	2.20	1.80	1.60	9.40	23.60
ARSENIC	2.0	16.00	180.00	37.00	62.00	150.00	120.00	22.00	4.40	5.20	26.00
BARIUM	100.0	180.0	110.0	-100.0	200.0	-100.0	-100.0	-100.0	460.0	140.0	290.0
BROMINE	2.0	2.20	16.00	14.00	25.00	10.00	5.90	5.10	-2.00	3.30	4.60
CERIUM	2.0	211.00	21.00	37.00	12.00	36.00	55.00	274.00	26.00	56.00	91.00
CAESIUM	1.0	16.00	8.70	4.70	4.60	8.40	7.20	8.60	17.00	5.80	11.00
CHROMIUM	5.0	280.0	1560.0	621.0	2840.0	360.0	751.0	360.0	260.0	290.0	260.0
COBALT	1.0	2.50	4.80	1.60	6.50	5.80	7.10	2.50	4.60	-1.00	6.10
EUROPIUM	.5	6.80	1.50	1.10	.87	1.20	1.90	13.00	.77	.67	2.70
GOLD, ppb	5.0	-5.0	21.0	-5.0	-5.0	-5.0	18.0	-5.0	18.0	30.0	-5.0
HAFNIUM	1.0	8.20	7.40	11.00	3.20	7.80	8.80	11.00	6.30	9.10	8.80
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.200	13.200	6.940	11.800	19.200	12.200	2.300	1.700	.620	3.100
LANTHANUM	.5	106.00	5.40	17.00	6.70	22.00	26.00	129.00	13.00	33.00	50.00
LUTETIUM	.2	1.30	.58	.59	.26	.48	.63	1.10	.68	.66	.60
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.500	1.700	.900	.840	2.000	-0.2	-0.2	3.500	.620	2.100
RUBIDIUM	20.0	140.0	240.0	88.0	49.0	190.0	79.0	71.0	280.0	73.0	210.0
SAMARIUM	.20	33.40	5.00	5.40	3.90	5.70	8.20	56.80	3.30	5.40	10.00
SCANDIUM	.10	35.50	52.20	88.20	122.00	45.10	83.70	55.00	28.20	19.50	33.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	3.10	2.10	4.10	-1.00	3.10	3.40	6.30	1.60	3.30	2.90
THORIUM	.5	18.00	10.00	13.00	5.70	10.00	8.70	8.70	18.00	11.00	8.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	14.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.90	3.30	-2.00
YTTERBIUM	.5	7.00	3.40	3.30	1.90	2.90	3.70	6.40	3.60	3.50	3.20
ZINC *	100.0	680.0	420.0	420.0	450.0	470.0	260.0	180.0	110.0	130.0	190.0
ZIRCONIUM	500.0	500.0	-500.0	-500.0	-500.0	-500.0	610.0	930.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 302

ELEMENT	DL	# 32621	# 32622	# 32623	# 32624	# 32625	# 32626	# 32627	# 32628	# 32629	# 32630
ANTIMONY	.2	6.70	11.00	3.10	2.40	2.40	1.70	3.00	12.00	4.20	9.10
ARSENIC	2.0	22.00	14.00	20.00	208.00	36.00	10.00	16.00	33.00	6.80	64.00
BARIUM	100.0	-100.0	450.0	210.0	-100.0	-100.0	150.0	190.0	520.0	350.0	290.0
BROMINE	2.0	6.70	4.10	7.80	6.70	5.90	5.50	-2.00	3.20	4.20	2.70
CERIUM	2.0	230.00	130.00	120.00	82.00	97.00	46.00	55.00	110.00	83.00	74.00
CAESIUM	1.0	10.00	12.00	11.00	5.40	8.10	6.60	6.20	24.00	17.00	16.00
CHROMIUM	5.0	280.0	220.0	210.0	160.0	390.0	210.0	160.0	81.0	340.0	210.0
COBALT	1.0	14.00	1.80	4.50	2.50	4.60	5.90	16.00	14.00	16.00	90.00
EUROPIUM	.5	4.80	3.70	2.80	2.60	2.70	1.30	1.90	1.40	2.00	1.60
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	11.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.70	8.90	10.00	8.00	10.00	10.00	8.10	8.50	7.50	8.10
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.400	.870	3.900	11.500	4.800	1.400	5.130	2.000	4.000	7.550
LANTHANUM	.5	109.00	67.30	69.50	39.00	50.60	22.00	29.00	61.00	39.00	35.00
LUTETIUM	.2	.48	.76	.68	.54	.77	.62	.55	.77	.60	.67
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-0.2	2.600	.650	-0.2	.530	-.200	-0.2	3.400	1.900	1.500
RUBIDIUM	20.0	120.0	210.0	84.0	51.0	50.0	42.0	35.0	220.0	150.0	140.0
SAMARIUM	.20	20.00	17.00	12.00	11.00	12.00	5.10	7.30	8.40	9.20	8.50
SCANDIUM	.10	49.20	39.70	46.70	41.50	50.00	39.10	32.30	13.00	29.40	33.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.80	2.80	4.10	3.00	2.90	3.00	2.40	3.90	3.00	3.60
THORIUM	.5	6.30	10.00	11.00	7.60	11.00	10.00	7.10	14.00	7.40	7.60
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	2.00	-2.00	-2.00	-2.00	3.80	-2.00	-2.00
YTTERBIUM	.5	3.10	4.30	3.70	3.30	4.20	3.40	3.10	3.90	3.30	3.60
ZINC	100.0	680.0	120.0	230.0	250.0	290.0	220.0	530.0	330.0	260.0	500.0
ZIRCONIUM	500.0	-500.0	780.0	550.0	-500.0	830.0	-500.0	-500.0	-500.0	550.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32631	# 32632	# 32633	# 32634	# 32635	# 32636	# 32637	# 32638	# 32639	# 32640
ANTIMONY	.2	7.80	4.60	4.20	1.80	22.20	44.60	22.60	.49	1.50	2.00
ARSENIC	2.0	26.00	12.00	26.00	48.00	140.00	120.00	91.00	5.60	-2.00	2.00
BARIUM	100.0	320.0	200.0	-100.0	140.0	-100.0	320.0	130.0	160.0	460.0	-100.0
BROMINE	2.0	10.00	14.00	5.00	-2.00	5.80	6.30	-2.00	19.00	4.00	24.00
CERIUM	2.0	100.00	95.00	82.00	71.00	63.00	73.00	59.00	15.00	93.00	44.00
CAESIUM	1.0	15.00	8.00	15.00	11.00	10.00	20.00	12.00	8.00	11.00	1.30
CHROMIUM	5.0	150.0	250.0	150.0	230.0	100.0	200.0	160.0	785.0	60.0	42.0
COBALT	1.0	16.00	25.00	43.00	76.00	54.00	20.00	100.00	33.00	-1.00	-1.00
EUROPIUM	.5	1.50	2.60	2.00	2.90	2.20	1.00	2.70	.57	1.20	1.50
GOLD, ppb	5.0	10.0	-5.0	-5.0	-5.0	-5.0	44.0	-5.0	-5.0	-5.0	7.0
HAFNIUM	1.0	6.10	11.00	7.50	6.70	5.70	7.30	10.00	2.30	11.00	8.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.700	6.990	8.380	9.710	9.640	9.380	4.900	4.300	.450	1.800
LANTHANUM	.5	47.00	46.00	44.00	33.00	33.00	34.00	30.00	6.90	48.00	22.00
LUTETIUM	.2	.57	.76	.64	.62	.42	.65	.72	.44	.90	.61
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.300	1.000	.590	.770	.740	2.900	-0.20	.610	3.000	-.200
RUBIDIUM	20.0	150.0	98.0	82.0	67.0	82.0	220.0	21.0	84.0	190.0	-20.0
SAMARIUM	.20	8.00	12.00	9.00	11.00	8.40	6.70	9.20	1.80	8.90	5.50
SCANDIUM	.10	24.50	30.40	36.80	36.80	24.10	32.40	41.40	40.80	12.50	4.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.90	3.30	2.50	2.60	2.20	2.70	3.40	-1.00	2.00	-1.00
THORIUM	.5	10.00	12.00	8.70	6.10	7.10	6.60	10.00	3.80	18.00	16.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.80
URANIUM	2.0	2.10	-2.00	-2.00	-2.00	-2.00	-2.00	2.80	-2.00	2.10	3.00
YTTERBIUM	.5	3.10	4.40	4.00	3.80	2.70	3.30	4.20	2.70	4.60	3.10
ZINC	100.0	140.0	330.0	340.0	380.0	530.0	130.0	1600.0	190.0	-100.0	100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	570.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32641	# 32642	# 32643	# 32644	# 32645	# 32646	# 32647	# 32648	# 32649	# 32650
ANTIMONY	.2	2.70	3.50	5.30	4.60	.64	.85	1.60	.44	.49	.25
ARSENIC	2.0	14.00	13.00	12.00	33.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	390.0	370.0	720.0	250.0	180.0	310.0	600.0	-100.0	460.0	460.0
BROMINE	2.0	-2.00	2.40	2.60	-2.00	-2.00	7.30	7.40	7.20	12.00	-2.00
CERIUM	2.0	83.00	150.00	140.00	110.00	51.00	44.00	79.00	44.00	100.00	66.00
CAESIUM	1.0	19.00	25.00	32.00	43.00	3.40	5.10	10.00	1.50	5.50	15.00
CHROMIUM	5.0	250.0	430.0	320.0	310.0	20.0	42.0	61.0	12.0	39.0	420.0
COBALT	1.0	3.00	36.00	123.00	62.00	1.50	-1.00	-1.00	-1.00	-1.00	21.00
EUROPIUM	.5	1.40	4.50	5.20	4.80	.69	1.10	1.60	.75	1.30	.71
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	6.3	-5.0	-5.0	-5.0	-5.0	53.0
HAFNIUM	1.0	7.30	12.00	10.00	9.10	7.70	9.20	7.90	12.00	12.00	7.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.580	1.700	3.400	4.400	.360	.480	.470	.410	.470	4.000
LANTHANUM	.5	47.00	86.50	77.20	65.30	28.00	31.00	47.00	25.00	57.10	34.00
LUTETIUM	.2	1.00	.60	.74	.55	.51	.69	.83	.43	1.00	.41
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.000	2.400	2.300	2.400	1.200	2.300	3.300	.550	2.000	1.700
RUBIDIUM	20.0	160.0	250.0	190.0	200.0	67.0	130.0	200.0	27.0	110.0	180.0
SAMARIUM	.20	9.00	16.00	18.00	16.00	5.10	5.30	9.40	4.40	10.00	6.90
SCANDIUM	.10	11.70	33.30	32.70	26.40	4.40	9.20	13.60	2.70	8.80	10.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.90	5.90	7.10	5.90	1.40	1.20	1.80	-1.00	-1.00	3.70
THORIUM	.5	12.00	10.00	10.00	8.30	7.40	10.00	10.00	5.30	13.00	13.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.40	-2.00	-2.00	-2.00	2.90	-2.00	-2.00	2.30	7.20
URANIUM	2.0	3.00	-2.00	-2.00	-2.00	3.00	3.40	2.70	-2.00	-2.00	2.90
YTTERBIUM	.5	4.60	2.90	3.40	2.60	2.40	3.00	3.50	1.90	4.40	1.80
ZINC	100.0	-100.0	590.0	1300.0	1400.0	-100.0	-100.0	-100.0	-100.0	-100.0	120.0
ZIRCONIUM	500.0	-500.0	660.0	770.0	540.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32651	# 32652	# 32653	# 32654	# 32655	# 32656	# 32657	# 32658	# 32659	# 32660
ANTIMONY	.2	.62	.81	.29	.38	.75	1.00	.63	1.60	1.20	.76
ARSENIC	2.0	-2.00	-2.00	-2.00	4.70	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	690.0	760.0	-100.0	460.0	570.0	580.0	640.0	530.0	510.0	310.0
BROMINE	2.0	9.40	6.30	4.50	2.40	3.20	8.70	4.60	4.10	8.60	14.00
CERIUM	2.0	65.00	81.00	35.00	87.00	72.00	89.00	200.00	70.00	79.00	35.00
CAESIUM	1.0	11.00	9.20	-1.00	5.50	10.00	12.00	10.00	13.00	13.00	4.50
CHROMIUM	5.0	84.0	59.0	8.4	32.0	51.0	73.0	95.0	79.0	63.0	29.0
COBALT	1.0	-1.00	-1.00	1.20	8.20	1.40	-1.00	1.70	-1.00	1.50	1.00
EUROPIUM	.5	1.10	1.50	-.50	1.90	1.40	1.40	5.80	1.60	1.50	.74
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.60	8.70	7.30	13.00	7.60	7.10	8.50	7.40	7.20	8.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.580	.470	.250	.620	.540	.670	.580	.640	.810	.390
LANTHANUM	.5	40.00	50.20	20.00	73.00	53.40	57.20	133.00	51.50	52.80	24.00
LUTETIUM	.2	.94	.84	.33	.84	.91	.86	1.00	.88	.86	.72
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	5.000	3.400	.210	2.100	3.600	4.600	4.100	3.600	3.800	2.000
RUBIDIUM	20.0	250.0	180.0	-20.0	140.0	210.0	250.0	230.0	210.0	220.0	130.0
SAMARIUM	.20	6.90	9.10	3.00	11.00	9.40	9.00	33.70	9.20	10.00	3.90
SCANDIUM	.10	18.00	13.00	1.60	7.50	12.70	15.10	17.00	16.00	15.30	8.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.50	1.40	-1.00	2.10	2.50	1.10	-1.00	1.30	2.00	1.60
THORIUM	.5	12.00	12.00	3.40	14.00	14.00	14.00	17.00	20.00	15.00	7.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.10	-2.00	-2.00	4.90	-2.00	3.00	-2.00	2.70	6.30	3.60
URANIUM	2.0	3.50	3.20	-2.00	4.50	-2.00	3.10	-2.00	3.90	3.20	2.30
YTTERBIUM	.5	4.10	3.50	1.50	3.10	3.40	3.50	3.70	3.30	3.40	2.60
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	120.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	600.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 302

ELEMENT	DL	# 32661	# 32662	# 32663	# 32664	# 32665	# 32666	# 32667	# 32668	# 32669	# 32670
ANTIMONY	.2	.58	.35	1.50	.70	1.20	.93	1.70	1.80	1.60	1.00
ARSENIC	2.0	-2.00	-2.00	11.00	-2.00	2.40	6.00	8.00	3.10	3.80	2.70
BARIUM	100.0	650.0	420.0	660.0	540.0	320.0	510.0	570.0	490.0	470.0	430.0
BROMINE	2.0	4.30	8.40	8.80	5.30	4.00	-2.00	-2.00	3.10	-2.00	11.00
CERIUM	2.0	79.00	51.00	85.00	58.00	37.00	71.00	66.00	73.00	77.00	54.00
CAESIUM	1.0	12.00	6.00	11.00	9.30	4.90	19.00	19.00	10.00	11.00	7.00
CHROMIUM	5.0	59.0	37.0	61.0	58.0	31.0	53.0	72.0	75.0	72.0	65.0
COBALT	1.0	2.20	-1.00	-1.00	1.60	-1.00	5.30	6.00	5.40	5.90	3.40
EUROPIUM	.5	1.50	.85	1.30	1.00	.78	1.60	1.60	1.10	1.00	.77
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.5	-5.0	8.6
HAFNIUM	1.0	7.40	7.60	6.30	6.90	9.00	12.00	6.80	6.90	7.30	7.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.000	.400	.910	.620	.340	1.000	1.700	2.400	2.100	1.300
LANTHANUM	.5	57.80	30.00	49.00	47.00	27.00	53.40	44.00	41.00	42.00	39.00
LUTETIUM	.2	.94	.64	.80	.83	.72	1.00	.74	.54	.55	.56
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.100	2.500	4.300	4.000	2.000	2.600	2.400	2.100	2.100	1.500
RUBIDIUM	20.0	230.0	130.0	260.0	220.0	120.0	140.0	140.0	140.0	140.0	110.0
SAMARIUM	.20	10.00	5.40	9.10	7.60	4.50	11.00	9.20	7.30	7.30	6.20
SCANDIUM	.10	16.60	10.00	17.00	14.30	8.40	11.50	10.60	9.30	9.50	7.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.60	1.40	2.00	1.00	1.20	1.80	-1.00	1.10	1.60	1.80
THORIUM	.5	16.00	7.00	14.00	10.00	7.40	12.00	14.00	13.00	14.00	11.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.30	2.60	5.60	6.00	2.90	2.80	-2.00	-2.00	2.70
URANIUM*	2.0	2.00	-2.00	2.00	-2.00	3.60	4.70	-2.00	2.40	2.80	-2.00
YTTERBIUM	.5	3.60	2.80	3.60	2.90	2.70	3.90	3.10	2.60	2.80	2.20
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	150.0	-100.0	100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

EMENT	DL	# 32671	# 32672	# 32673	# 32674	# 32675	# 32676	# 32677	# 32678	# 32679	# 32680
ANTIMONY	.2	1.00	1.00	.75	.89	1.50	2.00	1.40	1.60	1.60	4.30
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	2.30	12.00	3.30	7.50	2.80	8.20
BARIUM	100.0	390.0	310.0	460.0	570.0	580.0	610.0	560.0	570.0	430.0	500.0
BROMINE	2.0	7.20	7.80	11.00	12.00	6.30	7.60	4.40	5.60	10.00	4.40
CERIUM	2.0	53.00	56.00	58.00	55.00	59.00	65.00	59.00	59.00	61.00	55.00
CAESIUM	1.0	6.50	6.50	7.90	10.00	9.30	10.00	13.00	10.00	11.00	14.00
CHROMIUM	5.0	54.0	60.0	64.0	71.0	77.0	78.0	73.0	76.0	71.0	57.0
COBALT	1.0	-1.00	1.30	3.00	4.30	5.00	12.00	5.20	6.20	-1.00	-1.00
EUROPIUM	.5	.91	1.00	.76	1.10	1.30	1.20	1.00	1.00	1.30	1.10
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.9	-5.0	-5.0	7.5	-5.0
HAFNIUM	1.0	8.50	8.30	7.80	7.40	7.00	7.30	6.70	6.90	6.10	6.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.650	1.000	1.400	2.200	2.300	2.300	2.200	2.300	.930	1.100
LANTHANUM	.5	40.00	37.00	40.00	41.00	45.00	45.00	47.00	45.00	46.00	40.00
LUTETIUM	.2	.57	.54	.54	.55	.60	.61	.63	.59	.77	.70
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.500	1.700	1.600	1.800	2.000	2.100	2.400	2.300	3.300	3.100
RUBIDIUM	20.0	100.0	97.0	110.0	130.0	140.0	140.0	150.0	150.0	200.0	200.0
SAMARIUM	.20	6.00	5.90	6.30	6.80	7.70	7.50	7.20	7.40	8.10	7.00
SCANDIUM	.10	7.30	7.10	8.00	8.90	10.00	10.10	10.60	10.20	15.40	13.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.00	1.30	1.20	1.60	2.30	1.20	1.10	-1.00	1.10	1.50
THORIUM	.5	10.00	10.00	11.00	12.00	13.00	14.00	14.00	14.00	14.00	13.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.40	-2.00	-2.00	3.40	-2.00	-2.00	-2.00	-2.00	3.50
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	2.00	3.10	2.30	4.60	3.10
YTTERBIUM	.5	2.40	2.40	2.40	2.30	2.50	2.50	2.40	2.40	3.00	2.60
ZINC *	100.0	-100.0	-100.0	-100.0	-100.0	110.0	150.0	100.0	120.0	100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 302

ELEMENT	DL	# 32681	# 32682	# 32683	# 32684	# 32685	# 32686	# 32687	# 32688	# 32689	# 32690
ANTIMONY	.2	.63	.64	.68	.83	.27	.52	.78	.71	.76	2.90
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	35.00	2.80	-2.00	18.00
BARIUM	100.0	660.0	570.0	-100.0	530.0	470.0	140.0	230.0	340.0	530.0	600.0
BROMINE	2.0	5.30	9.20	2.00	5.00	6.70	-2.00	13.00	9.40	2.60	11.00
CERIUM	2.0	72.00	84.00	39.00	82.00	89.00	34.00	38.00	62.00	93.00	67.00
CAESIUM	1.0	13.00	11.00	1.60	12.00	11.00	1.90	4.10	11.00	18.00	15.00
CHROMIUM	5.0	79.0	82.0	14.0	69.0	70.0	12.0	24.0	42.0	62.0	100.0
COBALT	1.0	-1.00	-1.00	3.10	-1.00	3.30	-1.00	3.00	2.20	1.60	5.40
EUROPIUM	.5	1.10	1.30	.69	1.50	1.70	.76	.70	1.00	1.10	1.60
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.8
HAFNIUM	1.0	7.40	8.10	13.00	7.90	8.20	10.00	6.00	5.80	6.60	7.40
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.560	.590	.460	.660	.910	.310	2.300	.830	.660	2.200
LANTHANUM	.5	54.00	49.00	22.00	47.00	62.90	23.00	27.00	42.00	52.40	50.00
LUTETIUM	.2	.91	.84	.54	.78	1.00	.45	.49	.69	.78	.93
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.400	3.900	.770	3.700	3.800	.900	1.300	2.800	4.300	4.800
RUBIDIUM	20.0	280.0	230.0	40.0	220.0	210.0	51.0	85.0	160.0	230.0	260.0
SAMARIUM	.20	9.30	8.90	3.80	9.00	11.00	4.10	4.30	6.70	7.90	9.40
SCANDIUM	.10	17.40	16.00	3.60	15.10	16.70	3.60	6.70	11.80	15.30	21.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.80	1.20	1.00	1.60	1.80	-1.00	-1.00	1.20	1.50	1.50
THORIUM	.5	12.00	14.00	5.10	11.00	17.00	5.20	7.50	10.00	13.00	17.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.70	4.00	2.60	-2.00	-2.00	-2.00	-2.00	2.40	-2.00	-2.00
URANIUM	2.0	4.70	4.40	2.20	3.10	3.50	-2.00	2.50	2.20	2.20	3.40
YTTERBIUM	.5	3.40	3.90	2.30	3.60	3.80	1.80	2.00	2.70	3.60	3.40
ZINC *	100.0	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	100.0	-100.0	300.0
ZIRCONIUM	500.0	-500.0	-500.0	520.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32691	# 32692	# 32693	# 32694	# 32695	# 32696	# 32697	# 32698	# 32699	# 32700
ANTIMONY	.2	.88	1.10	.65	3.00	11.00	1.30	1.90	.58	.95	.22
ARSENIC	2.0	-2.00	8.20	-2.00	8.70	43.00	5.50	2.30	-2.00	-2.00	3.90
BARIUM	100.0	250.0	680.0	-100.0	280.0	120.0	590.0	420.0	-100.0	220.0	600.0
BROMINE	2.0	11.00	3.30	2.90	3.10	2.60	3.30	9.40	3.80	4.80	-2.00
CERIUM	2.0	52.00	110.00	22.00	130.00	100.00	82.00	67.00	11.00	30.00	80.00
CAESIUM	1.0	4.30	14.00	4.40	20.00	11.00	15.00	5.40	-1.00	2.70	11.00
CHROMIUM	5.0	27.0	60.0	20.0	340.0	250.0	53.0	35.0	8.8	19.0	330.0
COBALT	1.0	-1.00	4.40	-1.00	45.00	39.00	-1.00	1.90	-1.00	-1.00	33.00
EUROPIUM	.5	.90	1.40	-.50	3.70	2.60	1.10	.74	-.50	.51	1.10
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	260.0
HAFNIUM	1.0	8.00	8.00	4.20	7.10	7.50	8.20	7.70	6.70	11.00	8.80
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.510	2.600	.380	7.680	8.260	.660	1.400	.260	.360	5.420
LANTHANUM	.5	31.00	54.50	11.00	76.80	57.80	41.00	35.00	6.20	16.00	44.00
LUTETIUM	.2	.63	.88	.22	.46	.60	.67	.49	.29	.48	.57
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.400	3.100	.500	.470	.520	2.900	1.700	.260	1.200	1.000
RUBIDIUM	20.0	77.0	200.0	28.0	69.0	72.0	170.0	100.0	-20.0	66.0	110.0
SAMARIUM	.20	5.50	10.00	2.00	15.00	13.00	8.20	5.30	1.10	2.70	8.50
SCANDIUM	.10	6.10	14.60	2.20	40.30	30.70	11.40	8.00	1.90	4.50	12.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	1.70	-1.00	8.90	6.90	2.40	1.90	-1.00	1.10	1.40
THORIUM	.5	7.90	17.00	2.90	17.00	18.00	14.00	8.40	2.90	5.60	17.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	7.50
URANIUM	2.0	2.30	2.10	-2.00	3.40	3.20	2.40	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.70	4.00	1.20	2.50	3.10	3.20	2.40	1.40	2.40	2.70
ZINC *	100.0	-100.0	-100.0	-100.0	510.0	490.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	560.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

ELEMENT	DL	# 32701	# 32702	# 32703	# 32704	# 32705	# 32706	# 32707	# 32708	# 32709	# 32710
ANTIMONY	.2	1.20	.89	.59	1.70	.65	1.20	.74	.84	.70	1.00
ARSENIC	2.0	-2.00	3.20	-2.00	8.70	-2.00	2.90	-2.00	-2.00	2.20	-2.00
BARIUM	100.0	540.0	330.0	470.0	630.0	-100.0	510.0	520.0	550.0	430.0	430.0
BROMINE	2.0	4.40	4.50	5.20	-2.00	7.50	6.90	16.00	7.40	18.00	8.50
CERIUM	2.0	91.00	80.00	84.00	92.00	18.00	80.00	84.00	84.00	69.00	68.00
CAESIUM	1.0	13.00	11.00	13.00	14.00	1.40	10.00	8.80	9.20	7.50	8.00
CHROMIUM	5.0	92.0	52.0	53.0	83.0	41.0	82.0	77.0	78.0	59.0	67.0
COBALT	1.0	-1.00	3.10	5.80	7.60	-1.00	5.60	3.70	4.80	1.70	2.30
EUROPIUM	.5	1.30	1.10	1.20	1.50	-.50	1.20	1.00	1.20	.79	.87
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.10	6.60	6.20	7.30	4.00	7.70	8.40	8.10	7.40	7.70
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.680	1.000	2.000	2.000	.340	2.300	1.500	1.800	1.000	1.000
LANTHANUM	.5	48.00	42.00	43.00	49.00	10.00	43.00	46.00	46.00	38.00	37.00
LUTETIUM	.2	.79	.67	.67	.60	-.20	.60	.57	.59	.52	.52
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.900	2.900	2.800	2.400	.350	2.300	1.700	2.100	1.900	1.800
RUBIDIUM	20.0	240.0	170.0	160.0	150.0	22.0	140.0	120.0	150.0	120.0	120.0
SAMARIUM	.20	9.20	7.80	8.10	8.90	1.60	7.60	7.40	7.60	6.10	5.90
SCANDIUM	.10	15.90	11.60	13.60	11.30	1.30	10.80	9.20	10.40	8.30	8.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.30	1.30	1.10	1.80	-1.00	1.20	1.60	-1.00	-1.00	1.20
THORIUM	.5	18.00	12.00	14.00	16.00	2.60	17.00	12.00	15.00	12.00	11.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.30	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	3.20	-2.00	2.10	-2.00	-2.00	2.40	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.70	3.40	3.50	3.10	.91	3.00	2.90	2.90	2.50	2.60
ZINC *	100.0	-100.0	-100.0	-100.0	170.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

EMENT	DL	# 32711	# 32712	# 32713	# 32714	# 32715	# 32716	# 32717	# 32718	# 32719
ANTIMONY	.2	.92	.71	1.20	1.80	2.40	2.10	2.10	3.40	1.90
ARSENIC	2.0	-2.00	-2.00	2.20	3.70	12.00	13.00	11.00	8.70	5.10
BARIUM	100.0	490.0	420.0	510.0	400.0	570.0	530.0	490.0	580.0	460.0
BROMINE	2.0	7.60	23.00	6.10	5.80	-2.00	-2.00	-2.00	10.00	21.00
CERIUM	2.0	78.00	68.00	76.00	84.00	86.00	84.00	83.00	82.00	73.00
CAESIUM	1.0	10.00	8.60	10.00	10.00	14.00	11.00	16.00	9.50	9.00
CHROMIUM	5.0	73.0	63.0	83.0	81.0	77.0	79.0	76.0	85.0	79.0
COBALT	1.0	3.70	1.70	5.40	7.00	8.30	12.00	6.50	7.40	8.00
EUROPIUM	.5	1.20	.71	1.10	1.10	1.20	1.10	1.40	1.00	.94
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.50	7.10	7.30	7.80	7.40	7.90	7.10	7.90	7.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.700	1.000	2.300	2.600	2.200	2.600	1.900	2.400	1.900
LANTHANUM	.5	43.00	37.00	42.00	46.00	45.00	46.00	44.00	44.00	39.00
LUTETIUM	.2	.56	.51	.52	.57	.59	.62	.56	.57	.52
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.200	1.600	2.400	2.100	2.100	2.100	2.000	1.800	2.100
RUBIDIUM	20.0	140.0	110.0	140.0	150.0	140.0	130.0	120.0	130.0	120.0
SAMARIUM	.20	7.30	6.00	7.00	7.90	8.50	8.20	8.20	7.60	6.80
SCANDIUM	.10	10.00	8.30	10.00	10.00	10.70	10.80	10.70	10.00	9.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
VER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.20	2.00	1.50	1.80	1.80	1.50	1.10	1.40	-1.00
THORIUM	.5	13.00	11.00	14.00	15.00	16.00	15.00	15.00	14.00	14.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	2.90	-2.00	-2.00	2.60	2.20
YTTERBIUM	.5	2.80	2.40	2.70	3.00	3.00	3.10	2.80	2.80	2.70
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	110.0	150.0	110.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 302

DUPLICATES

ELEMENT	DL	# 32402	# 32430	# 32445	# 32478	# 32484	# 32504	# 32537	# 32553	# 32565	# 32595
ANTIMONY	.2	1.50	2.30	1.30	4.20	5.30	2.20	4.80	1.20	3.50	7.30
ARSENIC	2.0	98.00	62.00	24.00	110.00	120.00	120.00	28.00	40.00	44.00	25.00
BARIUM	100.0	430.0	250.0	130.0	330.0	260.0	1300.0	800.0	-100.0	240.0	230.0
BROMINE	2.0	2.60	30.00	68.00	35.00	18.00	2.20	8.60	36.00	35.00	5.30
CERIUM	2.0	78.00	59.00	95.00	72.00	43.00	87.00	74.00	63.00	60.00	84.00
CAESIUM	1.0	20.00	7.30	10.00	18.00	7.00	80.00	10.00	10.00	10.00	8.80
CHROMIUM	5.0	110.0	320.0	170.0	210.0	250.0	210.0	58.0	340.0	250.0	52.0
COBALT	1.0	40.00	35.00	53.00	12.00	6.50	99.00	-1.00	7.40	2.10	3.20
EUROPIUM	.5	1.80	1.60	1.40	2.00	1.50	2.90	1.00	2.30	1.90	1.20
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.20	8.30	6.40	8.20	7.40	6.20	6.60	8.60	8.50	8.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	9.840	10.800	8.490	8.530	11.700	7.500	.940	11.900	15.400	2.700
LANTHANUM	.5	24.00	32.00	25.00	38.00	27.00	52.00	44.00	43.00	31.00	49.00
LUTETIUM	.2	.66	.55	.52	.74	.43	.67	.50	.62	.45	.66
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-26.0
POTASSIUM, %	.2	1.500	.760	1.000	2.000	.920	2.200	2.200	1.000	1.800	1.100
RUBIDIUM	20.0	81.0	60.0	72.0	180.0	110.0	200.0	160.0	63.0	86.0	120.0
SAMARIUM	.20	7.60	7.20	6.20	8.30	5.10	10.00	6.00	8.30	7.90	7.60
INDIUM	.10	32.80	31.20	25.80	31.70	29.90	33.70	11.90	33.70	51.50	32.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	3.30	2.30	2.20	3.70	2.30	3.00	1.00	3.50	1.70	8.70
THORIUM	.5	8.80	7.80	9.20	11.00	5.40	6.50	10.00	9.40	7.10	29.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	28.00	-2.00	-2.00	-2.00	-2.00	5.70	-2.00	-2.00	6.50
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	15.00
YTTERBIUM	.5	3.60	3.40	3.00	3.90	2.30	3.50	2.40	3.30	3.00	3.50
ZINC	100.0	810.0	330.0	140.0	210.0	130.0	4600.0	-100.0	160.0	160.0	990.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	620.0	-500.0

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BECQUEREL JOB # 302

DUPLICATES

ELEMENT	DL	# 32605	# 32634	# 32656	# 32680	# 32694	# 32714
ANTIMONY	.2	3.20	1.80	1.40	4.00	2.70	1.60
ARSENIC	2.0	42.00	44.00	-2.00	5.90	9.30	3.10
BARIUM	100.0	160.0	220.0	610.0	390.0	300.0	410.0
BROMINE	2.0	16.00	-2.00	10.00	3.60	3.90	5.60
CERIUM	2.0	64.00	65.00	110.00	74.00	140.00	81.00
CAESIUM	1.0	7.80	10.00	12.00	12.00	19.00	7.40
CHROMIUM	5.0	60.0	210.0	72.0	54.0	330.0	75.0
COBALT	1.0	-1.00	69.00	1.50	1.50	44.00	6.50
EUROPIUM	.5	1.20	2.70	1.40	.92	3.80	1.10
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.80	6.20	6.90	6.70	6.70	7.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.200	8.840	.650	1.200	7.210	2.400
LANTHANUM	.5	31.00	30.00	55.50	38.00	71.70	42.00
LUTETIUM	.2	.50	.55	.74	.64	.44	.51
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.600	-.200	5.000	2.700	.430	2.000
RUBIDIUM	20.0	87.0	39.0	240.0	190.0	68.0	130.0
SAMARIUM	.20	6.30	9.40	8.50	6.70	13.00	7.00
SCANDIUM	.10	13.40	33.50	14.70	13.20	38.50	9.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	25.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	1.40	1.60	1.40	2.00	7.70	1.80
THORIUM	.5	12.00	6.20	14.00	14.00	16.00	14.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	2.70	-2.00	4.00	4.80	-2.00	-2.00
YTTERBIUM	.5	2.70	3.40	4.00	3.40	2.80	2.70
ZINC	100.0	-100.0	340.0	-100.0	-100.0	450.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES
A.C.N. 003 271 832

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL LABORATORIES PTY. LIMITED

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 09-04-91

RGC TASMANIA

BECQUEREL JOB # 330

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
- ELEVATED D.L. FOR K IN SOME SAMPLES DUE TO HIGH R.E.E., As & FOR Mo DUE TO U FISSION.
- ALL SAMPLE IDs PREFIXED WITH "T".

ELEMENT	DL	# 33042	# 33043	# 33044	# 33045	# 33046	# 33047	# 33048	# 33049	# 33050	# 33051
ANTIMONY	.2	2.07	2.05	2.30	1.55	1.04	45.20	1.45	.96	36.30	18.40
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	124.00	-2.00	-2.00	951.00	1560.00
BARIUM	100.0	182.0	395.0	473.0	-100.0	116.0	325.0	-100.0	-100.0	-100.0	144.0
BROMINE	2.0	5.38	10.80	2.05	2.09	3.52	5.21	4.64	3.04	11.60	14.50
CERIUM	2.0	13.60	71.00	24.10	15.70	30.80	179.00	3.01	-2.00	117.00	143.00
CAESIUM	1.0	7.66	14.30	16.00	2.87	3.60	13.10	-1.00	-1.00	-1.00	1.88
CHROMIUM	5.0	18.3	52.0	59.8	23.4	17.3	78.4	29.2	14.3	18.3	19.2
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	43.80	-1.00	-1.00	5.53	9.74
EUROPIUM	.5	-.50	.87	-.50	-.50	-.50	4.38	-.50	-.50	5.37	6.08
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.76	5.86	6.71	6.67	7.07	8.97	2.57	1.63	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.419	.546	.660	.276	.311	4.960	.136	.199	36.700	37.700
LANTHANUM	.5	7.70	39.40	12.40	8.04	15.60	93.90	1.50	.77	68.90	99.40
LUTETIUM	.2	.29	.62	.72	.36	.41	1.05	-.20	-.20	1.02	1.14
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.110	2.920	3.860	.523	.821	1.250	-.200	-.200	-.200	-.450
RUBIDIUM	20.0	68.9	154.0	198.0	22.3	39.3	74.8	-20.0	-20.0	75.0	85.6
SAMARIUM	.20	1.13	5.60	2.29	1.50	2.67	27.50	.35	.21	18.00	22.00
SCANDIUM	.10	4.63	12.20	15.40	2.42	3.17	18.30	.46	.34	10.30	7.48
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.033	.075	.067	.032	.036	.034	.021	.025	.023	.013
TANTALUM	1.0	1.00	-1.00	1.66	-1.00	-1.00	3.07	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	3.65	6.08	7.56	2.83	3.62	21.20	.71	.52	2.69	3.34
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.28	-2.00	2.17	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	2.76	3.01	-2.00	2.20	6.29	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	1.36	3.09	3.47	1.74	2.05	5.20	-.50	-.50	4.53	4.95
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	2020.0	-100.0	-100.0	2990.0	3330.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	628.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33052	# 33053	# 33054	# 33055	# 33056	# 33057	# 33058	# 33059	# 33060	# 33061
ANTIMONY	.2	9.61	10.10	9.56	7.45	3.25	14.40	6.73	5.83	.28	5.63
ARSENIC	2.0	61.80	35.90	27.70	26.90	4.55	70.10	35.10	154.00	2.79	28.80
BARIUM	100.0	-100.0	-100.0	-100.0	-100.0	533.0	-100.0	187.0	-100.0	535.0	249.0
BROMINE	2.0	7.49	7.54	29.70	27.20	4.55	98.60	45.20	65.40	-2.00	31.90
CERIUM	2.0	122.00	25.50	43.20	11.80	91.00	8.14	11.20	5.50	60.40	9.37
CAESIUM	1.0	-1.00	-1.00	1.24	2.64	14.40	1.11	4.83	1.35	16.50	9.78
CHROMIUM	5.0	25.4	-5.0	38.9	61.7	82.8	197.0	117.0	1410.0	429.0	211.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	4.46	3.89	4.38	21.20	5.99
EUROPIUM	.5	2.59	.71	.73	-.50	.84	-.50	-.50	-.50	.79	.55
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	55.0	-5.0
HAFNIUM	1.0	5.00	-1.00	1.60	4.07	7.46	7.66	6.93	5.41	7.92	5.32
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	2.230	1.730	3.450	3.470	.791	11.900	19.100	23.700	3.950	13.600
LANTHANUM	.5	45.10	8.61	28.90	7.27	53.10	2.11	6.86	2.31	33.90	4.89
LUTETIUM	.2	.33	-.20	-.20	-.20	.73	-.20	.43	.24	.41	.57
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	-.200	.319	3.910	-.200	.752	-.200	1.300	1.760
RUBIDIUM	20.0	-20.0	-20.0	-20.0	31.3	222.0	-20.0	74.9	43.3	190.0	137.0
SAMARIUM	.20	14.10	3.39	3.64	1.00	4.86	1.37	1.05	1.89	6.97	2.52
SCANDIUM	.10	3.29	1.25	2.49	4.91	15.70	40.00	33.70	48.20	10.90	39.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	11.90	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.057	.022	.019	.028	.082	.028	.032	.022	1.460	.052
TANTALUM	1.0	-1.00	-1.00	-1.00	1.16	1.95	2.95	1.88	1.80	2.88	1.80
THORIUM	.5	7.86	-.50	1.69	3.44	14.50	7.65	11.10	3.75	13.50	16.20
TIN *	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.44	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.85	-2.00
URANIUM	2.0	2.21	-2.00	-2.00	-2.00	2.85	-2.00	-2.00	-2.00	3.63	2.73
YTTERBIUM	.5	1.77	-.50	.56	.92	3.60	1.10	2.06	1.59	2.05	2.69
ZINC	100.0	234.0	211.0	-100.0	-100.0	-100.0	148.0	104.0	360.0	113.0	117.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33062	# 33063	# 33064	# 33065	# 33066	# 33067	# 33068	# 33069	# 33070	# 33071
ANTIMONY	.2	2.96	4.54	4.72	5.04	5.06	7.97	12.00	8.75	3.73	1.47
ARSENIC	2.0	17.00	12.40	20.10	13.00	22.40	28.70	21.10	10.10	3.74	4.04
BARIUM	100.0	400.0	190.0	109.0	-100.0	954.0	175.0	237.0	127.0	590.0	438.0
BROMINE	2.0	19.50	33.20	40.20	61.80	-2.00	30.10	103.00	51.60	3.73	8.15
CERIUM	2.0	79.90	17.30	23.50	3.84	376.00	21.00	267.00	11.50	103.00	17.30
CAESIUM	1.0	13.30	10.10	3.25	2.86	4.99	3.03	6.55	5.47	19.40	10.20
CHROMIUM	5.0	135.0	149.0	695.0	1610.0	621.0	1230.0	219.0	101.0	93.3	65.2
COBALT	1.0	9.41	5.10	1.83	15.10	122.00	4.66	21.20	31.00	-1.00	2.31
EUROPIUM	.5	1.52	2.24	1.50	-.50	13.50	1.73	13.60	-.50	1.11	.66
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.40	7.04	10.50	7.45	11.00	6.00	8.40	6.71	6.59	7.13
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.340	12.800	4.570	12.100	7.450	6.960	5.870	3.460	1.180	1.230
LANTHANUM	.5	57.80	6.05	9.59	1.23	226.00	18.50	261.00	7.99	56.60	8.70
LUTETIUM	.2	.74	.98	.54	-.20	2.08	.46	1.06	.37	.69	.63
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.680	1.030	-.200	-.200	2.140	-.200	-.740	.728	3.320	3.230
RUBIDIUM	20.0	130.0	98.7	-20.0	24.9	68.9	-20.0	49.3	54.3	194.0	172.0
SAMARIUM	.20	6.89	8.29	5.73	1.60	53.00	6.65	61.80	1.44	7.69	2.68
SCANDIUM	.10	29.30	41.10	61.60	83.40	52.60	57.20	26.70	11.50	15.20	11.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.0	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.046	.033	.028	.031	1.520	.031	.033	.033	.052	.066
TANTALUM	1.0	1.74	2.52	4.06	3.38	3.84	2.74	2.42	2.13	1.90	1.77
THORIUM	.5	12.00	11.80	7.04	4.44	9.20	4.61	17.00	12.20	16.80	11.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.59	2.44	2.50
YTTERBIUM	.5	3.34	5.06	2.71	1.13	11.30	2.47	5.42	1.98	3.15	3.16
ZINC	100.0	178.0	222.0	178.0	212.0	337.0	184.0	266.0	238.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	625.0	-500.0	1010.0	537.0	707.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 330

ELEMENT	DL	# 33072	# 33073	# 33074	# 33075	# 33076	# 33077	# 33078	# 33079	# 33080	# 33081
ANTIMONY	.2	1.25	.82	.93	.63	1.13	2.01	.73	2.57	-.20	.89
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.16	-2.00
BARIUM	100.0	546.0	595.0	112.0	-100.0	164.0	459.0	-100.0	542.0	547.0	-100.0
BROMINE	2.0	10.70	23.40	23.20	2.20	12.50	9.74	6.24	3.84	-2.00	6.77
CERIUM	2.0	77.00	53.00	29.80	17.20	52.40	164.00	17.90	183.00	84.80	38.50
CAESIUM	1.0	10.10	11.10	1.36	-1.00	4.13	11.80	-1.00	11.00	10.00	1.11
CHROMIUM	5.0	64.9	63.2	24.8	7.8	30.1	61.1	10.1	52.1	330.0	15.8
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	1.71	-1.00	1.03	32.30	-1.00
EUROPIUM	.5	.68	.70	-.50	-.50	.52	1.66	-.50	1.28	1.10	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	249.0	-5.0
HAFNIUM	1.0	8.14	7.01	13.60	3.98	7.95	8.39	4.58	17.70	8.21	5.40
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.565	.541	.350	.180	.392	.702	.264	.659	5.390	.262
LANTHANUM	.5	49.80	27.30	16.60	9.60	29.70	93.70	10.70	113.00	44.10	20.60
LUTETIUM	.2	.66	.63	.37	-.20	.42	.87	-.20	1.28	.53	.25
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.150	3.210	.447	-.200	1.310	3.130	-.200	3.300	1.260	.399
RUBIDIUM	20.0	152.0	156.0	22.1	-20.0	80.6	169.0	-20.0	185.0	104.0	23.5
SAMARIUM	.20	4.71	4.64	2.37	1.31	4.01	11.50	1.29	11.10	8.40	2.32
SCANDIUM	.10	10.30	10.90	2.90	.54	5.45	14.20	.97	10.70	12.60	2.52
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.063	.063	.040	.017	.035	.068	.019	.068	1.140	.017
TANTALUM	1.0	2.35	1.64	1.55	-1.00	1.90	2.52	-1.00	9.66	1.21	1.43
THORIUM	.5	9.11	10.80	5.25	1.75	7.72	15.90	2.27	25.10	17.00	3.82
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	2.25	-2.00	-2.00	-2.00	-2.00	-2.00	6.00	2.32
URANIUM	2.0	2.86	-2.00	-2.00	-2.00	2.52	2.23	-2.00	3.91	3.89	-2.00
YTTERBIUM	.5	3.19	3.10	1.88	.57	2.06	4.20	.86	6.23	2.92	1.28
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	517.0	-500.0	-500.0	-500.0	-500.0	761.0	-500.0	-500.0

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UEREL JOB # 330

ELEMENT	DL	# 33082	# 33083	# 33084	# 33085	# 33086	# 33087	# 33088	# 33089	# 33090	# 33091
ANTIMONY	.2	.86	1.37	2.09	1.62	2.41	2.38	1.12	.54	1.38	1.10
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	-100.0	-100.0	163.0	160.0	204.0	552.0	567.0	646.0	641.0	584.0
BROMINE	2.0	3.84	-2.00	-2.00	5.85	9.71	19.20	6.19	6.75	12.10	7.91
CERIUM	2.0	41.70	39.30	58.70	57.00	55.60	79.40	71.10	62.20	94.10	124.00
CAESIUM	1.0	-1.00	1.06	1.62	2.02	4.75	12.40	10.40	9.51	11.90	13.60
CHROMIUM	5.0	11.2	8.8	16.2	17.1	34.8	72.8	60.7	57.5	81.6	82.0
COBALT	1.0	1.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	-.50	.62	.54	.67	1.11	1.31	.85	.95	1.37
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	4.97	3.25	6.58	7.54	9.21	7.15	7.20	7.80	9.23	9.11
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.378	.348	.368	.378	.538	.479	.480	.494	.611	.457
LANTHANUM	.5	22.80	20.90	30.90	31.50	30.00	40.30	37.70	32.70	49.60	63.30
LUTETIUM	.2	.21	-.20	.39	.33	.55	.71	.71	.72	.88	.90
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.279	.397	.782	.669	1.340	2.960	3.350	3.260	4.010	4.010
RUBIDIUM	20.0	-20.0	24.4	46.8	51.6	88.5	196.0	195.0	187.0	223.0	233.0
SAMARIUM	.20	3.06	3.09	4.79	4.06	4.81	7.17	8.23	5.55	8.04	9.86
SCANDIUM	.10	1.39	1.44	3.27	2.97	6.97	12.60	13.60	13.80	14.70	16.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	10.70	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.018	.017	.024	.034	.041	.092	.078	.074	.078	.127
TANTALUM	1.0	-1.00	-1.00	1.60	2.30	1.70	1.63	1.15	1.92	2.41	2.06
THORIUM	.5	3.37	3.74	6.72	6.85	9.35	12.20	10.50	9.22	12.10	11.30
TIN *	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.13	-2.00	3.97	4.73	-2.00	2.91	-2.00	2.35	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	2.69	4.82	3.07	4.06	4.58	2.88
YTTERBIUM	.5	1.05	.96	2.00	1.76	2.82	3.65	3.66	3.65	4.49	4.32
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33092	# 33093	# 33094	# 33095	# 33096	# 33097	# 33098	# 33099	# 33100	# 33101
ANTIMONY	.2	1.47	8.09	7.58	2.64	1.05	4.17	3.26	.72	-.20	.81
ARSENIC	2.0	-2.00	4.04	5.87	2.60	-2.00	-2.00	-2.00	-2.00	3.78	-2.00
BARIUM	100.0	600.0	477.0	479.0	427.0	589.0	443.0	572.0	-100.0	613.0	144.0
BROMINE	2.0	14.90	5.44	17.80	7.20	12.10	5.32	3.79	6.15	-2.00	3.65
CERIUM	2.0	65.50	12.40	65.00	46.70	117.00	35.00	53.80	13.80	84.20	40.10
CAESIUM	1.0	12.90	16.20	13.50	13.50	22.60	11.00	13.10	-1.00	9.80	1.64
CHROMIUM	5.0	75.9	65.4	73.3	62.3	79.3	56.5	77.5	7.2	332.0	13.4
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	32.50	-1.00
EUROPIUM	.5	.68	-.50	.65	.70	1.13	.59	.87	-.50	1.17	-.50
GOLD, ppb	5.0	-5.0	9.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	265.0	-5.0
HAFNIUM	1.0	8.21	7.90	8.35	9.17	6.84	10.90	6.88	4.32	8.46	4.52
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.414	.530	1.190	.460	.566	.747	.580	.289	5.450	.430
LANTHANUM	.5	36.10	5.57	38.20	23.10	64.40	17.30	33.40	7.87	43.60	20.20
LUTETIUM	.2	.79	.68	.71	.72	.74	.75	.63	-.20	.54	.23
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.510	3.220	3.290	2.780	3.970	2.720	3.260	-.200	1.330	.673
RUBIDIUM	20.0	203.0	279.0	188.0	180.0	218.0	157.0	194.0	-20.0	112.0	42.3
SAMARIUM	.20	5.14	1.18	4.28	4.53	7.46	3.18	4.74	1.09	8.65	3.47
SCANDIUM	.10	14.30	13.50	13.70	12.20	16.40	11.10	13.60	1.44	12.70	2.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.121	.083	.097	.083	.151	.097	.086	.016	1.120	.022
TANTALUM	1.0	1.86	2.03	2.28	2.05	1.98	1.45	1.15	1.19	1.97	1.11
THORIUM	.5	22.10	15.60	16.70	17.20	13.50	14.80	11.00	2.50	16.90	4.18
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	5.31	2.77	-2.00	2.59	-2.00	2.57	-2.00	5.80	3.41
URANIUM	2.0	3.52	4.35	3.34	2.84	2.12	3.05	3.80	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.92	3.44	3.65	3.72	3.71	3.73	3.22	.92	2.87	1.12
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33102	# 33103	# 33104	# 33105	# 33106	# 33107	# 33108	# 33109	# 33110	# 33111
ANTIMONY	.2	2.51	1.32	.71	4.33	4.53	3.16	12.50	12.40	17.50	16.40
ARSENIC	2.0	-2.00	-2.00	-2.00	109.00	5.94	6.75	45.50	34.00	22.60	27.50
BARIUM	100.0	-100.0	415.0	-100.0	-100.0	189.0	277.0	174.0	172.0	515.0	986.0
BROMINE	2.0	7.24	17.80	-2.00	26.20	42.00	16.40	47.30	84.30	7.48	15.20
CERIUM	2.0	29.50	20.40	11.20	76.30	33.50	128.00	36.20	45.40	47.60	76.30
CAESIUM	1.0	1.37	6.55	-1.00	2.77	5.22	7.51	-1.00	1.12	11.70	7.73
CHROMIUM	5.0	16.2	22.8	7.2	267.0	156.0	155.0	272.0	305.0	108.0	183.0
COBALT	1.0	-1.00	-1.00	-1.00	62.10	5.18	12.50	15.80	10.90	-1.00	-1.00
EUROPIUM	.5	-.50	-.50	-.50	2.02	.76	3.38	.69	1.34	-.50	.88
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.5	-5.0
HAFNIUM	1.0	7.11	8.79	4.44	8.07	10.50	11.80	8.89	9.19	6.62	5.86
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.318	.509	.235	6.800	4.170	5.280	10.900	10.700	1.350	2.100
LANTHANUM	.5	15.80	11.30	6.07	34.50	16.60	60.20	22.10	23.20	26.50	47.90
LUTETIUM	.2	.29	.46	-.20	.59	.65	.96	.53	.50	.51	.72
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-24.0
POTASSIUM, %	.2	.519	1.130	-.200	.511	.844	1.890	.451	.347	3.220	2.340
RUBIDIUM	20.0	30.4	111.0	-20.0	60.8	58.7	130.0	38.0	32.9	206.0	137.0
SAMARIUM	.20	2.46	1.77	.98	10.50	3.92	16.40	3.22	4.97	2.78	4.79
SCANDIUM	.10	2.49	6.45	.65	48.10	18.90	26.30	30.90	32.50	12.30	14.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	8.4
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.027	.034	.017	.026	.030	.034	.036	.056	.045	.032
TANTALUM	1.0	1.07	3.32	-1.00	3.51	3.10	4.17	2.73	3.60	2.07	1.72
THORIUM	.5	3.79	8.17	1.93	8.17	10.40	15.30	7.29	7.48	12.60	14.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.38	-2.00	-2.00	-2.00	2.54	-2.00	-2.00	-2.00	3.24	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	2.03	-2.00	-2.00	-2.00	3.17	13.30
YTTERBIUM	.5	1.34	2.42	.72	3.29	3.43	5.11	2.87	2.84	2.72	3.38
ZINC	100.0	-100.0	-100.0	-100.0	3550.0	-100.0	157.0	220.0	138.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	651.0	595.0	537.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33112	# 33113	# 33114	# 33115	# 33116	# 33117	# 33118	# 33119	# 33120	# 33121
ANTIMONY	.2	20.80	10.60	1.75	2.03	2.67	4.11	4.34	21.90	1.02	5.02
ARSENIC	2.0	121.00	50.20	23.20	22.30	6.73	103.00	123.00	74.30	-2.00	3.09
BARIUM	100.0	1040.0	184.0	-100.0	-100.0	116.0	-100.0	-100.0	582.0	443.0	702.0
BROMINE	2.0	113.00	71.80	102.00	111.00	33.70	113.00	61.10	6.93	-2.00	2.78
CERIUM	2.0	60.40	9.86	5.32	12.40	13.90	20.10	10.50	41.80	59.00	47.30
CAESIUM	1.0	3.82	3.40	1.69	2.14	2.22	1.62	1.85	13.50	16.90	16.50
CHROMIUM	5.0	364.0	473.0	676.0	781.0	922.0	823.0	1260.0	75.3	431.0	69.4
COBALT	1.0	5.16	12.40	2.74	2.25	20.70	19.60	6.39	-1.00	22.60	-1.00
EUROPIUM	.5	1.61	-.50	-.50	-.50	-.50	.86	.71	.57	.86	.88
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	52.9	-5.0
HAFNIUM	1.0	7.04	7.57	6.21	8.97	7.38	8.00	5.92	6.25	7.80	7.01
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	7.930	11.400	20.300	11.400	16.200	15.700	16.900	2.110	4.130	.510
LANTHANUM	.5	29.40	9.20	1.82	10.00	1.83	5.36	3.55	26.60	35.20	19.50
LUTETIUM	.2	.68	.53	.33	.59	.41	.40	.31	.56	.42	.77
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.220	.271	-.200	-.200	-.200	-.200	-.200	2.960	1.410	3.990
RUBIDIUM	20.0	71.7	31.1	35.8	-20.0	32.5	25.0	27.0	185.0	197.0	236.0
SAMARIUM	.20	6.91	1.65	1.27	1.52	1.41	3.10	2.36	4.26	7.10	5.44
SCANDIUM	.10	30.90	27.60	38.40	42.10	49.20	57.60	53.60	13.30	11.20	14.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.032	.204	.033	.029	.025	.027	.021	.032	1.490	.049
TANTALUM	1.0	2.70	2.82	2.54	3.24	2.31	3.45	2.70	1.31	3.33	2.65
THORIUM	.5	8.43	12.40	5.81	9.72	5.54	6.27	3.74	11.30	13.30	14.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	8.97	5.40	-2.00
URANIUM	2.0	-2.00	2.23	-2.00	-2.00	-2.00	-2.00	-2.00	5.14	3.89	4.37
YTTERBIUM	.5	3.65	2.27	1.72	2.59	2.19	2.59	1.74	2.42	1.93	3.90
ZINC	100.0	148.0	286.0	-100.0	101.0	117.0	278.0	174.0	129.0	117.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	533.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33122	# 33123	# 33124	# 33125	# 33126	# 33127	# 33128	# 33129	# 33130	# 33131
ANTIMONY	.2	3.92	8.07	16.90	23.00	6.68	18.10	2.32	2.84	3.43	2.35
ARSENIC	2.0	-2.00	52.50	-2.00	42.10	16.30	28.90	4.46	5.02	10.30	52.70
BARIUM	100.0	784.0	-100.0	-100.0	-100.0	-100.0	182.0	-100.0	-100.0	-100.0	-100.0
BROMINE	2.0	9.03	4.00	-2.00	13.20	9.06	9.31	2.86	7.70	3.46	15.60
CERIUM	2.0	102.00	-2.00	-2.00	43.20	94.00	26.80	9.43	10.00	10.30	3.24
CAESIUM	1.0	9.32	-1.00	-1.00	-1.00	-1.00	2.51	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	66.7	-5.0	10.3	43.3	86.1	35.3	16.9	12.0	13.5	7.1
COBALT	1.0	2.13	-1.00	-1.00	-1.00	3.05	-1.00	-1.00	-1.00	-1.00	3.98
EUROPIUM	.5	.59	-.50	-.50	-.50	-.50	-.50	-.50	-.50	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	8.7	-5.0	6.1	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	10.70	-1.00	-1.00	3.67	9.60	4.22	1.78	1.94	2.52	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.760	.983	.208	2.750	2.030	2.430	.262	1.020	.716	3.490
LANTHANUM	.5	60.10	-.50	.69	22.90	55.90	14.20	5.00	5.51	5.76	1.22
LUTETIUM	.2	.74	-.20	-.20	.32	.64	.27	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.610	-.200	-.200	-.200	-.200	.757	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	133.0	-20.0	-20.0	-20.0	-20.0	38.4	-20.0	-20.0	-20.0	-20.0
SAMARIUM	.20	6.77	-.20	-.20	2.17	5.06	2.02	.77	.84	.81	.27
SCANDIUM	.10	12.70	.18	.20	4.81	9.93	5.60	.64	.93	.81	.49
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER*	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	5.60	-5.00	-5.00
SODIUM, %	.01	.040	-.010	-.010	.015	.019	.042	.014	.046	.019	.023
TANTALUM	1.0	1.26	-1.00	-1.00	-1.00	1.43	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	16.50	-.50	-.50	7.81	15.80	6.19	.96	1.81	1.39	1.01
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.47	-2.00	-2.00	2.91	2.86	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	2.35	6.36	3.32	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.32	-.50	-.50	1.50	3.13	1.31	-.50	-.50	-.50	-.50
ZINC	100.0	161.0	114.0	-100.0	269.0	342.0	120.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	514.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 330

ELEMENT	DL	# 33132	# 33133	# 33134	# 33135	# 33136	# 33137	# 33138	# 33139	# 33140	# 33141
ANTIMONY	.2	21.70	3.96	.80	.57	.83	7.66	22.10	21.20	-.20	5.22
ARSENIC	2.0	143.00	61.10	-2.00	-2.00	46.60	144.00	110.00	53.10	3.39	2.07
BARIUM	100.0	229.0	424.0	-100.0	-100.0	-100.0	431.0	228.0	483.0	615.0	492.0
BROMINE	2.0	117.00	20.30	-2.00	-2.00	2.34	5.20	26.80	5.39	-2.00	7.03
CERIUM	2.0	62.40	77.50	-2.00	-2.00	11.80	42.70	61.80	44.20	79.30	33.30
CAESIUM	1.0	6.33	11.90	-1.00	-1.00	-1.00	12.40	11.20	30.00	9.80	16.40
CHROMIUM	5.0	123.0	98.4	9.0	11.9	8.1	105.0	69.9	97.2	339.0	108.0
COBALT	1.0	1.11	1.24	-1.00	-1.00	30.10	8.93	3.60	16.40	32.20	-1.00
EUROPIUM	.5	.96	1.04	-.50	-.50	-.50	.71	2.51	.62	1.17	-.50
GOLD, ppb	5.0	19.8	10.4	-5.0	-5.0	-5.0	-5.0	-5.0	16.9	249.0	6.2
HAFNIUM	1.0	5.82	6.13	1.61	1.63	-1.00	6.88	4.83	5.27	8.64	5.74
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	5.440	1.700	.236	.228	2.760	2.520	6.370	3.060	5.450	.690
LANTHANUM	.5	33.90	38.70	.66	.90	1.11	23.20	28.80	21.90	44.60	16.60
LUTETIUM	.2	.54	.67	-.20	-.20	-.20	.48	.59	.75	.57	.64
MOLYBDENUM	5.0	-37.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.890	2.900	-.200	-.200	-.200	1.340	.875	4.630	1.480	3.870
RUBIDIUM	20.0	110.0	136.0	-20.0	-20.0	-20.0	85.5	65.0	250.0	125.0	211.0
SAMARIUM	.20	6.72	6.79	-.20	.24	.40	4.41	13.60	4.11	8.44	2.93
SCANDIUM	.10	28.50	14.00	.30	.37	1.26	11.00	14.40	17.40	12.80	14.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.023	.029	-.010	-.010	.013	.063	.052	.041	1.150	.043
TANTALUM	1.0	-1.00	1.02	-1.00	-1.00	-1.00	-1.00	-1.00	1.21	2.98	1.17
THORIUM	.5	27.00	12.60	.53	.69	1.16	8.70	7.57	11.80	17.40	14.70
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	4.32	2.22	5.34	-2.00
URANIUM	2.0	20.30	4.62	-2.00	-2.00	-2.00	-2.00	-2.00	4.42	4.05	2.78
YTTERBIUM	.5	2.67	3.26	-.50	-.50	-.50	2.38	3.12	3.78	2.88	3.15
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	580.0	964.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33142	# 33143	# 33144	# 33145	# 33146	# 33147	# 33148	# 33149	# 33150	# 33151
ANTIMONY	.2	17.20	1.44	17.60	14.70	1.05	1.14	1.28	3.90	8.72	3.85
ARSENIC	2.0	42.70	-2.00	19.50	328.00	22.40	3.77	11.30	83.50	35.80	2.48
BARIUM	100.0	486.0	231.0	-100.0	495.0	562.0	351.0	391.0	368.0	291.0	432.0
BROMINE	2.0	6.55	-2.00	13.60	11.40	-2.00	8.01	2.83	18.70	31.60	-2.00
CERIUM	2.0	60.00	18.80	102.00	45.90	105.00	70.20	60.70	44.50	133.00	50.90
CAESIUM	1.0	18.00	5.14	2.74	11.20	25.90	17.40	13.20	17.00	15.50	16.50
CHROMIUM	5.0	100.0	22.5	131.0	43.9	89.5	54.3	48.9	62.5	97.7	90.0
COBALT	1.0	-1.00	-1.00	1.80	11.50	22.10	3.25	4.65	-1.00	-1.00	-1.00
EUROPIUM	.5	.71	-.50	1.58	.72	1.84	.85	.69	.57	1.74	.78
GOLD, ppb	5.0	6.3	-5.0	-5.0	42.4	-5.0	-5.0	5.1	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.21	8.86	7.04	4.17	11.10	7.38	6.61	6.46	8.85	7.04
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.530	.367	2.460	7.880	4.930	1.370	2.830	3.610	2.310	.486
LANTHANUM	.5	29.90	8.35	53.20	24.90	52.80	35.10	34.60	25.80	62.90	26.70
LUTETIUM	.2	.61	.45	.56	.39	1.05	.71	.62	.59	.65	.69
MOLYBDENUM	5.0	-5.0	-5.0	-24.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.770	1.450	-.200	2.680	4.700	3.280	2.920	3.480	2.680	3.900
RUBIDIUM	20.0	181.0	61.2	-20.0	188.0	264.0	167.0	152.0	178.0	141.0	191.0
SAMARIUM	.20	5.73	1.79	9.31	4.40	10.90	6.77	5.31	3.21	12.40	4.72
SCANDIUM	.10	15.80	5.29	23.20	9.39	23.40	13.20	12.80	14.20	15.20	15.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.035	.037	.011	.061	.269	.074	.066	.097	.086	.065
TANTALUM	1.0	1.50	1.09	1.57	-1.00	1.68	1.22	1.51	1.06	1.11	2.31
THORIUM	.5	21.90	3.56	41.50	9.93	20.30	13.80	12.30	13.10	37.40	19.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.27	-2.00	-2.00	9.00	-2.00	2.35	-2.00	-2.00	-2.00	2.68
URANIUM	2.0	5.06	-2.00	13.10	-2.00	2.69	2.13	2.94	2.07	3.41	2.64
YTTERBIUM	.5	2.95	2.12	2.47	1.67	5.01	3.49	3.11	2.89	3.20	3.50
ZINC	100.0	-100.0	-100.0	181.0	105.0	146.0	103.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33152	# 33153	# 33154	# 33155	# 33156	# 33157	# 33158	# 33159	# 33160	# 33161
ANTIMONY	.2	8.39	5.61	5.04	2.87	1.29	.81	.44	.48	-.20	.43
ARSENIC	2.0	18.40	25.80	4.94	19.40	-2.00	3.92	-2.00	-2.00	2.84	-2.00
BARIUM	100.0	153.0	414.0	670.0	221.0	159.0	439.0	537.0	436.0	429.0	120.0
BROMINE	2.0	32.00	71.60	5.17	7.95	2.34	16.80	20.80	3.98	-2.00	7.54
CERIUM	2.0	6.06	4.86	103.00	68.90	39.90	101.00	68.90	68.40	62.70	25.30
CAESIUM	1.0	4.46	8.47	9.89	5.80	4.72	9.80	7.52	10.10	16.60	1.40
CHROMIUM	5.0	172.0	667.0	73.5	33.6	23.3	68.7	49.0	55.1	455.0	13.3
COBALT	1.0	21.50	31.40	1.01	1.61	-1.00	3.22	-1.00	1.13	21.40	-1.00
EUROPIUM	.5	-.50	-.50	2.29	.97	.56	1.13	.97	1.05	1.02	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	59.6	-5.0
HAFNIUM	1.0	2.09	-1.00	7.63	6.54	5.59	6.61	15.10	7.15	8.38	4.70
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.600	8.810	.607	1.280	.653	3.040	.573	.646	4.060	.326
LANTHANUM	.5	3.10	2.97	54.50	34.80	20.10	52.70	32.70	31.70	35.40	14.40
LUTETIUM	.2	.24	-.20	.80	.54	.34	.81	.89	.77	.44	.29
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.862	.786	3.840	1.760	.722	4.050	3.250	3.570	1.340	.611
RUBIDIUM	20.0	61.0	70.9	247.0	107.0	49.3	215.0	155.0	240.0	195.0	40.3
SAMARIUM	.20	1.15	1.25	9.94	6.97	3.83	9.43	6.76	7.41	7.19	1.43
SCANDIUM	.10	41.10	32.10	15.50	8.06	3.98	16.80	12.70	15.30	11.30	3.32
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.732	.114	.047	.043	.043	.069	.065	.052	1.520	.027
TANTALUM	1.0	-1.00	-1.00	1.46	1.76	-1.00	2.06	1.71	1.17	3.13	-1.00
THORIUM	.5	2.20	.92	17.60	10.90	5.44	14.70	10.30	11.40	14.10	3.09
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	5.29	-2.00	-2.00	-2.00	-2.00	2.80	3.25	2.31
URANIUM	2.0	-2.00	-2.00	3.04	-2.00	-2.00	4.56	3.57	2.95	3.45	-2.00
YTTERBIUM	.5	1.20	.82	3.99	2.82	1.74	4.03	4.51	3.80	2.25	1.48
ZINC	100.0	166.0	296.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	106.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	513.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33162	# 33163	# 33164	# 33165	# 33166	# 33167	# 33168	# 33169	# 33170	# 33171
ANTIMONY	.2	3.77	.88	.43	1.22	.71	.27	.47	.60	.35	.44
ARSENIC	2.0	3.01	4.61	3.05	7.75	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	545.0	658.0	197.0	853.0	165.0	-100.0	112.0	132.0	-100.0	-100.0
BROMINE	2.0	16.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.79	-2.00	2.77	9.15
CERIUM	2.0	104.00	106.00	61.20	137.00	44.00	32.30	32.70	57.60	48.00	12.00
CAESIUM	1.0	11.40	14.20	3.43	17.50	1.75	-1.00	1.27	3.75	1.41	-1.00
CHROMIUM	5.0	56.6	67.1	22.3	73.8	8.8	5.3	12.1	20.4	8.9	-5.0
COBALT	1.0	3.42	5.54	1.91	7.41	-1.00	-1.00	1.34	1.16	-1.00	-1.00
EUROPIUM	.5	1.36	1.77	.66	3.36	.73	-.50	-.50	.93	-.50	-.50
GOLD, ppb	5.0	-5.0	5.9	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.31	7.06	14.90	8.75	6.17	6.85	10.80	9.13	8.59	6.10
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.974	3.040	1.890	1.700	.399	.553	.301	1.560	.259	.218
LANTHANUM	.5	51.80	53.50	31.10	65.50	22.50	16.30	19.70	28.70	26.90	6.21
LUTETIUM	.2	.77	.87	.61	1.07	.37	.24	.47	.48	.35	-.20
YBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.680	3.970	1.220	4.350	.793	-.200	.575	1.050	.588	-.200
RUBIDIUM	20.0	204.0	231.0	75.7	258.0	54.4	-20.0	30.9	75.8	30.6	-20.0
SAMARIUM	.20	10.10	11.00	5.12	18.90	3.80	2.73	2.21	5.74	2.45	1.05
SCANDIUM	.10	14.80	18.00	5.65	18.30	3.45	1.57	3.33	4.88	2.87	1.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM,*%	.01	.058	.067	.022	.065	.023	.010	.027	.021	.029	.017
TANTALUM	1.0	-1.00	1.72	1.21	2.32	1.06	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	13.80	18.80	9.78	20.10	5.16	3.89	4.92	7.85	3.83	1.84
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	3.00	3.07	-2.00	2.18	-2.00	-2.00	-2.00
URANIUM	2.0	2.12	2.25	2.33	2.67	-2.00	-2.00	2.13	-2.00	-2.00	-2.00
YTTERBIUM	.5	4.14	4.52	3.10	5.56	2.01	1.28	2.47	2.51	1.80	.96
ZINC	100.0	-100.0	-100.0	-100.0	143.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	553.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL J08 # 330

ELEMENT	DL	# 33172	# 33173	# 33174	# 33175	# 33176	# 33177	# 33178	# 33179	# 33180	# 33181
ANTIMONY	.2	2.17	.73	.53	.83	.40	.28	.61	.75	-.20	2.52
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.63	4.19
BARIUM	100.0	823.0	653.0	-100.0	527.0	277.0	-100.0	710.0	752.0	530.0	607.0
BROMINE	2.0	5.00	11.30	12.30	7.09	15.20	8.68	8.91	3.55	-2.00	15.50
CERIUM	2.0	108.00	119.00	60.10	112.00	59.20	20.20	117.00	102.00	84.20	104.00
CAESIUM	1.0	13.00	10.20	2.22	11.30	4.41	-1.00	9.15	11.30	10.80	10.80
CHROMIUM	5.0	90.7	68.3	15.6	63.6	34.4	5.2	67.6	68.3	345.0	77.2
COBALT	1.0	-1.00	-1.00	-1.00	1.13	-1.00	-1.00	-1.00	-1.00	33.30	-1.00
EUROPIUM	.5	1.03	1.06	.60	1.46	.74	-.50	1.51	1.72	1.20	1.29
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	257.0	-5.0
HAFNIUM	1.0	8.58	11.10	9.63	7.83	6.58	5.01	12.20	7.87	8.41	7.06
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.557	.585	.255	.509	.537	.272	.567	.525	5.540	2.760
LANTHANUM	.5	54.00	60.20	30.20	55.50	30.30	10.10	57.20	51.90	44.20	53.00
LUTETIUM	.2	.86	.87	.45	.77	.45	-.20	.80	.82	.59	.83
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.680	3.830	.455	3.790	1.710	-.200	3.550	3.880	1.280	3.460
RUBIDIUM	20.0	260.0	204.0	28.6	245.0	98.9	-20.0	182.0	231.0	117.0	209.0
SAMARIUM	.20	8.50	9.23	4.74	9.56	5.62	1.87	10.50	10.20	8.76	10.50
SCANDIUM	.10	18.30	14.60	3.44	14.10	7.79	.90	12.10	15.50	13.00	16.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.086	.094	.028	.090	.071	.024	.062	.084	1.140	.115
TANTALUM	1.0	1.24	2.01	-1.00	1.61	1.30	-1.00	1.33	1.80	1.71	1.72
THORIUM	.5	16.50	15.70	7.77	13.60	8.71	2.36	14.80	11.10	17.00	20.80
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	2.09	-2.00	-2.00	2.08	2.65	5.54	-2.00
URANIUM	2.0	3.99	4.19	-2.00	2.98	-2.00	-2.00	2.55	2.56	-2.00	2.28
YTTERBIUM	.5	4.33	4.34	2.25	3.87	2.28	.83	4.15	4.23	2.88	4.08
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 330

ELEMENT	DL	# 33182	# 33183	# 33184	# 33185	# 33186	# 33187	# 33188	# 33189	# 33190	# 33191
ANTIMONY	.2	.31	.75	.48	.65	1.20	2.45	3.15	1.25	1.08	3.07
ARSENIC	2.0	-2.00	-2.00	-2.00	7.24	4.27	9.80	-2.00	-2.00	-2.00	10.30
BARIUM	100.0	575.0	448.0	408.0	510.0	759.0	641.0	768.0	688.0	633.0	457.0
BROMINE	2.0	9.19	12.30	6.38	-2.00	4.55	2.88	-2.00	2.85	4.87	6.00
CERIUM	2.0	96.90	91.10	59.20	90.30	108.00	87.90	77.80	90.70	86.00	74.80
CAESIUM	1.0	8.50	8.15	6.79	9.48	11.50	12.10	12.10	14.00	11.30	10.30
CHROMIUM	5.0	55.4	57.0	43.1	48.5	68.3	65.6	57.4	69.1	62.5	62.0
COBALT	1.0	-1.00	-1.00	-1.00	3.92	-1.00	2.21	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	1.60	1.35	.93	1.43	1.45	1.34	.73	1.23	1.05	1.05
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	6.2	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.77	9.14	7.48	8.86	8.05	8.28	8.12	7.88	8.16	7.46
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.430	.404	.437	1.510	.569	1.390	.438	.514	.496	.625
LANTHANUM	.5	47.90	45.90	31.40	45.00	55.00	44.10	40.20	46.40	43.40	40.70
LUTETIUM	.2	.79	.73	.52	.77	.86	.74	.72	.78	.77	.67
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.330	2.730	2.390	2.790	3.800	3.440	3.310	3.880	3.660	2.950
RUBIDIUM	20.0	166.0	158.0	136.0	168.0	223.0	189.0	181.0	227.0	210.0	208.0
SAMARIUM	.20	9.73	8.35	5.52	8.76	10.20	8.13	6.09	8.12	7.65	6.45
SCANDIUM	.10	12.80	12.20	9.94	11.40	16.10	12.90	11.00	15.50	14.80	12.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.094	.090	.066	.069	.096	.085	.095	.086	.074	.061
TANTALUM	1.0	1.77	1.29	1.74	-1.00	1.20	1.75	1.27	1.63	1.63	1.71
THORIUM	.5	13.30	12.50	7.14	12.50	12.20	14.90	10.40	11.40	10.10	10.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.15	-2.00	-2.00	-2.00	2.59	2.41	2.63	-2.00	3.85	2.98
URANIUM	2.0	3.75	3.25	-2.00	-2.00	3.27	2.95	3.26	2.94	2.55	2.23
YTTERBIUM	.5	3.92	3.76	2.69	4.24	4.48	3.92	3.51	4.08	4.00	3.46
ZINC	100.0	-100.0	-100.0	-100.0	147.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33192	# 33193	# 33194	# 33195	# 33196	# 33197	# 33198	# 33199	# 33200	# 33201
ANTIMONY	.2	3.78	1.29	.62	1.13	1.22	3.11	2.71	.74	.31	7.01
ARSENIC	2.0	6.88	3.33	4.29	-2.00	-2.00	21.10	-2.00	-2.00	3.12	2.73
BARIUM	100.0	701.0	655.0	629.0	684.0	138.0	367.0	589.0	196.0	390.0	464.0
BROMINE	2.0	2.61	3.82	-2.00	-2.00	5.38	2.78	2.53	11.00	-2.00	8.07
CERIUM	2.0	96.60	80.10	100.00	99.30	57.10	79.40	110.00	72.60	65.70	82.50
CAESIUM	1.0	10.60	13.90	10.10	13.10	2.16	8.29	8.57	2.50	17.20	8.66
CHROMIUM	5.0	58.9	58.3	60.9	59.5	18.3	35.8	65.8	18.9	433.0	43.2
COBALT	1.0	5.41	1.62	7.60	8.87	1.11	2.82	-1.00	-1.00	22.20	1.27
EUROPIUM	.5	1.33	.89	1.57	1.23	.99	.97	1.61	1.15	.93	1.39
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	8.5	-5.0	84.1	-5.0
HAFNIUM	1.0	7.08	6.51	7.02	7.03	15.00	9.50	7.53	11.40	8.35	7.98
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.190	.881	3.060	3.990	.361	1.300	.555	.975	4.080	.797
LANTHANUM	.5	47.50	40.80	48.60	48.60	29.20	39.10	54.00	35.60	34.40	40.20
LUTETIUM	.2	.77	.70	.81	.72	.60	.60	.79	.53	.40	.69
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.930	4.160	3.340	2.910	.971	1.920	4.230	1.240	1.810	2.440
RUBIDIUM	20.0	259.0	241.0	198.0	184.0	48.2	120.0	235.0	76.2	202.0	132.0
SAMARIUM	.20	8.53	6.67	9.38	9.44	5.37	7.54	10.30	6.88	7.05	8.58
SCANDIUM	.10	16.30	15.80	15.70	15.60	4.39	9.06	15.30	4.55	11.10	10.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	5.75
SODIUM, %	.01	.048	.065	.048	.047	.021	.031	.035	.018	1.480	.035
TANTALUM	1.0	-1.00	1.52	1.62	1.07	1.68	1.40	1.05	-1.00	2.95	1.19
THORIUM	.5	15.10	14.20	15.60	16.40	8.20	10.90	15.60	8.01	13.40	13.60
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.43	-2.00	-2.00	-2.00	3.89	-2.00	8.38	7.87	4.01	5.79
URANIUM	2.0	4.39	2.98	-2.00	3.67	2.07	-2.00	2.63	-2.00	3.94	2.42
YTTERBIUM	.5	3.84	3.72	4.13	3.92	3.31	3.10	4.12	2.58	2.13	3.42
ZINC	100.0	120.0	-100.0	-100.0	142.0	-100.0	-100.0	-100.0	-100.0	114.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	611.0	538.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33202	# 33203	# 33204	# 33205	# 33206	# 33207	# 33208	# 33209	# 33210	# 33211
ANTIMONY	.2	2.57	1.04	2.44	1.11	1.21	1.80	1.31	1.03	.94	.72
ARSENIC	2.0	7.37	-2.00	4.12	-2.00	-2.00	-2.00	-2.00	4.51	-2.00	-2.00
BARIUM	100.0	679.0	617.0	724.0	856.0	569.0	742.0	795.0	-100.0	629.0	783.0
BROMINE	2.0	3.62	2.96	6.15	4.61	5.94	4.18	7.16	8.50	4.65	5.09
CERIUM	2.0	117.00	84.40	118.00	131.00	98.30	94.80	114.00	50.10	100.00	110.00
CAESIUM	1.0	12.10	6.50	8.74	14.20	9.19	9.18	11.80	1.48	11.50	10.30
CHROMIUM	5.0	72.9	52.8	78.5	79.0	63.6	65.8	67.5	17.9	77.7	70.6
COBALT	1.0	2.05	-1.00	1.59	-1.00	1.38	-1.00	1.69	1.90	1.03	1.68
EUROPIUM	.5	2.51	1.42	2.02	2.37	1.26	1.64	1.87	1.07	1.74	1.28
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.44	9.24	10.90	7.80	6.88	6.39	8.16	6.55	7.31	9.52
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.710	.484	.613	.702	.608	.542	.957	2.150	.709	.640
LANTHANUM	.5	62.50	42.30	62.40	69.50	51.90	49.80	59.50	25.70	53.70	57.40
LUTETIUM	.2	.93	.78	.91	1.02	.78	.74	.91	.40	.85	1.05
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.120	3.190	4.600	5.580	4.250	4.220	4.350	.518	4.600	4.330
RUBIDIUM	20.0	231.0	184.0	272.0	292.0	216.0	237.0	231.0	39.6	241.0	250.0
SAMARIUM	.20	13.30	7.78	11.80	14.00	8.95	9.51	11.70	4.44	9.50	10.90
SCANDIUM	.10	18.30	11.40	17.70	19.90	16.10	16.60	17.10	3.98	17.80	18.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.048	.054	.064	.057	.056	.058	.068	.024	.057	.065
TANTALUM	1.0	-1.00	1.88	2.57	-1.00	1.44	-1.00	1.89	1.21	-1.00	2.06
THORIUM	.5	19.50	12.60	16.30	19.60	15.10	15.80	14.80	6.33	17.30	17.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.39	6.75	10.50	-2.00	-2.00	2.74	3.55	7.00	2.52	-2.00
URANIUM	2.0	3.48	2.17	2.24	4.00	3.06	3.10	3.40	-2.00	3.79	3.71
YTTERBIUM	.5	4.16	3.73	3.96	4.53	3.75	3.72	4.43	1.95	4.00	4.66
ZINC	100.0	375.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 330

ELEMENT	DL	# 33212	# 33213	# 33214	# 33215	# 33216	# 33217	# 33055R	# 33075R	# 33090R	# 33121R
ANTIMONY	.2	.99	.54	1.17	.74	.72	1.15	7.37	.65	1.26	4.89
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	27.00	-2.00	-2.00	3.07
BARIUM	100.0	514.0	610.0	497.0	358.0	910.0	668.0	-100.0	-100.0	640.0	661.0
BROMINE	2.0	11.30	9.22	12.00	6.72	6.60	2.88	26.80	2.45	13.10	2.55
CERIUM	2.0	90.20	97.30	118.00	73.80	126.00	116.00	12.90	16.80	96.60	48.70
CAESIUM	1.0	11.20	11.40	10.80	5.44	12.80	8.15	2.74	-1.00	11.00	17.80
CHROMIUM	5.0	59.2	67.6	69.5	42.0	82.5	54.8	62.7	7.3	84.3	69.1
COBALT	1.0	2.11	2.69	1.16	-1.00	-1.00	1.26	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	1.24	1.31	1.41	.99	1.20	1.61	-.50	-.50	1.06	.99
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.39	7.00	11.10	7.43	7.85	7.46	4.28	3.94	9.41	7.53
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.580	.927	.483	.407	.542	.476	3.540	.186	.606	.506
LANTHANUM	.5	46.30	50.00	60.20	38.10	62.90	56.70	7.39	9.22	49.90	19.70
LUTETIUM	.2	.82	.81	.87	.63	.94	.80	-.20	-.20	.92	.78
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.820	4.160	3.320	2.330	4.760	3.830	.324	-.200	4.000	4.190
RUBIDIUM	20.0	222.0	223.0	193.0	109.0	261.0	224.0	32.7	-20.0	223.0	235.0
SAMARIUM	.20	8.27	9.11	10.20	6.39	12.40	9.94	1.04	1.27	8.15	5.52
SCANDIUM	.10	16.70	16.70	13.90	8.52	19.00	15.30	5.05	.55	14.70	14.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.062	.066	.050	.041	.074	.047	.028	.016	.078	.050
TANTALUM	1.0	1.94	1.72	-1.00	-1.00	1.49	1.89	-1.00	-1.00	1.51	2.10
THORIUM	.5	13.30	15.10	17.00	8.88	18.50	15.30	3.45	1.78	12.40	15.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	10.40	-2.00	-2.00	-2.00	-2.00	-2.00	2.72	3.18
URANIUM	2.0	2.59	2.51	3.41	-2.00	3.22	3.36	2.02	-2.00	4.28	4.67
YTTERBIUM	.5	3.78	3.90	4.14	3.09	4.47	4.02	.95	.58	4.36	4.05
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 330

ELEMENT	DL	# 33135R	# 33157R	# 33174R	# 33190R	# 33208R
ANTIMONY	.2	.58	.95	.38	1.05	1.35
ARSENIC	2.0	-2.00	4.62	-2.00	-2.00	-2.00
BARIUM	100.0	-100.0	545.0	-100.0	613.0	803.0
BROMINE	2.0	-2.00	16.60	12.50	4.70	6.83
CERIUM	2.0	-2.00	104.00	58.30	81.90	120.00
CAESIUM	1.0	-1.00	9.79	2.04	10.40	11.20
CHROMIUM	5.0	12.0	67.5	17.0	63.2	69.7
COBALT	1.0	-1.00	3.43	-1.00	-1.00	1.36
EUROPIUM	.5	-.50	1.31	-.50	1.04	1.67
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	1.59	6.55	9.29	7.79	8.25
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.224	3.060	.221	.482	.926
LANTHANUM	.5	.95	52.20	29.30	41.40	58.40
LUTETIUM	.2	-.20	.83	.42	.74	.88
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.880	.504	3.440	4.160
RUBIDIUM	20.0	-20.0	220.0	24.1	206.0	229.0
SAMARIUM	.20	.22	9.70	4.59	7.32	11.60
SCANDIUM	.10	.38	16.60	3.32	14.10	16.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	-.010	.068	.027	.074	.068
TANTALUM	1.0	-1.00	1.60	-1.00	1.45	1.82
THORIUM	.5	.63	14.90	7.67	9.64	14.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	2.45	2.91
URANIUM	2.0	-2.00	-2.00	-2.00	4.38	-2.00
YTTERBIUM	.5	-.50	4.13	2.17	3.79	4.47
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 336

ELEMENT	DL	# 35331	# 35332	# 35333	# 35334	# 35335	# 35336	# 35337	# 35338	# 35339	# 35340
ANTIMONY	.2					1.18	1.00	3.83	.88	.43	-.20
ARSENIC	2.0					-2.00	-2.00	65.80	-2.00	-2.00	2.14
BARIUM	100.0					595.0	175.0	405.0	288.0	382.0	442.0
BROMINE	2.0					7.86	6.68	2.79	2.09	10.50	-2.00
CERIUM	2.0					105.00	49.60	62.30	53.70	85.50	64.40
CAESIUM	1.0					12.60	2.85	5.55	6.33	5.35	16.10
CHROMIUM	5.0					83.0	43.7	77.5	68.9	54.3	431.0
COBALT	1.0					-1.00	-1.00	-1.00	-1.00	-1.00	22.70
EUROPIUM	.5					1.47	.55	.55	-.50	.88	.98
GOLD, ppb	5.0					-5.0	-5.0	-5.0	-5.0	-5.0	54.8
HAFNIUM	1.0					7.13	5.28	5.39	3.43	6.71	8.05
IRIDIUM, ppb	20.0					-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05					.515	.422	6.280	.612	.462	4.070
LANTHANUM	.5					55.50	25.90	34.00	32.80	43.30	34.80
LUTETIUM	.2					.80	.41	.46	.31	.84	.42
MOLYBDENUM	5.0					-5.0	-5.0	-5.0	-18.0	-5.0	-5.0
POTASSIUM, %	.2					3.900	1.030	2.370	2.370	2.290	1.460
RUBIDIUM	20.0					173.0	49.0	120.0	100.0	110.0	192.0
SAMARIUM	.20					9.56	4.46	5.04	2.41	6.92	7.14
SCANDIUM	.10					14.10	4.06	10.40	4.54	9.92	11.20
SELENIUM	5.0					-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0					-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01					.135	.039	.073	.061	.063	1.520
TANTALUM	1.0					1.79	1.00	-1.00	1.55	-1.00	2.97
THORIUM	.5					18.00	5.99	11.70	11.80	10.10	13.80
TIN	500.0					-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0					-2.00	-2.00	-2.00	-2.00	-2.00	5.63
URANIUM	2.0					-2.00	-2.00	3.88	9.87	-2.00	2.52
YTTERBIUM	.5					3.96	1.93	2.39	1.48	4.08	2.12
ZINC	100.0					-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0					-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 538

ELEMENT	DL	# 35341	# 35342	# 35343	# 35344	# 35345	# 35346	# 35347	# 35348	# 35349	# 35350
ANTIMONY	.2	3.02	2.49	6.12	1.49	106.00	2.71	1.29	5.07	4.45	1.73
ARSENIC	2.0	2.37	-2.00	-2.00	-2.00	39.60	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	460.0	545.0	278.0	306.0	379.0	512.0	307.0	455.0	407.0	456.0
BROMINE	2.0	8.77	8.30	6.06	5.58	10.50	4.15	2.20	3.23	3.11	5.46
CERIUM	2.0	108.00	106.00	95.70	100.00	93.20	95.70	68.20	87.10	87.90	83.10
CAESIUM	1.0	7.47	5.08	5.27	4.74	6.16	7.21	3.23	7.54	11.50	8.99
CHROMIUM	5.0	60.8	69.6	74.7	45.8	254.0	79.3	35.1	69.4	80.6	82.8
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	1.39	1.31	1.14	1.45	1.50	1.11	.83	1.21	1.05	1.00
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	26.1	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	10.40	11.40	9.68	6.78	17.20	7.87	8.55	8.02	7.69	6.74
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.442	.431	.548	.393	12.500	.422	.391	.412	.480	.518
LANTHANUM	.5	58.30	57.20	50.90	48.60	49.30	49.50	35.70	45.90	46.60	43.40
LUTETIUM	.2	.89	1.02	.93	.91	.61	.75	.52	.73	.75	.67
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-39.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.200	3.400	2.060	2.300	2.260	3.380	1.590	3.200	3.620	3.010
RUBIDIUM	20.0	147.0	143.0	87.1	121.0	150.0	168.0	81.1	149.0	192.0	169.0
SAMARIUM	.20	9.69	10.40	8.76	9.78	10.20	8.71	6.61	8.24	8.37	7.71
SCANDIUM	.10	10.50	11.30	9.27	10.50	44.60	11.60	6.03	11.40	12.00	10.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	18.4	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.082	.106	.070	.087	.082	.112	.071	.118	.116	.121
TANTALUM	1.0	-1.00	1.61	1.57	1.17	2.05	2.51	1.94	1.94	1.46	-1.00
THORIUM	.5	16.00	16.70	13.70	11.50	77.20	16.00	9.94	15.70	16.30	15.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.17	3.36	2.55	-2.00	-2.00	-2.00	-2.00	-2.00	2.49	-2.00
URANIUM	2.0	-2.00	2.20	4.82	-2.00	21.40	3.16	-2.00	2.12	3.25	3.48
YTTERBIUM	.5	4.33	5.23	4.48	4.57	3.05	3.89	2.61	3.78	3.92	3.32
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	601.0	-500.0	-500.0	840.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 336

ELEMENT	DL	# 35351	# 35352	# 35353	# 35354	# 35355	# 35356	# 35357	# 35358	# 35359	# 35360
ANTIMONY	.2	2.40	.99	1.97	.39	.91	.84	.46	.67	.64	-.20
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.54
BARIUM	100.0	500.0	532.0	652.0	-100.0	144.0	-100.0	-100.0	174.0	182.0	682.0
BROMINE	2.0	3.18	3.58	3.57	7.41	6.31	6.17	16.00	10.90	5.83	-2.00
CERIUM	2.0	91.50	90.70	95.30	22.90	48.70	13.40	29.40	41.90	49.30	77.60
CAESIUM	1.0	10.10	6.22	9.42	-1.00	2.04	-1.00	-1.00	1.64	1.73	10.10
CHROMIUM	5.0	86.2	61.5	85.9	10.7	21.6	10.0	15.6	23.1	21.2	309.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	31.90
EUROPIUM	.5	1.26	1.30	1.49	-.50	.52	-.50	-.50	.67	.54	1.11
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	246.0
HAFNIUM	1.0	7.55	9.17	7.32	4.94	5.74	4.16	6.66	8.50	6.76	8.22
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.543	.475	.624	.526	.593	.455	.508	.492	.503	*5.360
LANTHANUM	.5	46.30	46.70	49.00	13.30	24.60	7.40	14.60	20.30	23.50	43.90
LUTETIUM	.2	.78	.77	.78	.23	.36	-.20	.32	.51	.37	.58
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.430	3.090	3.470	-.200	.865	-.200	.240	.900	.709	1.490
RUBIDIUM	20.0	177.0	153.0	170.0	-20.0	41.3	-20.0	-20.0	41.5	33.8	114.0
SAMARIUM	.20	8.81	8.58	9.44	2.29	4.24	1.28	2.52	3.85	4.14	8.11
SCANDIUM	.10	12.10	10.60	11.60	.77	3.32	.47	1.33	3.59	2.93	12.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.114	.099	.095	.023	.050	.018	.030	.046	.037	1.120
TANTALUM	1.0	1.50	1.34	1.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	16.40	15.20	16.20	2.69	6.32	1.68	3.75	6.44	5.92	16.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.19	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	21.10
URANIUM	2.0	3.21	2.15	2.99	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.82	3.93	3.81	1.03	1.67	.82	1.54	2.56	1.86	2.64
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	120.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 336

ELEMENT	DL	# 35361	# 35362	# 35363	# 35364	# 35365	# 35366	# 35367	# 35368	# 35369	# 35370
ANTIMONY	.2	.76	1.69	1.06	2.07	6.50	2.51	1.36	.69	1.62	.51
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	2.80	-2.00	-2.00	-2.00	5.99	-2.00
BARIUM	100.0	243.0	604.0	732.0	264.0	186.0	567.0	566.0	404.0	592.0	748.0
BROMINE	2.0	33.60	5.35	5.39	12.10	45.10	10.00	3.29	18.90	19.30	2.91
CERIUM	2.0	69.50	96.60	94.50	56.30	142.00	147.00	121.00	88.10	105.00	104.00
CAESIUM	1.0	1.57	5.42	8.94	3.21	7.27	13.90	14.90	6.87	10.00	12.90
CHROMIUM	5.0	17.8	63.6	64.2	24.3	421.0	80.3	77.8	51.5	68.8	66.6
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	.97	.85	1.54	.78	3.09	1.46	1.51	1.11	1.64	1.46
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.12	7.94	7.16	8.24	13.00	7.81	6.93	8.70	7.15	6.20
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.518	.545	.512	.479	.502	.679	.631	.519	1.720	.593
LANTHANUM	.5	31.70	45.80	51.50	26.70	70.60	76.50	56.70	41.20	55.40	49.20
LUTETIUM	.2	.45	.68	.74	.51	.78	.75	.84	.68	.86	.83
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.939	2.590	3.470	1.130	.624	3.600	3.970	2.640	3.250	4.310
RUBIDIUM	20.0	39.3	132.0	180.0	57.9	51.4	190.0	226.0	129.0	185.0	243.0
SAMARIUM	.20	5.83	7.98	9.81	4.55	13.80	10.20	10.80	7.63	9.84	9.01
SCANDIUM	.10	3.02	9.31	11.90	4.67	26.80	13.80	16.40	11.20	14.10	15.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.043	.074	.102	.047	.037	.073	.090	.105	.150	.219
TANTALUM	1.0	-1.00	-1.00	1.59	-1.00	7.14	2.73	-1.00	1.99	1.58	1.67
THORIUM	.5	8.48	14.20	14.30	7.52	14.90	20.80	18.30	13.20	17.20	18.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.21	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	2.47	2.89	-2.00	2.27	-2.00	2.22
YTTERBIUM	.5	2.17	3.23	3.27	2.64	3.94	3.83	4.06	3.33	3.73	3.89
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	996.0	-500.0	-500.0	-500.0	-500.0	-500.0

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N E U T R O N A C T I V A T I O N A N A L Y S I S

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BECQUEREL JOB # 336

ELEMENT	DL	# 35371	# 35372	# 35373	# 35374	# 35375	# 35376	# 35377	# 35378	# 35379	# 35380
ANTIMONY	.2	.57	1.94	.84	.78	1.00	.77	.49	1.00	2.35	.25
ARSENIC	2.0	-2.00	3.25	-2.00	-2.00	-2.00	-2.00	-2.00	2.92	8.49	35.20
BARIUM	100.0	495.0	541.0	665.0	568.0	656.0	463.0	524.0	578.0	477.0	365.0
BROMINE	2.0	6.32	8.31	2.52	3.40	24.90	6.02	6.50	4.33	3.24	3.48
CERIUM	2.0	93.80	82.70	103.00	103.00	106.00	68.40	97.00	100.00	89.10	75.50
CAESIUM	1.0	7.04	13.80	12.70	9.70	9.89	9.83	8.71	13.90	11.30	6.96
CHROMIUM	5.0	44.1	49.3	58.4	54.1	63.8	49.7	56.3	66.6	51.4	136.0
COBALT	1.0	-1.00	4.03	1.20	-1.00	4.33	4.41	2.64	-1.00	10.50	63.70
EUROPIUM	.5	1.38	1.14	1.36	1.20	1.56	1.21	1.55	1.34	1.50	* 1.55
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	2990.0
HAFNIUM	1.0	7.10	7.77	6.03	7.68	7.15	5.46	6.84	6.17	6.83	7.55
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.472	.670	.554	.508	2.660	1.990	2.410	.731	2.030	8.970
LANTHANUM	.5	45.60	38.30	49.20	49.40	53.20	39.60	48.40	53.20	42.10	55.50
LUTETIUM	.2	.79	.82	.77	.83	.83	.64	.74	.79	.73	.70
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.840	2.710	3.950	3.730	3.450	2.690	2.740	4.070	2.930	.565
RUBIDIUM	20.0	171.0	162.0	224.0	235.0	195.0	166.0	164.0	260.0	174.0	66.3
SAMARIUM	.20	8.79	7.26	8.91	9.89	9.65	7.02	8.80	9.33	8.65	9.78
SCANDIUM	.10	12.00	12.40	15.30	12.80	15.30	11.50	13.10	15.30	12.80	18.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.103	.201	.223	.118	.101	.101	.096	.103	.086	.097
TANTALUM	1.0	1.40	1.83	1.37	1.09	1.54	-1.00	1.26	-1.00	1.57	1.82
THORIUM	.5	14.70	14.30	18.00	15.30	18.20	12.50	16.30	17.00	14.70	19.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	2.43	-2.00	-2.00	-2.00	-2.00	-2.00	5.27
URANIUM	2.0	2.95	2.76	2.32	3.38	-2.00	-2.00	-2.00	2.21	-2.00	-2.00
YTTERBIUM	.5	3.71	4.22	3.92	3.90	4.01	2.97	3.53	3.58	3.70	2.96
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	114.0	101.0	-100.0	-100.0	796.0	134.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 336

ELEMENT	DL	# 35381	# 35382	# 35383	# 35384	# 35385	# 35386	# 35387	# 35388	# 35389	# 35390
ANTIMONY	.2	.91	1.16	3.53	.56	3.28	2.12	1.09	3.83	.68	1.77
ARSENIC	2.0	-2.00	7.31	-2.00	-2.00	10.10	6.88	-2.00	5.91	11.00	-2.00
BARIUM	100.0	590.0	367.0	723.0	520.0	559.0	570.0	630.0	546.0	-100.0	545.0
BROMINE	2.0	-2.00	-2.00	4.57	11.50	8.76	4.20	11.70	10.40	4.54	7.00
CERIUM	2.0	103.00	67.10	86.60	88.90	116.00	95.70	89.60	91.90	32.00	102.00
CAESIUM	1.0	13.00	9.79	11.60	9.55	8.69	11.80	10.80	11.00	4.49	11.10
CHROMIUM	5.0	54.2	41.8	90.2	69.7	92.9	90.5	83.2	83.4	56.0	* 106.0
COBALT	1.0	1.66	6.00	1.29	1.09	-1.00	-1.00	-1.00	-1.00	17.00	-1.00
EUROPIUM	.5	1.47	.89	1.18	1.09	1.34	1.43	1.03	1.29	.62	.97
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	6.7	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.61	6.61	6.08	7.56	7.05	6.44	6.33	5.88	3.31	4.69
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.967	3.030	1.660	.595	1.730	1.320	.658	1.170	7.590	.571
LANTHANUM	.5	48.70	35.00	55.80	48.70	56.20	49.90	46.10	45.90	20.30	51.10
LUTETIUM	.2	.69	.66	.79	.77	.79	.71	.75	.71	-.20	.55
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.320	2.270	3.860	3.420	3.690	3.460	3.420	3.640	.700	3.580
RUBIDIUM	20.0	186.0	127.0	236.0	211.0	192.0	190.0	228.0	195.0	43.6	165.0
SAMARIUM	.20	9.78	5.96	8.62	7.38	10.10	9.30	7.48	8.47	3.52	6.86
SCANDIUM	.10	13.30	10.40	15.10	13.50	14.70	15.30	14.60	14.20	4.36	15.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.120	.057	.096	.081	.120	.148	.137	.132	.045	.107
TANTALUM	1.0	1.33	-1.00	1.48	1.59	1.19	1.78	2.27	1.30	-1.00	1.91
THORIUM	.5	14.90	11.60	16.50	14.70	23.90	20.70	15.50	15.50	6.39	15.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.05	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	2.77	-2.00	2.59	2.84	3.57	3.40	3.44	-2.00	-2.00	4.45
YTTERBIUM	.5	3.24	3.10	3.33	3.60	3.91	3.46	3.48	3.30	.82	2.80
ZINC	100.0	107.0	156.0	117.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 336

ELEMENT	DL	# 35391	# 35392	# 35393	# 35394	# 35395	# 35396	# 35397	# 35398	# 35399	# 35400
ANTIMONY	.2	.84	4.32	3.00	.87	1.47	3.05	1.36	2.52	1.62	.41
ARSENIC	2.0	-2.00	3.31	-2.00	-2.00	-2.00	3.67	-2.00	-2.00	-2.00	3.02
BARIUM	100.0	433.0	447.0	377.0	117.0	106.0	1010.0	173.0	1050.0	-100.0	509.0
BROMINE	2.0	9.86	3.66	4.32	5.87	3.95	4.33	3.94	7.86	3.55	-2.00
CERIUM	2.0	93.20	88.10	77.20	31.20	62.00	81.90	41.50	97.20	38.30	*62.80
CAESIUM	1.0	8.66	8.51	5.98	1.54	1.96	7.80	1.50	11.30	1.18	17.30
CHROMIUM	5.0	118.0	101.0	61.5	21.3	24.0	67.1	31.7	97.0	21.3	432.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	22.10
EUROPIUM	.5	1.17	1.08	1.01	-.50	.73	1.15	.61	1.39	-.50	.86
GOLD, ppb	5.0	5.3	7.8	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	49.7
HAFNIUM	1.0	6.60	5.89	9.06	6.38	7.56	8.97	5.17	6.30	6.59	8.04
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.381	.374	.464	.333	.467	.517	.482	.577	.407	4.030
LANTHANUM	.5	50.10	50.50	40.80	15.90	30.80	44.50	22.40	53.90	20.30	34.30
LUTETIUM	.2	.78	.72	.73	.32	.40	.61	.26	.64	.34	.44
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.650	2.990	2.410	.616	.605	2.070	.319	3.180	.288	1.680
RUBIDIUM	20.0	131.0	147.0	134.0	31.9	33.6	104.0	20.0	220.0	-20.0	181.0
SAMARIUM	.20	9.32	8.74	7.90	3.01	5.63	7.08	3.50	7.71	3.38	7.23
SCANDIUM	.10	10.50	13.30	8.95	2.60	3.13	8.53	2.59	11.60	2.43	11.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.078	.101	.070	.040	.042	.066	.025	.070	.026	1.470
TANTALUM	1.0	2.20	-1.00	1.62	-1.00	1.61	2.78	1.00	1.98	1.80	4.06
THORIUM	.5	13.10	13.30	12.10	4.75	6.20	10.80	3.64	15.30	4.64	13.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.46	2.11	-2.00	-2.00	-2.00	3.70	-2.00	-2.00	-2.00	6.06
URANIUM	2.0	3.99	5.22	2.82	-2.00	2.23	2.04	-2.00	2.58	2.28	-2.00
YTTERBIUM	.5	3.80	3.57	3.83	1.66	2.11	3.07	1.33	3.28	1.82	2.10
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 336

ELEMENT	DL	# 35601	# 35602	# 35603	# 35604	# 35605	# 35606	# 35607	# 35608	# 35609	# 35610
ANTIMONY	.2	2.78	1.23	1.45	1.64	1.97	7.20	5.70	2.77	1.81	1.85
ARSENIC	2.0	12.80	-2.00	-2.00	-2.00	12.00	35.60	78.20	-2.00	2.93	5.40
BARIUM	100.0	220.0	117.0	158.0	583.0	508.0	403.0	418.0	623.0	528.0	521.0
BROMINE	2.0	71.40	5.82	7.00	10.90	16.50	-2.00	7.96	6.44	3.97	2.57
CERIUM	2.0	96.80	35.50	49.00	100.00	145.00	126.00	76.70	105.00	88.00	87.80
CAESIUM	1.0	6.08	1.56	3.25	10.40	12.70	22.40	10.70	10.00	13.80	14.60
CHROMIUM	5.0	381.0	28.6	34.9	77.1	80.0	81.8	62.7	72.8	76.4	57.0
COBALT	1.0	16.00	-1.00	-1.00	-1.00	-1.00	1.06	-1.00	-1.00	-1.00	2.29
EUROPIUM	.5	1.52	-.50	.59	1.14	1.62	.99	1.14	1.24	1.29	1.17
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	10.40	4.76	5.47	7.35	8.45	7.84	7.91	8.40	6.75	6.79
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	6.340	.554	.477	.667	.840	1.260	2.050	.684	.684	*1.570
LANTHANUM	.5	54.60	19.50	26.40	54.70	90.20	72.80	40.70	52.90	45.30	45.50
LUTETIUM	.2	.58	.27	.32	.73	.78	.74	.70	.84	.72	.76
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.625	.310	.626	4.310	3.830	4.110	3.010	3.920	4.080	3.540
RUBIDIUM	20.0	34.9	22.0	39.5	259.0	225.0	276.0	203.0	216.0	240.0	193.0
SAMARIUM	.20	7.55	3.05	4.14	8.41	9.31	8.43	8.03	10.10	8.89	8.69
SCANDIUM	.10	20.00	2.48	3.48	14.00	13.70	12.60	11.30	13.90	15.10	13.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.041	.030	.034	.088	.079	.077	.069	.109	.124	.107
TANTALUM	1.0	6.79	1.44	2.01	1.87	2.27	3.41	1.81	1.22	1.64	1.11
THORIUM	.5	11.50	3.73	4.97	17.50	23.70	20.50	13.40	18.10	15.60	15.60
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	3.12	2.97	-2.00	2.95	2.05	2.37	2.51
URANIUM	2.0	-2.00	-2.00	-2.00	3.70	3.59	4.68	2.92	2.90	2.02	2.61
YTTERBIUM	.5	3.05	1.34	1.62	3.79	4.03	3.79	3.58	4.08	3.73	3.87
ZINC	100.0	113.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 336

ELEMENT	DL	# 35611	# 35612	# 35613	# 35614	# 35615	# 35616	# 35617	# 35618	# 35619	# 35620
ANTIMONY	.2	1.30	1.10	2.70	15.70	1.52	1.05	5.31	1.18	1.48	1.68
ARSENIC	2.0	4.33	5.74	3.86	5.44	6.66	10.20	13.80	-2.00	-2.00	-2.00
BARIUM	100.0	565.0	648.0	473.0	424.0	700.0	189.0	-100.0	259.0	703.0	490.0
BROMINE	2.0	4.37	6.05	6.02	9.26	4.70	47.60	12.70	4.05	5.45	8.71
CERIUM	2.0	110.00	118.00	134.00	125.00	114.00	102.00	141.00	59.00	100.00	100.00
CAESIUM	1.0	13.40	14.20	14.50	12.10	19.50	6.64	3.45	4.85	12.00	10.60
CHROMIUM	5.0	73.4	80.4	75.9	76.0	74.6	604.0	367.0	38.2	77.5	65.1
COBALT	1.0	2.99	2.58	-1.00	-1.00	6.63	2.21	10.90	-1.00	-1.00	-1.00
EUROPIUM	.5	1.63	1.17	1.80	1.08	1.13	1.80	4.14	.77	1.36	1.06
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.56	7.36	7.82	7.23	7.13	9.57	10.00	8.51	8.13	* 9.69
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.850	2.300	1.020	.925	1.140	8.970	6.130	.538	.611	.565
LANTHANUM	.5	56.10	63.40	77.20	69.60	62.00	58.10	75.00	30.70	51.70	51.70
LUTETIUM	.2	.86	.78	.79	.71	.75	.48	.55	.51	.81	.86
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.060	3.640	3.920	3.960	4.110	.959	-.200	1.440	4.090	3.390
RUBIDIUM	20.0	245.0	234.0	281.0	240.0	238.0	54.5	29.8	86.1	211.0	193.0
SAMARIUM	.20	10.80	9.57	11.00	8.98	9.04	8.05	16.30	5.51	9.54	8.30
SCANDIUM	.10	16.00	15.40	12.40	11.50	14.60	15.80	35.10	5.26	13.90	12.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.093	.091	.080	.067	.080	.052	.102	.045	.118	.127
TANTALUM	1.0	1.51	2.03	2.97	2.23	2.08	5.32	7.11	1.14	1.77	1.73
THORIUM	.5	19.10	18.40	21.00	18.00	18.80	12.40	11.90	8.63	18.40	16.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.27	-2.00	2.63	2.20	-2.00	-2.00	-2.00	-2.00	2.92	3.10
URANIUM	2.0	3.00	3.57	2.37	2.93	3.96	-2.00	-2.00	2.15	2.30	-2.00
YTTERBIUM	.5	4.37	4.03	3.94	3.59	3.99	2.52	2.73	2.64	4.11	4.47
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	162.0	202.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	608.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 336

ELEMENT	DL	# 35621	# 35622	# 35623	# 35624	# 35625	# 35626	# 35627	# 35628	# 35629	# 35630
ANTIMONY	.2	1.53	.72	2.33	9.54	1.48	.43	1.65	1.46	1.55	4.07
ARSENIC	2.0	-2.00	-2.00	6.49	31.00	6.29	-2.00	2.19	-2.00	3.02	14.50
BARIUM	100.0	608.0	126.0	521.0	554.0	555.0	299.0	614.0	588.0	727.0	511.0
BROMINE	2.0	5.19	2.99	-2.00	2.19	16.50	10.40	6.23	3.60	6.40	12.80
CERIUM	2.0	82.40	44.80	89.60	91.50	75.80	95.20	73.30	75.70	95.40	89.30
CAESIUM	1.0	11.10	1.80	10.70	10.90	11.40	9.21	8.58	7.70	9.69	7.09
CHROMIUM	5.0	60.6	23.1	64.5	72.2	246.0	93.0	85.3	61.4	67.7	70.3
COBALT	1.0	-1.00	-1.00	6.17	-1.00	7.54	2.64	1.01	-1.00	-1.00	-1.00
EUROPIUM	.5	.77	.53	1.29	1.43	1.06	1.16	1.10	.95	1.41	1.04
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.62	7.22	6.10	6.80	6.53	6.11	5.86	6.43	7.74	7.22
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.556	.521	2.260	2.010	3.230	.561	1.130	.785	.721	2.830
LANTHANUM	.5	44.70	23.20	47.60	46.60	40.30	49.80	44.60	41.30	52.20	47.20
LUTETIUM	.2	.73	.42	.70	.76	.52	.60	.63	.69	.82	.73
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.080	.815	3.640	4.020	2.010	1.750	3.620	3.730	4.230	3.590
RUBIDIUM	20.0	156.0	48.2	208.0	233.0	130.0	99.2	229.0	207.0	222.0	198.0
SAMARIUM	.20	7.19	3.94	9.36	9.18	7.27	7.65	7.52	7.24	9.01	8.05
SCANDIUM	.10	12.00	3.26	14.20	13.40	11.20	14.30	12.10	12.60	15.90	12.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.115	.040	.068	.069	.196	.068	.057	.061	.083	.084
TANTALUM	1.0	1.45	1.53	1.21	1.78	1.29	1.54	1.74	1.70	1.63	1.09
THORIUM	.5	14.80	6.15	16.80	14.80	14.10	14.80	13.20	12.20	17.90	17.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.15	-2.00
URANIUM	2.0	3.44	-2.00	3.99	2.72	2.03	2.50	3.28	2.59	3.75	3.27
YTTERBIUM	.5	3.46	2.11	3.48	3.69	2.81	3.01	3.11	3.35	4.08	3.62
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 336

ELEMENT	DL	# 35631	# 35632	# 35633	# 35634	# 35635	# 35636	# 35637	# 35220X1	# 35236X1	# 35259X1
ANTIMONY	.2	3.28	1.41	.69	.61	1.28	.64	1.16	.97	3.03	2.09
ARSENIC	2.0	4.75	3.21	-2.00	-2.00	-2.00	-2.00	-2.00	10.90	12.30	2.57
BARIUM	100.0	599.0	683.0	597.0	533.0	596.0	293.0	416.0	339.0	103.0	636.0
BROMINE	2.0	8.96	5.00	4.18	3.69	2.46	2.28	2.13	16.50	6.02	10.70
CERIUM	2.0	91.30	107.00	87.00	87.50	91.20	54.70	76.30	21.80	58.20	68.30
CAESIUM	1.0	9.16	8.97	8.51	9.09	14.30	4.95	7.70	6.06	3.21	7.90
CHROMIUM	5.0	58.4	59.1	60.0	53.1	63.2	29.1	47.0	153.0	173.0	77.0
COBALT	1.0	-1.00	-1.00	2.31	-1.00	1.09	-1.00	-1.00	103.00	22.50	6.06
EUROPIUM	.5	1.27	1.46	1.40	1.51	1.48	.84	.94	1.72	1.20	1.21
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.88	6.27	7.76	8.23	7.55	6.50	9.91	2.02	6.25	7.62
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.663	.687	1.310	.599	.862	.541	.635	28.100	7.960	4.070
LANTHANUM	.5	48.20	58.10	49.20	46.30	48.20	28.60	41.30	9.90	30.50	37.60
LUTETIUM	.2	.76	.76	.81	.84	.82	.53	.73	.53	.55	.60
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.410	3.960	3.420	3.130	3.410	1.620	2.850	.534	.916	2.270
RUBIDIUM	20.0	236.0	229.0	198.0	176.0	200.0	98.9	163.0	75.0	61.3	120.0
SAMARIUM	.20	8.68	10.10	9.26	9.26	9.68	5.65	6.94	5.13	6.99	7.61
SCANDIUM	.10	12.20	13.90	13.30	12.20	13.70	6.41	9.63	53.40	21.20	14.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.110	.110	.099	.100	.102	.082	.085	.600	.901	.414
TANTALUM	1.0	1.66	1.29	1.38	1.41	1.48	-1.00	1.50	-1.00	2.03	2.23
THORIUM	.5	14.60	16.10	16.80	16.30	16.80	9.36	14.70	2.26	10.20	11.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.21	2.14	2.06	-2.00	2.10	-2.00	2.50	-2.00	-2.00	-2.00
URANIUM	2.0	3.32	3.35	3.13	4.16	4.14	2.08	3.85	-2.00	-2.00	3.27
YTTERBIUM	.5	3.69	3.68	3.93	4.06	3.95	2.76	3.76	3.39	2.80	3.17
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	1990.0	132.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

2JU

BECQUEREL JOB # 336

ELEMENT	DL	# 35264X1 #	35293X1 #	35307X1 #	35349X1 #	35375X1 #	35389X1 #	35389X2 #	35618X1 #	35631X1 #	35634X1
ANTIMONY	.2	1.98	8.18	2.00	4.88	1.08	.73	.69	1.25	3.34	.78
ARSENIC	2.0	3.04	41.20	-2.00	-2.00	-2.00	11.20	11.10	-2.00	4.50	-2.00
BARIUM	100.0	527.0	322.0	436.0	378.0	667.0	104.0	-100.0	199.0	505.0	612.0
BROMINE	2.0	-2.00	7.45	3.54	3.73	23.90	5.22	5.36	3.58	8.86	3.37
CERIUM	2.0	88.50	61.20	84.00	87.00	98.00	36.80	36.70	57.60	93.10	93.10
CAESIUM	1.0	12.20	5.75	6.44	10.40	10.30	5.03	4.91	4.14	9.28	9.11
CHROMIUM	5.0	106.0	55.3	73.4	76.5	64.7	57.2	60.3	36.4	55.5	53.3
COBALT	1.0	17.30	19.50	1.62	-1.00	3.77	16.90	16.80	-1.00	-1.00	-1.00
EUROPIUM	.5	1.57	1.11	1.60	1.13	1.33	-.50	.59	.83	1.30	1.16
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.42	3.14	5.58	7.30	6.92	3.34	3.32	8.23	6.89	8.54
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	6.570	4.460	2.290	.489	2.620	7.600	7.570	.509	.687	.623
LANTHANUM	.5	48.50	32.60	45.20	47.50	51.40	20.00	19.70	29.60	49.20	47.80
LUTETIUM	.2	.71	-.20	.74	.82	.82	-.20	-.20	.51	.77	.82
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.080	1.540	3.460	3.240	3.200	.638	.624	1.530	3.690	3.260
RUBIDIUM	20.0	184.0	86.7	145.0	188.0	206.0	44.7	51.0	82.3	218.0	170.0
SAMARIUM	.20	9.82	6.02	8.76	8.26	9.68	3.68	3.67	5.40	8.89	9.40
SCANDIUM	.10	22.10	8.40	15.20	11.90	15.00	4.42	4.36	5.06	12.60	12.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.519	.222	.193	.114	.100	.045	.045	.043	.116	.101
TANTALUM	1.0	2.40	1.17	1.98	1.98	1.22	-1.00	-1.00	1.37	2.30	1.38
THORIUM	.5	14.70	8.18	14.50	15.90	17.90	6.90	6.87	8.57	15.30	17.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.59	-2.00
URANIUM	2.0	3.36	2.47	5.00	2.59	2.02	2.09	-2.00	-2.00	2.77	4.14
YTTERBIUM	.5	3.34	1.07	2.93	3.24	3.81	.86	.83	2.67	3.77	4.21
ZINC	100.0	121.0	-100.0	-100.0	-100.0	110.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 21-08-91

RGC EXPLORATION PTY. LTD., TASMANIA
BECQUEREL JOB # 432

NOTE:- A NEGATIVE SIGN INDICATES "LESS THAN".
-RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
-ELEVATED DETECTION LIMITS FOR Mo DUE TO U FISSION.
-ALL SAMPLES PREFIXED "T".

ELEMENT	DL	# 34501	# 34502	# 34503	# 34504	# 34505	# 34506	# 34507	# 34508	# 34509	# 34510
ANTIMONY	.2	1.78	1.50	.89	1.40	1.69	.52	1.64	2.12	1.09	.81
ARSENIC	2.0	4.03	15.50	3.29	10.50	4.37	-2.00	-2.00	-2.00	2.05	-2.00
BARIUM	100.0	561.0	609.0	443.0	496.0	977.0	256.0	367.0	426.0	731.0	272.0
BROMINE	2.0	16.20	6.12	-2.00	14.40	4.81	3.16	5.96	11.30	23.60	3.46
CERIUM	2.0	76.00	148.00	78.10	90.80	109.00	22.60	35.30	23.60	74.30	52.10
CAESIUM	1.0	13.70	18.80	7.06	11.10	9.81	2.79	6.07	16.80	12.20	3.49
CHROMIUM	5.0	69.4	70.1	55.5	87.5	68.7	24.0	43.2	67.3	74.5	23.5
COBALT	1.0	1.48	-1.00	-1.00	-1.00	-1.00	-1.00	1.09	1.66	1.25	-1.00
EUROPIUM	.5	.81	2.27	1.03	.96	1.22	-.50	.61	.59	1.13	.71
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	9.09	10.10	10.80	7.27	7.87	9.38	9.04	7.82	6.82	8.18
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.687	2.270	.660	1.140	1.350	.558	.523	.536	.574	.487
LANTHANUM	.5	38.10	71.80	33.50	52.20	56.10	12.10	18.30	15.10	41.90	28.80
LUTETIUM	.2	.75	.94	.65	.66	.77	.49	.50	.62	.70	.41
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.010	3.250	2.130	3.620	3.920	1.760	2.060	3.990	4.580	1.420
RUBIDIUM	20.0	180.0	181.0	120.0	194.0	196.0	85.3	102.0	207.0	226.0	71.3
SODIUM	.20	6.06	13.90	6.25	6.20	8.49	1.80	2.90	2.30	5.66	4.10
SCANDIUM	.10	13.10	13.10	10.60	15.10	17.30	6.03	8.45	14.30	15.80	5.09
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.073	.078	.056	.077	.074	.035	.045	.051	.053	.029
TANTALUM	1.0	1.79	2.09	1.15	2.42	-1.00	-1.00	1.11	1.77	-1.00	-1.00
THORIUM	.5	11.30	16.60	12.80	16.40	20.30	6.51	7.49	11.70	15.80	6.02
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.65	2.86	-2.00	3.33	-2.00	-2.00	-2.00	3.53	-2.00	-2.00
URANIUM	2.0	3.49	2.69	2.54	2.83	-2.00	3.35	2.18	2.89	-2.00	-2.00
YTTERBIUM	.5	3.89	5.08	3.29	3.25	4.02	2.71	2.57	3.23	3.59	2.21
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	528.0	511.0	-500.0	-500.0	-500.0	-500.0	530.0	503.0	511.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 34511	# 34512	# 34513	# 34514	# 34515	# 34516	# 34517	# 34518	# 34519	# 34520
ANTIMONY	.2	1.17	1.70	34.60	6.69	6.53	14.10	5.70	9.04	2.24	-.20
ARSENIC	2.0	-2.00	-2.00	39.10	27.20	8.80	15.70	11.70	23.10	15.00	233.00
BARIUM	100.0	679.0	626.0	-100.0	252.0	288.0	459.0	-100.0	-100.0	144.0	-100.0
BROMINE	2.0	6.22	12.10	38.20	18.10	34.80	14.60	8.36	6.37	8.02	2.56
CERIUM	2.0	121.00	21.70	83.80	17.60	16.30	13.90	5.61	5.24	33.30	120.00
CAESIUM	1.0	14.80	17.20	2.87	11.20	11.40	20.90	-1.00	1.09	6.52	5.98
CHROMIUM	5.0	75.3	46.2	65.0	63.1	67.5	82.3	16.5	21.5	85.3	164.0
COBALT	1.0	2.17	1.39	8.91	1.71	1.11	-1.00	-1.00	-1.00	1.63	89.30
EUROPIUM	.5	1.22	-.50	3.47	-.50	-.50	-.50	-.50	-.50	-.50	2.15
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	3520.0
HAFNIUM	1.0	8.05	8.29	6.72	6.08	6.40	7.54	-1.00	2.16	10.60	6.68
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.853	.841	4.110	1.810	.854	1.200	1.470	2.280	1.510	10.700
LANTHANUM	.5	55.10	10.00	39.20	12.40	7.85	15.00	6.96	3.68	25.00	62.60
LUTETIUM	.2	.80	.63	.47	.44	.53	.47	-.20	-.20	.53	.76
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	19.3	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.990	3.340	-.200	2.720	3.570	3.560	-.200	-.200	2.070	.542
RUBIDIUM	20.0	215.0	228.0	-20.0	125.0	174.0	231.0	-20.0	-20.0	95.2	71.0
SAMARIUM	.20	9.27	1.76	8.57	1.42	1.76	1.74	.52	.76	1.88	12.60
SODIUM	.10	16.70	10.50	13.30	11.10	14.30	18.90	1.10	1.73	10.40	17.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.059	.046	.034	.047	.074	.052	.034	.039	.074	.042
TANTALUM	1.0	1.26	-1.00	-1.00	-1.00	1.10	1.89	-1.00	-1.00	1.40	-1.00
THORIUM	.5	22.80	9.85	14.20	19.40	14.60	15.80	1.91	5.05	9.24	20.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.43	9.53	3.35	3.75	7.13	-2.00	2.55	-2.00	7.32
URANIUM	2.0	2.21	-2.00	3.52	4.10	3.48	3.00	-2.00	-2.00	2.99	-2.00
YTTERBIUM	.5	4.38	3.01	2.45	2.01	2.94	2.29	-.50	-.50	2.63	3.95
ZINC	100.0	-100.0	-100.0	663.0	-100.0	-100.0	111.0	-100.0	117.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	536.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 34521	# 34522	# 34523	# 34524	# 34525	# 34526	# 34527	# 34528	# 34529	# 34530
ANTIMONY	.2	11.60	2.64	1.62	8.19	4.96	6.73	3.05	6.69	3.41	5.88
ARSENIC	2.0	16.90	16.20	9.91	5.12	-2.00	5.09	3.69	2.58	3.92	4.47
BARIUM	100.0	477.0	121.0	419.0	791.0	151.0	390.0	299.0	1290.0	-100.0	469.0
BROMINE	2.0	55.60	5.22	12.80	5.83	14.60	9.47	7.46	5.62	24.60	101.00
CERIUM	2.0	5.00	33.00	94.60	176.00	84.80	217.00	54.40	54.20	-2.00	-2.00
CAESIUM	1.0	4.54	2.61	11.20	15.70	8.06	16.00	8.98	12.80	12.40	14.00
CHROMIUM	5.0	174.0	49.3	108.0	111.0	90.9	96.5	83.4	136.0	1090.0	1090.0
COBALT	1.0	3.21	1.76	10.20	4.86	1.24	1.83	3.13	6.16	41.00	72.70
EUROPIUM	.5	-.50	-.50	2.02	2.89	1.61	3.89	1.14	.55	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.4
HAFNIUM	1.0	12.90	11.40	6.76	7.24	8.81	7.77	10.00	10.50	1.01	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	8.390	2.030	4.930	2.690	.535	.681	1.650	1.410	5.640	8.110
LANTHANUM	.5	3.43	18.90	49.30	81.80	34.60	90.10	25.80	28.10	1.47	1.69
LUTETIUM	.2	.48	.39	.67	.75	.59	.53	.57	.51	-.20	-.20
MOLYBDENUM	5.0	-11.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.636	1.110	3.550	3.010	1.770	1.890	2.590	3.550	.502	.945
[illegible]IUM	20.0	49.8	56.9	181.0	190.0	89.8	107.0	138.0	220.0	61.2	84.7
SAMARIUM	.20	1.21	1.92	8.64	14.40	10.00	21.80	5.22	3.21	.63	.53
SCANDIUM	.10	18.50	6.80	22.90	25.40	18.10	19.70	17.10	15.20	54.80	54.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-11.00	-11.00
SODIUM, %	.01	.049	.056	.132	.098	.062	.045	.079	.148	1.130	.179
TANTALUM	1.0	2.39	1.03	-1.00	1.77	2.63	3.09	1.79	1.08	-1.00	-1.00
THORIUM	.5	51.40	9.13	16.30	25.40	28.40	21.40	14.40	11.20	-.50	.97
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.49	2.35	-2.00	-2.00	-2.00	4.87	-2.00	10.70	-2.00	-2.00
URANIUM	2.0	5.91	-2.00	2.49	2.23	3.94	-2.00	-2.00	2.68	-2.00	-2.00
YTTERBIUM	.5	2.26	1.85	3.61	4.55	2.98	2.72	2.93	2.30	1.04	-.50
ZINC	100.0	113.0	-100.0	151.0	122.0	-100.0	-100.0	-100.0	-100.0	187.0	322.0
ZIRCONIUM	500.0	613.0	-500.0	-500.0	-500.0	501.0	-500.0	-500.0	522.0	-500.0	-500.0

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BECQUEREL JOB # 432

ELEMENT	DL	# 34531	# 34532	# 34533	# 34534	# 34535	# 34536	# 34537	# 34538	# 34539	# 34540
ANTIMONY	.2	5.35	5.85	.84	1.89	.96	1.12	1.42	2.65	1.76	.33
ARSENIC	2.0	6.38	10.40	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.20
BARIUM	100.0	233.0	-100.0	314.0	604.0	273.0	658.0	681.0	740.0	344.0	697.0
BROMINE	2.0	17.90	15.10	7.40	8.36	14.30	8.64	13.60	18.80	23.10	-2.00
CERIUM	2.0	-2.00	5.42	42.90	123.00	21.80	61.40	76.90	42.20	59.50	90.20
CAESIUM	1.0	5.69	15.50	5.28	11.10	3.75	9.42	6.38	13.10	7.76	10.10
CHROMIUM	5.0	647.0	269.0	30.9	60.8	23.2	66.7	32.1	70.6	55.8	355.0
COBALT	1.0	187.00	176.00	1.77	1.52	-1.00	1.50	-1.00	2.55	-1.00	32.50
EUROPIUM	.5	-.50	-.50	.64	1.26	-.50	.68	1.07	.62	.74	1.18
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	318.0
HAFNIUM	1.0	-1.00	-1.00	14.40	8.59	6.32	9.37	10.10	10.60	12.40	9.17
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	11.600	9.720	.605	.603	.751	.802	.549	.748	.617	5.740
LANTHANUM	.5	1.51	2.23	24.00	54.20	12.10	35.80	38.90	22.00	26.00	46.60
LUTETIUM	.2	-.20	-.20	.57	.67	.33	.68	.49	.83	.74	.59
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.494	.492	1.780	2.470	1.320	3.900	1.550	3.510	3.310	1.560
RUBIDIUM	20.0	66.2	68.8	87.5	165.0	62.0	175.0	102.0	193.0	156.0	103.0
SAMARIUM	.20	.73	.55	3.26	6.98	1.68	4.42	5.34	3.55	4.77	8.38
SCANDIUM	.10	109.00	71.10	7.40	14.80	5.26	15.40	6.54	15.10	11.20	13.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-16.00	-12.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.079	.079	.032	.063	.041	.054	.049	.068	.055	1.220
TANTALUM	1.0	1.19	-1.00	-1.00	2.27	-1.00	1.41	1.07	1.08	1.38	2.01
THORIUM	.5	.89	1.26	8.73	13.30	4.68	10.00	7.71	12.30	13.90	18.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-4.50	-2.00	2.18	-2.00	-2.00	-2.00	2.77	-2.00	3.65	6.11
URANIUM	2.0	-2.00	-2.00	2.41	3.29	-2.00	-2.00	-2.00	2.77	2.42	2.19
YTTERBIUM	.5	1.15	-.50	3.11	3.37	1.70	3.39	2.60	4.31	3.87	3.13
ZINC	100.0	405.0	232.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	530.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 432

ELEMENT	DL	# 34541	# 34542	# 34543	# 34544	# 34545	# 34546	# 34547	# 34548	# 34549	# 34550
ANTIMONY	.2	.92	.84	1.31	1.43	1.36	.82	1.50	1.02	1.05	4.43
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	555.0	553.0	627.0	518.0	484.0	563.0	600.0	768.0	130.0	1030.0
BROMINE	2.0	9.08	13.00	12.50	7.69	12.20	10.50	6.39	12.80	9.32	6.36
CERIUM	2.0	111.00	79.10	54.90	52.20	61.50	75.40	94.90	74.60	25.40	100.00
CAESIUM	1.0	10.70	9.91	10.70	10.00	8.92	9.87	13.20	12.10	1.89	15.90
CHROMIUM	5.0	79.4	62.0	61.1	55.9	60.5	61.4	89.6	72.4	13.6	67.6
COBALT	1.0	1.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	2.18	-1.00	1.16
EUROPIUM	.5	1.61	.97	.57	.76	.78	.85	1.58	.95	-.50	1.24
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.11	7.83	7.71	11.50	8.95	7.80	7.02	7.72	6.45	7.48
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.350	.488	.593	.568	.573	.470	1.270	.760	.529	.741
LANTHANUM	.5	55.00	42.80	30.60	27.90	32.50	40.60	42.80	36.20	14.70	47.50
LUTETIUM	.2	.81	.73	.63	.63	.62	.71	.80	.77	.25	.76
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.780	3.330	2.990	2.510	2.430	3.010	2.670	3.880	.838	4.580
RUBIDIUM	20.0	207.0	181.0	165.0	132.0	128.0	150.0	161.0	207.0	35.1	295.0
SAMARIUM	.20	9.16	5.62	3.91	4.00	4.91	6.08	8.54	6.67	1.58	8.38
SCANDIUM	.10	14.30	14.10	12.80	10.30	11.60	13.00	17.80	16.60	2.91	18.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.094	.074	.067	.060	.063	.072	.091	.098	.026	.089
TANTALUM	1.0	1.42	-1.00	-1.00	1.34	-1.00	-1.00	1.36	1.94	-1.00	-1.00
THORIUM	.5	10.30	9.55	8.27	8.94	9.40	10.70	21.50	13.50	4.31	15.70
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	3.84	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	2.07	-2.00	2.49	-2.00	-2.00	-2.00	2.15	4.99	-2.00	2.58
YTTERBIUM	.5	4.19	3.52	3.43	3.02	3.35	3.73	4.45	4.07	1.35	3.91
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 432

ELEMENT	DL	# 34551	# 34552	# 34553	# 34554	# 34555	# 34556	# 34557	# 34558	# 34559	# 34560
ANTIMONY	.2	1.71	14.10	8.68	2.68	5.40	11.30	14.90	3.47	9.35	-.20
ARSENIC	2.0	-2.00	53.70	32.70	35.70	16.50	168.00	375.00	9.42	15.50	2.50
BARIUM	100.0	336.0	423.0	345.0	251.0	403.0	-100.0	200.0	612.0	1030.0	352.0
BROMINE	2.0	4.40	8.51	12.30	9.07	3.36	29.60	19.50	6.34	33.60	-2.00
CERIUM	2.0	22.50	6.69	8.12	14.40	5.63	-2.00	21.60	70.30	16.90	69.60
CAESIUM	1.0	4.89	16.70	20.80	11.30	14.00	-1.00	12.90	27.50	15.20	17.40
CHROMIUM	5.0	25.4	85.7	95.2	123.0	70.0	22.2	40.7	118.0	131.0	465.0
COBALT	1.0	-1.00	-1.00	-1.00	1.76	-1.00	20.60	28.90	14.20	15.30	23.00
EUROPIUM	.5	-.50	-.50	-.50	.63	-.50	-.50	.53	1.35	.52	.81
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	67.4
HAFNIUM	1.0	11.70	7.07	7.99	7.02	8.13	-1.00	1.93	8.23	14.80	8.60
[illegible]UM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.448	3.920	7.730	11.700	1.480	60.100	17.400	2.110	4.480	4.250
LANTHANUM	.5	11.00	1.62	3.37	7.19	2.07	4.68	11.90	31.80	6.60	36.40
LUTETIUM	.2	.55	.54	.35	.48	.49	-.20	.26	.64	.61	.50
MOLYBDENUM	5.0	-5.0	-13.0	-22.0	-12.0	-5.0	-5.0	-5.0	-5.0	-13.0	-5.0
POTASSIUM, %	.2	1.600	3.550	2.780	2.420	3.610	-.200	.670	2.780	2.110	1.510
RUBIDIUM	20.0	81.6	201.0	189.0	148.0	177.0	44.9	73.1	219.0	130.0	191.0
SAMARIUM	.20	2.03	.67	1.13	2.14	.85	2.07	2.71	6.51	2.39	6.97
SCANDIUM	.10	6.20	19.20	20.80	15.80	14.40	10.40	4.79	32.70	25.50	11.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.029	.069	.064	.064	.075	.015	.186	.052	.327	1.580
TANTALUM	1.0	1.19	1.36	1.88	-1.00	-1.00	-1.00	1.18	1.88	2.33	3.34
THORIUM	.5	6.15	21.90	39.70	40.00	8.92	3.26	5.25	22.30	57.10	14.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	4.50	-2.00	-2.00	-2.00	6.87	-2.00	-2.00	-2.00	4.15
URANIUM	2.0	-2.00	6.59	12.20	6.04	3.35	-2.00	-2.00	5.05	6.89	3.96
YTTERBIUM	.5	2.79	2.44	2.04	3.00	2.31	.99	1.20	3.03	2.98	2.29
ZINC	100.0	-100.0	-100.0	-100.0	126.0	-100.0	471.0	512.0	448.0	156.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	501.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 34561	# 34562	# 34563	# 34564	# 34565	# 34566	# 34567	# 34568	# 34569	# 34570
ANTIMONY	.2	4.38	2.76	9.19	1.15	1.66	7.53	1.95	11.30	5.09	9.45
ARSENIC	2.0	16.90	5.74	7.82	13.10	2.76	17.20	7.29	20.30	6.08	75.20
BARIUM	100.0	796.0	511.0	213.0	323.0	759.0	333.0	271.0	480.0	1280.0	-100.0
BROMINE	2.0	49.00	29.60	6.92	13.10	4.01	55.20	26.20	20.50	5.21	4.48
CERIUM	2.0	74.20	30.60	107.00	79.20	58.20	4.54	5.09	6.55	27.30	39.40
CAESIUM	1.0	11.90	17.50	2.65	10.60	11.90	10.20	8.77	47.20	5.64	3.79
CHROMIUM	5.0	128.0	153.0	47.0	101.0	97.3	87.9	73.9	147.0	30.7	34.9
COBALT	1.0	8.13	5.72	16.70	3.90	5.19	2.24	1.80	8.06	6.49	8.95
EUROPIUM	.5	1.27	-.50	3.75	1.15	.85	-.50	-.50	-.50	.51	1.20
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.00	8.48	3.11	6.29	8.87	7.39	8.13	10.70	5.77	4.82
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.790	3.620	5.630	4.310	2.290	6.760	4.960	9.730	2.190	2.880
LANTHANUM	.5	37.60	16.10	57.10	44.40	28.40	3.23	3.48	2.44	14.20	18.60
LUTETIUM	.2	.57	.61	.47	.61	.67	.37	.35	.32	.31	.35
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-31.0	-5.0	-5.0
POTASSIUM, %	.2	3.340	3.950	.864	3.270	3.630	1.310	2.340	3.360	1.570	-.200
RUBIDIUM	20.0	174.0	217.0	39.1	191.0	208.0	89.5	127.0	393.0	77.8	22.4
SAMARIUM	.20	5.95	2.59	10.80	5.58	5.61	.92	1.00	1.05	2.53	5.04
SCANDIUM	.10	21.80	26.00	9.39	21.40	21.00	12.20	14.40	19.90	6.81	5.24
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.073	.187	.469	.147	.139	.045	.062	.055	.280	.069
TANTALUM	1.0	1.55	2.62	-1.00	2.64	2.08	1.92	1.24	1.39	-1.00	-1.00
THORIUM	.5	23.30	19.40	7.04	10.80	11.50	19.40	13.30	41.60	4.52	4.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	4.54	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM*	2.0	2.66	4.68	4.37	-2.00	4.40	3.51	3.57	17.80	-2.00	-2.00
YTTERBIUM	.5	3.07	3.00	2.61	3.26	3.38	1.66	1.87	1.56	1.62	1.72
ZINC	100.0	114.0	-100.0	200.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 432

ELEMENT	DL	# 34571	# 34572	# 34573	# 34574	# 34575	# 34576	# 34577	# 34578	# 34579	# 34580
ANTIMONY	.2	6.70	2.53	17.70	8.30	12.60	19.50	42.40	34.00	1.88	-.20
ARSENIC	2.0	19.00	12.90	7.46	9.27	10.80	164.00	751.00	491.00	2.78	13.80
BARIUM	100.0	420.0	350.0	4300.0	-100.0	123.0	-100.0	-100.0	-100.0	482.0	301.0
BROMINE	2.0	26.60	19.60	3.29	72.40	3.64	11.70	5.86	7.77	8.20	2.69
CERIUM	2.0	65.00	33.10	153.00	21.60	145.00	-2.00	-2.00	-2.00	101.00	117.00
CAESIUM	1.0	20.00	14.90	21.60	1.45	1.52	-1.00	1.93	2.99	12.90	5.13
CHROMIUM	5.0	106.0	83.6	135.0	59.8	65.8	13.4	25.1	32.1	48.1	174.0
COBALT	1.0	8.69	4.53	5.47	39.10	44.10	46.30	39.00	11.40	-1.00	154.00
EUROPIUM	.5	1.32	.70	1.96	-.50	3.64	-.50	-.50	-.50	1.47	2.07
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5550.0
HAFNIUM	1.0	6.90	8.20	12.10	5.90	3.99	-1.00	-1.00	1.09	8.36	6.73
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.940	5.970	1.330	7.170	8.790	64.900	59.700	46.700	.794	17.700
LANTHANUM	.5	34.70	18.40	63.40	11.10	80.90	2.83	1.19	2.14	48.20	68.90
LUTETIUM	.2	.55	.47	.64	.25	.44	-.20	-.20	-.20	.81	.92
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.190	2.320	7.200	-.200	-.500	-.200	-.200	-.200	3.390	-.460
RUBIDIUM	20.0	164.0	135.0	528.0	-20.0	28.4	-20.0	49.4	31.5	184.0	57.9
SAMARIUM	.20	5.90	2.70	10.00	1.95	12.30	.88	.93	.82	9.26	13.60
SODIUM	.10	20.30	15.30	36.30	9.67	12.00	2.59	1.90	1.57	14.20	19.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.090	.096	.117	.168	.507	.011	-.010	.012	.078	.047
TANTALUM	1.0	1.97	1.06	2.90	1.16	2.01	-1.00	-1.00	-1.00	-1.00	1.34
THORIUM	.5	15.40	21.70	29.90	10.80	9.68	1.27	1.95	2.08	15.30	20.60
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-4.20	-2.00	-2.00	10.50	17.50	18.90	-2.00	-2.00
URANIUM	2.0	2.82	-2.00	3.72	2.66	-2.00	-2.00	-2.00	-2.00	3.03	-2.00
YTTERBIUM	.5	2.92	2.34	3.36	1.14	2.37	.54	-.50	-.50	4.12	4.91
ZINC	100.0	-100.0	-100.0	139.0	212.0	187.0	193.0	177.0	240.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	639.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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N E U T R O N A C T I V A T I O N A N A L Y S I S

BECQUEREL JOB # 432

ELEMENT	DL	# 34581	# 34582	# 34583	# 34584	# 34585	# 34586	# 34587	# 34588	# 34589	# 34590
ANTIMONY	.2	1.44	1.53	1.65	1.20	1.52	.93	2.25	1.04	6.27	59.10
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.15	-2.00	9.78	1240.00
BARIUM	100.0	534.0	629.0	197.0	268.0	548.0	328.0	488.0	850.0	736.0	-100.0
BROMINE	2.0	7.97	3.93	8.46	6.38	24.10	15.90	21.30	18.40	18.80	9.04
CERIUM	2.0	62.40	111.00	39.40	53.90	136.00	30.70	132.00	19.20	75.30	-2.00
CAESIUM	1.0	10.00	9.10	4.11	2.05	11.10	4.47	14.30	15.80	11.30	-1.00
CHROMIUM	5.0	33.9	77.1	28.0	21.1	81.0	60.0	75.9	96.5	87.8	14.8
COBALT	1.0	-1.00	1.25	1.11	1.15	1.49	-1.00	1.61	-1.00	-1.00	68.10
EUROPIUM	.5	1.76	2.39	.54	.70	1.44	-.50	1.40	-.50	1.16	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-11.0
HAFNIUM	1.0	10.80	7.28	6.24	9.81	7.91	6.13	8.00	8.37	11.40	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.732	.757	.474	.696	.859	.409	.398	.626	1.260	62.400
LANTHANUM	.5	37.10	52.60	21.10	27.30	64.90	16.00	68.90	9.89	37.90	3.77
LUTETIUM	.2	.66	.83	.40	.43	.89	.48	.87	.77	.96	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	6.4	-5.0	-5.0	-5.0	-5.0
[illegible]SSIUM, %	.2	1.580	3.550	1.120	.878	4.410	3.100	2.140	4.320	3.140	-.200
RUBIDIUM	20.0	110.0	186.0	55.2	41.1	199.0	141.0	86.0	215.0	184.0	25.3
SAMARIUM	.20	9.73	13.30	3.03	4.07	11.30	2.25	11.20	1.77	7.53	1.75
SCANDIUM	.10	7.89	17.30	4.90	4.26	21.10	11.80	12.10	19.10	14.70	1.32
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.059	.098	.026	.032	.123	.088	.053	.124	.100	-.010
TANTALUM	1.0	-1.00	-1.00	-1.00	1.28	1.74	-1.00	-1.00	2.42	1.84	-1.00
THORIUM	.5	7.01	20.00	10.70	4.64	22.60	5.60	19.30	8.98	12.20	1.66
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	10.00	6.32	-2.00	27.70
URANIUM	2.0	-2.00	2.54	-2.00	-2.00	4.13	-2.00	-2.00	-2.00	4.82	-2.00
YTTERBIUM	.5	3.37	4.50	2.19	2.30	4.90	2.52	4.73	3.52	5.11	.69
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	144.0
ZIRCONIUM	500.0	547.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 34591	# 34592	# 34593	# 34594	# 34595	# 34596	# 34597	# 34598	# 34599	# 34600
ANTIMONY	.2	55.20	7.88	5.75	21.00	10.30	23.10	3.65	1.58	2.35	.60
ARSENIC	2.0	587.00	7.21	18.20	467.00	16.40	25.40	49.50	46.30	9.91	38.30
BARIUM	100.0	-100.0	1110.0	421.0	-100.0	218.0	783.0	774.0	492.0	637.0	334.0
BROMINE	2.0	12.90	7.40	-2.00	24.00	17.60	9.53	9.68	-2.00	5.59	3.88
CERIUM	2.0	-2.00	94.90	112.00	-2.00	-2.00	13.20	70.30	68.00	45.50	107.00
CAESIUM	1.0	1.92	13.90	17.20	2.39	19.60	12.00	16.30	31.00	12.00	6.19
CHROMIUM	5.0	19.9	69.2	82.8	50.4	77.2	90.2	101.0	97.4	61.2	176.0
COBALT	1.0	11.70	1.23	2.80	18.10	1.14	-1.00	1.36	41.70	5.81	67.60
EUROPIUM	.5	-.50	1.32	2.34	.86	-.50	-.50	.98	1.69	-.50	1.26
GOLD, ppb	5.0	-5.0	-5.0	-5.0	17.0	-5.0	-5.0	-5.0	-5.0	-5.0	3470.0
HAFNIUM	1.0	1.39	8.58	7.55	4.99	7.41	9.19	8.63	6.46	7.74	8.88
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	52.600	1.310	.485	52.100	2.630	2.460	.930	2.170	1.050	9.820
LANTHANUM	.5	3.91	67.70	45.30	3.12	1.16	6.60	32.70	32.50	21.90	58.70
LUTETIUM	.2	-.20	.74	.71	-.20	.42	.52	.68	1.14	.58	.78
MOLYBDENUM	5.0	-5.0	-5.0	17.3	-5.0	-13.0	-10.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.740	3.400	-.200	1.510	2.880	2.960	1.140	2.990	-.570
RUBIDIUM	20.0	42.4	194.0	195.0	-20.0	123.0	143.0	168.0	129.0	174.0	96.0
SAMARIUM	.20	.99	5.61	10.30	3.59	.63	1.68	6.55	7.60	4.06	10.80
SCANDIUM	.10	1.18	16.70	21.70	23.20	15.60	15.10	15.20	22.10	12.60	20.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.011	.106	.059	.017	.047	.067	.073	.299	.115	.109
TANTALUM	1.0	-1.00	2.34	1.05	-1.00	1.29	1.64	1.14	1.09	1.35	2.50
THORIUM	.5	.76	16.10	25.80	8.78	22.00	35.50	19.20	14.40	12.30	24.70
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	23.10	-2.00	-2.00	10.90	-2.00	5.03	-2.00	-2.00	13.70	4.60
URANIUM	2.0	3.27	3.67	4.06	5.45	6.80	5.23	4.06	-2.00	2.43	-2.00
YTTERBIUM	.5	.87	3.83	3.52	1.87	1.98	2.95	3.60	5.86	2.64	3.91
ZINC	100.0	317.0	-100.0	764.0	237.0	-100.0	-100.0	-100.0	845.0	223.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	520.0	-500.0	-500.0

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BECQUEREL JOB # 432

ELEMENT	DL	# 34601	# 34602	# 34603	# 34604	# 34605	# 34606	# 34607	# 34608	# 34609	# 34610
ANTIMONY	.2	1.88	6.07	3.16	2.13	.33	2.12	4.65	17.40	3.20	1.76
ARSENIC	2.0	3.40	20.20	8.35	4.94	-2.00	5.89	43.10	172.00	3.02	9.47
BARIUM	100.0	2300.0	449.0	376.0	-100.0	-100.0	485.0	178.0	-100.0	2230.0	649.0
BROMINE	2.0	2.57	137.00	51.30	27.10	3.80	8.05	39.90	38.20	18.60	16.30
CERIUM	2.0	73.60	28.60	16.40	4.43	3.03	221.00	54.90	93.80	120.00	100.00
CAESIUM	1.0	32.10	24.90	17.40	3.16	-1.00	20.00	7.89	6.07	15.20	14.40
CHROMIUM	5.0	86.9	143.0	96.4	22.7	14.4	100.0	32.5	35.5	199.0	140.0
COBALT	1.0	16.30	4.54	8.78	-1.00	-1.00	3.50	11.10	14.80	3.19	2.54
EUROPIUM	.5	1.23	1.15	.75	-.50	-.50	2.49	1.59	2.92	2.02	2.05
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.33	11.30	5.72	7.10	6.68	5.42	5.61	2.93	8.95	7.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
[illegible], %	.05	2.330	4.850	6.160	.333	.325	2.150	2.360	13.800	4.460	1.360
LANTHANUM	.5	36.90	25.90	17.20	2.46	1.76	100.00	24.20	45.40	56.60	63.60
LUTETIUM	.2	.54	.52	.46	-.20	-.20	.70	.38	.47	.79	.68
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-10.0
POTASSIUM, %	.2	3.200	1.610	1.640	-.200	-.200	3.100	.564	-.200	4.560	3.940
RUBIDIUM	20.0	240.0	163.0	128.0	-20.0	-20.0	209.0	33.3	48.0	262.0	208.0
SAMARIUM	.20	6.53	6.08	4.86	.50	.54	19.20	6.64	13.80	12.30	12.00
SCANDIUM	.10	17.70	25.50	15.90	2.75	.61	22.20	4.67	7.36	63.30	29.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	6.00	-5.00	-5.00
SODIUM, %	.01	.176	.708	.082	.030	.026	.153	.076	.050	.396	.110
TANTALUM	1.0	-1.00	1.74	1.63	-1.00	-1.00	1.37	-1.00	-1.00	3.92	2.48
THORIUM	.5	11.60	19.50	29.90	3.08	1.03	13.00	3.84	6.23	30.50	22.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.02	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	4.18	5.27
YTTERBIUM	.5	2.97	2.72	2.52	.90	.72	3.87	2.00	2.90	4.02	4.03
ZINC	100.0	257.0	-100.0	142.0	-100.0	-100.0	133.0	980.0	1970.0	116.0	-100.0
ZIRCONIUM	500.0	-500.0	665.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 432

ELEMENT	DL	# 34611	# 34612	# 34613	# 34614	# 34615	# 34616	# 34617	# 34618	# 35957	# 35958
ANTIMONY	.2	2.45	4.15	5.40	11.80	9.25	9.43	13.40	19.50	7.48	2.71
ARSENIC	2.0	3.50	9.20	19.70	60.20	21.90	103.00	166.00	179.00	5.40	272.00
BARIUM	100.0	2340.0	204.0	197.0	849.0	-100.0	-100.0	-100.0	-100.0	587.0	667.0
BROMINE	2.0	6.37	33.40	45.60	15.40	8.01	10.40	8.08	14.00	8.76	17.80
CERIUM	2.0	97.90	5.38	6.99	314.00	14.90	-2.00	-2.00	-2.00	80.60	96.30
CAESIUM	1.0	21.20	17.40	75.50	2.90	5.17	-1.00	1.36	1.19	6.95	10.70
CHROMIUM	5.0	89.6	104.0	86.8	30.4	46.5	26.2	35.3	41.1	58.8	69.5
COBALT	1.0	15.80	2.33	2.00	117.00	5.62	25.80	30.70	66.00	1.67	-1.00
EUROPIUM	.5	2.81	-.50	-.50	.99	-.50	-.50	-.50	-.50	.86	.94
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.73	8.03	8.88	14.50	12.30	1.41	1.39	2.22	9.38	10.70
[illegible]UM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.828	4.570	4.660	20.100	12.100	54.400	55.800	54.600	.635	6.990
LANTHANUM	.5	79.00	2.30	2.92	10.30	1.18	1.46	1.15	1.57	39.10	48.00
LUTETIUM	.2	.88	.45	.45	.61	.34	-.20	-.20	-.20	.57	.78
MOLYBDENUM	5.0	7.9	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.9
POTASSIUM, %	.2	2.020	.827	1.950	-.200	-.200	-.200	-.200	-.200	3.150	2.730
RUBIDIUM	20.0	153.0	74.0	182.0	54.6	24.9	34.9	22.6	39.7	152.0	161.0
SAMARIUM	.20	15.60	.78	.83	4.75	.98	.48	.43	.54	6.35	8.18
SCANDIUM	.10	17.60	22.70	27.50	28.40	22.20	.95	1.17	2.83	11.50	14.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.096	.043	.056	.032	.031	.012	-.010	.015	.071	.090
TANTALUM	1.0	1.41	2.30	1.96	2.67	2.19	-1.00	-1.00	-1.00	1.89	1.13
THORIUM	.5	13.20	22.90	20.90	16.80	20.80	.84	1.80	2.87	13.90	17.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	5.22	-2.00	7.00	7.32	8.95	10.00	9.86	3.57	-2.00
URANIUM	2.0	-2.00	4.19	3.70	4.02	4.24	-2.00	-2.00	-2.00	3.97	2.46
YTTERBIUM	.5	4.87	2.19	2.21	3.52	2.08	-.50	-.50	-.50	2.95	3.83
ZINC	100.0	141.0	-100.0	-100.0	682.0	171.0	-100.0	115.0	158.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	513.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 35959	# 35960	# 35961	# 35962	# 35963	# 35964	# 35965	# 35966	# 35967	# 35968
ANTIMONY	.2	1.25	2.88	1.15	1.15	.52	.43	1.51	5.02	1.42	.99
ARSENIC	2.0	3.07	298.00	-2.00	-2.00	-2.00	-2.00	-2.00	4.42	36.80	-2.00
BARIUM	100.0	665.0	552.0	651.0	501.0	-100.0	-100.0	865.0	535.0	425.0	324.0
BROMINE	2.0	7.93	-2.00	8.55	7.96	3.62	5.24	12.00	-2.00	7.14	4.55
CERIUM	2.0	63.60	30.80	74.70	84.00	7.61	5.86	81.50	14.50	28.00	23.60
CAESIUM	1.0	9.49	-1.00	6.96	3.60	-1.00	-1.00	7.91	6.53	8.73	6.92
CHROMIUM	5.0	76.5	46.8	59.8	34.1	8.0	12.8	76.0	46.0	36.1	33.6
COBALT	1.0	-1.00	15.00	-1.00	1.49	-1.00	-1.00	-1.00	-1.00	1.29	-1.00
EUROPIUM	.5	.77	.84	1.14	.77	-.50	-.50	.91	-.50	.51	-.50
GOLD, ppb	5.0	-5.0	225.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.4	-5.0	-5.0
HAFNIUM	1.0	9.43	2.93	10.80	10.00	4.54	4.98	7.04	7.65	10.60	10.30
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.531	4.600	.605	.474	.384	.388	.748	.612	1.810	.523
LANTHANUM	.5	35.60	14.40	37.70	45.80	3.86	3.38	46.00	11.80	15.00	13.00
LUTETIUM	.2	.72	.34	.74	.51	-.20	-.20	.53	.52	.54	.47
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	5.5	-5.0	-5.0	10.2	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.850	1.880	2.540	1.710	-.200	-.200	3.150	2.880	1.890	1.510
RUBIDIUM	20.0	190.0	37.7	147.0	91.3	-20.0	-20.0	161.0	137.0	104.0	82.6
SAMARIUM	.20	4.88	4.17	6.44	6.06	.73	.71	5.38	1.83	2.98	2.36
SCANDIUM	.10	13.30	13.10	10.40	7.37	.89	.78	12.20	11.30	8.27	6.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
[illegible]ER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.110	1.580	.091	.047	.017	.016	.092	.047	.043	.032
TANTALUM	1.0	1.12	1.58	-1.00	1.39	-1.00	-1.00	1.15	1.18	1.36	-1.00
THORIUM	.5	11.40	1.51	9.08	8.82	1.85	1.63	8.80	12.90	10.80	7.23
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	5.39	-2.00	-2.00	-2.00	-2.00	3.42	-2.00	3.47	-2.00
URANIUM	2.0	-2.00	-2.00	2.91	-2.00	-2.00	-2.00	-2.00	3.07	2.04	2.32
YTTERBIUM	.5	3.87	2.01	4.03	2.78	.83	.87	2.53	2.66	2.65	2.43
ZINC	100.0	-100.0	831.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	2890.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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ELEMENT	DL	# 35969	# 35970	# 35971	# 35972	# 35973	# 35974	# 35975	# 35976	# 35977	# 35978
ANTIMONY	.2	5.35	2.23	1.99	8.11	.63	3.31	3.55	3.68	6.30	1.35
ARSENIC	2.0	3.20	5.34	18.60	91.20	-2.00	3.21	6.02	53.30	47.80	-2.00
BARIUM	100.0	777.0	686.0	558.0	441.0	206.0	397.0	255.0	425.0	-100.0	549.0
BROMINE	2.0	4.98	7.34	4.39	6.92	4.17	11.30	3.48	6.73	7.35	3.72
CERIUM	2.0	58.20	61.30	35.60	35.20	36.70	9.32	10.80	115.00	3.52	86.40
CAESIUM	1.0	13.30	10.00	10.30	5.12	3.03	14.00	21.30	16.00	-1.00	14.70
CHROMIUM	5.0	78.3	66.5	56.2	41.7	22.3	58.6	60.3	70.4	16.4	117.0
COBALT	1.0	-1.00	1.11	-1.00	-1.00	-1.00	1.11	-1.00	1.63	-1.00	8.11
EUROPIUM	.5	1.01	.80	.52	.67	-.50	-.50	-.50	1.38	-.50	1.46
GOLD, ppb	5.0	7.3	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	11.2	26.9	-5.0
HAFNIUM	1.0	8.67	9.11	6.82	8.95	8.85	7.56	8.70	8.21	-1.00	6.78
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.673	.589	.649	3.130	.356	.545	.874	5.280	2.230	3.840
LANTHANUM	.5	28.40	30.60	19.60	17.00	25.60	3.99	3.25	48.20	2.16	41.90
LUTETIUM	.2	.86	.81	.65	.56	.45	.66	.69	.71	-.20	.70
MOLYBDENUM	5.0	6.6	5.6	-5.0	5.1	-5.0	-5.0	6.1	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.470	4.280	4.070	2.010	1.310	3.310	3.200	3.090	-.200	4.550
RUBIDIUM	20.0	232.0	221.0	215.0	109.0	63.6	173.0	203.0	189.0	-20.0	227.0
SAMARIUM	.20	5.37	5.61	3.31	3.72	2.90	1.50	1.42	9.27	.40	8.46
SCANDIUM	.10	17.20	16.60	15.10	10.10	4.77	13.60	16.60	14.70	1.20	25.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.069	.063	.050	.032	.023	.067	.065	.081	.026	.092
TANTALUM	1.0	-1.00	1.64	1.18	1.19	-1.00	1.51	1.72	1.63	-1.00	2.53
THORIUM	.5	15.10	13.50	13.50	14.20	5.65	12.80	30.70	26.30	3.48	17.70
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	4.18	3.59	4.76	-2.00	2.99	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	2.56	2.65	2.29	-2.00	-2.00	3.27	5.18	4.02	3.21	-2.00
YTTERBIUM	.5	4.47	4.36	3.47	2.93	2.38	3.59	3.52	4.10	-.50	3.59
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	522.0	521.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 35979	# 35980	# 35981	# 35982	# 35983	# 35984	# 35985	# 35986	# 35987	# 35988
ANTIMONY	.2	6.51	-.20	3.36	10.70	8.61	25.80	8.52	45.20	14.60	22.90
ARSENIC	2.0	49.40	2.46	3.85	17.90	8.61	157.00	13.60	650.00	104.00	181.00
BARIUM	100.0	423.0	319.0	537.0	-100.0	314.0	194.0	464.0	-100.0	295.0	-100.0
BROMINE	2.0	9.30	-2.00	9.20	11.10	3.68	35.30	15.20	46.40	29.70	53.40
CERIUM	2.0	124.00	69.30	22.80	5.64	95.40	25.40	25.30	12.50	5.10	7.08
CAESIUM	1.0	14.00	16.60	16.40	-1.00	-1.00	5.35	16.70	4.62	20.70	13.30
CHROMIUM	5.0	122.0	451.0	125.0	8960.0	192.0	3240.0	547.0	7350.0	1830.0	1760.0
COBALT	1.0	1.96	22.70	4.44	29.20	73.10	106.00	12.10	121.00	80.30	62.10
EUROPIUM	.5	.82	1.12	-.50	-.50	1.90	-.50	.61	-.50	1.50	-.50
GOLD, ppb	5.0	-5.0	50.8	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.78	8.09	8.50	1.20	4.71	3.13	6.05	2.06	-1.00	1.76
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	2.940	4.160	1.490	3.620	9.910	17.100	1.940	15.400	9.140	10.600
LANTHANUM	.5	69.40	35.60	14.80	2.56	46.60	6.62	11.10	7.48	3.62	4.16
LUTETIUM	.2	.51	.41	.56	-.20	.32	-.20	.52	.22	-.20	-.20
MOLYBDENUM	5.0	10.2	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.140	1.660	4.370	-.200	-.200	.359	4.070	-.200	1.020	.671
[illegible]DIUM	20.0	181.0	190.0	225.0	-20.0	25.5	51.9	209.0	-20.0	116.0	98.4
SAMARIUM	.20	4.31	7.09	1.60	.80	6.31	1.96	2.32	2.09	1.43	1.20
SCANDIUM	.10	24.40	11.40	23.20	20.50	11.90	7.33	17.50	14.70	43.10	32.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.079	1.580	.104	.033	.040	.035	.075	.061	.431	.205
TANTALUM	1.0	-1.00	2.10	2.31	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM*	.5	18.70	14.20	9.91	.81	10.40	6.02	17.00	2.40	1.48	2.60
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	4.74	-2.00	-2.00	-2.00	10.70	-2.00	5.87	30.60	-4.80
URANIUM	2.0	-2.00	3.00	3.11	-2.00	2.96	-2.00	2.60	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.32	2.37	2.81	-.50	1.98	.93	2.61	.80	.89	.78
ZINC	100.0	-100.0	-100.0	-100.0	391.0	498.0	473.0	-100.0	835.0	342.0	337.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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130296

NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 432

ELEMENT	DL	# 35989	# 35990	# 35991	# 35992	# 35993	# 35994	# 35995	# 35996	# 35997	# 35998
ANTIMONY	.2	17.70	2.89	4.06	1.50	1.38	2.48	1.10	1.32	2.91	1.04
ARSENIC	2.0	88.70	9.81	62.00	25.10	15.30	11.00	-2.00	-2.00	23.80	2.25
BARIUM	100.0	290.0	678.0	614.0	581.0	508.0	707.0	478.0	587.0	470.0	753.0
BROMINE	2.0	26.60	4.44	10.90	2.90	-2.00	-2.00	-2.00	5.76	8.29	7.47
CERIUM	2.0	10.50	89.00	74.00	29.90	24.30	75.30	124.00	92.90	52.20	142.00
CAESIUM	1.0	21.60	9.76	10.10	12.40	14.80	9.92	11.30	8.95	11.10	13.30
CHROMIUM	5.0	2750.0	57.9	68.0	70.9	72.6	59.4	77.1	75.1	66.2	73.5
COBALT	1.0	47.20	-1.00	-1.00	-1.00	1.65	-1.00	-1.00	-1.00	1.34	-1.00
EUROPIUM	.5	-.50	1.21	1.07	-.50	-.50	.65	1.61	1.41	.50	2.10
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	1.65	9.38	8.42	9.48	7.30	12.00	8.67	8.95	8.33	7.90
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	5.780	.728	1.450	1.720	3.710	.810	.518	.550	.869	.619
LANTHANUM	.5	5.47	46.70	36.80	16.20	14.90	44.20	63.80	47.00	27.90	71.60
LUTETIUM	.2	-.20	.72	.72	.67	.63	.72	.68	.72	.65	.85
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.949	2.780	3.850	3.710	3.660	2.790	2.790	2.900	3.030	4.170
RUBIDIUM	20.0	82.1	165.0	195.0	213.0	242.0	176.0	175.0	168.0	164.0	224.0
SAMARIUM	.20	1.27	7.69	6.70	2.48	2.43	5.41	10.70	9.40	3.88	12.00
SCANDIUM	.10	43.80	13.30	14.20	15.10	16.60	12.90	13.50	12.50	12.10	16.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.134	.072	.084	.096	.064	.078	.077	.073	.055	.091
TANTALUM	1.0	-1.00	-1.00	1.63	-1.00	1.60	1.73	1.30	1.15	1.16	2.20
THORIUM	.5	3.20	14.40	16.10	15.00	19.20	13.40	13.80	11.20	11.80	14.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	12.40	3.91	3.40	3.36	-2.00	-2.00	-2.00	3.66	-2.00	-2.00
URANIUM	2.0	-2.00	3.22	3.23	3.34	3.82	3.78	-2.00	2.13	2.40	-2.00
YTTERBIUM	.5	.86	3.72	4.14	3.43	3.26	3.49	3.72	3.75	3.15	4.58
ZINC	100.0	401.0	-100.0	-100.0	-100.0	211.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 432

ELEMENT	DL	# 35999	# 36000	# 34515R	# 34527R	# 34550R	# 34574R	# 34582R	# 35957R	# 35974R	# 35979R.
ANTIMONY	.2	.91	-.20	6.69	3.09	4.56	8.29	1.78	7.77	3.39	6.47
ARSENIC	2.0	-2.00	233.00	9.32	3.17	-2.00	9.11	2.92	4.75	2.46	49.40
BARIUM	100.0	661.0	136.0	377.0	294.0	949.0	-100.0	706.0	611.0	486.0	359.0
BROMINE	2.0	3.77	-2.00	38.20	6.66	5.22	72.10	4.78	8.89	11.40	8.77
CERIUM	2.0	92.40	124.00	15.70	51.70	98.60	22.00	114.00	80.20	12.40	123.00
CAESIUM	1.0	14.00	6.18	13.50	8.79	15.30	1.75	11.00	7.50	14.60	13.60
CHROMIUM	5.0	81.3	161.0	74.1	84.7	71.4	59.8	72.6	62.1	64.4	120.0
COBALT	1.0	-1.00	91.90	-1.00	2.22	-1.00	41.30	1.58	-1.00	-1.00	3.01
EUROPIUM	.5	1.34	2.01	-.50	1.19	1.36	-.50	2.39	.80	-.50	.73
GOLD, ppb	5.0	-5.0	3560.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.41	7.36	7.06	9.44	7.80	6.34	7.95	9.83	7.74	7.43
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
[illegible], %	.05	.518	10.800	.862	1.650	.768	7.310	.770	.679	.570	2.940
LANTHANUM	.5	48.20	62.80	8.10	25.80	46.70	11.10	55.30	38.90	4.10	69.70
LUTETIUM	.2	.77	.75	.59	.57	.77	.28	.85	.58	.66	.47
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.8	-5.0	-5.0	12.1
POTASSIUM, %	.2	4.250	-.200	3.950	2.610	4.450	-.200	3.940	2.910	3.630	3.990
RUBIDIUM	20.0	233.0	82.1	185.0	151.0	298.0	-20.0	179.0	158.0	168.0	193.0
SAMARIUM	.20	7.11	13.10	1.89	5.17	8.61	2.16	14.10	6.56	1.52	4.20
SCANDIUM	.10	17.50	18.00	15.10	17.00	18.20	9.87	18.30	11.50	13.80	24.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.101	.044	.080	.078	.087	.171	.103	.074	.067	.080
TANTALUM	1.0	1.26	2.16	1.19	1.31	-1.00	-1.00	-1.00	1.47	1.60	1.73
THORIUM	.5	12.70	20.10	15.30	14.30	15.30	10.30	20.90	14.40	12.70	18.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	8.39	3.71	-2.00	-2.00	-2.00	-2.00	3.59	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	2.70	2.14	2.23	-2.00	2.47	-2.00	3.49	2.81
YTTERBIUM	.5	3.75	3.86	3.08	2.75	3.99	1.23	4.54	2.92	3.46	2.29
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	219.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	644.0	-500.0	-500.0	560.0

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NEUTRON ACTIVATION ANALYSIS

NEUTRON ACTIVATION ANALYSIS REPORT Date: 21-08-91

RGC EXPLORATION PTY. LTD., TASMANIA
BECQUEREL JOB # 427

-NOTE:- A NEGATIVE SIGN INDICATES "LESS THAN".
-RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
-ELEVATED DETECTION LIMITS FOR Mo DUE TO U FISSION.
-ALL SAMPLES PREFIXED "T".

