

OPEN FILE

EXPLORATION LICENCE NO.'S
102/87, 55/89 & 12/92

("Queenstown", "Mt Darwin" &
"Queenstown South")

West Sedgwick & Garfield/Clark Valley

Annual Report April 1993- April 1994

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CONTENTS

	Page No.
SUMMARY	iv
1. INTRODUCTION	1
2. LAND TENURE	2
3. WORK COMPLETED	4
3.1 West Sedgwick	4
3.2 Garfield Prospect	5
3.3 Penghana Prospect	6
4. RESULTS AND DISCUSSION	8
4.1 West Sedgwick	8
4.2 Garfield	10
5. PROPOSED WORK	14
5.1 West Sedgwick	14
5.2 Garfield	14
5.3 Penghana	14
5.4 Other Areas	15
6. BIBLIOGRAPHY	16

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LIST OF PLANS & FIGURES

		Drg.No.	Scale
FIGURE 1	E.L.'s 102/87, 55/89 and 12/92 - Locality Map	5532/147	1:250,000
PLAN 1	WS007 Drillhole Cross Section Geological Interpretation	5532/162	1:1,000
PLAN 2	Comstock, West Sedgwick Geological Interpretation	5532/151	1:5,000
PLAN 3	Garfield Prospect Outcrop Map Sheet 4A1	5532/171	1:1,000
PLAN 4	Garfield Prospect Outcrop Map Sheet 4A2	5532/164	1:1,000
PLAN 5	Drillhole Geology Interpretation GAR001	5532/165	1:1,000
PLAN 6	Garfield Prospect Soil Sample Locations Sheet 4A1	5532/006	1:5,000

LIST OF APPENDICES

- APPENDIX 1 WS007 drill log and assays
- APPENDIX 2 Interpretation of Downhole TEM Survey Results,
Drill Holes WS006 and WS007: by R.C. Deakin
- APPENDIX 3 Report on Three Component Down Hole, Pulse EM Results
from the West Sedgwick Prospect: by R.C. Deakin
- APPENDIX 4 Soil geochemistry results, Garfield Prospect
- APPENDIX 5 Soil geochemistry results, profile sampling, Garfield
Prospect
- APPENDIX 6 GAR001 Drill Log and Assays
- APPENDIX 7 Interpretation of Ground Magnetic and Induced Polarization
Data, Garfield Prospect, Tasmania. E.L. 102/87
- APPENDIX 8 Report on Magnetic Properties of Drill Core Samples From
Garfield Prospect, Tasmania: by P.W. Schmidt
- APPENDIX 9 Report on Three Component, Pulse EM Results from the Garfield
Prospect, South West Tasmania: by R.C. Deakin

SUMMARY

Exploration Licences 102/87 Queenstown, 55/89 Mt Darwin and 12/92 South Queenstown cover a 40km N-S trending exposure of Cambrian Mt Read Volcanics from Lake Margaret to South Darwin Peak. E.L.'s 102/87 and 55/89 are held by BHP Minerals Ltd and explored by RGC Exploration under a joint venture agreement entered into on 29th November, 1991. RGC acquired an adjoining area as E.L. 12/92 on 12th October 1992, and this was also included in the joint venture. The total area covered by these licences was reduced from 249 sq km to 130 sq kms in March 1994 as part of a compulsory relinquishment.

During 1993/94 exploration focussed on two prospects, West Sedgwick and Garfield. At West Sedgwick, a silica, sericite, pyrite alteration zone was identified below the base of the Tyndall Group, adjacent to a Cambrian growth fault. This zone was tested by a 499m drill hole, WS007. This hole intersected a strongly pyritic alteration system, which was devoid of base metal sulphides. Isotope analyses indicate that it is an area of low temperature alteration, but it has similarities to the stringer envelope zone at Hellyer.

At Garfield, a 388m drill hole, GAR001 tested a pyritic alteration zone. This hole intersected a significant Prince Lyell-style Cu-Au mineralized system. Ground magnetic and induced polarisation surveys were successfully employed to delineate the extent of the alteration system.

1. INTRODUCTION

Exploration Licences 102/87 - Queenstown and 55/89 Mt Darwin are held by BHP Minerals Ltd. (BHPM) and an adjoining licence, E.L. 12/92 is held by RGC. These licences are explored by RGC Exploration Ltd under the terms and conditions of a joint venture agreement. Approval was granted allowing the joint reporting of the exploration work because the tenements form a single coherent geological block.

The tenements currently occupy a total area of 130 sq kms surrounding Queenstown extending to the north, in part, some 30 kms to Moxon Saddle and to the south some 25 kms to South Darwin Peak (Figure 1). They cover a significant portion of the Cambrian Mount Read Volcanics. These rocks host a variety of significant mineral occurrences.

- (i) Zinc - volcanic-hosted massive sulphide deposits, eg. Hellyer, Que River, Rosebery, Hercules and Tasman Crown
- (ii) Copper - Mt Lyell style mineralisation
- (iii) Gold - Henty style mineralisation.

Much of the previous work in this area targeted copper-gold mineralisation of the Mt Lyell style. More recently BHPM covered selected areas with blanket UTEM looking for VMS mineralisation. This was supported by some geological mapping and rock chip/stream sediment geochemistry.

RGC is also exploring these EL's for Rosebery-style VMS mineralisation. The exploration approach which has been applied involves detailed geological mapping in an attempt to identify Cambrian growth faults, possible mineralised horizons and alteration zones. This mapping is supported by multi-element soil and rock geochemistry. Any alteration zones thus identified can be tested by deep drilling and down-hole geophysics.

2. LAND TENURE

E.L. 102/87 - **Queenstown** was granted to BHPM on 22nd April, 1988. The tenement initially covered 95 sq kms in three separate parts (Figure 1)

Part (i) - Queenstown of 74 sq kms

Part (ii) - Garfield of 19 sq kms

Part (iii) - Moxon Saddle of 2 sq kms

Part (i) totally enclosed the Mt Lyell Mine Lease, 30M/80. In 1988 Mining Lease Application areas (MLA's) were cancelled by Mt Lyell increasing the area of Part (i) to 79 sq kms. Again in early 1992 additional MLA's were relinquished further increasing Part (i) to 84 sq kms. This tenement covered 105 sq kms and was due for 50% reduction on or before 22nd April, 1993. A meeting with representatives of the Department of Mines Tasmania (DMT) was held on 15th April, 1992 where RGCE expressed its interest in postponing the reduction date by 12 months due to its recent entry into the Agreement with BHPM.

E.L. 55/89 - **Mt Darwin** was granted to BHPM on 5th May, 1990. This tenement covered 78 sq kms and links Parts (i) and (ii) of E.L. 102/87 (Figure 1) resulting in a continuous exposure of Mt Read Volcanics over a strike length of 40 kms which is explored as a single coherent block. Because of this BHPM was successful in gaining approval from the DMT to jointly report on exploration activities (15th March, 1991).

E.L. 12/92 - **South Queenstown** was granted to RGC on 12th October 1992. This tenement forms a narrow strip partly enclosing the other E.L.'s. It was divided into 3 parts:

Part (i) - 49 sq kms on the eastern side of the West Coast Range

Part (ii) - 15 sq kms over Mt Sorell and Mt Strahan

Part (iii) - 2 sq kms south of Lake Margaret.

A significant portion of E.L.'s 102/87 and 55/89 was within the South-West Conservation Area (SWCA) and considered to be environmentally sensitive. Despite the revocation of Conservation Area status in areas north of

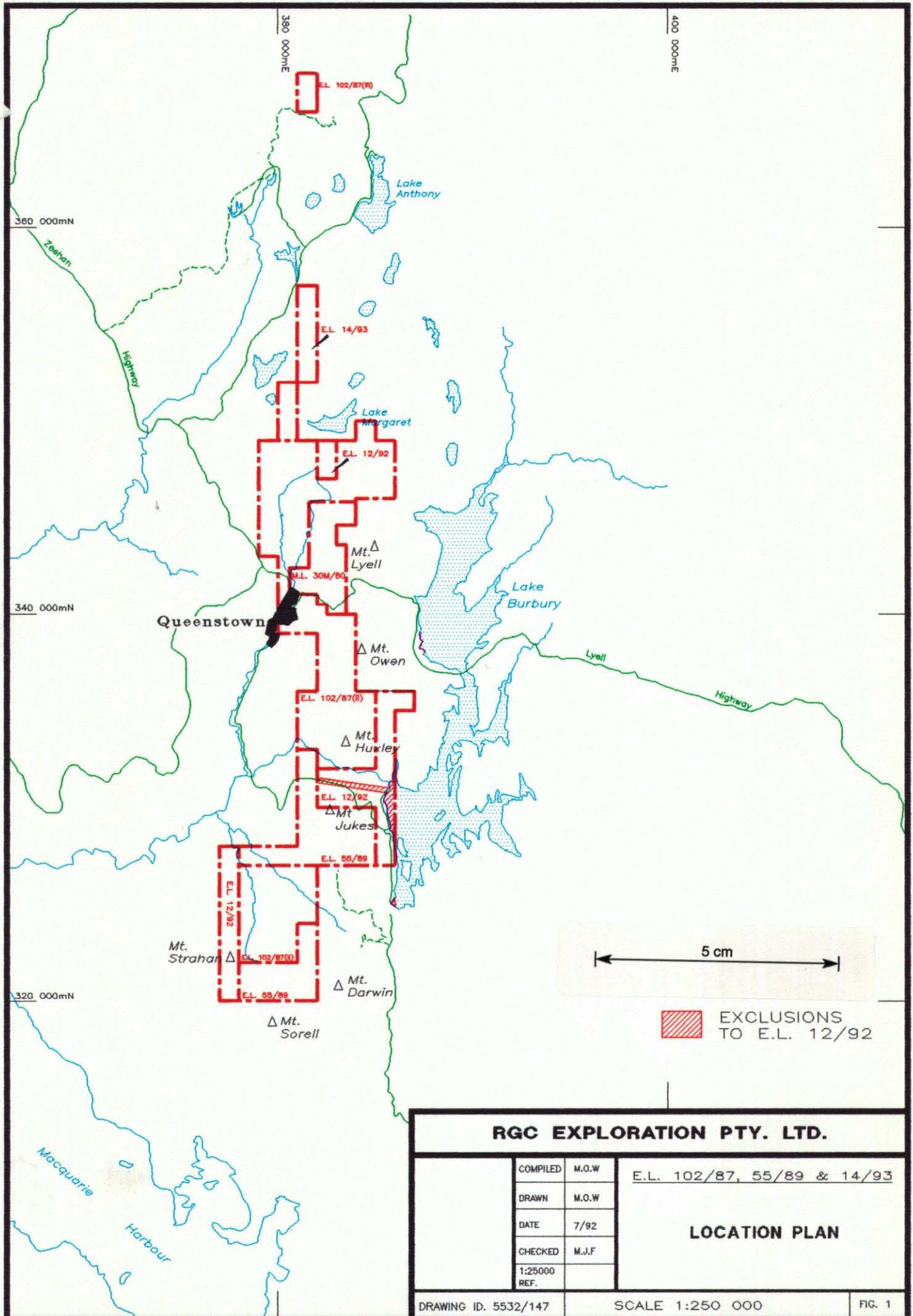
Macquarie Harbour exploration activities in the Garfield/Clark Valley are still subject to approval from the Mineral Exploration Working Group.

In March 1994 as a result of a compulsory partial relinquishment the total area covered by the three E.L.'s was reduced to 130 sq kms. This is made up of:

E.L. 102/87 Part (i) Queenstown - 56 sq kms
Part (ii) Garfield - 18 sq kms
Part (iii) Moxon Saddle - 2 sq kms

E.L. 55/89 Part (i) Mt Darwin - 28 sq kms

E.L. 12/92 Part (i) West Coast Range - 16 sq kms
Part (ii) Mount Sorell - 8 sq kms
Part (iii) Lake Margaret - 2 sq kms



 EXCLUSIONS TO E.L. 12/92

RGC EXPLORATION PTY. LTD.		
COMPILED	M.O.W	E.L. 102/87, 55/89 & 14/93
DRAWN	M.O.W	
DATE	7/92	
CHECKED	M.J.F	
1:25000 REF.		
DRAWING ID. 5532/147	SCALE 1:250 000	

LOCATION PLAN

3. WORK COMPLETED

3.1 West Sedgwick

Diamond Drilling Tas were contracted to drill WS007 from the saddle between Agglomerate Hill and Zig Zag Hill. An LY44 rig was flown in by helicopter on 4 February 1993. The hole was cased off in HQ at 103m and continued in NQ to 499.2m. The hole was ended on 8 March 1993. At the time of writing last years annual report the rig and core had not been removed from the drill pad. After the core was lifted out it was logged and sampled. Since most of the core was altered but not obviously mineralized, it was sampled with a core grinder in ten metre composite intervals. The intention was to resample in more detail any anomalous zones evident from the first round of sampling. The zones of most intense alteration were cut in half and sampled in one metre intervals. All samples were analysed for Cu, Pb, Zn and Ag by AAS at Analabs in Cooeee, and were also assayed for Au by fire assay.

Drill holes WS006 and WS007 were surveyed with down hole SIROTEM. This work was done on contract by McSkimming Geophysics. Existing grid lines were used as far as possible to lay out the energising loops, but some additional line cutting was required. An array of 200m by 200m energising loops was used at each hole so that at least one of the loops would effectively couple with a hypothetical conductor in the vicinity of the drill holes.

In October 1993 Outer Rim Geophysics were contracted to survey the Comstock drill hole C072 with the new Crone 3-component Pulse EM system. It was decided at the same time to resurvey WS007 with this system. This time a single 400m by 400m energising loop was employed.

The nature of the alteration system in WS007 was investigated with a small number of stable isotope analyses. Two samples were analysed for whole-rock Delta ¹⁸O and three pyrite samples were analysed for

Delta ^{34}S . The analyses were performed at the Central Science Laboratory at the University of Tasmania.

3.2 Garfield Prospect

During the initial mapping of the Garfield grid a zone of intense chlorite-pyrite-sericite alteration was noted within an andesite unit. The alteration zone appeared to be related to a fault which offset the andesite to the south. Soil samples from the alteration zone reported up to 0.48% Cu and 0.12ppm Au (Halley, 1993). It was decided to investigate this area in more detail. An area of approximately 1km by 1km was remapped at 1:1000 scale. Following this a drill hole was designed to test the alteration zone. The hole was drilled by Diamond Drilling Tas with a Longyear 38 rig. The final depth of the hole was 388m. The equipment was flown in from a clear pad near the surge pond beside the Mount Jukes Road. Drilling commenced on 23rd May, 1993 and was finished on 18th June, 1993. The hole intersected a broad copper bearing pyritic alteration zone. One hundred and five metres of core was sampled in 1m intervals. It was assayed at Analabs for Au by fire assay and for Ag, Cu, Pb and Zn by AAS.

Following the success of the first drill hole a second phase of exploration was planned. Magnetite within the alteration system indicated that ground magnetics would be a simple way to delineate the extent of the alteration system. The similarity to Prince Lyell mineralization also indicated that IP would map out the extent of sulphide bearing alteration. Since the existing grid was at a line spacing of 200m, a local baseline at 2100E was cut from 1800N to 3400N and infill cross lines at 100m spacings were cut from 1900N to 2700N. Also additional short N-S lines were cut at 1800E, 2000E and 2200E where further information was required to accurately locate a NE trending fault.

The initial soil sampling survey sampled every second line, that is at 400m spacings, at 50m intervals, although this was closed up to 200m line spacings over the Garfield Prospect. After the new lines

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were cut, they were soil sampled by hand auguring at 25m intervals. The sampling interval was also closed up to 25m on the original lines. These samples were analysed for Au, Ag, Cu, Pb and Zn. The N-S lines across the NE-trending Garfield Fault were also soil sampled at 25m intervals. These samples were analysed for a suite of elements by INAA with the objective of using the trace element chemistry to distinguish lithologies and constrain more tightly the position of the fault.

The ground magnetic survey was contracted to Brendan Stedman. Approximately 12 km of grid lines were surveyed. The data was processed in-house by RGC and presented as a series of stacked profiles and as a contour plan. The gradient array IP survey was conducted by Geoterrex. The transmitting electrodes were located on line 2200N at 1300E and 3100E. The receiver dipole was 50m in length and lines between 1800N and 2600N were surveyed. In addition, line 1800N was surveyed with dipole-dipole IP.

Drill hole GAR001 was surveyed by Outer Rim Geophysics with 3-component down hole pulse EM. Two 400m by 400m energising loops were used. The survey was designed to test for massive sulphides stratigraphically above the pyritic alteration zone, and to test for more massive mineralization along the fault zone.

3.3 Penghana Prospect

Following the discovery of the mineralization at Garfield some common features of mineralized systems south of Henty were recognised. Most of the Cambrian alteration systems in this area can be related to andesitic to basaltic volcanics belonging to the "suite 2" of Crawford et al., (1992). The alteration at Garfield also included a magnetite-rich zone similar to Prince Lyell. As a result of these observations, the open file aero-magnetic data was overlaid on the regional geology to see if any other "suite 2" andesites had a magnetic signature similar to the Garfield andesite. The most obvious area was the "Horse Paddock Andesite" at Penghana Hill near the Lake Margaret turnoff. Furthermore, this andesite

occurs in the stratigraphic footwall of the Madam Howards Barite prospect and a hydrothermal system related to the andesite might provide an explanation to these enigmatic veins. Work on the Penghana Prospect is at a preliminary stage and results are not yet available for reporting. Work underway at present includes reclearing the old West Sedgwick grid and cutting infill lines at a 100m spacing, mapping at a scale of 1:1000, a ground magnetic survey and a soil geochemistry survey sampling 200m spaced lines at 25m intervals.

4. RESULTS AND DISCUSSION

4.1 West Sedgwick

A summary log of drill hole WS007 is as follows:

- 0 - 69m felsic feldspar-phyric volcaniclastics
- 69 - 157m amygdaloidal basaltic pillow lava
- 157 - 289m strongly foliated andesite
- 289 - 348m massive intermediate to massive ^{? mafic?} lava
- 348 - 499m interbedded siltstone and crystal-rich feldspathic sandstone

A more detailed log and the assays are presented in Appendix 1. Zones of significant silica-sericite-pyrite alteration occurred from 45 to 155m and from 295 to 350m. The basaltic lavas contain abundant siliceous spheres up to 10mm in diameter which are interpreted to be silica-filled vesicles. Irregular bands of grey cherty material up to 5cm wide commonly occur within the basalt. These are interpreted to be interpillow chert. Pyrite occurs throughout this unit, typically around 1 to 2%, but locally up to 20%.

The second alteration zone is more intense than the first and occurs in a mixed lava, volcaniclastic sequence. It includes some intensely silicified zones and pyrite contents locally up to 30%. In one interval, some epiclastic material appears to be bedded with semi-massive pyrite. This is overlain by a strongly pyritic quartz phyric unit. The alteration terminates abruptly at a black siltstone unit. The siltstone is followed by a grey crystal-rich feldspathic sandstone derived from an andesitic provenance. This is interpreted to be a local basal unit of the Comstock Tuff, similar to the Lynchford Tuff. The absence of a pink colouration in this rock is attributed to weak sericitic alteration. This drill hole indicates that the base of the Tyndall Group is an important stratigraphic position for VMS related alteration and mineralisation, as has been noted elsewhere in this region.

Ninety-three samples from WS007 were submitted for assay. This included 36, 10m composite samples of ground core and 57, 1m intervals of halved core. The assay results were very disappointing. None of the base metals were above 1000ppm, and only a few of the gold assays were above the detection limit (0.008ppm).

A few samples were submitted for stable isotope analysis to determine why such a strong alteration system was devoid of mineralisation. Two whole rock samples were analysed for their oxygen isotope ratio and three pyrite samples were analysed for their sulphur isotope ratio. The whole rock $\delta^{18}\text{O}$ values were +13.5 and +13.1. These results suggest that the alteration was produced at a temperature of around 200 degrees. This explains the lack of base metals, since it is likely that temperatures of 250 to 300 degrees are required to transport significant levels of base metals. The pyrite $\delta^{34}\text{S}$ values were +15.3, +32.4 and +46.3. In low temperature, barren, pyritic VMS systems a $\delta^{34}\text{S}$ signature of around 0 per mil would be expected, this signature being derived from the leaching of rock-sulphur in the volcanic pile. The values from WS007 indicate that seawater sulphate has been the source of the sulphur. The sulphate has been reduced and ^{34}S fractionated between oxidized and reduced sulphur species to produce the high sulphur isotope ratios. The reduction of sulphate to H_2S has a high activation energy, and laboratory studies indicate that temperatures above 240 degrees are required to drive this inorganic reaction. This suggests that WS007 intersected the margins of a hotter alteration system, which does have potential for base metal alteration. The only other recorded place in Tasmania with the same combination of highly ^{34}S -enriched pyrite and high whole rock $\delta^{18}\text{O}$ values is in the stringer envelope zone (SEZ) at Hellyer. The most likely interpretation of the Hellyer results is that the SEZ is a zone of entrainment and mixing of cold shallow-circulating seawater with hot upwelling reduced hydrothermal fluid. A similar situation is envisaged at West Sedgwick.

Drill holes WS006 and WS007 were logged with the SIROTEM downhole TEM system. No conductors were located within the vicinity of either hole. Details of the survey and its interpretation are

presented in Appendix 2. The lack of any "character" in the WS007 survey was surprising given the amount of pyrite in the hole. It was decided to resurvey the hole with three-component Pulse EM when the contractors were on site at Mount Lyell. This survey corroborated the results of the first survey. These details are presented in Appendix 3.

4.2 Garfield

The Garfield Prospect was remapped at 1:1000 scale, with traverses along grid lines, and in the critical areas along creeks. Three main units were identified. These include: (i) a package of quartz-phyric lavas and volcaniclastics belonging to the Yolande River Sequence. These rocks are easily identified by their glassy quartz phenocrysts. They have a pale green, sericitic, moderately foliated groundmass. The volcaniclastics are medium to fine grained and are not easily distinguished from the lavas. (ii) a hornblende-feldspar-phyric andesite. The andesite has a sheet-like geometry, conformable with the stratigraphy, ranging between 20 and 150m thick. The geometry suggests that it is a lava, but conformable intrusive sills of other lithologies are common elsewhere in the YRS. The southern end of the andesite is offset by a SW trending fault. (iii) a pale grey, feldspar phyric lava lying stratigraphically above the andesite. This rock occurs within the YRS but resembles the CVC both mineralogically and chemically (eg. it has a high Zr/Ti ratio). In float, it is difficult to distinguish from finer-grained volcaniclastics of the YRS. Bands of andesite, possibly intrusive, occur within this unit. With the poor degree of exposure of these rocks, the andesite bands cannot be mapped out even with 1:1000 scale mapping.

A zone of outcropping pyrite, chlorite, sericite alteration occurs in the andesite immediately to the north of the SW trending fault. The alteration has been mapped over an area of about 200m by 100m and is best developed on the western side of the andesite. Magnetite is locally abundant, but is more common towards the eastern side, separate from the pyrite. Within the alteration zone

andesite outcrops generally have a leached outer rind about 2cm thick, but within the fresh kernel they are green and chloritic with veins of pyrite up to a few mm thick as well as disseminated pyrite. The pyrite content is up to 10%.

During the auger sampling of soil from the new grid lines and infill sampling from the old lines, 187 samples were collected. The Cu and Au values of these samples were surprisingly low when compared to the results from the first round of sampling (Appendix 4). The highest Cu value was 331ppm and the highest gold, 164ppb. This compares to a previous high of 4800ppm Cu. Two possible reasons for the discrepancy were investigated. Different digests for AAS were used in the two rounds of assaying, perchloric acid in the first round and aqua regia/perchloric acid on the second round so that vanadium could be assayed from the same digest. Although it was considered unlikely that this would make a significant difference, a number of pulps from each round of sampling were reassayed using a perchloric acid digest. The repeat values are given below:

<u>sample</u>	<u>Cu value</u>	<u>Cu value (repeat)</u>
T39948	4800	4750
T39949	1200	1240
T40037	175	175
T40038	50	49
T40054	260	261
T40055	19	19
T45272	40	42
T45273	36	42
T45274	40	44
T45275	331	373
T45276	126	140
T45277	9	10

The repeat assaying indicated that the original assays are reliable and that the different digests made no difference. The possible affect of the sampling technique was also investigated. A number of sites were selected within the alteration zone and soil samples were collected at different depths in the soil profile (Appendix 5).

Although there was some difference between samples from the same site, there was no systematic variation between B-horizon and C-horizon samples. The conclusions reached from the repeat sampling and check assaying were that the two high Cu values (4800 and 1200ppm) obtained in the first round of sampling were fortuitous, and secondly that the soil geochemical signature of the Garfield mineralisation is very subtle, typically 40 to 200ppm Cu, and any Au value above the detection limit is significant. Gold was the most reliable indicator of the mineralised zone with a range of 10 to 200ppb.

Drill hole GAR001 was designed to test the alteration zone at Garfield, north of the Garfield Fault. The hole was drilled far enough north to avoid the possibility the Garfield Fault might have a northerly dip and cut off the mineralisation at depth. This placed the hole to the north of the best soil geochemistry values. A summary log of the hole is as follows:

0.0 - 17.5	feldspar phyric dacitic lava
17.5 - 34.5	andesite
34.5 - 89.4	feldspar phyric dacitic lava
89.4 - 102.7	quartz phyric rhyolite lava
102.7 - 148.4	andesite
148.4 - 175.0	quartz phyric rhyolite lava
175.0 - 318.5	mineralised, chlorite-pyrite altered andesite
318.5 - 388.5	rhyolitic epiclastics and lavas

Sulphides, dominantly pyrite, occurred from 170m to around 330m. The sulphides occurred in a widely spaced stockwork of veinlets up to 5mm wide. The veinlets commonly also contain calcite. Disseminated sulphides are also common. The sulphide content is typically 2 to 5% but locally up to 40%. The matrix of the rock is altered to chlorite and sericite, with narrow selvages of sericite alteration commonly around the veins. Coarse crystals and veins of magnetite are also a common feature. These are not evenly distributed through the rock, but occur in discreet magnetite-rich zones. The magnetite commonly occurs in association with clusters of coarse pink apatite. Chalcopyrite is generally very fine grained and occurs in intimate

association with pyrite. Intervals without visible chalcopyrite commonly returned significant Cu assays (up to 2000ppm Cu). The nature of the sulphides and the magnetite-apatite association is very similar to the Prince Lyell mineralisation.

The drill hole was assayed in 1m intervals from 175m to 280m. A detailed drill log and the assays are presented in Appendix 6. The Cu values averaged 0.38% over 105m. Gold occurred at low levels throughout the hole with a maximum value of 0.58ppm. Like Prince Lyell, the Zn and particularly Pb values are very low.

Following the recognition of magnetite as part of the alteration system at Garfield, it was decided to conduct a ground magnetic survey. The lines surveyed were from 1600N to 3200N, with readings taken at 5m intervals. Details of the survey and the results are in Appendix 7. The interpretation of the ground magnetics was constrained by measurements of remnant magnetism in drill core samples from GAR001 (Appendix 8). The extent of the magnetite bearing alteration is clearly evident in the results of the survey. The main alteration zone extends from 2000N to 2300N as expected from the mapping. The surprising result is that the faulted-off southern extension of the andesite also contains secondary magnetite although no alteration had been mapped in this area.

The IP detected strong chargeability responses over the main alteration zone, particularly on lines 2000N, 2100N, 2200N and 2300N. Surprisingly, chargeability responses were also detected on lines 2400N and 2600N, although with a lower amplitude. A weak chargeability feature was observed on line 1800N, coincident with the magnetic anomaly on the southern part of the andesite. These results are also discussed in Appendix 7.

Drill hole GAR001 was surveyed with three component downhole Pulse EM. No off-hole conductors were detected. Specifications of the survey and an interpretation of the results is presented in Appendix 9.

5. PROPOSED WORK

5.1 West Sedgwick

One more hole is planned to test the West Sedgwick alteration zone. The alteration terminates to the north against an E-W growth fault. Mapping suggests that it dies out to the south. The lack of an EM response suggests that no mineralization occurs between the hole and the surface. The only option left is to drill a deeper hole beneath WS007. A hole has been planned to intersect the stratigraphic top of the alteration system 200m below WS007. This hole should commence in May 1994.

5.2 Garfield

It appears that the alteration at Garfield is controlled by the SW trending Garfield Fault, and there is a likelihood that higher grade mineralisation may be encountered adjacent to the fault. Consequently a second drill hole has been planned to intersect the alteration zone between GAR001 and the fault. Other ideas under consideration are:

1. Drill testing the IP anomaly north of 2200N
2. Extending the IP survey to close off the chargeability anomaly north of 2600N
3. Drill testing the magnetic anomaly on line 1800N
4. Trying to identify the seafloor position at the time the Garfield mineralisation formed, and assessing the Pb-Zn potential of this horizon.

5.3 Penghana

As already mentioned, infill gridding, mapping, a soil geochemistry survey and a ground magnetic survey are already underway at Penghana. Assessment of these results is likely to be followed by an IP survey and drill testing of the best anomalies.

5.4 Other Areas

Earlier work by BHP at Moxon Saddle identified an IP chargeability anomaly along the Henty fault. RGC intend to follow up this anomaly by mapping, soil sampling and possibly by drilling. Also a review of previous exploration at the Beatrice Prospect, on the southern slopes of Mount Sedgwick, will be compiled. The possibility of an extension of the Beatrice mineralisation to the south beneath glacial cover will be assessed.

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APPENDIX 1

WS007 DRILL LOG AND ASSAYS

WEST SEDGWICK PROSPECT

DIAMOND DRILLHOLE : WS007

PROJECT IDEN : WEST SEDGW START DATE : 8 FEB 93 COMPLETION DATE : 10 MAR 93 LOGGED BY: SCOTT HALLEY
 COLLAR NORTHING: 346120.00 COLLAR EASTING : 381305.00 COLLAR ELEVATION: 486.00 GRID AZIMUTH : 0.00
 DRILLED BY : DDT TOTAL LENGTH : 499.20 CORE/HOLE SIZE : HQNQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		87.00	-58.00	346120.00	381305.00	486.00
001	43.00		86.00	-58.00			
002	73.00		84.50	-56.50			
003	109.00		86.00	-55.00			
004	139.00		84.50	-55.00			
005	169.00		83.50	-54.70			
006	199.00		83.00	-54.00			
007	229.00		80.00	-53.20			
008	259.00		79.00	-52.60			
009	289.00		78.00	-52.00			
010	316.00		78.50	-51.50			
011	346.00		79.00	-49.00			
012	376.00		79.00	-44.20			
013	406.00		79.50	-41.70			
014	439.00		77.50	-41.00			
015	469.00		78.00	-40.00			
016	499.00		77.50	-39.00			

	Interval From (m)	To (m)	Description	Unit
R	0.00	3.00	NO CORE (PRECOLLAR). TRICONE	
	3.00	18.90	SCHISTOSE FELDSPAR PHYRIC X-TAL RICH FELSIC VOLCANICLASTIC; orange. STRUCTURE: cleavage/foliation: 55 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: strongly weathered.	CAMBRIAN CENTRAL VOLCANIC COMPLEX
R	3.00	103.00	CORE SIZE: HQ	
	18.90	27.30	FELDSPAR PHYRIC SANDY FELSIC VOLCANICLASTIC: light grey. TEXTURE: strongly foliated.	CAMBRIAN CENTRAL VOLCANIC COMPLEX
	27.30	35.00	FELDSPAR PHYRIC SANDY FELSIC VOLCANICLASTIC: pale grey. STRUCTURE: strongly broken core and limonitic. MINERALOGY: 5% veins of quartz. 29.00 - 29.90 100% SILTSTONE: lighter grey.	CAMBRIAN CENTRAL VOLCANIC COMPLEX

RGC EXPLORATION PTY LTD
WEST SEDGWICK PROSPECT
DIAMOND DRILLHOLE : WS007 (CONTINUED)

	Interval	-	-	Description	Unit
	From (m)	To (m)	To (m)		
	35.00	56.05		SANDY FELSIC EPICLASTIC: light grey.	CAMBRIAN CENTRAL VOLCANIC COMPLEX
R	35.00	56.05		This is a felsic epiclastic unit, mostly massive but with some	
R	35.00	56.05		bedded silty bands.	
				38.00 - 39.00 100% SILTSTONE: medium grey.	
				STRUCTURE: strongly broken core.	
				41.90 - 42.60 100% SILTSTONE: medium grey.	
				STRUCTURE: moderately broken core.	
				44.20 - 44.90 100% SILTY FELSIC EPICLASTIC: pale pink.	
				STRUCTURE: bedding: 35 degrees dip long core axis, cleavage/foliation: 35 degrees dip long core axis.	
				45.50 - 52.00 100% SANDY FELSIC EPICLASTIC.	
				STRUCTURE: moderately broken core.	
				54.80 - 54.90 100% SILTY FELSIC EPICLASTIC.	
				STRUCTURE: bedding: 40 degrees dip long core axis, basal conyacy is conformable.	
				MINERALOGY: 10% layers/bands of pyrite.	
	56.05	57.80		BASALTIC LAVA: dark green.	
				STRUCTURE: strongly broken core.	
				TEXTURE: amygdaloidal.	
R	56.05	57.80		Fine grained mafic rock with irregular grey cherty bands and	
R	56.05	57.80		5mm sperical structures filled with chlorite and silica.	
	57.80	70.10		FELDSPAR PHYRIC CRYSTAL-RICH SANDY FELSIC EPICLASTIC.	
				TEXTURE: moderately foliated, 50% coarse fraction, 1.0mm to 4.0mm coarsest fraction.	
				63.10 - 63.95 60% VEIN.	
				MINERALOGY: 50% veins of quartz, 10% veins of carbonate, 1% veins of chlorite.	
R	63.95	70.10		Finer grained parts of this unit are well bedded.	
				63.95 - 70.10 100% SANDY FELSIC EPICLASTIC.	
				STRUCTURE: bedding: 35 degrees dip long core axis.	
				ALTERATION: weakly sericitic.	
				MINERALOGY: 1% disseminations & scattered crystals of pyrite.	
				65.60 - 66.00 100% SANDY FELSIC EPICLASTIC.	
				STRUCTURE: strongly broken core.	
R	70.10	156.50		Fine-grained mafic volcanic with sperical siliceous balls from	
R	70.10	156.50		amygdules and 1 to 5cm irregular bands of dark grey chert. This	
R	70.10	156.50		chert.	
	70.10	156.50		BASALTIC LAVA: dark green.	
				STRUCTURE: cleavage/foliation: 35 degrees dip long core axis.	
				TEXTURE: amygdaloidal, moderately foliated.	

RGC EXPLORATION PTY LTD
WEST SEDGWICK PROSPECT
DIAMOND DRILLHOLE : WS007 (CONTINUED)

	Interval From (m)	To (m)	Description	Unit
R	70.10	156.50	ALTERATION: strongly pyritic. 3mm to 10mm, quite crowded in places, interpreted to be	
R	70.10	156.50	is interpreted to be a pillow lava sequence with inter-pillow 70.10 - 75.60 100% BASALTIC LAVA. ALTERATION: weakly sericitic, weakly chloritic. MINERALOGY: pervasive carbonate, 10% pervasive pyrite.	
			75.00 - 75.35 100% BASALTIC LAVA. MINERALOGY: 5% pervasive carbonate, 10% stringers of sericite, 50% layers/bands of pyrite.	
			84.10 - 86.10 100% BASALTIC LAVA: pale green. ALTERATION: strongly siliceous. MINERALOGY: 1% veins of carbonate, 1% veins of pyrite.	
			85.40 - 88.00 100% BASALTIC LAVA. STRUCTURE: strongly broken core.	
			87.00 - 88.40 100% SANDY SILTSTONE. STRUCTURE: bedding; 45 degrees dip long core axis.	
			88.40 - 88.70 100% BASALTIC LAVA: pale green. ALTERATION: strongly siliceous. MINERALOGY: 2.5% disseminations & scattered crystals of pyrite.	
			88.70 - 89.50 100% BASALTIC LAVA: brown green. ALTERATION: strongly sericitic, moderately chloritic. MINERALOGY: 5% pervasive carbonate, 10% stringers of sericite, 30% layers/bands of pyrite.	
			101.00 - 101.40 100% FAULT. STRUCTURE: very strongly broken core with prominent pug zones.	
R	103.00	499.20	102.10 - 103.60 100% BASALTIC LAVA: brown green. ALTERATION: strongly siliceous, strongly pyritic. MINERALOGY: 5% pervasive carbonate, 5% stringers of sericite, 40% layers/bands of pyrite. CORE SIZE: NO	
			104.10 - 105.10 100% BASALTIC LAVA: pale green. ALTERATION: strongly siliceous. MINERALOGY: 2.5% stringers of pyrite.	
R	105.90	115.30	Amygdaloidal basalt with a fine grained dark green matrix and	
R	105.90	115.30	about 5% bright pink siliceous amygdules averaging 5mm	
R	105.90	115.30	diameter. There is also around 10% prominent dark grey	
R	105.90	115.30	irregular chert bands some of them with abundant finely	
R	105.90	115.30	disseminated pyrite. Pyrite occurs through the rock in coarse	
R	105.90	115.30	grained bands. 105.90 - 115.30 100% BASALTIC LAVA: very dark green. TEXTURE: amygdaloidal. MINERALOGY: 2.5% layers/bands of pyrite.	
			112.90 - 117.00 100% BASALTIC LAVA. STRUCTURE: strongly broken core.	

RGC EXPLORATION PTY LTD
WEST SEDGWICK PROSPECT
DIAMOND DRILLHOLE : WS007 (CONTINUED)

Interval From (m) To (m)	Description	Unit
	118.00 - 118.80 100% BASALTIC LAVA: pale green. ALTERATION: strongly siliceous.	
	121.20 - 121.40 100% BASALTIC LAVA: brown green. ALTERATION: strongly pyritic, strongly siliceous. MINERALOGY: 10% layers/bands of carbonate, 30% layers/bands of pyrite.	
	125.30 - 126.60 100% BASALTIC LAVA: pale green. ALTERATION: strongly siliceous. MINERALOGY: 2.5% stockwork of carbonate.	
	128.50 - 130.50 100% BASALTIC LAVA: pale green. ALTERATION: strongly siliceous. MINERALOGY: 5% veins of quartz, 2.5% stockwork of carbonate, 2.5% disseminations & scattered crystals of pyrite.	
	130.50 - 131.00 100% BASALTIC LAVA. ALTERATION: strongly pyritic. MINERALOGY: 10% stringers of sericite, 20% layers/bands of pyrite.	
	131.60 - 132.30 100% BASALTIC LAVA: pale grey. ALTERATION: strongly siliceous. MINERALOGY: 5% veins of quartz.	
	132.70 - 134.40 100% BASALTIC LAVA: brown green. ALTERATION: strongly pyritic. MINERALOGY: 5% layers/bands of pyrite.	
	134.40 - 136.10 100% BASALTIC LAVA: pale grey. ALTERATION: strongly siliceous. MINERALOGY: 1% veins of pyrite.	
	138.00 - 140.90 100% BASALTIC LAVA: pale grey. ALTERATION: strongly siliceous. MINERALOGY: 2.5% stockwork of carbonate, 1% layers/bands of pyrite.	
	143.50 - 146.30 100% BASALTIC LAVA: light grey. ALTERATION: strongly siliceous. MINERALOGY: 5% veins of quartz, 1% veins of carbonate.	
	146.30 - 149.80 100% BASALTIC LAVA. STRUCTURE: strongly broken core with minor pug zones.	
	149.30 - 152.60 100% BASALTIC LAVA: brown green. STRUCTURE: cleavage/foliation: 35 degrees dip long core axis. ALTERATION: moderately sericitic. MINERALOGY: 10% layers/bands of pyrite.	
	154.00 - 156.50 100% BASALTIC LAVA: brown green. ALTERATION: moderately sericitic, weakly siliceous. MINERALOGY: 5% layers/bands of pyrite.	
156.50	289.00 ANDESITIC LAVA: dark green.	

RGC EXPLORATION PTY LTD
WEST SEDGWICK PROSPECT
DIAMOND DRILLHOLE : WS007 (CONTINUED)

	Interval From (m)	To (m)	Description	Unit
			STRUCTURE: basal contact is faulted. TEXTURE: strongly foliated, lineated. ALTERATION: moderately chloritic, weakly sericitic.	
R	156.50	289.00	This is a massive andesite unit with pervasive chlorite - sericite - silica alteration. It is strongly cleaved and the intensity of the cleavage increases progressively down-hole. The rock also develops a very strong vertical lineation towards the end of the interval. This unit is ended by a fault at a low angle to the core axis. The rock becomes increasingly strained approaching the fault, with numerous puggy breaks from 279m onwards.	
R	156.50	289.00		
R	156.50	289.00		
R	156.50	289.00		
R	156.50	289.00		
R	156.50	289.00		
R	156.50	289.00		
	168.70 - 169.10		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 88 degrees dip 232 dip direction.	
	193.50 - 193.80		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 78 degrees dip 227 dip direction.	
	198.40 - 200.70		100% ANDESITIC LAVA.	
			ALTERATION: moderately chloritic, weakly sericitic.	
			MINERALOGY: 1% veins of carbonate, 1% disseminations & scattered crystals of pyrite.	
	207.00 - 212.60		100% ANDESITIC LAVA: dark green.	
			ALTERATION: moderately chloritic, weakly sericitic.	
			MINERALOGY: 2.5% layers/bands of pyrite.	
	212.60 - 217.50		100% ANDESITIC LAVA: light green.	
			ALTERATION: moderately chloritic, moderately sericitic.	
			MINERALOGY: 5% layers/bands of pyrite.	
	221.80 - 222.20		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 78 degrees dip 222 dip direction.	
	222.20 - 223.00		100% ANDESITIC LAVA.	
			ALTERATION: moderately chloritic, moderately sericitic.	
			MINERALOGY: 5% layers/bands of carbonate, 1% disseminations & scattered crystals of pyrite.	
	236.60 - 236.90		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 89 degrees dip 073 dip direction.	
	246.00 - 289.00		100% ANDESITIC LAVA.	
			TEXTURE: very strongly foliated, lineated.	
			ALTERATION: moderately sericitic, weakly chloritic.	
	250.90 - 251.30		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 90 degrees dip 085 dip direction.	
	267.00 - 267.50		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 88 degrees dip 069 dip direction.	
	279.00 - 287.00		100% ANDESITIC LAVA.	
			STRUCTURE: moderately broken core with minor pug zones.	
	280.20 - 280.30		100% STRUCTURAL MEASUREMENT.	
			STRUCTURE: cleavage/foliation: 83 degrees dip 250 dip direction.	

RGC EXPLORATION PTY LTD
WEST SEDGWICK PROSPECT
DIAMOND DRILLHOLE : WS007 (CONTINUED)

Interval From (m) To (m)	Description	Unit
	287.00 - 289.00 100% ANDESITIC LAVA. STRUCTURE: strongly broken core with prominent pug zones.	
289.00 289.80	FAULT. STRUCTURE: very strongly broken core with prominent pug zones, fault: 20 degrees dip long core axis.	
289.80 299.60	ANDESITIC LAVA: dark grey. STRUCTURE: weakly broken core. MINERALOGY: 2.5% veins of carbonate, 0.3% disseminations & scattered crystals of pyrite.	
299.60 303.10	BASALTIC LAVA: light grey. STRUCTURE: moderately broken core with minor pug zones. ALTERATION: strongly sericitic, moderately pyritic. MINERALOGY: 5% layers/bands of pyrite.	
303.10 303.90	POLYMICT COARSE ANDESITIC VOLCANICLASTIC. STRUCTURE: cleavage/foliation: 86 degrees dip 252 dip direction. TEXTURE: strongly foliated, lineated. ALTERATION: strongly sericitic, moderately pyritic. MINERALOGY: 5% lenses of pyrite.	
303.90 304.70	MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. STRUCTURE: cleavage/foliation: 87 degrees dip 078 dip direction, bedding: 87 degrees dip 078 dip direction. TEXTURE: bedded. ALTERATION: strongly pyritic, strongly siliceous. MINERALOGY: 40% layers/bands of pyrite.	
304.70 306.30	MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. ALTERATION: strongly siliceous. MINERALOGY: 1% disseminations & scattered crystals of pyrite.	
306.30 314.40	QTZ PHYRIC COARSE FELSIC VOLCANICLASTIC: medium grey. TEXTURE: strongly foliated. ALTERATION: strongly siliceous, moderately sericitic. MINERALOGY: stringers of sericite, 1% disseminations & scattered crystals of pyrite.	
R 306.30 314.40	Quartz-phyric unit with a coarse fragmental texture and strong silica - sericite - pyrite alteration.	
R 306.30 314.40	312.75 - 312.85 100% FAULT. STRUCTURE: strongly broken core with prominent pug zones, fault: 45 degrees dip long core axis.	

Interval From (m) To (m)	Description	Unit
314.40 - 317.00	QTZ PHYRIC BLOCKY FELSIC VOLCANICLASTIC. ALTERATION: strongly siliceous, strongly pyritic. MINERALOGY: 5% breccia fillings of pyrite.	
317.00 - 317.70	SANDY FELSIC VOLCANICLASTIC. ALTERATION: strongly sericitic. MINERALOGY: 5% layers/bands of pyrite.	
317.70 - 322.20	FELDSPAR PHYRIC LAVA: medium grey. ALTERATION: intensely siliceous, strongly pyritic. MINERALOGY: 10% veins of quartz, 5% stockwork of pyrite.	
322.20 - 342.20	MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC: medium grey. STRUCTURE: moderately broken core. TEXTURE: moderately foliated. ALTERATION: moderately sericitic, weakly siliceous. MINERALOGY: 0.1% disseminations & scattered crystals of pyrite. 325.90 - 328.70 100% MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. STRUCTURE: strongly broken core with minor pug zones. 331.00 - 335.00 100% MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. STRUCTURE: strongly broken core with minor pug zones. 332.50 - 333.00 100% MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. STRUCTURE: very strongly broken core with prominent pug zones, 2-5mm fault: 00 degrees dip long core axis. 333.00 - 334.50 100% MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC: light green. TEXTURE: strongly foliated, lineated. ALTERATION: strongly sericitic. 335.30 - 336.70 100% MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. STRUCTURE: strongly broken core. 339.20 - 339.80 100% MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC. STRUCTURE: strongly broken core.	
342.20 - 348.70	MEDIUM (SANDY) ANDESITIC VOLCANICLASTIC: medium grey. ALTERATION: strongly pyritic, moderately siliceous. MINERALOGY: 2.5% veins of quartz, 2.5% veins of carbonate, 5% stockwork of pyrite.	
348.70 - 354.10	FELDSPAR PHYRIC SILTY SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC: medium grey. TEXTURE: interbedded.	
354.10 - 363.00	SHALE: black.	

RGC EXPLORATION PTY LTD
WEST SEDGWICK PROSPECT
DIAMOND DRILLHOLE : WS007 (CONTINUED)

Interval		Description	Unit
From (m)	To (m)		
		TEXTURE: well bedded, soft sediment slumping. 359.50 - 363.00 100% SHALE. STRUCTURE: strongly broken core bedding: 45 degrees dip long core axis.	
363.00	364.40	FELDSPAR PHYRIC SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC: light grey. ALTERATION: weakly sericitic.	
364.40	376.10	SHALE: black. STRUCTURE: bedding: 45 degrees dip long core axis. TEXTURE: well bedded. 375.20 - 376.10 100% SHALE. STRUCTURE: strongly broken core with minor pug zones.	
376.10	380.50	FELDSPAR PHYRIC WITH LITHIC FRAGMENTS SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC. STRUCTURE: moderately broken core.	
380.50	382.00	SHALE: black. STRUCTURE: strongly broken core with prominent pug zones.	
382.00	499.20	FELDSPAR PHYRIC SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC: light grey. TEXTURE: strongly foliated, lineated. ALTERATION: weakly sericitic.	
R	382.00	CRYSTAL-RICH FELDSPATHIC SANDSTONE INTERBEDDED WITH THIN BEDS	
R	382.00	OF BLACK SILTSTONE, STRONGLY CLEAVED AND STRONGLY LINEATED. 383.50 - 383.80 100% SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC. ALTERATION: moderately sericitic. MINERALOGY: 5% layers/bands of pyrite. 388.00 - 388.40 100% STRUCTURAL MEASUREMENT. STRUCTURE: cleavage/foliation: 88 degrees dip 087 dip direction, lineation: 88 degrees dip 087 dip direction. 397.95 - 398.05 100% FAULT. STRUCTURE: strongly broken core with prominent pug zones. 400.30 - 400.45 100% SHALE: black. 406.30 - 406.60 100% SHALE: black. 417.40 - 417.50 100% SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC. STRUCTURE: strongly broken core with minor pug zones. 421.50 - 421.60 100% STRUCTURAL MEASUREMENT. STRUCTURE: cleavage/foliation: 83 degrees dip 230 dip direction. 426.50 - 427.80 100% SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC. STRUCTURE: strongly broken core.	