ELEMENT	DL	# 35801	# 35802	# 35803	# 35804	# 35805	# 35806	# 35807	# 35808	# 35809	# 35810
ANTIMONY	.2	1.97	2.40	3.24	7.32	1.52	.94	1.06	1.55	4.10	1.72
ARSENIC	2.0	8.19	4.52	3.89	39.50	-2.00	-2.00	4.31	3.94	60.90	-2.00
BARIUM	100.0	171.0	832.0	230.0	200.0	214.0	199.0	353.0	938.0	556.0	476.0
BROMINE	2.0	5.76	4.91	7.04	5.39	10.40	4.09	6.88	4.20	5.37	6.69
CERIUM	2.0	19.50	21.00	23.60	13.70	25.20	18.70	23.60	23.60	7.66	50.10
CAESIUM	1.0	3.33	12.70	3.73	2.79	3.51	3.54	12.00	18.50	19.90	11.50
CHROMIUM	5.0	21.7	89.5	32.3	23.1	33.1	22.5	59.5	95.8	134.0	51.7
COBALT	1.0	-1.00	1.89	1.03	-1.00	1.31	-1.00	1.22	1.26	-1.00	1.47
EUROPIUM	.5	-.50	.53	-.50	-.50	.55	-.50	.50	-.50	-.50	.66
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	5.62	10.10	7.74	7.47	7.16	8.96	6.56	8.09	6.56	9.85
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.633	.977	.562	1.940	.458	.555	.715	.951	2.570	.751
LANTHANUM	.5	10.60	12.30	12.20	6.96	14.00	9.81	14.50	10.60	3.28	35.20
LUTETIUM	.2	.34	.87	.39	.32	.35	.43	.68	.79	.61	.70
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.160	5.970	1.440	.766	1.250	1.130	3.620	5.500	4.200	3.240
RUBIDIUM	20.0	59.8	283.0	78.7	49.5	72.8	64.3	197.0	278.0	235.0	148.0
SAMARIUM	.20	1.77	1.76	1.98	1.68	2.25	1.88	3.23	1.90	1.42	3.62
SCANDIUM	.10	4.48	21.80	6.19	5.26	5.59	4.83	15.90	20.80	17.30	12.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.027	.078	.045	.034	.041	.044	.083	.085	.067	.057
TANTALUM	1.0	1.09	2.03	-1.00	-1.00	-1.00	-1.00	1.51	1.96	1.23	2.04
THORIUM *	.5	5.50	14.40	8.69	13.80	6.20	5.04	11.00	13.30	19.60	9.38
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.01
URANIUM	2.0	-2.00	3.26	-2.00	2.10	2.28	-2.00	2.06	4.10	4.41	3.60
YTTERBIUM	.5	1.72	4.35	2.07	1.77	1.94	2.18	3.52	4.33	3.26	3.68
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 427

ELEMENT	DL	# 35811	# 35812	# 35813	# 35814	# 35815	# 35816	# 35817	# 35818	# 35819	# 35820
ANTIMONY	.2	23.00	2.12	1.36	1.26	1.36	1.83	2.38	1.30	3.38	.43
ARSENIC	2.0	54.50	-2.00	-2.00	-2.00	-2.00	11.00	-2.00	-2.00	-2.00	2.57
BARIUM	100.0	1850.0	470.0	106.0	-100.0	508.0	196.0	256.0	200.0	989.0	489.0
BROMINE	2.0	4.13	7.65	5.19	3.42	5.52	3.06	5.59	8.60	7.93	-2.00
CERIUM	2.0	204.00	19.10	23.40	6.53	68.30	43.30	32.40	23.60	88.30	67.80
CAESIUM	1.0	20.00	16.50	2.74	-1.00	14.30	4.89	4.74	3.82	12.60	15.90
CHROMIUM	5.0	112.0	69.3	25.8	9.1	66.7	26.5	14.1	25.2	51.2	438.0
COBALT	1.0	4.50	-1.00	-1.00	-1.00	-1.00	1.14	-1.00	-1.00	-1.00	22.90
EUROPIUM	.5	3.47	-.50	-.50	-.50	1.05	.78	-.50	-.50	.90	1.04
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	52.3
HAFNIUM	1.0	6.09	7.44	7.73	6.61	7.18	9.38	9.09	12.30	8.15	7.99
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	1.250	.664	.492	.533	.780	1.430	.573	.742	.588	4.020
LANTHANUM	.5	75.90	9.40	11.20	3.14	32.70	21.80	15.80	11.80	41.80	34.60
LUTETIUM	.2	1.00	.68	.35	.23	.71	.47	.32	.45	.56	.44
MOLYBDENUM	5.0	7.9	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.190	3.810	.480	-.200	3.540	1.330	.655	1.080	1.930	1.900
RUBIDIUM	20.0	200.0	180.0	27.4	-20.0	185.0	67.4	45.0	50.4	128.0	194.0
SAMARIUM	.20	20.80	2.09	1.98	.67	5.75	3.91	2.60	2.01	5.36	6.84
SODIUM	.10	21.20	14.40	2.97	.91	14.80	5.77	2.70	4.29	10.50	11.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.063	.067	.036	.027	.069	.040	.030	.036	.046	1.520
TANTALUM	1.0	1.79	1.06	-1.00	-1.00	1.17	1.09	-1.00	1.43	-1.00	3.92
THORIUM	.5	19.10	8.23	3.33	1.49	10.10	14.80	4.13	4.32	14.40	13.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	2.22	-2.00	-2.00	2.74	-2.00	-2.00	-2.00	-2.00	8.27
URANIUM	2.0	6.72	3.32	-2.00	-2.00	2.75	2.40	-2.00	2.48	-2.00	3.96
YTTERBIUM	.5	5.62	3.56	1.96	1.11	3.83	2.50	1.35	2.37	2.96	2.29
ZINC	100.0	834.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	103.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	572.0	-500.0	-500.0

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N E U T R O N A C T I V A T I O N A N A L Y S I S

BECQUEREL JOB # 427

ELEMENT	DL	# 35821	# 35822	# 35823	# 35824	# 35825	# 35826	# 35827	# 35828	# 35829	# 35830
ANTIMONY	.2	1.22	4.75	13.20	9.43	4.13	12.20	7.58	9.03	7.94	6.61
ARSENIC	2.0	-2.00	9.44	13.30	19.70	7.69	10.40	7.57	14.10	8.57	8.34
BARIUM	100.0	754.0	-100.0	300.0	221.0	160.0	161.0	480.0	-100.0	-100.0	202.0
BROMINE	2.0	4.45	20.90	8.04	57.90	32.80	40.00	42.60	32.10	41.60	75.30
CERIUM	2.0	21.30	33.40	-2.00	5.70	12.70	11.40	26.30	2.75	-2.00	-2.00
CAESIUM	1.0	15.40	4.12	3.43	5.35	7.75	7.81	17.10	3.95	-1.00	10.90
CHROMIUM	5.0	67.8	1310.0	335.0	252.0	172.0	227.0	197.0	939.0	423.0	326.0
COBALT	1.0	1.59	31.80	43.50	29.40	28.20	41.40	31.20	68.00	46.10	9.07
EUROPIUM	.5	-.50	.62	-.50	.51	-.50	.55	.64	-.50	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	9.22	3.04	-1.00	-1.00	3.24	2.04	4.39	1.78	2.33	1.22
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.913	5.060	5.540	7.560	6.820	7.080	5.840	17.900	16.300	17.000
LANTHANUM	.5	9.58	16.50	.78	2.99	7.88	5.95	13.10	2.75	2.60	1.52
LUTETIUM	.2	.78	-.20	-.20	.26	.36	-.20	.43	-.20	-.20	.26
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	4.560	-.200	1.950	.326	.873	.344	.844	-.200	-.200	-.200
[illegible]DIUM	20.0	230.0	28.5	96.3	51.2	63.0	47.3	69.1	60.0	39.5	67.2
SAMARIUM	.20	2.62	3.41	.40	1.16	1.63	1.42	2.68	.80	.87	.89
SCANDIUM	.10	17.60	65.30	38.40	45.90	41.60	43.90	36.50	76.50	77.10	81.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-12.00	-5.00	-5.00	-5.00	-5.00	-5.00	-13.00	-12.00	-13.00
SODIUM, %	.01	.082	1.060	1.920	.400	.496	.209	.311	.043	.051	.050
TANTALUM	1.0	1.41	-1.00	-1.00	-1.00	-1.00	-1.00	1.42	-1.00	-1.00	-1.00
THORIUM	.5	7.86	2.03	.71	2.44	2.55	2.45	4.66	.97	2.14	.95
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	2.71	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.97	1.16	-.50	1.42	1.82	1.31	2.34	.90	.99	1.70
ZINC	100.0	-100.0	297.0	299.0	230.0	145.0	194.0	138.0	152.0	179.0	190.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35831	# 35832	# 35833	# 35834	# 35835	# 35836	# 35837	# 35838	# 35839	# 35840
ANTIMONY	.2	8.49	2.22	34.80	1.05	1.56	1.49	2.74	.83	1.58	2.61
ARSENIC	2.0	11.40	88.00	146.00	-2.00	-2.00	2.39	-2.00	-2.00	-2.00	301.00
BARIUM	100.0	-100.0	418.0	158.0	-100.0	497.0	-100.0	520.0	689.0	587.0	546.0
BROMINE	2.0	91.20	13.90	18.00	6.03	9.88	10.30	2.57	7.12	6.61	-2.00
CERIUM	2.0	-2.00	19.90	23.60	9.93	71.60	12.50	68.50	87.20	71.80	29.10
CAESIUM	1.0	1.76	8.67	3.19	1.83	6.59	1.99	14.30	14.40	11.90	1.40
CHROMIUM	5.0	251.0	53.7	28.1	12.2	52.2	23.0	121.0	76.7	70.1	53.9
COBALT	1.0	3.99	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.17	-1.00	16.40
EUROPIUM	.5	-.50	-.50	-.50	-.50	.83	-.50	.88	1.26	.57	.92
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	8.0	-5.0	-5.0	213.0
HAFNIUM	1.0	2.78	7.27	5.43	6.40	9.87	4.84	8.91	6.28	6.00	2.11
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	14.600	6.060	2.400	.470	.622	.603	.578	.514	.559	4.520
LANTHANUM	.5	3.49	11.30	12.40	5.11	40.90	6.73	33.20	45.50	36.70	14.60
LUTETIUM	.2	-.20	.67	.35	.28	.64	.26	.82	.69	.63	.34
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-11.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.150	1.040	.622	2.420	.505	3.470	4.440	3.870	1.640
RUBIDIUM	20.0	39.1	169.0	60.4	32.1	133.0	32.5	200.0	258.0	240.0	43.4
SAMARIUM	.20	.78	1.94	2.00	1.00	5.67	1.08	5.33	6.18	3.55	4.01
SCANDIUM	.10	58.70	14.30	4.90	2.94	9.85	2.71	14.40	17.10	17.70	12.90
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-10.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.034	.055	.028	.023	.074	.034	.088	.171	.119	1.580
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	1.06	1.90	1.70	2.03	2.18
THORIUM	.5	2.93	18.30	6.65	3.31	7.85	2.93	27.20	13.20	13.30	2.37
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	4.26	-2.00	-2.00	-2.00	-2.00	3.83	5.42	3.71	-2.00
YTTERBIUM	.5	.86	3.62	1.71	1.50	3.24	1.26	4.31	3.73	3.49	1.82
ZINC	100.0	127.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	834.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	515.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35841	# 35842	# 35843	# 35844	# 35845	# 35846	# 35847	# 35848	# 35849	# 35850
ANTIMONY	.2	1.79	1.47	4.91	6.64	.94	18.90	6.34	2.55	3.52	.75
ARSENIC	2.0	3.79	-2.00	-2.00	35.20	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
BARIUM	100.0	626.0	668.0	646.0	877.0	517.0	250.0	701.0	664.0	376.0	-100.0
BROMINE	2.0	5.84	4.73	3.37	15.70	3.63	20.90	3.29	15.10	17.80	9.36
CERIUM	2.0	57.60	140.00	78.50	43.50	109.00	138.00	56.60	51.30	42.00	9.92
CAESIUM	1.0	12.50	13.00	12.40	12.40	9.21	3.47	12.80	13.50	10.80	-1.00
CHROMIUM	5.0	69.8	77.4	72.6	86.1	63.9	158.0	76.9	76.9	48.1	6.6
COBALT	1.0	-1.00	1.12	1.10	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	2.04	.81	.64	1.05	1.24	-.50	.82	.66	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.71	7.27	9.17	8.59	11.10	8.90	8.90	9.04	11.20	4.17
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
I[illegible] %	.05	.538	.535	.494	1.810	.562	.149	.613	.695	.769	.699
LANTHANUM	.5	29.90	66.40	39.90	22.60	53.80	77.20	32.10	24.90	21.20	5.11
LUTETIUM	.2	.64	.73	.70	.72	.72	.46	.58	.80	.71	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-10.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	3.270	3.620	3.340	3.990	2.570	-.200	3.850	4.100	2.490	-.200
RUBIDIUM	20.0	188.0	206.0	190.0	228.0	144.0	-20.0	215.0	238.0	148.0	-20.0
SAMARIUM	.20	3.08	12.50	4.96	3.40	7.23	8.17	4.22	4.33	3.31	.99
SCANDIUM	.10	15.10	14.90	14.60	16.60	11.90	18.50	15.70	15.90	9.17	.72
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.093	.093	.076	.071	.057	.041	.075	.122	.042	.030
TANTALUM	1.0	1.53	2.46	2.86	2.16	2.46	2.85	2.28	2.37	5.52	2.65
THORIUM	.5	15.00	16.80	16.60	26.60	15.90	107.00	16.60	13.60	18.80	3.21
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	4.83	-2.00	-2.00	-2.00	3.87	-2.00	-2.00
URANIUM	2.0	4.28	-2.00	2.63	2.92	2.82	2.14	5.21	3.67	3.56	-2.00
YTTERBIUM	.5	3.38	4.04	3.59	3.62	3.78	2.58	3.08	4.40	3.70	.97
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	586.0	-500.0	530.0	550.0	-500.0	-500.0	522.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35851	# 35852	# 35853	# 35854	# 35855	# 35856	# 35857	# 35858	# 35859	# 35860
ANTIMONY	.2	.50	4.29	2.62	1.10	1.05	1.02	.56	.74	2.99	-.20
ARSENIC	2.0	-2.00	17.60	4.55	10.40	2.92	-2.00	-2.00	-2.00	-2.00	13.40
BARIUM	100.0	-100.0	841.0	399.0	837.0	768.0	637.0	168.0	464.0	676.0	173.0
BROMINE	2.0	3.70	4.14	5.98	9.34	9.07	5.12	8.58	11.00	6.05	3.21
CERIUM	2.0	7.29	134.00	117.00	158.00	54.40	39.90	19.90	41.30	14.40	120.00
CAESIUM	1.0	-1.00	14.50	10.90	13.80	8.97	14.00	1.68	7.11	15.90	3.46
CHROMIUM	5.0	10.4	80.8	67.7	75.7	62.5	80.7	22.5	44.2	87.8	181.0
COBALT	1.0	-1.00	1.25	2.35	1.26	-1.00	-1.00	-1.00	1.28	-1.00	154.00
EUROPIUM	.5	-.50	1.29	1.54	1.82	.98	.61	-.50	.61	-.50	1.95
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5480.0
[illegible]IUM	1.0	3.35	7.39	4.88	8.52	8.99	7.30	8.56	9.68	7.01	6.54
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.424	1.080	2.690	.964	.572	.624	.545	.657	.658	17.300
LANTHANUM	.5	3.65	66.70	55.80	73.50	27.70	18.80	10.70	20.40	5.82	66.80
LUTETIUM	.2	-.20	.65	.55	.82	.66	.78	.37	.59	.69	.89
MOLYBDENUM	5.0	-5.0	-12.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.170	2.580	3.680	3.100	4.280	.609	2.630	4.580	.325
RUBIDIUM	20.0	-20.0	197.0	143.0	219.0	182.0	226.0	30.9	135.0	261.0	88.5
SAMARIUM	.20	.72	9.79	10.40	11.30	5.11	2.87	1.90	3.29	1.51	13.50
SCANDIUM	.10	1.04	15.60	15.60	16.20	12.60	17.70	3.51	10.40	18.20	18.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.018	.069	.071	.134	.110	.103	.038	.073	.119	.049
TANTALUM	1.0	-1.00	1.54	1.30	1.18	1.46	1.66	1.16	-1.00	1.43	1.32
THORIUM	.5	1.83	20.50	17.20	15.20	10.10	13.70	4.13	10.70	19.10	20.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	4.52	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	6.02	4.66	3.98	2.89	3.65	-2.00	2.85	4.36	3.28
YTTERBIUM	.5	.61	3.68	3.20	4.54	3.43	4.01	1.80	3.11	3.79	4.68
ZINC	100.0	-100.0	123.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 427

ELEMENT	DL	# 35861	# 35862	# 35863	# 35864	# 35865	# 35866	# 35867	# 35868	# 35869	# 35870
ANTIMONY	.2	1.19	2.25	2.86	8.24	2.21	14.20	3.96	2.88	1.33	7.39
ARSENIC	2.0	3.23	4.42	2.87	5.97	7.17	81.60	25.20	4.23	-2.00	49.30
BARIUM	100.0	224.0	802.0	500.0	259.0	528.0	554.0	732.0	512.0	179.0	257.0
BROMINE	2.0	4.54	9.89	14.00	22.70	4.83	2.44	9.11	4.74	6.48	21.90
CERIUM	2.0	29.70	25.70	58.50	137.00	80.50	63.90	38.40	94.90	26.10	85.70
CAESIUM	1.0	2.67	15.30	8.52	25.90	12.60	12.00	15.50	13.60	3.38	9.88
CHROMIUM	5.0	16.7	87.3	65.4	76.2	54.0	104.0	101.0	70.9	13.3	38.7
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	1.08	-1.00	-1.00	-1.00	-1.00	-1.00
[illegible]PIUM	.5	-.50	-.50	.84	2.16	.98	.65	.70	.89	-.50	1.09
GOLD, ppb	5.0	-5.0	-5.0	-5.0	8.9	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	12.80	9.05	8.17	13.00	6.48	8.34	8.12	7.97	5.56	8.04
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.448	.620	.618	.985	.703	2.090	3.070	.481	.618	1.940
LANTHANUM	.5	13.30	11.50	28.00	66.40	39.70	30.50	18.90	48.70	13.50	44.90
LUTETIUM	.2	.44	.80	.68	.71	.62	.72	.72	.66	.26	.57
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-11.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.090	4.940	3.250	3.860	3.600	3.950	4.310	3.250	.588	1.740
RUBIDIUM	20.0	56.3	263.0	169.0	592.0	190.0	196.0	234.0	173.0	43.5	91.0
SAMARIUM	.20	2.26	2.13	4.47	10.00	6.65	5.23	4.11	6.96	2.28	6.25
SCANDIUM	.10	4.10	18.20	13.70	11.70	13.60	15.10	16.60	12.80	3.21	7.37
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.020	.057	.052	.040	.053	.069	.067	.074	.025	.037
TANTALUM	1.0	-1.00	-1.00	1.64	1.73	1.94	-1.00	1.80	2.21	-1.00	-1.00
THORIUM	.5	5.39	14.40	10.80	19.50	9.34	63.00	45.40	16.20	3.66	9.19
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	3.56	-2.00	-2.00	5.21	-2.00	-2.00	-2.00
URANIUM	2.0	2.01	3.59	2.18	-2.00	-2.00	5.24	2.98	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.03	4.23	3.47	3.41	3.46	3.86	3.88	3.89	1.31	2.95
ZINC	100.0	-100.0	-100.0	-100.0	134.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	514.0	-500.0	-500.0	658.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35871	# 35872	# 35873	# 35874	# 35875	# 35876	# 35877	# 35878	# 35879	# 35880
ANTIMONY	.2	4.07	1.15	1.73	2.17	2.74	4.27	5.96	1.40	1.29	-.20
ARSENIC	2.0	3.55	26.80	2.30	5.51	-2.00	2.16	-2.00	-2.00	-2.00	2.94
BARIUM	100.0	1190.0	276.0	662.0	630.0	681.0	698.0	835.0	838.0	349.0	616.0
BROMINE	2.0	7.45	20.60	7.06	9.67	7.81	2.41	4.54	2.92	17.10	-2.00
CERIUM	2.0	255.00	81.90	33.70	55.90	83.00	49.00	65.10	41.30	38.20	86.00
CAESIUM	1.0	15.70	6.53	14.40	13.20	14.90	14.10	15.10	6.45	7.01	10.20
CHROMIUM	5.0	98.9	44.7	67.3	82.5	81.4	85.3	82.1	59.5	49.0	347.0
COBALT	1.0	-1.00	-1.00	1.15	-1.00	1.27	-1.00	-1.00	-1.00	-1.00	33.30
EUROPIUM	.5	2.97	.71	.75	.61	1.33	.54	.51	.60	-.50	1.28
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	253.0
HAFNIUM	1.0	6.56	9.61	9.80	9.55	9.03	9.53	8.53	11.30	8.84	8.98
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.517	3.770	.706	.604	.665	.480	.655	.463	.538	5.580
LANTHANUM	.5	123.00	43.30	15.40	28.50	34.20	25.00	30.70	22.50	18.20	44.90
LUTETIUM	.2	.70	.56	.85	.71	.83	.74	.70	.65	.56	.59
MOLYBDENUM	5.0	9.3	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.720	1.230	3.810	3.220	3.840	4.190	3.390	2.740	2.110	1.430
RUBIDIUM	20.0	149.0	79.2	189.0	196.0	204.0	228.0	223.0	144.0	110.0	109.0
SAMARIUM	.20	18.60	5.20	3.61	4.13	8.60	3.97	3.65	3.33	2.36	8.19
SCANDIUM	.10	17.00	8.81	15.40	16.70	16.00	16.00	16.00	11.00	8.20	13.00
[illegible]NIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.062	.048	.081	.084	.086	.088	.061	.074	.081	1.190
TANTALUM	1.0	1.47	2.59	2.27	3.34	1.76	2.08	1.70	1.55	1.03	2.24
THORIUM	.5	20.60	13.80	11.10	24.60	26.10	21.50	17.70	10.80	8.37	17.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	4.22	-2.00	-2.00	-2.00	-2.00	3.47	-2.00	2.88	2.56	6.65
URANIUM*	2.0	3.91	2.43	3.51	4.43	3.28	4.32	2.91	3.29	-2.00	3.33
YTTERBIUM	.5	3.86	3.18	4.86	4.19	4.52	4.08	3.59	3.49	3.03	3.04
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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N E U T R O N A C T I V A T I O N A N A L Y S I S

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ELEMENT	DL	# 35881	# 35882	# 35883	# 35884	# 35885	# 35886	# 35887	# 35888	# 35889	# 35890
ANTIMONY	.2	2.13	.84	.60	1.38	2.26	.90	6.14	43.90	3.49	1.85
ARSENIC	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	13.90	800.00	27.00	5.86
BARIUM	100.0	559.0	591.0	551.0	481.0	463.0	450.0	740.0	386.0	813.0	998.0
BROMINE	2.0	8.70	7.72	6.25	3.82	25.30	14.30	-2.00	54.60	27.50	2.95
CERIUM	2.0	66.50	59.80	11.00	94.10	28.40	45.80	176.00	81.70	59.70	23.60
CAESIUM	1.0	12.10	7.38	8.47	15.30	10.00	11.90	25.50	9.78	13.50	13.80
CHROMIUM	5.0	87.3	50.5	60.1	86.6	70.3	58.3	190.0	81.5	73.6	88.5
COBALT	1.0	-1.00	-1.00	-1.00	1.04	-1.00	-1.00	12.40	-1.00	1.45	1.33
EUROPIUM	.5	-.50	.64	-.50	1.15	-.50	.59	3.07	1.54	.59	.59
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	192.0	-5.0	-5.0
HAFNIUM	1.0	8.68	6.82	8.99	7.25	10.10	11.50	9.20	8.09	7.70	10.20
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.523	.425	.499	.603	.486	.519	1.140	11.300	4.350	.913
LANTHANUM	.5	33.30	30.10	4.75	48.60	16.00	21.90	84.00	51.40	11.60	11.20
LUTETIUM	.2	.71	.59	.67	.71	.56	.71	1.11	.74	.78	.96
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-10.0	-20.0	-15.0	-11.0	5.3
POTASSIUM, %	.2	3.420	2.610	3.360	3.990	3.110	2.260	3.520	2.340	4.080	5.230
RUBIDIUM	20.0	177.0	149.0	185.0	224.0	165.0	157.0	241.0	120.0	220.0	278.0
[illegible]RIUM	.20	4.69	4.83	1.19	6.99	1.68	2.82	17.00	7.48	3.62	2.27
SCANDIUM	.10	12.50	9.41	13.10	15.80	12.40	13.40	19.00	23.60	21.50	21.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.075	.043	.102	.154	.116	.083	.088	.052	.063	.082
TANTALUM	1.0	1.67	-1.00	1.45	1.75	1.45	2.30	2.03	-1.00	2.00	1.34
THORIUM	.5	9.61	8.47	8.20	12.90	12.60	8.72	23.40	48.60	29.90	14.80
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	4.72	-2.00	-2.00	8.08	-2.00	4.94
URANIUM	2.0	2.78	-2.00	3.20	4.19	3.08	5.19	11.00	8.27	5.65	2.75
YTTERBIUM	.5	3.66	3.05	3.56	4.03	2.98	3.96	6.53	3.88	4.51	5.18
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	130.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	835.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35891	# 35892	# 35893	# 35894	# 35895	# 35896	# 35897	# 35898	# 35899	# 35900
ANTIMONY	.2	.76	3.29	5.52	5.30	4.07	1.87	13.20	3.56	1.41	-.20
ARSENIC	2.0	-2.00	48.90	21.50	123.00	47.20	3.65	64.40	5.64	-2.00	235.00
BARIUM	100.0	-100.0	319.0	1000.0	1770.0	582.0	224.0	313.0	144.0	465.0	402.0
BROMINE	2.0	2.10	26.10	19.30	7.10	22.00	8.87	13.50	41.80	18.20	2.90
CERIUM	2.0	10.80	15.90	10.00	116.00	23.80	35.60	70.90	12.10	74.50	126.00
CAESIUM	1.0	1.32	9.11	5.56	15.10	13.60	6.18	6.51	5.62	15.20	5.89
CHROMIUM	5.0	20.7	56.9	476.0	155.0	98.9	26.8	141.0	69.1	63.3	168.0
COBALT	1.0	-1.00	-1.00	-1.00	1.67	-1.00	1.06	2.63	5.36	1.29	91.70
EUROPIUM	.5	-.50	-.50	-.50	2.45	.57	.77	1.08	-.50	.76	1.78
GOLD, ppb	5.0	-5.0	-5.0	-5.0	14.5	-5.0	-5.0	-5.0	-5.0	-5.0	3640.0
HAFNIUM	1.0	5.87	6.61	3.95	7.39	7.35	6.02	8.79	9.05	8.51	7.20
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.496	2.510	.977	4.460	6.620	.554	4.990	2.250	.847	11.000
LANTHANUM	.5	5.13	12.10	4.38	44.20	13.60	20.00	46.80	6.32	36.60	63.70
LUTETIUM	.2	.23	.43	.37	.77	.62	.39	.52	.43	.67	.75
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-10.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.386	2.530	3.850	3.680	3.870	1.170	1.400	.753	2.590	-.480
[illegible]DIUM	20.0	-20.0	143.0	172.0	201.0	212.0	81.6	107.0	33.5	185.0	72.5
SAMARIUM	.20	1.04	1.17	1.13	13.10	2.40	3.58	5.11	1.28	5.13	13.00
SCANDIUM	.10	1.90	12.90	28.60	19.50	17.50	5.84	27.20	9.04	14.30	18.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.026	.057	.081	.069	.070	.044	.037	.052	.067	.047
TANTALUM	1.0	-1.00	1.30	-1.00	1.65	-1.00	-1.00	2.63	1.52	2.03	-1.00
THORIUM*	.5	2.96	20.10	8.17	31.80	40.70	5.45	27.30	14.40	13.40	20.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	5.97
URANIUM	2.0	-2.00	3.43	-2.00	7.17	4.97	-2.00	5.36	3.31	-2.00	-2.00
YTTERBIUM	.5	1.14	2.43	1.85	4.55	3.45	2.31	2.63	2.33	3.78	3.95
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	112.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35901	# 35902	# 35903	# 35904	# 35905	# 35906	# 35907	# 35908	# 35909	# 35910
ANTIMONY	.2	1.17	.64	1.06	5.86	1.20	4.21	3.22	.99	9.30	1.00
ARSENIC	2.0	-2.00	-2.00	2.79	4.22	-2.00	2.03	8.35	5.60	56.30	-2.00
BARIUM	100.0	295.0	311.0	250.0	714.0	448.0	361.0	258.0	683.0	1040.0	112.0
BROMINE	2.0	3.71	2.60	10.10	8.32	6.30	14.40	16.20	3.68	5.75	11.10
CERIUM	2.0	60.30	95.70	49.70	51.80	33.80	32.80	111.00	72.30	104.00	24.30
CAESIUM	1.0	12.70	18.30	11.50	10.50	4.19	13.20	7.39	18.30	14.60	2.29
CHROMIUM	5.0	51.0	67.8	39.1	73.7	28.9	38.1	48.6	79.7	261.0	14.3
COBALT	1.0	2.63	1.86	1.19	-1.00	1.46	-1.00	-1.00	1.77	-1.00	-1.00
EUROPIUM	.5	1.02	1.31	.76	1.22	.55	.69	1.06	1.15	1.38	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.62	8.96	7.89	8.65	11.20	10.40	10.70	6.86	10.60	4.04
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.970	.843	.869	.760	.535	.607	3.160	.818	3.020	.598
LANTHANUM	.5	29.40	44.10	25.50	24.60	15.90	18.50	66.60	34.80	59.80	12.20
LUTETIUM	.2	.69	.91	.57	.80	.58	.48	.65	.74	.77	-.20
MOLYBDENUM	5.0	-5.0	10.8	-5.0	-5.0	-5.0	-5.0	-5.0	6.6	-5.0	-5.0
POTASSIUM, %	.2	3.010	3.740	2.210	4.360	1.830	1.840	1.660	4.380	3.720	.489
RUBIDIUM	20.0	154.0	175.0	116.0	228.0	97.8	102.0	103.0	238.0	206.0	29.7
SAMARIUM	.20	5.95	10.20	4.04	5.03	2.94	3.03	6.34	7.16	8.11	2.04
SCANDIUM	.10	13.90	15.90	9.50	16.50	7.12	7.83	8.31	19.20	22.30	2.27
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.078	.118	.069	.070	.047	.042	.040	.064	.075	.036
TANTALUM	1.0	1.70	1.43	1.11	2.95	1.53	1.79	1.21	-1.00	5.03	-1.00
THORIUM	.5	17.70	18.00	13.90	13.70	7.97	9.33	12.00	16.30	53.50	2.56
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	2.27	-2.00	-2.00	-2.00	3.52	4.31	-2.00
URANIUM	2.0	3.81	-2.00	2.44	3.53	-2.00	-2.00	3.52	2.49	4.56	-2.00
YTTERBIUM	.5	3.57	5.01	3.24	4.26	3.10	2.54	3.52	4.28	4.26	.96
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	140.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

MENT	DL	# 35911	# 35912	# 35913	# 35914	# 35915	# 35916	# 35917	# 35918	# 35919	# 35920
ANTIMONY	.2	11.10	2.65	12.90	5.80	3.25	6.48	8.73	26.00	11.90	-.20
ARSENIC	2.0	9.11	2.47	783.00	7.63	-2.00	203.00	120.00	24.00	3.81	2.96
BARIUM	100.0	2160.0	231.0	127.0	661.0	782.0	722.0	442.0	380.0	1850.0	461.0
BROMINE	2.0	6.57	6.87	53.00	4.20	2.75	2.45	2.54	9.62	3.62	-2.00
CERIUM	2.0	98.00	21.60	14.80	25.50	128.00	139.00	145.00	62.10	93.60	68.60
CAESIUM	1.0	10.00	3.19	1.19	13.40	15.00	15.60	11.70	4.28	12.10	16.90
CHROMIUM	5.0	60.1	27.2	98.6	87.6	112.0	104.0	62.4	81.9	67.8	463.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	79.70	43.90	1.16	-1.00	22.10
EUROPIUM	.5	1.30	-.50	.51	-.50	.97	2.35	2.77	1.15	1.27	.93
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	14.9	-5.0	79.5
HAFNIUM	1.0	8.70	6.63	1.75	10.00	9.24	6.19	7.91	6.89	8.40	8.72
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.793	.616	15.700	.656	.560	5.920	3.130	1.040	.565	4.110
LANTHANUM	.5	50.60	10.40	8.07	12.70	67.10	68.70	72.50	31.20	48.90	35.20
LUTETIUM	.2	.59	.31	-.20	.68	.77	.86	1.35	.47	.65	.43
MOLYBDENUM	5.0	-5.0	5.3	19.3	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	2.900	1.090	-.200	3.980	4.020	3.150	1.330	1.390	3.550	1.520
RUBIDIUM	20.0	180.0	51.5	-20.0	219.0	220.0	184.0	113.0	83.5	190.0	209.0
SAMARIUM	.20	7.79	1.85	2.60	2.21	7.70	14.30	15.00	4.84	7.25	7.13
SCANDIUM	.10	12.20	4.53	24.80	14.60	14.20	18.40	17.00	15.30	15.20	11.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
UM, %	.01	.066	.059	.033	.079	.048	.049	.026	.034	.090	1.600
TANTALUM	1.0	-1.00	1.38	-1.00	2.21	3.21	1.34	1.90	1.71	-1.00	4.89
THORIUM	.5	12.50	4.76	14.50	16.10	18.40	17.80	16.80	11.70	15.40	14.10
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.36	2.11	-2.00	2.25	-2.00	-2.00	-2.00	-2.00	-2.00	4.10
URANIUM	2.0	-2.00	-2.00	5.14	4.38	4.43	5.90	-2.00	-2.00	3.70	3.51
YTTERBIUM	.5	3.58	1.67	.73	3.41	3.87	4.56	7.42	2.27	3.32	2.14
ZINC *	100.0	199.0	-100.0	264.0	-100.0	-100.0	411.0	1590.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES
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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35921	# 35922	# 35923	# 35924	# 35925	# 35926	# 35927	# 35928	# 35929	# 35930
ANTIMONY	.2	4.27	18.10	6.17	.96	.81	.71	.61	.63	8.16	.85
ARSENIC	2.0	11.50	34.80	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	1150.00	3.31
BARIUM	100.0	1300.0	808.0	743.0	-100.0	162.0	-100.0	-100.0	224.0	281.0	271.0
BROMINE	2.0	6.06	8.90	3.58	2.38	2.95	-2.00	5.08	4.04	8.25	6.53
CERIUM	2.0	57.80	74.20	62.20	5.95	19.30	8.06	5.36	16.10	26.80	35.20
CAESIUM	1.0	12.70	10.30	12.10	-1.00	1.57	-1.00	-1.00	2.45	9.67	4.30
CHROMIUM	5.0	83.5	91.5	90.5	9.8	18.3	6.8	11.1	17.2	87.3	27.4
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.03	-1.00	-1.00
EUROPIUM	.5	1.03	.72	.95	-.50	-.50	-.50	-.50	-.50	-.50	.51
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	12.40	9.29	9.01	6.43	6.43	4.63	5.01	6.48	6.16	10.70
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.874	2.010	.551	.413	.384	.393	.435	.526	8.860	.615
LANTHANUM	.5	27.80	38.50	34.30	2.84	9.60	4.16	2.76	7.72	12.10	19.60
LUTETIUM	.2	1.03	.71	.69	.22	.31	-.20	-.20	.30	.55	.50
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-17.0	-5.0
POTASSIUM, %	.2	4.360	3.590	3.560	-.200	.612	.226	-.200	.851	3.730	1.660
RUBIDIUM	20.0	216.0	195.0	192.0	-20.0	29.0	-20.0	-20.0	51.1	189.0	82.7
SAMARIUM	.20	5.44	5.32	5.61	.67	1.90	.88	.63	1.61	3.11	2.96
SCANDIUM	.10	15.70	13.60	13.10	1.09	2.86	1.24	.83	3.62	27.50	6.09
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.089	.071	.069	.019	.029	.023	.023	.026	.063	.040
TANTALUM	1.0	1.93	1.61	1.55	1.08	-1.00	-1.00	-1.00	-1.00	-1.00	1.73
THORIUM	.5	14.30	25.10	16.90	2.09	3.27	2.20	1.63	4.47	41.90	5.68
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.60	2.51	-2.00	2.48	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	4.16	3.90	2.09	-2.00	-2.00	-2.00	-2.00	-2.00	9.13	-2.00
YTTERBIUM	.5	5.15	3.64	3.54	1.02	1.50	.85	.79	1.47	2.91	2.41
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 427

ELEMENT	DL	# 35931	# 35932	# 35933	# 35934	# 35935	# 35936	# 35937	# 35938	# 35939	# 35940
ANTIMONY	.2	1.72	4.62	11.40	2.52	5.71	1.46	.81	.84	6.96	-.20
ARSENIC	2.0	29.10	28.50	3.45	4.12	39.70	-2.00	-2.00	-2.00	7.57	13.50
BARIUM	100.0	301.0	641.0	462.0	193.0	376.0	466.0	-100.0	120.0	-100.0	258.0
BROMINE	2.0	15.70	2.85	7.51	12.10	26.60	6.81	6.78	7.50	5.25	2.59
CERIUM	2.0	32.70	35.30	34.30	46.50	27.60	50.80	20.70	17.00	-2.00	119.00
CAESIUM	1.0	3.85	14.50	16.80	3.26	13.10	10.20	2.68	1.94	5.26	4.28
CHROMIUM	5.0	28.9	78.4	120.0	43.7	60.9	43.6	26.7	20.2	-5.0	171.0
COBALT	1.0	-1.00	-1.00	-1.00	7.48	-1.00	-1.00	-1.00	-1.00	-1.00	150.00
EUROPIUM	.5	.60	-.50	.52	1.00	-.50	-.50	-.50	-.50	-.50	1.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5370.0
HAFNIUM	1.0	5.87	7.72	6.04	5.53	8.27	8.73	6.00	7.80	-1.00	6.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	2.800	1.210	.670	2.850	2.140	.706	.635	.627	2.840	16.900
LANTHANUM	.5	17.20	21.10	18.10	25.70	18.50	21.70	10.90	8.11	.84	65.40
LUTETIUM	.2	.38	.66	.66	.36	.55	.58	.35	.38	-.20	.90
MOLYBDENUM	5.0	-5.0	-5.0	6.8	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.884	4.490	4.090	.651	2.800	2.680	.519	.362	-.200	-.200
RUBIDIUM	20.0	54.3	224.0	185.0	-20.0	166.0	142.0	24.9	-20.0	-20.0	69.5
SAMARIUM	.20	3.11	2.26	2.90	4.58	1.80	3.00	1.83	1.53	.28	13.40
SCANDIUM	.10	6.32	20.80	17.60	10.20	12.00	10.70	2.89	2.07	.52	18.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.036	.070	.066	.091	.062	.104	.068	.053	.025	.044
TANTALUM	1.0	-1.00	1.75	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.76
THORIUM	.5	8.70	23.00	18.20	12.20	13.30	7.31	3.31	3.08	.75	19.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.97	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	2.75	3.95	7.20	3.02	2.59	2.26	-2.00	-2.00	-2.00	3.11
YTTERBIUM	.5	1.93	3.71	3.40	1.96	2.39	2.85	1.80	1.87	-.50	4.65
ZINC	100.0	-100.0	-100.0	-100.0	103.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 427

ELEMENT	DL	# 35941	# 35942	# 35943	# 35944	# 35945	# 35946	# 35947	# 35948	# 35949	# 35950
ANTIMONY	.2	48.00	5.16	11.80	9.65	5.37	9.38	3.57	1.20	.82	2.69
ARSENIC	2.0	71.00	2.05	45.20	9.89	6.38	3.92	37.20	2.03	-2.00	-2.00
BARIUM	100.0	-100.0	641.0	-100.0	304.0	630.0	204.0	842.0	121.0	655.0	518.0
BROMINE	2.0	2.84	5.76	9.87	25.70	33.90	2.24	2.55	8.17	5.61	10.80
CERIUM	2.0	155.00	22.70	51.40	3.66	6.46	-2.00	75.70	11.70	70.60	94.30
CAESIUM	1.0	2.63	17.10	2.88	14.10	16.10	11.00	10.20	2.04	10.80	13.50
CHROMIUM	5.0	49.6	70.2	87.1	801.0	598.0	695.0	57.5	22.1	75.5	77.3
COBALT	1.0	19.80	-1.00	33.80	51.60	43.30	54.40	1.11	-1.00	-1.00	-1.00
EUROPIUM	.5	2.58	-.50	15.30	-.50	-.50	-.50	1.09	-.50	1.06	1.28
GOLD, ppb	5.0	17.9	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	3.50	9.81	-1.00	1.07	1.46	-1.00	9.18	4.83	7.29	9.11
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.510	.726	17.800	6.720	5.860	5.610	1.070	.532	.617	.677
LANTHANUM	.5	73.10	15.60	18.20	2.61	3.35	.72	37.90	5.86	40.00	46.90
LUTETIUM	.2	.54	.46	.64	-.20	-.20	-.20	.63	.23	.73	.73
MOLYBDENUM	5.0	13.3	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	3.220	-.200	.802	1.520	.352	3.020	.479	4.440	3.850
RUBIDIUM	20.0	-20.0	200.0	47.7	49.2	121.0	39.6	178.0	32.8	233.0	230.0
SAMARIUM	.20	15.30	1.32	15.70	.87	.84	.32	6.56	1.11	5.58	7.89
SCANDIUM	.10	14.10	14.00	19.10	46.20	44.00	53.90	13.90	2.63	16.10	16.10
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.021	.087	.042	.523	.397	.955	.053	.039	.093	.073
TANTALUM	1.0	1.23	1.93	-1.00	-1.00	-1.00	-1.00	2.47	-1.00	1.17	1.62
THORIUM	.5	9.21	7.27	.54	1.51	1.23	-.50	23.10	3.19	12.90	17.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	3.44	20.30	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	7.15	2.24	-2.00	-2.00	-2.00	-2.00	3.67	-2.00	2.50	2.03
YTTERBIUM	.5	3.45	2.12	4.83	.71	.77	-.50	3.20	1.18	3.75	3.67
ZINC	100.0	8810.0	-100.0	140.0	224.0	269.0	160.0	-100.0	-100.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	512.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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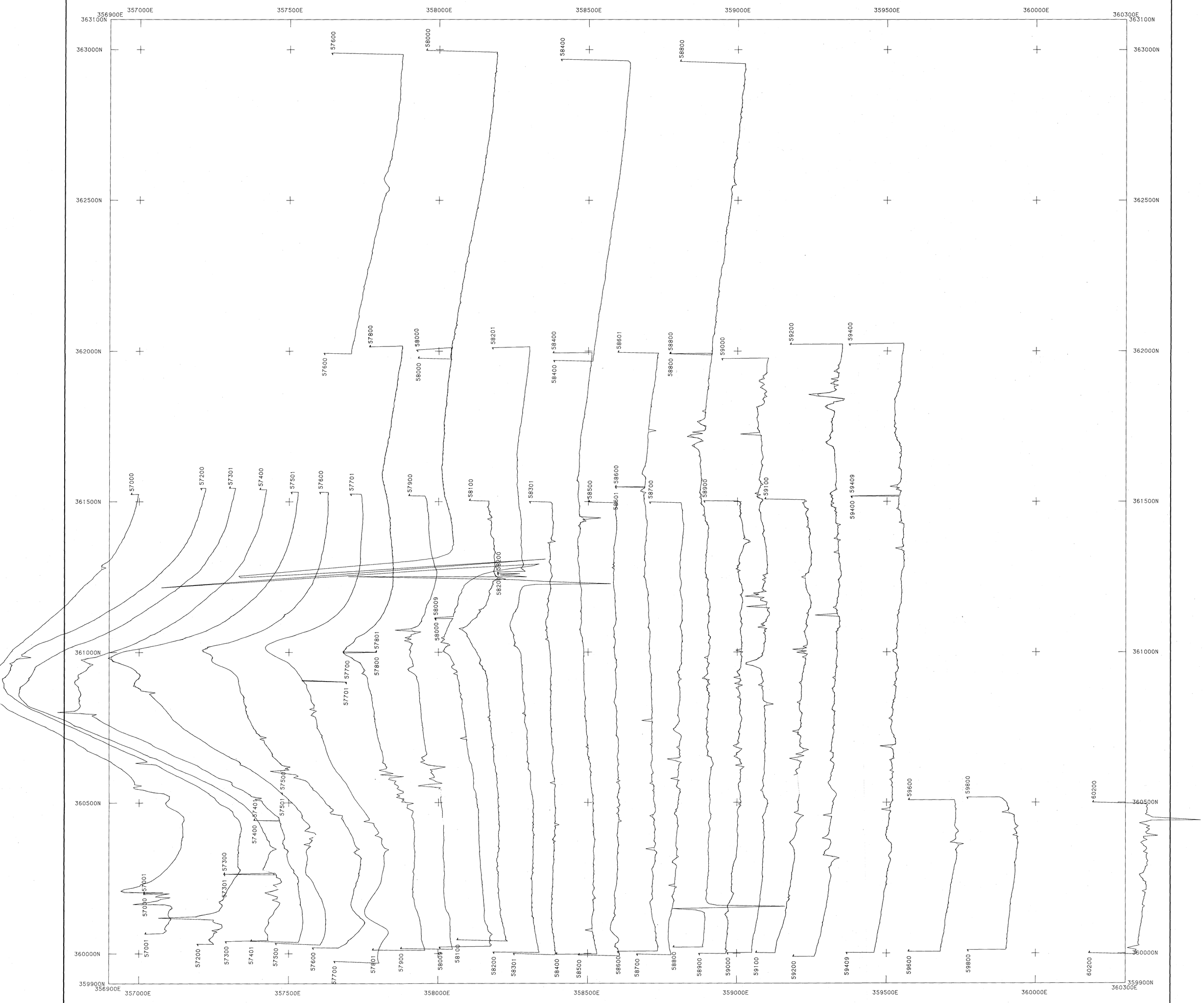
BECQUEREL JOB # 427

ELEMENT	DL	# 35951	# 35952	# 35953	# 35954	# 35955	# 35956	# 35819R	# 35823R	# 35858R	# 35877R
ANTIMONY	.2	1.21	2.10	1.13	.58	1.03	1.95	3.52	13.00	.76	5.99
ARSENIC	2.0	2.87	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	12.10	-2.00	-2.00
BARIUM	100.0	496.0	1000.0	395.0	-100.0	102.0	743.0	952.0	306.0	502.0	793.0
BROMINE	2.0	10.00	4.80	10.30	5.94	8.38	4.33	8.02	8.49	11.20	3.95
CERIUM	2.0	62.70	123.00	65.60	6.42	6.63	75.90	85.90	-2.00	40.80	61.10
CAESIUM	1.0	6.12	12.70	3.04	-1.00	-1.00	7.81	12.40	4.94	7.33	15.90
CHROMIUM	5.0	47.8	107.0	25.1	8.9	5.4	55.3	46.6	334.0	47.1	79.7
COBALT	1.0	1.07	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	43.70	1.33	-1.00
EUROPIUM	.5	.93	1.71	.99	-.50	-.50	.81	.95	-.50	-.50	.64
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.77	10.10	8.69	4.48	4.31	11.80	8.47	-1.00	10.10	8.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.699	.584	.684	.506	.506	.492	.607	5.500	.654	.661
LANTHANUM	.5	32.80	63.40	33.80	3.40	3.64	36.00	42.60	.72	20.50	30.90
[illegible]TIUM	.2	.52	.85	.46	-.20	-.20	.78	.60	-.20	.65	.70
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.4	5.2	-5.0	-5.0	5.4
POTASSIUM, %	.2	2.050	4.620	1.330	-.200	-.200	2.950	2.230	1.320	2.960	3.960
RUBIDIUM	20.0	129.0	237.0	59.1	-20.0	-20.0	142.0	131.0	99.3	146.0	238.0
SAMARIUM	.20	5.11	10.90	5.97	.77	.75	6.68	5.52	.43	3.42	3.68
SCANDIUM	.10	8.87	17.30	5.05	.79	.93	11.10	10.80	38.30	10.60	16.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER *	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	.076	.091	.045	.028	.028	.073	.043	1.900	.076	.061
TANTALUM	1.0	2.39	1.17	1.30	-1.00	-1.00	1.57	1.29	-1.00	1.23	1.73
THORIUM	.5	9.86	20.60	6.02	2.28	1.50	15.70	14.20	.64	11.00	17.40
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	2.49	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.61
URANIUM	2.0	2.59	4.72	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.78	3.74
YTTERBIUM	.5	2.79	4.45	2.49	.81	.75	4.28	3.15	-.50	3.20	3.64
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	247.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	653.0	503.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES
A.C.N. 003 271 832
LUCAS HEIGHTS RESEARCH LABORATORIES NEW ILLAWARRA RD, LUCAS HEIGHTS, NSW
Telephone: (02) 543 2644
Facsimile: (02) 543 2655
P.O. BOX 93
MENAI, NSW, 2234

10453



SURVEY SPECIFICATIONS

1989 1990 SURVEY

SURVEYED BY : HIGHLAND EXPLORATION SERVICES.
MAGNETOMETER : GSM8 LA MONTAQUE MAGNETOMETER.
LINE SPACING : approx 200 METRES.
READING INTERVAL : 5 METRES.
SENSOR HIEGHT : 2 METRES

1991 SURVEY

SURVEYED BY :
MAGNETOMETER :
LINE SPACING : approx 200 METRES.
READING INTERVAL : 5 METRES.
SENSOR HIEGHT :

PROCESSING SEQUENCE

1989 1990 SURVEY

1. Diurnal coorection.
2. 3 Point Median
3. 21 Point (0.00-0.25) Bandpass filter

1991 SURVEY

1. Diurnal coorection.
2. 3 Point Median
3. 21 Point (0.00-0.25) Bandpass filter

LEGEND

BASE VALUE 62800 nT
VERTICAL SCALE 100 nT/cm

RAW PROFILE : Black
FILTERED PROFILE : Red

N

0 100 200 300 400 500m
Scale 1:5000

5 cm

PROCESSING BY TESLA-10 PTY. LTD.
JOB No. TA1737

91-3309

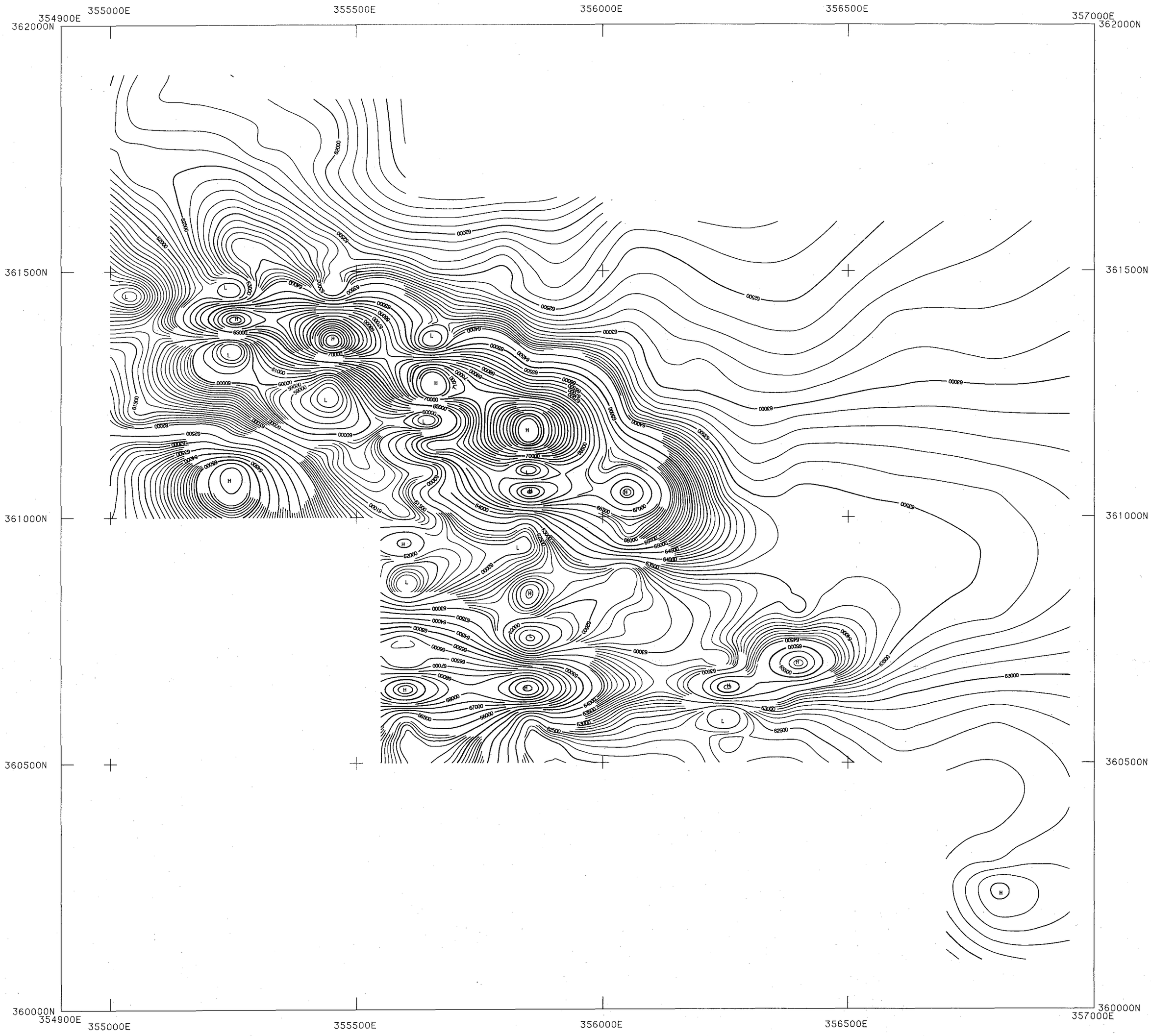
RGC EXPLORATION PTY. LIMITED

SYLVESTER
TASMANIA
GROUND MAGNETIC SURVEY
PROFILES OF MERGED TOTAL
FIELD MAGNETIC INTENSITY

Drawn TESLA-10	Scale 1:5000	PLAN 27
DATE May 1991	Drawing No.	5521/071

130314

10456



130315

5 cm

PROCESSING BY TESLA-10 PTY. LTD.
JOB No. TA1737

SURVEY SPECIFICATIONS

SURVEYED BY :
MAGNETOMETER :
LINE SPACING : approx 200 METRES.
READING INTERVAL : 5 METRES.
SENSOR HEIGHT :
DATE : JUNE 1991.

PROCESSING SEQUENCE

1. Diurnal correction.
2. Lowpass (0.00-0.15) filter with cosine roll off.
3. Gridded with 50m x 50m cell size.

LEGEND

Contour Interval 100.0 nT

5000 nT Contour
500 nT Contour
100 nT Contour

0 100 200 300 400 500m

Scale 1:5000

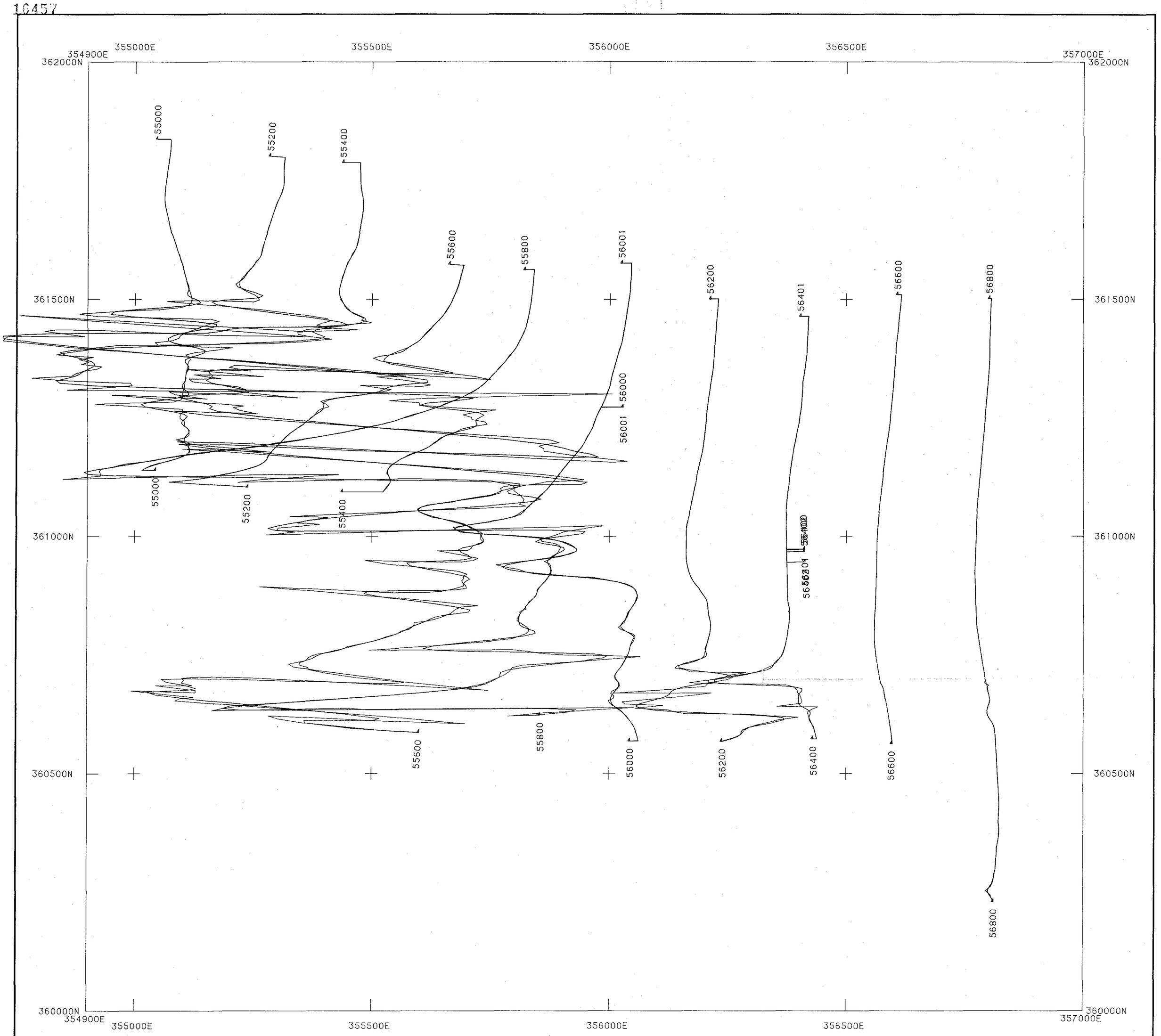
91-3309

RGC EXPLORATION PTY. LIMITED

COMSTOCK
TASMANIA
TENTH LEGION PROSPECT
GROUND MAGNETIC SURVEY
CONTOURS OF
TOTAL FIELD
MAGNETIC INTENSITY

Drawn TESLA-10	Scale 1:5000	5521/106
DATE OCT 1991	Drawing No.	PLAN 28

10457



5 cm

PROCESSING BY TESLA-10 PTY. LTD.
JOB No. TA1737

SURVEY SPECIFICATIONS

SURVEYED BY :
MAGNETOMETER :
LINE SPACING : approx 200 METRES.
READING INTERVAL : 5 METRES.
SENSOR HEIGHT :
DATE : JUNE 1991.

PROCESSING SEQUENCE

1. Diurnal correction.
2. Lowpass (0.00-0.15) filter with cosine roll off.

LEGEND

BASE VALUE : 62800 nT
VERTICAL SCALE : 1000 nT/cm

Raw Data
Filtered Data

0 100 200 300 400 500m
Scale 1:5000

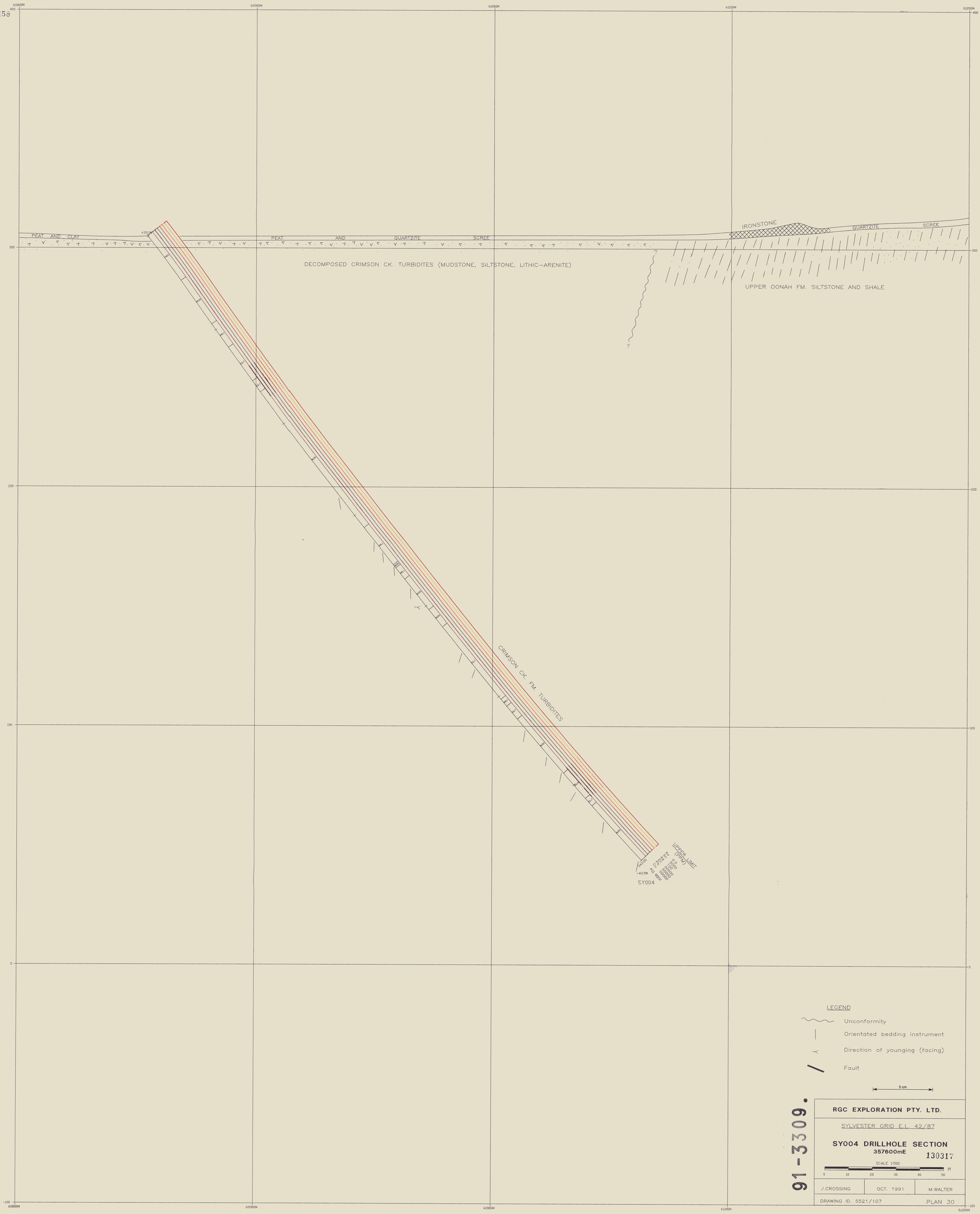
91-3309.

RGC EXPLORATION PTY. LIMITED

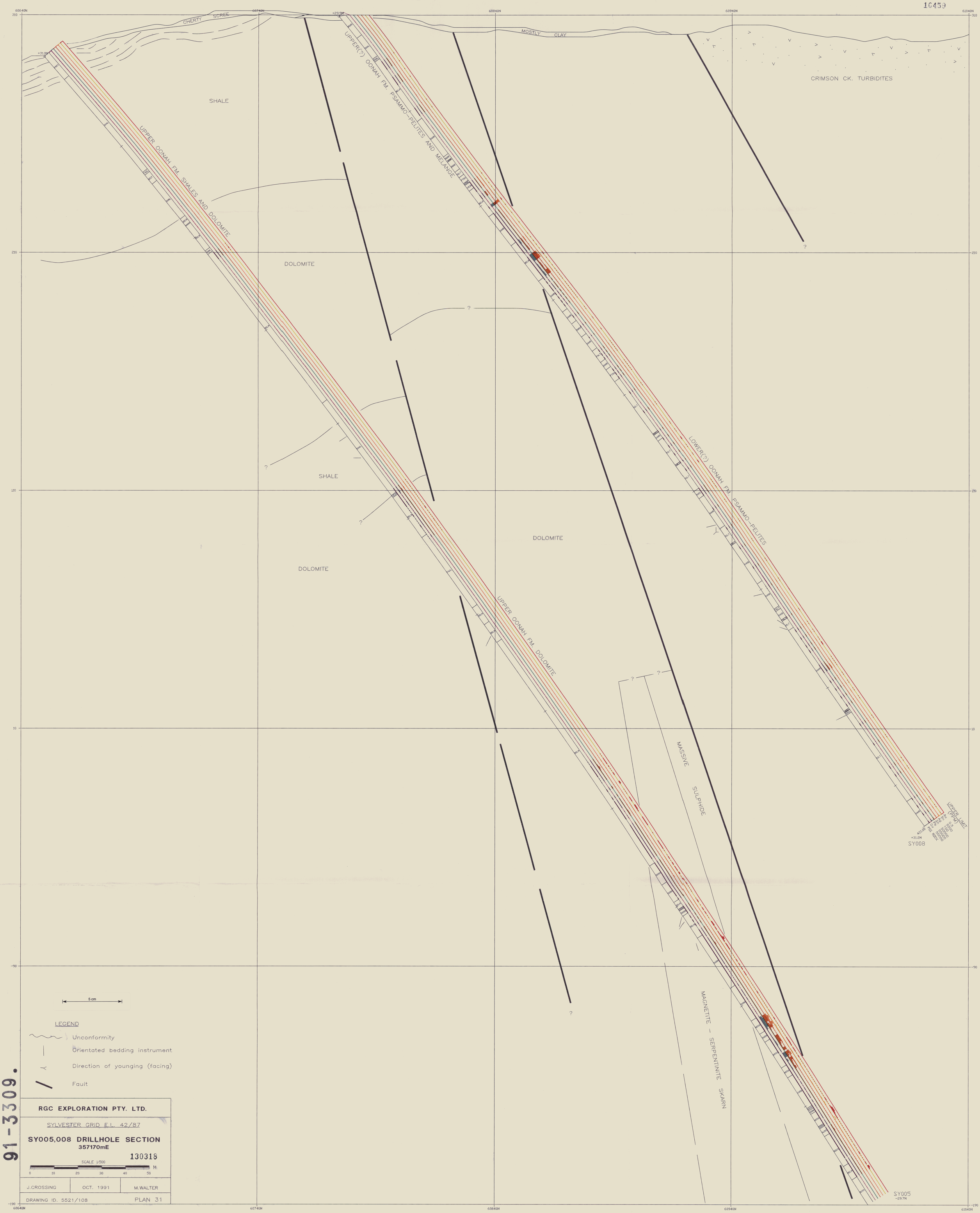
COMSTOCK 130310
TASMANIA
TENTH LEGION PROSPECT
GROUND MAGNETIC SURVEY
STACKED PROFILES OF
TOTAL FIELD
MAGNETIC INTENSITY

Drawn TESLA-10	Scale 1:5000	5521/105
DATE OCT 1991	Drawing No.	PLAN 29

10458

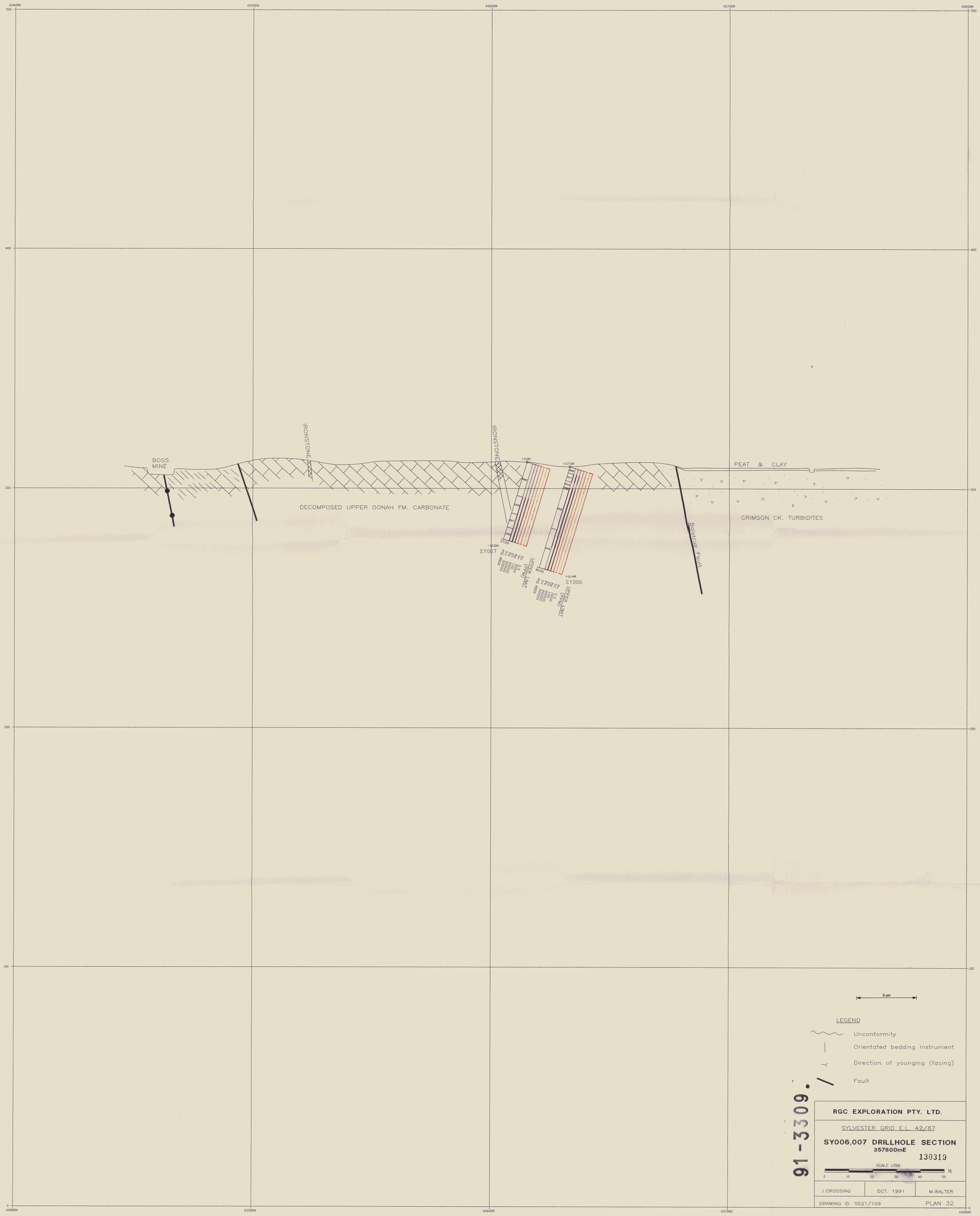

60800N
60900N
61000N
61100N
61200N
400
300
200
100
0
-100
PEAT AND CLAY
+35.1M
PEAT AND QUARTZITE SCREE
IRONSTONE
QUARTZITE
SCREE
DECOMPOSED CRIMSON CK. TURBIDITES (MUDSTONE, SILTSTONE, LITHIC-ARENITE)
UPPER OONAH FM. SILTSTONE AND SHALE
CRIMSON CK. FM. TURBIDITES
UPPER LIMIT (PPM)
Au 0.5
Ag 30
Zn 200
Cu 500
Pb 500
Ni 500
Co 500
Fe1 500
-34.3M
-43.5M
SY004
LEGEND
Unconformity
Orientated bedding instrument
Direction of younging (facing)
Fault
5 cm
RGC EXPLORATION PTY. LTD.
SYLVESTER GRID E.L. 42/87
SY004 DRILLHOLE SECTION
357600mE
130317
SCALE 1:500
0 10 20 30 40 50 M
J.CROSSING
OCT. 1991
M.WALTER
DRAWING ID. 5521/107
PLAN 30
91-3309.

10459

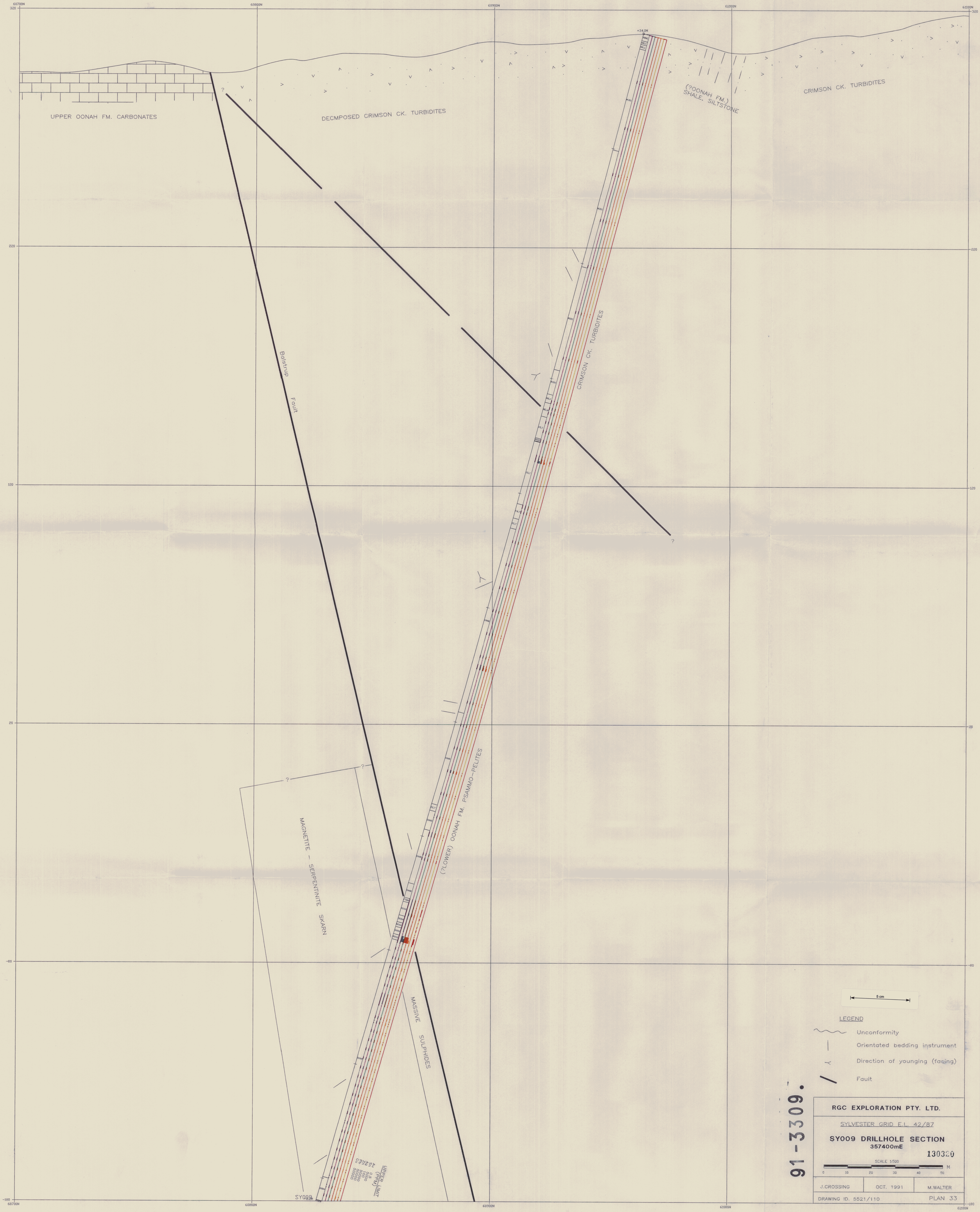


91-3309.

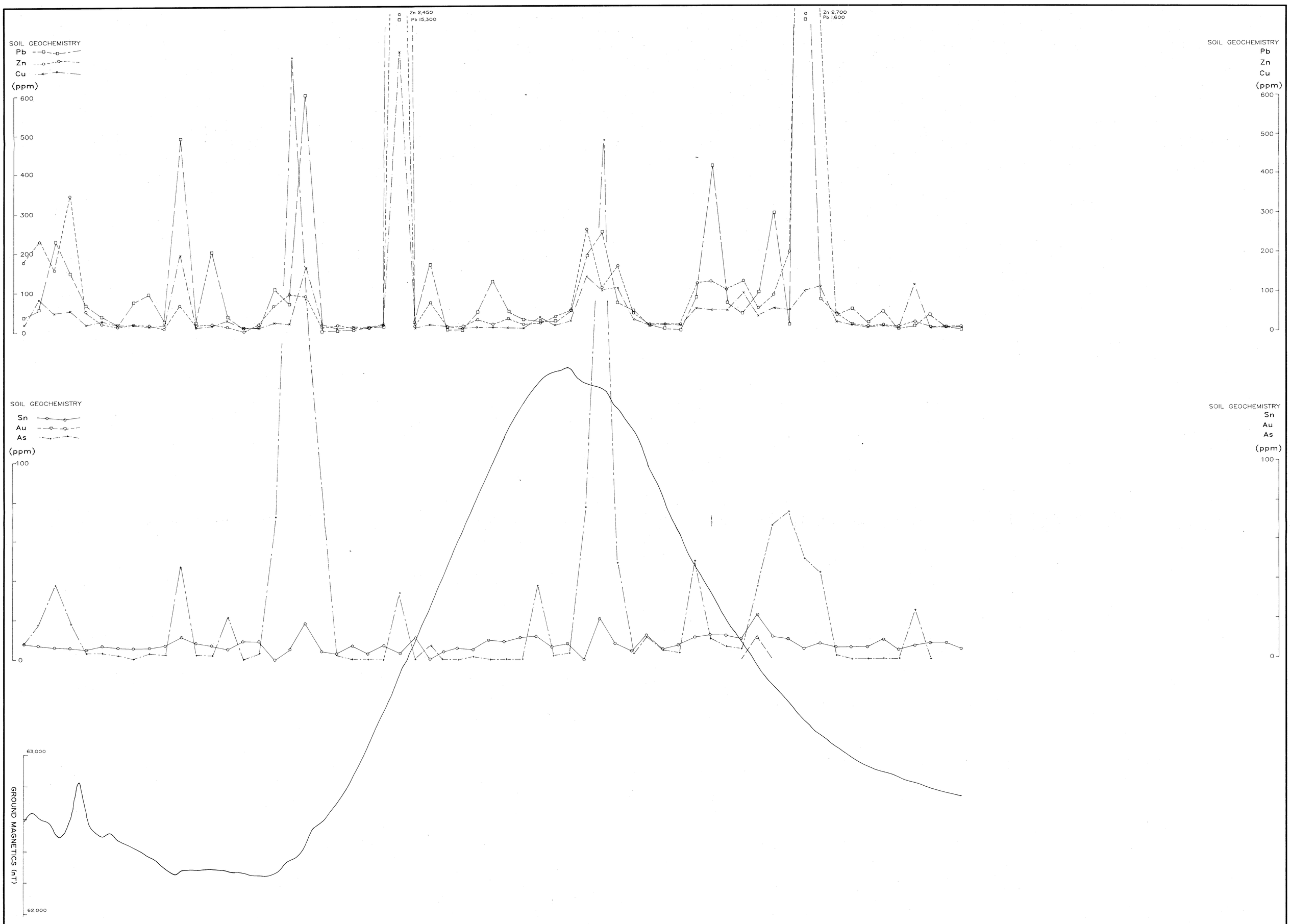
10460


60400N
60500N
60600N
60700N
60800N
500
400
300
200
100
0
BOSS MINE
IRONSTONE
IRONSTONE
DECOMPOSED UPPER OONAH FM. CARBONATE
+3.0M
+37.0M
-12.8M
37.20
SY007
48.60
+16.4M
SY006
UPPER LIMIT (PPM)
UPPER LIMIT (PPM)
Balstrup Fault
PEAT & CLAY
CRIMSON CK. TURBIDITES
5 cm
LEGEND
Unconformity
Orientated bedding instrument
Direction of younging (facing)
Fault
91-3309.
RGC EXPLORATION PTY. LTD.
SYLVESTER GRID E.L. 42/87
SY006,007 DRILLHOLE SECTION
357800mE
130319
SCALE 1:500
0 10 20 30 40 50 M.
J.CROSSING
OCT. 1991
M.WALTER
DRAWING ID. 5521/109
PLAN 32

10491


60700N
60800N
60900N
61000N
61100N
320
220
120
20
-80
-180
+34.0M
UPPER OONAH FM. CARBONATES
DECMPOSED CRIMSON CK. TURBIDITES
(?OONAH FM.)
SHALE, SILTSTONE
CRIMSON CK. TURBIDITES
Balstrup Fault
CRIMSON CK. TURBIDITES
(?LOWER) OONAH FM. PSAMMO-PELITES
MAGNETITE - SERPENTINITE SKARN
MASSIVE SULPHIDES
UPPER LIMIT (PRM)
SY009
5 cm
LEGEND
Unconformity
Orientated bedding instrument
Direction of younging (facing)
Fault
RGC EXPLORATION PTY. LTD.
SYLVESTER GRID E.L. 42/87
SY009 DRILLHOLE SECTION
357400mE
130320
SCALE 1:500
0 10 20 30 40 50 M
J.CROSSING
OCT. 1991
M.WALTER
DRAWING ID. 5521/110
PLAN 33
91-3309

10482



LEGEND

QUARTERNARY	Qs	SCREE, TALUS
	Qss	SILICEOUS, CHERTY, SCREE
CAMBRIAN	€c	CRIMSON CK. TURBIDITES, MUDSTONE, SHALES
	€g	GABBRO
	Fest	IRONSTONE
PROTEROZOIC	Po	OONAH FM. (UNDIFFERENTIATED)
	Pod	DOLOMITE
	Pol	LIMESTONE
	Pocb	CARBONATE (UNDIFFERENTIATED)
	Posh	SHALE
	Post	SILTSTONE
	Poss	SANDSTONE
	Pomn	MELANGE
	Pos	PSAMMO-PELITES (UNDIFFERENTIATED)

MASSIVE SULPHIDES REPLACEMENT
SKARN
FAULT

LITHOLOGICAL CONTACT
UNCONFORMITY
FAULT
ORIENTATED BEDDING MEASUREMENT
DIRECTION OF YOUGING (FACING)
ORIENTATED SHEAR MEASUREMENT

Ac	Actinolite
Bo	Boulangerite
Br	Brucite
Cl	Chlorite
Dp	Diopside
Ep	Epidote
Fe	Iron Oxide
Gl	Galena
Gn	Garner
Mt	Magnetite
Po	Pyrrhotite
Py	Pyrite
Qz	Quartz
Se	Serpentinite
Sl	Sphalerite
Tc	Talc

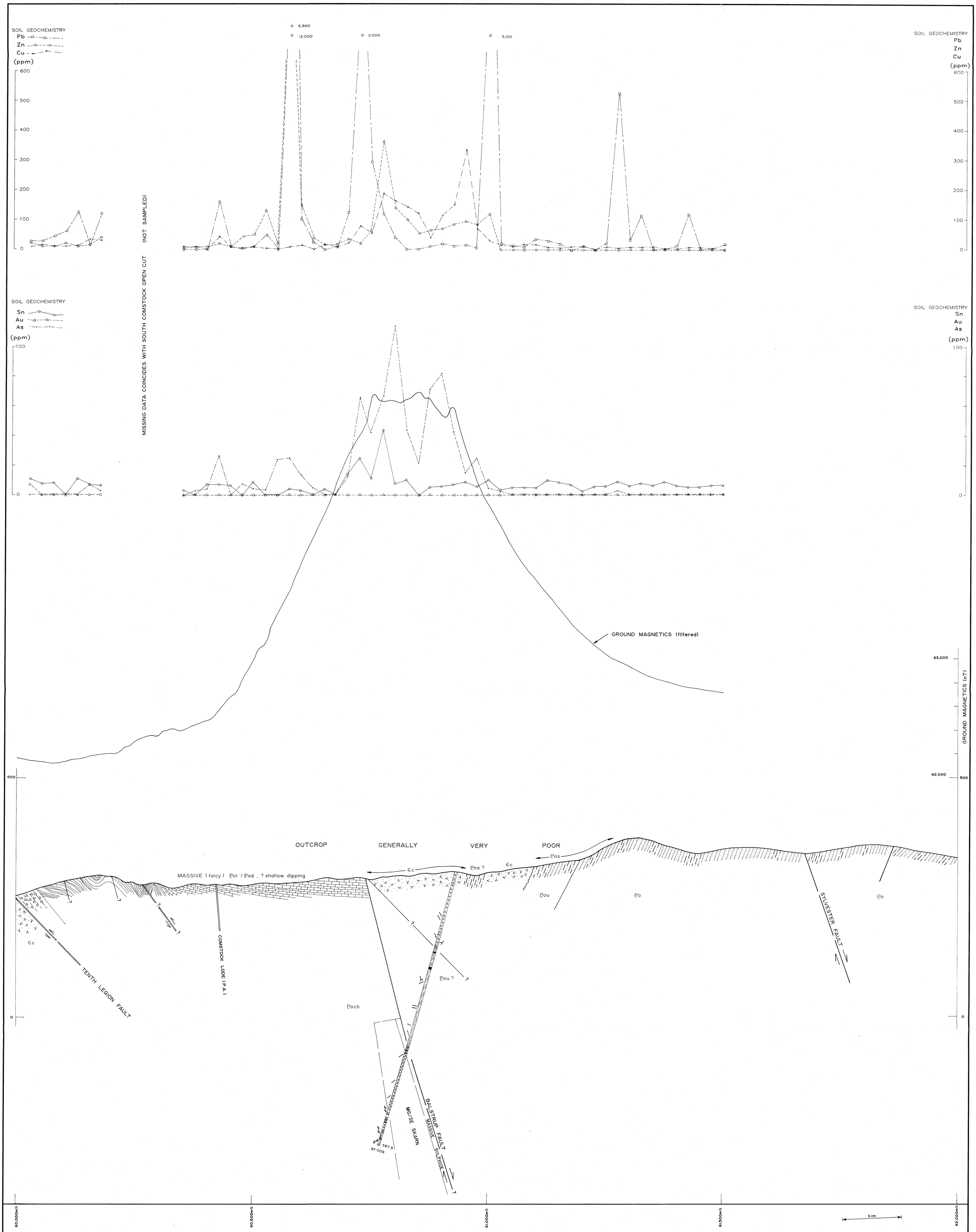
91-3309.

RGC EXPLORATION PTY. LTD.

COMPILED	J.CROSSING	ZEEHAN E.L. 42/87 — 130321
DRAWN	J.BANKS	SYLVESTER GRID
DATE		COMPOSITE SECTION 7200mE
CHECKED		5 cm
1:25000 REF.		

DRAWING ID. 5521/087 — 0 50 100 200 300 400 SCALE 1:2500 — PLAN 34

10463



91-3309.

LEGEND

QUARTERNARY
- Qs — SCREE, TALUS
- Qss — SILICEOUS, CHERTY, SCREE

CAMBRIAN
- Ꞓc — CRIMSON CK. TURBIDITES, MUDSTONE, SHALES
- Ꞓg — GABBRO

Fest — IRONSTONE

MASSIVE SULPHIDES REPLACEMENT
SKARN
FAULT

PROTEROZOIC
- Po — OONAH FM. (UNDIFFERENTIATED)
- Pod — DOLOMITE
- Pol — LIMESTONE
- Pocb — CARBONATE (UNDIFFERENTIATED)
- Posh — SHALE
- Post — SILTSTONE
- Poss — SANDSTONE
- Pomn — MELANGE
- Pos — PSAMMO-PELITES (UNDIFFERENTIATED)

LITHOLOGICAL CONTACT
UNCONFORMITY
FAULT
ORIENTATED BEDDING MEASUREMENT
DIRECTION OF YOUGING (FACING)
ORIENTATED SHEAR MEASUREMENT

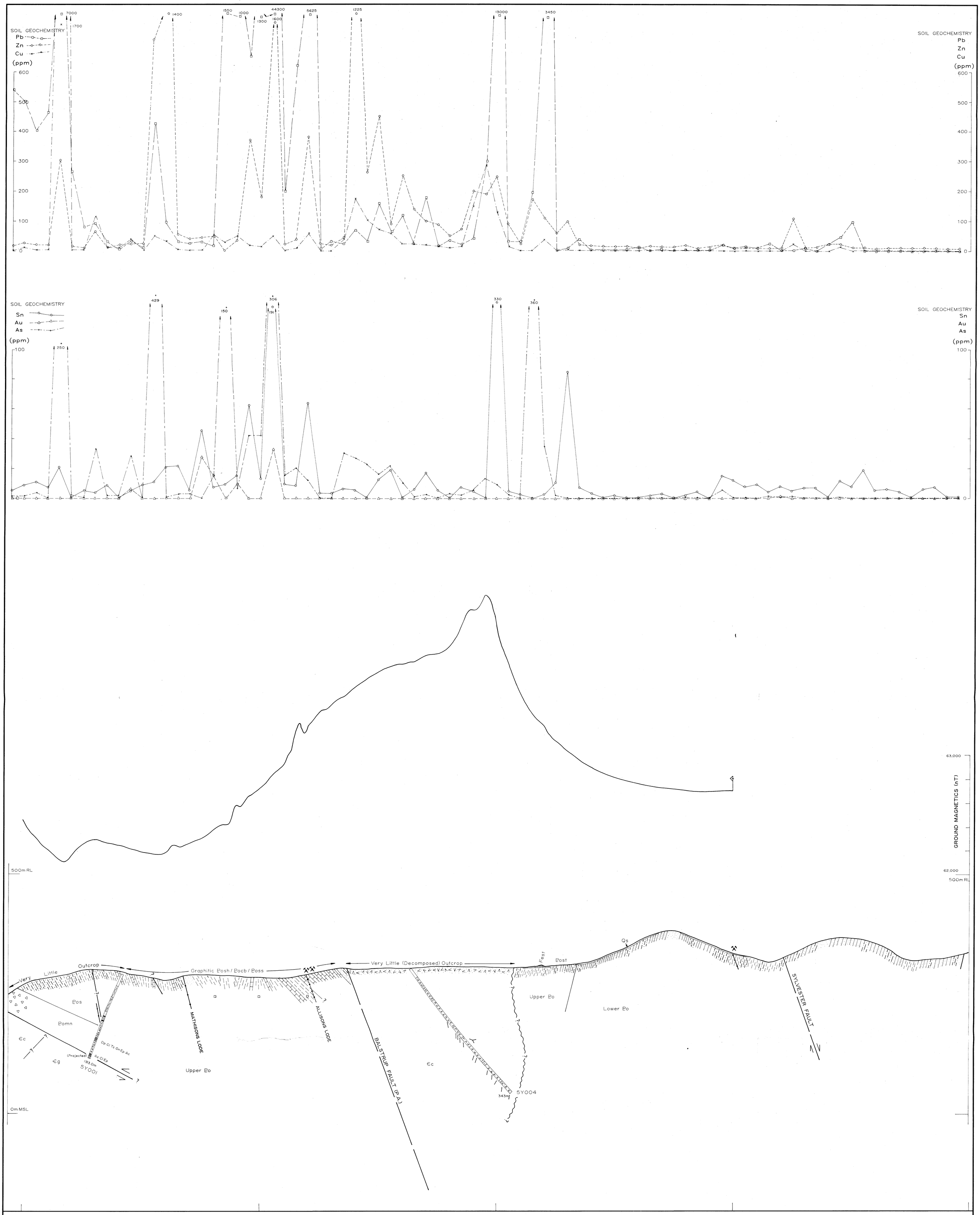
Ac Actinolite
Bo Boulangerite
Br Brucite
Cl Chlorite
Dp Diopside
Ep Epidote
Fe Iron Oxide
Gl Galena
Gn Garner
Mt Magnetite
Po Pyrrhotite
Py Pyrite
Qz Quartz
Se Serpentinite
Sl Sphalerite
Tc Talc

RGC EXPLORATION PTY. LTD.

COMPILED	J.CROSSING	ZEEHAN E.L. 42/87 — 139322
DRAWN	J.BANKS	SYLVESTER GRID COMPOSITE SECTION 7400mE
DATE		
CHECKED		
1:25000 REF.		

DRAWING ID. 5521/086 — 0 50 100 200 300 400 — SCALE 1:2500 — PLAN 35

16464



91-3309.

LEGEND

QUARTERNARY	Qs	SCREE, TALUS
	Qss	SILICEOUS, CHERTY, SCREE
CAMBRIAN	Ꞓc	CRIMSON CK. TURBIDITES, MUDSTONE, SHALES
	Ꞓg	GABBRO
	Fest	IRONSTONE
		MASSIVE SULPHIDES REPLACEMENT
		SKARN
		FAULT

PROTEROZOIC	Po	OONAH FM. (UNDIFFERENTIATED)
	Pod	DOLOMITE
	Pol	LIMESTONE
	Pocb	CARBONATE (UNDIFFERENTIATED)
	Posh	SHALE
	Post	SILTSTONE
	Poss	SANDSTONE
	Pomn	MELANGE
	Pos	PSAMMO-PELITES (UNDIFFERENTIATED)

LITHOLOGICAL CONTACT
UNCONFORMITY
FAULT
ORIENTATED BEDDING MEASUREMENT
DIRECTION OF YOUGING (FACING)
ORIENTATED SHEAR MEASUREMENT

Ac	Actinolite
Bo	Boulangerite
Br	Brucite
Cl	Chlorite
Dp	Diopside
Ep	Epidote
Fe	Iron Oxide
Gl	Galena
Gn	Garner
Mt	Magnetite
Po	Pyrrhotite
Py	Pyrite
Qz	Quartz
Se	Serpentinite
Sl	Sphalerite
Tc	Talc

RGC EXPLORATION PTY. LTD.

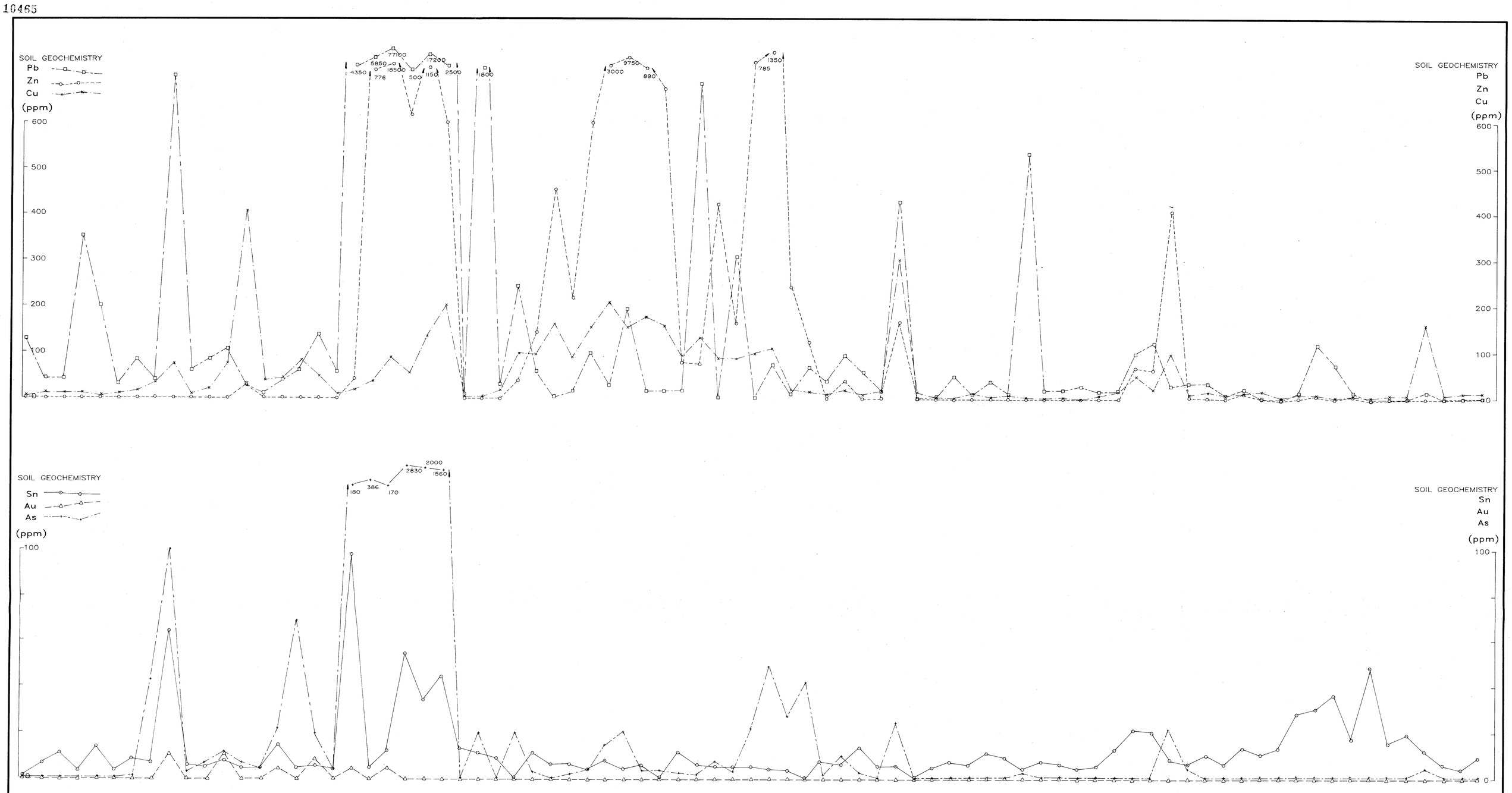
COMPILED	J.CROSSING	ZEEHAN E.L. 42/87
DRAWN	J.BANKS	130323
DATE		SYLVESTER GRID COMPOSITE SECTION 7600mE
CHECKED		
1:25000 REF.		

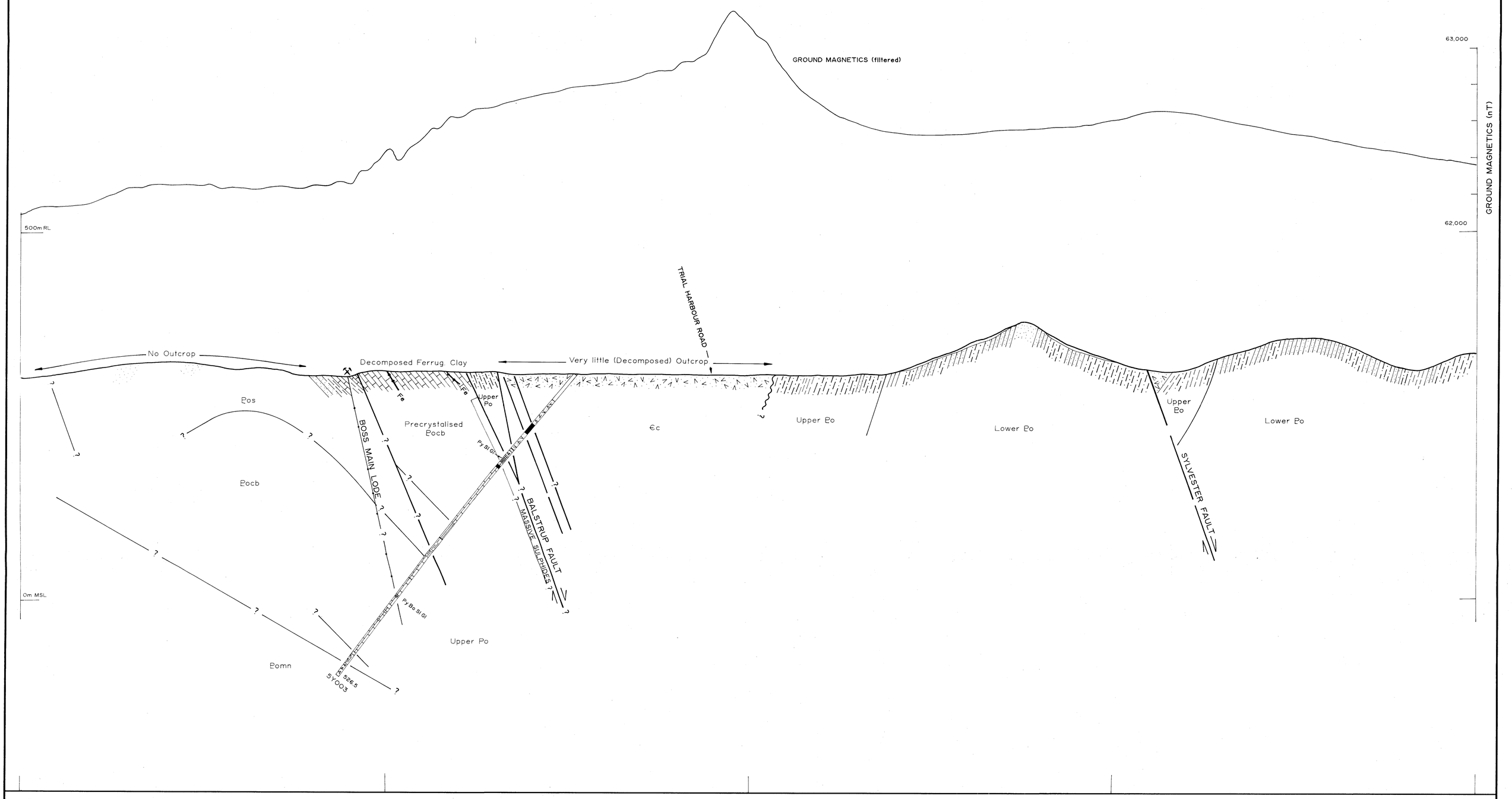
DRAWING ID. 5521/088

0 50 100 200 300 400 SCALE 1:2500

PLAN 36

10465





5 cm

91-3309.

LEGEND

QUARTERNARY	Qs	SCREE, TALUS
	Qss	SILICEOUS, CHERTY, SCREE
CAMBRIAN	Ꞓc	CRIMSON CK. TURBIDITES, MUDSTONE, SHALES
	Ꞓg	GABBRO
	Fest	IRONSTONE
		MASSIVE SULPHIDES REPLACEMENT
		SKARN
		FAULT
PROTEROZOIC	Ꝑo	OONAH FM. (UNDIFFERENTIATED)
	Ꝑod	DOLOMITE
	Ꝑol	LIMESTONE
	Ꝑocb	CARBONATE (UNDIFFERENTIATED)
	Ꝑosh	SHALE
	Ꝑost	SILTSTONE
	Ꝑoss	SANDSTONE
	Ꝑomn	MELANGE
	Ꝑos	PSAMMO-PELITES (UNDIFFERENTIATED)

LITHOLOGICAL CONTACT
UNCONFORMITY
FAULT
ORIENTATED BEDDING MEASUREMENT
DIRECTION OF YOUGING (FACING)
ORIENTATED SHEAR MEASUREMENT

Ac	Actinolite
Bo	Boulangerite
Br	Brucite
Cl	Chlorite
Dp	Diopside
Ep	Epidote
Fe	Iron Oxide
Gl	Galena
Gn	Garner
Mt	Magnetite
Po	Pyrrhotite
Py	Pyrite
Qz	Quartz
Se	Serpentinite
Sl	Sphalerite
Tc	Talc

RGC EXPLORATION PTY. LTD.

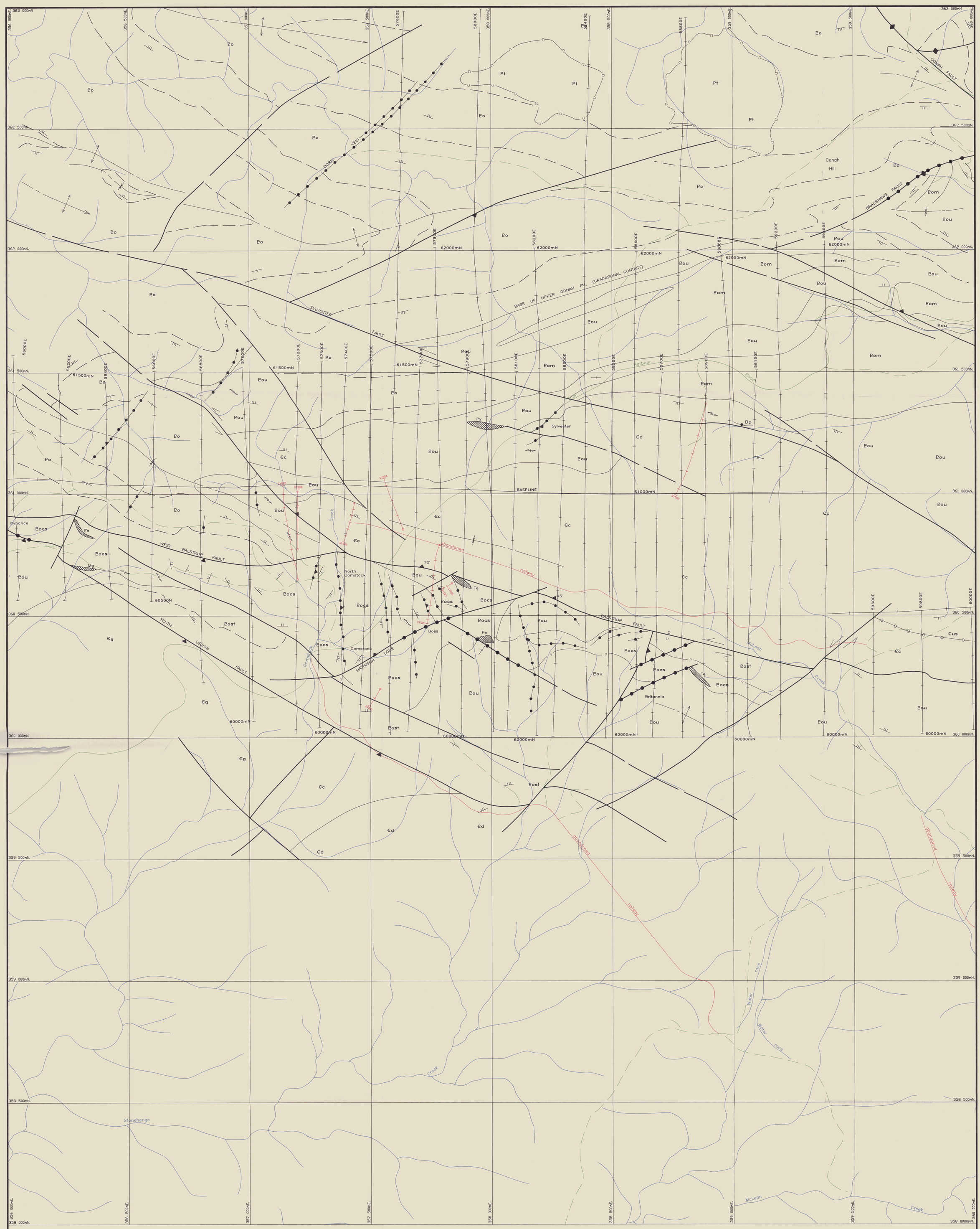
COMPILED	J.CROSSING	ZEEHAN E.L. 42/87
DRAWN	J.BANKS	SYLVESTER GRID COMPOSITE SECTION 7800mE
DATE		
CHECKED		130324
1:25000 REF.		

DRAWING ID. 5521/089

0 50 100 200 300 400 SCALE 1:2500

PLAN 37

10466



LEGEND

PERMIAN	Pt	ZEEHAN GLACIAL FM.
CAMBRIAN	Ꞓd	DUNDAS GP. GRITS AND CONGLOMERATE
	Ꞓc	CRIMSON CK. FM. TURBIDITES
PROTEROZOIC	Ꝑou	UPPER OONAH FM., UNDIFFERENTIATED
	Ꝑocs	CARBONATES AND CARBONACEOUS SHALE
	Ꝑost	SANDSTONE AND SILTSTONE
	Ꝑom	MONTANA MELAPHYRE VOLCANICS
	Ꝑo	LOWER OONAH FM. PSAMMO–PELITES
INTRUSIVE	Dp	DEVONIAN PORPHYRY
	Ꞓg	CAMBRIAN GABBRO
	Ꞓus	CAMBRIAN SERPENTINITE

MINERALISATION
Fe IRONSTONE
Mg MAGNETITE
Py PYRITE

BASE METAL VEINS
DYKE
FAULT
MINERALISED FAULT
LITHOLOGICAL CONTACT
BEDDING TREND
UNCONFORMITY
SHEAR FABRIC
VERTICAL BEDDING
BEDDING ATTITUDE 0–29°
" " 29–59°
" " 60–90°
ANTCLINE
SYNCLINE

SHEET LOCATION

	SHEET A	SHEET B
SHEET E	SHEET C	SHEET D

GN TN 2° MN
GRID CONVERGENCE 1.2?
GRID/MAGNETIC 11.6?
5 cm

91-3309.

RGC EXPLORATION PTY. LTD.

COMPILED	J.CROSSING
DRAWN	M.WALTER
DATE	10/91
CHECKED	
1:25,000 REFERENCE	

SYLVESTER GRID E.L. 42/87

GEOLOGICAL INTERPRETATION

130325

DRAWING ID. 5521/003

100 0 100 200 500
SCALE: 1 : 10,000

PLAN 38

RGC EXPLORATION PTY. LIMITED

- C 291

130326

OPEN FILE

E.L. 42/87, INCORPORATING M.L.'s

43M/85 AND 123M/47 - ZEEHAN AREA

ANNUAL REPORT FOR THE PERIOD

OCT. 1990 TO SEPT. 1991

VOLUME 3

D
File EL 42/87
- 8 NOV 1991
Doc Ref
Action Officer
Folio 63
ON FILE
REFERS

91-3309.

130327

APPENDIX 3

Zeehan Project rock chip/costean sampling
analytical results (1990/91)

NAME:CODE

5521 ZEEHAN (EL 42/87)

NAME:COLOUR

1	DARK	2	MEDIUM	3	LIGHT
A	GREY	B	BLUE	G	GREEN
L	LIME	M	MAUVE	N	BLACK(NOIR)
O	ORANGE	P	PURPLE	Q	AQUA
R	RED	T	TAN(KHAKI)	U	BROWN(UMBER)
V	VIOLET	W	WHITE	Y	YELLOW

NAME:COMPOS

COB	COBBLY	CY	CLAYEY	PEB	PEBBLY
SIL	SILTY	SN	SANDY		

NAME:GRID

PTL	PARTING LAKE GRID	SYL	SYLVESTER GRID	TLG	TENTH LEGION GRID

NAME:KIND

OC	OUTCROP	RC	ROCK CHIP SAMPLE	SL	SOIL SAMPLE

NAME:QCONT

STD	STANDARD

NAME:SAMPLR

CC	CHRISTOPHER COONEY	JC	JOHN CROSSING

NAME:SLOPE

1	FLAT	2	GENTLE	3	MODERATE
4	STEEP	5	VERY STEEP		

NAME:SOIL

G	GLACIAL	R	RESIDUAL	T	TRANSPORTED

290
130328
SL

NAME:UNIT

A	HIGH ORGANIC COMPOUND	B	CLAY CONCENTRATION	C	WEATHERED BEDROCK

294

130329

NAME:ALTER

FE	IRON OXIDE	PY	PYRITIC	SI	SILICIFIED
WT	WEATHERED				

NAME:CODE

5521	ZEEHAN (EL 42/87)

NAME:GRID

AMG	AUST. MAP GRID	CST	COMSTOCK GRID	SYL	SYLVESTER GRID

NAME:KIND

CO	COSTEAN SAMPLE	CORC	COSTEAN/ROCK CHIP SAMPLE	RC	ROCK CHIP SAMPLE
RD	ROCK DUMP SAMPLE	RF	ROCK FLOAT SAMPLE		

NAME:OREMIN

FE	IRON OXIDE	GL	GALENA	MG	MAGNETITE
MN	MANGANITE	PY	PYRITE	QT	QUARTZ-TOURMALINE
QZ	QUARTZ				

NAME:QCONT

STD	STANDARD

NAME:ROCK

ARLI	LITHIC ARENITE	CARB	CARBONATE	CLAY	CLAY
DOLM	DOLOMITE	FALT	FAULT ZONE	FEST	IRONSTONE
GABR	GABBRO	GOSS	GOSSAN	LIMS	LIMESTONE
MSSX	MASSIVE SULPHIDES	MUDS	MUDSTONE	SAND	SANDSTONE
SHAL	SHALE	SULF	SULPHIDES	VEIN	VEIN

NAME:UNIT

CC	CAMBRIAN CRIMSON CREEK FORMATION	PO	PRECAMBRIAN DONAH FORMATION

NAME:VEINS

FE	IRONSTONE	MN	MANGANITE	PY	PYRITE
QZ	QUARTZ				

29J
130330

RGC EXPLORATION PTY.LTD. DATA SHEET

17/10/91

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 11861	360400	360400	357750	357750		AMG	RC	LIMS	PO	WT			400	200	100	4	8
Remark:FERRUGINOUS TALCY ROCK. PROBABLY ALTERED LIMESTONE..																	
T 11862	361130	361130	358795	358795		CST	RC	SAND				QZPY	-100	200	100	1	12
Remark:GRIT																	
T 11863	61280	361292	79985	357975		CST	RC	MSSX			PY		65	65	50	-5	7
Remark:TALCOSE SEMI MASSIVE PYRITE																	
T 11864	61275	361285	79985	357973		CST	RC	MSSX			PY		180	35	35	-5	4
Remark:TALCOSE SEMI MASSIVE PYRITE																	
T 11865	61270	361276	79985	357976		CST	RC	MSSX			PY		85	775	1300	-5	8
Remark:TALCOSE SEMI MASSIVE PYRITE																	
T 11866	61265	361267	79985	357976		CST	RC	MSSX			PY		145	40	40	-5	-3
Remark:SEMI -MASSIVE PYRITE & TALC																	
T 11867	61260	361260	79985	357977		CST	RC	MSSX			PY		110	60	110	-5	6
Remark:SEMI - MASSIVE PYRITE & TALC																	
T 11868	61255	361249	79985	357980		CST	RC	SHAL			PY		55	200	155	-5	6
T 11870					STD		STD								200	-5	
Remark:STD 83 0.05 g/t																	
T 11871	60625	360631	57835	357831		CST	RC	FALT		PYQT	PY		15	460	90	34	14
Remark:FROM TRENCH																	
T 11872	60610	360618	57860	357858		CST	RC	GOSS		FE	QT		95	400	205	-5	10
Remark:IRONSTONE (GOSSAN)																	
T 11873	60600	360608	57855	357853		CST	RC	SULF			PYQT		95	1400	500	-5	55
T 11874	60595	360605	57860	357861		CST	RC	GOSS		FE	QTPY		1200	5200	2700	-5	17
Remark:GOSSAN																	
T 11875	60592	360600	57865	357868		CST	RC	GOSS		FE	QTPY		155	11100	1900	-5	15
T 11876	60590	360593	57870	357878		CST	RC	CARB		TCFE			145	4100	1100	-5	-3
T 11877	60620	360632	57860	357858		CST	RC	CARB		FE							
Remark:IRONSTONE																	
T 11878	60625	360627	57890	357889		CST	RC	CARB		TCFE			3650	3900	1050	-5	8
Remark:IRONSTONE																	
T 11879	60625	360627	57890	357889		CST	RC	CARB		TCFE			90	7800	1550	-5	35
Remark:IRONSTONE																	
T 11880					STD		STD								-100	-5	
Remark:STD 84 0.25 g/t Au																	
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

280
130331

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	OCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 11881	60525	360526	57865	357890		CST	RC	CARB		TCFE		220	52400	2000	53	178
Remark:IRONSTONE																
T 11882	60537	360537	57820	357831		CST	RC	CARB		TCFE		240	39300	1950	160	41
Remark:IRONSTONE																
T 11883	60430	360437	57850	357853		CST	RC	CARB		PY		120	10600	3000	-5	42
Remark:10 - 30 % PYRITE PSUEDOMORPHS IN EXTREMELY WEATHERED ROCK																
T 11884	60430	360432	57880	357882		CST	RC			TCFE		10	3500	1150	-11	16
Remark:IRONSTONE																
T 11885	60415	360423	57860	357959		CST	RC	DOLM		FE		25	400	195	-5	28
Remark:GOSSANEOUS IRONSTONE IN DOLOMITE HOST																
T 11886	60380	360383	58000	358023		CST	RC	SHAL		TCFE		55	8200	190	23	22
Remark:PYRITIC CRUSH ZONE IN SHALE/SILTSTONE FROM OLD WORKINGS																
T 11887	60350	360359	57850	357856		CST	RC	CARB		TCFE		525	1300	185	11	156
Remark:IRONSTONE																
T 11888	60295	360294	58130	358130		CST	RD	SULF		TCFE		30	2600	26200	13	9
Remark:MASSIVE PYRITE LENSES IN OPEN CUT																
T 11889	60270	360272	58170	358158		CST	RD	SULF		SLPY		375	3050	560000	-10	340
Remark:IRONSTONE																
T 11890					STD		STD							-100	-5	
Remark:STD B4 0.25 g/t																
T 11891	60530	360533	58125	358146		CST	RC	SAND			PYQT	65	350	1700	-5	78
T 11892	60557	360555	58190	358180		CST	RC	FEST				205	1750	1375	-5	20
Remark:IRONSTONE																
T 11893	60400	360400	58180	358168		CST	RC	FEST			PYFE	210	4250	480	-5	70
Remark:IRONSTONE																
T 11894	60350	360349	58260	358248		CST	RD	SULF			PYQTSL	25	7250	765	93	28
Remark:IRONSTONE																
T 11895	60395	360390	58335	358326		CST	RC	FEST				190	8150	3450	-5	80
Remark:IRONSTONE																
T 11896	60430	360420	58460	358451		CST	RC	FEST				100	62600	3100	17	38
Remark:IRONSTONE																
T 11897	60457	360455	58513	358506		CST	RC	GOSS				35	1300	850	-5	16
Remark:QUARTZ - PYRITE GOSSAN																
T 11898	60415	360405	58520	358516		CST	RC	FEST				65	1200	850	35	-3
Remark:MANGANIFEROUS IRONSTONE																
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

130337

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 11899	60485	360495	58355	358347		CST	RC	FEST				65	7450	11600	-5	64
Remark:IRONSTONE																
T 11900	60520	360518	58315	358303		CST	RC	FEST				215	1310	875	-5	9
Remark:IRONSTONE																
T 26219	60360	360370	58643	358644		CST	RD	SHAL			PY	20	2650	145	18	31
Remark:BRECCIATED , PYRITISED SHALE																
T 26220					STD		STD							130	-5	
Remark:STD B3 0.5 g/t																
T 26221	60315	360331	58640	358641		CST	RD	SHAL			PYGL	170	52200	150	130	164
T 26222	60175	360175	58415	358412		CST	RD	SULF			PYOT	30	1700	1450	8	20
T 26223	60550	360550	57785	357774		CST	RD	FEST				225	29400	3250	18	187
Remark:IRONSTONE																
T 26224	60550	360554	57740	357730		CST	RD					595	22000	2400	-5	472
Remark:IRONSTONE																
T 26225	60545	360544	57683	357681		CST	RD					370	23500	2450	-5	471
Remark:IRONSTONE																
T 26228	60591		57799			SYL	CORC	CLAY		FE		215	1600	205	3	13
Remark:COSTEAN #1 SYLVESTER GRID, 0 - 2 W																
T 26229	60591		57798			SYL	CORC	CLAY		FE		140	1300	160	4	19
Remark:2 - 4 W																
T 26230	60590		57796			SYL	CORC	CLAY		FE		240	2400	270	4	23
Remark:4-6 W																
T 26231	60589		57794			SYL	CORC	CLAY		FE		250	2750	340	4	11
Remark:6-8 W																
T 26232	60588		57793			SYL	CORC	CLAY		FE		275	3350	235	5	19
Remark:8-10 W																
T 26233	60587		57791			SYL	CORC	CLAY		FE		185	8300	325	3	8
Remark:10-12 W																
T 26234	60586		57789			SYL	CORC	FEST				395	15000	1250	6	155
Remark:12 - 14 W																
T 26235	60579		57778			SYL	CORC	CLAY		FE		265	49800	12300	49	139
Remark:24-26 W																
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

130333

NGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 26236	60577		57777			SYL	CORC	CLAY		FE		180	70000	13600	10	191
Remark:26-28 W																
T 26237	60568		57761			SYL	CORC	CLAY				60	16000	250	1	17
Remark:44-46 W QUARTZ GRAINS/FRAGMENTS																
T 26238	60567		57760			SYL	CORC	CLAY				215	16000	425	21	16
Remark:46-48 W																
T 26239	60566		57757			SYL	CORC	CLAY				20	620	45	1	10
Remark:48-50 W																
T 26240					STD		STD	STD								
Remark:STANDARD B3																
T 26241	60563		57754			SYL	CORC	CLAY		FE		55	760	250	-0	11
Remark:54-56 W																
T 26242	60562		57552			SYL	CORC	CLAY		FE		65	630	560	1	16
Remark:54-56 W																
T 26243	60560		57751			SYL	CORC	CLAY				10	65	25	2	-3
Remark:58-60 W																
T 26244	60553		57738			SYL	CORC	CLAY				65	7150	230	-0	37
Remark:74-76 W																
T 26245	60551		57735			SYL	CORC	FEST				130	24500	3200	4	58
Remark:76-78 W																
T 26246	60550		57734			SYL	CORC	FEST				215	34400	14100	30	150
Remark:78-80 W																
T 26247	60549		57733			SYL	CORC	CLAY		FE		250	17400	4700	51	47
Remark:CLAY IRONSTONE 80-82 W																
T 26248	60548		57731			SYL	CORC	CLAY		FE		105	5950	575	6	9
Remark:IRON OXIDE AS SPECKS; 82-84 W																
T 26249	60547		57739			SYL	CORC	CLAY		FE		30	5400	130	1	-3
Remark:IRON OXIDE AS SPECKS																
T 26250	60546		57726			SYL	CORC	CLAY		FE		35	9650	210	2	10
Remark:IRON OXIDE AS SPECKS 86-88 W																
T 26251	60546		57724			SYL	CORC	CLAY		FE		15	8300	30	-0	4
Remark:IRON OXIDE SPECKS 88-90 W																
T 26252	60594		57801			SYL	CORC					220	3800	300	6	29
Remark:COSTEAN #1 EXTENSION.SAMPLES FROM EXCAVATED MATERIAL. 0-2 W																
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 26253	60595		57803			SYL	CORC					135	5000	155	13	10
Remark:EAST DIRECTION																
T 26254	60597		57805			SYL	CORC					90	4200	115	13	7
Remark:EAST DIRECTION																
T 26255	60600		57809			SYL	CORC					60	1350	85	11	16
Remark:EAST DIRECTION																
T 26256	60601		57811			SYL	CORC					95	3100	65	14	23
Remark:EAST DIRECTION																
T 26257	60602		57813			SYL	CORC					85	4000	240	18	18
Remark:EAST DIRECTION																
T 26258	60603		57815			SYL	CORC					285	20500	590	48	208
Remark:EAST DIRECTION																
T 26259	60604		57816			SYL	CORC					295	18500	690	23	171
Remark:EAST DIRECTION																
T 26260					STD		STD									
Remark:STD FMC1																
T 26261	60605		57818			SYL	CORC					820	11800	845	890	990
Remark:EAST																
T 26262	60606		57820			SYL	CORC					635	9800	650	270	774
Remark:EAST																
T 26263	60607		57822			SYL	CORC					230	4900	130	82	118
Remark:EAST																
T 26264	60611		57828			SYL	CORC					300	2800	90	80	76
Remark:EAST																
T 26265	60612		57830			SYL	CORC					230	2900	90	28	102
Remark:EAST																
T 26266	60613		57832			SYL	CORC					370	18000	200	166	454
Remark:T																
T 26267	60614		57834			SYL	CORC					445	14600	255	220	665
Remark:EAST																
T 26268	60616		57835			SYL	CORC					325	15900	170	134	297
Remark:EAST																
T 26269	60617		57837			SYL	CORC					480	9400	260	270	400
Remark:EAST																
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 26270	60618		57839			SYL	CORC					300	6900	180	240	385
Remark:EAST																
T 26271	60619		57841			SYL	CORC					170	7500	135	80	127
Remark:EAST																
T 26272	60620		57842			SYL	CORC					200	7700	200	70	198
Remark:EAST																
T 26273	60621		57844			SYL	CORC					80	3400	100	11	10
Remark:EAST																
T 26274	60598		57806			SYL	CORC					120	750	145	19	14
Remark:COSTEAN #1(EXT) EAST																
T 26275	60599		57808			SYL	CORC					65	1250	100	9	5
Remark:EAST																
T 26276	60627		57851			SYL	CORC					240	2850	270	20	52
Remark:COSTEAN #2																
T 26277	60629		57851			SYL	CORC					150	2700	165	36	40
T 26278	60631		57851			SYL	CORC					170	945	145	5	56
T 26279	60633		57852			SYL	CORC					100	3950	530	5	33
T 26280					STD		STD									
Remark:STD B3																
T 26281	60600		57844			SYL	RC	SHAL		FE		100	1150	250	17	27
Remark:OLD TIMERS COSTEAN SOUTHWARDS FROM INTERSECTION WITH COSTEAN #1 EXT.																
T 26282	60598		57844			SYL	RC	SHAL		FE		90	1350	740	2	18
T 26283	60596		57845			SYL	RC	SHAL				80	1600	600	2	21
T 26284	60594		57845			SYL	RC	SHAL				195	1750	150	52	13
T 26285	60587		57850			SYL	RC	SULF			PYFE	130	785	835	18	87
T 26286	60585		57850			SYL	RC	SULF			FEPY	205	765	700	7	131
T 26287	60583		57851			SYL	RC	SULF			PYFE	80	1550	1600	1	32
T 26288	60581		57852			SYL	RC	FEST				115	2900	1850	1	22
T 26289	60580		57853			SYL	RC	FEST				160	7100	1650	1	22
T 26290	60579		57854			SYL	RC	CARB		FE		185	5150	2100	1	92
T 26291	60577		57856			SYL	RC	CARB		FE		300	3600	2450	-0	157
T 26292	60576		57857			SYL	RC	CARB		FE		150	3700	1300	4	25
T 26293	60575		57858			SYL	RC	CARB		FE		170	3600	970	2	-3
T 26294	60575		57860			SYL	RC	CARB		WT		110	3250	720	2	10
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

130330

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 26295	60573		57868			SYL	RC	FEST					230	3250	3150	-0	40
Remark:4M SOUTH OF COSTEAN																	
T 26296	60566		57891			SYL	RC	CARB					100	485	380	1	16
Remark:OPEN STOCKWORK OF IRON OXIDE VEINLETS																	
T 26297	60564		57899			SYL	RC	FEST					340	9500	4800	-0	578
Remark:2M SOUTH OF COSTEAN																	
T 26298	60564		57899			SYL	RC	SULF			PY		10	710	170	30	22
Remark:OLD TIMERS COSTEAN GOING N.W. FROM COSTEAN #1 (EXT) TOWARDS SY 003																	
T 26299	60564		57899			SYL	RC	SULF			PY		45	460	155	32	22
T 26300					STD	SYL	STD										
Remark:STD FMC1																	
T 27401	60490	360511	7015	357016		SYL	RD			SI PY	PY		90	355	1350	-5	13
T 27402	61298	361299	8995	358982		SYL	RD	SHAL			PY		25	20	120	-5	8
Remark:SHEARED (MELANGE)																	
T 27403	61293	361292	9015	359001		SYL	RD	SHAL			FE		25	40	100	-5	31
Remark:QUARTZ PORPHYRY IN CREEK																	
T 27404	61293	361297	9015	358943		SYL	RD	SHAL					235	1450	460	-5	58
Remark:FUCHSITIC ROCK IN FRACTURE																	
T 27405	61293	360611	9015	360338		SYL	RD	SHAL					25	5500	4050	-5	20
Remark:MANGANIFEROUS IRONSTONE																	
T 27406	60490	360524	60000	359985		SYL	RC	ARLI	CC			FE	190	195	700	-5	7
T 27407	60500	360530	60015	360000		SYL	RC	ARLI	CC	WT		FE	100	25	205	-5	6
T 27408	60500	360532	60125	360101		SYL	RF	GOSS		MN		QZ	55	3250	3600	-10	13
T 27409	60445	360478	60200	360190		SYL	RF	ARLI	CC	WT			120	14500	3800	-10	17
Remark: .																	
T 27410	60445	360547	60200	360086		SYL	RC	ARLI		WT		FE	210	1215	440	-5	5
Remark:FE STRINGER STOCKWORK/VEIN																	
T 27411	60445	360526	60200	360042		SYL	RC	VEIN		WT		FEMN	735	27800	2900	-10	920
T 27412	60397	360410	59600	359587		SYL	RC	VEIN				QZ	55	275	400	-5	15
T 27413	60630	360642	59400	359387		SYL	RC	GOSS			PY	QZ	120	1350	1550	-7	-3
T 27414	60810	360821	49400	359390		SYL	RC	MUDS	CC			QZPY	75	35	525	-5	10
T 27415	60810	360497	49400	359354		SYL	RC	ARLI				FE	615	110	1000	-5	10
T 27416	61379	361374	58400	358392		SYL	RC	GOSS			QZFE		20	15	145	-5	6
T 27417	61420	361414	58410	358400		SYL	RD	GOSS			FE		85	2500	950	-5	15
Remark:FROM DRAINAGE DITCH NEXT TO TRAIL H. ROAD																	

Laboratory:	ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :	101	101	101	AAS	401
Det. Limit:	5.000	5.000	5.000	1.000	3.000

130334

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	NORTH EAST metres	TEAST metres	OCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
27418	61400	361394	58375	358366		SYL	RC	GOSS		FEMN		20	70	220	-5	7
Remark:FROM TRENCH ADJACENT TO TRAIL H. ROAD																
T 27419	61015	361020	58000	357996		SYL	RC	FEST				20	10	360	-5	7
Remark:IRONSTONE																
T 27420					STD		STD							850	-5	-20
Remark:STD FMC1																
T 27421	60985	360991	58006	357999		SYL	RC	FEST				20	-5	135	-5	4
T 27422	61020	361021	58006	358022		SYL	RD	FEST				30	-5	220	-5	4
T 27423	61780	361784	58270	358261		SYL	RC	SHAL		PY	QZPY	35	45	15	-5	11
Remark:GRAPHITIC SHEARED																
T 27424	62320	362268	59560	359505		SYL	RC	SAND		QZPY	QZPY	80	2000	100	6	12
Remark:BRECCIATED QUARTZITE WITH QUARTZ PYRITE 2 PAST KUCHENS LODE																
T 27425	60592		57800			SYL	CORC					125	9600	315	-5	-3
Remark:0-1 E																
T 27426	60591		57799			SYL	CORC					1100	5000	335	-5	25
Remark:1-2 W																
T 27427	27427		57998			SYL	CORC					240	5200	450	-5	45
Remark:2-3 W																
T 27428	60590		57797			SYL	CORC					80	10600	170	-5	4
Remark: 3-4 W																
T 27429	60590		57796			SYL	CORC					190	10600	520	-10	25
Remark:4-5 W																
T 27430	60589		57795			SYL	CORC					135	10000	545	-5	-3
Remark:5-6 W																
T 27431	60589		57794			SYL	CORC					285	3200	440	-5	10
Remark:6-7 W																
T 27432	60588		57794			SYL	CORC					240	3650	430	-5	15
Remark:7-8 W																
T 27433	60588		57793			SYL	CORC					275	2650	360	-5	21
Remark:8-9 W																
T 27434	60587		57792			SYL	CORC					320	3900	485	-5	37
Remark:9-10 W																
T 27435	60587		57791			SYL	CORC					400	12900	760	-10	13
Remark:10-11 W																

Laboratory:	ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :	101	101	101	AAS	401
Det. Limit:	5.000	5.000	5.000	1.000	3.000

130338

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27436	60586		57790			SYL	CORC					325	11800	695	-5	6
Remark:11-12 W																
T 27437	60586		57789			SYL	CORC					300	23000	485	-5	6
Remark:12-13 W																
T 27438	60585		57788			SYL	CORC					535	10000	790	-12	48
Remark:13-14 W																
T 27439	60577		57777			SYL	CORC					235	30800	7000	390	193
Remark:26-28 W																
T 27440					STD									110	-5	-20
Remark:83																
T 27441	60586		57762			SYL	CORC					60	8000	495	-5	57
Remark: 44-45 W																
T 27442	60586		57761			SYL	CORC					75	6400	240	-5	7
Remark: 45-46 W																
T 27443	60567		57760			SYL	CORC					65	7100	215	-5	12
Remark: 46-47 W																
T 27444	60566		57758			SYL	CORC					315	33000	1150	65	35
Remark: 47-49 W																
T 27445	60562		57752			SYL	CORC					170	5800	665	-5	17
Remark: 56-57 W																
T 27446	60562		57751			SYL	CORC					195	17300	1700	-5	5
Remark: 57-58 W																
T 27447	60552		57736			SYL	CORC					1100	59500	535	-5	12
Remark: 75-76 W																
T 27448	60551		57735			SYL	CORC					180	16800	710	-5	101
Remark: 76-77 W																
T 27449	60551		57734			SYL	CORC					75	26000	790	26	14
Remark: 77-78 W																
T 27450	60550		57734			SYL	CORC					180	20500	2300	-5	95
Remark: 78-79 W																
T 27451	60550		57734			SYL	CORC					235	26000	4100	-5	110
Remark: 79-80 W																
T 27452	60549		57733			SYL	CORC					505	49200	11500	18	152
Remark: 80-81 W																
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

130330

PROJECT: ZEPHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27453	60549		57732			SYL	CORC					610	63900	11500	16	221
Remark: 81-82 W																
T 27454	60548		57731			SYL	CORC					385	35000	7800	120	36
Remark: 82-83 W																
T 27455	60548		57730			SYL	CORC					235	18900	1300	6	12
Remark: 83-84 W																
T 27456	60547		57729			SYL	CORC					45	16500	185	-5	5
Remark: 85-86 W																
T 27457	60546		57726			SYL	CORC					60	27000	300	-5	15
Remark: 87-88 W																
T 27458	60546		57724			SYL	CORC					20	11300	200	-5	7
Remark: 89-90 W																
T 27459	60544		57722			SYL	CORC					20	8400	50	-5	22
Remark: 91-92 W																
T 27460					STD		STD							-100	-5	-20
Remark:84																
T 27461	60621		57850			SYL	CORC					40	2250	115	-5	17
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27462	60622		57850			SYL	CORC					50	2200	110	-5	11
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27463	60623		57850			SYL	CORC					50	2600	125	-5	15
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27464	60624		57850			SYL	CORC					50	4800	135	-5	24
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27465	60625		57850			SYL	CORC					60	4250	170	-5	5
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27466	60626		57850			SYL	CORC					60	6150	140	-5	10
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27467	60627		57851			SYL	CORC					470	3200	65	-5	6
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27468	60628		57851			SYL	CORC					290	4200	85	-8	9
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
T 27469	60629		57851			SYL	CORC					1600	2050	200	57	57
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

139340

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27470	60630		57851			SYL	CORC						600	3200	145	340	388
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27471	60631		57851			SYL	CORC						720	2700	80	-5	11
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27472	60632		57851			SYL	CORC						615	15800	845	14	20
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27473	60633		57852			SYL	CORC						520	17100	650	45	64
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27474	60634		57852			SYL	CORC						160	10000	370	73	229
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27475	60635		57852			SYL	CORC						165	2650	95	-5	7
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27476	60636		57833			SYL	CORC						190	3400	75	-5	11
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27477	60637		57833			SYL	CORC						150	3100	85	-5	17
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27478	60638		57853			SYL	CORC						135	9500	170	-5	44
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27479	60639		57853			SYL	CORC						105	470	395	-5	12
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27480					STD	SYL	STD								130	-5	-20
Remark:B																	
T 27481	60642		57853			SYL	CORC						25	1100	65	-5	5
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27482	60644		57854			SYL	CORC						15	990	45	-5	6
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27483	60646		57854			SYL	CORC						20	2450	45	-5	4
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27484	60648		57854			SYL	CORC						25	3000	85	-5	3
Remark:COSTEAN #2 (ACROSS BALSTRUP, EAST OF SY003)																	
T 27485	62050	362076	59540	359422		SYL	CORC						25	200	25	-5	9
Remark:PEA SOUP CREEK SAMPLE #1																	
T 27486	62050	362075	59545	359428		SYL	CORC						110	305	60	-5	11
Remark:PEA SOUP CREEK SAMPLE #2																	
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

133341

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27487	62055	362081	59535	359417		SYL	CORC					25	175	110	-5	7
Remark:PEA SOUP CREEK SAMPLE #3																
T 27488	62055	362078	59625	359407		SYL	CORC					40	65	90	-5	17
Remark:PEA SOUP CREEK SAMPLE #4																
T 27489	60690		57960			SYL	CORC					155	215	110	-5	-3
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27490	60689		57760			SYL	CORC					260	300	110	-5	14
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27491	60688		57760			SYL	CORC					265	265	140	-5	7
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27492	60687		57760			SYL	CORC					165	310	300	-5	6
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27493	60686		57760			SYL	CORC					195	295	855	-5	11
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27494	60685		57760			SYL	CORC					170	115	710	-5	9
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27495	60684		57760			SYL	CORC					150	345	420	-5	14
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27496	60683		57760			SYL	CORC					210	230	215	-5	8
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27497	60682		57760			SYL	CORC					265	440	110	-10	7
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27498	60681		57760			SYL	CORC					310	535	100	-5	6
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27499	60680		57759			SYL	CORC					170	275	100	-5	8
Remark:COSTEAN #3 (ACROSS BALSTRUP ON LINE WITH SY003)																
T 27500					STD	SYL	STD							100	-5	-20
Remark:STD MAG																
T 27601	60679		57759			SYL	CORC					230	300	120	-10	5
T 27602	60678		57759			SYL	CORC					170	375	150	-5	8
Remark:COSTEAN #3 (CONTINUED)																
T 27603	60677		57759			SYL	CORC					125	160	105	-5	11
T 27604	60676		57759			SYL	CORC					150	100	110	-5	8
T 27605	60675		57759			SYL	CORC					150	100	95	-5	7
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27606	60673		57759			SYL	CORC						350	125	100	-5	8
T 27607	60671		57758			SYL	CORC						125	110	75	-5	10
T 27608	60699		57758			SYL	CORC						160	135	85	-5	10
T 27609	60667		57758			SYL	CORC						160	60	60	-5	8
T 27610	60665		57758			SYL	CORC						10	45	25	-5	7
T 27611	60661		57757			SYL	CORC						5	70	30	-5	6
T 27612	60656		57757			SYL	CORC						10	65	30	-5	9
T 27613	60651		57756			SYL	CORC						10	125	40	-5	6
T 27614	60646		57756			SYL	CORC						10	35	40	-5	11
T 27615	60641		57755			SYL	CORC						10	125	30	-5	5
T 27616	60594		57800			SYL	CORC						165	11800	370	-10	38
	Remark:COSTEAN #3 (CONTINUED)																
T 27617	60594		57801			SYL	CORC						195	1750	195	-5	30
T 27618	60595		57803			SYL	CORC						110	5600	135	8	6
T 27619	60596		57804			SYL	CORC						150	12800	290	18	8
T 27620					STD		STD								860	-5	-20
	Remark:STD FMC1																
T 27621	60597		57805			SYL	CORC						90	5850	115	11	5
	Remark:4-5 E																
T 27622	60597		57806			SYL	CORC						50	1150	65	7	11
	Remark:5-6 E																
T 27623	60598		57806			SYL	CORC						55	835	185	-5	4
	Remark:6-7 E																
T 27624	60598		57807			SYL	CORC						50	475	135	-5	8
	Remark:7-8 E																
T 27625	60599		57808			SYL	CORC						165	2850	465	-5	49
	Remark:8-9 E																
T 27626	60599		57809			SYL	CORC						25	2100	45	-5	47
	Remark:9-10 E																
T 27627	60600		57809			SYL	CORC						5	90	10	-5	9
	Remark:10-11 E																
T 27628	60600		57810			SYL	CORC						130	18800	360	-5	41
	Remark:11-12 E																
T 27629	60601		57811			SYL	CORC						115	3900	140	5	55
	Remark:12-13 E																
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27630	60601		57812			SYL	CORC					180	3450	240	5	25
Remark:13-14 E																
T 27631	60602		57813			SYL	CORC					475	4100	275	-5	16
Remark:14-15 E																
T 27632	60602		57814			SYL	CORC					460	48000	280	521	227
Remark:15-16 E																
T 27633	60603		57815			SYL	CORC					515	11200	265	34	225
Remark:16-17 E																
T 27634	60604		57815			SYL	CORC					440	10700	580	50	139
Remark:17-18 E																
T 27635	60604		57817			SYL	CORC					125	17000	560	260	1260
Remark:18-19 E																
T 27636	60604		57817			SYL	CORC					465	11000	350	220	185
Remark:19-20 E																
T 27637	60605		57818			SYL	CORC					390	18100	405	110	369
Remark:20-21 E																
T 27638	60605		57819			SYL	CORC					95	3100	60	7	12
Remark:21-22 E																
T 27639	60606		57820			SYL	CORC					75	4200	75	-5	17
Remark:22-23 E																
T 27640					STD		STD							110	-5	-20
Remark:STD B4																
T 27641	60606		57822			SYL	CORC					125	7900	70	10	25
Remark:23-24 E																
T 27642	60607		57821			SYL	CORC					105	14300	200	-5	50
Remark:24-25 E																
T 27643	60607		57822			SYL	CORC					150	4500	105	-5	60
Remark:25-26 E																
T 27644	60608		57823			SYL	CORC					265	5500	95	-5	29
Remark:26-27 E																
T 27645	60608		57824			SYL	CORC					150	5400	75	-5	20
Remark:27-28 E																
T 27646	60609		57825			SYL	CORC					210	6300	70	-5	27
Remark:28-29 E																

Laboratory:	ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :	101	101	101	ANS	401
Det. Limit:	5.000	5.000	5.000	1.000	3.000

13334

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN %	THS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27647	60610		57825			SYL	CORC						340	4500	85	-5	40
	Remark:29-30 E																
T 27648	60611		57826			SYL	CORC						420	4550	170	-5	23
	Remark:30-31 E																
T 27649	60611		57827			SYL	CORC						405	3900	55	25	74
	Remark:31-32 E																
T 27650	60611		57828			SYL	CORC						255	6500	75	15	137
	Remark:32-33 E																
T 27651	60611		57829			SYL	CORC						355	16100	560	190	401
	Remark:33-34 E																
T 27652	60612		57830			SYL	CORC						1100	41700	435	627	1610
	Remark:34-35 E																
T 27653	60612		57831			SYL	CORC						910	45000	385	1230	460
	Remark:35-36 E																
T 27654	60613		57832			SYL	CORC						145	10000	100	-5	23
	Remark:36-37 E																
T 27655	60613		57833			SYL	CORC						75	13500	255	-5	4
	Remark:37-38 E																
T 27656	60614		57834			SYL	CORC						50	11000	115	-5	6
	Remark:38-39 E																
T 27657	60615		57834			SYL	CORC						55	7800	95	-5	8
	Remark:39-40 E																
T 27658	60616		57835			SYL	CORC						50	7150	80	-5	12
	Remark:40-41 E																
T 27659	60616		57836			SYL	CORC						60	19900	305	-5	26
	Remark:41-42 E																
T 27660					STD		STD								120	-5	-20
	Remark:STD B3																
T 27661	60617		57837			SYL	CORC						50	8800	125	-5	26
	Remark:42-43 E																
T 27662	60617		57838			SYL	CORC						60	5900	190	-5	31
	Remark:43-44 E																
T 27663	60618		57839			SYL	CORC						75	12000	225	-5	11
	Remark:44-45 E																
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

130345

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 27664	60618		57840			SYL	CORC						60	10400	140	-5	8
Remark:45-46 E																	
T 27665	60619		57841			SYL	CORC						65	14900	175	-5	4
Remark:46-47 E																	
T 27666	60619		57841			SYL	CORC						70	6200	225	-5	5
Remark:47-48 E																	
T 27667	60620		57842			SYL	CORC						65	5550	85	-5	15
Remark:48-49 E																	
T 27668	60620		57843			SYL	CORC						55	7850	120	-5	9
Remark:C 50 49-50 E																	
T 27669	60621		57844			SYL	CORC						65	10900	150	-5	12
Remark:50-51 E																	
T 27670	60621		57845			SYL	CORC						55	5200	105	-5	9
Remark:51-52 E																	
T 27671	60622		57846			SYL	CORC						45	3700	110	-5	20
Remark:52-53 E END OF COSTEAN																	
T 27679	3370	363355	61143	361134		PTL	RD			WT			20	10400	3450	-5	15
Remark:MULLOCK: WEATHERED MASSIVE SULPHIDES.																	
T 27680					STD		STD										
Remark:STD B4																	
T 27681		360679		355685			RC	GABR		PYCB			120	200	435	-5	16
T 27682		360679		355685			RC	GABR			MG		20	115	400	-5	16
Remark:ALTERED. MAGNETITE RICH																	
T 27683		360699		355706				GABR			MG		15	340	1650	-5	7
Remark:ALTERED GABBRO BRECCIA.																	
T 27690	61145	361154	57100	357093		SYL	RC	SHAL		PY			87	347	500	-5	8
T 30701	60592		57800			SYL	CORC						10	145	10	3	19
Remark:0 - 1 W																	
T 30702	60585		57787			SYL	CORC						180	4900	215	1	146
Remark:14 - 15 W																	
T 30703	60584		57786			SYL	CORC						300	2450	215	2	22
Remark:15-16 W																	
T 30704	60584		57785			SYL	CORC						215	1800	170	1	15
Remark:16-17 W																	

Laboratory:	ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :	101	101	101	AAS	401
Det. Limit:	5.000	5.000	5.000	1.000	3.000

130346

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONI	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 30705	60583		57785			SYL	CORC					105	5050	245	1	4
	Remark:17-18 W															
T 30706	60582		57784			SYL	CORC					360	16100	835	1	97
	Remark:18-19 W															
T 30707	60581		57783			SYL	CORC					355	8700	980	4	258
	Remark:19-20 W															
T 30708	60581		57782			SYL	CORC					140	10600	595	2	67
	Remark:20-21 W															
T 30709	60580		57781			SYL	CORC					105	32700	2000	2	15
	Remark:21-22 W															
T 30710	60580		57780			SYL	CORC					145	18600	2050	1	56
	Remark:22-23 W															
T 30711	60579		57779			SYL	CORC					140	10300	4450	1	23
	Remark:23-24 W															
T 30712	60579		57778			SYL	CORC					145	13500	4100	2	35
	Remark:24-25 W															
T 30713	60578		57778			SYL	CORC					300	9700	5700	1	379
	Remark:25-26 W															
T 30714	60577		57776			SYL	CORC					150	41000	8300	6	110
	Remark:28-29 W															
T 30715	60576		57775			SYL	CORC					160	70000	7400	5	106
	Remark:29-30 W															
T 30716	60575		57774			SYL	CORC					95	48400	4450	7	81
	Remark:30-31 W															
T 30717	60575		57773			SYL	CORC					115	58000	15500	3	72
	Remark:31-32 W															
T 30718	60574		57773			SYL	CORC					155	55000	9600	3	258
	Remark:32-34 W															
T 30719	60573		57771			SYL	CORC					25	5100	120	5	6
	Remark:34-36 W															
T 30720																
	Remark:FML 0.23 g/t CARBONATE PYRITE															
T 30721	60572		57769			SYL	CORC					15	5250	255	18	-3
	Remark:36-38 W															
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

130347

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 30722	60571		57768			SYL	CORC					10	4050	50	12	5
	Remark:38-40 W															
T 30723	60570		57766			SYL	CORC					10	3400	110	12	5
	Remark:40-42 W															
T 30724	60569		57764			SYL	CORC					70	7400	2350	85	101
	Remark:42-44 W															
T 30725	60565		57758			SYL	CORC					35	9050	420	11	15
	Remark:49-50 W															
T 30726	60565		57757			SYL	CORC					50	6000	185	-0	7
	Remark:50-51 W															
T 30727	60564		57756			SYL	CORC					90	37500	365	1	30
	Remark:51-52 W															
T 30728	60564		57755			SYL	CORC					15	150	45	-0	6
	Remark:52-53 W															
T 30729	60563		57753			SYL	CORC					35	380	190	1	13
	Remark:53-54 W															
T 30730	60563		57754			SYL	CORC					15	90	25	-0	10
	Remark:54-55 W															
T 30731	60543		57753			SYL	CORC					10	170	20	1	19
	Remark:55-56 W															
T 30732	60560		57751			SYL	CORC					5	25	5	1	-3
	Remark:58-59 W															
T 30733	60560		57750			SYL	CORC					5	30	5	1	3
	Remark:59-60 W															
T 30734	60559		57749			SYL	CORC					5	115	55	1	8
	Remark:60-62 W															
T 30735	60558		57747			SYL	CORC					35	500	285	1	20
	Remark:62-64 W															
T 30736	60557		57745			SYL	CORC					5	70	10	-0	5
	Remark:64-66 W															
T 30737	60556		57744			SYL	CORC					5	50	10	-0	7
	Remark:66-68 W															
T 30738	60555		57742			SYL	CORC					5	90	10	1	-3
	Remark:68-70 W															
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

13034B

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 30739	60554		57740			SYL	CORC					5	35	5	1	-3
	Remark:70-72 W															
T 30740																
	Remark:B3 0.05 g/T HC Q+Z CHLORITE															
T 30741	60553		57739			SYL	CORC					5	40	10	-0	-3
	Remark:72-74 W															
T 30742	60553		57738			SYL	CORC					5	130	10	1	3
	Remark:74-75 W															
T 30743	60645		57830			SYL	CORC					80	920	90	30	30
	Remark:OLD TIMERS COSTEAN GOING NW(TOWARD SY003)FROM COSTEAN #1(EXT) (PYRITE)															
T 35401						SYL	CORC					25	480	170	6	16
T 35402						SYL	CORC					10	330	30	5	-3
T 35403						SYL	CORC					10	145	20	2	-3
T 35404						SYL	CORC					5	30	15	1	-3
T 35405						SYL	CORC					10	40	20	13	-3
T 35406						SYL	CORC					10	215	35	3	7
T 35407						SYL	CORC					35	14200	380	10	-3
T 35408						SYL	CORC					30	3650	265	10	3
T 35409						SYL	CORC					30	4600	665	17	-3
T 35410						SYL	CORC					35	3800	930	13	-3
T 35411						SYL	CORC					10	135	50	12	28
T 35412						SYL	CORC					20	480	170	14	38
T 35413						SYL	CORC					105	9150	3500	124	31
T 35414						SYL	CORC					115	3450	1700	7	50
T 35415						SYL	CORC					125	14300	1750	8	70
T 35416						SYL	CORC					145	22900	2450	10	210
T 35417						SYL	CORC					60	7400	530	7	12
T 35418						SYL	CORC					45	345	360	1	15
T 35419						SYL	CORC					25	105	55	-0	10
T 35420					STO											
	Remark:STO B3 0.05 g/t															
T 35421						SYL	CORC					25	180	65	0	4
T 35422						SYL	CORC					40	270	100	1	3
T 35423						SYL	CORC					80	5200	695	16	51
Laboratory:												ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :												101	101	101	AAS	401
Det. Limit:												5.000	5.000	5.000	1.000	3.000

130340

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 35424						SYL	CORC						30	220	165	-0	6
T 35425						SYL	CORC						75	13100	965	7	8
T 35426						SYL	CORC						330	27000	800	6	72
T 35427						SYL	CORC						25	1150	115	1	-3
T 35428						SYL	CORC						25	470	70	-0	-3
T 35429						SYL	CORC						20	5000	55	2	4
T 35430						SYL	CORC						20	9400	75	0	5
T 35431						SYL	CORC						20	7400	50	0	5
T 35432						SYL	CORC						45	11400	355	14	6
T 35433						SYL	CORC						45	7500	155	4	-3
T 35434						SYL	CORC						20	3350	65	1	6
T 35435						SYL	CORC						30	7100	240	3	14
T 35436						SYL	CORC						40	5050	245	4	-3
T 35437						SYL	CORC						30	4400	135	3	11
T 35438						SYL	CORC						25	9300	260	3	8
T 35439						SYL	CORC						30	9150	225	5	9
T 35440					STD												
Remark:STD 0.05 g/t																	
T 35441						SYL	CORC						160	13500	1800	2	40
T 35442						SYL	CORC						75	20200	1550	4	7
T 35443						SYL	CORC						60	27400	940	3	9
T 35444						SYL	CORC						30	11400	215	3	4
T 35445						SYL	CORC						65	13500	1800	10	17
T 35446						SYL	CORC						85	13400	2650	5	10
T 35447						SYL	CORC						55	3650	3150	5	3
T 35448						SYL	CORC						435	2250	4950	20	49
T 35449						SYL	CORC						1200	21900	12300	10	671
T 35450						SYL	CORC						30	9300	680	5	6
T 35451						SYL	CORC						45	17500	1350	3	7
T 35452						SYL	CORC						25	13200	635	4	-3
T 35453						SYL	CORC						20	8950	185	6	-3
T 35454						SYL	CORC						20	10200	350	2	9
T 35455						SYL	CORC						20	10000	310	1	7
T 35456						SYL	CORC						40	22400	3500	1	14
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. limit:													5.000	5.000	5.000	1.000	3.000

13330

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 35457						SYL	CORC						55	15000	3500	0	26
T 35458						SYL	CORC						25	9700	2200	2	11
T 35459						SYL	CORC						40	5850	1600	3	32
T 35460					STD												
Remark:STD B4 0.25 g/t																	
T 35461						SYL	CORC						45	18300	12100	0	6
T 35462						SYL	CORC						100	36400	29100	0	15
T 35463						SYL	CORC						115	51500	23100	1	25
T 35464						SYL	CORC						150	59100	26900	1	89
T 35465						SYL	CORC						205	15500	1500	0	178
T 35466						SYL	CORC						25	460	85	0	48
T 35467						SYL	CORC						50	1300	150	0	129
T 35468						SYL	CORC						35	1800	80	1	40
T 35469						SYL	CORC						25	2250	110	0	11
T 35470						SYL	CORC						10	285	10	0	-3
T 35471						SYL	CORC						10	45	10	-0	-3
T 35472						SYL	CORC						10	195	20	0	-3
T 35473						SYL	CORC						15	270	35	2	4
T 35474						SYL	CORC						10	80	20	1	-3
T 35475						SYL	CORC						10	45	10	1	-3
T 35476						SYL	CORC						10	20	5	3	-3
T 35477						SYL	CORC						10	100	50	3	29
T 35478						SYL	CORC						5	40	10	2	7
T 35479						SYL	CORC						5	55	20	3	8
T 35480					STD												
Remark:STD B20 1.77 g/t																	
T 35481						SYL	CORC						10	90	40	3	11
T 35482						SYL	CORC						20	310	120	5	13
T 35483						SYL	CORC						115	830	1500	37	20
T 35484						SYL	CORC						115	545	690	3	55
T 35485						SYL	CORC						160	7500	1250	4	32
T 35486						SYL	CORC						25	545	100	1	3
T 35487						SYL	CORC						40	1300	575	2	16
T 35488						SYL	CORC						50	1150	570	1	28
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

13335

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	OCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 35489						SYL	CORC						40	2500	260	2	25
T 35490						SYL	CORC						55	44000	905	1	3
T 35491						SYL	CORC						20	19000	150	1	12
T 35492						SYL	CORC						30	31100	500	2	8
T 35493						SYL	CORC						30	16900	190	4	11
T 35494						SYL	CORC						55	30900	4200	2	21
T 35495						SYL	CORC						25	15000	1650	3	24
T 35496						SYL	CORC						30	25000	870	3	-3
T 35497						SYL	CORC						55	25100	3000	5	16
T 35498						SYL	CORC						85	35300	19200	1	37
T 35499						SYL	CORC						65	35900	1250	0	7
T 35500					STD												
Remark:STD 84 0.25 g/t																	
T 35501						SYL	CORC						225	150	80	2	5
Remark:CONTINUED FROM T36699																	
T 35502						SYL	CORC						55	95	30	4	7
T 35503						SYL	CORC						180	70	50	6	6
T 35504						SYL	CORC						90	70	35	7	6
T 35505						SYL	CORC						170	100	45	4	4
T 35506						SYL	CORC						260	120	60	3	4
T 35507						SYL	CORC						200	245	40	17	7
T 35508						SYL	CORC						250	150	45	1	7
T 35509						SYL	CORC						230	170	50	2	11
T 35510						SYL	CORC						125	145	45	1	9
T 35511						SYL	CORC						145	150	75	1	-3
T 35512						SYL	CORC						60	110	50	1	4
T 35513						SYL	CORC						100	375	110	1	8
T 35514						SYL	CORC						90	3000	135	0	9
T 35515						SYL	CORC						125	800	255	1	29
T 35516						SYL	CORC						245	2000	935	1	83
T 35517						SYL	CORC						165	2050	400	1	96
T 35518						SYL	CORC						255	2400	250	0	63
T 35519						SYL	CORC						70	750	105	1	59
T 35520					STD												
Remark:STD 820 1.77 g/t																	
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

13 0 0 0 0

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT metres	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 35521						SYL	CORC						50	1000	60	1	33
T 35522						SYL	CORC						45	605	40	1	12
T 35523						SYL	CORC						20	215	15	0	5
T 35524						SYL	CORC						15	225	10	0	15
T 35525						SYL	CORC						50	300	75	1	44
T 35526						SYL	CORC						30	550	50	1	20
T 35527						SYL	CORC						35	1200	45	1	19
T 35528						SYL	CORC						40	950	35	-0	24
T 35529						SYL	CORC						45	1300	50	1	88
T 35530						SYL	CORC						45	780	30	0	38
T 35531						SYL	CORC						40	1950	35	0	29
T 35532						SYL	CORC						75	1900	40	1	31
T 35533						SYL	CORC						15	580	30	1	28
T 35534						SYL	CORC						30	240	130	1	9
T 35535						SYL	CORC						30	195	205	1	3
T 35536						SYL	CORC						25	170	100	1	5
T 35537						SYL	CORC						20	60	40	-0	10
T 35538						SYL	CORC						15	80	25	-0	7
T 35539						SYL	CORC						10	125	35	1	4
T 35540					STD												
Remark:STD B3 0.05 g/t																	
T 35541						SYL	CORC						10	200	20	0	11
T 35542						SYL	CORC						10	90	15	1	10
T 35543						SYL	CORC						50	1950	105	2	16
Remark:MINERALISED QUARTZ ALONG FLOOR OF COSTEAN.																	
T 35544						SYL	CORC						50	2250	2200	2	11
T 35545						SYL	CORC						30	4400	310	5	6
T 35546						SYL	CORC						80	7150	355	3	4
T 35547						SYL	CORC						130	13100	875	3	-3
T 35548						SYL	CORC						85	2050	160	6	5
T 35549						SYL	CORC						165	720	340	11	5
T 35550						SYL	CORC						290	2900	260	8	8
T 35551						SYL	CORC						350	6050	525	4	14
T 35552						SYL	CORC						75	6350	835	6	14
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 35553						SYL	CORC						335	34100	1300	9	12
T 35554						SYL	CORC						130	7200	3600	4	11
T 35555						SYL	CORC						115	6700	3350	4	6
T 35556						SYL	CORC						115	1900	1500	6	-3
T 35557						SYL	CORC						205	5450	1950	19	-3
T 35558						SYL	CORC						120	5500	585	7	22
T 35559						SYL	CORC						25	85	30	1	3
T 35560					STD												
Remark:STD 84 0.25 g/t																	
T 35561						SYL	CORC						60	340	20	3	6
T 35562						SYL	CORC						205	635	130	8	-3
T 35563						SYL	CORC						150	365	65	1	4
T 35564						SYL	CORC						160	220	45	0	10
T 35565						SYL	CORC						100	400	100	1	4
T 35566						SYL	CORC						140	1250	240	1	-3
T 35567						SYL	CORC						150	85	260	0	-3
T 36601						SYL	CORC						55	46500	2800	0	18
T 36602						SYL	CORC						35	9650	290	3	19
T 36603						SYL	CORC						35	35300	670	1	28
T 36604						SYL	CORC						70	52800	1150	9	26
T 36605						SYL	CORC						95	35100	915	109	63
T 36606						SYL	CORC						20	6600	80	2	53
T 36607						SYL	CORC						95	6000	975	36	49
T 36608						SYL	CORC						130	40400	3800	6	50
T 36609						SYL	CORC						240	53400	3700	64	43
T 36610						SYL	CORC						185	55900	3350	16	36
T 36611						SYL	CORC						75	85600	4000	3	19
T 36612						SYL	CORC						125	59000	5950	2	23
T 36613						SYL	CORC						470	60300	3500	109	238
T 36614						SYL	CORC						90	25500	1700	9	19
T 36615						SYL	CORC						45	2400	375	3	32
T 36616						SYL	CORC						90	7150	330	1	16
T 36617						SYL	CORC						160	4650	775	2	61
T 36618						SYL	CORC						160	15400	1650	5	64
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

13335

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 36619						SYL	CORC						205	3400	1550	2	61
T 36620					STD												
Remark:STD B4 0.25 g/t																	
T 36621						SYL	CORC						95	4500	775	3	56
T 36622						SYL	CORC						185	28000	2950	3	29
T 36623						SYL	CORC						90	16300	1950	3	21
T 36624						SYL	CORC						170	4100	2300	0	78
T 36625						SYL	CORC						345	8050	1450	3	66
T 36626						SYL	CORC						295	9300	395	1	27
T 36627						SYL	CORC						85	6350	150	2	21
T 36628						SYL	CORC						40	1250	100	2	60
T 36629						SYL	CORC						145	13200	1250	6	52
T 36630						SYL	CORC						165	3950	1450	1	131
T 36631						SYL	CORC						85	470	770	0	19
T 36632						SYL	CORC						15	125	155	0	20
T 36633						SYL	CORC						5	75	35	1	14
T 36634						SYL	CORC						5	120	40	1	20
T 36635						SYL	CORC						5	165	40	1	13
T 36636						SYL	CORC						30	1950	515	28	26
T 36637						SYL	CORC						15	325	85	3	23
T 36638						SYL	CORC						25	1200	255	2	21
T 36639						SYL	CORC						30	22900	435	1	3
T 36640					STD												
Remark:STD B3 0.05 g/t																	
T 36641						SYL	CORC						40	5300	660	1	13
T 36642						SYL	CORC						20	850	185	1	18
T 36643						SYL	CORC						10	240	70	2	15
T 36644						SYL	CORC						175	26300	2600	3	192
T 36645						SYL	CORC						120	26400	1400	2	79
T 36646						SYL	CORC						130	48000	2400	2	57
T 36647						SYL	CORC						85	24200	1850	8	95
T 36648						SYL	CORC						20	2150	240	4	28
T 36649						SYL	CORC						15	180	160	1	15
T 36650						SYL	CORC						30	18300	690	4	30
Laboratory:													ANALAB	ANALAB	ANALAB	MEN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

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PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 36651						SYL	CORC						40	25500	1400	1	15
T 36652						SYL	CORC						25	12000	550	1	11
T 36653						SYL	CORC						40	13800	1600	1	16
T 36654						SYL	CORC						50	13600	1750	2	12
T 36655						SYL	CORC						30	12300	540	2	30
T 36656						SYL	CORC						25	13500	350	3	13
T 36657						SYL	CORC						90	16900	575	6	45
T 36658						SYL	CORC						75	24100	430	4	93
T 36659						SYL	CORC						75	9250	655	5	78
T 36660					STD												
Remark:STD B20 1.77 g/t																	
T 36661						SYL	CORC						85	23600	2550	2	42
T 36662						SYL	CORC						95	58000	7250	13	-3
T 36663						SYL	CORC						155	11800	1550	63	6
T 36664						SYL	CORC						60	20500	2100	408	8
T 36665						SYL	CORC						45	1150	275	36	7
T 36666						SYL	CORC						50	1950	320	18	15
T 36667						SYL	CORC						75	620	370	10	15
T 36668						SYL	CORC						100	1500	1150	13	86
T 36669						SYL	CORC						280	8200	2500	15	60
T 36670						SYL	CORC						180	2600	2050	8	48
T 36671						SYL	CORC						130	1000	1400	17	48
T 36672						SYL	CORC						260	945	1950	56	213
T 36673						SYL	CORC						80	320	180	12	13
T 36674						SYL	CORC						145	3600	1450	1	11
T 36675						SYL	CORC						470	6900	875	-0	34
T 36676						SYL	CORC						235	2550	345	1	28
T 36677						SYL	CORC						625	10400	2600	0	15
T 36678						SYL	CORC						60	350	140	0	8
T 36679						SYL	CORC						20	290	75	-0	-3
T 36680					STD												
Remark:STD B3 0.05 g/t																	
T 36681						SYL	CORC						30	275	260	0	-3
T 36682						SYL	CORC						20	285	195	2	32
Laboratory:													ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :													101	101	101	AAS	401
Det. Limit:													5.000	5.000	5.000	1.000	3.000

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130356

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN ROCK CHIP SAMPLES

SAMPLE NUMBER	NORTH metres	TNORTH metres	EAST metres	TEAST metres	QCONT	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS	CU PPM	PB PPM	ZN PPM	AG PPM	SN PPM
T 36683						SYL	CORC						10	165	70	5	6
T 36684						SYL	CORC						50	320	120	10	4
T 36685						SYL	CORC						25	1650	115	2	-3
T 36686						SYL	CORC						20	270	120	-0	6
T 36687						SYL	CORC						30	480	105	1	3
T 36688						SYL	CORC						30	190	210	1	4
T 36689						SYL	CORC						295	3000	150	2	38
T 36690						SYL	CORC						30	230	70	2	5
T 36691						SYL	CORC						65	220	30	0	3
T 36692						SYL	CORC						45	345	25	1	24
T 36693						SYL	CORC						60	200	45	0	4
T 36694						SYL	CORC						115	700	40	2	5
T 36695						SYL	CORC						195	3050	70	1	-3
T 36696						SYL	CORC						240	3150	45	2	5
T 36697						SYL	CORC						170	1500	85	1	11
T 36698						SYL	CORC						110	135	90	2	7
T 36699						SYL	CORC						135	140	55	1	5
T 36700					STD												

Remark:STD B4 0.25 g/t

Laboratory:	ANALAB	ANALAB	ANALAB	REN	ANALAB
Method :	101	101	101	AA[illegible]	401
Det. Limit:	5.000	5.000	5.000	1.000	3.000

13035

NEUTRON ACTIVATION ANALYSIS

TRON ACTIVATION ANALYSIS REPORT

Date: 28-08-90

RGC TASMANIA SAMPLE Nos: T11870-T11900, T26219-T26225
BECQUEREL JOB # 094

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
- ELEVATED DETECTION LIMITS DUE TO HIGH As AND Zn.

ELEMENT	DL	# 11870	# 11871	# 11872	# 11873	# 11874	# 11875	# 11876	# 11878	# 11879	# 11880
ANTIMONY	.2	1.90	47.20	24.40	35.50	16.00	19.00	16.00	102.00	115.00	-.20
ARSENIC	2.0	35.00	120.00	1220.00	1460.00	2170.00	2300.00	1320.00	2140.00	2710.00	3.10
BARIUM	100.0	530.0	-100.0	-100.0	-100.0	-100.0	390.0	-100.0	150.0	1300.0	670.0
BROMINE	2.0	-2.00	4.70	8.40	3.30	5.00	5.40	7.10	6.30	7.60	-2.00
CERIUM	2.0	55.00	-2.00	-2.00	5.60	32.00	28.00	32.00	-2.00	12.00	87.00
CAESIUM	1.0	15.00	-1.00	-1.00	1.10	1.20	1.50	-1.00	-1.00	-1.00	11.00
CHROMIUM	5.0	370.0	7.3	25.0	21.0	31.0	34.0	50.0	14.0	14.0	360.0
COBALT	1.0	20.00	-1.00	1.60	-1.00	11.00	13.00	8.80	3.80	9.20	33.00
EUROPIUM	.5	.84	-.50	-.50	-.50	-.50	.77	.80	-.50	-.50	1.30
GOLD, ppb	5.0	68.0	-5.0	25.0	68.0	15.0	14.0	10.0	-5.0	-5.0	260.0
HAFNIUM	1.0	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.60	-1.00	-1.00	8.90
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
[illegible], %	.05	3.900	12.500	23.500	16.900	41.500	37.800	27.400	36.300	14.500	5.750
LANTHANUM	.5	30.00	.54	2.40	3.20	3.90	7.10	5.70	2.10	4.40	47.00
LUTETIUM	.2	.38	-.20	-.20	-.20	-.20	-.20	.21	-.20	.20	.58
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	14.0	17.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.400	-.200	-.200	-.200	-.200	.200	-.200	-.200	-.200	1.300
RUBIDIUM	20.0	160.0	-20.0	55.0	41.0	84.0	110.0	67.0	-20.0	33.0	100.0
SAMARIUM	.20	6.20	-.20	.41	.44	1.80	2.50	2.60	1.30	1.40	9.20
SCANDIUM	.10	9.30	.17	7.90	4.40	9.30	19.30	11.30	1.70	4.00	13.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	12.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	34.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.50	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	3.10
THORIUM	.5	11.00	-.50	-.50	1.00	.62	4.20	5.50	.76	.79	18.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	4.30	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	6.70
URANIUM	2.0	3.10	-2.00	-2.00	-2.00	-2.00	-2.00	3.10	-2.00	-2.00	-2.00
YTTERBIUM	.5	1.70	-.50	-.50	-.50	-.50	.70	.88	-.50	-.50	3.00
ZINC	100.0	200.0	-100.0	200.0	350.0	2300.0	1600.0	950.0	710.0	1500.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES
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130359

NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 094

ELEMENT	DL	# 11881	# 11882	# 11883	# 11884	# 11885	# 11886	# 11887	# 11888	# 11889	# 11890
ANTIMONY	.2	127.00	34.20	25.30	20.00	19.00	36.70	49.90	51.90	47.70	-.20
ARSENIC	2.0	6720.00	700.00	2910.00	8610.00	1310.00	722.00	581.00	574.00	74.00	4.00
BARIUM	100.0	7600.0	5200.0	8500.0	280.0	200.0	-100.0	-100.0	-100.0	-390.0	620.0
BROMINE	2.0	11.00	5.60	7.10	17.00	5.40	18.00	4.90	2.90	-2.00	-2.00
CERIUM	2.0	64.00	120.00	57.00	60.00	-2.00	30.00	4.40	-2.00	-5.80	85.00
CAESIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-3.80	10.00
CHROMIUM	5.0	18.0	15.0	23.0	-5.0	21.0	48.0	-5.0	26.0	30.0	350.0
COBALT	1.0	107.00	77.00	19.00	6.40	1.10	22.00	-1.00	5.40	-1.00	33.00
EUROPIUM	.5	2.30	3.90	2.80	1.80	-.50	-.50	-.50	-.50	-.50	1.00
GOLD, ppb	5.0	-12.0	-5.0	150.0	-14.0	43.0	-5.0	11.0	18.0	-10.0	290.0
HAFNIUM	1.0	-1.00	1.10	-1.00	-1.00	-1.00	3.00	-1.00	-1.00	-1.00	8.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-44.0	-20.0
IRON, %	.05	16.700	23.600	33.600	46.000	17.400	13.800	45.200	27.200	5.770	5.590
LANTHANUM	.5	23.00	34.00	39.00	9.20	1.20	17.00	56.70	.57	-.50	45.00
LUTETIUM	.2	.35	.48	.27	.24	-.20	.20	-.20	-.20	-.20	.56
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	29.0	-5.0	11.0	-5.0	-5.0	-10.0	-5.0
POTASSIUM, %	.2	-.200	.520	-.200	-.410	-.200	-.200	-.200	-.200	-.410	1.600
RUBIDIUM	20.0	30.0	38.0	79.0	110.0	49.0	23.0	-20.0	-20.0	-20.0	110.0
SAMARIUM	.20	5.20	11.00	8.80	6.40	.41	1.70	3.80	.24	-.20	8.80
SCANDIUM	.10	5.90	5.70	1.70	6.00	1.10	4.80	5.10	.52	-.22	13.00
SELENIUM	5.0	-11.0	-5.0	-5.0	-13.0	-5.0	6.5	33.0	-5.0	-16.0	-5.0
SILVER	5.0	53.00	160.00	-5.00	-11.00	-5.00	23.00	11.00	13.00	-10.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.20
THORIUM	.5	1.30	1.60	-.50	1.30	-.50	7.50	.78	-.50	-1.20	18.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-1000.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	5.20	-2.00	-2.00	-7.60	7.80
URANIUM	2.0	-4.40	-2.00	-2.00	-5.00	-2.00	2.40	-2.00	-2.00	-6.10	4.10
YTTERBIUM	.5	.50	2.60	1.10	-.50	-.50	.84	-.50	-.50	-.50	2.90
ZINC	100.0	1900.0	1900.0	3000.0	870.0	170.0	190.0	100.0	24700.0	433000.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

BQ BECQUEREL LABORATORIES

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 094

ELEMENT	DL	# 11891	# 11892	# 11893	# 11894	# 11895	# 11896	# 11897	# 11898	# 11899	# 11900
ANTIMONY	.2	30.90	18.00	37.50	103.00	346.00	42.60	23.50	25.40	4.90	210.00
ARSENIC	2.0	2380.00	6640.00	1530.00	1410.00	5060.00	809.00	1600.00	1290.00	322.00	325.00
BARIUM	100.0	6000.0	200.0	2700.0	-100.0	380.0	26900.0	340.0	31800.0	640.0	890.0
BROMINE	2.0	4.70	14.00	5.90	5.90	10.00	3.40	3.30	4.20	2.60	-2.00
CERIUM	2.0	13.00	59.00	160.00	-2.00	15.00	76.00	5.40	22.00	9.30	15.00
CAESIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	4.50	-1.00	-1.00
CHROMIUM	5.0	10.0	120.0	20.0	31.0	-5.0	39.0	190.0	17.0	83.0	200.0
COBALT	1.0	1.10	28.00	149.00	-1.00	7.90	233.00	21.00	142.00	17.00	19.00
EUROPIUM	.5	.84	1.90	.88	-.50	-.50	2.20	.70	4.40	.68	-.50
GOLD, ppb	5.0	-5.0	34.0	90.0	100.0	140.0	-5.0	160.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	21.300	26.600	26.800	29.500	36.000	10.500	13.400	13.700	35.100	26.600
LANTHANUM	.5	6.50	8.20	15.00	.82	2.20	29.00	3.80	67.40	1.10	1.70
LUTETIUM	.2	-.20	.28	-.20	-.20	-.20	-.20	-.20	.48	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	-.200	-.200	-.200	.460	-.200	.720	-.200	.260
RUBIDIUM	20.0	32.0	52.0	47.0	64.0	82.0	-20.0	28.0	34.0	-20.0	58.0
SAMARIUM	.20	4.20	7.10	3.70	.67	1.50	5.00	2.10	10.00	2.30	.62
SCANDIUM	.10	.71	6.40	10.00	.25	3.50	.75	.37	1.40	1.10	.43
SELENIUM	5.0	-5.0	-10.0	10.0	-5.0	-11.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	93.00	-5.00	17.00	-5.00	35.00	-5.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	1.00	-.50	4.30	-.50	1.50	-.50	-.50	1.30	-.50	-.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-4.20	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-4.10	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	-.50	-.50	.85	.53	-.50	.81	-.50	2.30	-.50	-.50
ZINC	100.0	690.0	990.0	440.0	780.0	2700.0	3200.0	850.0	9500.0	660.0	750.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 094

ELEMENT	DL	# 26219	# 26220	# 26221	# 26222	# 26223	# 26224	# 26225	# 11876x2	# 11897x2
ANTIMONY	.2	35.90	.31	131.00	39.20	84.20	417.00	310.00	17.00	26.60
ARSENIC	2.0	437.00	3.10	816.00	678.00	2380.00	1850.00	1460.00	1370.00	1610.00
BARIUM	100.0	-100.0	440.0	-100.0	-100.0	1000.0	1300.0	370.0	-100.0	280.0
BROMINE	2.0	3.30	-2.00	-2.00	-2.00	8.00	5.50	3.80	8.40	3.00
CERIUM	2.0	38.00	68.00	24.00	2.10	44.00	94.00	42.00	27.00	2.50
CAESIUM	1.0	-1.00	18.00	1.10	1.20	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	42.0	460.0	26.0	42.0	14.0	-5.0	-5.0	50.0	170.0
COBALT	1.0	2.30	24.00	5.30	1.30	8.30	109.00	9.00	9.50	19.00
EUROPIUM	.5	1.10	.85	.91	-.50	.79	1.20	.51	.76	.67
GOLD, ppb	5.0	110.0	140.0	15.0	19.0	-5.0	-11.0	50.0	16.0	150.0
HAFNIUM	1.0	1.00	8.70	3.30	-1.00	1.10	-1.00	-1.00	1.80	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	5.640	4.300	12.000	17.900	39.600	34.000	36.500	28.300	13.300
LANTHANUM	.5	15.00	37.00	13.00	3.90	4.80	13.00	2.50	5.80	3.60
LUTETIUM	.2	-.20	.44	.25	-.20	-.20	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	6.5	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	1.800	.220	.300	-.200	.930	.480	-.200	-.200
RUBIDIUM	20.0	-20.0	220.0	-20.0	-20.0	72.0	61.0	44.0	-20.0	-20.0
SAMARIUM	.20	4.20	7.70	2.70	.81	2.00	5.50	2.00	2.60	2.10
SCANDIUM	.10	1.10	11.80	4.90	1.00	3.20	4.80	6.50	11.40	.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	18.00	-5.00	130.00	8.00	18.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	3.30	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	.84	15.00	5.20	1.10	.94	1.50	-.50	5.50	-.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	4.10	5.20	13.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	2.70	-2.00	-2.00	-2.00	2.70	-2.00	-2.00	-2.00
YTTERBIUM	.5	-.50	2.10	1.10	-.50	-.50	1.00	-.50	.89	-.50
ZINC	100.0	150.0	130.0	25100.0	1100.0	2800.0	2000.0	2100.0	970.0	820.0
ZIRCONIUM	500.0	-500.0	530.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES
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130362

NEUTRON ACTIVATION ANALYSIS

DATE: 15 OCT 1990
FILE No.:
INITIALS:

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 11-10-90

RGC TASMANIA SAMPLE Nos: T27401 - T27405
BECQUEREL JOB # 154

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
- ELEVATED DETECTION LIMITS FOR Mo DUE TO HIGH Fe AND URANIUM FISSION.

ELEMENT	DL	# 27401	# 27402	# 27403	# 27404	# 27405	# 27401x2
ANTIMONY	.2	6.50	2.30	4.30	33.70	264.00	6.50
ARSENIC	2.0	762.00	21.00	11.00	593.00	755.00	762.00
BARIUM	100.0	-100.0	180.0	290.0	310.0	360.0	-100.0
BROMINE	2.0	-2.00	2.60	2.80	5.20	3.60	2.40
CERIUM	2.0	7.80	54.00	45.00	19.00	11.00	7.50
CAESIUM	1.0	1.00	5.40	16.00	15.00	-1.00	-1.00
CHROMIUM	5.0	10.0	55.0	11.0	1890.0	22.0	-5.0
COBALT	1.0	14.00	-1.00	5.10	12.00	10.00	13.00
EUROPIUM	.5	1.20	.57	.91	.94	2.00	1.30
GOLD, ppb	5.0	48.0	-5.0	-5.0	-5.0	-5.0	40.0
HAFNIUM	1.0	-1.00	8.00	2.90	-1.00	-1.00	-1.00
[illegible]DIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	34.200	1.600	.450	2.800	39.800	34.200
LANTHANUM	.5	3.80	26.00	19.00	11.00	6.50	3.70
LUTETIUM	.2	-.20	.39	1.50	.26	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-34.0	-5.0	-10.0	-5.0
POTASSIUM, %	.2	-.200	1.000	2.000	1.700	.450	-.200
RUBIDIUM	20.0	62.0	75.0	270.0	180.0	89.0	74.0
SAMARIUM	.20	1.50	4.80	7.10	3.10	3.20	1.50
SCANDIUM	.10	.88	3.70	12.90	26.00	2.00	.85
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	-1.00	13.00	-1.00	-1.00	-1.00
THORIUM	.5	-.50	6.60	20.00	1.70	1.10	.65
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	4.20	3.30	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	17.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	-.50	1.90	7.50	.91	.66	-.50
ZINC	100.0	1200.0	120.0	120.0	460.0	3600.0	1100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 01-11-90

TASMANIA
BECQUEREL JOB # 171

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.

ELEMENT	DL	# 11863	# 11864	# 11865	# 11866	# 11867	# 11868	# 27406	# 27407	# 27408	# 27409
ANTIMONY	.2	8.30	8.20	13.00	23.60	19.00	6.90	13.00	6.30	929.00	662.00
ARSENIC	2.0	180.00	120.00	224.00	361.00	110.00	45.00	38.00	11.00	458.00	2060.00
BARIUM	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	640.0	620.0	580.0	-220.0	-220.0
BROMINE	2.0	-2.00	-2.00	-2.00	4.30	-2.00	-2.00	8.90	7.00	7.30	10.00
CERIUM	2.0	3.60	-2.00	-2.00	-2.00	-2.00	110.00	37.00	43.00	5.50	23.00
CAESIUM	1.0	1.30	-1.00	1.00	2.50	-1.00	15.00	13.00	7.70	1.80	5.30
CHROMIUM	5.0	33.0	6.5	12.0	11.0	12.0	87.0	400.0	420.0	2780.0	89.0
COBALT	1.0	5.30	4.70	5.30	3.50	3.80	18.00	76.00	11.00	63.00	205.00
EUROPIUM	.5	.50	-.50	-.50	-.50	-.50	1.40	1.20	1.30	1.70	4.20
GOLD, ppb	5.0	5.7	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-12.0	-12.0
HAFNIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	7.30	5.10	7.10	-1.00	1.10
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	26.100	29.000	25.500	48.500	22.800	11.500	14.600	12.100	35.900	30.800
LANTHANUM	.5	2.10	.68	.63	1.10	.82	55.40	12.00	30.00	4.80	15.00
LUTETIUM	.2	-.20	-.20	-.20	-.20	-.20	.65	.53	.60	.50	.54
MOLYBDENUM	5.0	-5.0	-5.0	-6.3	-5.0	-8.4	-5.0	-5.0	-5.0	-11.0	-10.0
POTASSIUM, %	.2	-.200	-.200	-.200	-.200	-.200	2.700	1.800	1.700	1.900	1.800
RUBIDIUM	20.0	45.0	67.0	48.0	-20.0	49.0	170.0	180.0	140.0	130.0	110.0
SAMARIUM	.20	1.60	.55	.56	.73	.58	9.30	4.00	5.80	2.80	5.20
SCANDIUM	.10	2.20	.67	.65	2.20	1.20	11.70	56.60	29.40	17.10	20.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-11.0	-11.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-10.00	-10.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.30	2.50	1.60	-1.00
THORIUM	.5	-.50	-.50	-.50	1.10	.82	14.00	6.70	9.30	-.50	1.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-1200.0	-1200.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.00	-5.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.40	2.50	-4.00	-2.00
YTTERBIUM	.5	-.50	-.50	-.50	-.50	-.50	3.40	2.90	3.30	.59	1.30
ZINC	100.0	130.0	130.0	1800.0	180.0	230.0	260.0	860.0	250.0	3800.0	3600.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27410	# 27411	# 27412	# 27413	# 27414	# 27415	# 27416	# 27417	# 27418	# 27419
ANTIMONY	.2	14.00	2000.00	17.00	80.60	4.50	6.40	7.00	19.00	2.80	2.40
ARSENIC	2.0	17.00	3460.00	81.00	2110.00	65.00	110.00	256.00	405.00	58.00	1630.00
BARIUM	100.0	590.0	-250.0	-100.0	230.0	350.0	370.0	-100.0	1600.0	3100.0	-100.0
BROMINE	2.0	6.00	17.00	5.10	6.80	-2.00	4.70	10.00	12.00	6.00	13.00
CERIUM	2.0	31.00	21.00	86.00	-2.00	8.30	100.00	7.40	-2.00	30.00	-2.00
CAESIUM	1.0	9.10	-1.00	7.50	-1.00	14.00	4.60	3.80	1.70	13.00	4.60
CHROMIUM	5.0	200.0	250.0	170.0	470.0	524.0	350.0	230.0	110.0	44.0	40.0
COBALT	1.0	355.00	44.00	28.00	15.00	15.00	69.00	4.90	23.00	38.00	8.60
EUROPIUM	.5	1.20	2.60	2.80	1.60	.54	3.30	-.50	.79	.76	-.50
GOLD, ppb	5.0	-5.0	-23.0	-5.0	140.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	-1.00	-1.00	3.90	-1.00	1.80	9.20	1.10	1.10	1.50	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	30.900	42.300	10.200	39.900	7.790	15.500	33.200	41.800	22.300	45.400
LANTHANUM	.5	4.60	10.00	49.00	6.00	5.40	53.90	4.20	5.50	11.00	2.30
LUTETIUM	.2	.34	.30	.49	-.20	.32	.77	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-19.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.720	1.000	1.000	-.200	1.800	1.300	-.200	-.200	.290	-.200
RUBIDIUM	20.0	120.0	120.0	70.0	-20.0	270.0	140.0	66.0	28.0	82.0	-20.0
SAMARIUM	.20	4.20	4.40	9.10	3.20	1.90	14.00	1.00	2.50	3.40	.90
SCANDIUM	.10	37.00	51.70	20.80	6.40	40.20	40.00	3.50	4.10	3.40	2.90
SELENIUM	5.0	-5.0	-11.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-10.00	-5.00	7.80	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	3.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	-.50	-.50	4.20	-.50	.62	9.40	1.50	1.70	2.40	.94
TIN	500.0	-500.0	-1200.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-19.00	-2.00	-2.00	88.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-8.20	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.40	.51	2.70	-.50	2.00	4.40	-.50	.76	.93	-.50
ZINC	100.0	460.0	3000.0	460.0	1500.0	550.0	1300.0	110.0	780.0	210.0	240.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27420	# 27421	# 27422	# 27423	# 27424	# 27425	# 27426	# 27427	# 27428	# 27429
ANTIMONY	.2	2.80	1.80	3.20	14.00	6.70	71.60	31.90	85.60	8.00	38.60
ARSENIC	2.0	299.00	641.00	269.00	24.00	66.00	1310.00	1700.00	4030.00	3290.00	5800.00
BARIUM	100.0	410.0	120.0	350.0	190.0	-100.0	750.0	-100.0	-100.0	-100.0	-220.0
BROMINE	2.0	-2.00	9.10	13.00	4.60	-2.00	6.50	8.30	10.00	10.00	11.00
CERIUM	2.0	26.00	-2.00	-2.00	35.00	35.00	268.00	206.00	130.00	150.00	200.00
CAESIUM	1.0	-1.00	1.80	3.10	6.10	1.70	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	54.0	27.0	26.0	120.0	18.0	38.0	18.0	53.0	17.0	34.0
COBALT	1.0	16.00	4.20	2.00	-1.00	1.60	75.00	46.00	34.00	13.00	29.00
EUROPIUM	.5	1.10	-.50	-.50	.72	.69	.88	2.10	1.80	-.50	1.70
GOLD, ppb	5.0	250.0	-5.0	-5.0	6.5	-5.0	-5.0	78.0	19.0	-5.0	53.0
HAFNIUM	1.0	2.70	-1.00	-1.00	2.90	5.50	-1.00	-1.00	3.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.600	50.600	47.700	2.500	2.700	31.600	39.300	39.500	28.900	41.200
LANTHANUM	.5	15.00	1.70	4.20	18.00	18.00	7.90	14.00	19.00	1.20	18.00
LUTETIUM	.2	.34	-.20	-.20	.41	.35	-.20	-.20	.34	-.20	.34
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-12.0
POTASSIUM, %	.2	1.700	-.200	-.200	1.300	.530	-.200	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	44.0	32.0	29.0	95.0	27.0	52.0	-20.0	70.0	63.0	110.0
SAMARIUM	.20	4.10	.76	1.70	3.50	3.40	3.00	7.70	6.10	1.60	6.40
SCANDIUM	.10	13.00	1.90	4.00	5.60	3.00	9.30	8.60	13.50	9.30	13.40
SELENIUM	5.0	-5.0	-5.0	-5.0	7.4	-5.0	-5.0	-5.0	-5.0	-5.0	-12.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	6.30	-5.00	-5.00	-5.00	-5.00	-10.00
TANTALUM	1.0	1.10	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	2.10	-.50	-.50	6.30	5.60	.56	1.50	8.90	3.00	2.30
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-1000.0	-500.0	-1200.0
TUNGSTEN	2.0	4.50	-2.00	-2.00	2.60	5.30	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	3.00	-2.00	-2.00	-2.00	4.20	-2.00	-4.30
YTTERBIUM	.5	1.70	-.50	-.50	2.20	1.70	-.50	1.10	1.10	-.50	.72
ZINC	100.0	850.0	-100.0	140.0	-100.0	130.0	340.0	230.0	460.0	170.0	560.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 171

ELEMENT	DL	# 27430	# 27431	# 27432	# 27433	# 27434	# 27435	# 27436	# 27437	# 27438	# 27439
ANTIMONY	.2	28.30	62.20	33.20	40.00	80.50	48.20	41.90	30.90	126.00	242.00
ARSENIC	2.0	3410.00	3440.00	2990.00	3450.00	2360.00	2650.00	822.00	940.00	2950.00	2130.00
BARIUM	100.0	-100.0	-100.0	-100.0	150.0	-100.0	150.0	280.0	160.0	360.0	2400.0
BROMINE	2.0	10.00	11.00	9.50	13.00	13.00	10.00	3.30	4.70	8.30	20.00
CERIUM	2.0	150.00	43.00	49.00	40.00	56.00	180.00	200.00	454.00	150.00	49.00
CAESIUM	1.0	-1.00	-1.00	-1.00	1.40	-1.00	-1.00	1.20	1.50	-1.00	-1.00
CHROMIUM	5.0	-5.0	17.0	16.0	24.0	43.0	19.0	17.0	13.0	35.0	21.0
COBALT	1.0	18.00	7.90	18.00	17.00	63.00	308.00	438.00	426.00	293.00	30.00
EUROPIUM	.5	.73	.58	1.20	.71	.53	.74	-.50	-.50	-.50	1.30
GOLD, ppb	5.0	-10.0	-10.0	15.0	24.0	-10.0	23.0	-5.0	-5.0	20.0	30.0
HAFNIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	45.100	35.300	42.200	47.700	39.800	34.700	27.600	24.300	37.700	30.700
LANTHANUM	.5	4.70	1.60	6.10	5.20	4.50	3.50	1.60	.86	2.70	22.00
LUTETIUM	.2	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-17.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	-.200	.210	-.200	-.200	-.200	-.200	-.440	.540
RUBIDIUM	20.0	27.0	-20.0	-20.0	-20.0	86.0	61.0	42.0	31.0	110.0	68.0
SAMARIUM	.20	4.10	2.30	3.40	2.30	1.60	2.10	.77	.66	1.40	2.30
SCANDIUM	.10	6.60	8.20	11.00	12.00	14.80	16.90	15.90	25.40	25.90	8.30
SELENIUM	5.0	-5.0	-5.0	10.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-10.00	-5.00	-5.00	-12.00	390.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	-.50	1.00	1.50	2.30	2.50	1.10	-.50	-.50	1.20	1.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	8.20
URANIUM	2.0	-2.00	-2.00	-2.00	3.00	9.40	-2.00	-2.00	4.50	-2.00	-2.00
YTTERBIUM	.5	-.50	-.50	-.50	-.50	-.50	-.50	-.50	-.50	-.50	-.50
ZINC	100.0	430.0	370.0	340.0	300.0	410.0	650.0	710.0	530.0	750.0	5900.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27440	# 27441	# 27442	# 27443	# 27444	# 27445	# 27446	# 27447	# 27448	# 27449
ANTIMONY	.2	1.70	69.30	54.30	54.30	86.10	187.00	287.00	114.00	132.00	38.60
ARSENIC	2.0	3.00	180.00	374.00	464.00	1450.00	1050.00	791.00	449.00	965.00	243.00
BARIUM	100.0	450.0	-100.0	130.0	-100.0	830.0	-100.0	140.0	840.0	410.0	1200.0
BROMINE	2.0	-2.00	7.00	26.00	16.00	13.00	23.00	22.00	8.80	12.00	6.30
CERIUM	2.0	67.00	33.00	33.00	34.00	209.00	17.00	47.00	130.00	60.00	63.00
CAESIUM	1.0	19.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	470.0	38.0	15.0	48.0	11.0	43.0	21.0	36.0	18.0	-5.0
COBALT	1.0	24.00	7.80	3.30	5.80	168.00	6.90	13.00	72.00	13.00	6.10
EUROPIUM	.5	1.10	-.50	-.50	-.50	1.00	-.50	.58	.70	.69	-.50
GOLD, ppb	5.0	51.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.70	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.400	14.200	24.200	14.500	18.100	25.400	32.100	19.000	31.900	13.100
LANTHANUM	.5	38.00	.64	-.50	-.50	6.80	1.10	.90	8.00	2.90	4.30
LUTETIUM	.2	.47	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.900	.220	-.200	-.200	-.200	-.200	.660	.530	-.200	-.200
RUBIDIUM	20.0	210.0	26.0	56.0	27.0	47.0	40.0	54.0	40.0	60.0	31.0
SAMARIUM	.20	7.50	.31	.26	.29	2.10	.64	1.10	1.80	1.80	.85
SCANDIUM	.10	12.10	4.80	5.80	6.30	20.40	8.50	17.70	13.70	13.40	5.20
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	65.00	-5.00	-5.00	-5.00	-5.00	26.00
TANTALUM	1.0	3.50	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	15.00	.55	1.00	.77	1.10	1.10	.83	1.60	.68	-.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	6.30	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	4.60	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.90	-2.00	2.20
YTTERBIUM	.5	2.30	-.50	-.50	-.50	.68	-.50	-.50	-.50	-.50	-.50
ZINC	100.0	110.0	510.0	240.0	270.0	1100.0	630.0	1800.0	570.0	770.0	900.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27450	# 27451	# 27452	# 27453	# 27454	# 27455	# 27456	# 27457	# 27458	# 27459
ANTIMONY	.2	215.00	149.00	207.00	123.00	44.60	21.50	21.00	26.00	19.00	56.50
ARSENIC	2.0	1310.00	1900.00	2200.00	803.00	267.00	120.00	170.00	229.00	85.00	315.00
BARIUM	100.0	300.0	-100.0	950.0	1700.0	3100.0	270.0	-100.0	120.0	-100.0	-100.0
BROMINE	2.0	4.50	8.30	5.10	5.70	3.40	3.50	4.30	8.90	4.60	16.00
CERIUM	2.0	120.00	160.00	257.00	302.00	271.00	120.00	78.00	95.00	40.00	18.00
CAESIUM	1.0	1.50	-1.00	-1.00	2.80	1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	10.0	-5.0	-5.0	10.0	14.0	-5.0	20.0	10.0	30.0	21.0
COBALT	1.0	12.00	7.50	13.00	28.00	43.00	180.00	134.00	80.00	21.00	16.00
EUROPIUM	.5	.70	.88	4.30	10.00	6.60	.72	-.50	-.50	-.50	-.50
GOLD, ppb	5.0	49.0	29.0	62.0	30.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-23.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	31.800	39.500	22.100	10.200	3.600	3.100	3.200	7.380	2.600	9.780
LANTHANUM	.5	2.20	4.00	32.00	64.40	78.10	6.30	3.00	3.20	1.00	1.50
LUTETIUM	.2	-.20	-.20	.47	.76	.86	-.20	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.490	-.200	-.510	-.520	-.430	.370	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	61.0	-20.0	64.0	46.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
SAMARIUM	.20	1.80	2.70	7.50	11.00	14.00	2.30	.89	1.40	.31	.32
SCANDIUM	.10	7.00	6.90	11.70	34.50	21.60	15.10	5.50	5.90	3.40	1.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.7
SILVER	5.0	-5.00	-5.00	18.00	16.00	120.00	6.90	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	-.50	-.50	-.50	-.50	-.50	.52	-.50	1.00	-.50	2.90
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-5.30	14.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	6.00	4.60	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	-.50	-.50	1.90	3.50	4.90	.82	-.50	-.50	-.50	-.50
ZINC	100.0	2300.0	4000.0	13100.0	13200.0	7700.0	1300.0	230.0	380.0	270.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27460	# 27461	# 27462	# 27463	# 27464	# 27465	# 27466	# 27467	# 27468	# 27469
ANTIMONY	.2	.23	6.80	9.50	7.50	6.30	10.00	19.00	25.60	46.40	64.40
ARSENIC	2.0	4.10	99.00	110.00	79.00	100.00	110.00	170.00	256.00	265.00	750.00
BARIUM	100.0	680.0	-100.0	-100.0	140.0	-100.0	120.0	-100.0	-100.0	-100.0	-100.0
BROMINE	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	2.10	-2.00	4.20
CERIUM	2.0	86.00	59.00	58.00	48.00	53.00	68.00	31.00	6.60	4.90	-2.00
CAESIUM	1.0	11.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	350.0	58.0	68.0	57.0	51.0	54.0	30.0	6.0	-5.0	28.0
COBALT	1.0	34.00	13.00	19.00	16.00	20.00	28.00	30.00	17.00	22.00	9.10
EUROPIUM	.5	1.00	.82	.79	.70	.82	1.40	1.20	.69	-.50	-.50
GOLD, ppb	5.0	270.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.6	29.0
HAFNIUM	1.0	8.70	5.30	5.70	4.90	4.10	4.40	2.10	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	5.700	3.200	3.900	3.400	3.500	4.800	7.780	10.200	8.880	15.800
LANTHANUM	.5	46.00	30.00	28.00	23.00	25.00	33.00	17.00	3.70	4.00	2.30
LUTETIUM	.2	.57	.44	.44	.35	.32	.40	.21	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.3	-5.0	-6.6
POTASSIUM, %	.2	1.500	-.200	-.200	-.200	-.200	-.200	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	95.0	-20.0	-20.0	-20.0	-20.0	-20.0	23.0	-20.0	25.0	33.0
SODIUM	.20	9.10	4.30	4.80	3.90	4.80	6.60	3.40	1.40	.93	.69
SCANDIUM	.10	13.40	12.40	13.80	13.00	12.30	13.60	9.40	2.40	1.80	1.50
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	6.3
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-8.30	57.00
TANTALUM	1.0	3.00	-1.00	1.20	1.00	1.10	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	18.00	12.00	13.00	12.00	10.00	11.00	6.20	1.10	.79	.61
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	5.00	3.60	2.90	2.20	3.60	-2.00	-2.00	-2.00	71.00	46.00
URANIUM	2.0	2.70	2.70	2.50	2.90	2.40	2.20	4.20	-2.00	-2.00	-2.00
YTTERBIUM	.5	3.10	2.30	2.20	2.00	1.80	2.20	1.20	-.50	-.50	-.50
ZINC	100.0	-100.0	170.0	160.0	160.0	140.0	200.0	220.0	130.0	140.0	280.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27470	# 27471	# 27472	# 27473	# 27474	# 27475	# 27476	# 27477	# 27478	# 27479
ANTIMONY	.2	107.00	40.20	77.50	80.40	64.80	10.00	7.60	23.20	40.30	133.00
ARSENIC	2.0	2200.00	233.00	150.00	229.00	521.00	49.00	35.00	150.00	382.00	130.00
BARIUM	100.0	-100.0	-100.0	-100.0	-100.0	150.0	340.0	400.0	270.0	-100.0	-100.0
BROMINE	2.0	4.30	-2.00	-2.00	6.70	21.00	6.50	21.00	20.00	14.00	6.50
CERIUM	2.0	-2.00	-2.00	-2.00	5.80	100.00	120.00	130.00	100.00	95.00	3.40
CAESIUM	1.0	-1.00	-1.00	-1.00	1.70	2.30	10.00	9.20	5.10	-1.00	-1.00
CHROMIUM	5.0	-5.0	18.0	13.0	16.0	55.0	100.0	110.0	100.0	68.0	12.0
COBALT	1.0	2.70	1.20	7.50	6.20	-1.00	1.40	-1.00	-1.00	-1.00	-1.00
EUROPIUM	.5	-.50	-.50	-.50	.52	2.80	1.30	2.20	2.20	2.50	-.50
GOLD, ppb	5.0	47.0	-5.0	-5.0	-5.0	20.0	7.2	8.1	10.0	25.0	-5.0
HAFNIUM	1.0	-1.00	-1.00	-1.00	-1.00	5.10	7.50	6.70	7.90	5.30	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	33.900	6.880	6.170	7.990	8.530	2.000	1.300	3.900	9.130	8.730
LANTHANUM	.5	-.50	-.50	-.50	3.90	69.80	68.00	61.80	50.30	58.20	2.00
LUTETIUM	.2	-.20	-.20	-.20	-.20	.45	.83	.87	.71	.44	-.20
MOLYBDENUM	5.0	-18.0	-7.8	7.9	-11.0	-5.0	-5.0	-15.0	-23.0	-5.0	13.0
POTASSIUM, %	.2	-.200	-.200	-.200	-.200	.740	3.000	2.600	1.400	.220	-.200
RUBIDIUM	20.0	72.0	-20.0	-20.0	-20.0	50.0	170.0	160.0	90.0	-20.0	-20.0
SAMARIUM	.20	-.20	-.20	-.20	.75	8.80	10.00	11.00	10.00	8.70	.61
SCANDIUM	.10	.71	.66	1.10	2.60	12.70	17.90	19.50	21.20	10.00	25.90
SELENIUM	5.0	-5.0	-5.0	-5.0	8.5	-5.0	-5.0	-5.0	-9.0	-5.0	-5.0
SILVER	5.0	340.00	-5.00	14.00	45.00	73.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	1.30	1.90	-1.00	-1.00	-1.00
THORIUM	.5	-.50	.60	1.30	3.20	9.40	15.00	14.00	16.00	12.00	2.70
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	79.00	34.00	12.00	28.00	19.00	16.00	11.00	13.00	20.00	43.00
URANIUM	2.0	-2.00	-2.00	4.40	5.80	4.10	5.60	8.00	13.00	5.00	2.40
YTTERBIUM	.5	-.50	-.50	-.50	-.50	2.60	4.40	4.80	3.80	2.40	-.50
ZINC	100.0	390.0	150.0	1000.0	740.0	410.0	140.0	110.0	140.0	250.0	550.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

BECQUEREL LABORATORIES

LUCAS HEIGHTS RESEARCH LABORATORIES NEW ILLAWARRA RD. LUCAS HEIGHTS. NSW
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P.O. BOX 93
MENAI, NSW, 2234

NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27480	# 27481	# 27482	# 27483	# 27484	# 27485	# 27486	# 27487	# 27488	# 27489
ANTIMONY	.2	.26	16.00	8.80	23.50	16.00	5.90	7.20	8.10	9.30	8.60
ARSENIC	2.0	2.70	16.00	15.00	43.00	41.00	13.00	40.00	88.00	30.00	22.00
BARIUM	100.0	540.0	510.0	770.0	250.0	320.0	240.0	270.0	190.0	660.0	390.0
BROMINE	2.0	-2.00	2.80	3.00	6.10	6.10	-2.00	17.00	-2.00	8.40	10.00
CERIUM	2.0	67.00	43.00	26.00	55.00	74.00	64.00	150.00	69.00	100.00	100.00
CAESIUM	1.0	17.00	8.80	13.00	10.00	3.40	7.70	12.00	12.00	18.00	1.00
CHROMIUM	5.0	450.0	64.0	73.0	689.0	1110.0	96.0	340.0	92.0	130.0	350.0
COBALT	1.0	22.00	-1.00	-1.00	1.10	1.20	2.30	3.00	9.50	6.00	11.00
EUROPIUM	.5	.95	-.50	-.50	.66	1.20	.87	2.00	1.40	1.30	2.70
GOLD, ppb	5.0	51.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.60	6.60	8.30	9.40	9.00	8.50	8.60	13.00	7.70	10.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.200	.690	.710	.460	.510	2.100	11.100	10.200	5.110	5.820
LANTHANUM	.5	36.00	30.00	20.00	40.00	52.90	31.00	94.20	33.00	55.90	45.00
[illegible]ETIUM	.2	.43	.39	.53	.50	.51	.61	.45	.79	.72	.58
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	1.700	2.200	3.200	1.500	.700	1.600	2.900	1.200	3.600	.330
RUBIDIUM	20.0	200.0	130.0	210.0	110.0	44.0	110.0	230.0	97.0	230.0	28.0
SAMARIUM	.20	7.40	2.80	1.90	3.50	5.50	6.00	10.00	7.60	7.80	12.00
SCANDIUM	.10	11.50	12.00	13.00	25.50	29.30	5.40	38.60	7.90	16.90	46.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	3.40	-1.00	1.60	2.20	2.00	1.30	8.40	-1.00	3.30	2.80
THORIUM	.5	14.00	14.00	16.00	20.00	23.00	9.30	16.00	11.00	16.00	17.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	6.30	12.00	12.00	7.10	3.90	14.00	-2.00	16.00	6.40	-2.00
URANIUM	2.0	3.70	3.50	3.90	4.40	4.50	-2.00	-2.00	-2.00	3.10	3.80
YTTERBIUM	.5	2.20	1.80	2.60	2.20	2.60	3.10	2.70	4.00	3.50	3.30
ZINC	100.0	130.0	-100.0	-100.0	110.0	150.0	-100.0	120.0	150.0	140.0	200.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	580.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27490	# 27491	# 27492	# 27493	# 27494	# 27495	# 27496	# 27497	# 27498	# 27499
ANTIMONY	.2	11.00	11.00	13.00	17.00	16.00	17.00	20.00	19.00	26.80	20.30
ARSENIC	2.0	16.00	30.00	41.00	48.00	81.00	31.00	27.00	24.00	39.00	46.00
BARIUM	100.0	530.0	880.0	510.0	520.0	490.0	310.0	830.0	680.0	310.0	360.0
BROMINE	2.0	4.70	8.00	4.60	4.60	4.60	3.30	3.00	4.50	7.00	14.00
CERIUM	2.0	110.00	96.00	110.00	110.00	120.00	110.00	74.00	130.00	51.00	60.00
CAESIUM	1.0	1.70	2.30	2.30	1.30	2.00	3.10	3.20	2.20	1.40	-1.00
CHROMIUM	5.0	230.0	440.0	190.0	290.0	480.0	370.0	430.0	360.0	360.0	320.0
COBALT	1.0	8.50	11.00	44.00	45.00	77.00	26.00	23.00	9.20	3.20	4.10
EUROPIUM	.5	2.80	2.60	2.90	2.90	3.60	3.30	2.20	3.90	1.60	1.80
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	7.70	10.00	7.20	7.20	7.60	8.80	10.00	11.00	7.00	8.50
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.500	6.320	5.900	5.000	6.030	4.800	5.770	5.030	5.340	6.770
LANTHANUM	.5	45.00	41.00	42.00	39.00	42.00	46.00	31.00	54.90	24.00	28.00
LUTETIUM	.2	.55	.57	.59	.53	.60	.62	.54	.65	.42	.49
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	.440	1.100	.890	.830	1.000	.850	1.300	1.500	.910	.470
RUBIDIUM	20.0	32.0	78.0	55.0	55.0	76.0	64.0	90.0	77.0	46.0	39.0
SAMARIUM	.20	11.00	12.00	13.00	14.00	16.00	16.00	10.00	17.00	6.90	7.80
SCANDIUM	.10	47.80	67.90	36.80	47.30	50.70	69.00	57.40	83.20	67.30	82.30
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-10.00	-5.00	-5.00
TANTALUM	1.0	2.80	3.50	2.30	2.60	3.30	3.80	2.80	4.10	2.50	2.80
THORIUM	.5	14.00	15.00	13.00	10.00	7.40	12.00	11.00	14.00	8.00	11.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	-2.00	4.50	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.90	3.50	3.10	3.20	3.40	3.90	3.30	4.00	2.20	2.90
ZINC	100.0	190.0	250.0	370.0	900.0	710.0	540.0	340.0	230.0	170.0	210.0
ZIRCONIUM	500.0	580.0	530.0	-500.0	-500.0	570.0	660.0	-500.0	-500.0	-500.0	660.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27500	# 27601	# 27602	# 27603	# 27604	# 27605	# 27606	# 27607	# 27608	# 27609
ANTIMONY	.2	4.90	26.30	29.80	15.00	17.00	19.00	43.00	19.00	20.00	13.00
ARSENIC	2.0	2730.00	150.00	91.00	45.00	43.00	41.00	96.00	43.00	120.00	53.00
BARIUM	100.0	530.0	300.0	300.0	340.0	-100.0	-100.0	-100.0	130.0	-100.0	440.0
BROMINE	2.0	4.60	23.00	21.00	5.10	10.00	12.00	14.00	10.00	16.00	14.00
CERIUM	2.0	17.00	35.00	44.00	20.00	14.00	15.00	19.00	22.00	24.00	15.00
CAESIUM	1.0	5.20	3.00	1.50	-1.00	1.10	-1.00	1.60	1.50	4.10	6.00
CHROMIUM	5.0	280.0	350.0	320.0	360.0	450.0	240.0	410.0	180.0	340.0	410.0
COBALT	1.0	17.00	8.60	3.40	7.00	6.80	4.50	3.40	3.20	2.70	2.10
EUROPIUM	.5	.68	1.00	1.10	.52	-.50	-.50	-.50	-.50	-.50	-.50
GOLD, ppb	5.0	1350.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	-1.00	10.00	9.40	8.00	10.00	8.60	8.30	8.70	11.00	10.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	12.700	12.500	6.810	6.630	7.670	6.770	9.600	4.600	6.480	3.100
LANTHANUM	.5	10.00	19.00	26.00	10.00	7.00	7.20	12.00	13.00	13.00	7.50
LUTETIUM	.2	-.20	.52	.61	.50	.56	.46	.46	.49	.64	.63
MOLYBDENUM	5.0	-8.0	-5.0	-5.0	-5.0	-5.0	-5.0	-11.0	-5.0	-5.0	-5.0
[illegible]SSIUM, %	.2	1.300	.250	-.200	.350	.270	-.200	-.200	-.200	-.200	.650
[illegible]DIUM	20.0	59.0	21.0	39.0	-20.0	21.0	-20.0	21.0	-20.0	27.0	47.0
SAMARIUM	.20	2.30	3.90	3.60	2.00	1.50	1.20	1.50	1.80	1.90	1.50
SCANDIUM	.10	6.20	84.50	67.10	49.70	56.40	36.20	44.00	29.80	46.60	41.80
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-10.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	-1.00	4.30	4.00	2.70	3.60	2.50	2.40	2.30	4.00	3.30
THORIUM	.5	1.80	11.00	14.00	11.00	13.00	15.00	11.00	13.00	15.00	14.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	16.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	5.10	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	4.60	3.80	6.00	3.30	3.60	-2.00
YTTERBIUM	.5	-.50	2.90	2.90	2.40	2.80	2.50	2.40	2.40	3.40	3.10
ZINC	100.0	100.0	240.0	220.0	180.0	190.0	150.0	150.0	120.0	160.0	120.0
ZIRCONIUM	500.0	-500.0	530.0	510.0	-500.0	-500.0	-500.0	-500.0	580.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

BECQUEREL JOB # 171

ELEMENT	DL	# 27610	# 27611	# 27612	# 27613	# 27614	# 27615	# 27616	# 27617	# 27618	# 27619
ANTIMONY	.2	5.10	2.30	2.60	3.20	1.90	2.20	51.00	58.70	74.40	94.90
ARSENIC	2.0	3.50	-2.00	-2.00	-2.00	-2.00	-2.00	3470.00	1080.00	743.00	1180.00
BARIUM	100.0	830.0	1100.0	1300.0	1300.0	1100.0	1300.0	260.0	-100.0	150.0	720.0
BROMINE	2.0	4.30	4.10	-2.00	2.10	4.30	-2.00	15.00	11.00	15.00	9.00
CERIUM	2.0	26.00	49.00	73.00	100.00	67.00	54.00	190.00	37.00	110.00	309.00
CAESIUM	1.0	6.60	8.90	8.10	10.00	8.80	10.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	50.0	80.0	58.0	74.0	57.0	69.0	25.0	16.0	51.0	9.0
COBALT	1.0	-1.00	-1.00	-1.00	-1.00	1.00	1.30	56.00	6.70	29.00	105.00
EUROPIUM	.5	-.50	.57	.75	1.10	.91	.92	2.00	-.50	-.50	.56
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	150.0	50.0	25.0	-5.0
HAFNIUM	1.0	12.00	10.00	10.00	8.70	8.40	8.80	-1.00	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-29.0	-20.0	-20.0	-20.0
IRON, %	.05	.580	.530	.470	.590	.470	.620	38.200	25.300	16.600	26.900
LANTHANUM	.5	16.00	26.00	38.00	54.20	34.00	37.00	23.00	1.80	2.00	7.30
LUTETIUM	.2	.58	.70	.75	.72	.72	.82	.37	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	10.0	-5.0	-5.0
POTASSIUM, %	.2	1.900	3.000	3.200	3.600	3.100	4.100	-.200	-.200	-.200	.250
RUBIDIUM	20.0	92.0	140.0	160.0	180.0	160.0	210.0	68.0	58.0	26.0	54.0
SAMARIUM	.20	2.00	3.50	5.40	7.10	6.10	5.30	7.80	1.20	1.00	2.60
SCANDIUM	.10	9.10	11.30	12.20	14.00	12.40	15.10	11.20	4.80	5.60	10.00
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-6.2	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-10.00	-5.00	8.50	18.00
TANTALUM	1.0	1.10	1.40	-1.00	2.10	-1.00	1.30	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	19.00	15.00	15.00	14.00	13.00	13.00	4.20	.91	1.10	-.50
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-1100.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.50	3.10	-2.00	3.20	3.30	-2.00	-2.00	-2.00	-2.00	-2.00
URANIUM	2.0	3.20	2.20	-2.00	-2.00	-2.00	3.40	-2.00	-2.00	-2.00	4.60
YTTERBIUM	.5	2.90	3.50	3.90	3.90	3.60	4.20	.74	-.50	-.50	-.50
ZINC	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	330.0	210.0	200.0	310.0
ZIRCONIUM	500.0	-500.0	550.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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N E U T R O N A C T I V A T I O N A N A L Y S I S

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UEREL JOB # 171

ELEMENT	DL	# 27620	# 27621	# 27622	# 27623	# 27624	# 27625	# 27626	# 27627	# 27628	# 27629
ANTIMONY	.2	2.80	28.30	23.50	158.00	71.60	111.00	22.90	4.30	117.00	145.00
ARSENIC	2.0	295.00	824.00	309.00	526.00	294.00	912.00	69.00	7.00	250.00	235.00
BARIUM	100.0	510.0	410.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
BROMINE	2.0	-2.00	9.00	6.30	8.00	6.10	9.10	8.00	2.70	7.10	8.30
CERIUM	2.0	29.00	200.00	22.00	3.30	6.70	23.00	43.00	-2.00	120.00	46.00
CAESIUM	1.0	1.40	1.10	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	52.0	22.0	-5.0	73.0	5.4	59.0	20.0	91.0	27.0	63.0
COBALT	1.0	16.00	83.00	11.00	2.20	1.90	1.80	-1.00	-1.00	1.70	1.20
EUROPIUM	.5	1.00	-.50	-.50	-.50	-.50	.75	.56	-.50	3.00	1.10
GOLD, ppb	5.0	210.0	-5.0	-5.0	-5.0	-5.0	-5.0	7.7	-5.0	16.0	23.0
HAFNIUM	1.0	2.40	-1.00	-1.00	-1.00	-1.00	1.20	1.60	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.500	11.900	7.760	12.700	10.700	25.500	3.100	.510	4.300	4.800
LANTHANUM	.5	15.00	3.60	1.20	.55	.83	11.00	25.00	1.10	61.10	17.00
LUTETIUM	.2	.36	-.20	-.20	-.20	-.20	-.20	-.20	-.20	.40	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	11.0	10.0	82.0	10.0	-5.0	-5.0	17.0
POTASSIUM, %	.2	1.700	-.200	-.200	.300	-.200	-.200	-.200	-.200	-.200	.530
RUBIDIUM	20.0	47.0	25.0	-20.0	27.0	26.0	39.0	-20.0	-20.0	-20.0	33.0
[illegible]RIUM	.20	4.20	.89	.34	.44	.46	3.10	2.00	.22	6.60	3.50
SCANDIUM	.10	12.90	3.40	2.20	3.40	2.30	12.90	1.80	.27	11.70	7.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	5.4
SILVER	5.0	-5.00	11.00	7.70	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	5.70
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	1.90	-.50	-.50	-.50	-.50	4.20	3.00	-.50	1.80	3.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	2.70	-2.00	-2.00	2.30	-2.00	3.60	5.00	3.90	-2.00	-2.00
URANIUM	2.0	-2.00	-2.00	-2.00	6.00	3.20	16.00	-2.00	-2.00	4.10	4.60
YTTERBIUM	.5	1.70	-.50	-.50	-.50	-.50	.69	-.50	-.50	1.80	-.50
ZINC	100.0	860.0	120.0	-100.0	200.0	150.0	430.0	-100.0	-100.0	210.0	170.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 171

ELEMENT	DL	# 27630	# 27631	# 27632	# 27633	# 27634	# 27635	# 27636	# 27637	# 27638	# 27639
ANTIMONY	.2	190.00	166.00	430.00	208.00	240.00	485.00	221.00	257.00	27.90	28.00
ARSENIC	2.0	442.00	735.00	1910.00	803.00	827.00	1220.00	898.00	995.00	63.00	61.00
BARIUM	100.0	-100.0	-100.0	-100.0	-100.0	-100.0	150.0	-100.0	110.0	-100.0	-100.0
BROMINE	2.0	4.40	7.90	24.00	7.30	6.10	8.20	7.10	13.00	6.60	12.00
CERIUM	2.0	30.00	36.00	93.00	40.00	22.00	34.00	20.00	110.00	8.10	22.00
CAESIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.20	-1.00	-1.00
CHROMIUM	5.0	25.0	50.0	38.0	41.0	33.0	38.0	48.0	89.0	67.0	18.0
COBALT	1.0	2.40	3.40	1.60	2.30	1.60	1.10	1.70	2.20	-1.00	-1.00
EUROPIUM	.5	1.00	1.80	4.30	1.60	.79	.87	.69	2.80	-.50	.76
GOLD, ppb	5.0	39.0	15.0	470.0	140.0	92.0	110.0	120.0	64.0	5.3	10.0
HAFNIUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	10.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	9.860	13.600	16.800	13.400	11.100	13.200	9.330	6.330	1.400	1.500
LANTHANUM	.5	6.50	6.10	64.20	14.00	4.40	7.50	6.10	44.00	2.70	8.80
LUTETIUM	.2	-.20	-.20	.41	-.20	-.20	.24	-.20	.82	-.20	-.20
MOLYBDENUM	5.0	14.0	12.0	-21.0	-17.0	12.0	27.0	8.9	-41.0	27.0	16.0
POTASSIUM, %	.2	.250	.470	.610	.260	.360	.910	.580	.910	-.200	-.200
RUBIDIUM	20.0	-20.0	30.0	23.0	27.0	26.0	28.0	32.0	45.0	-20.0	-20.0
SAMARIUM	.20	3.10	5.00	7.20	4.00	2.80	3.40	1.90	8.20	.82	2.20
SCANDIUM	.10	8.00	13.20	20.50	13.20	10.00	8.90	4.50	14.50	1.30	2.40
SELENIUM	5.0	10.0	-5.0	36.0	16.0	9.0	18.0	18.0	15.0	-5.0	-5.0
SILVER	5.0	5.60	-5.00	521.00	34.00	50.00	260.00	220.00	110.00	7.00	-5.00
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	1.90	-1.00	-1.00
THORIUM	.5	1.60	4.20	4.30	3.50	2.30	2.40	2.10	19.00	1.50	3.20
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-1200.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	-2.00	-2.00	8.20	-2.00	-2.00	-2.00	3.40	13.00	2.50	-2.00
URANIUM	2.0	6.20	7.50	12.00	10.00	7.90	9.50	-2.00	23.00	2.30	4.80
YTTERBIUM	.5	.51	.54	1.90	-.50	-.50	-.50	-.50	4.00	-.50	-.50
ZINC	100.0	270.0	310.0	320.0	310.0	620.0	620.0	410.0	490.0	-100.0	130.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	560.0	-500.0	-500.0

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BECQUEREL JOB # 171

ELEMENT	DL	# 27640	# 27641	# 27642	# 27643	# 27644	# 27645	# 27646	# 27647	# 27648	# 27649
ANTIMONY	.2	-.20	25.30	49.30	58.30	28.00	15.00	24.30	18.00	20.10	12.00
ARSENIC	2.0	3.00	120.00	588.00	110.00	130.00	97.00	140.00	150.00	170.00	140.00
BARIUM	100.0	520.0	-100.0	170.0	340.0	180.0	360.0	-100.0	520.0	380.0	350.0
BROMINE	2.0	-2.00	4.40	4.20	2.70	5.40	2.80	3.60	3.90	4.90	5.30
CERIUM	2.0	89.00	34.00	150.00	120.00	98.00	72.00	120.00	63.00	39.00	51.00
CAESIUM	1.0	11.00	-1.00	-1.00	4.90	5.10	6.70	1.90	9.10	7.70	5.50
CHROMIUM	5.0	340.0	93.0	110.0	120.0	140.0	150.0	150.0	110.0	110.0	110.0
COBALT	1.0	34.00	1.20	2.80	-1.00	1.20	1.10	2.10	1.70	2.30	1.90
EUROPIUM	.5	1.20	1.00	5.20	3.90	3.40	2.10	4.30	2.10	1.40	1.60
GOLD, ppb	5.0	270.0	7.3	10.0	24.0	16.0	9.2	18.0	15.0	-5.0	11.0
HAFNIUM	1.0	8.50	6.00	11.00	13.00	8.30	6.20	11.00	7.00	5.50	5.60
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	5.530	.870	.400	.430	.340	.250	.200	.380	.260	.260
LANTHANUM	.5	46.00	12.00	59.00	43.00	35.00	28.00	52.50	28.00	13.00	19.00
[illegible]TIUM	.2	.61	.32	1.20	1.10	.67	.57	.81	.79	.63	.64
[illegible]BDENUM	5.0	-5.0	18.0	-31.0	-37.0	-29.0	-16.0	-31.0	-32.0	15.0	-34.0
POTASSIUM, %	.2	1.600	-.200	.230	1.100	1.100	1.500	.470	2.800	2.400	2.300
RUBIDIUM	20.0	110.0	-20.0	-20.0	77.0	70.0	88.0	30.0	180.0	150.0	150.0
SAMARIUM	.20	8.60	3.20	17.00	13.00	11.00	7.30	14.00	7.90	4.90	6.30
SCANDIUM	.10	13.20	6.00	18.70	22.80	18.70	16.00	21.10	22.20	19.20	22.60
SELENIUM	5.0	-5.0	7.4	10.0	13.0	11.0	10.0	-5.0	-5.0	-5.0	9.5
SILVER	5.0	-5.00	10.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	25.00
TANTALUM	1.0	1.60	-1.00	2.50	2.10	2.40	1.20	2.20	1.50	1.50	1.60
THORIUM	.5	18.00	8.10	22.00	28.00	23.00	16.00	27.00	19.00	15.00	17.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	6.60	6.60	7.70	10.00	8.90	5.10	11.00	-2.00	-2.00	4.30
URANIUM	2.0	-2.00	10.00	17.00	21.00	16.00	8.70	17.00	18.00	16.00	19.00
YTTERBIUM	.5	3.00	1.60	6.10	5.80	4.00	3.10	4.60	4.20	3.40	3.50
ZINC	100.0	110.0	110.0	250.0	190.0	160.0	130.0	160.0	160.0	230.0	120.0
ZIRCONIUM	500.0	-500.0	-500.0	860.0	-500.0	570.0	-500.0	700.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 171

ELEMENT	DL	# 27650	# 27651	# 27652	# 27653	# 27654	# 27655	# 27656	# 27657	# 27658	# 27659
ANTIMONY	.2	46.40	118.00	189.00	294.00	37.60	14.00	10.00	10.00	11.00	20.20
ARSENIC	2.0	283.00	990.00	1870.00	1510.00	120.00	99.00	46.00	52.00	62.00	160.00
BARIUM	100.0	420.0	300.0	130.0	210.0	110.0	100.0	-100.0	-100.0	-100.0	-100.0
BROMINE	2.0	7.90	22.00	21.00	19.00	3.10	-2.00	-2.00	-2.00	-2.00	-2.00
CERIUM	2.0	72.00	437.00	200.00	170.00	78.00	38.00	57.00	55.00	52.00	66.00
CAESIUM	1.0	5.40	1.40	-1.00	-1.00	1.60	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	180.0	170.0	180.0	150.0	110.0	65.0	57.0	64.0	75.0	82.0
COBALT	1.0	1.70	3.20	3.10	3.20	21.00	30.00	24.00	27.00	24.00	37.00
EUROPIUM	.5	2.10	20.00	24.00	7.80	1.90	-.50	.89	.86	1.20	1.10
GOLD, ppb	5.0	33.0	250.0	1660.0	270.0	20.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	11.00	48.00	19.00	10.00	7.80	5.00	4.30	4.20	4.60	5.90
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	.850	1.100	4.300	13.900	1.400	3.000	1.500	1.800	1.800	2.800
LANTHANUM	.5	34.00	235.00	118.00	115.00	40.00	21.00	29.00	29.00	26.00	37.00
LUTETIUM	.2	1.00	3.00	1.20	1.00	.51	.31	.30	.34	.36	.44
MOLYBDENUM	5.0	92.0	-76.0	56.0	-38.0	-21.0	-5.0	-5.0	-10.0	-5.0	-5.0
POTASSIUM, %	.2	1.800	-.420	-.200	-.200	-.200	-.200	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	150.0	-20.0	24.0	33.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
[illegible]RIUM	.20	8.20	43.70	22.30	13.00	7.50	2.50	4.80	4.60	5.00	5.20
SCANDIUM	.10	25.40	55.10	41.80	54.40	24.60	17.30	16.60	17.00	15.90	21.40
SELENIUM	5.0	41.0	-13.0	96.0	62.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	15.00	190.00	627.00	1230.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	2.70	7.90	-1.00	2.00	1.70	-1.00	1.50	1.30	1.20	1.70
THORIUM	.5	24.00	83.60	33.00	24.00	18.00	11.00	11.00	11.00	11.00	13.00
TIN	500.0	-500.0	-500.0	-500.0	-1000.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	6.50	78.00	83.00	53.00	5.30	2.60	-2.00	-2.00	3.30	5.30
URANIUM	2.0	16.00	43.00	25.00	22.00	12.00	5.20	4.40	5.50	5.90	8.50
YTTERBIUM	.5	5.00	14.00	5.80	4.00	2.80	1.70	1.70	1.90	1.90	2.30
ZINC	100.0	160.0	1200.0	550.0	570.0	140.0	320.0	150.0	140.0	100.0	340.0
ZIRCONIUM	500.0	-500.0	2500.0	1300.0	1100.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 171

ELEMENT	DL	# 27660	# 27661	# 27662	# 27663	# 27664	# 27665	# 27666	# 27667	# 27668	# 27669
ANTIMONY	.2	.35	26.30	34.40	18.00	22.20	20.20	16.00	23.00	14.00	12.00
ARSENIC	2.0	3.00	269.00	583.00	150.00	83.00	60.00	120.00	140.00	100.00	110.00
BARIUM	100.0	520.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0	-100.0
BROMINE	2.0	-2.00	-2.00	2.90	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
CERIUM	2.0	66.00	47.00	53.00	43.00	59.00	60.00	57.00	67.00	54.00	45.00
CAESIUM	1.0	17.00	-1.00	1.30	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	450.0	84.0	76.0	66.0	77.0	75.0	82.0	71.0	65.0	52.0
COBALT	1.0	23.00	26.00	30.00	24.00	28.00	25.00	24.00	27.00	26.00	22.00
EUROPIUM	.5	1.10	1.00	1.00	.69	.95	1.10	1.00	1.70	1.10	1.30
GOLD, ppb	5.0	50.0	-5.0	10.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	8.60	4.90	4.50	4.10	5.90	5.70	5.70	4.90	5.20	4.80
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	4.200	4.300	8.070	3.100	3.000	2.500	3.400	4.700	3.200	3.200
LANTHANUM	.5	36.00	25.00	30.00	23.00	34.00	32.00	31.00	35.00	29.00	24.00
LUTETIUM	.2	.44	.34	.36	.31	.46	.41	.41	.39	.43	.41
MOLYBDENUM	5.0	-5.0	-5.0	-13.0	-5.0	-14.0	-5.0	-5.0	-15.0	-5.0	-16.0
POTASSIUM, %	.2	1.900	-.200	-.200	-.200	-.200	.310	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	220.0	-20.0	24.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
SAMARIUM	.20	7.30	4.20	4.10	3.40	5.10	5.20	5.70	7.20	5.60	4.90
SCANDIUM	.10	11.60	15.20	19.10	19.80	24.30	21.50	20.80	19.80	16.00	16.60
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
TANTALUM	1.0	3.10	-1.00	-1.00	1.00	1.80	1.10	1.50	1.40	1.10	-1.00
THORIUM*	.5	14.00	11.00	12.00	11.00	16.00	14.00	13.00	12.00	13.00	10.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	6.10	4.90	6.30	-2.00	-2.00	-2.00	3.30	-2.00	-2.00	2.90
URANIUM	2.0	3.90	4.90	7.20	7.10	7.90	5.70	4.70	8.30	7.80	8.60
YTTERBIUM	.5	2.30	1.70	1.80	1.60	2.50	2.20	2.30	2.30	2.40	2.00
ZINC	100.0	120.0	160.0	270.0	340.0	250.0	240.0	360.0	160.0	180.0	190.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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BECQUEREL JOB # 171

ELEMENT	DL	# 27670	# 27671	# 27414x2	# 27431x2	# 27447x2	# 27472x2	# 27496x2	# 27601x2	# 27637x2	# 27650x2
ANTIMONY	.2	10.00	8.80	4.30	53.40	129.00	64.40	20.00	23.60	250.00	46.20
ARSENIC	2.0	65.00	110.00	61.00	3020.00	505.00	140.00	27.00	110.00	893.00	277.00
BARIUM	100.0	-100.0	-100.0	440.0	-100.0	1100.0	-100.0	710.0	390.0	-100.0	290.0
BROMINE	2.0	-2.00	-2.00	-2.00	6.70	10.00	-2.00	2.20	22.00	12.00	8.50
CERIUM	2.0	68.00	53.00	10.00	40.00	170.00	-2.00	76.00	37.00	120.00	82.00
CAESIUM	1.0	-1.00	-1.00	14.00	-1.00	-1.00	-1.00	3.10	3.50	-1.00	5.10
CHROMIUM	5.0	60.0	55.0	490.0	16.0	35.0	-5.0	460.0	320.0	120.0	150.0
COBALT	1.0	20.00	13.00	14.00	7.90	83.00	6.20	22.00	8.40	2.40	1.80
EUROPIUM	.5	1.60	1.20	.58	-.50	.75	-.50	2.40	.89	3.50	2.30
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	59.0	36.0
HAFNIUM	1.0	4.70	4.70	1.40	-1.00	-1.00	-1.00	10.00	9.10	11.00	11.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	3.000	3.500	7.440	30.800	21.200	5.260	5.760	11.400	4.700	.800
LANTHANUM	.5	36.00	27.00	5.20	1.60	9.40	-.50	32.00	18.00	49.00	34.00
[illegible]TIUM	.2	.40	.38	.35	-.20	-.20	-.20	.64	.47	.85	1.00
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-48.0	130.0
POTASSIUM, %	.2	-.200	-.200	1.500	-.200	.410	-.200	1.500	.400	.510	2.300
RUBIDIUM	20.0	-20.0	-20.0	250.0	51.0	-20.0	-20.0	93.0	36.0	33.0	150.0
SAMARIUM	.20	7.50	5.30	1.80	1.80	2.20	-.20	10.00	3.80	8.40	8.30
SCANDIUM	.10	15.00	12.10	38.00	7.40	15.60	.85	60.60	80.10	15.60	25.40
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	15.0	43.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	12.00	-5.00	-5.00	110.00	15.00
TANTALUM	1.0	1.30	-1.00	-1.00	-1.00	-1.00	-1.00	3.60	4.00	1.70	2.30
THORIUM	.5	12.00	11.00	.72	1.20	1.80	1.20	12.00	10.00	19.00	24.00
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	3.20	3.60	82.00	-2.00	-2.00	13.00	-2.00	-2.00	17.00	6.70
URANIUM	2.0	5.80	2.90	-2.00	-2.00	-2.00	4.10	2.70	-2.00	27.00	17.00
YTTERBIUM	.5	2.40	2.00	1.90	-.50	-.50	-.50	3.50	3.00	4.40	5.00
ZINC	100.0	160.0	150.0	530.0	320.0	660.0	1100.0	340.0	220.0	420.0	150.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	630.0	570.0	-500.0	-500.0

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ELEMENT	DL	# 27666x2
ANTIMONY	.2	15.00
ARSENIC	2.0	110.00
BARIUM	100.0	-100.0
BROMINE	2.0	-2.00
CERIUM	2.0	62.00
CAESIUM	1.0	-1.00
CHROMIUM	5.0	69.0
COBALT	1.0	23.00
EUROPIUM	.5	.72
GOLD, ppb	5.0	-5.0
HAFNIUM	1.0	5.40
IRIDIUM, ppb	20.0	-20.0
IRON, %	.05	3.200
LANTHANUM	.5	30.00
LUTETIUM	.2	.42
MOLYBDENUM	5.0	-5.0
POTASSIUM, %	.2	-.200
RUBIDIUM	20.0	-20.0
SAMARIUM	.20	5.50
SODIUM	.10	20.40
SELENIUM	5.0	-5.0
SILVER	5.0	-5.00
TANTALUM	1.0	1.10
THORIUM	.5	12.00
TIN	500.0	-500.0
TUNGSTEN	2.0	-2.00
URANIUM*	2.0	4.50
YTTERBIUM	.5	2.20
ZINC	100.0	360.0
ZIRCONIUM	500.0	-500.0

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130382 13 FEB 1991

N E U T R O N A C T I V A T I O N A N A L Y S I S

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BECQUEREL LABORATORIES PTY. LIMITED

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 08-02-91

RGC TASMANIA.
BECQUEREL JOB # 290

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.

ELEMENT	DL	# T27679	# T8482	# T25023	# T25024	# T25025	# T25026	# T25027	# T25027R
ANTIMONY	.2	11.00	7.70	6.50	133.00	16.00	18.00	3.00	2.90
ARSENIC	2.0	13.00	38.00	35.00	16.00	16.00	180.00	4.10	3.60
BARIUM	100.0	-100.0	-100.0	-100.0	840.0	-100.0	-100.0	-100.0	-100.0
BROMINE	2.0	-2.00	2.40	2.50	-2.00	12.00	4.30	3.00	3.00
CERIUM	2.0	23.00	-2.00	-2.00	100.00	6.00	6.30	-2.00	-2.00
CAESIUM	1.0	3.00	1.60	-1.00	7.10	-1.00	-1.00	-1.00	-1.00
CHROMIUM	5.0	25.0	6.1	7.7	7.7	13.0	13.0	-5.0	-5.0
COBALT	1.0	9.10	6.10	5.60	1.20	20.00	11.00	-1.00	-1.00
EUROPIUM	.5	1.10	-.50	-.50	2.80	-.50	-.50	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	1.10	-1.00	-1.00	8.80	-1.00	-1.00	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	34.700	54.400	55.600	1.400	2.900	15.000	.890	.890
LANTHANUM	.5	15.00	.56	.55	54.60	2.30	3.10	.90	.94
LUTETIUM	.2	-.20	-.20	-.20	.88	-.20	-.20	-.20	-.20
MOLYBDENUM	5.0	-5.0	-15.0	-9.0	-5.0	-5.0	-5.2	-5.0	-5.0
POTASSIUM, %	.2	.720	-.200	-.200	3.900	-.200	-.200	-.200	-.200
RUBIDIUM	20.0	110.0	90.0	98.0	180.0	-20.0	28.0	-20.0	-20.0
SAMARIUM	.20	4.50	.72	.64	12.00	.65	.86	.35	.34
SCANDIUM	.10	5.20	5.80	5.00	19.00	1.30	1.10	2.70	2.70
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.02	-.020	-.020	-.020	.059	.024	-.020	-.020	-.020
TANTALUM	1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
THORIUM	.5	3.50	1.00	1.10	16.00	1.20	1.10	.66	.84
TIN	200.0	-200.0	-400.0	-410.0	-470.0	-200.0	-200.0	-200.0	-200.0
TUNGSTEN	2.0	6.30	11.00	12.00	11.00	59.00	21.00	19.00	18.00
URANIUM	2.0	-2.00	-2.00	-2.00	3.20	-2.00	2.30	-2.00	-2.00
YTTERBIUM	.5	1.30	-.50	-.50	4.20	-.50	-.50	-.50	-.50
ZINC	100.0	3100.0	110.0	100.0	-100.0	-100.0	380.0	-100.0	-100.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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130383 6 MAY 1991

NEUTRON ACTIVATION ANALYSIS

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SECQUEREL LABORATORIES PTY. LIMITED

NEUTRON ACTIVATION ANALYSIS REPORT

Date: 24-04-91

RGC TASMANIA

SECQUEREL JOB # 337

NOTE: - A NEGATIVE SIGN INDICATES "LESS THAN".
- RESULTS ARE IN PARTS PER MILLION (ppm) UNLESS OTHERWISE INDICATED.
- ELEVATED D.L. FOR SOME ELEMENTS IN SAMPLE T26486 DUE TO HIGH As.

ELEMENT	DL	# T26483	# T26484	# T26485	# T26486	# T26487	# T26488	# T26489	# T26490	# T27681	# T27682
ANTIMONY	.2	32.90	1.58	19.70	72.10	3.49	1.98	1.94	1.21	4.43	11.80
ARSENIC	2.0	53.30	63.40	853.00	5810.00	63.10	30.30	14.60	12.30	18.00	83.40
BARIUM	100.0	122.0	-100.0	4320.0	-100.0	-100.0	600.0	308.0	3350.0	-100.0	-100.0
BROMINE	2.0	9.00	25.80	6.66	-10.00	-2.00	-2.00	-2.00	-2.00	-2.00	3.11
CERIUM	2.0	41.60	15.90	50.10	14.20	6.34	-2.00	3.04	5.81	3.36	-2.00
CAESIUM	1.0	-1.00	4.13	1.28	-1.00	6.02	130.00	168.00	39.50	-1.00	-1.00
CHROMIUM	5.0	267.0	55.9	23.2	50.8	13.8	-5.0	-5.0	39.0	-5.0	-5.0
COBALT	1.0	9.42	1.65	42.70	5.37	104.00	13.90	20.60	28.00	24.10	53.90
EUROPIUM	.5	1.48	.89	-.50	.59	-.50	-.50	-.50	-.50	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0	-5.0	67.8	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
HAFNIUM	1.0	6.97	1.59	3.78	1.06	-1.00	-1.00	-1.00	3.25	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0	-20.0
IRON, %	.05	8.230	41.600	14.900	30.100	22.200	16.900	9.530	5.220	1.800	27.100
LANTHANUM	.5	20.20	7.17	11.50	8.83	4.67	1.37	3.06	2.46	1.11	-.50
LUTETIUM	.2	.54	-.20	-.20	.22	-.20	-.20	-.20	.22	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0	-5.0	-10.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200	.543	-.500	-.200	.747	.781	2.340	-.200	-.200
RUBIDIUM	20.0	-20.0	91.2	65.0	89.0	65.3	691.0	1010.0	363.0	-20.0	62.2
SAMARIUM	.20	5.09	3.34	2.34	1.84	1.19	.29	.37	2.34	2.14	.38
SCANDIUM	.10	32.90	4.20	8.31	19.20	2.87	1.20	1.75	11.00	.48	.51
SELENIUM	5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
SILVER *	5.0	-5.00	-5.00	-5.00	-5.00	-13.00	-5.00	-5.00	-5.00	-5.00	-5.00
SODIUM, %	.01	-.010	.011	.050	-.010	-.010	.069	.255	.066	.023	-.010
TANTALUM	1.0	2.14	-1.00	-1.00	-1.00	-1.00	2.05	1.09	1.18	-1.00	-1.00
THORIUM	.5	5.54	1.96	4.66	3.69	1.76	2.46	4.98	4.50	.55	.61
TIN	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0
TUNGSTEN	2.0	5.34	-2.00	-2.00	-4.30	13.30	18.40	27.30	-2.00	-2.00	37.00
URANIUM	2.0	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
YTTERBIUM	.5	2.84	1.33	.63	-.50	-.50	-.50	-.50	1.31	-.50	-.50
ZINC	100.0	145.0	-100.0	742.0	532.0	83800.0	2320.0	10500.0	192.0	478.0	457.0
ZIRCONIUM	500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0	-500.0

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NEUTRON ACTIVATION ANALYSIS

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BECQUEREL JOB # 337

ELEMENT	DL	# T27683	# T27683R
ANTIMONY	.2	15.30	15.60
ARSENIC	2.0	74.00	76.20
BARIUM	100.0	-100.0	-100.0
BROMINE	2.0	-2.00	-2.00
CERIUM	2.0	14.80	16.60
CAESIUM	1.0	-1.00	-1.00
CHROMIUM	5.0	-5.0	-5.0
COBALT	1.0	66.60	69.30
EUROPIUM	.5	-.50	-.50
GOLD, ppb	5.0	-5.0	-5.0
HAFNIUM	1.0	-1.00	-1.00
IRIDIUM, ppb	20.0	-20.0	-20.0
IRON, %	.05	28.300	29.200
LANTHANUM	.5	18.50	19.30
LUTETIUM	.2	-.20	-.20
MOLYBDENUM	5.0	-5.0	-5.0
POTASSIUM, %	.2	-.200	-.200
RUBIDIUM	20.0	49.0	55.6
SAMARIUM	.20	1.30	1.34
SCANDIUM	.10	.50	.53
SELENIUM	5.0	-5.0	-5.0
SILVER	5.0	-5.00	-5.00
SODIUM, %	.01	-.010	-.010
TANTALUM	1.0	-1.00	-1.00
THORIUM	.5	-.50	-.50
TIN	500.0	-500.0	-500.0
TUNGSTEN	2.0	10.80	11.90
URANIUM	2.0	-2.00	-2.00
YTTERBIUM	.5	.96	.85
ZINC	100.0	1550.0	1590.0
ZIRCONIUM	500.0	-500.0	-500.0

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130385

APPENDIX 4

Interpretation of ground magnetic data from the Sylvester Prospect, Zeehan, Tasmania

351

130386

Interpretation of Ground Magnetic data from the Sylvester Prospect, Zeehan, Tasmania

E.L. 42/87
QUEENSTOWN SK 55-5

for

RGC Exploration Pty. Limited

Bruce Wyatt

March 1991

Wyatt & Associates

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T/91/21

Summary

This report describes modelling of ground magnetic data obtained over the Sylvester grid, near Zeehan in western Tasmania. Drill hole SY005, beneath the main magnetic anomaly, intersected magnetite skarn between 429.1 and 507.4 metres, and massive pyrrhotite between 507.4 and 560.1 metres.

To assist in the magnetic interpretation, susceptibilities were read every 2 metres along core recovered from drill holes SY003, SY004, and SY005. Oriented samples were obtained from the magnetite and pyrrhotite zones in SY005 to measure magnetic properties (remanence) in more detail. This study concluded that the magnetite would probably have a soft magnetic component aligned with the Earth's field, and a Koenigsberger ratio of about 1. The pyrrhotite possessed a stable and intense magnetisation with a Koenigsberger ratio of 7.7, a declination of 166° (AMG), and an inclination of 45°.

Magnetite was modelled using a susceptibility of 1.0 SI units and a remanent amplitude of 50 amps/metre in the same direction as the Earth's field. Pyrrhotite was modelled using a susceptibility of 0.3 SI units and remanent amplitude of 115 amps/metre. The inclusion of susceptibility and remanence constraints has radically changed the position, attitude, and dimensions of the magnetic sources from an earlier interpretation of part of the data.

Modelling has indicated that a substantial part of the main magnetic anomaly can be explained by magnetite and pyrrhotite bodies intersected in drillhole SY005. The bodies are interpreted to have near vertical (80° north) dips and dimensions of a few tens of metres by a few hundred metres, and with substantial down-dip extent.

Drilling should aim to better define the extent of any mineralisation associated with the main magnetic sources, and also with the source of a smaller linear anomaly. The top of the interpreted pyrrhotite body is at a depth of 253 metres, with the eastern edge centred at 7460 mE, 60840 mN and the western edge outside of the survey area.

The model is very dependent on the measurements from a single pyrrhotite sample. Analysis of additional oriented samples of pyrrhotite may be necessary to further improve control on the model. Further refinement of the magnetic model should be undertaken when additional information becomes available from drilling and other work.

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Note: Figures 4, 5, 6 show the location of all lines of magnetic stations except for a short line at 360200 E.

The remaining Figures show only data from the area between 357000 and 358300 mE and between 5360000 and 5361500 mN.

1 Magnetic susceptibility of drill core from SY003, 1:5 000 scale 4

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13 Observed and modelled profile 7400 mE, 1:5 000 scale 21

14 Observed and modelled profile 7500 mE, 1:5 000 scale 22

15 Observed and modelled profile 7600 mE, 1:5 000 scale 23

16 Observed and modelled profile 7700 mE, 1:5 000 scale 24

17 Observed and modelled profile 7800 mE, 1:5 000 scale 25

18 Observed and modelled profile 7900 mE, 1:5 000 scale 26

19 Observed and modelled profile 8000 mE, 1:5 000 scale 27

1 Introduction

This report describes modelling of ground magnetic data obtained over the Sylvester grid, near Zeehan in western Tasmania. The ground survey forms part of follow up work to a helicopter magnetic survey over the Zeehan and Renison areas (Wyatt, 1990).

The data were collected by Brendan Stedman of Highland Geophysics for RGC Exploration during March, 1990 and January, 1991. The station spacing was five metres.

The data collected in March 1990 were from north-south lines 200 metres apart. They were modelled by the author on May 14 1990 to indicate the location of the source of the main anomaly. The modelling was carried out with no indication as to physical properties or other source parameters. The main anomaly was modelled as an ellipsoid (1000 metres long, 450 metres thick, 700 metres down dip, strike 110°, dip 60° south, with top at 357278 mE, 5360889 mN, depth 140 m). This body provided a reasonable fit to the main anomaly. A residual anomaly was modelled as a smaller ellipsoid (400 metres long, 200 metres thick, 80 metres down dip, strike 70°, dip 70° south, with top at 357600 mE, 5360970 mN, depth 30 m). Susceptibilities of the ellipsoid bodies were 0.11 and 0.04 SI units respectively.

Drill hole SY003 was drilled as a stratigraphic hole and to test a broad geochemical anomaly. Drill holes SY004 and SY005 were drilled to test for tin at depth and to test the interpreted magnetic sources (smaller and larger ellipsoid bodies respectively). SY004 did not intersect any significant magnetic material. SY005 intersected magnetite skarn between 429.1 and 507.4 metres, and massive pyrrhotite between 507.4 and 560.1 metres.

The ground magnetic data acquired in January 1991 comprised additional lines between the original ones spaced 200 metres apart, and extended some lines (at 400 metre spacing) further to the north.

To assist in the magnetic interpretation, susceptibilities were read every 2 metres along core recovered from drill holes SY003, SY004, and SY005.

Oriented samples were obtained from the magnetite and pyrrhotite zones in SY005 to measure magnetic properties (remanence) in more detail.

The collar coordinates and orientation of diamond drill holes are indicated in Table 1. Projections of these drill holes (except SY002) are plotted on all relevant plan and profile views of Figures 1 to 19.

Table 1 Diamond drillhole locations

Drillhole	Collar coordinates (m) AMG	Collar coordinates (m) Local grid	Inclination (approx)	Direction (approx)	Total depth (m)
SY001	357543 E, 5360204 N (approx)		-66°	211°	193.0
SY002	358889 E, 5361368 N	58897 E, 61374 N	-45°	197°	534.5
SY003	357786 E, 5360790 N	57785 E, 60764 N	-50°	189°	526.5
SY004	357635 E, 5360854 N	57650 E, 60821 N	-50°	340°	343.5
SY005	357201 E, 5360649 N	57200 E, 60600 N	-53°	351°	666.8

2 Magnetic Interpretation

2.1 Magnetic Properties

2.1.1 Susceptibility

Susceptibility readings from SY003, SY004, and SY005 are plotted as Figures 1, 2, and 3.

SY003 has a few isolated readings between 0.1 and 0.35 SI units between 166 and 265 metres, and a zone with susceptibility up to 0.9 SI units at depths between 473 and 486 metres.

A single anomalous reading of 0.54 SI units at depth 331 metres in SY004 corresponds to a magnetite bearing vein.

SY005 has zones with susceptibility of about 0.1 SI units between 240 and 256 metres depth and also between 296 and 304 metres depth. Between 380 and 578 metres, the susceptibility measurements range up and beyond the instrument limits of 1.9 SI units. This zone corresponds to intersections of magnetite skarn between 429.1 and 507.4 metres, and massive pyrrhotite between 507.4 and 560.1 metres.

2.1.2 Remanence

Oriented core samples from 427, 455, 464, and 471.5 metres down SY005 were subjected to detailed magnetic cleaning and measurements by CSIRO Division of Exploration Geoscience (Schmidt, 1991).

This study concluded that the magnetite would probably have a soft magnetic component aligned with the Earth's field, and a Koenigsberger ratio of about 1.

The pyrrhotite bearing sample (464 metres depth) possessed a stable and intense magnetisation with a declination of 166° (AMG) and an inclination of 45°. The sample has a Koenigsberger ratio of 7.7.

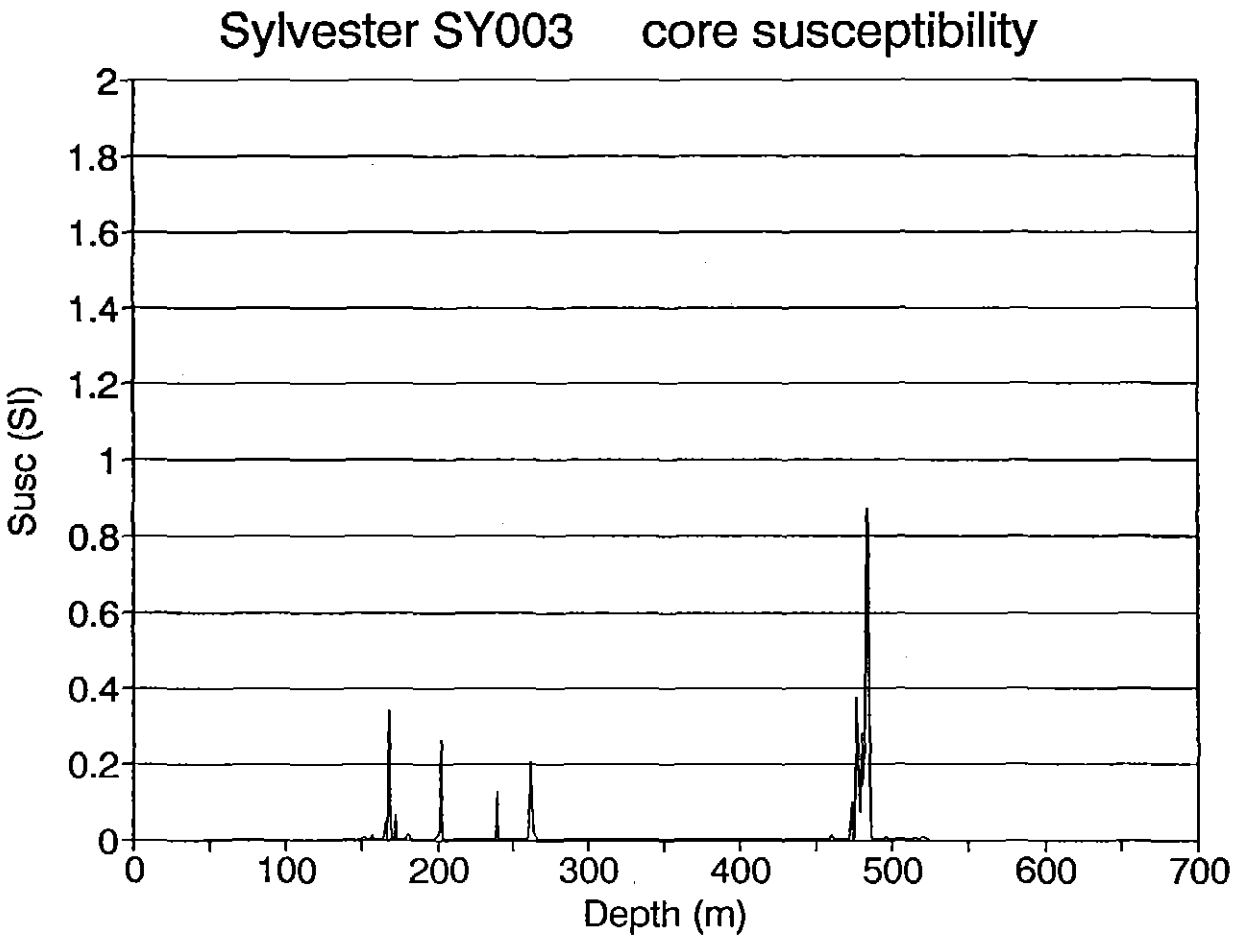


Figure 1 Magnetic susceptibility of drill core from SY003

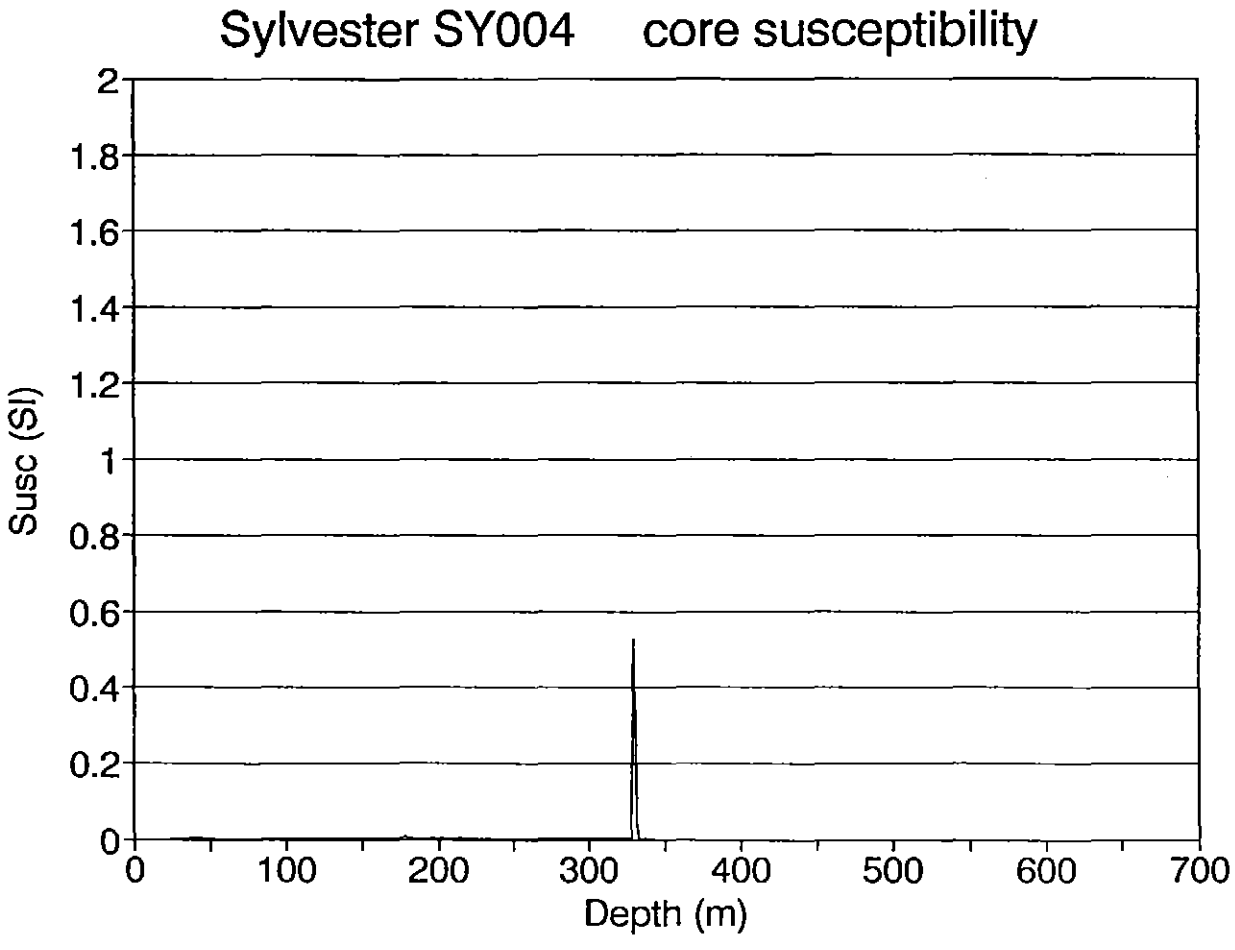


Figure 2 Magnetic susceptibility of drill core from SY004

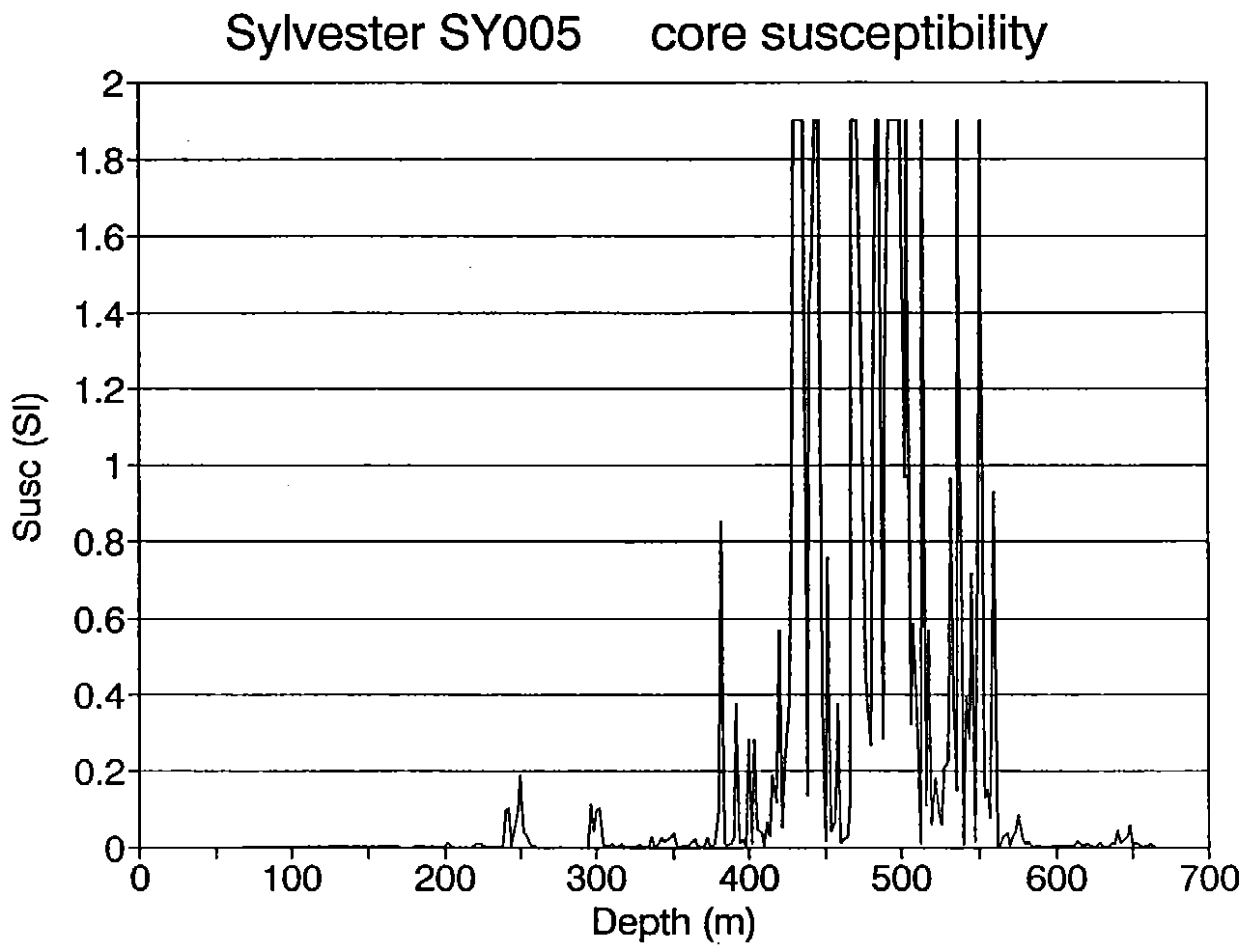


Figure 3 Magnetic susceptibility of drill core from SY005

2.2 Data Processing and Presentation

The data used in this study have been corrected for diurnal variation as recorded at a base station. All data points are located at their nominal grid locations, and have **not** been transformed back to absolute AMG coordinates. The error is several metres and should be taken into account when comparing these data in detail with other maps. The magnitude of the difference can be appreciated by reference to Table 1.

Figure 4 is a plan view showing the surface projections of the limits of each body, and the location of each tenth data point along all survey lines (except for the eastern-most line at 360200 mE). The observation points are shown as '+' symbols. Figures 5 and 6 show the same information, as well as the observed field with contour intervals of 50 and 10 nT respectively.

Figures 7, 8, and 9 show the area bounded by 357000 and 358300 mE and 5360000 and 5361500 mN in more detail at 1:10000 scale. The figures show contours of observed, calculated, and residual fields respectively. The residual plot also the location of the data points (every fourth point) used for the grid generation and contour presentations.

Figures 1 to 19 show all drill holes and modelled bodies projected onto the ground surface or onto the vertical plane of the section. Drill holes SY001, SY003, SY004, and SY005 are labelled 1, 3, 4, and 5, respectively. The main intersections of magnetite skarn and massive pyrrhotite in SY005 are also shown labelled as 8 and 9 respectively.

The reference point at the centre of the top of each body in the model is shown with a '+' sign, and the coordinates, dimensions, orientation, and physical properties are listed in Table 2.

Plates 1, 2, and 3 are colour reproductions from a computer monitor. Plate 1 shows contours of observed, calculated, and residual total magnetic intensity fields (25, 25, and 50 nT contours respectively). The colour presentations provide a better appreciation of the relative amplitudes of the main and other anomalies.

Plate 2 shows observed and calculated magnetic profiles on lines 7000E, 7200E, 7300E, 7400E, and 7500E. Plate 3 shows observed and calculated magnetic profiles on lines 7600E, 7700E, 7800E, 7900E, and 8000E. On these Plates, the green profile represents the observed field readings, the red profile the calculated field, and the blue profiles are the components due to individual bodies. These plates show similar information to Figures 7 to 19, in a less quantitative but more convenient manner. The stacked profiles of Plates 2 and 3 show all measured points and so display the short wavelength anomalies (and noise) better that Figures 10 to 19.

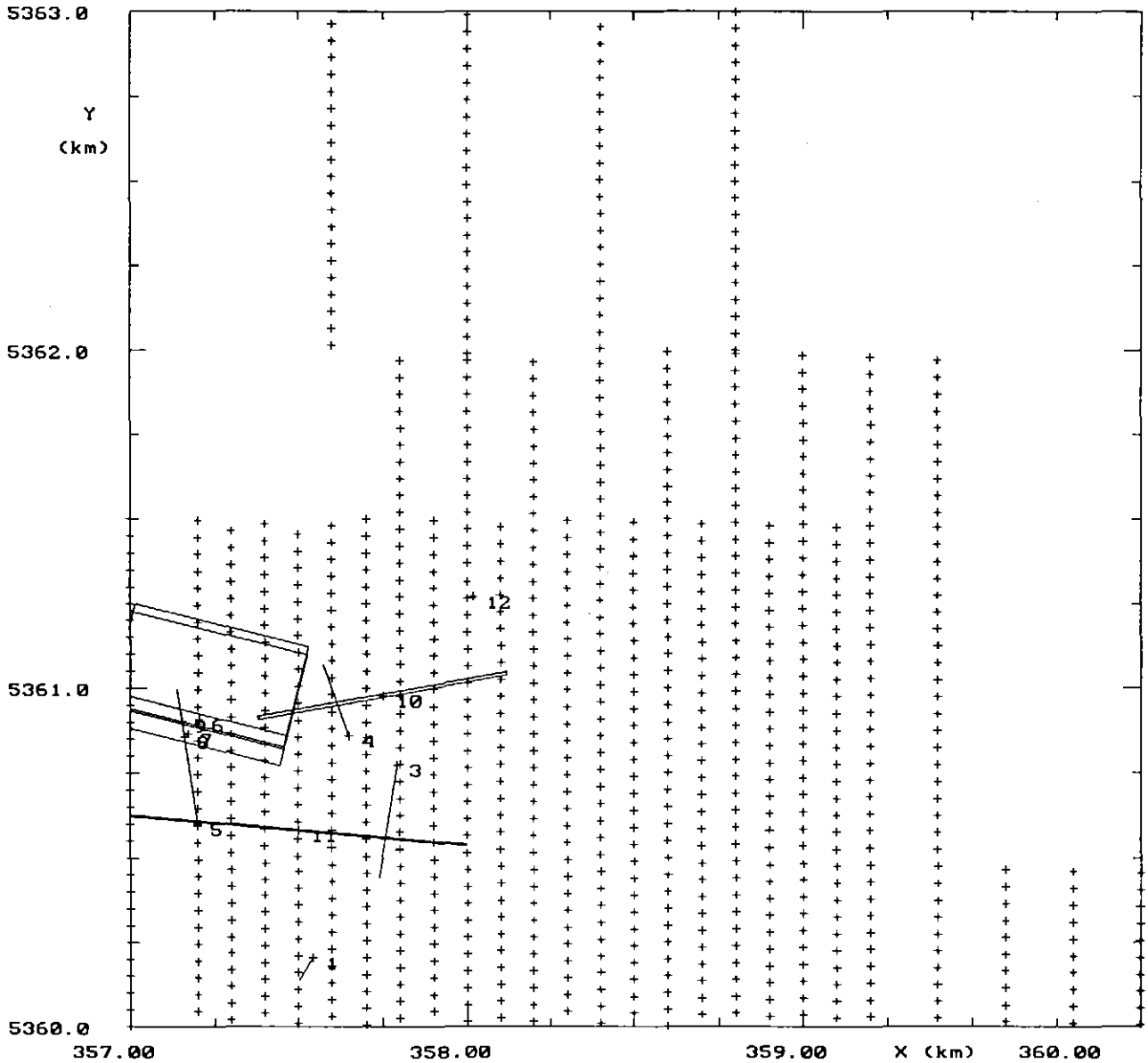


Figure 4 Sylvester survey grid 1:20 000 scale

5 cm

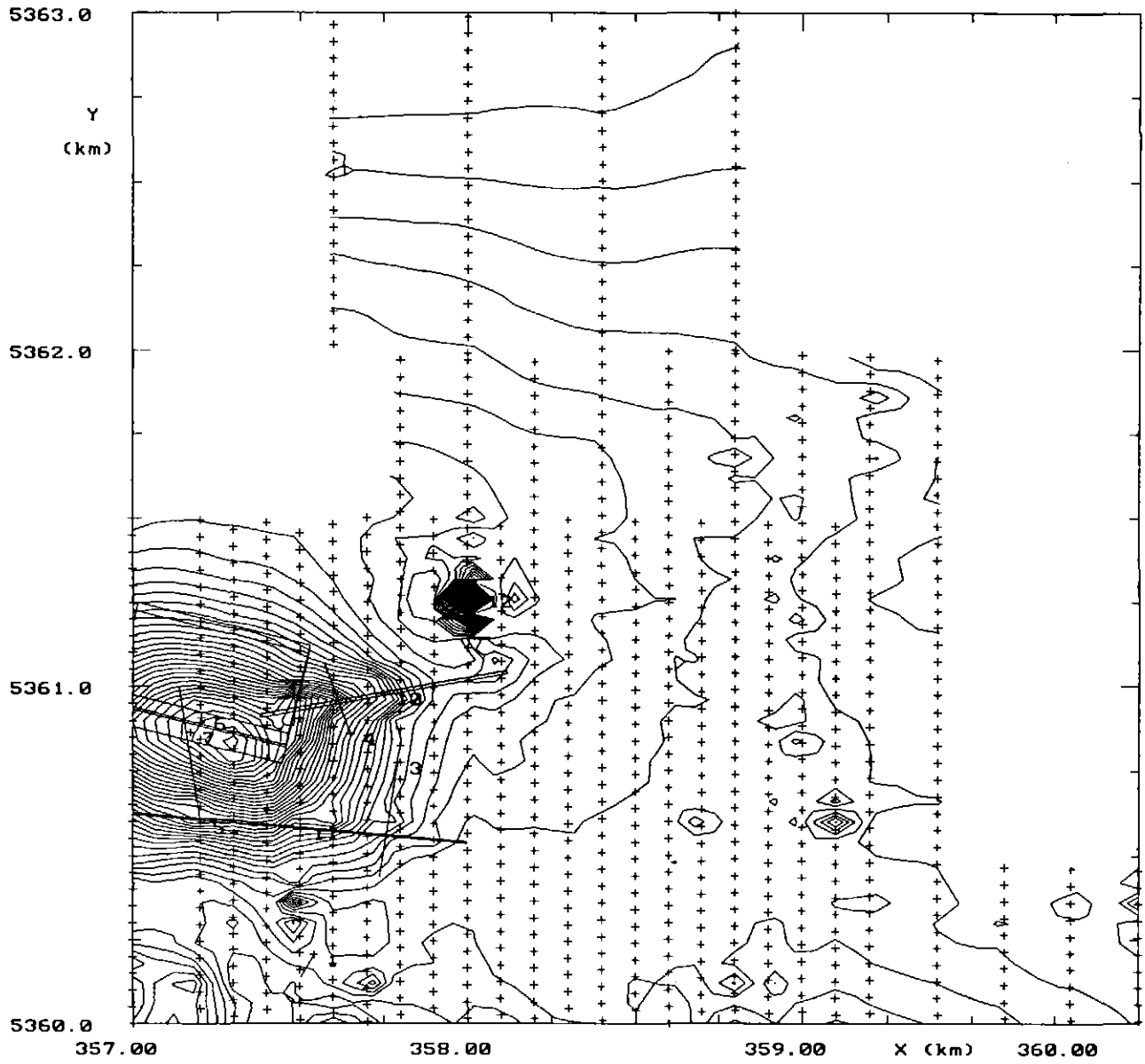


Figure 5 Observed magnetic field, 50 nT contours, 1:20 000 scale

5 cm

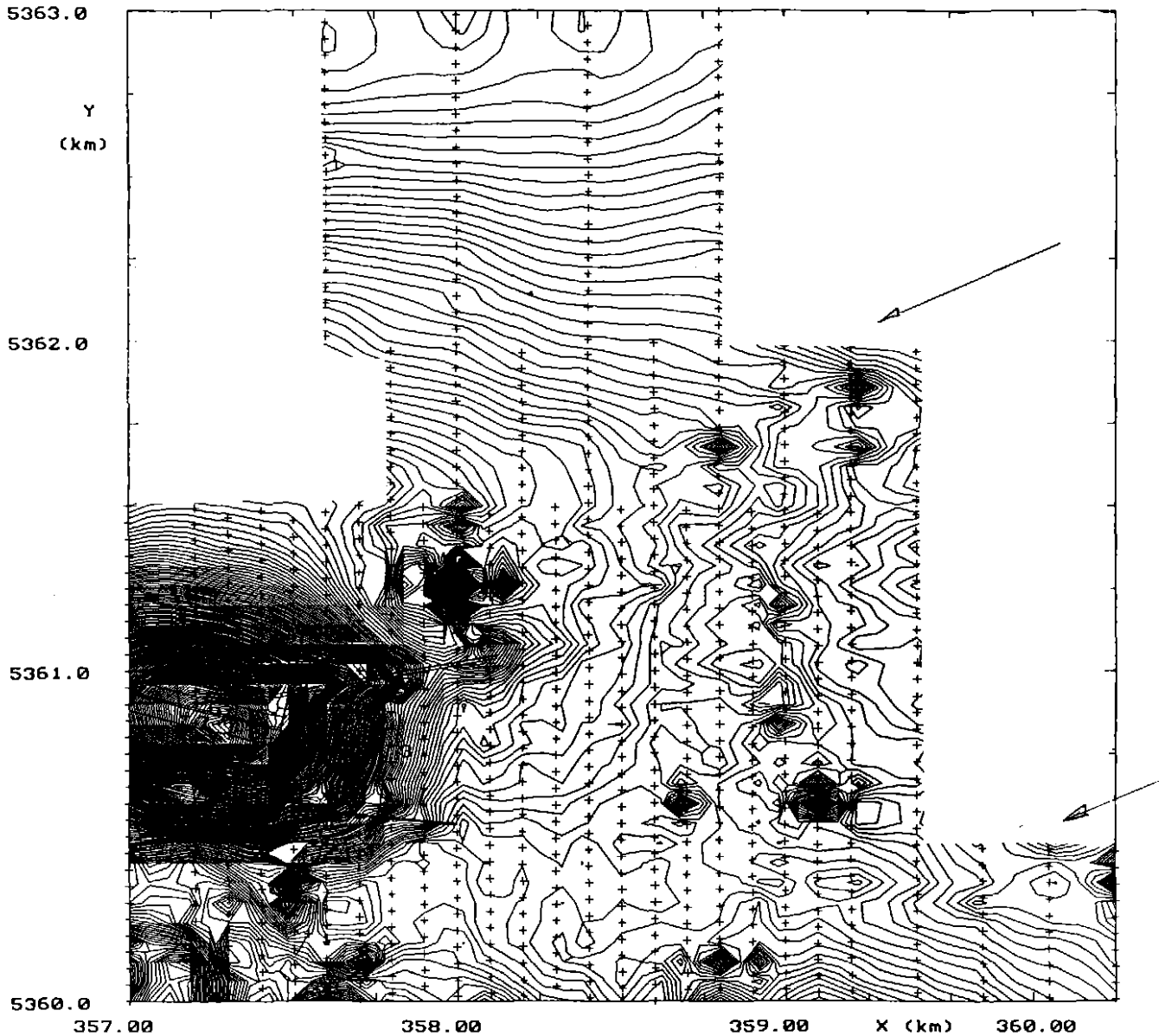


Figure 6 Observed magnetic field, 10 nT contours, 1:20 000 scale

5 cm

2.3 Modelling

Most of the more prominent anomalies have been computer modelled to provide a better appreciation of the shape and nature of their sources. It is stressed that the models are not unique, and that various simplifying assumptions have been made in terms of the geometries of the bodies employed in the models.

For the magnetic modelling, mean susceptibilities were determined by averaging the readings from measurements made at two metre (or in some cases, one metre) intervals on drill core (see Figures 1, 2, and 3). Remanent magnetic properties were assigned using the results of Schmidt (1991).

Magnetite was modelled using a susceptibility of 1.0 SI units, with a Koenigsberger ratio of 1.0 (remanent amplitude = 50 amps/metre), and with remanence in the same direction as the Earth's field. It should be noted that this is equivalent to disregarding remanence and doubling the susceptibility.

Pyrrhotite was modelled using a susceptibility of 0.3 SI units, with a Koenigsberger ratio of 7.7 (remanent amplitude = 115 amps/metre), and with remanence in a downward direction to the south.

Data from all survey lines have been quantitatively interpreted using a 3-dimensional modelling package (Almond, 1990). Units on all profile plots are metres and nanoTeslas, with arbitrary origins. The Earth's main field has been taken as 62371 nT amplitude, inclination -72.4°, and declination 12.7°.

The results of the profile modelling studies are presented as Figures 10 to 19. The modelled profiles are oriented 'looking West'. Each of these figures comprises a profile showing the observed and computed total magnetic fields and a cross section showing all bodies having some effect on that profile and drill holes within about 100 metres of the line. The projections of the bodies are shown as 'wire frame' representations, with the actual intersection of the profile plane shown as a shaded area. The observations are shown as '+' symbols and the computed magnetic anomaly field as a solid line. In some cases, anomaly components due to individual bodies are also superimposed as solid lines, numbered with their respective body numbers. The scales of the figures are all identical to give a better appreciation of anomaly amplitudes and body dimensions. In each profile, a (separate and arbitrary) linear regional has been removed from the observed field.

Table 2 lists the parameters used to define each of the bodies used in the model. The reference point is at the centre of the upper surface of the body. All distances are metres. Susceptibility is in SI units. Remanence is in amps/metre. Depths are positive down, relative to survey elevation (2 metres above ground level). Dips are from the south (ie bodies 6 and 7 dip 80° to the north). The only body with a non-zero plunge is body 10 which plunges down to the east at 3°.

Table 2 Modelled Body Characteristics - Tabular Prisms

No	Reference point			Strike	Dip	width	length	height	Susc	Remanence		
	mE	mN	depth	deg	deg	m	m	m	SI	A/m	Az.	Inc
6	357203	5360908	253	104	100	35	530	1550	.3	115	166	45
7	357170	5360865	274	104	100	50	580	1650	1.0	50	13	-72
10	357750	5360978	60	80	90	10	750	40	0.5	10	166	45
11	357500	5360580	30	95	90	5	1000	5	0.5	10	315	-70
12	358020	5361270	2	0	90	8	8	30	5.0	150	166	45

Body 12 is very strongly magnetic and interpreted to occur at the ground surface. It is probably either a cultural feature, or an outcropping skarn.