- Interval -
From (m) To (m)

Description

Unit

427.80 - 428.30 100% SHALE: black.
 441.10 - 443.60 80% SHALE: black.
 STRUCTURE: cleavage/foliation: 83 degrees dip 252 dip direction,
 bedding: 83 degrees dip 252 dip direction.
 443.60 - 444.30 100% SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC.
 STRUCTURE: strongly broken core with minor pug zones.
 455.80 - 456.30 100% SHALE: black.
 463.10 - 464.70 100% SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC.
 STRUCTURE: 5-20mm vein: 00 degrees dip long core axis.
 MINERALOGY: 20% veins of quartz, 10% veins of carbonate.
 472.80 - 473.30 100% STRUCTURAL MEASUREMENT.
 STRUCTURE: cleavage/foliation: 90 degrees dip 081 dip direction.
 483.70 - 484.30 100% SHALE: dark grey.
 STRUCTURE: bedding: 50 degrees dip long core axis.
 496.60 - 497.80 100% SANDY CRYSTAL-RICH ANDESITIC EPICLASTIC.
 STRUCTURE: strongly broken core with minor pug zones.

916032

West Sedgwick

DIAMOND DRILLHOLE : WS007

PROJECT IDEN : WEST SEDGW START DATE : 8 FEB 93 COMPLETION DATE : 10 MAR 93 LOGGED BY: SCOTT HALLEY
 COLLAR NORTHING: 5346120.00 COLLAR EASTING : 381305.00 COLLAR ELEVATION: 486.00 GRID AZIMUTH : 0.00
 DRILLED BY : DD'T TOTAL LENGTH : 499.20 CORE/HOLE SIZE : HQNQ

ASSAY VALUES

From	To	Number	ANALAB Au ppm GG309	ALAB Au(R) ppm GG309	ANALAB Ag ppm GA101	ANALAB Ag ppm GA104	ANALAB Cu ppm GA101	ANALAB Pb ppm GA101	ANALAB Zn ppm GA101
0.00	10.00	31901	0.012		-2		38	94	36
10.00	20.00	31902	-0.008		-2		49	48	55
20.00	30.00	31903	-0.008		-2		47	531	141
30.00	40.00	31904	0.010		-2		40	26	98
40.00	50.00	31905	-0.008		-2		66	658	127
50.00	60.00	31906	-0.008		-2		112	258	129
60.00	70.00	31907	-0.008		-2		88	43	129
70.00	80.00	31908	0.014		-2		205	38	133
80.00	90.00	31909	0.011		-2		197	29	109
90.00	100.00	31910	0.008		-2		231	17	107
100.00	110.00	31911	0.010		-2		215	163	188
110.00	120.00	31912	0.009	0.011	-2		220	15	155
120.00	130.00	31913	0.009		-2		228	17	145
130.00	140.00	31914	0.013		-2		227	46	149
140.00	150.00	31915	0.012		-2		226	47	138
150.00	160.00	31916	0.009		-2		172	49	126
160.00	170.00	31917	-0.008		-2		59	13	93
170.00	180.00	31918	-0.008		-2		83	-5	112
180.00	190.00	31919	-0.008		-2		68	-5	112
190.00	200.00	31920	-0.008		-2		91	7	79
200.00	210.00	31921	-0.008		-2		69	10	82
210.00	220.00	31922	-0.008	-0.008	-2		50	9	84
220.00	230.00	31923	-0.008		-2		24	-5	137
230.00	240.00	31924	-0.008		-2		21	15	102
240.00	250.00	31925	-0.008		-2		22	-5	91
250.00	260.00	31926	-0.008		-2		23	6	96
260.00	270.00	31927	-0.008		-2		22	7	85
270.00	280.00	31928	-0.008		-2		23	5	87
280.00	290.00	31929	-0.008		-2		46	10	125
290.00	291.00	31937	-0.008		-2		77	21	103
291.00	292.00	31938	-0.008		-2		99	-5	94
292.00	293.00	31939	-0.008		-2		106	-5	102
293.00	294.00	31940	0.010		-2		79	-5	92
294.00	295.00	31941	-0.008		-2		47	7	83
295.00	296.00	31942	-0.008		-2		40	5	83
296.00	297.00	31943	-0.008		-2		67	7	78

916033

R.G.C. Exploration Pty Ltd
West Sedgwick
DIAMOND DRILLHOLE : WS007 (CONTINUED)

ASSAY VALUES

From	To	Number	ANALAB Au ppm GG309	ALAB Au(R) ppm GG309	ANALAB Ag ppm GA101	ANALAB Ag ppm GA104	ANALAB Cu ppm GA101	ANALAB Pb ppm GA101	ANALAB Zn ppm GA101
297.00	298.00	31944	-0.008		-2		98	-5	94
298.00	299.60	31945	-0.008		-2		81	11	62
299.60	301.00	31946	0.014		-2		232	-5	71
301.00	302.00	31947	0.013		-2		242	41	110
302.00	303.10	31948	0.012	0.014	-2		243	31	118
303.10	303.90	31949	0.008		-2		160	23	147
303.90	304.70	31951	-0.008	-0.008	-2		45	47	71
304.70	306.30	31952	-0.008		-2		34	20	32
306.30	307.00	31953	-0.008		-2		77	26	63
307.00	308.00	31954	-0.008		-2		67	24	47
308.00	309.00	31955	0.011		-2		71	15	48
309.00	310.00	31956	0.008		-2		72	14	49
310.00	311.00	31957	-0.008		-2		69	21	70
311.00	312.00	31958	-0.008	0.008	-2		64	19	43
312.00	313.00	31959	-0.008		-2		64	18	53
313.00	314.40	31960	-0.008		-2		67	20	57
314.40	315.00	31961	-0.008		-2		72	44	62
315.00	316.00	31962	0.012		-2		59	34	54
316.00	317.00	31963	0.011		-2		70	24	69
317.00	317.70	31964	-0.008		2		89	37	75
317.70	319.00	31965	-0.008		-2		60	30	64
319.00	320.00	31966	-0.008		-2		63	35	82
320.00	321.00	31967	-0.008		2		55	27	35
321.00	322.20	31968	-0.008		-2		31	22	32
322.20	323.00	31969	-0.008		-2		28	6	84
323.00	324.00	31970	-0.008		-2		77	-5	75
324.00	325.00	31971	-0.008		-2		89	12	76
325.00	326.00	31972	-0.008		-2		316	-5	78
326.00	327.00	31973	-0.008	-0.008	-2		648	-5	77
327.00	328.00	31974	0.008		-2		182	49	106
328.00	329.00	31976	-0.008		-2		84	20	114
329.00	330.00	31977	-0.008		-2		118	8	84
330.00	331.00	31978	-0.008		-2		320	8	60
331.00	332.00	31979	-0.008		-2		269	11	82
332.00	333.00	31980	-0.008		-2		138	65	116
333.00	334.00	31981	-0.008		-2		8	5	62
334.00	335.00	31982	-0.008		-2		30	9	106
335.00	336.00	31983	-0.008	-0.008	2		717	42	76
336.00	337.00	31984	-0.008		-2		48	8	120
337.00	338.00	31985	-0.008		-2		38	30	54
338.00	339.00	31986	-0.008		-2		33	24	366
339.00	340.00	31987	-0.008		2		60	57	99

R.G.C. Exploration Pty Ltd
West Sedgwick
DIAMOND DRILLHOLE : WS007 (CONTINUED)

ASSAY VALUES

From	To	Number	ANALAB Au ppm GG309	ALAB Au(R) ppm GG309	ANALAB Ag ppm GA101	ANALAB Ag ppm GA104	ANALAB Cu ppm GA101	ANALAB Pb ppm GA101	ANALAB Zn ppm GA101
340.00	341.00	31988	-0.008		2		70	50	69
341.00	342.20	31989	-0.008		2		77	53	74
342.20	343.00	31990	-0.008		4		90	102	58
343.00	344.00	31991	-0.008		2		69	45	44
344.00	345.00	31992	-0.008		2		75	55	52
345.00	346.00	31993	-0.008		2		77	45	54
346.00	347.00	31994	-0.008		2		79	36	56
347.00	348.00	31995	-0.008		2		93	94	54
348.00	348.70	31996	-0.008		-2		91	25	68
348.70	350.00	31997	-0.008		-2		42	20	64
350.00	360.00	31930	-0.008		-2		56	510	142
360.00	370.00	31931	-0.008		-2		62	592	333
370.00	380.00	31932	-0.008		-2		41	81	247
380.00	390.00	31933	-0.008		-2		36	47	150
390.00	400.00	31934	-0.008		-2		29	30	114

DIAMOND DRILLHOLE : WS007 (CONTINUED)

ROCK QUALITY DESIGNATION (RQD)

From	To	Number	MEASURED RQD m	CALCULATED RQD %	MEAS. RECOVERY m	CALC. RECOVERY %
96.80	99.40		1.27		2.30	
99.40	100.50		0.30		1.00	
100.50	103.00		0.75		2.20	
103.00	103.50		0.30		0.50	
103.50	105.10		1.40		1.60	
105.10	106.20		0.40		0.90	
106.20	108.80		1.00		2.50	
108.80	110.80		0.70		2.00	
110.80	112.40		0.40		1.50	
112.40	115.00		0.70		2.60	
115.00	118.50		1.20		3.20	
118.50	120.70		0.74		2.20	
120.70	123.00		1.67		2.25	
123.00	126.10		2.46		3.10	
126.10	128.60		1.80		2.40	
128.60	129.80		0.60		1.20	
129.80	131.60		0.86		1.80	
131.60	133.90		1.60		2.34	
133.90	136.40		1.50		2.20	
136.40	139.50		1.44		3.40	
139.50	142.50		1.34		2.90	
142.50	144.00		0.85		1.60	
144.00	147.10		1.50		2.80	
147.10	148.30		0.10		1.00	
148.30	149.80		0.27		1.50	
149.80	152.80		2.30		3.10	
152.80	154.80		1.10		1.90	
154.80	157.00		0.90		2.25	
157.00	160.50		1.86		3.50	
160.50	162.40		1.37		1.90	
162.40	165.30		2.35		2.90	
165.30	168.50		2.20		2.95	
168.50	169.50		0.50		1.00	
169.50	172.50		2.60		2.90	
172.50	175.50		2.70		2.90	
175.50	178.50		2.50		3.00	
178.50	181.50		2.45		3.00	
181.50	184.50		2.45		2.95	
184.50	187.50		2.10		2.90	
187.50	190.50		2.20		2.90	
190.50	193.50		2.20		2.90	
193.50	194.70		0.70		1.20	

NQ

916036

R.G.C. Exploration Pty Ltd
West Sedgwick
DIAMOND DRILLHOLE : WS007 (CONTINUED)

ROCK QUALITY DESIGNATION (RQD)

From	To	Number	MEASURED RQD m	CALCULATED RQD %	MEAS. RECOVERY m	CALC. RECOVERY %
194.70	197.70		1.50		3.20	
197.70	199.50		1.20		1.70	
199.50	201.30		1.10		1.80	
201.30	204.40		1.74		3.20	
204.40	207.40		2.70		3.00	
207.40	208.50		0.87		1.10	
208.50	211.50		2.40		2.90	
211.50	212.60		0.80		1.10	
212.60	215.70		2.86		2.90	
215.70	218.70		2.20		3.10	
218.70	220.50		1.40		1.70	
220.50	223.50		2.45		2.90	
223.50	226.50		2.50		2.90	
226.50	229.50		2.70		2.95	
229.50	232.50		2.40		2.90	
232.50	235.50		2.40		3.00	
235.50	238.50		1.57		2.95	
238.50	241.50		2.80		3.00	
241.50	244.50		2.55		3.00	
244.50	246.90		2.20		2.20	
246.90	250.50		2.88		3.60	
250.50	253.50		2.50		2.95	
253.50	256.50		2.50		2.90	
256.50	259.50		1.20		3.00	
259.50	262.50		1.70		3.00	
262.50	265.50		2.20		3.00	
265.50	268.50		2.50		2.90	
268.50	271.50		2.20		2.90	
271.50	274.50		1.30		3.00	
274.50	277.50		0.60		3.10	
277.50	280.50		1.10		3.00	
280.50	283.50		0.20		3.10	
283.50	286.50		0.80		2.90	
286.50	289.50		0.30		3.00	
289.50	291.60		0.90		2.10	
291.60	294.60		1.95		3.00	
294.60	297.70		1.50		3.00	
297.70	300.40		1.70		2.70	
300.40	302.00		1.20		1.56	
302.00	304.50		1.65		2.50	
304.50	307.50		2.10		2.90	
307.50	310.50		2.10		3.10	

916037

R.G.C. Exploration Pty Ltd
West Sedgwick
DIAMOND DRILLHOLE : WS007 (CONTINUED)

ROCK QUALITY DESIGNATION (RQD)

From	To	Number	MEASURED RQD m	CALCULATED RQD %	MEAS. RECOVERY m	CALC. RECOVERY %
310.50	312.50		1.46		2.00	
312.50	315.60		1.43		3.00	
315.60	316.50		0.35		0.74	
316.50	319.50		2.76		2.96	
319.50	322.50		2.55		2.90	
322.50	324.00		0.70		1.36	
324.00	325.90		1.00		1.80	
325.90	327.50		0.10		1.38	
327.50	330.60		0.87		2.90	
330.60	333.30		0.20		2.50	
333.30	336.00		0.30		2.45	
336.00	338.70		1.20		2.60	
338.70	339.60		0.10		0.86	
339.60	342.70		2.00		2.90	
342.70	345.30		1.70		2.58	
345.30	346.40		0.60		0.94	
346.40	349.30		1.77		2.80	
349.30	352.40		2.58		3.00	
352.40	355.20		1.97		2.86	
355.20	358.30		2.00		2.96	
358.30	359.90		1.00		1.48	
359.90	361.60		0.20		1.50	
361.60	363.00		0.10		1.00	
363.00	365.30		0.50		2.10	
365.30	366.70		0.10		1.40	
366.70	368.10		0.00		1.50	
368.10	370.50		0.20		2.20	
370.50	372.40		1.30		2.10	
372.40	374.20		0.67		1.60	
374.20	375.60		0.10		1.00	
375.60	376.70		0.00		1.00	
376.70	378.00		0.26		1.20	
378.00	380.00		0.90		2.00	
380.00	381.20		0.20		1.20	
381.20	382.40		0.22		0.96	
382.40	385.40		2.74		3.00	
385.40	388.40		2.40		2.90	
388.40	391.20		1.70		2.80	
391.20	394.30		2.76		3.00	
394.30	397.40		2.00		2.90	
397.40	399.90		0.80		2.30	
399.90	403.00		2.70		3.10	

PLEASE CHECK RQD, CAN'T READ ORIGINAL.

R.G.C. Exploration Pty Ltd
West Sedgwick
DIAMOND DRILLHOLE : WS007 (CONTINUED)

ROCK QUALITY DESIGNATION (RQD)

From	To	Number	MEASURED	CALCULATED	MEAS.	CALC.
			RQD m	RQD %	RECOVERY m	RECOVERY %
403.00	406.00		2.50		2.96	
406.00	408.80		1.90		2.60	
408.80	411.90		2.50		3.10	
411.90	415.00		2.00		3.00	
415.00	418.00		0.70		2.90	
418.00	419.80		1.20		1.70	
419.80	421.50		0.55		1.80	
421.50	423.60		1.20		2.10	
423.60	426.50		1.70		2.67	
426.50	427.00		0.00		0.50	
427.00	430.50		1.80		3.40	
430.50	433.50		1.97		3.00	
433.50	435.60		0.90		1.97	
435.60	438.00		0.90		2.20	
438.00	439.50		0.65		1.40	
439.50	442.50		2.00		2.90	
442.50	445.50		1.75		3.00	
445.50	448.50		2.90		2.95	
448.50	451.50		2.70		2.86	
451.50	454.50		2.40		2.90	
454.50	457.50		2.30		2.90	
457.50	460.50		2.10		2.97	
460.50	463.50		2.10		2.94	
463.50	466.30		1.40		2.76	
466.30	469.40		2.45		3.00	
469.40	472.50		2.25		3.00	
472.50	475.50		2.34		2.84	
475.50	478.50		2.70		2.90	
478.50	481.50		2.65		2.90	
481.50	484.50		2.27		2.84	
484.50	487.50		2.50		3.00	
487.50	489.00		0.28		1.50	
489.00	491.80		0.78		2.76	
491.80	494.90		2.30		2.95	
494.90	497.40		1.33		2.44	
497.40	499.20		1.14		1.75	

EOH

APPENDIX 2

INTERPRETATION OF DOWNHOLE TEM SURVEY RESULTS,
DRILL HOLES WS006 AND WS007: BY R.C. DEAKIN

Interpretation of Downhole TEM Survey Results

Drill Holes WS-06 & WS-07

West Sedgwick Prospect

Mt Lyell, Tasmania.

on behalf of

R.G.C. Exploration Pty. Ltd.

By

R. C. Deakin

July 1993

R. DEAKIN & ASSOCIATES
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RGC EXPLORATION	
REPRINT No.	
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Contents

	<u>Page</u>
1. Introduction	1
2. TEM Survey Results & Interpretation Methods	1
3. Interpretation	3
4. Conclusions	5
5. References	5

Plates

Plate No.

- 1 Filament Modelling Results DH WS-06, Ch. No. 6
- 2 Filament Modelling Results DH WS-07, Ch. No. 5

Accompanying Plans

Figure No.

- 1. Locality Plan 1:25000
- 2. West Sedgwick, WS-06, Loops 9 to 14, Locality Diagram
- 3. West Sedgwick, WS-07, Loops 1 to 8, Locality Diagram

1. INTRODUCTION

- 1.1 The West Sedgwick prospect lies about 2 km. north of the Comstock prospect in the Mt. Lyell copper/gold province of Tasmania (Figure 1). R.G.C. Exploration have recently extended their exploration of the Comstock locality to West Sedgwick and have used down hole TEM in two exploration drill holes, WS-06 and WS-07. That work follows on from earlier down hole TEM carried out in Comstock drill holes in 1991 and 1992 which was interpreted by this author (Deakin 1991 & 1992).

The drill holes WS-06 and WS-07 were angled from west to east to investigate the Cambrian sequence of volcanics, volcanoclastics and meta-sediments that host the (original) Comstock copper lodes. That sequence of Mt Read volcanics are steeply dipping and occur south of the Sedgwick fault and west of the Great Lyell fault. DH WS-06 passed through both of those faults which enclose a wedge of sediments and Comstock tuff. Only very minor sulphide mineralisation was encountered in the two drill holes and the down hole TEM was carried out to hopefully locate any buried sulphide conductors within about 300m of the drill holes.

- 1.2 Drill holes WS-06 & WS-07 were logged with a down hole SiroteM, Mk II, TEM system in May 1993 by McSkimming Geophysics. Measurements of the secondary TEM field at discrete intervals (generally 5m to 10m) down both drill holes were logged for 14 separate surface transmitting (Tx) Loops. Drill hole WS-06 was logged using surface Tx loops 9 to 14 and WS-07 logged using surface Tx loops 1 to 8.

The relative locations of surface loops 9 to 14 and drill hole WS-06 are illustrated on Figure 2. Similarly, Tx loops 1 to 8 and drill hole WS-07 are shown on Figure 3. The SiroteM profile logs of the two drill holes for each Tx loop used are presented in the Appendix and represent the original Log-linear plots by McSkimming Geophysics.

2. TEM RESULTS AND INTERPRETATION METHODS

- 2.1 The TEM results for drill holes WS-06 and WS-07, for most Tx loops, show very little if any, anomalous character. The results for WS-06 show the existence of a weak to moderate positive anomaly near the top of the hole for Tx loop 11 and a weaker negative anomaly at the top of the hole for Tx loop 13. Similarly the only results worthy of comment for drill hole WS-07 are weak anomalies near the top of the hole; positive for Tx loop 3 and negative for Tx loop 5.

2.2 TEM signal levels at West Sedgwick, like Comstock, are very low which is indicative of a very resistive environment. Secondary voltages rapidly decay to background-noise levels and therefore the contractor recorded all logging runs using channels 1 to 14 of the Sirotem early time series (0.05 m.S. - 1.5 m.S.). He supplemented that data for most logging runs by additionally recording channels 1 to 14 of the Sirotem standard time series (0.5 m.S. - 12 m.S.). This strategy appears puzzling as he could have covered the same time range by measuring channels 1 to 28 using only the Sirotem early time series.

Although the TEM results are essentially featureless and indicative of a lack of any significant conductors within approximately 300m of the drill holes, some time was devoted to the shallow anomalies recorded in both holes. Those anomalies, particularly WS-06 - Loop 11, are significant in terms of amplitude, spatial wave length and stability to late times (standard time series, channel 10 - 6 m.S.) and could possibly indicate subsurface conductors of some merit. Considering the similarity of response for both holes and the anomaly predominance for the Tx loop encompassing the drill hole collars, those shallow anomalies are suspiciously spurious - possibly an instrumental phenomenon.

2.3 The interpretation was carried out with the assistance of quantitative, current filament modelling software developed by the author. The forward modelling process consisted of simultaneously fitting current filament model anomalies to field anomalies for selected Drill hole - Tx Loop field data sets for a selected Sirotem time channel. Absolute computed anomaly amplitudes are arbitrary and are determined by the anomaly range of one selected data set. The amplitudes of remaining data sets are thus relative to that set and determined by calculated anomaly amplitudes. The filament modelling process employs the following algorithms.

- a) Calculation of EM field vectors (strength and direction) at model (current filament) locations for each separate Tx Loop.
- b) Tx loop positions are defined by up to 15 x,y,z coordinate pairs to mimic as accurately as possible surface Loop geometry and hence reproduce as accurately as possible true subsurface EM field vectors.
- c) Projection of energizing EM field vectors on to the 'normal' vector of each filament model and integration of the energizing EM field around the current filament model.

- d) Calculation of the EM anomaly vector for each model - Tx Loop set, at defined points on each drill hole and projection of that vector on to the axial drill hole vector direction. Drill hole x,y,z co-ordinates and vector directions are computed from down hole surveys.

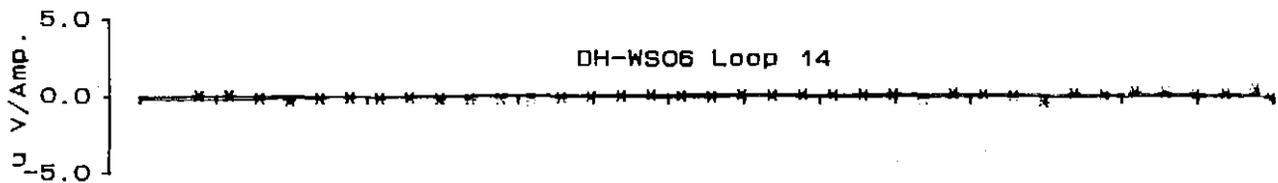
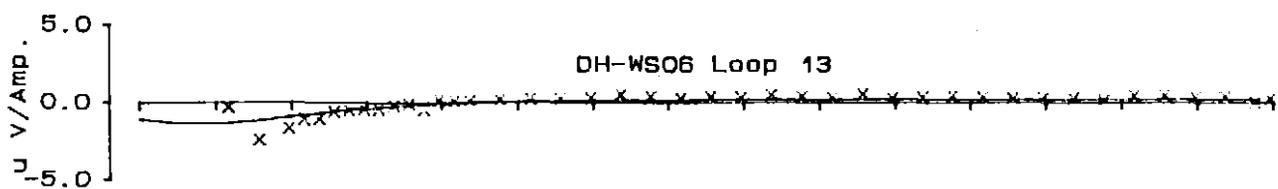
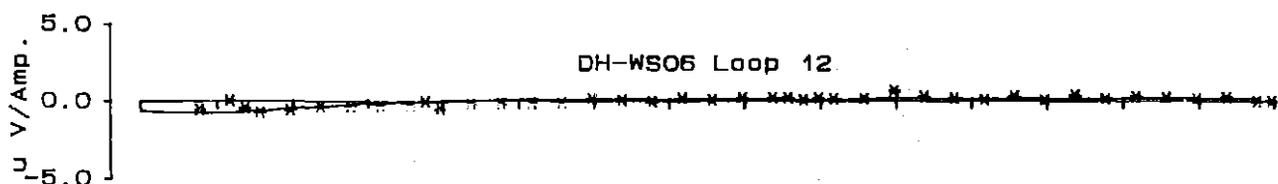
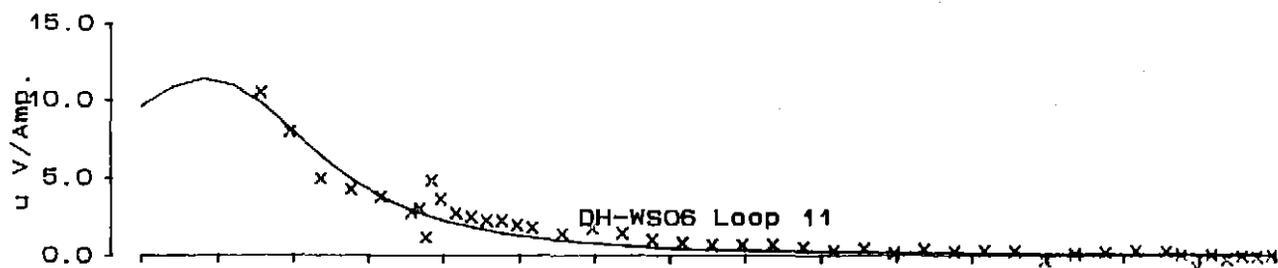
Any current filament model is defined by the x,y,z co-ordinates of its centre and three varieties of filament model can be defined. They are (a) circular, defined by radius, dip and the azimuth of the dip, (b) rectangular, defined by length, width, dip and plunge and (c) sphere, a circular filament of defined radius oriented orthogonally to the energizing EM field vector and thus unlike the circular and rectangular filament models, having no preferred spatial orientation.

- 2.4 Quantitative forward modelling has been used as an interpretation aid. The algorithms used involve very simple model geometries in order to approximate subsurface EM behavior. The geology however can be and is expected to be far more complex both spatially and electrically than can be adequately modeled by theoretical means. Therefore the observed interpretation is very much an approximation of the geology and simply a tool used to optimize drilling targets.

Apart from the simplification of model geometry the modelling process assumes a uniform resistive halfspace which therefore ignores the possible effects of electrically variable lithologies and structures. Although the data would suggest that the resistive half space assumption is valid, the survey area is characterized by faulting, complex structure and probably a wide distribution of small sulphide veins which will influence subsurface electrical fields both inductively and galvanically.

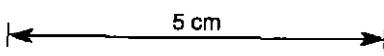
3. INTERPRETATION

- 3.1 For drill hole WS-06 the quantitative interpretation was restricted to the data sets for Tx loops 11, 12, 13 and 14 as results for Tx loops 9 and 10 have no recognizable anomaly and are situated well south of the drill hole (Fig. 2). To approximate the WS-06 relative anomaly amplitudes and polarities a current filament model which is flat lying (shallow dip) and encompasses the drill hole collar was required. One solution using current filament model C1 (a circle) is shown on Plate 1 for channel 6 - standard time series. That model is a good explanation of the anomaly near the top of the hole and represents a flat lying, near surface conductor.



0 50 100 150 200 250 300 350
Depth in metres

R. Deakin & Assoc.	RGC-EXPLORATION
<p>Filmt. C1</p> <p>Type = Circle</p> <p>Centre x, y, z Co-ords are :</p> <p>381410.0E 346860.0N 510.0FL</p> <p>Az & Dip = 280.0 5.0 deg</p> <p>Radius = 60.0 m</p>	<p>WEST-SEDGWICK</p> <p>Mt Lyell, Tasmania</p> <p>TEM Survey DH WS-06</p> <p>Filament Modelling - Ch 8</p> <p>Hor. Scale - 1:2500</p> <p>Plate 1</p>



The anomaly at the top of drill hole WS-06 therefore can be explained by a near surface surficial conductor which fits well with gravels and scree sampled in the top 9m of the hole. Other filament models which might represent deeper bedrock conductors were tried however none could adequately fit the relative anomaly amplitudes and polarities of the field results.

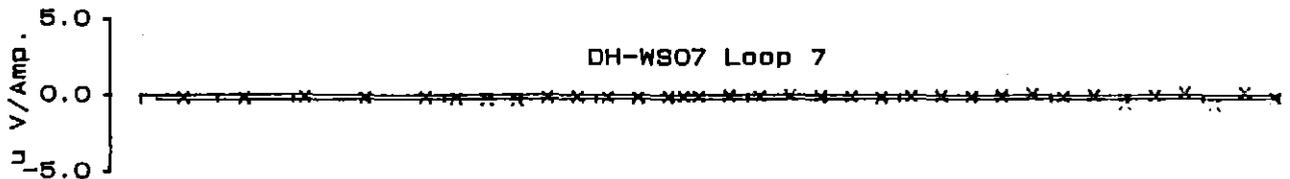
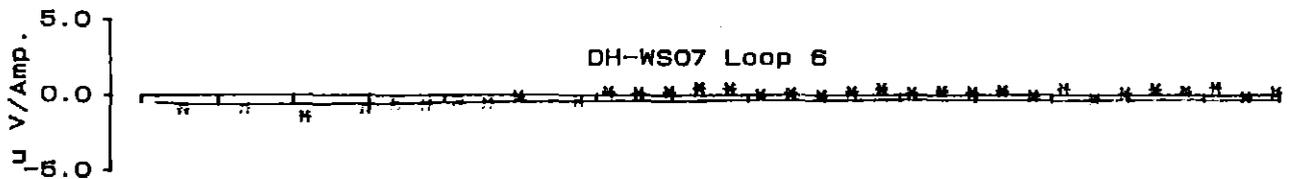
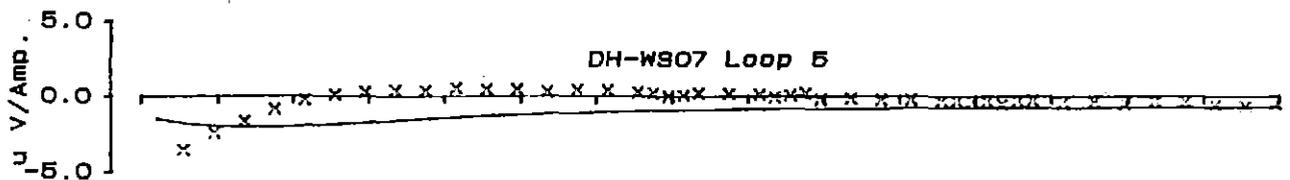
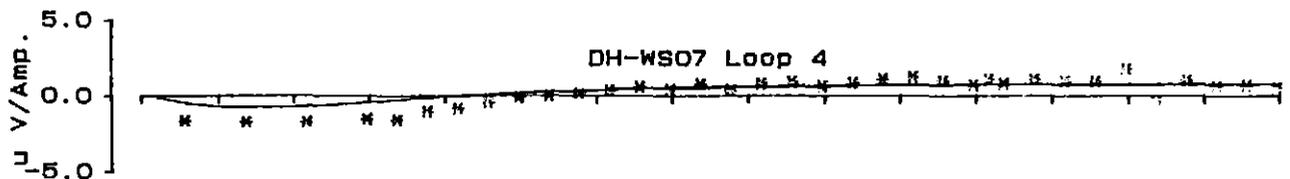
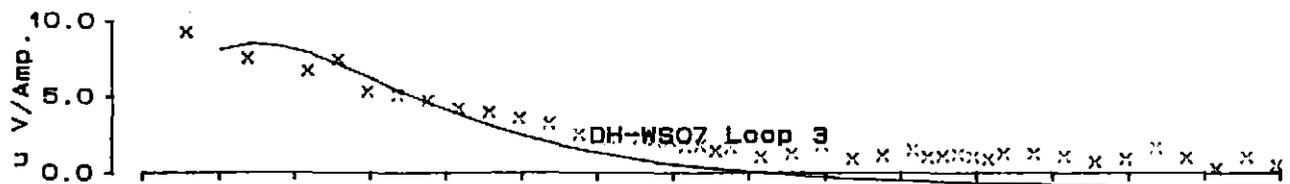
- 3.2 The WS-07 results were modeled using data sets for Tx loops 3, 4, 5, 6 and 7 and standard time series data. Data for Tx loops 1 and 2 were omitted because they were recorded with only the early time series, are featureless and some distance from the drill hole. The Tx loop 8 data set was not used because it also is featureless and is well north of the hole collar. One modelling result, circular filament C2, for WS-07 and standard time channel 5, is illustrated on Plate 2. That result although only an approximate fit to the field data, represents the best solution derived using simple filament geometries. It infers a near surface conductor, just south of the hole collar with a shallow (30 deg.) dip to the southeast.

Similarly to the WS-06 results, the interpretation of the TEM anomaly at the top of WS-07 indicates a near surface surficial conductive source. Unlike WS-06, the geological log of WS-07 does not record any shallow scree deposits which might explain that result. The derived filament model however corresponds approximately with a gully in the southeastern part of Tx loop 3 which may be a zone of transported surface scree. Similarly to the WS-06 result, the anomaly at the top of WS-07 could not be adequately explained by deeper, bedrock conductors.

- 3.3 The quantitative interpretation above suggests that the shallow anomalies recorded in both drill holes may be caused by shallow surficial conductors - ie. water saturated surface scree deposits. It might be expected however that scree deposits would be widespread and that TEM effects from several such zones be manifest in the results. Two other factors also discount that interpretation, namely:

1. The anomaly decay curves appear to have late time (after channel 5) exponential decay with time constants of about 4 m.S. to 5 m.S. - unusually high for a surficial conductor and indicative of a conductivity of the order of 20 S/m. to 50 S/m. which might be more representative of sulphides.

2. The results from both drill holes are suspiciously similar having a good positive anomaly for the Tx loop which encompasses the drill collar and a weaker but significant, negative anomaly for the Tx loop immediately to the north. The interpretation both qualitatively and quantitatively (above) of that



50 100 150 200 250 300 350 400
Depth in metres

R. Deakin & Assoc.

RG-C-EXPLORATION

Filmt. C2

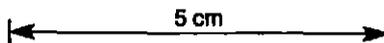
Type = Circle

Centre N, Y, Z Co-ords are :

261320.0E 346050.0N 480.0FL

Az & Dip = 150.0 90.0 deg

Radius = 70.0 m



WEST-SEDGWICK

Mt Lyell, Tasmania

TEM Survey DH WS-07

Filament Modelling - Ch 5

Hor. Scale - 1:2500

phenomenum is a flat lying conductor confined to the area of the Tx loop encompassing the drill collar - fortuitously occurring at both drill locations.

A more likely explanation of the shallow TEM anomalies in drill holes WS-06 and WS-07 is that they are spurious ie. an instrumental phenomenon linked to the position and proximity (to the drill hole collar) of the Tx loop. This may be the "self response" alluded to by other Sirotem users. A further possibility is that the shallow anomalies result from cultural factors eg. a vehicle or other conductive body positioned within the collar Tx loop, or metallic drill casing. The latter possibility is unlikely considering the broad spatial wavelength of the anomalies.

4. CONCLUSIONS

The down hole TEM surveys of WS-06 and WS-07 at the West Sedgwick prospect have not detected any anomalies of significance and therefore there is little likelihood of any economic sulphide resource within approximately 300 m. of those drill holes.

Weak to moderate anomalies were recorded at the top of both drill holes for the two Tx loops closest to the drill collars. These anomalies might be explained by shallow, flat lying, surficial conductors however there is reasonable evidence to suspect a spurious instrumental cause.

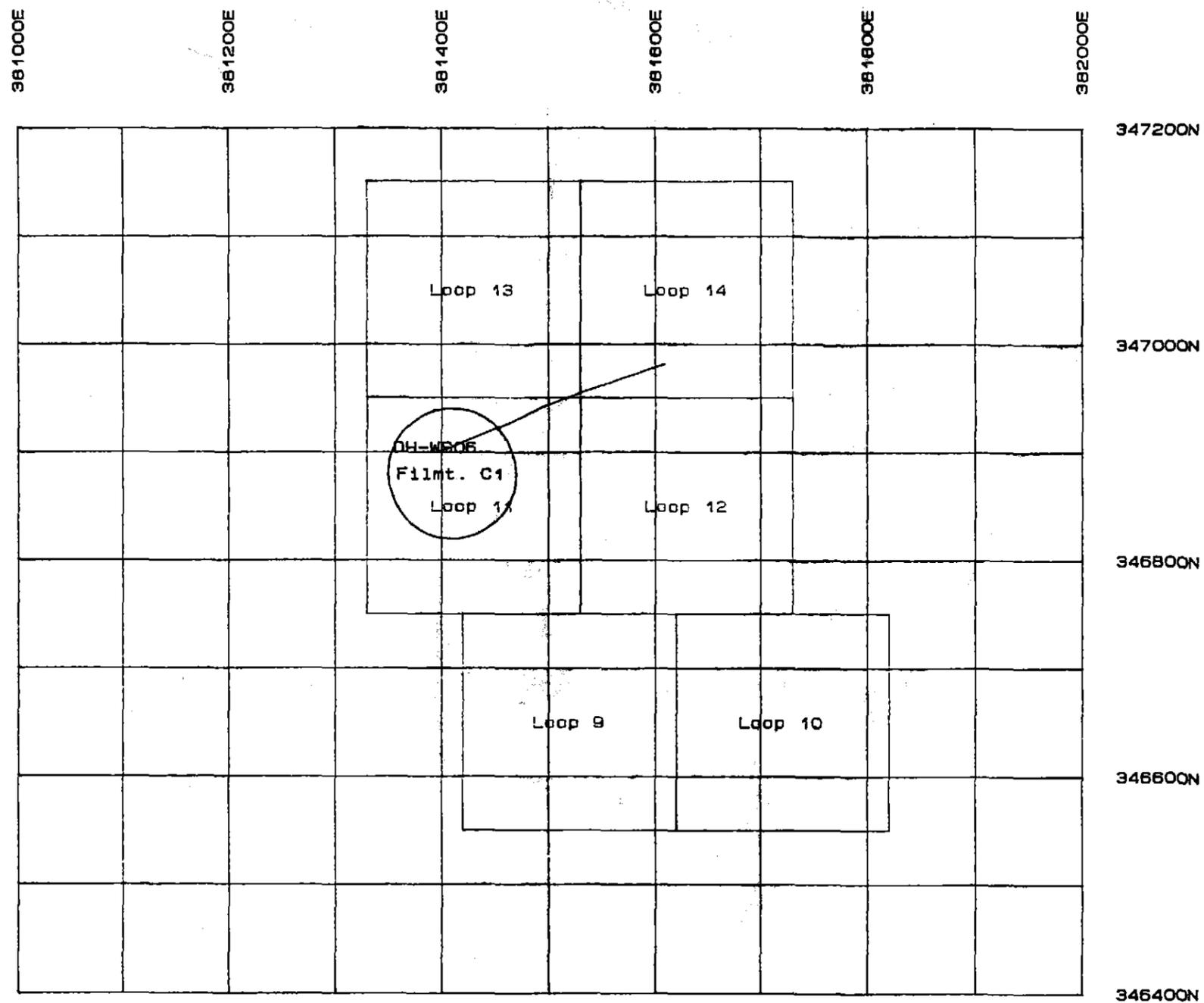
5. REFERENCES.

Deakin. R.C., May 1991. Interpretation of Down Hole Geophysical Surveys from the Glen Lyell and Comstock Areas, Mt. Lyell, Tasmania R. Deakin & Associates report for R.G.C. Exploration Pty. Ltd.

Deakin. R.C., August 1992. Interpretation of Downhole TEM Surveys from the Comstock Prospect, Mt Lyell, Tasmania. R. Deakin & Assoc. Report for R.G.C. Exploration Pty. Ltd.

R. Deakin & Assoc.

Filmt. C1
 Type = Circle
 Centre x,y,z Co-ords are :
 381410.0E 346880.0N 510.0RL
 Az & Dip = 250.0 5.0 deg
 Radius = 60.0 m



Projection from: 180.0 deg Azimuth
 and: 90.0 deg Tilt

5 cm

RGC-EXPLORATION

WEST-SEDGWICK

Mt Lyell, Tasmania

TEM Survey DH WS-06

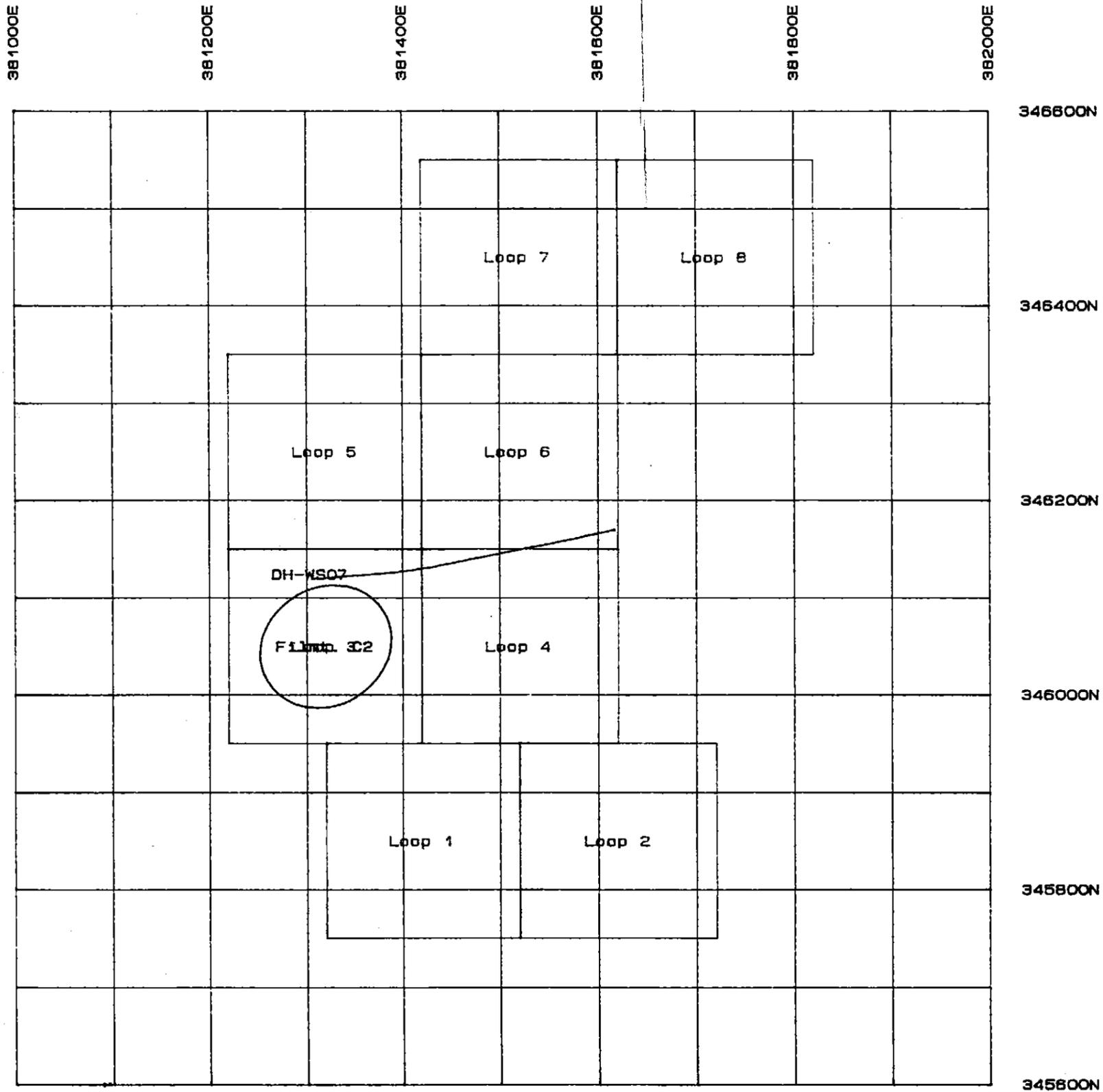
Loop/DrillHole Locations

Hor. Scale - 1 : 5000

Figure 2

R. Deakin & Assoc.

Filmt. C2
Type = Circle
Centre x, y, z Co-ords are :
381320.0E 346050.0N 460.0RL
Az & Dip = 150.0 30.0 deg
Radius = 70.0 m



Projection from: 150.0 deg Azimuth
and: 90.0 deg Tilt

5 cm

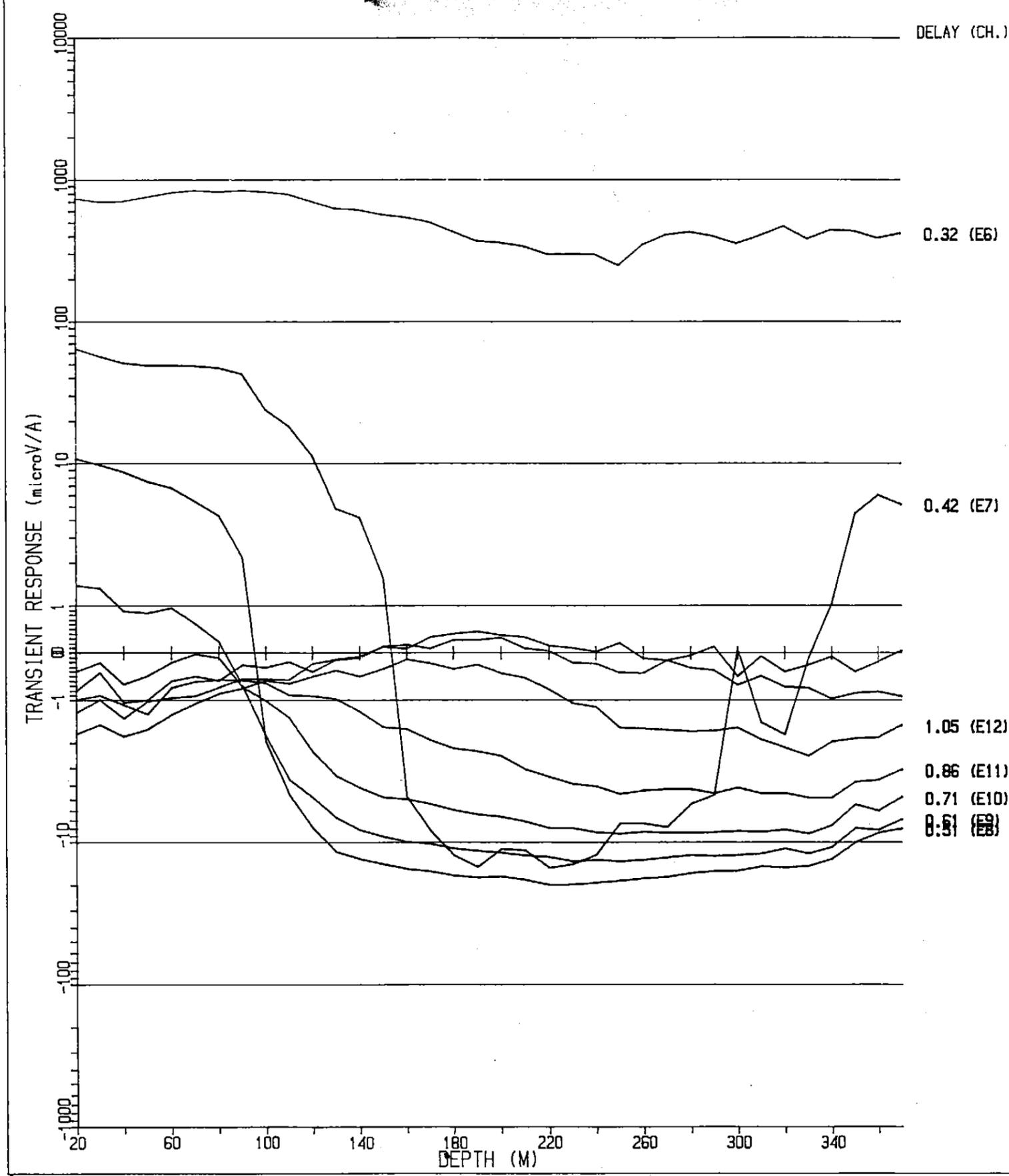
RGC-EXPLORATION
WEST-SEDGWICK
Mt Lyell, Tasmania
TEM Survey DH WS-07
Loop/DrillHole Locations

Hor. Scale - 1 : 5000

Figure 3

APPENDIX A

TEM results - Profiles, Log-Linear scaling
(McSkimming Geophysics)



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

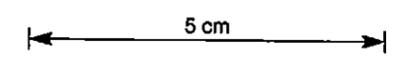
SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY

READING INT. : 20 METRES
 NO. OF STACKS : 2048
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 12.7 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

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS006 LP9

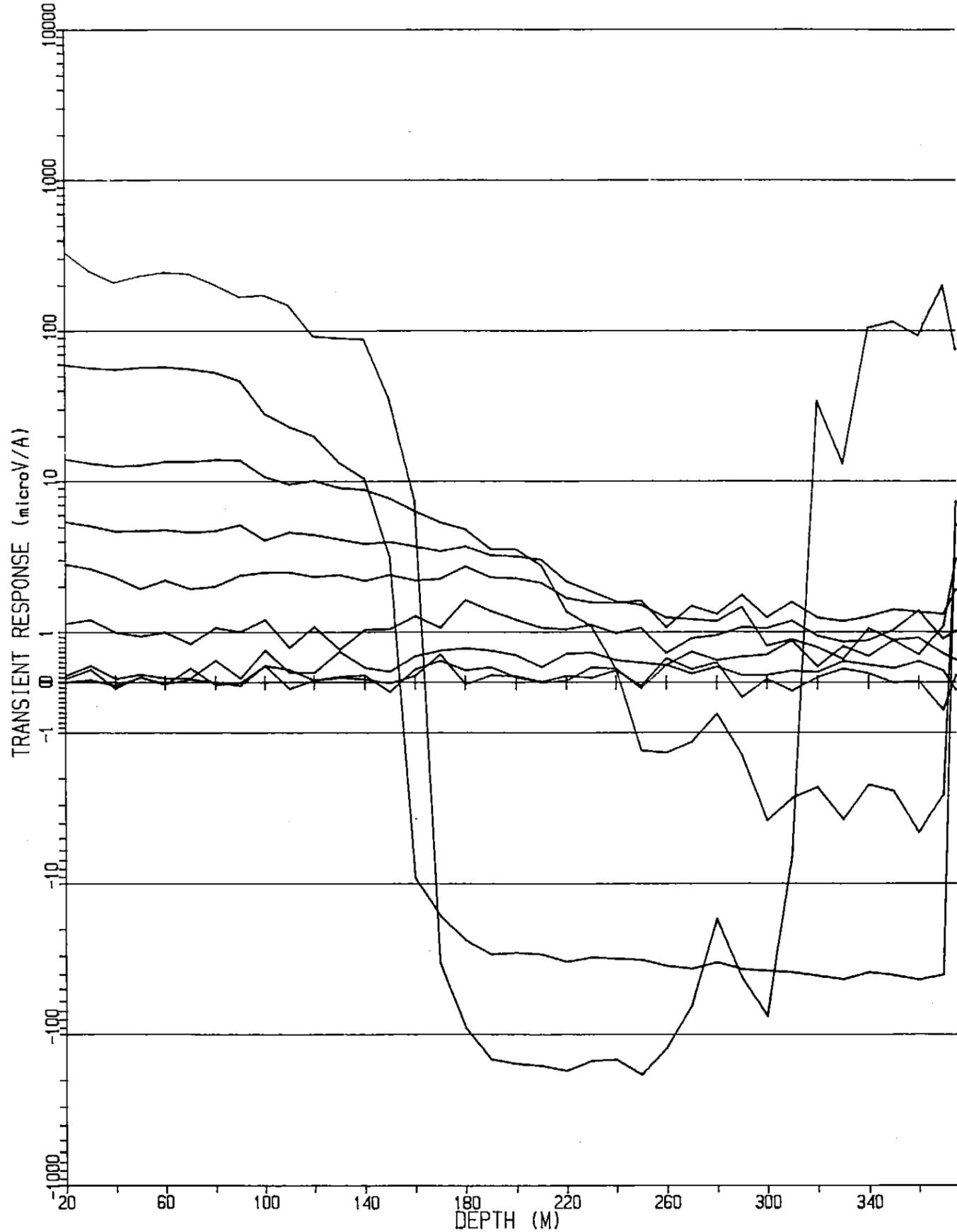
SCALE - 1:2000

DELAY (CH.)

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 2048
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 12.7 AMPS
 OPERATOR : P McSKIMMING

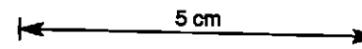


0.32 (E6)
 0.42 (E7)
 0.51 (E8)
 0.61 (E9)
 0.71 (E10)
 0.86 (E11)

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

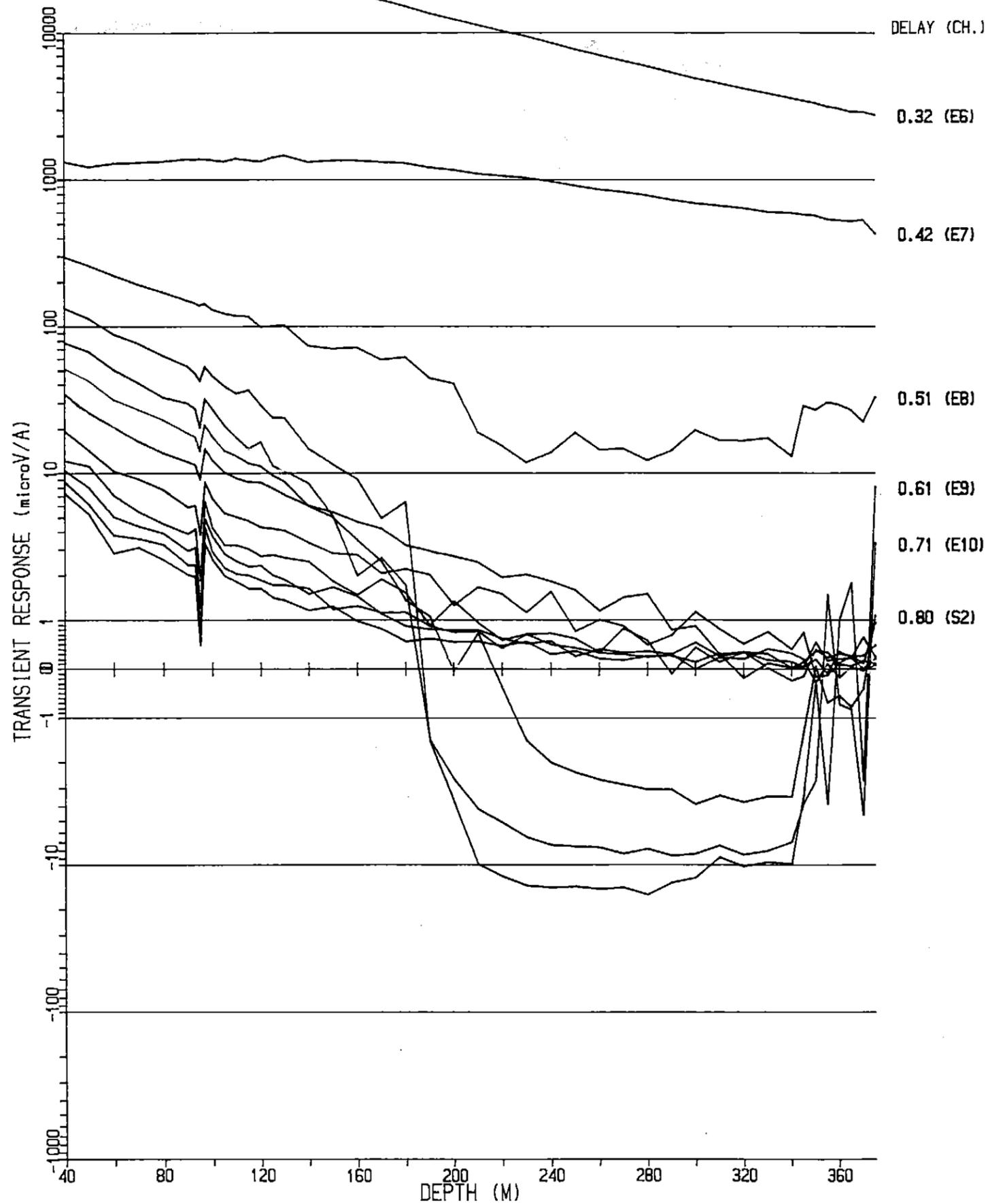
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE W5006 LP10

SCALE - 1:2000



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 14.1 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

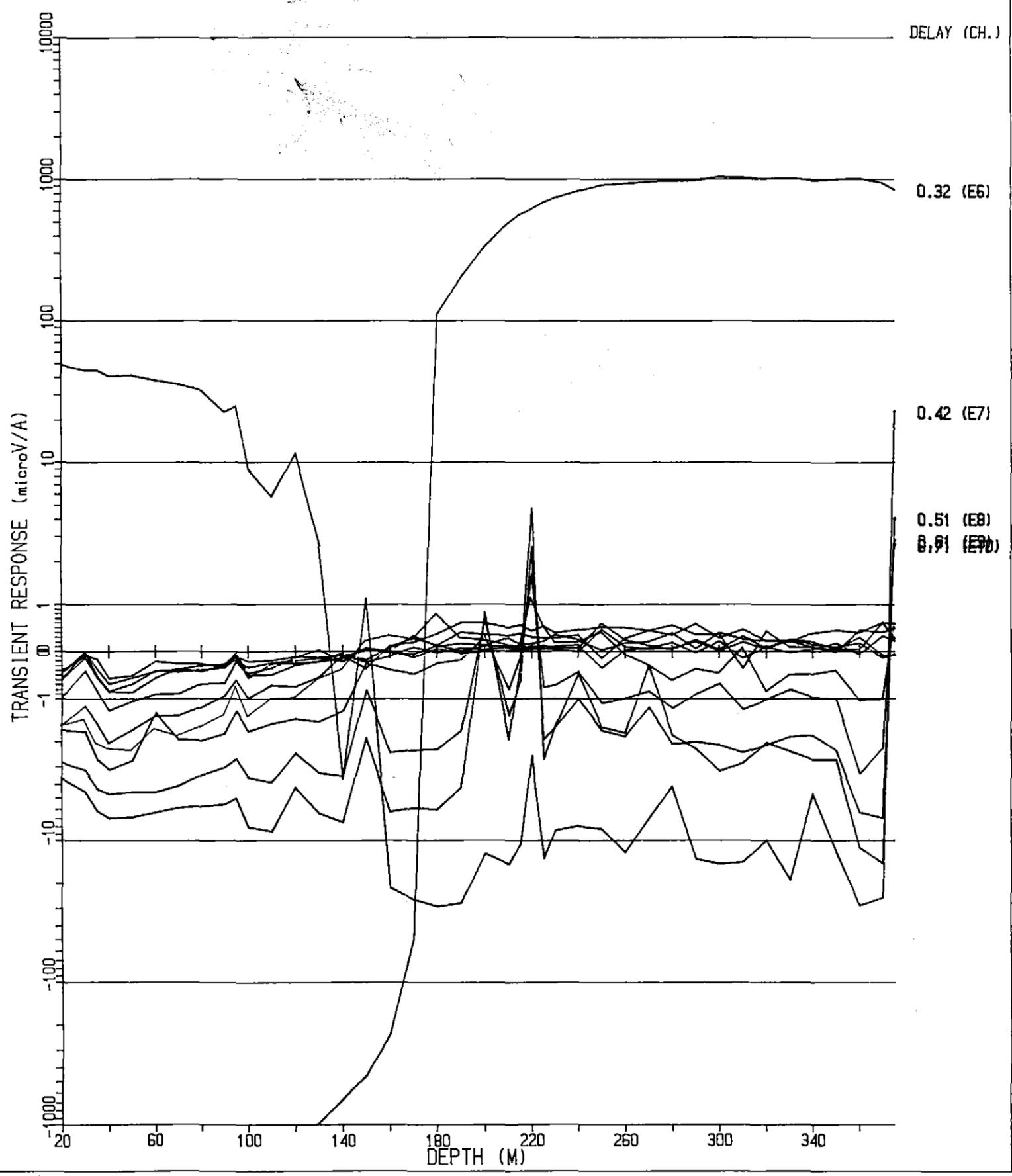
HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW

RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS006 LP11

SCALE - 1:2000



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

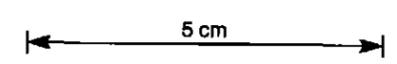
SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY

READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 13.9 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

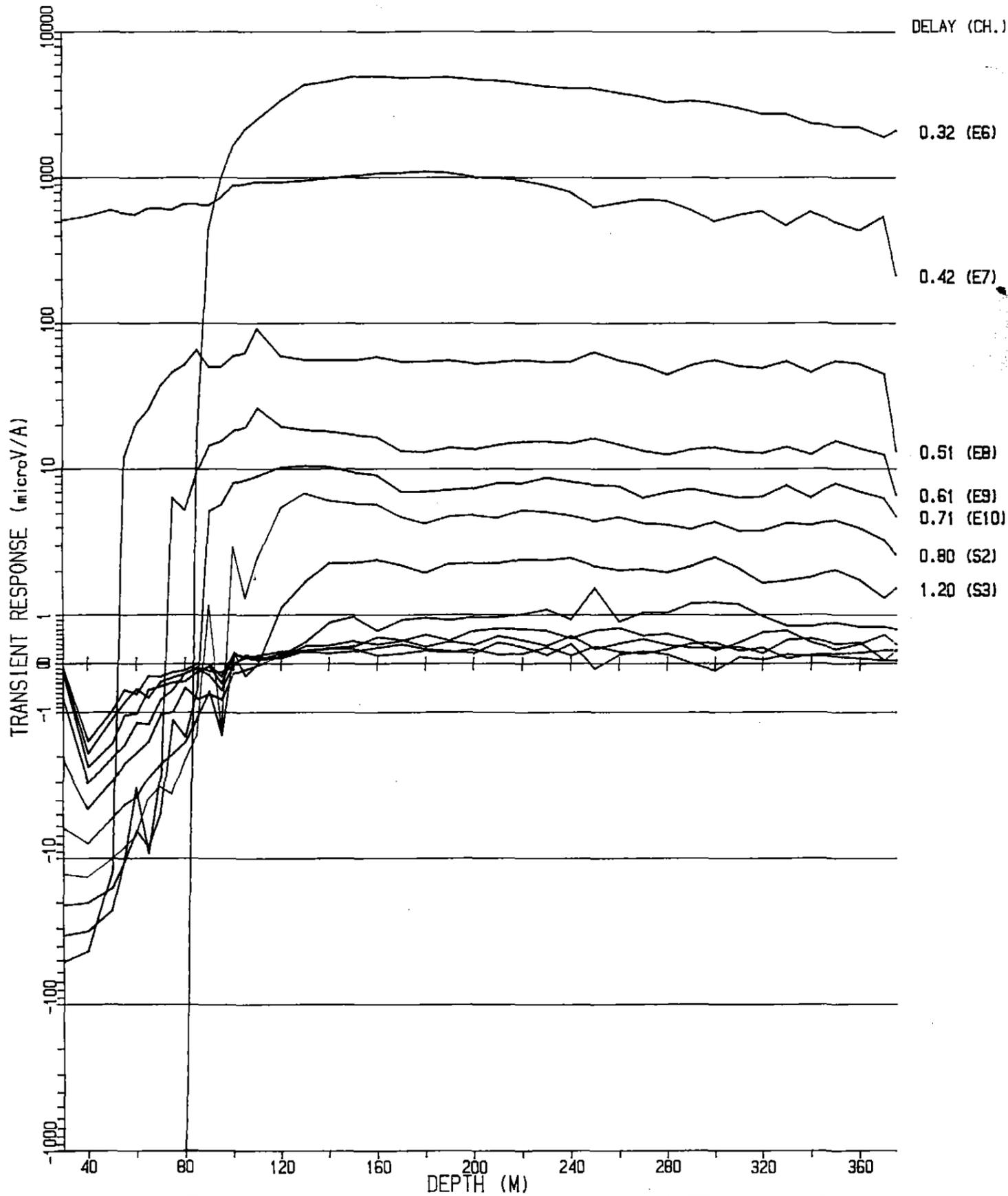
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WSO06 LP12

SCALE - 1:2000



SURVEY SPECIFICATIONS

DATA ACQUISITION : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 14.6 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

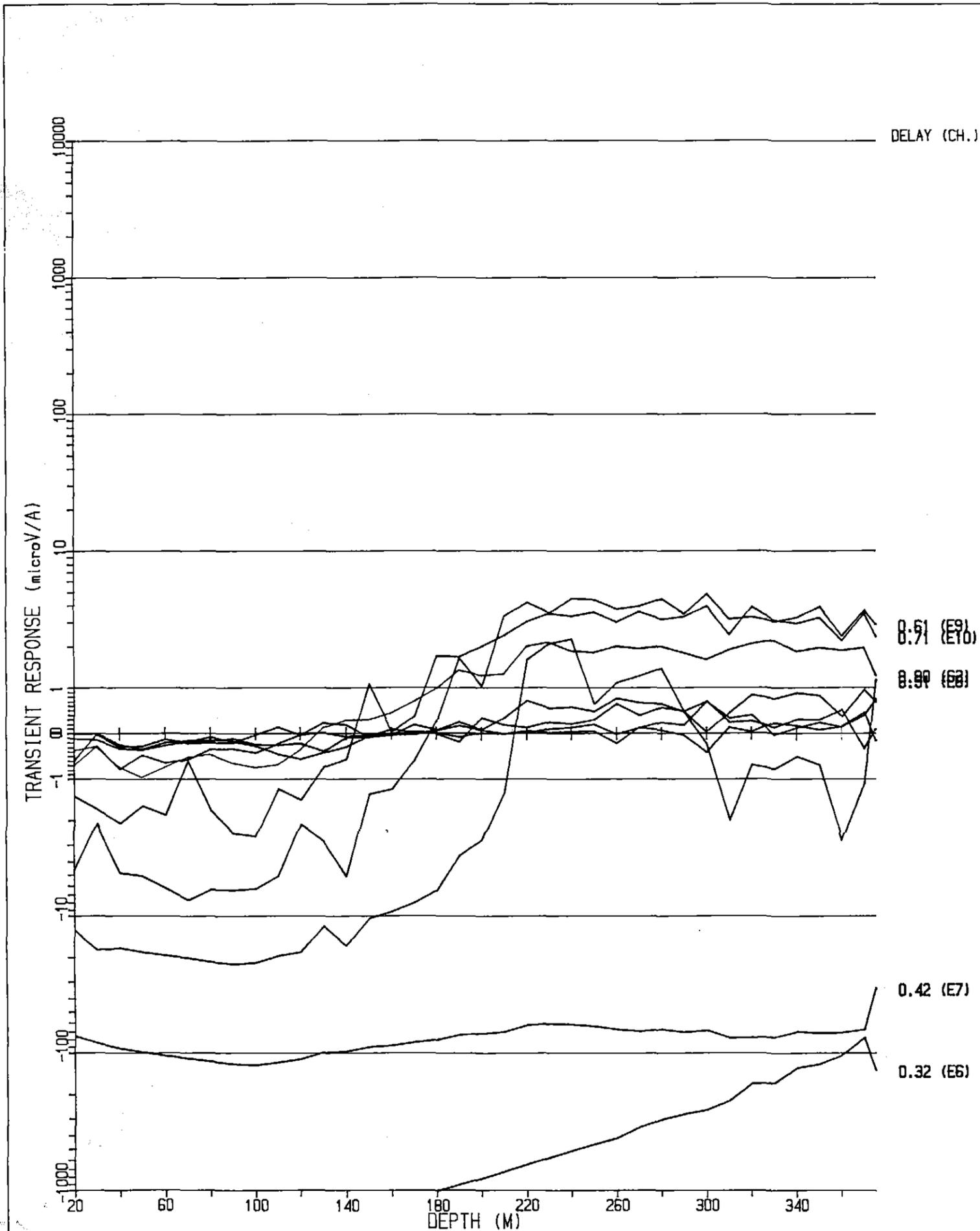
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW

5 cm

RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS006 LP13

SCALE - 1:2000



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

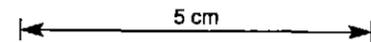
SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY

READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 13.9 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

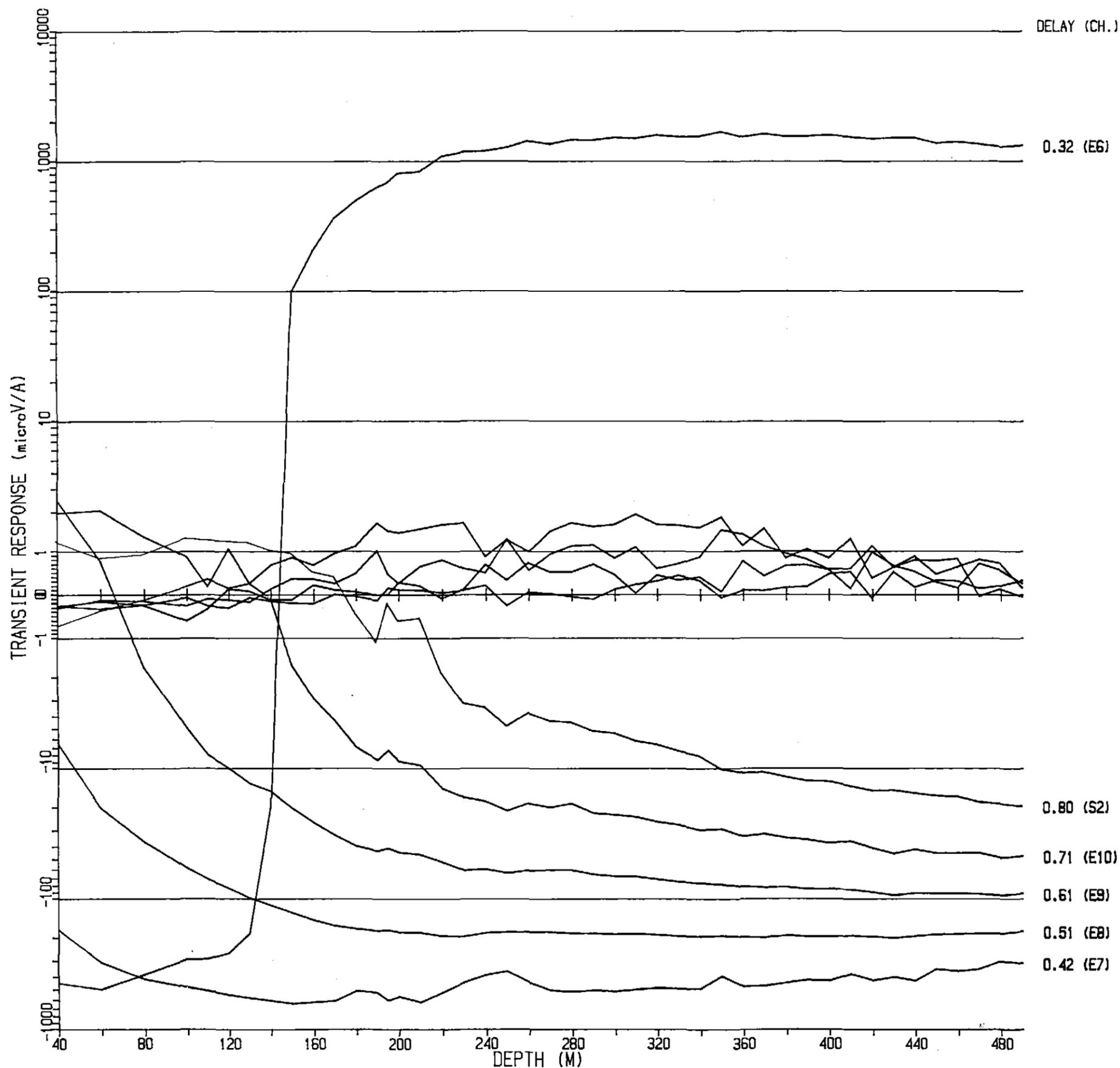
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS006 LP14

SCALE - 1:2000



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 13.5 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

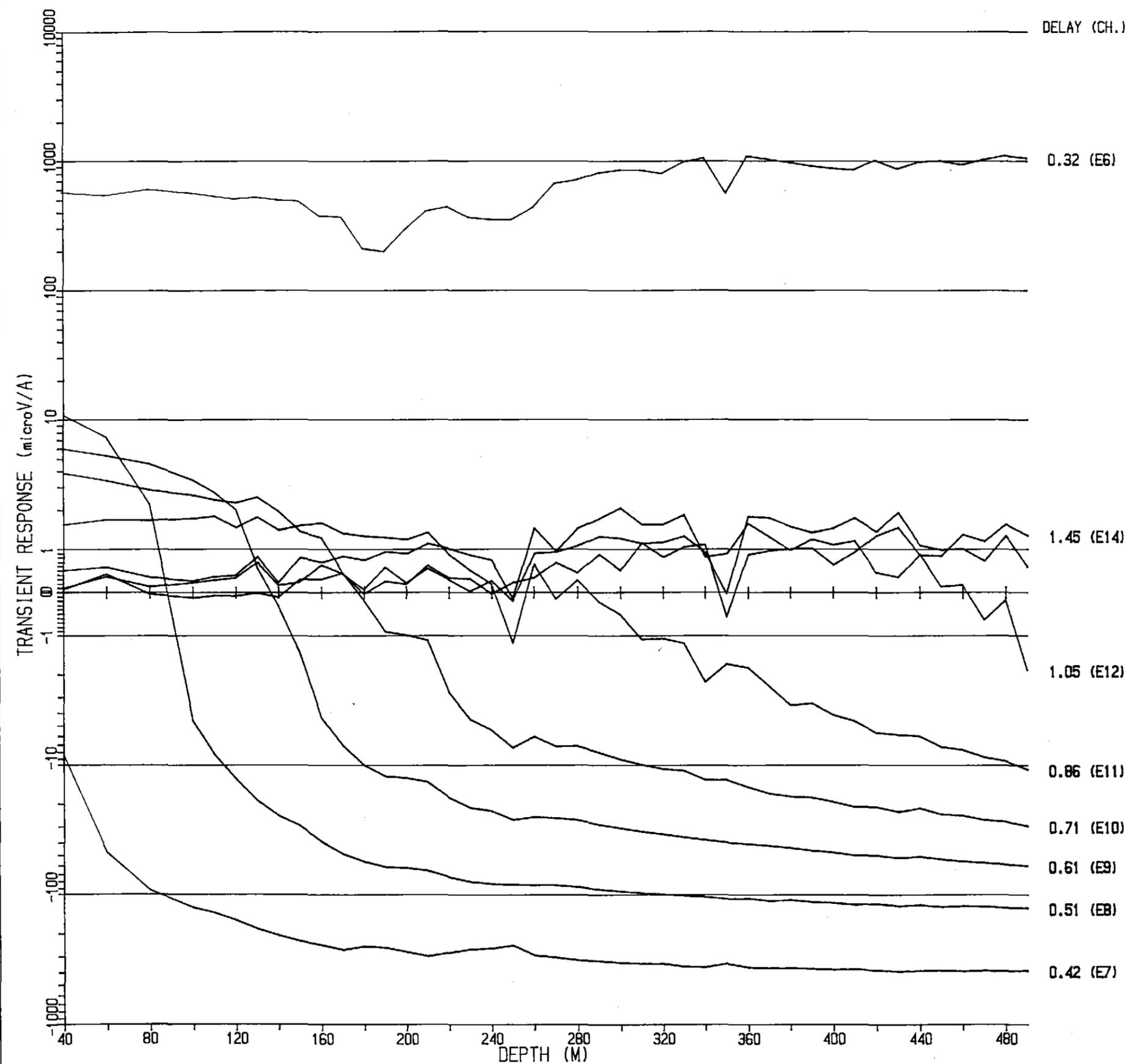
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW

5 cm

RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS007 LP1

SCALE - 1:2000



SURVEY SPECIFICATIONS

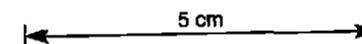
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SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 2048
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 13.5 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

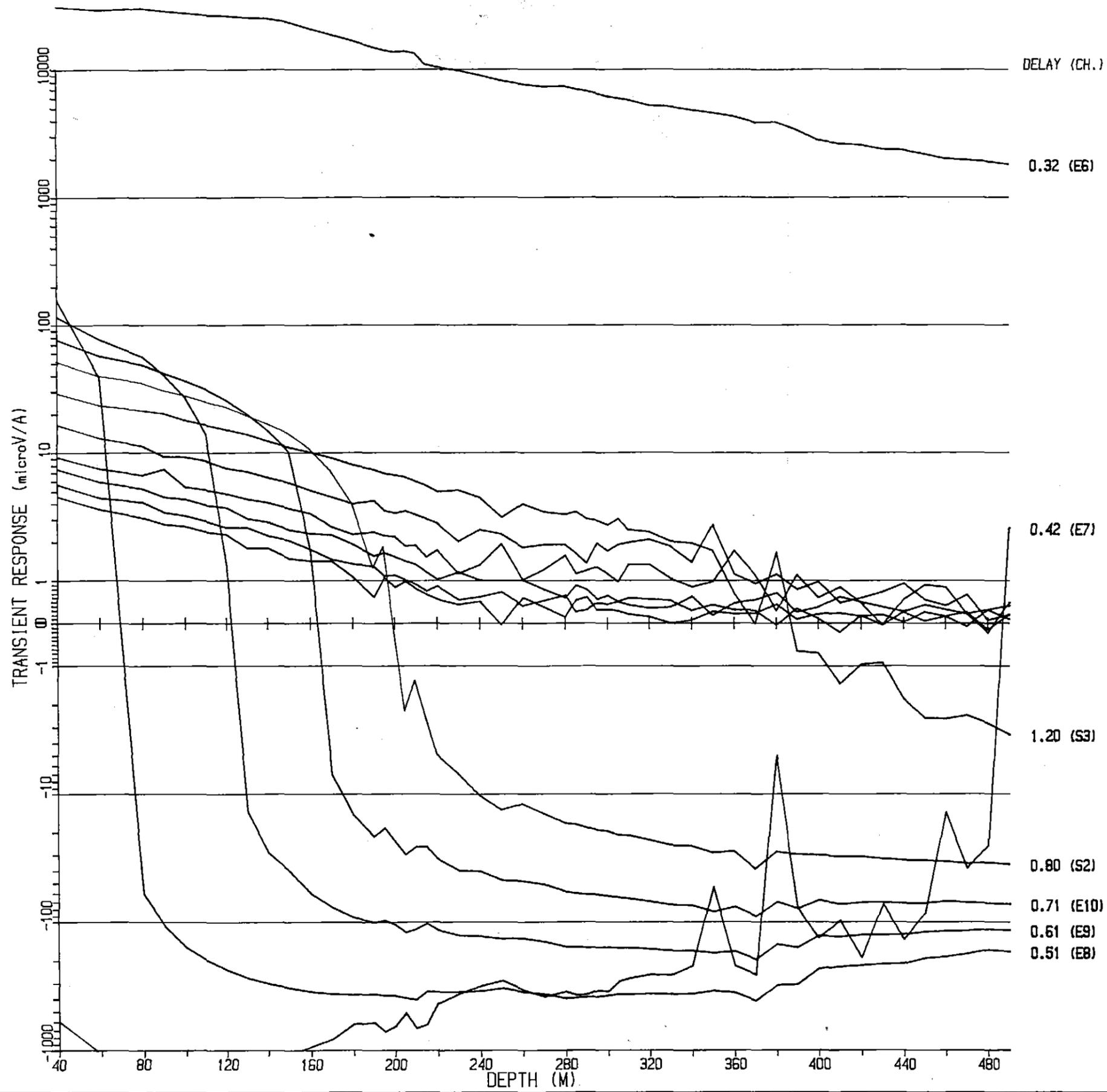
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WSO07 LP2

SCALE - 1:2000



SURVEY SPECIFICATIONS

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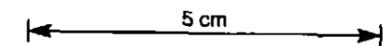
SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY

READING INT. : 20 METRES
 NO. OF STACKS : 512
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 14.4 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

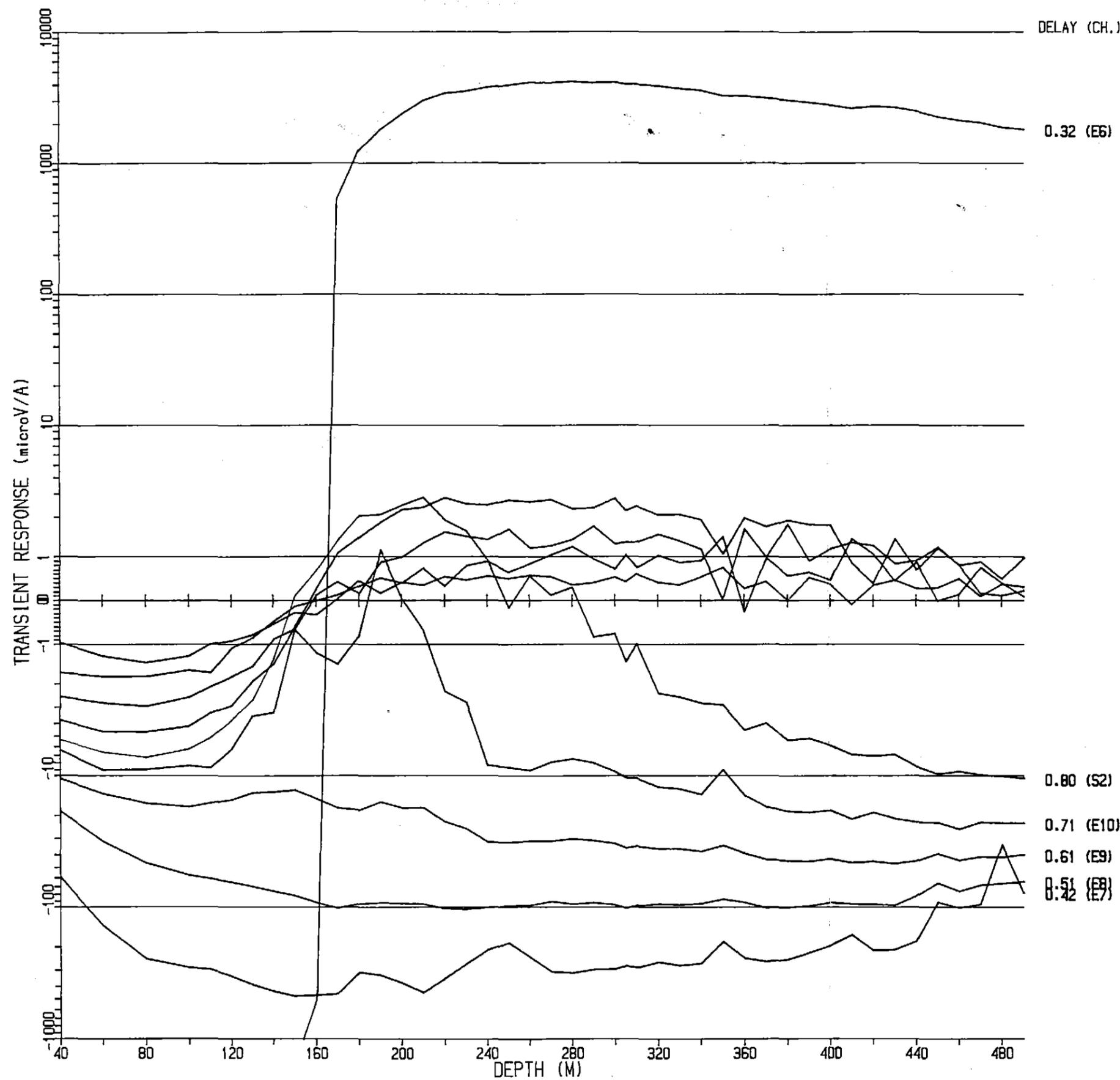
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WSO07 LP3

SCALE - 1:2000



DELAY (CH.)

SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993

CONFIGURATION : 200M SQUARE TX. LOOP,
DRILL HOLE SURVEY

READING INT. : 20 METRES

NO. OF STACKS : 1024

TRANSMITTER : MEDIUM POWER

RECEIVER : SIROTEM II S/N 1237

CURRENT : 14.4 AMPS

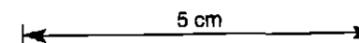
OPERATOR : P McSKIMMING

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

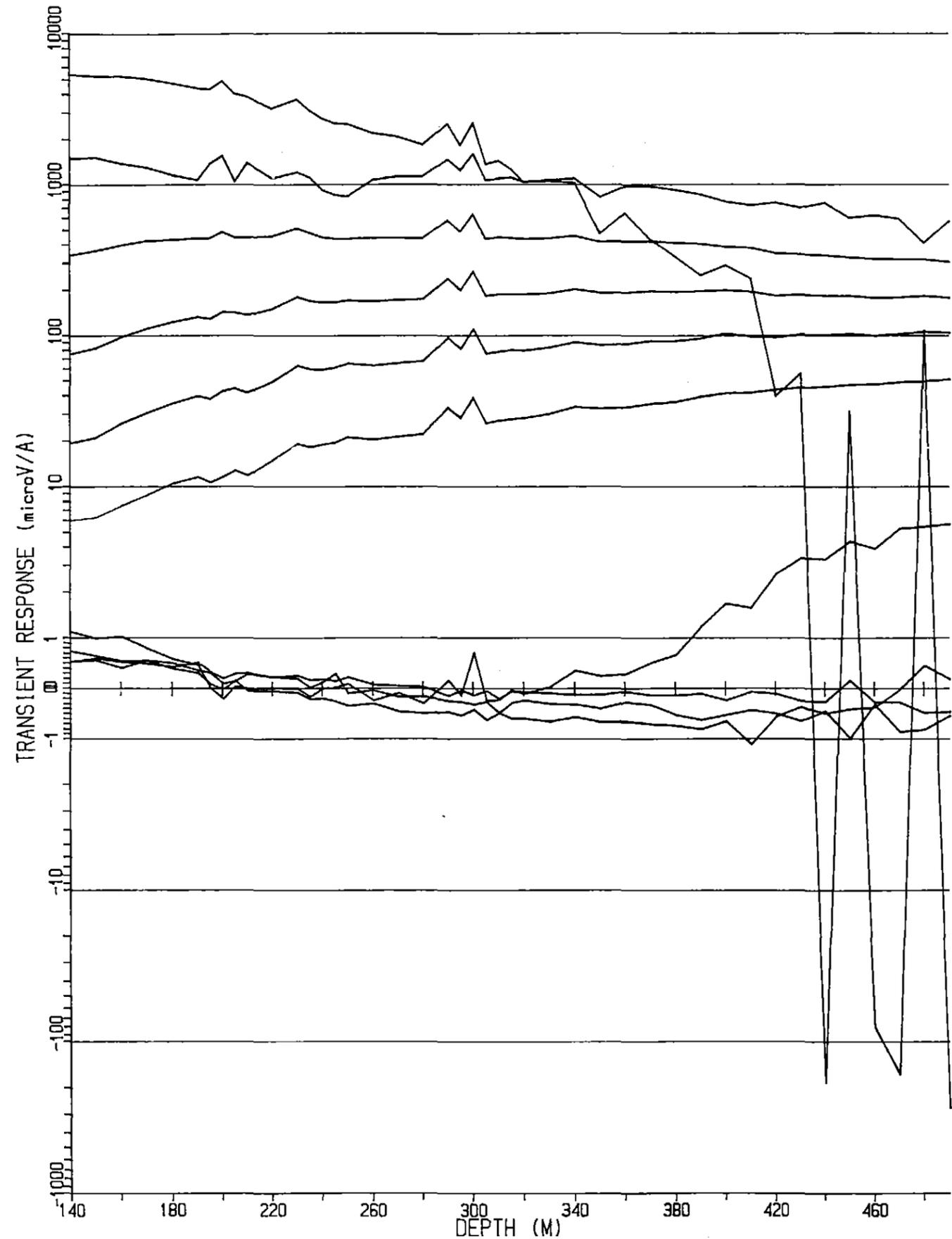


RGC EXPLORATION

QUEENSTOWN
WEST SEDGWICK
SIROTEM PROFILE
LINE W5007 LP4

SCALE - 1:2000

DELAY (CH.)