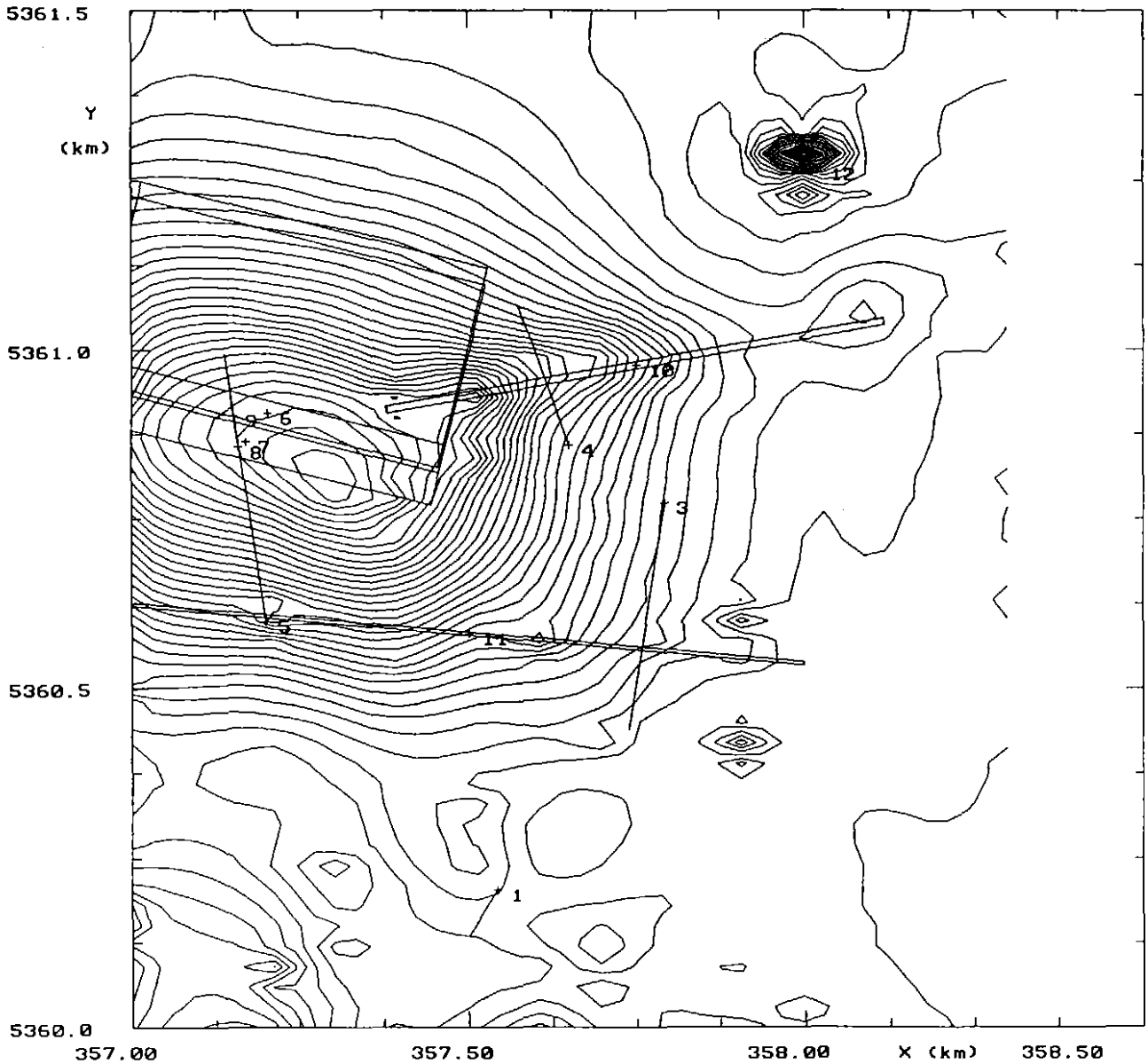


Figure 7 Observed magnetic field, 50 nT contours, 1:10 000 scale

5 cm

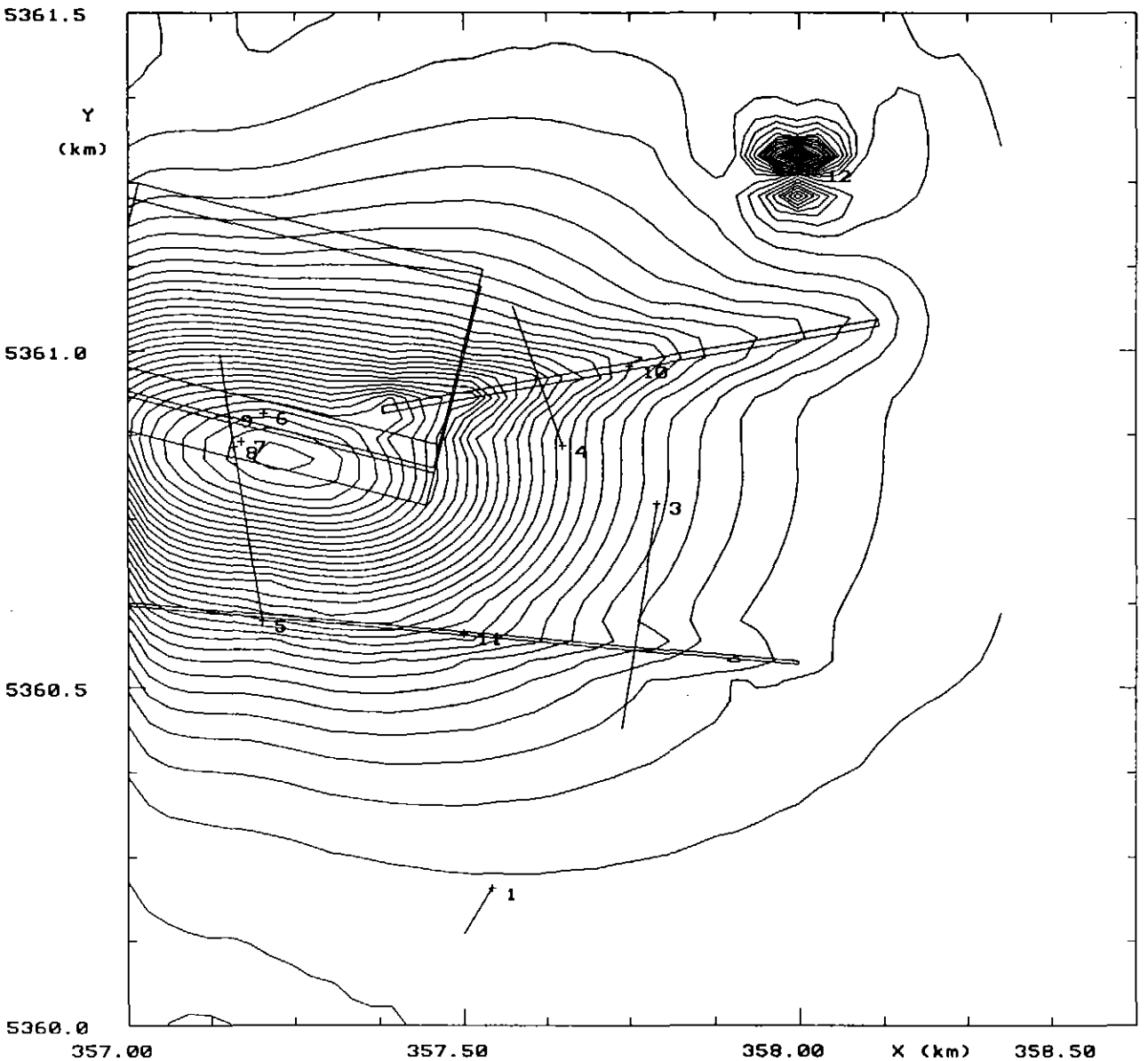


Figure 8 Calculated magnetic field, 50 nT contours, 1:10 000 scale

5 cm

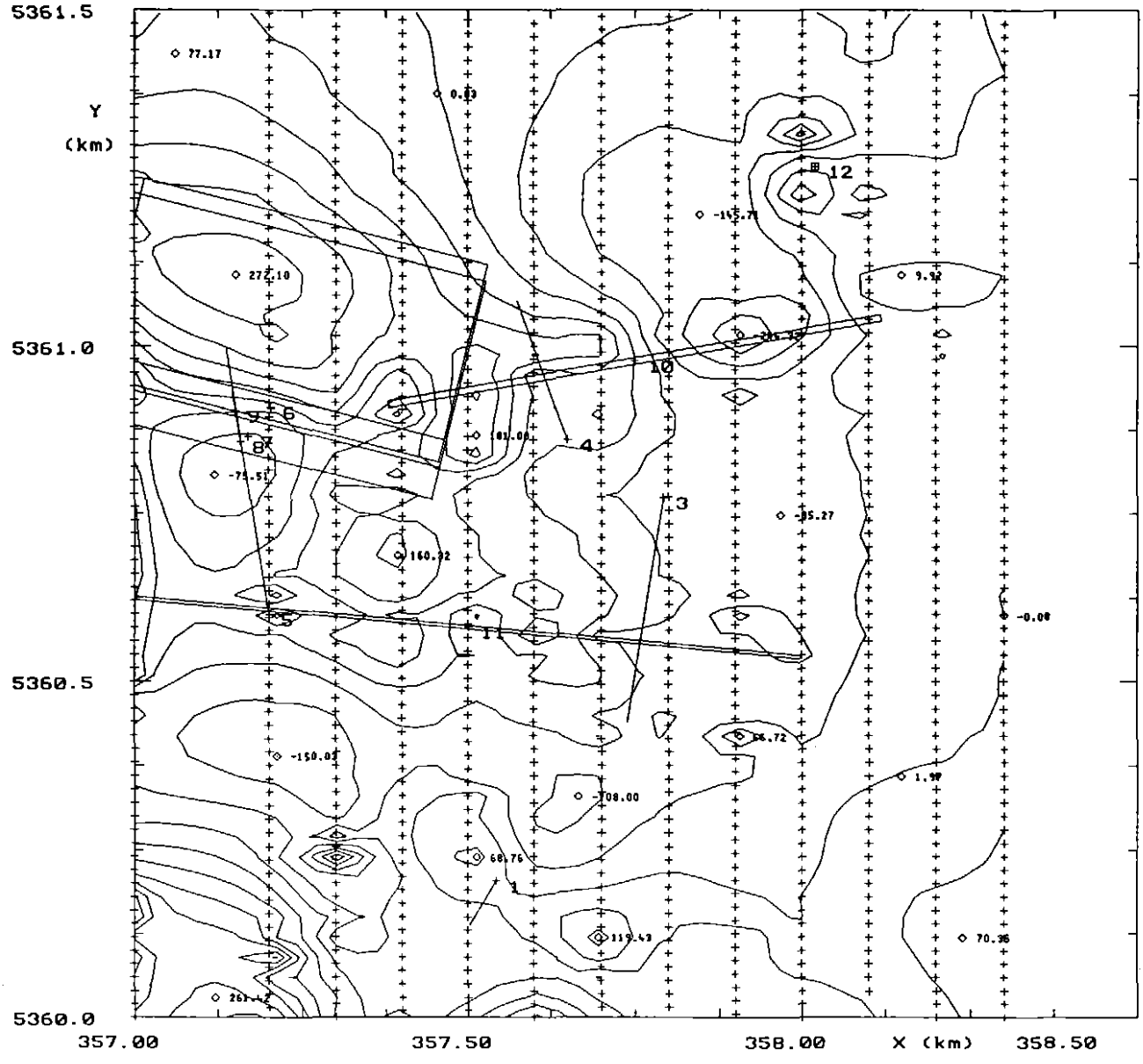


Figure 9 Residual magnetic field, 50 nT contours, 1:10 000 scale

5 cm

2.4 Linear Anomalies

Figure 6 has been contoured at 10 nT interval to show two distinct and parallel breaks in slope trending to 65°, and bounding a flatter region with short wavelength noise between them.

Body 11 represents a shallow linear feature whose anomaly is apparent on quite a few lines. This is possibly cultural in origin (fence line?) or alternatively may correspond to a fault trace or mafic dyke. The source dimensions used in the model were based on gridded data and appear to be too large when the profile data is inspected.

Body 10 is a linear feature, extending for about 750 metres. It is interpreted to have a shallower source in the west. The anomaly shape varies on successive profiles indicating substantial variation in source dimensions or properties along strike. The anomaly persists from lines 7400E to 8100E but is best developed on lines 7500E to 7800E where it is interpreted as due to a body with width 10 metres and height 40 metres at a depth of 60 metres. Drillhole SY004 would have passed below the interpreted source. Lines 7300E to 7600E indicate another adjacent but smaller anomaly of similar wavelength, trending to 70°.

2.5 Major Magnetic Sources

The individual body profiles due to bodies 6 and 7 are plotted on Figures 10 to 15, 17, and 18. These profiles illustrate the effect of the remanent magnetism in the pyrrhotite (body 6). The bodies have very similar dimensions and orientation, but the dominant remanent component in the pyrrhotite produces a substantial negative anomaly which tends to cancel out much of the anomaly due to the magnetite. It also produces a broader positive anomaly further to the south. The overall effect of the pyrrhotite is to reduce the amplitude of the main anomaly and shift the peak to the south. Thus any departure in the relative sizes of the two bodies (from that indicated by the intersection in SY005) will have a substantial effect on the main anomaly.

The main magnetic anomaly, centred at 357500 mE, 5360800 mN, has an amplitude of about 1500 nT. Most of this anomaly can be explained by two bodies (6 and 7) with magnetic properties and positions consistent with results obtained from drillhole SY005. A broad residual anomaly (Figure 9) has an amplitude of up to 300 nT, and two local maxima about 300 metres north of the main anomaly peak and about 150 metres southeast of the main peak. The residual suggests that an additional magnetic source may be present further to the north of bodies 6 and 7. For example, a body with dimensions 20 by 200 by 500 metres (width by length by height) with centre at 357170 mE, 5361057 mN, 280 metres depth and with identical physical properties, strike, and dip to body 7 could be invoked to explain most of the residual anomaly. Alternatively, the residual could be reduced substantially by increasing the dimensions of the magnetite body or decreasing the size of the pyrrhotite body.

Because of short wavelength noise and interference from smaller anomalies, and because bodies 6 and 7 tend to cancel out each others anomalies, it is not possible to define the bodies very precisely. It is recommended that the model be reviewed when better control is available from drilling, with the view to better defining bodies 6 and 7 and analysing any residual anomaly.

130407

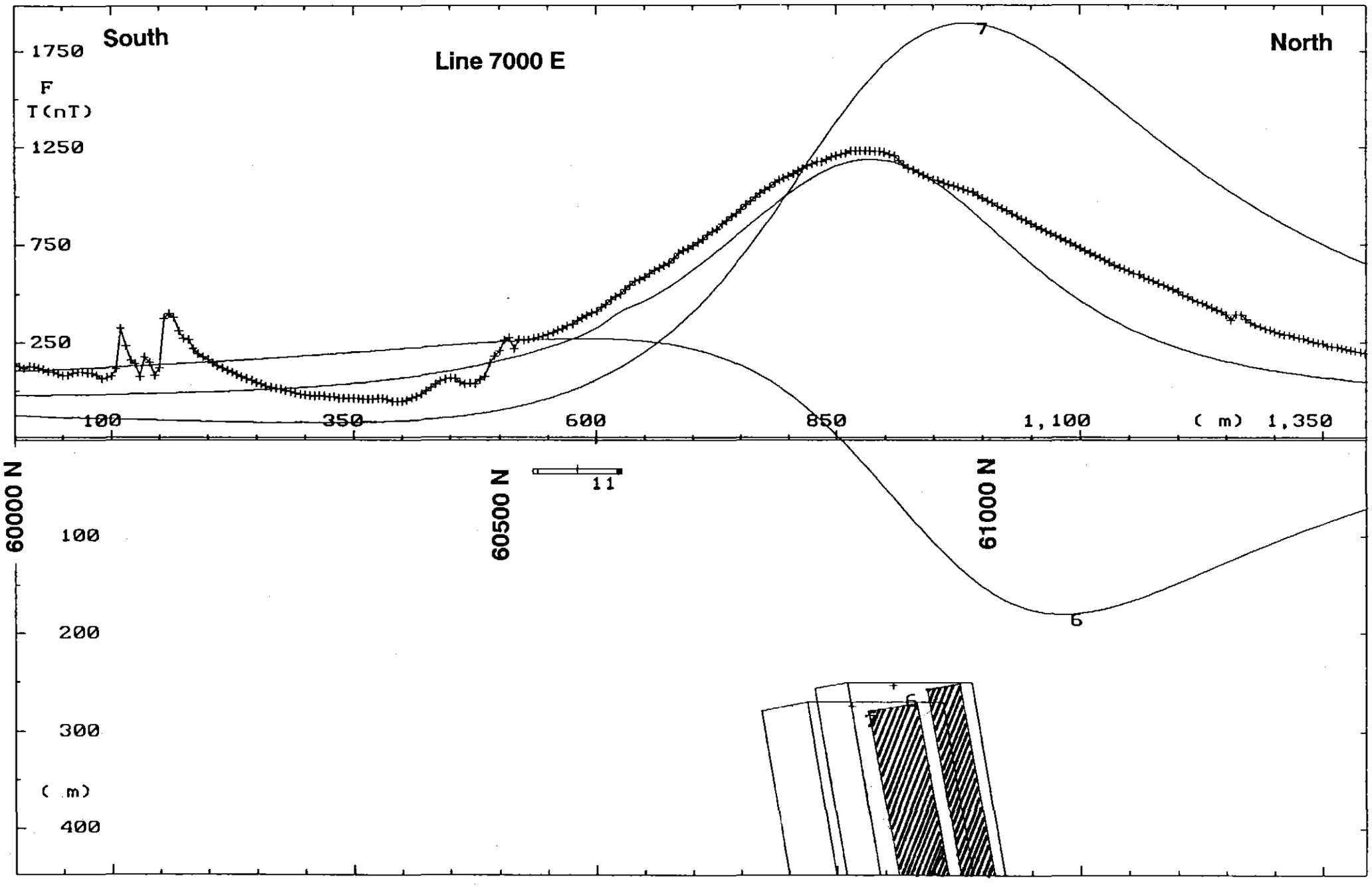


Figure 10 Observed and modelled profile 7000 mE 1:5 000 scale

5 cm

130409

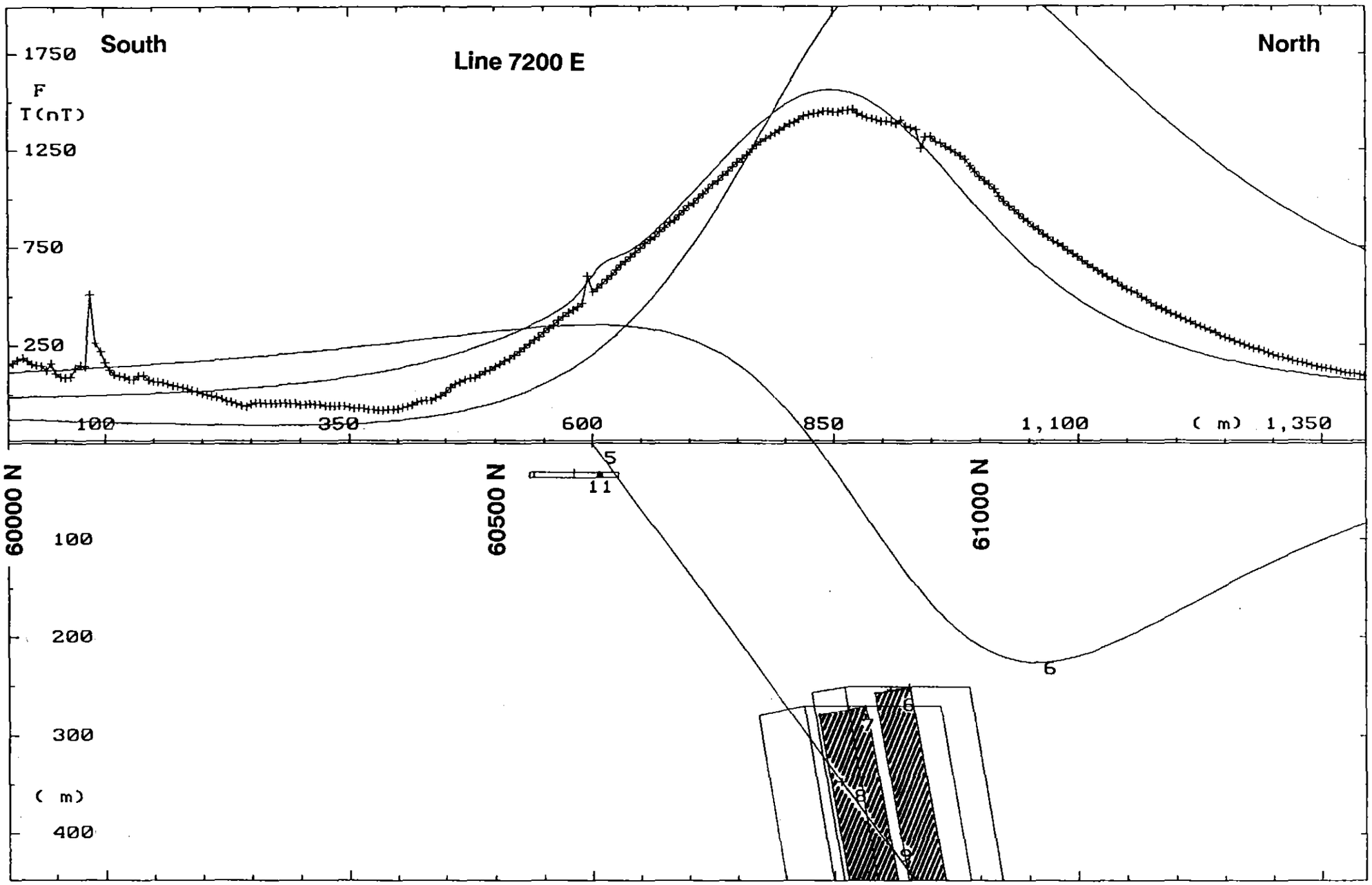
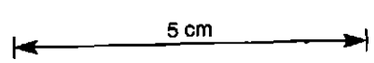


Figure 11 Observed and modelled profile 7200 mE 1:5 000 scale



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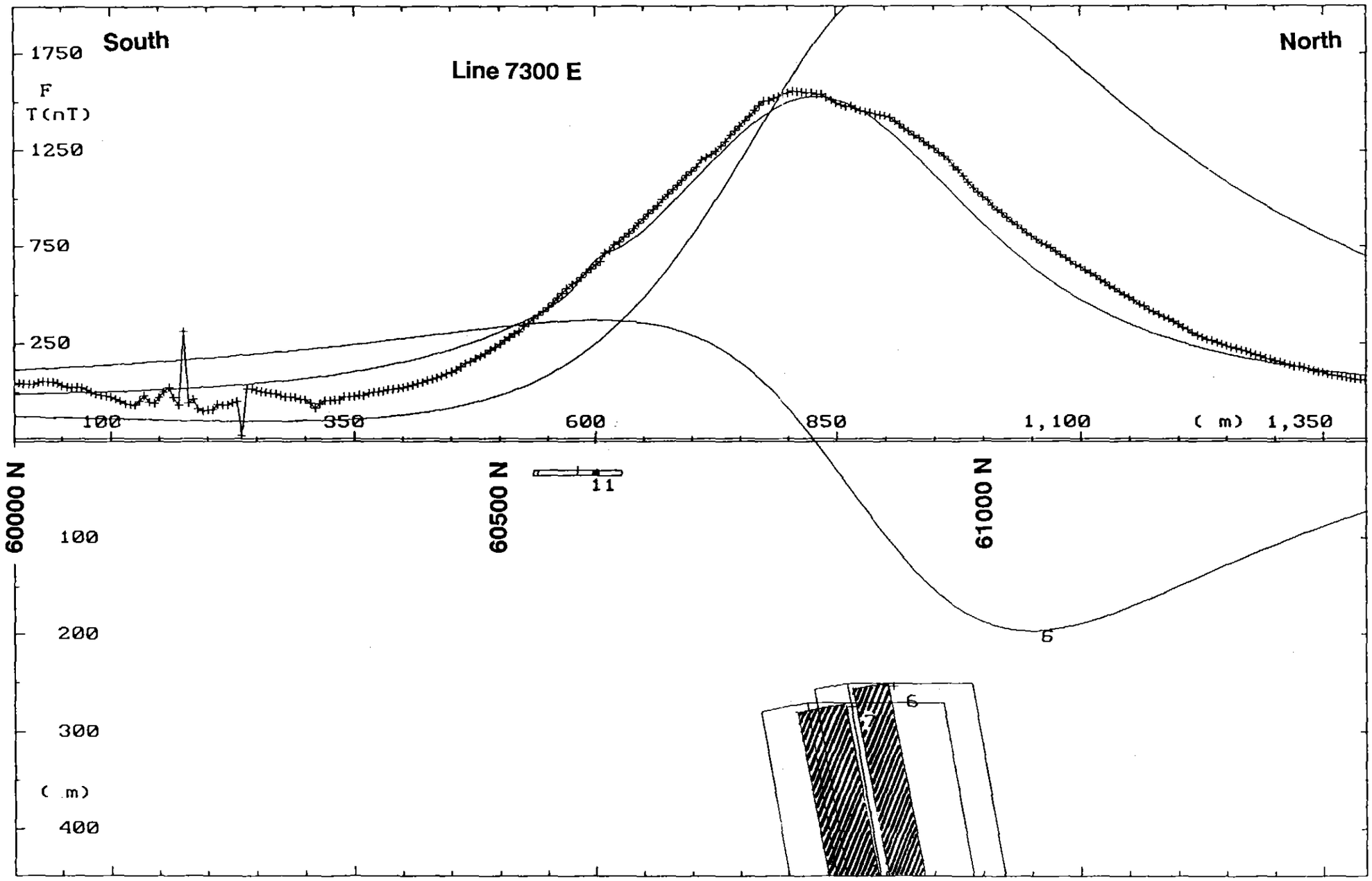


Figure 12 Observed and modelled profile 7300 mE 1:5 000 scale

5 cm

130410

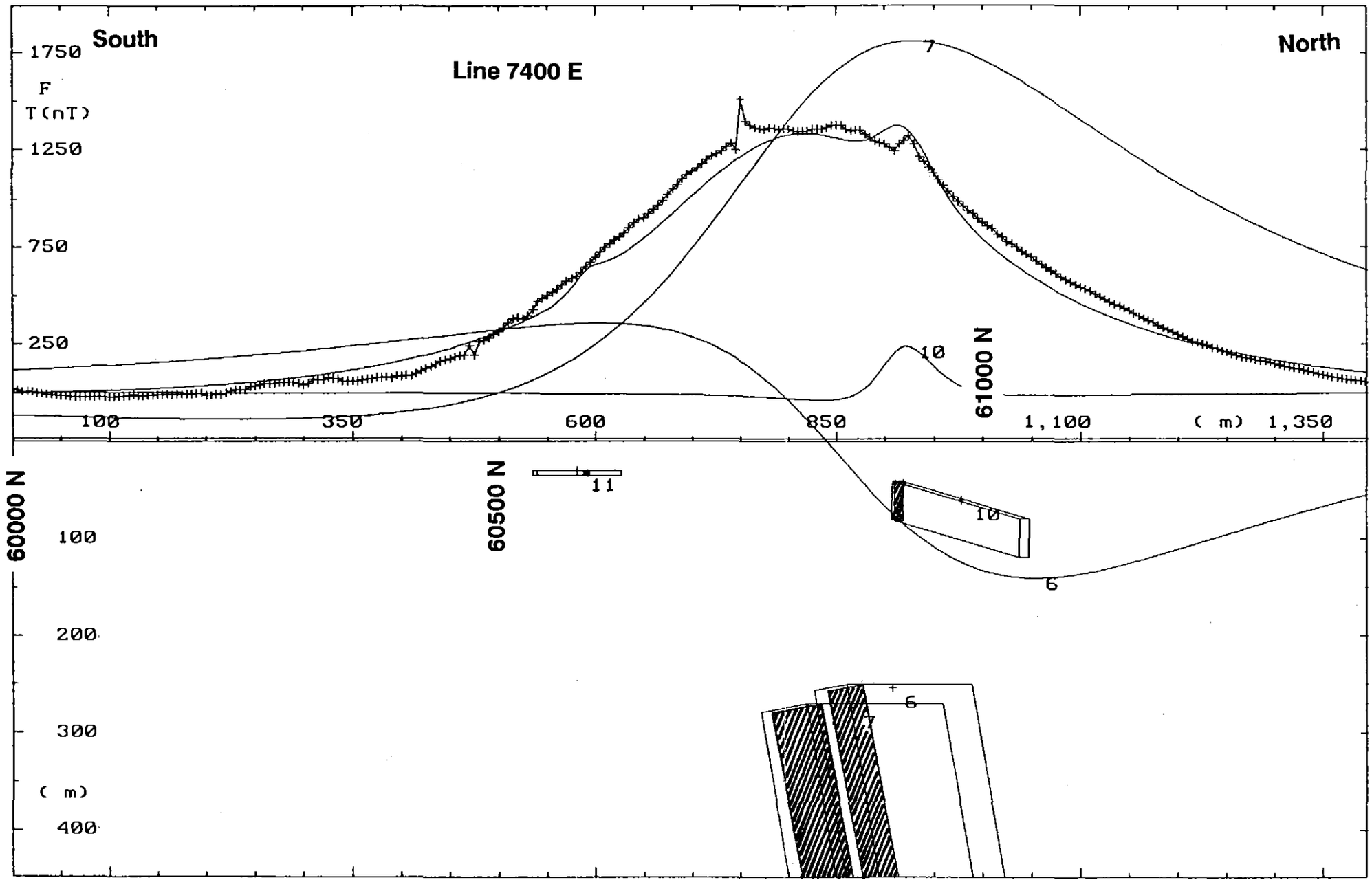


Figure 13 Observed and modelled profile 7400 mE 1:5 000 scale

5 cm

130411

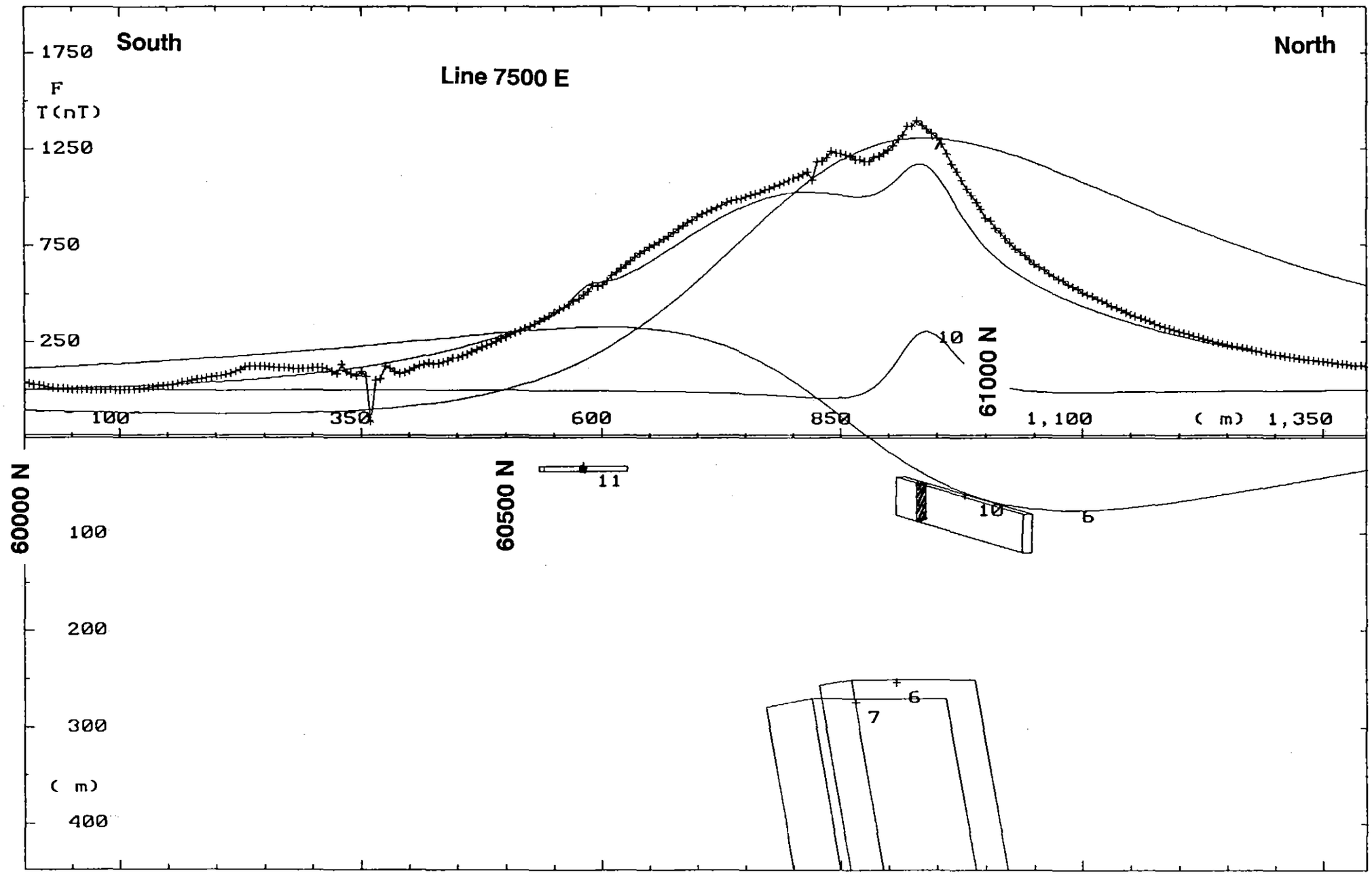


Figure 14 Observed and modelled profile 7500 mE 1:5 000 scale

5 cm

130412

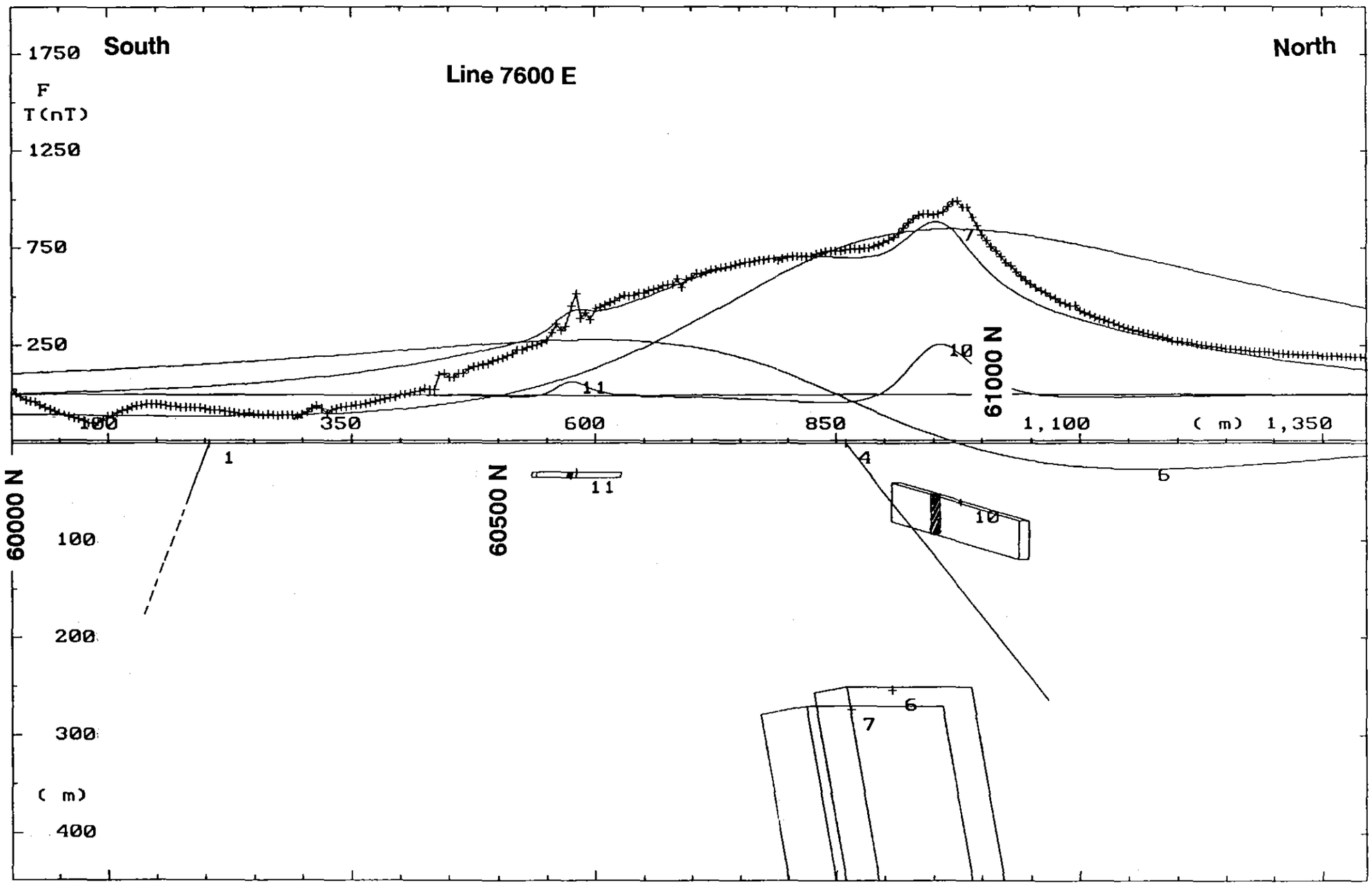
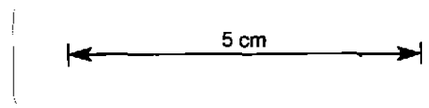


Figure 15 Observed and modelled profile 7600 mE 1:5 000 scale



130413

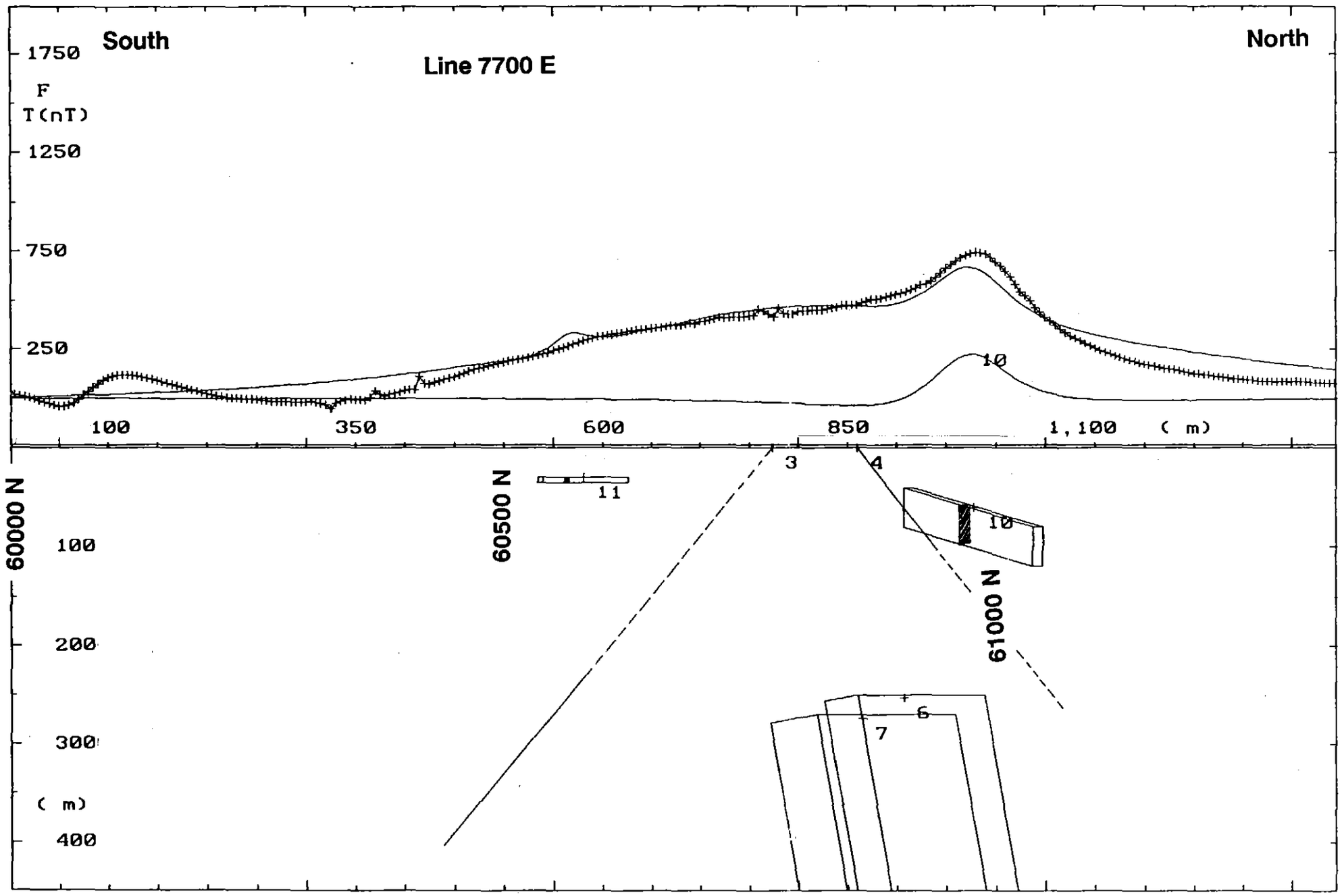
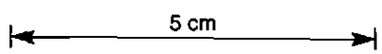


Figure 16 Observed and modelled profile 7700 mE 1:5 000 scale



130414

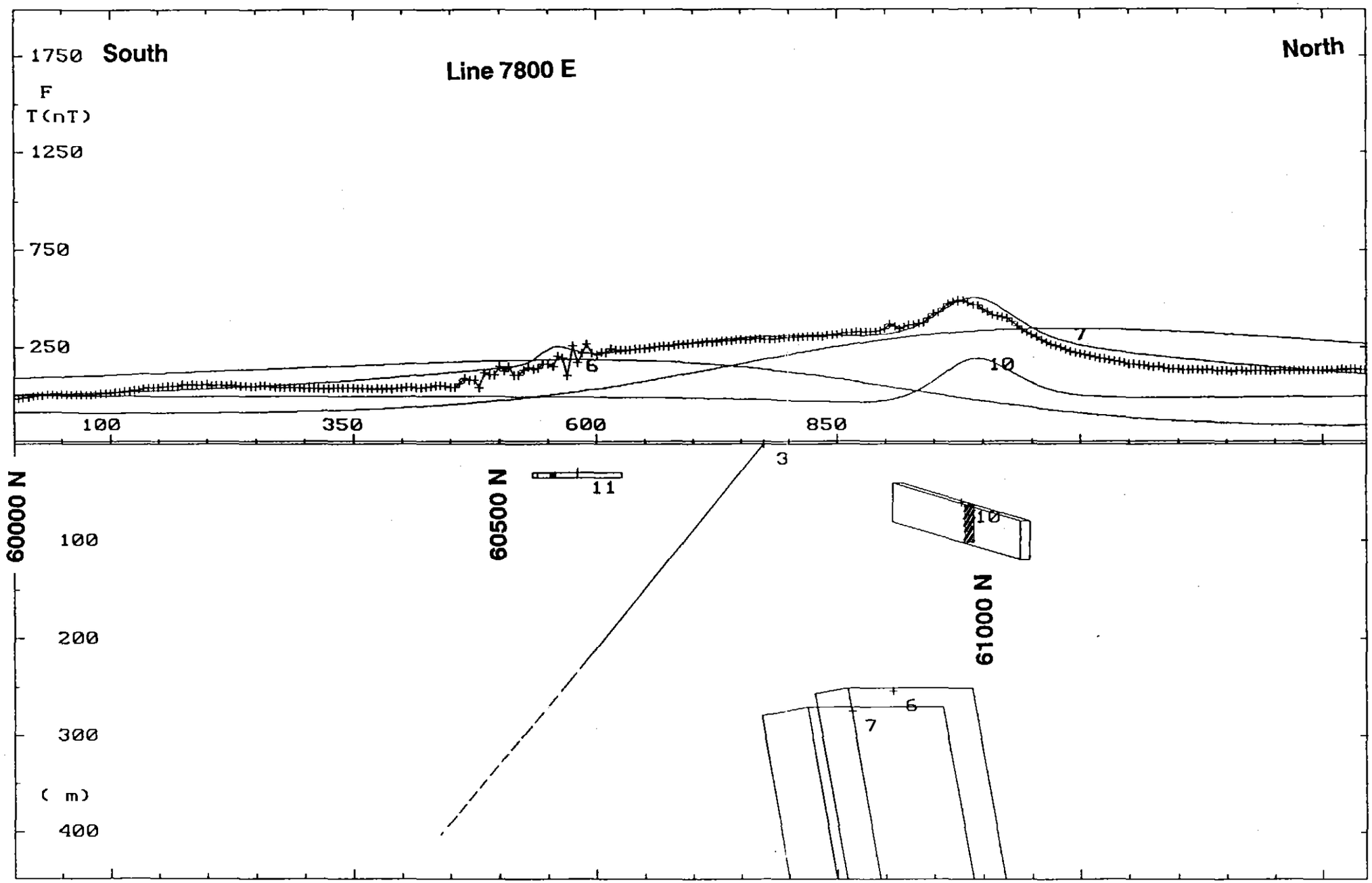


Figure 17 Observed and modelled profile 7800 mE 1:5 000 scale

5 cm

130415

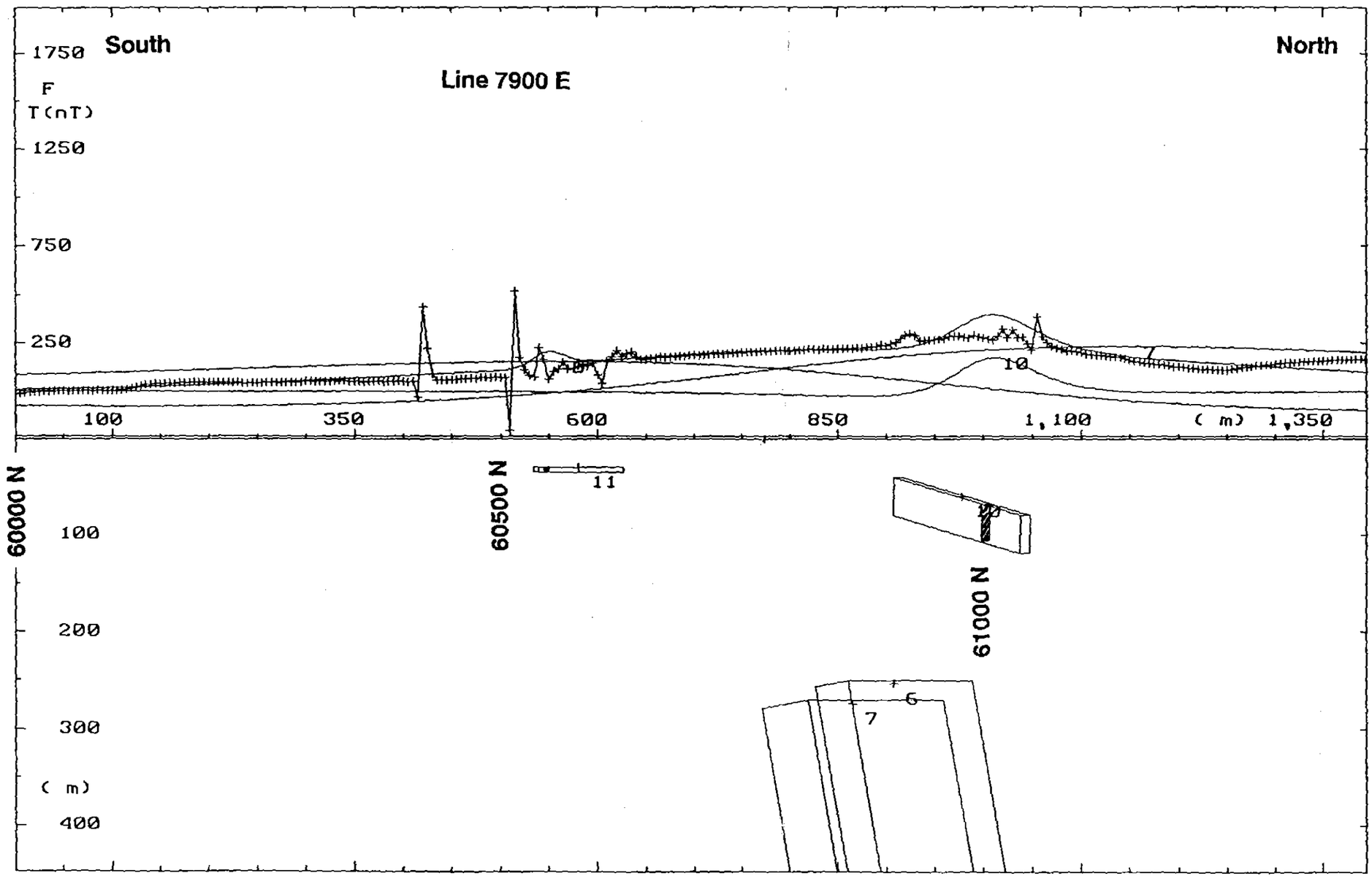


Figure 18 Observed and modelled profile 7900 mE 1:5 000 scale

5 cm

130410

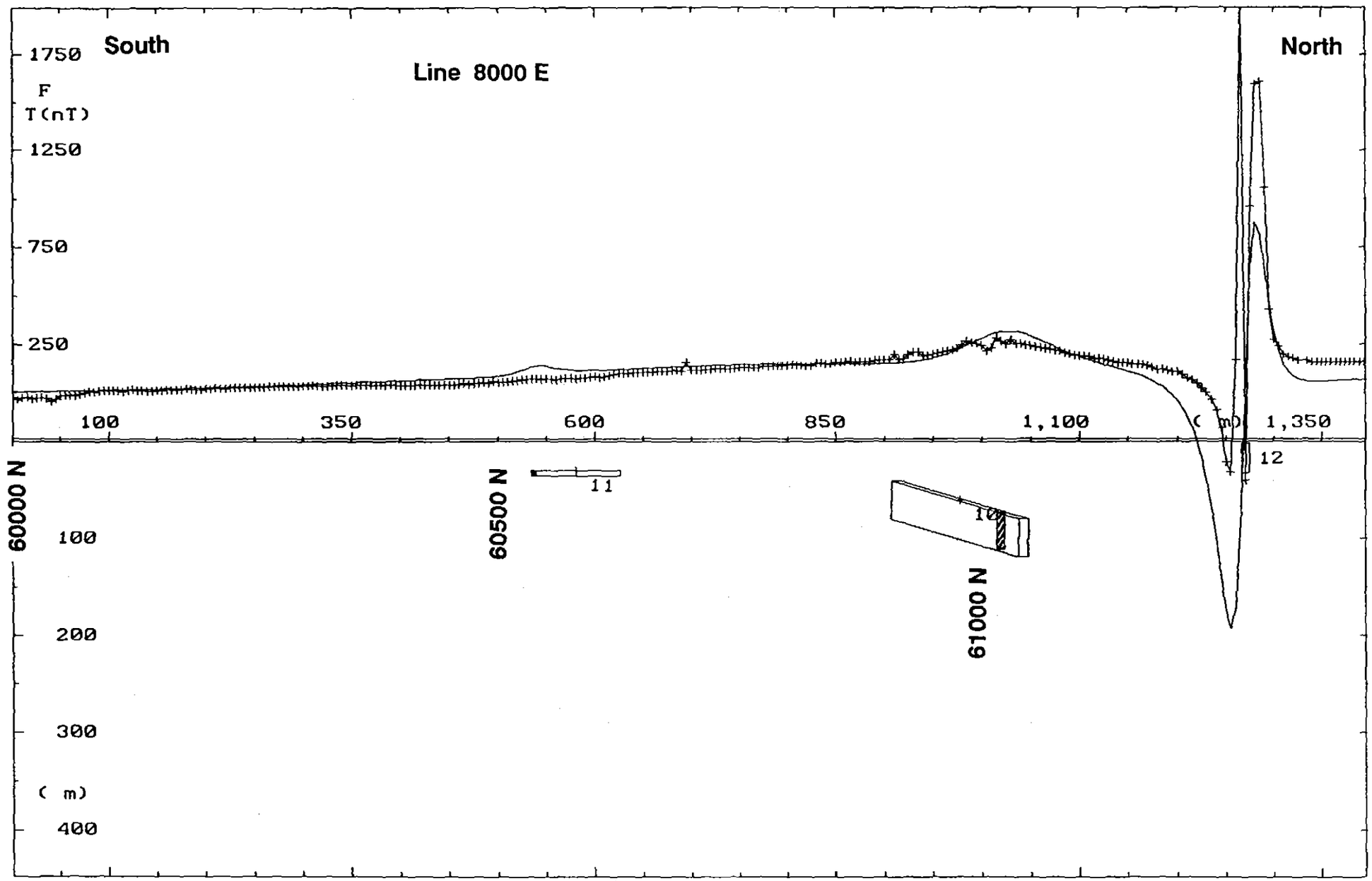


Figure 19 Observed and modelled profile 8000 mE 1:5 000 scale

5 cm

3 Conclusions

Susceptibility and remanence measurements have been used to constrain parameters for magnetic modelling. The inclusion of this control has radically changed the position, attitude, and dimensions of the magnetic sources used in an earlier model.

The model is very dependent on the measurements from a single pyrrhotite sample. Analysis of additional oriented samples of pyrrhotite (or downhole measurements?) may be necessary to further improve control on the model.

Modelling has indicated that a substantial part of the main magnetic anomaly can be explained by magnetite and pyrrhotite bodies intersected in drillhole SY005. The bodies are interpreted to have near vertical (80° north) dips and dimensions of a few tens of metres by a few hundred metres, and substantial down-dip extent. The top of the interpreted pyrrhotite body is at a depth of 253 metres, with the eastern edge centred at 7460 mE, 60840 mN and the western edge outside of the survey area. This eastern part of the anomaly could be tested with a drill hole on line 7400E, designed to intersect the body at a depth of about 300 metres. As the interpretation suggests a near vertical dip, a shallow inclined hole is recommended.

A linear anomaly trending to 80° has been defined on several survey lines and is interpreted to represent a tabular body with width 10 metres, height 40 metres, depth 60 metres.

4 Recommendations

1 Further drilling should aim to better define the extent of any mineralisation associated with the main magnetic sources (bodies 6 and 7), and with the smaller source of a linear anomaly (body 10). The easternmost extent of the interpreted pyrrhotite body should be tested by drilling an inclined hole on line 7400E to intersect the body at about 300 metres depth.

2 Further refinement of the magnetic model should be undertaken when additional information becomes available from drilling and other work.

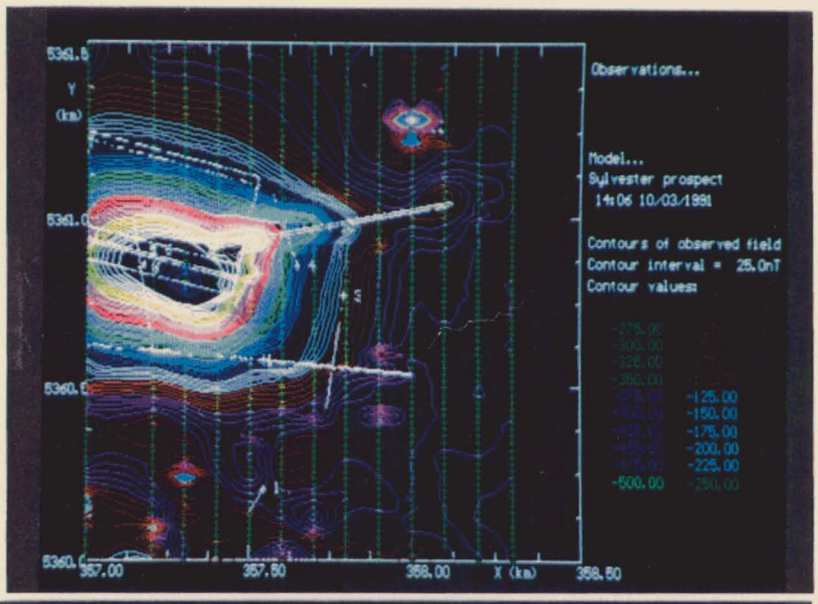
5 References

Almond, R.A., 1990, POTENT. Interactive modelling and interpretation of magnetic and gravity data. Users Guide by PC Potentials.

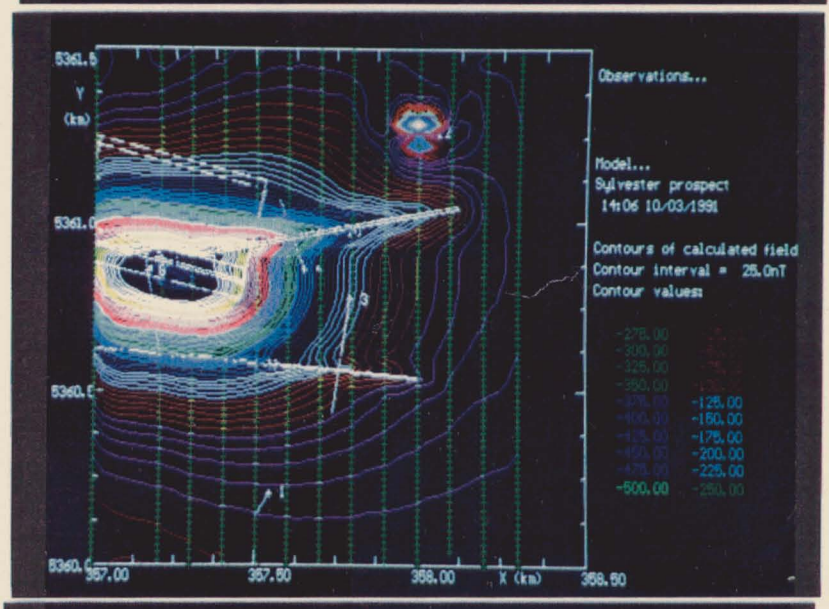
Schmidt, P., 1991, Magnetic Properties of Magnetite/Pyrrhotite Skarns. Sylvester Prospect, Zeehan, Tasmania. Unpublished Report by CSIRO Division of Exploration Geoscience for RGC Exploration.

Wyatt, B.W., 1990, Interpretation of Aeromagnetic data from EL 42/87 (Zeehan). Unpublished report by Wyatt & Associates for RGC Exploration Pty Limited.

Observed field



Calculated field



Residual field

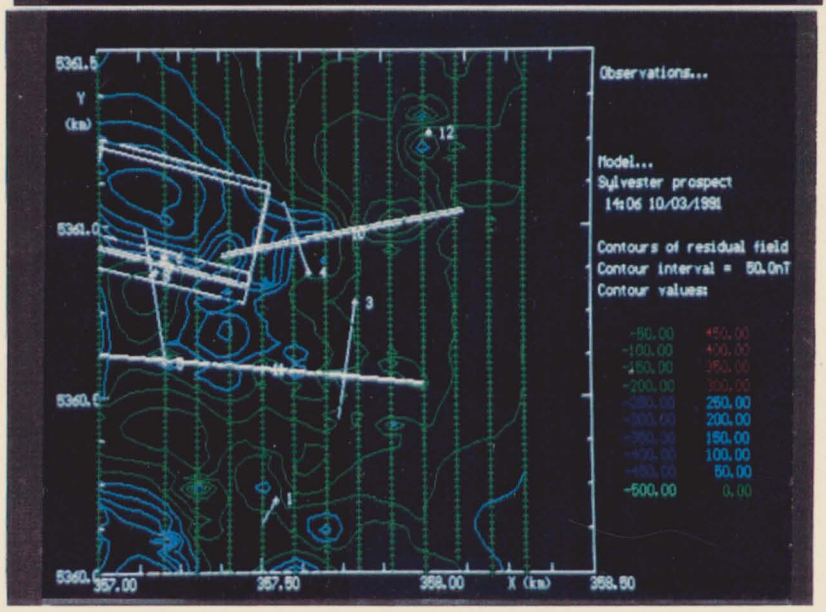


Plate 1 Observed, calculated, and residual magnetic fields, 1:22 000 scale

5 cm

Line 7000E

Line 7200E

Line 7300E

Line 7400E

Line 7 500E

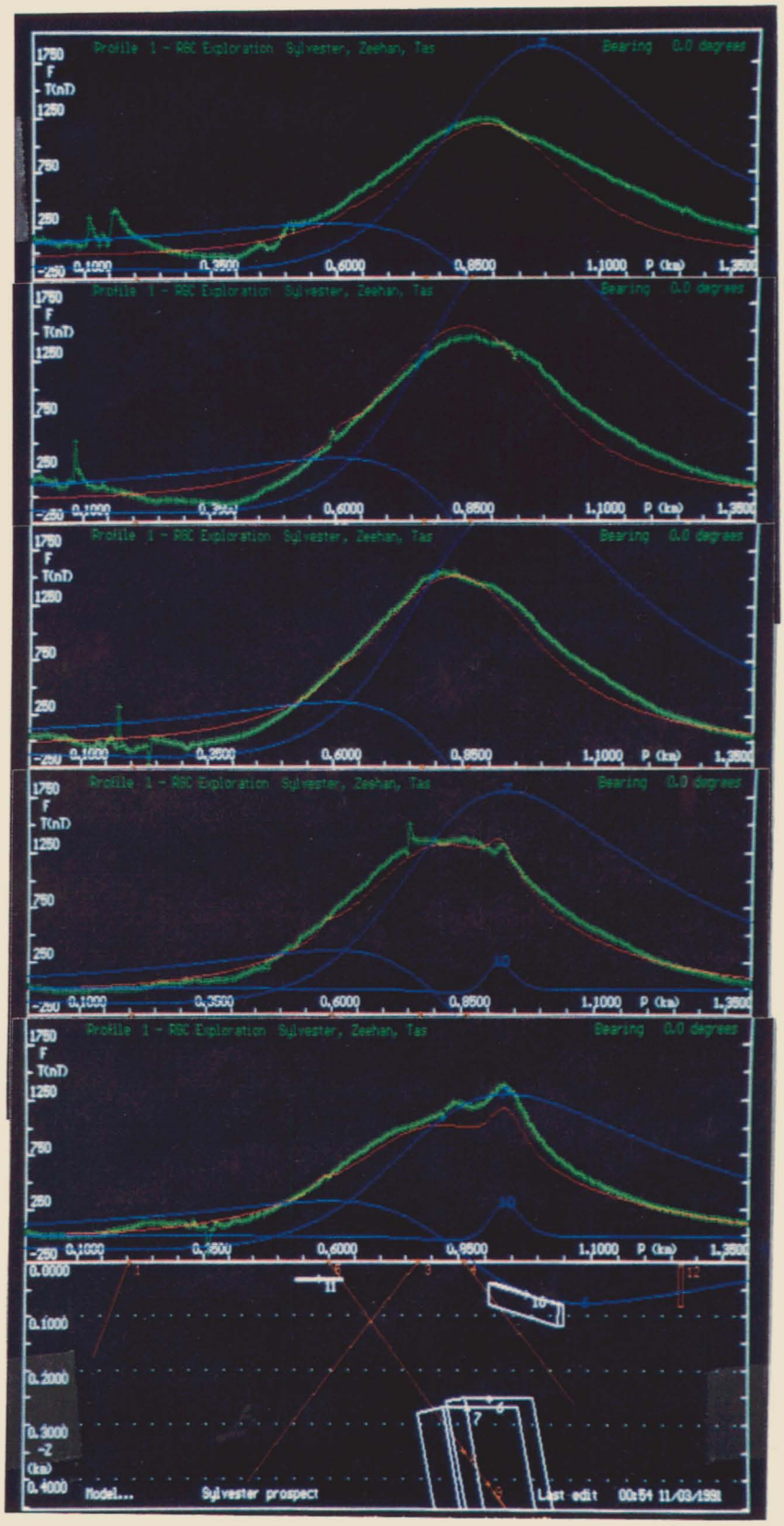


Plate 2 Profiles - lines 7000E, 7200E, 7300E, 7400E, 7500E 1:13 400 scale

5 cm

Line 7600E

Line 7700E

Line 7800E

Line 7900E

Line 8000E

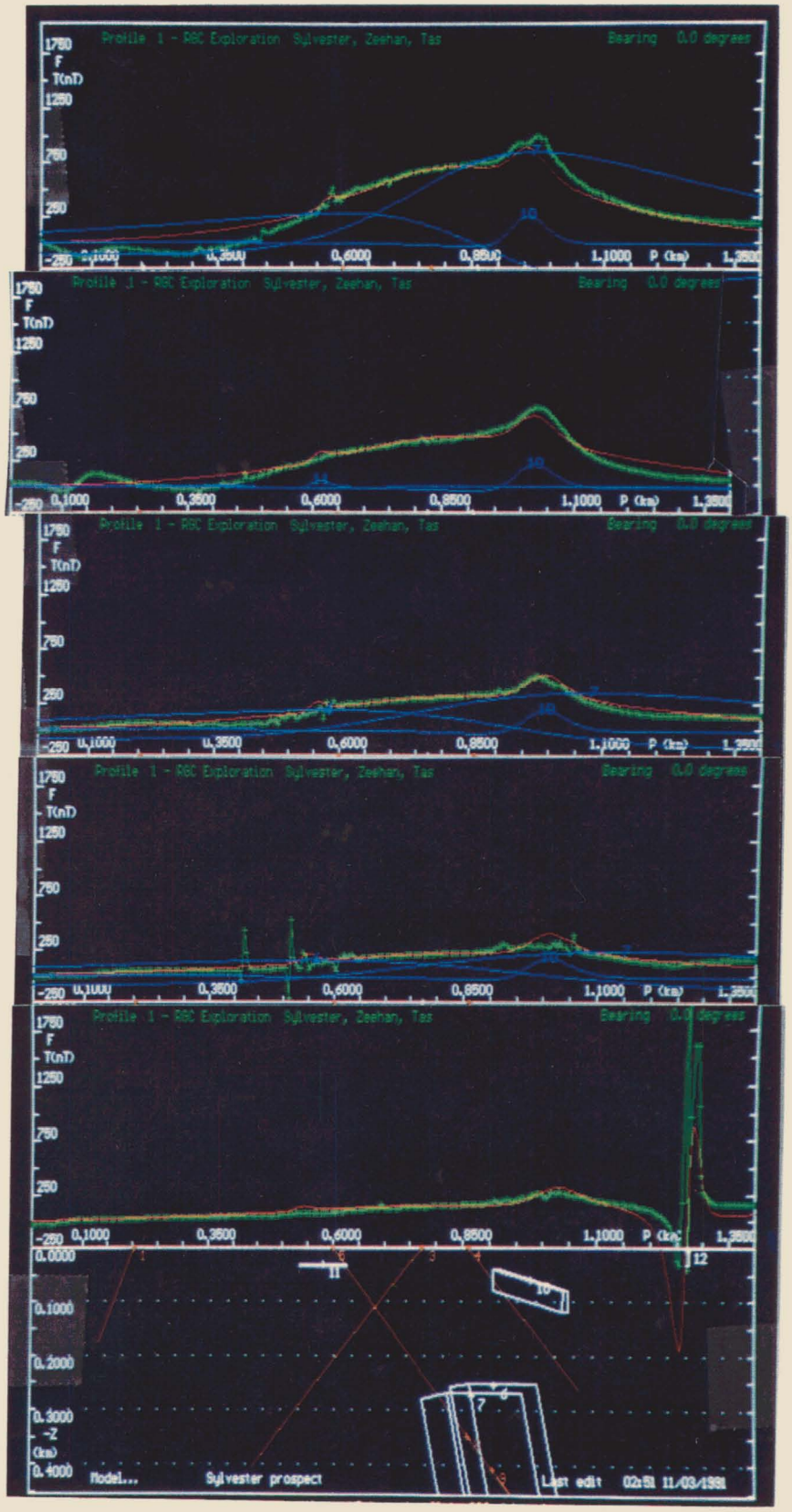


Plate 3 Profiles - lines 7600E, 7700E, 7800E, 7900E, 8000E 1:13 400 scale

380

130423

Interpretation of Ground Magnetic data from the Sylvester Grid (Tenth Legion Area), Zeehan, Tasmania

E.L. 42/87
QUEENSTOWN SK 55-5

for

RGC Exploration Pty. Limited

Bruce Wyatt

September 1991

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7 Observed and modelled profile 6000 mE, 1:5 000 scale 14

8 Observed and modelled profile 6200 mE, 1:5 000 scale 15

9 Observed and modelled profile 6400 mE, 1:5 000 scale 16

10 Observed and modelled profile 6600 mE, 1:5 000 scale 17

11 Observed and modelled profile 6800 mE, 1:5 000 scale 18

12 Observed and modelled profile 7000 mE, 1:5 000 scale 19

13 Observed and modelled profile 7200 mE, 1:5 000 scale 20

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5 Profiles - lines 7300E, 7400E, 7500E 1:10 000 scale 31

Summary

This report describes modelling of ground magnetic data obtained over the Sylvester and Tenth Legion grids, near Zeehan in western Tasmania. Drill holes SY005 and SY009, beneath one of the main magnetic anomalies, intersected magnetite skarn and massive pyrrhotite between about 380 and 560 metres depth.

Magnetite was modelled using a susceptibility of 1.0 SI units and a remanent amplitude of 50 amps/metre in the same direction as the Earth's field. Pyrrhotite was modelled using a susceptibility of 0.3 SI units and remanent amplitude of 115 amps/metre.

Modelling has indicated that a substantial part of the magnetic anomalies can be explained by magnetite and pyrrhotite bodies intersected in drillholes SY005 and SY009, and by their interpreted extensions to the west. The bodies are interpreted to have near vertical (75° north) dips and dimensions of a few tens of metres by a few hundred metres, and with substantial down-dip extent.

Drilling should aim to better define the extent of any mineralisation associated with the main magnetic sources. The tops of the interpreted pyrrhotite bodies are at depths of 240 metres (in the east) to 360 metres (in the west), with the eastern edge centred at 357500 mE, 5360750 mN and the western edge centred at 356250 mE, 5361080 mN.

The model is very dependent on the measurements from a single pyrrhotite sample. Analysis of additional oriented samples of pyrrhotite may be necessary to further improve control on the model.

1 Introduction

This report describes modelling of ground magnetic data obtained over the Sylvester grid, near Zeehan in western Tasmania. The ground survey forms part of follow up work to a helicopter magnetic survey over the Zeehan and Renison areas (Wyatt, 1990).

The data were collected by Brendan Stedman of Highland Geophysics for RGC Exploration during March 1990, January 1991, and June 1991. The station spacing was five metres. Line spacings were 100, 200, and 400 metres.

An earlier report (Wyatt, 1991) described physical property measurements made on drill core and modelling of the ground magnetic data obtained during March 1990 and January 1991. This report refines and extends the earlier work by incorporating the results from subsequent drill holes and the June 1991 magnetic data.

2 March 1990 Data

The data collected in March 1990 were from north-south lines 200 metres apart. They were modelled by the author on May 14 1990 to indicate the location of the source of the main anomaly. The modelling was carried out with no indication as to physical properties or other source parameters. The main anomaly was modelled as an ellipsoid (1000 metres long, 450 metres thick, 700 metres down dip, strike 110°, dip 60° south, with top at 357278 mE, 5360889 mN, depth 140 m). This body provided a reasonable fit to the main anomaly. A residual anomaly was modelled as a smaller ellipsoid (400 metres long, 200 metres thick, 80 metres down dip, strike 70°, dip 70° south, with top at 357600 mE, 5360970 mN, depth 30 m). Susceptibilities of the ellipsoid bodies were 0.11 and 0.04 SI units respectively.

2.1 January 1991 Data

The ground magnetic data acquired in January 1991 comprised additional lines between the original ones spaced 200 metres apart, and extended some lines (at 400 metre line spacing) further to the north.

To assist in the magnetic interpretation, susceptibilities were read every 2 metres along core recovered from drill holes SY003, SY004, and SY005.

Oriented samples were obtained from the magnetite and pyrrhotite zones in SY005 to measure magnetic properties (remanence) in more detail.

Magnetite was modelled using a susceptibility of 1.0 SI units and a remanent amplitude of 50 amps/metre in the same direction as the Earth's field. Pyrrhotite was modelled using a susceptibility of 0.3 SI units and remanent amplitude of 115 amps/metre. The inclusion of susceptibility and remanence constraints radically changed the position, attitude, and dimensions of the magnetic sources from the earlier interpretation of part of the data.

Modelling indicated that a substantial part of the main magnetic anomaly can be explained by magnetite and pyrrhotite bodies intersected in drillhole SY005. The bodies are interpreted to have near vertical (80° north) dips and dimensions of a few tens of metres by a few hundred metres, and with substantial down-dip extent.

2.2 June 1991 Data

During June 1991, the magnetic coverage was extended to the west over the Tenth Legion extension of the Sylvester grid. Lines were spaced 200 metres apart, between 355000 and 356800 mE.

2.3 Drilling and Geology

The collar coordinates and orientation of diamond drill holes are listed in Table 1. Projections of these drill holes (except SY002 which is about 200 metres north of the northern end of line 8800E) are plotted on all relevant plan and profile views of Figures 1 to 16.

Drill hole SY003 was drilled as a stratigraphic hole and to test a broad geochemical anomaly. Drill holes SY004 and SY005 were drilled to test for tin at depth and to test the interpreted magnetic sources (smaller and larger ellipsoid bodies respectively). SY004 did not intersect any significant magnetic material. SY005 intersected magnetite skarn between 429.1 and 507.4 metres, and massive pyrrhotite between 507.4 and 560.1 metres.

Drill holes SY008 and SY009 were drilled to test the extent of the mineralisation intersected in SY005, based on the interpreted magnetic sources. SY008 did not intersect any significant magnetic material. SY009 intersected massive sulphides between approximately 380 and 400 metres, and magnetite-serpentinite skarn between approximately 400 and 530 metres.

Surface mapping and interpolation from drilling indicate that the massive sulphide mineralisation is closely associated with the Balstrup Fault which separates shallow dipping carbonates (to the south) from non-carbonates in the north (John Crossing, personal communication).

Table 1 Diamond drillhole locations

Drillhole	Collar coordinates (m) AMG	Collar coordinates (m) Local grid	Inclination (approx)	Direction (approx)	Total depth (m)
SY001	357543 E, 5360204 N	(approx)	-66°	211°	193.0
SY002	358889 E, 5361368 N	58897 E, 61374 N	-45°	197°	534.5
SY003	357786 E, 5360790 N	57785 E, 60764 N	-50°	189°	526.5
SY004	357635 E, 5360854 N	57650 E, 60821 N	-50°	340°	343.5
SY005	357201 E, 5360649 N	57200 E, 60600 N	-53°	351°	666.8
SY008		57200 E, 60730 N	-53°	0°	420
SY009		57400 E, 60930 N	-75°	180°	597.9

3 Magnetic Interpretation

3.1 Magnetic Properties

Susceptibility and remanence measurements from drill core were plotted and described in the previous report (Wyatt, 1991).

3.2 Data Processing and Presentation

The data used in this study have been corrected for diurnal variation as recorded at a base station. All data points are located at their nominal grid locations, and have not been transformed back to absolute AMG coordinates. The error is several metres and should be taken into account when comparing these data in detail with other maps. The magnitude of the difference can be appreciated by reference to Table 1. Ground elevation has been taken into account for magnetic modelling.

Figure 1 is a plan view showing the surface projections of the limits of each body, and the location of each sixth data point along all survey lines. The observation points are shown as '+' symbols.

Figures 2, 3, and 4 show the area bounded by 355000 and 357500 mE and 5360000 and 5361500 mN at 1:10000 scale. The figures show contours of observed, calculated, and residual fields respectively. The residual plot also indicates the location of the data points (every second point) used for the grid generation and contour presentations.

Figures 1 to 16 show all drill holes and modelled bodies projected onto the ground surface or onto the vertical plane of each individual section. Drill holes SY001, SY003, SY004, SY005, SY008, and SY009 are labelled 1, 3, 4, 5, 8, and 9 respectively.

The reference point at the centre of the top of each body in the model is shown with a '+' sign, and the coordinates, dimensions, orientation, and physical properties are listed in Table 2.

Plates 1 to 5 are colour reproductions from a computer monitor. Plate 1 shows contours of observed, calculated, and residual total magnetic intensity fields (25, 25, and 50 nT contours respectively).

Plate 2 to 5 show observed and calculated magnetic profiles on lines 5600E to 7500E. On these Plates, the green profile represents the observed field readings, the red profile the calculated field, the blue profiles are the components due to individual bodies, and the brown profile is the ground surface. The field amplitude scales are identical except on plate 2 where it is 25 times larger than on the others. These colour presentations show similar information to Figures 5 to 16. They are less quantitative but provide a better appreciation of the relative amplitudes of the anomalies on adjacent survey lines.

130430

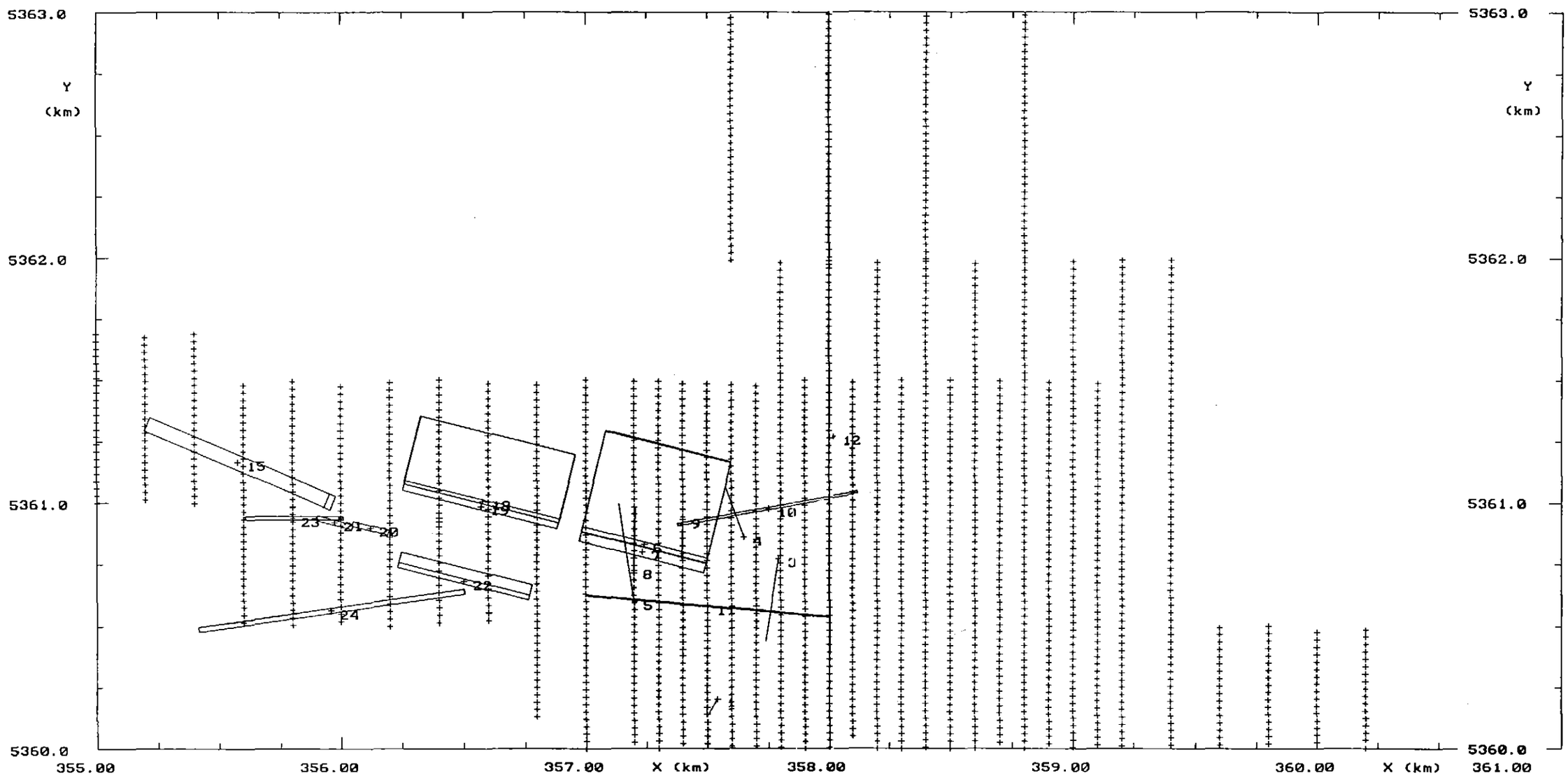


Figure 1 Sylvester survey grid 1:20000 scale

5 cm

3.3 Modelling

Most of the more prominent anomalies have been computer modelled to provide a better appreciation of the shape and nature of their sources. It is stressed that the models are not unique, and that various simplifying assumptions have been made in terms of the geometries of the bodies employed in the models.

For the magnetic modelling, mean susceptibilities were determined by averaging the readings from measurements made at two metre (or in some cases, one metre) intervals on drill core (Wyatt, 1991). Remanent magnetic properties were assigned using the results of Schmidt (1991).

130431

Magnetite was modelled using a susceptibility of 1.0 SI units, with a Koenigsberger ratio of 1.0 (remanent amplitude = 50 amps/metre), and with remanence in the same direction as the Earth's field. It should be noted that this is equivalent to disregarding remanence and doubling the susceptibility.

Pyrrhotite was modelled using a susceptibility of 0.3 SI units, with a Koenigsberger ratio of 7.7 (remanent amplitude = 115 amps/metre), and with remanence in a downward direction to the south.

Data from all survey lines have been quantitatively interpreted using a 3-dimensional modelling package (Almond, 1990). Units on all profile and plan plots are kilometres (AMG) and nanoTeslas. The Earth's main field has been taken as 62371 nT amplitude, inclination -72.4°, and declination 12.7°.

A constant regional of 300 nT has been removed from the observed field.

The results of the profile modelling studies are presented as Figures 5 to 16. The modelled profiles are oriented 'looking West'. Each of these figures comprises a profile showing the observed and computed total magnetic fields and a cross section showing all bodies having some effect on that profile and drill holes within about 100 metres of the line. The projections of the bodies are shown as 'wire frame' representations, with the actual intersection of the profile plane shown as a shaded area. The observations are shown as '+' symbols and the computed magnetic anomaly field as a solid line. In some cases, anomaly components due to individual bodies are also superimposed as solid lines, numbered with their respective body numbers. The scales of most of the figures are identical to allow a better appreciation of anomaly amplitudes and body dimensions. The exceptions are profiles 5600E, 5800E, and 6000E where the field amplitude scale has been increased by a factor of 25.

Table 2 lists the parameters used to define each of the bodies used in the model. The reference point is at the centre of the upper surface of the body. All distances are metres. Susceptibilities are given in SI units. Remanence is in amps/metre. Depths are in metres above sea level. The tops of all bodies are at (bodies 18 and 19) or above sea level. Dips are measured from the south (ie bodies 6 and 7 dip 75° to the north). Bodies 10, 15, 23, and 24 have been assigned plunges of 3°E, 3°W, 5°W, and 3°W degrees respectively. In these cases, the bodies are interpreted to crop out. The plunges reflect the variation in surface elevation along strike.

Table 2 Modelled Body Characteristics - Tabular Prisms

No	Reference point			Strike	Dip	width	length	height	Susc	Remanence		
	mE	mN	masl	deg	deg	m	m	m	SI	A/m	Inc	Az.
6	357242	5360830	40	104	105	20	530	1550	.3	115	45	166
7	356234	5360800	46	104	105	40	530	1650	1.0	50	-72	13
10	357750	5360978	240	80	90	10	750	40	.5	10	45	166
11	357500	5360580	270	95	90	5	1000	5	.5	10	45	166
12	358020	5361270	298	0	90	8	8	30	5.0	150	-70	315
15	355576	5361167	276	113	90	60	800	500	1.0	0	0	0
18	356577	5361006	0	104	100	15	650	1550	.3	115	45	166
19	356570	5360986	0	104	100	25	650	1650	1.0	50	-72	13
20	356122	5360899	202	104	90	20	150	1300	1.0	50	-72	13
21	355976	5360922	250	104	90	20	150	1300	1.0	50	-72	13
22	356502	5360682	79	104	95	20	550	500	1.0	50	-72	13
23	355800	5360940	280	90	90	15	390	200	1.0	0	0	0
24	355960	5360564	242	82	90	20	1100	50	.5	10	45	166

390

130433

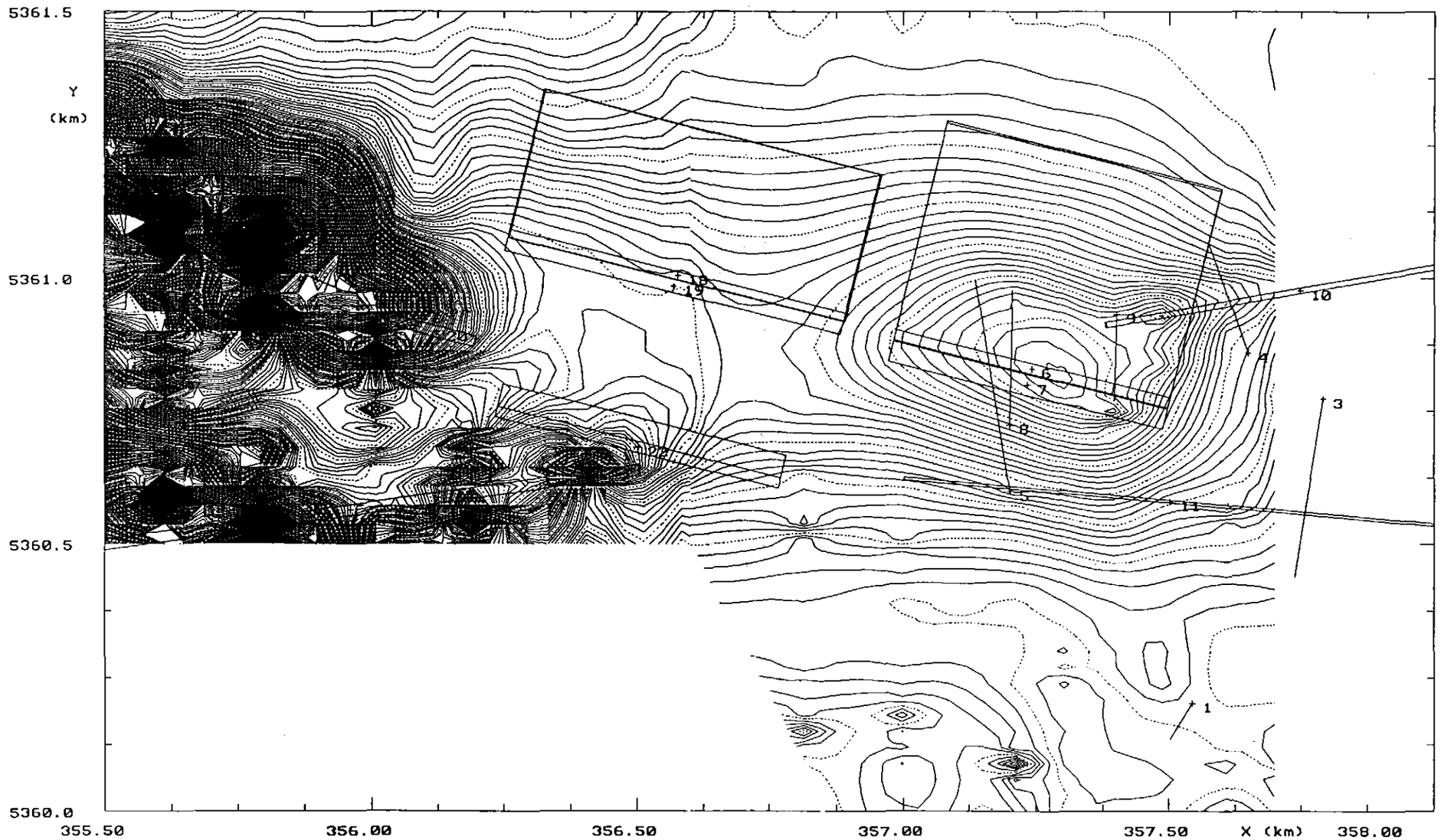
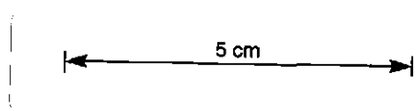


Figure 2 Observed magnetic field, 50 nT contours, 1:10000 scale



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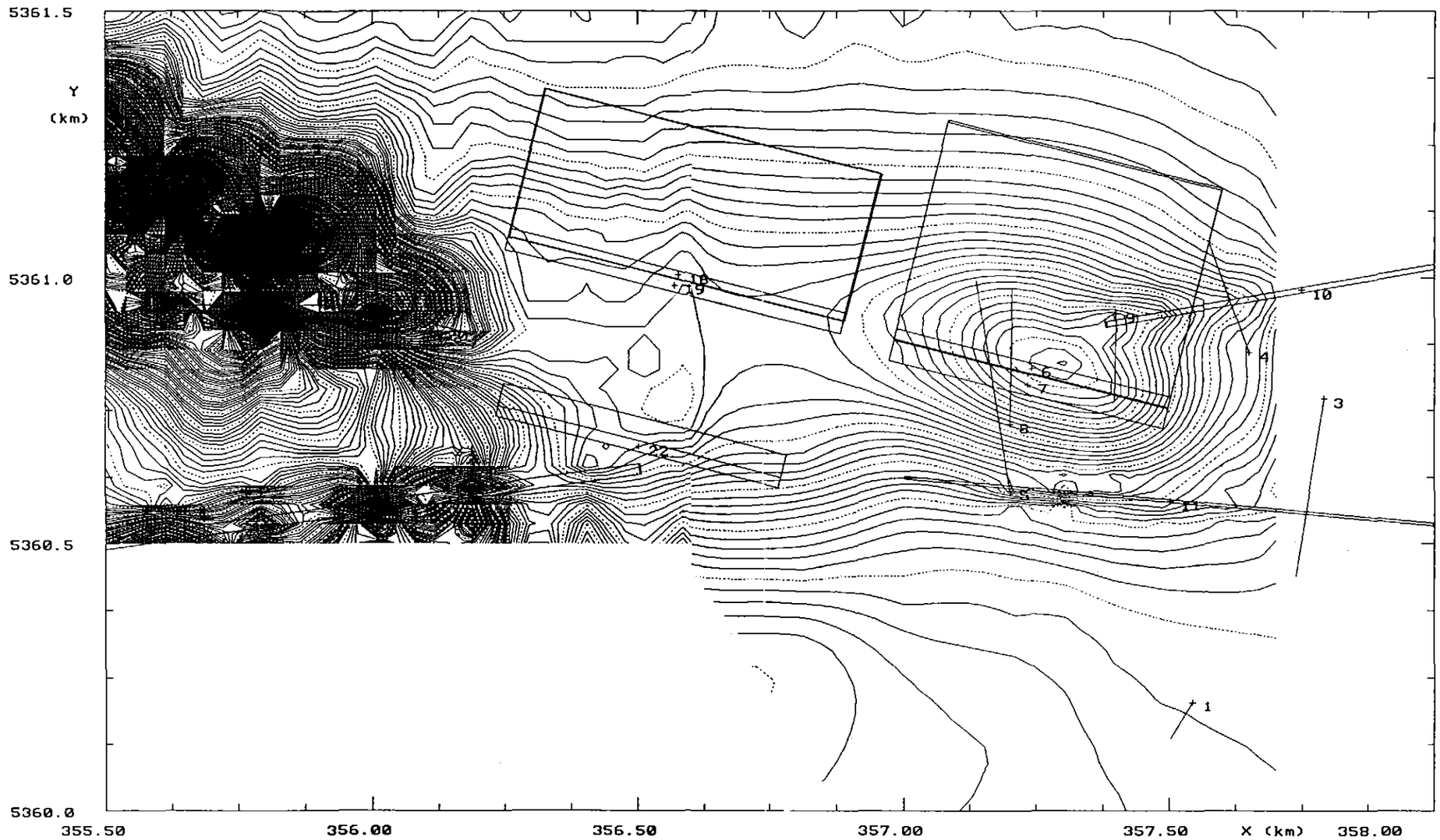

Figure 3 Calculated magnetic field, 50 nT contours, 1:10000 scale

5 cm

130435

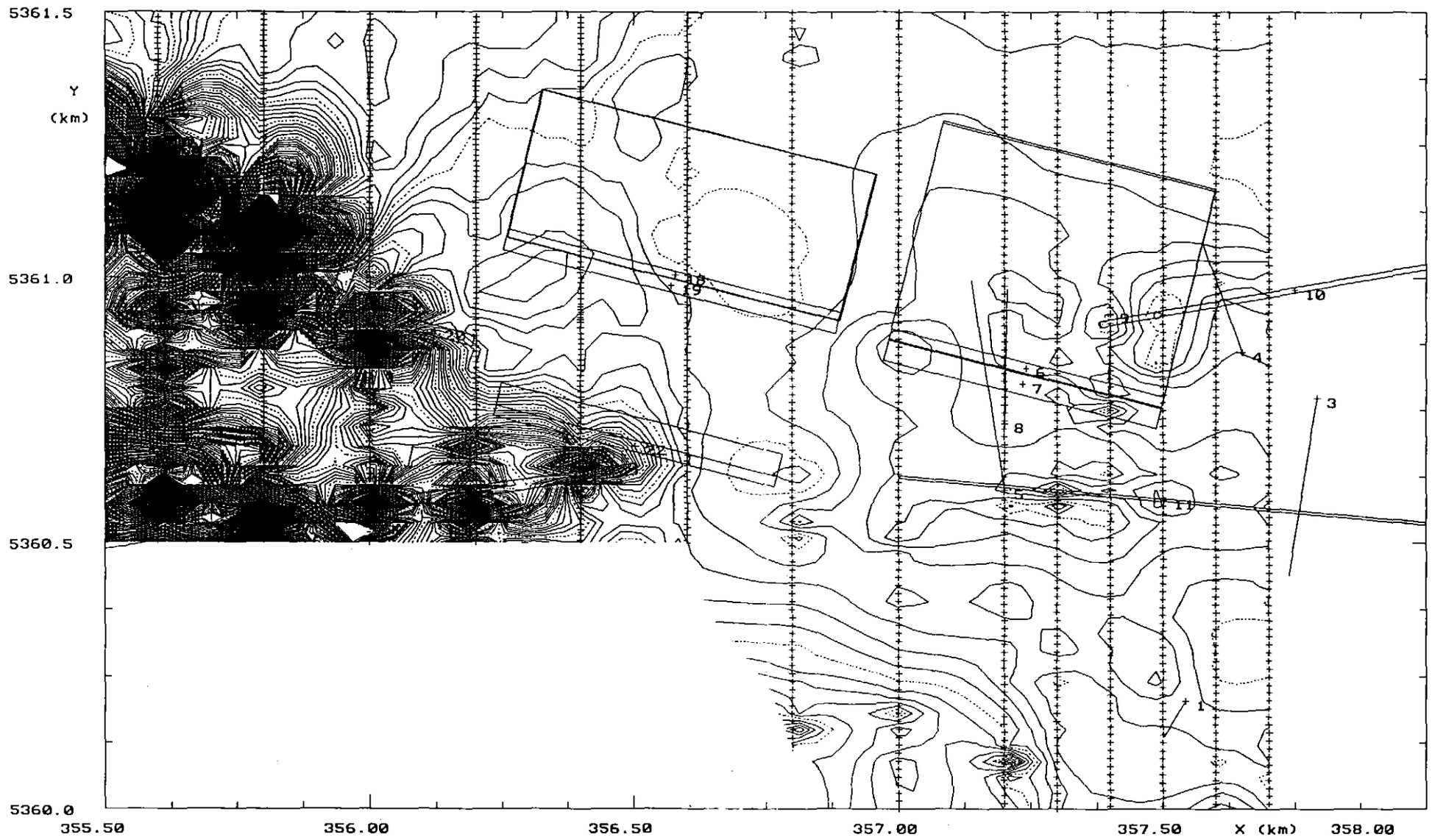

Figure 4 Residual magnetic field, 50 nT contours, 1:10000 scale

5 cm

3.4 Linear Anomalies

Body 11 represents a shallow linear feature whose anomaly is apparent on quite a few lines. This is possibly cultural in origin (fence line?) or alternatively may correspond to a fault trace or mafic dyke.

Body 10 is a linear feature, extending for about 750 metres. It is interpreted to have a shallower source in the west. The anomaly shape varies on successive profiles indicating substantial variation in source dimensions or properties along strike. Lines 7300E to 7600E indicate another adjacent but smaller anomaly of similar wavelength, trending to 70°.

Body 24 represents a shallow linear source striking to 82°. This is parallel to and almost colinear with body 10. It is suggested that these bodies represent the same fault, possibly offset at about 356800 mE.

3.5 Major Magnetic Sources

The individual body profiles due to bodies 6 and 7 are plotted on Figures ?? 10 to 15, 17, and 18. These profiles illustrate the effect of the remanent magnetism in the pyrrhotite (body 6). The bodies have very similar dimensions and orientation, but the dominant remanent component in the pyrrhotite produces a substantial negative anomaly which tends to cancel out much of the anomaly due to the magnetite. It also produces a broader positive anomaly further to the south. The overall effect of the pyrrhotite is to reduce the amplitude of the main anomaly and shift the peak to the south. Thus any departure in the relative sizes of the two bodies (from that indicated by the intersection in SY005) will have a substantial effect on the main anomaly.

The magnetic anomaly, centred at 357500 mE, 5360800 mN, has an amplitude of about 1500 nT. Most of this anomaly can be explained by two bodies (6 and 7) with magnetic properties and positions consistent with results obtained from drillholes SY005 and SY009.

Bodies 18 to 22 have steep dips and similar strike to bodies 6 and 7. Body 18 has the same magnetic properties as those attributed to the pyrrhotite (body 6), while the other bodies have the same magnetic properties as the magnetite (body 7). The tops of these bodies is greatest for bodies 18 and 19, and decreases to the west. The configuration of the interpreted bodies suggests that the bodies of most interest (^ and 7) are downthrown on the western side of a fault which trends about 15° east of north. One or more parallel faults are also suggested between the western end of bodies 18 and 19 and the outcropping serpentinite (body 15). The interpretation of these faults is based mainly on the interpreted depths and is limited by the 200 metre line spacing.

The anomaly on lines 6400E, 6600E, and 6800E is of lower amplitude but wider than the anomaly over bodies 6 and 7. This is accommodated in the model by making bodies 18 and 19 deeper, and by including an additional body (22) with the same properties as the magnetite-serpentinite skarn.

Because of the substantial short wavelength noise and interference from neighbouring anomalies, the dependence on magnetic property measurements in hole SY005, and because the magnetite and pyrrhotite bodies tend to cancel each other, the interpretation of bodies 6, 7, 18, and 19 should not be considered to have been made with a high degree of confidence. It is recommended that the model be reviewed when better control is available from drilling, with the view to better defining the bodies and analysing any residual anomalies.

Body 15 corresponds with outcropping magnetite-serpentinite on the Tenth Legion Fault. The model attempts only to define the very gross characteristics as there are problems with the observed magnetic field measurements in these areas of very high gradients.

Body 23 represents a smaller outcropping source of high susceptibility, presumably more magnetite-serpentinite.

Body 12 is very strongly magnetic and interpreted to occur at the ground surface. It is probably either a cultural feature, or an outcropping skarn.

13043B

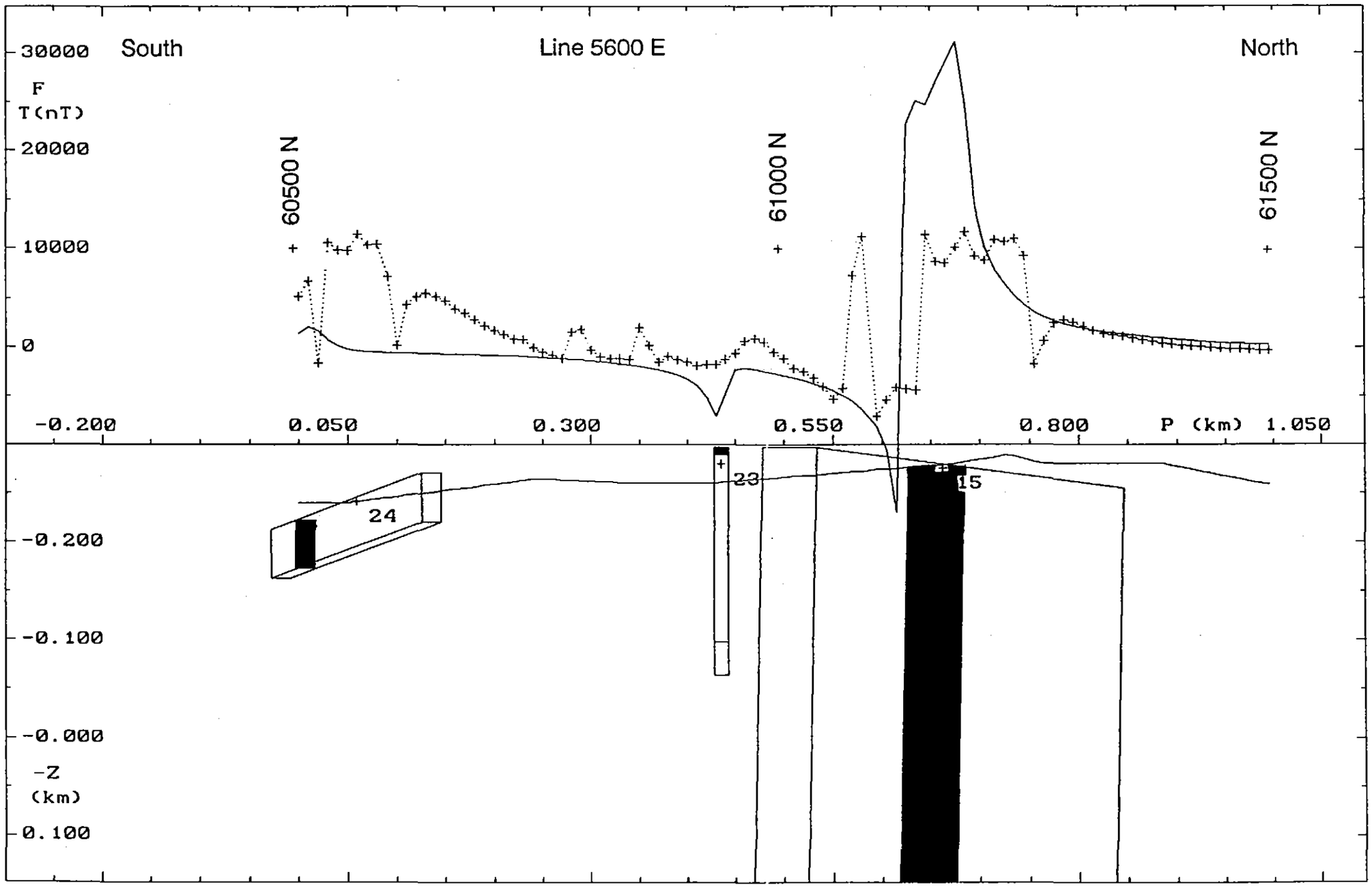

Figure 5 Observed and modelled profile 5600 mE 1:5 000 scale

5 cm

130439

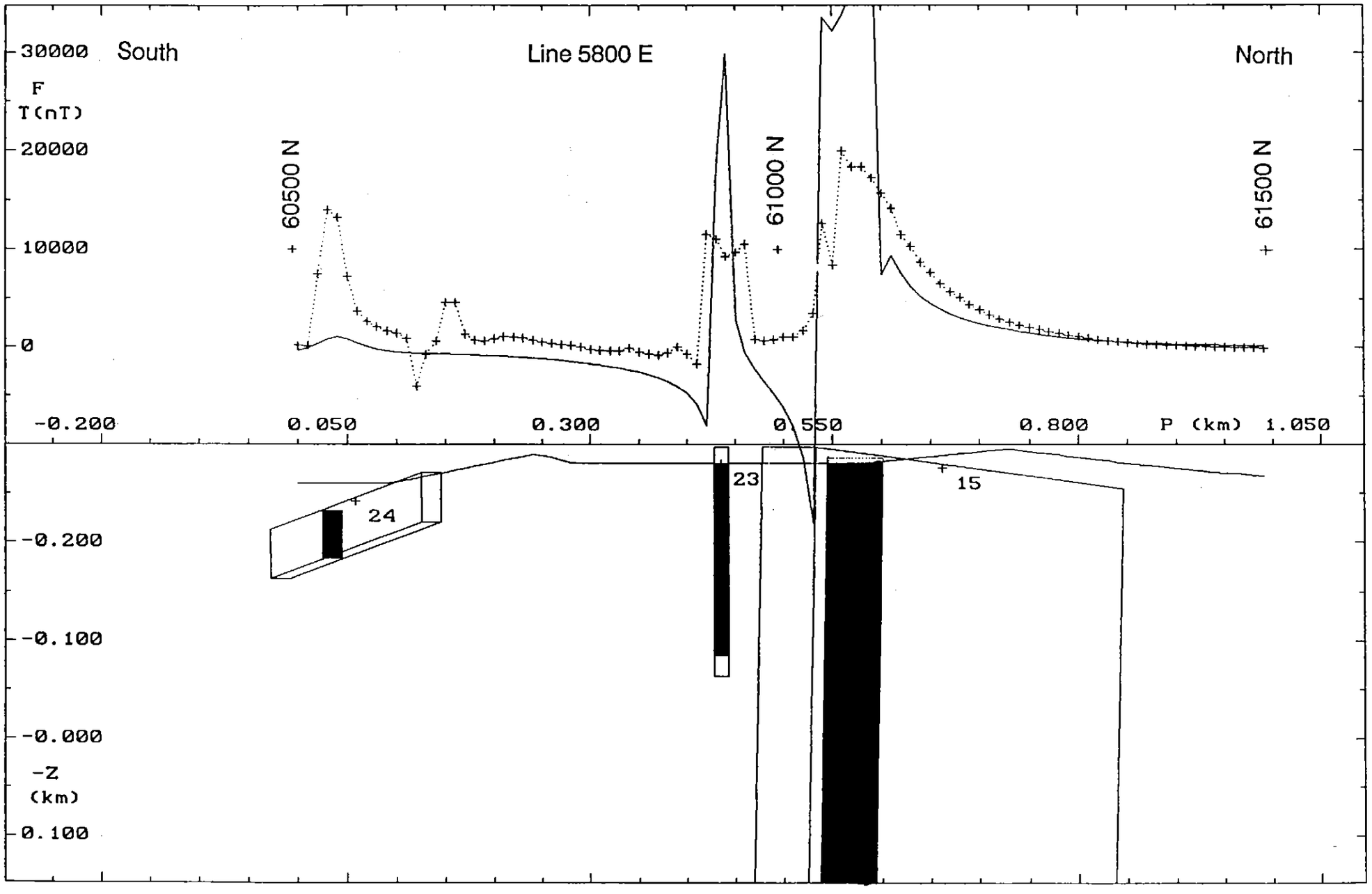

Figure 6 Observed and modelled profile 5800 mE 1:5 000 scale

5 cm

130440

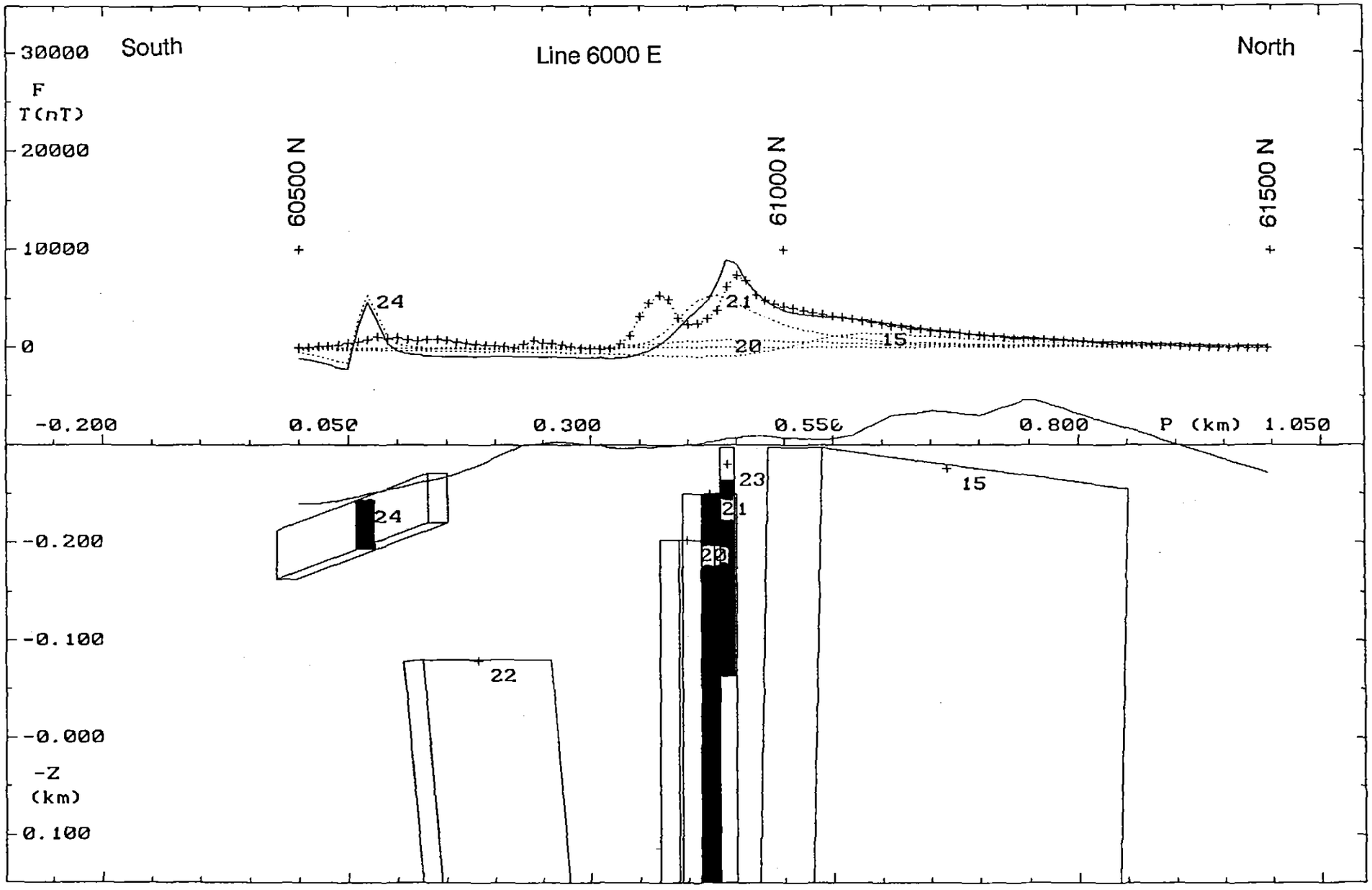

Figure 7 Observed and modelled profile 6000 mE 1:5 000 scale

5 cm

130441

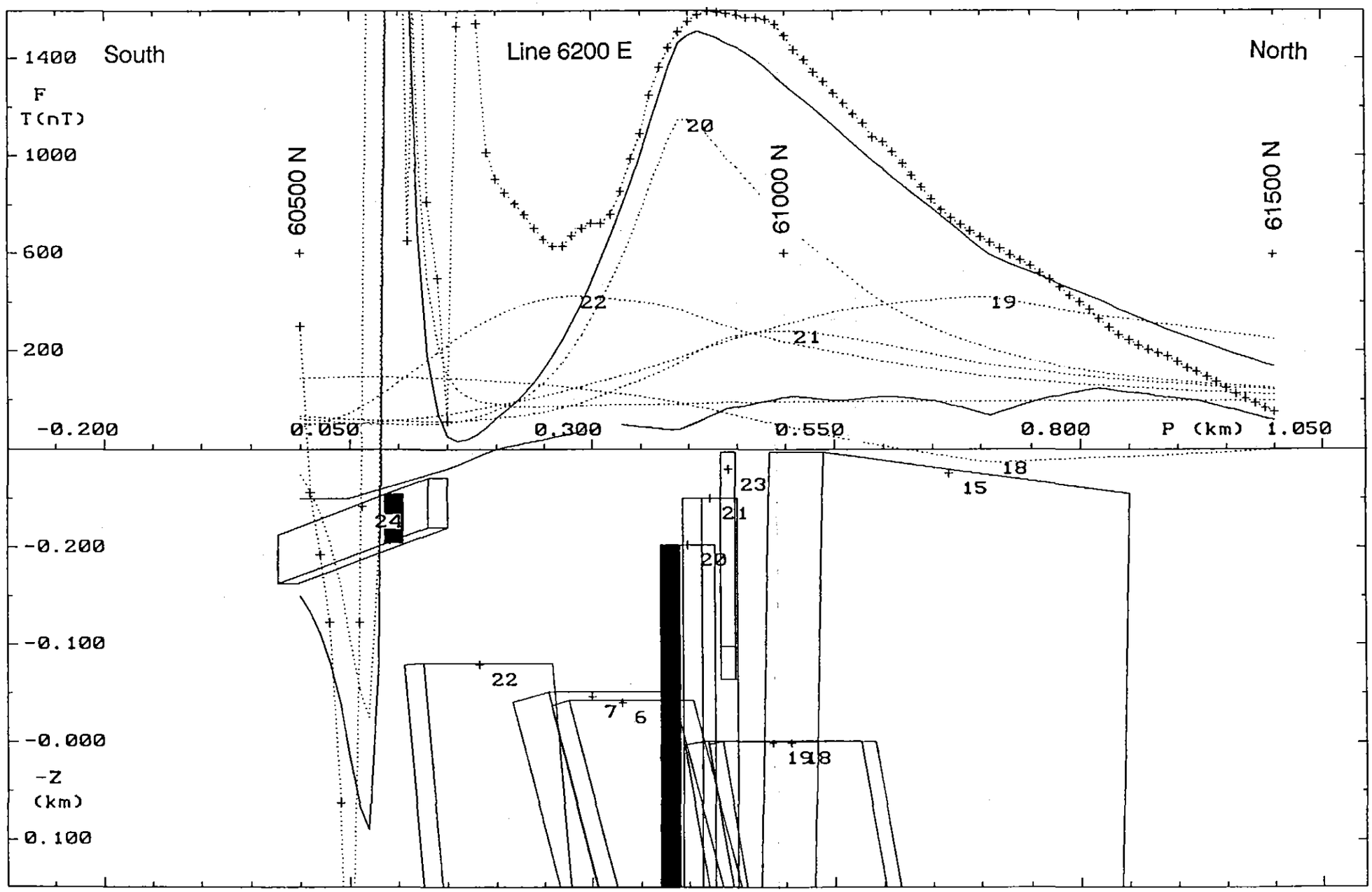

Figure 8 Observed and modelled profile 6200 mE 1:5 000 scale

5 cm

130442

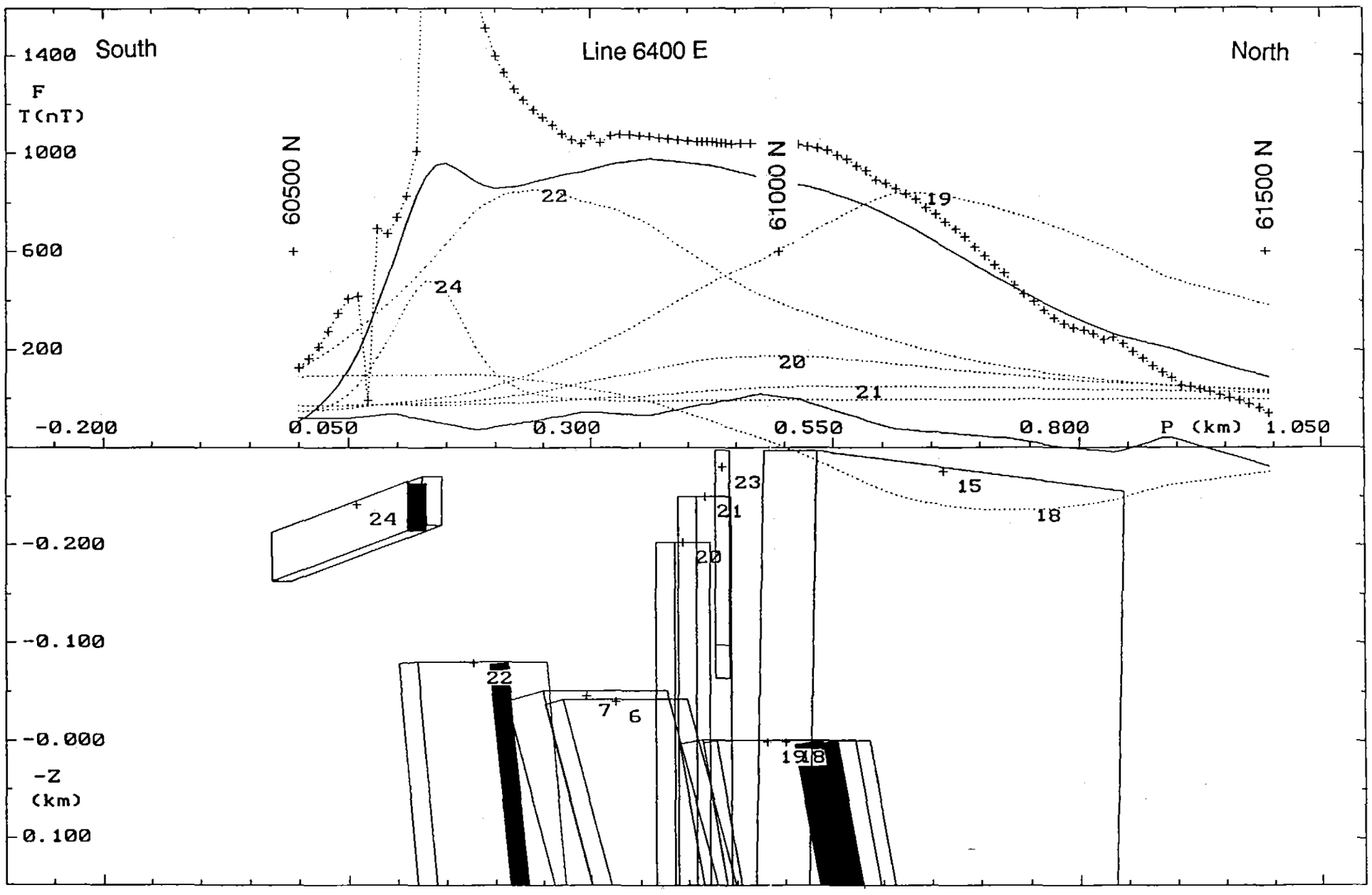

Figure 9 Observed and modelled profile 6400 mE 1:5 000 scale

5 cm

130443

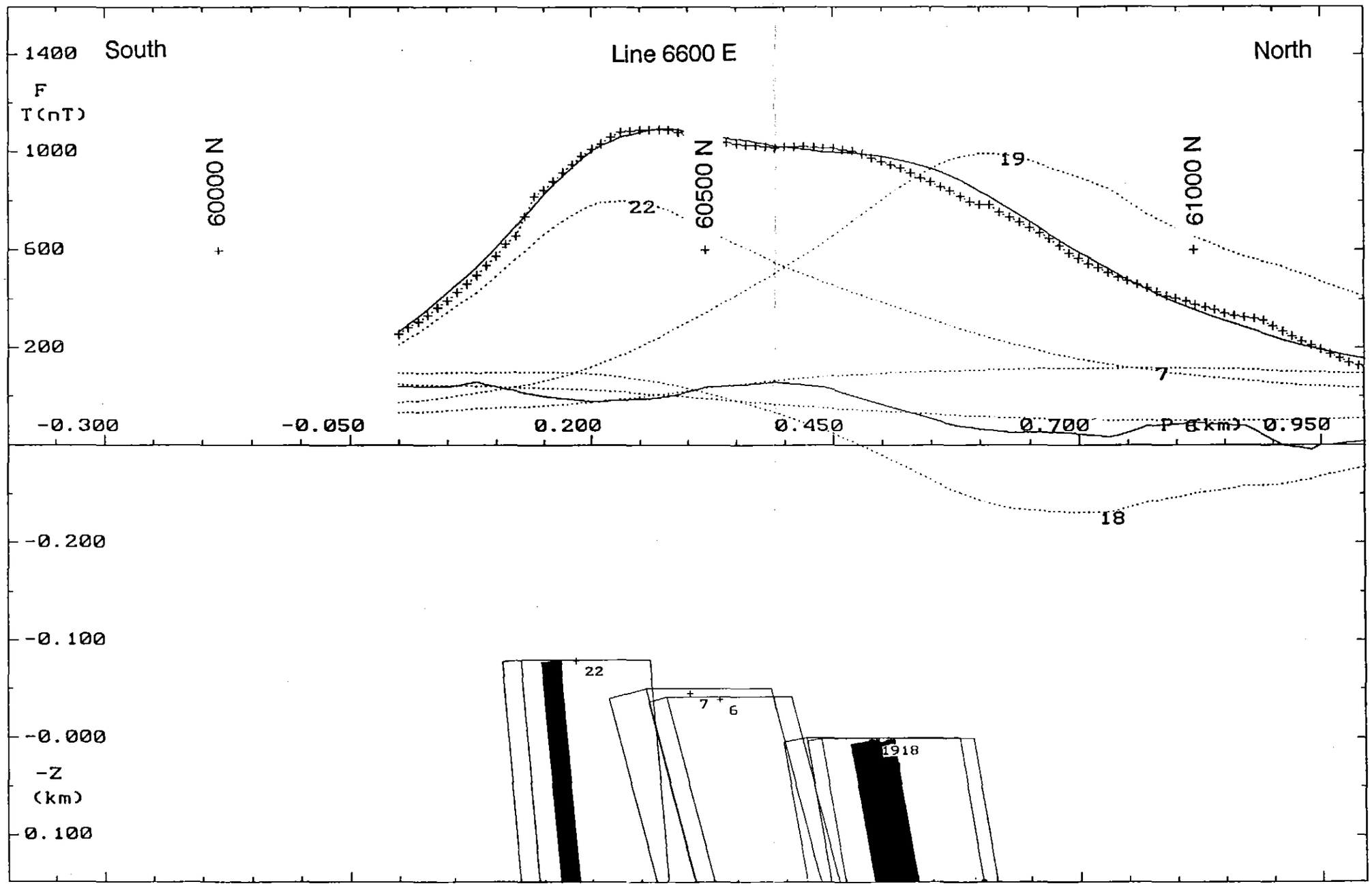

Figure 10 Observed and modelled profile 6600 mE 1:5 000 scale

5 cm

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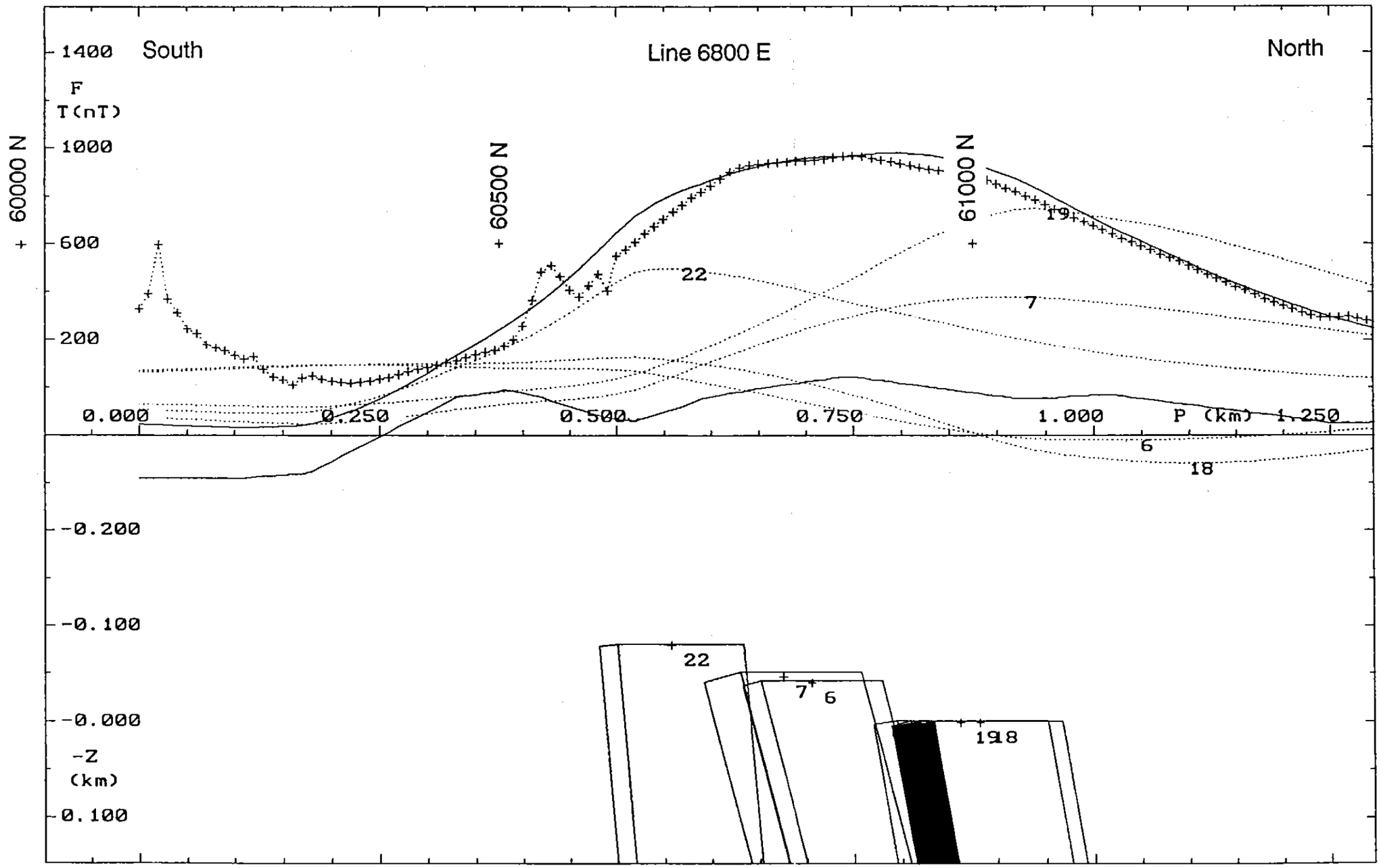

Figure 11 Observed and modelled profile 6800 mE 1:5 000 scale

5 cm

130445

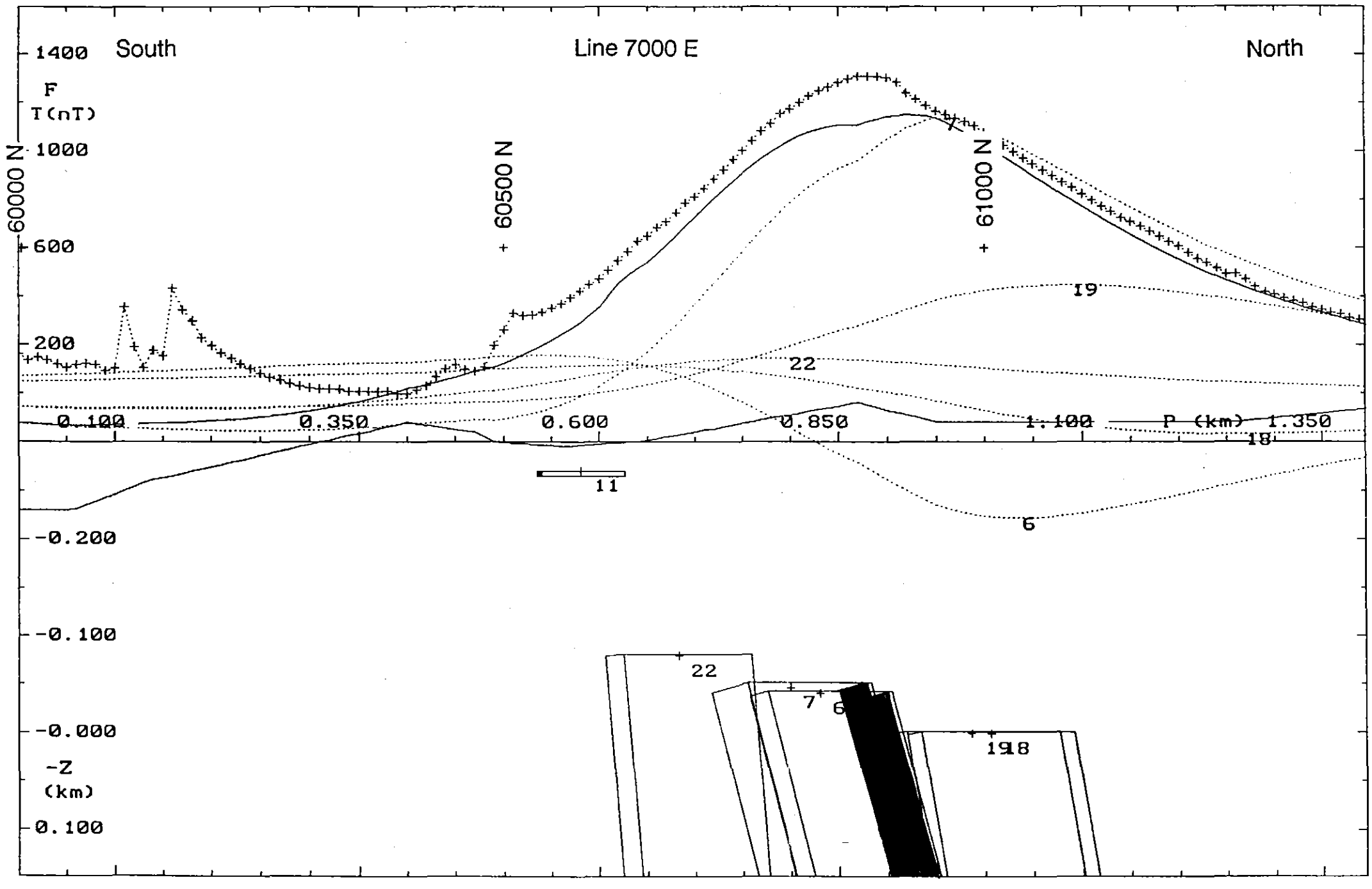

Figure 12 Observed and modelled profile 7000 mE 1:5 000 scale

5 cm

130446

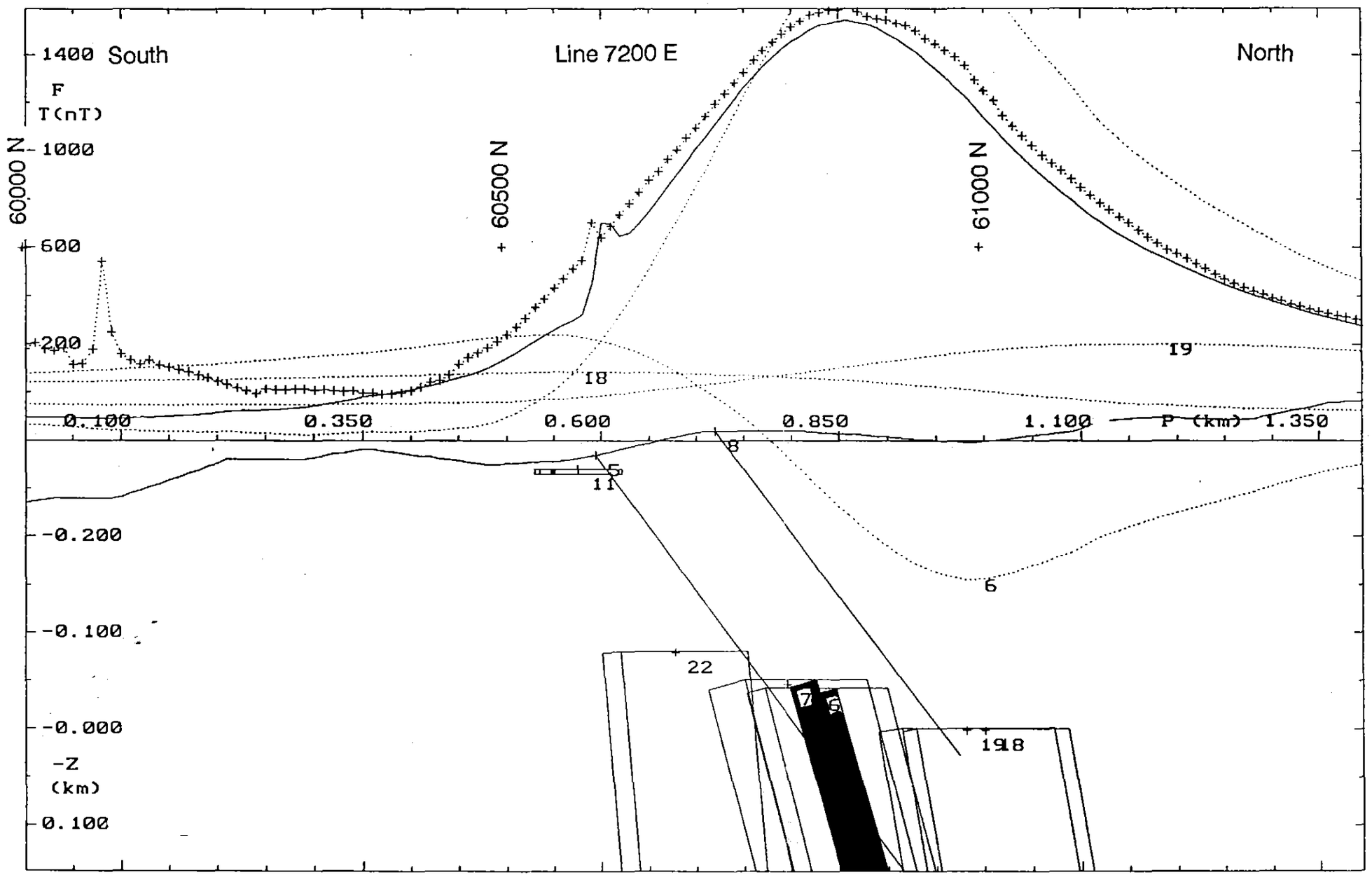

Figure 13 Observed and modelled profile 7200 mE 1:5 000 scale

5 cm

130447

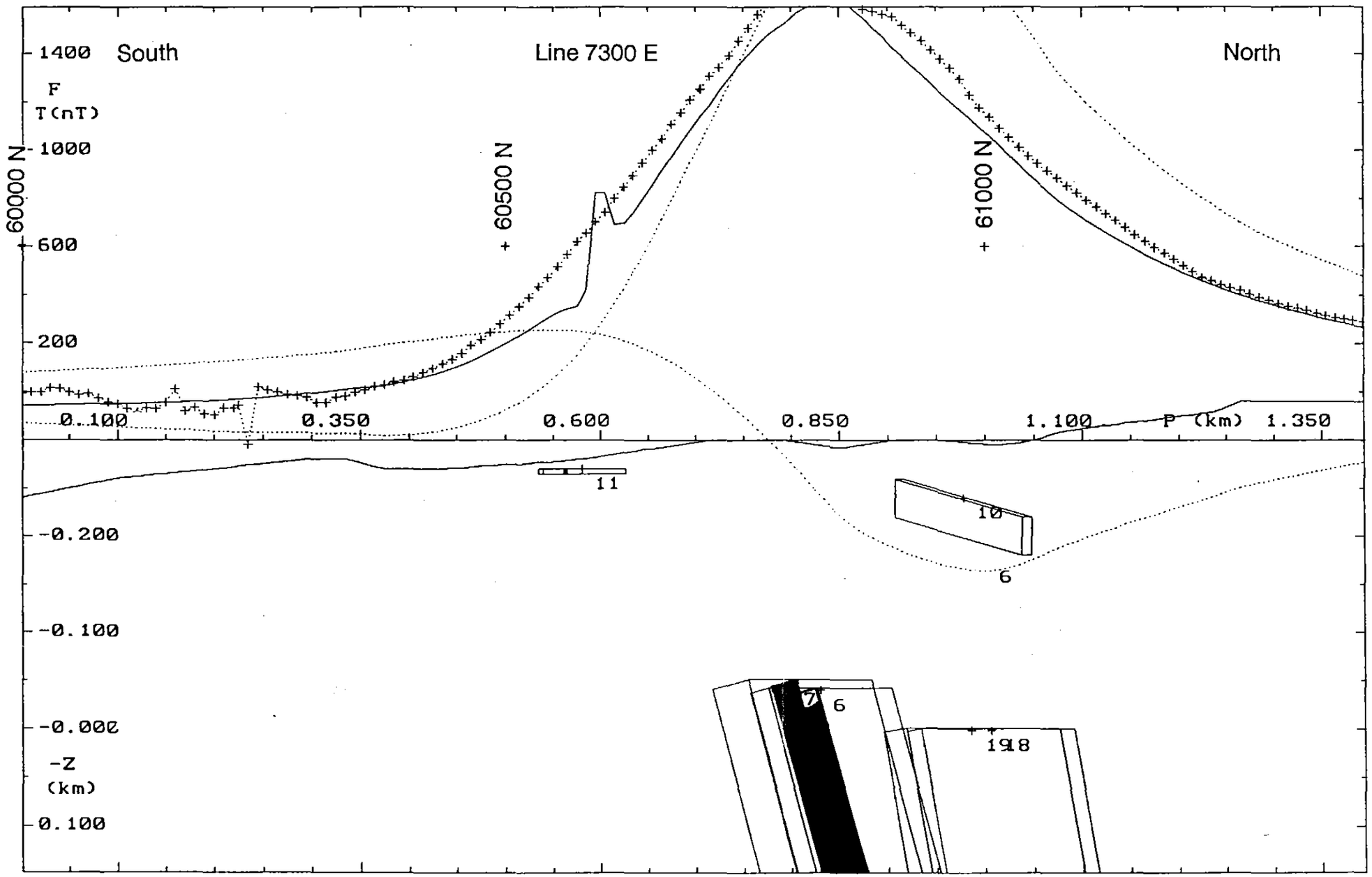

Figure 14 Observed and modelled profile 7300 mE 1:5 000 scale

5 cm

130448

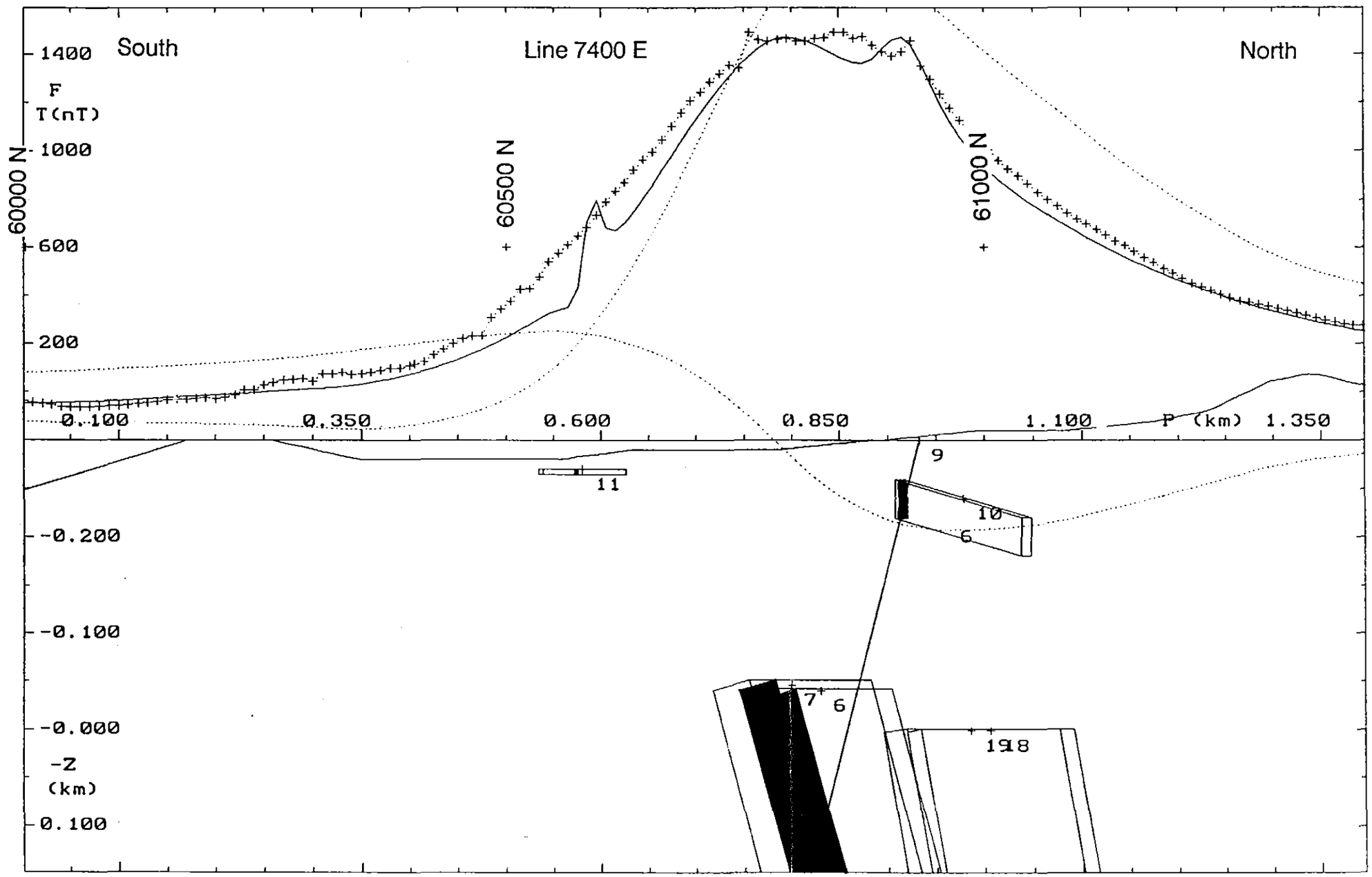

Figure 15 Observed and modelled profile 7400 mE 1:5 000 scale

5 cm

130449

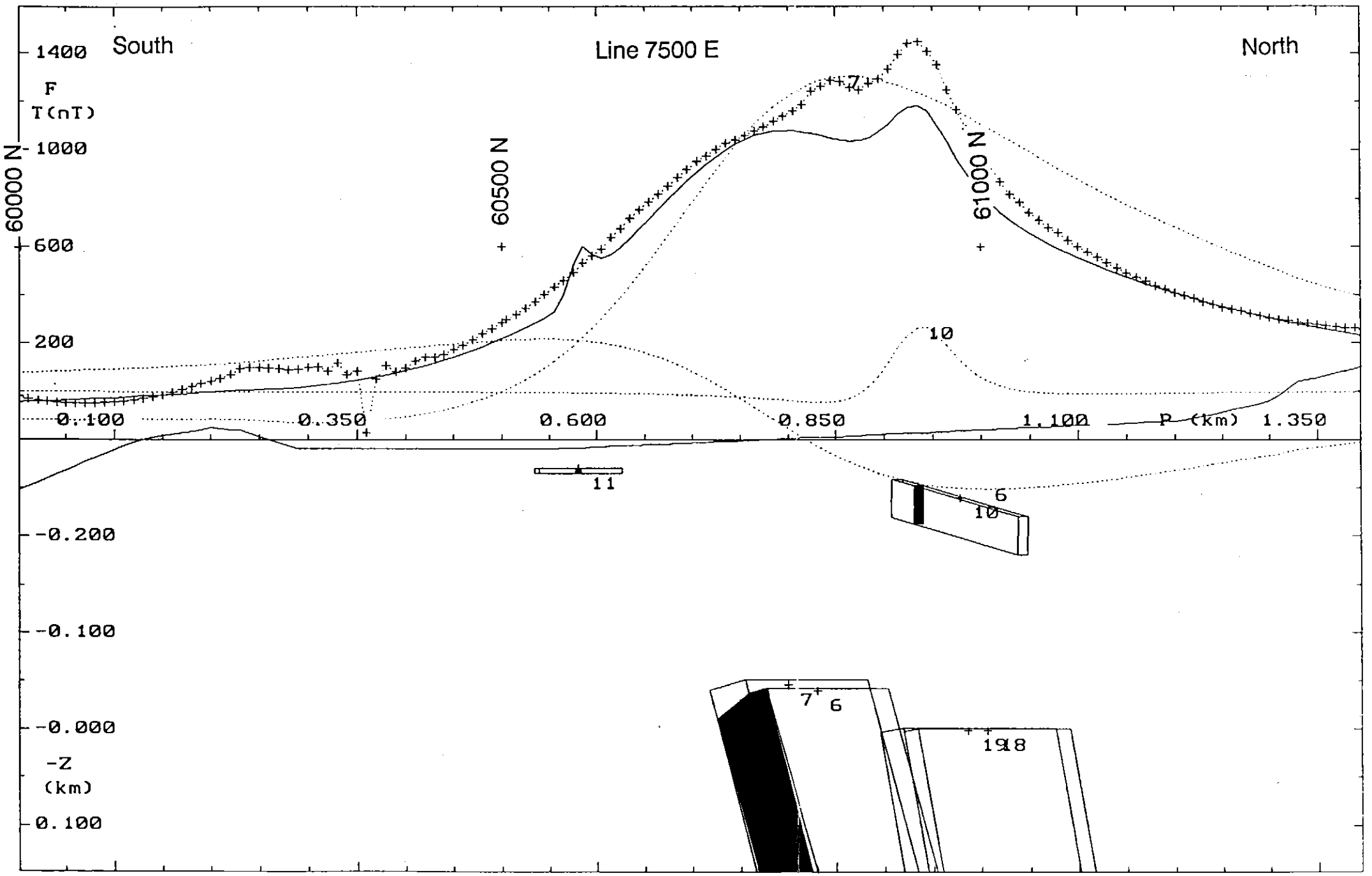

Figure 16 Observed and modelled profile 7500 mE 1:5 000 scale

5 cm

4 Conclusions

Additional ground magnetic measurements and drilling information have been used to refine and extend the magnetic sources interpreted from earlier model studies.

The model is very dependent on the measurements from a single pyrrhotite sample. Analysis of additional oriented samples of pyrrhotite and magnetite sources may be necessary to further improve control on the model.

Modelling has indicated that a substantial part of the main magnetic anomaly can be explained by magnetite and pyrrhotite bodies intersected in drillholes SY005 and SY009. The bodies are interpreted to have near vertical (75° north) dips and dimensions of a few tens of metres by a few hundred metres, and substantial down-dip extent. The top of the interpreted pyrrhotite body is at depths between 240 and 360 metres, with the eastern edge centred at 7500 mE, 60750 mN and the western edge at 6250 mE, 61080 mN. The western part of the anomaly could be tested with a drill hole near line 6600E, designed to intersect the body at a depth of about 300 metres. As the interpretation suggests a steep dip, a shallow inclined hole is recommended.

A linear anomaly trending to 80° has been defined on several survey lines and is interpreted to represent a tabular body with width 10 metres, height 40 metres, depth 60 metres.

130451

5 Recommendations

1 Further drilling should aim to better define the extent of any mineralisation associated with the magnetic sources (bodies 6, 7, 18, and 19). The extent of the interpreted pyrrhotite body should be initially tested by drilling an inclined hole near line 6600E to intersect the body at about 400 metres depth.

2 Further refinement of the magnetic model should be undertaken when additional information becomes available from drilling, magnetic rock property measurements, and other work.

130452

6 References

Almond, R.A., 1990, POTENT. Interactive modelling and interpretation of magnetic and gravity data. Users Guide by PC Potentials.

Schmidt, P., 1991, Magnetic Properties of Magnetite/Pyrrhotite Skarns. Sylvester Prospect, Zeehan, Tasmania. Unpublished Report by CSIRO Division of Exploration Geoscience for RGC Exploration.

Wyatt, B.W., 1990, Interpretation of Aeromagnetic data from EL 42/87 (Zeehan). Unpublished report by Wyatt & Associates for RGC Exploration Pty Limited.

Wyatt, B.W., 1991, Interpretation of Ground Magnetic data from the Sylvester Prospect, Zeehan, Tasmania. EL 42/87 (Zeehan). Unpublished report by Wyatt & Associates for RGC Exploration Pty Limited.