SURVEY SPECIFICATIONS

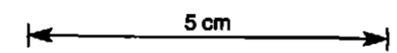
DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 512
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 14.4 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

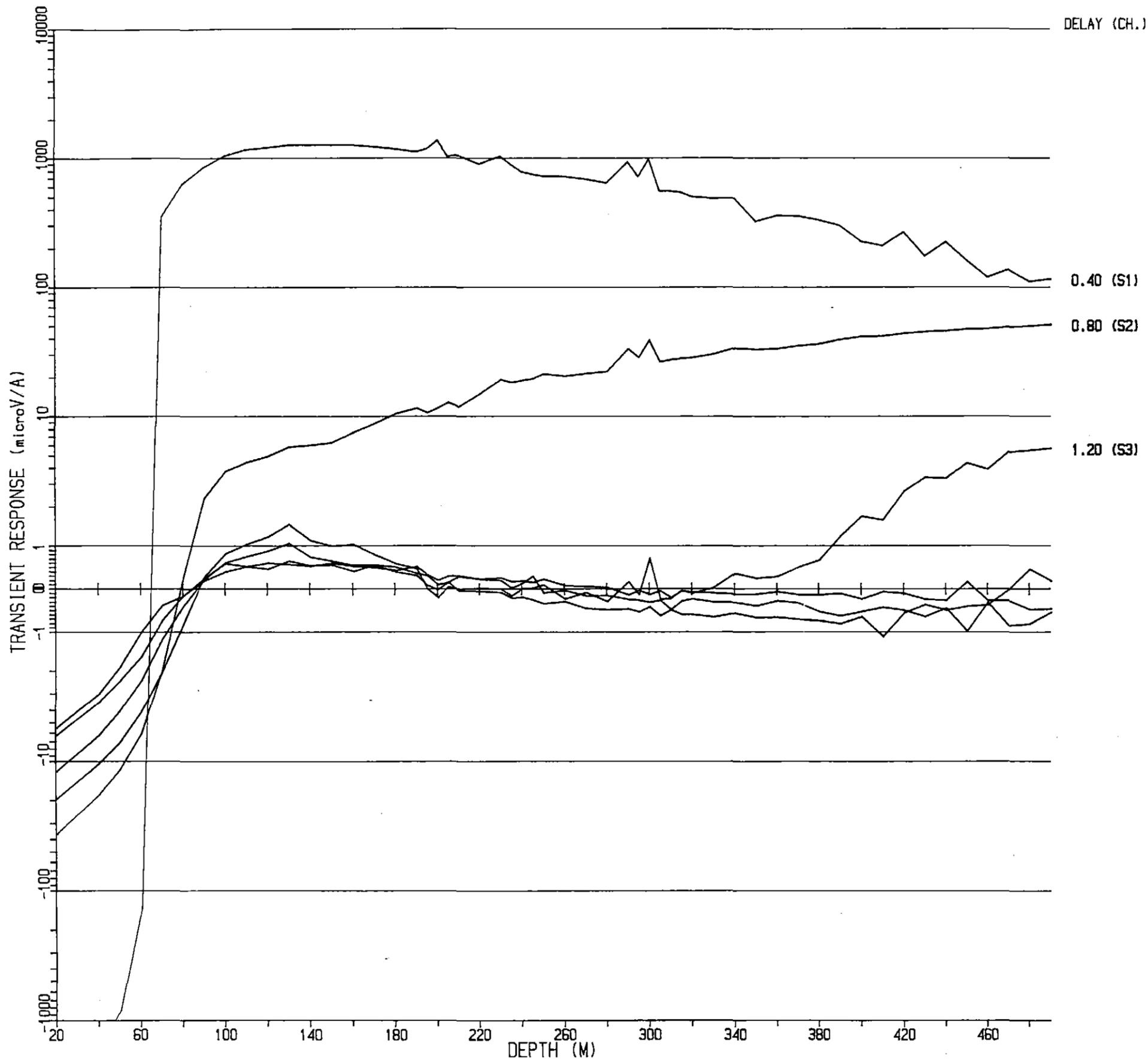


RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS007 LP5

SCALE - 1:2000

0.32 (E6)



SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 14.4 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

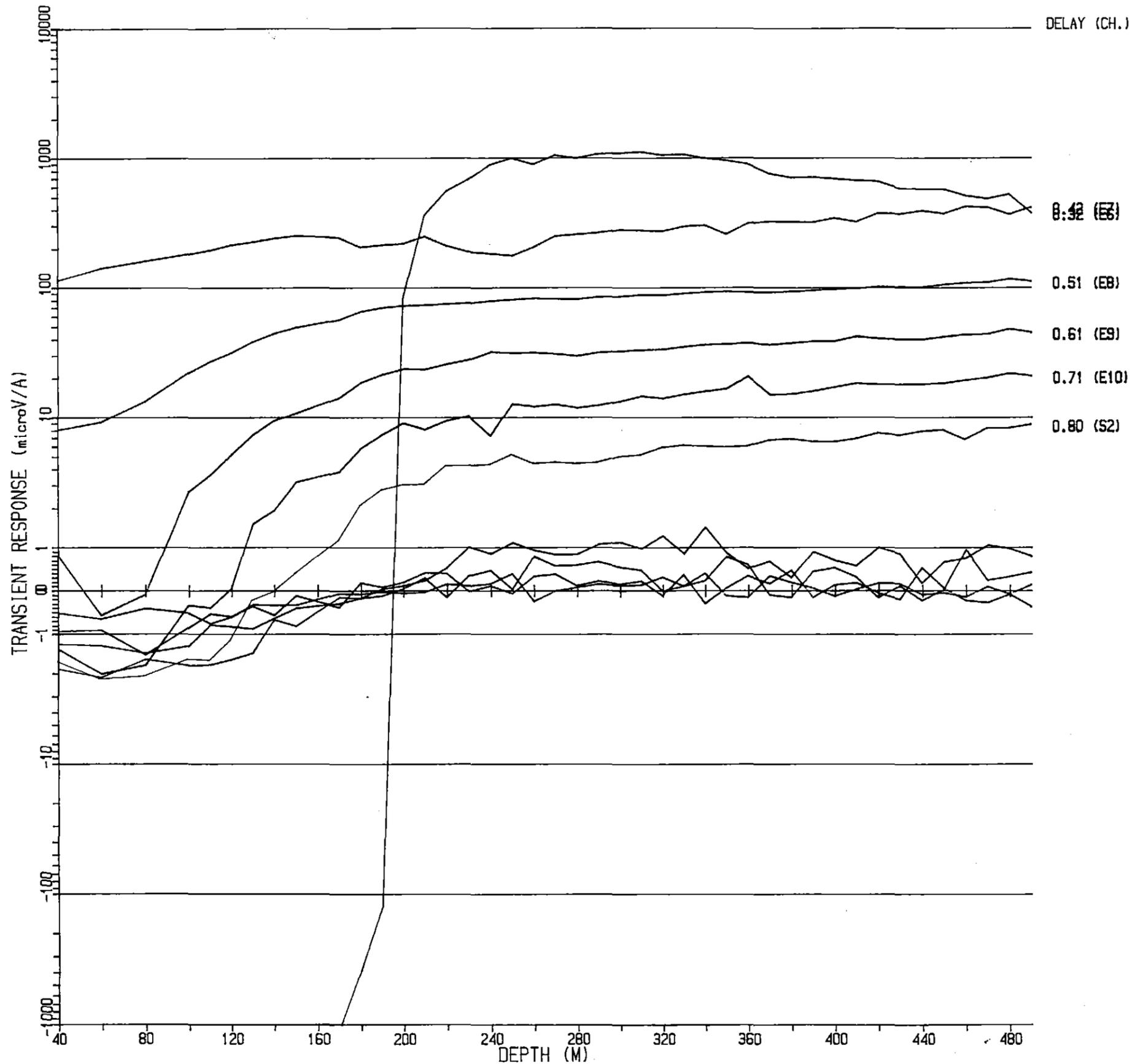
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW

5 cm

RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS007 LP5

SCALE - 1:2000



SURVEY SPECIFICATIONS

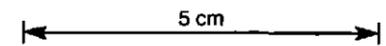
DATA ACQUISITION : McSKIMMING GEOPHYSICS

SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 512
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 14.4 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1 AND +1

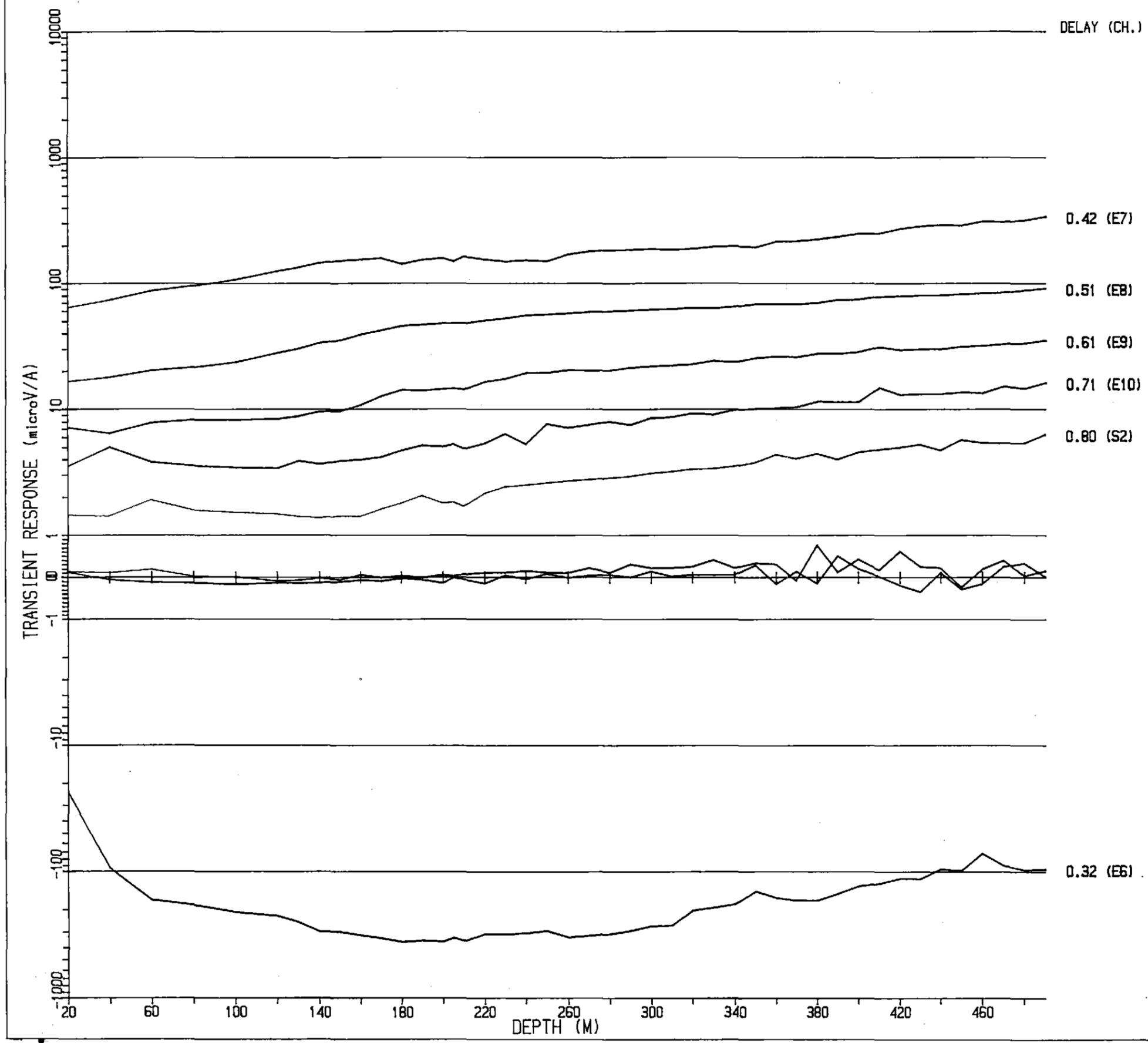
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS007 LP6

SCALE - 1:2000



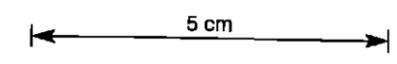
SURVEY SPECIFICATIONS

DATA ACQUIS'N : McSKIMMING GEOPHYSICS
 SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 13.9 AMPS
 OPERATOR : P McSKIMMING

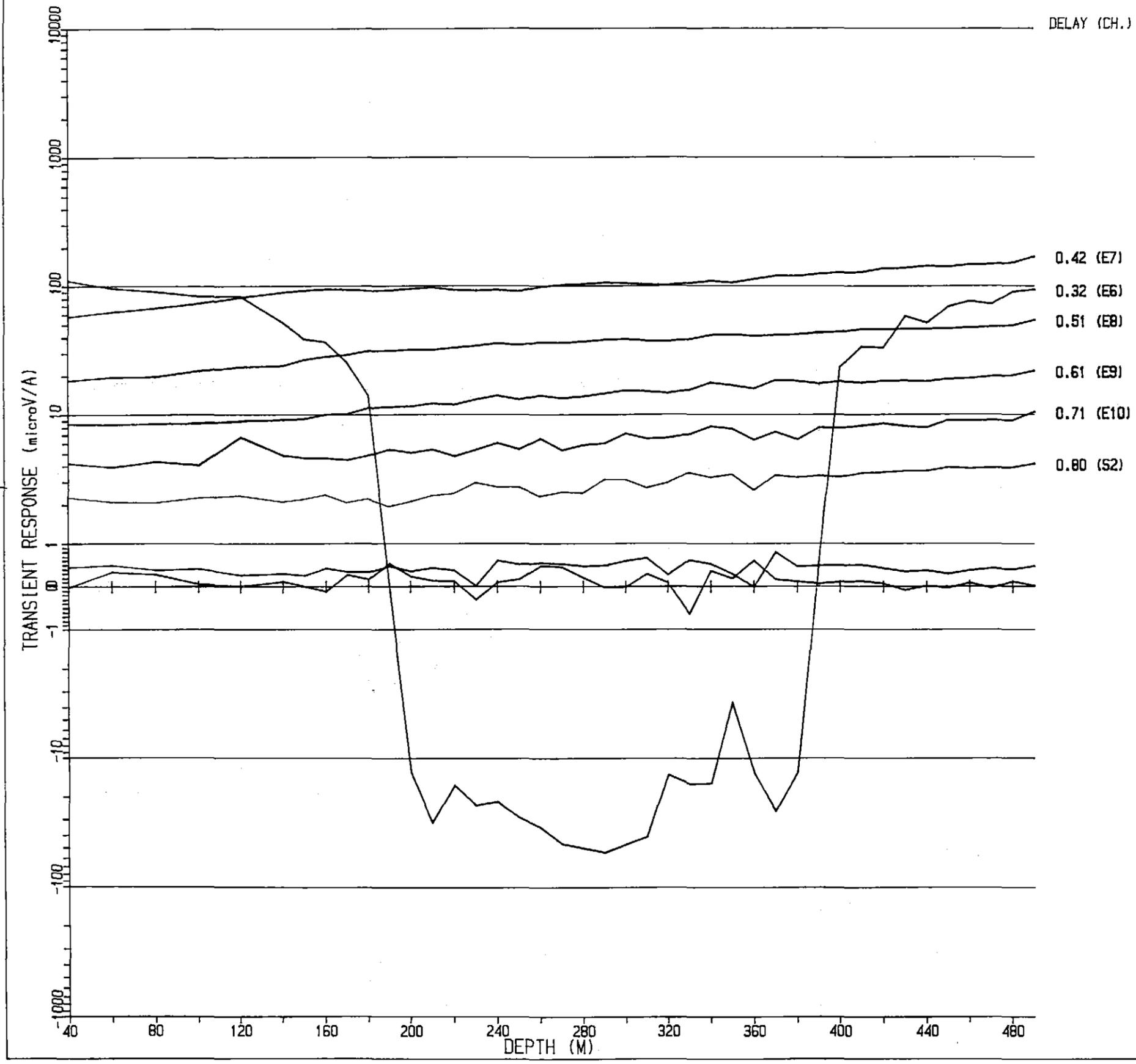
PLOT SPECIFICATIONS

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
 QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS007 LP7
 SCALE - 1:2000



DELAY (CH.)

- 0.42 (E7)
- 0.32 (E6)
- 0.51 (E8)
- 0.61 (E9)
- 0.71 (E10)
- 0.80 (S2)

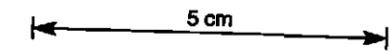
SURVEY SPECIFICATIONS

DATA ACQUISITION : McSKIMMING GEOPHYSICS
 SURVEY DATE : APRIL 1993
 CONFIGURATION : 200M SQUARE TX. LOOP,
 DRILL HOLE SURVEY
 READING INT. : 20 METRES
 NO. OF STACKS : 1024
 TRANSMITTER : MEDIUM POWER
 RECEIVER : SIROTEM II S/N 1237
 CURRENT : 13.3 AMPS
 OPERATOR : P McSKIMMING

PLOT SPECIFICATIONS

HORIZONTAL SCALE - 1:2000
 VERTICAL SCALE - LOGARITHMIC
 3CM. PER DECADE
 LINEAR BETWEEN
 -1. AND +1

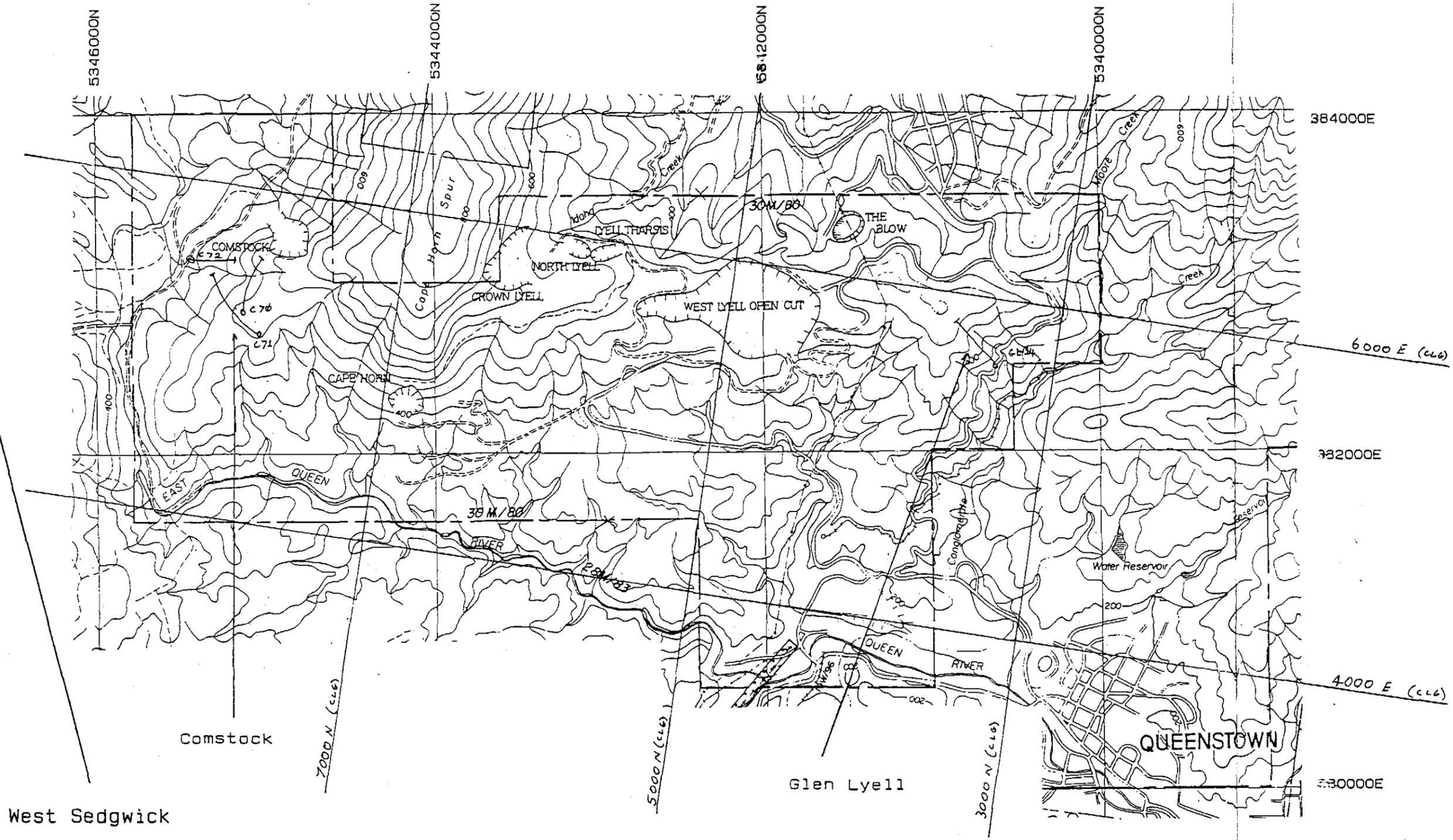
TIME DELAYS IN MILLISECONDS
 E - EARLY TIME WINDOW
 S - STANDARD TIME WINDOW



RGC EXPLORATION

QUEENSTOWN
 WEST SEDGWICK
 SIROTEM PROFILE
 LINE WS007 LP8

SCALE - 1:2000



Note: Main Grid is AMG. - Zone 55
 (CLG) = Consolidated Lease Grid

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 Mt Lyell - Down Hole TEM Surveys

Scale 1: 25,000

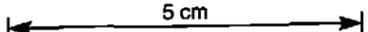
Locality Plan 

Figure 1

APPENDIX 3

**REPORT ON THREE COMPONENT DOWN HOLE, PULSE EM RESULTS FROM THE
WEST SEDGWICK PROSPECT**

BY

R.C. DEAKIN

Report on
Three Component Down Hole,
Pulse EM Results

from

The West Sedgwick Prospect, Mt. Lyell
and
The Mount Julia Prospect, Henty

on behalf of

R.G.C. Exploration Pty Ltd

by

R. C. Deakin
(R. Deakin & Assoc)

March 1994

CONTENTS

	<u>Page No.</u>
1. INTRODUCTION	1
2. WEST SEDGWICK	2
3. Mt. JULIA	4

1. INTRODUCTION.

During November 1993, RGC Exploration contracted Outer Rim Exploration Services to carry out three component, down hole, TEM surveys of drill holes at two base metal prospects in the Mt. Lyell district of South West Tasmania. Those prospects were West Sedgwick and Mount Julia.

Previous down hole TEM had been carried out at the West Sedgwick Prospect by McSkimming Geophysics using a Sirotec II system with which the single axial TEM component was recorded (Deakin 1993). No previous work has been carried out at Mount Julia.

- 1.2 Outer Rim Exploration Services (ORES) used the Crone three component, down hole, pulse EM (PEM) system which records an axial (Z) component and two orthogonal X and Y components of the secondary TEM field: The X and Y components are corrected for probe rotation to give a resultant X component pointing upwards in the direction of hole azimuth and a resultant Y component that points horizontally to the left of an observer looking in the direction of hole azimuth.

2. WEST SEDGWICK.

- 2.1 The previous single axial component (Sirotem) TEM surveys of drill holes WS-006 and WS-007 (Deakin 1993) did not record any anomalies of interest. That survey used eight Tx loops for DH WS-007 (Loops 1 to 8) and six Tx loops (Loops 7 to 14). Some Loop DH combinations produced a weak anomaly near the top of the drill hole for early times which was interpreted as either a cultural effect or the response of conductive overburden. Signal levels decayed rapidly to noise levels by about channel 5 (2.1 m.S.) and no conductors of significance were interpreted within 300m (approx.) of either drill hole.
- 2.2 The three component Crone survey was carried out for one drill hole, WS 007, using two surface Tx loops denoted Loops 15 and 16. There was some initial confusion with the Tx Loop numbers and the relevant TEM data. In their daily log, ORES refer to the two Loops as Loop 4 and Loop 5; in their data dumps they refer to them as Loop 1 and Loop 2. The Loop positions relative to the plan projection of DH WS-007 are illustrated on Plate 1 and the western Loop has been denoted Loop 15 equivalent to Loop 1 or Loop 4 of ORES, and the eastern Loop denoted as Loop 16 is equivalent to Loop 2 or Loop 5 of ORES.
- 2.3 The results from Tx Loop 15 which encompassed the collar of drill hole WS 007, show Z and X components which are positive and essentially flat along the length of the hole and a Y component which is negative and has a gradual decrease in absolute amplitude down hole. Those results are qualitatively, representative of the half space effect and no anomalies of interest are evident.
- 2.4 The Tx Loop 16 results show similar results for the Z component data - positive, flat and with a slight increase in amplitude down hole for late times. This signature is also interpreted qualitatively as a typical half space effect. The X component data has a high amplitude cross over, negative to positive, at about 80m depth which persists to noise level - about channel 10. The Y component data symptomatically has a positive to negative cross over in the 100m to 200m depth range which appears to migrate up-hole with delay time. Those X and Y component results appear to be inconsistent with the Z component results and suggest that there may be a problem with the field data or its subsequent processing.

The X and Y component results qualitatively, can be interpreted as a half space effect where the subsurface current filament is 'trapped' at a location near the drill hole. That phenomenon can occur when a conductor such as a fault zone, acts as a locus for trapping the current filament and giving rise to conductive and/or current channelling effects in the secondary field. The problem with that suggestion, for the Loop 16 data set, is that an

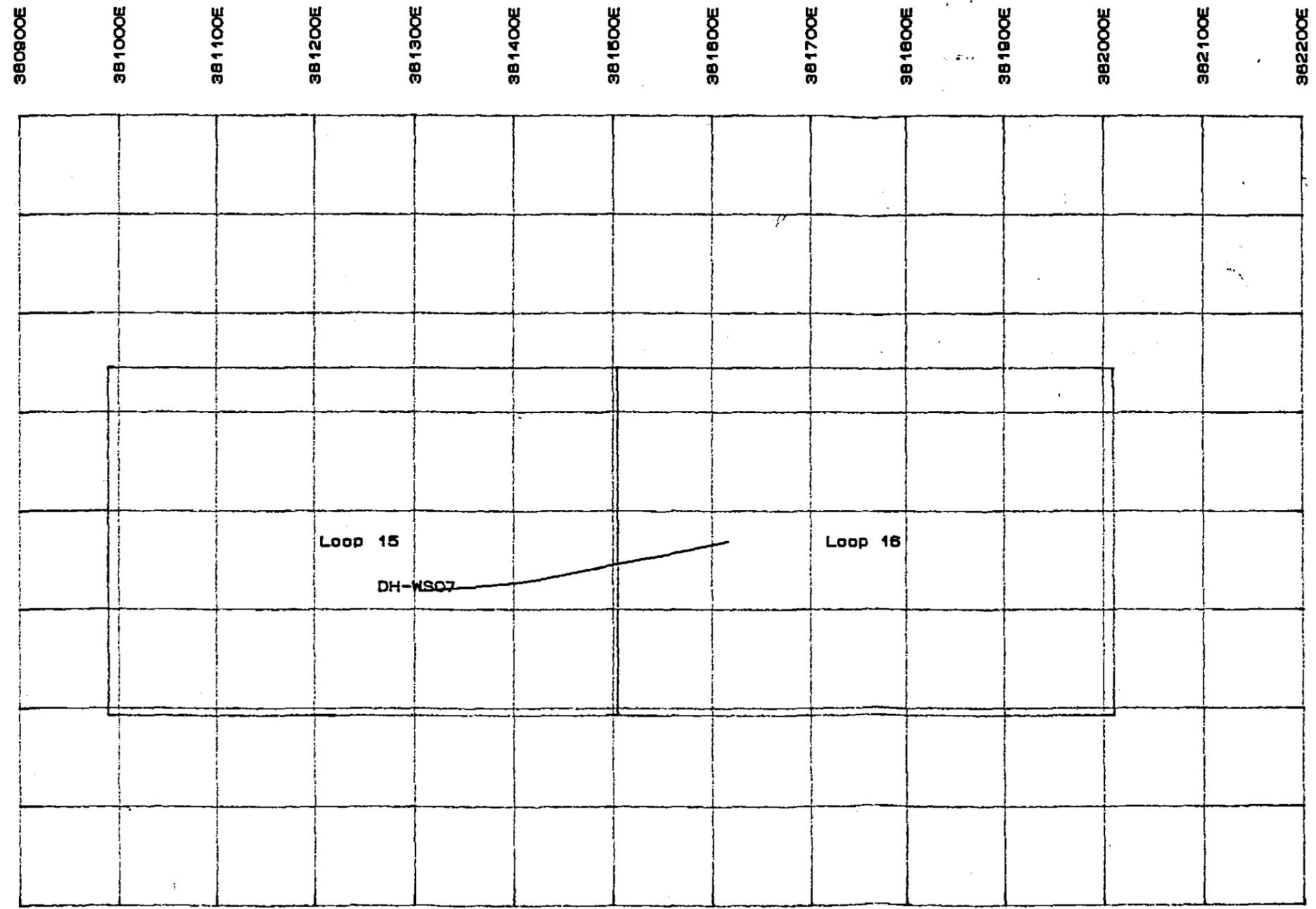
equivalent effect in the Z component does not exist.

2.5 The signal level for all three components has decayed to noise level by about channel 12 (1.8 mS) and no conductors of any significance can be interpreted. The apparent inconsistency in the Loop 16 results is therefore largely academic as no worthwhile conductors within about 300m of the drill hole exist.

2.4 REFERENCE:

Deakin, R.C. July 1993. Interpretation of Downhole TEM survey Results, Drill Holes WS 006 & WS 007 West Sedgwick Prospect, Mt Lyell, Tasmania. R. Deakin & Assoc. Report for RGC Exploration Pty. Ltd.

R. Deakin & Assoc.



346800N
 346500N
 346400N
 346300N
 346200N
 346100N
 346000N
 345900N
 345800N

5 cm

Projection from: 180.0 deg Azimuth
 and: 90.0 deg Tilt

R.G.C. Exploration
 West Sedgewick
 Mt. Lyeil, Tas.
 DH TEM Survey WS-007
 Loop/Drill Hole Locations
 Hor. Scale - 1 : 5000

CRONE GEOPHYSICS & EXPLORATION LTD

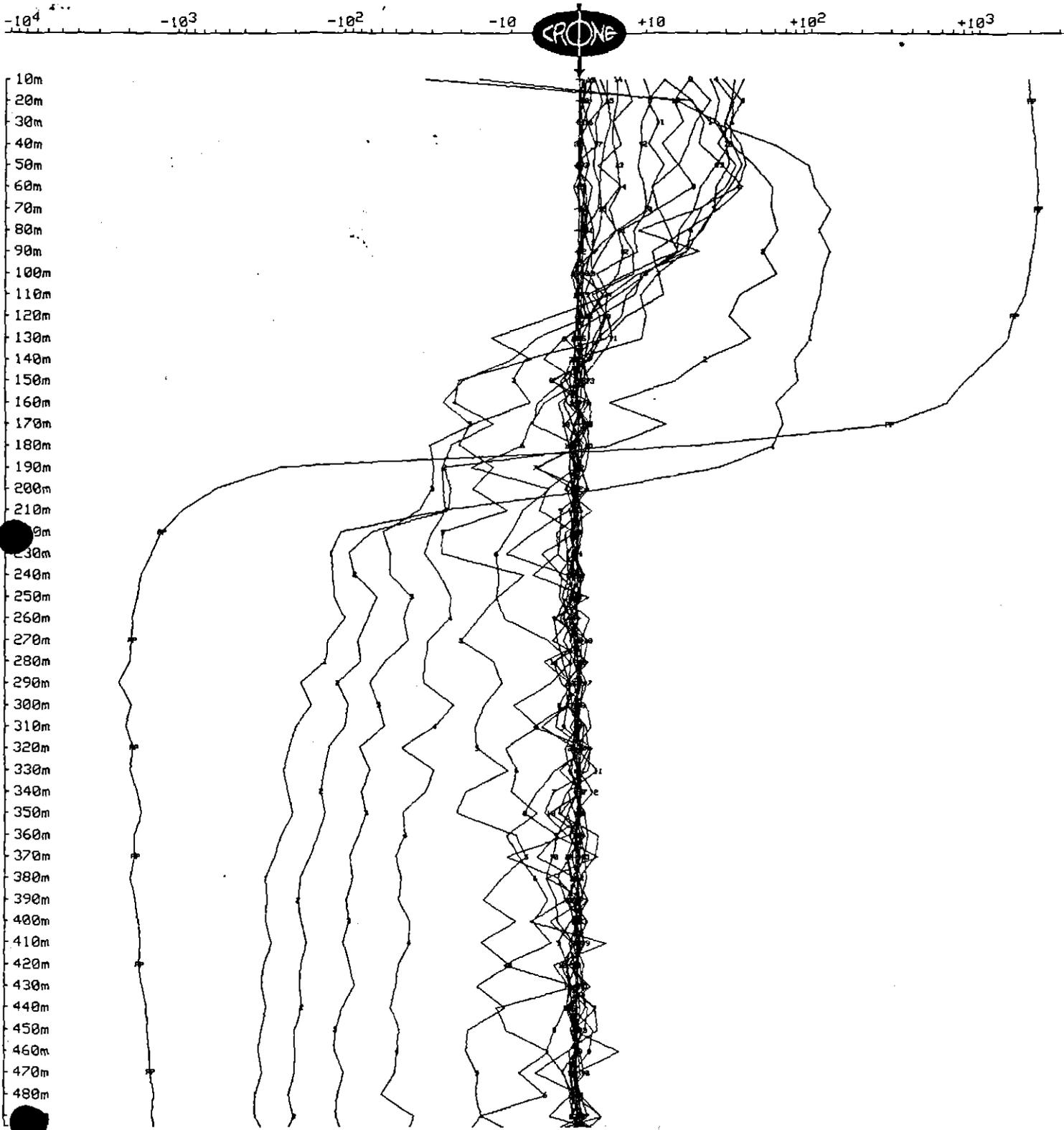
BOREHOLE PEM

Client : RGC EXPLORATION
Grid : WEST-SEDRICK
Date : Nov 28, 1993

Hole : WS-007
Tx Loop : 2
File name : WS7XY2.PEM

Data Corrected for Probe Rotation using Orientation Tool #2
Y COMPONENT dBy/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



Loop 16

CRONE GEOPHYSICS & EXPLORATION LTD

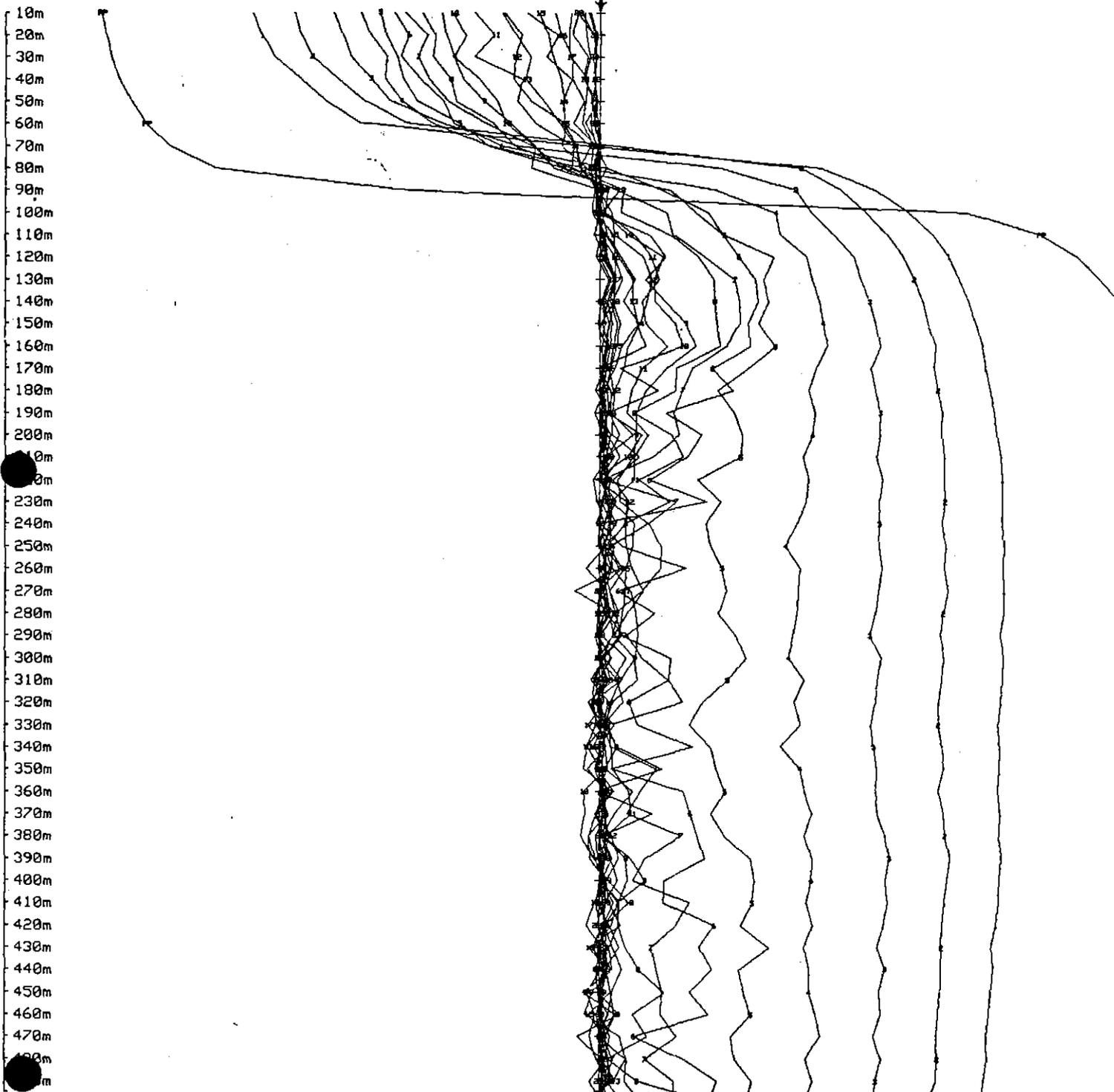
BOREHOLE PEM

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Grid : WEST-SEDRICK
Date : Nov 28, 1993

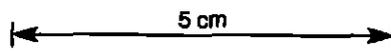
Hole : WS-007
Tx Loop : 2
File name : WS7XY2.PEM

Data Corrected for Probe Rotation using Orientation Tool #2
X COMPONENT dBx/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



Loop 16



916078

CRONE GEOPHYSICS & EXPLORATION LTD

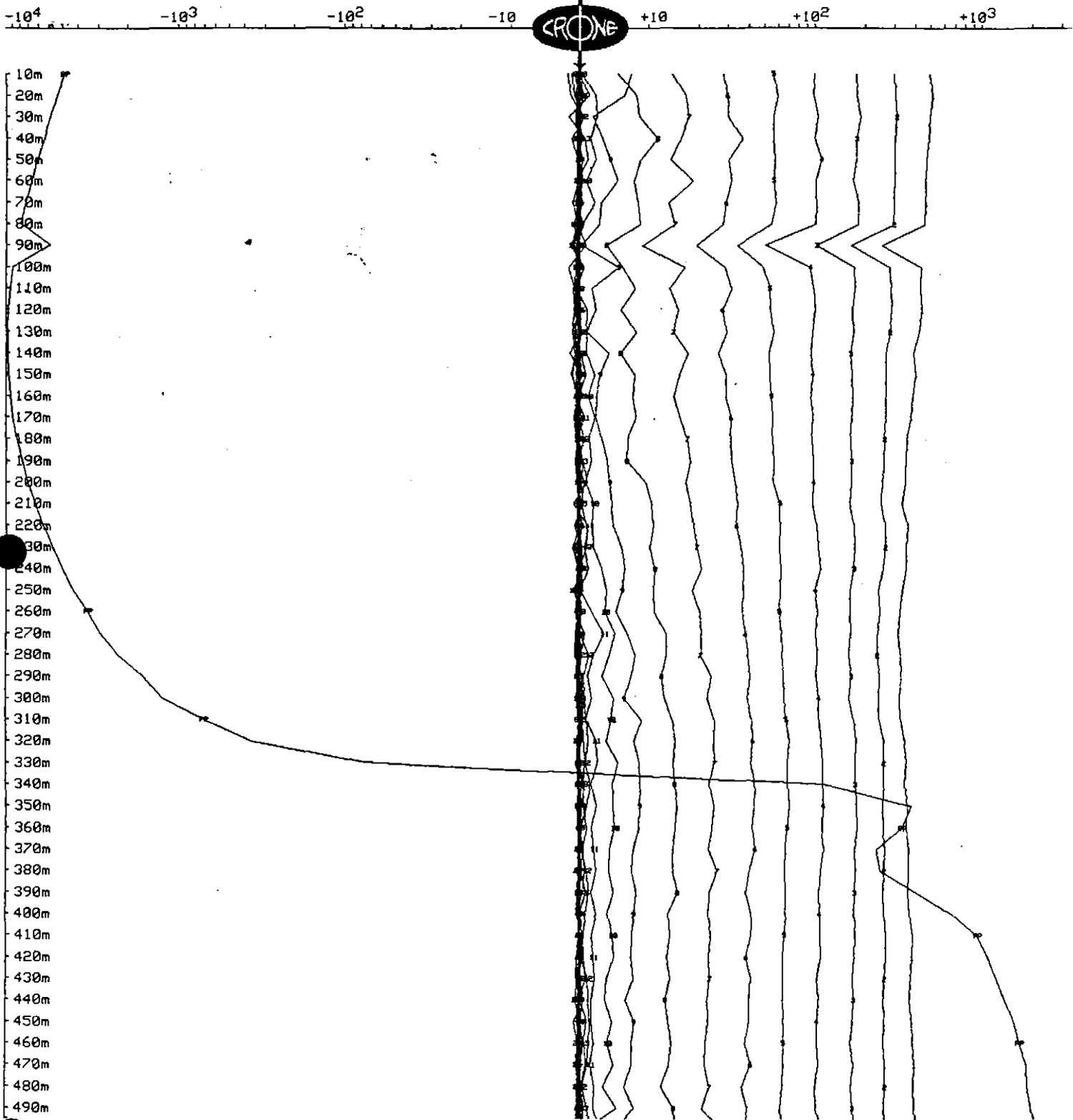
OUTER-RIM EXPLORATION SERVICES

Client : RGC EXPLORATION
Grid : WEST-SEDRICK PROSPECT
Date : 27/11/93

Hole : WS-007
Tx Loop : 2
File name : WS722.PEM

Z COMPONENT dBz/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



5 cm

Loop 16

CRONE GEOPHYSICS & EXPLORATION LTD

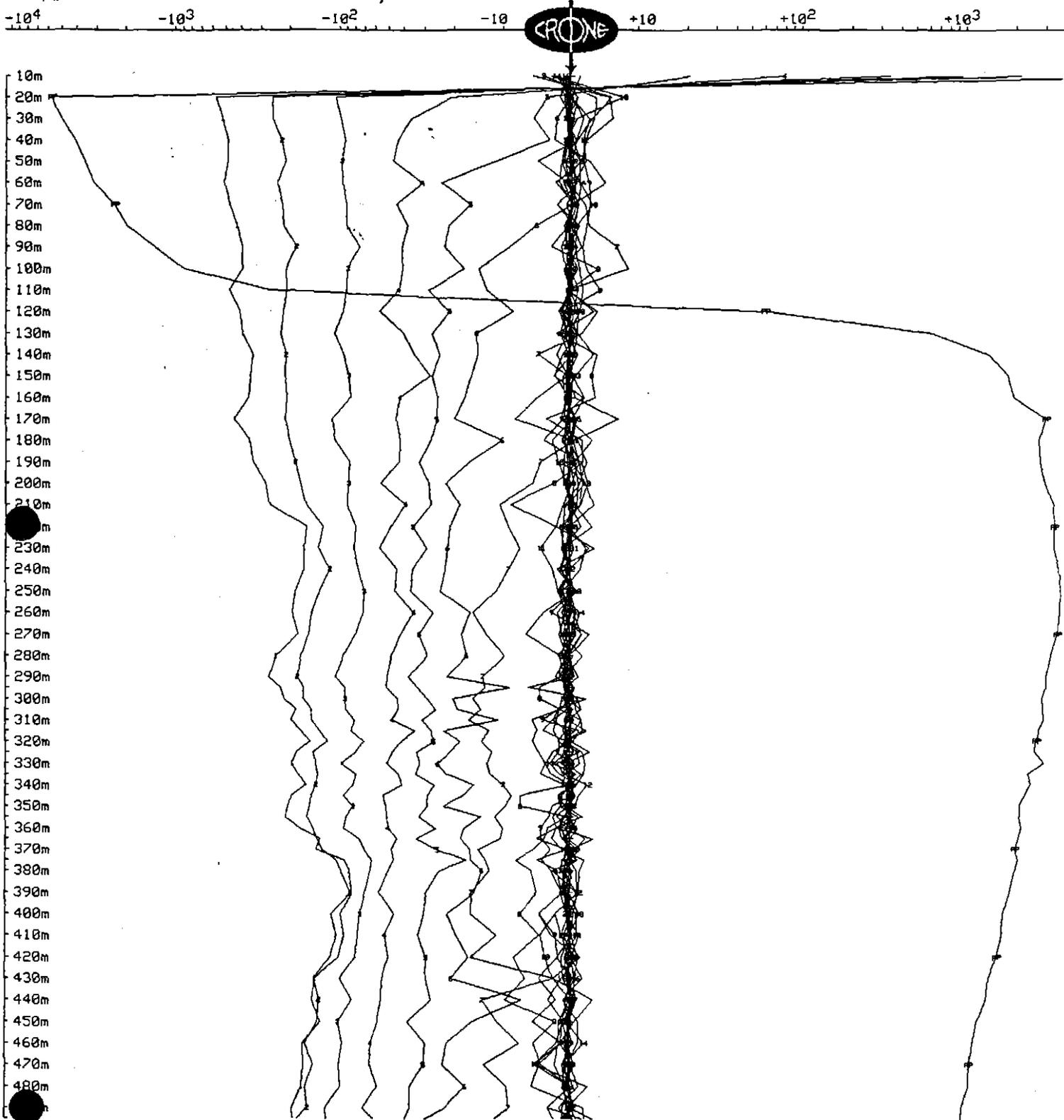
OUTER-RIM EXPLORATION SERVICES

Client : RGC EXPLORATION
Grid : WEST-SEDRICK
Date : 29/11/93

Hole : WS-007
Tx Loop : 1
File name : WS7XY1.PEM

Data Corrected for Probe Rotation using Orientation Tool #2
Y COMPONENT dBy/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



5 cm

Loop 1E

CRONE GEOPHYSICS & EXPLORATION LTD

OUTER-RIM EXPLORATION SERVICES

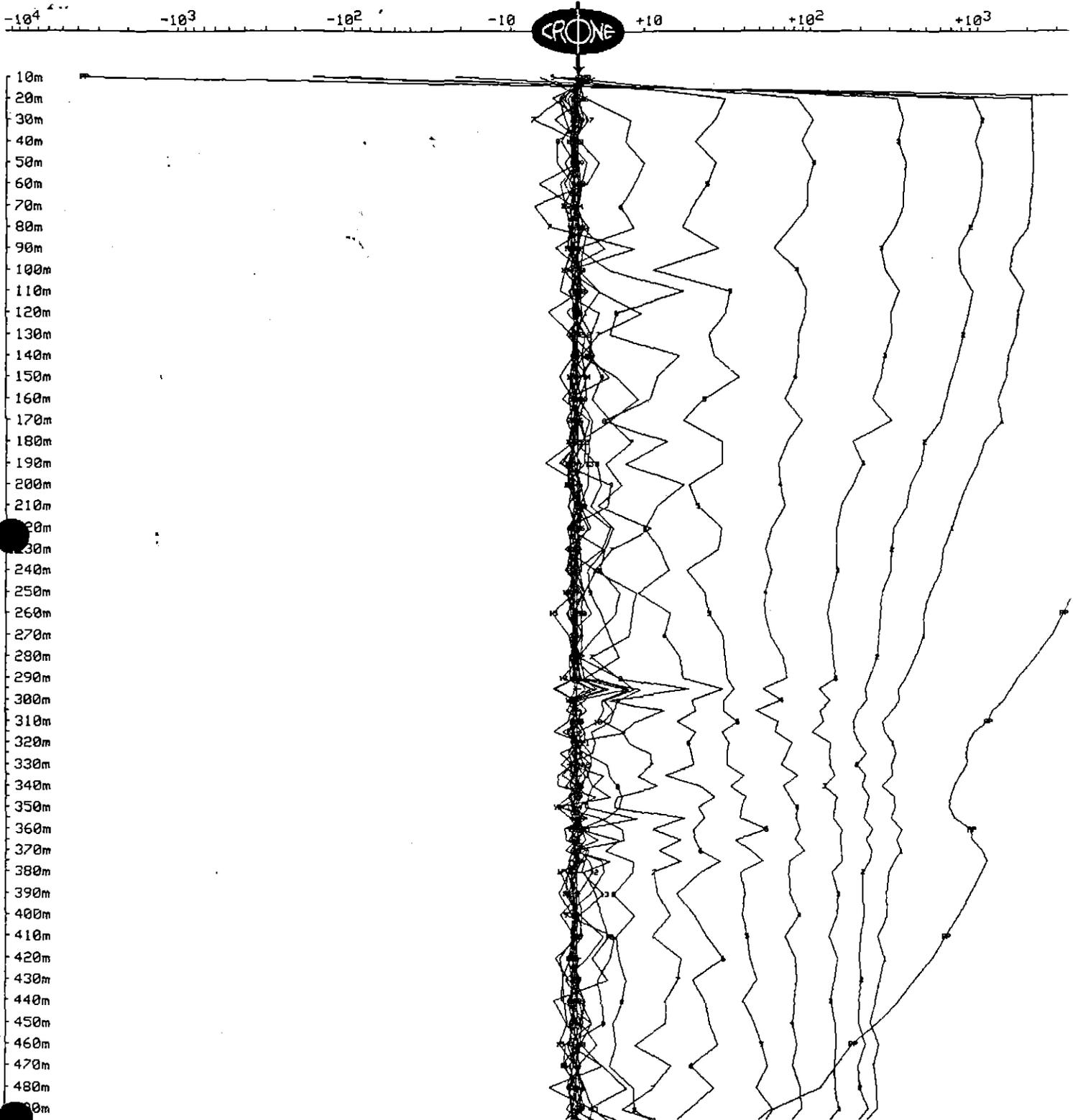
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Grid : WEST-SEDRICK
Date : 29/11/93

Hole : WS-007
Tx Loop : 1
File name : WS7XY1.PEM

916080

Data Corrected for Probe Rotation using Orientation Tool #2
X COMPONENT dBx/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



5 cm

Loop 15

CRONE GEOPHYSICS & EXPLORATION LTD

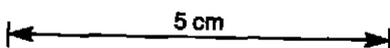
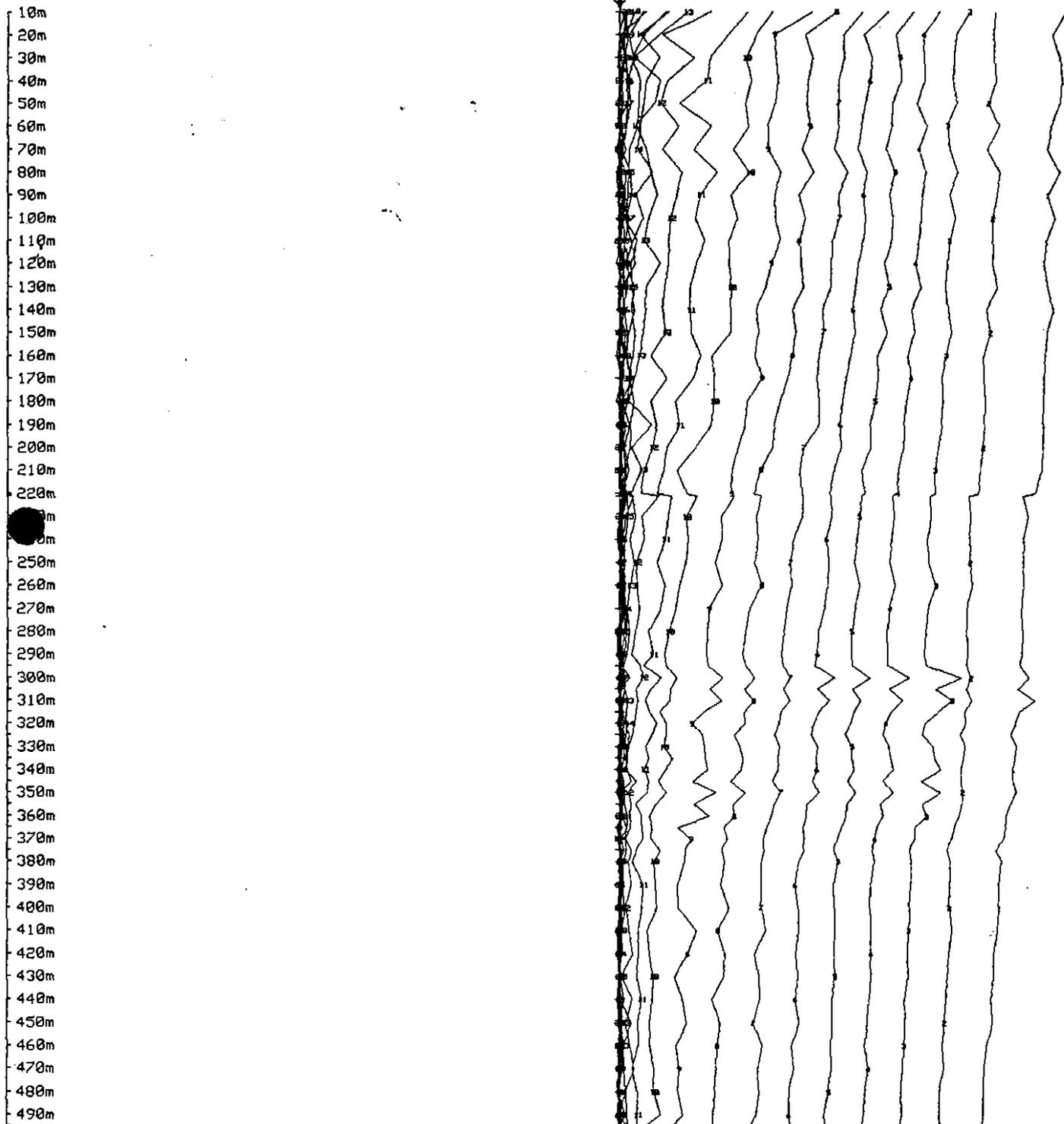
OUTER-RIM EXPLORATION SERVICES

Client : RGC EXPLORATION
Grid : WEST-SEDRICK
Date : 28-29/11/93

Hole : WS-007
Tx Loop : 1
File name : WS7Z1.PEM

Z COMPONENT dBz/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



Loop 15

APPENDIX 4

SOIL GEOCHEMISTRY RESULTS
GARFIELD PROSPECT

Sample	True easting	True northing	Cu ppm ANALAB GA140	ANALAB Pb_2 ppm GA10	Zn ppm ANALAB GA140	Au ppm ANALAB 309	Au(r) ppm ANALAB GG3
45201	379951.30	5324336.95	31.000	10.000	41.000		
45202	379971.89	5324351.86	54.000	7.000	35.000		
45203	379992.49	5324366.76	29.000	7.000	48.000		
45204	380015.61	5324380.36	14.000	20.000	114.000		
45205	380034.93	5324395.28	14.000	9.000	16.000		
45206	380056.82	5324411.44	7.000	7.000	11.000		
45207	380076.10	5324423.82	8.000		8.000		
45208	380096.72	5324440.00	11.000		10.000		
45209	380116.01	5324452.39	8.000		9.000		
45210	380139.17	5324468.52	31.000		13.000		
45211	380159.74	5324482.16	10.000		19.000		
45212	380179.07	5324497.08	18.000		10.000		
45213	380204.79	5324514.45	7.000		12.000		
45214	380222.80	5324526.85	11.000	4.000	19.000		
45215	380244.65	5324540.47	7.000		13.000		
45216	380266.58	5324559.17	9.000	5.000	11.000		
45217	380283.30	5324570.32	11.000	9.000	15.000		
45218	380300.04	5324582.75	9.000	16.000	14.000		
45219	380323.18	5324597.62	13.000	7.000	19.000		
45220	380343.78	5324612.52	8.000	8.000	11.000		
45221	380364.39	5324628.70	7.000	5.000	17.000		
45222	380386.28	5324644.85	17.000	13.000	22.000		
45223	380404.32	5324658.53	18.000	8.000	29.000		
45224	380423.66	5324674.73	8.000	4.000	14.000		
45225	379956.16	5324698.02	5.000		15.000		
45226	379989.67	5324724.15	5.000		17.000		
45227	380032.15	5324755.21					
45228	380068.15	5324778.75	57.000	29.000	123.000		
45229	380106.89	5324813.70	6.000	5.000	8.000	0.010	
45230	380145.50	5324841.01	286.000	11.000	15.000	0.052	
45231	380184.15	5324870.86	13.000	16.000	14.000	0.083	
45232	380225.28	5324896.86	10.000	39.000	8.000		
45233	380270.24	5324924.07	7.000	8.000	9.000		
45234	380174.38	5324968.95	5.000	3.000	10.000		
45235	380155.07	5324955.29	5.000	7.000	11.000	0.008	
45236	380131.93	5324940.43	9.000	15.000	13.000		
45237	380113.88	5324925.48	22.000	26.000	13.000		
45238	380092.03	5324911.87	9.000	9.000	8.000		
45239	380074.00	5324898.19	7.000		7.000	0.013	
45240	380050.86	5324883.33	8.000		6.000		
45241	380034.08	5324868.35	8.000	4.000	9.000		

Laboratory:	ANALAB	ANALAB	ANALAB	ANALAB	ANALAB
Detection Limit:	5.000	0.000	5.000	0.008	0.008
Method:					

Sample	True easting	True northing	Cu ppm ANALAB GA140	ANALAB Pb_2 ppm GA10	Zn ppm ANALAB GA140	Au ppm ANALAB 309	Au(r) ppm ANALAB GG3
45242	380013.48	5324853.45	7.000	10.000	16.000		
45243	379991.61	5324838.56	4.000	33.000	18.000		
45244	379972.29	5324823.64	9.000	15.000	14.000		
45245	379951.67	5324807.46	17.000	39.000	58.000		
45246	379929.78	5324791.30	4.000	4.000	5.000		
45247	379910.47	5324777.65	8.000	9.000	8.000		
45248	379892.42	5324762.70	7.000	5.000	11.000		
45249	379874.89	5324903.74	10.000	17.000	12.000	0.008	
45251	379866.04	5324931.01	10.000	16.000	13.000	0.011	
45252	379902.13	5324959.64	17.000	5.000	7.000		
45253	379943.28	5324986.91	28.000	8.000	9.000	0.010	
45254	379984.45	5325015.45	44.000	5.000	15.000	0.008	
45255	380031.95	5325042.61	14.000		8.000		
45256	380069.31	5325071.22	24.000	3.000	15.000		
45257	379768.04	5324925.06	7.000		7.000		
45258	379787.40	5324942.53	10.000	5.000	5.000		
45259	379808.02	5324958.71	9.000	36.000	53.000		
45260	379828.60	5324972.34	20.000	6.000	20.000		
45261	379849.11	5324982.16	7.000	7.000	8.000		
45262	379871.02	5324999.59	17.000	6.000	15.000		
45263	379892.89	5325014.48	14.000	4.000	10.000		
45264	379912.21	5325029.40	14.000	6.000	12.000		
45265	379930.22	5325041.81	9.000	34.000	7.000		
45266	379952.09	5325056.70	31.000	39.000	16.000		
45267	379972.73	5325074.14	10.000	10.000	12.000		
45268	379992.04	5325087.80	11.000	15.000	7.000	0.038	
45269	380010.03	5325098.94	13.000	7.000	9.000		
45270	380033.19	5325115.07	10.000	29.000	13.000		
45271	380053.81	5325131.25	7.000	7.000	9.000		
45281	379998.62	5325250.46	7.000	8.000	8.000		
45282	379978.00	5325234.28	11.000	3.000	7.000		
45283	379956.13	5325219.40	4.000	7.000	7.000		
45284	379938.12	5325206.99	6.000	7.000	6.000		
45285	379918.82	5325193.33	6.000	14.000	9.000		
45286	379896.97	5325179.72	5.000		9.000		
45287	379873.85	5325166.13	19.000	34.000	42.000		
45288	379857.05	5325149.89	7.000	19.000	11.000		
45289	379837.72	5325134.96	8.000	4.000	11.000		
45301	379906.54	5324471.24	8.000	21.000	36.000		
45302	379948.94	5324497.22	10.000	18.000	27.000		
45303	379983.64	5324519.51	10.000	13.000	23.000		

Laboratory: ANALAB
 Detection Limit: 5.000 ANALAB 0.000 ANALAB 5.000 ANALAB 0.008 ANALAB 0.008
 Method:

916084

Sample	True easting	True northing	Cu ppm ANALAB GA140	ANALAB Pb 2 ppm GA10	Zn ppm ANALAB GA140	Au ppm ANALAB 309	Au(r) ppm ANALAB GG3
45304	380028.56	5324544.18	29.000	27.000	16.000		
45305	380065.94	5324574.05	14.000	17.000	9.000		
45306	380103.32	5324603.93	210.000	11.000	11.000	0.059	0.057
45307	380144.58	5324637.56	13.000	10.000	24.000	0.054	
45308	380181.96	5324667.44	15.000	9.000	11.000	0.008	
45309	380221.91	5324698.54	31.000	14.000	22.000		
45310	380264.33	5324725.79	6.000	8.000	10.000		
45311	380305.57	5324758.15	10.000	5.000	22.000		
45312	380348.01	5324786.67	11.000	8.000	12.000		
45313	379825.92	5324515.86	8.000	4.000	12.000		
45314	379847.81	5324532.02	5.000		12.000		
45315	379867.11	5324545.68	7.000	6.000	19.000		
45316	379890.25	5324560.54	10.000		20.000		
45317	379912.04	5324570.34	10.000	7.000	22.000		
45318	379935.04	5324577.57	10.000	5.000	21.000		
45319	379958.10	5324587.35	12.000	4.000	26.000		
45320	379979.99	5324603.51	10.000	5.000	31.000		
45321	379999.29	5324617.16	9.000	45.000	19.000		
45322	380019.89	5324632.07	21.000	12.000	13.000		
45323	380039.15	5324643.18	54.000	17.000	137.000		
45324	380058.50	5324659.38	22.000	9.000	8.000		
45325	380080.39	5324675.54	74.000	7.000	11.000	0.060	
45326	380099.73	5324691.74	16.000	5.000	17.000	0.020	
45327	380120.29	5324704.10	47.000	14.000	36.000		
45328	380142.18	5324720.26	31.000	23.000	25.000	0.112	
45330	380182.12	5324751.36	19.000	3.000	14.000		
45331	380203.97	5324764.98	45.000	34.000	18.000		
45332	380223.31	5324781.18	8.000		9.000		
45333	380240.07	5324794.88	12.000	5.000	9.000		
45334	380261.99	5324812.30	15.000	3.000	12.000		
45335	380281.29	5324825.96	11.000	8.000	10.000		
45336	380298.07	5324840.93	14.000	4.000	10.000		
45337	380319.96	5324857.09	17.000	3.000	11.000		
45338	379715.39	5325044.23	7.000	10.000	5.000		
45339	379735.99	5325059.13	8.000	15.000	7.000		
45340	379756.56	5325072.77	15.000	3.000	7.000		
45341	379775.91	5325088.97	17.000	3.000	11.000		
45342	379793.96	5325103.92	8.000		9.000		
45343	379815.83	5325118.80	8.000	5.000	11.000		
45354	379632.41	5325099.06	7.000		6.000		
45355	379654.25	5325112.68	6.000	9.000	7.000		

Laboratory: ANALAB ANALAB ANALAB ANALAB ANALAB
 Detection Limit: 5.000 0.000 5.000 0.008 0.008
 Method:

Sample	True easting	True northing	Cu ppm ANALAB GA140	ANALAB Pb_2 ppm GA10	Zn ppm ANALAB GA140	Au ppm ANALAB 309	Au(r) ppm ANALAB GG3
45356	379674.83	5325126.31	5.000	10.000	5.000		
45357	379699.28	5325143.69	11.000	13.000	6.000		
45358	379716.02	5325156.12	8.000	22.000	5.000	0.011	
45359	379736.60	5325169.76	8.000	27.000	10.000		
45360	379755.94	5325185.96	6.000	10.000	8.000		
45361	379775.29	5325202.16	5.000	6.000	7.000		
45362	379798.34	5325211.93	9.000	10.000	14.000		
45363	379821.46	5325225.53	6.000	14.000	11.000		
45364	379842.01	5325237.89	4.000	4.000	7.000		
45365	379863.86	5325251.50	10.000	14.000	18.000		
45366	379888.29	5325267.61	9.000	9.000	11.000		
45367	379907.60	5325281.27	10.000	6.000	9.000		
45368	379926.90	5325294.93	10.000	6.000	6.000		
45369	379599.43	5325253.50	6.000	6.000	6.000		
45370	379645.60	5325276.87	7.000	5.000	5.000		
45371	379685.37	5325297.80	5.000	7.000	9.000		
45372	379721.53	5325330.25	20.000	21.000	15.000		
45373	379753.82	5325360.21	10.000	26.000	9.000		
45375	379832.31	5325414.82	23.000	6.000	7.000		

Laboratory:	ANALAB	ANALAB	ANALAB	ANALAB	ANALAB
Detection Limit:	5.000	0.000	5.000	0.008	0.008
Method:					

Sample	True easting	True northing	Cu ppm ANALAB GA140	ANALAB Pb_2 ppm GA10	Zn ppm ANALAB GA140	Ti ppm ANALAB GX401	Zr ppm ANALAB GX401	ANALAB V ppm GA140	Au_n ppb BECQUE INAA	Sb_n ppm BECQUE INAA	As_n ppm BECQUE INAA	Ba_n ppm BECQUE INAA	Br_n ppm BECQUE INAA	Ce_n ppm BECQUE INAA	Cs_n ppm BECQUE INAA	Cr_n ppm BECQUE INAA
45272	380076.00	5324682.00	40.000	17.000	11.000	3063.000	174.000	139.000	34.200	0.720	6.310	910.000	38.100	270.000	7.850	12.700
45273	380091.00	5324662.00	36.000	11.000	8.000	2266.000	169.000	90.000	50.900	1.030	3.330	723.000	20.300	50.600	7.240	25.800
45274	380107.00	5324642.00	40.000	15.000	9.000	2062.000	198.000	104.000	28.600	0.750	2.590	848.000	15.600	71.900	8.550	15.600
45275	380121.00	5324622.00	331.000	15.000	76.000	3078.000	227.000	236.000	164.000	0.820	12.700	488.000	39.400	93.900	4.210	28.600
45276	380135.00	5324602.00	126.000	17.000	9.000	2664.000	205.000	152.000	34.600	0.800	2.610	2550.000	14.500	71.800	9.920	40.700
45277	380151.00	5324582.00	9.000	6.000	8.000	829.000	116.000	32.000	9.700	0.860	3.270	295.000	20.500	61.300	1.370	9.500
45278	380166.00	5324562.00	28.000	8.000	6.000	2114.000	159.000	77.000	-5.000	0.740	2.570	571.000	20.400	152.000	3.920	13.000
45279	380180.00	5324542.00	15.000	16.000	12.000	1156.000	158.000	22.000	-5.000	0.720	3.040	366.000	22.200	150.000	4.820	-5.000
45280	380197.00	5324523.00	6.000	3.000	5.000	927.000	117.000	17.000	-5.000	0.630	2.230	447.000	8.990	68.800	2.830	8.700
45344	380284.55	5324569.03	5.000	9.000	6.000	857.000	135.000	10.000	-5.000	1.050	2.240	253.000	17.500	47.700	2.540	9.600
45345	380268.41	5324592.20	7.000	16.000	15.000	943.000	161.000	13.000	-5.000	0.690	1.930	627.000	7.700	88.200	3.480	6.200
45346	380252.24	5324612.82	7.000	14.000	7.000	1164.000	148.000	26.000	-5.000	0.750	2.240	607.000	11.100	85.300	3.930	-5.000
45347	380238.60	5324633.40	7.000	7.000	6.000	834.000	124.000	12.000	-5.000	0.650	2.070	325.000	15.500	44.500	1.740	9.600
45348	380223.67	5324652.73	7.000	11.000	8.000	1050.000	180.000	12.000	-5.000	0.860	2.570	834.000	11.600	124.000	4.640	-5.000
45349	380207.49	5324673.36	4.000	3.000	4.000	1235.000	156.000	23.000	10.700	0.710	2.220	831.000	11.600	57.500	3.500	8.100
45351	380192.61	5324695.23	42.000	26.000	15.000	1955.000	162.000	56.000	6.000	1.010	4.250	856.000	40.100	116.000	3.280	39.900
45352	380178.91	5324712.00	6.000	11.000	9.000	1896.000	175.000	63.000	-5.000	0.800	2.760	516.000	16.900	34.700	4.010	41.600
45353	380161.52	5324736.46	6.000	8.000	9.000	825.000	245.000	9.000	-5.000	0.630	2.520	251.000	10.700	45.000	2.650	13.400
45376	379825.92	5324515.86	6.000	7.000	9.000	1603.000	304.000	7.000	-5.000	0.790	1.810	521.000	14.100	108.000	5.690	-5.000
45377	379839.54	5324494.01	9.000	14.000	20.000	1507.000	277.000	7.000	-5.000	0.810	2.660	736.000	18.500	80.300	5.610	-5.000
45378	379854.46	5324474.68	10.000	12.000	24.000	1485.000	258.000	7.000	-5.000	0.650	1.370	562.000	19.300	82.000	5.720	7.900
45379	379869.37	5324454.08	6.000	5.000	39.000	1696.000	329.000	10.000	-5.000	0.840	1.240	1070.000	12.300	106.000	8.760	-5.000
45380	379884.32	5324436.02	6.000	3.000	28.000	1581.000	297.000	7.000	-5.000	0.860	13.500	955.000	12.800	93.300	9.500	-5.000
45381	379896.64	5324412.92	24.000	22.000	106.000	2537.000	232.000	139.000	-5.000	0.780	6.160	612.000	86.600	105.000	5.290	10.700
45382	379910.30	5324393.61	23.000	9.000	42.000	4132.000	270.000	248.000	-5.000	0.680	8.970	468.000	38.900	38.800	6.630	14.000
45383	379922.71	5324375.59	33.000	40.000	43.000	3634.000	265.000	208.000	-5.000	1.050	8.570	596.000	34.000	37.600	5.810	7.900
45384	379940.16	5324354.95	39.000	17.000	32.000	3185.000	367.000	222.000	-5.000	0.980	9.310	136.000	50.500	81.500	1.640	11.400
45385	379953.86	5324338.18	38.000	10.000	119.000	3837.000	208.000	319.000	-5.000	0.540	5.870	168.000	120.000	150.000	2.640	17.200
45386	379965.04	5324322.73	18.000	26.000	75.000	4186.000	270.000	241.000	-5.000	0.810	6.000	-100.000	93.000	55.600	2.850	11.300
45387	379976.24	5324308.55	41.000	62.000	41.000	4681.000	331.000	246.000	-5.000	0.790	8.280	172.000	81.300	117.000	1.460	16.600
45388	379984.88	5324293.14	39.000	49.000	44.000	4224.000	351.000	222.000	-5.000	0.650	6.150	116.000	62.700	62.800	2.280	15.000
45389	379999.29	5324617.16	5.000	18.000	14.000	1667.000	232.000	19.000	-5.000	1.080	1.740	586.000	5.840	16.600	5.640	5.800
45390	380012.97	5324599.13	15.000	26.000	39.000	3532.000	215.000	164.000	-5.000	1.730	8.910	668.000	57.800	37.900	7.970	28.700
45391	380026.56	5324576.00	105.000	16.000	45.000	2657.000	157.000	100.000	24.400	2.780	6.620	764.000	28.900	54.800	7.080	11.900
45392	380040.22	5324556.69	26.000	12.000	19.000	1928.000	129.000	13.000	-5.000	1.710	2.490	498.000	24.100	33.300	3.070	16.200
45393	380053.81	5324533.57	13.000	16.000	15.000	1378.000	106.000	10.000	-5.000	1.000	3.440	236.000	54.400	12.700	1.450	13.400
45394	380072.51	5324511.63	12.000	11.000	4.000	800.000	99.000	15.000	-5.000	0.870	1.960	228.000	9.410	27.700	1.530	12.400
45395	380086.17	5324492.32	10.000	4.000	4.000	771.000	77.000	8.000	-5.000	0.680	1.770	101.000	14.600	13.800	1.040	9.300
45396	380101.05	5324470.45	44.000	8.000	5.000	851.000	144.000	8.000	-5.000	0.720	2.600	606.000	22.700	73.400	2.710	12.100
45397	380115.98	5324451.12	6.000	6.000	5.000	713.000	134.000	7.000	-5.000	0.600	1.410	463.000	13.400	47.000	2.290	-5.000

Laboratory:	ANALAB	BECQUE													
Detection Limit:	5.000	0.000	5.000	1.000	5.000	5.000	5.000	5.000	0.200	2.000	100.00	2.000	2.000	1.000	5.000
Method:						GA140									

916087

Sample	True easting	True northing	Co_n ppm BECQUE INAA	Eu_n ppm BECQUE INAA	Au_n ppb BECQUE INAA	Hf_n ppm BECQUE INAA	Ir_n ppb BECQUE INAA	Fe_n % BECQUE INAA30	La_n ppm BECQUE INAA	Lu_n ppm BECQUE INAA	Mo_n ppm BECQUE INAA	K_n % BECQUE INAA30	Rb_n ppm BECQUE INAA	Sm_n ppm BECQUE INAA	Sc_n ppm BECQUE INAA	Se_n ppm BECQUE INAA
45272	380076.00	5324682.00	1.790	2.620	34.200	3.560	-20.000	2.650	152.000	0.250	-5.000	2.320	111.000	13.600	13.500	-5.000
45273	380091.00	5324662.00	1.680	0.510	50.900	3.310	-20.000	1.510	27.800	-0.200	-5.000	2.240	90.000	2.970	15.700	-5.000
45274	380107.00	5324642.00	2.730	1.640	28.600	4.140	-20.000	1.630	39.500	0.250	-5.000	2.870	120.000	5.250	14.500	-5.000
45275	380121.00	5324622.00	28.200	1.660	164.000	4.230	-20.000	6.530	49.800	0.290	-5.000	1.210	48.900	7.320	15.300	13.700
45276	380135.00	5324602.00	-1.000	0.730	34.600	4.030	-20.000	1.220	44.400	-0.200	22.900	4.080	171.000	3.020	17.900	7.600
45277	380151.00	5324582.00	1.780	0.540	9.700	3.170	-20.000	1.430	32.400	-0.200	-5.000	0.590	28.200	3.520	4.800	-5.000
45278	380166.00	5324562.00	1.830	1.290	-5.000	3.930	-20.000	1.040	90.500	0.230	-5.000	1.620	60.200	7.320	11.500	-5.000
45279	380180.00	5324542.00	-1.000	0.720	-5.000	4.600	-20.000	1.420	80.200	0.240	-5.000	1.960	69.600	6.230	4.010	-5.000
45280	380197.00	5324523.00	-1.000	0.630	-5.000	3.090	-20.000	0.890	34.900	0.330	-5.000	1.600	63.400	4.090	4.310	-5.000
45344	380284.55	5324569.03	-1.000	-0.500	-5.000	3.570	-20.000	0.620	23.800	0.260	-5.000	1.070	56.900	3.310	2.570	-5.000
45345	380268.41	5324592.20	-1.000	0.910	-5.000	4.390	-20.000	0.920	42.200	0.400	-5.000	2.230	114.000	6.280	4.500	-5.000
45346	380252.24	5324612.82	-1.000	1.090	-5.000	3.860	-20.000	0.730	45.200	0.280	-5.000	1.880	90.600	5.660	6.320	-5.000
45347	380238.60	5324633.40	-1.000	0.590	-5.000	3.120	-20.000	0.620	22.100	0.250	-5.000	0.960	39.500	2.980	2.770	-5.000
45348	380223.67	5324652.73	-1.000	1.080	-5.000	4.760	-20.000	1.020	60.100	0.430	-5.000	2.420	93.900	8.090	5.190	-5.000
45349	380207.49	5324673.36	-1.000	0.570	10.700	3.910	-20.000	0.590	29.300	0.320	-5.000	1.690	72.100	3.380	5.010	-5.000
45351	380192.61	5324695.23	1.900	1.300	6.000	3.900	-20.000	0.900	65.200	0.270	-5.000	1.220	62.400	6.330	8.870	-5.000
45352	380178.91	5324712.00	1.140	-0.500	-5.000	3.900	-20.000	0.950	21.100	0.230	-5.000	1.130	47.400	2.000	7.330	-5.000
45353	380161.52	5324736.46	-1.000	-0.500	-5.000	6.160	-20.000	0.950	22.300	0.230	-5.000	0.890	38.000	2.820	2.220	-5.000
45376	379825.92	5324515.86	-1.000	1.470	-5.000	7.400	-20.000	0.670	51.700	0.630	-5.000	2.240	93.300	9.490	9.120	-5.000
45377	379839.54	5324494.01	-1.000	1.050	-5.000	6.710	-20.000	1.100	39.200	0.540	-5.000	1.970	77.900	6.800	7.870	-5.000
45378	379854.46	5324474.68	1.100	1.210	-5.000	6.230	-20.000	1.330	38.500	0.460	-5.000	1.690	70.400	7.140	6.780	-5.000
45379	379869.37	5324454.08	-1.000	1.380	-5.000	7.950	-20.000	1.570	48.900	0.630	-5.000	2.760	108.000	9.000	10.200	-5.000
45380	379884.32	5324436.02	-1.000	1.590	-5.000	7.380	-20.000	2.510	43.900	0.520	-5.000	2.630	116.000	7.900	9.190	-5.000
45381	379896.64	5324412.92	6.920	0.850	-5.000	5.350	-20.000	4.070	58.300	-0.200	-5.000	1.190	57.200	5.930	9.450	-5.000
45382	379910.30	5324393.61	3.720	-0.500	-5.000	6.100	-20.000	4.210	27.600	0.230	-13.000	0.930	65.400	1.800	10.200	-5.000
45383	379922.71	5324375.59	2.770	-0.500	-5.000	5.360	-20.000	5.340	25.700	-0.200	-14.000	1.290	83.600	1.240	12.500	-5.000
45384	379940.16	5324354.95	11.400	-0.500	-5.000	8.090	-20.000	6.100	36.200	-0.200	-5.000	0.470	29.100	2.250	16.400	-5.000
45385	379953.86	5324338.18	19.000	0.830	-5.000	4.920	-20.000	8.200	37.800	0.250	-5.000	0.460	-20.000	4.090	30.100	-5.000
45386	379965.04	5324322.73	3.640	-0.500	-5.000	6.350	-20.000	6.730	33.000	-0.200	-13.000	-0.200	-20.000	2.170	12.800	-5.000
45387	379976.24	5324308.55	13.900	1.090	-5.000	7.150	-20.000	6.250	95.800	0.220	-5.000	0.400	25.900	7.500	15.400	-5.000
45388	379984.88	5324293.14	5.330	-0.500	-5.000	7.210	-20.000	6.020	43.200	-0.200	-13.000	0.300	24.200	2.530	10.500	-5.000
45389	379999.29	5324617.16	-1.000	-0.500	-5.000	5.460	-20.000	0.910	8.060	0.390	-5.000	1.520	62.900	1.410	6.270	-5.000
45390	380012.97	5324599.13	1.340	0.610	-5.000	4.570	-20.000	5.900	20.000	0.290	-5.000	1.830	86.200	2.600	12.500	-5.000
45391	380026.56	5324576.00	1.090	0.580	24.400	3.270	-20.000	3.210	32.100	0.250	-5.000	1.820	86.000	3.150	10.400	-5.000
45392	380040.22	5324556.69	-1.000	-0.500	-5.000	3.210	-20.000	1.210	17.700	0.230	-5.000	1.230	53.500	2.060	3.750	-5.000
45393	380053.81	5324533.57	-1.000	-0.500	-5.000	2.490	-20.000	1.310	6.770	-0.200	-5.000	0.730	20.500	0.780	2.390	-5.000
45394	380072.51	5324511.63	-1.000	-0.500	-5.000	2.390	-20.000	0.810	15.500	-0.200	-5.000	0.580	32.400	1.590	2.550	-5.000
45395	380086.17	5324492.32	-1.000	-0.500	-5.000	2.010	-20.000	0.770	7.910	-0.200	-5.000	0.480	-20.000	1.020	1.540	-5.000
45396	380101.05	5324470.45	-1.000	0.820	-5.000	4.060	-20.000	1.180	35.700	0.430	-5.000	2.020	97.700	5.410	4.350	-5.000
45397	380115.98	5324451.12	-1.000	-0.500	-5.000	3.820	-20.000	0.770	24.200	0.280	-5.000	1.680	84.900	3.530	3.360	-5.000

Laboratory: Detection Limit: Method:	BECQUE 1.000	BECQUE 0.500	BECQUE 5.000	BECQUE 1.000	BECQUE 0.000	BECQUE 0.050	BECQUE 0.500	BECQUE 0.200	BECQUE 5.000	BECQUE 0.200	BECQUE 0.000	BECQUE 0.200	BECQUE 5.000	BECQUE 5.000
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Sample	True easting	True northing	Ag_n ppm BECQUE INAA	Na_n % BECQUE INAA30	Ta_n ppm BECQUE INAA	Th_n ppm BECQUE INAA	Sr_n ppm BECQUE INAA	W_n ppm BECQUE INAA3	U_n ppm BECQUE INAA3	Yb_n ppm BECQUE INAA	Zn_n ppm BECQUE INAA	BECQUE Zr ppmINAA30
45272	380076.00	5324682.00	-5.000	0.040	-1.000	20.900	-500.000	14.200	2.150	1.650	-100.000	-500.000
45273	380091.00	5324662.00	-5.000	0.050	-1.000	10.200	-500.000	4.170	3.190	1.170	-100.000	-500.000
45274	380107.00	5324642.00	-5.000	0.040	-1.000	8.750	-500.000	2.250	2.240	1.580	-100.000	-500.000
45275	380121.00	5324622.00	-5.000	0.040	-1.000	32.000	-500.000	3.860	2.930	1.820	129.000	-500.000
45276	380135.00	5324602.00	-5.000	0.050	-1.000	22.300	-500.000	12.600	3.030	1.080	-100.000	-500.000
45277	380151.00	5324582.00	-5.000	0.040	-1.000	9.790	-500.000	2.220	3.550	1.330	-100.000	-500.000
45278	380166.00	5324562.00	-5.000	0.030	-1.000	15.500	-500.000	4.620	4.430	1.540	-100.000	-500.000
45279	380180.00	5324542.00	-5.000	0.050	1.350	7.250	-500.000	4.540	-2.000	1.480	-100.000	-500.000
45280	380197.00	5324523.00	-5.000	0.030	-1.000	8.360	-500.000	5.280	2.060	2.070	-100.000	-500.000
45344	380284.55	5324569.03	-5.000	0.080	-1.000	7.690	-500.000	-2.000	2.030	1.690	-100.000	-500.000
45345	380268.41	5324592.20	-5.000	0.090	-1.000	11.900	-500.000	-2.000	3.320	2.540	-100.000	-500.000
45346	380252.24	5324612.82	-5.000	0.060	-1.000	12.100	-500.000	-2.000	3.420	1.910	-100.000	-500.000
45347	380238.60	5324633.40	-5.000	0.040	-1.000	6.950	-500.000	-2.000	-2.000	1.560	-100.000	-500.000
45348	380223.67	5324652.73	-5.000	0.060	1.440	14.900	-500.000	-2.000	5.300	2.790	-100.000	-500.000
45349	380207.49	5324673.36	-5.000	0.050	-1.000	8.170	-500.000	2.580	2.480	2.120	-100.000	-500.000
45351	380192.61	5324695.23	-5.000	0.050	-1.000	20.000	-500.000	-2.000	2.380	1.980	-100.000	-500.000
45352	380178.91	5324712.00	-5.000	0.030	-1.000	12.100	-500.000	-2.000	2.780	1.420	-100.000	-500.000
45353	380161.52	5324736.46	-5.000	0.040	-1.000	7.220	-500.000	-2.000	-2.000	1.540	-100.000	-500.000
45376	379825.92	5324515.86	-5.000	0.060	-1.000	17.600	-500.000	-2.000	2.730	4.030	-100.000	-500.000
45377	379839.54	5324494.01	-5.000	0.140	-1.000	12.600	-500.000	-2.000	3.200	3.270	-100.000	-500.000
45378	379854.46	5324474.68	-5.000	0.020	1.870	14.000	-500.000	-2.000	3.510	3.090	-100.000	-500.000
45379	379869.37	5324454.08	-5.000	0.030	1.170	20.100	-500.000	-2.000	4.360	4.280	-100.000	-500.000
45380	379884.32	5324436.02	-5.000	0.040	1.100	16.100	-500.000	-2.000	3.790	3.450	-100.000	-500.000
45381	379896.64	5324412.92	-5.000	1.150	-1.000	17.700	-500.000	-2.000	-2.000	1.680	185.000	-500.000
45382	379910.30	5324393.61	-5.000	0.050	1.050	20.800	-500.000	-2.000	7.110	1.270	-100.000	-500.000
45383	379922.71	5324375.59	-5.000	0.020	-1.000	21.300	-500.000	-2.000	7.950	1.130	104.000	-500.000
45384	379940.16	5324354.95	-5.000	0.040	-1.000	20.700	-500.000	-2.000	6.300	1.290	-100.000	-500.000
45385	379953.86	5324338.18	-5.000	0.030	-1.000	44.300	-500.000	-2.000	8.840	1.690	211.000	-500.000
45386	379965.04	5324322.73	-5.000	0.040	-1.000	26.300	-500.000	-2.000	7.110	1.340	129.000	-500.000
45387	379976.24	5324308.55	-5.000	0.050	-1.000	29.900	-500.000	-2.000	8.710	1.440	-100.000	-500.000
45388	379984.88	5324293.14	-5.000	0.030	-1.000	27.400	-500.000	-2.000	7.060	1.360	-100.000	-500.000
45389	379999.29	5324617.16	-5.000	0.030	1.320	8.630	-500.000	-2.000	4.390	2.540	-100.000	-500.000
45390	380012.97	5324599.13	-5.000	0.090	-1.000	15.900	-500.000	-2.000	4.720	1.900	-100.000	-500.000
45391	380026.56	5324576.00	-5.000	0.030	-1.000	14.900	-500.000	4.870	4.400	1.660	-100.000	-500.000
45392	380040.22	5324556.69	-5.000	0.020	-1.000	7.050	-500.000	-2.000	-2.000	1.460	-100.000	-500.000
45393	380053.81	5324533.57	-5.000	0.030	-1.000	3.950	-500.000	-2.000	-2.000	1.090	-100.000	-500.000
45394	380072.51	5324511.63	-5.000	0.020	-1.000	4.650	-500.000	-2.000	-2.000	0.880	-100.000	-500.000
45395	380086.17	5324492.32	-5.000	0.030	-1.000	3.990	-500.000	3.510	-2.000	0.950	-100.000	-500.000
45396	380101.05	5324470.45	-5.000	0.060	-1.000	11.800	-500.000	2.890	2.770	2.750	-100.000	-500.000
45397	380115.98	5324451.12	-5.000	0.040	-1.000	8.570	-500.000	-2.000	2.470	2.050	-100.000	-500.000

Laboratory: BECQUE
 Detection Limit: 5.000 0.050 1.000 0.500 500.00 2.000 2.000 0.500 100.00 100.00
 Method: INAA30

APPENDIX 5

SOIL GEOCHEMISTRY RESULTS, PROFILE SAMPLING
GARFIELD PROSPECT

Sample	TNorth	TEast	Grid easting	Grid northing	To depth	Au ppm ANALAB 309	Cu ppm ANALAB GA140	Pb ppm ANALAB GA140	Zn ppm ANALAB GA140
45501			1800.00	1875.00	0.20	0.058	38.000	44.000	46.000
	Remarks: 10 CM HUMUS LAYER, 1.2 M ORANGE (ANDESITIC) CLAY								
45502			1800.00	1875.00	1.30	-0.008	54.000	9.000	127.000
45503			2000.00	2050.00	0.30	0.006	62.000	94.000	31.000
	Remarks: 0.3 M SURFACE HUMUS, BROWN SOIL, VEG MATTER								
45504			2000.00	2050.00	0.60	-0.008	33.000	15.000	35.000
	Remarks: BROWN SOIL + SMALL FRAGS OF ROCK								
45505			2000.00	2050.00	0.70	-0.008	92.000	27.000	183.000
	Remarks: ROCK CHIP FROM DOWN HOLE								
45506			2075.00	2000.00	0.10	0.033	30.000	28.000	15.000
45507			2075.00	2000.00	0.40	0.019	20.000	9.000	9.000
	Remarks: C-HORIZON, CHIPS OF EYTQ + BROWN CLAY SOIL								
45508			2075.00	2000.00	0.50	0.015	13.000	7.000	8.000
45509			2100.00	2025.00	0.10	0.098	134.000	26.000	30.000
	Remarks: HUMUS, CLAY								
45510			2100.00	2025.00	0.20	0.207	426.000	10.000	88.000
45511			2100.00	2100.00	0.20	0.039	37.000	37.000	20.000
	Remarks: HUMUS + CLAY								
45512			2100.00	2100.00	0.60	0.072	109.000	5.000	9.000
45513			2275.00	2500.00	0.20	-0.008	23.000	31.000	14.000
45514			2275.00	2500.00	0.40	-0.008	10.000	12.000	11.000
	Remarks: 50% CLAY, 50% ROCK CHIPS								
45515			2175.00	2200.00	0.20	0.021	23.000	31.000	10.000
45516			2175.00	2200.00	0.30	-0.008	18.000	6.000	96.000
45517			2225.00	2200.00	0.10	-0.008	18.000	44.000	12.000
45518			2225.00	2200.00	0.40	0.008	11.000	23.000	8.000
	Remarks: ANDESITIC CLAY/ROCK								

Laboratory:	ANALAB	ANALAB	ANALAB	ANALAB
Detection Limit:	0.008	5.000	5.000	5.000
Method:				

916091

APPENDIX 6

GAR001 DRILL LOG AND ASSAYS

Garfield

DIAMOND DRILLHOLE : GAR001

PROJECT IDEN : GARFIELD START DATE : 23 MAY 93 COMPLETION DATE : 18 JUN 93 LOGGED BY:
 COLLAR NORTHING: 5324550.00 COLLAR EASTING : 379945.00 COLLAR ELEVATION: 285.00 GRID AZIMUTH : 0.00
 DRILLED BY : DDTAS TOTAL LENGTH : 388.50 CORE/HOLE SIZE : HQNQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING	ELEVATION
000	0.00		36.00	-60.00	5324550.00	379945.00	285.00
001	30.00		47.00	-59.00			
002	60.00		47.50	-58.20			
003	90.00		51.00	-57.00			
004	120.00		51.00	-55.80			
005	150.00		51.50	-54.40			
006	180.00		51.50	-53.00			
007	210.00		52.50	-52.40			
008	240.00		52.50	-52.00			
009	270.00		53.00	-51.30			
010	300.00		54.50	-50.30			
011	330.00		56.80	-49.50			
012	360.00		57.00	-48.00			
013	388.50		58.00	-46.30			

R HED			SUMMARY LOG				
R HED	0.00	17.50	WEATHERED, FELDSPAR-PHYRIC DACITIC LAVA				
R HED	17.50	34.45	CHLORITIC, FELDSPAR-PHYRIC CRYSTAL RICH ANDESITE LAVA				
R HED	35.45	89.40	APHYRIC TO FELDSPAR-PHYRIC DACITIC LAVA				
R HED	89.40	102.70	STRONGLY FOLIATED, SERICITIC, QUARTZ PHYRIC RHYOLITIC LAVA				
R HED	102.70	148.40	STRONGLY FOLIATED, CHLORITIC, FELDSPAR PHYRIC ANDESITE LAVA				
R HED	148.40		STRONGLY FOLIATED, SERICITIC, SILICIFIED, QUARTZ PHYRIC				
R HED		175.00	RHYOLITIC LAVA				
R HED	175.00	318.50	MINERALISED, CHLORITIC ANDESITIC LAVA				
R HED	318.50	388.50	STRONGLY FOLIATED FELSIC (RHYOLITIC) EPICLASTICS AND LAVAS				

916093

	Interval From (m)	To (m)	Description	Unit
	0.00	17.50	WEATHERED FELDSPAR PHYRIC DACITIC LAVA: pale grey. STRUCTURE: moderately broken core along foliation, cleavage/foliation: 35 degrees dip long core axis, lower contact: sharp basal contact, 40 degrees dip long core axis. TEXTURE: moderately foliated, massive. MINERALOGY: trace disseminations > veins of pyrite. CVC OR EQUIVALENT	
R	0.00	17.50		
R	0.00	0.00		
R	0.00	0.00		
THN	17.50	35.45	FELDSPAR PHYRIC XL-RICH ANDESITE LAVA: dark grey. TYPIFYING MINERALS: chlorite. STRUCTURE: moderately broken core along foliation, cleavage/foliation: 40 degrees dip long core axis, lower contact: sharp basal contact, 40 degrees dip long core axis. TEXTURE: moderately foliated. MINERALOGY: trace disseminations & scattered crystals o pyrite. SOME 2-5 MILLIMETRE CHLORITE FLECKS AFTER HORNBLENDE. "HORNBLENDE PYHRIC" IN PLACES	QUITE
R	17.50	35.45		
R	17.50	35.45		
	35.45	89.40	FELDSPAR PHYRIC DACITIC LAVA: light grey. STRUCTURE: very weakly broken core. TEXTURE: weakly foliated.	
R	35.45	37.80	APPEARS TO BE BRECCIATED IN PLACES 35.45 - 37.80 2.5% FELDSPAR PHYRIC DACITIC LAVA: pale grey. STRUCTURE: moderately broken core along foliation, cleavage/foliation: 40 degrees dip long core axis. TEXTURE: moderately foliated. ALTERATION: weakly bleached.	
THN				
R	37.80	46.55	FINE GRAINED CRYSTAL - POOR APHYRIC LAVA PROBABLY FELSIC, MINOR FRACTURES OFTEN BLEACHED	
R	37.80	46.55		
			37.80 - 46.55 20% FINE FELSIC LAVA: light grey. STRUCTURE: weakly broken core along foliation, lower contact: 40 degrees dip long core axis, sharp basal contact. TEXTURE: weakly foliated, massive.	
			46.55 - 47.10 10% FELDSPAR PHYRIC XL-RICH ANDESITE LAVA: dark grey. STRUCTURE: very weakly broken core cleavage/foliation: 25 degrees dip long core axis, lower contact: sharp basal contact, 25 degrees dip long core axis. TEXTURE: weakly foliated.	
R	47.10	52.06	APHYRIC FELSIC LAVA ??? SIMILAR TO LDF WITHOUT PHENOCRYSTS 47.10 - 52.06 10% FELSIC LAVA: light orange. STRUCTURE: very weakly broken core lower contact: 15 degrees dip	

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DIAMOND DRILLHOLE : GAR001 (CONTINUED)

	- Interval - From (m) To (m)	Description	Unit
		long core axis, basal contact is faulted. TEXTURE: weakly foliated, massive.	
R	52.40 66.00	52.06 - 52.40 1% PUGGY FAULT: light green. STRUCTURE: very strongly broken core with prominent pug zones. NO CORE STARTS AT 66.0 M. 52.40 - 66.00 30% FINE FELSIC LAVA: light grey. STRUCTURE: very weakly broken core cleavage/foliation: 45 degrees dip long core axis, joint: 10 degrees dip long core axis. TEXTURE: very weakly foliated, massive. MINERALOGY: 0.3% microveins/joint fillings of carbonate, 0.3% coatings and encrustations of pyrite.	
R	72.15 74.30	66.00 - 72.15 10% FELDSPAR PHYRIC DACITIC LAVA: light grey. STRUCTURE: very weakly broken core cleavage/foliation: 45 degrees dip long core axis. TEXTURE: moderately foliated, massive. MINERALOGY: trace disseminations & scattered crystals of pyrite. DEVONIAN QUARTZ - CHLORITE VEINING 72.15 - 74.30 5% BLEACHED QTZ VEINED FELDSPAR PHYRIC DACITIC LAVA: light green. STRUCTURE: strongly broken core vein: 70 degrees dip long core axis. TEXTURE: moderately foliated, vuggy. MINERALOGY: 10% veins of quartz, 20% veins of chlorite, trace veins of galena.	
R	74.30 89.40	FELDSPAR PHENOS STRETCHED TO THE MAX. APHYRIC IN PLACES 74.30 - 89.40 30% FELDSPAR PHYRIC DACITIC LAVA: green grey. STRUCTURE: very weakly broken core cleavage/foliation: 35 degrees dip long core axis. TEXTURE: moderately foliated. MINERALOGY: pervasive chlorite.	
	89.40 102.70	QUARTZ PHYRIC RHYOLITIC LAVA: green grey. TYPIFYING MINERALS: sericite. STRUCTURE: weakly broken core along foliation, cleavage/foliation: 35 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: weakly bleached. MINERALOGY: 10% pervasive sericite.	CAMB WESTERN VOLCANO-SED SEQ
R	90.70 91.15	DEVONIAN 90.70 - 91.15 2.5% VEIN: white. TYPIFYING MINERALS: quartz, chlorite. TEXTURE: vuggy. MINERALOGY: 70% veins of quartz, 20% veins of chlorite.	
		96.77 - 99.30 20% ALTERED QUARTZ PHYRIC RHYOLITIC LAVA: green	CAMB WESTERN VOLCANO-SED SEQ

	Interval	Description	Unit
	From (m) To (m)		
		grey. TYPIFYING MINERALS: sericite. STRUCTURE: weakly broken core along foliation, cleavage/foliation: 34 degrees dip long core axis. TEXTURE: vuggy. ALTERATION: weakly bleached. MINERALOGY: 20% pervasive siderite, 10% pervasive sericite.	
	102.70 143.70	FELDSPAR PHYRIC ANDESITIC LAVA: dark green. TYPIFYING MINERALS: chlorite. TEXTURE: strongly foliated. 102.70 - 106.20 10% FELDSPAR PHYRIC ANDESITIC LAVA: dark green. TYPIFYING MINERALS: chlorite, sericite. STRUCTURE: cleavage/foliation: 40 degrees dip long core axis. TEXTURE: very strongly foliated. MINERALOGY: 0.3% veins of carbonate. 106.20 - 109.90 10% VEIN: dark green. TYPIFYING MINERALS: quartz, chlorite, carbonate. STRUCTURE: weakly broken core. TEXTURE: vuggy. MINERALOGY: 60% veins of quartz, 10% veins of carbonate, 20% veins of chlorite.	
R	109.90 118.40	QUARTZ FILLED AMYGDALES 109.90 - 118.40 20% QTZ VEINED AMYGDALOIDAL FELDSPAR PHYRIC ANDESITIC LAVA: dark green. TYPIFYING MINERALS: chlorite. STRUCTURE: weakly broken core along foliation, cleavage/foliation: 40 degrees dip long core axis. TEXTURE: very strongly foliated. MINERALOGY: 10% veins of quartz, 2.5% veins of carbonate, 2.5% veins of chlorite, 1% disseminations & scattered crystals o pyrite, trace veins of arsenopyrite. 116.00 - 116.50 1% VEIN: white. TYPIFYING MINERALS: quartz. TEXTURE: massive. 116.50 - 117.20 1% FELDSPAR PHYRIC ANDESITIC LAVA: light grey. TYPIFYING MINERALS: silicified. TEXTURE: strongly foliated. MINERALOGY: 2.5% disseminations & scattered crystals o pyrite. 118.40 - 120.70 5% ANDESITIC LAVA: dark green. TYPIFYING MINERALS: chlorite. STRUCTURE: very weakly broken core cleavage/foliation: 60 degrees dip long core axis. TEXTURE: very strongly foliated.	