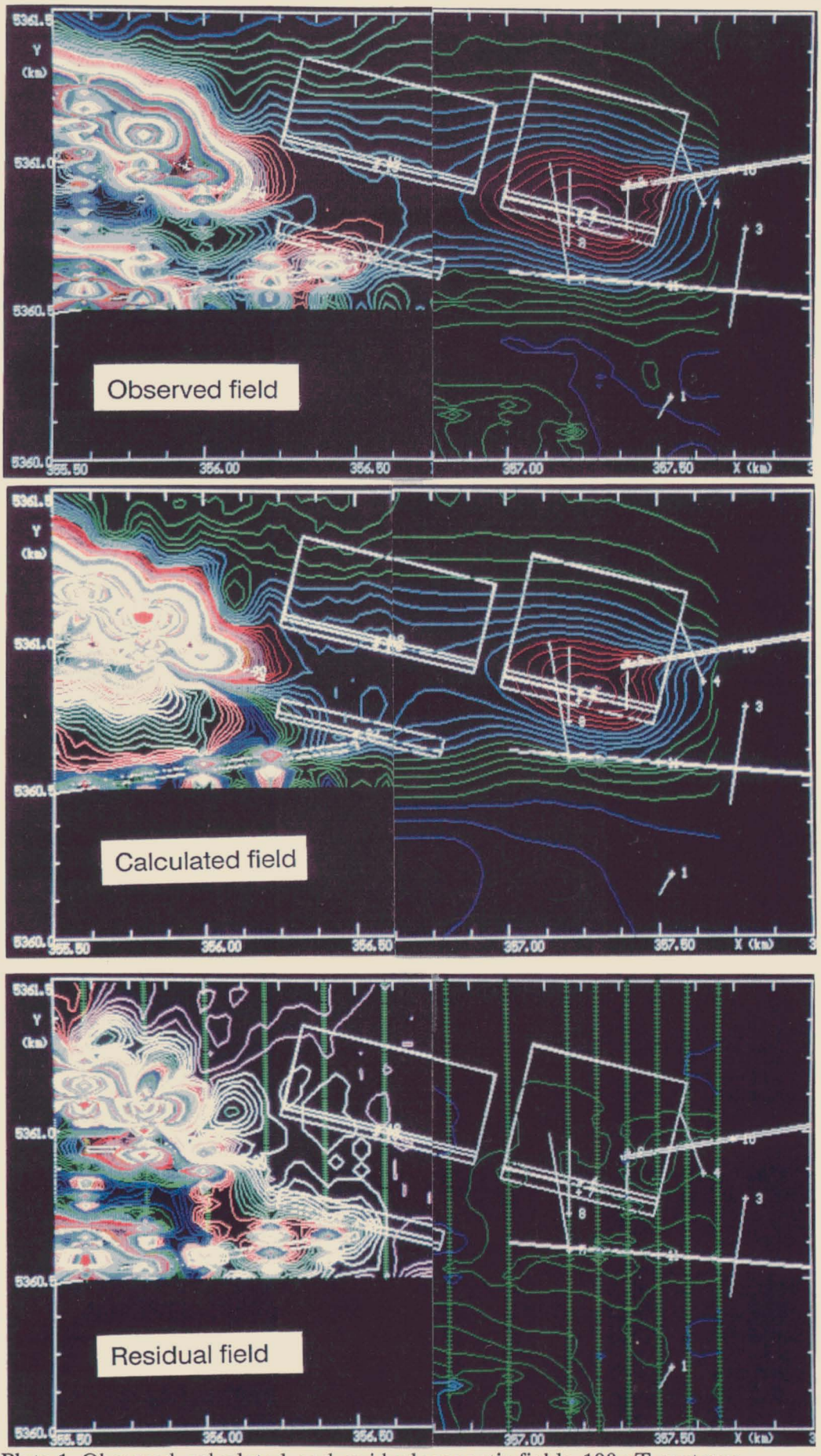

Plate 1 Observed, calculated, and residual magnetic fields, 100 nT contours

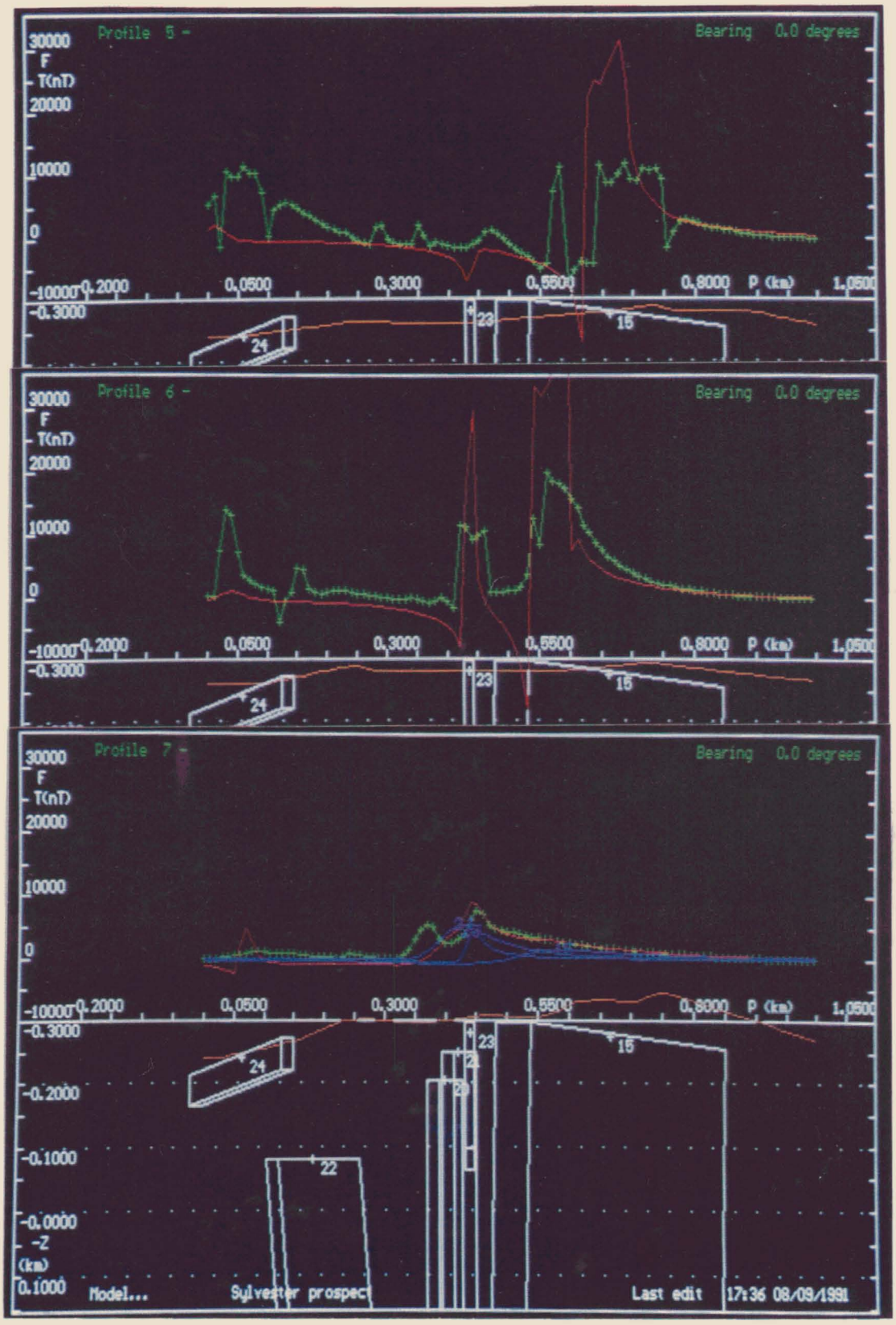

Plate 2 Profiles - lines 5600E, 5800E, 6000E 1:10 000 scale

5 cm

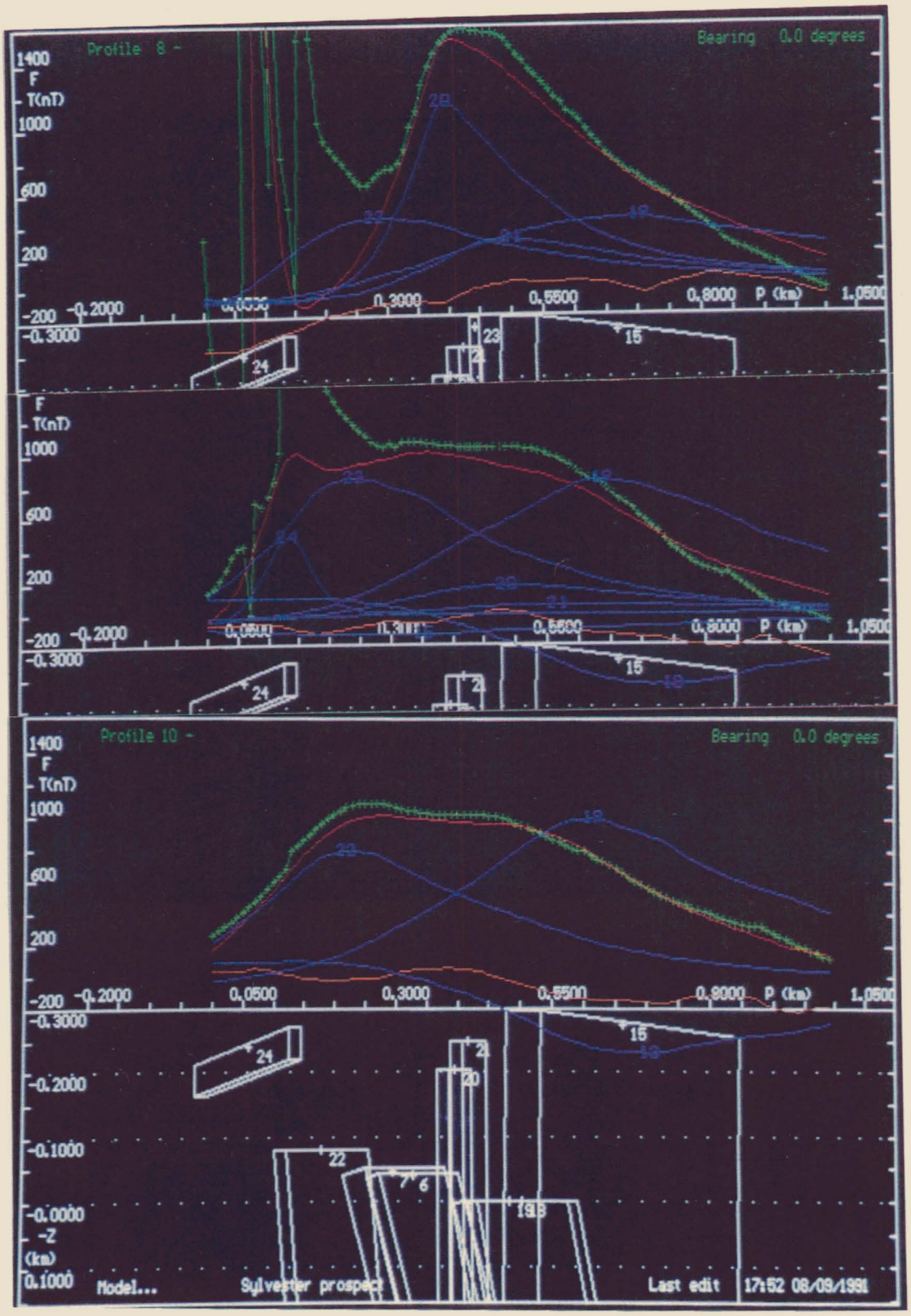

Plate 3 Profiles - lines 6200E, 6400E, 6600E 1:10 000 scale

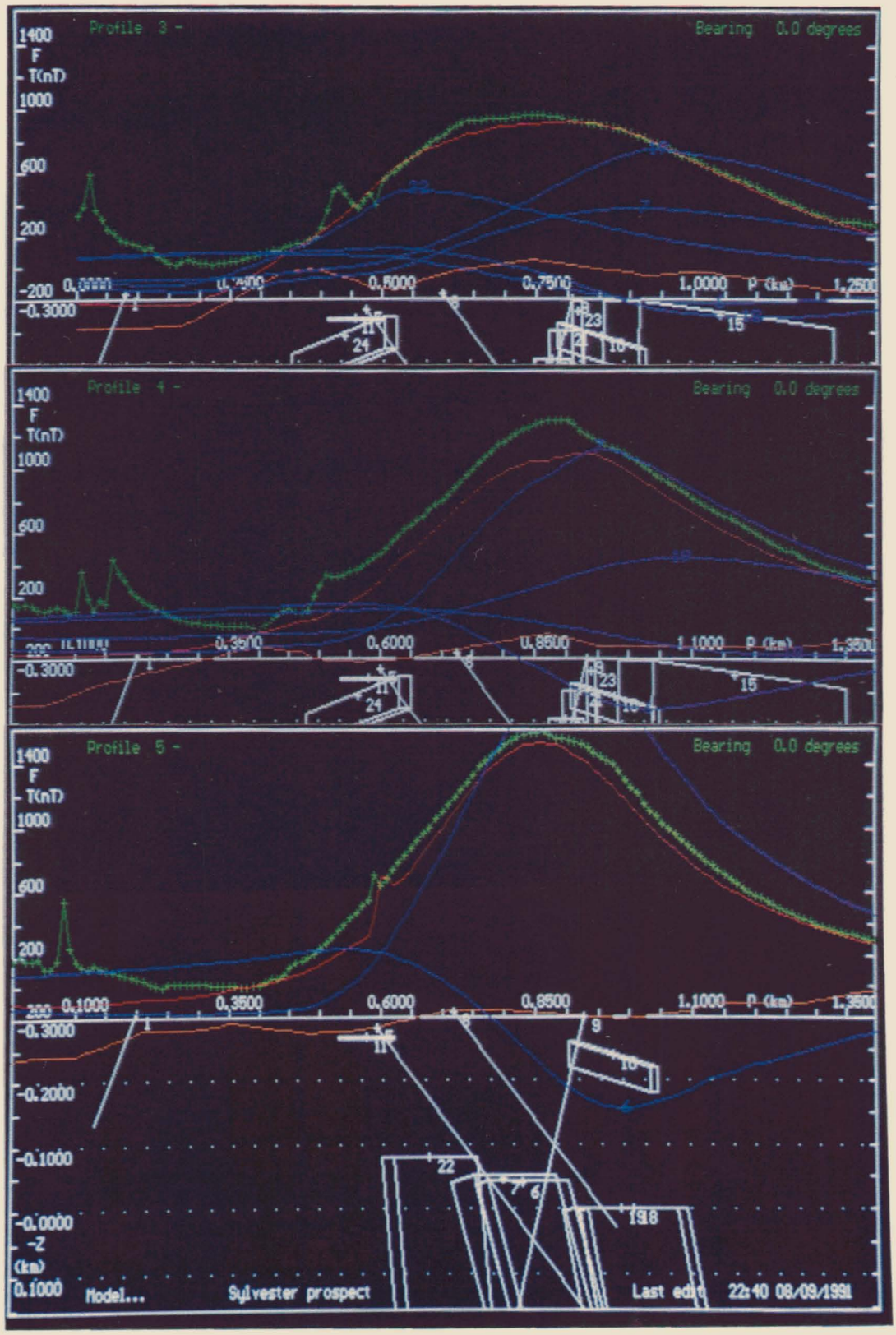

Plate 4 Profiles - lines 6800E, 7000E, 7200E 1:10 000 scale

5 cm

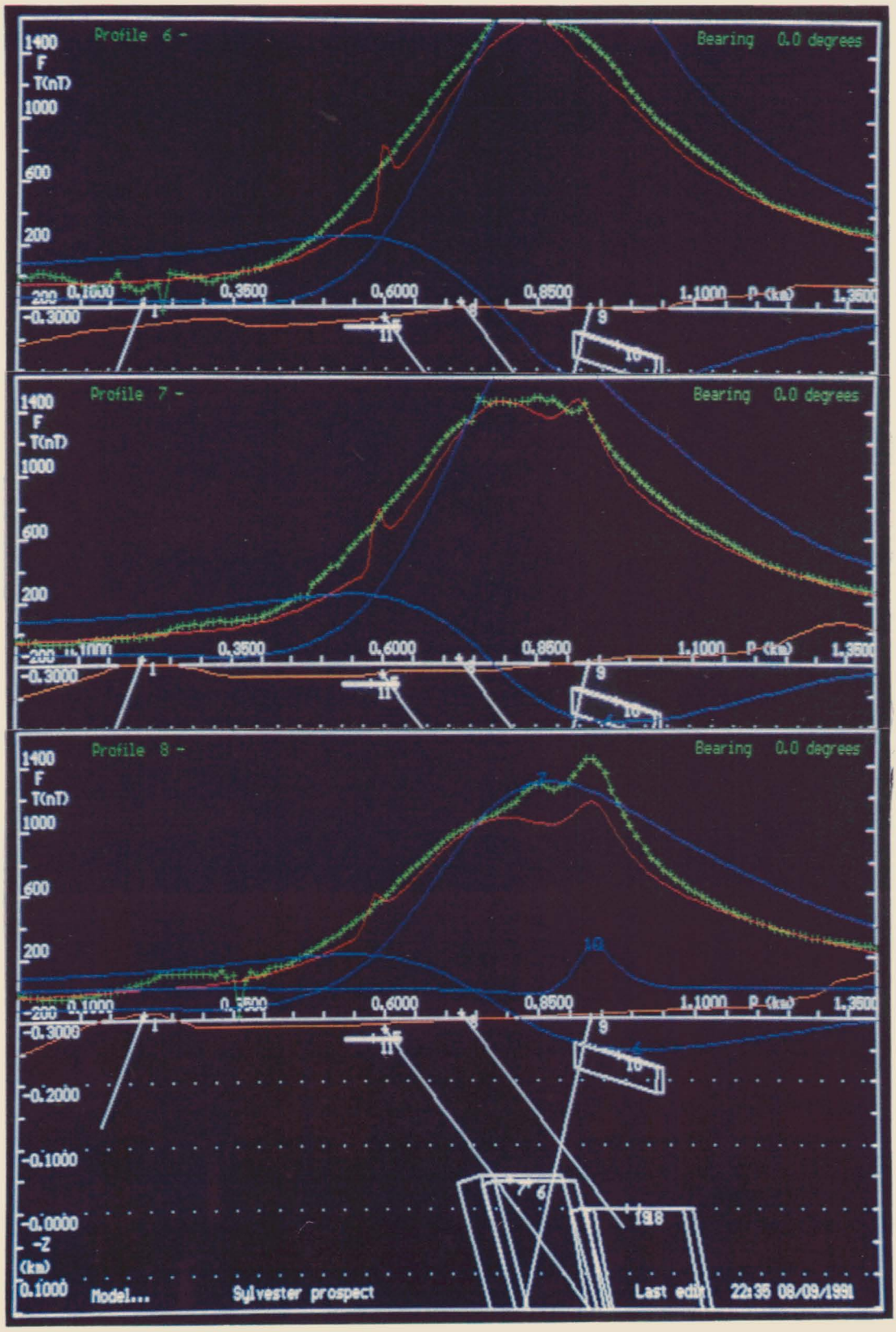

Plate 5 Profiles - lines 7300E, 7400E, 7500E 1:10 000 scale

5 cm

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APPENDIX 5

Magnetic properties of Magnetite/Pyrrhotite skarns,
Sylvester Prospect, Zeehan, Tasmania

130459

MAGNETIC PROPERTIES OF MAGNETITE/PYRRHOTITE SKARNS, SYLVESTER PROSPECT, ZEEHAN, TASMANIA

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Executive Summary

This study has demonstrated that magnetite and pyrrhotite bearing skarns from Sylvester prospect at Zeehan, Tasmania, are strongly remanently magnetised. Some magnetite is coarse grained and therefore magnetically soft, having a high susceptibility of over 100000 μG/Oe (or 1.25 SI). Anisotropy of susceptibility of all samples is not sufficiently large to warrant its inclusion in modelling. The magnetite remanence has been reset during drilling and would most probably be aligned with the Earth's field in the skarn. The magnetite bearing samples possessed Köenigsberger ratios (Qs) of about 1. This can therefore be modelled by enhancing the susceptibility by a factor of 2. The pyrrhotite bearing sample possessed a stable and intense magnetisation with a declination of 166° (AMG) and an inclination of 45°. This sample has a Q of 7.7. Depending upon the relative abundances of fine and coarse grained magnetite, and the relative importance of magnetite and pyrrhotite, the high susceptibility of the magnetite (augmented by its soft remanence) or the oblique and intense remanence of the pyrrhotite may dominate the magnetic signature of the skarn. In any case, it should not be expected that the measured susceptibilities alone would account for the magnetic anomaly amplitude.

1.0 Introduction

Magnetite/pyrrhotite rich rocks occur in skarns at RGC's Sylvester prospect at Zeehan, Tasmania. A study was instigated by Stephen Mudge to determine their magnetic properties, in particular their natural remanent magnetisations (NRMs). Four samples were collected from oriented drill core SYL005 for analysis. Depths of samples are:

#1 is from 427m to 427.1m
#2 is from 455m to 455.1m
#3 is from 463.75m to 463.85m
#4 is from 471.4m to 471.6m

Each sample was cored and sliced in the laboratory to provide three or four oriented specimens, each nominally 2.5cm diameter and 2.2cm height, this being the best cylindrical approximation to a sphere.

2.0 Results and Discussion

2.1 Natural Remanent Magnetization

The samples possessed strong to very strong natural remanent magnetizations. Specimen NRM directions are plotted in Fig. 1 along with directions after 300 Oe. The vector means for specimens from each site are listed in Table 1. While sample 1 and 2 possess moderately strong remanences, sample 3 and 4 are extremely magnetic (almost 80 mG, or 80 Am^{-1}). The finer magnetite of samples 1 and 2 were less intensely magnetised than the very coarse (>1mm) magnetite of sample 4.
Samples 1, 2 and 4, i.e. those that appear to be mainly magnetite bearing, are magnetised in the uphole direction, to the south and up. This suggests that these samples have been affected by the drilling process and their NRMs are what has recently been dudded drilling induced remanences (DIRs). Such magnetisations are soft and are probably piezoremanent magnetisations (PRMs) resulting from the release of stress in the presence of a magnetic field deflected up the drill string. Soft magnetisations are usually aligned with the Earth's field prior to disturbance during drilling.
The mean NRM of sample 3 is to the south and down, and appears to be carried by pyrrhotite. This remanence has not been affected by the drilling and is directionally (reasonably) stable during AF cleaning. The NRM directions of the three specimens of sample 3 are scattered, although they are all directed southerly and down and become slightly shallower at 300 Oe (Fig. 1c) when their intensities are much diminished.

2.2 Susceptibility and Anisotropy

The magnetic susceptibility and anisotropy of magnetic susceptibility (AMS) of the specimens were measured to

determine the magnetic fabric which reflects the tectonic history of the rock and may be important for magnetic modelling. The principal axes of the susceptibility ellipsoids from each sample are listed in Table 2. The directions of the maximum axes are considered to be parallel to the direction of lineation, while the directions of the minimum axes represent poles to the magnetic foliation which is thought to reflect cleavage.

Sample 1 possessed moderate anisotropy (6%) with a northeasterly and down lineation.
Sample 2 showed a similar level of anisotropy as sample 1, but with a better developed foliation dipping to the southwest.
Sample 3 showed 8% anisotropy but with no consistency between specimens.
Sample 4, although having a higher anisotropy than the other samples (13%), also shows no consistency in orientation.
None of the samples have anisotropies sufficient to warrant their inclusion in magnetic modelling.

2.3 Palaeomagnetic Cleaning

Representative results of stepwise thermal cleaning are plotted on orthogonal projections of the measured magnetization vectors (Fig. 2). These plots allow both the direction of, and the intensity of, magnetizations removed during cleaning to be visualized.

The magnetite bearing samples (1,2 and 4) each move away from the up hole direction to a steep up direction. That is, the stable component carried by magnetite is almost vertically up. This is reminiscent of the Cretaceous geomagnetic field for Tasmania and may be reflecting a thermal event during initial rifting between Australia and Antarctica. Magnetic overprinting of passive margins has been found elsewhere and is also related to fission track annealing. Nevertheless, it is thought that the remanence of the magnetite bearing samples would be dominated by the soft component, which would be aligned with the Earth's present field (dec = 12.6°, inc = -72.4°, intensity 62541 nT).

Sample 3, the pyrrhotite bearing sample, changes direction only a little, and the initial scattering of the directions is retained. This indicates that the magnetisations are stable, and if we can assume that the mean is a reasonable average then the magnetic properties of the pyrrhotite is dominted by this southerly down remanence.

2.4 Representative Properties (cgs and SI)

The remanence of the magnetite bearing samples would be expected to have a declination of 12.6°, an inclination of -72.4° and an intensity ranging from 3000 μG (3000×10^{-6} emu/cc, 3 Am^{-1}, 300 "gamma") to 80000μG (80000×10^{-6} emu/cc, 80 Am^{-1}, 8000 "gamma"). The finer magnetite of samples 1 and 2

were less intensely magnetised than the very coarse (>1mm) magnetite of sample 4. Induced magnetization (kH) also varies with grain size from about 2500 μG (2500×10^{-6} emu/cc, 2.5 Am^{-1}, 250 "gamma") to about 78000μG (78000×10^{-6} emu/cc, 78 Am^{-1}, 7800 "gamma") practically in the direction of the Earth's field, i.e. dec = 12.6°, inc = -72.4°.

Note that to calculate induced magnetisation in the cgs system:
kH = 125000 μG/Oe x 0.625 Oe = 78100 μG
while in SI:
$kH = kB/\mu_o = 157000 \times 10^{-5}$ SI x 62500 nT / μ_o = 157000×10^{-5} SI x 62500 / $(4\pi \times 10^{-7})$ nAm^{-1}) = 78.1 Am^{-1}.

These values correspond to an Köenigsberger ratio (J/kH) of about 1.

Likewise values can be calculated for the pyrrhotite sample using a remanent intensity of 77000 μG, a susceptibility of 16000 μG/Oe, yielding a Q of 7.7.

3.0 Conclusion

The magnetic properties of the skarn at Sylvester prospect are dominated by remanence. Because the remanence of the magnetite is soft and probably aligned with the Earth's field direction, the susceptibility should be enhanced by a factor of 2 when modelling the magnetics.

The pyrrhotite sample has a Köenigsberger ratio of 7.7, indicating that its southerly and down directed remanence dominates the magnetic properties of the pyrrhotite bearing skarn.

The overall magnetic properties of the skarn would depend on the relative abundances of the different grain sized magnetites, and the relative abundances of magnetite and pyrrhotite. In any case, susceptibility alone would be inadequate to model the magnetics over the skarn.

Table 1 Vector Mean Natural Remanent Magnetization

Sample	n	Dec(°)	Inc(°)	Int(μG)	σ(μG)
01	4	186.2	-60.9	3299	2552
02	4	222.8	-57.0	3316	1583
03	3	165.8	45.8	77486	-
04	3	162.9	-54.1	79637	15377

Int - intensity ($1\mu G = 1mAm^{-1}$), σ - standard deviation
Specimens from sample 3 had intensities ranging from 72000μG to 195000μG, rendering the standard deviation meaningless (note that the 77486μG given above is the vector mean intensity).

Table 2 Tensor Mean Anisotropy of Magnetic Susceptibility

Site	n	Dec(°)	Inc(°)	Int(μG/Oe)	A	bulk
01						
Max	4	68.2	63.4	5584	1.06	5394
Int	4	218.6	23.6	5337		
Min	4	313.8	11.7	5262		
02						
Max	4	297.1	6.4	1974	1.07	1919
Int	4	192.6	65.9	1945		
Min	4	29.8	23.2	1838		
03						
Max	3	296.2	7.6	17063	1.08	16394
Int	3	204.1	15.5	16351		
Min	3	51.4	72.6	15769		
04						
Max	3	55.4	2.9	124654	1.13	116371
Int	3	324.3	20.2	114250		
Min	3	153.1	69.6	110211		

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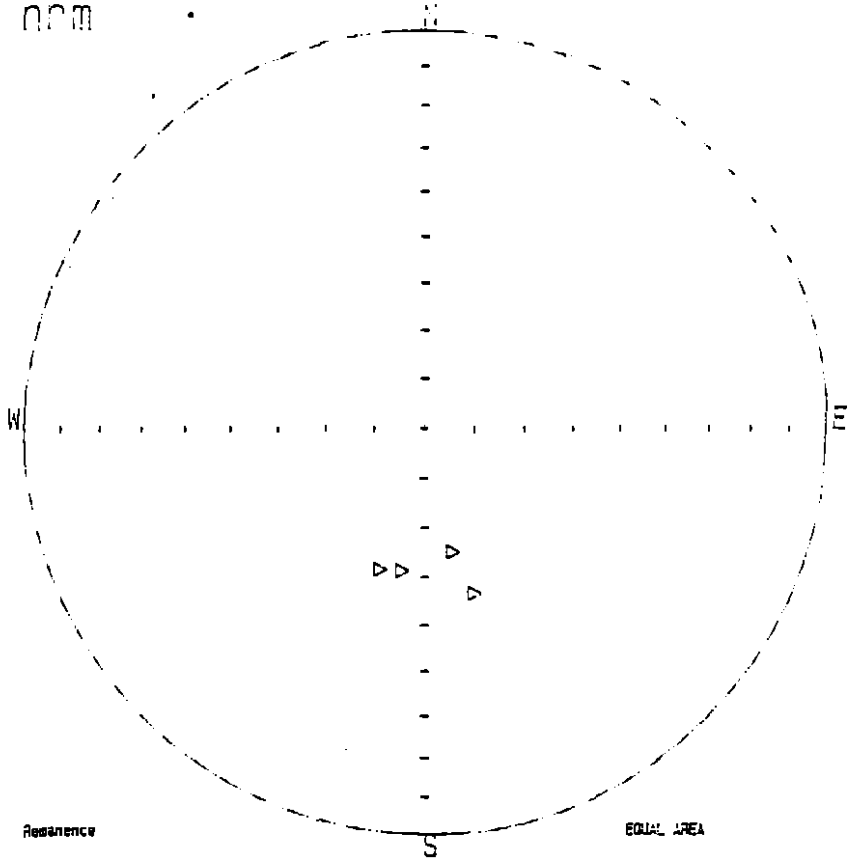
Figure 1. Stereographic projections of natural remanent magnetisation directions and directions after 300 Oe.

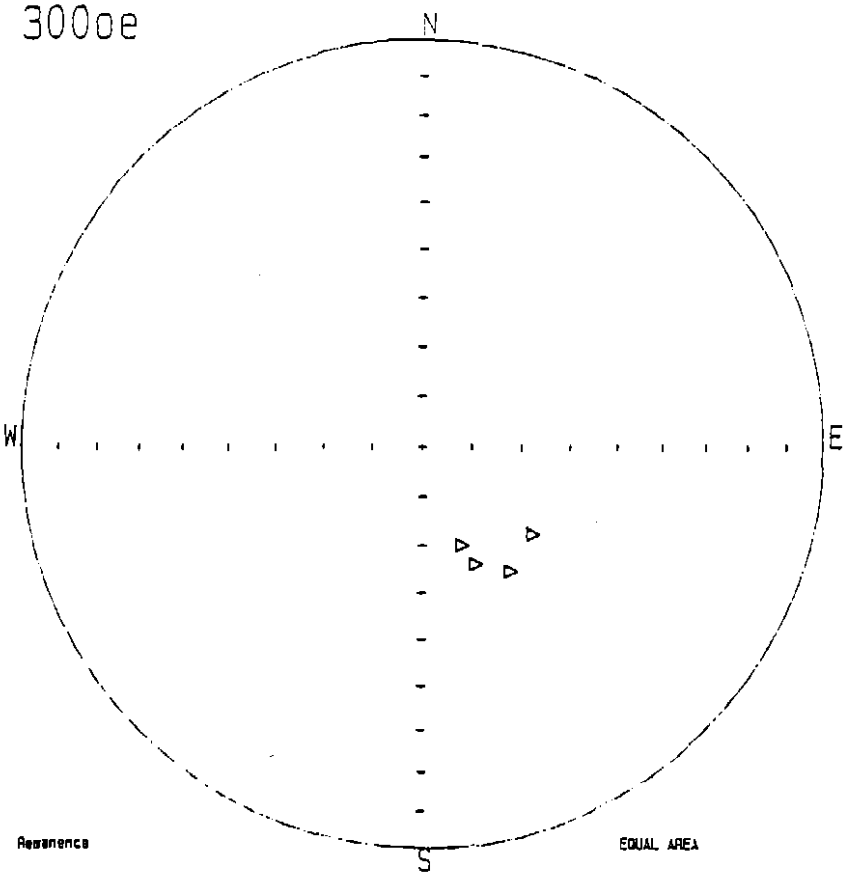
rgc3-91.rem nrm

1a



rgc3-91.rem 300oe

1a



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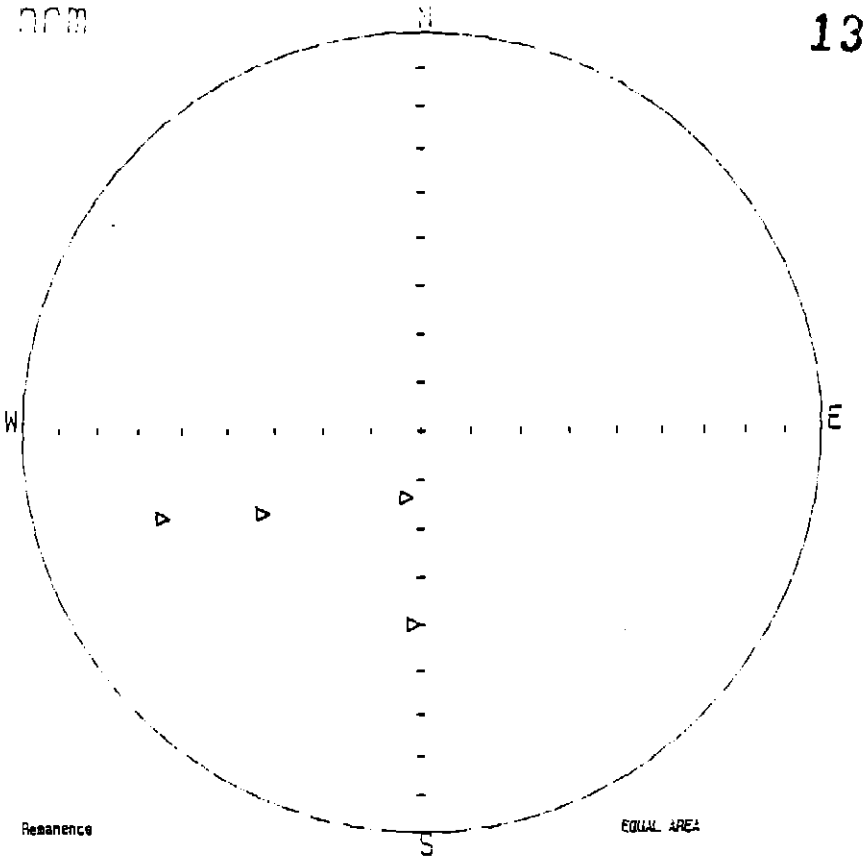
rgc3-91.rem nrm

130466

1b



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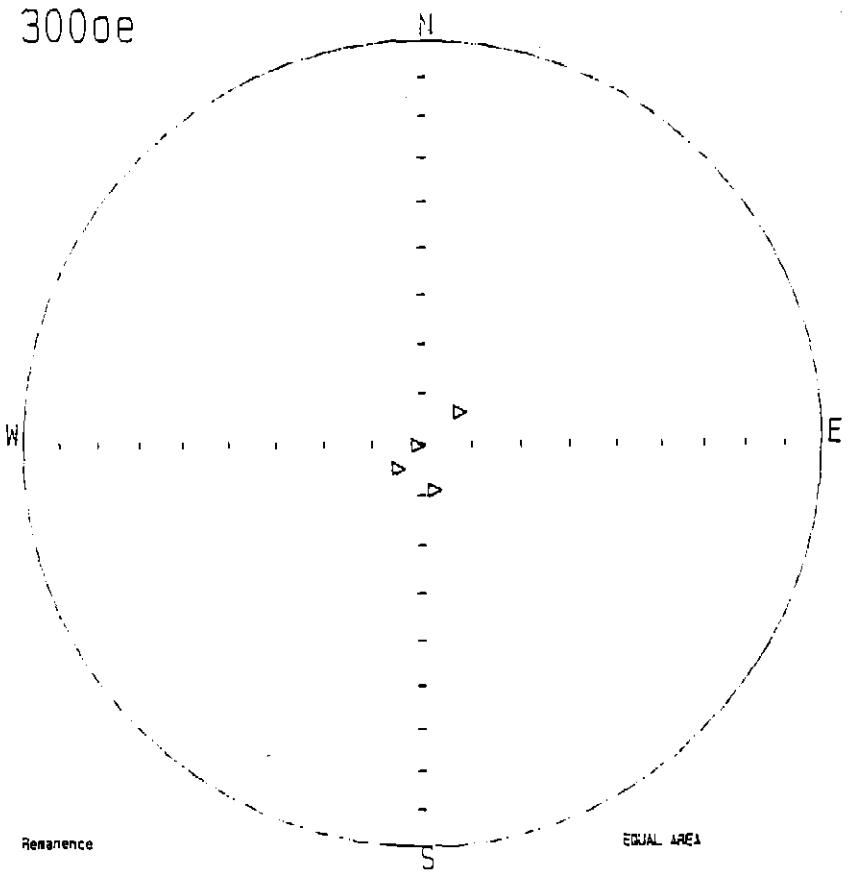
1b



432

130467

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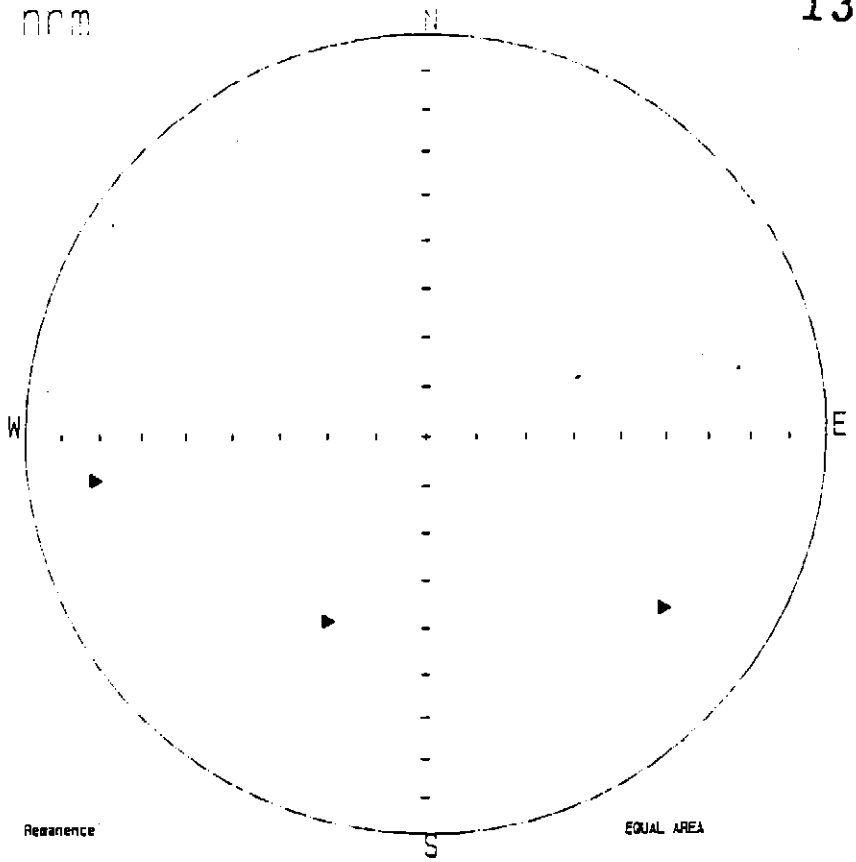
1c



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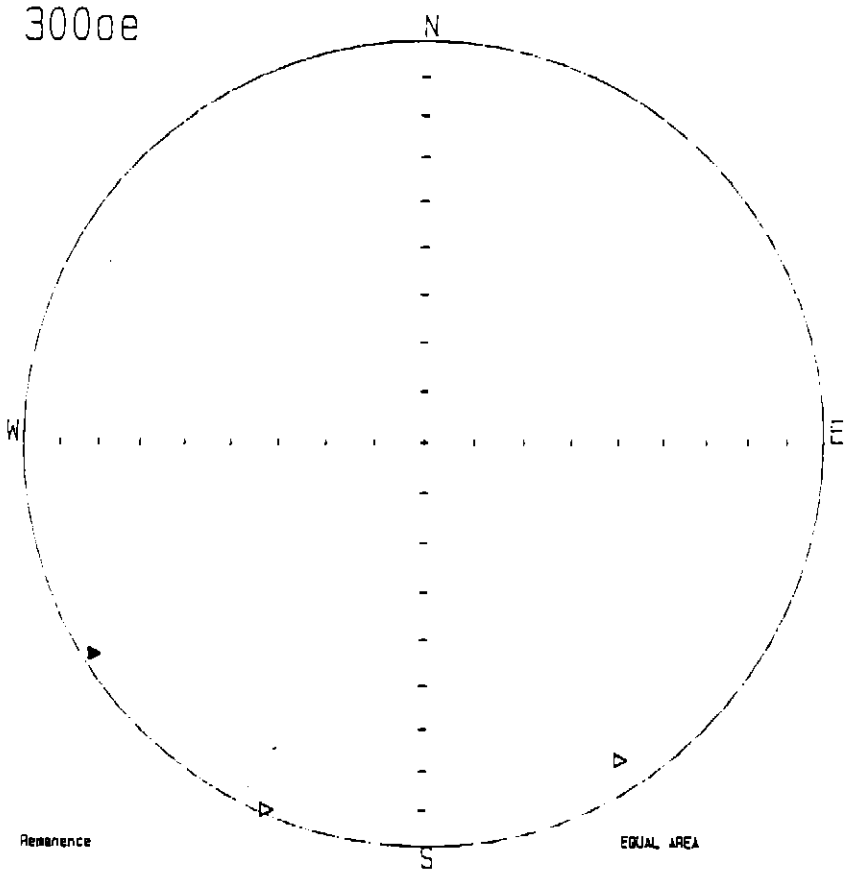
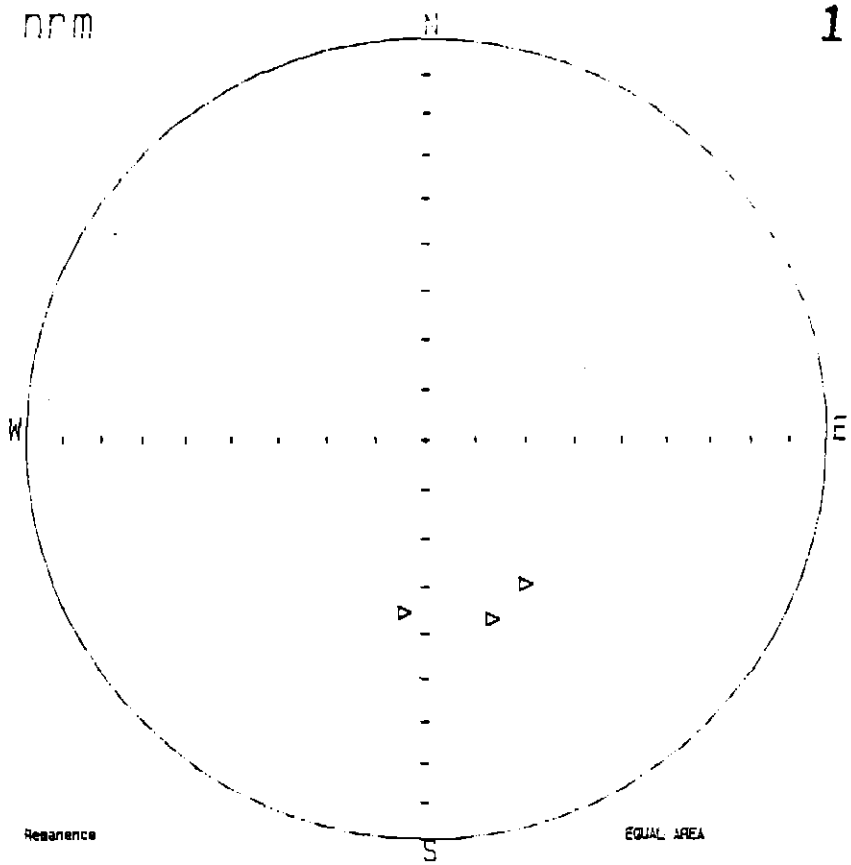
1c



rgc3-91.rem nrm

130468

1d



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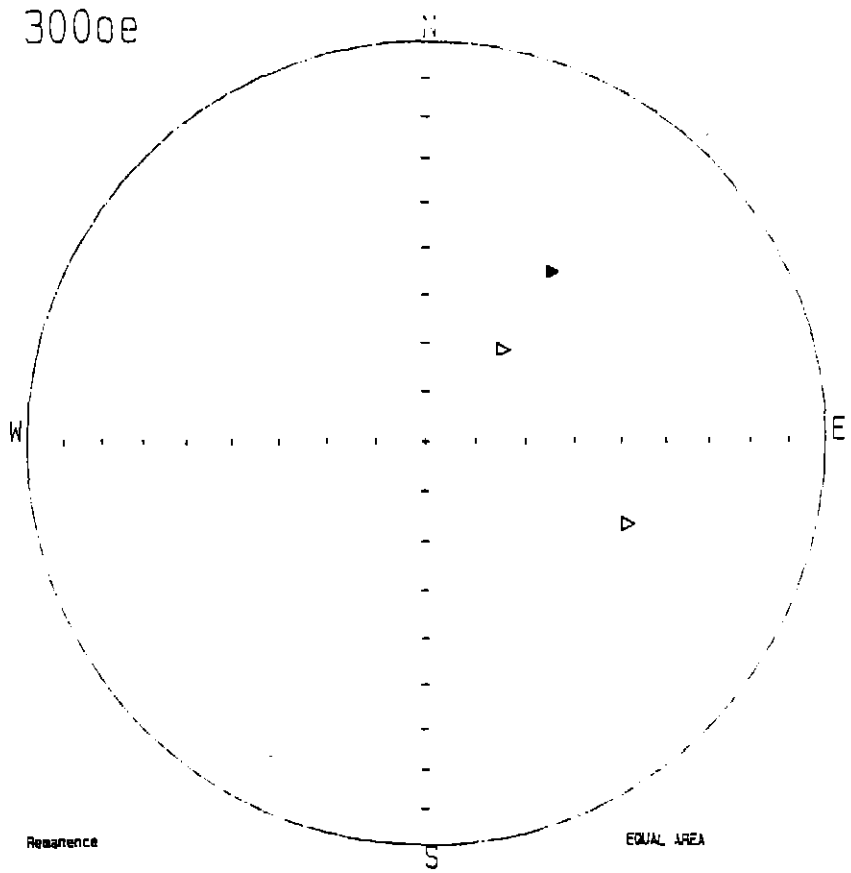
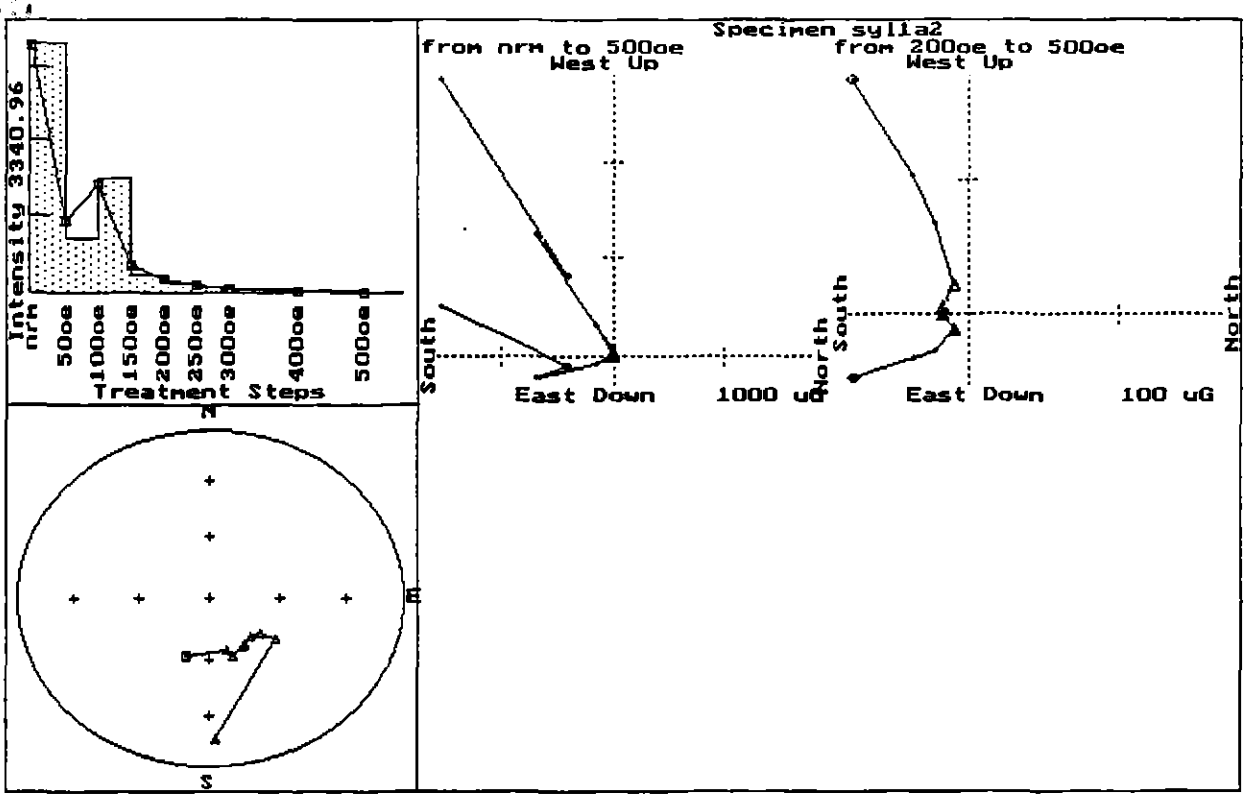
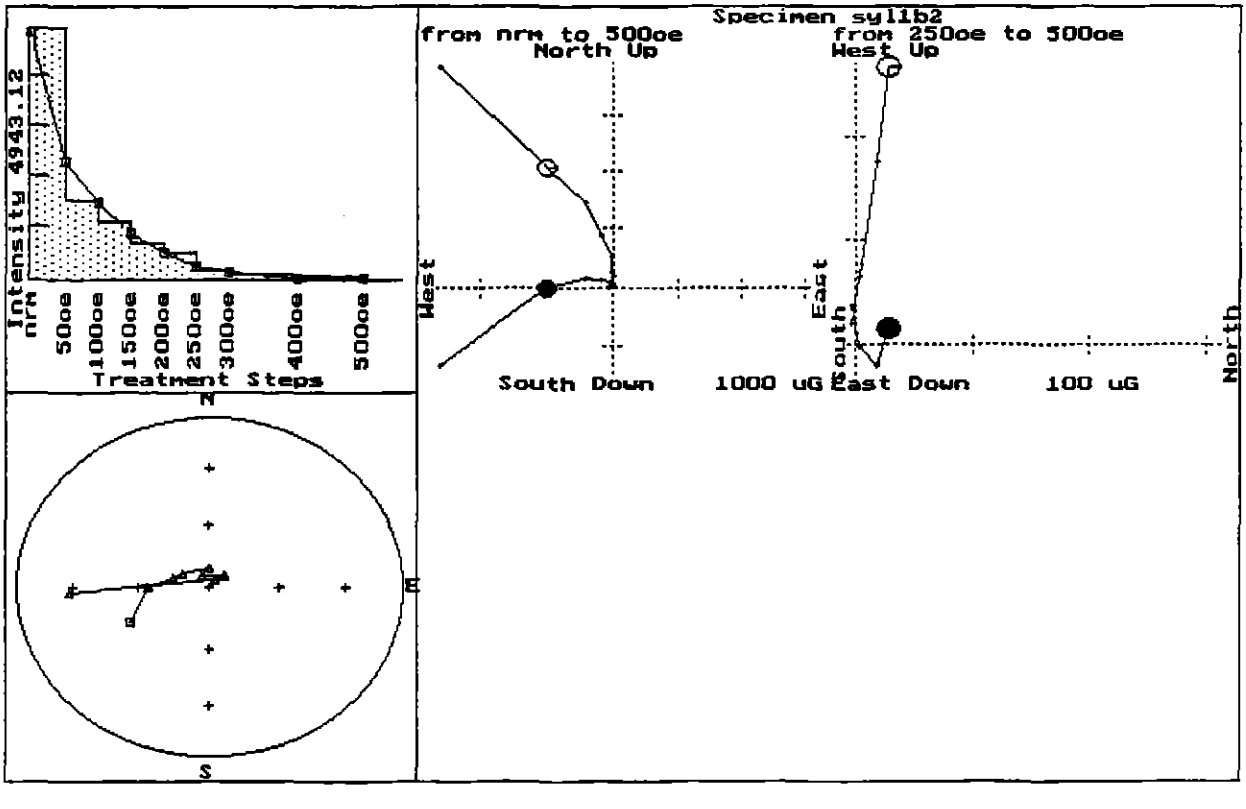
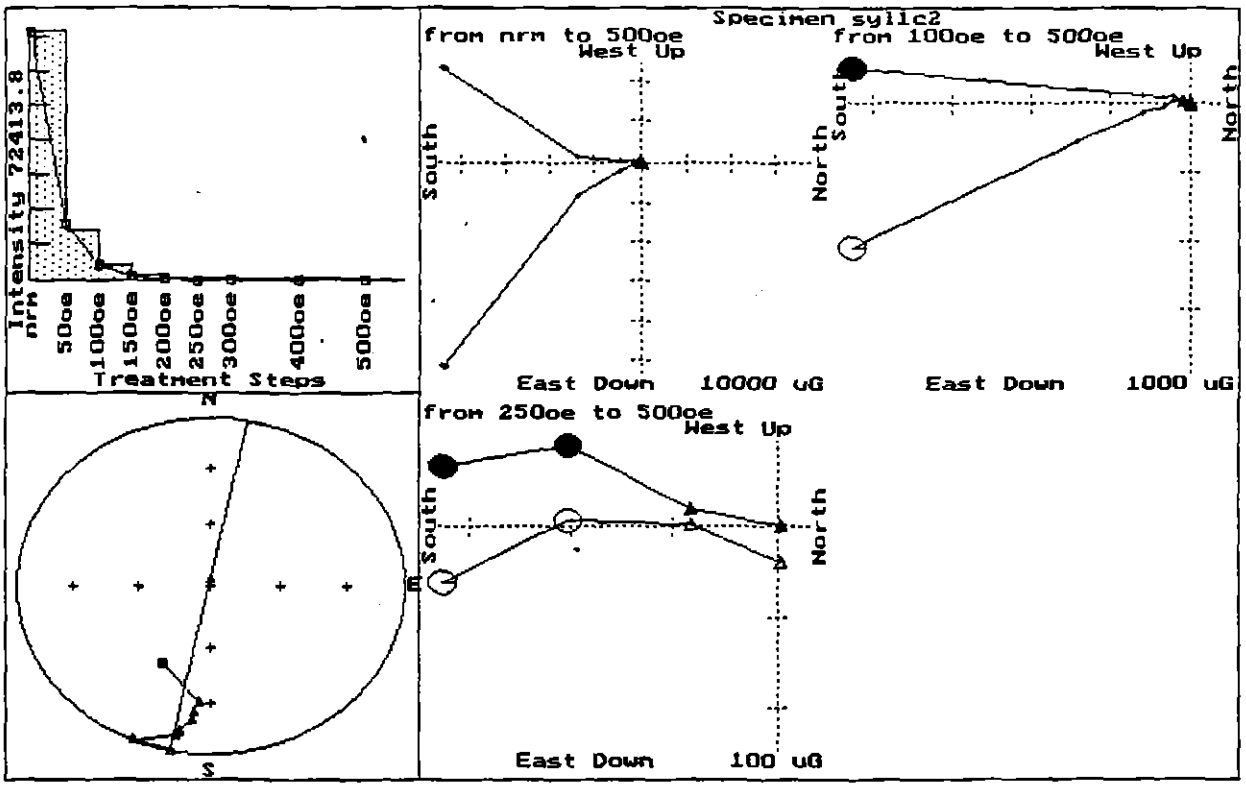
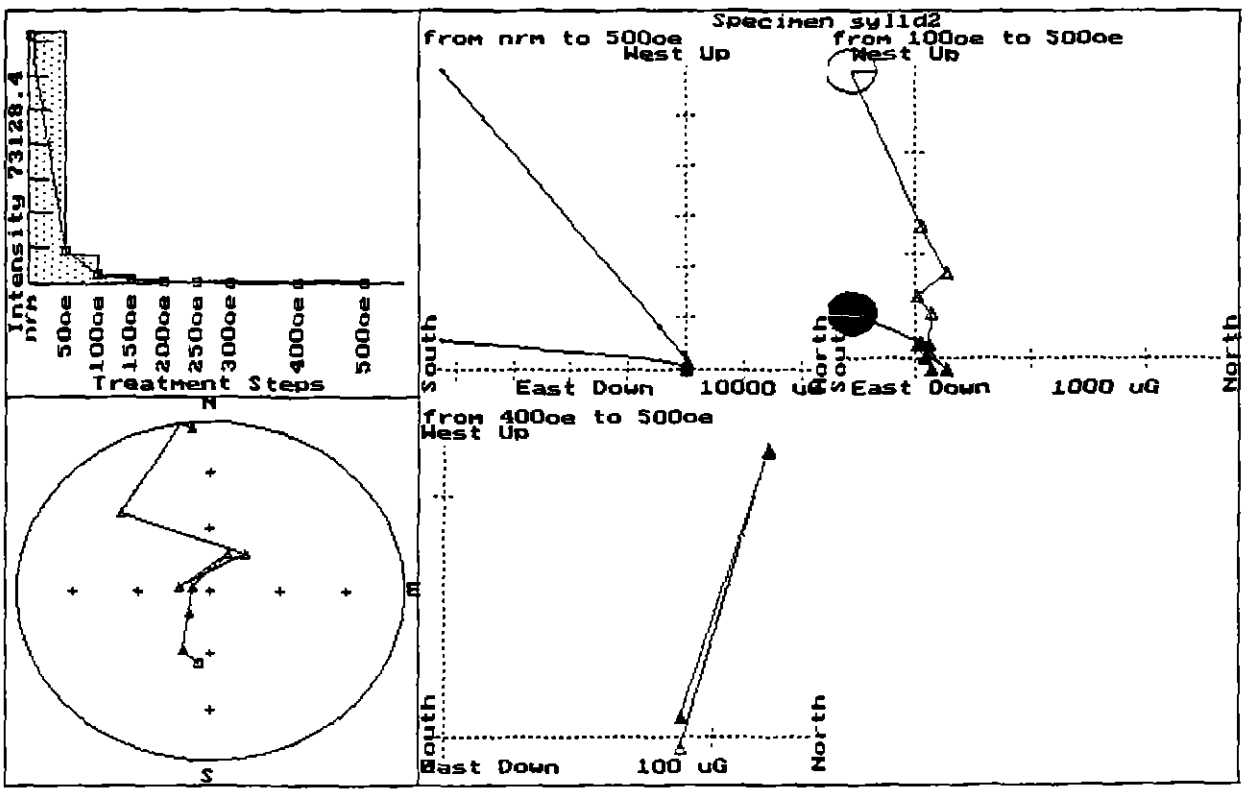


Figure 2. Stereographic projections, orthogonal and demagnetisation plots of natural remanent magnetisation (NRM). Full (open) symbols plot on the lower (upper) hemisphere.


Specimen sylla2
from nrm to 500oe
West Up
from 200oe to 500oe
West Up
Intensity 3340.96
nrm
50oe
100oe
150oe
200oe
250oe
300oe
400oe
500oe
Treatment Steps
N
E
S
South
East Down
1000 uG
North
South
East Down
100 uG
North


Specimen syllb2
from nrm to 500oe
North Up
from 250oe to 500oe
West Up
Intensity 4943.12
nrm
50oe
100oe
150oe
200oe
250oe
300oe
400oe
500oe
Treatment Steps
N
E
S
West
South Down
1000 uG
East
South
East Down
100 uG
North


Intensity 72413.8
nrm
50oe
100oe
150oe
200oe
250oe
300oe
400oe
500oe
Treatment Steps
N
E
S
Specimen syllc2
from nrm to 500oe
West Up
South
North
East Down
10000 uG
from 100oe to 500oe
West Up
South
North
East Down
1000 uG
from 250oe to 500oe
West Up
South
North
East Down
100 uG


Intensity 73128.4
nrm
50oe
100oe
150oe
200oe
250oe
300oe
400oe
500oe
Treatment Steps
N
E
S
Specimen syllld2
from nrm to 500oe
West Up
South
North
East Down
10000 uG
from 100oe to 500oe
West Up
South
North
East Down
1000 uG
from 400oe to 500oe
West Up
South
North
East Down
100 uG

130472

APPENDIX 6

An interpretation form of Heemskirk Granite,
Zeehan EL 42/87.

LEAMAN GEOPHYSICS
Survey Review, Specification, Reduction, Interpretation
Gravity, Magnetic and Seismic Methods
Structure and Prospect Evaluation

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AN INTERPRETATION FORM OF HEEMSKIRK GRANITE

ZEEHAN EL 42/87

for
RGC Exploration Pty Limited

by
Dr. D.E. Leaman

October 1990

ZEEHAN

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5 Geological and gravity field trends
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All figures follow the text

MAPS

1 Bouguer anomalies
2 Residual Bouguer anomalies
3 Current granite model interpretation

Maps are included in separate pockets.

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SUMMARY

Review of extant gravity data in the Zeehan area has enabled some refinement of previous models and concepts of the form of the Heemskirk Granite in the region between its exposure at Mt Agnew and the township of Zeehan.

This interpretation, although limited by assumptions concerning the bulk properties of the Oonah Formation and the scale and nature of the syncline of Lower Palaeozoic rocks east of Zeehan, has defined several definite elements of the granite form.

There is a clear correlation between granite form and many observed fault and fold patterns across the licence area. It may be inferred that the granite has been affected by, and modified high level manifestations of, pre-existing fractures.

There is also a positive association with known mineralisation, particular forms of the granite and those structures which presented primary controls on intrusion. Some of these are not obvious in surface mapping which may not distinguish them due to existence of other faults, or due to their modification upon intrusion or deformation.

The granite within the area is ribbed; two sub E-W features extend from exposure to the west, and one N-S rise forms a shelf beneath the Zeehan mineralised field. The location of this rise and the Zeehan Syncline may have been controlled by a pre-existing N-S structure. In general, however, the granite is relatively smoothly formed and few cupola or wall abnormality sites or fractures can be inferred. Those which have been identified should be matched with known distributions of carbonates.

INTRODUCTION

EL 42/87, Zeehan, is located immediately west of Zeehan township in western Tasmania. It includes the town (see Figure 1).

This important mineralised area contains an array of deposits which have been previously worked. It also includes some tin deposits, such as that at Queen Hill, which have been defined but which are undeveloped.

In order to understand the relationships between these deposits and the Devonian Heemskirk Granite, exposed a few kilometres to the west, gravity data have been reviewed and interpreted.

Previous interpretations of more regional and indicative nature have been reported which demonstrate the efficacy of this approach. These were summarised in Chapter 14 of Leaman & Richardson (1989a). Figure 2 presents the net conclusion of this previous work which shows that the granite was inferred to shelve eastward toward Zeehan at depths less than 2 to 4 km. This diagram suggests the general relationship between mineralisation and granite shelf but does not provide any specific guidance for prospect or EL evaluation.

This report examines the gravity data within this area in order to provide a more refined and specific description.

The gravity data used were obtained from the state gravity data base (TASGRAV) maintained by the Department of Mineral Resources and Energy. Map 1 presents a compilation of this data for the area centred on the licence. All Bouguer reductions include a 22 km terrain correction and use of crustal density 2.67 gm/cc. The nominal station spacing is about 400-500 m and stations are shown in Map 2.
Map 2 presents the residual gravity field after removal of the deep crustal and oceanic components as defined by Leaman & Richardson (1989b). This presentation provides a normal relativity of response patterns free of regional gradient distortions and forms the basis for the present interpretation.

INTERPETATION

ROCKS AND ROCK PROPERTIES

No specific study of rock properties has been undertaken in order to provide the present interpretation. All work has been referenced against the geological maps of Blissett & Gulline (1962) and the recent compilation by RGC Exploration (presented as a base to some figures).

Late Precambrian rocks of the Oonah Formation are exposed across much of the area. These include carbonates and various other sediments but are intensely deformed and faulted. A gross anticlinorium extends E-W across the area. Oonah structures and distribution is truncated in the east by extensive faulting and a large syncline with a N-S axis. The core of this structure includes Devonian units and the oldest parts of the limbs include Cambrian rocks. The association between structures and these rock suites is more complex along the southern margin of the EL.
Leaman (1986), and Berry and Crawford (1988), have suggested major thrusts within this association of structures. Eastward translation of the Oonah Formation across a large part of the Lower Palaeozoic sections was implied by Leaman (1986).

Nominal rock properties based on general experience of the exposed materials have been employed but tested against the controls afforded by the magnitude of anomalies across the granite boundary exposed west of the EL.
Line 5362 (Figure 14) provides an example of these tests to suggest that the appropriate bulk contrast between granite and Oonah Formation - as a package - is of the order of 0.12 gm/cc.
Since the bulk density of the granite is of the order of 2.61 to 2.63 gm/cc then the implied bulk density of the Oonah suite is about 2.75 gm/cc. This is consistent with sample determinations obtained during the Mt Read Volcanics Project.
The Cambrian rocks are more variable but have not been distinguished for this interpretation.
Ordovician, Silurian and Devonian rocks are also variable but generally much less dense. Siliceous rocks may have densities of 2.5-2.55 gm/cc while carbonates may be 2.74-2.84 gm/cc. Examination of Maps 1 and 2, however, shows that the bulk effect is strongly negative showing that the bulk contrast for these rocks as a group is much less than both the density of reduction and the density of either the granite or the Oonah Precambrian and Cambrian rocks.

There is considerable scope for re-assessment of the bulk density chosen for these rocks and of review of particular portions of the disrupted syncline. Bulk densities assumed lay in the range 2.55-2.60 depending upon the exposed proportion of Gordon Limestone.

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FEATURES OF GRAVITY FIELD

Map 2 displays all the salient features of the gravity field. Figures 3 and 4 present this map with and without a geological basemap.

The gravity field is approximately two dimensional west of 361 000 mE although becoming increasingly negative as the granite exposure is approached. The anomalies become positive to both north and south but the effect is most pronounced to the south. Distinct ribs may be observed at about 5362 and 5364 000 mN but these are terminated near 359 000 mE.
Several small perturbations may be recognised in the field but the significance of these is not immediately obvious. The most marked occurs near Queen Hill and Sylvester.

The largest single feature in the field is associated with the Zeehan Syncline. This N-S feature correlates directly with a large part of the exposed syncline but the gravity field shows that this pattern is far from simple. Major discontinuities are evident which show that the rocks of the syncline, and the structure itself, are strongly compartmentalised. A major fault is evident near 363 000 mE, 5363 000 mN and extends SW for two kilometres. This is the Brickfields Fault. The gravity response to north and south of this structure shows that the Bell Shale is much denser than all other rocks, except perhaps the Gordon Limestone, since it only occurs to the south and there is a marked reduction in anomaly.

Apart from the E-W and N-S trends noted above a number of other trends may be recognised.
These trends, defined by marked gradients or distortions of the field, can be seen to correlate closely with intensely deformed portions of the area, or known fault systems (Figures 4 and 5). It will be noted that many gravity features are slightly rotated and often only approximate mapped structure positions, or stress a particular structure. Review of these relationships shows which faults are significant regionally. An example of a substantial structure which is not well exposed extends from WSW of Sylvester across Zeehan (357, 5361 - 363 000 mE, 5363 000 mN). Some minor faults have been mapped within the syncline and there is some concentration of folding and fold axis rotation west of Queen Hill but the gravity field is definitive. All of the minor structures indicated are impressions controlled by a more fundamental feature which has also shaped the intrusion from the west.
Several other examples of this type are evident and largely explain some of the convolutions in folding and shapes of many faults.
All the surface structures can be seen in this context to be related to a small group of very large structures whose position is only defined with any certainty using the gravity data.

METHODS

An array of observed profiles was established based on Map 2. These profiles were designed to provide a representative sampling of semi-regional anomaly forms. The nominal line spacing was about 1 km and may be contrasted with the nominal station spacing of 0.5 km. This report represents a preliminary interpretation which is also an order of magnitude upgrade of previous interpretations. It is not an overinterpretation of the data available.

The N-S and certain axial E-W profiles were then modelled using simple two dimensional methods in order to scale the general relief of the granite and estimate the order of the density contrast between Oonah Formation and granite. This was achieved by extending some lines westward to Mt Agnew (e.g., line 5362, Figure 14). These simple methods were also used to test whether the density contrast applied over considerable depths, say greater than 3 km, and whether it was possible to model viably using the granite density alone as a bulk reference.
The initial tests showed that a bulk contrast of about +0.12 gm/cc should be used between granite and Oonah rocks - although some minor variations are permissible and likely. It was also found that rocks with comparable densities extend to considerable depth around the granite.

Since the form of the granite is irregular and generally elliptical in two directions three dimensional methods must be employed to generate reliable proportions for the form of the granitic mass. Two dimensional methods are quite unreliable for many E-W profiles. The information derived from 2D tests and previous work was used to produce an initial 3D model which was passed through six iterations to produce the solution offered in this report.
Each profile was examined after each iteration and tested for consistency in both body geometry and curve fit parameters. The latter provide a crucial test of model and assumptions and must be consistent for all lines of the array. The difference between the zero shift and the observed and calculated difference is a measure of this and has been found to be about 14.5 mGal for this data set. The deviation for best fits is about 0.3 mGal which is close to the noise level in the data.
Note that a residual data set should yield a near zero difference, not 14.5 mGal, and would if the density contrasts were referred to the Bouguer density; viz -.06 gm/cc for granite and +0.07 mGal for Oonah Formation. Modelling has been simplified by using a single contrast.

Basic review of the profile set soon revealed the impact of the syncline. This anomalous source generates large responses which are not simply defined due to the presence of many distinct units. Since this study emphasizes the granite no more effort was directed toward resolution of the sources within the syncline than necessary to generate an approximate "equivalent" source for the effect. This is clearly a crude model which

generally satisfies the anomalies observed but is not geologically valid or true to all unit exposures. No structure contour model of this source is included in this report since it is a geophysical compromise and should not be used to control geological sections. Some approximate indications of the scale of the structure are indicated in Map 3 where the nominal base of the Ordovician rocks is shown as a depth with respect to the surface.

There is clearly scope for considerable refinement of this part of the analysis but this would only be justified if the far eastern edge of the licence area is found to contain important or mineralised structures.

DISCUSSION

Eleven profiles of the profile array established to evaluate the gravity field and define the form of the Heemskirk Granite in this area are shown in Figures 6 to 16. All granite profiles shown represent the current status of the 3D model. Further refinement of this model (Map 3) is not justified until some control is established within the study area, or the contrast assumptions can be significantly revised.
As noted above there is scope for review in the vicinity of the syncline since the responses of both granite and syncline may locally overlap and these may not have been properly separated. This may be achieved by fuller modelling of the syncline and contrasting various elements of this structure with the granite response. This cannot be justified in a preliminary study since this process would require more time than allocated to the present work. Most of the conflict and ambiguity lies east of the EL in any event.

(Any evaluation of the granite form between the Murchison Highway and Renison, and Zeehan, is not possible without considering and resolving these issues)

Each profile has been discussed separately in order to indicate the nature of the conflicts, issues and targets implied in different parts of the structure.

Line 357 000 mE (Figure 6).
This section samples the negative anomaly spines which reach out from the granite exposures near Mt Agnew. The model shows that these may be due to a superimposed light granite phase or alteration about the roof pinnacles of the granite since the model is not especially sensitive to such forms. The relief indicated is the minimum likely and the roof depth is the maximum probable. The features generating the anomalies, whether due to shallower and sharper spines of the main mass, or cap alteration, are very abrupt and could be expected to be associated with mineralisation according to the concepts shown in Figure 20 were suitable host rocks present. The "Doric" mine is in such a cap position.

The more positive deviation at the southern end of the profile reflects the mafic rocks exposed. The anomaly due to these sources is small suggesting that the bodies are thin and probably part of thrust structures as implied by Berry & Crawford (1988).

Line 358 000 mE (Figure 7)
The irregular granite forms in the roof of the intrusion are of higher relief at this easting and well defined. Known mineralisation in the Sylvester-Comstock area is within 1 to 1.5 km of the nearest granite and both zones lies within a fan of intrusion fractures adjacent to fault conduits. Several other important fracture sites for fluid transfer are evident.

The positive anomaly at 5365 000 mN is very localised and no mapped unit can explain it. A local dolomite or mafic unit would be required and the locality should be reviewed magnetically. It is possible that this represents a skarn around the edge of the intrusion.

Line 359 000 mE (Figure 8)
This section covers the flat roof of the granite at about 2 km depth. The most important possible deviation in the solution occurs at about 5360 500 mN where the observed field is more negative than expected. The response correlates with the southern margin of the granite and may indicate a limited localised marginal spine. This area is mineralised. Part of the effect is three dimensional due to the curl of a ridge spine from the WNW (see Map 3, Figure 17).

Line 360 000 mE (Figure 9)
This section is a more extreme version of line 359E. The granite is narrower and more abrupt but lacking in protrusions. Mineralisation appears to be associated with projections of the (clearly) fracture controlled margins even though the crest of the granite is a little more than 2 km deep.

No satisfactory solution could be found for the gravity field at the northern end of this profile. The field appears more negative than can be explained by granite alone unless it is more extensive than the profile array suggests. Part of the problem may relate to the coverage of stations - or the syncline and its contents may extend into this region as an overthrust block (see Leaman, 1986). This option has not been considered further here but may be important prospectively since the Ordovician carbonates may be present.

Line 361 000 mE (Figure 10)
The model generally satisfies the straightforward condition for all rocks and the granite south of the influence of the syncline rocks. The rocks of the syncline affect the section in a peripheral manner but this has not been resolved. The negative anomaly south of 5364 000 mN is anomalous. It cannot be related to granite, nor any member of the Oonah Formation and rocks of the syncline are east of it - unless this portion of the Oonah

Formation overlies it in a thrust block. This type of structure may well transform the prospectivity of this fault block since the granite is not more than 2 km below surface.

The irregular and more positive fit between the curves between 5363 and 5365 000 mN reflects the local influence of the nearby syncline and the particular units exposed along the marginal faults.

Line 362 000 mE (Figure 11)
The issues posed by this section are an extreme version of those discussed for line 361E. The section samples the syncline and a general outline is suggested. Note that the scale of the structure and any biasses introduced by different rock types have not been fully assessed or modelled and small changes in density balance can satisfy the various levels of the observed data between 5363 and 5367 000 mN.

Zeehan and the nearby mineralised field, however, lie within the fracture fan defined by the southern margin of the granite. This zone includes a positive anomaly which may be associated with rocks of the Crimson Creek Formation.

Line 5360 000 mN (Figure 12)
This section samples the southern wall of the granite and provides a good representation of the N-S rib which extends south from Zeehan. The relief of this feature can be established independently of the effects of the overlying synclinal rocks due to information provided by the N-S profiles. The synclinal model requires some local, high frequency modifications only.

Line 5361 000 mN (Figure 13)
This section samples the top of the southern wall of the granite and confirms the general low relief of this part of the intrusion. The effect of the syncline is satisfactorily separated and not a problem.

Line 5362 000 mN (Figure 14)
This extended profile establishes the true relief of the anomalous effect of the granite. It also shows that no simple surface can account for the observed profile. The spines are 3D effects required by all profiles and the areal distribution of anomalies and can be correlated with many important mineralised sites - including Queen Hill.

The observed profile includes two negative spikes which may represent noisy data or near surface alteration. This cannot be established with the present data density but it is interesting that such features are associated with fracture projections or granite corners and may reflect alteration zones.
The syncline effect is generally satisfied although the denser Bell Shale portion is not fitted - but is apparent.

Line 5364 000 mN (Figure 15)
This profile samples the northern aspect of the granite ridge

and is of generally low relief. The rib defined marks the northern limit of the elongate cupola which underlies the Zeehan field. No mineralisation is known at this northing but the possibility should be reviewed.

The effect of the syncline is satisfactorily fitted using a contrast of -0.2 gm/cc (implied density 2.54) in a zone lacking Bell Shale. This suggests that the Silurian rocks dominate the effective contrast of the syncline.

Line 5366 000 mN (Figure 16)
This profile along the northern wall of the granite mass complements that along the southern wall (Figure 12). The hammer head style ribs which extend N-S beneath Zeehan are elongated north and south of the main nearly E-W axis of the intrusion. This is a primary feature and the syncline is intimately associated with it. Structures controlling the location and disposition of the syncline have also controlled intrusion of the granite.

The syncline effect is generally fitted although denser units are implied toward the eastern side of the structure.

The interpretation of granite form has been summarised in Map 3 and Figure 17. This clearly shows the ribs which extend eastward from exposure as well as the extended N-S axis near Zeehan, with its local crest. Mineralisation south of Zeehan along many of the faults adjacent to the syncline margin is clearly associated with extension of this primary rib. Fluids have been transferred from it into the faults adjacent to it.

The association between granite form and surface geology is shown in Figure 18, and between model and structural trends in Figure 19.

Possible target zones based on fracture and cupola form projections are suggested in Figure 21. The concepts used to develop this zonation are indicated schematically in Figure 20.

130434

CONCLUSIONS AND RECOMMENDATIONS

The present interpretation of gravity data in the Zeehan area has established that a fat spine of Heemskirk Granite extends eastward from exposures at Mt Agnew to Zeehan at depths little more than 2 km below surface. The granite roof and walls are irregular and contain at least two E-W spines and a N-S cross rib. The latter crests beneath Zeehan itself and is clearly the source for most mineralisation.

The form of the granite east of Zeehan is uncertain due to the cover of low density rocks in a large syncline with a relief of at least 3 km. It is possible that the granite shelves gently eastweard to depths of the order of 6 km.

Some relatively minor anomalous effects have been recognised in the data set. Some, negative, may be due to incomplete correction but their association with critical granite shape changes does suggest the possibility of localised alteration. These sites, such as that near Queen Hill, are clearly worthy of inspection and perhaps some minor infill to establish whether the effect is real.
Other, positive, effects may also be important if mafic rocks can be eliminated as sources. Comparative review of magnetic data and matching of the granite forms with magnetic source depths is recommended for this purpose and it may also identify skarns.

It is likely that part, possibly a large part, of the Oonah Formation has been overthrust upon the Lower Palaeozoic rocks now exposed only in the syncline. The fault block at 360 800 mE, 5363 500 mN may be a case where the concealed rocks occur at relatively shallow depths. If this concept is correct then the distribution of surface rocks of the Oonah Formation and their particular content of dolomites may present only part of the prospectivity equation in this area since other carbonates may be present beneath them. Any magnetic analysis must consider this possibility since these concealed rocks will be much closer to the granite and well inside its aureole.

Refinement of the present interpretation is not generally justified unless the model can be tested and densities confirmed. Improvement is possible at the easting of Zeehan but requires a comprehensive review of the effects and contents of the syncline.
Isolated anomalies, such as that near Sylvester or 358/5365, may repay more detailed survey in case these are due to fortuitous location of the stations in materials which are not mafic but mineralised. Some ground checking is also advised.

REFERENCES

Berry, R.F., & Crawford, A.J., 1988. The tectonic significance of the Cambrian allochthonous mafic-ultramafic complexes in Tasmania. Aust. J. Earth Sci., 35, 161-171.

Blissett, A.H., & Gulline, A.B., 1962. Zeehan. 1: 63360 geological map sheet. Geol. Surv. Tasm.

Leaman, D.E., 1986. Gravity interpretation west and north west Tasmania. Mt. Read Volcanics Project Report Dep. Mines Tasm.

Leaman, D.E., & Richardson, R.G., 1989a. The granites of west and north west Tasmania - a geophysical interpretation. Bull. geol. Surv. Tasm., 66.

Leaman, D.E., & Richardson, R.G., 1989b. Production of a Residual Gravity Field Map for Tasmania and some implications. Exploration Geophysics, 20, 181-184.

130480

Report submitted on behalf of
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by

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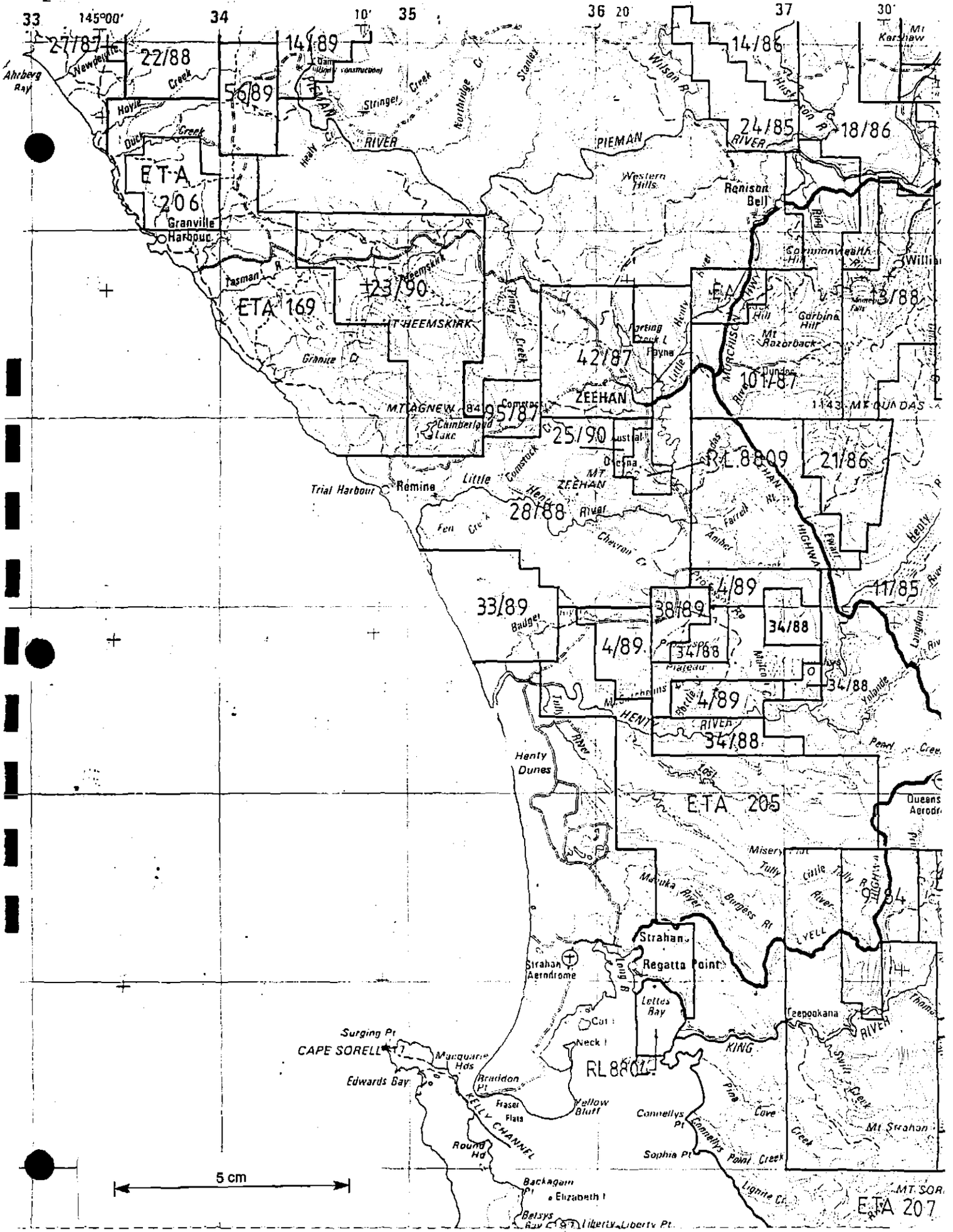
M.Aus.I.M.M., M.M.I.C.A

Oct 24, 1990



LOCATION MAP ZEEHAN EL 42/87 FIGURE 1

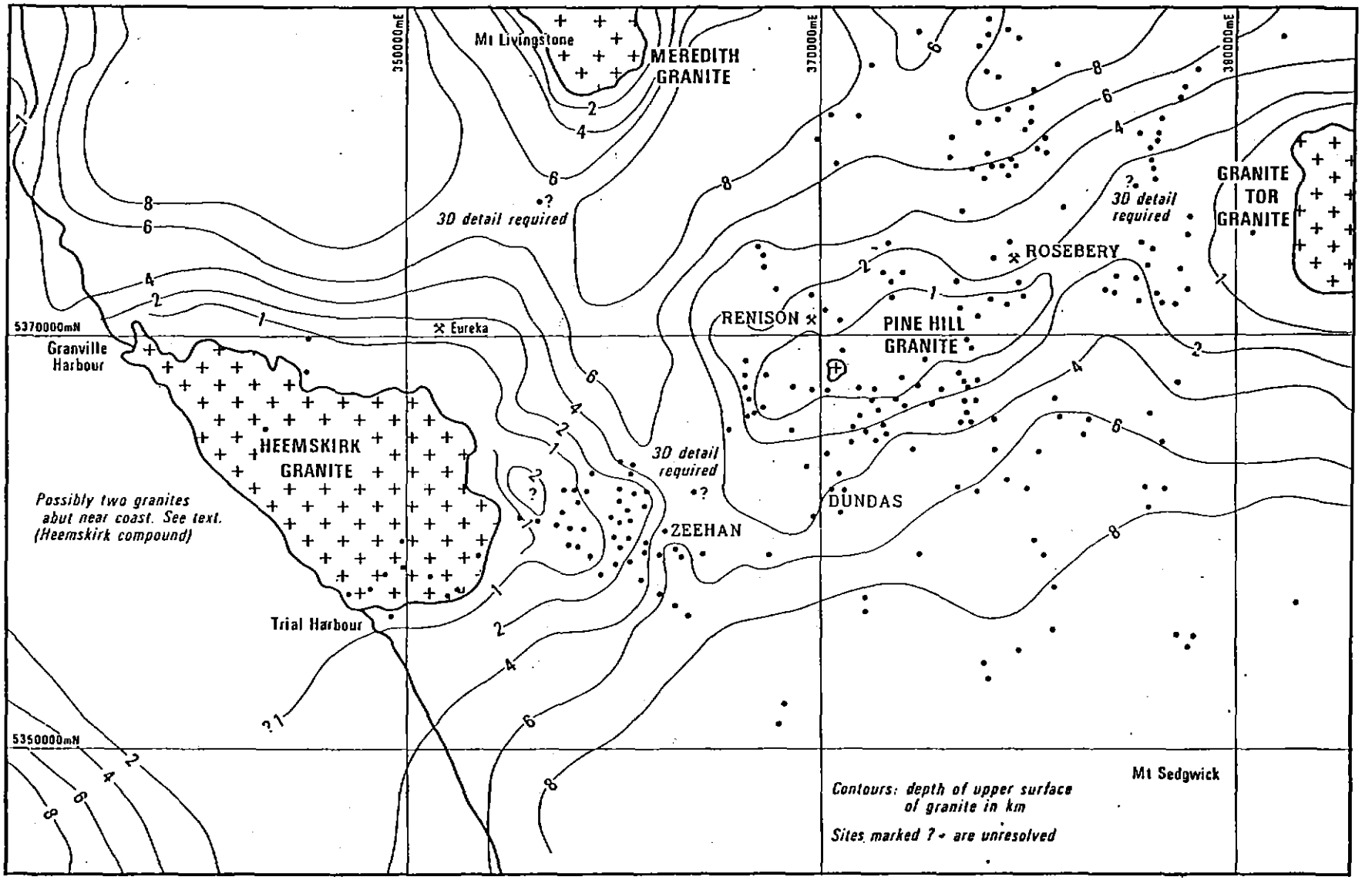


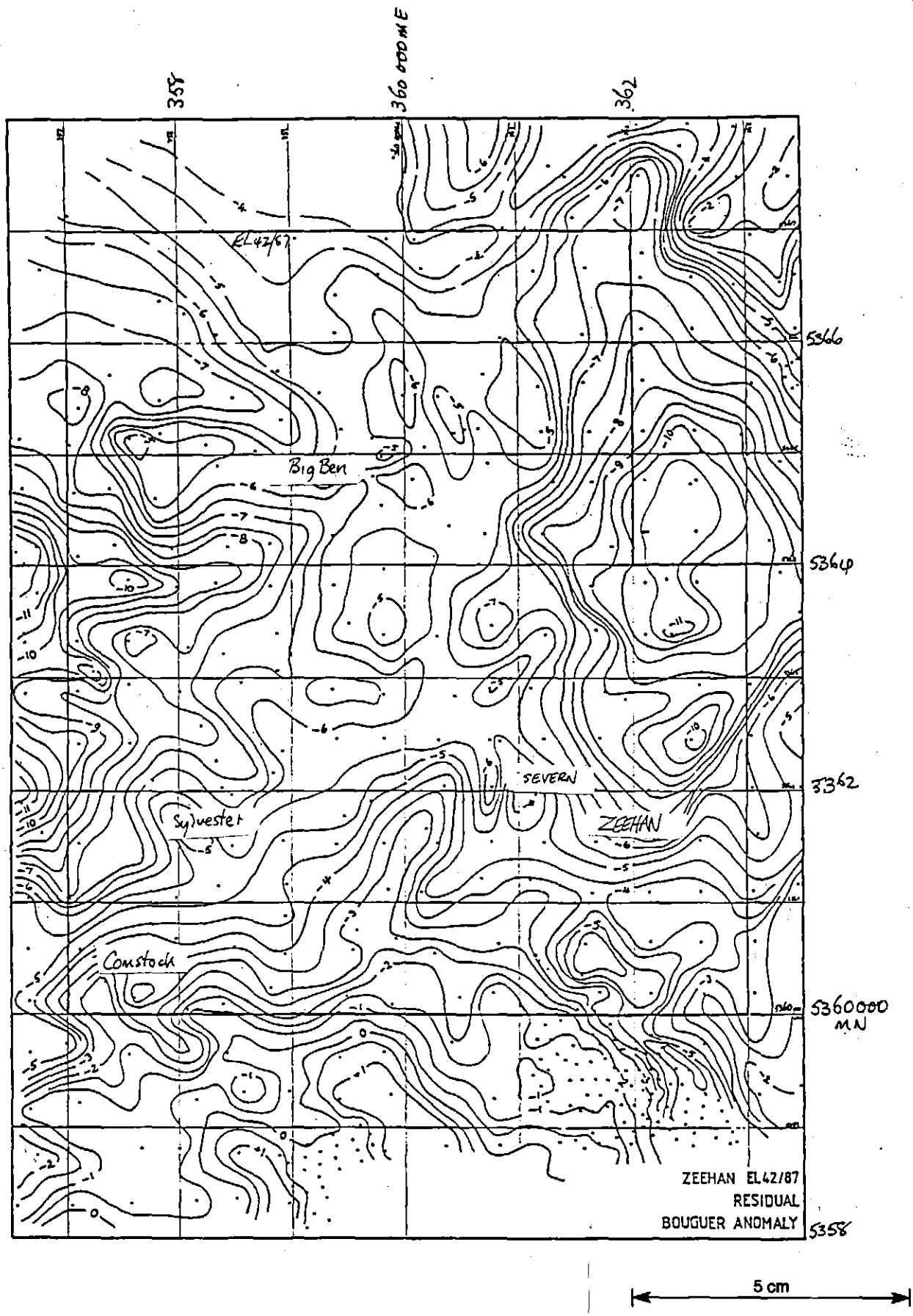
Figure 90. *Provisional interpretation of the form of the Heemskirk and Pine Hill granites. Mineralised sites (indicated •) from Leaman (1986a) and Bamford and Green (1986).*

5 cm

PREVIOUS INTERPRETATION OF 'HEEMSKIRK GRANITE AND ASSOCIATION WITH MINERALISED SITES (from Leaman & Richardson, 1989a)

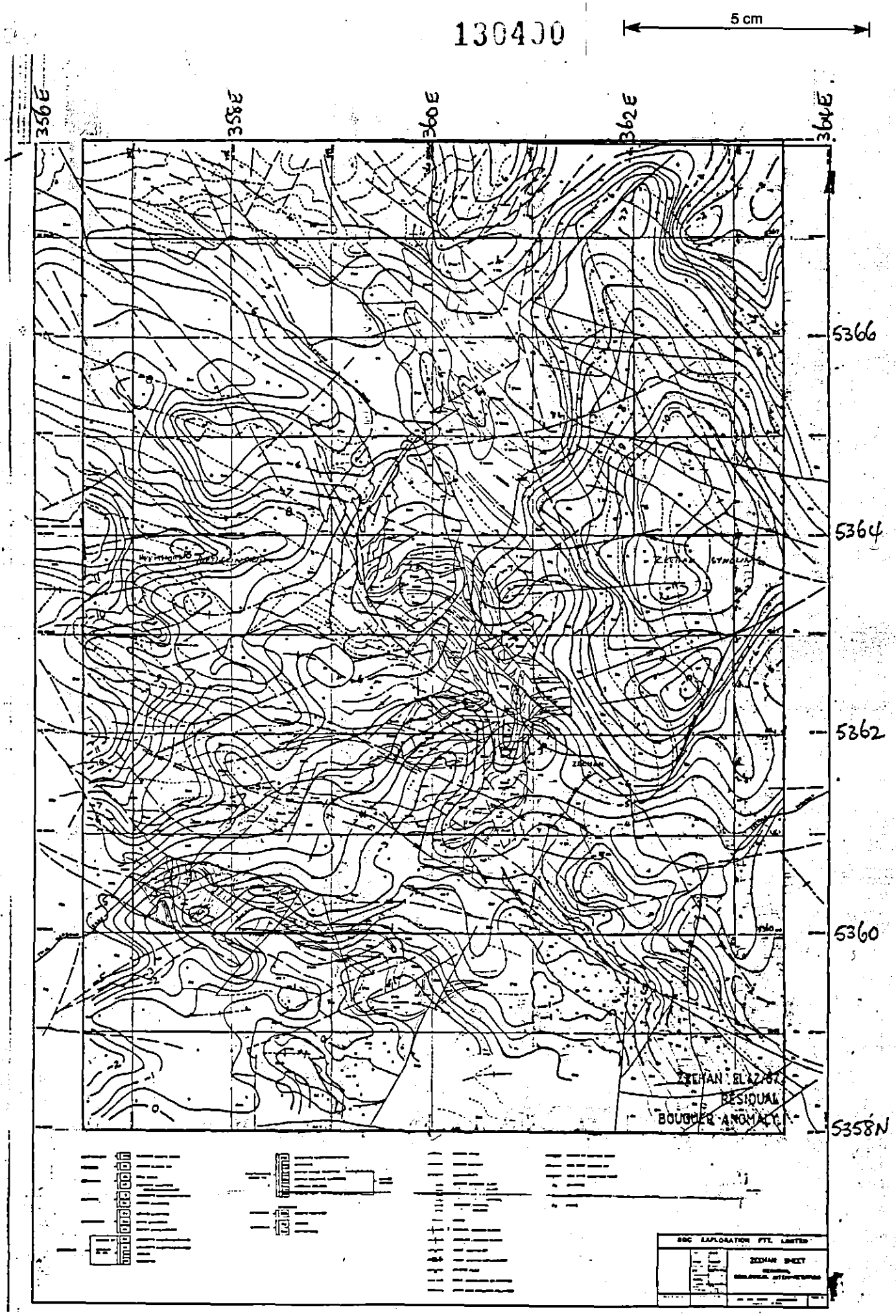
FIGURE 2

130438

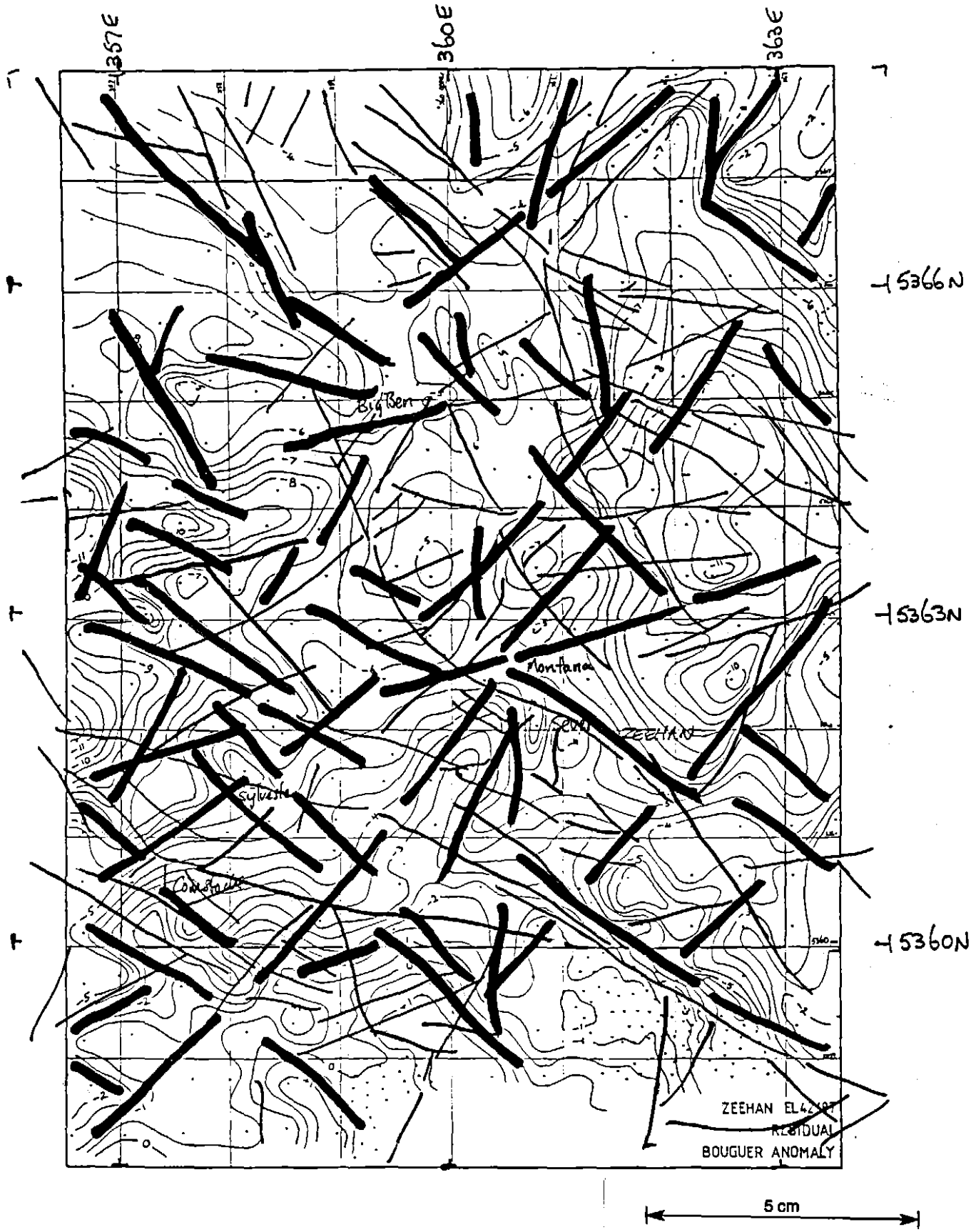


RESIDUAL BOUGUER ANOMALY ZEEHAN EL 42/87
Regional separation by method of Leaman & Richardson (1989b)

FIGURE 3



RESIDUAL BOUGUER ANOMALY AND GEOLOGICAL BASE MAP EL 42/87
Basemap by RGC Exploration FIGURE 4



TRENDS ZEEHAN EL 42/87
Light lines from geological base map (RGC source)
Heavy lines from gravity field map

FIGURE 5

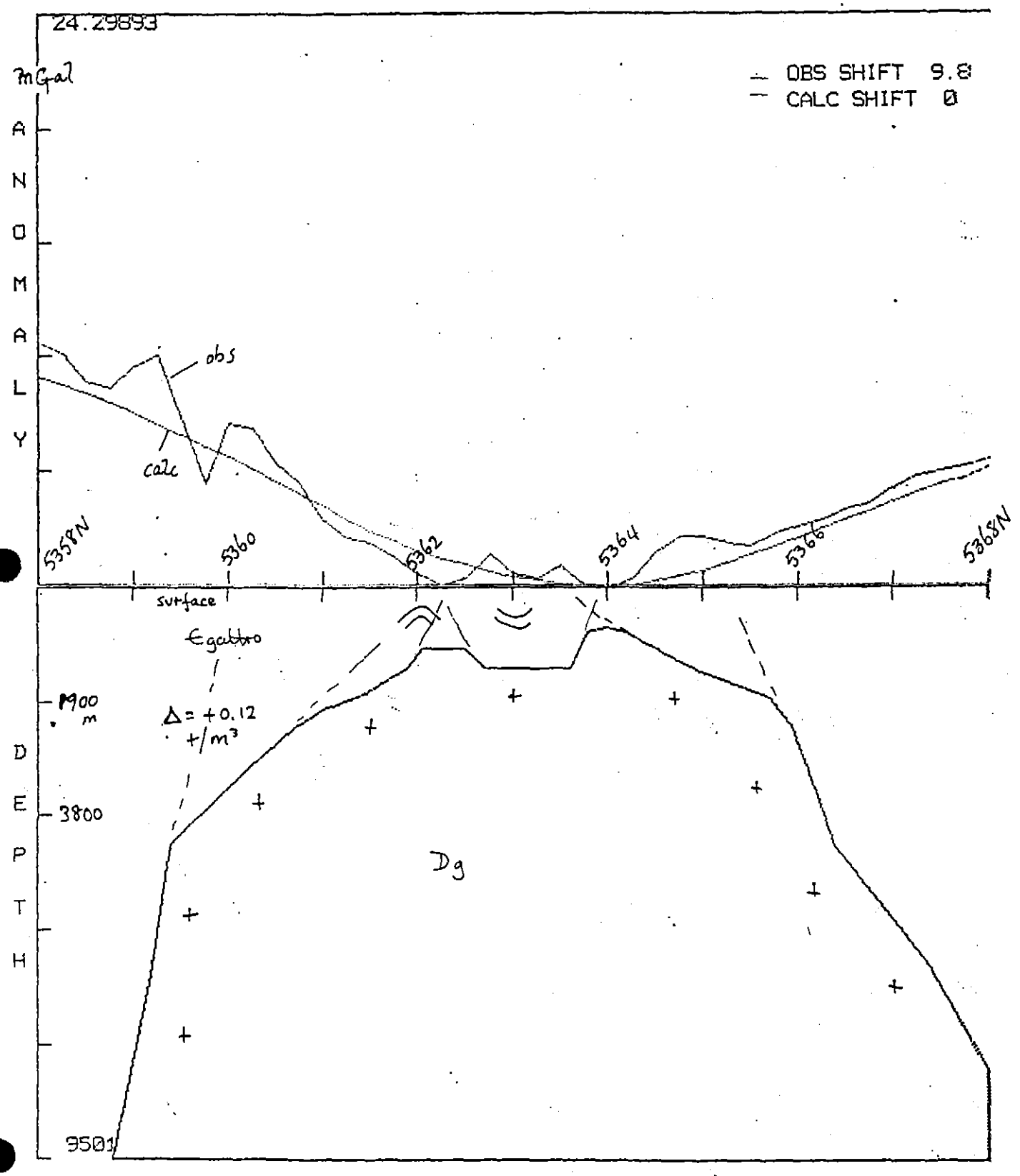
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130432

357 000 mE

0 1.00 B:ZEEG7
1 1.00 B:G5AML7
2 1.00 B:G0BL7
3 2.00 B:SYN3L7

ERO SHIFT : 24.29893



ZEEHAN EL 42/87 3D MODEL LINE 357 000 mE FIGURE 6

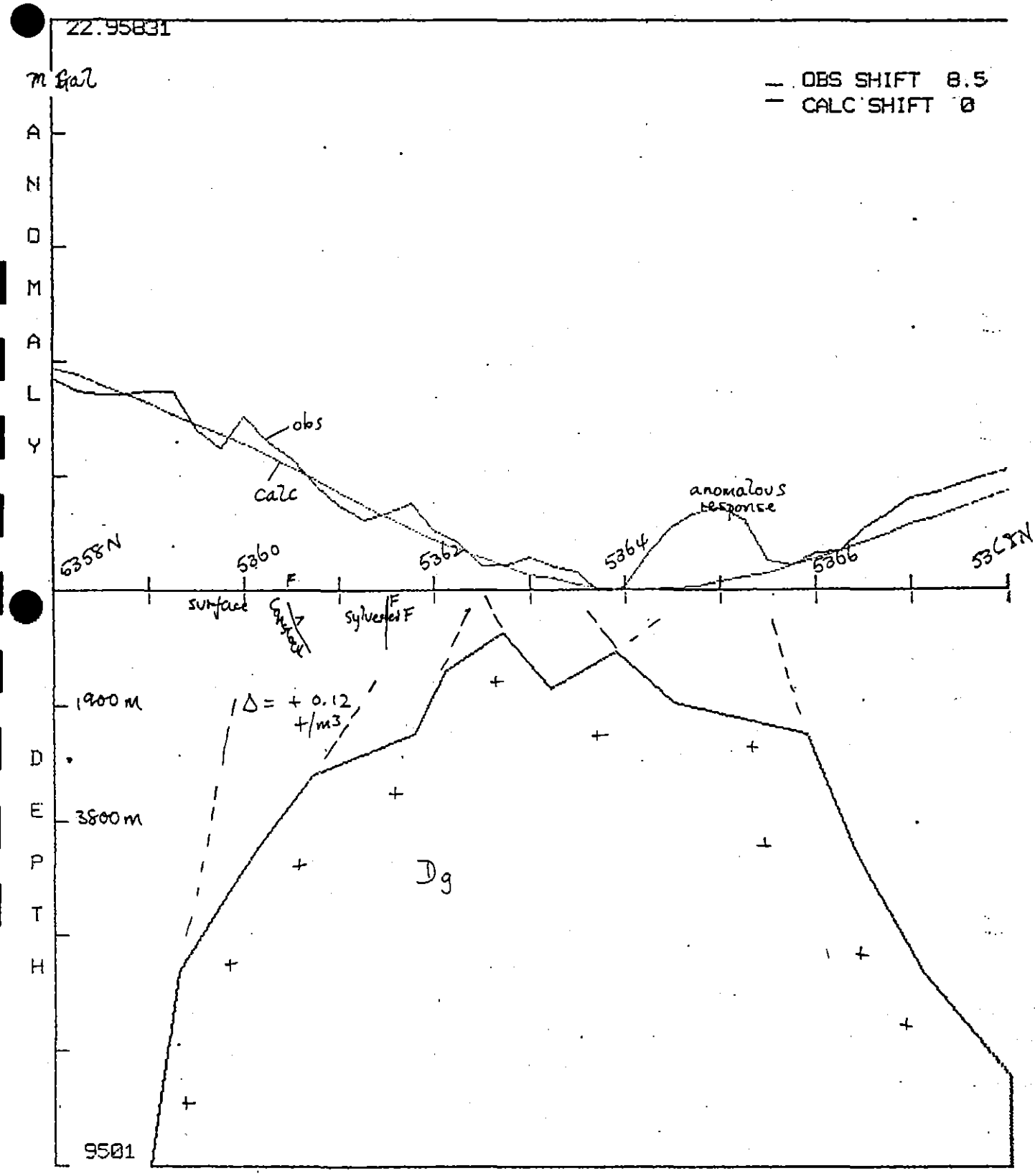
458

130493

358 000 mE

0	1.00	B:ZEEG8
1	1.00	B:G5ALL8
2	1.00	B:G0BL8
3	2.00	B:SYN3L8

ZERO SHIFT : 22.95831



ZEEHAN EL 42/87 3D MODEL LINE 358 000 mE FIGURE 7

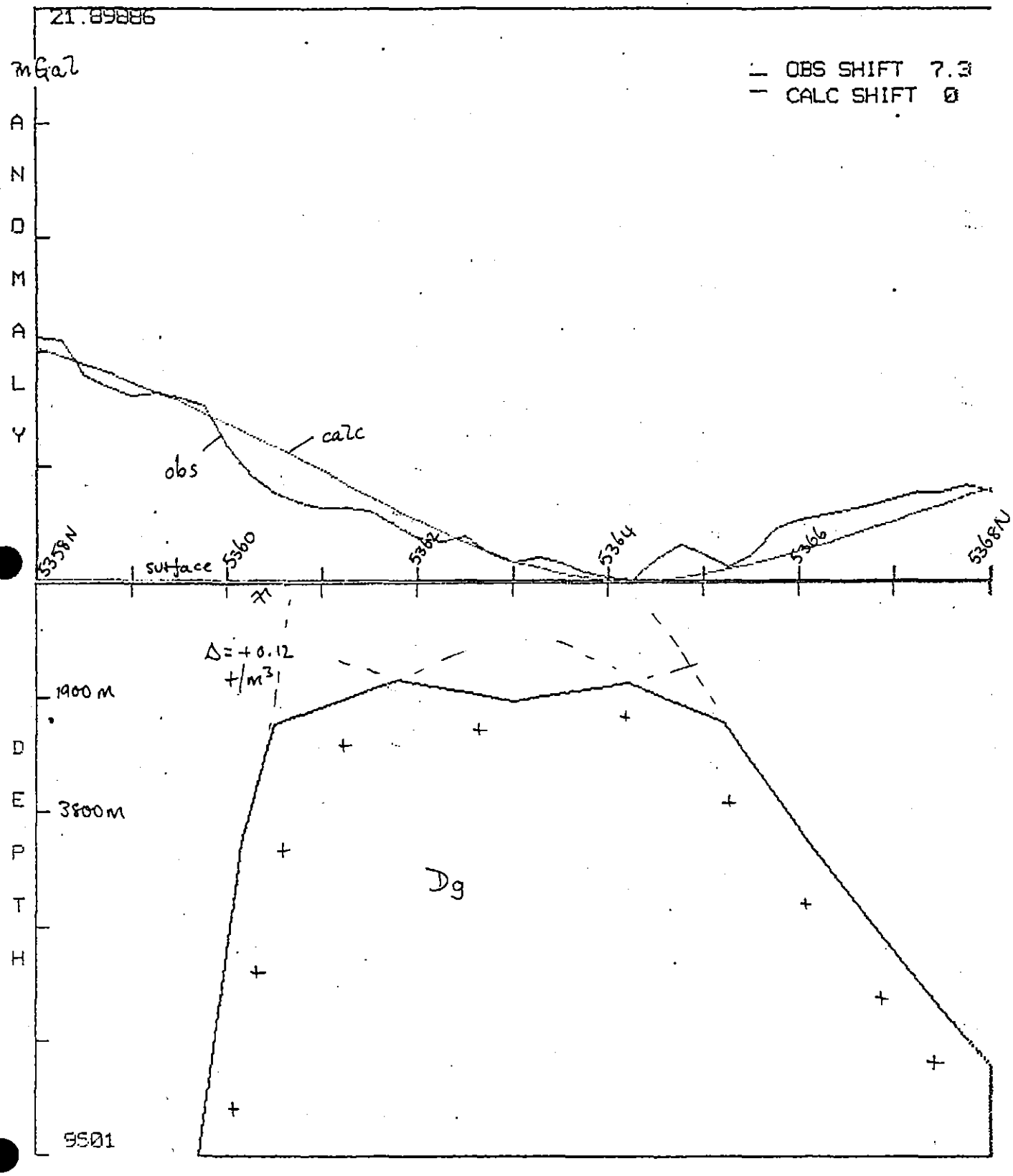
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130494

359 000 mE

0 1.00 B:ZEEG9
1 1.00 B:G5ALL9
2 1.00 B:G0BL9
3 2.00 B:SYN3L9

ZERO SHIFT : 21.89886



ZEEHAN EL 42/87 3D MODEL LINE 359 000 mE FIGURE 8

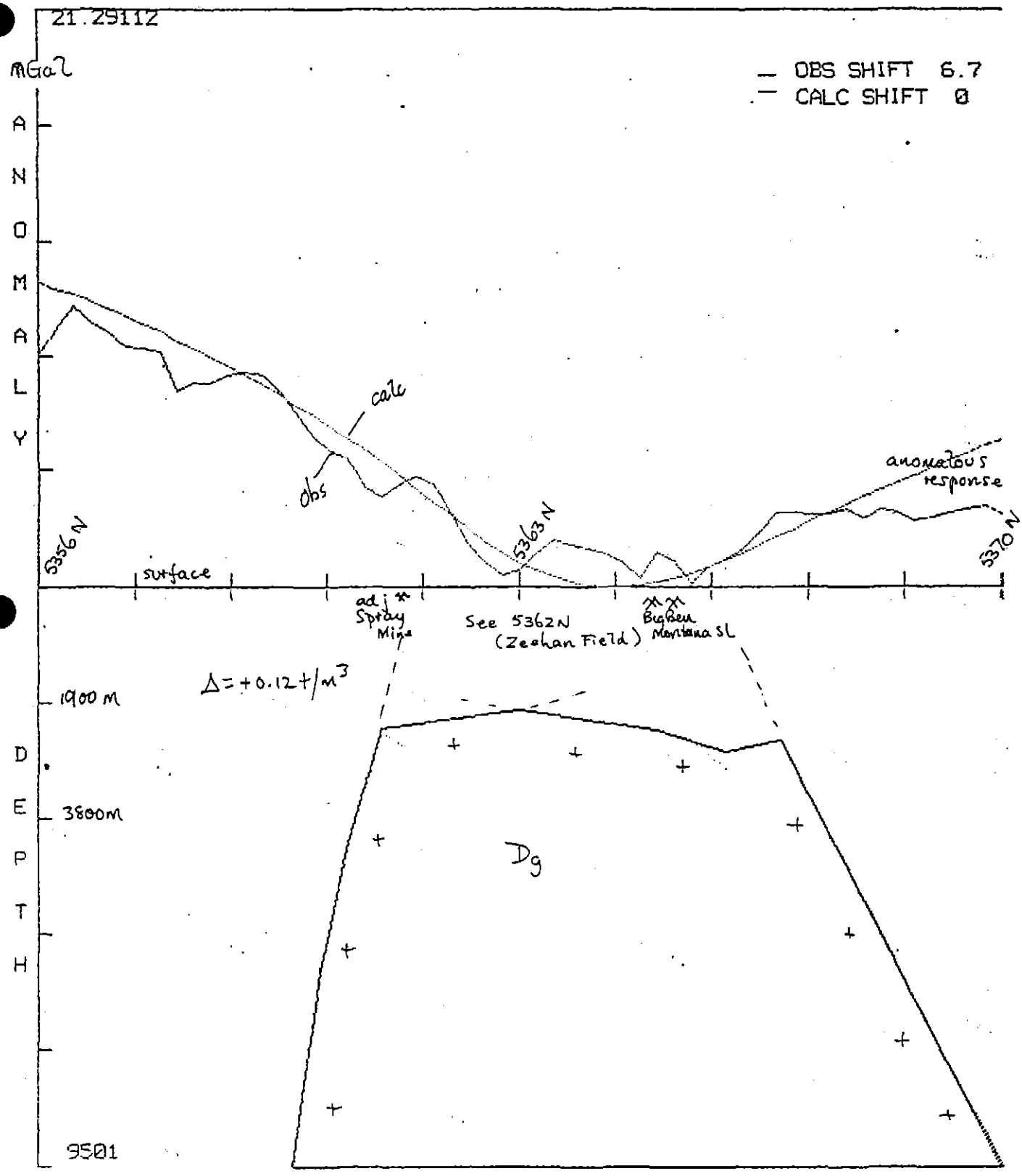
4b'

0 1.00 B:ZEEG10
1 1.00 B:G5ALL10
2 1.00 B:G0BL10
3 2.00 B:SYN3L10

ZERO SHIFT : 21.29112

130495

360 000 mE



ZEEHAN EL 42/87 3D MODEL LINE 360 000 mE FIGURE 9

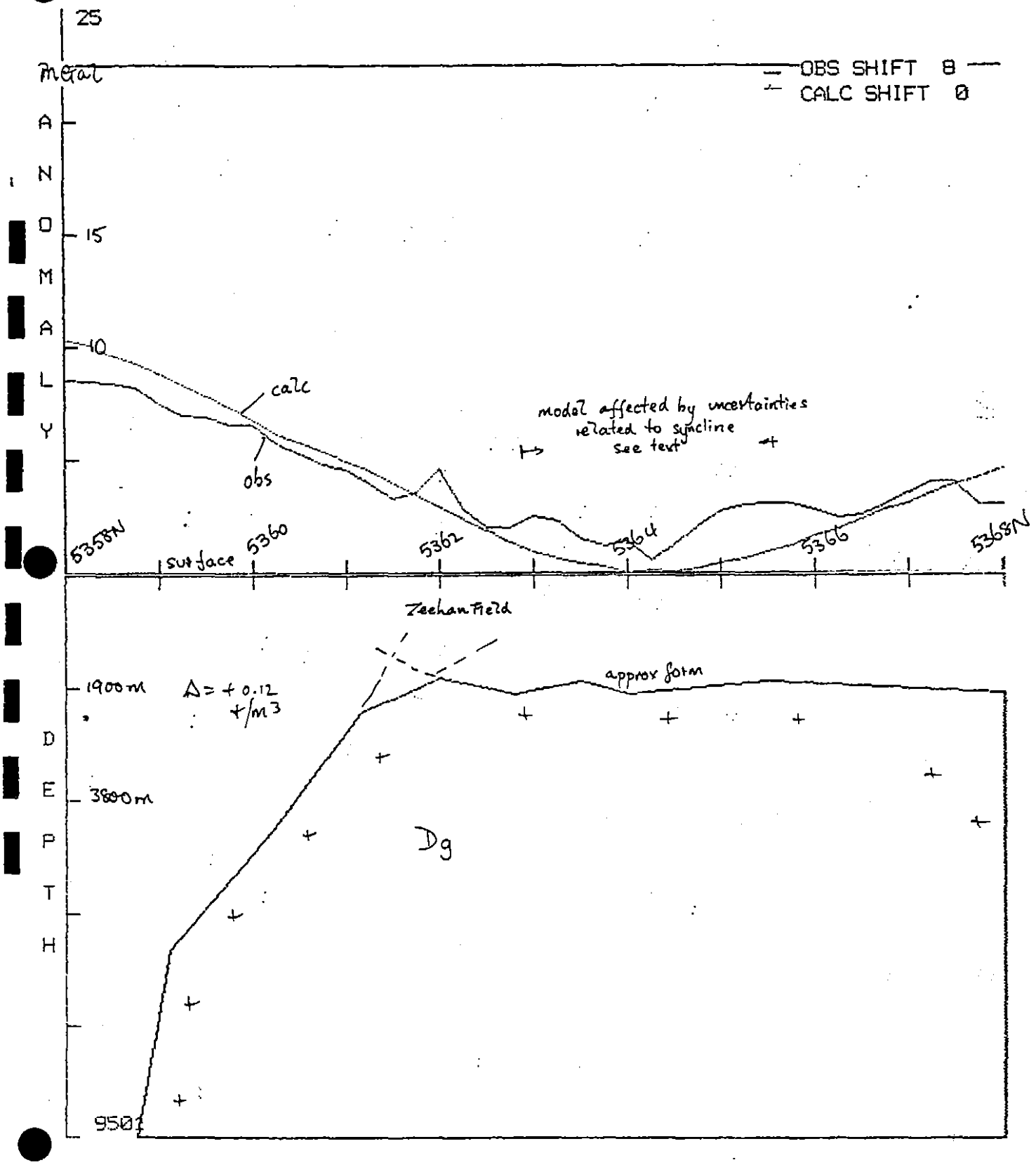
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130496

361 000 mE

0	1.00	B:ZEEG11
1	1.00	B:G5ANL11
2	1.00	B:G0BL11
3	2.00	B:SYN5L11

ZERO SHIFT : 22.48271



ZEEHAN EL 42/87 3D MODEL LINE 361 000 mE FIGURE 10

LEAMAN GEOPHYSICS

Survey Review, Specification, Reduction, Interpretation
Gravity, Magnetic and Seismic Methods
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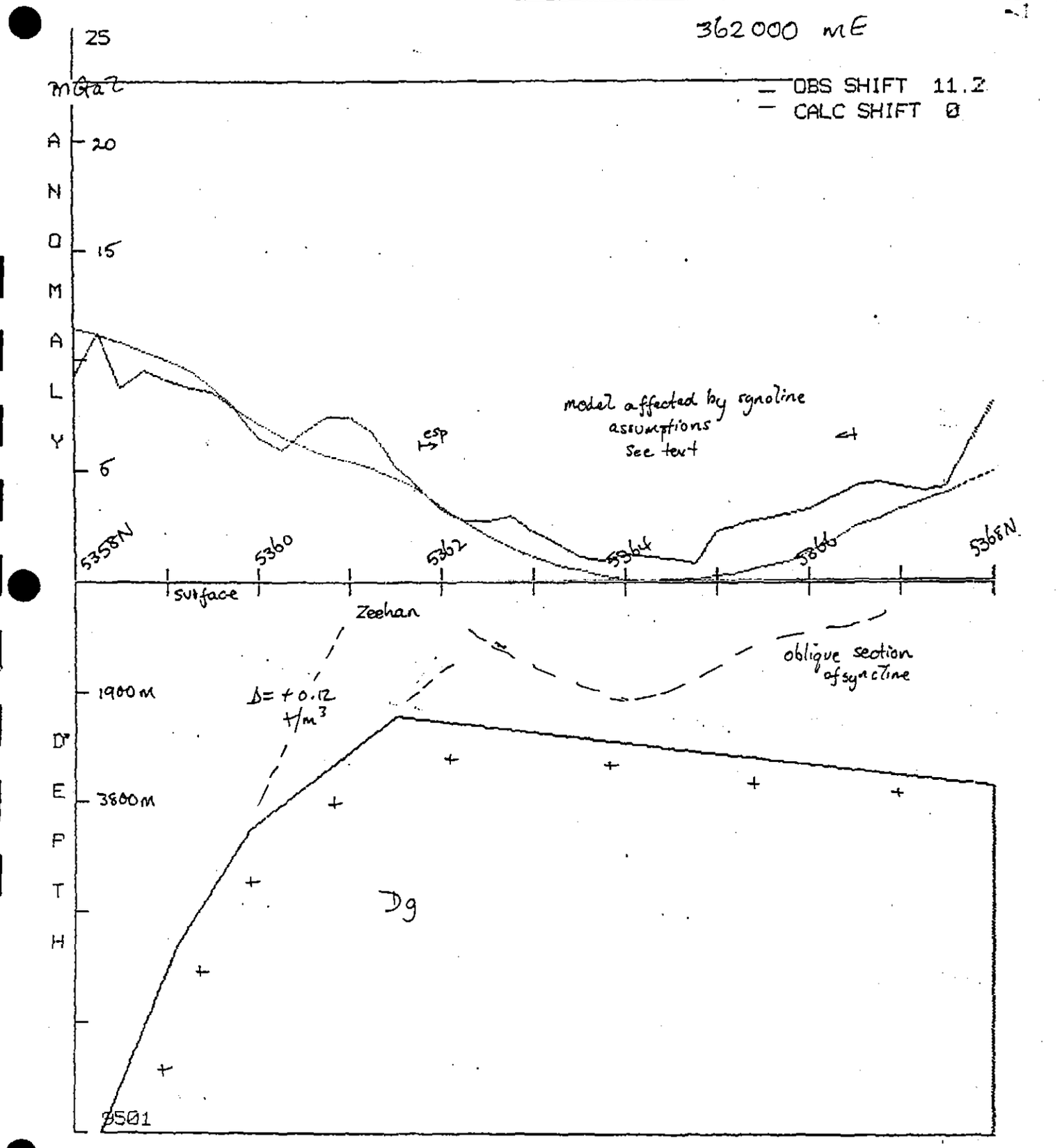


ZEEHAN EL 42/87 3D MODEL LINE 362 000 mE FIGURE 11

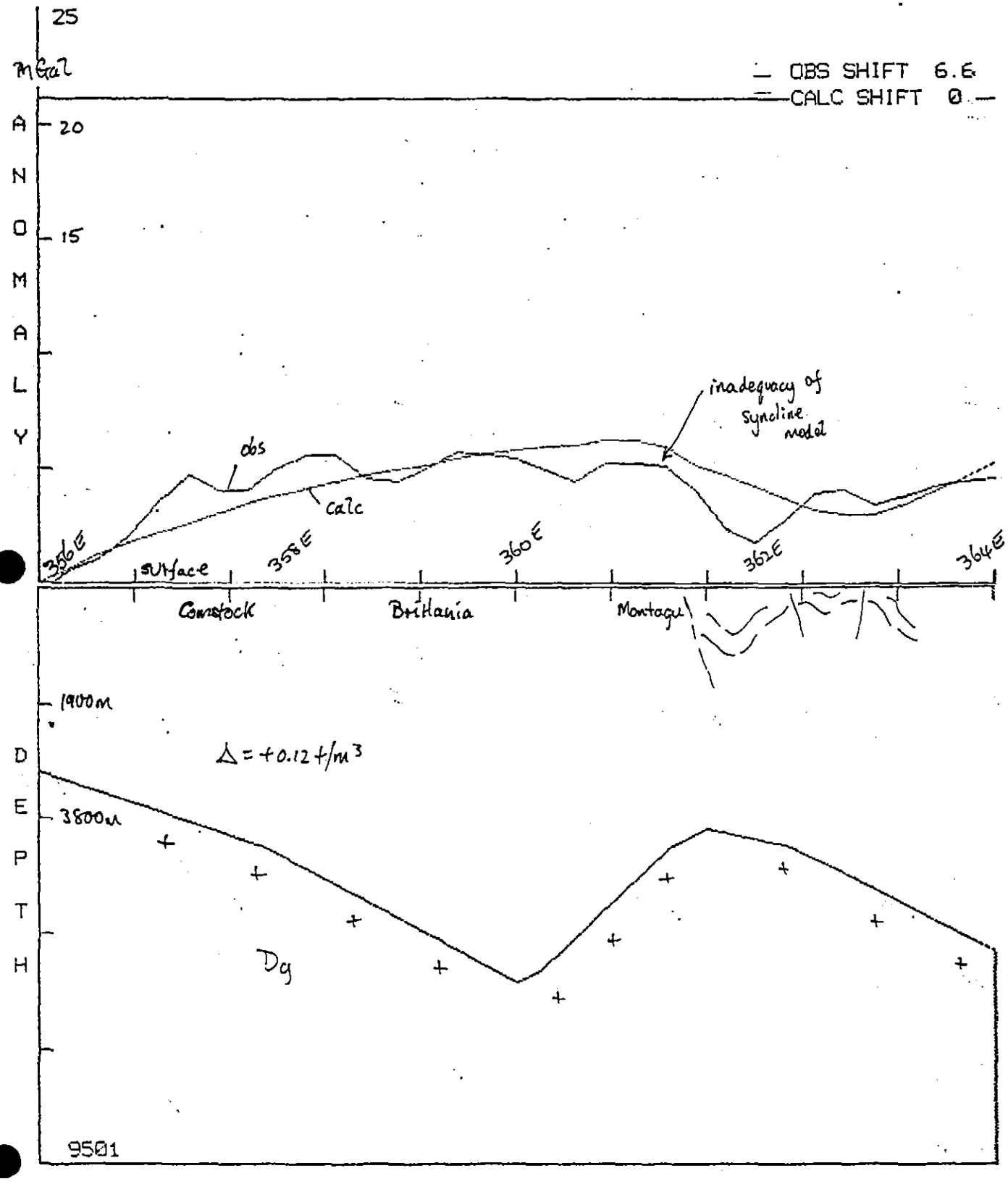
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130498

5360 000 mN

0 1.00 B:ZEEG60
1 1.00 B:G5AML60
2 1.00 B:G0BL60
3 2.00 B:SYN4L60

ERO SHIFT : 21.15616



ZEEHAN EL 42/87 3D MODEL LINE 5360 000 mN FIGURE 12

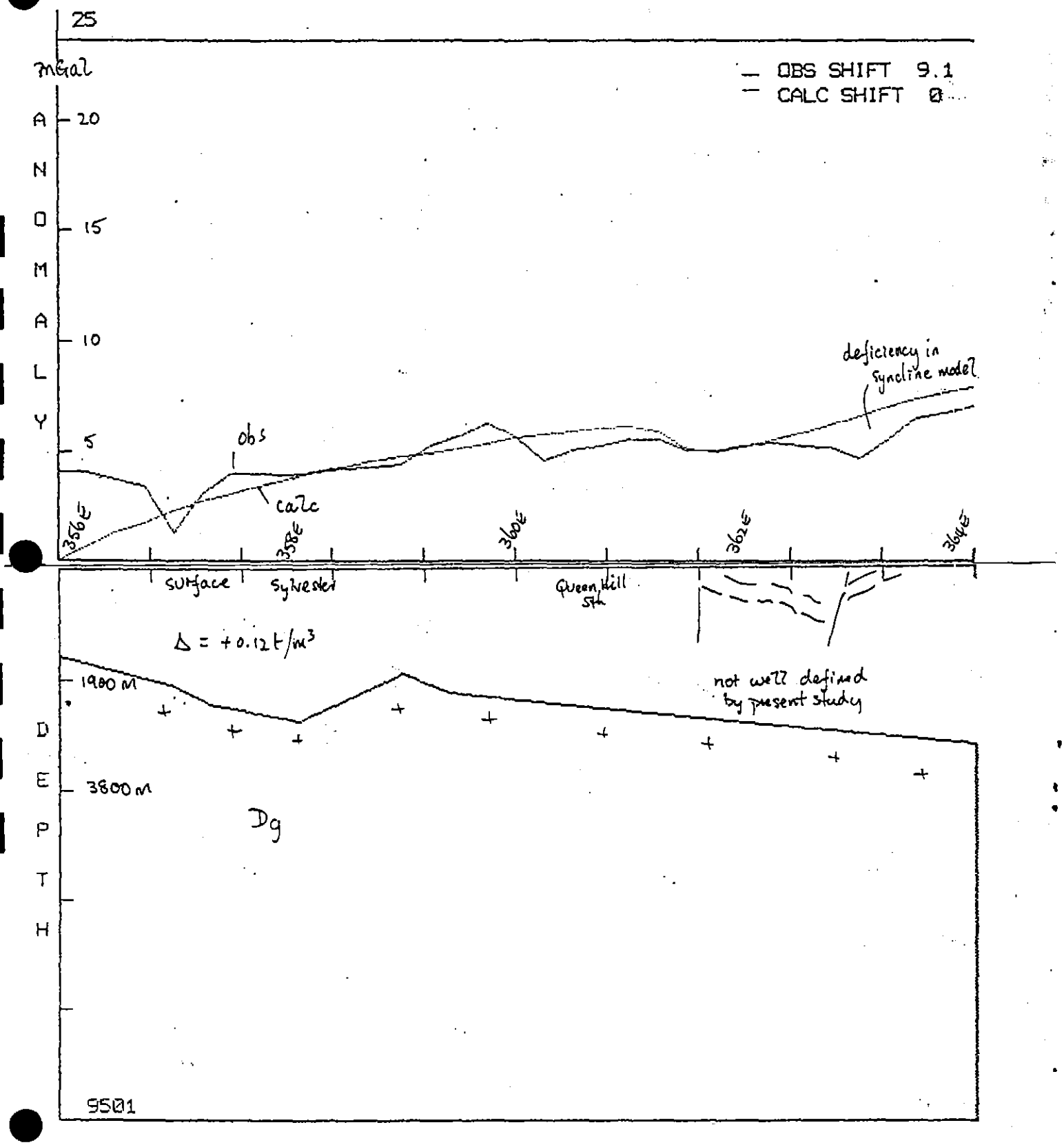
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130499

5361 000 mN

0 1.00 B:ZEEG61
1 1.00 B:G5AML61
2 1.00 B:G0BL61
3 2.00 B:SYN4L61

ZERO SHIFT : 23.72811



ZEEHAN EL 42/87 3D MODEL LINE 5361 000 mN FIGURE 13

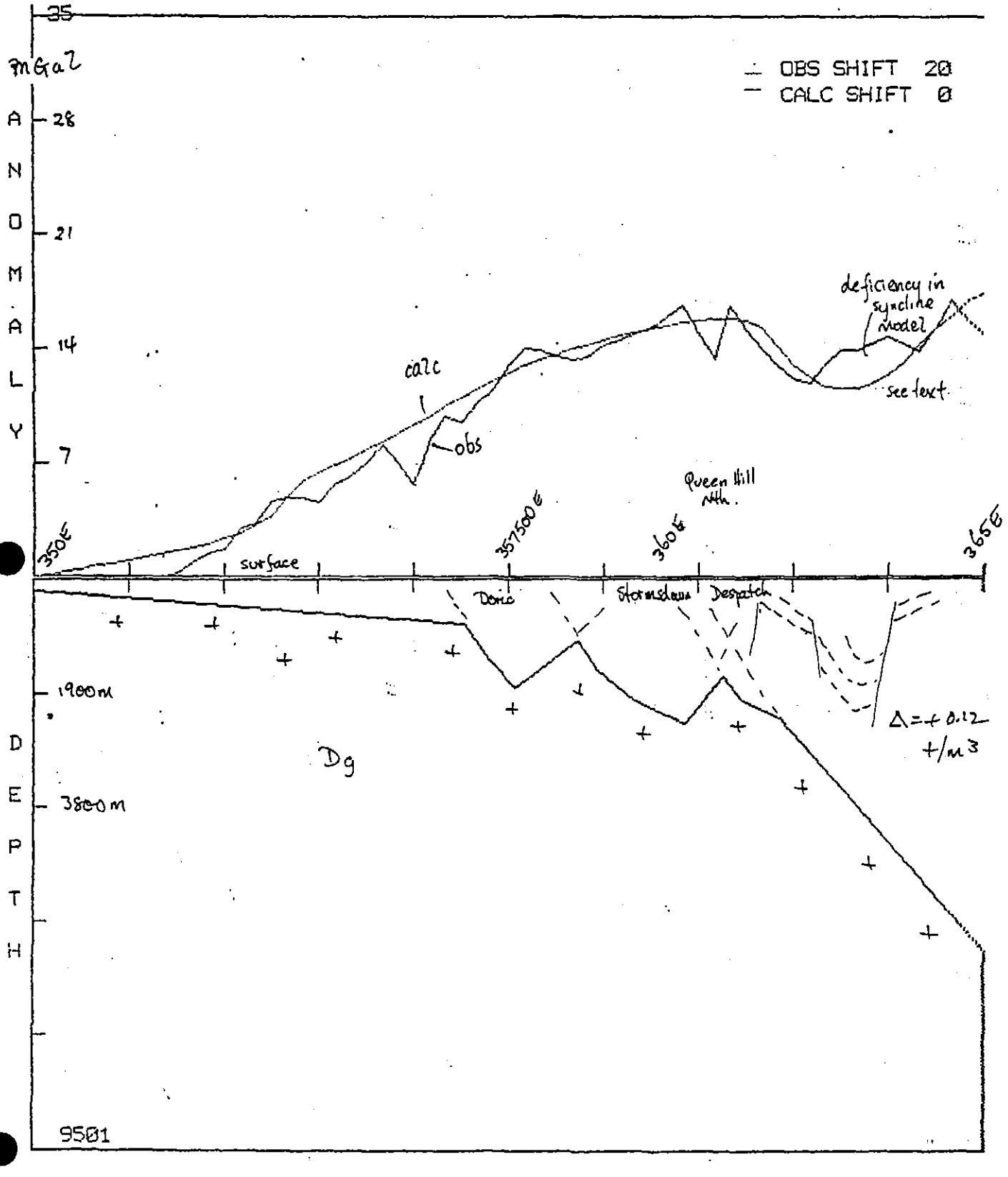
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130500

5362 000 mN

0 1.00 B:ZEEG62
1 1.00 B:G5AML62
2 1.00 B:G0BL62
3 2.00 B:SYN4L62

ZERO SHIFT : 34.43169



ZEEHAN EL 42/87 3D MODEL LINE 5362 000 mN FIGURE 14

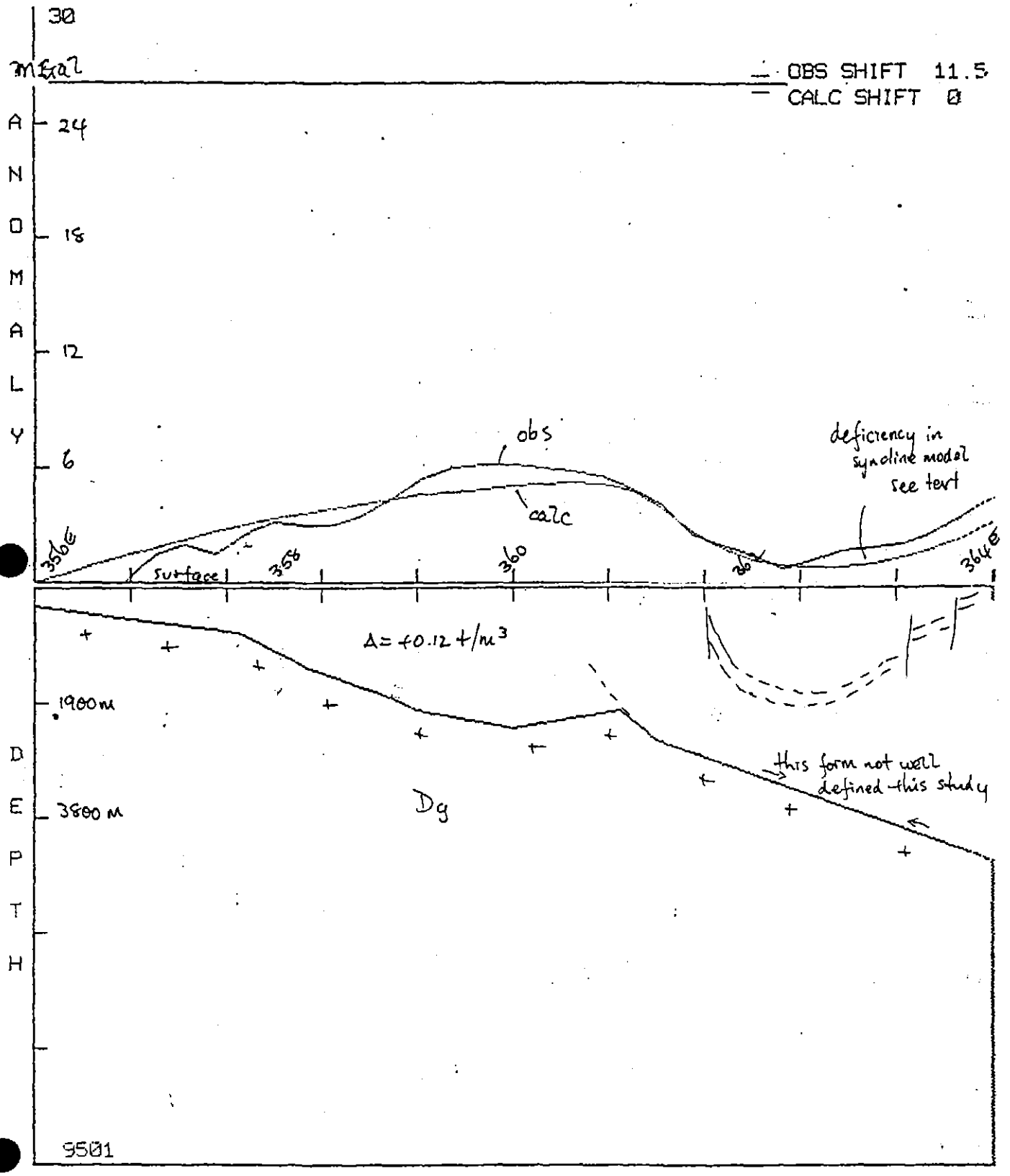
PROFILE EVALUATION
LEAHAN GEOPHYSICS

130501

5364 000 mN

0 1.00 B:ZEEG64
1 1.00 B:G5AML64
2 1.00 B:G0BL64
3 1.80 B:SYN4L64

ZERO SHIFT : 26.1341



ZEEHAN EL 42/87 3D MODEL LINE 5364 000 mN FIGURE 15

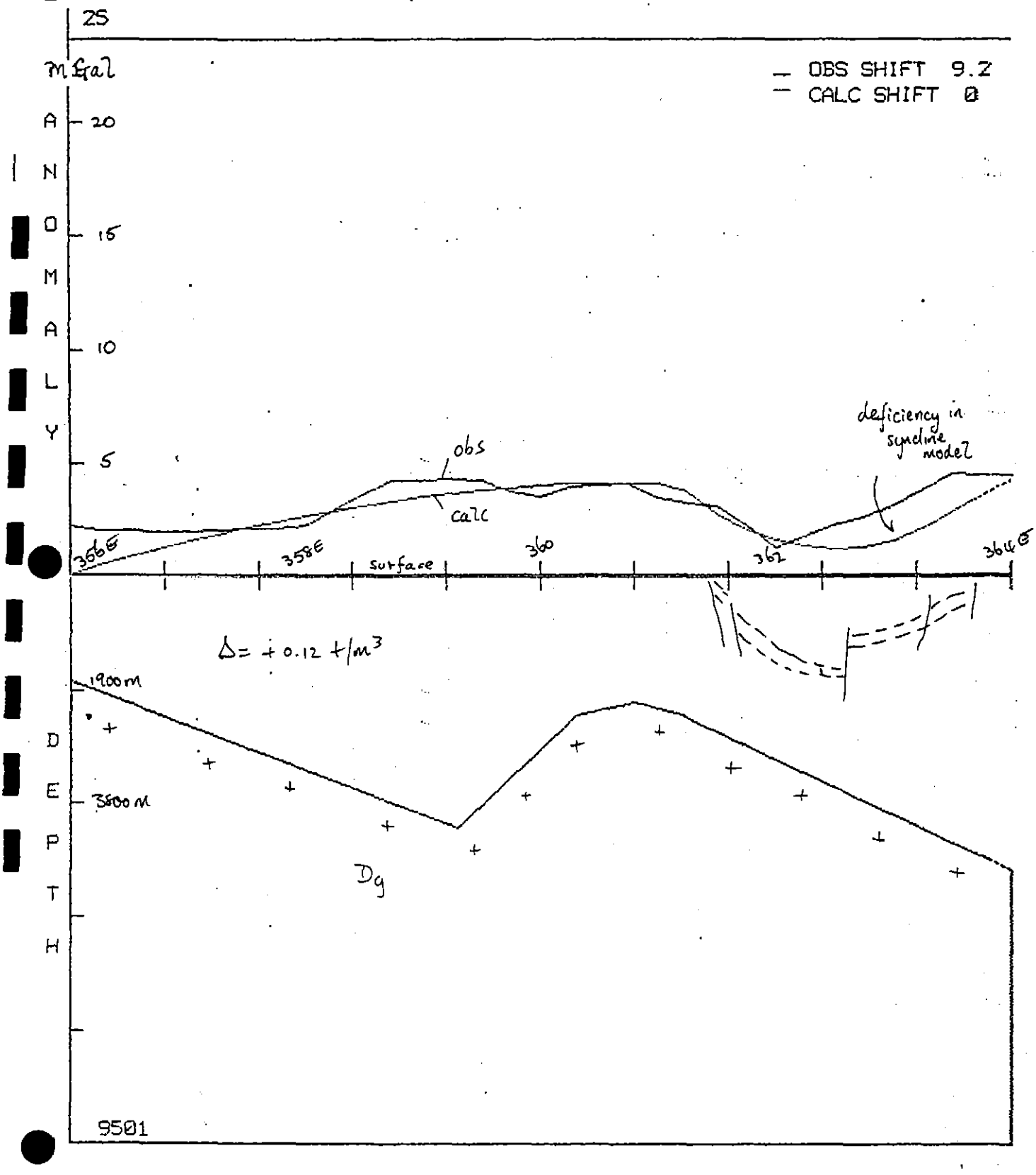
PROFILE EVALUATION
LEAMAN GEOPHYSICS

130502

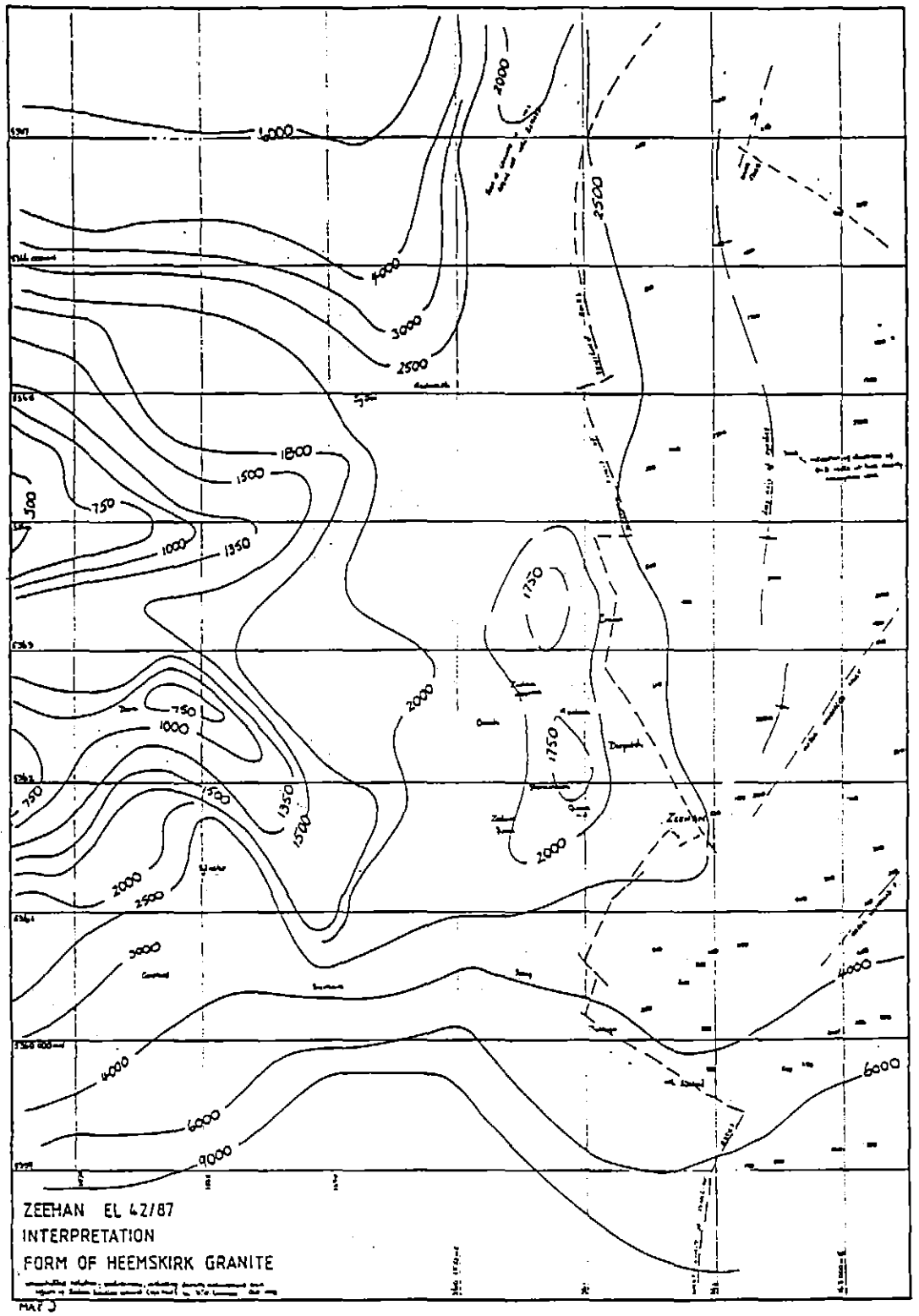
5366 000mN

0 1.00 B:ZEEG66
1 1.00 B:G5AML66
2 1.00 B:G0BL66
3 1.50 B:SYN4L66

ZERO SHIFT : 23.70566



ZEEHAN EL 42/87 3D MODEL LINE 5366 000 mN FIGURE 16

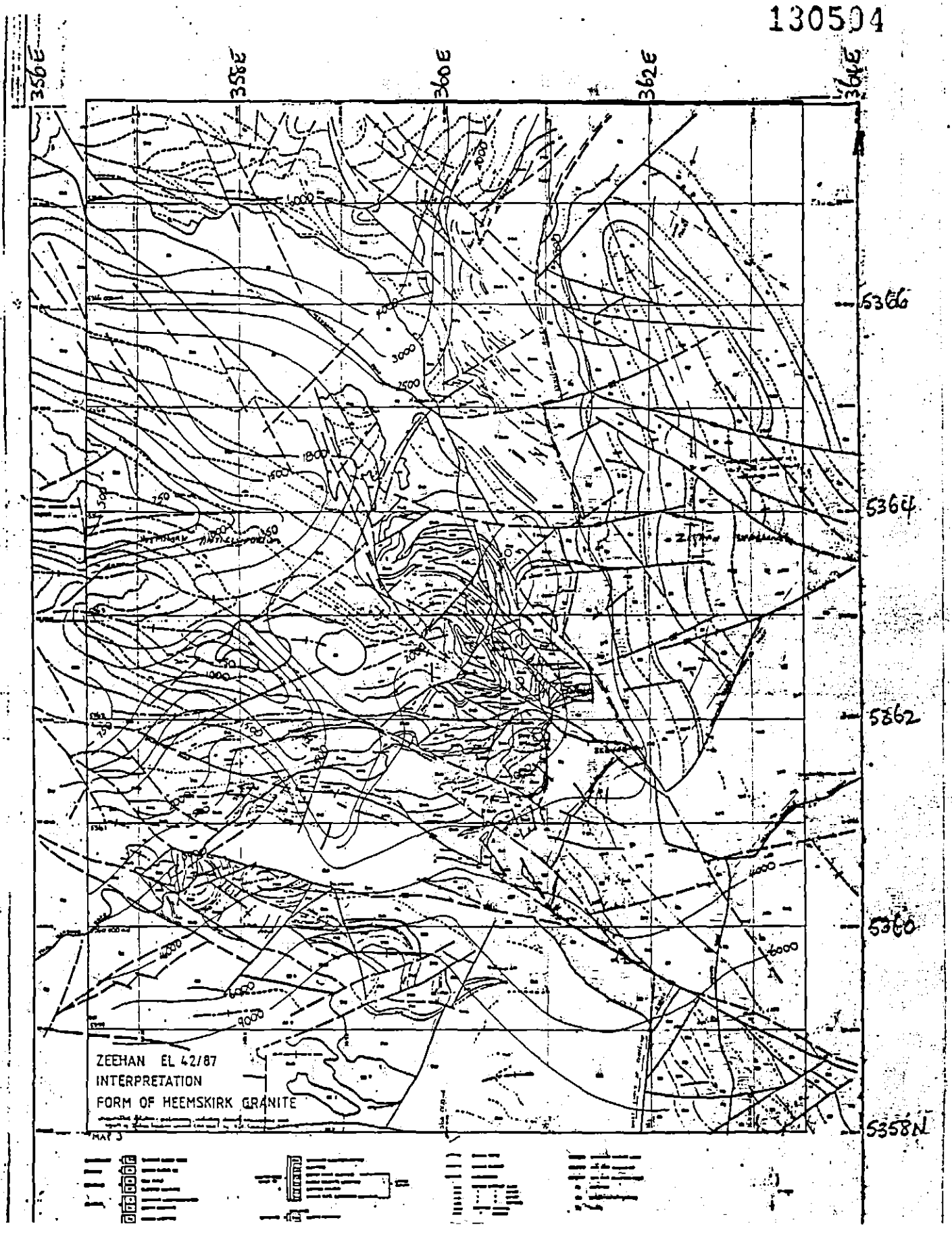


5 cm

ZEEHAN EL 42/87 CURRENT MODEL OF HEEMSKIRK GRANITE
INTERPRETATION STATUS FIGURE 17

5 cm

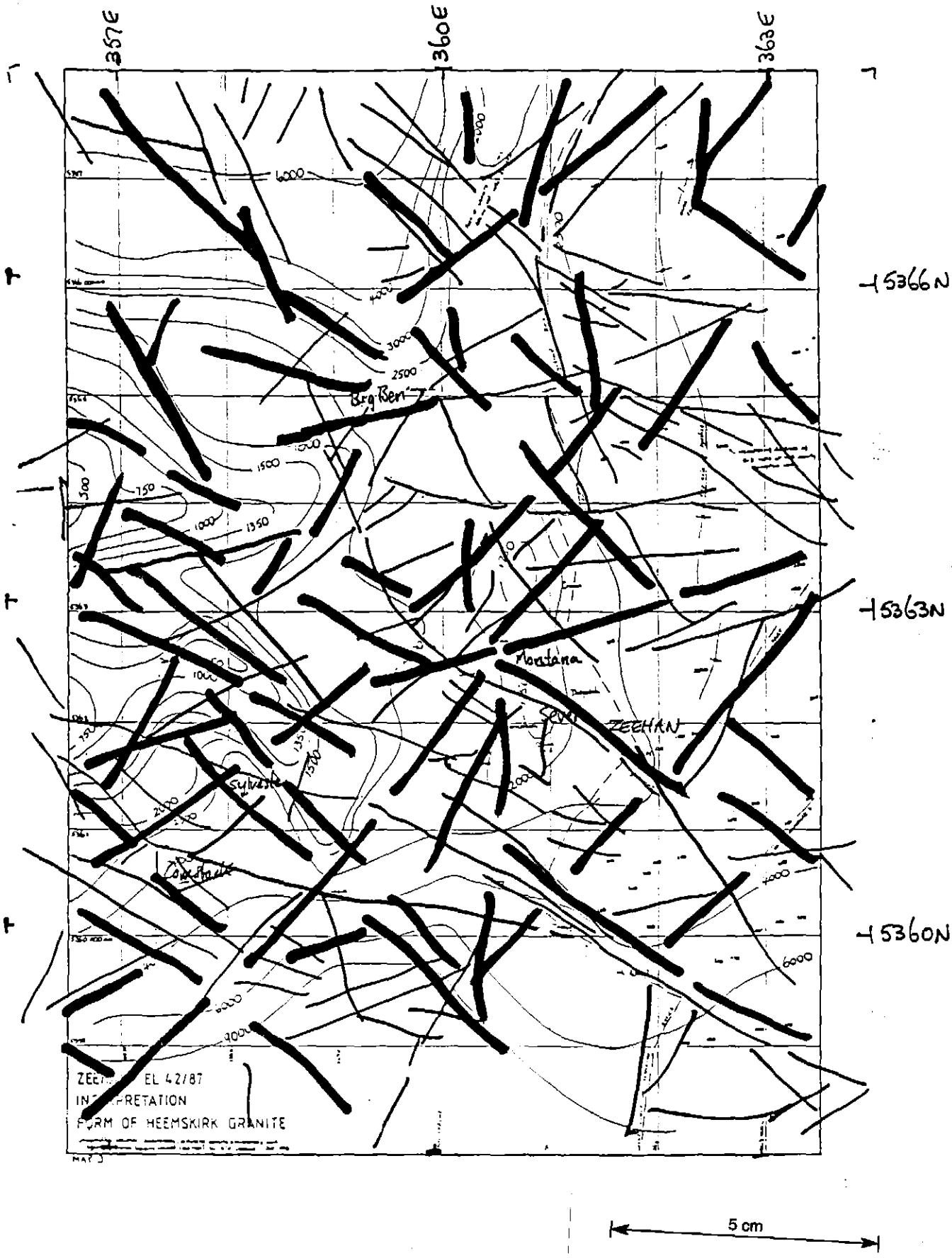
130504



ZEEHAN EL 42/87 CURRENT GRANITE MODEL AND GEOLOGICAL BASEMAP
Basemap by RGC Exploration