	Interval From (m) To (m)	Description	Unit
THN		MINERALOGY: 1% veins of quartz, 1% veins of carbonate, 0.3% disseminations & scattered crystals o magnetite, 20% pervasive chlorite, 2.5% disseminations & scattered crystals o pyrite. 120.70 - 130.70 20% MEDIUM FELDSPAR PHYRIC ANDESITIC LAVA: medium grey. STRUCTURE: very weakly broken core cleavage/foliation: 55 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: weakly chloritic.	
R	130.70 135.35	MINERALOGY: 0.3% veins of quartz, 0.3% veins of carbonate, 0.3% disseminations & scattered crystals o pyrite. CHLORITE AFTER HORNBLENDE 130.70 - 135.35 10% HORNBLENDE PHYRIC ANDESTITIC LAVA: medium grey. STRUCTURE: very weakly broken core cleavage/foliation: 30 degrees dip long core axis. TEXTURE: very strongly foliated. ALTERATION: weakly chloritic.	
THN		MINERALOGY: 2.5% veins of quartz, 1% veins of carbonate, 2.5% veins of chlorite, trace disseminations & scattered crystals o pyrite. 135.35 - 140.60 10% ANDESITIC LAVA: medium grey. STRUCTURE: very weakly broken core cleavage/foliation: 45 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: weakly chloritic.	
		MINERALOGY: 1% veins of quartz, 1% veins of carbonate, 10% pervasive chlorite, trace disseminations & scattered crystals o pyrite. 140.60 - 142.90 5% AMYGDALOIDAL FELDSPAR PHYRIC ANDESITIC LAVA: dark grey. STRUCTURE: very weakly broken core. TEXTURE: strongly foliated. ALTERATION: moderately chloritic.	
		MINERALOGY: 20% pervasive chlorite, 0.3% disseminations & scattered crystals o pyrite. 142.90 - 143.70 2.5% VEIN: white. TYPIFYING MINERALS: quartz, chlorite. TEXTURE: massive, vuggy.	
		MINERALOGY: 80% veins of quartz, 10% veins of chlorite, 5% veins of pyrite.	
	143.70 175.00	QUARTZ PHYRIC RHYOLITIC LAVA. TYPIFYING MINERALS: silicified, sericite, chlorite.	CAMB WESTERN VOLCANO-SED SEQ

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DIAMOND DRILLHOLE : GAR001 (CONTINUED)

	Interval From (m) To (m)	Description	Unit
		MINERALOGY: 10% pervasive sericite, 2.5% disseminations & scattered crystals o pyrite.	
		143.70 - 147.60 10% QUARTZ PHYRIC RHYOLITIC LAVA: dark green.	CAMB WESTERN VOLCANO-SED SEQ
		TYPIFYING MINERALS: chlorite, sericite.	
		STRUCTURE: very weakly broken core cleavage/foliation: 45 degrees dip long core axis.	
		TEXTURE: strongly foliated.	
R	147.60 148.40	MINERALOGY: 5% veins of sericite, 20% pervasive chlorite, 1% disseminations & scattered crystals o pyrite.	
		DEVONIAN	
		147.60 - 148.40 2.5% VEIN: dark green.	
		TYPIFYING MINERALS: chlorite, quartz.	
		STRUCTURE: very weakly broken core lower contact: 70 degrees dip long core axis.	
		MINERALOGY: 40% veins of quartz, 60% veins of chlorite, 0.3% veins of pyrite, 1% veins of chalcopyrite.	
		148.40 - 149.70 5% QUARTZ PHYRIC RHYOLITIC LAVA: green grey.	CAMB WESTERN VOLCANO-SED SEQ
		TYPIFYING MINERALS: chlorite.	
		STRUCTURE: very weakly broken core cleavage/foliation: 45 degrees dip long core axis.	
		TEXTURE: moderately foliated.	
TAZ		MINERALOGY: 0.3% disseminations & scattered crystals o pyrite.	
		149.70 - 163.40 40% ALTERED QUARTZ PHYRIC RHYOLITIC LAVA: pale grey.	CAMB WESTERN VOLCANO-SED SEQ
		TYPIFYING MINERALS: silicified, sericite, pyrite.	
		STRUCTURE: very weakly broken core cleavage/foliation: 65 degrees dip long core axis.	
		TEXTURE: moderately foliated.	
		ALTERATION: strongly siliceous, moderately sericitic.	
		MINERALOGY: 1% veins of quartz, 20% pervasive sericite, 2.5% disseminations & scattered crystals o pyrite.	
R	163.40 164.90	3 CENTIMETRE CLASTS OF SHALE	
		163.40 - 164.90 5% QTZ-FELD. PHYRIC COARSE RHYOLITIC EPICLASTIC: medium grey.	CAMB WESTERN VOLCANO-SED SEQ
		TYPIFYING MINERALS: silicified.	
		STRUCTURE: very weakly broken core.	
		TEXTURE: strongly foliated, clastic.	
		MINERALOGY: 10% pervasive quartz, 2.5% disseminations & scattered crystals o pyrite.	
R	164.90 165.25	FINER VERSION OF EPICLASTIC ??	
		164.90 - 165.25 1% FINE (SILTY) FELSIC VOLCANICLASTIC: medium grey.	CAMB WESTERN VOLCANO-SED SEQ
		STRUCTURE: cleavage/foliation: 60 degrees dip long core axis.	
		TEXTURE: strongly foliated.	

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DIAMOND DRILLHOLE : GAR001 (CONTINUED)

	Interval From (m) To (m)	Description	Unit
		MINERALOGY: 1% veins of carbonate, 10% pervasive sericite, 1% disseminations & scattered crystals o pyrite.	
	165.25 - 167.00	5% COARSE FELSIC EPICLASTIC: medium grey.	CAMB WESTERN VOLCANO-SED SEQ
		TYPIFYING MINERALS: silicified.	
		STRUCTURE: moderately broken core cleavage/foliation: 65 degrees dip long core axis, basal contact is gradational.	
		TEXTURE: strongly foliated.	
		MINERALOGY: pervasive chlorite, 2.5% disseminations & scattered crystals o pyrite.	
R	167.00 - 175.00	VERY SIMILAR TO EPICLASTIC BUT MORE MASSIVE. NO VISIBLE SHALE	
R	167.00 - 175.00	CLASTS. SOME FELDSPAR PHENOS.	
	167.00 - 175.00	30% COARSE QUARTZ PHYRIC RHYOLITIC LAVA: medium grey.	CAMB WESTERN VOLCANO-SED SEQ
		TYPIFYING MINERALS: silicified.	
		STRUCTURE: very weakly broken core cleavage/foliation: 55 degrees dip long core axis.	
		TEXTURE: strongly foliated.	
		ALTERATION: strongly siliceous.	
		MINERALOGY: 50% pervasive quartz, 1% disseminations & scattered crystals o pyrite.	
	175.00 - 318.15	ANDESITIC LAVA: dark green.	
		TYPIFYING MINERALS: chlorite, pyrite.	
		TEXTURE: moderately foliated.	
		MINERALOGY: 2.5% disseminations & scattered crystals o pyrite, 1% disseminations & scattered crystals o chalcopyrite.	
	175.00 - 177.60	2.5% ALTERED ANDESITIC LAVA: darker grey.	
		TYPIFYING MINERALS: chlorite, silicified.	
		STRUCTURE: very weakly broken core cleavage/foliation: 50 degrees dip long core axis.	
		MINERALOGY: 40% pervasive quartz, 30% pervasive chlorite, 1% disseminations & scattered crystals o pyrite.	
	177.60 - 185.70	5% ALTERED AMYGDALOIDAL ANDESITIC LAVA: dark grey	
		TYPIFYING MINERALS: chlorite, silicified.	
		STRUCTURE: very weakly broken core cleavage/foliation: 55 degrees dip long core axis, quartz chlorite vein/s: 90 degrees dip long core axis.	
		TEXTURE: strongly foliated.	
		MINERALOGY: 20% pervasive quartz, 30% pervasive chlorite, 2.5% disseminations & scattered crystals o pyrite, 0.3% veins of chalcopyrite.	
R	180.15 - 180.65	DEVONIAN 5% C.G. CHALCOPYRITE	
	180.15 - 180.65	0.3% VEIN: very dark green.	

	Interval From (m) To (m)	Description	Unit
R	181.10 - 181.65	<p>TYPIFYING MINERALS: quartz, chlorite. MINERALOGY: 40% veins of quartz, 50% veins of chlorite, 5% veins of pyrite, 5% veins of chalcopyrite. DEVONIAN 181.10 - 181.65 0.3% VEIN: very dark green. TYPIFYING MINERALS: quartz, chlorite. MINERALOGY: 50% veins of quartz, 40% veins of chlorite, 2.5% veins of pyrite, 2.5% veins of chalcopyrite.</p>	
R	185.70 - 189.25	<p>QUARTZ FILLED AMYGDALES 185.70 - 189.25 2.5% ALTERED AMYGDALOIDAL ANDESITIC LAVA: dark green. TYPIFYING MINERALS: pyrite, chlorite, silicified. STRUCTURE: cleavage/foliation: 60 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: strongly chloritic. MINERALOGY: 2.5% disseminations & scattered crystals o magnetite, 30% pervasive chlorite, 10% disseminations & scattered crystals o pyrite, 1% disseminations & scattered crystals o chalcopyrite.</p>	
R	189.25 - 193.55	THREE NARROW (<20cm) ZONES OF INTENSE ALTERATION COMPRISING OF	
R	189.25 - 193.55	10 - 20% PYRITE, 10 - 80% MAGNETITE AND 10 - 50% PINK APATITE	
R	189.25 - 193.55	<p>ALTERATION. 189.25 - 193.55 2.5% ALTERED ANDESITIC LAVA: dark green. TYPIFYING MINERALS: chlorite, pyrite. STRUCTURE: cleavage/foliation: 45 degrees dip long core axis, vein: 45 degrees dip long core axis. TEXTURE: moderately foliated, massive. MINERALOGY: 10% veins of quartz, 10% disseminations & scattered crystals o magnetite, 5% veins of albite, 30% pervasive chlorite, 5% disseminations & scattered crystals o pyrite, 10% veins of apatite.</p>	
R	193.55 - 201.05	<p>PYRITE SAMPLE FOR S ISOTOPE ANALYSIS AT 194.40m 193.55 - 201.05 5% HORNELENDE PHYRIC ANDESTITIC LAVA: dark green. TYPIFYING MINERALS: chlorite, pyrite, silicified. STRUCTURE: cleavage/foliation: 55 degrees dip long core axis. TEXTURE: strongly foliated. MINERALOGY: 2.5% veins of quartz, 1% disseminations & scattered crystals o magnetite, 20% pervasive chlorite, 2.5% disseminations & scattered crystals o pyrite, 0.3% disseminations & scattered crystals o chalcopyrite.</p>	
		<p>201.05 - 202.50 1% FELDSPAR PHYRIC ANDESITIC LAVA: medium grey. TYPIFYING MINERALS: pyrite. STRUCTURE: cleavage/foliation: 45 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: weakly sericitic.</p>	

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DIAMOND DRILLHOLE : GAR001 (CONTINUED)

	Interval From (m) To (m)	Description	Unit
		MINERALOGY: 2.5% disseminations & scattered crystals o pyrite, 0.3% disseminations & scattered crystals o chalcopyrite. 202.50 - 206.90 2.5% ANDESITIC LAVA: darker grey. TYPIFYING MINERALS: pyrite. STRUCTURE: cleavage/foliation: 55 degrees dip long core axis, vein: 20 degrees dip long core axis. TEXTURE: strongly foliated, veined. ALTERATION: weakly chloritic.	
R	206.90 217.35	MINERALOGY: 10% veins of quartz, 5% pervasive chlorite, 2.5% disseminations > veins of pyrite, 1% disseminations & scattered crystals o chalcopyrite. SAMPLE FOR O ISOTOPE ANALYSIS AT 211.65m. 206.90 - 217.35 5% HORNBLEND FELDSPAR PHYRIC ANDESITIC L: darker grey. TYPIFYING MINERALS: pyrite. STRUCTURE: cleavage/foliation: 50 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: weakly chloritic. MINERALOGY: 1% veins of quartz, 2.5% disseminations < veins of pyrite, 1% disseminations & scattered crystals o chalcopyrite. 209.78 - 210.05 TRACE VEIN: white. TYPIFYING MINERALS: quartz, chlorite. TEXTURE: massive. MINERALOGY: 50% veins of quartz, 20% veins of chlorite, 20% veins of chalcopyrite.	
		217.35 - 219.10 1% ANDESITIC LAVA: darker grey. TYPIFYING MINERALS: chlorite, pyrite. STRUCTURE: cleavage/foliation: 40 degrees dip long core axis. TEXTURE: very strongly foliated. MINERALOGY: 5% veins of quartz, 1% disseminations > veins of pyrite.	
R	225.20 246.40	219.10 - 225.20 5% ANDESITIC LAVA: darker grey. TYPIFYING MINERALS: pyrite. TEXTURE: strongly foliated. MINERALOGY: 1% disseminations > veins of pyrite. NUMEROUS 10cm DEVONIAN QUARTZ CHLORITE VEINS 225.20 - 246.40 10% HORNBLEND PHYRIC FELDSPAR PHYRIC XL-RICH ANDESITE LAVA: darker green. TYPIFYING MINERALS: chlorite. STRUCTURE: cleavage/foliation: 50 degrees dip long core axis. TEXTURE: strongly foliated, massive. MINERALOGY: 2.5% veins of quartz, 2.5% veins of carbonate, 0.3% disseminations & scattered crystals o magnetite, 2.5% veins of chlorite, 1% disseminations & scattered crystals o pyrite, 0.3%	

R.G.C. Exploration Pty Ltd
Garfield
DIAMOND DRILLHOLE : GAR001 (CONTINUED)

- Interval - From (m) To (m)	Description	Unit
	disseminations & scattered crystals o chalcopyrite. 246.40 - 254.60 10% ALTERED ANDESITIC LAVA: medium grey. TYPIFYING MINERALS: sericite, silicified. TEXTURE: strongly foliated. MINERALOGY: 2.5% veins of quartz, 2.5% veins of chlorite, 1% disseminations & scattered crystals o pyrite, 0.3% disseminations & scattered crystals o chalcopyrite.	
	254.60 - 260.65 5% FELDSPAR PHYRIC ANDESITIC LAVA. TYPIFYING MINERALS: chlorite. STRUCTURE: cleavage/foliation: 60 degrees dip long core axis. TEXTURE: strongly foliated. ALTERATION: strongly chloritic. MINERALOGY: 2.5% veins of quartz, 2.5% veins of chlorite, 1% disseminations & scattered crystals o pyrite, 0.3% disseminations & scattered crystals o chalcopyrite.	
	260.65 - 264.45 2.5% ALTERED QTZ VEINED ANDESITIC LAVA: green grey. TYPIFYING MINERALS: sericite, chlorite. STRUCTURE: quartz chlorite vein/s: 45 degrees dip long core axis, cleavage/foliation: 60 degrees dip long core axis. TEXTURE: chaotic, veined. MINERALOGY: 20% veins of quartz, 30% replacive sericite, 10% veins of chlorite, 1% disseminations & scattered crystals o pyrite, 0.3% veins of chalcopyrite.	
	264.45 - 284.00 10% ANDESITIC LAVA: darker grey. TYPIFYING MINERALS: chlorite. STRUCTURE: cleavage/foliation: 60 degrees dip long core axis, basal contact is gradational. TEXTURE: strongly foliated. ALTERATION: weakly altered. MINERALOGY: 1% veins of quartz, 2.5% veins of siderite, 1% veins of chlorite, 1% disseminations & scattered crystals o pyrite, 0.3% veins of chalcopyrite.	
	284.00 - 285.90 1% ANDESITIC LAVA: medium grey. STRUCTURE: cleavage/foliation: 60 degrees dip long core axis. TEXTURE: very strongly foliated, massive. ALTERATION: weakly chloritic. MINERALOGY: 0.3% disseminations & scattered crystals o pyrite.	
	285.90 - 293.60 5% CRYSTAL-RICH ANDESITIC LAVA: medium grey. STRUCTURE: cleavage/foliation: 55 degrees dip long core axis, vq: 60 degrees dip long core axis. TEXTURE: strongly foliated, veined. ALTERATION: weakly chloritic. MINERALOGY: 2.5% veins of siderite, 1% veins of carbonate, 1%	

R.G.C. Exploration Pty Ltd
Garfield
DIAMOND DRILLHOLE : GAR001 (CONTINUED)

	- Interval - From (m) To (m)	Description	Unit
		disseminations & scattered crystals o magnetite, 0.3% disseminations & scattered crystals o pyrite. 293.60 - 299.15 5% HBLEND FSPAR PHYRIC ANDESTITIC V.CLAS: brown orange. TYPIFYING MINERALS: sericite. TEXTURE: strongly foliated, veined, clastic. ALTERATION: weakly altered. MINERALOGY: 2.5% veins of quartz, 10% pervasive siderite, 0.3% disseminations & scattered crystals o pyrite. 299.15 - 305.35 5% HORNBLEND FELDSPAR PHYRIC ANDESITIC L: medium grey. STRUCTURE: cleavage/foliation: 60 degrees dip long core axis. TEXTURE: massive, strongly foliated, veined. MINERALOGY: 1% microveins/joint fillings of quartz, 2.5% microveins/joint fillings of carbonate, 2.5% disseminations & scattered crystals o magnetite, 0.3% disseminations & scattered crystals o pyrite.	
R	305.35 314.00	SILTY BANDS AND SHALEY FRAGMENTS COMMON 305.35 - 314.00 5% FSPAR HBLEND PHYRIC ANDESTITIC V.CLAS: darker grey. STRUCTURE: cleavage/foliation: 65 degrees dip long core axis. TEXTURE: strongly foliated. MINERALOGY: 1% microveins/joint fillings of carbonate, 1% disseminations & scattered crystals o magnetite.	
R	314.00 314.80	COLLOFORM TEXTURED MAGNETITE - QUARTZ ? CAMBRIAN VEINS 314.00 - 314.80 100% ALTERED ANDESITIC LAVA. MINERALOGY: 10% microveins/joint fillings of quartz, 10% microveins/joint fillings of magnetite.	
R	314.80 318.15	FLATTENED HORNBLLENDE PHENOS 314.80 - 318.15 100% HORNBLEND FELDSPAR PHYRIC ANDESITIC L. STRUCTURE: cleavage/foliation: 74 degrees dip long core axis, basal contact is gradational. MINERALOGY: 10% microveins/joint fillings of quartz, 10% veins of carbonate, 1% microveins/joint fillings of magnetite.	
	318.15 328.55	FINE (SILTY) FELSIC VOLCANICLASTIC: lighter grey. TYPIFYING MINERALS: sericite, chlorite. 318.15 - 320.55 100% FINE (SILTY) FELSIC VOLCANICLASTIC: lighter grey. STRUCTURE: cleavage/foliation: 70 degrees dip long core axis. TEXTURE: moderately foliated. ALTERATION: weakly sericitic, weakly chloritic. MINERALOGY: 1% microveins/joint fillings of quartz, 1% microveins/joint fillings of carbonate, 5% pervasive sericite,	CAMB WESTERN VOLCANO-SED SEQ

R.G.C. Exploration Pty Ltd
Garfield
DIAMOND DRILLHOLE : GAR001 (CONTINUED)

- Interval - From (m) To (m)	Description	Unit
	<p>0.3% disseminations & scattered crystals o pyrite. 320.55 - 321.40 100% COARSE EPICLASTIC: lighter grey. STRUCTURE: cleavage/foliation: 65 degrees dip long core axis. ALTERATION: weakly sericitic, weakly chloritic. 321.40 - 322.70 100% FINE (SILTY) FELSIC VOLCANICLASTIC: lighter grey. ALTERATION: weakly chloritic, weakly sericitic. 322.70 - 328.55 100% FINE (SILTY) FELSIC VOLCANICLASTIC: light grey. TYPIFYING MINERALS: pyrite. STRUCTURE: cleavage/foliation: 45 degrees dip long core axis. TEXTURE: strongly foliated, veined. ALTERATION: weakly sericitic, weakly siliceous. MINERALOGY: 2.5% veins of quartz, 2.5% veins of carbonate, 2.5% veins of chlorite, 1% disseminations & scattered crystals o pyrite.</p>	
328.55	<p>QUARTZ PHYRIC RHYOLITIC LAVA: light grey. TYPIFYING MINERALS: sericite. TEXTURE: moderately foliated. 328.55 - 356.70 100% WITH MEGA-QTZ GRAINS QUARTZ PHYRIC RHYOLITIC LAVA: light grey. TYPIFYING MINERALS: sericite, silicified, pyrite. STRUCTURE: cleavage/foliation: 60 degrees dip long core axis, cleavage/foliation: 70 degrees dip long core axis. TEXTURE: strongly foliated, massive. MINERALOGY: 40% pervasive quartz, 20% pervasive sericite, 1% disseminations & scattered crystals o pyrite. 356.70 - 362.20 100% WITH MEGA-QTZ GRAINS QUARTZ PHYRIC RHYOLITIC LAVA: light grey. TEXTURE: strongly foliated. ALTERATION: weakly sericitic. MINERALOGY: 5% veins of quartz, 5% veins of carbonate. 362.20 - 375.50 100% QUARTZ PHYRIC RHYOLITIC LAVA: light grey. STRUCTURE: cleavage/foliation: 65 degrees dip long core axis, vein: 10 degrees dip long core axis. TEXTURE: moderately foliated, massive. MINERALOGY: 5% veins of quartz, 1% veins of carbonate. 375.50 - 388.50 100% QUARTZ PHYRIC RHYOLITIC LAVA: light grey. TYPIFYING MINERALS: sericite. TEXTURE: strongly foliated. MINERALOGY: 5% veins of quartz.</p>	CAMB WESTERN VOLCANO-SED SEQ

R.G.C. Exploration Pty Ltd
Garfield
DIAMOND DRILLHOLE : GAR001 (CONTINUED)

ASSAY VALUES

From	To	Number	ANALAB Au ppm GG309	ALAB Au(R) ppm GG309	ANALAB Ag ppm GA101	ANALAB Ag ppm GA104	ANALAB Cu ppm GA101	ANALAB Pb ppm GA101	ANALAB Zn ppm GA101
175.00	176.00	37001	0.086		-2		3685	361	136
176.00	177.00	37002	0.121		-2		5380	44	121
177.00	178.00	37003	0.029		-2		3084	20	189
178.00	179.00	37004	0.031		-2		6098	27	292
179.00	180.00	37005	0.021		-2		3411	6	214
180.00	181.00	37006	0.053		-2		5206	51	294
181.00	182.00	37007	0.031		-2		2337	14	212
182.00	183.00	37008	0.060		-2		5791	6	229
183.00	184.00	37009	0.024		-2		2261	-5	134
184.00	185.00	37010	0.019		-2		3185	6	146
185.00	186.00	37011	0.027		-2		4473	32	239
186.00	187.00	37012	0.077	0.072	5		11400	58	205
187.00	188.00	37013	0.095		5		12500	229	232
188.00	189.00	37014	0.077		-2		7287	37	269
189.00	190.00	37015	0.070		-2		5952	11	205
190.00	191.00	37016	0.036		-2		4740	73	1139
191.00	192.00	37017	0.033		3		5536	99	916
192.00	193.00	37018	0.022		2		3615	55	389
193.00	194.00	37019	0.035		-2		4912	25	249
194.00	195.00	37021	0.034		-2		4284	-5	180
195.00	196.00	37022	0.041	0.043	-2		4470	7	164
196.00	197.00	37023	0.030		-2		5123	-5	130
197.00	198.00	37024	0.084		-2		9087	9	126
198.00	199.00	37025	0.080		-2		5519	-5	68
199.00	200.00	37026	0.103		-2		5968	-5	69
200.00	201.00	37027	0.092		-2		5625	-5	60
201.00	202.00	37028	0.048		-2		3630	-5	44
202.00	203.00	37029	0.052		-2		3164	-5	40
203.00	204.00	37030	0.118		-2		5741	-5	63
204.00	205.00	37031	0.160		-2		6386	-5	53
205.00	206.00	37032	0.109		-2		6451	-5	63
206.00	207.00	37033	0.115		2		10500	-5	52
207.00	208.00	37034	0.036		-2		1196	-5	28
208.00	209.00	37035	0.045		-2		2980	-5	41
209.00	210.60	37036	0.580		4		32700	-5	62
210.60	211.00	37037	0.056	0.064	-2		1186	-5	34
211.00	212.00	37038	0.040		-2		1677	-5	43
212.00	213.00	37039	0.062		2		4561	-5	66
213.00	214.00	37041	0.157		-2		11100	-5	75
214.00	215.00	37042	0.068		-2		6459	-5	126
215.00	216.00	37043	0.031		-2		2386	-5	66
216.00	217.00	37044	0.055		2		1783	-5	47

R.G.C. Exploration Pty Ltd
Garfield
DIAMOND DRILLHOLE : GAR001 (CONTINUED)

ASSAY VALUES

From	To	Number	ANALAB Au ppm GG309	ALAB Au(R) ppm GG309	ANALAB Ag ppm GA101	ANALAB Ag ppm GA104	ANALAB Cu ppm GA101	ANALAB Pb ppm GA101	ANALAB Zn ppm GA101
217.00	218.00	37045	0.095		-2		1168	-5	55
218.00	219.00	37046	0.071		-2		1711	-5	69
219.00	220.00	37047	0.116	0.121	-2		5257	-5	43
220.00	221.00	37048	0.100		-2		4447	-5	42
221.00	222.00	37049	0.208		-2		6784	5	42
222.00	223.00	37050	0.164		-2		5022	-5	49
223.00	224.00	37051	0.121		-2		4866	-5	50
224.00	225.00	37052	0.098		2		7000	-5	59
225.00	226.00	37053	0.051		-2		2780	-5	56
226.00	227.00	37054	0.033		-2		1404	-5	37
227.00	228.00	37055	0.082		-2		2903	-5	53
228.00	229.00	37056	0.029		-2		1050	-5	63
229.00	230.00	37057	0.048		-2		1496	-5	66
230.00	231.00	37058	0.055		-2		2070	-5	98
231.00	232.00	37059	0.033		-2		1648	-5	126
232.00	233.00	37061	0.068		-2		2112	-5	143
233.00	234.00	37062	0.036	0.033	-2		1530	-5	188
234.00	235.00	37063	0.042		-2		1674	-5	134
235.00	236.00	37064	0.070		-2		3580	5	152
236.00	237.00	37065	0.114		-2		1352	-5	147
237.00	238.00	37066	0.046		-2		523	-5	135
238.00	239.00	37067	0.016		-2		972	-5	128
239.00	240.00	37068	0.121		-2		6204	6	163
240.00	241.00	37069	0.063		-2		3826	-5	187
241.00	242.00	37070	0.070		-2		4599	-5	251
242.00	243.00	37071	0.026		-2		2927	-5	434
243.00	244.00	37072	0.058	0.059	-2		7541	-5	369
244.00	245.00	37073	0.103		-2		4573	39	837
245.00	246.00	37074	0.013		-2		1476	45	644
246.00	247.00	37075	0.017		-2		3305	81	570
247.00	248.00	37076	0.016		-2		2986	16	255
248.00	249.00	37077	0.017		-2		4091	14	177
249.00	250.00	37078	0.017		-2		3202	17	301
250.00	251.00	37079	0.018		-2		2589	21	231
251.00	252.00	37081	0.016		2		3078	62	160
252.00	253.00	37082	0.017		2		2429	31	332
253.00	254.00	37083	0.018		2		2195	112	599
254.00	255.00	37084	0.032		3		1965	63	980
255.00	256.00	37085	0.064		-2		1735	19	583
256.00	257.00	37086	0.145		-2		2000	26	445
257.00	258.00	37087	0.021	0.023	-2		1151	-5	298
258.00	259.00	37088	0.176		-2		5890	-5	280

R.G.C. Exploration Pty Ltd
Garfield
DIAMOND DRILLHOLE : GAR001 (CONTINUED)

ASSAY VALUES

From	To	Number	ANALAB Au ppm GG309	ALAB Au(R) ppm GG309	ANALAB Ag ppm GA101	ANALAB Ag ppm GA104	ANALAB Cu ppm GA101	ANALAB Pb ppm GA101	ANALAB Zn ppm GA101
259.00	260.00	37089	0.093		-2		2159	-5	281
260.00	261.00	37090	0.088		2		1903	16	744
261.00	262.00	37091	0.024		-2		398	25	2642
262.00	263.00	37092	0.021		-2		151	48	352
263.00	264.00	37093	0.013		-2		259	-5	381
264.00	265.00	37094	0.058		2		2326	-5	424
265.00	266.00	37095	0.026		-2		1353	10	193
266.00	267.00	37096	0.090		-2		2720	5	114
267.00	268.00	37097	0.054	0.054	-2		1744	-5	90
268.00	269.00	37098	0.020		-2		671	-5	58
269.00	270.00	37099	0.023		-2		906	-5	69
270.00	271.00	37101	0.044		-2		1852	-5	66
271.00	272.00	37102	0.053		-2		1222	-5	62
272.00	273.00	37103	0.044		-2		1711	-5	71
273.00	274.00	37104	0.056		-2		1733	-5	62
274.00	275.00	37105	0.045		-2		1336	6	76
275.00	276.00	37106	0.034		-2		621	-5	71
276.00	277.00	37107	0.024		-2		862	-5	68
277.00	278.00	37108	0.025		-2		1460	-5	58
278.00	279.00	37109	0.030		-2		1084	-5	82
279.00	280.00	37110	0.062		-2		2036	-5	72

APPENDIX 7

**INTERPRETATION OF GROUND MAGNETIC AND INDUCED POLARIZATION DATA
GARFIELD PROSPECT, TASMANIA
E.L. 102/87**

RGC EXPLORATION PTY. LIMITED
(on behalf of Renison Goldfields Consolidated)

INTERPRETATION OF
GROUND MAGNETIC AND
INDUCED POLARISATION DATA
GARFIELD PROSPECT, TASMANIA

E.L. 102/87

QUEENSTOWN 1:250,000

Volume 1 of 1

by:

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Principal Geophysicist
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Geophysicist

16 February 1994

Report No: TAS-GL-94/1/4

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CONTENTS

	Page No.
SUMMARY AND CONCLUSIONS	ii
LIST OF PLANS	iv
LIST OF FIGURES	v
INTRODUCTION :	1
MAGNETIC INTERPRETATION	3
IP/RESISTIVITY INTERPRETATION	6
RECOMMENDATIONS	8
REFERENCES	10

SUMMARY AND CONCLUSIONS

1. The ground magnetic survey detected two distinct magnetic anomalies that are attributed to magnetite intersected in drill hole GAR-001. The survey also delineated the fault F1, geologically mapped, striking east-west along line 2000N. A subtle magnetic anomaly was also detected in association with the north striking andesite body.
2. The gradient array IP/Resistivity survey was successful in locating several strongly chargeable anomalies in close proximity to the magnetic anomalies. The survey delineated fault F1 as well as two parallel lineaments, L1 and L2, see Plan 8. These three structures displace the four IP anomalies.
3. The dips of the IP and magnetic anomaly sources agree locally but vary along strike from westerly in the north to easterly dipping in the south.
4. Magnetic anomaly B, see Figure 1, was shown to have an east dip in contrast to expectations of a west dip. Anomaly IP1 also has an east dip. Magnetic modelling suggests that drill hole GAR-001 may not have intersected the bulk of the source of the magnetic anomaly and probably not adequately tested the IP chargeability anomaly.
5. Magnetic anomaly A, see Figure 1, was shown to be displaced to the west, possibly indicating it has been intersected by an east-west fault parallel to F1.
6. Modelling of magnetic anomaly C, see Figure 1, without remanence, indicates that the source of the anomaly dips to the west. IP anomaly IP2, in close proximity to magnetic anomaly C, also indicates that the chargeable source is dipping to the west.
7. The mineralisation and bulk magnetite intersected in drill hole GAR-001 may not be the principal source of the magnetic anomaly. Recommendations have been made to site a second drill hole to test the coincident magnetic and IP anomalies for west dipping sources.
8. Recommendations have been made to drill test the coincident magnetic anomaly

C and IP anomaly IP2.

9. Recommendations have been made to drill test magnetic anomaly A.

LIST OF PLANS

		Scale
PLAN 1	GARFIELD - Total Magnetic Intensity Stacked Profiles	1 : 5,000
PLAN 2	GARFIELD - Total Magnetic Intensity Contours	1 : 5,000
PLAN 3	GARFIELD - Ground Magnetic Models	1 : 5,000
PLAN 4	GARFIELD - IP Chargeability Stacked Profiles	1 : 5,000
PLAN 5	GARFIELD - IP Apparent Resistivity Stacked Profiles	1 : 5,000
PLAN 6	GARFIELD - IP Chargeability Contours	1 : 5,000
PLAN 7	GARFIELD - IP Apparent Resistivity Contours <i>Not in folder or on microfiche</i>	1 : 5,000
PLAN 8	GARFIELD - Geophysical Interpretation	1 : 5,000

LIST OF FIGURES

- FIGURE 1 Garfield Magnetic Models Plan View
- FIGURE 2 Garfield Magnetic Model - Line 1600N
- FIGURE 3 Garfield Magnetic Model - Line 1800N
- FIGURE 4 Garfield Magnetic Model - Line 2000N
- FIGURE 5a Garfield Magnetic Model - Line 2100N
- FIGURE 5b Garfield Magnetic Model - Line 2100N Alternative Model
- FIGURE 5c Garfield Magnetic Model - Line 2100N Alternative Model
- FIGURE 6 Garfield Magnetic Model - Line 2200N
- FIGURE 7 Garfield Magnetic Model - Line 2300N
- FIGURE 8 Garfield Magnetic Model - Line 2200E
- FIGURE 9 Garfield Dipole-Dipole IP Contour Pseudo-section Line 1800N
- FIGURE 10 Garfield Dipole-Dipole IP Colour Pseudo-section Line 1800N

INTRODUCTION

RGC Exploration Pty Limited undertook a detailed ground magnetic survey and a gradient array IP/resistivity survey of the Garfield Prospect during November and December 1993.

The magnetic survey was conducted on a local grid with lines spaced 200 metres apart and infill lines at 100 metres. Station spacing was 5 metres. A pair of Geometrics G856 Proton Precession magnetometers was used, one of these was established as a recording base station to monitor the drift of the Earth's field at 6 second intervals. The magnetic data was processed at RGC Exploration, Canberra.

Data is presented as profiles and contours of magnetic intensity, see Plans 1 and 2.

A gradient array IP/resistivity survey was conducted at the prospect as a means of rapidly mapping the extent of pyrite intersected in drill hole GAR-001. In addition, line 1800N was surveyed using dipole-dipole IP.

The survey were conducted by Geoterrex Ltd. using a Zonge GDP-16 receiver and a Hunttec 7.5kw two (2) second time domain transmitter. The receiver dipole was 50 metres in length and data was recorded at half the receiver dipole length, 25 metres. The gradient array transmitting electrodes were located on line 2200N at 1300E and 3100E, the transmitting dipole being approximately 1800 metres long.

The following lines were surveyed :

- Line 1800N from 1600E to 2500E,
- Line 2000N from 1700E to 2500E,
- Line 2100N from 1800E to 2500E,
- Line 2200N from 1700E to 2500E,
- Line 2300N from 1800E to 2500E,
- Line 2400N from 1800E to 2500E and
- Line 2600N from 1800E to 2500E.

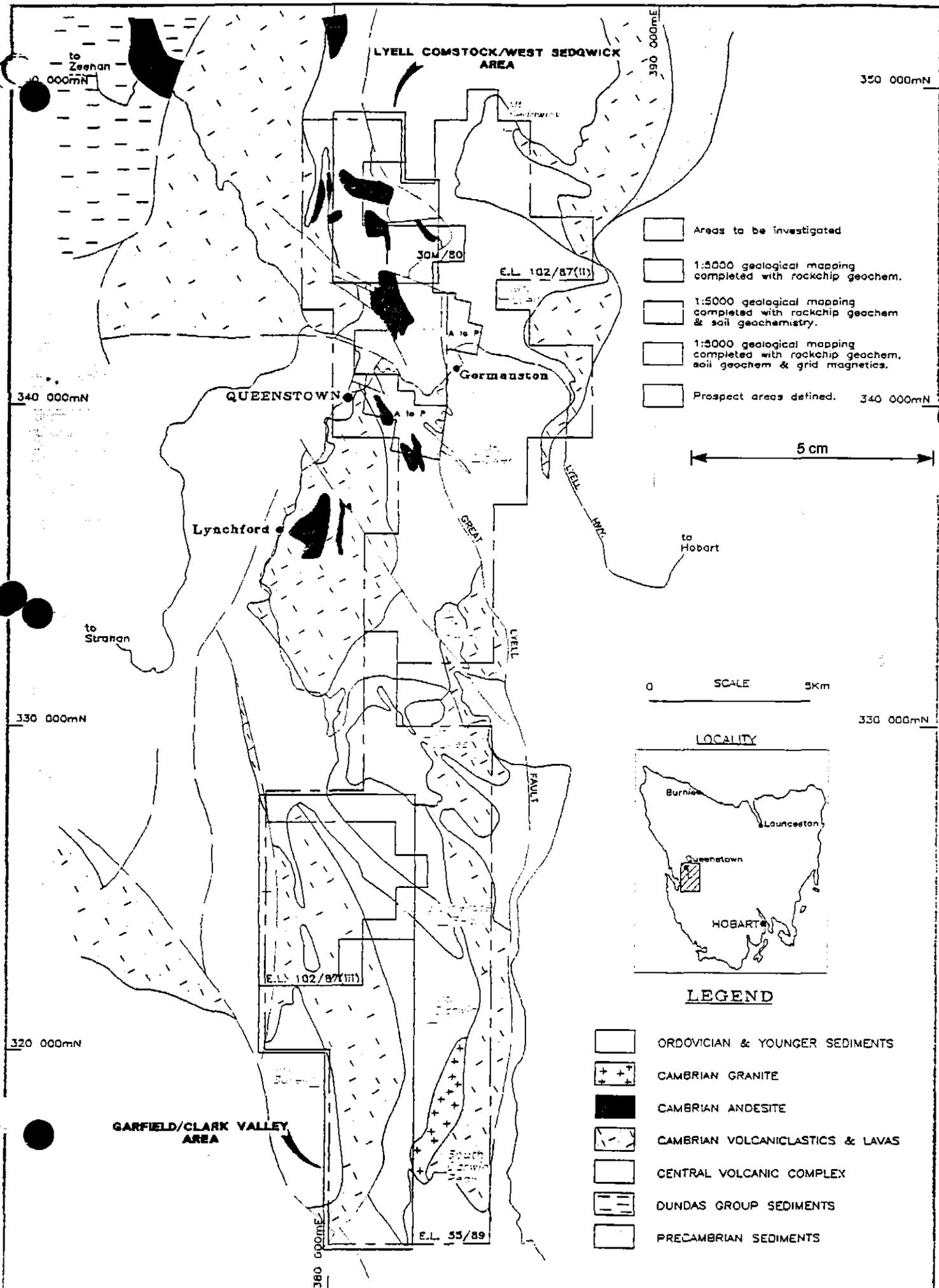
Data is presented as profiles and contours of apparent resistivity and apparent chargeability, see Plans 4 to 7 inclusive.

A survey using a 50 metre dipole-dipole array was conducted on line 1800N to test for a buried source of a weak anomaly detected by the gradient array survey. The data is presented as pseudo-sections of apparent resistivity and apparent chargeability, see Figures 9 and 10. A prominent gradient array chargeability anomaly located between lines 2000N and 2500N was not resurveyed with the dipole-dipole array as the source of the anomaly was attributed to the outcropping pyrite-altered andesite mapped in that area.

The magnetic and IP survey data have not been located to true geographical location and consequently location errors of up to 25 metres may be present in the data. The IP/resistivity and magnetic plans should be positioned by the geological plan (not accompanying this report) which shows the true location of the grid lines.

The surveys were undertaken as a part of RGC's base metal exploration program in Western Tasmania.

This report presents an interpretation of the ground magnetic and IP/Resistivity data.



MAGNETIC INTERPRETATION

For modelling purposes, magnetic field strength, inclination and declination were determined for the year 1993.8 using the AGRF model. The parameters determined were -

Magnetic Field Strength :	62490 nT
Inclination :	-72.86°
Declination :	13.41°
Datum level :	62300.0 nT

Apparent inclination and declination were calculated using the slope correction method, see Mudge 1988. Using an azimuth of 235° and slope of 6° the final values were -

Inclination :	-68.0°
Declination :	58.5°

Magnetic remanence was determined from drill core by the CSIRO at three depths, see Schmidt 1993. The bulk value was used -

Intensity :	4.207 Amps / metre
Inclination :	-7.0°
Declination :	302.0°

After correction for slope the following parameters were determined for magnetic remanence -

Inclination :	-9.3°
Declination :	-22.0°

Magnetic susceptibility readings for the drill core samples ranged from 0.25 (SI) to 0.9 (SI) and were considered to be too high to be representative of the target as a whole. Consequently, magnetic susceptibility was unrestrained.

The results of the modelling are illustrated in Figures 2 to 8. Figure 1 shows the magnetic models in plan view. Apart from Figure 8, all figures are west-east

profiles showing the observed and modelled magnetic responses. There are three anomalies of interest labelled A, B and C, see Figure 1.

Anomaly A has been explained by a two dipping slabs of similar dimensions, see Table 1 and Figures 1-2. The southern slab has been displaced by approximately 100 metres to the west, possibly indicating a fault trace. Magnetic susceptibility was 0.02 (SI) and magnetic remanence was included in the modelling.

BODY	EASTING	NORTHING	DEPTH	WIDTH	LENGTH	THICKNESS	DIP	REMANENT MAGNITUDE	MAG.SUS.
4	1775	1780	16.7	200	150	60	4° E	3.0 A/M	0.02
4	1670	1667	16.7	200	50	60	4° E	3.0 A/M	0.02

Table 1 : Model A slab parameters.

Anomaly B has been modelled individually for each intersecting line from 2000N to 2200N. The existing drill hole on line 2100N, hole GAR-001, has intersected approximately 150 metres of magnetite alteration and 100 metres of copper and gold mineralisation. As indicated on Figure 5a, the magnetic modelling shows that the drill hole has missed the bulk of the source of the magnetic anomaly. Figure 5c shows a possible interpretation where the drill hole has intersected a faulted block of the main anomalous body. This model generates the most accurate fit presented in this report. Recommendations have been made to site a second drill hole to test this model. Note that previous data indicated the body should have a westerly dip. In general the body dips west at approximately 5° except at line 2100N where the dip could be easterly by a similar amount.

Line	Model Type	Mag.Sus.	Remanent Amplitude	Dip
2000N (Body 1)	Prism	0.01	4.0 A/M	West, 15°
2100N (Body 3)	3D Prism	0.05	4.2 A/M	East, -5°-10°
2200N (Body 3)	3D Prism	0.05	4.2 A/M	East, -5°-10°
2300N (Body 2)	Prism	0.02	0.0 A/M	West, 5°

Table 2 : Model B magnetic parameters.

Figure 8 shows a south-north profile across Anomaly B at line 2200E. The model demonstrates that the dip on the southern edge of the body is approximately 70°

... north and the dip on the northern edge is approximately 80° south. The model is not intended to illustrate the geometry of the body.

The magnetic susceptibility of model C ranged from 0.01 to 0.05 (SI) and remanent magnetism was included in the modelling calculations. The magnitude of the remanent vector ranged from 4.0 A/M to 4.2 A/M.

Magnetic anomaly C has been modelled on line 2300 as a separate body with zero magnetic remanent intensity. Magnetic susceptibility varies between 0.01 (SI) to 0.05 (SI), see Table 2. The model is dipping to the west, see Figure 7.

IP/RESISTIVITY INTERPRETATION

Gradient array chargeabilities show a high of approximately three (3) times background extending from approximately 2000N to 2300N between 2000E and 2200E, anomaly IP1 in Plan 8. The source of the anomaly also has a lower resistivity than the surrounding rocks. The asymmetry of both the chargeability and resistivity anomalies indicates that the source dips to the east and is probably bounded to the south by fault F1 which has been geologically delineated sub-parallel to line 2000N.

The anomaly extends northward to 2120E, 2500N where it appears to be terminated by lineament L1 delineated from both the resistivity and chargeability data. A second chargeability anomaly, IP2, having an amplitude of about twice background, has been identified extending from 2200E, 2225N to 2235E, 2500N. The asymmetry of the anomaly is opposite to that of IP1 and indicates that the source of IP2 dips to the west. A distinct resistivity low anomaly is also associated with the chargeability anomaly and confirms that the dip direction is to the west.

The gradient array survey extended only to line 2600N. However there is evidence of a coincident weak chargeability and resistivity anomaly, IP3, extending north from about 2100E, 2550N. An additional gradient array IP survey to the north is required to map the extent of this response.

A second lineament, L2, has been interpreted from both the chargeability and resistivity data. This feature is parallel to L1.

The approximate outline of the top surface of the dipping sources of the chargeability anomalies are shown in Plan 8. No attempt has been made at this time to computer model the IP/resistivity anomalies to resolve body depth, thickness and dip. Estimates of the dip directions were obtained from computed model responses, see Coggon 1973.

A weak gradient array chargeability response, IP4, was detected on Line 1800N at about 1700E. The response has not been closed off to the south as the survey did not extend south of Line 1800N. Nevertheless, the anomaly was tested with a dipole-dipole array survey in an attempt to resolve the depth of the buried

...source. Pseudo-sections of apparent resistivity and apparent chargeabilities are shown in Plans 8 and 9 respectively. They show evidence of a chargeable body located about one dipole length, 50 metres, below about 1500E. The survey did not extend far enough west to fully resolve the anomaly. A second chargeable zone was also detected at about two dipole lengths, 100 metres, below about 1950E. The survey has not extended far enough east to fully resolve this anomaly. The resistivities of section 1425E to 1975E show a distinct contact at about 1475E and a deeply buried, greater than about two dipole lengths ie 100 metres, resistive body at about 1725E. The anomaly source has very low chargeability.

The gradient array resistivity data show an area of lower apparent resistivities east of about 2300E. This boundary may be delineating the buried edge of the more resistive andesite. Fault F1 can be seen extending east of 2300E. Higher resistivities were measured west of about 1900E extending to a prominent higher anomaly in the north-west section of the surveyed area. The latter anomaly is open to the north. A zone of low resistivity was delineated between 1900E and 1850E extending south from 2250N. The zone is open to the south.

The IP/resistivity data show strong correlations with the magnetic data. Anomaly IP1 has the same dip direction as M3 and appears to be closely associated with the magnetic anomaly. Lineament L1 is also evident in the magnetic data: it divides the magnetic anomaly as evidenced by magnetic body M2. Anomaly IP2 appears to be associated with the northerly subtle magnetic trend that extends from the stronger magnetic anomaly associated with bodies M2 and M3. Anomalies IP2 and M2 have the same dip direction. Anomalies IP1, IP2 and IP3 are confined to a geologically mapped north striking andesite. Anomaly IP4 appears to be related to anomaly M4 however more IP/resistivity data are required to resolve these features.

Fault F1 is prominent in both the magnetic and IP/resistivity data.

RECOMMENDATIONS

1. The magnetic data should be located correctly and editing performed to remove any high frequency spikes. If possible, elevations should be surveyed to enable 3D magnetic modelling to be performed. This modelling will test the modelling results reported here.
2. The gradient array IP/resistivity survey, using a 50 metre receiver dipole, ought to be extended further north beyond line 2600N between 1800E and 2500E on lines 100 metres apart to close-off anomaly IP3. The location of the transmitting electrodes can be specified at a later time when grid access has been established.
3. The gradient array IP/resistivity survey, using a 50 metre receiver dipole, ought to be extended further south beyond line 1800N between 1400E and 2500E on lines 100 metres apart to close-off anomaly IP4. The location of the transmitting electrodes can be specified at a later time when grid access has been established.
4. Magnetic anomaly B, bodies M3 and M1, and IP anomaly IP1 ought to be tested by drilling. A hole should be collared at local grid coordinates 2240E, 2100N and drilled with a dip of 60° (to the horizontal) grid west to intersect a point 240 metres below 2070E, 2100N. Note that the terrain slope of 6° has been accounted for in specifying the dip of the drill hole.
5. Magnetic anomaly C, body M2, and IP anomaly IP2 ought to be tested by drilling. A hole should be collared at local grid coordinates 2120E, 2300N and drilled with a dip of 60° (to the horizontal) grid east to intersect a point 200 metres below 2210E, 2300N. Note that the terrain slope of 6° has been accounted for in specifying the dip of the drill hole.

Bodies Tested	Collar East	Collar North	Dest. East	Dest. North	Depth	Dip	Length
M1, M3, IP1	2240E	2100N	2070E	2100N	240m	60° W	295m
M2, IP2	2120E	2300N	2210E	2300N	200m	60° E	220m

Table 3. Proposed Drill Hole Locations

7. Drill core samples obtained from the drilling program should be analysed to determine magnetic remanence and magnetic susceptibility.

REFERENCES

Coggon, J.H

'A Comparison of IP Electrodes.' Geophysics v38, NO. 4 August 1973 p. 737-761.

Mudge, S.T

'The slope correction method of analysing magnetic data from a sloping survey plane.' Exploration Geophysics 1988, v19 p489.

Schmidt, P.W

'Report on magnetic properties of drill core samples from Garfield prospect, Tasmania.' RGC Exploration, 1993.

GARFIELD MAGNETIC MODELS

3200.00

Y
(m)

2400.00

1600.00

1600.00

X (m)

2400.00

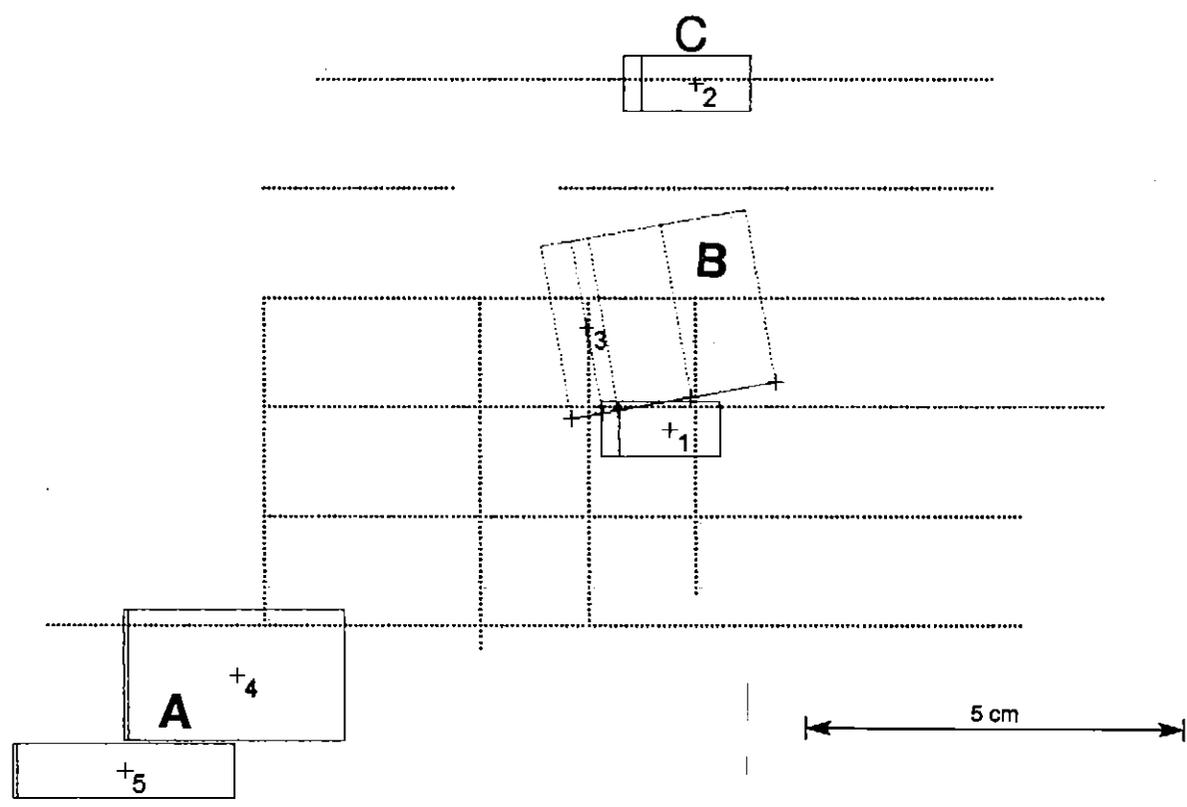
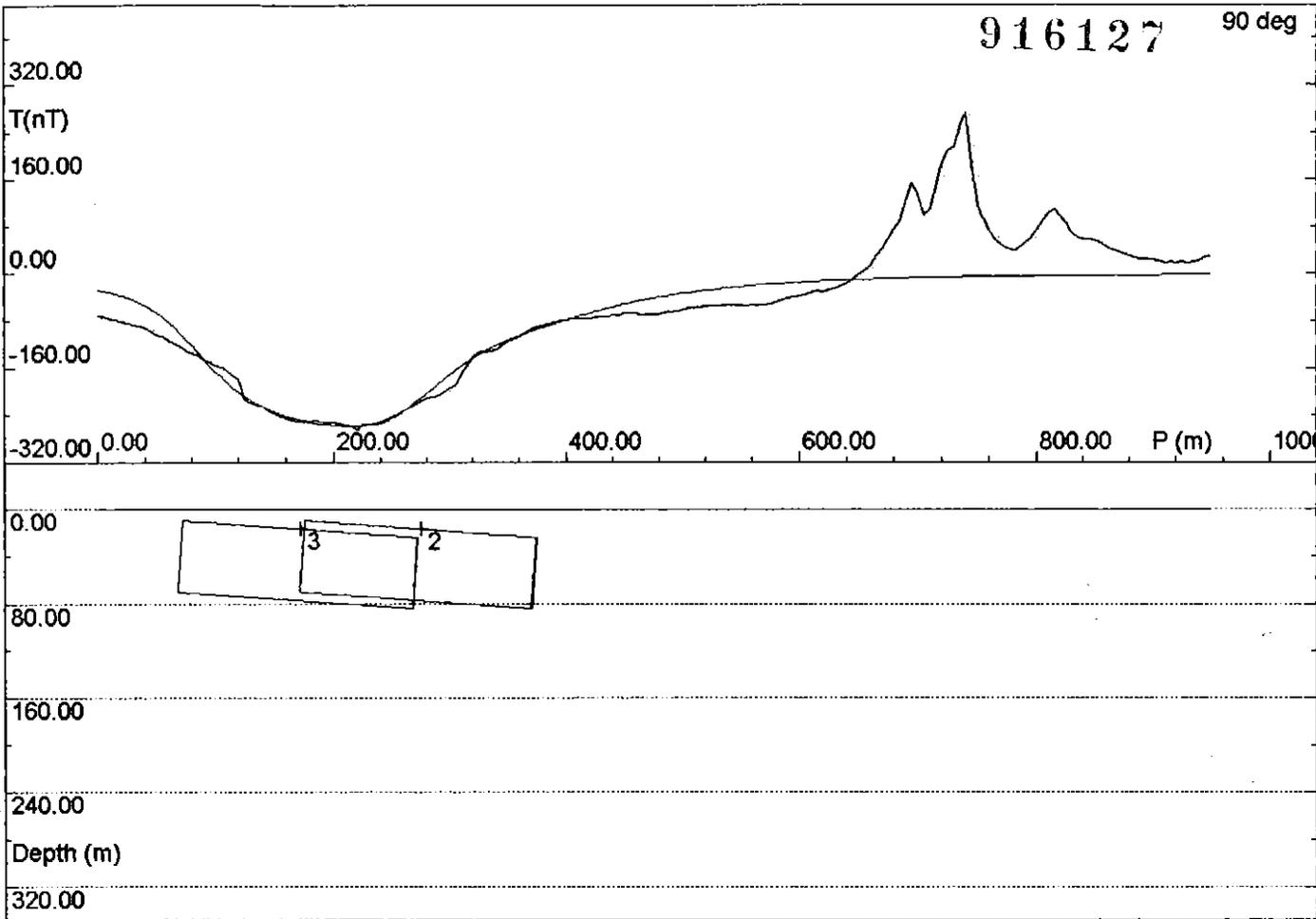


Figure 1

94-3569



Observations: GARFIELD MAGNETICS - LINE 1600N

Profile #2;

Model:

Calculation mode: Total Magnetic Intensity

Observed: _____

Calculated: _____

Residual: _____

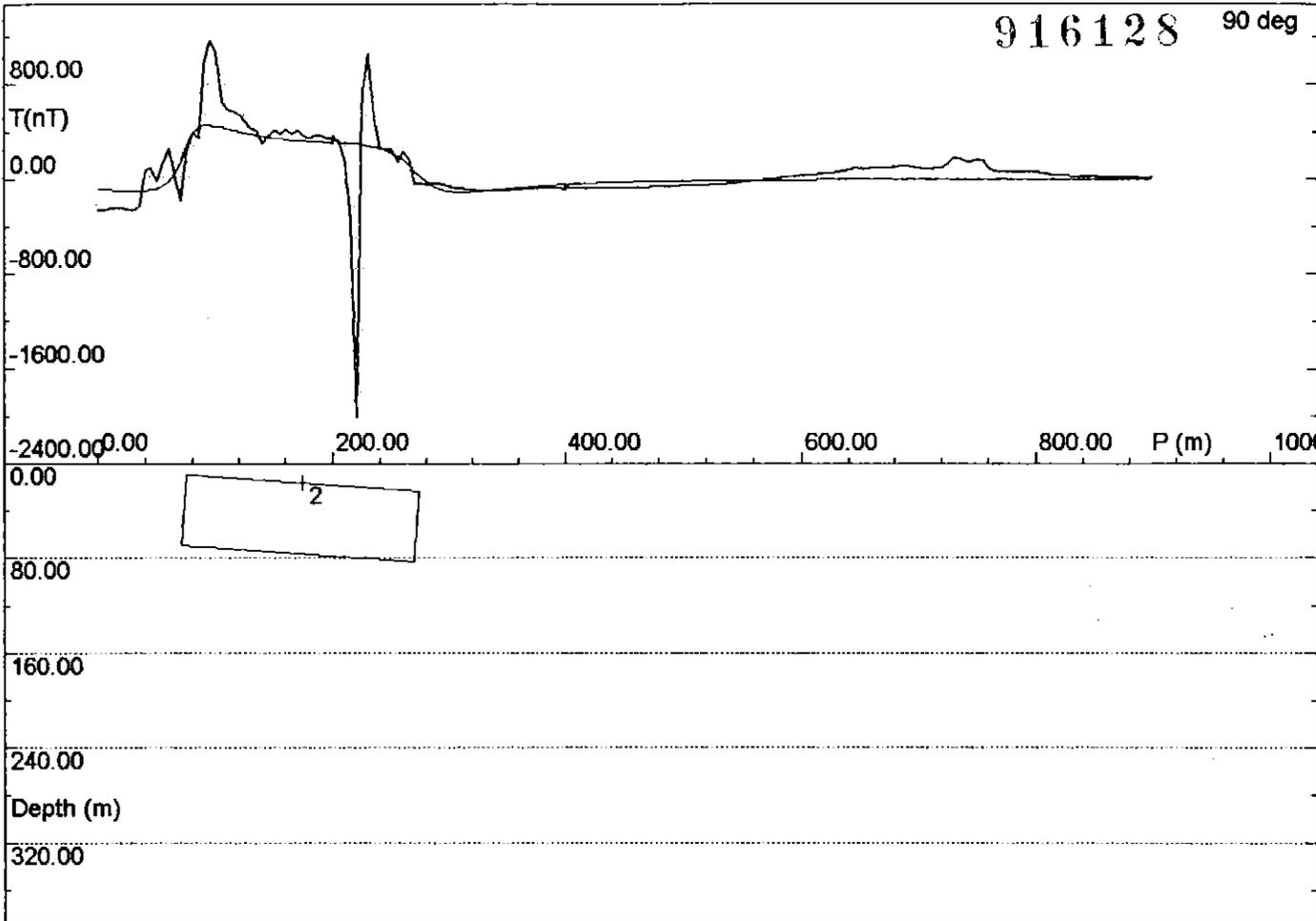
Individual body: _____

POTENT v3.03

Profile drawn at 15:21 27/01/1994 for RGC Exploration Pty. Limited

Figure 2

94-3569



Observations: GARFIELD MAGNETICS - LINE 1800N

Profile #1;

Model:

Calculation mode: Total Magnetic Intensity

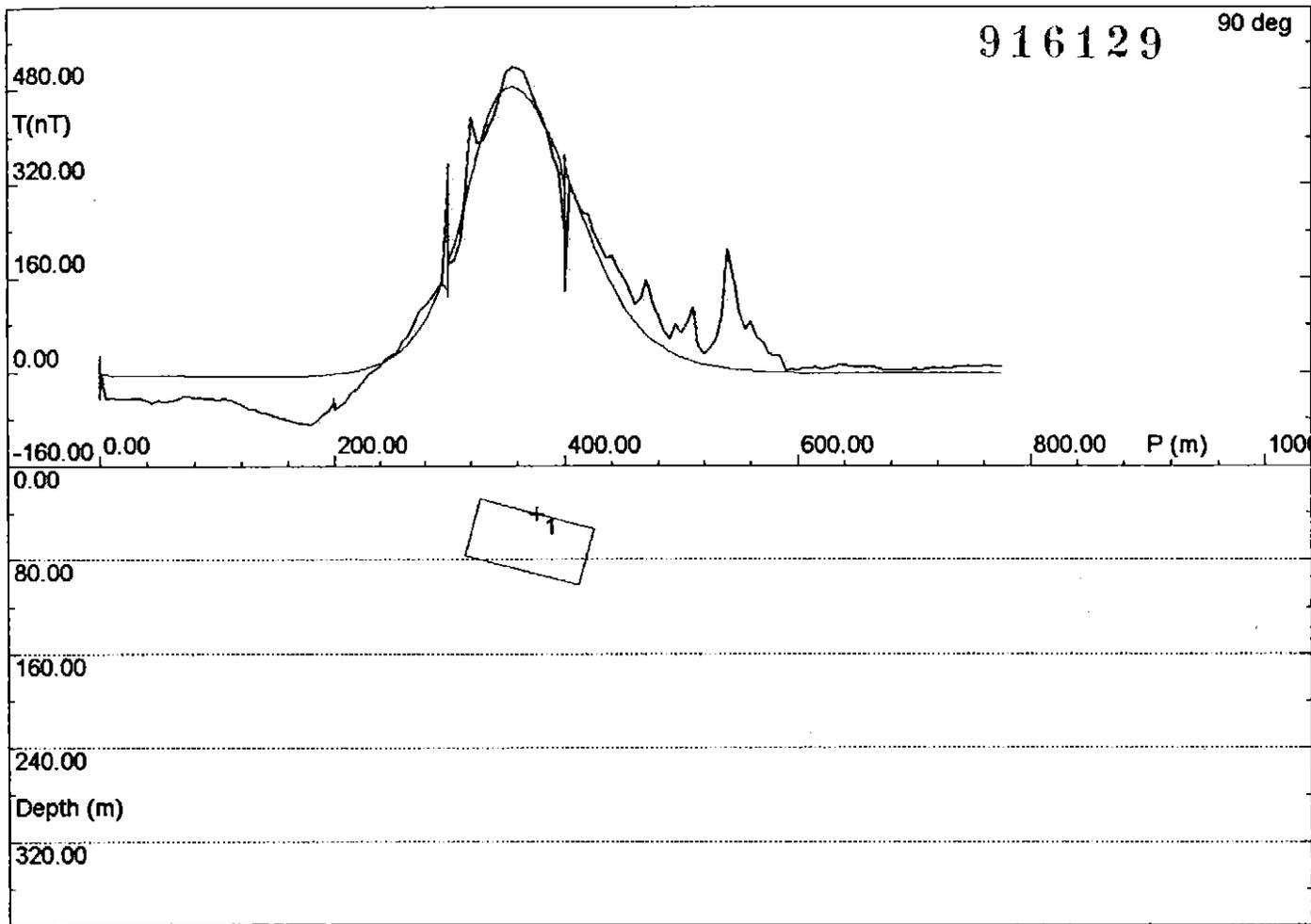
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Residual: _____ Individual body: _____

POTENT v3.03 Profile drawn at 15:17 27/01/1994 for RGC Exploration Pty. Limited

Figure 3

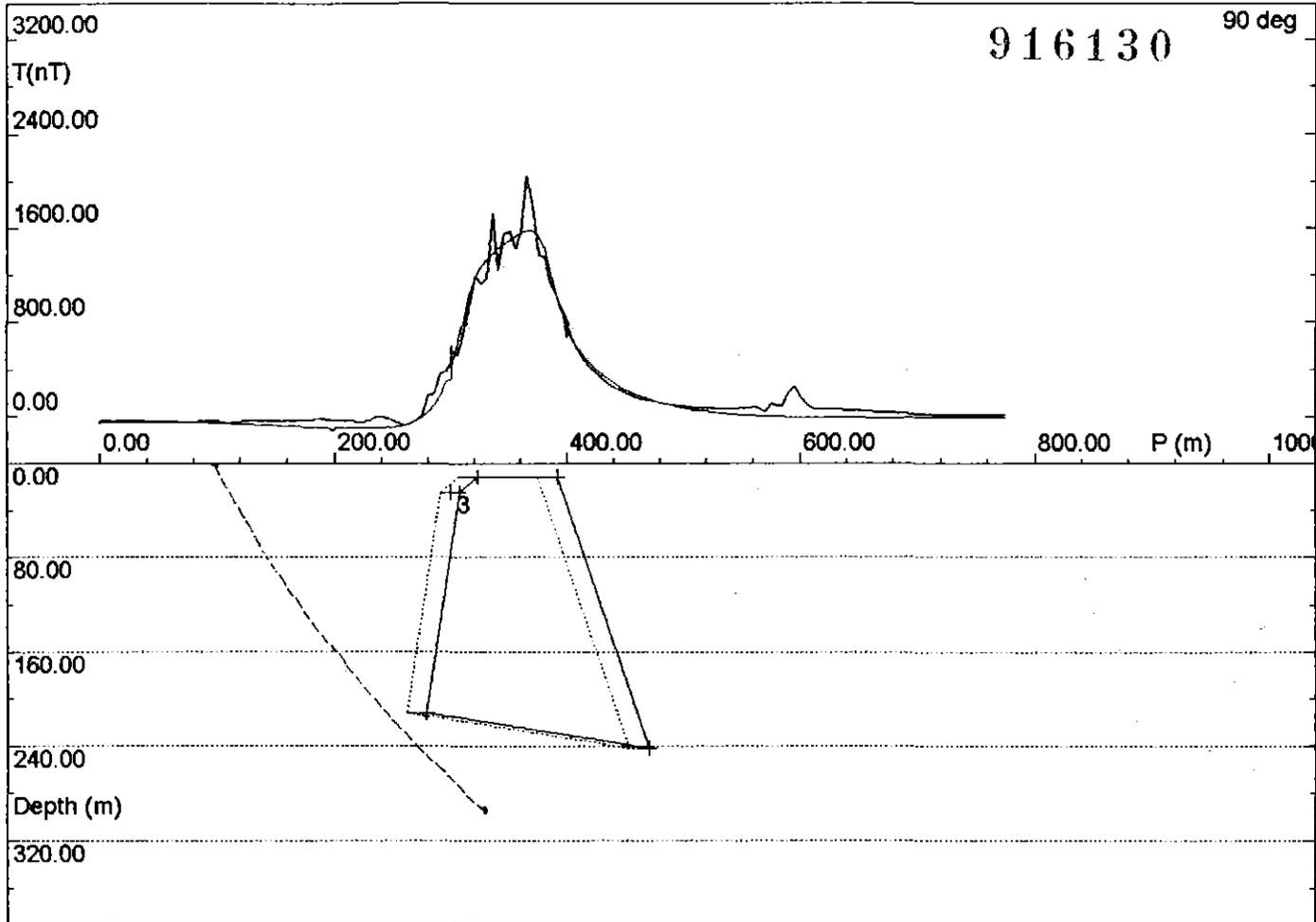
94-3569



Observations: GARFIELD MAGNETICS - LINE 2000N
Profile #1;
Model:
Calculation mode: Total Magnetic Intensity
Observed: _____ Calculated: _____
Residual: _____ Individual body: _____
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Figure 4

94-3569



Observations: GARFIELD MAGNETICS - LINE 2100N

Profile #2;

Model:

Calculation mode: Total Magnetic Intensity

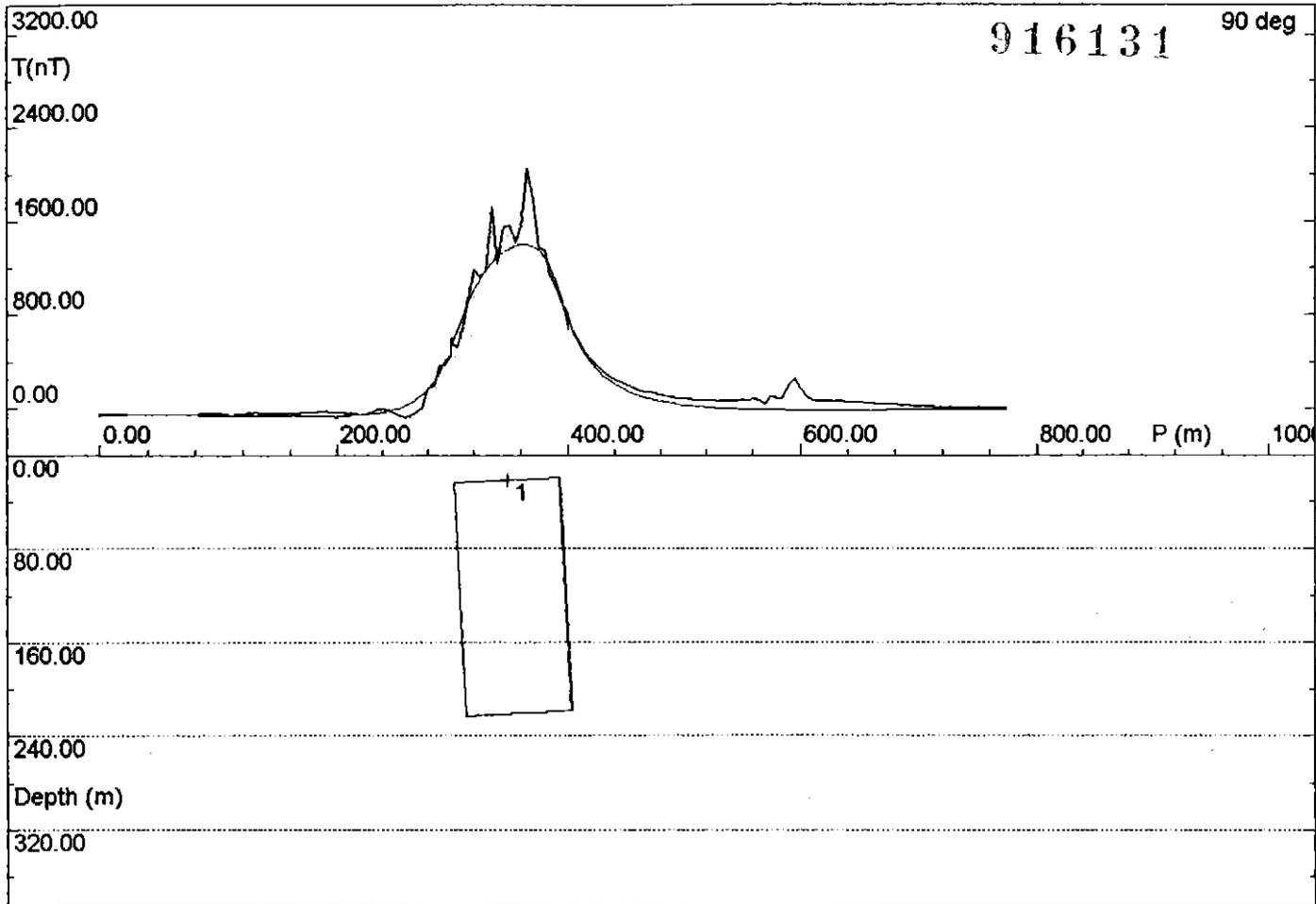
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Figure 5a

94-3569



Observations: GARFIELD MAGNETICS - LINE 2100N

Profile #2;

Model:

Calculation mode: Total Magnetic Intensity

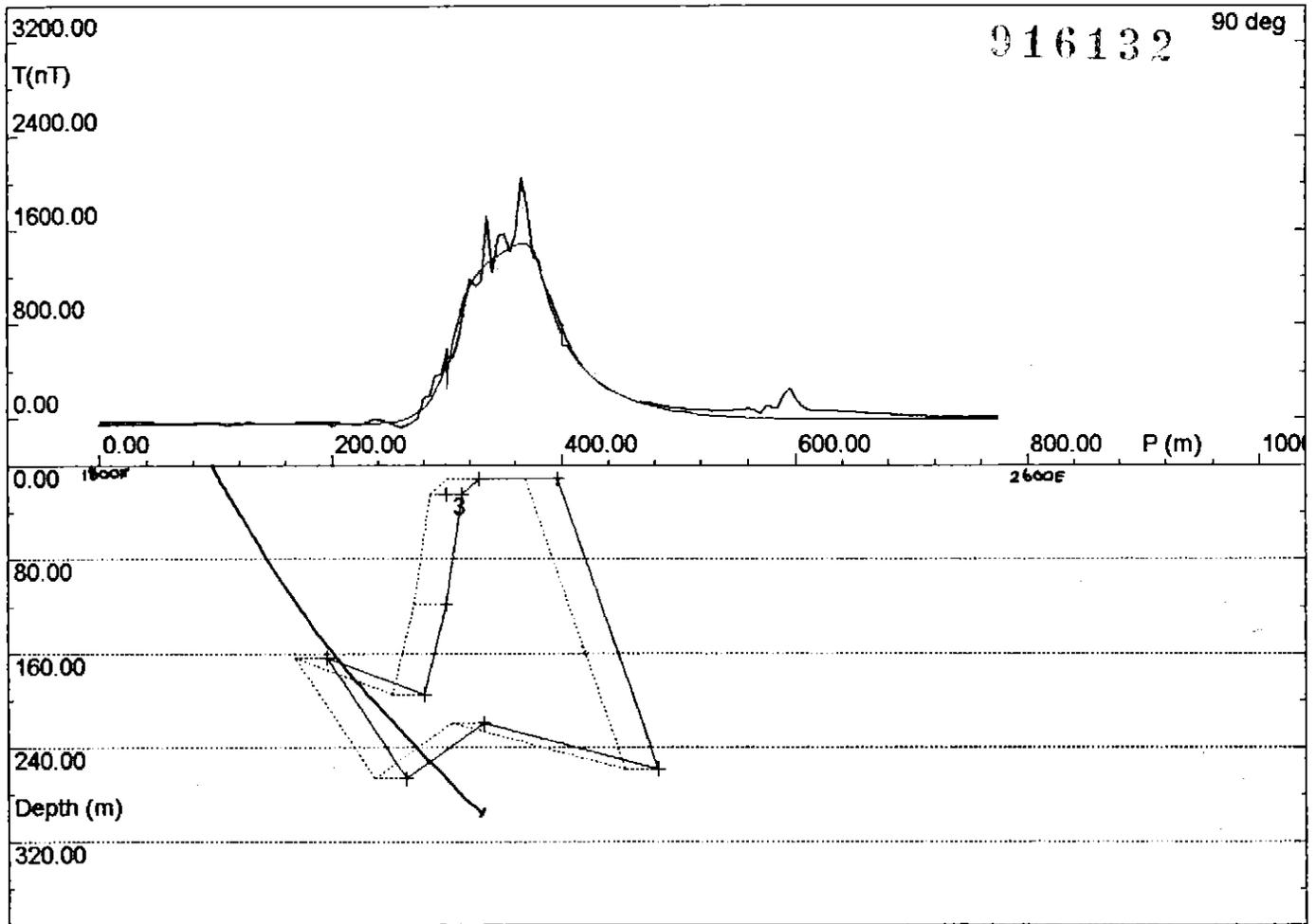
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Residual: _____ Individual body: _____

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Figure 5b

94-3569



Observations: GARFIELD MAGNETICS - LINE 2100N

Profile #1;

Model:

Calculation mode: Total Magnetic Intensity

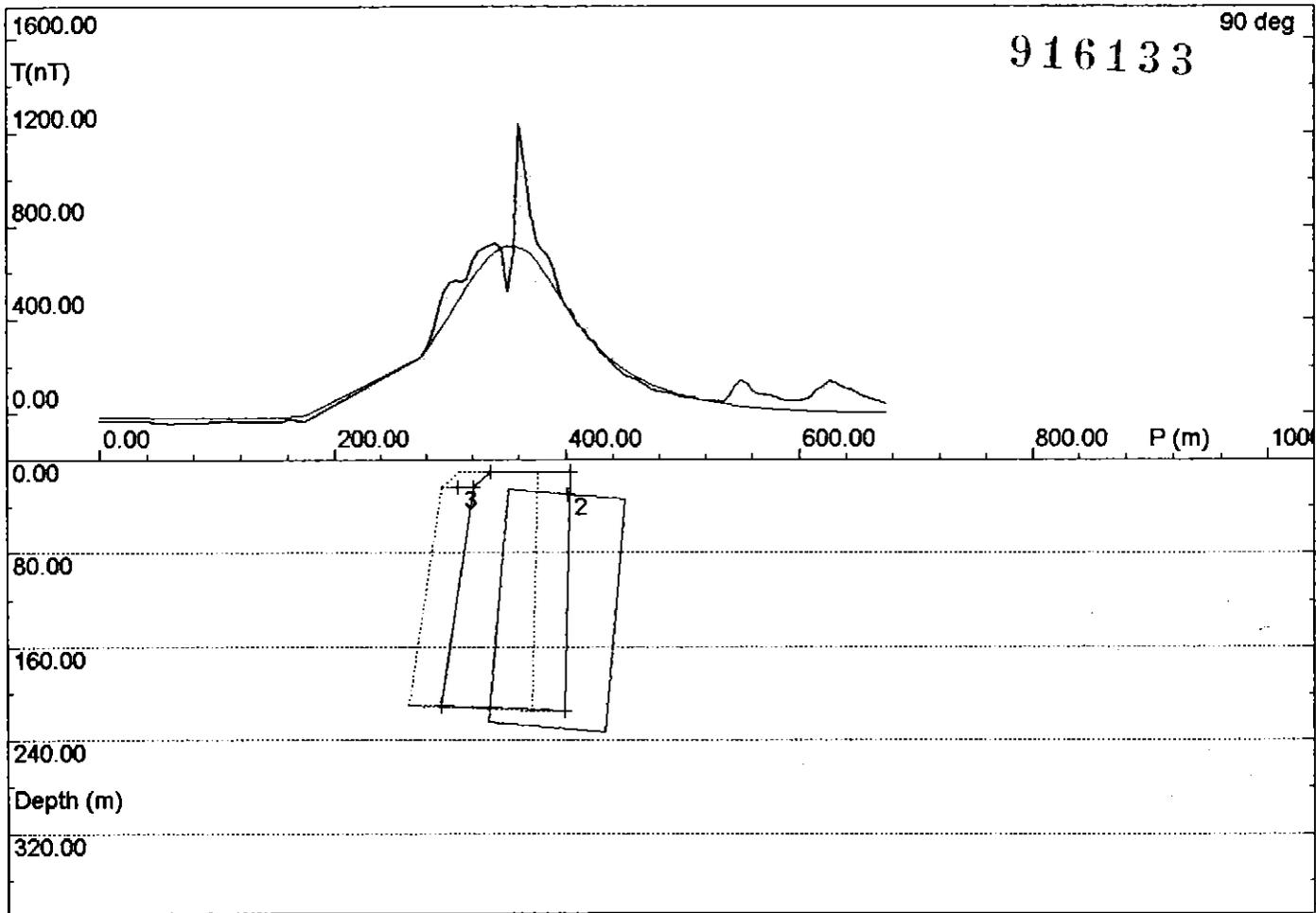
Observed: _____ Calculated: _____

Residual: _____ Individual body: _____

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Figure 5c

94-3569



Observations GARFIELD MAGNETICS - LINE 2200N

Profile #1;

Model:

Calculation mode: Total Magnetic Intensity

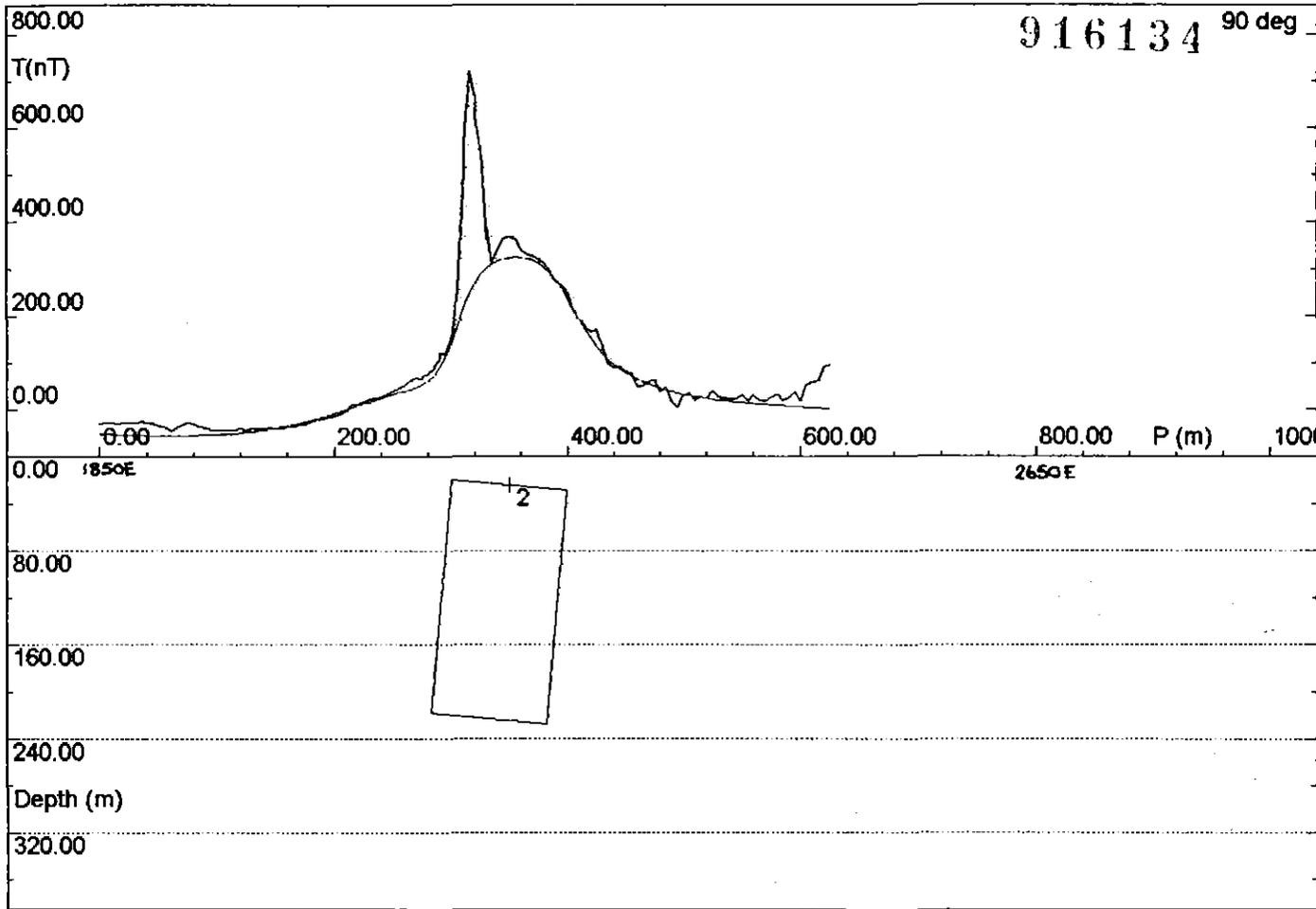
Observed: _____ Calculated: _____

Residual: _____ Individual body: _____

POTENT v3.03 Profile drawn at 14:35 27/01/1994 for RGC Exploration Pty. Limited

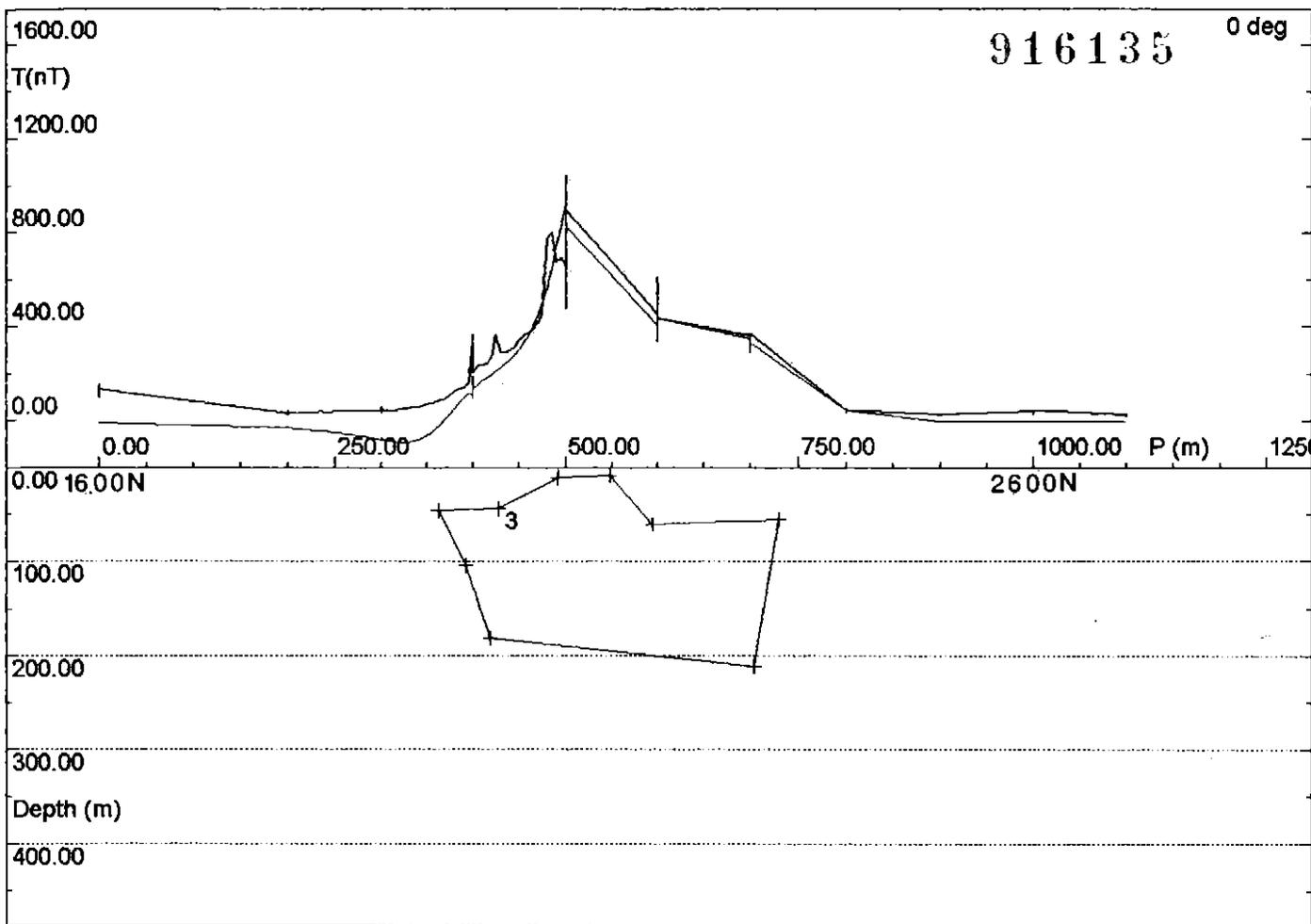
Figure 6

94-3569



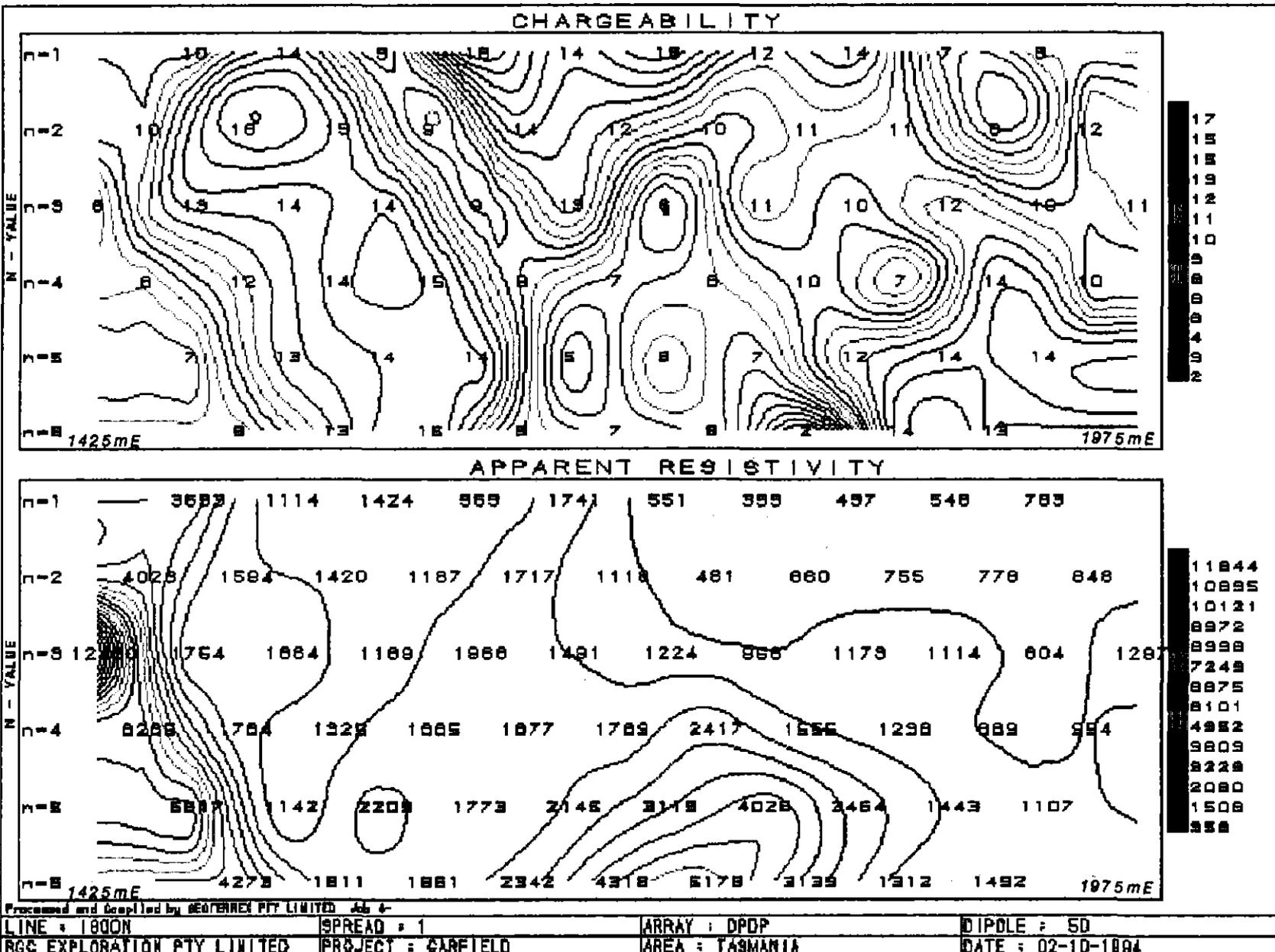
Observations: GARFIELD MAGNETICS - LINE 2300N
Profile #1;
Model:
Calculation mode: Total Magnetic Intensity
Observed: _____ Calculated: _____
Residual: _____ Individual body: _____
POTENT v3.03 Profile drawn at 09:37 27/01/1994 for RGC Exploration Pty. Limited

Figure 7



Observations GARFIELD MAGNETICS - SOUTH-NORTH PROFILE 2200W
Profile #5;
Model:
Calculation mode: Total Magnetic Intensity
Observed: _____ Calculated: _____
Residual: _____ Individual body: _____
POTENT v3.03 Profile drawn at 09:25 28/01/1994 for RGC Exploration Pty. Limited

Figure 8



Processed and Compiled by GEOTREX PTY LIMITED Job 4-

LINE : 1800N	SPREAD : 1	ARRAY : DPDP	DIPOLE : 5D
RGC EXPLORATION PTY LIMITED	PROJECT : GARFIELD	AREA : TASMANIA	DATE : 02-10-1994

Figure 9 Garfield Dipole-Dipole IP

916136

94-3569

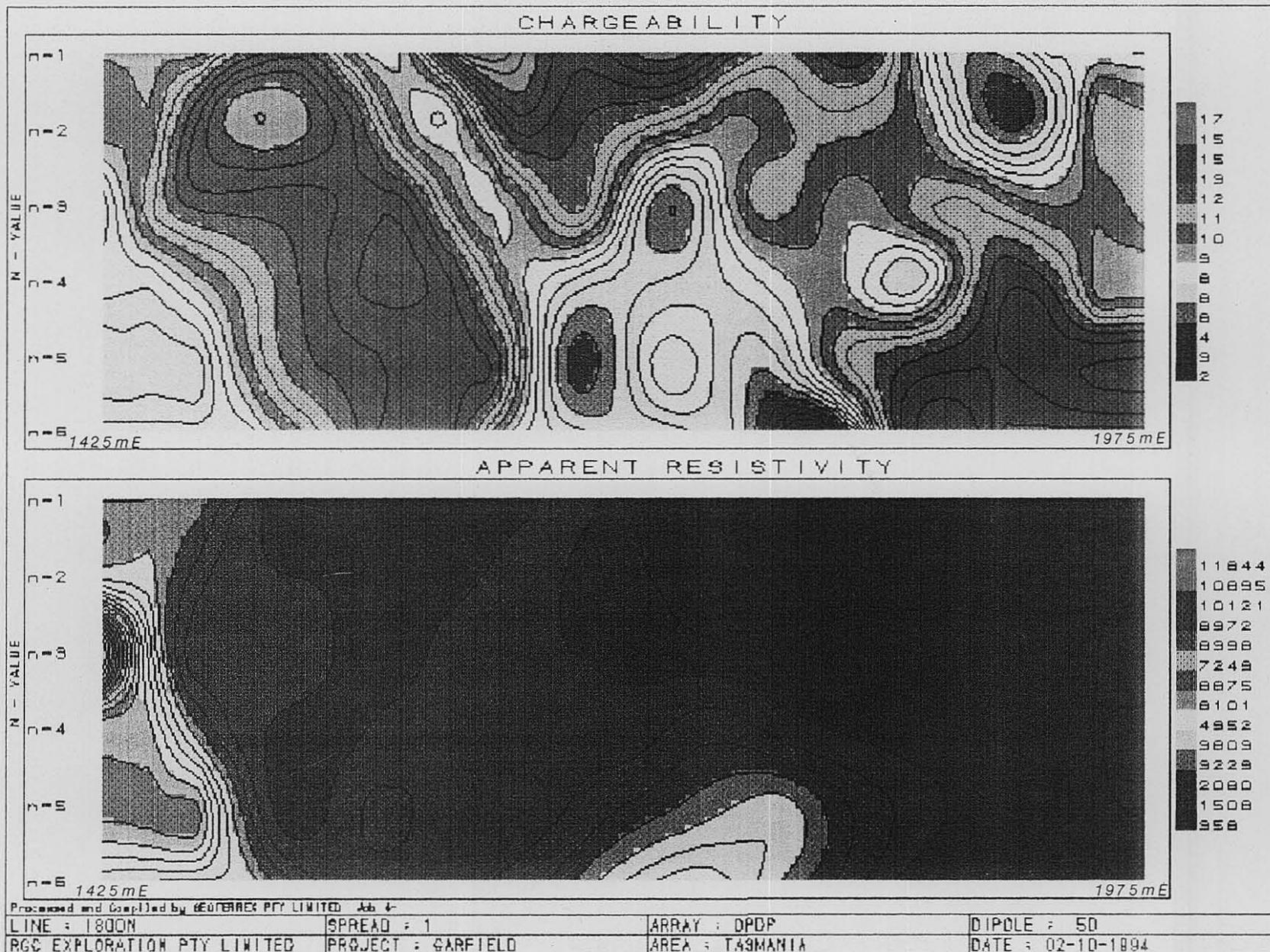
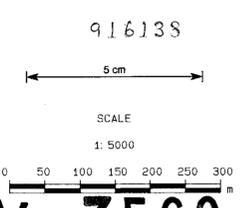
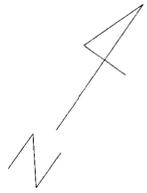
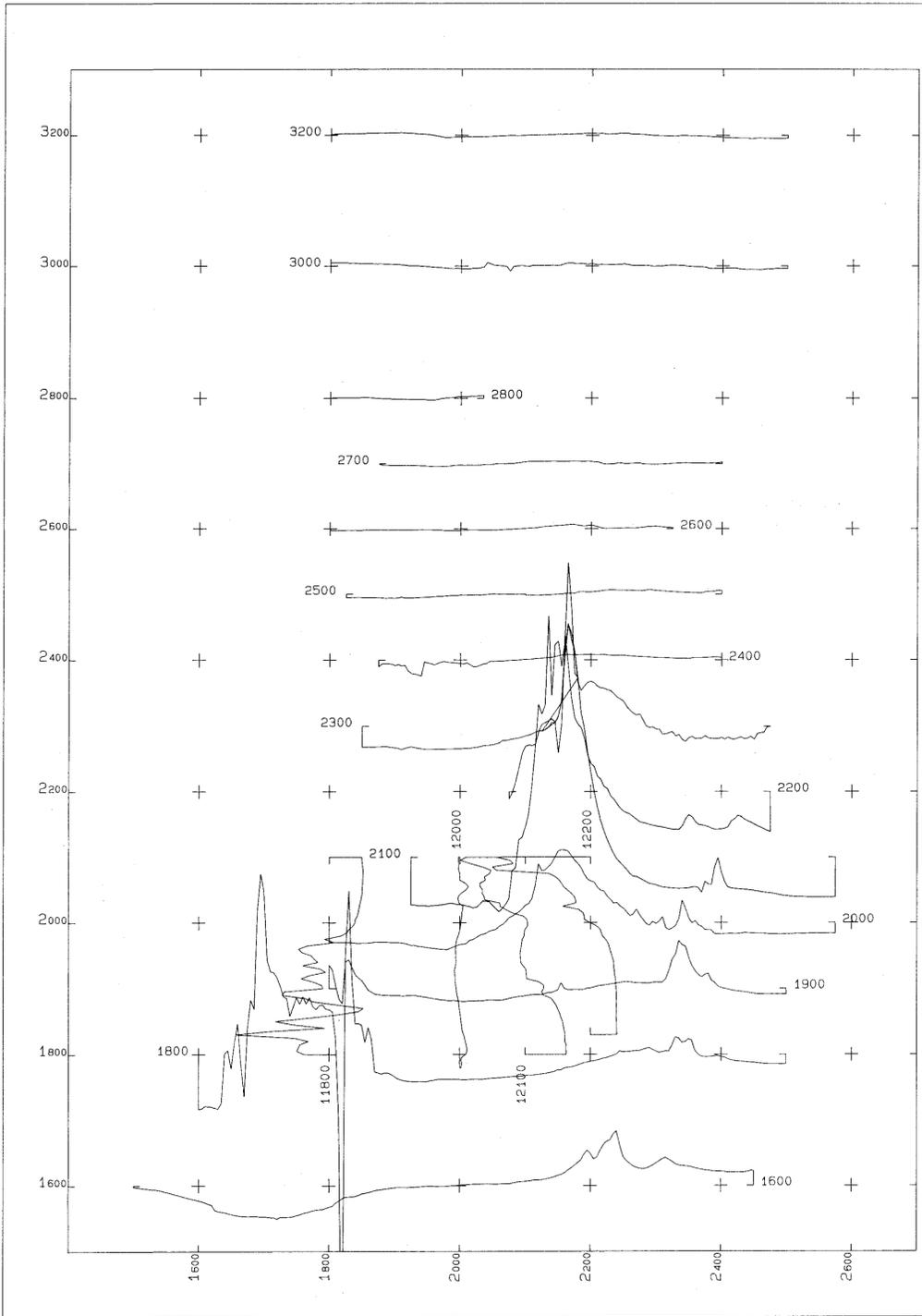