FIGURE 18

130505

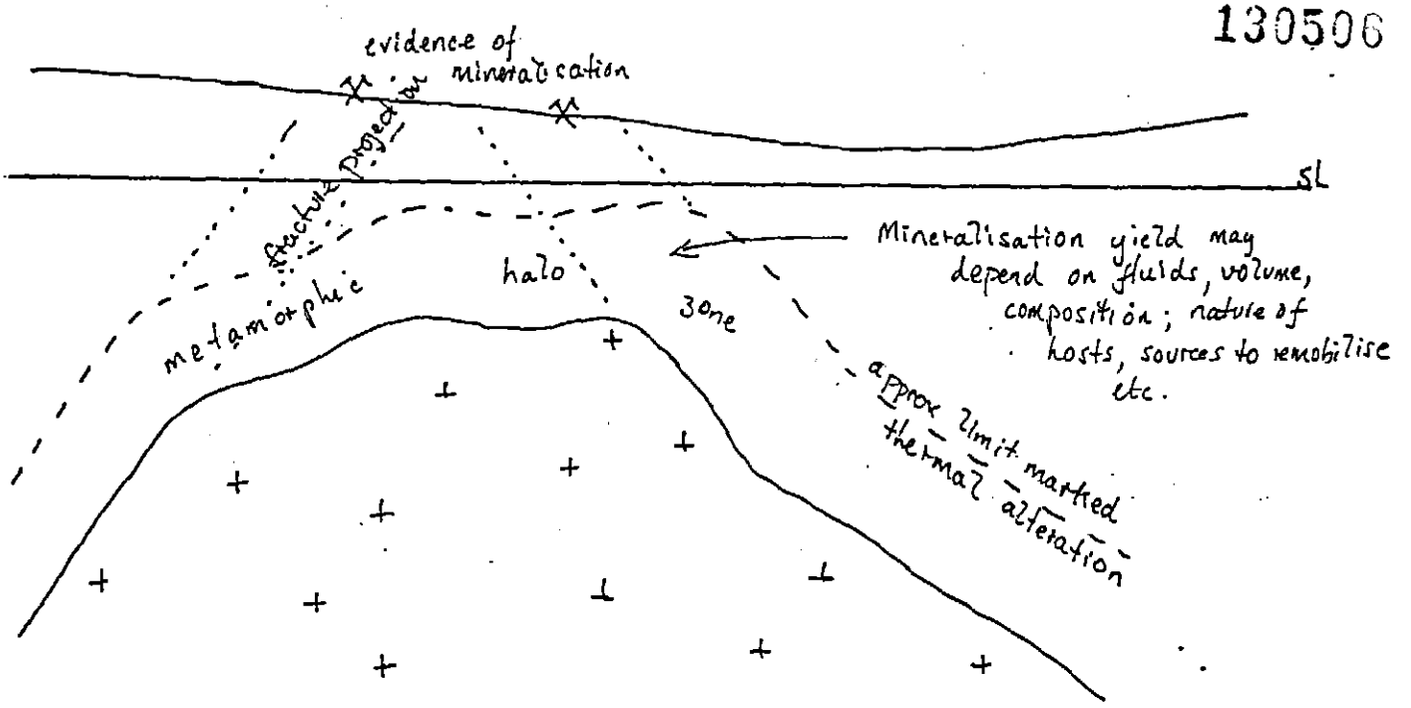


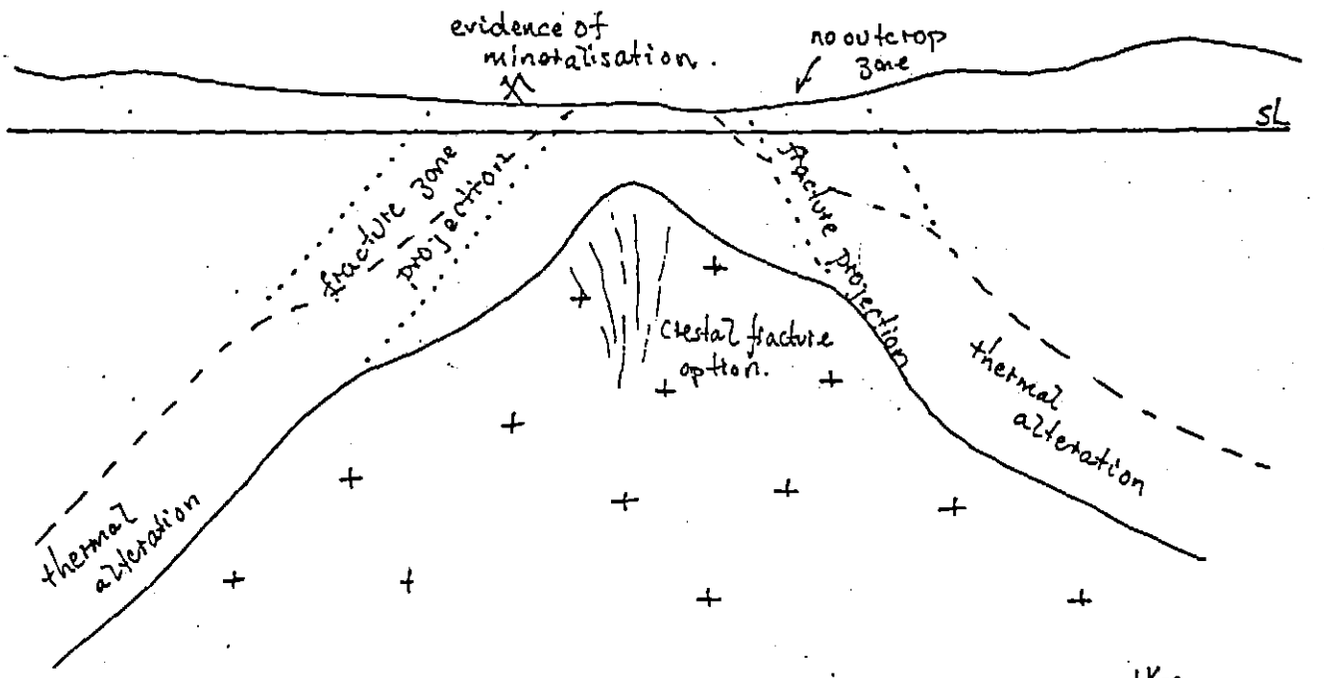
5 cm

ZEEHAN EL 42/87 CURRENT GRANITE MODEL AND TRENDS

FIGURE 19

130506





1Km

1Km

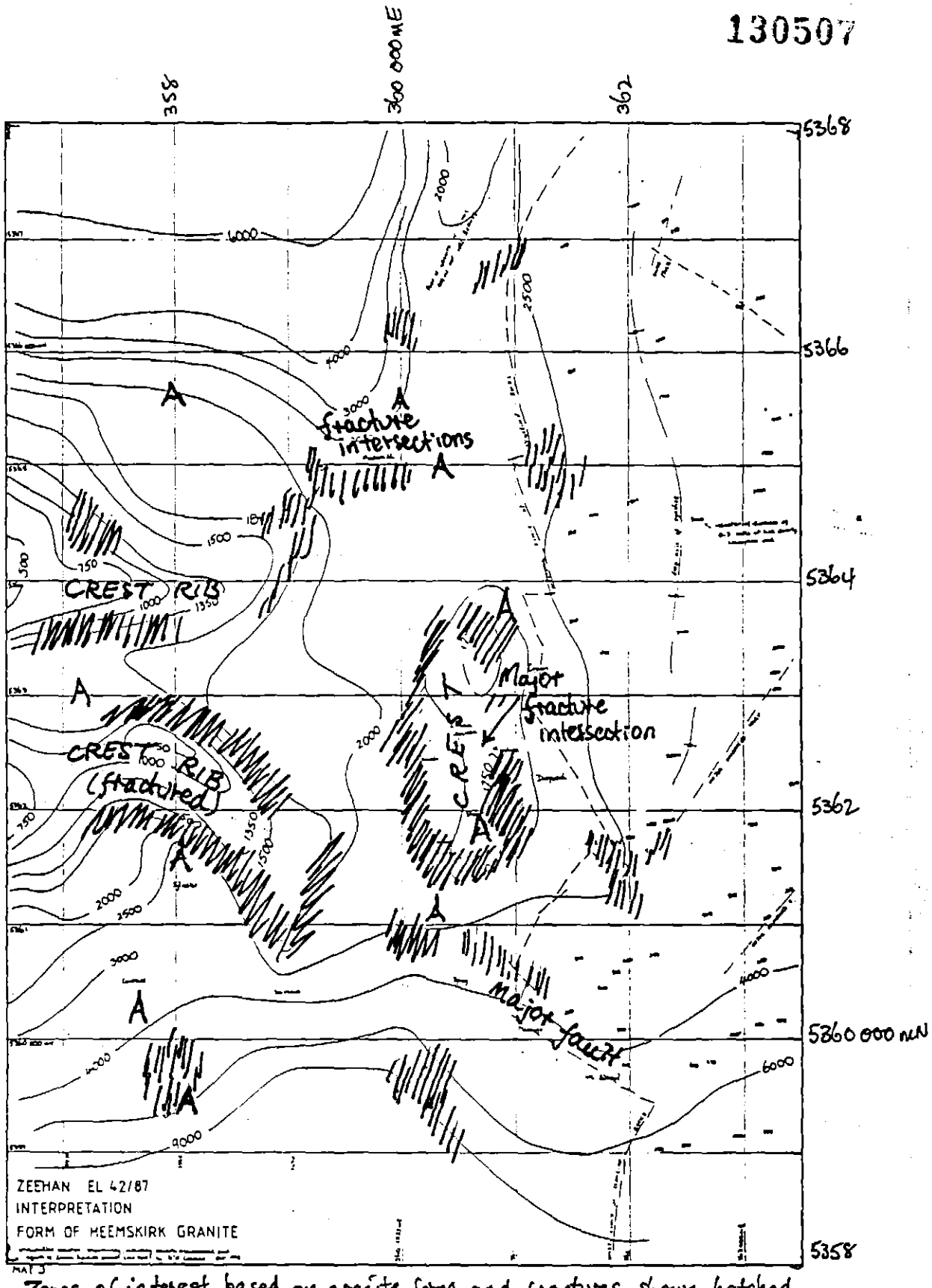
5 cm

SUGGESTED RELATIONSHIPS BETWEEN GRANITE FORM AND MINERALISATION
Diagram suggests patterns of fractures and aureole effects

FIGURE 20

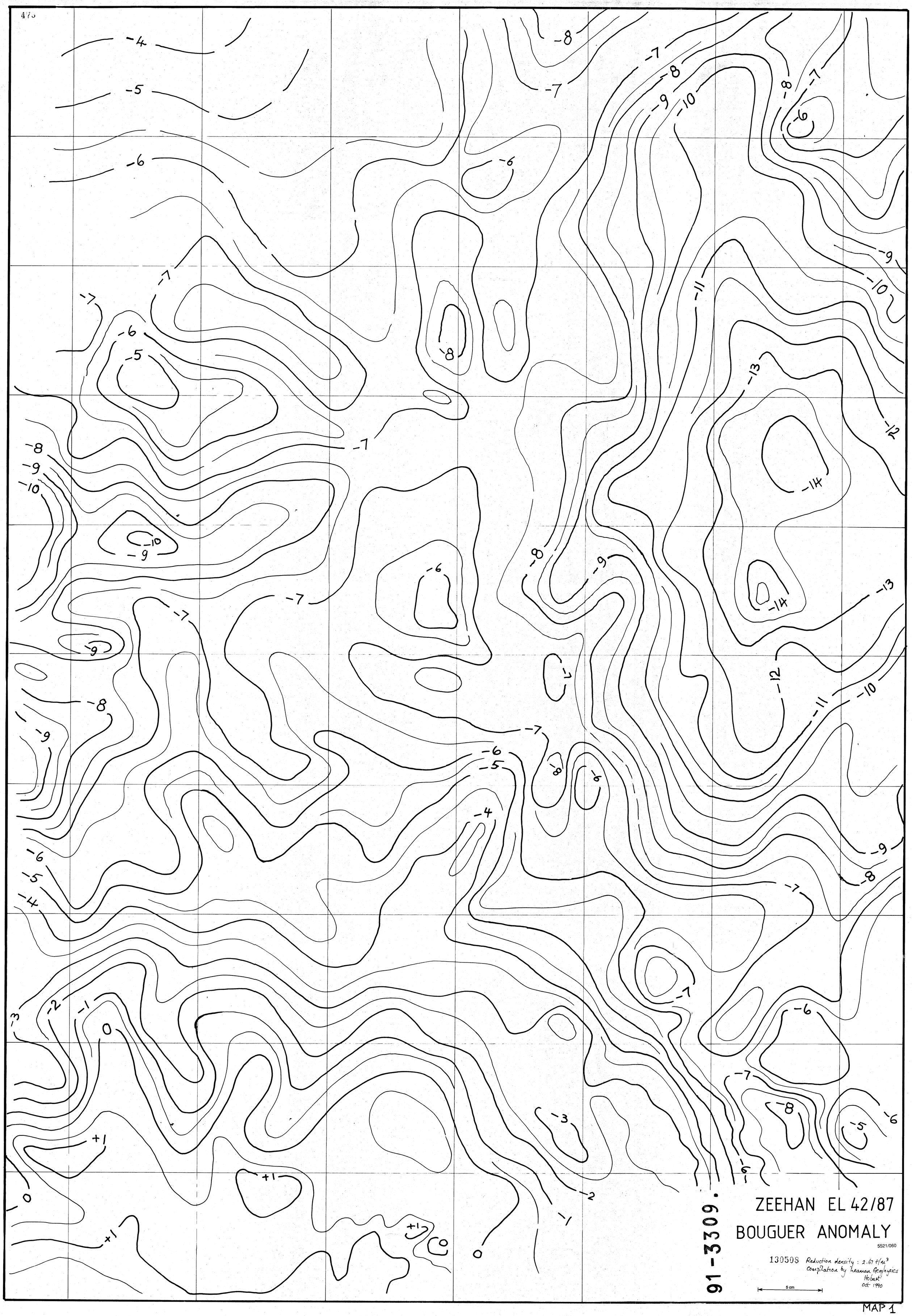
5 cm

130507

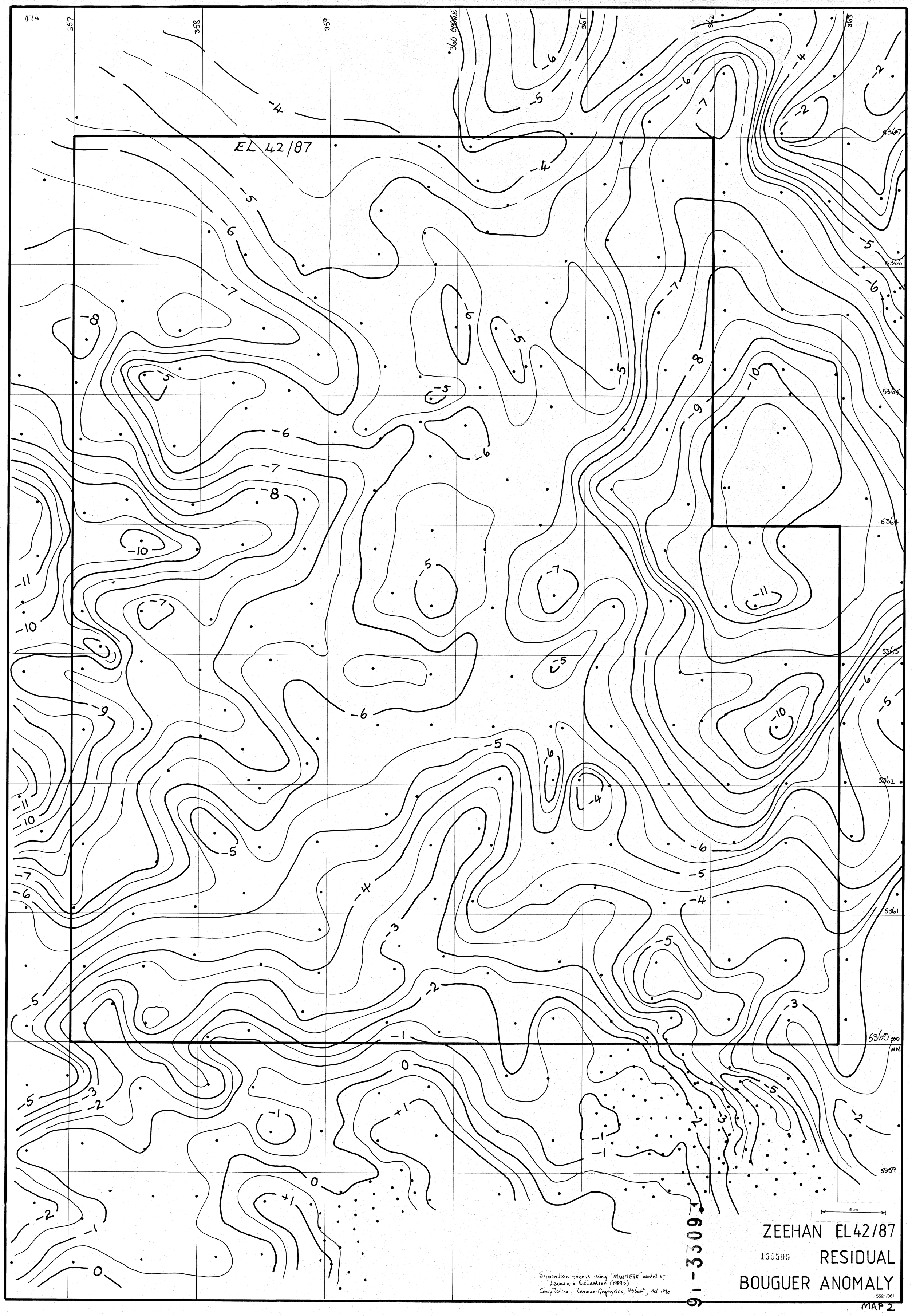


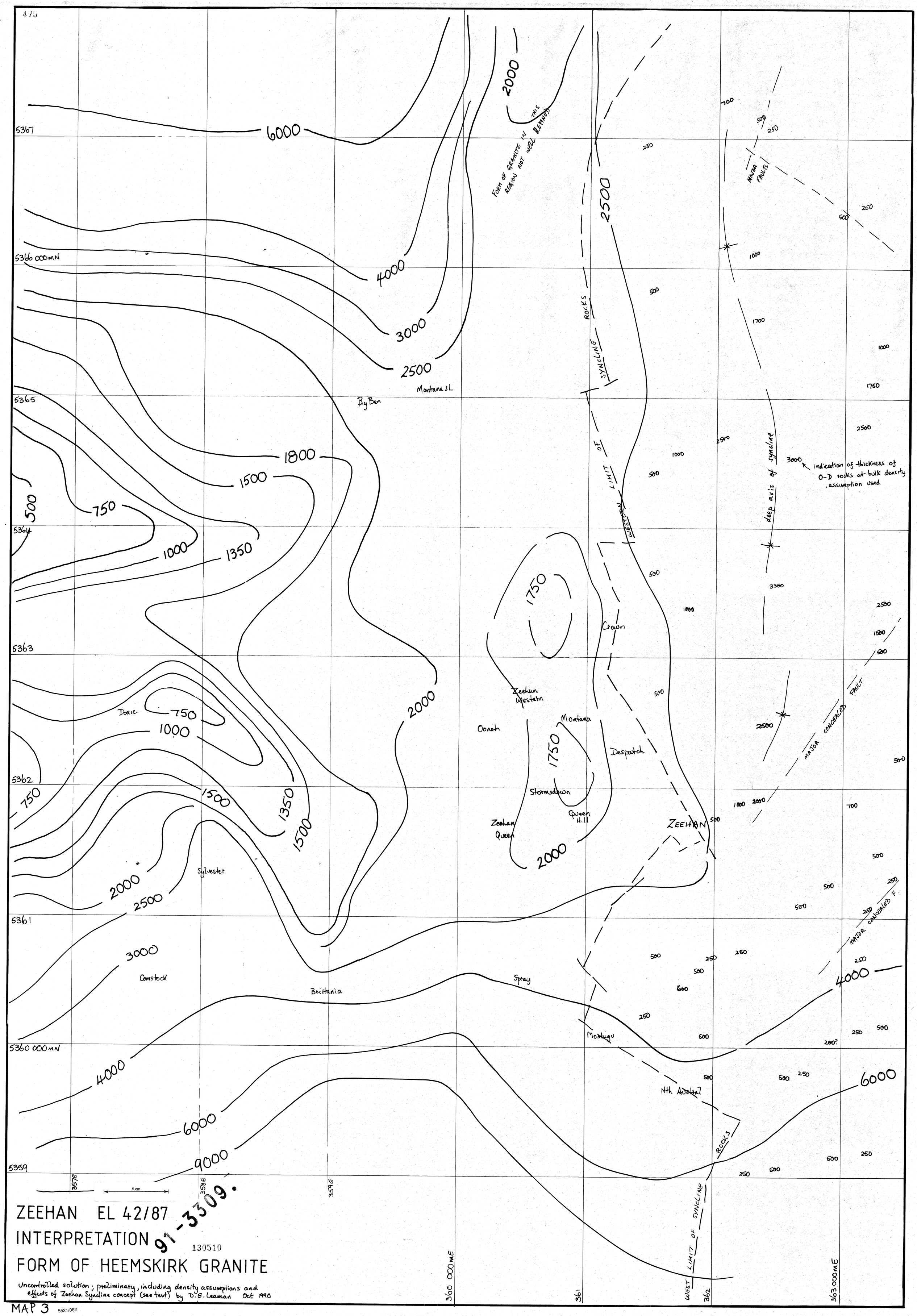
Zones of interest based on granite form and fractures shown hatched.
A = locally anomalous gravity value (site to be checked for alteration) but may be spurious observations (check by infill)

ZEEHAN EL 42/87 CURRENT GRANITE MODEL AND POSSIBLE TARGETS
FIGURE 21


ZEEHAN EL 42/87
BOUGUER ANOMALY
5521/060
130508 Reduction density : 2.67 t/m³
Compilation by Heaman Geophysics
Hobart
Oct 1990
5 cm
91-3309.

MAP 1


474
357
358
359
360 000mE
361
362
363
5367
5366
5365
5364
5363
5362
5361
5360 000 MN
5359
EL 42/87
5 cm
ZEEHAN EL42/87
130509
RESIDUAL
BOUGUER ANOMALY
5521/061
Separation process using "MANTLE88" model of Leaman & Richardson (1989b).
Compilation: Leaman Geophysics, Hobart; Oct 1990
91-3309
MAP 2


ZEEHAN EL 42/87
INTERPRETATION
FORM OF HEEMSKIRK GRANITE
91-3309.
130510
Uncontrolled solution; preliminary, including density assumptions and effects of Zeehan Syncline concept (see text) by D.E. Leaman Oct 1990
MAP 3
5521/062
5 cm
Form of granite in this region not well defined
Indication of thickness of O-D rocks at bulk density assumption used
Minor faults
Major concealed fault
Deep axis of syncline
Limit of Western Rocks
Limit of Syncline
Montana SL
Big Ben
Doric
Sylvester
Comstock
Britania
Spray
Montagu
Nth Austral
Crown
Zeehan Western
Oonah
Montana
Despatch
Stormsdown
Queen Hill
Zeehan Queen
ZEEHAN
5367
5366 000mN
5365
5364
5363
5362
5361
5360 000mN
5359
358E
359E
360 000mE
361
362
363 000mE

MAP 3

130511

APPENDIX 7

Interpretation of down-hole geophysical results from the Sylvester Grid, Zeehan, Tasmania.

47

130512

INTERPRETATION OF DOWN HOLE GEOPHYSICAL RESULTS from the SYLVESTER GRID, ZEEHAN, TASMANIA

on behalf of

R.G.C. Exploration Pty. Ltd.

by

R. C. Deakin.

April 1991

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17th April 1991

Mr. J. Crossing
R.G.C. Exploration Pty. Ltd.
P.O. Box 320
Rosny Park
Tasmania 7018

Dear John,
Enclosed are two copies of my recent report on the Sylvester Grid down hole TEM as well as the N.S.W. Mines Dept. logs.

The appendix I refer to in the report includes all the computer profile plots made and supplied by Peter McSkimming. I have most of the originals of these but not all. Some I have only as fax copies. A large bundle of plots were sent to Steve Mudge from Tas. recently and therefore I have (a) sent him all the original plots I hold, and (b) asked him to sort the lot and have an A3 appendix made, copied and bound to accompany the report. He will send two copies of this document to you.

Another snag from the point of view of plans is the N.S.W. Mines Dept. logs. I have only one original paper plot. That, as far as I am aware, is all that exists. I will therefore request additional plots from them and send or have sent, copies to you for inclusion in the report.

Regards

Roger Deakin

Contents.

		Page
1.	Introduction	1
2.	Field and Interpretation Methods	2
3.	Results and Interpretation	5
4.	Conclusions	11
6.	Recommendations	12
7.	References	12

Accompanying Plans.

Fig No.

1. Locality Plan (1:5000)

2. Geophysical Interpretation Summary (1:5000) (Surface Projection).

SY3-1 Drill hole SY3 - Down Hole TEM Interpretation Results - Models 1 and 2 (1:5000)

SY3-2 Drill hole SY3 - Down Hole TEM Interpretation Results - Model No 3. (1:5000)

SY3-3 Cross Sectional Projections of Interpretation Results - Models 1,2 and 3 (1:5000)

SY5-1 Drill hole SY5 - Down Hole TEM Interpretation Results - Models 4 and 5 (1:5000)

SY5-2 Cross Sectional Projection of Interpretation Results - Models 4 and 5 (1:5000)

S3/C15 Sirotem Data for drill hole SY3, TX Loops 4,6,8,9 and 10 - channel 15 (1:2000)

S3/C25 Sirotem Data for drill hole SY3, Tx Loops 4,6,8,9 and 10 - channel 25 (1:2000)

S5/C15 Sirotem Data for drill hole SY5, Tx Loops 1,2,3 5 and 6 - channel 15 (1:2000)

S5/C25 Sirotem Data for drill hole SY5, Tx Loops 1,2,3,5 and 6 - Channel 25 (1:2000)

Appendix:
Log-Linear plots of Sirotem Data for drill holes SY2, SY3, SY4 and SY5. by McSkimming Geophysics.

1. INTRODUCTION

1.1 The Sylvester grid, in the neighborhood of Zeehan in SW Tasmania, is currently being explored for base metals by R.G.C. Exploration Pty. Ltd. To date exploration has consisted of geological and geochemical mapping, a surface grid magnetometer survey, several diamond drill holes; and most recently, a down hole Sirotem survey of the drill holes SY2, SY3, SY4 and SY5.

1.2 Drill holes SY3 and SY5 both encountered sulphide mineralisation at depth and the results from SY5 where magnetite skarn and massive pyrrhotite were encountered, is reconciled with the surface magnetic results by Wyatt (1991). Wyatt (1991) has shown that the surface magnetic anomaly which covers the approximate grid area 57000E - 57750E, 60600N - 61300N, is caused by two separate magnetic sources. These consist of (1) a tabular shaped skarn body with high concentrations of magnetite and a significant 'reversed' remanent component; and (2) a tabular shaped pyrrhotite body immediately north of the skarn. Both magnetic sources have the approximate geometric dimensions:-

Strike length 500m and strike - 76deg Grid.
Dip 80deg (to the north) and large 1500m dip length.
Width (thickness) of 30m to 50m.
Depth approx 250m, and
centred at approximately 57200E, 60900N.

The mineralisation encountered in drill hole SY3 consisted of pyrite, base metal sulphides and some sparse disseminated pyrrhotite. The rocks in the vicinity of SY3 are essentially non magnetic.

Drill hole SY4 was drilled to 343m without intersecting any mineralisation.

Drill hole SY2, to the NE of drill hole SY3, intersected 5 metres of sulphides at approximately 270m depth.

1.3 Drill holes SY2, SY3, SY4 and SY5 were logged with a down hole Sirotem system by McSkimming Geophysics during February 1991. The aim of this work was to locate any significant missed conductors which may exist in the vicinity of these drill holes.

One short surface traverse, denoted as the 'costean traverse', was surveyed with the Sirotem system. This line was coincident with a surface costean and both vertical (Hz) and horizontal (Hx) components were recorded using a rectangular transmitting loop located to the east.

1.4 Figure 1, the locality plan, illustrates the surface positions of all transmitting loops, the Costean traverse and the surface projections of drill holes.

1.5 Drill hole SY4 was electrically logged with the parameters Induced Polarization and Apparent resistivity, by the N.S.W. Mines Department using closely spaced in-hole electrodes. That work was undertaken as part of a larger survey on behalf of R.G.C. Exploration Pty. Ltd. in the Zeehan area. Drill hole SY3 was similarly logged by that organization but produced flat results which are thought to be the result of an instrument malfunction. The drill hole of prime interest i.e. SY5 was not logged with this technique.

2. FIELD and INTERPRETATION METHODS.

2.1 The down hole Sirotem system employs a flexible, cylindrical, receiving coil which, when attached by multi-conductor cable to the surface instrument, records the secondary transient magnetic field strength generated by a surface transmitting loop. The induced voltage measured in this coil represents the secondary magnetic field vector oriented along the axis of the probe; i.e. the probe measures the field component parallel to the drill hole axis.

2.2 Each drill hole was logged several times with a different surface transmitting loop being used for each separate run. Various 200m x 200m surface Loops were used for logging the drill holes and the positions of these loops are illustrated on Figure 1.

The contractor has furnished the results in the form of profiles of secondary induced voltage (in micro volt/Ampere) vs. borehole, depth. These results are plotted using a vertical logarithmic scale with both positive and negative axes and an interim linear section which encompasses the zero line. All these plots can be found in the appendix.

2.3 At the commencement of the survey various possible surface loop positions were formulated for each drill hole and numbered, with a separate numbering system for each drill hole. As some of these loops were not used and others were used for two or more different drill holes the surface loop notations for the field results are confusing and possibly ambiguous. For the purpose of this report therefore, surface loops used in the survey have been renumbered so that each loop has a unique ID. (Figure 1).

The relationship between the field numbers and the 'new' numbers of Tx loops is listed below:-

Drill Hole	Tx Loop No. (Fig.1)	Field Tx Loop ID (McSkimming)
SY2	11	SY2-3
	12	SY2-5
SY3	4	SY3-2
	6	SY3-5 & SY5-4
	8	SY3-4
	9	SY3-6
	10	SY3-3
SY4	6	SY5-4
	7	SY3-1
SY5	1	SY5-5
	2	SY5-2
	3	SY3-8 & SY5-6
	5	SY5-1
	6	SY5-4

2.4 Down hole TEM results depend upon the existence or not of electrical conductors; the relative positions in space of the Transmitting (Tx) Loop, the conductor and the borehole; and the size - conductivity properties of the conductor as well as the host rocks.

'In-hole' conductors, that is conductors which have been intersected by the drill hole and therefore encompass it, will give rise to positive or sometimes dipolar (positive + negative) anomalies due to the relative spatial geometry of the Tx loop and the 'in-hole' conductor.

'Off-hole' conductors, that is conductors which are in the vicinity of the drill hole but have been missed, will give rise to predominantly negative and sometimes dipolar anomalies. In some situations where the conductor orientation, is at a low angle to the bore hole 'off-hole' and 'in-hole' anomalies may be confused, particularly for small bodies. In general however, a predominantly negative anomaly indicates an 'off-hole' conductor and vice-versa.

Magnetic and electric fields induced within a conductor by the primary transmitting field generally shrink towards its centre with increased delay time of the recorded secondary TEM field. Because of this phenomenum 'in-hole' anomalies at early or medium delay times can flip to 'off-hole' anomalies at late delay times due to the migration of eddy currents towards the conductor centre or towards the conductive centre of the conductor.

2.5 Interpretation of the Sylvester TEM data has incorporated both a qualitative and quantitative approach. Defining approximately the position, size and orientation of anomalous conductors from the data involves reconciling the expected or modeled result with the borehole profile data as well as expected variations related to different Tx Loop positions, with the corresponding field results.

A simple rectangular current filament model has been used for quantitative anomaly matching. For each theoretical model the amplitude ratios of the model anomaly for different Tx loop positions has been calculated and compared with anomaly amplitude ratios measured or estimated from the field data. This forward approach, has been used to interatively home in on the most likely position, attitude and size of interpreted conductors. The derived result however remains ambiguous because of a) the finite number of Tx loops used, b) the large number of variable parameters, c) the simplifying assumptions of model geometry and d) the one-dimensional nature of the field result. A significant improvement in the confidence of the interpretation would be achieved if surface grid TEM coverage were available.

Various rectangular current filament models have been interpreted from the Sirotem results and their respective geometries are illustrated as a surface projection on Figure 2 and as cross sectional projections on Figures SY3-3 and SY5-2.

2.6 The contractors method of data presentation is often used and has the advantage of illustrating a large amount of data on a single profile plot. The result however in anomalous zones, is a complex arrangement of highs, lows and migrating (with channel delay time) zero cross overs. To simplify the data presentation and to provide a more direct comparison of different Tx loop results for a single drill hole, the results from drill holes SY3 and SY5 have been partially reproduced using a linear voltage scale. Two time delay channels have been (arbitrarily) chosen; channel 15, delaytime 13 milliseconds (m.S) representing a mid-time response and channel 25, delay time 55m.S., representing a late-time response.

For drill hole SY3 the drill hole profile result is shown as a linear plot for each surface Tx loop used for channel 15 on Figure S3/C15 and for channel 25 on Figure S3/C25. The equivalent results for drill hole SY5 are on Figures S5/C15 and S5/C25 (resp).

3. RESULTS and INTERPRETATION.

3.1 Drill Hole SY4.

3.1.1 This drill hole has been electrically logged with the N.S.W. Mines Department logging system. The parameters recorded are induced polarization and apparent resistivity using a (small) in hole, 4 electrode, dipole-dipole array. The dipole size was 1m and the dipole separation 1m. Hence the electrode configuration was designed to measure the electrical properties of the rocks in the immediate vicinity of the borehole (1m) and not to locate off-hole bodies.

The logs show the existence of two anomalies. One at 78m - 84m indicates an apparent resistivity of 10 ohn.m. and chargeabilities up to 50m.S. The other at 177m - 180m indicates a similar apparent resistivity and chargeabilities up to 30 m.S. The former anomaly is within siltstone the latter within a thin mudstone layer. Neither anomaly is explained by the geological drill logs which recorded no sulphides in the hole. It is expected that these two narrow anomalies represent thin bands of graphitic shale within the sediments, graphite being common in rocks of the Sylvester Grid.

The apparent resistivity log provides some possibly useful information on the inherent or background resistivity values of the sediments in this drill hole. Material described as Arenite generally gives rise to apparent resistivities of 200 ohm.m. to 500 ohm.m. Siltstone resistivities are generally an order of magnitude higher and mudstone is variable in an approximate range 500 ohm.m. to 5000 ohm.m. In general, material described as mudstone has an apparent resistivity of several hundred ohm metres apart from two units, in the intervals 84m - 157m and 263m - 293m, which have a value of about 4000 ohm.m. These units and their distinctive (?) high resistivities may be useful parameters for correlation purposes.

3.1.2 Sirotem logging of drill hole SY4 was carried out for two runs using Tx loops 6 and 7. The results for loop 7, which is south of the hole, are virtually featureless. The results for loop 6, immediately SW of the hole, show a very broad and weak negative anomaly with a width of the order of 200m. This broad anomaly can be readily reconciled with the interpretation of the surface magnetics (Wyatt 1991) and the results from drill hole SY5 to the west. Qualitative interpretation of the anomaly indicates an 'off-hole' source conductor, about 130m to 180m from the drill hole. Approximately 150m west of the drill hole is the interpreted eastern limit of both the magnetic-skarn body and the massive pyrrhotite body interpreted by Wyatt. The poor Loop 7

result is due to poor coupling between that surface loop and the conductive pyrrhotite.

3.2 Drill Hole SY3 + The Costean Traverse.

3.2.1 Non magnetic, pyritic, sulphides were recorded in this drill hole from 148m to 155m and that intersection correlates approximately with a short wave length TEM anomaly centred at 170m depth. The TEM anomaly persists with little change in character to late times (Figs. S3/C15, S3/C25).

Drill hole SY3 was logged 5 times using Tx loops 4,6,8,9 and 10 and the narrow anomaly at 170m is similar for all loops with the exception of the loop 8 result which is reversed in polarity. This result is consistent with a conductor adjacent to the drill hole with a (tabular) N/S (approx.) orientation whereby the energizing field from loop 8 is in the opposite direction, and hence polarity, to that from loops 4,6,9 and 10.

The loop 8, channel 25 field results have been fitted to a small rectangular current filament model (Model No 1) which is very close to the drill hole (within 10m), has the dimensions 80m length (N-S) by 20m width, a steep dip and a plunge of 50 deg. to the north. This model appears to represent a down dip extension of the drill hole sulphide intersection which occurs at the uphole edge of the anomaly response. The derived model result is shown on Figure SY3-1 and the comparison of measured and calculated amplitude ratios for the different Tx loops are:-

Loop	Amplitude Ratios Measured	Calculated
4	0.12	0.07
6	0.32	0.29
8	1.0	1.0
9	0.35	0.18
10	0.15	0.25

These results represent reasonable agreement between measured and calculated amplitudes considering the spiky nature of the anomalies and thus inherent errors in obtaining representative measured amplitude ratios.

The anomaly cause is clearly a small zone of sulphide mineralisation with limited dip extent. The interpreted North-South strike orientation suggests that the mineralisation may be associated with faulting.

3.2.2 Early and mid time results for all Tx loops in the SY3 results show a broad positive anomaly centred at about

350m. This feature is most obvious for the Loop 10 result (Fig S3/C15). The anomaly shape is similar for Tx loops 8 and 9 but with a significantly lower amplitude. For Tx loops 4 and 6 the anomaly is very weak or non existent.

The positive 'inhole' response for Tx Loop 10 has been modeled with a rectangular current filament (Model No. 2) which encompasses the drill hole. Relative induced current amplitudes for the model compare favourably with those measured from the data viz:

Tx Loop	Relative Amplitudes Measured	Calculated
4	0.09	0.013
6	0.13	0.08
8	0.37	0.32
9	0.28	0.21
10	1.0	1.0

This modelling result, illustrated in Figure SY3-1, indicates a source geometry which is approximately equidimensional with a shallow dip towards the east. The body size is of the order of 200m x 200m.

3.2.3 This TEM anomaly changes to a predominantly negative response at late times, as is evident in the channel 25 results (Fig. S3/C25). The anomaly has its largest amplitude for Tx loop 8 and is poorly defined for Tx loops 6 and 9, the loops most distant from the hole.

The late time (channel 25) TEM profile is interpreted as a broad low with at least two higher frequency highs or positive anomalies at 360m and 400m. This phenomenum is interpreted as the overprinting of separate anomalies; one a broad, negative, 'off-hole' response the others narrow, 'in-hole' positive peaks. The separation of anomalies in this way, fits with the earlier, channel 15 results (Fig S3/C15), where small high frequency peaks are evident at 360m and 400m.

3.2.4 The SY3, Tx loop 8, channel 25, data has been fitted to a rectangular current filament model (Model No. 3) which is relatively large (350m x 200m), is east of the drill hole and has a shallow (20 deg) dip to the east (Figure SY3-2). At a depth of approximately 300m this model can readily represent a down dip extension of the 'in hole', Model No. 2.

The two component (Hz & Hx) TEM results from the surface Costean traverse have been incorporated into this interpretation thus providing an additional degree of control. The surface profile can be fitted to a large

variety of significantly different geometries however the derived result has been constrained by the drill hole data plus the surface data as well as the objective of deriving reasonable agreement between the measured and calculated, relative anomaly amplitudes for the five different surface transmitting loops, the results of which are :-

Loop	Amplitude Ratios Measured	Calculated
4	Ø.3	Ø.12
6	Ø.18	Ø.Ø9
8	1.Ø	1.Ø
9	Ø.1(?)	Ø.Ø9
1Ø	Ø.3	Ø.2

To fit the surface costean traverse Hz and Hx profiles to the final model (Figure SY3-2) required a lateral shift of the field data of about 3Øm to the west. This discreptancy is not significant considering that the traverse position is known only approximately.

3.2.5 The geological log of drill hole SY3 shows that the ´in-hole´ channel 15 anomaly and the ´off-hole´ channel 25 anomaly at approximately 35Øm depth occur within a thick section of unmineralised dolomite. The explanation for the TEM anomalies may lie with a narrow fault logged at 36Øm. It is at this depth that the predominant narrow, higher frequency, peak occurs and therefore the bulk of both the interpreted ´in-hole´ body and the later time ´off-hole´ body may be related to a fault or fault zone with a shallow dip towards the east.

Whether the TEM anomalies are caused by just the fault, as an aqueous ionic conductor, or by associated sulphide mineralisation cannot be readily determined. However the data from this zone indicates an exponential decay constant of 5mS to 9mS which is indicative of a good conductor. Therefore the inferred concentration of conductive material to the east of drill hole SY3 represents a viable base metal target.

3.3 Drill hole SY5.

3.3.1 This drill hole was logged using surface Loops 1,2,3,5 and 6. The results, when plotted on the ´standard´ logarithmic scale are, in each case, a complex arrangement of highs and lows and channel trace crossings particularly in the interval 35Øm to 55Øm which encompasses the magnetite skarn and the pyrrhotite mineralisation. A much improved appreciation of the data is derived from the linear scale plots of channel 15

(Fig. S5/C15) and channel 25 (Fig. S5/C25).

3.3.2 The channel 15 results (Fig S5/C15) have several features of interest, namely:-

a) Lows centred at approximately 50m and 100m depth which are probably 'off- hole' anomalies and related to graphitic shales which were recorded in SY5 in the interval 20m to 80m.

b) A broad (50m to 100m) high centred at approximately 200m depth which can be directly attributed to graphitic shales in SY5 in the interval 200m to 230m.

c) A zone of anomalies in the interval 400m to 580m which correlates with the skarn and pyrrhotite intersections in this drill hole. These anomalies are essentially positive with a high spatial frequency and are 'in-hole' anomalies.

3.3.3 Largest anomaly magnitudes correspond to the magnetite skarn at approximately 470m depth. As that lithology is reported as being devoid of sulphides it must be assumed that the TEM response is caused by magnetite. As has been shown by Olhoeft & Strangway (1974) and Fraser (1981) magnetite can give rise to a measurable EM response which can often be detected by airborne EM techniques (Fraser 1981). The EM response of magnetite by virtue of magnetic polarisation by the energizing field, is expected however to be of opposite polarity to that from induced eddy currents in electronic conductors. The positive TEM anomalies coincident with the magnetite skarn therefore are not explainable by purely magnetite effects. Possibly the serpentinite associated with the skarn is anomalously conductive although it is unlikely that the inherent conductivity of serpentinite would be larger than that of the 'massive' pyrrhotite further down the drill hole. This apparently unexplained result can be best resolved by in hole logging methods such as those employed by the N.S.W. Mines Department, which measure the true electrical properties of the rocks in-situ.

3.3.4 The channel 25 results (Fig. S5/C25) show that the weak shallow anomalies at 50m and 100m have decayed to zero or background and that the broad positive anomaly at 200m depth persists for Tx Loops 1 and 2. An equivalent negative anomaly was recorded for Tx Loop 6 which suggests that 'off-hole' concentrations of graphitic shales have been favourably energized by this Loop.

The zone of noisy positive anomalies from 400m to 580m remains at this later delay time which however appears to be superimposed on a predominantly negative, much longer

wave length feature. The result for all five Tx loops is very similar and the broad negative is implied by the positive shoulder uphole of the main anomaly zone and a similar, weaker shoulder on the down hole side.

3.3.5 The interpolated long wavelength anomaly shape infers an off-hole conductor either above or to the east of the drill hole. This conclusion is based on the assumption that the postulated 'off-hole' conductor is concordant with the known mineralisation and with the magnetic interpretation; i.e. a strike direction of -76 deg (GRID) and dip of 80 deg (to the North) has been assumed.

In order to estimate likely conductor positions, numerical modelling using the rectangular current filament model, of the SY5, Tx Loop 1, channel 25 data, was carried out. Two possible results were derived; Model 4, a body up dip - above the drill hole intersection and/or Model No. 5, a body along strike - to the east of the drill hole intersection. The anomaly can (equally) be explained by both theoretical models. The field data (SY5-Tx Loop 1-channel 25) was initially corrected for the half space effect by removing a linear regional obtained by invoking a very large, deep, square current filament which simulated the migrating electric current field maxima. The modelling results are shown on Figure SY5 - 1, and a cross sectional projection of them as well as the interpreted magnetic bodies (Wyatt 1991) is illustrated on Figure SY5 - 2.

A comparison of measured and calculated anomaly amplitude ratios for the above models was attempted with limited success. The basic problem is in estimating real (measured) ratios when the anomaly being modeled is itself an interpretation and interpolation of the actual data.

3.4 Drill hole SY2.

This drill hole is located to the north east of the SY3, SY4, SY5 group (Figure 1) and is of minor interest although the hole intersected 5m of sulphides at about 270m depth.

TEM was logged down this hole for Tx Loops. 11 and 12 and the results reveal an anomaly centred at about 270m which is negative at early times and weakly positive beyond channel 6.

This anomaly can be related to the sulphide intersection in the drill hole. The early time negatives can be reconciled with the half space behavior of the expanding electric field whereby it occurs above the anomaly location for the 'early' time channels.

4. CONCLUSIONS

4.1 The TEM results from drill hole SY4 have delineated a broad, weak, 'off-hole' anomaly which can be readily explained by magnetite and pyrrhotite bodies interpreted (Wyatt 1991) from the surface magnetics which occur about 150m west of the drill hole.

4.2 The narrow, high spatial frequency anomaly in drill hole SY3 at about 170m depth can be related to sulphides encountered in the drill hole at about 150m depth. The sulphides are interpreted to be concentrated in a small zone or body just west of the drill hole. The TEM interpretation indicates that this feature strikes approximately north-south and may be fault related. The inferred (small) size indicates that it is of minor economic significance.

4.3 A broad, mid time, positive, and therefore 'in-hole', anomaly, centred at 350m in drill hole SY3 is not overtly explained by the geology. A fault at 360m depth gives rise to a small high within the broader feature which suggests that this structure is the anomaly source. Late time behavior suggests a migration of eddy currents to the east. Both mid and late time anomalies have been modeled with a rectangular current filament model, approximately 200m x 200m with a shallow dip to the east. The 'off-hole' model No. 3 can also explain the results from the surface costean traverse.

The EM anomalies may be caused by a conductive but unmineralised, fault zone. The possibility however of significant sulphide associations should be considered.

4.4 The TEM survey results from drill hole SY5 are dominated by the 'in-hole' responses of massive pyrrhotite and magnetite encountered in the drill hole. Late time behavior suggests that induced eddy currents in these conductors have migrated away from the drill hole up dip and possibly towards the east. Hence more conductive and more favourable mineralisation may be expected away from the drill hole and in the upper-eastern quadrant of the body.

4.5 Anomalous TEM results from drill hole SY2 at 270m depth are consistent with the sulphide mineralisation encountered. No 'off-hole' anomalies are evident and the weak anomaly is indicative of a poor conductor.

5. RECOMMENDATIONS.

5.1 The geometry of the mineralised body encountered in drill hole SY5 is well defined by the interpretation of the magnetics (Wyatt 1991) and specific drill targets should be based on those models. The TEM interpretation does however give priority to a) testing up dip of the SY5 intersection and b) along strike to the east of the SY5 intersection.

5.2 A drill target to test the inferred 'off-hole' conductor of SY3 at approximately 350m depth is:

The point 300m (RL = 0m) vertically below 60600N - 57850E.

A steeply angled hole drilled from east to west is recommended and should extend to RL -100m.

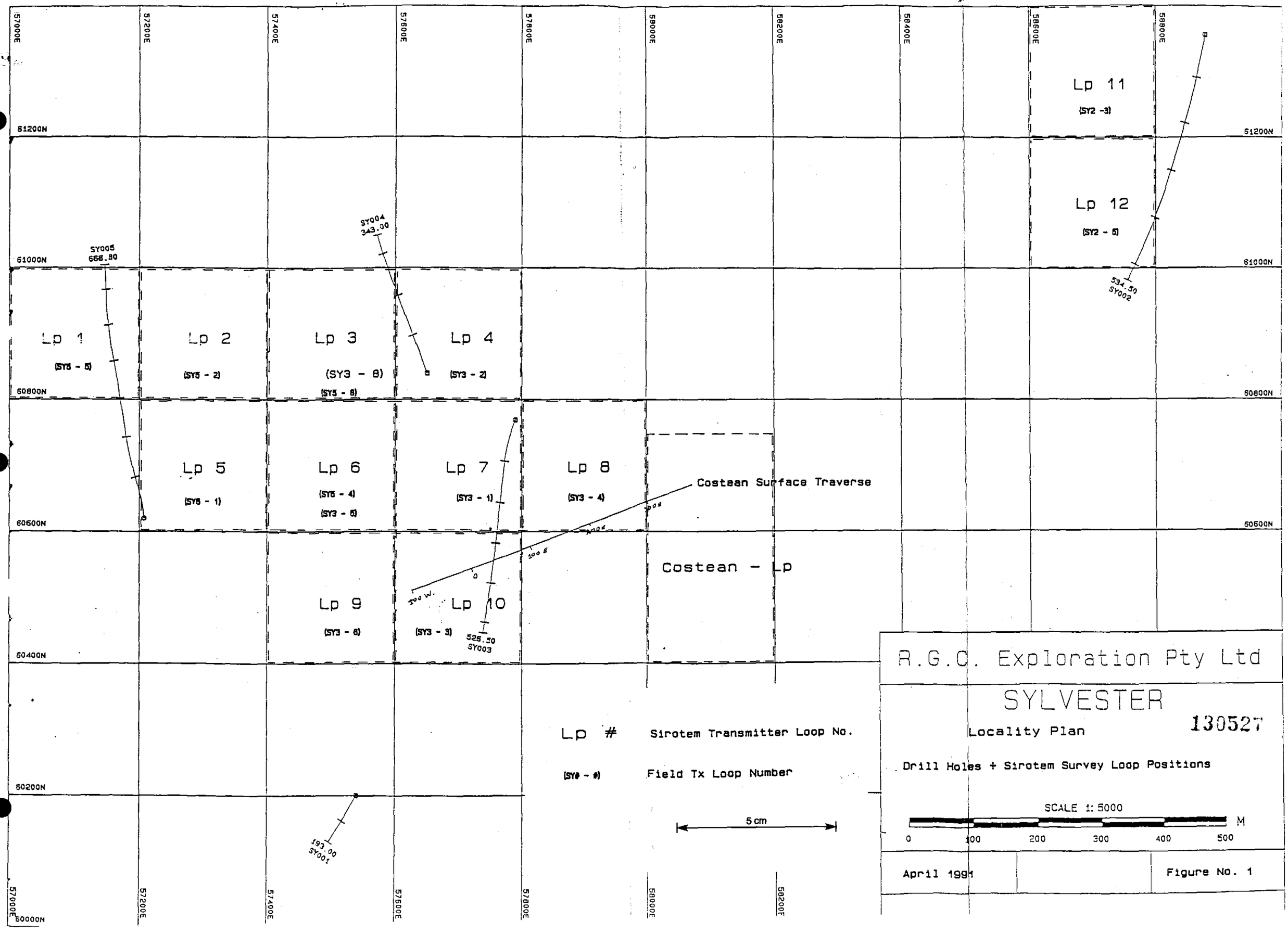
6. REFERENCES

Fraser, D.C., 1981. Magnetite mapping with a multicoil airborne electromagnetic system. Geophysics Vol. 46. No. 11. pp 1579.

Fullagar, P.K., 1987. Inversion of down hole TEM data using circular current filaments.
Exploration Geophysics Vol.18. No.3. pp 341.

Olhoeft, G.R. and Strangway, D.W., 1974. Magnetic relaxation and the electromagnetic response parameter.
Geophysics Vol. 39. No.3. pp 302.

Wyatt, B., 1991. Interpretation of ground magnetic data from the Sylvester Prospect, Zeehan, Tasmania.
Wyatt & Associates Rep. for R.G.C. Exploration Pty. Ltd.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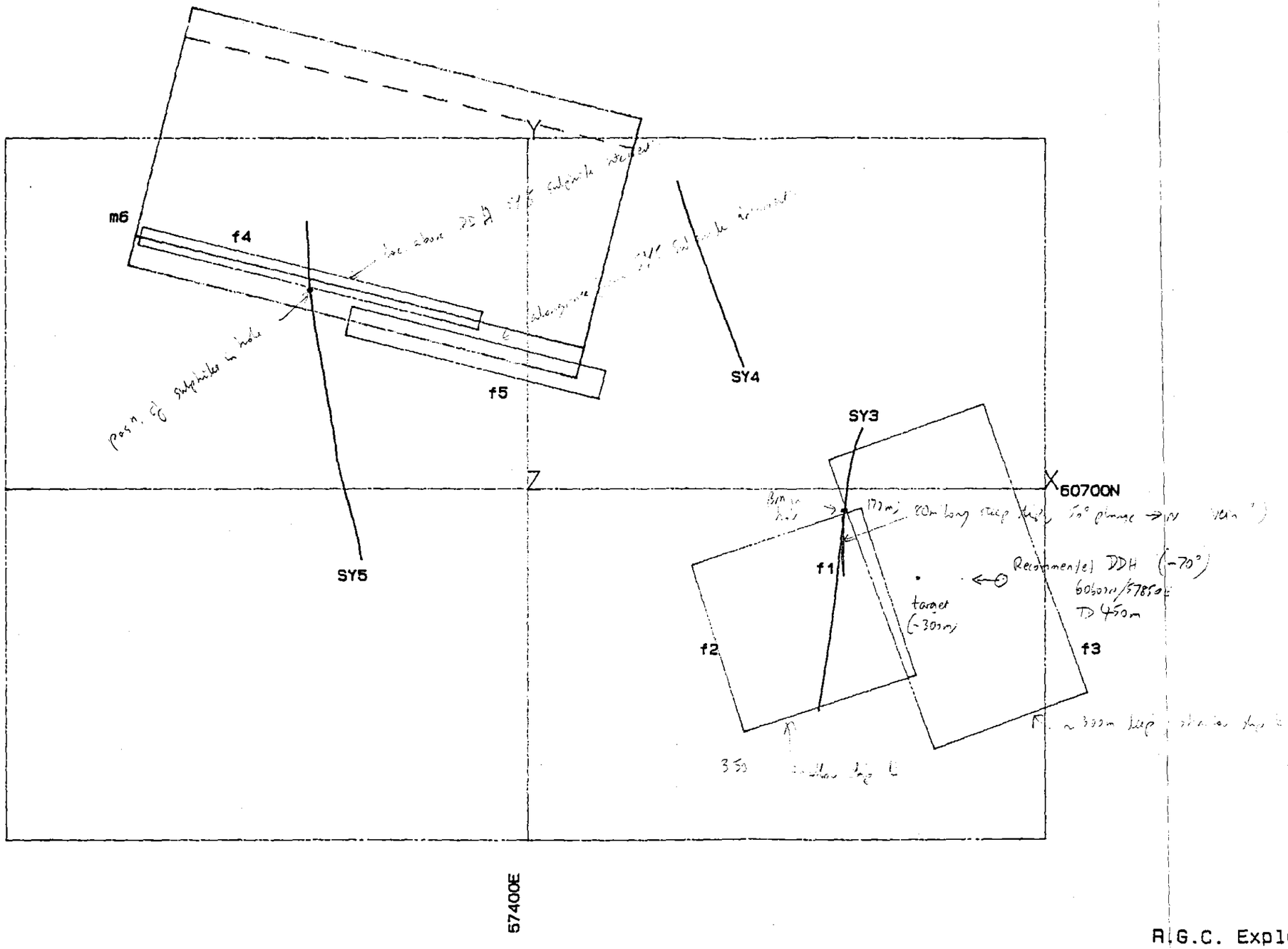
60000N
Lp 1
(SY5 - 5)
Lp 2
(SY5 - 2)
Lp 3
(SY3 - 8)
(SY5 - 8)
Lp 4
(SY3 - 2)
Lp 5
(SY5 - 1)
Lp 6
(SY5 - 4)
(SY3 - 5)
Lp 7
(SY3 - 1)
Lp 8
(SY3 - 4)
Lp 9
(SY3 - 6)
Lp 10
(SY3 - 3)
Lp 11
(SY2 -3)
Lp 12
(SY2 - 5)
Costean Surface Traverse
Costean - Lp
SY005
668.80
SY004
343.00
SY003
525.50
SY002
534.50
SY001
193.00
Lp # Sirotem Transmitter Loop No.
(SY# - #) Field Tx Loop Number
5 cm
R.G.C. Exploration Pty Ltd
SYLVESTER
Locality Plan
130527
Drill Holes + Sirotem Survey Loop Positions
SCALE 1:5000
0 100 200 300 400 500 M
April 1991
Figure No. 1

130528



R.G.C. Exploration Pty. Ltd.

Sylvester Grid - Zeehan - Tas.

Geophysical Interpretation Summary

Surface Projection

f# Filament Model No

m# Magnetic Model No

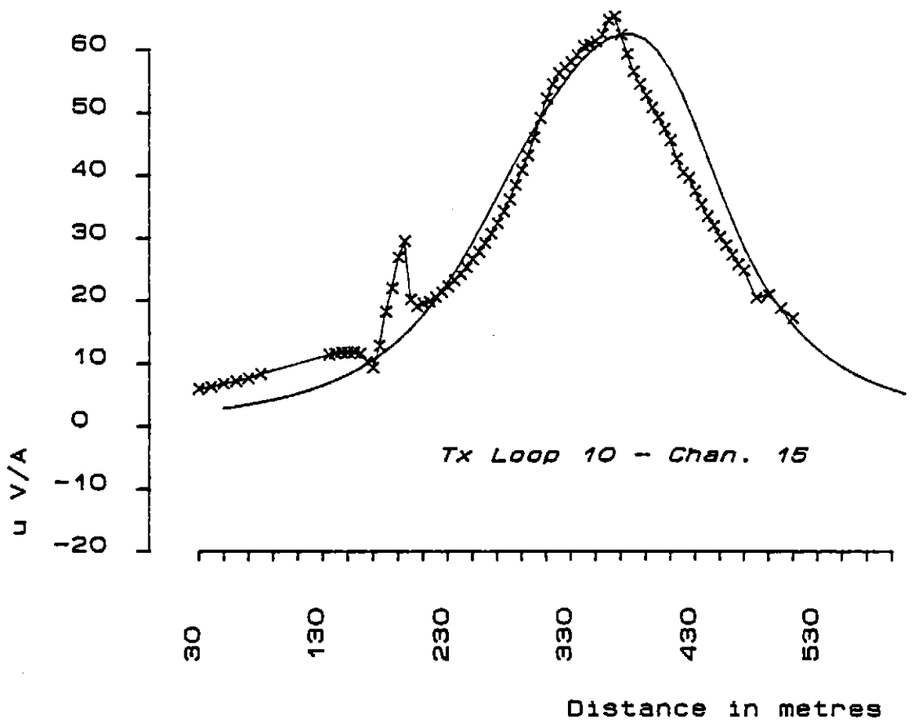
5 cm

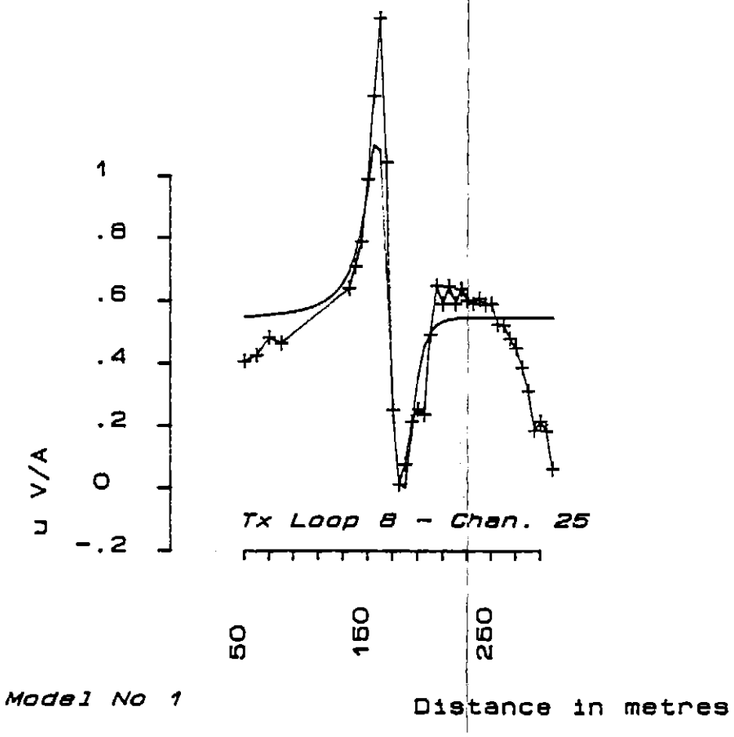
Scale 1: 5000

Figure No. 2

49

Rectangular Current Filament Modelling Results





Model No 1

Centre 60635N - 57768E - 205m RL.

Azimuth = 0 deg.

Dip = -95 deg.

Plunge = 50 deg.

Length = 80 m.

Width = 20 m.

Model No 2

Centre 60650N - 57720E - 35m RL.

Azimuth = -18 deg.

Dip = 17 deg.

Plunge = 0 deg.

Length = 200 m.

Width = 220 m.

R.G.C. Exploration Pty. Ltd.

Sylvester Grid - Zeehan - Tas.

Down Hole TEM Survey

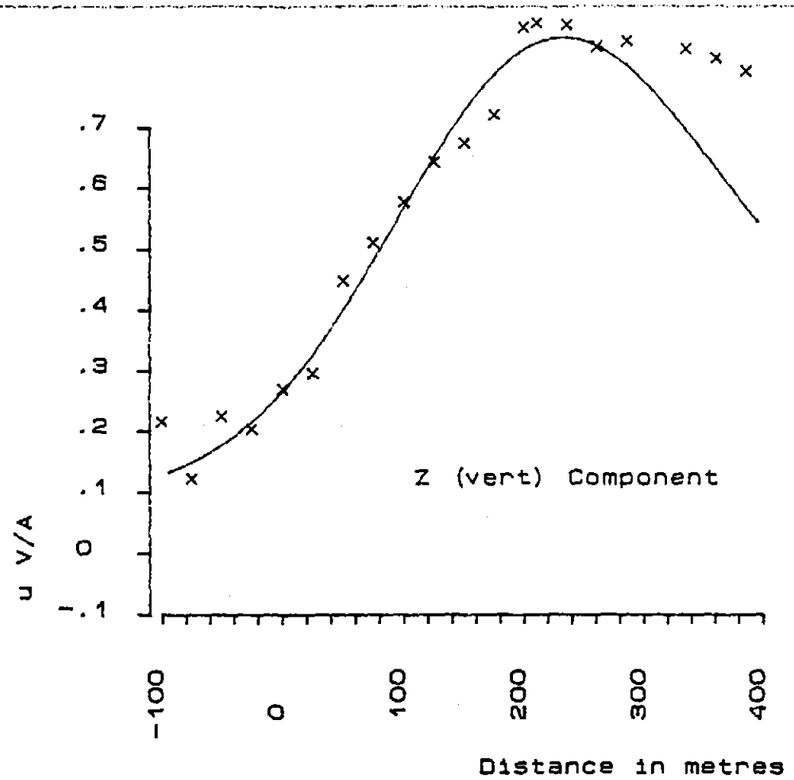
Drill Hole SY3

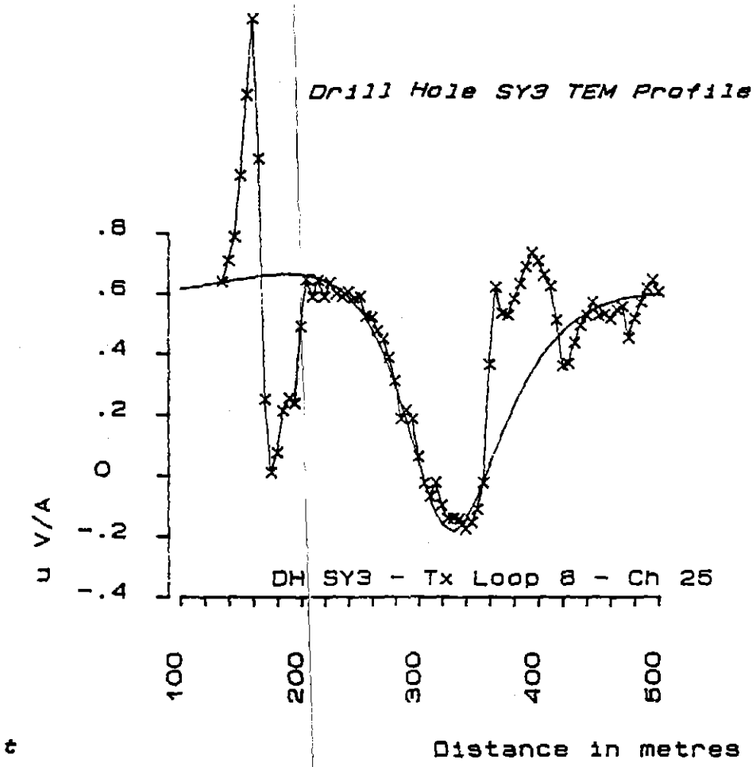
SCALES HOR. 1 : 5000

VERT as shown

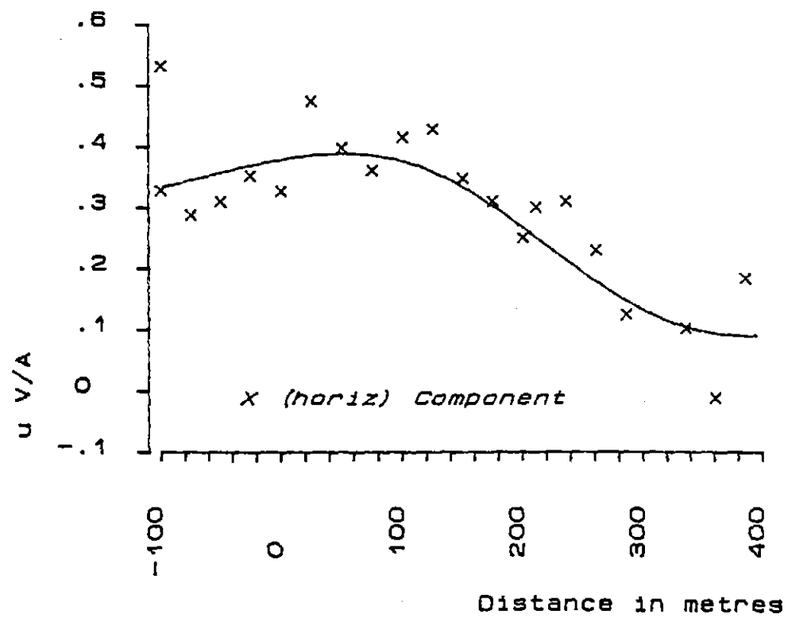
5 cm

Figure SY3 - 1





Costean Surface TEM Profiles



Rectangular Current Filament

Modelling Results

Model No 3

Centre 6060ON - 5790OE - Om RL.
Azimuth = -20 deg.
Dip = 20 deg.
Plunge = 0 deg.
Length = 350 m.
Width = 200 m.

R.G.C. Exploration Pty. Ltd.

Sylvester Grid - Zeehan - Tas.

Down Hole TEM Survey

DH SY3 + Costean Profile

Channel 25 - Tx Loop 8

SCALES HOR. 1 : 5000

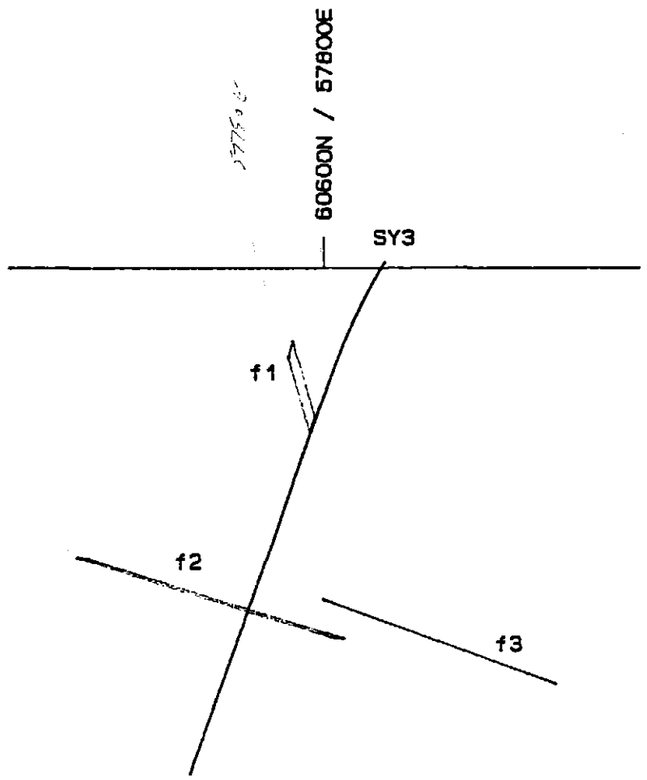
VERT. 1 cm to .2 u V/A

5 cm

Figure SY3 - 2

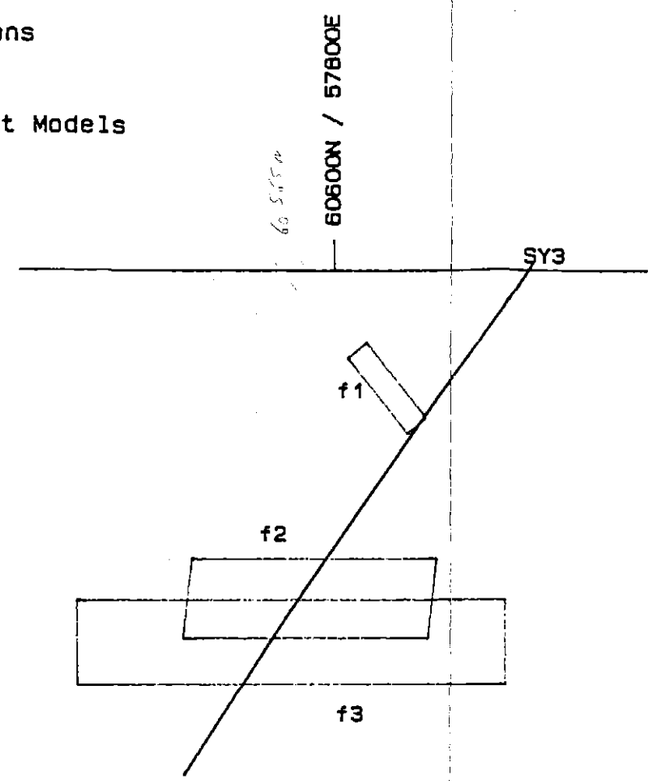
Orthographic Parallel Projections

of Rectangular Current Filament Models



Viewing Angles :

160 deg. Azimuth
0.0 deg. (vert) Elevation



Viewing Angles :

70 deg. Azimuth
0.0 deg. (vert) Elevation

R.G.C. Exploration Pty. Ltd.
Sylvester Grid - Zeehan - Tas.

Drill Hole SY3
TEM Interpretation Results
Cross Sectional Projections

f# Filament Model No

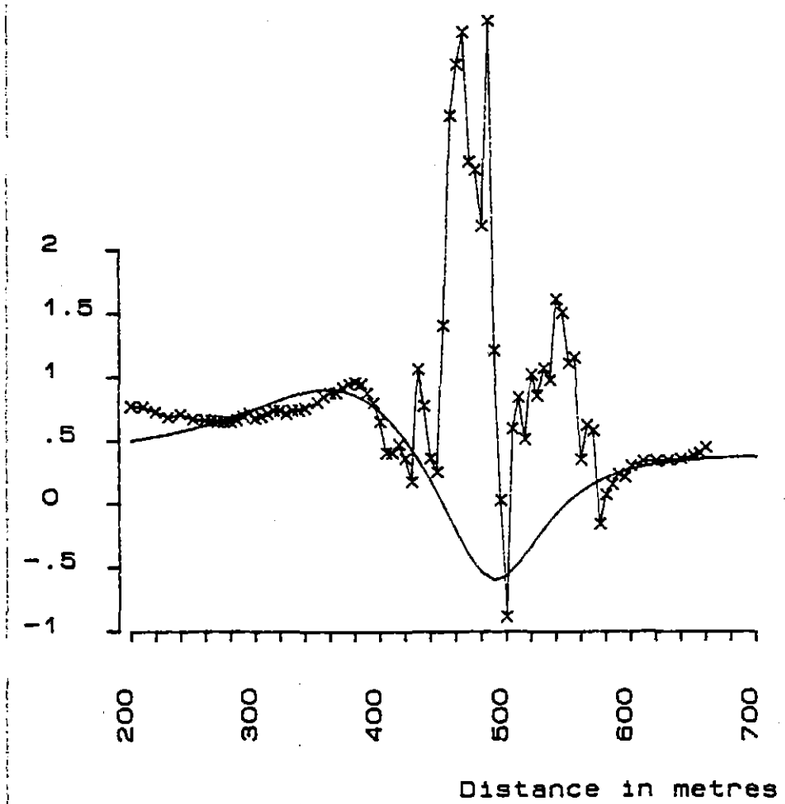
Scale 1: 5000

5 cm

Figure No. SY3 - 3

139532

Rectangular Current Filament Modelling Results

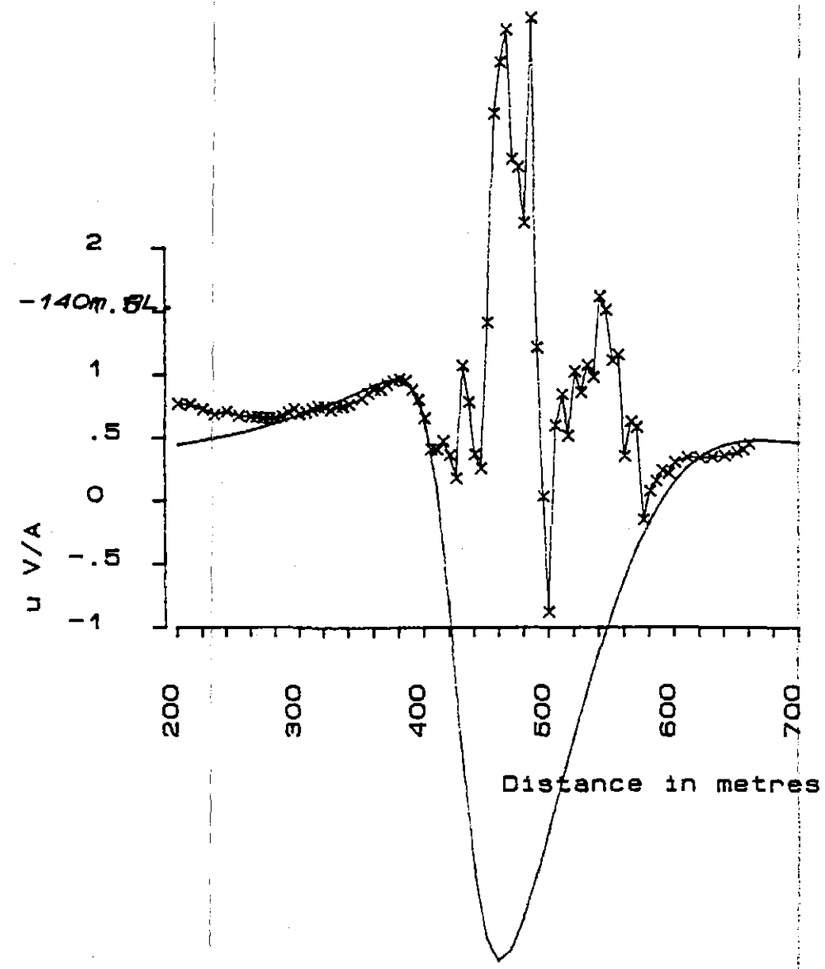


Model No 4

Centre 60940N - 57150E - -10m RL.
Azimuth = -76 deg.
Dip = 80 deg.
Plunge = 0 deg.
Length = 400 m.
Width = 120 m.

Model No 5

Centre 60855N - 57340E - -140m RL.
Azimuth = -76 deg.
Dip = 80 deg.
Plunge = 0 deg.
Length = 300 m.
Width = 190 m.



R.G.C. Exploration Pty. Ltd.

Sylvester Grid - Zeehan - Tas.

Down Hole TEM Survey

Drill Hole SY5 - Loop 1

Channel No. 25

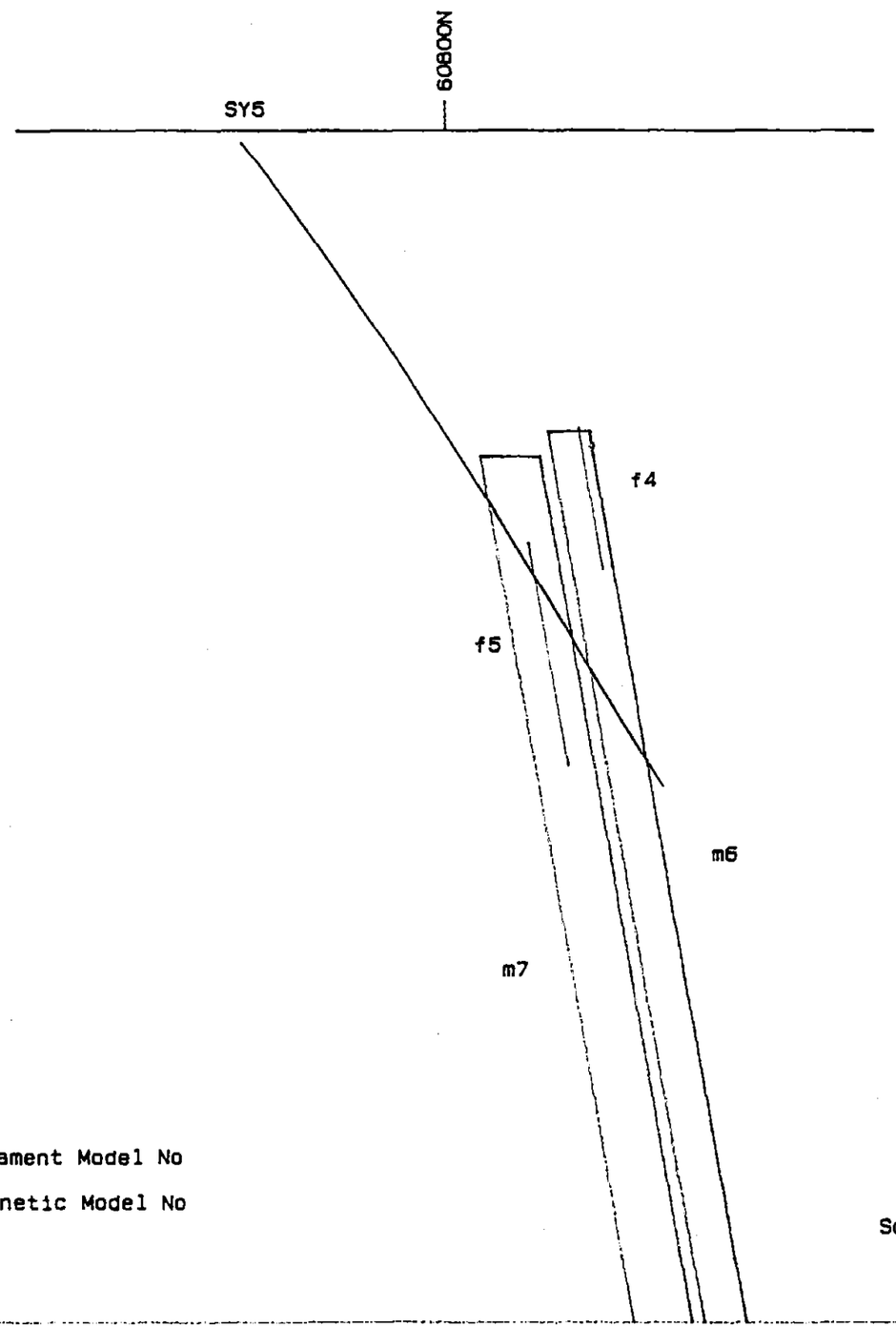
SCALES HOR. 1 : 5000

VERT. 1 cm to .5 u V/A

5 cm

Figure SY5 - 1

130533



Orthographic Parallel Projection

Viewing Angles :

104 deg. Azimuth

0 deg (vert) Elevation

f# Filament Model No

m# Magnetic Model No

Scale 1:5000

5 cm

R.G.C. Exploration Pty. Ltd.

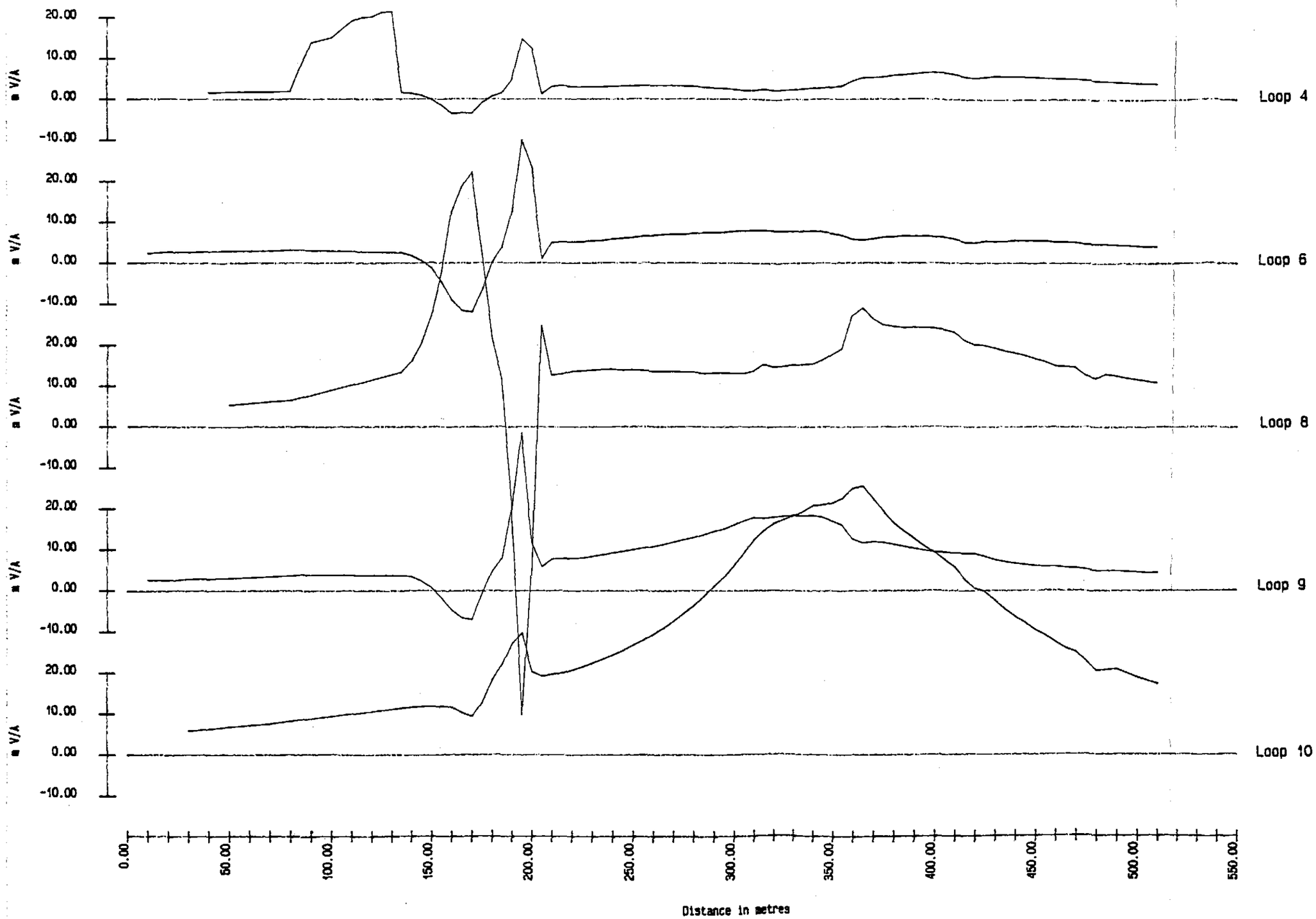
Sylvester Grid - Zeehan - Tas.

Drill Hole SY5 - Interpretation Results

Cross Sectional Projection

Figure No. SY5 - 2

130534



R.G.C. Exploration Pty. Ltd.
Sylvester Grid - Zeehan, Tas.

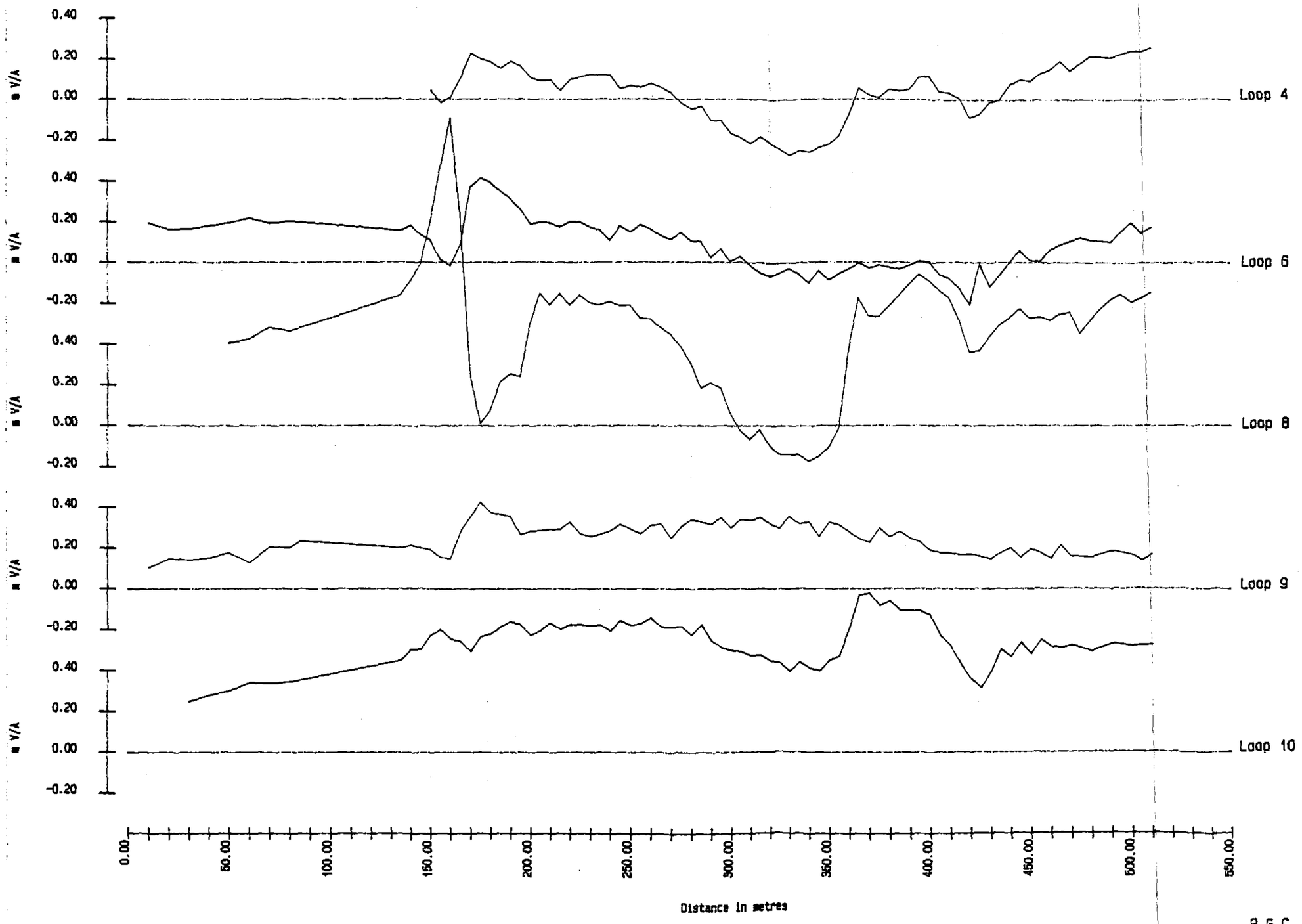
Down Hole TEM Survey

Drill Hole SY3 - Channel 15

Figure No. S3/C15

5 cm

139535

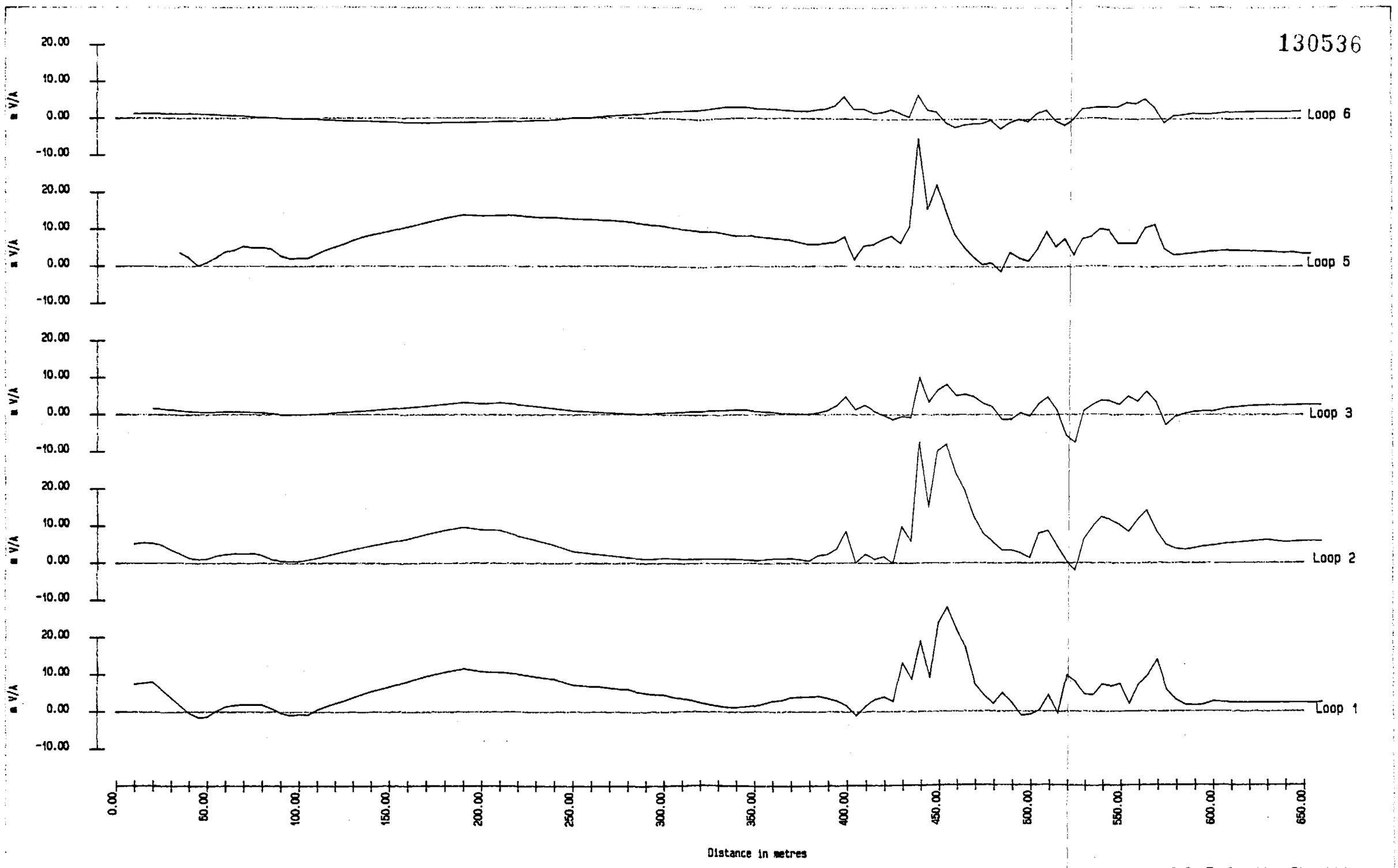


A.G.C. Exploration Pty. Ltd.
Sylvester Grid - Zeehan, Tas.

Down Hole TEM Survey

Drill Hole SY3 - Channel 25

Figure No. S3/C25

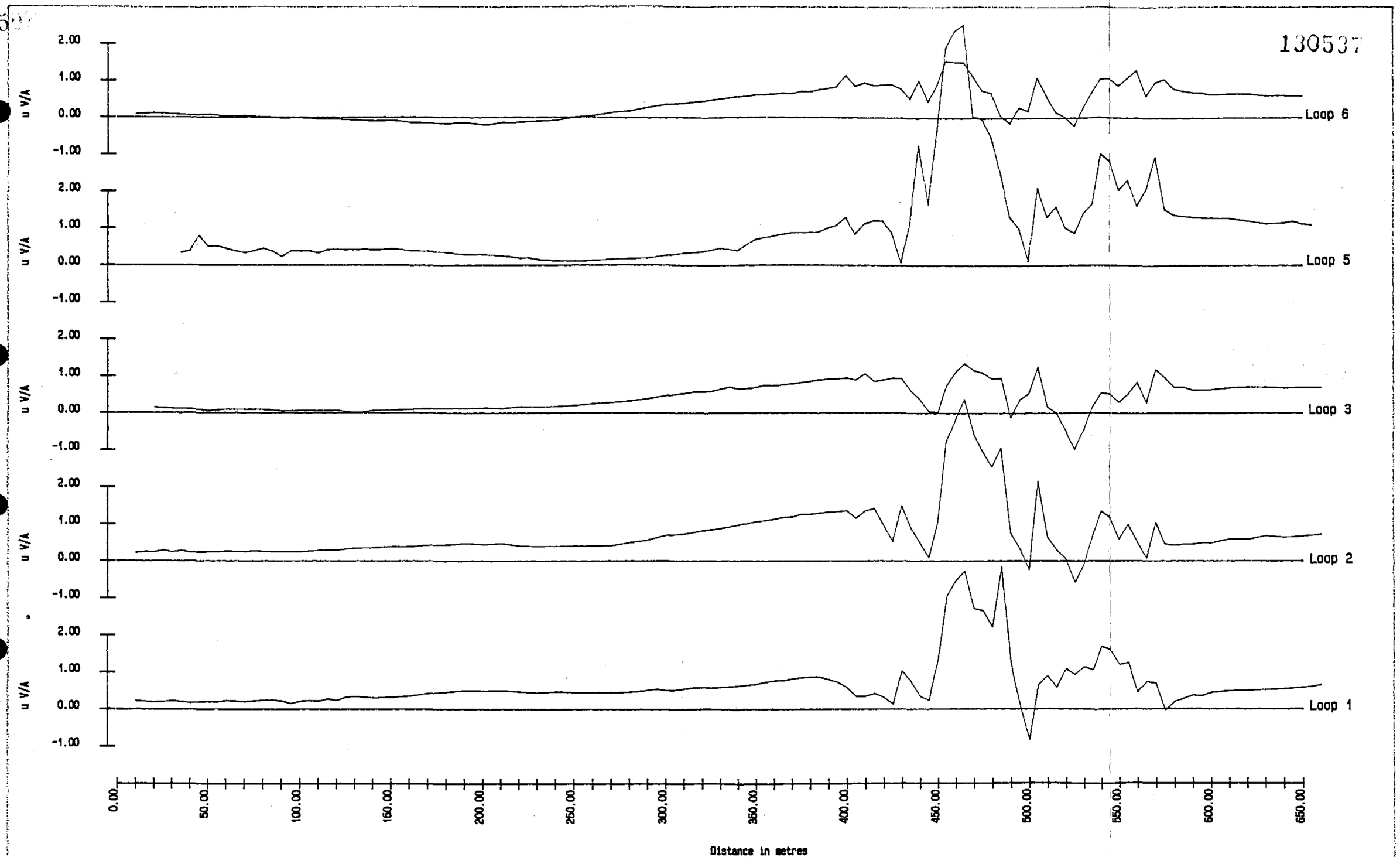


R.G.C. Exploration Pty. Ltd.
Sylvester Grid - Zeehan, Tas.

Down Hole TEM Survey

Drill Hole SY5 - Channel 15

Figure No. S5/C15



R.G.C. Exploration Pty. Ltd.

Sylvester Grid - Zeehan, Tas.

Down Hole TEM Survey

Drill Hole SY5 - Channel 25

Figure No. S5/C25

130538

INTERPRETATION OF DOWN-HOLE GEOPHYSICAL RESULTS FROM THE SYLVESTER GRID, ZEEHAN TASMANIA

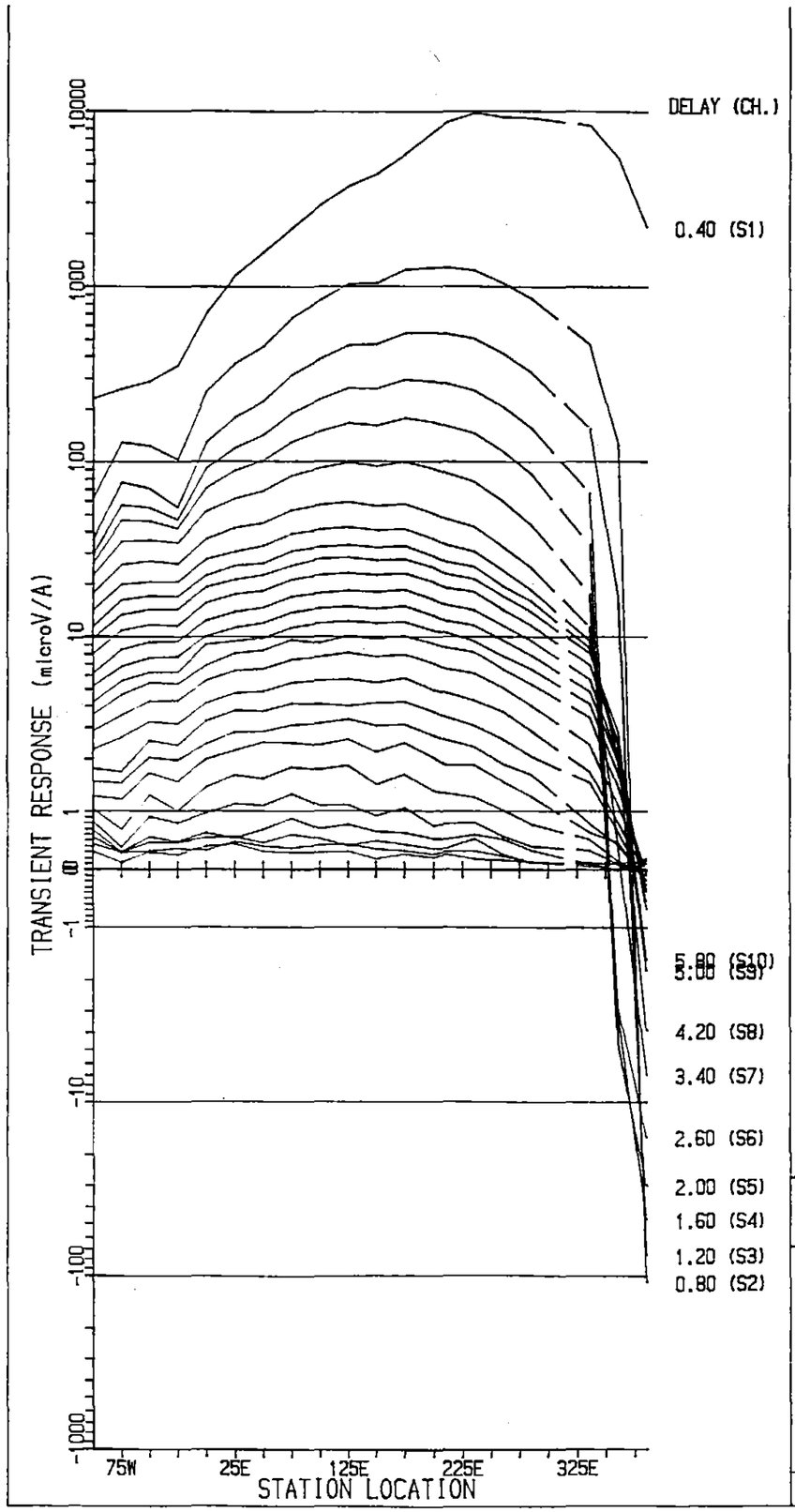
BY

R.C. DEAKIN

APPENDIX

130539

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 350M SQUARE TX. LOOP, TURAM MODE RVR SURVEY
READING INT. : 25 METRES
NO. OF STACKS : 512
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 12.0 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:5000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

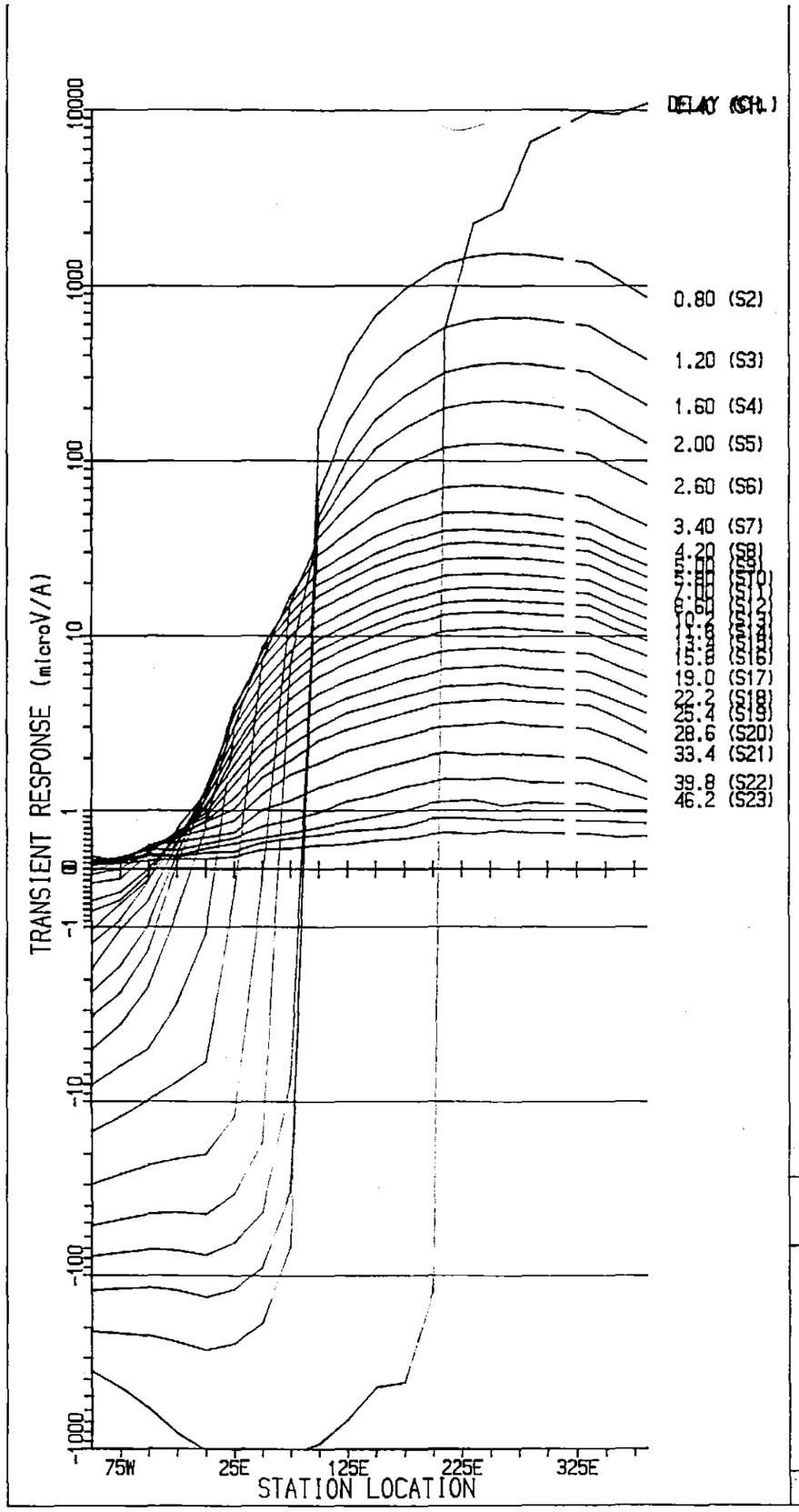
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE COSTEAN 4 X

SCALE - 1:5000

52. 130540



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 350M SQUARE TX. LOOP, TURAM MODE RVR SURVEY
READING INT. : 25 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 12.0 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:5000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

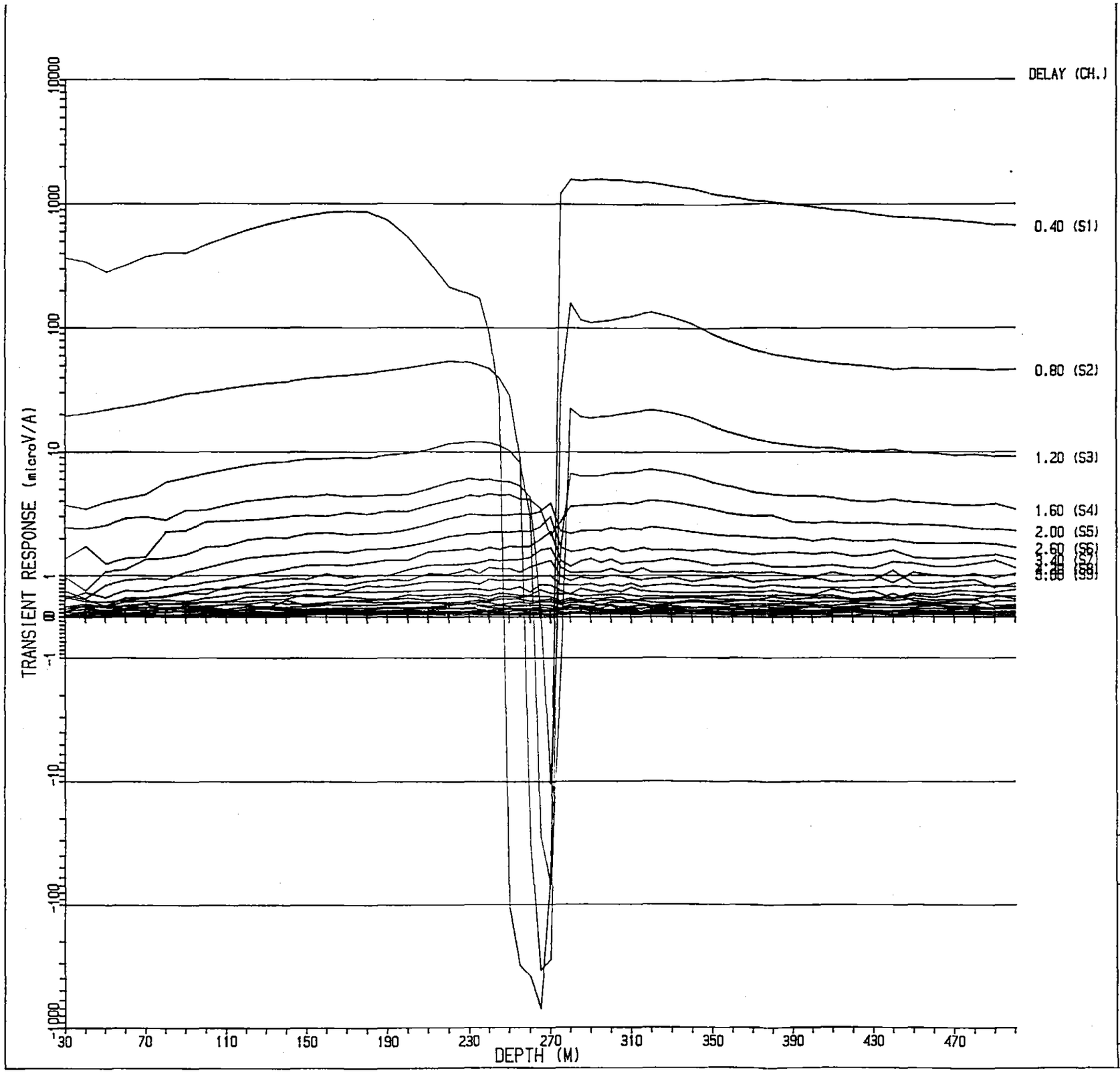
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE COSTEAN 4 Z

SCALE - 1:5000

130541



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

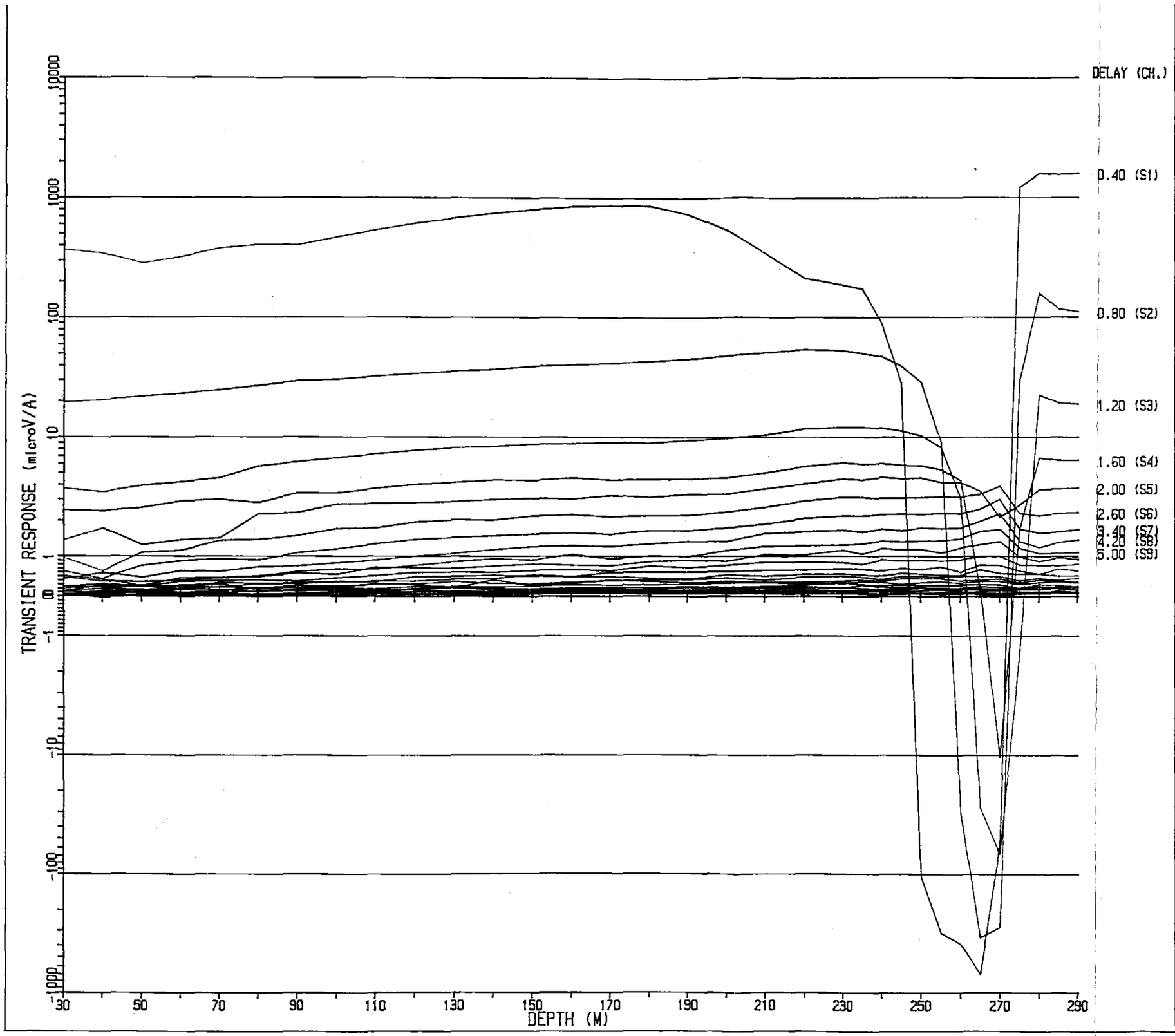
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY2 LP3

SCALE - 1:2000

130542



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

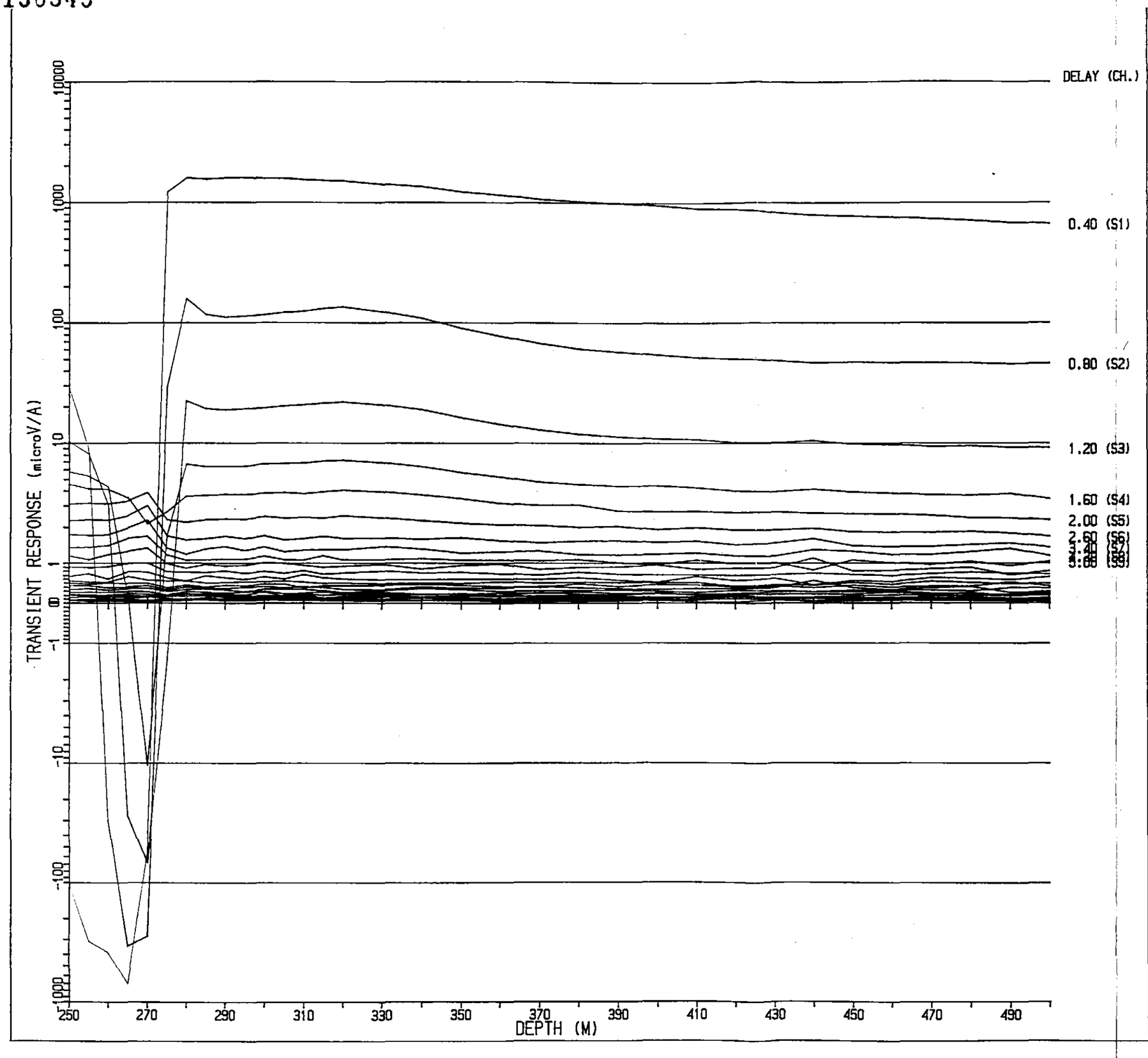
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY2 LP3

SCALE - 1:1000

59c

130543



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

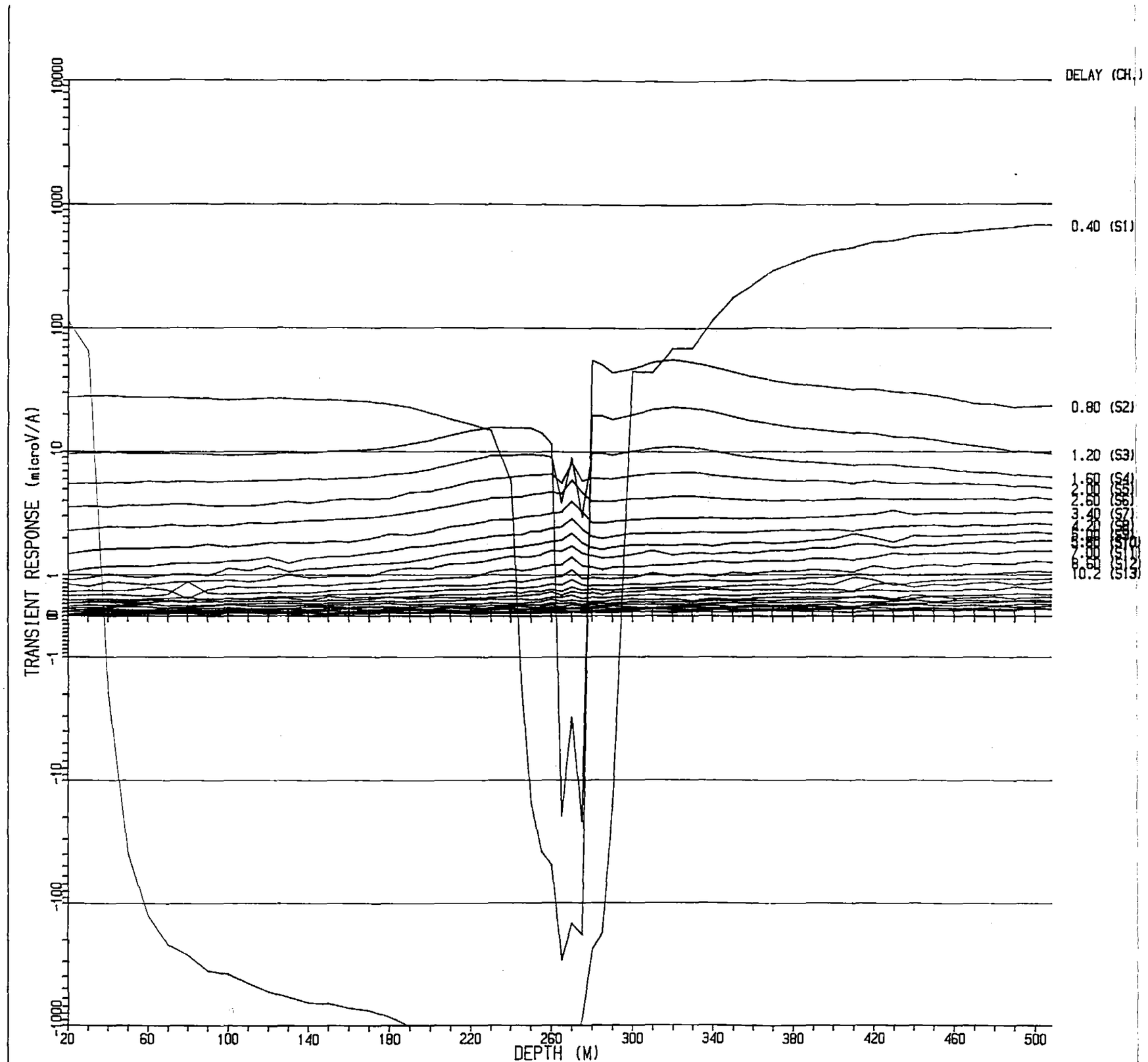
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY2 LP3

SCALE - 1:1000

130544

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 2048
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.8 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

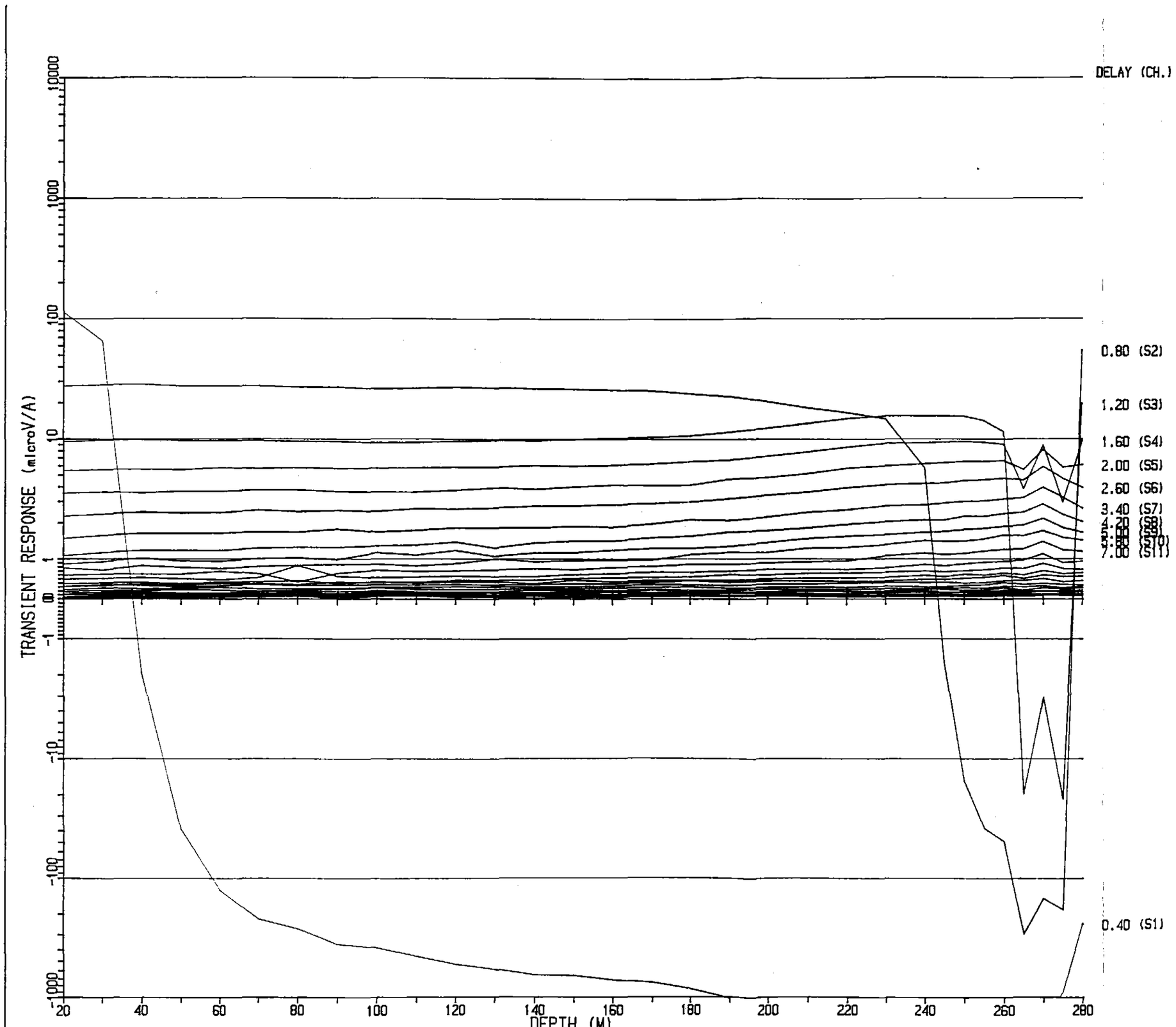
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY2 LP5

SCALE - 1:2000

130545



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 2048
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.8 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

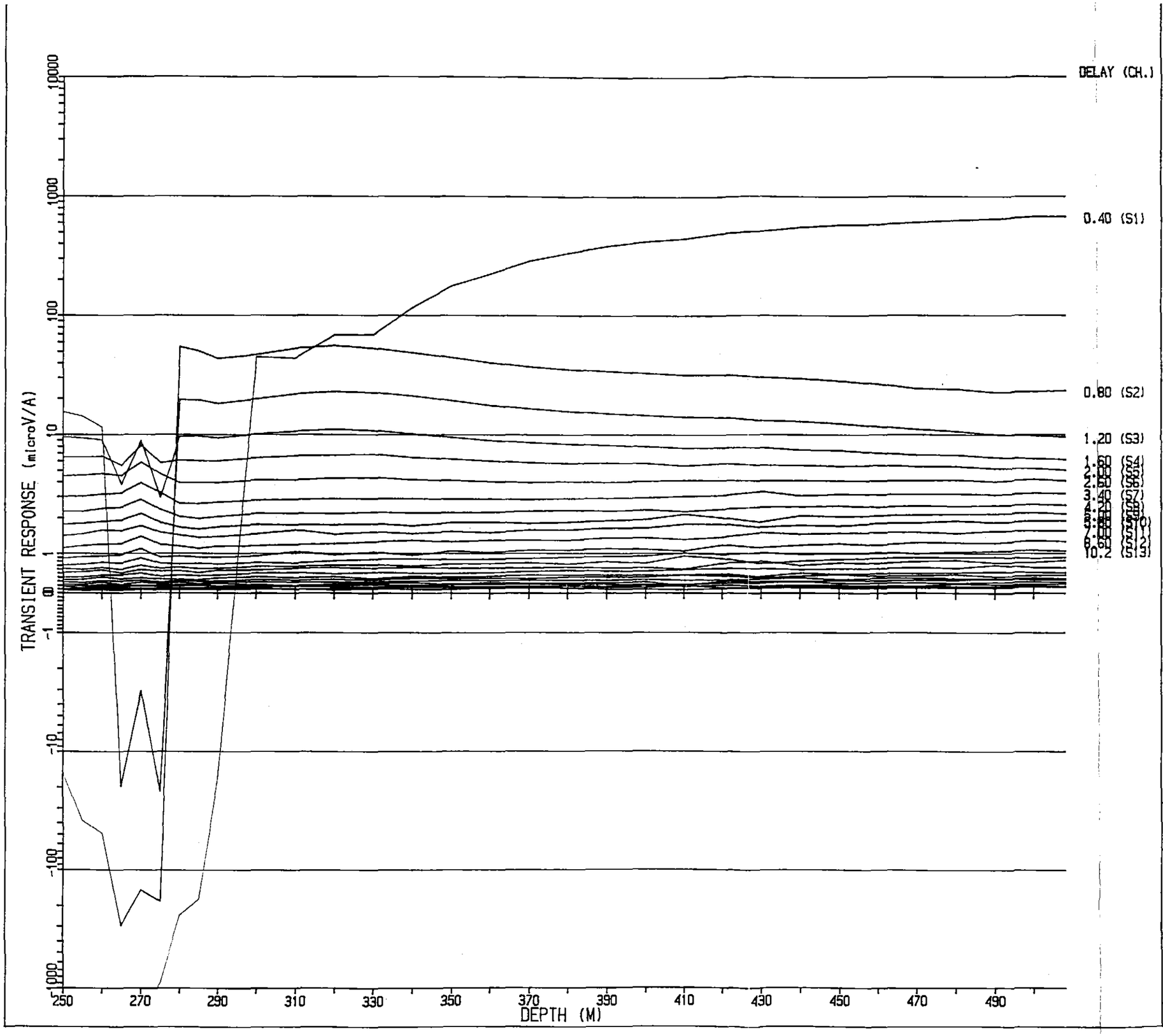
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY2 LP5

SCALE - 1:1000

130546



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 2048
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.8 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

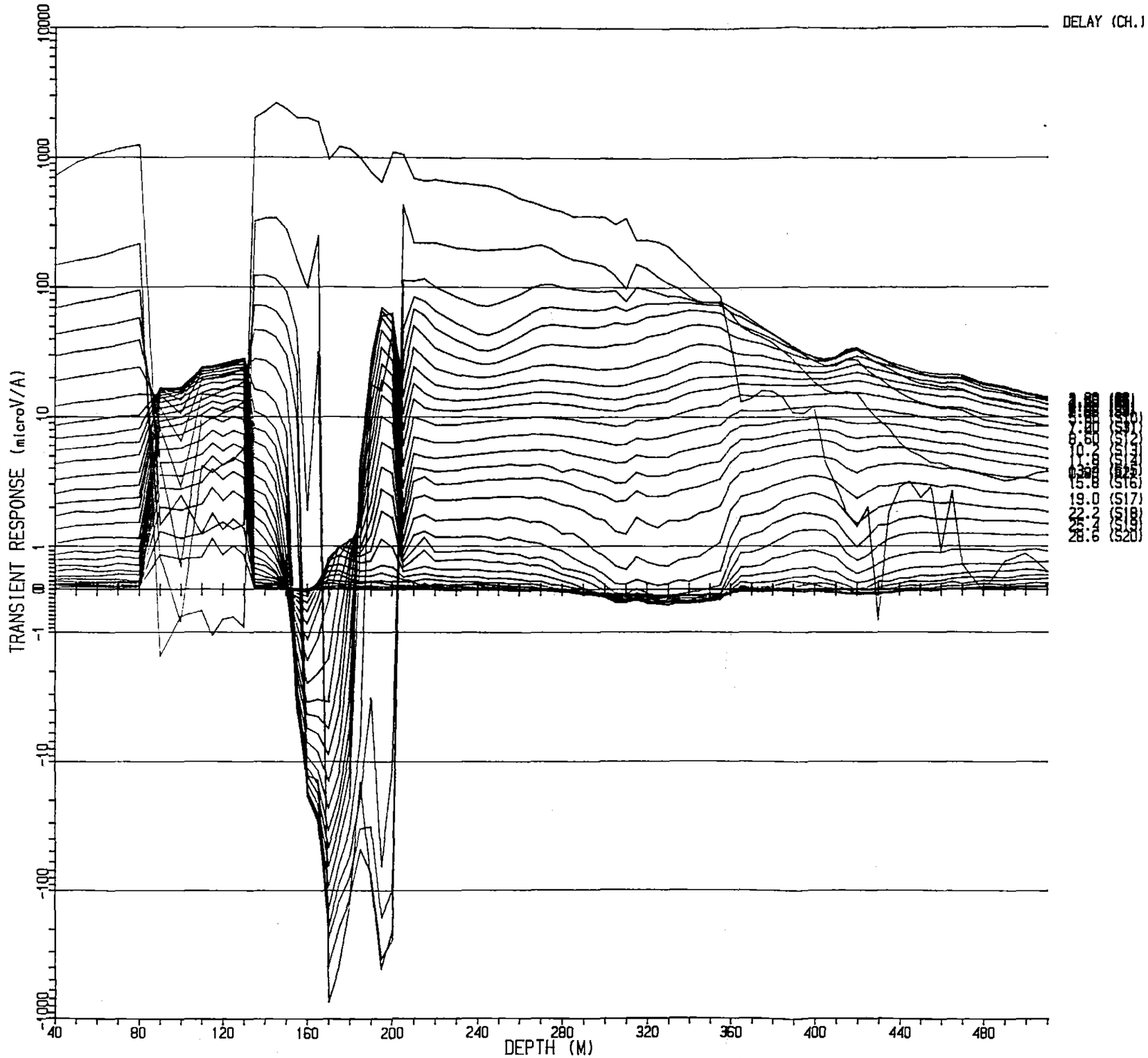
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY2 LP5

SCALE - 1:1000

130547

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 128.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

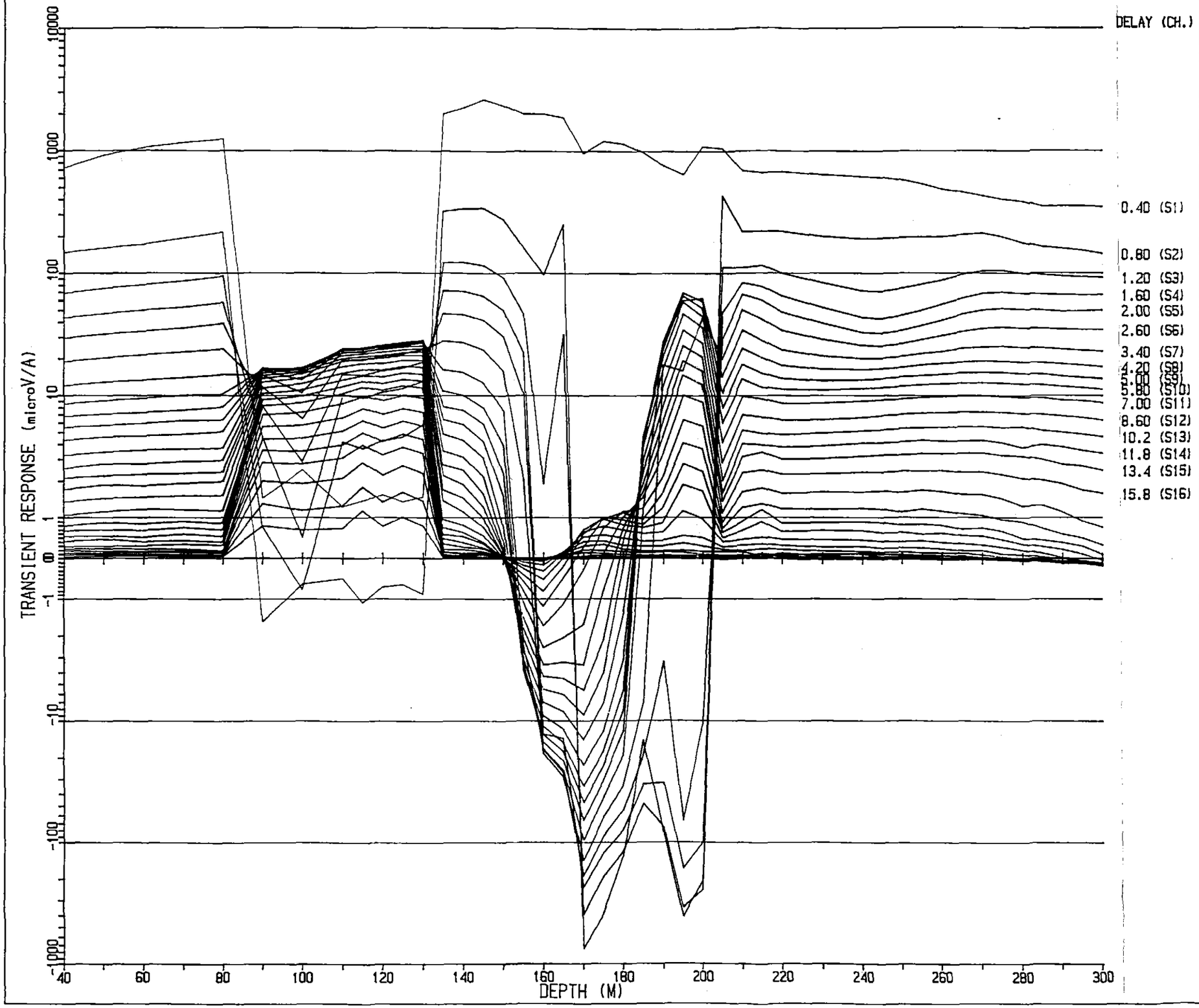
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP2

SCALE - 1:2000

130548

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 128.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

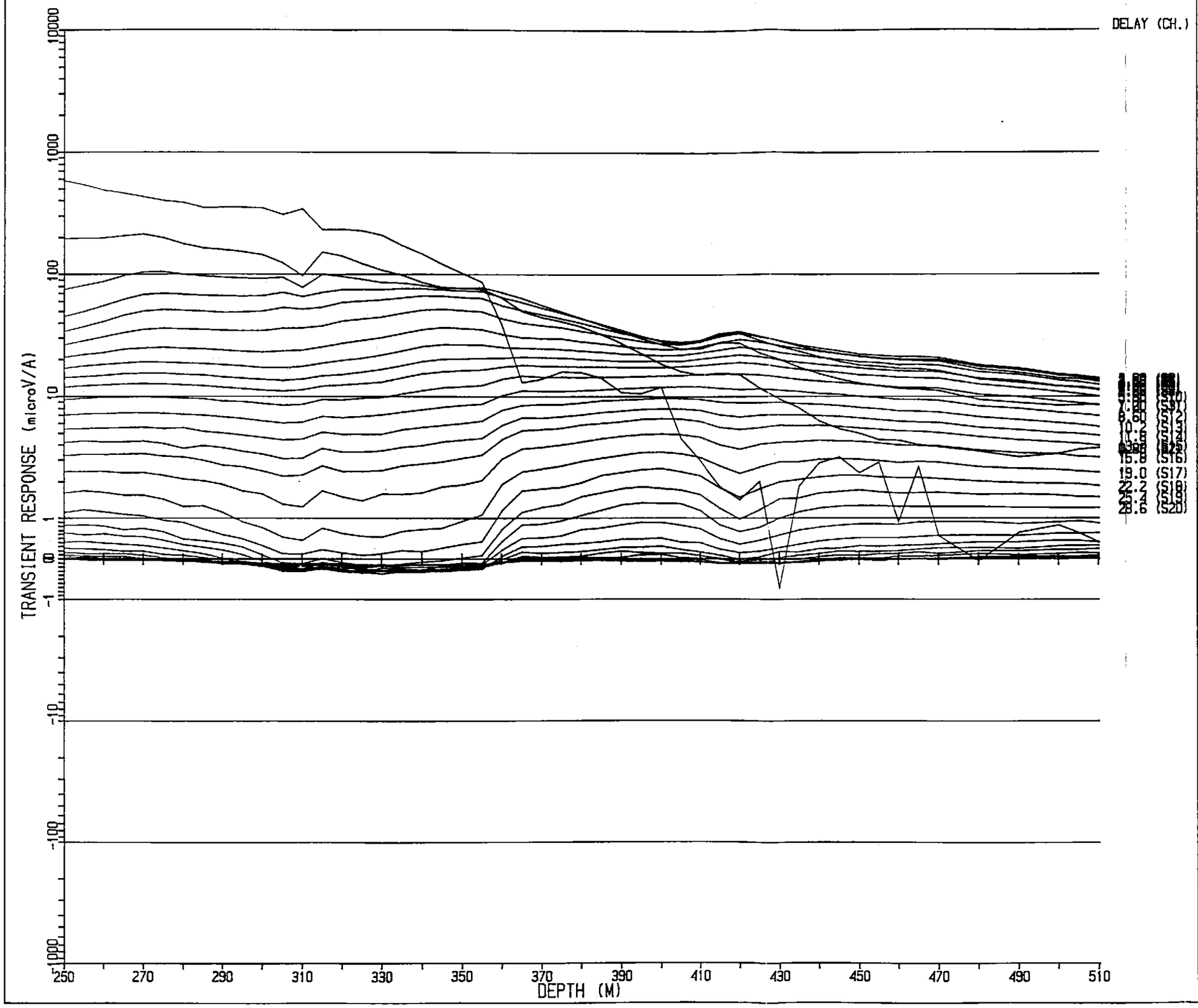
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP2

SCALE - 1:1000

130549

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 128.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

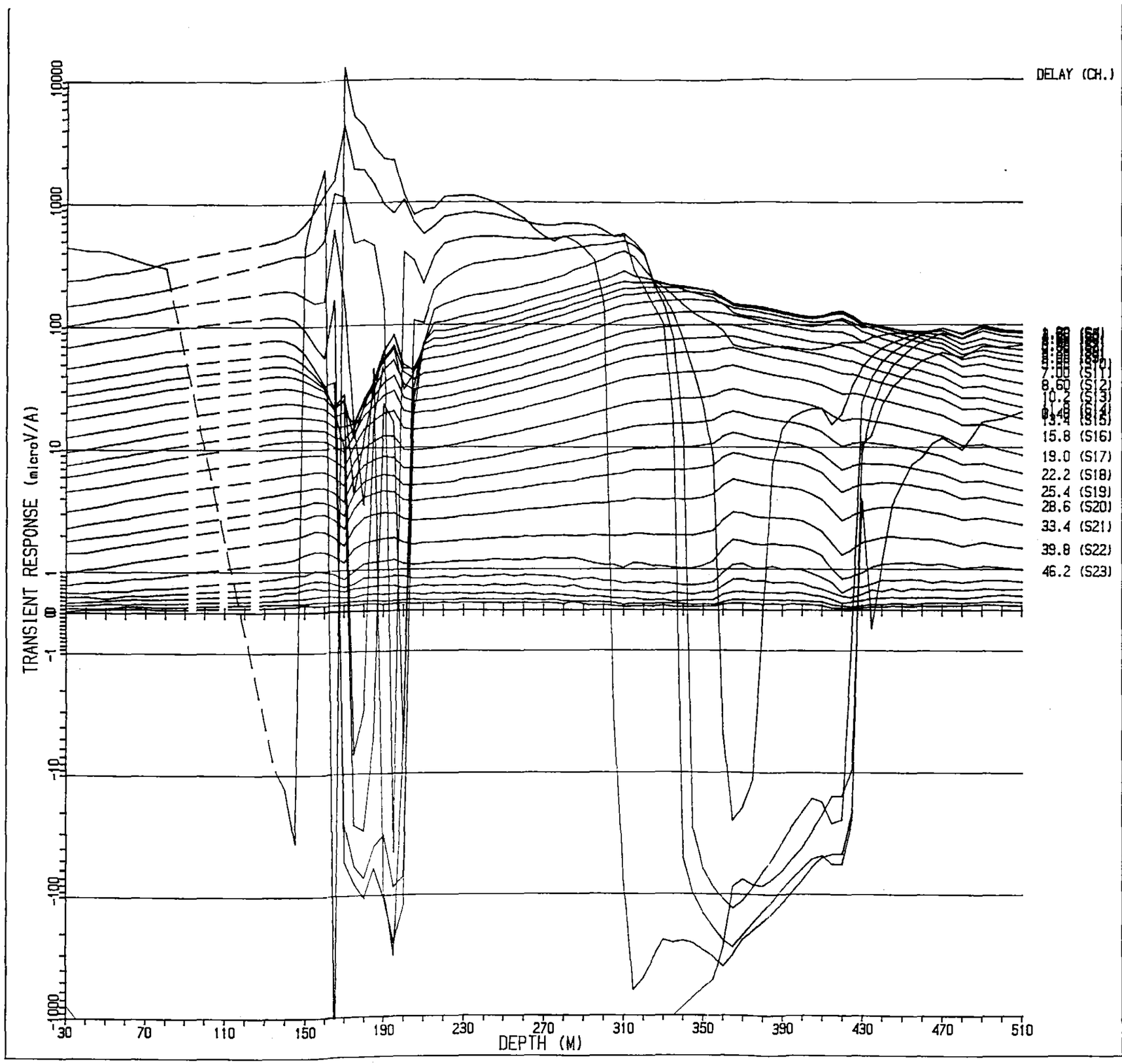
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP2

SCALE - 1:1000

130550

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.9 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

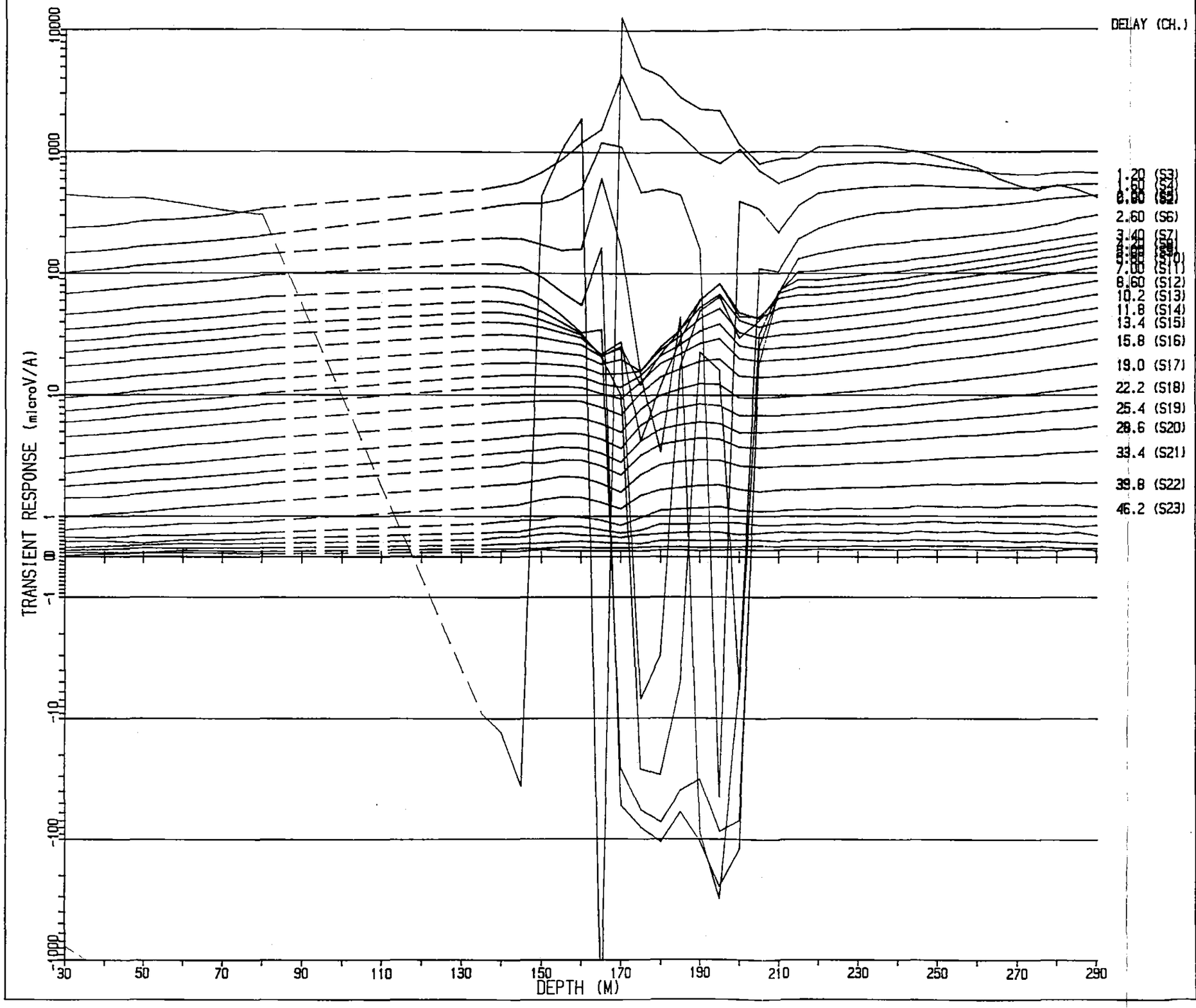
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP3

SCALE - 1:2000

515 130551

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.9 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

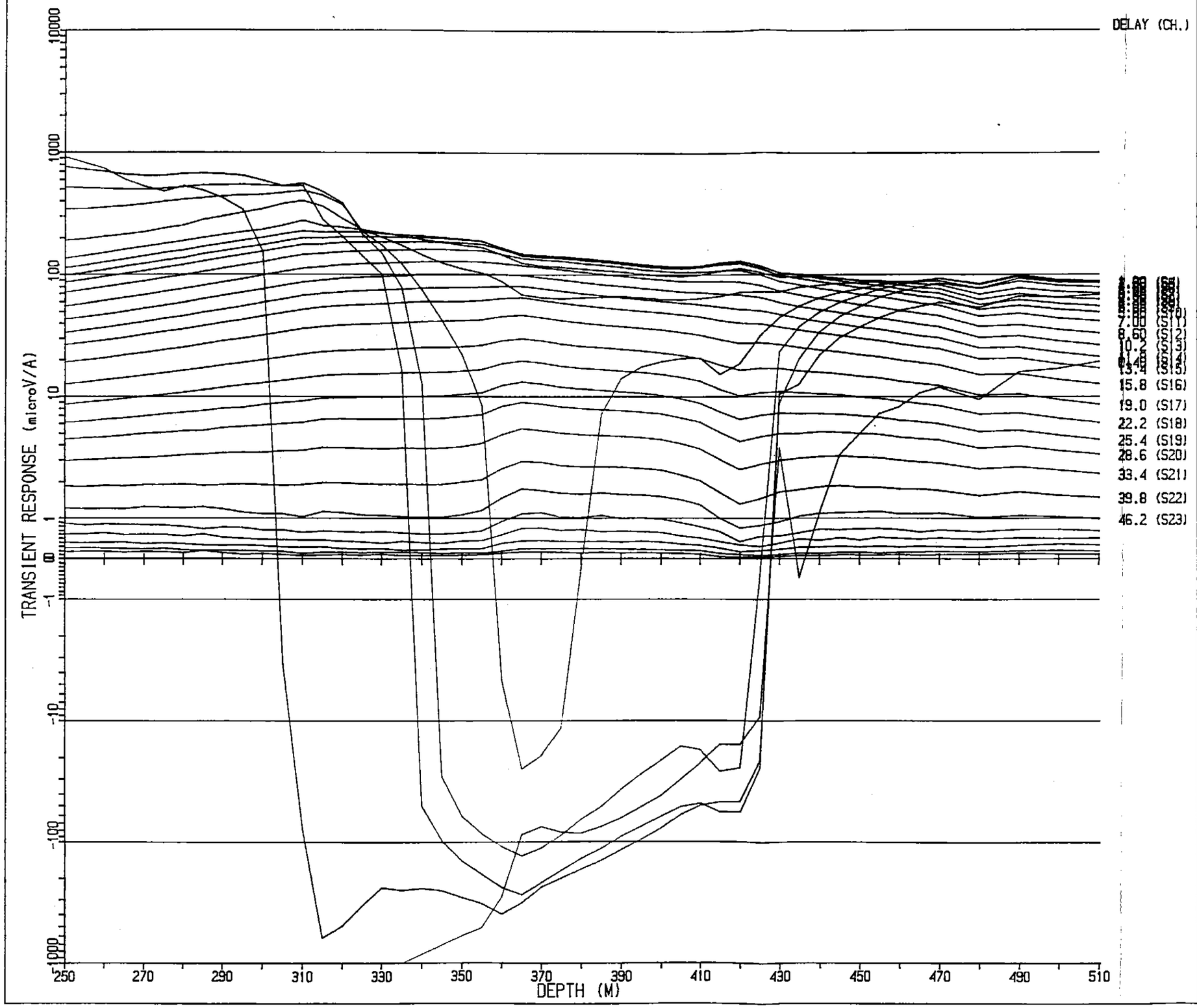
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP3

SCALE - 1:1000

130552

517



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.9 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

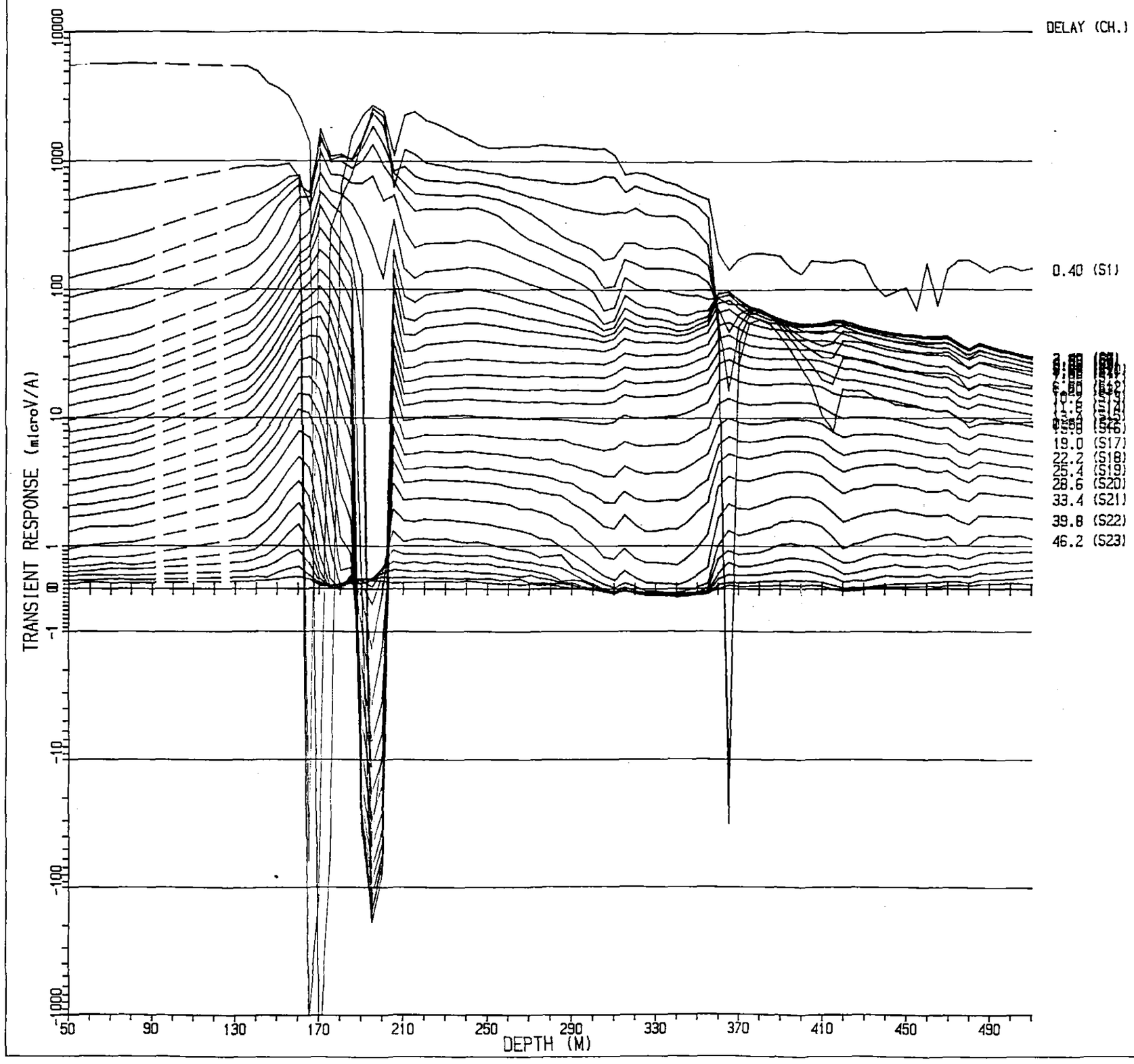
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP3

SCALE - 1:1000

130553

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.0 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

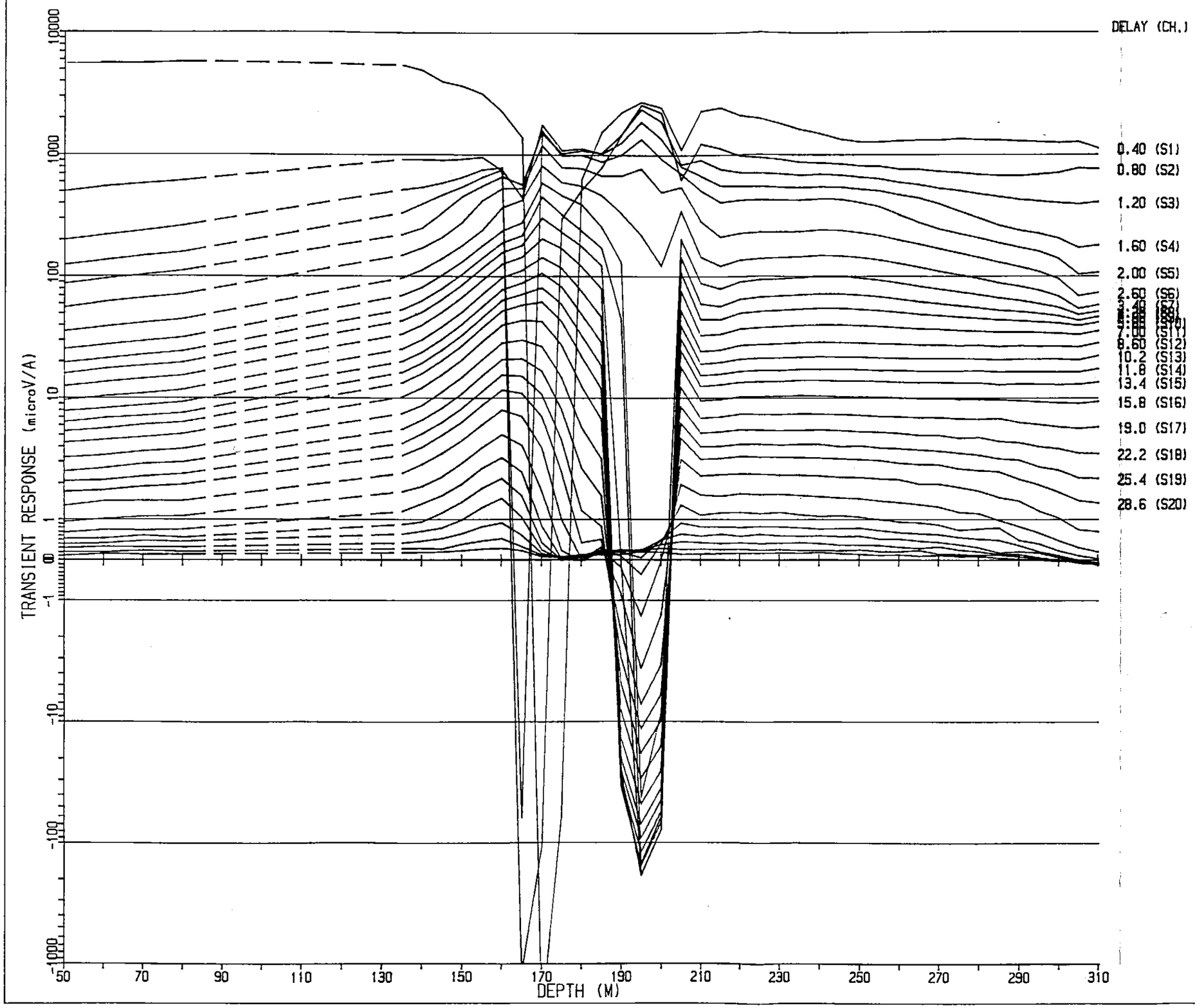
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP4

SCALE - 1:2000

130554

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.0 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

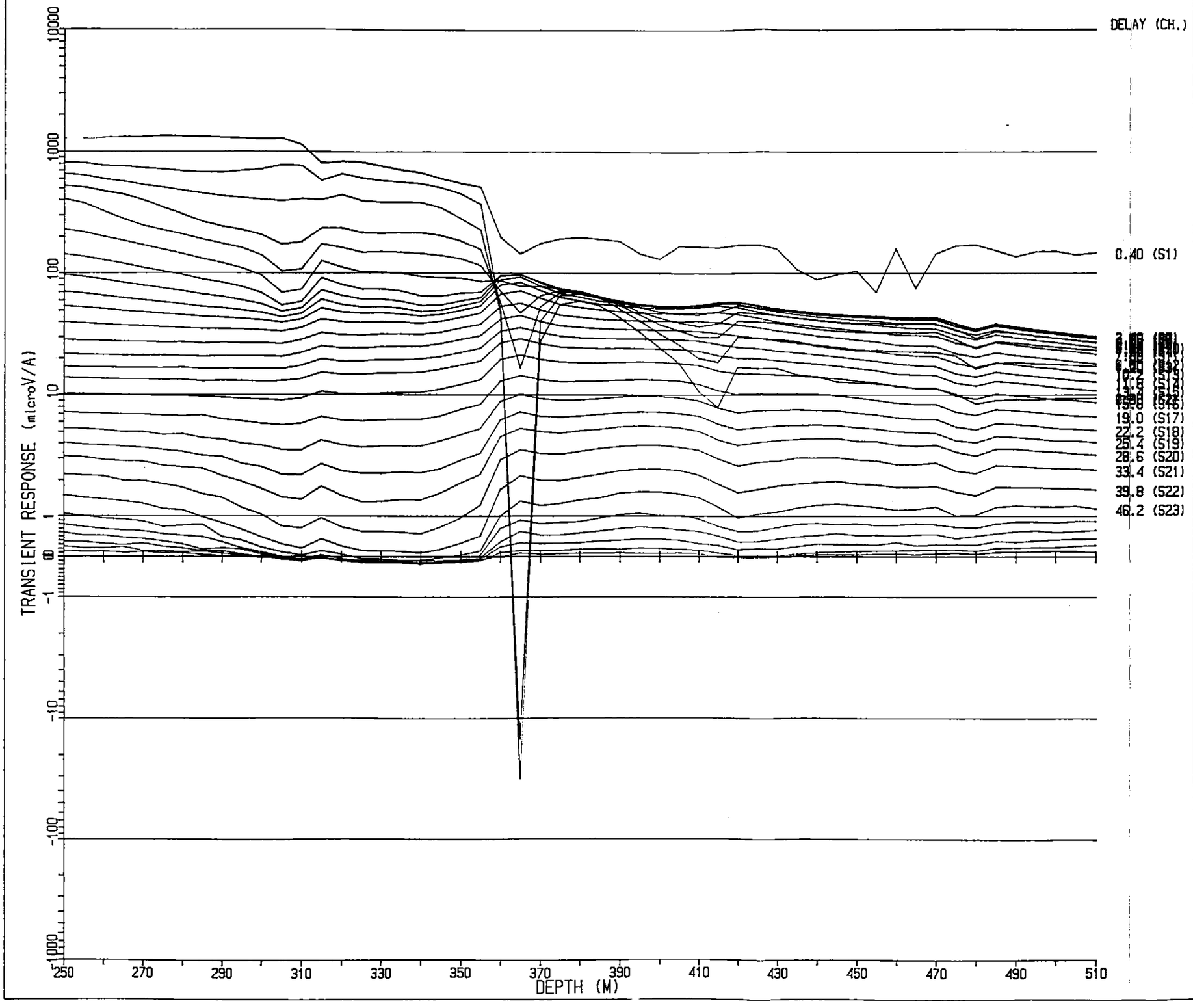
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP4

SCALE - 1:1000

130555

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.0 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

ZEEHAN
SYLVESTER

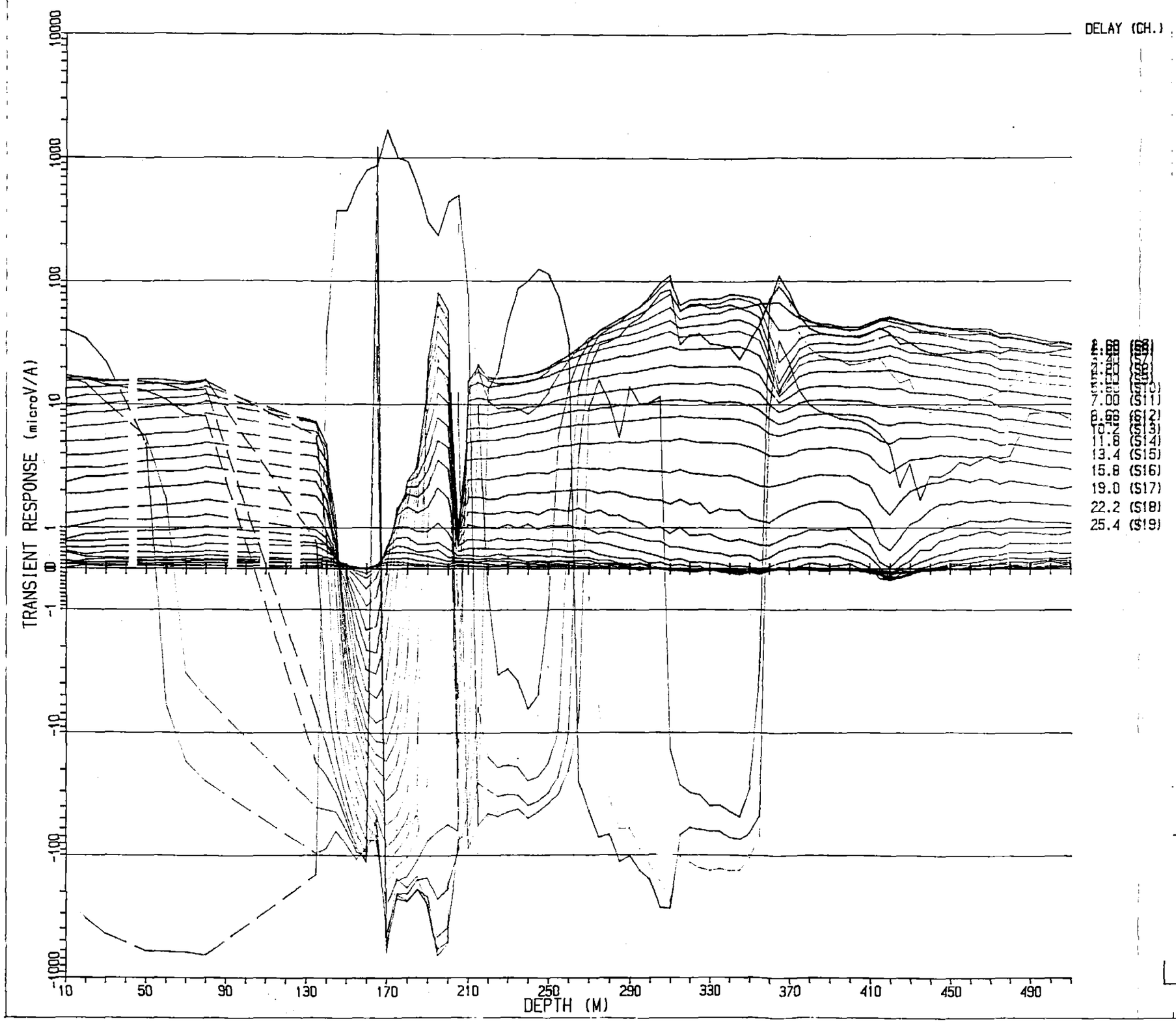
SIROTEM PROFILE
LINE SY3 LP4

SCALE - 1:1000

130556

521

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 11.5 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

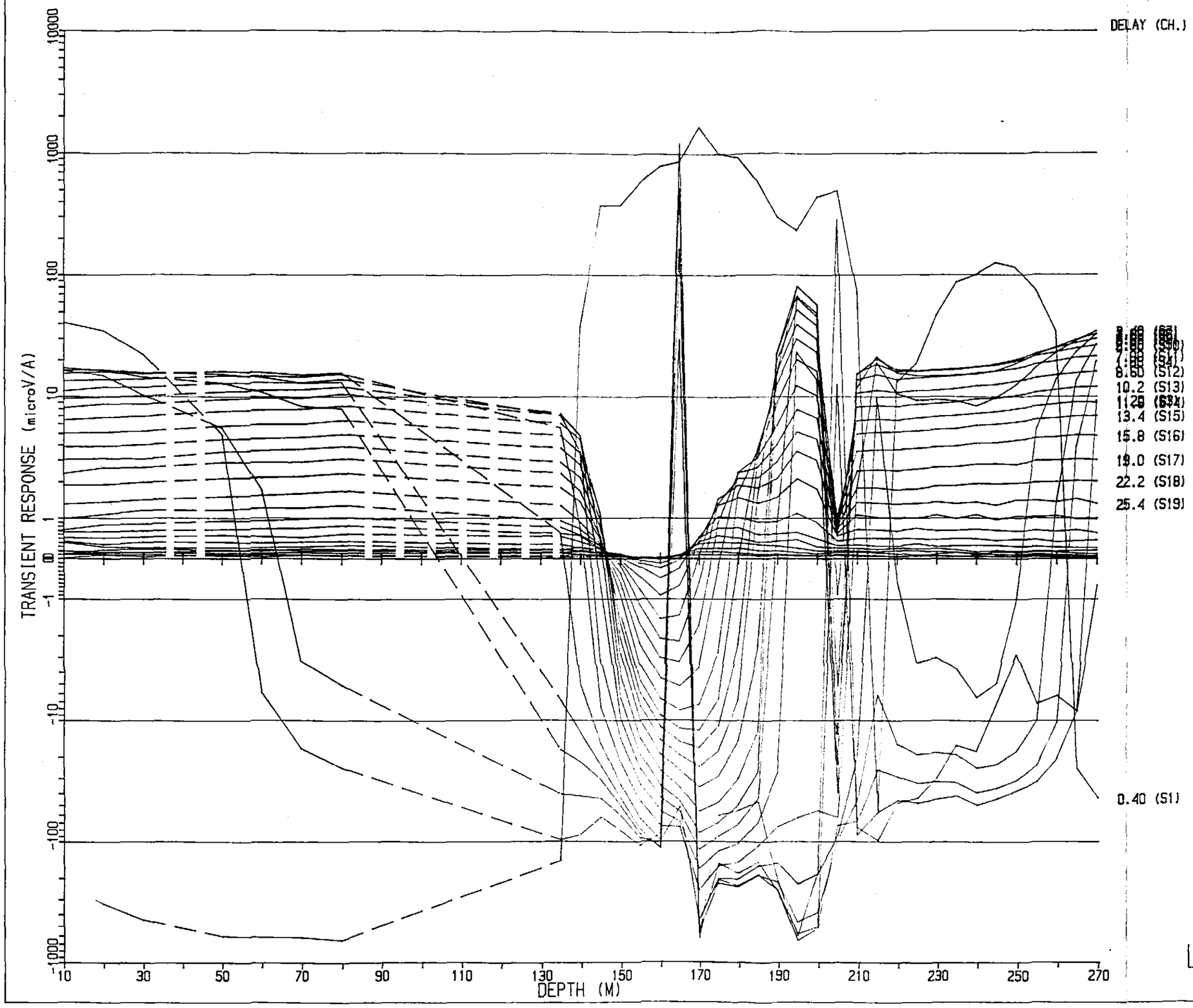
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP5(SY5-4)

SCALE - 1:2000

130557

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 11.5 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

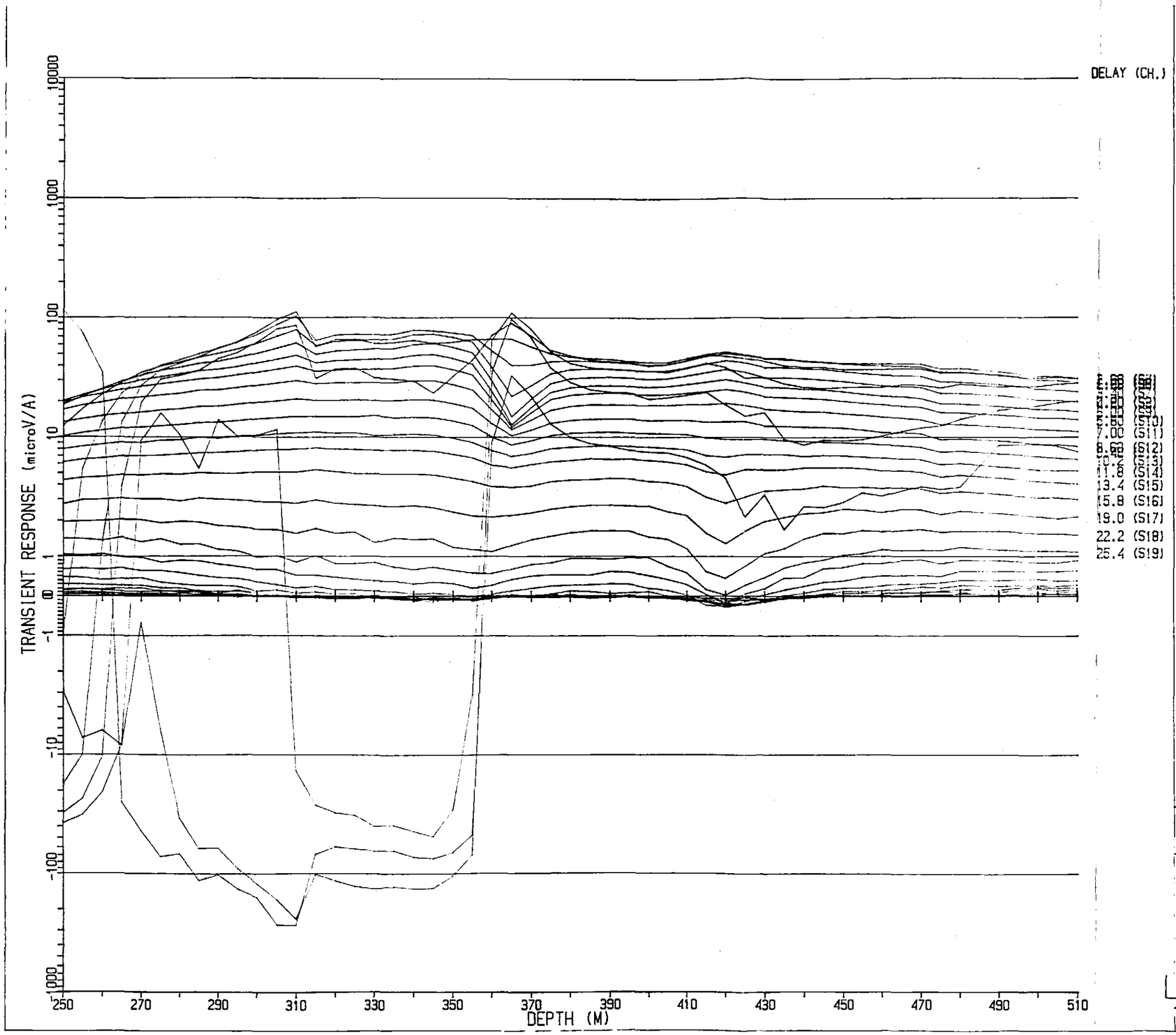
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP5(SY5-4)

SCALE - 1:1000

130558

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 11.5 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

ZEEHAN
SYLVESTER

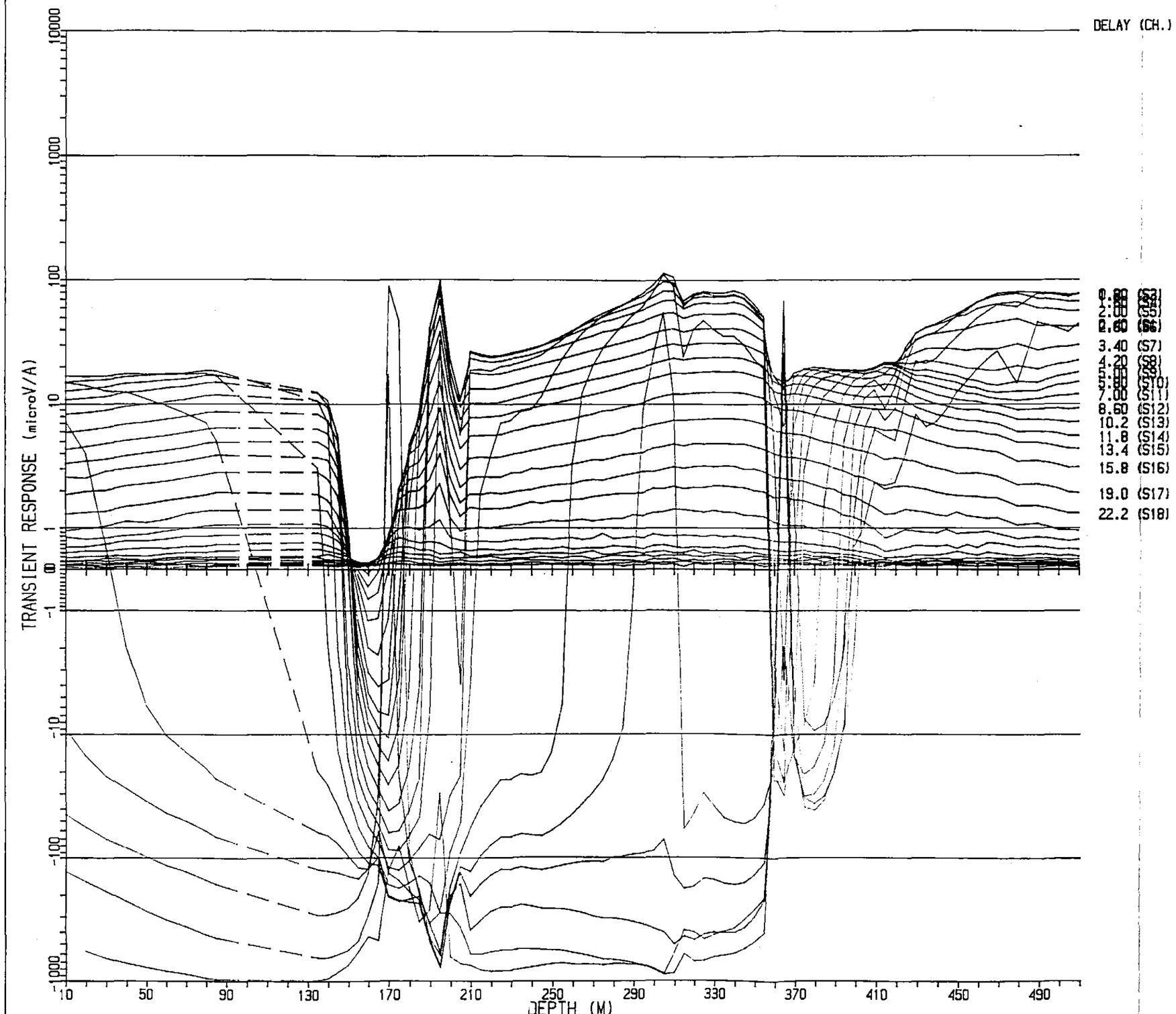
SIROTEM PROFILE
LINE SY3 LP5(SY5-4)

SCALE - 1:1000

130559

524

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.7 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

ZEEHAN
SYLVESTER

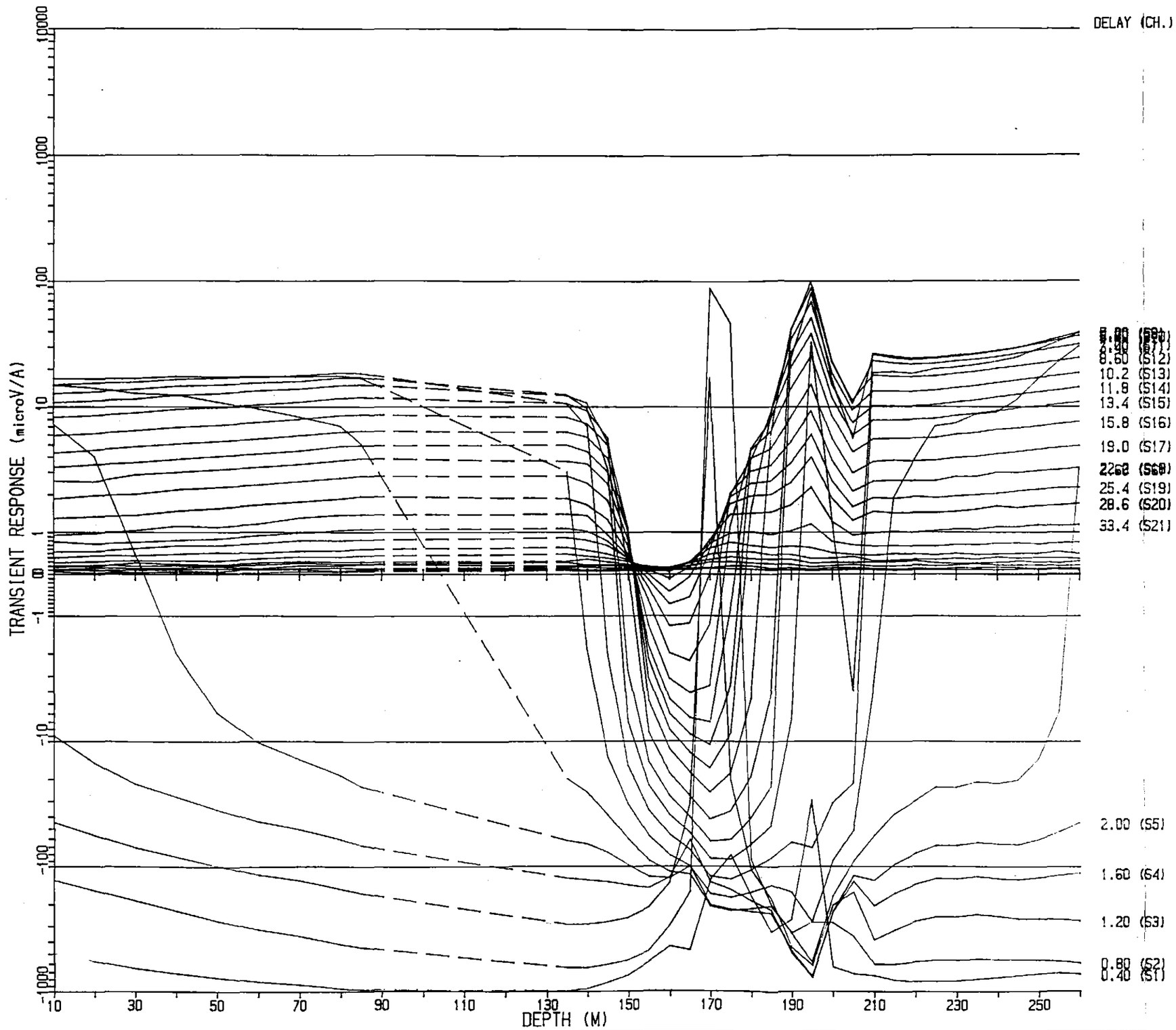
SIROTEM PROFILE
LINE SY3 LP6

SCALE - 1:2000

130560

52

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.7 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

ZEEHAN
SYLVESTER

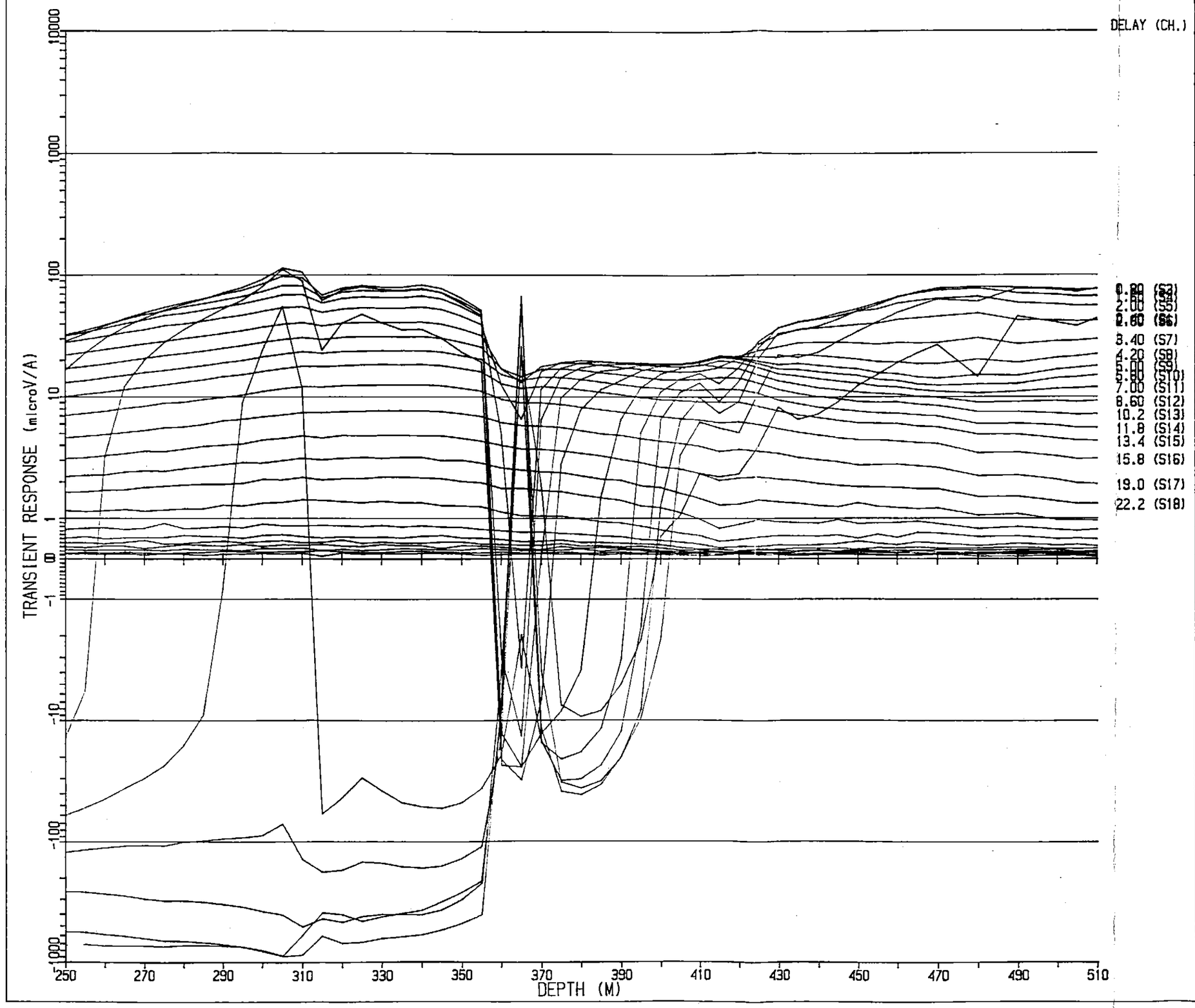
SIROTEM PROFILE
LINE SY3 LP6

SCALE - 1:1000

130561

525

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.7 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

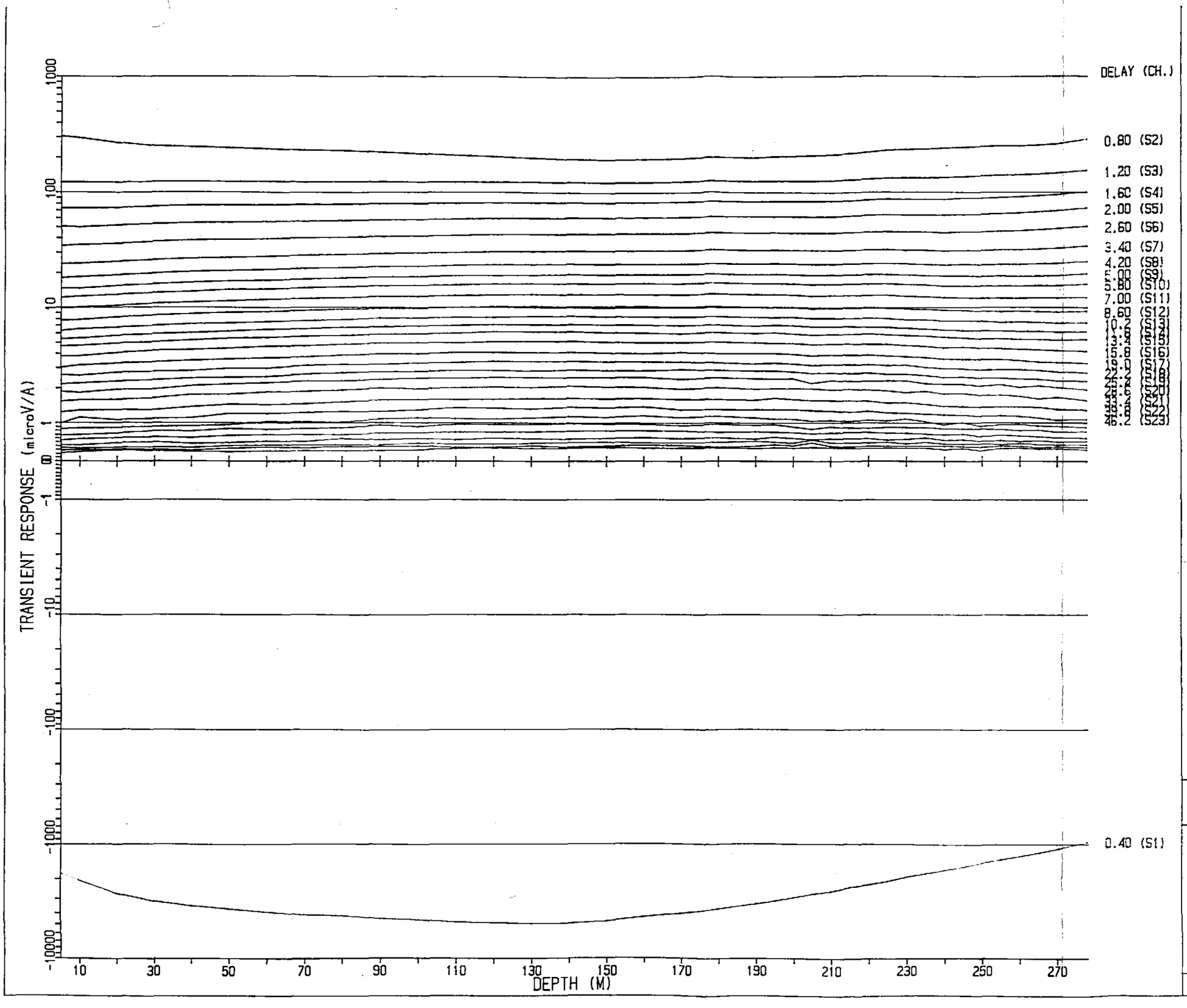
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY3 LP6

SCALE - 1:1000

130562

527



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHY

SURVEY DATE : FEB 1991
CONFIGURATION : 400M SQUARE TX. L
DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 12
CURRENT : 11.5 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC
3CM. PER DEC
LINEAR BETWE
-1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

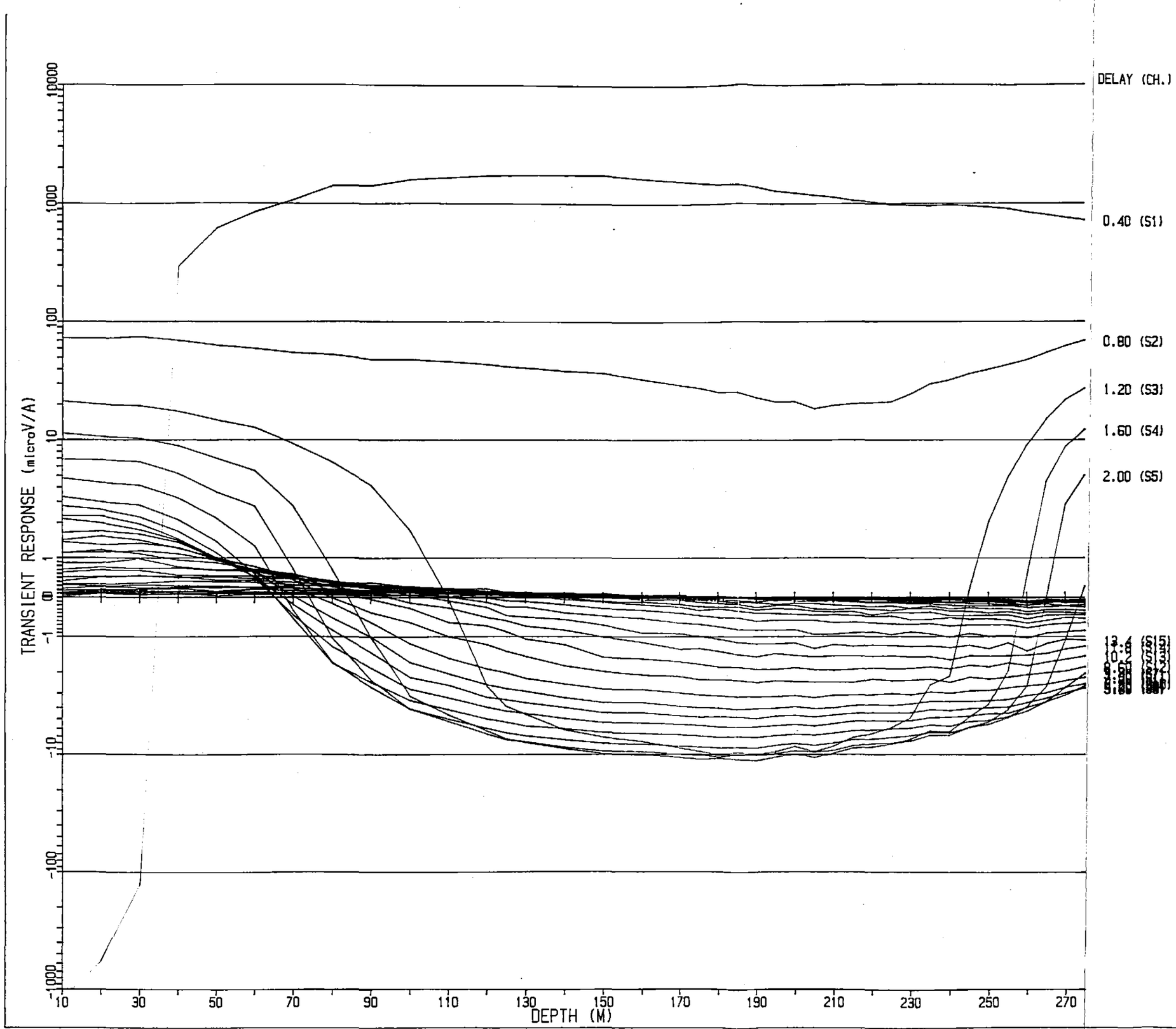
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY4 LP1

SCALE - 1:1000

130563

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

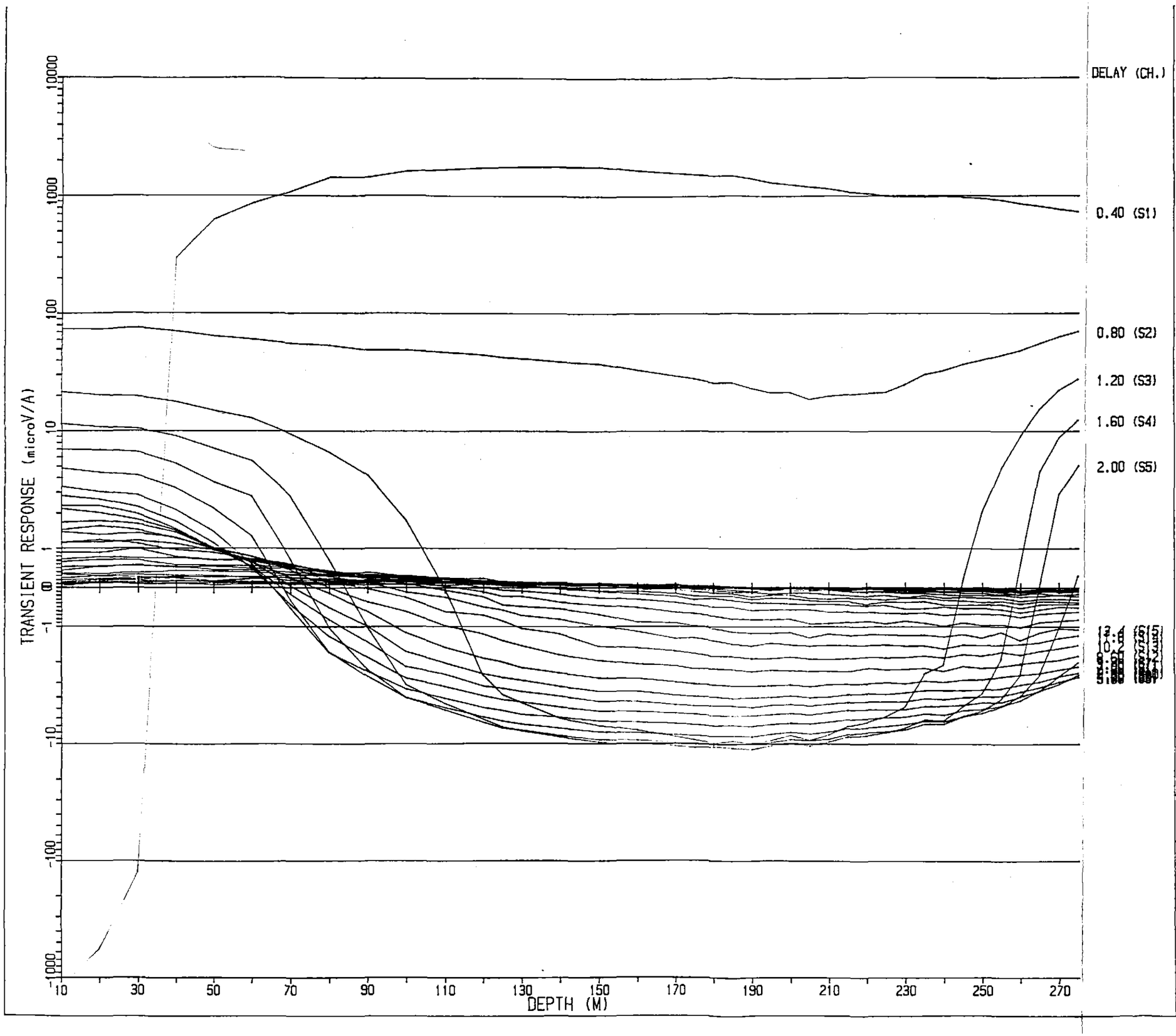
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY4 LPSY5-4

SCALE - 1:1000

130564

529



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

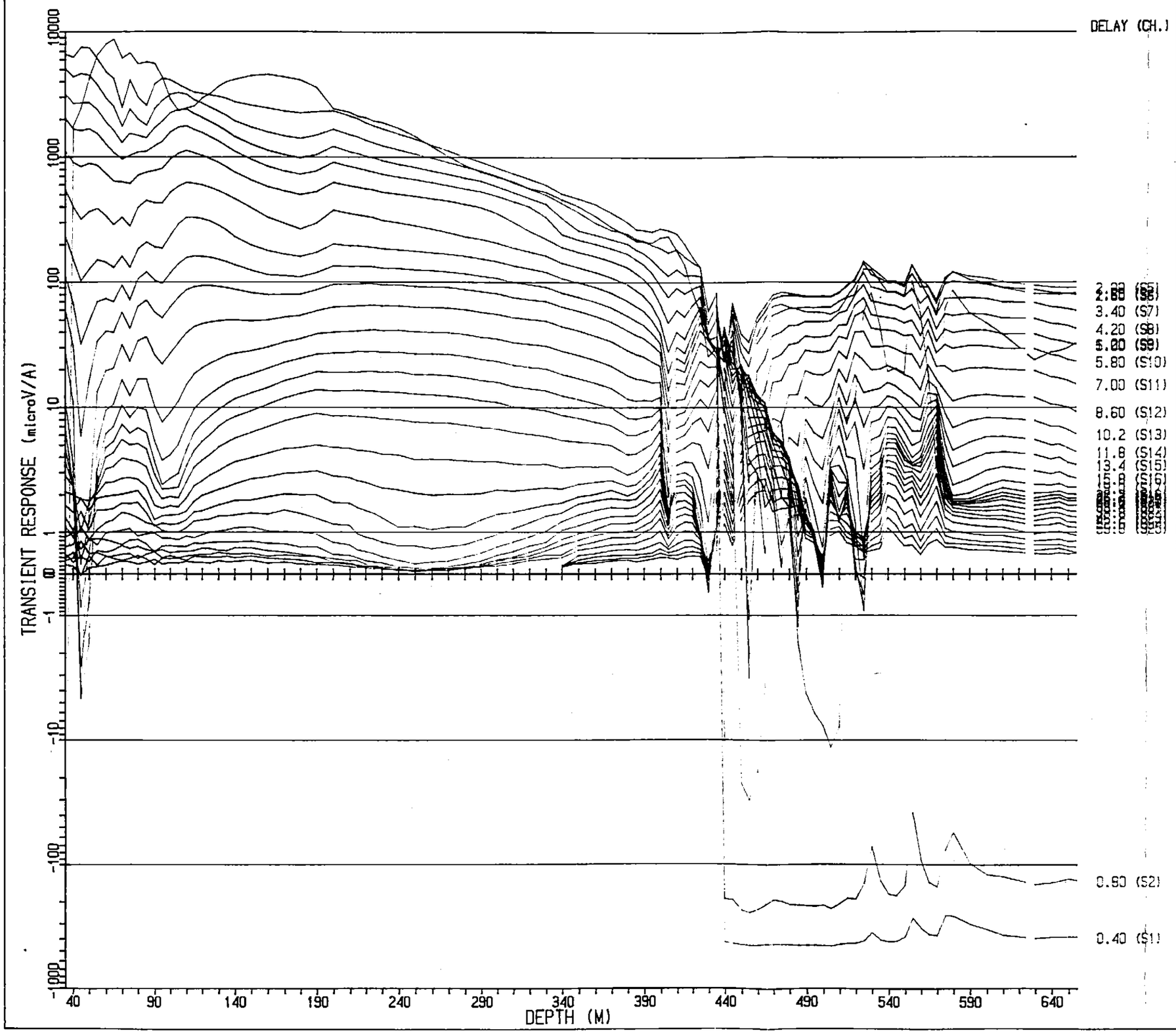
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY4 LPSY5-4

SCALE - 1:1000

130565

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 512
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2500
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

ZEEHAN
SYLVESTER

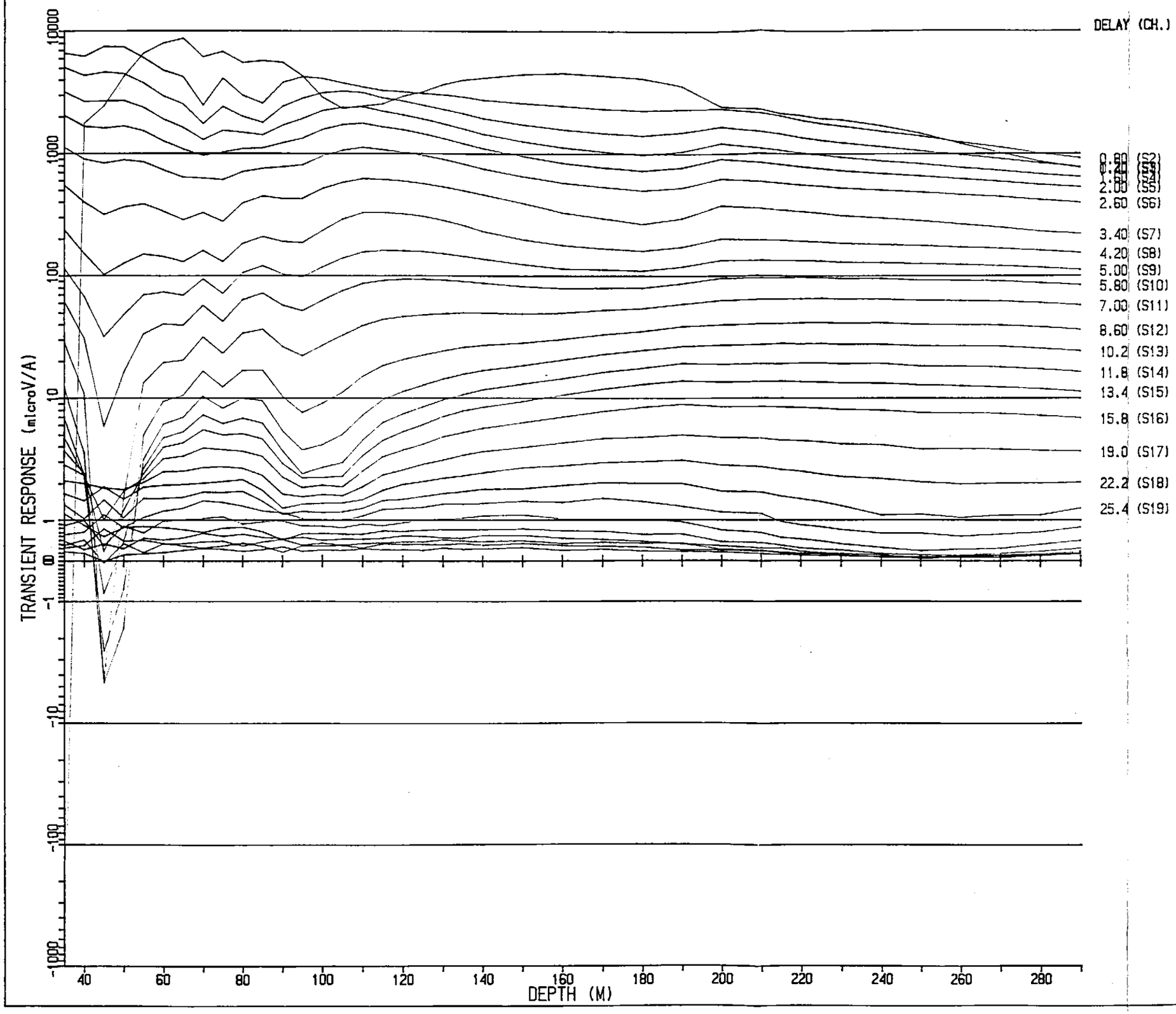
SIROTEM PROFILE
LINE SY5 LP1

SCALE - 1:2500

130566

534

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 512
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

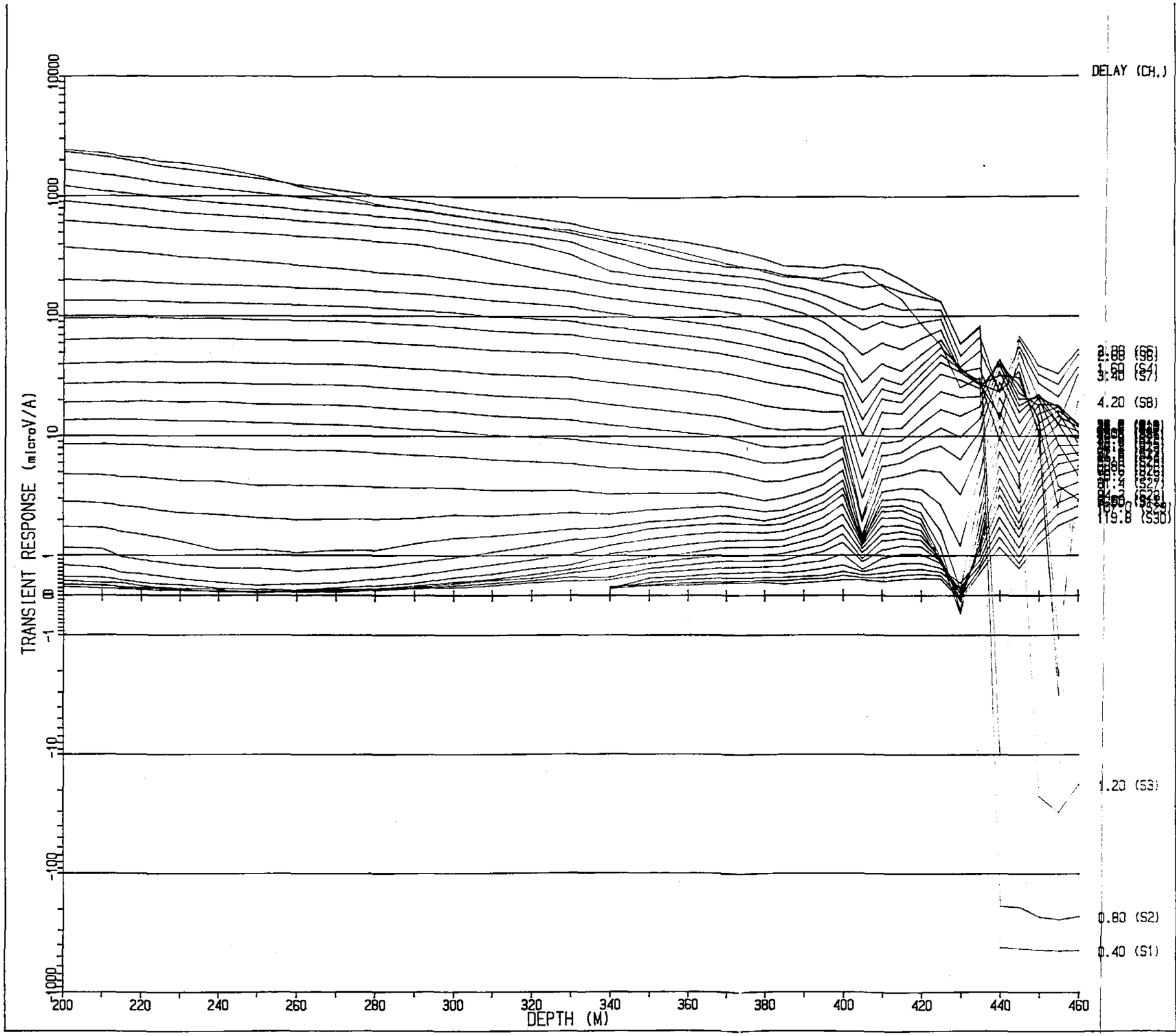
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP1

SCALE - 1:1000

130567



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 512
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

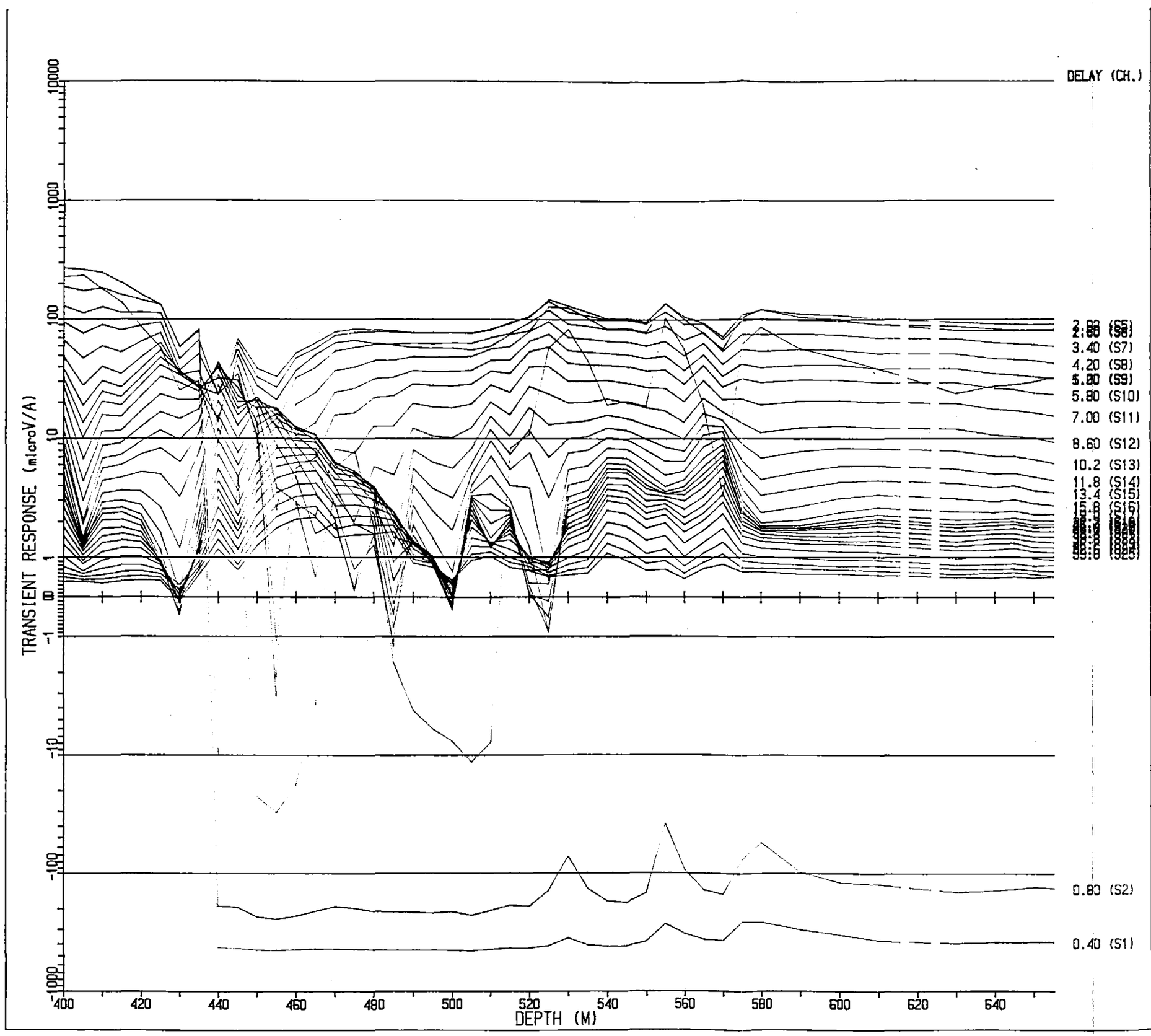
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP1

SCALE - 1:1000

130568

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 512
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

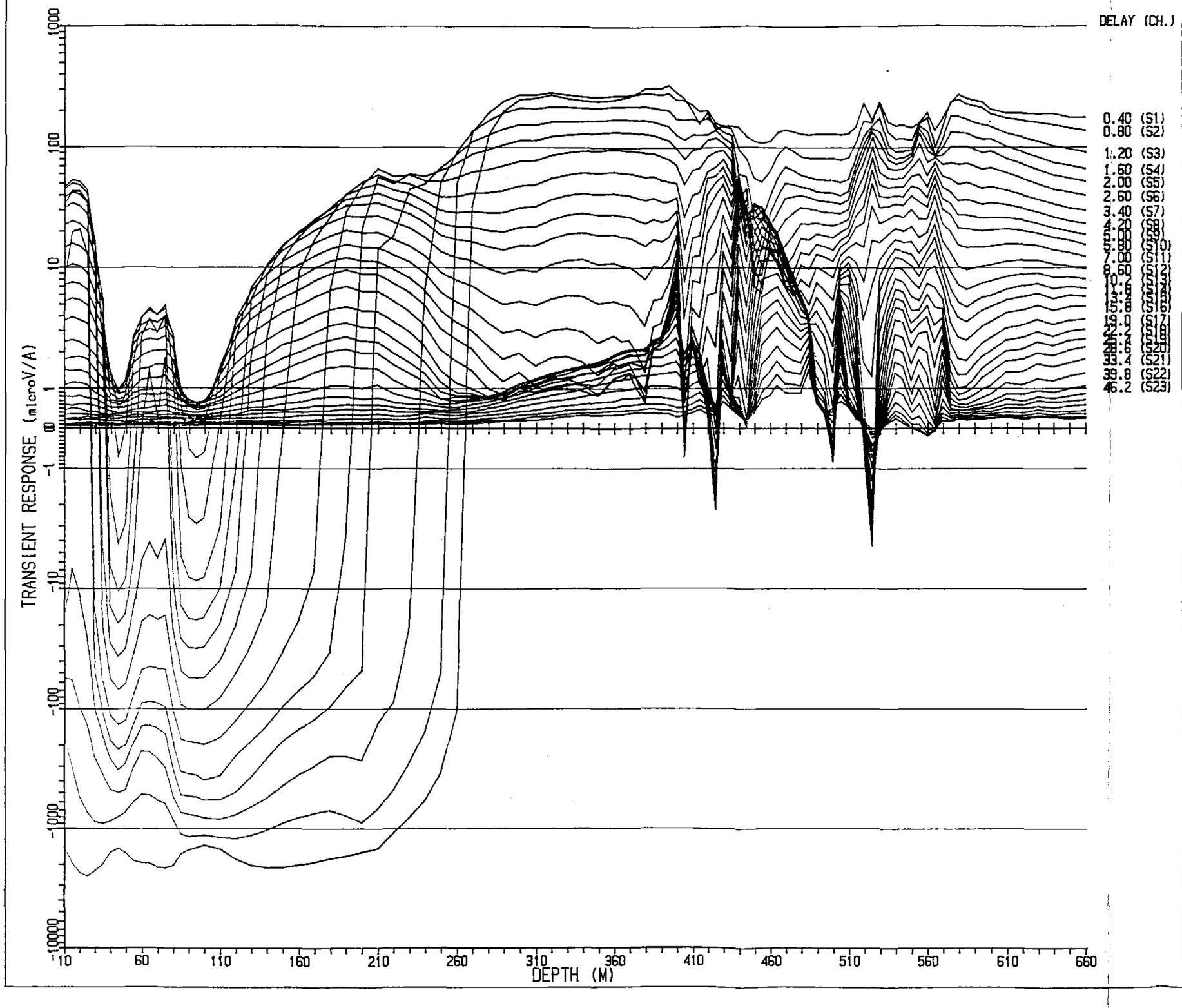
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP1

SCALE - 1:1000

130569



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 12.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2500
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

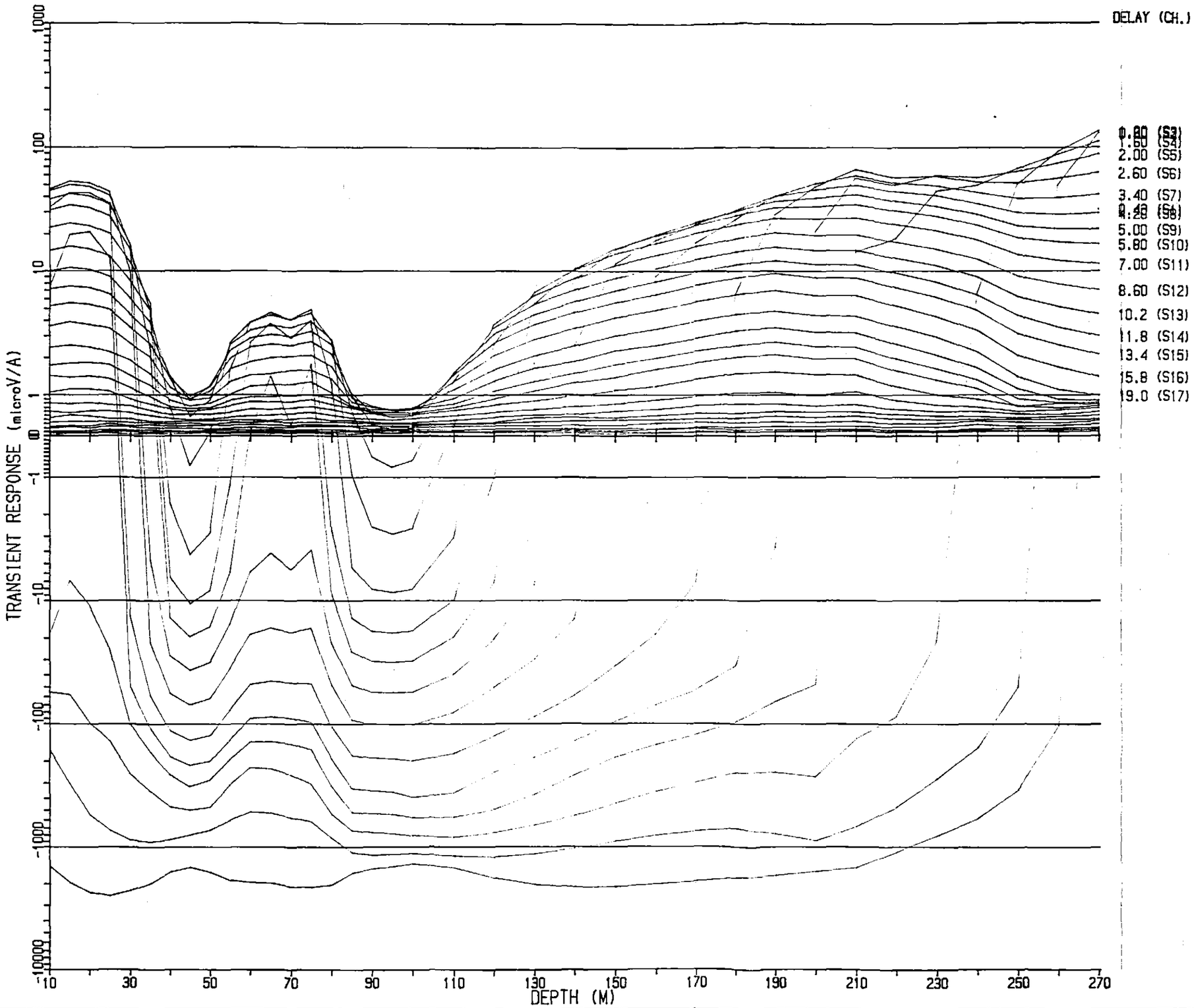
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP2

SCALE - 1:2500

130570

5 cm



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 12.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

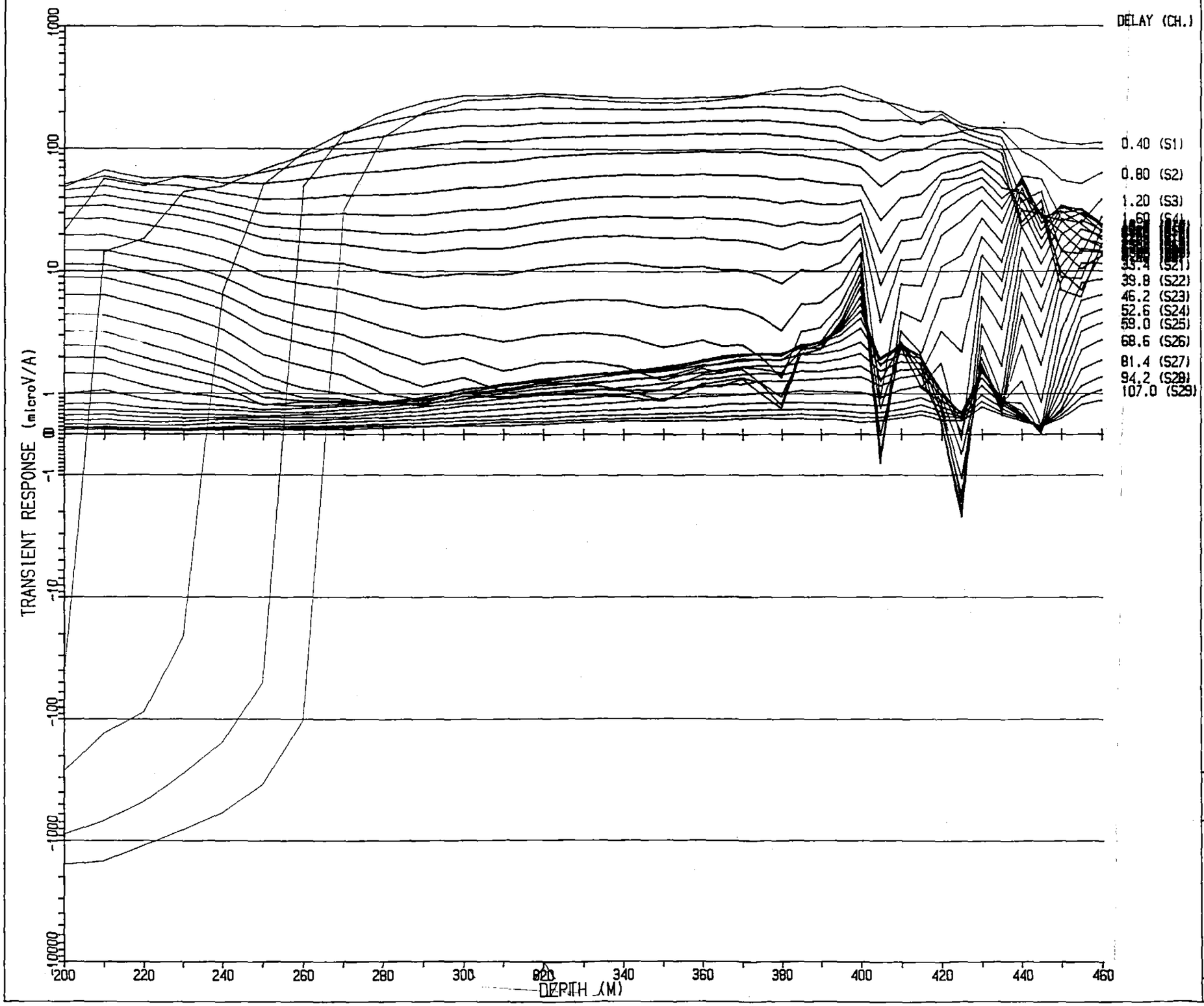
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP2

SCALE - 1:1000

130571

536



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SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 12.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC EXPLORATION

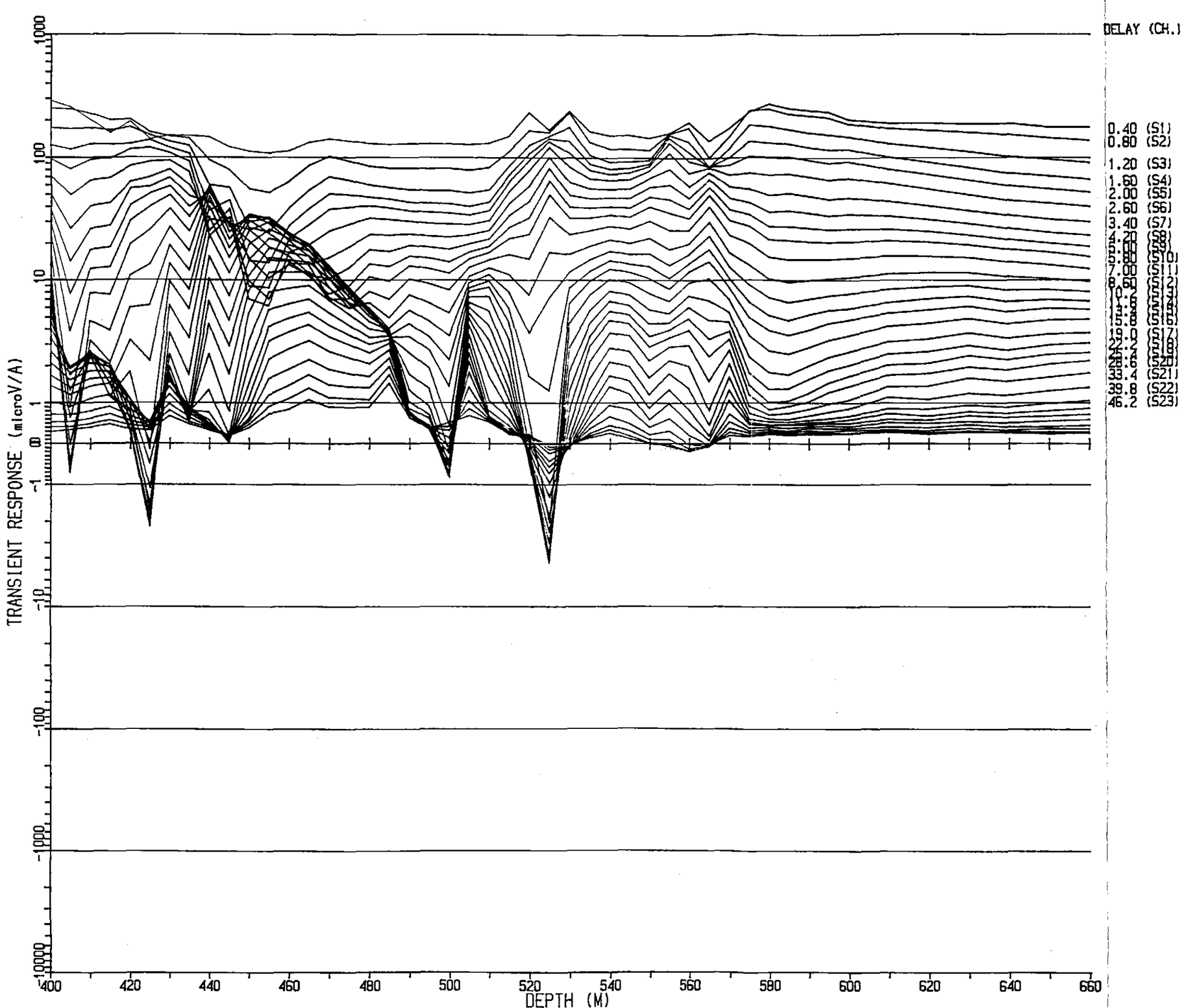
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP2

SCALE - 1:1000

130572

53



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 12.6 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

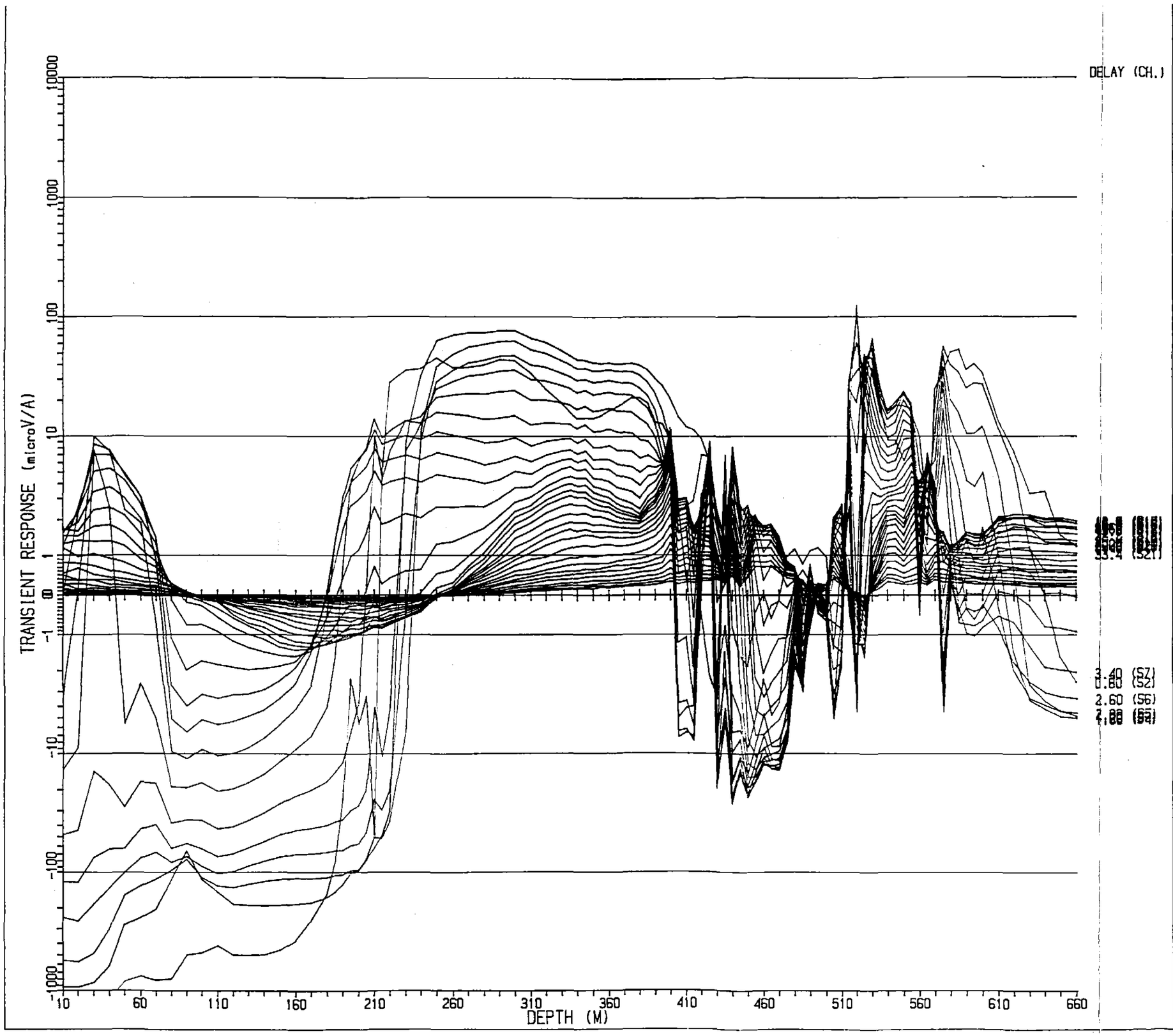
RGC EXPLORATION

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP2

SCALE - 1:1000

130573



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2500
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

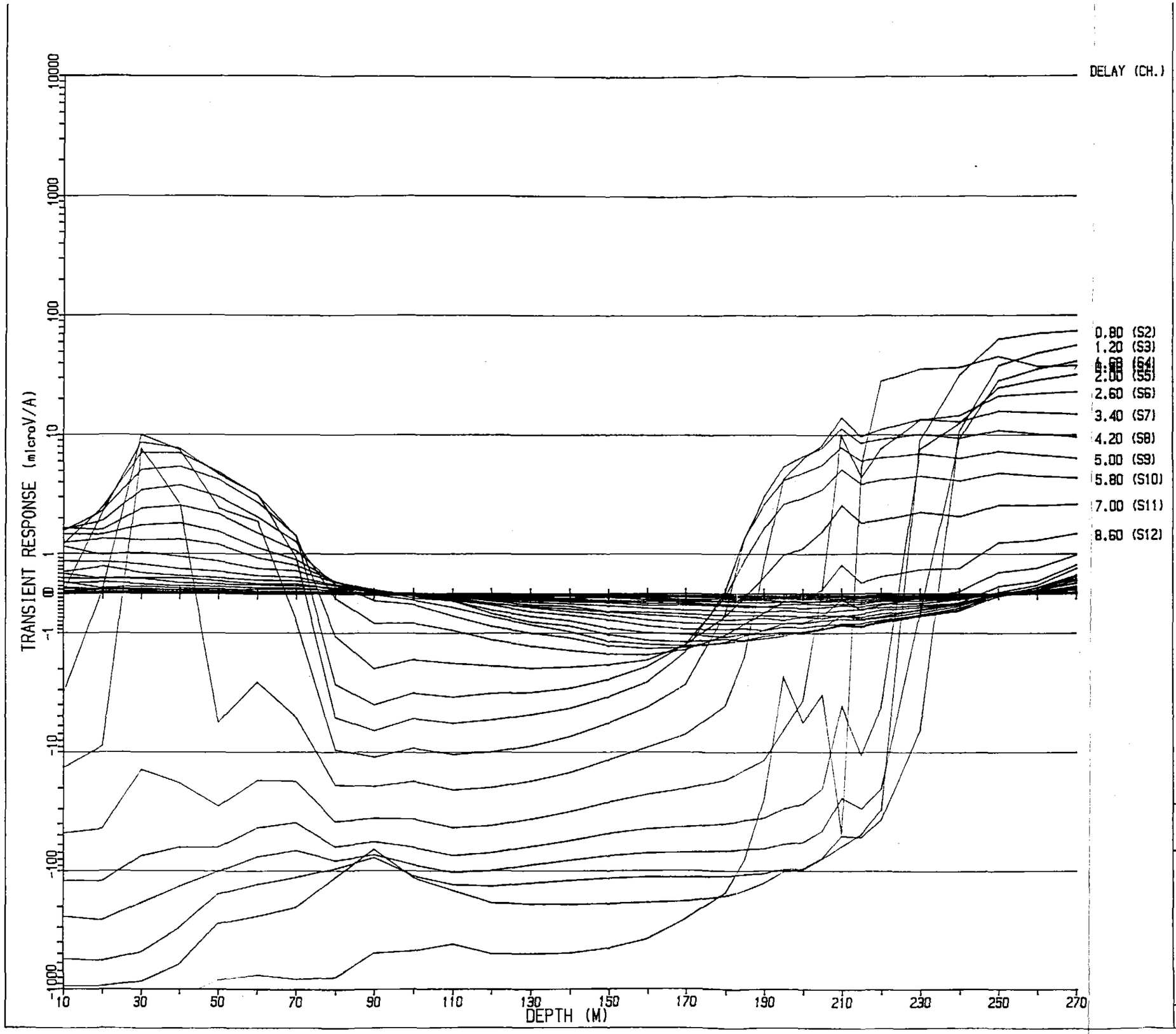
RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP4

SCALE - 1:2500

130574



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC

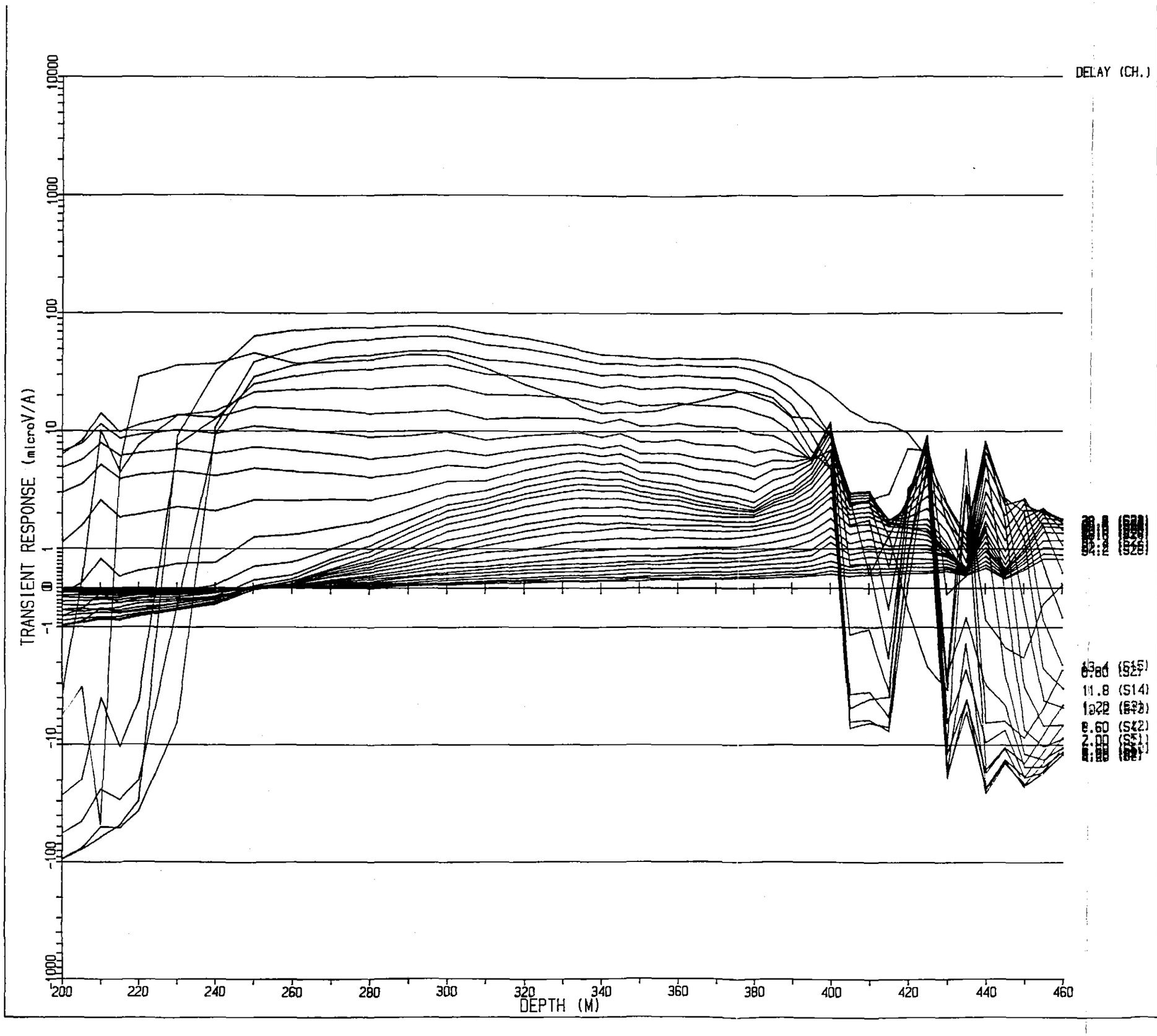
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP4

SCALE - 1:1000

130575

549



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC

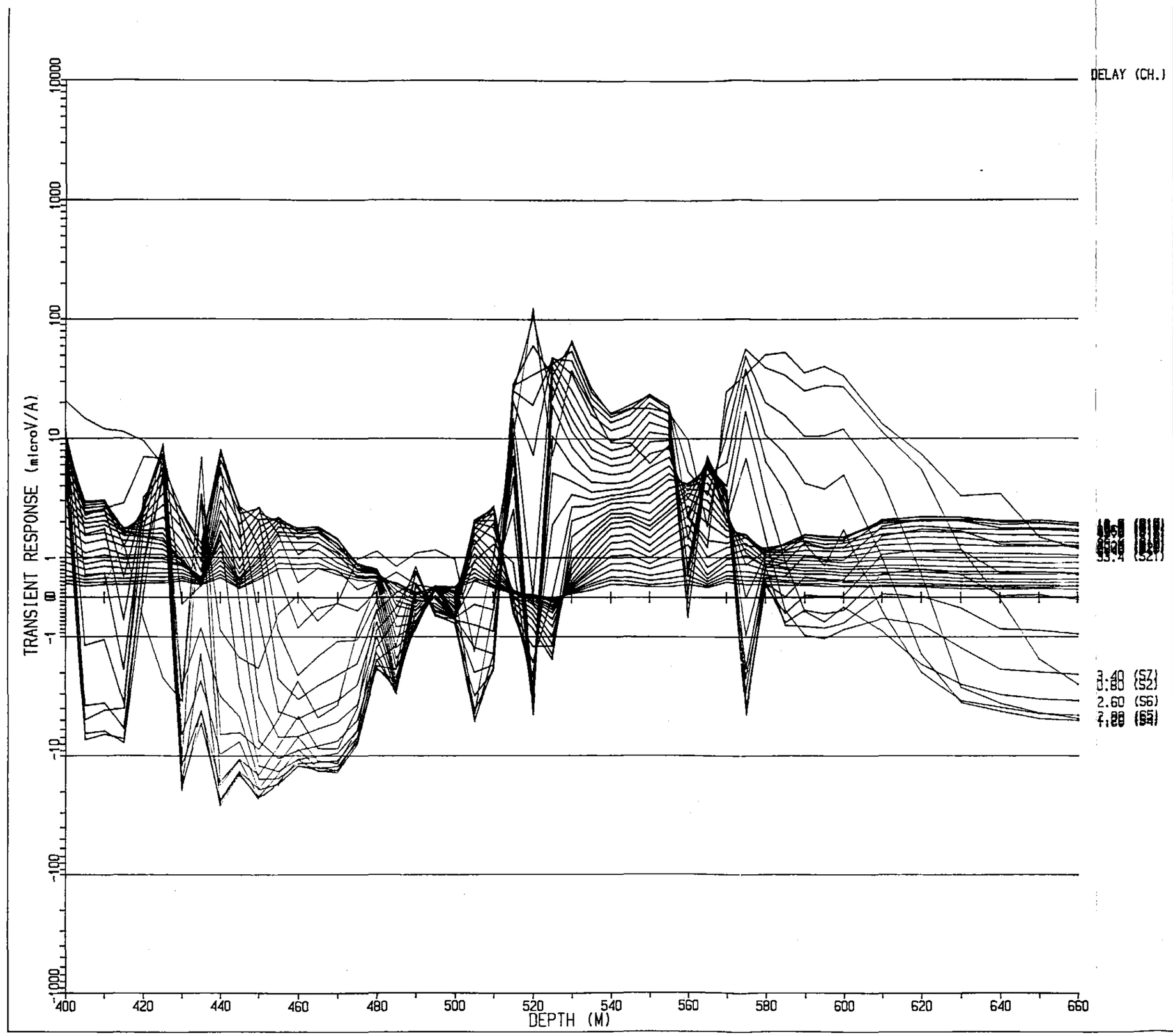
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP4

SCALE - 1:1000

130576

54A



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

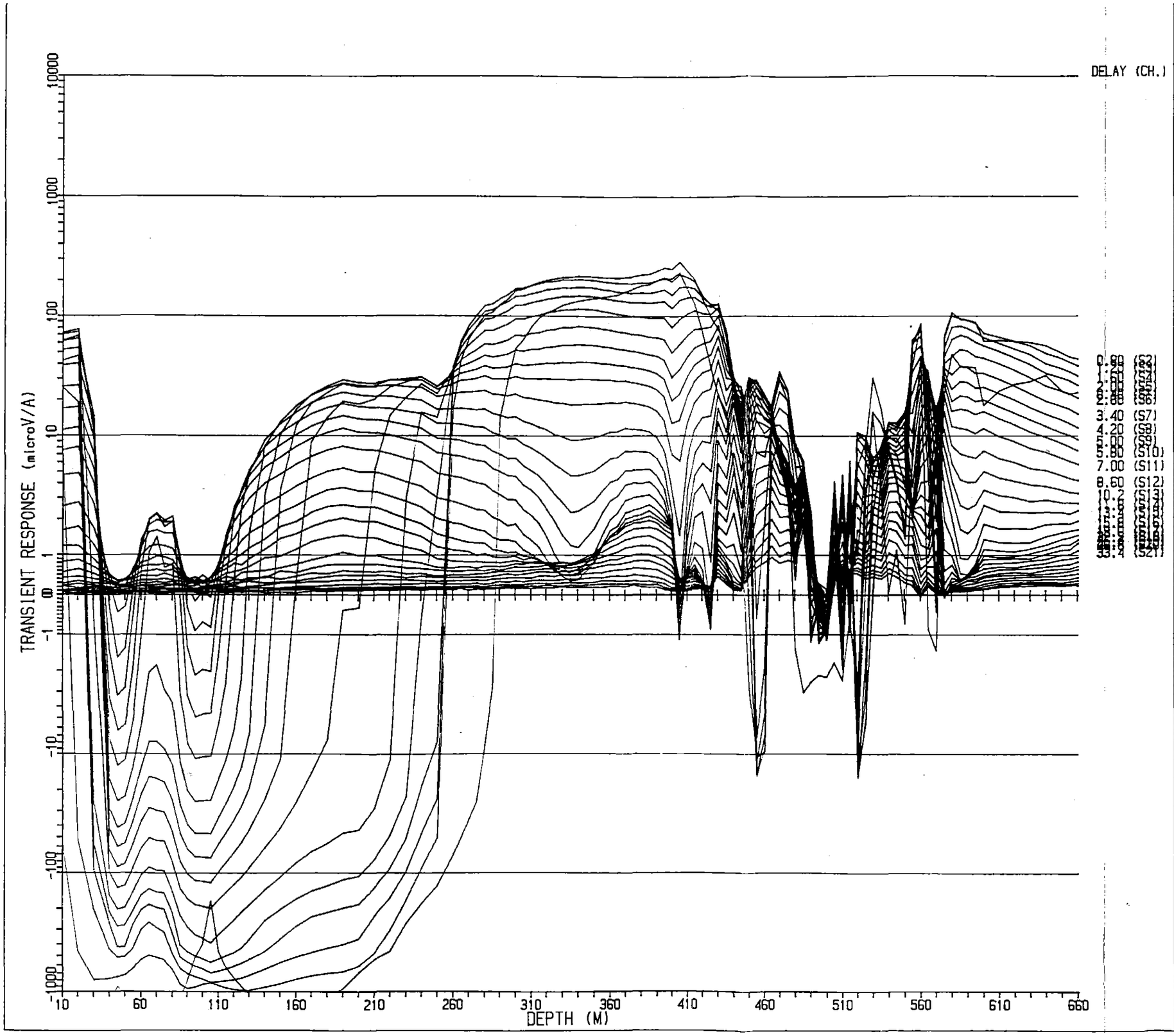
RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP4

SCALE - 1:1000

130577



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2500
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC

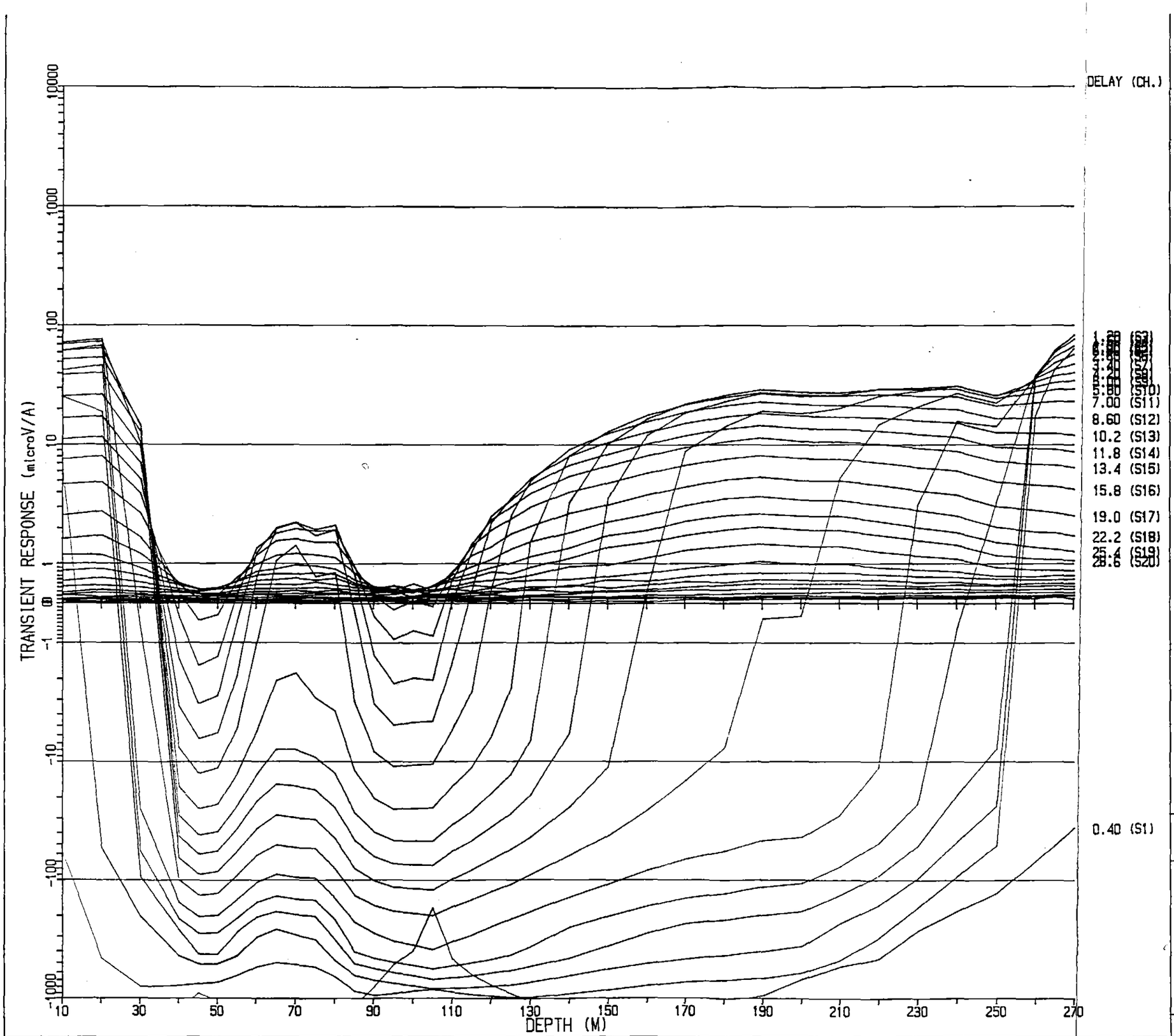
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP5

SCALE - 1:2500

130578

54



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC

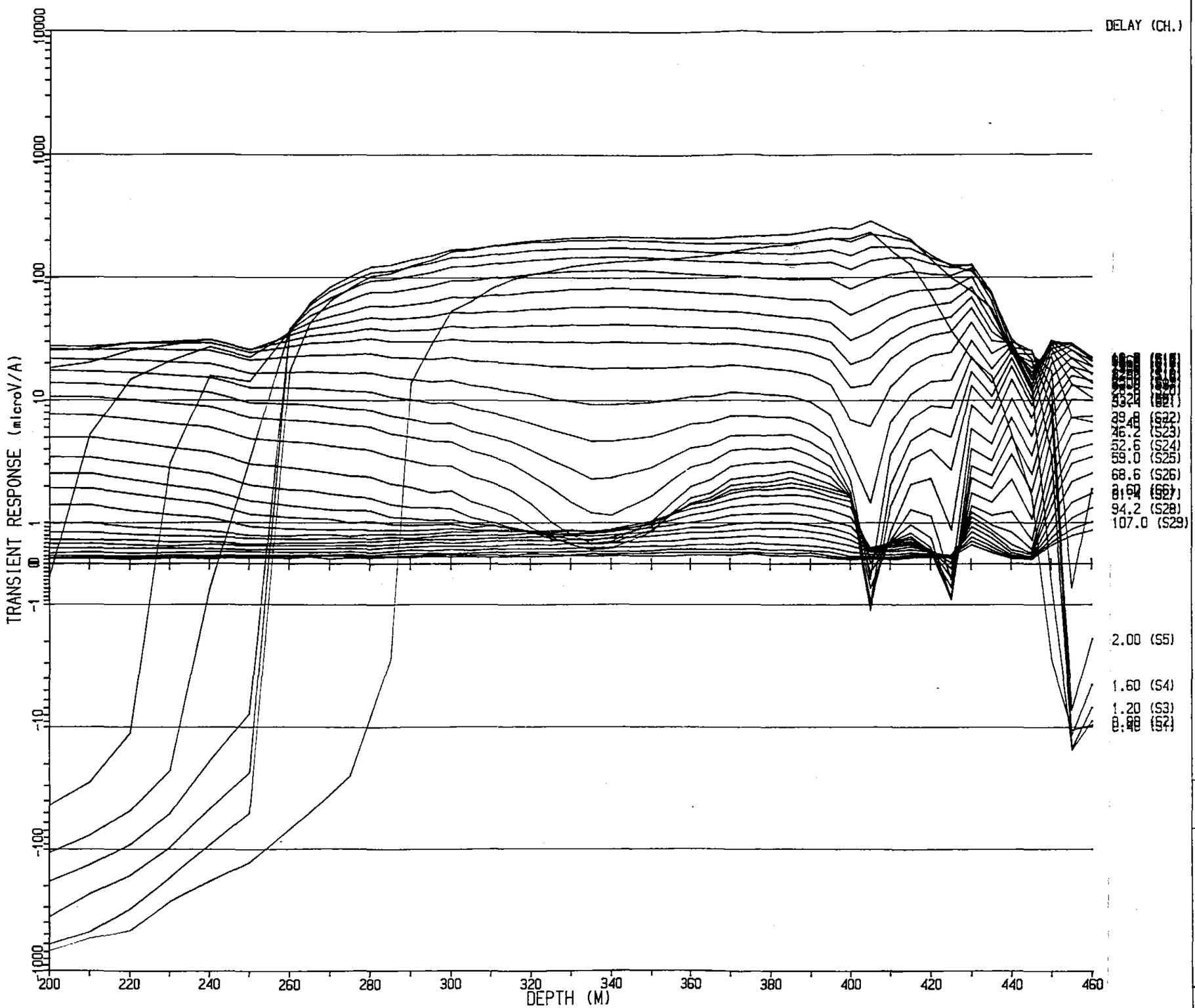
ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP5

SCALE - 1:1000

130579

544



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

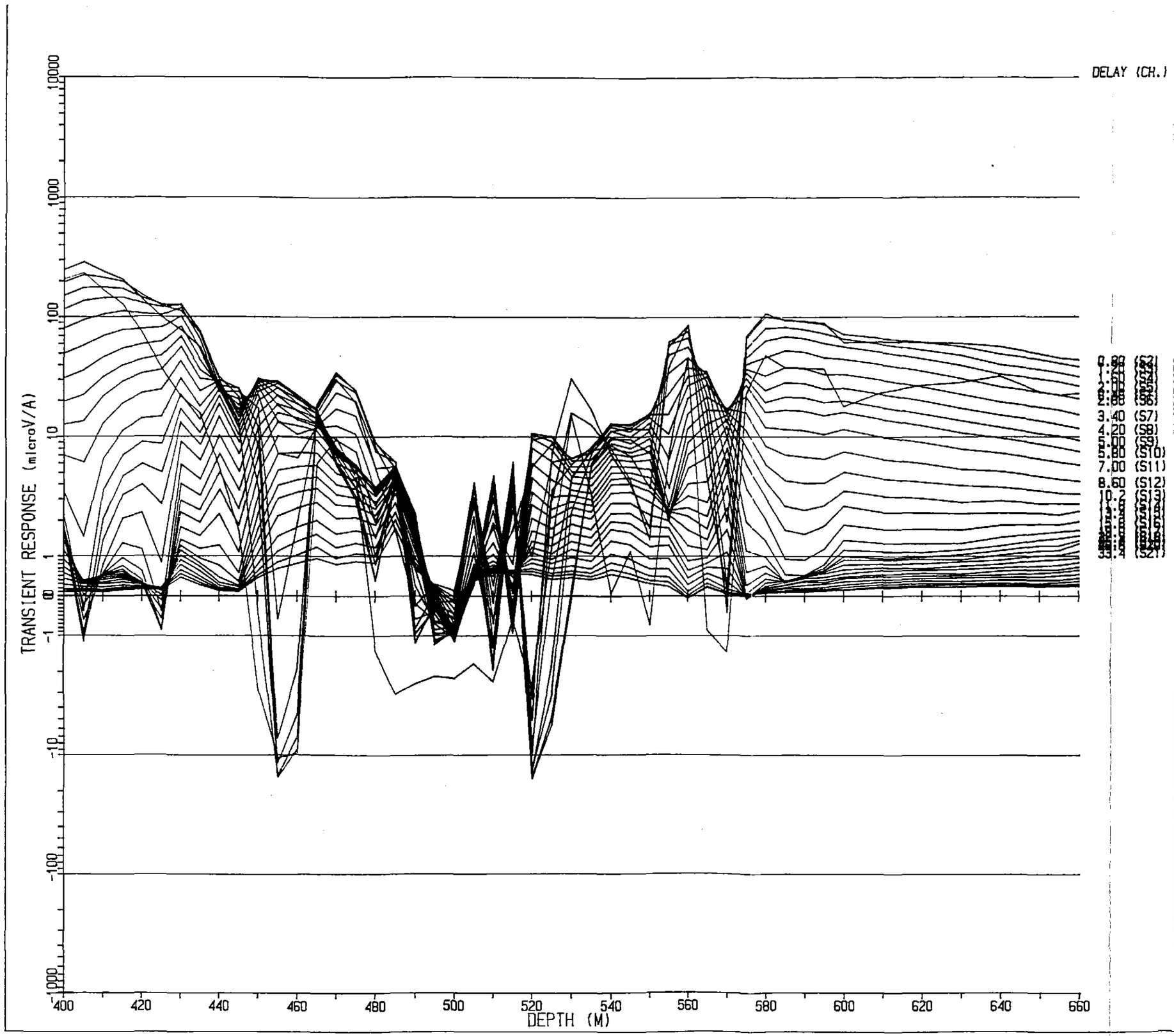
RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP5

SCALE - 1:1000

130530



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.3 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

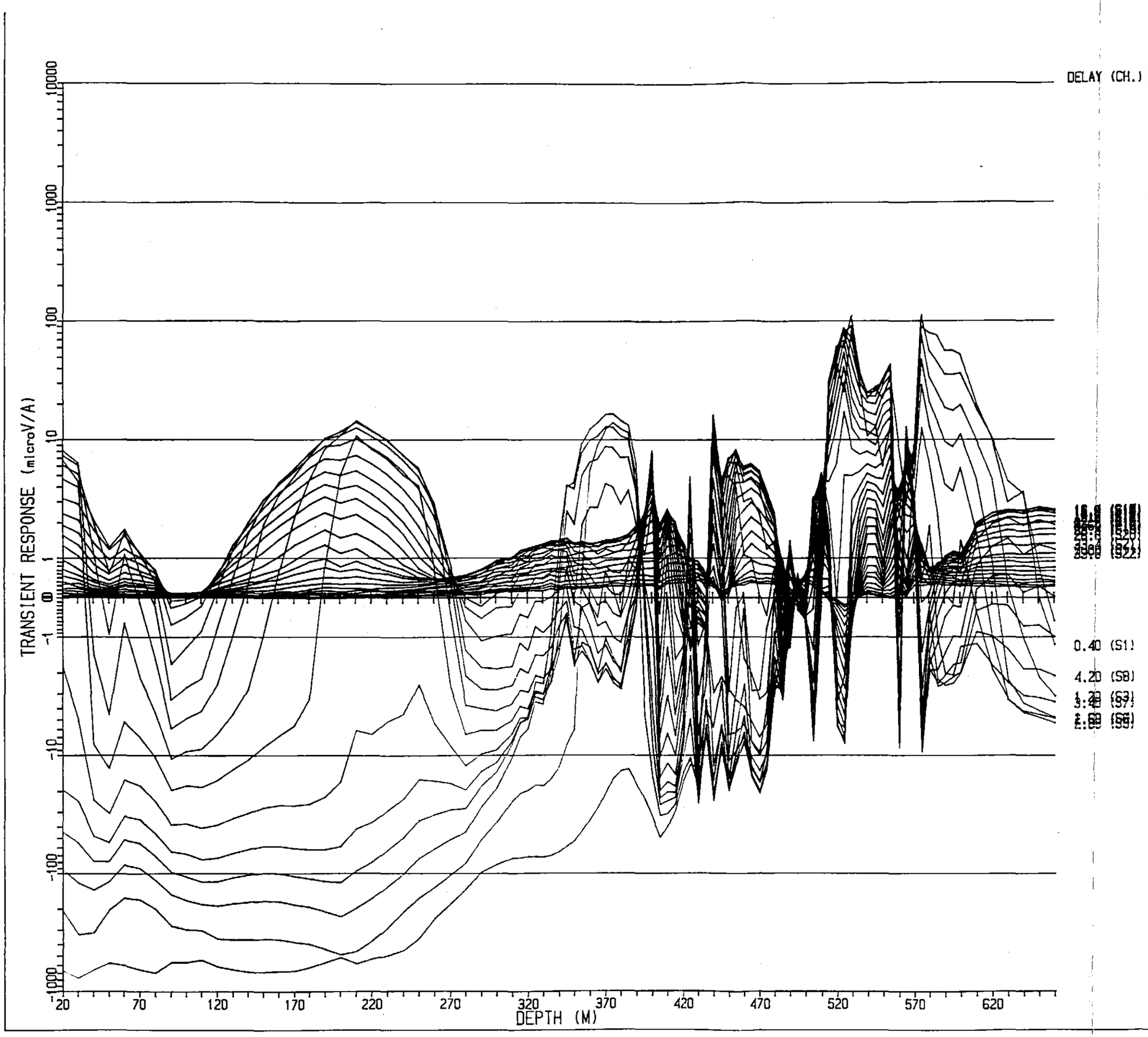
TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP5

SCALE - 1:1000



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2500
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

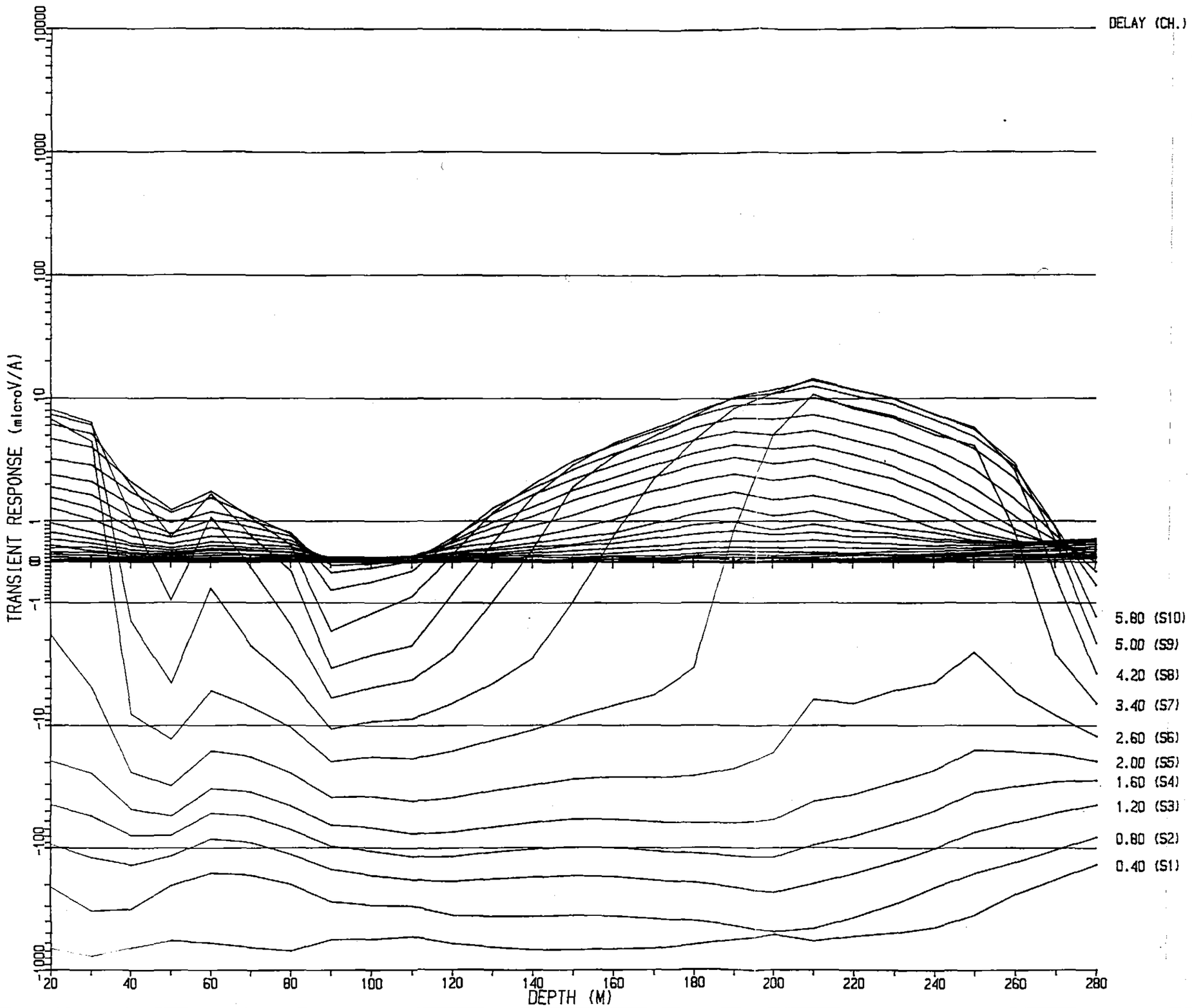
RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP6

SCALE - 1:2500

547 130582



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

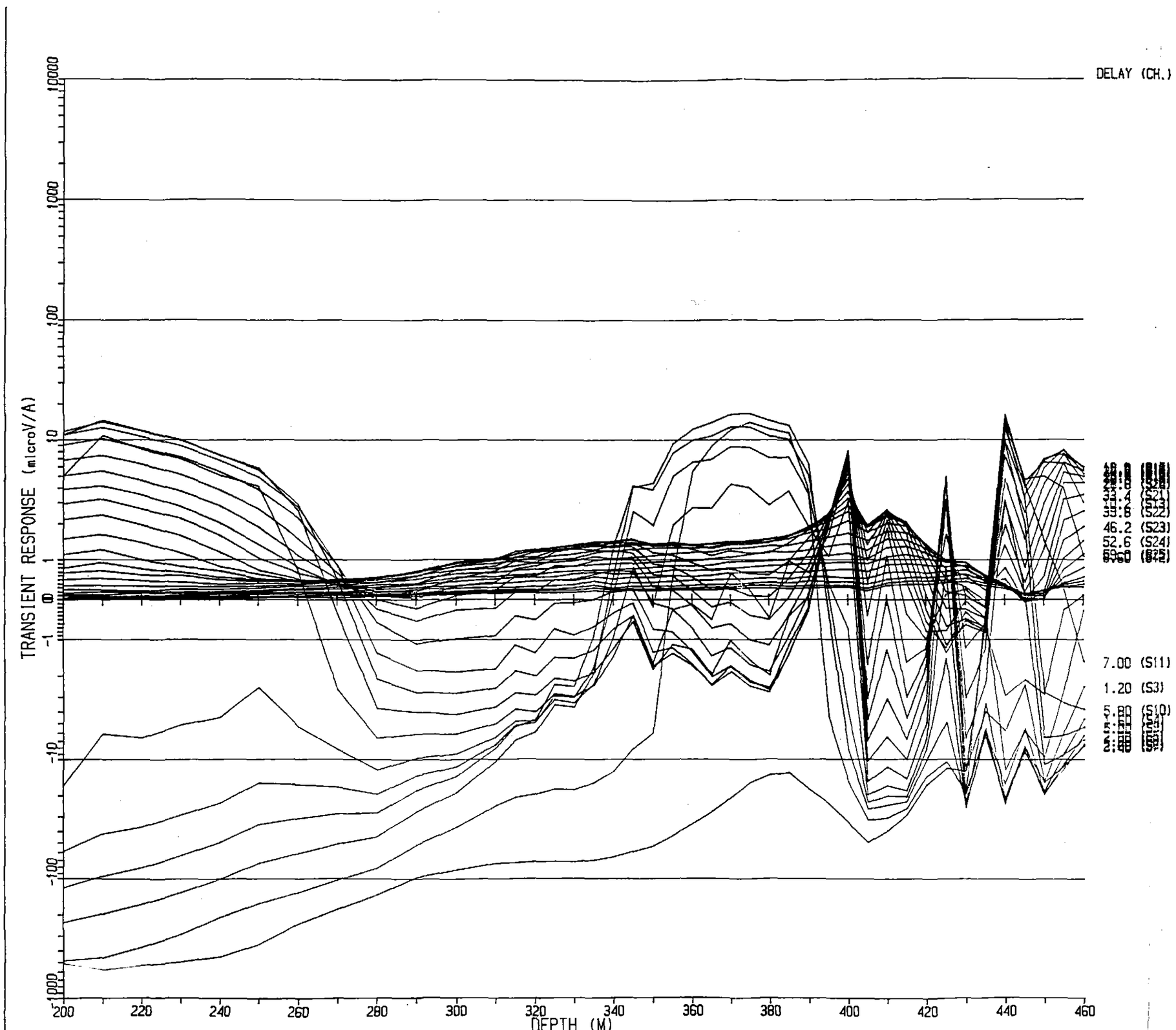
RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP6

SCALE - 1:1000

546 130583



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

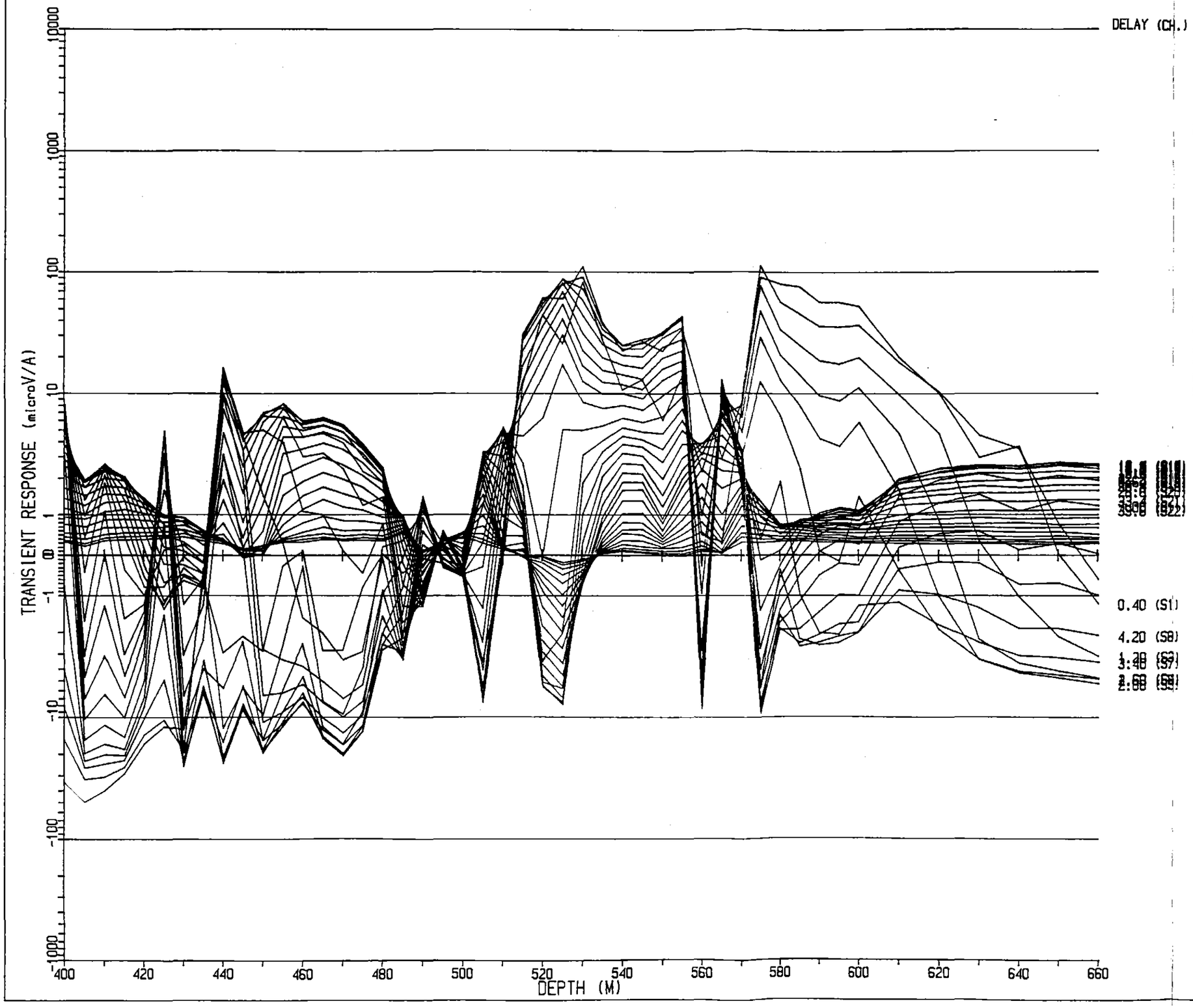
RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP6

SCALE - 1:1000

130584



5 cm

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : FEB 1991
CONFIGURATION : 200M SQUARE TX. LOOP, DRILL HOLE SURVEY
READING INT. : 10 METRES
NO. OF STACKS : 256
TRANSMITTER : MEDIUM POWER
RECEIVER : SIROTEM II S/N 1224
CURRENT : 13.4 AMPS
OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:1000
VERTICAL SCALE - LOGARITHMIC 3CM. PER DECADE LINEAR BETWEEN -1 AND +1

TIME DELAYS IN MILLISECONDS
E - EARLY TIME WINDOW
S - STANDARD TIME WINDOW

RGC

ZEEHAN
SYLVESTER

SIROTEM PROFILE
LINE SY5 LP6

SCALE - 1:1000

ELECTRICAL AND RADIOMETRIC BOREHOLE LOGS - Scale 1: 1000

A Joint Project of: The N.S.W. Department of Minerals and Energy and the Australian Mineral Industries Research Association Limited

Project Leader: Edward D. TYNE Project Engineer: David H. DAGGAR

Prospect: SYLVESTER	Hole No: SY3	Total Depth: 500.00m	Water Table Depth: 5.00 m
Company: RGC	Job Code: 90/052	Operators: ET, RS, DD	Log Interval: 490.00m to 10.00m
Logging Speed (m/min): 2.	Run Direction: UP	Run No: 3	Probe No: 3
Electrode Array: Dipole Dipole n=1 a=1.0m		Frequency: 1.000Hz Bipolar Square Wave	Data Points/Waveform: 512

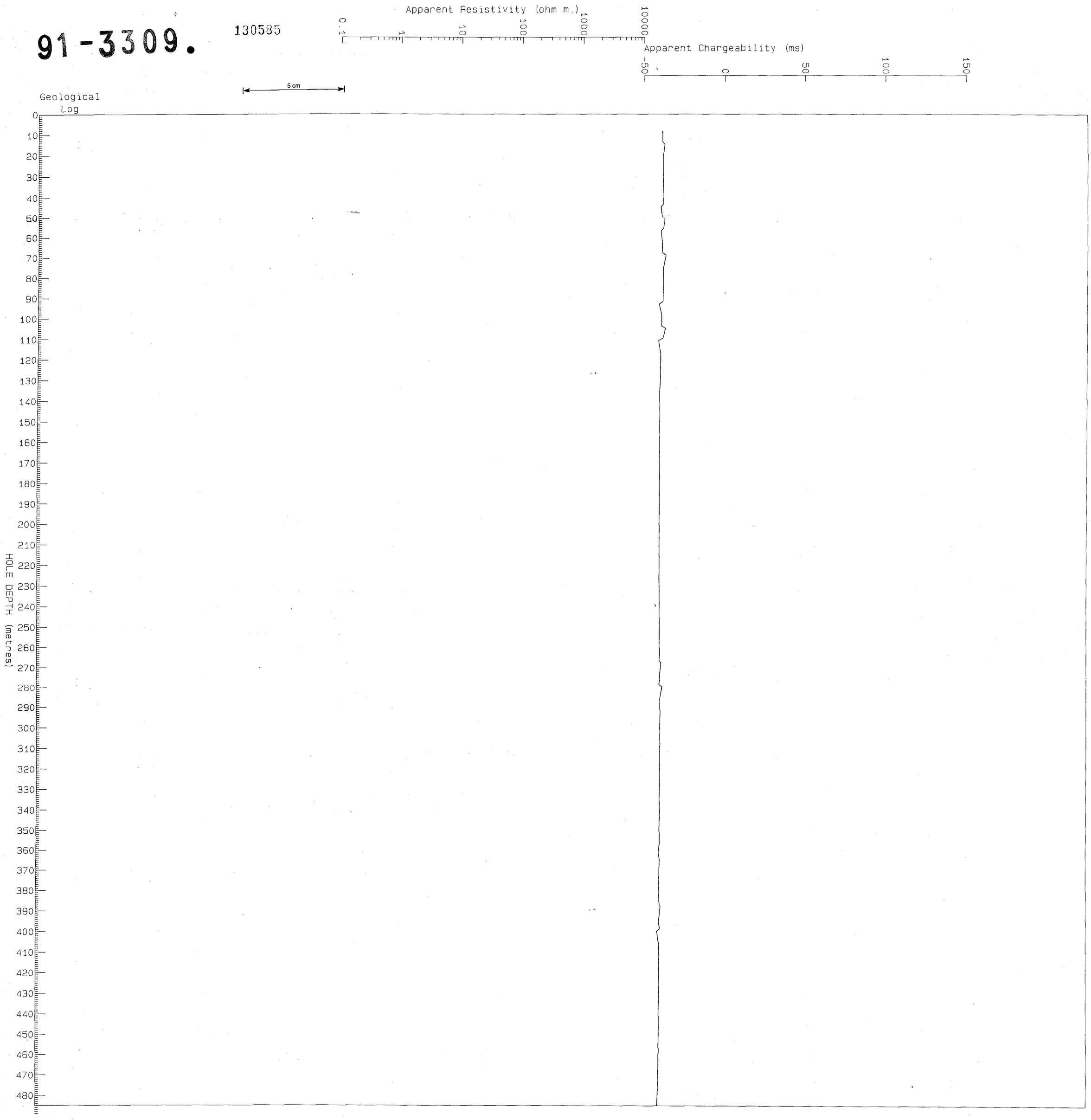
Operator Selected Chargeability Integration Time Interval: 50.78ms to 230.47ms for a current off time of 250.ms

Survey Date: 11:15 AM FRI., 14 DEC., 1990 Comments: INCLINED HOLE WITH PVC CASING

Data Base Codes: sy3c

91-3309.

130585



551

ELECTRICAL AND RADIOMETRIC BOREHOLE LOGS - Scale 1: 500

A Joint Project of: The N.S.W. Department of Minerals and Energy and the Australian Mineral Industries Research Association Limited
Project Leader: Edward D. TYNE Project Engineer: David H. DAGGAR

Prospect: SYLVESTER	Hole No: SY4	Total Depth: 300.00m	Water Table Depth: 10.00 m
Company: RGC	Job Code: 90/052	Operators: ET, DD, RS	Log Interval: 290.00m to 0.00m
Logging Speed (m/min): 2	Run Direction: UP	Run No: 1	Probe No: 3
Electrode Array: Dipole Dipole n=1 a=1.0m		Frequency: 1.000Hz Bipolar Square Wave	Data Points/Waveform: 512

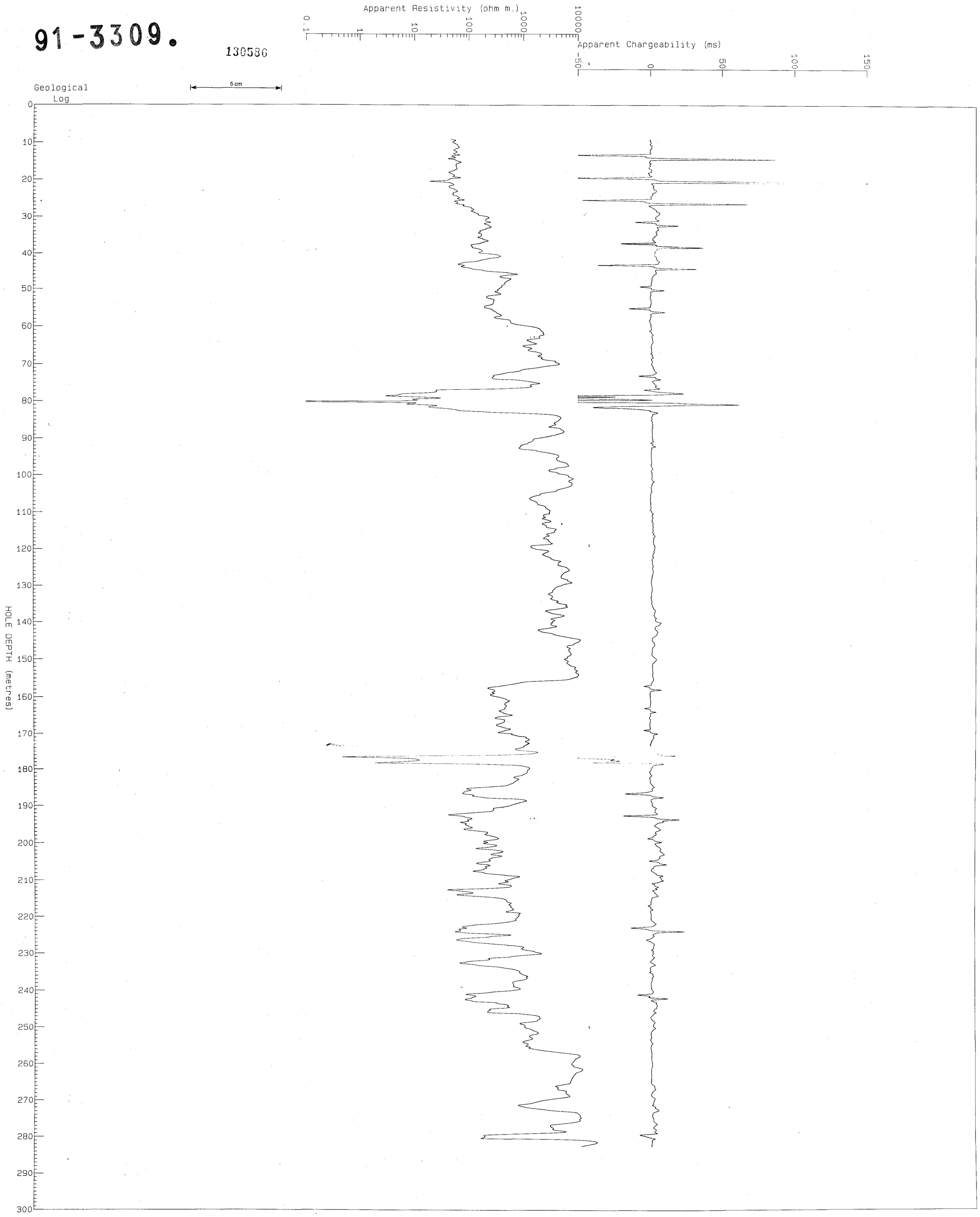
Operator Selected Chargeability Integration Time Interval: 50.78ms to 230.47ms for a current off time of 250.ms

Survey Date: 3:09 PM TUE., 11 DEC., 1990 Comments: INCLINED HOLE WITH SLOTTED PVC CASING

Data Base Codes: sy4aF2

91-3309.

130586



130587

APPENDIX 8

Sylvester drilling programme, drill logs and analytical results

INTERNATIONAL GEOSYSTEMS CORPORATION

R.G.C. Exploration Pty Ltd
SYLVESTER GRID

DIAMOND DRILLHOLE : SY004

PROJECT IDEN : ZEEHAN
COLLAR NORTHING: 60854.24
DRILLED BY :O.D.T

START DATE : 14 NOV 90
COLLAR EASTING : 57635.13
TOTAL LENGTH : 343.50

COMPLETION DATE : 29 NOV 90
COLLAR ELEVATION: 304.92
CORE/HOLE SIZE : HQNQ

LOGGED BY:MARK J FLEMMING
GRID AZIMUTH : 0.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		340.00	-50.00	60854.24	57635.13	304.92
001	30.00		337.00	-52.50			
002	60.00		341.00	-52.50			
003	90.00		336.00	-51.00			
004	120.00		340.00	-50.00			
005	150.00		337.00	-49.50			
007	210.00		340.00	-49.30			
008	240.00		339.00	-48.75			
009	270.00		340.00	-47.50			
010	300.00		341.00	-47.00			
011	330.00		343.00	-46.00			
012	343.00		344.00	-45.75			
013	343.50		344.00	-45.75			

R HED THIS HOLE INTERSECTED TWO MINERALISED INTERVALS.THE FIRST ONE
R HED FROM 77.1 TO 82.9 CONTAINED SPHALERITE VEINS IN PYRITIC
R HED SILTSTONE.THE SECOND INTERVAL FROM 301.9 TO 304.9 CONTAINED
R HED DISSEMINATED SPHALERITE AND GALENA IN A SEQUENCE OF DOLOMITE
R HED PARTLY REPLACED BY TALC.THERE WAS NO EVIDENCE OF THE MAGNETIC
R HED ANOMALY AT WHICH THIS HOLE WAS TARGETTED.

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
	0.00	24.00			PRECOLLAR.	
	24.00	47.00			MUDSTONE: dark gray, slightly carbonaceous, disrupted bedding, fine bedded, sheared, jointed, hard, bedding: 40 degree angle to c.a., shear: 45 degree angle to c.a., gradational base, trace quartz veins of, 1% pyrite blebs of, 0.1% pyrite disseminations < veins, .03% chlorite veins of.	CAMBRIAN CRIMSON CK FOR
R	24.00	59.90			HQ CORE, THEN NQ TO THE END OF THE HOLE.	
R	24.00	27.60			POSSIBLY A FAULT ZONE RATHER THEN BEING BROKEN AND PUGGY DUE TO	
R	24.00	27.60			LEACHING.	
					24.00- 27.60: 100% MUDSTONE: gray brown, highly limonitic, slightly leached, disrupted bedding, fine bedded, sheared, jointed, puggy zones, exceptionally broken, bedding: 40 degree angle to c.a., shear: 45 degree angle to c.a., gradational	CAMBRIAN CRIMSON CK FOR

130588

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY004 (CONTINUED)

	Interval From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
					base, trace quartz veins of, 0.1% pyrite blebs of, .03% pyrite disseminations = veins, absent chlorite spots. 24.00- 47.00: 40% INTERMIXED IRREGULARLY INTERBEDDED LITHIC ARENITE: brown gray, massive, fine bedded, coarse sand, intermediately sorted, moderately rounded, moderate sphericity, OPEN STRUCTURE.	
R	27.60	31.60			THE CARBONATE VEINS ARE LEACHED AND ALTERED TO A LIME - GREEN	
R	27.60	31.60			MINERAL.	
					27.60- 37.30: 100% MUDSTONE: dark gray, slightly carbonaceous, disrupted bedding, fine bedded, intensely sheared, jointed, hard, highly broken, bedding: 40 degree angle to c.a., shear: 45 degree angle to c.a., gradational base, trace quartz veins of, 0.3% carbonate veins of, 3 % pyrite blebs of, 1% pyrite disseminations = veins, trace chlorite veins of.	CAMBRIAN CRIMSON CK FOR
					37.30- 47.00: 100% MUDSTONE: dark gray, slightly carbonaceous, disrupted bedding, fine bedded, sheared, jointed, hard, slightly broken, bedding: 40 degree angle to c.a., shear: 45 degree angle to c.a., gradational base, absent quartz spots, 3 % carbonate veins of, 0.1% pyrite blebs of, 0.1% pyrite disseminations (veins, .03% chlorite veins of.	CAMBRIAN CRIMSON CK FOR
	47.00	59.30			LITHIC ARENITE: gray brown, slightly chloritic, calcareous, massive, medium bedded, jointed, sheared, hard, slightly broken, grit, intermediately sorted, anguiar, low sphericity, OPEN STRUCTURE, basal contact: 25 degree angle to c.a., shear: 20 degree angle to c.a., sheared base, 1% carbonate veins of, .03% pyrite disseminations of, pervasive, 0.1% epidote veins of.	CAMBRIAN CRIMSON CK FOR
					47.00- 59.30: 3 % INTERMIXED NEAR TOP OF INTERVAL MUDSTONE: black.	
					53.00- 53.01: 100% LITHIC ARENITE: gray brown, slightly chloritic, calcareous, massive, medium bedded, jointed, sheared, hard, slightly broken, grit, intermediately sorted, angular, low sphericity, OPEN STRUCTURE, basal contact: 25 degree angle to c.a., fault: 20 degree angle to c.a., sheared base, 1% carbonate veins of, .03% pyrite disseminations of, pervasive, 0.1% epidote veins of.	CAMBRIAN CRIMSON CK FOR
	59.30	77.10			SILTSTONE: gray green, slightly chloritic, fine bedded, disrupted bedding, sheared, brecciated, hard, moderately broken, basal contact: 30 degree angle to c.a., shear: 20 degree angle to c.a., sheared base, trace quartz veins of, 1% carbonate veins of, 0.1% pyrite disseminations of, pervasive. 59.30- 66.40: 50% INTERBEDDED LITHIC ARENITE: massive, coarse	CAMBRIAN CRIMSON CK FOR

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY004 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					sand, well sorted, angular, moderate sphericity, OPEN STRUCTURE.	
R	71.10	77.10			CORRODED , LIMONITIC IRREGULAR QUARTZ PATCHES (VEINS?) OCCUR	
R	71.10	77.10			THAT ARE RIMMED BY SILICEOUS ALTERATION. CHLORITE (?) IS	
R	71.10	77.10			ASSOCIATED.THE CARBONATE VEINS ARE ALMOST TOTALLY LEACHED.	
					71.10- 77.10: 100% SILTSTONE: gray green, silicified, fine bedded, disrupted bedding, moderately sheared, brecciated, hard, moderately broken, basal contact: 30 degree angle to c.a., shear: 20 degree angle to c.a., sheared base, 0.3% quartz veins of, 1% carbonate veins of, 0.3% pyrite blebs of, pervasive.	CAMBRIAN CRIMSON CK FOR
	77.10	82.90			SILTSTONE: purple gray, pyritic, hard, bedding: 70 degree angle to c.a., 10% pyrite replacive, 0.3% galena veins of, 3 % pyrite in fractures, 1% sphalerite veins of.	CAMBRIAN CRIMSON CK FOR
R	77.10	82.90			MINERALIZED INTERVAL WITH PYRITE - SPHALERITE-GALENA VEINS AND	
R	77.10	82.90			PATCHY REPLACEMENT OF BEDDING IN SILTSTONE BY PYRITE.	
	82.90	156.70			MUDSTONE: greenish gray, massive, fine bedded, hard. 90.70- 92.30: 100% MUDSTONE: hard, moderately broken, 20% quartz veins of, 0.3% pyrite blebs of, .03% galena blebs of, 0.3% epidote coatings of. 125.40- 135.30: 100% MUDSTONE: brecciated, veined, 20% quartz veins of, 5% carbonate veins of, 0.3% pyrite blebs of, .03% galena blebs of, 1% epidote coatings of.	CAMBRIAN CRIMSON CK FOR
	156.70	177.30			ARKOSIC LITHIC ARENITE: gray green, massive, hard, coarse sand, fairly well sorted, bedding: 40 degree angle to c.a., 0.3% pyrite blebs of. 156.70- 177.30: 10% INTER BEDDED MUDSTONE: very dark gray. 166.00- 166.15: 100% VEIN: brecciated, vein: 75 degree angle to c.a., 20% quartz veins of, 30% carbonate veins of, 3 % galena blebs of, 3 % sphalerite blebs of.	CAMBRIAN CRIMSON CK FOR
	177.30	179.00			MUDSTONE: darkest brown, bedding: 35 degree angle to c.a., 1% pyrite blebs of, 3 % pyrrhotite blebs of.	CAMBRIAN CRIMSON CK FOR
R	177.30	179.00			BLEBS OF PYRRHOTITE COMMONLY ENLOGATED ALONG BEDDING, SOME	
R	177.30	179.00			REPLACED BY PYRITE.	
	179.00	185.20			ARKOSIC LITHIC ARENITE: gray green, massive, hard, coarse sand, fairly poorly sorted, 0.3% pyrite veins of.	CAMBRIAN CRIMSON CK FOR
	185.20	202.00			SILTY MUDSTONE: gray green, fine bedded, soft sediment slumping, bedding: 40 degree angle to c.a., uphole facing.	CAMBRIAN CRIMSON CK FOR

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY004 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					185.20- 202.00: 40% MUDSTONE: very dark gray, disrupted bedding, reworked, 1% pyrite veins of, 0.3% pyrite blebs of. 185.20- 202.00: 10% LITHIC ARENITE: gray green.	
	202.00	211.40			MUDSTONE: gray green, fractured, stockworked, hard, moderately broken, 10% carbonate veins of.	CAMBRIAN CRIMSON CK FOR
	211.40	251.50			LITHIC SILTSTONE: medium gray, soft sediment slumping, coarse bedded, hard, 3 % carbonate veins of, .03% galena blebs of, .03% sphalerite blebs of.	CAMBRIAN CRIMSON CK FOR
R	211.40	251.50			SEQUENCE OF INTERBEDDED SILTSTONE BLACK MUDSTONE AND LITHIC	
R	211.40	251.50			ARENITE.THE MUDSTONE SHOWS ABUNDANT EVIDENCE OF REWORKING,	
R	211.40	251.50			WITH CLASTS UP TO 11cm INCLUDED IN THE SILTSTONE.PYRITE	
R	211.40	251.50			HAS PRECIPITATED PREFERENTIALLY IN THE MUDSTONE.	
					211.40- 251.50: 30% INTER BEDDED MUDSTONE: very dark gray, disrupted bedding, reworked, bedding: 40 degree angle to c.a., uphole facing, 3 % pyrite blebs of. 211.40- 251.50: 10% ARKOSIC LITHIC ARENITE: gray green.	
	251.50	255.40			ARKOSIC LITHIC ARENITE: 3 % carbonate veins of, 0.1% pyrite blebs of, .03% galena blebs of, .03% pyrrhotite blebs of.	
	255.40	262.60			SILTSTONE: pale grey, fine bedded, graded bedding, bedding: 50 degree angle to c.a., uphole facing.	CAMBRIAN CRIMSON CK FOR
	262.60	293.30			SILTY MUDSTONE: medium light grey, fine bedded, soft sediment slumping, disrupted bedding, bedding: 40 degree angle to c.a.. 262.60- 293.30: 20% MUDSTONE: very dark gray, disrupted bedding, reworked. 271.20- 288.20: 100% MUDSTONE: 1% quartz veins of, 3 % carbonate veins of, 0.3% pyrite blebs of, trace galena blebs of, 0.1% chlorite veins of, 0.3% epidote veins of, 0.1% sphalerite veins of. 278.20- 279.30: 80% LITHIC ARENITE: dark gray.	CAMBRIAN CRIMSON CK FOR
R	289.50	293.30			ALTHOUGH NOT OBVIOUSLY FAULTED,THIS IS A STRUCTURALLY DISTURBED	
R	289.50	293.30			INTERVAL.	
					289.50- 293.30: 100% MUDSTONE: darkest brown, slightly graphitic, disrupted bedding, fragmental, 1% carbonate veins of, 1% pyrite disseminations of, .03% galena blebs of, 1% chlorite veins of, 0.1% pyrrhotite disseminations of, 0.1% sphalerite blebs of.	
	293.30	307.70			DOLOMITE: pale grey, talcose, stylolitic, fractured, stockworked, 5% carbonate veins of, 1% talc alteration haloes	CAMBRIAN CRIMSON CK FOR

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY004 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					of.	
R	293.30	301.90			THE DOLOMITE IS EXTENSIVELY FRACTURED, WITH COARSE GRAINED	
R	293.30	301.90			WHITE CARBONATE FILLING THE FRACTURES AND MINOR TALC FORMING	
R	293.30	301.90			ADJACENT TO THEM.	
R	301.90	304.90			SILTY DOLOMITE PARTLY REPLACED BY TALC SPHALERITE AND GALENA. 301.90- 304.90: 100% SILTY DOLOMITE: light green, moderately talcose, remnant bedding, stockworked, bedding: 65 degree angle to c.a., 30% talc pervasive, 0.3% galena disseminations of, 1% sphalerite disseminations of. 305.40- 306.20: 100% MUDSTONE: dark red.	
	307.70	312.00			SILTSTONE: dark gray, fine bedded.	CAMBRIAN CRIMSON CK FOR
	312.00	343.50			MUDSTONE: dark red, disrupted bedding, 3 % epidote alteration haloes of. 331.70- 331.80: 100% VEIN: 30% quartz veins of, 10% magnetite euhedral crystals of, 50% chlorite veins of, 5% sphalerite veins of.	CAMBRIAN CRIMSON CK FOR

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY004 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	AS(PPM)	SB(PPM)
71.00	72.00	29249	45	20	135	8	0.01	-0.50	4.00	
72.00	73.00	29250	85	35	200	7	0.01	-0.50	7.00	
73.00	74.00	29251	110	70	255	7	0.01	-0.50	13.00	
74.00	75.00	29252	70	20	190	7	0.01	-0.50	16.00	
75.00	76.00	29253	90	-5	145	9	-0.01	-0.50	14.00	
76.00	77.10	29254	85	5	180	8	-0.01	-0.50	12.00	
77.10	78.00	29255	95	225	4700	10	0.01	2.00	100.00	
78.00	79.00	29256	90	370	350	6	0.01	2.00	79.00	
79.00	80.00	29257	60	335	8250	25	0.02	3.00	100.00	
80.00	81.00	29258	75	3000	9250	30	0.02	8.00	100.00	
81.00	82.00	29259	90	780	2200	20	-0.01	1.00	34.00	
82.00	82.90	29261	115	675	3100	30	0.01	1.00	100.00	
82.90	84.00	29262	90	10	180	4	-0.01	1.00	18.00	
84.00	85.00	29263	95	-5	150	3	-0.01	-0.50	11.00	
85.00	86.00	29264	125	5	160	-3	-0.01	-0.50	9.00	
86.00	87.00	29265	80	35	135	7	-0.01	-0.50	21.00	
292.30	293.30	29266	15	60	205	30	-0.01	-0.50	100.00	
293.30	294.30	29267	10	325	300	4	-0.01	-0.50	11.00	
294.30	295.30	29268	10	10	55	3	-0.01	-0.50	2.00	
295.30	296.30	29269	10	15	60	4	-0.01	-0.50	2.00	
296.30	297.30	29270	10	10	50	-3	-0.01	-0.50	1.00	
297.30	298.30	29271	10	20	55	-3	-0.01	-0.50	1.00	
298.30	299.30	29272	10	5	60	3	-0.01	-0.50	-1.00	
299.30	300.30	29273	10	5	60	3	-0.01	-0.50	1.00	
300.30	301.90	29274	10	10	45	5	-0.01	-0.50	15.00	
301.90	302.90	29275	5	625	920	45	-0.01	-0.50	9.00	
302.90	303.90	29276	5	1250	1300	35	-0.01	-0.50	8.00	
303.90	304.90	29277	15	4150	4800	55	-0.01	1.00	11.00	
304.90	305.90	29278	10	320	165	15	-0.01	-0.50	9.00	
305.90	306.90	29279	10	140	220	25	-0.01	1.00	7.00	
306.90	307.70	29281	5	150	220	35	-0.01	-0.50	4.00	
307.70	308.70	29282	10	25	75	9	-0.01	-0.50	21.00	

130593

R.G.C. Exploration Pty Ltd
SYLVESTER GRID

SURFACE DIAMOND DRILLHOLE : SY005

PROJECT IDEN : ZEEHAN
COLLAR NORTHING: 60649.53
DRILLED BY :L.Y.

START DATE : 27 NOV 90
COLLAR EASTING : 57201.05
TOTAL LENGTH : 666.80

COMPLETION DATE : 2 DEC 90
COLLAR ELEVATION: 292.42
CORE/HOLE SIZE : HQNQ

LOGGED BY:MARK J FLEMMING
GRID AZIMUTH : 0.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		354.00	-49.00	60649.53	57201.05	292.42
001	31.00		354.00	-49.00			
002	61.00		347.00	-50.00			
003	91.00		344.00	-50.50			
004	121.00		344.00	-51.00			
005	160.00		346.00	-51.50			
006	190.00		347.00	-52.00			
007	223.00		355.00	-53.00			
008	253.00		349.00	-53.50			
009	284.00		351.00	-54.00			
010	316.00		349.00	-54.00			
011	347.00		352.00	-54.50			
012	383.00		350.00	-55.00			
013	417.00		348.00	-56.00			
015	448.00		350.00	-56.00			
016	486.00		352.00	-56.30			
017	521.00		353.00	-57.00			
018	560.00		354.00	-57.70			
019	602.00		360.00	-57.00			
020	647.00		357.00	-56.00			
021	665.00		355.00	-55.00			
022	666.80		355.00	-55.00			

R HED THIS HOLE WAS TARGETTED AT A DEEP SOURCE MAGNETIC ANOMALY IN
R HED UPPER OONAH CARBONATES AND SHALES IN THE FOOTWALL OF THE
R HED BALSTRUP FAULT.THE HOLE INTERCEPTED 78.3m OF MAGNETITE -
R HED SERPENTINITE SKARN AND 53.8m OF DOMINANTLY MASSIVE SULPHIDE
R HED WITH SPHALERITE - GALENA, HOSTED BY UPPER OONAH CARBONATES. THE
R HED HOLE THEN PASSED THROUGH A SILICEOUS ZONE INTERPRETED AS THE
R HED (ANNEALED) BALSTRUP FAULT, INTO PSAMMO - PELITES INTERPRETED AS
R HED LOWER OONAH FORMATION.
R HED LOGGED BY: MJ FLEMMING (0 - 429.1m)
R HED DJ CROSSING (429.1 - 666.8m)

1305941

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	0.00	12.90			PRECOLLAR.	
	12.90	64.30			SHALE: black, highly graphitic, bedded, disrupted bedding, sheared, firm, moderately broken, faulted base, 0.3% quartz veins of, 1% carbonate veins of, in vughs, 0.1% chlorite veins of.	OONAH FM UNDIFFERENT
R	12.90	64.30			BEDDING CORE AXIS ANGLE DECREASES FROM 50 DEGREES TO 10 GOING	
R	12.90	64.30			DOWN THE HOLE. MUCH OF THE PYRITE OCCURS AS SYNGENETIC LAYERED	
R	12.90	64.30			DISSEMINATIONS AND AS BLEBS; TO A LESSER EXTENT AS VEINS.	
R	17.10	18.10			MINOR PUGGY ZONES - CORE LOSS.	
					17.10- 18.10: 100% FAULT ZONE: exceptionally broken.	
R	25.00	26.80			MAJOR PUG ZONES - CORE LOSS.	
					25.00- 26.80: 80% FAULT ZONE: highly broken.	
R	59.60	63.40			MAJOR PUG ZONES - CORE LOSS.	
					59.60- 63.40: 60% FAULT ZONE: highly broken.	
	64.30	65.80			FAULT ZONE: exceptionally broken.	
R	64.30	65.80			MINOR PUGGY ZONES - CORE LOSS.	
	65.80	70.70			DOLOMITIC QUARTZITE: light gray, silicified, massive, crackled, sheared, extremely hard, moderately broken, faulted base, 5% quartz veins of, 3 % carbonate stockwork, trace talc veins of, 0.1% pyrite veins of, 1% chlorite veins of.	OONAH FM UNDIFFERENT
R	65.80	70.70			CARBONATE OCCURS AS A FINE CRACKLE STOCKWORK.	
	70.70	89.90			SHALE: black, highly graphitic, very strongly sheared, strongly sheared, highly broken, faulted base, 0.3% pyrite joint linings.	OONAH FM UNDIFFERENT
R	70.70	89.90			THIS IS A HIGH STRAIN ZONE IN A GRAPHITIC SHALE, WITH THE	
R	70.70	89.90			DEVELOPMENT OF ABUNDANT POLISHED SLICKENSIDED FACES.	
	89.90	93.50			SALTY DOLOMITE: light gray, quartzitic,ose, stylolitic, faulted base, 3 % carbonate veins of.	OONAH FM UNDIFFERENT
	93.50	93.80			FAULT ZONE: puggy zones, exceptionally broken.	
	93.80	107.30			SILTY DOLOMITE: light gray, talcose, well bedded, fractured, stockworked, brecciated base, 5% carbonate veins of.	
R	93.80	107.30			THE BEDDING TO CORE AXIS ANGLE IS QUITE VARIABLE THROUGH THIS	
R	93.80	107.30			INTERVAL.	
	107.30	109.20			SHALE: black, highly graphitic, moderately sheared, sharp irregular base, 0.1% pyrite joint linings.	OONAH FM UNDIFFERENT

130595

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
	109.20	189.10			DOLOMITE: pale grey, hard, sharp planar base. 109.20- 160.40: 100% DOLOMITE: talcose, mottled, massive. 111.10- 112.50: 100% DOLOMITE: 5% pyrite pervasive.	OONAH FM UNDIFFERENT
R	129.00	2038.00			Q CORE. 143.20- 143.60: 100% DOLOMITE: brecciated, 20% carbonate veins of. 160.40- 168.00: 100% DOLOMITE: homogeneous, massive.	
R	168.00	189.10			DARKER GREY TALCY FINE INTERBEDES OCCUR THROUGH THIS INTERVAL. 168.00- 189.00: 100% DOLOMITE: well bedded, medium bedded, bedding: 65 degree angle to c.a..	
	189.10	237.80			DOLOMITIC SHALE: black, highly graphitic, moderately folded, sharp base, 0.1% pyrite joint linings, veins of.	OONAH FM UNDIFFERENT
R	189.10	200.50			WELL-BEDDED GRAPHITIC BLACK SHALE WITH A MODERATELY DEVELOPED	
R	189.10	200.50			CLEAVAGE PARALLEL TO BEDDING. MOST OF THE BEDDING PLANES SHOW	
R	189.10	200.50			EVIDENCE OF MOVEMENT, BEING WELL POLISHED AND SLICKENSIDED. 189.10- 200.50: 100% SHALE: well bedded.	
R	201.00	237.80			MINOR MORE GRITTY SHALE HORIZONS DISTRUPTED AND CONTORTED WITH	
R	201.00	237.80			MUCH SYGENETIC (?) PYRITE. TALC VEINING MOST COMMON FROM 228 TO	
R	201.00	237.80			232M. 201.00- 237.80: 100% DOLOMITIC SHALE: talcose, moderately graphitic, slightly chloritic, disrupted bedding, 3 % carbonate veins of, .03% talc veins of, .03% chlorite veins of, .03% pyrrhotite veins of. 221.00- 237.80: 100% DOLOMITIC SHALE: 0.1% pyrite disseminations = veins.	
					229.00- 234.00: 100% DOLOMITIC SHALE: black, highly graphitic, fragmental, sharp base, 0.1% pyrite joint linings, veins of.	OONAH FM UNDIFFERENT
	237.80	238.90			SILTY VEIN: black, massive, strongly sheared, basal contact: 25 degree angle to c.a., sharp base, 1% carbonate in vughs, disseminations = veins, clasts of, 50% chlorite 1% arsenopyrite.	
	238.90	259.80			DOLOMITE: light gray, epidotized, pyrrhotitic, magnetite, massive, mottled, stockworked, hard, gradational base, trace talc patches, 1% magnetite disseminations of, 5% pyrite disseminations of, 1% serpentine patches, trace chlorite patches.	OONAH FM UNDIFFERENT
					239.50- 250.90: 100% DOLOMITE: light gray, epidotized, pyrrhotitic, magnetite, massive, mottled, stockworked, hard, gradational base, trace talc patches, 1% magnetite disseminations of, 5% pyrite disseminations of, 1% serpentine patches, trace chlorite patches, 3 % pyrrhotite disseminations	OONAH FM UNDIFFERENT

130596

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					> veins. 256.50- 256.90: 100% DOLOMITIC BRECCIATED MUDSTONE: gray brown, talcose, slightly hematitic, brecciated, sheared, 3 % talc 3 % pyrite disseminations of. 256.90- 257.10: 100% FAULT ZONE: intensely sheared, puggy zones, fault: 60 degree angle to c.a..	
	259.80	296.50			DOLOMITIC FAULT ZONE: gray white, hard.	OONAH FM UNDIFFERENT
R	259.80	279.00			SIGNIFICANT CORE LOSS IN THIS INTERVAL. PYRITE ASSOCIATED WITH	
R	259.80	279.00			CRACKLED AND CORRODED DOLOMITE. ABUNDANT WHITE MINERAL PRESENT.	
R	259.80	279.00			WOLLASTONITE (?) WHICH FORMS THE FRAGMENTS OF THE BRECCIA	
R	259.80	279.00			CAVATIES RECOGNISED BY DRILLERS AND RETURN LOSS AT 267 METRES. 259.80- 279.00: 100% BRECCIATED ALTERED FAULT ZONE: white gray, crackled, brecciated, moderately broken, 40% carbonate breccia fillings of, trace talc veins of, 0.1% pyrite disseminations of.	
R	279.00	296.50			ABUNDANT CORE LOSS - CAVITIES, HOLE MAKING WATER AT 295.6	
R	279.00	296.50			METRES. 279.00- 296.50: 100% DOLOMITIC SILTY FAULT ZONE: crackled, brecciated, puggy zones, highly broken, 0.3% pyrite disseminations of.	
	296.50	305.20			ALTERED DOLOMITE: light gray, silicified, serpentinized, magnetite, massive, stylolitic, hard, gradational base, trace talc veins of, 0.3% magnetite disseminations of, 1% pyrite disseminations of, absent galena amygdaloids of, 3 % serpentine veins of, 0.1% spots of, trace pyrrhotite disseminations of. 302.10- 303.70: 50% DOLOMITIC MUDSTONE: dark gray, pyritic, fine bedded, moderately broken, 5% pyrite laminations, 5% serpentine lenses of.	OONAH FM UNDIFFERENT
	305.20	314.40			SILTY DOLOMITE: gray, slightly talcose, bedded, stockworked, brecciated, hard, gradational base, 20% carbonate veins of, 3 % pyrite.	OONAH FM UNDIFFERENT
R	305.20	314.40			BCA'S ARE VARIABLE.	
	314.40	429.10			ALTERED DOLOMITE: light gray, magnetite, asbestos, slightly serpentinized, mottled, stylolitic, hard, gradational base, patches, 0.3% pyrite disseminations < veins, absent asbestos .03% pyrrhotite disseminations < veins. 314.40- 324.90: 100% DOLOMITE: moderately talcose, indistinctly bedded, 10% carbonate veins of, 0.1% pyrrhotite disseminations < veins.	OONAH FM UNDIFFERENT

13059

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
					324.90- 342.20: 100% DOLOMITE: gray green, moderately serpentinized, .03% talc patches, 0.1% magnetite disseminations of, 0.1% pyrite disseminations of, 3 % serpentine patches, 0.3% asbestos spots of, 0.3% pyrrhotite spots of.	
					342.20- 352.00: 100% ALTERED DOLOMITE: greenish gray, magnetite, moderately serpentinized, stockworked, brecciated, 1% magnetite disseminations of, serpentine breccia fillings of.	
					345.40- 345.45: 100% FAULT ZONE: puggy zones, fault: 75 degree angle to c.a..	
R	359.00	371.40			TOURMALINE OCCURS AS RANDOMLY ORIENTATE INDIVIDUAL GRAINS	
R	359.00	371.40			THROUGHOUT. GENERALLY 2 - 3 MM IN LENGTH.	
					359.00- 371.40: 100% ALTERED DOLOMITE: moderately tourmalinised, massive, homogeneous, serpentine veins of, 3 % tourmaline.	
					378.00- 384.50: 100% ALTERED DOLOMITE: gray green, moderately serpentinized, moderately tourmalinized, stockworked, brecciated, vein: 40 degree angle to c.a., 0.3% magnetite disseminations of, serpentine patches, patches, 3 % pyrrhotite veins of, 0.3% sphalerite veins of.	
					388.80- 395.20: 100% ALTERED DOLOMITE: strongly jointed, highly broken, joint: 90 degree angle to c.a., 0.3% magnetite patches, 0.3% pyrrhotite veins of.	
R	392.50	392.50			A 1.0 CM VEIN OF PYRRHOTITE + SPHALERITE OCCURS; SHEARED AT ITS	
R	392.50	392.50			DOWN-HOLE CONTACT, CA OF 20 DEGREES.	
					396.80- 407.90: 100% ALTERED DOLOMITE: gray green, moderately serpentinized, puggy zones, moderately broken, 3 % magnetite disseminations < veins, 0.1% pyrite disseminations of, 0.3% asbestos spots of, 1% pyrrhotite patches.	
					417.50- 429.10: 100% ALTERED DOLOMITE: gray green, moderately serpentinized, sheared, puggy zones, 3 % magnetite disseminations < veins, 0.3% asbestos spots of, 1% pyrrhotite disseminations < veins.	
					428.00- 429.10: 100% ALTERED DOLOMITE: highly magnetite, 5% magnetite disseminations > veins.	
	429.10	438.80			SKARN: darkest green, magnetite, serpentinized, massive, recrystallised, hard, moderately broken, interstitial, 40% magnetite replacive, 20% serpentine replacive, 20% tremolite replacive, .03% pyrrhotite veins of.	
R	429.10	438.80			MAGNETICS OCCUR AS IRREGUALAR MASSES WITH INTERSTITIAL	
R	429.10	438.80			TREMOLITE AND SERPENTINITE REPLACING DOLOMITE (COMPLETELY).	

130598

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	438.80	447.70			SKARN: medium mottled, magnetite, serpentinized, partly recrystallised, firm, moderately broken, 50% carbonate replacive, 10% magnetite patches, 20% serpentine patches, 10% tremolite patches, 1% sericite patches.	
R	438.80	447.70			SKARNIFICATION IS INCOMPLETE WITH REMANT DOLOMITE PATCHES AND	
R	438.80	447.70			LESS INTENSE MAGNETITE/SERPENTINITE REPLACEMENT.	
	447.70	451.20			DOLOMITE: light gray, massive, hard, slightly broken, 3 % magnetite patches, 3 % serpentine patches.	UPPER OONAH
	451.20	452.00			SKARN: pale green, clayey, magnetite, massive, recrystallised, crumbly, highly broken, 10% quartz patches, 20% carbonate interstitial, 10% magnetite patches, 30% clay interstitial, 10% serpentine patches.	
	452.00	454.60			SKARN: banded, banding: 40 degree angle to c.a., 10% carbonate interstitial, 40% magnetite laminations, 40% serpentine laminations. 452.00- 454.60: 40% IRREGULARLY INTERBEDDED DOLOMITE: light gray, massive, 3 % magnetite disseminations of, 3 % serpentine disseminations of.	
	454.60	465.70			DOLOMITE: light gray, massive, vein: 40 degree angle to c.a., .03% siderite veins of, 1% magnetite patches, 1% serpentine patches, 1% pyrrhotite veins of. 454.60- 460.50: 30% DOLOMITE: banded, banding: 40 degree angle to c.a..	UPPER OONAH
	465.70	491.00			SKARN: very dark green, serpentinized, magnetite, massive, recrystallised, hard, slightly broken, sharp irregular base, 1% talc patches, 10% siderite interstitial, 10% magnetite patches, 70% serpentine massive/ semi - massive. 473.00- 475.30: 100% SKARN: banded, banding: 50 degree angle to c.a., sharp irregular base.	
	491.00	507.40			SKARN: very dark mauve, magnetite, massive, recrystallised, hard, moderately broken, 5% carbonate patches, 5% talc patches, 70% magnetite massive/ semi - massive, 10% serpentine interstitial, 3 % clay patches, clay 1% pyrrhotite interstitial.	
R	491.00	507.40			SOME INTERSTSIIAL PYRRHOTITE OCCURS NEAR BASE, BECOMMING MORE	
R	491.00	507.40			ABUNDANT DOWNWARD.	
	507.40	514.00			MASSIVE SULPHIDES: darker brown, massive, hard, moderately	

130599

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					broken, sharp irregular base, 20% quartz interstitial, 1% carbonate veins of, 3 % galena disseminations = veins, 3 % serpentine patches, 70% pyrrhotite massive/ semi - massive, 5% sphalerite patches.	
R	507.40	514.00			QUARTZ OCCURS INTERSTITIAL TO MEDIUM GRAINED PYRRHOTITE AND AS	
R	507.40	514.00			IRREGULAR PATCHES, GALENA OCCURS AS STREAKY VEINS AND	
R	507.40	514.00			DISSEMINATIONS AND SPHALERITE AS IRREGULAR DISSEMINATED	
R	507.40	514.00			PATCHES.	
	514.00	518.00			SKARN: medium green, serpentinized, magnetite, massive, recrystallised, diffuse base, fracture: 10 degree angle to c.a., 1% talc patches, 20% magnetite patches, 70% serpentine massive/ semi - massive, 0.3% sphalerite disseminations of.	
	518.00	530.90			MASSIVE SULPHIDES: darker brown, massive, hard, moderately broken, 5% quartz interstitial, 3 % carbonate disseminations = veins, 3 % talc interstitial, 5% pyrite patches, 3 % galena patches, 70% pyrrhotite massive/ semi - massive, 5% sphalerite patches.	
R	518.00	530.90			SPHALERITE IS DARK GREY/BROWN.	
R	522.30	524.90			PYRITE IS COARSE AND AT CONTACTS SUBHEDRAL PYRITE IS REPLACING	
R	522.30	524.90			PYRRHOTITE.	
					522.30- 524.90: 100% MASSIVE SULPHIDES: light yellow, massive, hard, moderately broken, 5% quartz interstitial, 5% carbonate veins of, 3 % talc interstitial, 70% pyrite massive/ semi - massive, 3 % galena patches, 70% pyrrhotite massive/ semi - massive, 5% sphalerite patches.	
	530.90	535.80			MASSIVE SULPHIDES: massive, sharp irregular base, 40% quartz interstitial, 1% carbonate veins of, patches.	
	535.80	551.00			CARBONATE: partly recrystallised, vuggy, hard, moderately broken, gradational base, vein: 45 degree angle to c.a., 3 % talc patches, 5% magnetite patches, 5% pyrite stockwork, 3 % serpentine patches, 5% pyrrhotite stockwork.	
					538.60- 539.30: 100% CARBONATE: partly recrystallised, vuggy, hard, moderately broken, gradational base, vein: 45 degree angle to c.a., 3 % talc patches, 90% magnetite massive/ semi - massive, 5% pyrite stockwork, 3 % serpentine patches, 5% pyrrhotite stockwork.	
	551.00	552.30			MASSIVE SULPHIDES: medium brown, hard, moderately broken, 3 % carbonate veins of, 5% magnetite disseminations of, 20% pyrite disseminations = veins, 70% pyrrhotite massive/ semi -	

130600

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					massive.	
	552.30	554.00			SKARN: dark mauve, serpentinized, magnetite, massive, recrystallised, vuggy, 30% magnetite patches, 60% serpentine massive/ semi - massive.	
	554.00	560.10			MASSIVE SULPHIDES: hard, moderately broken, basal contact: 40 degree angle to c.a., sheared base, vein: 10 degree angle to c.a., 10% quartz interstitial, 3 % siderite veins of, 3 % pyrite disseminations = veins, 70% pyrrhotite massive/ semi - massive.	
	560.10	561.20			SKARN: black, magnetite, massive, brittle, highly broken, 70% magnetite massive/ semi - massive, 20% serpentine massive/ semi - massive.	
	561.20	565.00			DOLOMITIC MUDSTONE: gray green, hard, highly broken, bedding: 30 degree angle to c.a., 5% chlorite disseminations of, 1% sphalerite disseminations of.	OONAH FM UNDIFFERENT
R	561.20	565.00			SPAHERITE IS LIGHT BROWN. 561.20- 565.00: 20% CARBONATE: medium bedded.	
	565.00	579.90			ANY ROCK: highly silicified, textures obliterated by alteration, massive, basal contact: 35 degree angle to c.a., sheared base, 40% quartz pervasive, 10% carbonate disseminations = veins, 3 % tremolite patches, 5% chlorite disseminations of, 20% pyrrhotite stockwork.	
R	565.00	579.90			INTENSELY SILICIFIED THEN BRECCIATED TO PRODUCE STOCKWORK VEINS	
R	565.00	579.90			OF PYRRHOTITE. LOCALLY CARBONATED. PRECURSOR A MUDSTONE.	
R	565.00	579.90			ORIGINAL TEXTURES OBLITERATED. 572.80- 574.30: 100% MUDSTONE: very dark gray, highly calcareous, textures obliterated by alteration, brecciated, 30% carbonate disseminations = veins, 3 % pyrite disseminations = veins. 574.30- 576.10: 100% MUDSTONE: black, slightly graphitic, massive, textures obliterated by alteration, 3 % pyrite veins of, 1% pyrrhotite disseminations of.	
	579.90	586.60			MELANGE: medium dark grey, moderately altered, massive, basal contact: 45 degree angle to c.a., sheared base, 5% carbonate disseminations of, 3 % chlorite disseminations of, 0.3% pyrrhotite disseminations of. 582.40- 582.80: 100% CARBONATE: medium green, massive, bedding: 25 degree angle to c.a., 5% pyrrhotite replacive, 1%	OONAH FM UNDIFFERENT

130601

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					sphalerite disseminations of.	
					584.30- 585.85: 50% MUDSTONE: fine bedded, disrupted bedding.	
R	585.85	586.40			MELANGE MAY BE TECTONIC IN ORIGIN SHEAR FABRIC LOCALLY	
R	585.85	586.40			DEVELOPED GENERALLY AT 130 DEGREES TO THE C.A.	
					585.85- 586.40: 100% FAULT: fault: 40 degree angle to c.a., 30% quartz massive/ semi - massive, 3 % carbonate veins of, 0.1% pyrite disseminations of, 30% pyrrhotite massive/ semi - massive, 0.3% sphalerite patches.	
	586.60	650.30			MUDSTONE: laminated, disrupted bedding, microfaults, hard, moderately broken, bedding: 13 degree dip to c.a., uphole facing, faulted base, veins of, 0.3% pyrite disseminations (veins, 0.3% pyrrhotite disseminations (veins.	OONAH FM UNDIFFERENT
R	586.60	650.30			LOCALLY DEVELOPED FINE CRENULATION CLEAVAGE GIVES ROCKS A SILKY	
R	586.60	650.30			APPEARANCE. BCA'S VARY 0 - 30 DEGREES TO THE C.A. LOCALLY	
R	586.60	650.30			DISTURBED.	
					586.60- 650.30: 20% IRREGULARLY INTERBEDDED SANDSTONE: coarse bedded.	
					610.00- 612.60: 90% VEIN: 90% quartz veins of, 1% pyrrhotite stockwork.	
					634.70- 637.00: 40% VEIN: 40% quartz veins of, 3 % pyrrhotite stockwork.	
R	640.00	644.00			GRADED SANDSTONE BEDS GIVE GEOLOGY FACING (TOPS UPHOLE) . SOME	
R	640.00	644.00			TIGHT Z-FOLDING.	
					648.90- 649.40: 100% FAULT: fault: 35 degree angle to c.a., 90% quartz veins of, 0.3% pyrite veins of, 5% pyrrhotite veins of.	
	650.30	665.80			SANDSTONE: medium gray, crenulated, disturbed bedding, microfaults, coarse sand. 1% pyrrhotite veins of.	OONAH FM UNDIFFERENT
					650.30- 665.80: 10% INTER BEDDED SHALE: black, fine bedded.	
					650.30- 665.80: 10% INTER BEDDED MUDSTONE: light gray, fine bedded.	
	665.80	666.30			FAULT: silicified, brecciated, fault: 15 degree angle to c.a., 90% quartz veins of, 1% pyrite disseminations of.	
	666.30	666.80			SILTSTONE: light gray, fine bedded, disturbed bedding, drag-folded.	
END					666.30- 666.80: 40% FINELY INTERBEDDED SHALE: black, fine bedded.	OONAH FM UNDIFFERENT

130602

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	W(PPM
110.00	111.00	29296	10	10	30	-3	-0.01	-0.50	-20
111.00	111.80	29297	10	10	25	-3	-0.01	-0.50	-20
111.80	112.50	29298	10	70	70	-3	0.01	-0.50	-20
112.50	113.50	29299	8	40	25	-3	-0.01	-0.50	-20
236.00	237.00	30501	115	65	110	5	-0.01	-0.50	-50
237.00	237.80	30502	65	60	70	20	-0.01	-0.50	-50
237.80	238.80	30503	60	6650	9250	12	-0.01	8.00	159
238.80	239.50	30504	20	60	95	-3	-0.01	1.00	-50
239.50	240.50	30505	10	-5	35	-3	-0.01	-0.50	-50
240.50	241.50	30506	20	-5	35	-3	-0.01	-0.50	-50
241.50	242.50	30507	10	-5	30	-3	-0.01	-0.50	-50
242.50	243.50	30508	10	-5	45	-3	-0.01	-0.50	-50
243.50	244.50	30509	35	80	1000	-3	-0.01	-0.50	-50
244.50	245.50	30510	10	15	75	-3	-0.01	-0.50	-50
245.50	246.50	30511	5	-5	30	-3	-0.01	-0.50	-50
246.50	247.50	30512	-5	-5	30	-3	-0.01	-0.50	-50
247.50	248.50	30513	-5	-5	30	-3	-0.01	-0.50	-50
248.50	249.50	30514	-5	5	30	-3	-0.01	-0.50	-50
249.50	250.50	30515	15	50	55	-3	0.01	-0.50	-50
250.50	251.90	30516	5	10	55	-3	-0.01	1.00	-50
251.90	253.00	30517	5	10	45	-3	-0.01	-0.50	-50
253.00	254.00	30518	5	15	30	-3	-0.01	-0.50	-50
254.00	255.00	30519	5	15	45	-3	-0.01	-0.50	-50
255.00	256.00	30521	10	105	150	-3	-0.01	1.00	-50
256.00	256.50	30522	-5	-5	35	14	-0.01	-0.50	-50
256.50	257.10	30523	5	-5	70	16	-0.01	-0.50	-50
257.10	258.00	30524	5	-5	35	-3	-0.01	-0.50	-50
258.00	259.00	30525	5	-5	60	13	-0.01	-0.50	-50
259.00	259.80	30526	5	-5	70	-3	-0.01	-0.50	-50
259.80	261.00	30527	-5	-5	55	-3	-0.01	-0.50	-50
261.00	262.00	30528	-5	15	40	-3	-0.01	-0.50	-50
378.00	379.00	30529	-5	85	135	-3	-0.01	-0.50	-50
379.00	380.00	30530	-5	15	75	-3	-0.01	-0.50	-50
380.00	381.00	30531	30	270	335	10	0.01	-0.50	-50
381.00	382.00	30532	35	155	6600	-3	0.01	-0.50	110
382.00	383.00	30533	40	195	16600	4	0.01	-0.50	263
383.00	384.00	30534	60	195	6750	-3	-0.01	1.00	118
384.00	384.50	30535	50	105	2100	4	0.01	-0.50	-50
384.50	385.50	30536	20	45	360	-3	-0.01	-0.50	-50
385.50	386.50	30537	5	60	70	-3	-0.01	-0.50	-50
386.50	387.50	30538	-5	20	55	-3	-0.01	-0.50	-50
387.50	388.50	30539	-5	15	60	-3	0.03	-0.50	-50

130603

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	W(PPM
392.00	393.00	30541	75	2000	5800	-3	0.11	4.00	112
396.00	397.00	30542	10	35	355	-3	-0.02	-0.50	-20
398.00	400.00	30543	15	10	185	-3	-0.02	-0.50	-20
400.00	402.00	30544	55	10	1750	-3	0.03	-0.50	37
402.00	404.00	30545	25	5	190	42	-0.02	2.00	-20
404.00	406.00	30546	335	-5	6400	26	0.11	-0.50	141
406.00	407.00	30547	50	-5	295	6	0.02	-0.50	28
410.00	414.00	30548	20	130	1650	-3	0.03	-0.50	31
414.00	418.00	30549	15	140	375	-3	-0.02	-0.01	-20
418.00	422.00	30550	45	20	640	5	-0.02	-0.50	-20
422.00	426.00	30551	60	15	220	8	0.02	-0.50	27
426.00	427.00	30552	15	15	55	5	-0.02	-0.50	-20
429.10	430.00	30553	210	2450	3100	102	-0.02	-0.50	-20
430.00	431.00	30554	15	110	375	112	0.02	-0.50	27
431.00	432.00	30555	30	695	1800	58	-0.02	4.00	-20
432.00	433.00	30556	10	280	310	69	-0.02	-0.50	-20
433.00	434.00	30557	35	560	1450	69	0.04	3.00	44
434.00	435.00	30558	15	100	210	79	-0.02	-0.50	-20
435.00	436.00	30559	10	245	400	52	0.02	2.00	22
436.00	437.00	30561	10	330	405	62	0.01	1.00	-20
437.00	438.00	30562	10	585	400	68	-0.02	3.00	-20
438.00	438.80	30563	155	1550	3800	100	0.08	10.00	89
438.80	440.00	30564	70	105	230	51	-0.02	-0.50	-20
440.00	441.00	30565	165	365	340	196	-0.02	1.00	-20
441.00	442.00	30566	140	300	345	86	0.02	1.00	22
442.00	443.00	30567	25	45	100	127	-0.02	-0.50	-20
443.00	444.00	30568	90	150	265	118	0.02	-0.50	24
444.00	445.00	30569	50	270	345	76	-0.02	-0.50	-20
445.00	446.00	30570	10	50	80	49	-0.02	-0.50	-20
446.00	447.00	30571	5	15	110	40	-0.02	-0.50	-20
447.00	447.70	30572	10	50	160	50	-0.02	-0.50	-20
451.20	452.00	30573	45	95	170	155	-0.02	-0.01	-20
452.00	453.00	30574	120	235	740	50	0.04	-0.50	49
453.00	454.60	30575	75	80	400	32	-0.02	-0.50	-20
456.00	457.00	30576	85	-5	50	-3	0.02	0.02	26
458.00	459.00	30577	80	-5	190	-3	0.02	-0.50	27
460.00	461.00	30578	45	10	60	-3	-0.02	-0.50	-20
463.00	464.00	30579	75	295	4200	-3	0.08	-0.50	83
464.00	465.00	30581	70	420	4100	-3	0.09	-0.50	92
465.00	465.70	30582	100	80	470	-3	-0.02	-0.50	-20
465.70	467.00	30583	65	10	145	4	0.02	-0.50	21
467.00	468.00	30584	25	5	200	20	-0.02	-0.50	-20

130604

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	W(PPM
468.00	469.00	30585	250	340	2450	45	0.02	1.00	24
469.00	470.00	30586	410	95	900	36	0.02	2.00	27
470.00	471.00	30587	260	35	2200	42	0.07	1.00	76
471.00	472.00	30588	915	140	10200	27	0.28	3.00	282
472.00	473.00	30589	255	20	1975	43	0.05	5.00	50
473.00	474.00	30590	260	10	900	49	-0.02	1.00	-20
474.00	475.00	30591	420	15	2150	44	0.04	2.00	46
475.00	476.00	30592	360	15	2600	41	0.04	2.00	42
476.00	477.00	30593	360	35	2750	33	0.04	2.00	49
477.00	478.00	30594	145	40	400	40	-0.02	-0.50	-20
478.00	479.00	30595	55	15	100	41	-0.02	-0.50	-20
479.00	480.00	30596	180	30	200	45	-0.02	-0.50	-20
480.00	481.00	30597	25	10	100	43	-0.02	-0.50	-20
481.00	482.00	30598	15	5	300	44	-0.02	-0.50	-20
482.00	483.00	30599	40	15	225	77	0.02	-0.50	25
483.00	484.00	30601	40	5	170	99	-0.02	-0.50	-20
484.00	485.00	30602	105	-5	215	110	0.02	-0.50	24
485.00	486.00	30603	150	-5	675	99	-0.02	-0.50	-20
486.00	487.00	30604	50	5	75	55	0.03	-0.50	35
487.00	488.00	30605	115	5	155	67	-0.02	0.01	-20
488.00	489.00	30606	70	-5	55	48	0.02	-0.50	29
489.00	490.00	30607	25	-5	75	56	0.02	-0.50	28
490.00	491.00	30608	15	5	100	40	-0.02	-0.50	-20
491.00	492.00	30609	15	10	200	74	-0.02	-0.50	-20
492.00	493.00	30610	15	5	100	108	-0.02	-0.50	-20
493.00	494.00	30611	10	-5	60	196	-0.02	-0.50	-20
494.00	495.00	30612	10	125	115	120	-0.02	-0.50	-20
495.00	496.00	30613	10	10	125	87	0.00	-0.50	-20
496.00	497.00	30614	10	90	160	77	-0.02	-0.50	-20
497.00	498.00	30615	10	5	85	77	-0.02	-0.50	-20
498.00	499.00	30616	10	70	595	92	0.02	-0.50	21
499.00	500.00	30617	10	5	80	144	-0.02	-0.50	-20
500.00	501.00	30618	15	-5	85	178	-0.02	-0.50	-20
501.00	502.00	30619	15	-5	95	118	-0.02	-0.50	-20
502.00	503.00	30621	30	-5	145	102	-0.01	-0.50	-50
503.00	504.00	30622	30	-5	135	197	-0.01	-0.50	-50
504.00	505.00	30623	20	-5	100	223	-0.01	-0.50	-50
505.00	506.00	30624	10	-5	100	168	-0.01	-0.50	-50
506.00	507.40	30625	110	-5	85	180	-0.01	-0.50	-50
507.40	508.00	30626	960	45	730	169	-0.01	3.00	-50
508.00	509.00	30627	2350	31800	39800	240	-0.01	36.00	909
509.00	510.00	30628	2800	46800	47100	264	-0.01	70.00	1210

130605

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	W(PPM
510.00	511.00	30629	3150	40700	41600	150	-0.01	44.00	1090
511.00	512.00	30630	1800	37800	13100	134	0.02	35.00	314
512.00	513.00	30631	3700	99400	29200	182	-0.01	78.00	510
513.00	514.00	30632	4050	18500	66600	80	-0.01	35.00	1350
514.00	515.00	30633	570	1250	7700	1150	-0.01	8.00	116
515.00	516.00	30634	110	180	1050	672	-0.01	1.00	-50
516.00	517.00	30635	35	295	1700	747	-0.01	2.00	-50
517.00	518.00	30636	65	55	275	530	-0.01	-0.50	-50
518.00	519.00	30637	2575	3350	80600	139	-0.01	10.00	1640
519.00	520.00	30638	2650	4500	39300	43	-0.01	10.00	984
520.00	521.00	30639	2250	10900	46900	206	-0.01	12.00	1160
521.00	522.00	30641	1750	11200	25200	67	0.02	12.00	632
522.00	523.00	30642	795	840	10200	60	0.03	-0.50	315
523.00	524.00	30643	345	760	7300	86	0.05	-0.50	396
524.00	525.00	30644	575	1150	44500	98	0.02	1.00	1130
525.00	526.00	30645							
526.00	527.00	30646	1900	59000	62900	471	0.01	36.00	1310
527.00	528.00	30647	1750	105600	29000	616	0.01	50.00	524
528.00	529.00	30648	1700	2100	10700	100	-0.01	7.00	390
529.00	530.00	30649	1500	17100	109300	282	-0.01	12.00	2430
530.00	530.90	30650	1500	1850	23500	427	0.01	7.00	609
530.90	532.00	30651	795	4050	15800	208	-0.01	13.00	312
532.00	533.00	30652	1550	4000	11900	499	-0.01	10.00	258
533.00	534.00	30653	775	6850	23900	838	-0.01	9.00	525
534.00	535.00	30654	675	220	3300	118	-0.01	4.00	81
535.00	535.80	30655	930	15	120	60	-0.01	1.00	80
535.80	537.00	30656	350	15	80	7	-0.01	1.00	-50
537.00	538.00	30657	290	10	120	32	-0.01	2.00	-50
538.00	539.00	30658	225	-5	100	35	-0.01	-0.50	-50
539.00	540.00	30659	450	-5	85	13	-0.01	-0.50	-50
540.00	541.00	30661	340	10	45	7	-0.01	-0.50	-50
541.00	542.00	30662	400	5	45	11	-0.01	-0.50	-50
542.00	543.00	30663	370	-5	60	210	-0.01	-0.50	-50
543.00	544.00	30664	515	20	150	345	-0.01	-0.50	-50
544.00	545.00	30665	195	5	55	22	-0.01	-0.50	-50
545.00	546.00	30666	130	-5	40	73	-0.01	-0.50	-50
546.00	547.00	30667	290	15	40	164	-0.01	-0.50	-50
547.00	548.00	30668	210	15	40	48	-0.01	-0.50	-50
548.00	549.00	30669	135	5	40	228	-0.01	-0.50	-50
549.00	550.00	30670	180	20	35	38	-0.01	-0.50	-50
550.00	551.00	30671	200	-5	85	621	-0.01	-0.50	-50
551.00	552.30	30672	400	15	90	36	0.03	-0.50	107

130606

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY005 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	W(PPM
552.30	553.00	30673	220	-5	115	984	-0.01	-0.50	89
553.00	554.00	30674	275	-5	90	488	-0.01	-0.50	-50
554.00	555.00	30675	845	50	60	-3	-0.01	-0.50	84
555.00	556.00	30676	1200	15	45	-3	0.04	-0.50	214
556.00	557.00	30677	1300	75	50	-3	0.20	1.00	-50
557.00	558.00	30678	1300	275	45	7	0.22	1.00	-50
558.00	559.00	30679	905	-5	30	-3	0.10	1.00	50
559.00	560.10	30681	880	25	285	119	0.02	-0.50	101
560.10	561.20	30682	500	40	250	2390	0.02	-0.50	73
561.20	562.00	30683	35	995	6350	670	-0.01	3.00	101
562.00	563.00	30684	15	50	4950	237	-0.01	3.00	67
563.00	564.00	30685	15	130	3750	148	-0.01	1.00	73
564.00	565.00	30686	35	195	9450	193	-0.01	1.00	142
565.00	566.00	30687	945	50	3350	18	-0.01	1.00	138
566.00	567.00	30688	955	150	1700	24	-0.01	3.00	-50
567.00	568.00	30689	435	510	2250	52	-0.01	3.00	53
568.00	569.00	30690	445	330	420	-3	-0.01	2.00	-50
569.00	570.00	30691	360	40	1600	19	-0.01	2.00	-50
570.00	571.00	30692	125	70	2000	77	-0.01	1.00	51
571.00	572.00	30693	340	50	430	25	-0.01	1.00	-50
572.00	572.80	30694	695	40	360	37	-0.01	1.00	-50
572.80	574.30	30695	70	405	2950	110	-0.01	3.00	30
574.30	575.00	30696	235	65	80	67	-0.01	1.00	-50
575.00	576.10	30697	105	60	85	55	-0.01	2.00	-50
576.10	577.10	30698	250	40	55	9	-0.01	2.00	-50
577.10	578.00	30699	255	90	90	-3	-0.01	2.00	-50
578.00	579.00	30801	190	90	75	-3	0.03	-0.50	39
579.00	579.90	30802	205	105	160	14	-0.02	1.00	-20
579.90	581.00	30803	50	330	360	174	-0.02	-0.50	-20
581.00	582.00	30804	55	670	1000	66	-0.02	-0.50	-20
582.00	583.00	30805	80	525	800	105	-0.02	-0.50	-20
583.00	584.00	30806	160	715	2600	53	0.02	-0.50	25
584.00	585.00	30807	70	110	75	23	-0.02	-0.50	-20
585.00	586.00	30808	285	295	1050	89	0.19	3.00	197
586.00	586.60	30809	500	235	1000	162	0.03	3.00	33
610.00	611.00	30810	30	25	75	4	-0.02	-0.50	-20
619.00	620.00	30811	35	20	50	6	-0.02	-0.50	-20
635.00	636.00	30812	30	5	75	4	-0.02	0.01	-20
639.00	640.00	30813	25	-5	25	23	-0.02	-0.50	-20
648.90	649.40	30814	50	10	45	37	0.02	-0.50	29

130607

R.G.C. Exploration Pty Ltd
SYLVESTER GRID

DIAMOND DRILLHOLE : SY006

PROJECT IDEN : ZEEHAN
COLLAR NORTHING: 60633.00
DRILLED BY : POLTOCK
START DATE : 20 NOV 90
COLLAR EASTING : 57837.00
TOTAL LENGTH : 48.60
COMPLETION DATE : 22 NOV 90
COLLAR ELEVATION: 309.00
CORE/HOLE SIZE : TT46
LOGGED BY: DR. SCOTT W. HALLEY
GRID AZIMUTH : 0.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		238.00	-60.00	60633.00	57837.00	309.00
001	48.60		238.00	-60.00			

R HED THE AVERAGE RECOVERY FOR THIS HOLE WAS 5% . IT FAILED TO
R HED PENETRATE THE WEATHERED ZONE. THE LONG SECTIONS WHERE THERE WAS
R HED NO RECOVERY WERE PROBABLY CLAY ZONES. THE DRILLERS REPORTED
R HED EXTREMELY SOFT GROUND THROUGH THESE ZONES.

	Interval From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
	0.00	2.80			NO CORE.	
	2.80	6.50			CLAYEY SILTSTONE: pale grey, highly weathered, cleaved, cleavage: 40 degree angle to c.a..	
	6.50	9.50			MASSIVE SULPHIDES: vuggy, 50% pyrite euhedral crystals of.	
R	6.50	9.50			APPROXIMATELY 5% RECOVERY IN THIS INTERVAL. THE PYRITE IS	
R	6.50	9.50			PROBABLY SUPERGENE IN ORIGIN.	
	9.50	10.25			CLAY: black.	
	10.25	29.40			NO CORE.	
	29.40	48.60			SANDSTONE: medium orange, limonitic, highly weathered.	
R	29.40	48.60			NO RECOVERY FROM WIDE SECTIONS THROUGH THIS INTERVAL.	

130608

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY006 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	AS(PPM)
2.80	6.45	29283	45	4900	190	20	-0.01	1.00	95.00
9.50	37.90	29285	20	9450	2100	6	-0.01	3.00	101.00
37.90	48.60	29286	5	5000	700	-3	-0.01	3.00	101.00

130609

R.G.C. Exploration Pty Ltd
SYLVESTER GRID

DIAMOND DRILLHOLE : SY007

PROJECT IDEN : ZEEHAN
COLLAR NORTHING: 60615.00
DRILLED BY :POLTOCK
START DATE : 22 NOV 90
COLLAR EASTING : 57803.00
TOTAL LENGTH : 37.20
COMPLETION DATE : 27 NOV 90
COLLAR ELEVATION: 311.00
CORE/HOLE SIZE : TT46
LOGGED BY:DR. SCOTT W.HALLEY
GRID AZIMUTH : 0.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		238.00	-60.00	60615.00	57803.00	311.00
001	37.20		238.00	-60.00			

R HED APPROXIMATELY 20 % RECOVERY. MOST OF THE HOLE WAS THROUGH
R HED DECOMPOSED CLAYEY MATERIAL FROM WHICH THERE WAS NO RECOVERY.
R HED THE HOLE FAILED TO PENETRATE THE OXIDIZED ZONE.

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
	0.00	16.00			NO CORE.	
	16.00	24.40			SANDSTONE: medium orange, limonitic, highly weathered, fractured.	
	24.40	31.20			IRONSTONE: limonitic, highly weathered.	
	31.20	37.20			CLAYEY SANDSTONE: palest grey, highly weathered.	
R	31.20	37.20			2% RECOVERY THROUGH THIS INTERVAL. DRILLERS REPORTED LARGE	
R	31.20	37.20			"CAVATIES" THROUGH THIS INTERVAL.	

130610

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
DIAMOND DRILLHOLE : SY007 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)	AS(PPM)
16.00	19.55	29287	145	4600	1900	8	-0.01	3.00	101.00
19.55	20.10	29288	115	3650	1200	-3	-0.01	3.00	101.00
20.10	20.90	29289	115	1800	1100	-3	-0.01	-0.50	101.00
20.90	22.30	29290	115	2500	1300	4	-0.01	1.00	101.00
22.30	22.75	29291	125	3150	1500	5	-0.01	-0.50	101.00
22.75	23.70	29292	55	3200	700	5	-0.01	1.00	101.00
23.70	24.50	29293	75	4050	700	3	-0.01	1.00	101.00
24.50	28.40	29294	95	6200	1400	10	-0.01	1.00	101.00
28.40	37.25	29295	75	9350	400	30	-0.01	5.00	101.00

INTERNATIONAL GEOSYSTEMS CORPORATION

R.G.C. Exploration Pty Ltd
SYLVESTER GRID

SURFACE DIAMOND DRILLHOLE : SY008

PROJECT IDEN : ZEEHAN
COLLAR NORTHING: 60773.76
DRILLED BY :D.D.T

START DATE : 1 APR 91
COLLAR EASTING : 57199.90
TOTAL LENGTH : 421.00

COMPLETION DATE : 13 MAY 91
COLLAR ELEVATION: 309.49
CORE/HOLE SIZE : HQNQ

LOGGED BY:DAVID JOHN CROSSING
GRID AZIMUTH : 0.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		360.00	-50.00	60773.76	57199.90	309.49
001	30.00		1.00	-55.00			
002	60.00		360.00	-53.00			
003	90.00		360.00	-53.00			
004	124.00		0.50	-52.00			
005	150.00		0.50	-52.00			
006	180.00		1.00	-53.30			
007	210.00		1.00	-53.50			
008	240.00		358.50	-54.50			
009	270.00		358.00	-55.50			
010	300.00		358.50	-56.00			
011	330.00		357.50	-55.50			
012	360.00		3.00	-55.00			
013	390.00		3.00	-55.00			
014	420.00		3.00	-54.00			
015	421.00		3.00	-54.00			

R HED
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R HED

THIS HOLE WAS DESIGNED TO TEST THE SKARN INTERSECTED BY SY009, ABOUT 200M UPDIP (AT A VERTICLE DEPTH OF ABOUT 250M). THE HOLE PASSED THROUGH A BROAD ZONE OF FAULTING WITH SUBSEQUENT HIGH CORE LOSS FROM 0 - 140M AND THROUGH FAULTS AT 177 - 183 M AND 187 - 193M. BELOW THIS THE HOLE REMAINED IN A SEQUENCE OF PSAMMO - PELITES INTERPRETED AS LOWER OONAH FM. SOME VEIN MINERALISATION WAS NOTED. A MAJOR THRUST PROBABLY SEPERATES THE SEQUENCE FROM THAT ENCOUNTERED IN SY005.

130612

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	0.00	12.00			NO CORE.	
	12.00	23.00	3.1		SHALE: palest grey, talcose, exceptionally weathered, fissile, crumbly, exceptionally broken.	
R	12.00	23.00			ALTHOUGH QUARTZITE DOMINATES THE SMALL QUANTITY OF CORE	
R	12.00	23.00			RECOVERED, IT IS LIKELY THAT THE UNRECOVERED MATERIAL IS SHALE	
R	12.00	23.00			THAT IS COMPLETELY WEATHERED TO CLAYS, AND WASHED OUT DURING	
R	12.00	23.00			DRILLING. MAY BE A DECOMPOSED MELANGE IN PART.	
					12.00- 23.00: 10% IRREGULARLY INTERBEDDED QUARTZITE: gray mottled, massive, brecciated, 10% quartz veins of.	
					12.00- 23.00: 10% VEIN: white, massive, 90% quartz veins of.	
	23.00	24.50	0.7		SHALE: black, moderately graphitic, moderately weathered, fissile, crumbly, exceptionally broken.	
R	23.00	24.50			WEATHERS ALONG JOINTS AND FRACTURES TO A LIGHT GREY TALCY	
R	23.00	24.50			ROCK.	
	24.50	55.40	8.3		MELANGE: gray mottled, slightly graphitic, massive, crumbly, exceptionally broken, 10% quartz veins of, 3 % pyrite veins of.	
R	24.50	55.40			BADLY BROKEN, SOME BRECCIA TEXTURES ARE PROBABLY THE RESULT OF	
R	24.50	55.40			THE MIXING OF HARD QUARTZITE FRAGMENTS WITH SOFT CLAYEY PELITES	
R	24.50	55.40			DURING DRILLING. HOWEVER, SOME SHORT LENGTHS OF RECOGNISABLE	
R	24.50	55.40			MELANGE WERE LOGGED NEAR TOP OF INTERVAL, WHERE IT CONSISTS OF	
R	24.50	55.40			FRAGMENTS OF QUARTZ-VEINED QUARTZITE IN A DEFORMED SHALEY	
R	24.50	55.40			MATRIX.MATRIX IS "TALCY".	
					29.00- 30.80: 100% SANDSTONE: medium gray, moderately micaceous, massive, fine sand.	
	55.40	74.00	5.3		SANDSTONE: slightly weathered, massive, brittle, exceptionally broken, 0.1% quartz veins of, trace tourmaline veins of.	
R	55.40	74.00			QUARTZITE HAS WEAK TO MODERATE PENETRATIVE FOLIATION OF	
R	55.40	74.00			PROBABLE TECTONIC ORIGIN (FOLDED) AND THIN QUARTZ - TOURMALINE	
R	55.40	74.00			VEINS WITH NARROW SILICEOUS ALTERED HALOES.	
					55.40- 74.00: 50% IRREGULARLY INTERBEDDED SHALE: gray green, fissile.	
					65.70- 70.00: 30% VEIN: white, vuggy, 80% quartz veins of, 10% tourmaline veins of.	
	74.00	76.30	0.0		NO CORE.	
	76.30	76.80	0.2		VEIN: highly oxidised, 90% quartz veins of, 3 % pyrite veins of.	

130613

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	76.80	82.00	0.0		NO CORE.	
	82.00	84.90	0.6		SILTSTONE: light gray, highly weathered, fissile.	
	84.90	88.00	0.8		SHEAR (ZONE): clayey, highly weathered, strongly sheared, shear: 0 degree angle to c.a..	
	88.00	89.00	0.0		NO CORE.	
	89.00	92.00	0.6		VEIN: white, oxidised, vuggy, 80% quartz veins of, 5% tourmaline veins of, 5% fe-oxides veins of.	
	92.00	105.60	5.1		MELANGE: light brown, oxidised, sheared, crumbly, exceptionally broken, 3 % fe-oxides disseminations of. 102.10- 103.00: 100% VEIN: 10% pyrite veins of, 30% galena veins of, 60% sphalerite veins of.	
	105.60	121.00	2.8		SANDSTONE: medium gray, foliated, massive, brittle, exceptionally broken, 20% quartz veins of, 3 % talc veins of, 3 % pyrite veins of, .03% galena veins of.	UPPER OONAH
R	105.60	121.00			MASSIVE CORE LOSS DUE TO LOSS OF A SOFT GREY CLAY (?MELANGE)	
R	105.60	121.00			WHICH IS WASHED AWAY BY DRILLING FLUIDS.	
BOX					105.60- 105.61: 100% ANY ROCK.	
					105.60- 121.00: 70% CLAY: very dark gray, soft.	
*	121.00	139.90	6.0		MELANGE: highly weathered, massive, brecciated, soft, highly broken, 3 % pyrite disseminations > veins, 0.3% galena disseminations = veins, 1% sphalerite disseminations = veins.	
R	121.00	139.90			GENERALLY ANGULAR FRAGMENTS OF DECOMPOSED CARBONATE	
R	121.00	139.90			SANDSTONE,SHALE,QUARTZ AND SULPHIDES IN MATRIX THAT HAS	
R	121.00	139.90			DECOMPOSED TO A SOFT LIGHT GREY/BROWN TO DARK GREY CLAY.	
R	121.00	139.90			FRAGMENTS MOSTLY LESS THAT 1 CM IN SIZE.	
			6.0		130.90- 132.10: 100% MELANGE: highly weathered, massive, brecciated, soft, highly broken, 10% pyrite veins of, 10% galena veins of, 20% sphalerite veins of.	
	139.90	156.30	6.1		SANDSTONE: medium gray, massive, disrupted bedding, brittle, exceptionally broken, coarse sand, 10% quartz veins of, 1% pyrite disseminations = veins, 1% chlorite disseminations of, 1% sphalerite veins of.	OONAH FM UNDIFFERENT
R	139.90	156.30			LOCALLY BRECCIATED.	
					139.90- 156.30: 50% IRREGULARLY INTERBEDDED SHALE: black, slightly graphitic.	

130614

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	156.30	162.60	6.3		SANDSTONE: dark gray, slightly carbonaceous, massive, foliated, disrupted bedding, hard, highly broken, bedding: 10 degree angle to c.a., cleavage: 0 degree angle to c.a., 5% quartz veins of, 3 % pyrite disseminations) veins, 0.3% epidote veins of, 0.3% pyrrhotite veins of.	OONAH FM UNDIFFERENT
R	156.30	162.60			THE FOLIATION APPEARS TO BE TECTONIC IN ORIGIN, BUT IS ROUGHLY	
R	156.30	162.60			PARALLEL TO SHALEY PARTINGS. SOME EPIDOTE VEINING OCCURS	
R	156.30	162.60			PERPENDICULAR TO FOLIATION.	
R	156.30	162.60			NOTE: THE HOLE WAS CEMENTED WHEN AT 166.0 M, BUT WHEN DRILLING	
R	156.30	162.60			BACK THROUGH THE CEMENT THE HOLE DEVIATED AND FROM ABOUT 156.0M	
R	156.30	162.60			ONWARD IT REMAINED OUTSIDE THE ORIGINAL CEMENTED HOLE. FOR THIS	
R	156.30	162.60			REASON THE ADDITIONAL CORE WAS RETAINED. AS A RESULT FOR THE	
R	156.30	162.60			INTERVAL 156.8 - 166.0M THE CORE IS DUPLICATED.LOGGING OF THE	
R	156.30	162.60			HOLE TRANSFERED TO THE "NEW" HOLE AT 156.8M.	
			6.3		162.10- 162.59: 100% SANDSTONE: dark gray, slightly carbonaceous, massive, foliated, brecciated, hard, highly broken, bedding: 10 degree angle to c.a., cleavage: 0 degree angle to c.a., 10% quartz veins of, 3 % pyrite disseminations = veins, 0.3% epidote veins of, 5% pyrrhotite veins of.	OONAH FM UNDIFFERENT
	162.60	169.50	6.9		SANDSTONE WITH SHALE: dark gray, slightly carbonated, fine bedded, graded bedding, hard, highly broken, bedding: 40 degree angle to c.a., microfault: 25 degree angle to c.a., 1% quartz veins of, 3 % pyrite disseminations = veins, 0.1% muscovite veins of, 0.1% chlorite veins of, 0.1% epidote veins of.	OONAH FM UNDIFFERENT
R	162.60	169.50			DISRUPTED WITH BCA VARYING 0 - 45 DEGREES, LOCALLY	
R	162.60	169.50			SHEARED.PREFERENTIALLY WHERE SHALEY.	
					165.40- 166.00: 100% SHEAR (ZONE): shear: 30 degree angle to c.a., 40% quartz infilling shear/fault, 3 % pyrite infilling shear/fault.	
	169.50	177.00	7.5		SANDSTONE: light gray, massive, hard, moderately broken, coarse sand, 10% quartz veins of, 3 % pyrite disseminations) veins. 171.40- 171.80: 100% SHEAR (ZONE): crumbly, exceptionally broken, shear: 30 degree angle to c.a., 5% pyrite disseminations) veins.	OONAH FM UNDIFFERENT
	177.00	182.90	3.6		FAULT: medium gray, brecciated, crumbly, exceptionally broken, shear: 10 degree angle to c.a., gradational base, 3 % pyrite infilling shear/fault.	OONAH FM UNDIFFERENT
R	177.00	182.90			MODERATE TO STRONGLY SHEARED & BRECCIATED SANDSTONE, SHEARED AT	
R	177.00	182.90			SHALLOW ANGLE TO BEDDING ?.	

130615

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	182.90	186.80	3.9		SANDSTONE: light gray, massive, disturbed bedding, sheared, hard, moderately broken, coarse sand, gradational base, 5% quartz veins of, 3 % pyrite disseminations = veins, 0.3% pyrrhotite disseminations = veins.	OONAH FM UNDIFFERENT
	186.80	193.00	5.2		SHEAR (ZONE): dark gray, slightly carbonated, crumbly, exceptionally broken, shear: 15 degree angle to c.a., gradational base, 3 % quartz infilling shear/fault, 5% pyrite infilling shear/fault.	OONAH FM UNDIFFERENT
R	186.80	193.00			INCLUDES REMNANT FRAGMENTS OF CONTORTED SILTSTONE.	
	193.00	220.30	27.3		SILTSTONE: dark gray, slightly carbonated, medium bedded, strongly folded, hard, moderately broken, faulted base, 3 % quartz veins of, 3 % pyrite disseminations = veins.	OONAH FM UNDIFFERENT
R	193.00	220.30			MOSTLY FOLDED WITH VARIABLE BCA. WHERE UNDISTURBED, BCA VARIES	
R	193.00	220.30			15 - 40 DEGREES.	
					193.00- 220.30: 10% IRREGULARLY INTERBEDDED SANDSTONE: light gray, medium bedded, fine bedded, coarse sand.	
			27.3		193.00- 220.29: 100% SILTSTONE: dark gray, slightly carbonated, medium bedded, sheared, brecciated, hard, moderately broken, shear: 15 degree angle to c.a., faulted base, 10% quartz veins of, 5% pyrite disseminations = veins.	OONAH FM UNDIFFERENT
	220.30	221.00	0.7		SANDSTONE WITH SILTSTONE: sheared, shear: 10% quartz veins of, 5% pyrite disseminations = veins.	OONAH FM UNDIFFERENT
	221.00	224.00	3.0		SANDSTONE: light gray, medium bedded, hard, moderately broken, gradational base, 10% quartz veins of, 3 % pyrite disseminations = veins.	OONAH FM UNDIFFERENT
R	221.00	224.00			STRONG CONVOLUTE FOLDING IN LAMINATED SILTSTONE MAY BE SOFT	
R	221.00	224.00			SEDIMENT DEFORMATION.	
					221.00- 224.00: 50% INTER BEDDED SILTSTONE: light gray, fine bedded, laminated, strongly folded, microfaults.	
	224.00	236.40	12.4		SILTSTONE: very dark gray, moderately carbonated, moderately calcareous, medium bedded, sheared, hard, moderately broken, bedding: 45 degree angle to c.a., faulted base, 10% quartz veins of, 1% pyrite veins of, 3 % pyrrhotite disseminations of.	OONAH FM UNDIFFERENT
R	224.00	236.40			PYRRHOTITE OCCURS DISSEMINATED AND AS IRREGULAR (REPLACIVE?)	
R	224.00	236.40			MASSES IN IMPURE MICACEOUS SANDSTONE.PYRRHOTITE MASSES HAVE	
R	224.00	236.40			MICACEOUS HALOES. NUMEROUS DISCRETE GRAPHITIC SHEARS OCCUR AT	
R	224.00	236.40			ABOUT 10CM INTERVAL AT 15 - 45 DEGREES TO C.A. (AVE 40	

130616

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
R	224.00	236.40			DEGREES).	
R	224.00	236.40			MOST ARE SLICKENSIDED.CALCAREOUS WHERE GRAPHITIC. 224.00- 236.40: 40% INTER BEDDED SANDSTONE: light gray, moderately micaceous.	
	236.40	237.00	0.6		FAULT: black, exceptionally graphitic, slickensided, crumbly, highly broken, fault: 15 degree angle to c.a..	OONAH FM UNDIFFERENT
R	236.40	248.80			FAULT SURFACES AT 15 - 20 DEGREES TO C.A. CONTAIN STRONG	
R	236.40	248.80			SLICKENSIDES AT 80 DEG TO C.A.	
	237.00	250.00	13.0		SILTSTONE: darkest brown, moderately graphitic, medium bedded, massive, sheared, moderate to strongly folded, hard, moderately broken, shear: 20 degree angle to c.a., gradational base, 3 % quartz veins of, 3 % pyrite disseminations (veins. 238.90- 242.60: 100% SHEAR (ZONE): black, exceptionally graphitic, 1% quartz veins of, 0.1% pyrite disseminations of.	OONAH FM UNDIFFERENT
R	248.80	250.00			SLICKENSIDES AT 80 DEGREES TO C.A (AS ABOVE), IN IRREGULARLY	
R	248.80	250.00			SPACED FRACTURES. ALSO LOCALISED TIGHT FOLDING, BRECCIATION.	
	250.00	253.70	3.7		SHALE WITH SILTSTONE: medium dark grey, laminated, microfaults, soft sediment slumping, hard, moderately broken, sharp base, 5% quartz veins of, 0.3% pyrite disseminations = veins, 3 % pyrrhotite disseminations = veins, 0.3% sphalerite veins of. 250.00- 253.00: 30% IRREGULARLY INTERBEDDED SANDSTONE: medium light grey, medium bedded.	OONAH FM UNDIFFERENT
	253.70	269.00	15.3		SANDSTONE: light gray, massive, medium bedded, hard, slightly broken, coarse sand, bedding: 45 degree angle to c.a., gradational base, 1% carbonate veins of. 253.70- 269.00: 50% INCREASING DOWNHOLE SILTSTONE: medium dark grey, fine bedded.	OONAH FM UNDIFFERENT
			15.3		254.20- 255.50: 100% SANDSTONE: light gray, slightly graphitic, moderately micaceous, massive, medium bedded, sheared, hard, slightly broken, coarse sand, bedding: 45 degree angle to c.a., shear: 45 degree angle to c.a., gradational base, 10% quartz veins of, 1% carbonate veins of, 3 % pyrrhotite disseminations of.	OONAH FM UNDIFFERENT
R	256.40	258.10			REGULARLY SPACED MICROFAULTS (ABOUT 4MM SPACING), OCCUR AT 45	
R	256.40	258.10			DEGREES TO C.A. AND APPROXIMATELY PERPENDICULAR TO BEDDING,	
R	256.40	258.10			RESEMBLES CLEAVAGE. UNUSUAL SAND DYKES ARE ALSO PRESENT.	
	269.00	277.00	8.0		SILTSTONE: dark gray, medium bedded, graded bedding, hard, slightly broken, bedding: 45 degree angle to c.a., downhole	OONAH FM UNDIFFERENT

130617

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					facing. 269.00- 277.00: 5% INTER BEDDED SANDSTONE: light gray, fine bedded.	
	277.00	277.70	0.7		FAULT: moderately graphitic, fault: 80 degree angle to c.a., 5% quartz infilling shear/fault, 3 % pyrrhotite infilling shear/fault.	OONAH FM UNDIFFERENT
	277.70	297.20	19.5		SANDSTONE: light gray, medium bedded, fine bedded, hard, moderately broken, coarse sand, bedding: 10 degree angle to c.a., sharp base, 1% quartz veins of, 0.3% carbonate veins of, 0.3% pyrite veins of, 1% pyrrhotite veins of. 277.70- 297.20: 30% INTER BEDDED SILTSTONE: medium dark grey. 280.90- 283.00: 60% FAULT: slickensided, brecciated, fault: 15 degree angle to c.a..	OONAH FM UNDIFFERENT
			19.5		292.50- 297.19: 100% SANDSTONE: light gray, slightly graphitic, moderately calcareous, medium bedded, fine bedded, disturbed bedding, fractured, hard, moderately broken, coarse sand, bedding: 10 degree angle to c.a., fault: 15 degree angle to c.a., sharp base, 1% quartz veins of, 0.3% carbonate veins of, 0.3% pyrite veins of, 1% pyrrhotite veins of.	OONAH FM UNDIFFERENT
	297.20	309.90	12.7		SANDSTONE: light gray, massive, hard, slightly broken, coarse sand, 3 % quartz veins of, 1% pyrite veins of, 1% pyrrhotite veins of.	OONAH FM UNDIFFERENT
	309.90	311.20	1.3		FAULT: moderately graphitic, moderately calcareous, brecciated, fault: 15 degree angle to c.a., .03% carbonate veins of, 1% pyrite infilling shear/fault.	OONAH FM UNDIFFERENT
	311.20	315.40	4.2		SANDSTONE: light gray, massive, hard, slightly broken, coarse sand, 0.3% quartz veins of, 0.3% carbonate veins of, 1% pyrite disseminations = veins, 0.3% pyrrhotite veins of.	OONAH FM UNDIFFERENT
	315.40	316.10	0.7		FAULT: fault: 5% quartz infilling shear/fault, 0.3% carbonate veins of, 1% pyrite infilling shear/fault, 3 % pyrrhotite infilling shear/fault.	OONAH FM UNDIFFERENT
	316.10	320.80			SILTSTONE: medium dark grey, slightly calcareous, fine bedded, medium bedded, moderately folded, microfaults, hard, 3 % quartz veins of, 1% pyrite disseminations = veins, 1% pyrrhotite disseminations = veins.	OONAH FM UNDIFFERENT
R	316.10	320.80			MICROFAULTING OCCURS AT 25 AND 55 DEGREES TO C.A. 316.10- 320.80: 50% IRREGULARLY INTERBEDDED SANDSTONE: light	

130619

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					gray, medium bedded, coarse sand.	
	320.80	362.00			SANDSTONE: light gray, massive, hard, moderately broken, coarse sand, bedding: 30 degree angle to c.a., gradational base, 3 % quartz veins of, 0.3% carbonate veins of, 0.3% pyrite disseminations < veins, .03% galena veins of, 0.1% pyrrhotite disseminations < veins, .03% sphalerite veins of. 322.00- 332.40: 100% SANDSTONE: light gray, massive, stockworked, hard, moderately broken, coarse sand, bedding: 30 degree angle to c.a., gradational base, 3 % quartz veins of, 0.3% carbonate veins of, 3 % pyrite disseminations < veins, 0.1% galena veins of, 0.3% pyrrhotite disseminations < veins, 0.1% sphalerite veins of. 332.40- 333.65: 100% VEIN: vein: 15 degree angle to c.a., 30% quartz veins of, 50% pyrite veins of, 1% galena veins of, 3 % sphalerite veins of. 339.90- 344.00: 100% SANDSTONE: light gray, massive, hard, moderately broken, coarse sand, bedding: 30 degree angle to c.a., gradational base, 5% quartz veins of, 0.3% carbonate veins of, 3 % pyrite disseminations = veins, 0.3% galena veins of, 0.1% pyrrhotite disseminations < veins, 1% sphalerite veins of.	OONAH FM UNDIFFERENT
	362.00	362.55	0.5		SANDSTONE WITH SILTSTONE: medium light grey, medium bedded, hard, moderately broken, coarse sand, 3 % quartz veins of, 3 % carbonate veins of.	OONAH FM UNDIFFERENT
	362.55	362.70	0.1		FAULT BRECCIA: breccia: 30 degree angle to c.a., 30% quartz infilling shear/fault, 40% carbonate infilling shear/fault.	OONAH FM UNDIFFERENT
	362.70	364.00	1.3		SANDSTONE WITH SILTSTONE: medium light grey, medium bedded, disturbed bedding, hard, moderately broken, coarse sand, basal contact: 80 degree angle to c.a., 5% quartz veins of, 5% carbonate veins of, 0.3% pyrite disseminations < veins, 0.3% pyrrhotite disseminations < veins.	OONAH FM UNDIFFERENT
	364.00	408.20			SILTSTONE: dark gray, moderately carbonaceous, massive, hard, slightly broken, bedding: 20 degree angle to c.a., gradational base, 0.1% pyrrhotite veins of.	OONAH FM UNDIFFERENT
R	364.00	408.20			OCCASIONALLY FAINTLY LAMINATED. BCA'S CONSTANT (UNDEFORMED),	
R	364.00	408.20			GRADING TO SILTY FINE SANDSTONE. WIDE SPACED FRACTURES WITH	
R	364.00	408.20			MINOR DISPLACEMENT (A FEW CM) ARE COMMON RANGING 10 - 30	
R	364.00	408.20			DEGREES TO C.A.	
R	364.00	408.20			BCA'S VARY FROM 80 DEGREES (NEAR TOP) TO 5 DEGREES TO C.A (AVE	

130619

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
R	364.00	408.20			20) CLEAVAGE LOCALLY DEVELOPED. 382.00- 382.30: 100% SANDSTONE: medium light grey, bedding: 35 degree angle to c.a., 3 % quartz laminations, 5% pyrrhotite laminations. 391.70- 395.00: 100% SILTSTONE: dark gray, moderately carbonaceous, massive, hard, slightly broken, bedding: 20 degree angle to c.a., gradational base, 0.3% quartz stockwork, 1% carbonate stockwork, 0.3% chlorite stockwork, 1% pyrrhotite stockwork. 395.00- 404.80: 100% SILTSTONE: medium light grey, massive, 1% quartz veins of, 1% pyrite disseminations of, 1% pyrrhotite stockwork.	
END	408.20	421.00			SANDSTONE: medium light grey, medium bedded, coarse bedded, hard, slightly broken, coarse sand, bedding: 40 degree angle to c.a., fracture: 15 degree angle to c.a., 3 % quartz veins of, 1% pyrite disseminations of, 0.3% galena stockwork, 1% pyrrhotite stockwork, 0.3% sphalerite stockwork.	OONAH FM UNDIFFERENT
R	408.20	421.00			OCCASIONALLY SILTY GRADED MUDSTONE BEDS FACE CONSISTENTLY	
R	408.20	421.00			DOWNHOLE. THINNER SANDSTONE BEDS ARE SOMETIMES BOUDINAGED AND	
R	408.20	421.00			QUARTZ- SUPLHIDES VEINING IS MOSTLY SELECTIVE HOSTED BY THE	
R	408.20	421.00			MORE COMPETENT SANDSTONE. BCA'S VARY 0 - 45 DEGREES (AVE 40).	
END					408.20- 421.00: 50% SALTY MUDSTONE: medium light tan, medium bedded, coarse bedded, hard, slightly broken, coarse sand, bedding: 40 degree angle to c.a., downhole facing, fracture: 15 degree angle to c.a., 3 % quartz veins of, 1% pyrite disseminations of, 0.3% galena stockwork, 1% pyrrhotite stockwork, 0.3% sphalerite stockwork. 412.30- 412.40: 100% FAULT: fault: 40 degree angle to c.a., 10% quartz infilling shear/fault, 3 % pyrite infilling shear/fault, 1% chlorite infilling shear/fault, 20% pyrrhotite infilling shear/fault, 3 % sphalerite infilling shear/fault.	

130630

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)
26.00	30.00	33901	39	381	1615	-3	-0.01	-0.50
34.00	38.00	33902	40	249	1824	-3	-0.01	-0.50
42.00	46.00	33903						
50.00	54.00	33904	14	219	93	5	-0.01	5.00
89.00	92.00	33905	74	91	149	5	-0.01	7.50
92.00	94.00	33906	360	766	120	20	-0.01	10.50
96.00	98.00	33907	51	2327	14300	9	-0.01	6.60
100.00	102.10	33908						
102.10	103.00	33909	131	131700	451400	74	0.01	334.00
105.60	110.00	33910	25	1347	3659	6	-0.01	2.00
110.00	115.00	33911	36	831	1224	-3	-0.01	-0.50
115.00	121.00	33912	80	923	953	3	-0.01	0.90
121.00	123.00	33913	41	16200	10000	9	-0.01	11.30
123.00	125.00	33914	26	4965	7774	9	-0.01	4.80
125.00	127.00	33915	14	4698	12400	49	-0.01	2.80
127.00	129.00	33916						
129.00	130.90	33917	135	79200	87400	127	-0.01	42.00
130.90	132.10	33918	335	93800	183400	245	0.01	61.00
132.10	134.00	33919	32	2819	8007	25	-0.01	4.80
134.00	136.00	33957	97	10400	14200	55	-0.01	
136.00	138.00	33921	212	12000	11700	11	-0.01	10.50
138.00	139.90	33922	121	18600	48500	86	-0.01	22.00
139.90	141.00	33923	26	290	1031	3	-0.01	0.50
142.00	143.00	33924	21	244	1674	-3	-0.01	-0.50
144.00	145.00	33925	31	223	1343	4	-0.01	1.10
145.00	147.00	33926	16	2060	2205	-3	-0.01	1.10
148.00	149.00	33927	38	222	2707	-3	-0.01	0.60
150.00	151.00	33928	34	206	399	6	-0.01	
152.00	153.00	33929	40	113	447	-3	-0.01	
154.00	155.00	33930	26	141	170	4	-0.01	
160.00	161.00	33931	13	19	59	-3	-0.01	
165.40	166.00	33932	15	145	153	4	-0.01	
171.40	171.80	33933	17	112	96	-3	-0.01	
178.00	179.00	33934	30	10	50	5	-0.01	
180.00	181.00	33935	32	48	185	5	-0.01	
182.00	182.90	33936	25	331	164	15	-0.01	
188.00	189.00	33937	32	19	27	7	-0.01	
190.00	191.00	33938	49	110	186	15	-0.01	
192.00	193.00	33939	55	132	51	7	-0.01	
200.00	201.00	33958	28	78	63	4	-0.01	
210.00	211.00	33941	31	46	31	4	-0.01	
220.30	221.00	33942	47	67	56	-3	-0.01	

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130621

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY008 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)
224.00	225.00	33943	39	-5	31	-3	-0.01	
228.00	229.00	33944	57	71	37	-3	0.02	
232.00	233.00	33945	47	-5	32	4	-0.01	
236.40	237.00	33946	53	126	35	6	-0.01	
240.00	241.00	33947	51	96	43	4	0.02	
250.00	251.00	33948	61	17	32	4	-0.01	
251.00	252.00	33949	62	16	39	-3	-0.01	
252.00	253.00	33950	72	25	528	8	-0.01	
253.00	253.70	33951	26	22	37	6	-0.01	
260.00	261.00	33952	48	39	26	-3	-0.01	
270.00	271.00	33953	42	188	94	3	-0.01	
280.00	281.00	33954	37	42	159	-3	-0.01	
290.00	291.00	33955	14	21	15	6	-0.01	
300.00	301.00	33956	-5	15	109	4	-0.01	
315.40	316.10	33959	46	31	486	4	-0.01	
322.00	323.00	33961	32	1261	484	27	-0.01	1.90
326.00	327.00	33962	42	46	40	9	-0.01	-0.50
330.00	331.00	33963	46	38	27	21	-0.01	-0.50
332.40	333.65	33964	256	524	400	28	0.04	1.10
339.90	341.00	33965	25	875	74	14	-0.01	1.20
341.00	342.00	33966	23	2917	4899	8	-0.01	3.70
342.00	343.00	33967	128	4600	11200	15	-0.01	16.00
343.00	344.00	33968	172	10300	11200	21	-0.01	20.00
348.00	349.00	33969	15	81	64	6	-0.01	-0.50
352.00	353.00	33970	8	19	44	4	-0.01	-0.50
356.00	357.00	33971	26	47	43	4	-0.01	-0.50
360.00	361.00	33972	14	11	38	3	-0.01	-0.50
370.00	371.00	33973	22	7	29	3	-0.01	-0.50
380.00	381.00	33974	113	-5	35	8	-0.01	-0.50
391.70	393.00	33975	48	-5	54	6	-0.01	-0.50
396.00	397.00	33976	39	16	60	17	-0.01	-0.50
408.20	409.00	33977	36	12	73	-3	-0.01	-0.50
412.00	413.00	33978	379	423	1046	22	-0.01	4.00
416.00	417.00	33979	15	6	26	7	-0.01	-0.50
420.00	421.00	33981	41	26	44	13	-0.01	-0.50

130622

R.G.C. Exploration Pty Ltd
SYLVESTER GRID

SURFACE DIAMOND DRILLHOLE : SY009

PROJECT IDEN : ZEEHAN
COLLAR NORTHING: 60963.00
DRILLED BY :D.D.T

START DATE : 14 MAY 91
COLLAR EASTING : 57434.00
TOTAL LENGTH : 597.90

COMPLETION DATE :
COLLAR ELEVATION: 310.00
CORE/HOLE SIZE : HQNQ

LOGGED BY:DAVID JOHN CROSSING
GRID AZIMUTH : 0.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		190.00	-75.00	60963.00	57434.00	310.00
001	60.00		191.00	-75.00			
002	90.00		192.00	-74.70			
003	120.00		194.00	-74.70			
004	150.00		193.00	-74.40			
005	180.00		193.50	-74.30			
006	210.00		197.00	-74.00			
007	240.00		193.00	-73.90			
008	270.00		199.00	-73.70			
009	300.00		197.50	-73.50			
010	330.00		197.30	-73.00			
011	360.00		197.30	-73.30			
012	390.00		197.30	-73.00			
013	420.00		197.30	-73.00			
014	450.00		197.30	-73.30			
015	480.00		197.30	-73.50			
016	525.00		197.30	-73.60			
017	570.00		197.30	-73.70			
018	591.00		197.30	-73.70			
019	597.00		197.30	-73.70			
020	597.90		197.30	-73.70			

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SY009 WAS DESIGNED TO TEST THE BASE METAL SKARN INTERSECTED BY SY005 ANOTHER 200m FURTHER EAST. AT AN ESTIMATED DEPTH OF 300 - 350m.THE HOLE TRAVERSED CRIMSON CREEK TURBIDITES TO 160.3m, THEN PASSED THROUGH 6.3m OF MELANGE INTO PSAMMO - PELITES OF THE (UPPER) OONAH FORMATION. AT 376.9m THE HOLE PASSED THROUGH A FAULT BRECCIA AND THEN TRAVERSED INTERMIXED MASSIVE PYRRHOTITE AND MAGNETITE-SERPENTINITE SKARN (378.7 - 395.1m). UP TO 10% COMBINED LEAD-ZINC IS ASSOCIATED WITH THE MASSIVE SULPHIDES. THE HOLE THEN PASSED THROUGH 152m OF MAGNETITE-SERPENTINITE AND CARBONATE, AND FINALLY ENDED IN LOWER OONAH PSAMMO-PELITES AT 597.9m.

130623

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	0.00	3.00			NO CORE.	
	3.00	4.60	1.1		LITHIC ARENITE: orange brown, highly weathered, massive, clayey, moderately broken, coarse sand.	CAMBRIAN CRIMSON CK FOR
	4.60	6.60	2.0		LITHIC ARENITE: gray green, very slightly weathered, massive, firm, moderately broken, coarse sand.	CAMBRIAN CRIMSON CK FOR
R	4.60	6.60			LABILE (LITHIC) ARENITE, ONLY MINOR QUARTZ, WITH OCCASIONAL	
R	4.60	6.60			INTRACLASTS.	
	6.60	50.50	39.5		MUDSTONE: medium dark grey, slightly carbonaceous, slightly calcareous, massive, medium bedded, microfaults, firm, moderately broken, bedding: 30 degree angle to c.a., 0.3% quartz veins of, 0.1% carbonate veins of, 0.1% pyrite veins of.	CAMBRIAN CRIMSON CK FOR
R	6.60	50.50			SILTSTONES OCCASIONALLY FAINTLY LAMINATED. BCA'S VARIABLE 0 -	
R	6.60	50.50			45 DEGREES.BASE OF WEATHERING AT 30m, BELOW WHICH ALL	
R	6.60	50.50			LITHOLOGIES ARE VARIABLY CALCAREOUS AND QUARTZ- CARBONATE -	
R	6.60	50.50			PYRITE VEINS APPEAR. MICROFAULTS, APPROXIMATELY PERPENDICULAR	
R	6.60	50.50			TO AVERAGE BEDDING ARE COMMON.	
					6.60- 50.50: 30% INTER BEDDED SILTSTONE: light gray, moderately calcareous, laminated, medium bedded.	
					6.60- 50.50: 20% DECREASING DOWNHOLE LITHIC ARENITE: gray green, moderately calcareous, massive, medium bedded.	
			39.5		40.00- 50.00: 100% MUDSTONE: medium dark grey, slightly graphitic, slightly calcareous, lightly sheared, medium bedded, microfaults, firm, moderately broken, bedding: 30 degree angle to c.a., shear: 30 degree angle to c.a., 1% quartz veins of, 1% carbonate veins of, 1% pyrite veins of.	CAMBRIAN CRIMSON CK FOR
	50.50	101.30	9.2		MUDSTONE: medium gray, microfaults, hard, moderately broken, bedding: 35 degree angle to c.a., microfault: 40 degree angle to c.a., gradational base, 0.3% carbonate veins of, .03% pyrite veins of.	CAMBRIAN CRIMSON CK FOR
R	50.50	101.30			MUDSTONE IS DARKISH GREY, GRADING TO LIGHT GREY FAINTLY	
R	50.50	101.30			LAMINATED SILTSTONE WHICH IS RARELY SLIGHTLY CALCAREOUS. LITHIC	
R	50.50	101.30			ARENITE LOCALLY GRADES INTO LITHIC WACKE CONSISTING OF SUB -	
R	50.50	101.30			ANGULAR MUDSTONE INTRACLASTS IN A LITHIC - ARENITE MATRIX.	
					50.50- 101.30: 40% IRREGULARLY INTERBEDDED LITHIC ARENITE: light gray, massive, coarse bedded, coarse sand.	
	101.30	146.00			MUDSTONE: medium dark grey, massive, medium bedded, hard, slightly broken, bedding: 40 degree angle to c.a., microfault: 40 degree angle to c.a., 3 % carbonate veins of, 1% pyrite	CAMBRIAN CRIMSON CK FOR

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					disseminations) veins, 0.1% chlorite disseminations of, .03% epidote selvages of.	
R	101.30	146.00			SILTSTONE GRADES LOCALLY INTO SILTY DOLOMITE LOCALISED	
R	101.30	146.00			SOFT-SEDIMENT DEFORMATION, EVIDENCED BY BOUDINAGED AND BROKEN	
R	101.30	146.00			BEDS, LITHIC - ARENITE DYKES ETC. BCA'S OTHERWISE FAIRLY	
R	101.30	146.00			CONSTANT.WEAKLY GRADED FACE UPHOLE ? (NOT DIAGNOSTIC)	
					101.30- 146.00: 20% INTERGRADATIONAL SILTSTONE: light gray, moderately calcareous, medium bedded.	
	146.00	156.60			MUDSTONE: light gray, medium bedded, fine bedded, microfaults, hard, slightly broken, bedding: 35 degree angle to c.a., microfault: 30 degree angle to c.a..	CAMBRIAN CRIMSON CK FOR
R	146.00	156.60			WELL BEDDED, WITH MICROFAULTS ALMOST PERPENDICULAR TO BEDDING.	
					146.00- 156.60: 20% SILTSTONE: light gray, fine bedded, graded bedding, uphole facing.	
	156.60	160.30			LITHIC ARENITE: gray green, massive, coarse bedded, hard, moderately broken, bedding: 40 degree angle to c.a., basal contact: 20 degree angle to c.a., sheared base, 5% quartz veins of, 3 % carbonate veins of, 0.1% talc veins of, 1% tremolite veins of, 0.1% muscovite disseminations of, 0.1% chlorite disseminations of, .03% epidote selvages of.	CAMBRIAN CRIMSON CK FOR
					156.60- 160.30: 20% INTER BEDDED MUDSTONE: medium dark grey, medium bedded, disturbed bedding, sheared.	
	160.30	166.30			MELANGE: slightly carbonaceous, slightly calcareous, massive, sheared, brecciated, small pebble, 20% coarse, angular, moderate sphericity, shear: 25 degree angle to c.a., 1% pyrite disseminations of.	
R	160.30	166.30			UPPER CONTACT IS DISCRETE, SHEARED WITH FRAGMENTS OF ALTERED	
R	160.30	166.30			LITHIC ARENITE, ALIGNED WITH SHEAR FABRIC (20 - 30 DEGREES TO	
R	160.30	166.30			THE C.A). RAPIDLY GRADES AWAY FROM CONTACT (OVER 2 - 3 cm) INTO	
R	160.30	166.30			MONOTONOUS POLYMICT MELANGE CONSISTING OF SUB-ANGULAR FRAGMENTS	
R	160.30	166.30			OF GREY MUDSTONE, SILTSTONE,OFF - WHITE QUARTZITE, CARBONATE	
R	160.30	166.30			ETC. ALSO ALTERED FRAGMENTS OF LITHIC ARENITE.	
	166.30	175.70			SILTSTONE: gray black, disturbed bedding, hard, moderately broken, shear: 30 degree angle to c.a., 3 % quartz veins of, 1% pyrite disseminations of.	UPPER OONAH
R	166.30	175.70			DISTURBED PARTIALLY SHEARED WITH ORIGINAL SEDIMENTARY TEXTURE	
R	166.30	175.70			50 % DESTROYED.	
	175.70	177.05			MUDSTONE: grey tan, hard, moderately broken, bedding: 30 degree angle to c.a., 0.1% carbonate veins of, 0.1% pyrite	UPPER OONAH

130625

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					disseminations of. 0.1% epidote veins of. 175.70- 177.05: 10% IRREGULARLY INTERBEDDED LITHIC ARENITE: grey tan. fine bedded, graded bedding, uphole facing.	
	177.05	177.20			FAULT: fault: 45 degree angle to c.a.. 5% quartz infilling shear/fault. 1% carbonate infilling shear/fault. 3 % pyrite infilling shear/fault, 1% galena infilling shear/fault, 1% sphalerite infilling shear/fault.	
	177.20	204.40			SILTSTONE: light gray, medium bedded, coarse bedded, soft sediment slumping, massive, hard, moderately broken, bedding: 45 degree angle to c.a., basal contact: 30 degree angle to c.a., faulted base, 1% quartz veins of, 1% pyrite disseminations = veins.	UPPER OONAH
R	177.20	204.40			LOCALLY LAMINATED, ALSO GRADING LOCALLY INTO SANDY SILTSTONE.	
R	177.20	204.40			OCCASIONALLY INTRACLASTS PRESENT.BCA VARIABLE 20 - 60 DEGREES	
R	177.20	204.40			TO THE C.A.	
					182.70- 185.70: 100% SILTSTONE: light gray, medium bedded, coarse bedded, soft sediment slumping, massive, hard, moderately broken, bedding: 45 degree angle to c.a., basal contact: 30 degree angle to c.a., faulted base, 1% quartz veins of, 3 % pyrite disseminations = veins, 0.3% galena stockwork, 0.3% sphalerite stockwork.	UPPER OONAH
					194.00- 195.50: 100% SILTSTONE: light gray, graded bedding, coarse bedded, soft sediment slumping, massive, hard, moderately broken, bedding: 30 degree angle to c.a., uphole facing, 30 degree angle to c.a., faulted base, 1% quartz veins of, 1% pyrite disseminations = veins.	UPPER OONAH
	204.40	210.70			FAULT: dark gray, brecciated. hard, moderately broken, basal contact: 40 degree angle to c.a., fault: 30 degree angle to c.a., 5% quartz breccia fillings of, 1% pyrite disseminations of, 1% pyrrhotite disseminations of.	
R	204.40	210.70			FAULTED PARTIALLY BRECCIATED FINE BEDDED SILTSTONE/SANDSTONE	
R	204.40	210.70			AND MELANGE.	
					207.00- 208.20: 100% SILTSTONE: dark gray, fine bedded. disturbed bedding, bedding: 40 degree angle to c.a..	OONAH FM UNDIFFERENT
	210.70	215.10			SILTSTONE: dark gray, moderately calcareous, fine bedded. laminated, soft sediment slumping, hard, moderately broken. bedding: 40 degree angle to c.a., sharp base. 0.3% pyrite disseminations of. 210.70- 215.10: 40% FINELY INTERBEDDED SANDSTONE: light gray, fine bedded. fine sand.	OONAH FM UNDIFFERENT

130626

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	215.10	295.50			SANDSTONE: light gray, massive, medium bedded, coarse bedded, hard, moderately broken, coarse sand, bedding: 65 degree angle to c.a., 3 % quartz veins of, 1% pyrite veins of, .03% galena veins of, 1% pyrrhotite veins of, .03% sphalerite veins of.	OONAH FM UNDIFFERENT
R	215.10	295.50			BCA'S VARY 40 - 80 DEGREES, AND AVE 65. GENERALLY HOWEVER,	
R	215.10	295.50			BEDDING IS RELATIVELY UNDISTURBED, BCA'S ARE GREATER THAN 60	
R	215.10	295.50			DEGREES. OCCASIONAL LOCAL SLUMPING OF SILTSTONE. VEINING	
R	215.10	295.50			GENERALLY RESTRICTED TO COMPETENT SANDSTONE. UPHOLE FACING NEAR	
R	215.10	295.50			TOP, DOWNHOLE FACING NEAR BASE, IN GRADED SILTSTONE BEDS.	
					215.10- 295.50: 20% IRREGULARLY INTERBEDDED SILTSTONE: very dark gray, moderately calcareous, fine bedded, laminated, graded bedding, soft sediment slumping, uphole facing.	
					274.00- 276.00: 100% SANDSTONE: light gray, massive, medium bedded, coarse bedded, hard, moderately broken, coarse sand, bedding: 65 degree angle to c.a., 3 % quartz veins of, 3 % pyrite disseminations = veins, 0.3% galena veins of, 1% pyrrhotite veins of, 0.3% sphalerite veins of.	OONAH FM UNDIFFERENT
					288.00- 288.10: 100% SANDSTONE: light gray, graded bedding, medium bedded, coarse bedded, hard, moderately broken, coarse sand, bedding: 55 degree angle to c.a., downhole facing, 3 % quartz veins of, 1% pyrite veins of, .03% galena veins of, 1% pyrrhotite veins of, .03% sphalerite veins of.	OONAH FM UNDIFFERENT
	295.50	335.70			SANDSTONE: light gray, massive, coarse bedded, hard, moderately broken, bedding: 65 degree angle to c.a., sharp base, 3 % quartz veins of, 1% carbonate veins of, 1% pyrite disseminations = veins.	
					295.50- 335.70: 10% NEAR MIDDLE OF OF INTERVAL MUDSTONE: light gray, fine bedded.	
					300.00- 305.00: 100% SANDSTONE: light gray, slightly calcareous, massive, coarse bedded, hard, moderately broken, bedding: 65 degree angle to c.a., sharp base, 3 % quartz veins of, 1% carbonate veins of, 1% pyrite disseminations = veins, 1% pyrrhotite disseminations = veins.	
	335.70	338.60			SILTSTONE: medium dark grey, slightly calcareous, fine bedded, laminated, graded bedding, hard, moderately broken, bedding: 70 degree angle to c.a., downhole facing, 0.3% pyrrhotite laminations.	
					335.70- 338.60: 50% FINELY INTERBEDDED SANDSTONE: slightly calcareous, fine bedded, well bedded.	
	338.60	346.90			SANDSTONE: light gray, fine bedded, medium bedded,	

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
					microfaults, hard, moderately broken, bedding: 50 degree angle to c.a., 1% carbonate disseminations = veins.	
R	338.60	346.90			LOCALLY SLIGHTLY CALCAREOUS, AS IN PREVIOUS INTERVALS,	
R	338.60	346.90			PYRRHOTITE OCCURS INSTEAD OF PYRITE WHERE HOST IS CALCAREOUS .	
R	338.60	346.90			BCA'S VARY FROM 0 - 80 DEGREES, BUT MOSTLY 40 - 70 DEGREES.	
R	338.60	346.90			LOCAL SLUMPING.	
					338.60- 346.90: 50% INTER BEDDED MUDSTONE: light gray, fine bedded.	
	346.90	370.50			SANDSTONE: light gray, slightly calcareous, microfaults, lightly folded, coarse sand, 5% carbonate disseminations = veins, 0.1% pyrite veins of, 0.1% pyrrhotite veins of.	
R	346.90	370.50			MODERATELY DISTURBED/FOLDED AND LOCALLY FRACTURED/BRECCIATED,	
R	346.90	370.50			BECOMING MORE INTENSE DOWNWARD.	
					346.90- 370.50: 10% IRREGULARLY INTERBEDDED MUDSTONE: light gray, fine bedded.	
					347.30- 349.30: 100% VEIN: vein: 40 degree angle to c.a., basal contact: 20 degree angle to c.a., sharp base, 20% carbonate veins of, 60% tremolite veins of, 1% sphalerite disseminations of.	
					356.50- 360.40: 100% SANDSTONE: light gray, slightly calcareous, disturbed bedding, lightly folded, coarse sand, fault: 10 degree angle to c.a., 5% carbonate disseminations = veins, 1% pyrite disseminations = veins, 1% pyrrhotite disseminations < veins, 0.3% sphalerite veins of.	
	370.50	376.90			SANDSTONE: light gray, breccia, disturbed bedding, fractured, hard, highly broken, 5% quartz veins of, 3 % carbonate veins of, 3 % pyrite veins of, 0.3% pyrrhotite veins of.	
R	370.50	376.90			MODERATE TO STRONGLY BRECCIATED/FAULTED, INCREASING IN	
R	370.50	376.90			INTENSITY DOWNWARD.	
					370.50- 376.90: 10% IRREGULARLY INTERBEDDED SILTSTONE: slightly altered, fine bedded.	
					372.10- 372.40: 100% FAULT: fault: 30 degree angle to c.a.,	
					375.20- 376.90: 10% BRECCIA: highly calcareous.	
	376.90	378.70			FAULT BRECCIA: medium gray, highly calcareous, massive, vuggy, crumbly, highly broken, basal contact: 40 degree angle to c.a., sharp base, 20% carbonate breccia fillings of, 10% clay breccia fillings of.	
	378.70	384.60			MASSIVE SULPHIDES: medium brown, hard, moderately broken, basal contact: 45 degree angle to c.a., diffuse base, 0.3% quartz disseminations of, 3 % pyrite patches, 1% galena	

139628

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					patches, 90% pyrrhotite massive/ semi - massive, 1% sphalerite disseminations of.	
R	378.70	384.60			MINOR DISSEMINATED QUARTZ OCCURS NEAR UPPER CONTACT. LOWER	
R	378.70	384.60			CONTACT IS DIFFUSE AND PYRITIC. SULPHIDES APPEAR TO BE	
R	378.70	384.60			SELECTIVELY REPLACING DISSEMINATED MAGNETITE. THIS GRADE UPWARD	
R	378.70	384.60			(OVER 50 cm) INTO MASSIVE MEDIUM GRAINED PYRRHOTITE WHICH HAS	
R	378.70	384.60			BEEN REPLACED BY PYRITE ADJACENT TO SOME THIN FRACTURES.	
	384.60	387.60			SKARN: green-white, magnetic, serpentinized, carbonated, massive, recrystallised, hard, moderately broken, 50% carbonate interstitial, 40% magnetite patches, 0.3% pyrite disseminations of, 10% serpentine patches.	
	387.60	389.70			MASSIVE SULPHIDES: brown black, hard, slightly broken, 5% quartz disseminations of, 5% carbonate disseminations of, 10% magnetite disseminations of, 20% pyrite patches, 20% serpentine patches, 30% pyrrhotite patches.	
R	387.60	389.70			PYRRHOTITE/PYRITE IS REPLACING DISSEMINATIONS AND PATCHES OF	
R	387.60	389.70			MAGNETITE. TOWARD CONTACT,ISOLATED MAGNETITE PATCHES OCCUR	
R	387.60	389.70			WITH PYRITIC RIMS. PYRITE IS PROBABLY A RESULT OF RETROGRADE	
R	387.60	389.70			ALTERATION OF PYRRHOTITE.	
	389.70	392.85			SKARN: white, carbonated, serpentinized, massive, recrystallised, hard, moderately broken, sharp irregular base, 60% carbonate interstitial, 5% magnetite patches, 20% brucite patches, 20% serpentine patches.	
R THN	390.80	390.90			UNIDENTIFIED MINERAL; GOOD CLEAVAGE IN ONE DIRECTION,	
R THN	390.80	390.90			TRANSLUCENT,BLACK, HARDNESS 3, SLIGHTLY MAGNETIC, IN LARGE	
R THN	390.80	390.90			CRYSTAL MASSES, WHITE STREAK.(LATER IDENTIFIED AS BRUCITE)	
	392.85	395.10			MASSIVE SULPHIDES: hard, slightly broken, basal contact: 80 degree angle to c.a., sharp base, 5% quartz disseminations of, 5% galena disseminations of, 80% pyrrhotite massive/ semi - massive, 5% sphalerite disseminations of.	
	395.10	499.30			SKARN: greenish black, carbonated, magnetite, serpentinized, massive, recrystallised, hard, moderately broken, gradational base, 70% carbonate massive/ semi - massive, 10% magnetite patches, 1% tremolite disseminations of, 10% serpentine patches, 5% brucite patches.	
R	395.10	499.30			CARBONATE IS COARSELY CRYSTALLINE DOLOMITE. MAGNETITE OCCURS AS	
R	395.10	499.30			A STOCKWORK OF STRINGERS, VEINS AND IRREGULAR PATCHES.	
R	395.10	499.30			SERPENTINITE OCCURS AS IRREGULAR MASSES OFTEN ASSOCIATED WITH	
R	395.10	499.30			MAGNETITE.	

1306620

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					395.10- 402.00: 100% SKARN: greenish black, carbonated, magnetite, serpentinized, massive, recrystallised, hard, moderately broken, gradational base, 20% carbonate patches, 20% magnetite patches, 1% tremolite disseminations of, 50% serpentine massive/ semi - massive, 5% brucite patches.	
					419.50- 423.40: 100% SKARN: greenish black, carbonated, magnetite, serpentinized, massive, recrystallised, hard, moderately broken, gradational base, 70% carbonate massive/ semi - massive, 10% magnetite patches, 1% tremolite disseminations of, 10% serpentine patches, 5% brucite patches, 5% pyrrhotite disseminations of.	
					451.00- 486.00: 100% SKARN: greenish black, carbonated, magnetite, serpentinized, massive, recrystallised, hard, moderately broken, gradational base, 30% carbonate massive/ semi - massive, 20% magnetite patches, 1% tremolite disseminations of, 40% serpentine massive/ semi - massive, 5% brucite patches.	
					492.50- 495.50: 100% SKARN: greenish black, carbonated, magnetite, serpentinized, massive, recrystallised, hard, moderately broken, gradational base, 30% carbonate massive/ semi - massive, 20% magnetite patches, 1% tremolite disseminations of, 40% serpentine massive/ semi - massive, 5% brucite patches.	
	499.30	509.30			SKARN: greenish black, serpentinized, magnetite, hard, slightly broken, 10% carbonate patches, 20% magnetite patches, 60% serpentine massive/ semi - massive.	
	509.30	528.40			SKARN: black, serpentinized, magnetite, hard, slightly broken, 30% magnetite patches, 60% serpentine massive/ semi - massive.	
R	517.50	520.80			THE PYRRHOTITE MOSTLY OCCURS AS REPLACIVE RIMS AROUND MAGNETITE	
R	517.50	520.80			AGGREGATES OR COMPLETELY REPLACING MAGNETITE.	
					517.50- 520.80: 100% SKARN: black, serpentinized, magnetite, hard, slightly broken, 30% magnetite patches, 60% serpentine massive/ semi - massive, 3 % pyrrhotite replacive.	
	528.40	529.30			FAULT: black, slightly graphitic, slickensided, hard, highly broken, fault: 45 degree angle to c.a., 5% magnetite patches, 1% tremolite in fractures, 3 % pyrrhotite patches.	
R	528.40	529.30			MAGNETITE OCCURS AS STREAKY PATCHES ALIGNED WITH SHEAR FABRIC.	
R	528.40	529.30			BUT OVERPRINTED BY THIN WHITE (TREMOLITE ? FILLED) FRACTURES,	
R	528.40	529.30			WHICH ALIGN WITH SHEAR. NUMEROUS GRAPHITIC, SLICKENSIDED	
R	528.40	529.30			FAULT SURFACES THROUGHOUT.	

130630

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
	529.30	535.60			ANY ROCK: exceptionally altered, hard, moderately broken, 20% quartz patches, 20% carbonate patches, 5% epidote patches, 5% muscovite disseminations of.	
R	529.30	535.60			THE ENTIRE INTERVAL MAY BE A BROAD SHEAR LARGELY ANNEALED (AND	
R	529.30	535.60			TEXTURES THUS DESTROYED) BY SUBSEQUENT METASOMATISM. THE	
R	529.30	535.60			PRECURSOR IS PROBABLY CARBONATE OR POSSIBLY CARBONATE RICH	
R	529.30	535.60			MELANGE.	
					529.30- 535.60: 30% INTERMIXED SHEAR (ZONE): sheared, brecciated, shear: 40 degree angle to c.a..	
					529.30- 535.60: 10% INTERMIXED SKARN: massive, slickensided, 20% magnetite patches, 10% pyrite replacive, 60% serpentine massive/ semi - massive.	
	535.60	541.30			SKARN: black, massive, hard, moderately broken, basal contact: 40 degree angle to c.a., diffuse base, 20% magnetite patches, 70% serpentine massive/ semi - massive, 0.3% pyrrhotite disseminations = veins.	
	541.30	542.15			MASSIVE SULPHIDES: medium brown, hard, moderately broken, basal contact: 30 degree angle to c.a., diffuse base, 10% carbonate disseminations of, 10% pyrite patches, 70% pyrrhotite massive/ semi - massive.	
	542.15	546.10			SKARN: greenish black, hard, moderately broken, basal contact: 40 degree angle to c.a., sheared base, 20% magnetite patches, 70% serpentine massive/ semi - massive.	
	546.10	547.00			SHEAR (ZONE): highly silicified, hard, slightly broken, fault: 30 degree angle to c.a., 30% quartz pervasive, 3 % epidote patches, 5% chlorite disseminations of.	
	547.00	567.30			MELANGE: gray black, massive, hard, moderately broken, shear: 30 degree angle to c.a., 3 % pyrite disseminations of, 1% pyrrhotite replacive.	
R	547.00	567.30			ALTERATION DECREASES IN INTENSITY AWAY FROM UPPER CONTACT AND	
R	547.00	567.30			BECOMES PATCHY BELOW 550.5m. FRAGMENTS ARE SUB-ANGULAR TO	
R	547.00	567.30			SUB-ROUNDED/LENTICULAR CONSISTING MAINLY OF SANDSTONE AND	
R	547.00	567.30			QUARTZ IN FINE BLACK MATRIX. FRAGMENTS VARY 0.1mm TO 0.8 m IN	
R	547.00	567.30			SIZE. FABRIC VARIES IN ORIENTATION 0 - 45 DEGREES TO THE C.A,	
R	547.00	567.30			AVE 30. SOME FRAGMENTS (CALCAREOUS?) HAVE BEEN SELECTIVELY	
R	547.00	567.30			ALTERED & PARTIALLY REPLACED BY PYRRHOTITE.	
R	547.00	547.80			SANDSTONE BOUDIN.	
					547.80- 550.50: 100% MELANGE: gray black, moderately altered, massive, hard, moderately broken, shear: 30 degree angle to	

13063.

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	Interval From (m)	Interval To (m)	Rec. (m)	RQD (m)	Description	Formation
					c.a., 10% quartz pervasive, 1% pyrite disseminations of, 0.3% galena disseminations of, 0.3% epidote patches, 3 % muscovite disseminations of, 5% chlorite disseminations of, 3 % pyrrhotite disseminations of, 0.3% sphalerite disseminations of.	
	567.30	570.30			SKARN: black, massive, hard, moderately broken, basal contact: 45 degree angle to c.a., sharp base, 10% magnetite patches, 80% serpentine massive/ semi - massive.	
	570.30	581.00			MELANGE: gray green, moderately altered, hard, moderately broken, 5% quartz replacive, .03% epidote patches, 5% chlorite disseminations of.	
R	570.30	581.00			PARTIALLY ALTERED , WITH ALTERATION SELECTIVELY AFFECTING	
R	570.30	581.00			CALCAREOUS FRAGMENTS MOST STRONGLY.MELANGE HAS A HIGH	
R	570.30	581.00			PROPORTION OF CALCAREOUS FRAGMENTS. FABRIC ORIENTATION VARIES 0	
R	570.30	581.00			- 50 DEGREES TO THE C.A. AVE 40. ALTERATION INTENSITY	
R	570.30	581.00			DECREASES DOWNHOLE.	
					573.70- 575.30: 100% CARBONATE: white, basal contact: 40 degree angle to c.a..	
	581.00	581.75			SKARN: green-white, serpentinized, firm, highly broken, shear: 45 degree angle to c.a., sharp irregular base, 1% magnetite disseminations of, 1% pyrite disseminations of, 60% serpentine massive/ semi - massive, 3 % tremolite patches, 20% tourmaline patches, 5% muscovite patches, 3 % pyrrhotite patches.	
R	581.00	581.75			SKARN IS INTERMIXED WITH QUARTZ-CARBONATE-SULPHIDE PATCHES.IT	
R	581.00	581.75			APPEARS TO BE REPLACING A FAULT OR MELANGE, AND A REMNANT	
R	581.00	581.75			SHEAR/BRECCIA FABRIC IS OCCASIONALLY PRESENT.	
	581.75	582.60			FAULT: green-white, silicified, firm, moderately broken, shear: 40 degree angle to c.a., diffuse base, 20% quartz patches, 10% carbonate infilling shear/fault, 30% actinolite disseminations of, 3 % mineral 1 clusters.	
R	581.75	582.60			UNIDENTIFIED MINERAL X1 IS BROWN, TRANSLUCENT, ELONGATE WITH	
R	581.75	582.60			HEXAGONAL CROSS-SECTION, HARDNESS 5, WHITE STREAK. CLUSTERS ARE	
R	581.75	582.60			SURROUNDED BY PINKISH AUREOLE. ?APATITE.	
	582.60	585.70			SANDSTONE: light gray, fine bedded, microfaults, hard, moderately broken, coarse sand.	DONAH FM UNDIFFERENT
					582.60- 585.70: 50% FINELY INTERBEDDED SILTSTONE: black, fine bedded, laminated.	
					583.40- 583.80: 100% FAULT: highly silicified, fault: 40 degree angle to c.a., 60% quartz infilling shear/fault, 10%	

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

	- Interval - From (m)	To (m)	Rec. (m)	RQD (m)	Description	Formation
					carbonate infilling shear/fault, 3 % chlorite disseminations of.	
	585.70	586.00			VEIN: vein: 60 degree angle to c.a., 90% quartz veins of, 1% chlorite disseminations of.	
	586.00	586.15			FAULT: sheared, fault: 50 degree angle to c.a..	
END	586.15	597.90			SANDSTONE: light gray, fine bedded, hard, moderately broken, fine sand, 5% quartz veins of.	OONAH FM UNDIFFERENT
R	586.15	597.90			SILTSONE IS PARTLY PHYLLITIC WITH VERY FINE MINERAL	
R	586.15	597.90			SEGREGATIONS PRODUCING FOLIATIONS RESTRICTED TO SILTSTONE, WITH	
R	586.15	597.90			VARIABLE ORIENTATION AT 10 - 50 DEGREES TO BEDDING, THIS	
R	586.15	597.90			FOLIATION GIVES THE ROCK A PEARLY SHEEN. LOCAL SLUMPED BEDDING.	
					586.15- 597.90: 50% SILTSTONE: very dark gray, fine bedded, laminated, 0.3% pyrite veins of.	
END					586.15- 588.20: 100% SANDSTONE: light gray, slightly altered, slightly silicified, fine bedded, augen structured, hard, moderately broken, fine sand, 10% quartz veins of, 5% muscovite disseminations of, 1% chlorite veins of, 1% pyrrhotite veins of.	OONAH FM UNDIFFERENT
					593.20- 596.30: 90% SANDSTONE: light gray, carbonated, massive, coarse sand.	

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)
20.00	21.00	33982	124	-5	130	-3	-0.01	-0.50
40.00	41.00	33983	122	6	133	-3	-0.01	-0.50
60.00	61.00	33984	224	-5	126	6	-0.01	-0.50
80.00	81.00	33985	145	9	220	6	-0.01	-0.50
100.00	101.00	33986	89	-5	178	6	-0.01	-0.50
120.00	121.00	33987	108	33	127	5	-0.01	0.70
140.00	141.00	33988	111	-5	148	5	0.02	-0.50
159.00	160.30	33989	137	-5	154	10	-0.01	-0.50
162.00	163.00	33990	57	129	280	-3	-0.01	-0.50
164.00	165.00	33991	59	88	113	7	-0.01	0.50
168.00	169.00	33992	71	13	192	9	-0.01	-0.50
172.00	173.00	33993	25	44	130	3	-0.01	-0.50
176.00	177.20	33994	72	456	332	5	-0.01	0.50
182.70	184.00	33995	44	952	715	37	-0.01	2.50
184.00	185.00	33996	155	5200	10700	93	0.03	13.00
185.00	185.70	33997	261	33500	13200	71	-0.01	40.00
204.40	206.00	33998	30	580	212	6	-0.01	-0.50
207.00	208.00	33999	63	182	68	9	-0.01	0.90
220.00	221.00	34001	47	124	53	6	-0.01	0.70
230.00	231.00	34002	36	85	33	10	-0.01	0.50
240.00	241.00	34003	30	164	106	5	-0.01	0.80
250.00	251.00	34004	17	12	38	5	-0.01	-0.50
260.00	261.00	34005	17	6	48	10	-0.01	-0.50
270.00	271.00	34006	45	343	324	10	-0.01	1.20
274.00	275.00	34007	34	5941	5247	8	-0.01	10.40
275.00	276.00	34008	87	9100	11100	13	-0.01	30.00
290.00	291.00	34009	24	241	121	12	-0.01	0.50
300.00	301.00	34010	29	175	198	23	-0.01	0.50
310.00	311.00	34011	52	2754	810	22	-0.01	7.60
320.00	321.00	34012	190	8878	4400	25	-0.01	22.00
330.00	331.00	34013	12	34	48	7	-0.01	0.50
340.00	341.00	34014	5	9	85	18	-0.01	-0.50
347.30	348.00	34015	12	44	2951	93	-0.01	0.70
348.00	349.30	34016	33	78	123	64	-0.01	-0.50
356.50	357.50	34017	165	41	359	13	-0.01	0.60
358.50	359.50	34018	38	28	55	19	0.02	-0.50
376.90	378.00	34019	54	310	335	89	-0.01	0.80
378.00	378.70	34021	48	45	176	134	-0.01	-0.50
378.70	380.00	34022	1028	12	33	11	-0.01	1.10
380.00	381.00	34023	1334	116	688	-3	0.04	2.00
381.00	382.00	34024	1339	1669	1037	30	0.02	4.40
382.00	383.00	34025	1376	1248	3468	17	0.02	3.20

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R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)
383.00	384.00	34026	1362	7750	9185	107	-0.01	10.20
384.00	384.60	34027	1000	206	744	15	0.01	1.70
384.60	386.00	34028	412	493	1003	74	-0.01	1.00
386.00	387.60	34029	112	63	237	118	-0.01	-0.50
387.60	388.00	34030	1180	20	126	26	-0.01	0.90
388.00	389.00	34031	995	27	84	39	-0.01	0.50
389.00	389.70	34032	732	37	116	59	0.01	-0.50
389.70	391.00	34033	173	36	102	91	-0.01	0.50
391.00	392.00	34034	47	-5	61	39	-0.01	-0.50
392.00	392.85	34035	18	-5	51	32	-0.01	-0.50
392.85	394.00	34036	1000	27900	66000	83	0.15	38.00
394.00	395.10	34037	934	53000	89000	46	0.16	64.00
395.10	396.00	34038	117	126	214	73	0.03	0.80
398.00	399.00	34039	9	-5	92	125	-0.01	-0.50
402.00	403.00	34041	10	41	143	117	-0.01	-0.50
406.00	407.00	34042	9	22	98	612	-0.01	-0.50
410.00	411.00	34043	13	25	72	37	0.01	-0.50
414.00	415.00	34044	7	9	46	20	-0.01	-0.50
418.00	419.50	34045	53	114	109	16	-0.01	-0.50
419.50	420.50	34046	439	35	129	40	-0.01	0.90
420.50	421.50	34047	174	33	101	36	-0.01	-0.50
421.50	422.50	34048	186	8	62	45	-0.01	-0.50
422.50	423.40	34049	369	-5	359	24	-0.01	-0.50
428.00	429.00	34050	10	6	44	325	-0.01	-0.50
430.00	431.00	34051	-5	8	82	439	-0.01	-0.50
434.00	435.00	34052	12	17	104	39	-0.01	-0.50
438.00	439.00	34053	13	6	63	276	-0.01	-0.50
442.00	443.00	34054	8	12	83	22	-0.01	-0.50
446.00	447.00	34055	43	19	197	17	-0.01	-0.50
450.00	451.00	34056	8	27	102	155	-0.01	-0.50
454.00	455.00	34057	23	55	250	23	-0.01	-0.50
458.00	459.00	34058	6	63	673	63	-0.01	-0.50
462.00	463.00	34059	38	268	3259	89	-0.01	0.80
466.00	467.00	34061	12	46	340	69	-0.01	-0.50
470.00	471.00	34062	54	80	1455	212	-0.01	0.60
474.00	475.00	34063	-5	58	186	74	-0.01	-0.50
478.00	479.00	34064	49	38	1021	188	-0.01	-0.50
482.00	483.00	34065	6	34	450	109	-0.01	-0.50
486.00	487.00	34066	37	89	1454	22	-0.01	0.50
490.00	491.00	34067	32	6	50	7	-0.01	-0.50
494.00	495.00	34068	7	16	333	65	-0.01	-0.50
498.00	499.00	34069	-5	22	94	17	-0.01	-0.50

009
130635

R.G.C. Exploration Pty Ltd
SYLVESTER GRID
SURFACE DIAMOND DRILLHOLE : SY009 (CONTINUED)

ASSAYS

From	To	Number	CU(PPM)	PB(PPM)	ZN(PPM)	SN(PPM)	AU(PPM)	AG(PPM)
502.00	503.00	34070	-5	11	89	113	-0.01	-0.50
506.00	507.00	34071	21	7	116	658	-0.01	-0.50
510.00	511.00	34072	-5	43	115	42	-0.01	-0.50
514.00	515.00	34073	-5	9	91	11	-0.01	-0.50
517.50	519.00	34074	187	55	803	37	0.03	1.00
519.00	520.00	34075	196	239	6974	23	1.10	2.20
520.00	520.80	34076	165	135	3218	8	0.07	1.20
524.00	525.00	34077	14	-5	115	10	-0.01	-0.50
528.40	529.30	34078	67	19	132	17	0.03	0.50
530.00	531.00	34079	59	17	54	20	-0.01	-0.50
532.00	533.00	34081	79	100	195	15	-0.01	-0.50
534.00	535.00	34082	187	171	313	11	-0.01	0.80
536.00	537.00	34083	101	7	144	22	0.02	-0.50
538.00	539.00	34084	107	322	1000	45	0.01	-0.50
540.00	541.30	34085	251	9	284	19	-0.01	-0.50
541.30	542.15	34086	1275	8	122	30	-0.01	-0.50
542.15	543.00	34087	200	9	33	20	-0.01	-0.50
544.00	545.00	34088	22	41	117	17	0.05	-0.50
546.10	547.00	34089	94	11	36	18	-0.01	-0.50
547.80	549.00	34090	220	26	47	9	-0.01	-0.50
549.00	550.50	34091	191	649	2142	11	-0.01	2.30
554.00	555.00	34092	22	44	43	7	-0.01	-0.50
558.00	559.00	34093	14	7	19	9	-0.01	-0.50
562.00	563.00	34094	12	30	57	6	-0.01	-0.50
566.00	567.00	34095	134	7	62	42	-0.01	-0.50
570.00	572.00	34096	55	5	41	24	-0.01	-0.50
574.00	575.00	34097	-5	6	29	13	-0.01	-0.50
578.00	579.00	34098	23	32	61	20	-0.01	-0.50
581.00	581.75	34099	-5	11	17	14	-0.01	-0.50
581.75	582.60	34101	-5	15	23	20	-0.01	-0.50
585.70	586.15	34102	27	12	9	6	-0.01	-0.50
587.00	588.00	34103	36	10	14	3	-0.01	-0.50
590.00	591.00	34104	21	-5	21	6	-0.01	-0.50

130630

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APPENDIX 9

Gold Standards

GOLD ASSAY STANDARDS

Current recommended values. 3.MAY.991

130638

ID	MEAN GRADE	PREC. %	ACCEPT. RANGE(95%)		STAT	DATE	LAB	DESCRIPTION
B0	-0.002	100	-0.00	-0.00	2BOX	1.NOV.87	BEQ**	BURRAGA QTZ SST AND MINOR CHLORITE
B10	0.061	5	0.05	0.06	1BOX	20.MAR.90		LUCKY DRAW BLENDED WITH BASALT
B11	5.060	4	4.55	5.56	3BOX	5.JUL.89	BEQ	LUCKY DRAW OXIDIZED
B12	3.280	5	2.95	3.61	2BOX	20.MAR.90	BEQ	LUCKY DRAW BLENDED WITH BASALT
B12X	0.104	4	0.09	0.11	3BOX	1.APR.91	BEQ	LUCKY DRAW BASALT BLENDED
B13	0.498	2	0.45	0.55	2BOX	20.MAR.90		LUCKY DRAW BLENDED WITH BASALT
B20	1.770	2	1.59	1.95	4BOX	5.JUL.89	BEQ	LUCKY DRAW OXIDIZED
B4	0.250	30	0.18	0.33	1BIN	1.JAN.88	BEQ	BURRAGA HC QTZ CHLORITE
B5	3.500	8	3.15	3.85	1BIN	1.NOV.87	BEQ**	BURRAGA HC QTZ CHLOR
B6	17.000	5	15.30	18.70	2BIN	1.JUN.87	NAA	BURRAGA RAB
B66	6.900	5	6.21	7.59	1BIN	1.JUN.87	NAA	BURRAGA RAB
B8	1.190	3	1.07	1.31	4BOX	5.JUL.89	BEQ	LUCKY DRAW OXIDIZED
B9	3.140	3	2.83	3.46	3BOX	5.JUL.89	BEQ	LUCKY DRAW OXIDIZED
BRB1	3.555	30	2.50	4.63	1BOX	1.MAY.87	BEQ	BARAMBAH OXIDIZED
BRB2	1.100	7	0.99	1.21	1BIN	1.MAY.88	BEQ	BARAMBAH OXIDIZED
BRB3	0.308	8	0.28	0.34	1BOX	1.MAY.88	BEQ	BARAMBAH OXIDIZED
BRB4	0.143	20	0.11	0.17	1BIN	1.MAY.88	BEQ	BARAMBAH OXIDIZED
BRB5	0.074	17	0.06	0.09	2BIN	1.MAY.88	BEQ	BARAMBAH OXIDIZED
FMC1	0.236	35	0.15	0.32	2BOX	1.JUN.88	BEQ	FOUR MILE CK. NSW SERI. CARBONATE PYRITE
FMC2	2.911	13	2.53	3.29	1BOX	1.JUN.88	BEQ	FMC NSW SILTSTONE
FMC3	1.797	15	1.53	2.07	1BOX	1.JUN.88	BEQ	FMC NSW PYRITIC ACID INTRUSIVE
FMC4	0.370	10	0.33	0.41	1BOX	1.JUN.88	BEQ	FMC NSW CHERTY SILT
FMC5	0.771	40	0.46	1.08	1BOX	1.JUN.88	BEQ	FMC NSW CARBON SILTSTONE
FMC6	0.300	30	0.21	0.39	2BOX	1.JUN.88	BEQ	FMC NSW CHERTY SILTSTONE
FMC7	1.731	45	0.95	2.51	4BOX	1.JUN.88	BEQ	FMC NSW SULPHIDIC SILTSTONE
GC10	2.780	5	2.50	3.06	1BIN	1.MAR.88	BEQ**	PINE CREEK OXIDIZED
GC12	3.500	15	2.98	4.03	2BOX	1.AUG.87	BEQ	PINE CREEK OXIDIZED
GC14	1.917	4	1.73	2.11	7BOX	1.FEB.90	BEQ	PINE CREEK PART OXIDIZED
GC15	3.276	4	2.95	3.60	2BOX	1.FEB.90	BEQ	PINE CREEK PART OXIDIZED
GC3A	1.258	20	1.01	1.51	2BOX	1.MAR.88	BEQ**	PINE CREEK OXIDIZED
GC4A	1.329	8	1.20	1.46	2BOX	1.AUG.87	BEQ	PINE CREEK OXIDIZED
GC5	1.442	10	1.30	1.59	2BOX	1.MAR.88	BEQ**	PINE CREEK OXIDIZED
GC7	7.400	15	6.29	8.51	2BOX	18.JUN.87	ANALAB	PINE CREEK OXIDIZED
GC8	0.753	15	0.64	0.87	1BOX	1.JUN.87	ANALAB	PINE CREEK OXIDIZED
MAG	0.540	15	0.46	0.62	1BOX	1.MAR.88	BEQ**	MT.MAGNET BIF OXIDIZED
MC1	1.600	10	1.44	1.76	1BIN	1.NOV.87	BEQ**	MT.COOLON OXIDIZED
MC2	1.550	8	1.40	1.71	5BIN	1.MAR.88	BEQ**	MT.COOLON OXIDIZED
MC3	6.130	4	5.52	6.74	1BOX	1.MAR.88	BEQ**	MT.COOLON OXIDIZED
MC6	0.888	5	0.80	0.98	6BOX	1.FEB.90	BEQ	MOUNT COOLON OXIDIZED
MD1	0.387	5	0.35	0.43	2BOX	1.AUG.87	BEQ	MT.DAVID CLAY OXIDIZED
MD2	0.400	25	0.30	0.50	1BOX	1.AUG.87	BEQ	MT.DAVID CLAY OXIDIZED
MD3	1.000	15	0.85	1.15	1BIN	1.MAR.88	BEQ**	MT.DAVID CLAY OXIDIZED
MM1	0.555	15	0.47	0.64	1BOX	1.JUN.87	ANALAB	MT.MORGAN STREAM SED.
MM2	1.320	30	0.92	1.72	3BIN	1.MAR.88	BEQ	MILKY WAY PART OXID
MM3	0.370	15	0.31	0.43	3BIN	1.MAR.88	BEQ	MILKY WAY PART OXID
PHQ	1.510	10	1.36	1.66	2BIN	1.JUN.87	ANALAB	PEAK HILL
PHR	0.668	10	0.60	0.74	3BIN	1.JUN.87	ANALAB	PEAK HILL
PHZ	0.965	17	0.80	1.13	2BOX	1.JAN.88	BEQ	PEAK HILL OXIDIZED
POX	1.220	15	1.04	1.40	1BOX	1.MAR.88	BEQ**	WAU PNG PARTIALLY OXIDIZED
PRIM	0.990	15	0.84	1.14	2BOX	1.NOV.87	BEQ**	WAU PNG PRIMARY
WAU	0.617	16	0.52	0.72	4BIN	1.JAN.88	BEQ	WAU PNG OXIDIZED

ID	MEAN GRADE	PREC. %	ACCEPT. RANGE(95%)		STAT	DATE	LAB	DESCRIPTION
B1	1.000	20	0.80	1.20	GONE	1.NOV.87	BEQ**	BURRAGA HC QTZ CHLOR
B2	0.020	50	0.01	0.03	GONE	1.JUN.87	ANALAB	BURRAGA RAB
B24	2.900	7	2.61	3.19	GONE	1.JUN.87	NAA	BURRAGA RAB
B25	0.832	4	0.75	0.92	GONE	1.AUG.87	BEQ	BURRAGA RAB
B3	0.050	15	0.04	0.06	GONE	1.NOV.87	BEQ**	BURRAGA HC QTZ CHLOR
B43	1.600	5	1.44	1.76	GONE	1.JUN.87	NAA	BURRAGA RAB
B44	0.590	5	0.53	0.65	GONE	1.JUN.87	NAA	BURRAGA RAB
B65	1.700	5	1.53	1.87	GONE	1.JUN.87	NAA	BURRAGA RAB
B7	3.200	7	2.88	3.52	GONE	1.JUN.87	NAA	BURRAGA RAB
B71	0.130	20	0.10	0.16	GONE	1.JUN.87	ANALAB	BURRAGA RAB
B72	0.640	10	0.58	0.70	GONE	1.JUN.87	NAA	BURRAGA RAB
GC1	1.420	30	0.99	1.85	GONE	1.JUN.87	ANALAB	PINE CREEK OXIDIZED
GC11	0.610	15	0.52	0.70	GONE	1.JUN.87	ANALAB	PINE CREEK OXIDIZED
GC13	3.850	5	3.47	4.24	GONE	1.JAN.88	BEQ	PINE CREEK PART.OXIDIZED
GC2	1.310	20	1.05	1.57	GONE	1.JUN.87	ANALAB	PINE CREEK OXIDIZED
GC3	1.064	20	0.85	1.28	GONE	1.FEB.87	ANALAB	PINE CREEK OXIDIZED
GC4	1.334	10	1.20	1.47	GONE	1.JUN.87	ANALAB	PINE CREEK OXIDIZED
GC6	0.736	10	0.66	0.81	GONE	1.JUN.87	NAA	PINE CREEK
GC9	3.120	8	2.81	3.43	GONE	1.JUN.87	KML	PINE CREEK
MC4	12.800	8	11.52	14.08	GONE	1.JAN.88	BEQ	MT.COOLON OXIDIZED
MC5	2.417	3	2.18	2.66	GONE	1.JUN.88	BEQ	MT. COOLON PARTIALLY OXIDIZED?
MM4	2.250	20	1.80	2.70	GONE	1.MAR.88	BEQ	MILKY WAY PART OXID

LAB. refers to laboratory from which grade is determined

MEAN GRADE is mean of 10 * 30gm. neutron activation analyses in a single contiguous batch at respective LAB.

PRECISION is (200 * std.dev.) / mean

ACCEPT RANGE is calculated from mean + 2 std.dev. from test lab
OR mean +/- 10% , whichever is greatest.

STAT GONE standard no longer available
STAT 1BIN approx. 100 standards.
STAT 1BOX approx. 1000 standards.

CURRENT COST $2.00 / EACH

LAB marked BEQ** have estimates which are suspected of being 15% too low. The precision estimates of the standards are reasonably good Consequently these standards are available for use as repeatability

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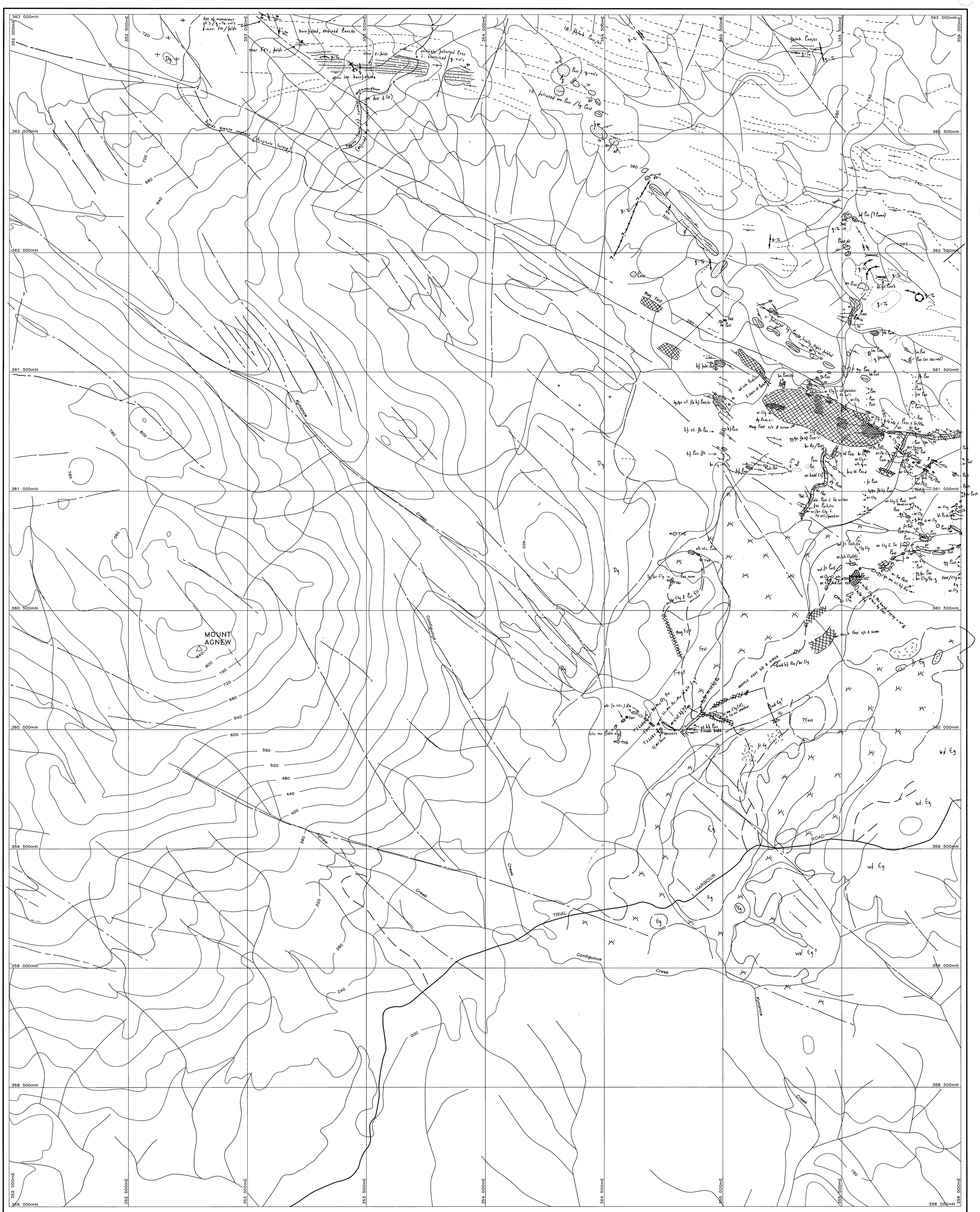

DEVONIAN	Dg	granite
CAMBRIAN	Eg	gabbro
PROTEROZOIC OONAH FM.	Ꞓos	sediments, undiff.
	Ꞓosh	shale
	Ꞓost	siltstone
	Ꞓoss	sandstone

Bedding trend
Bedding attitude ; measured
; 0 - 29° estimated
30 - 59°
60 - 89°
Vertical
Joint ; vertical
inclined
Shear ; vertical
inclined
Cleavage ; vertical
inclined
Fault ; vertical
inclined

Airphoto Lineament
Vein

alt	altered	gn	green	q	quartz
br	brown	gy	grey	Rx	rock (undiff.)
brx	brecciated	hf	hornfelsed	sd	sheared
cb	coarse bedded	IB	interbedded	Sil	siliceous
Cly	clay	jt	jointed	To	Tourmaline
d.	disseminated	lg	light grey	v	very
dg	dark grey	Lm	laminated	Vn	vein
fb	fine bedded	mag	magnetic	wh	white
Fe	Ferruginous	mb	medium bedded	wd	weathered
Fest	Ironstone	Mt	Magnetite		
fiss	fissile	mv			
fr	fresh	mx	massive		
Ft	fault	or	orange		

5 cm

RGC EXPLORATION PTY.LTD.

COMPILED		ZEEHAN AREA E.L. 42/86 SHEET E
DRAWN	D.J.C.	
DATE	March 1991	GEOLOGICAL FACT MAP
CHECKED		
1:25000 REF.		

DRAWING ID. 5521/081 — SCALE 1:5000 — PLAN10

5521/085

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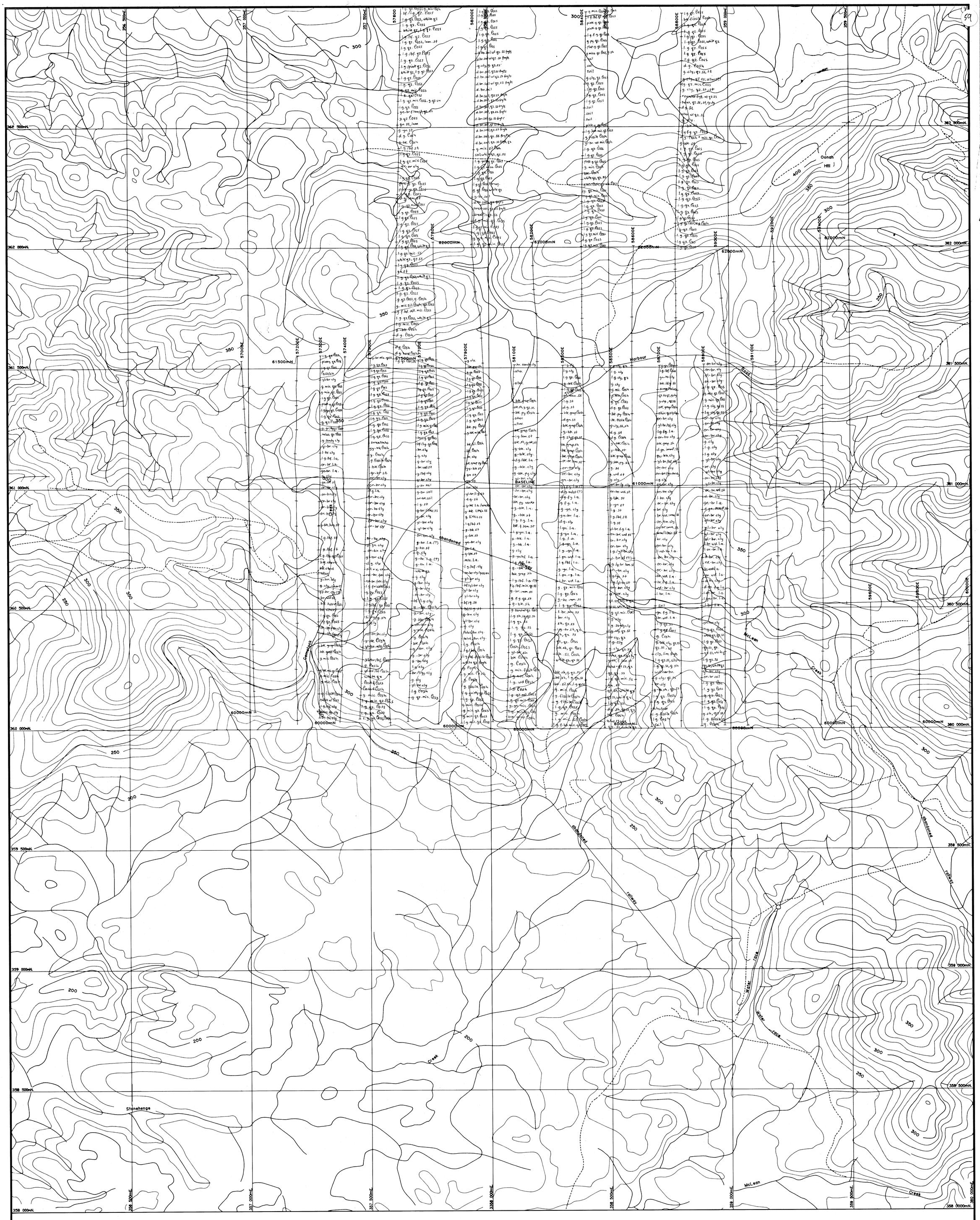


SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

GN TN MN
GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.6°

5 cm

⇨ Legend as for 1:5,000 Geological Fact Map Sheet C (Drwg. Id. 5 521/033)

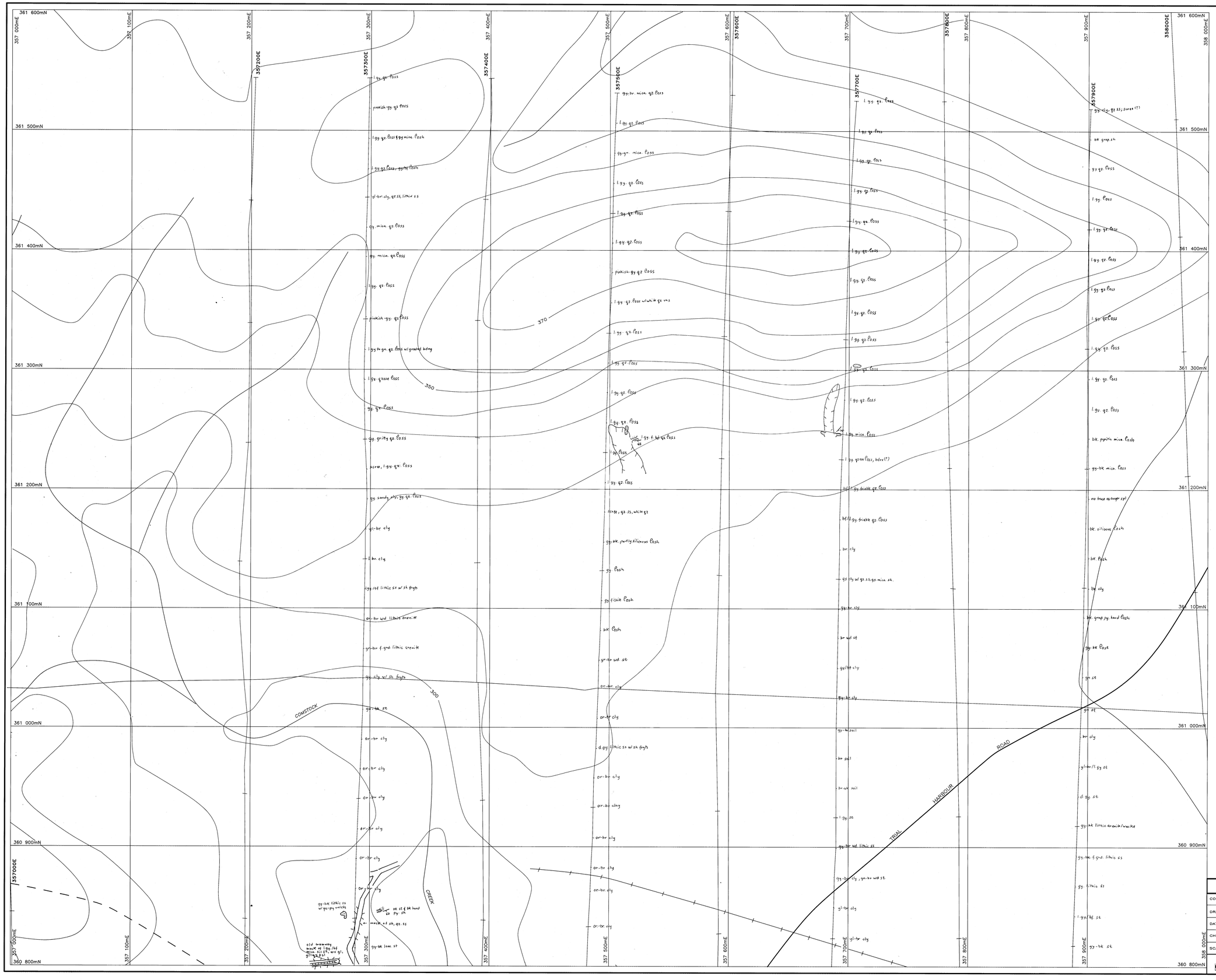
RGC EXPLORATION PTY. LIMITED
(ENC. IN N.S.W.)

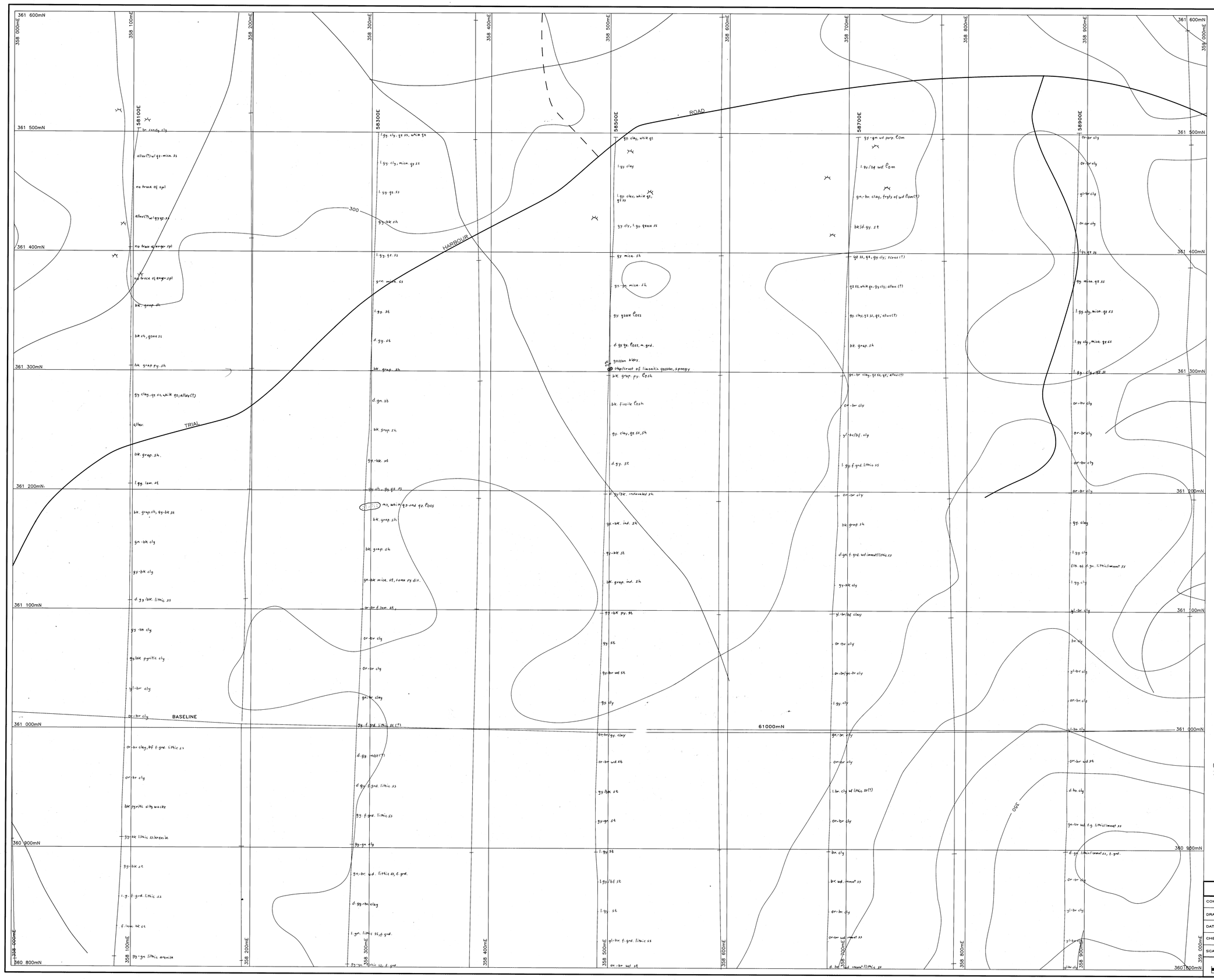
COMPILED:	D.D
DRAWN:	DD/DJC
DATE:	7/91
CHECKED:	
1:25,000 REFERENCE:	SUNDAS OCEANA HEEM. STRIAL

ZEEHAN AREA
SHEET C
FACTUAL GEOLOGY (GRID BASED)
SYLVESTER INFILL GRIDDING

BASE PLAN No. 5521/085
OVERLAY PLAN No.
0 50 100 200 300m
1:5000
FIGURE No.

N.W. Coast Computer Aided Drafting Centre. Phone (004 354316)


361 600mN
361 500mN
361 400mN
361 300mN
361 200mN
361 100mN
361 000mN
360 900mN
360 800mN
357 000mE
357 100mE
357 200mE
357 300mE
357 400mE
357 500mE
357 600mE
357 700mE
357 800mE
357 900mE
358 000mE
3572000E
3573000E
3574000E
3575000E
3576000E
3577000E
3578000E
3579000E
3580000E
370
350
300
COMSTOCK
CREEK
TRIAL HARBOUR ROAD
l.gy. qz. loss
pinkish-gy. qz loss
l.gy. qz loss & gy mica. losh
gy. qz loss, gy/br losh
yl-br. cly, qz ss, lithic ss
gy. mica qz loss
gy. mica qz loss
l.gy. qz. loss
pinkish-gy. qz loss
l.gy to gn. qz loss w/ graded bdng
l.gy. qz rose loss
gy. qz. loss
gy. gritty qz loss
sericite, l.gy. qz. loss
gy. sandy ash, gy qz loss
yl-br cly
l.br. cly
l.gy/bf lithic ss w/ sh frgts
or-br wd lithic granite
gy-br f.grd. lithic granite
gy. cly w/ sh frgts
gy-bk st
or-br cly
or-br cly
or-br cly
or-br cly
or-br cly
gy-bk lithic ss w/ gy-py veinlets
old tramway
gy-bk lom. st
gy-br. mica. qz. loss
l.gy. qz. loss
gy-gn. mica loss
l.gy. qz. loss
l.gy. qz. loss
l.gy. qz. loss
l.gy. qz loss
pinkish-gy qz loss
l.gy. qz loss w/ white qz vns
l.gy. qz. loss
l.gy. qz loss
l.gy. qz loss
l.gy. qz



Legend as for Geological Fact Map Sheet C

5 cm

SHEET LAYOUT

SHEET 7	SHEET 1	SHEET 2	SHEET 3
	SHEET 4	SHEET 5	SHEET 6

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DRAWN	M.Walter
DATE	3/91
CHECKED	
SCALE 1:1000	

ZEEHAN E.L. 21/86

FACTUAL GEOLOGY

SYLVESTER INFILL GRIDDING

DRAWING ID. 5521/083

5521/083

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360 800mN
360 700mN
360 600mN
360 500mN
360 400mN
360 300mN
360 200mN
360 100mN
360 000mN
357 000mE
357 100mE
357 200mE
357 300mE
357 400mE
357 500mE
357 600mE
357 700mE
357 800mE
357 900mE
358 000mE
HARBOUR
ROAD
CREEK
TRUNK
COMSTOCK
300
320
250
gy-br clay
gy-br wd lithic ss(?)
gy-bk st
gy-br clay
gy-bk st
lithic mica. arenite
gy-bk st
br clay and gossan
yl-br clay
yl-br clay
yl-br clay
gy clay, fgrade ss
gy fissile Cosh
gy Cosh w/ sil band
gy mica. Cosh
gy sh
gy fissile Cosh
gy mica Cosh
gy qz mica. Coss, gy sh
gy qz mica. Coss, gy mica Cosh
gy mica. Coss
gy-br clay
gy-br clay
gy-br clay