Figure 10 Garfield Dipole-Dipole IP

94-3569

916137



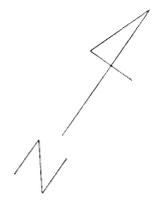
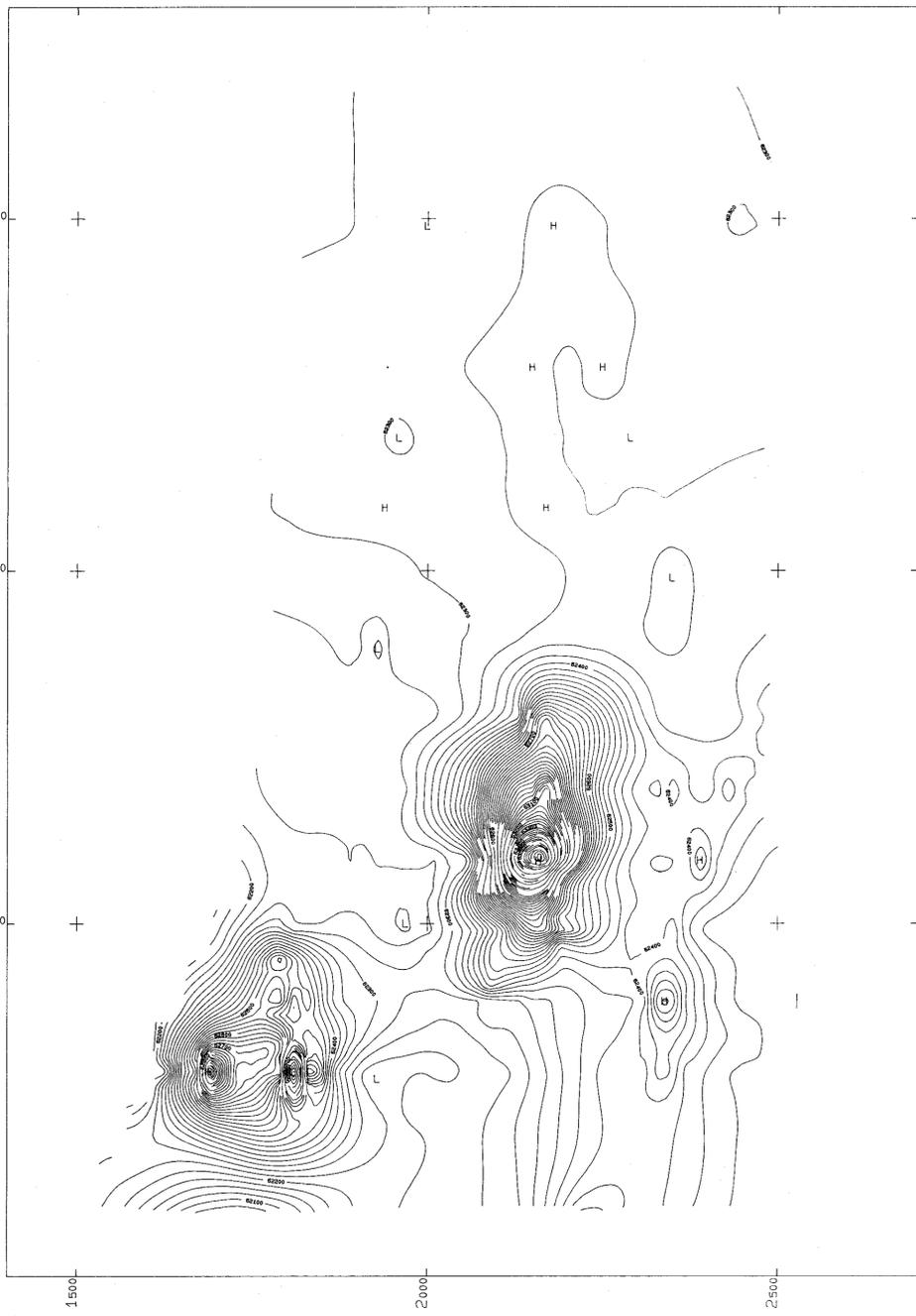
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RGC EXPLORATION PTY LIMITED

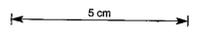
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GROUND MAGNETICS DATA
Stacked Profiles of
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Unlocated Data, Unfiltered

Compiled by:	Date: 31 Jan 1994
Drawn by:	Drawing No.: 1

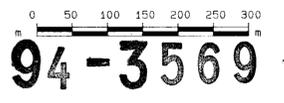
5532/177



916139



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RGC EXPLORATION PTY LIMITED

GARFIELD PROSPECT TASMANIA EL 102/B7
GROUND MAGNETICS DATA
Contours of
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Unlocated Data : Contour Int. 25nT

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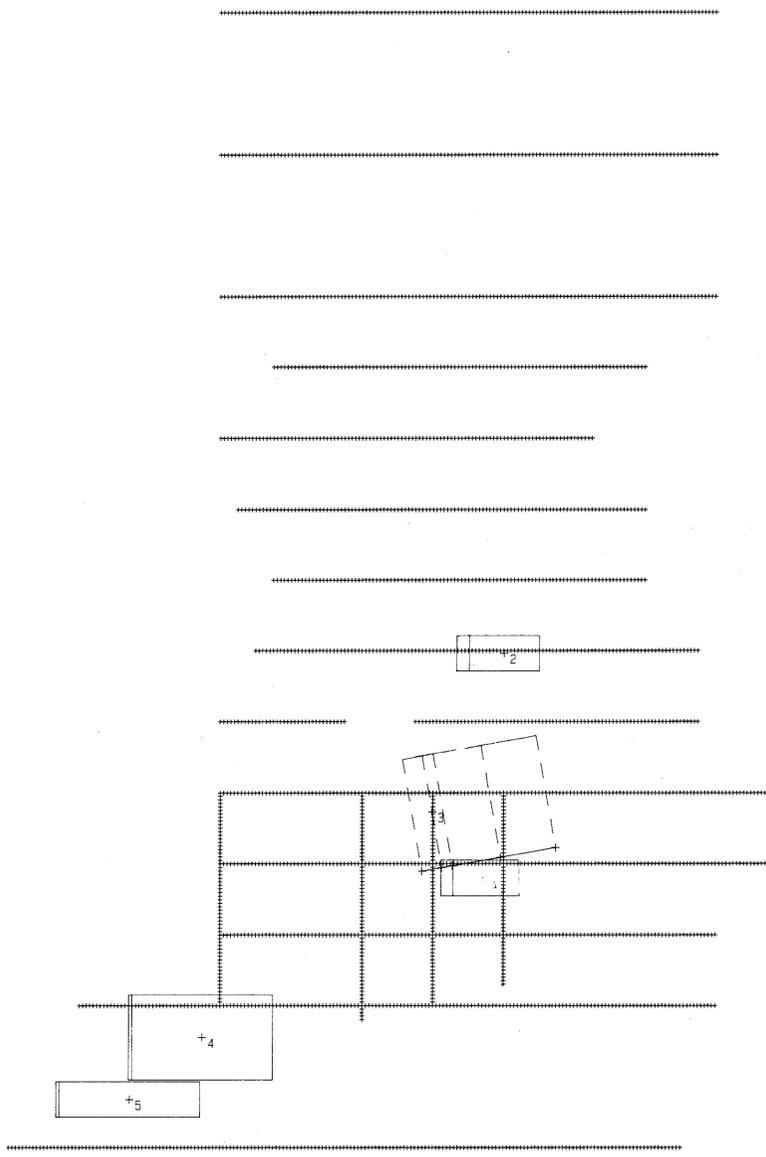
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(m)

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1600.00

800.00



1600.00

2400.00

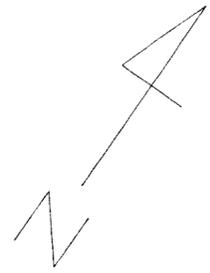
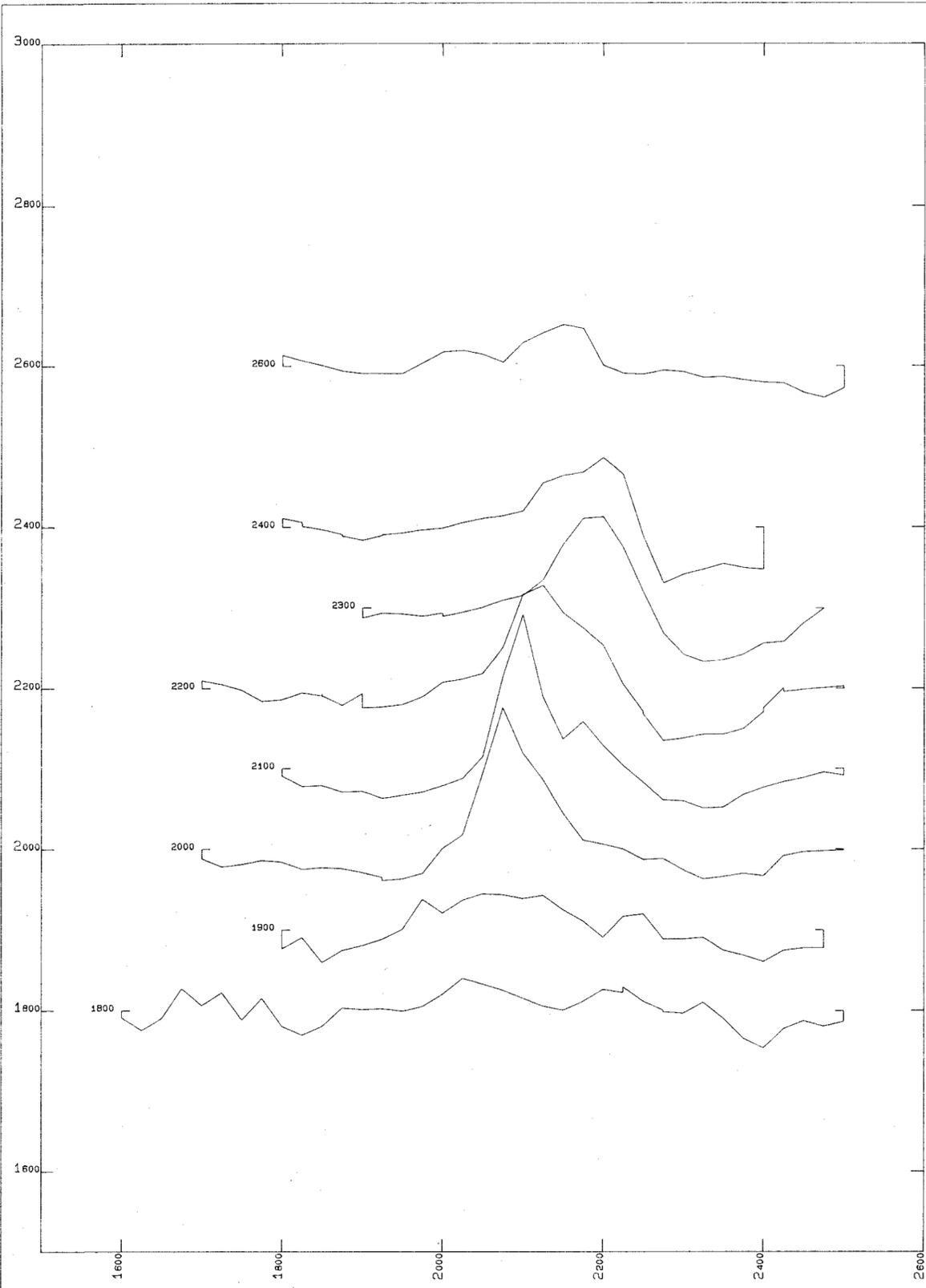
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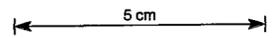
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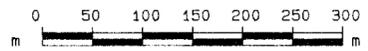
PLAN 3



916141



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RGC EXPLORATION PTY LIMITED

GARFIELD PROSPECT TASMANIA EL 102/87

GRADIENT ARRAY IP DATA

Stacked Profiles

of

CHARGEABILITY

Vertical Scale 1cm : 5ms

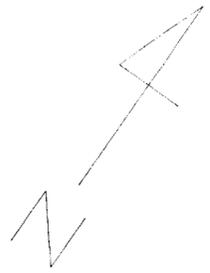
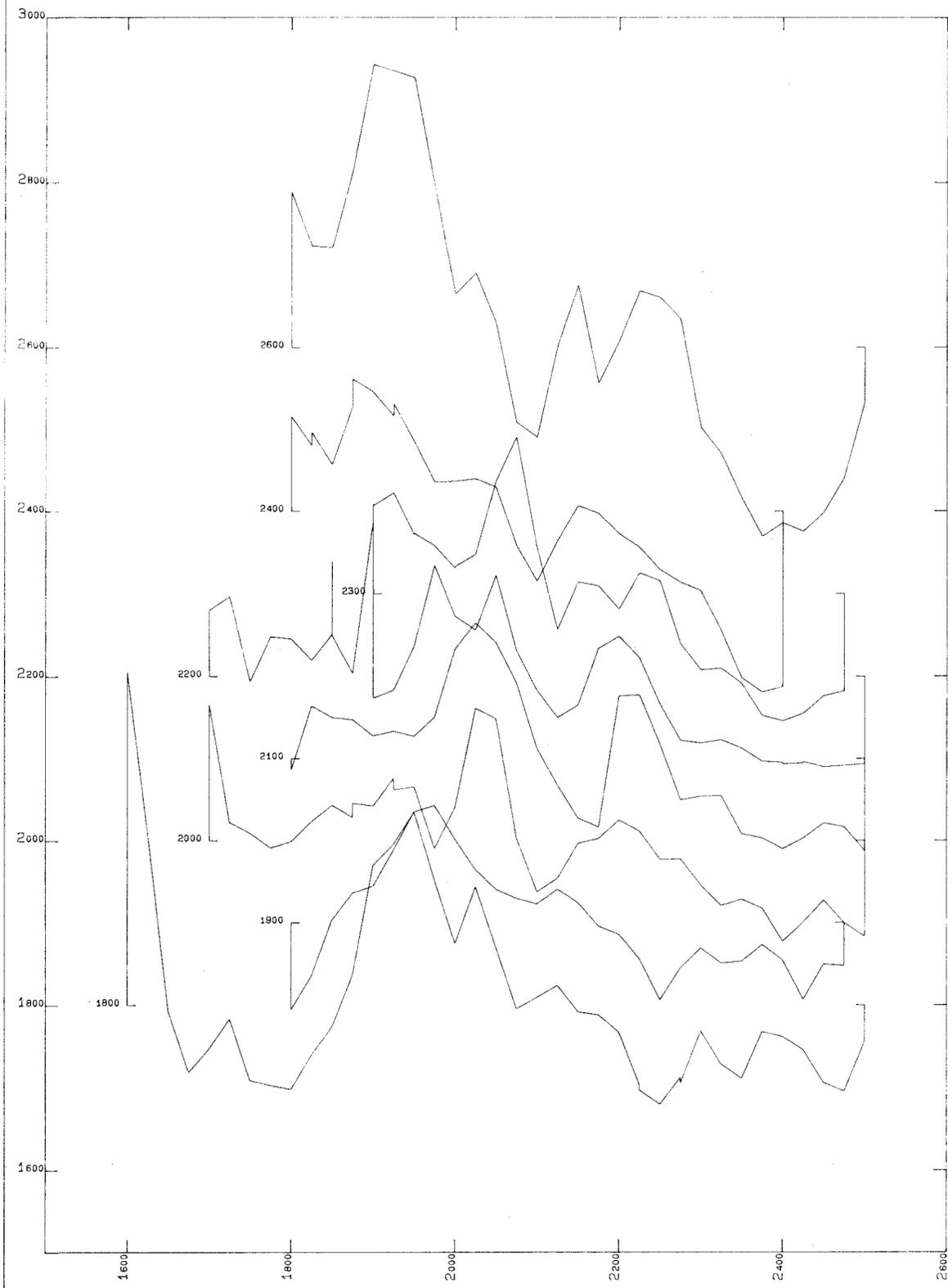
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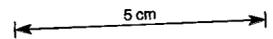
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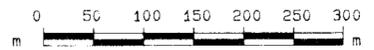
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916142



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RGC EXPLORATION PTY LIMITED

GARFIELD PROSPECT TASMANIA EL 102/87

GRADIENT ARRAY IP DATA

Stacked Profiles

of

APPARENT RESISTIVITY

Vertical Scale 1cm : 500 OhmM

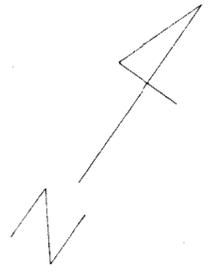
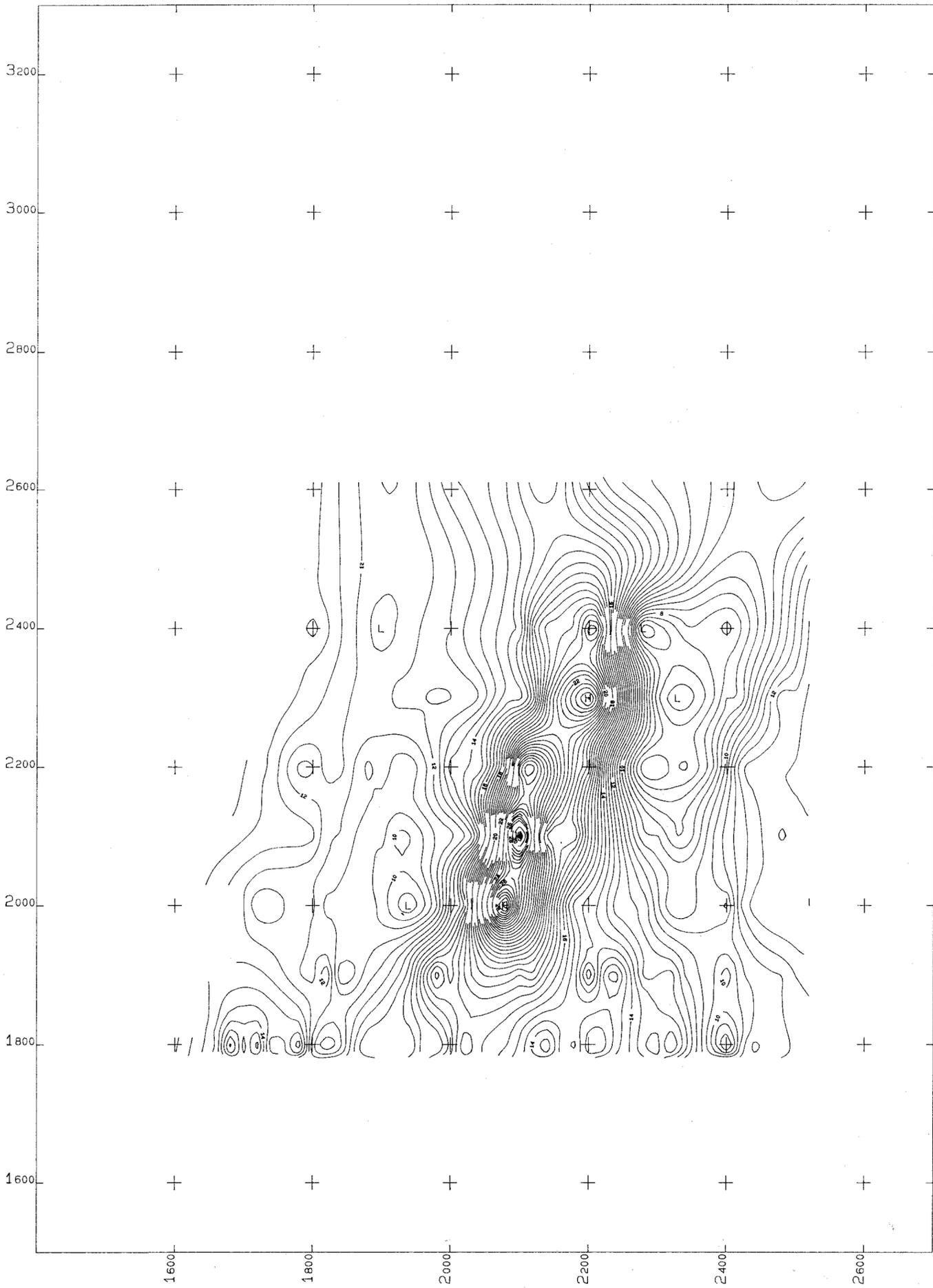
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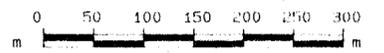
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016143

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94-3569

RGC EXPLORATION PTY LIMITED

GARFIELD PROSPECT TASMANIA FL 102/87

GRADIENT ARRAY IP DATA

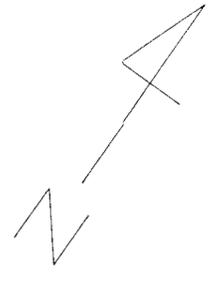
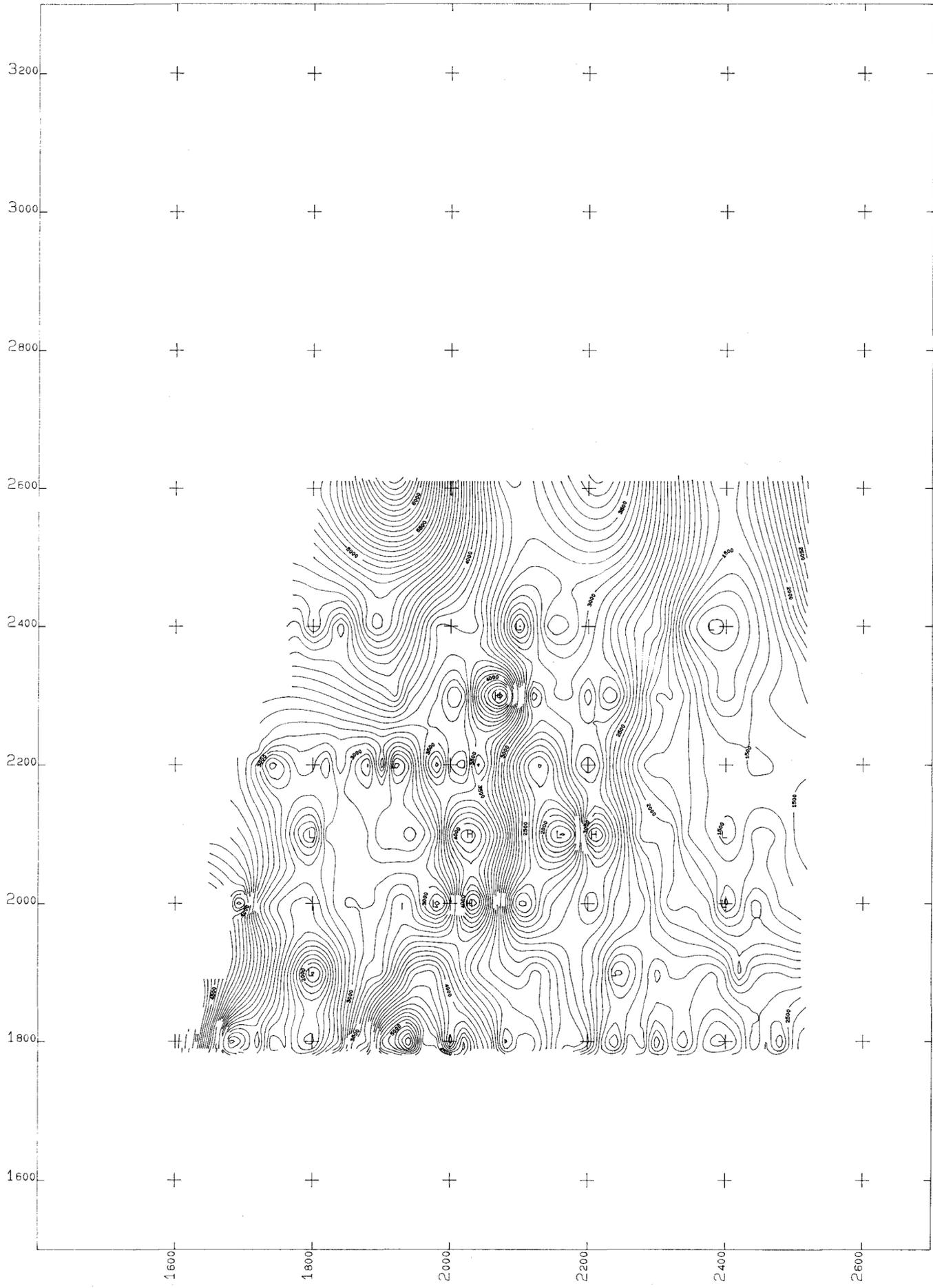
Contours of
CHARGEABILITY

Unlocated Data : Contour Int. 0.5ms

Compiled by:	Date: 31 Jan 1994
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5532/182



916144
5 cm

SCALE
1: 5000
0 50 100 150 200 250 300
m

94-3569

RGC EXPLORATION PTY LIMITED	
GARFIELD PROSPECT TASMANIA EL 102/87	
GRADIENT ARRAY IP DATA	
Contours of	
APPARENT RESISTIVITY	
Unlocated Data : Contour Int. 100ohms	
Compiled by:	Date: 31 Jan 1994
Drawn by:	Drawing No.: 7

APPENDIX 8

REPORT ON MAGNETIC PROPERTIES OF DRILL CORE SAMPLES FROM
GARFIELD PROSPECT, TASMANIA

BY
P.W. SCHMIDT

REPORT ON MAGNETIC PROPERTIES OF DRILL CORE SAMPLES FROM
GARFIELD PROSPECT, TASMANIA

P.W.Schmidt
CSIRO Division of Exploration and Mining
PO Box 136
North Ryde NSW 2113

This report describes the magnetic properties of three samples from Garfield prospect near Queenstown, Tasmania, submitted by Mr S.T. Mudge of RGC Exploration Pty Ltd. The samples are described as magnetite rich andesites from drill hole GAR001 at depths of 192m, 258m and 317m.

The remanence and the susceptibility of the samples decrease with depth. There is an increase in magnetic foliation with depth, and the magnetic fabric of the lower sample strongly reflects the cleavage that is visible. The magnetic fabric has been used as an indication of the geological structure for preliminary magnetic modelling. The modelling may be invalid if the assumed geology is significantly in error, but it was thought to be of sufficient interest to see what difference the remanence made. The minimum susceptibility axes have been used as poles to the foliation. The magnetic units thus appear to be striking NW-SE and dipping to the SW 50° - 60° . The maximum and intermediate susceptibility axes are in the plane of the foliation as can be seen on the stereonets of the anisotropy data. Overall the magnetic anisotropy is only 5%, so in itself not of importance to the modelling. The tables list the

magnetic properties and give the vector mean for the remanences and the tensor mean for susceptibilities and their anisotropies.

The demagnetisation diagrams show that there are two remanence components present in these rocks. The strong component of interest to modelling is directed NW. If my assumptions about the geology are correct, this remanence component is approximately along the strike of the magnetic unit and thus contributes little to the anomaly. This is seen in the diagram showing the models, where anomalies with and without remanence are compared. The direction of this strong remanence component is unusual for Palaeozoic rocks from Australia and its origin is enigmatic.

The weaker remanence component, seen most clearly in the deepest sample is very similar to the remanence direction of the Tasmanian Dolerite. Although this component is not of significance to modelling, it may have geological implications. The weak component may be carried by pyrrhotite which is easily reset thermally but can have a high coercivity and may be isolated from other remanences by AF cleaning. Evidence for the presence of the weak component in the sample from intermediate depth (258m) is seen in the progressive change of remanence direction on AF cleaning.

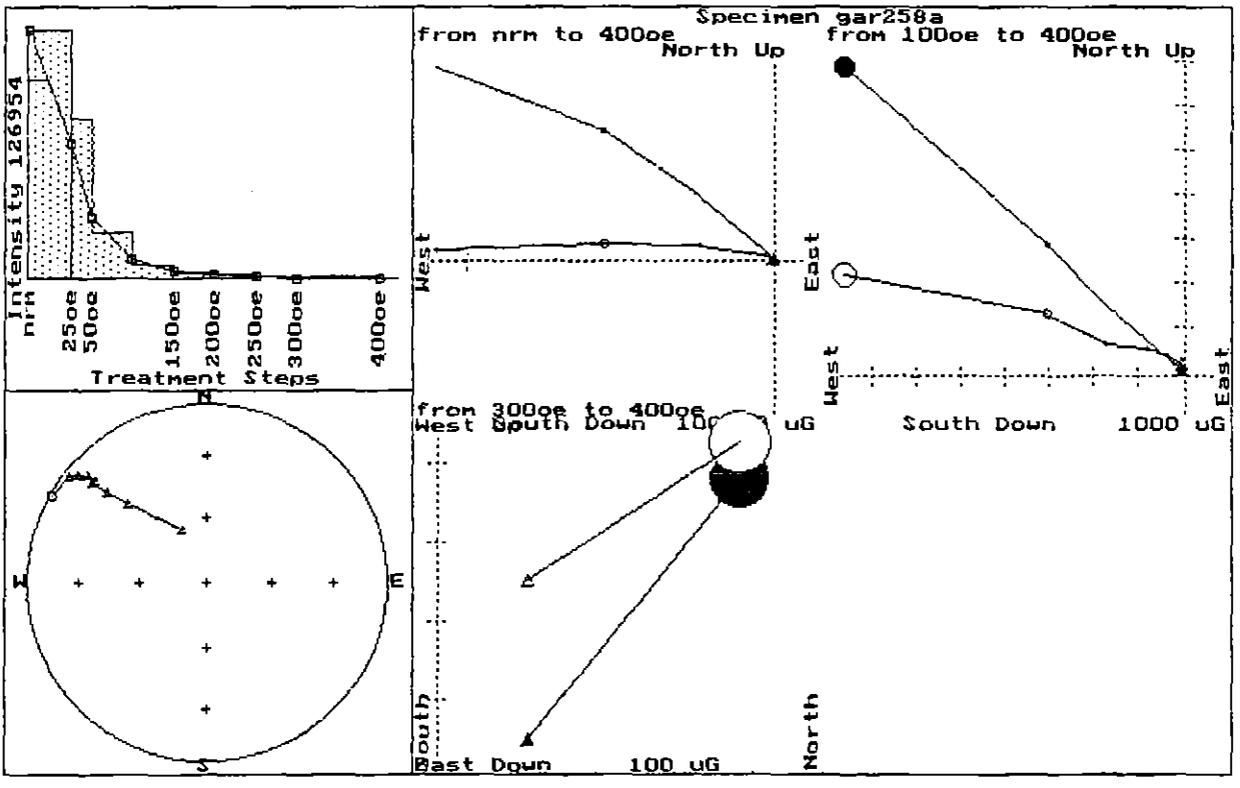
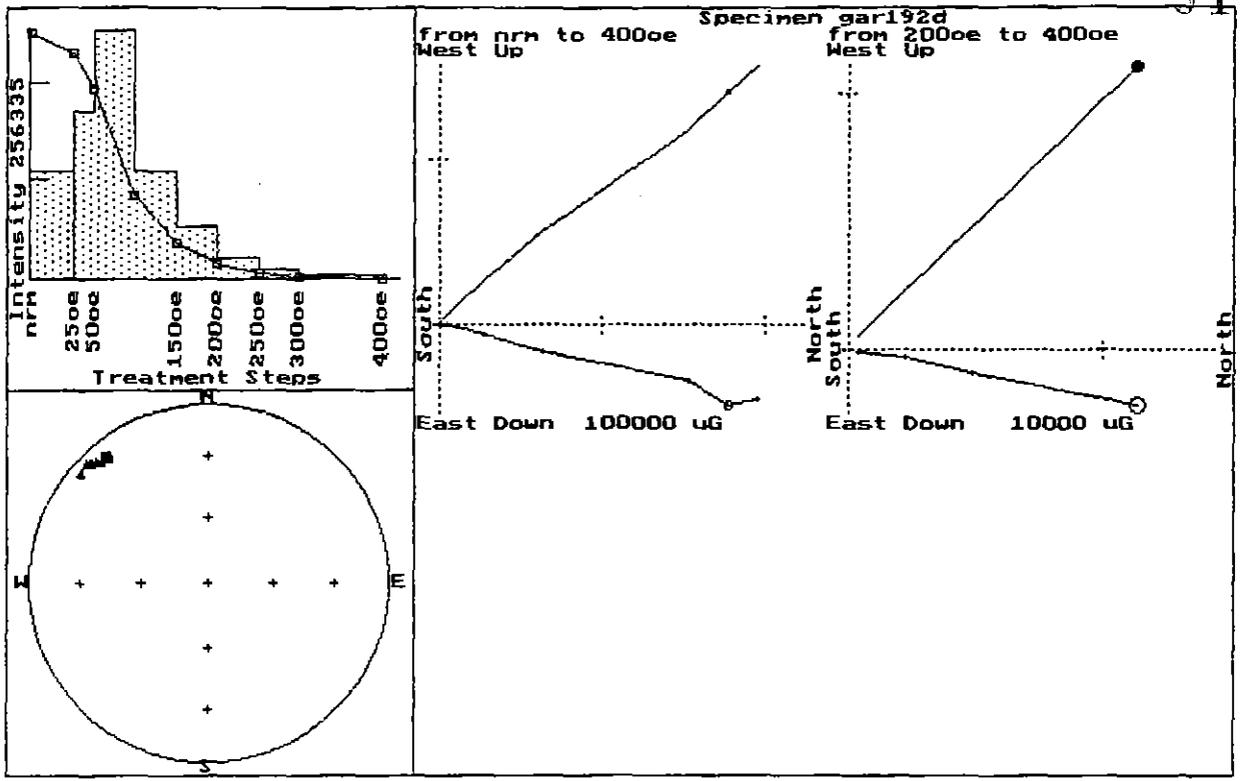
TABLE 1. BASIC MAGNETIC PROPERTIES OF GARFIELD SAMPLES

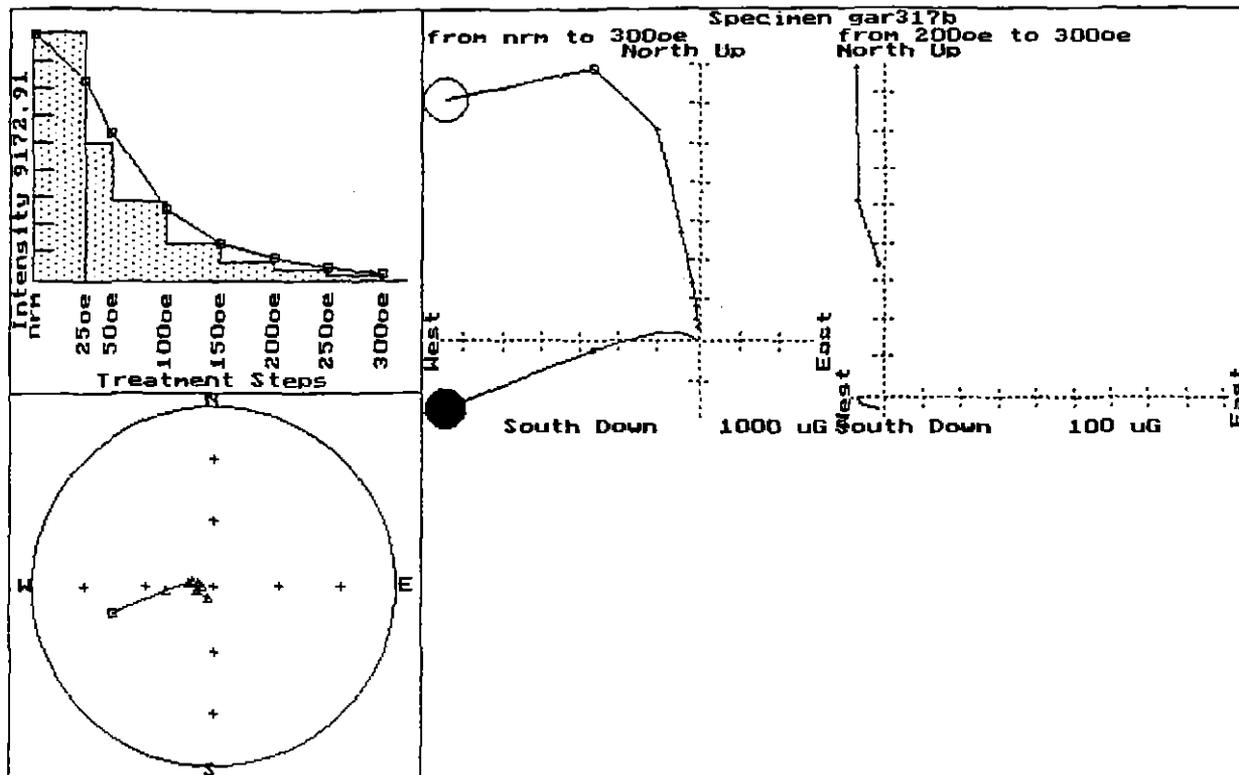
Sample (depth m)	N	Bulk susceptibility ($\mu\text{G}/\text{Oe}$) <i>= 10^{-6}cgs</i>	NRM (J[μG]; D°, I°)	Q
192	7	$74367 \times 10^{-6}\text{cgs}$	101110; 303, -7	2.18
258	7	$46903 \times 10^{-6}\text{cgs}$	48406; 302, -1	1.65
317	6	$20007 \times 10^{-6}\text{cgs}$	5679; 258, -62	0.45
Vector Mean	20	$48447 \times 10^{-6}\text{cgs}$	52864; 302, -7	1.75

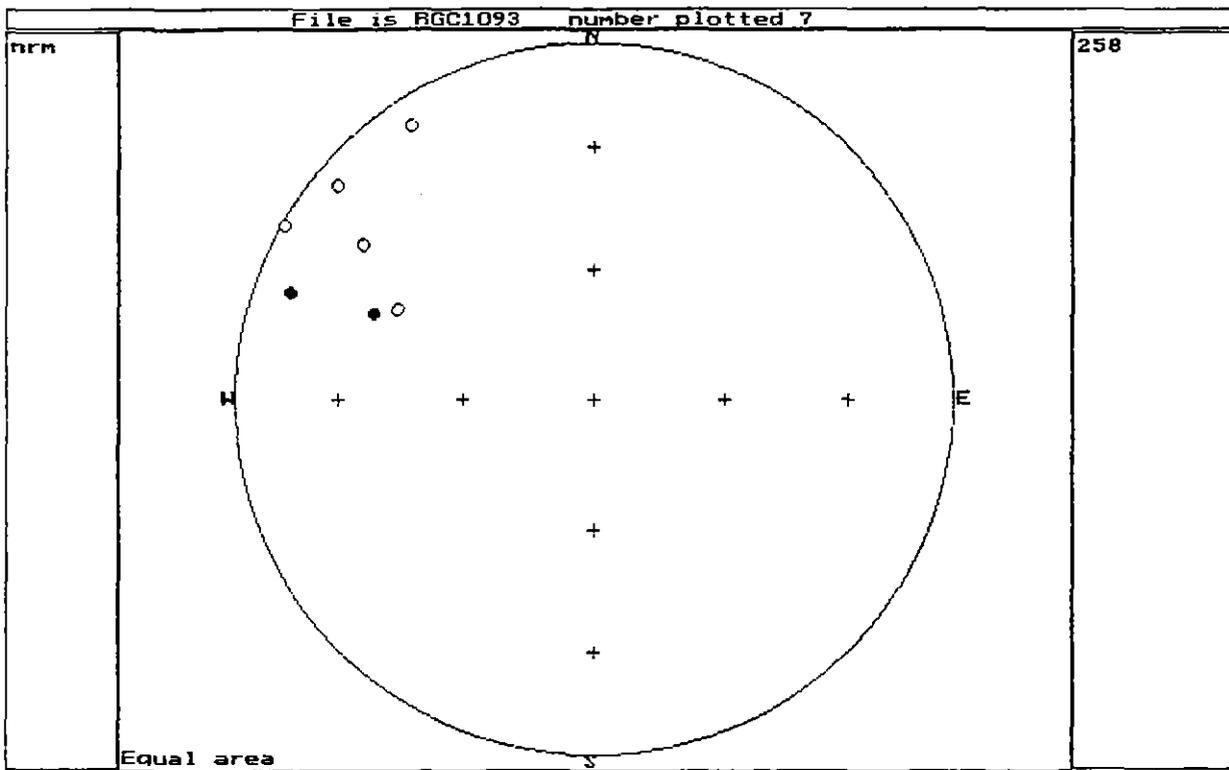
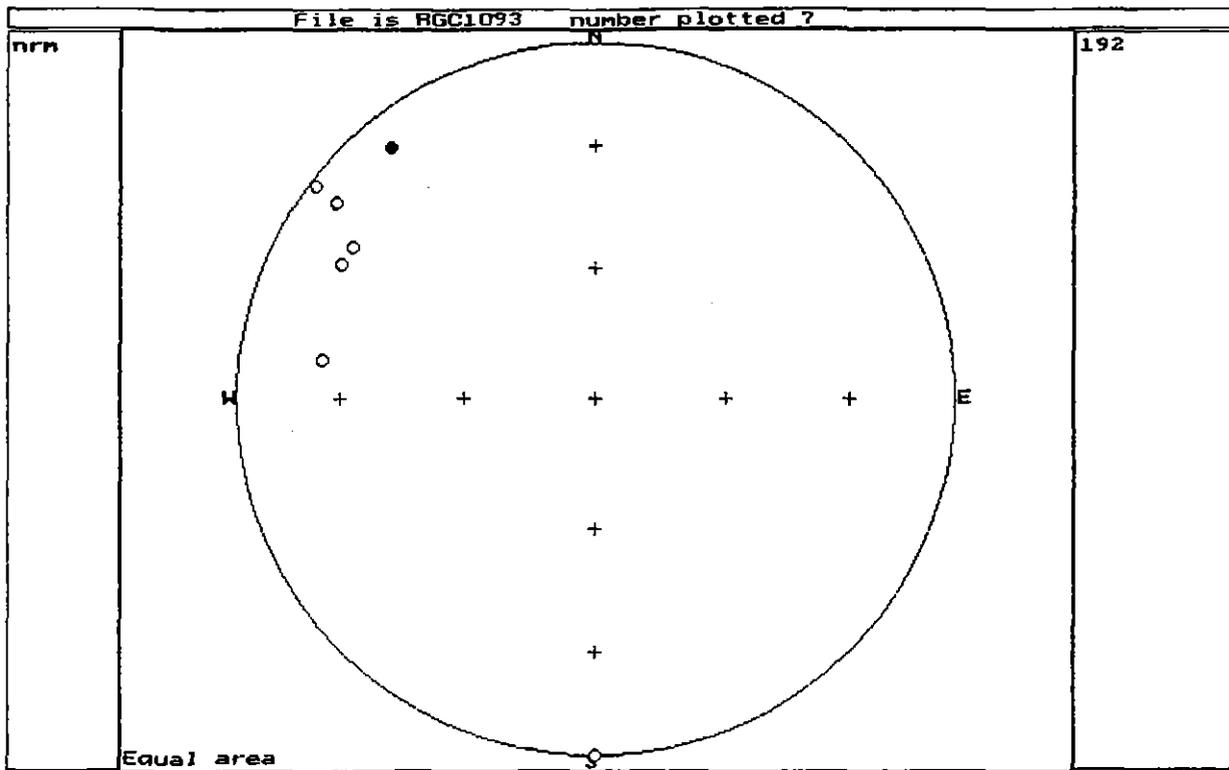
$$10 \mu\text{G} = 1 \text{ mT}$$

TABLE 2. MAGNETIC FABRIC OF GARFIED SAMPLES

Sample	Susceptibility Ellipsoid	A	L	F	P	T
192	77537;106,37 75026;207,14 70538;315,50	1.099	1.034	1.064	0.972	0.304
258	49112;254,53 47278;144,15 44320;044,33	1.108	1.039	1.067	0.974	0.259
317	21397;290,50 20893;164,27 17729;058,28	1.207	1.024	1.179	0.869	0.746
Tensor Mean	49689;159,43 48675;270,21 46976;018,40	1.058	1.021	1.036	0.985	0.266



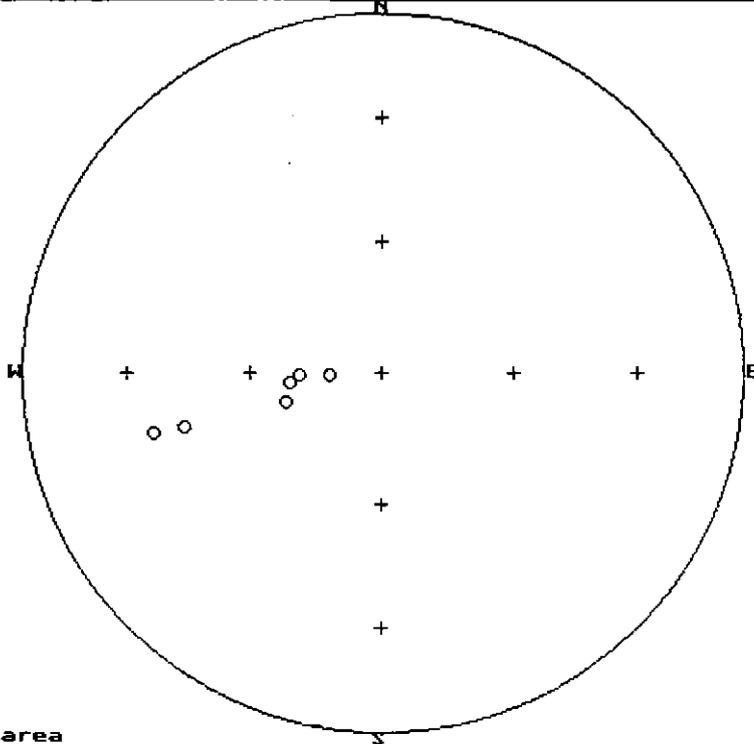




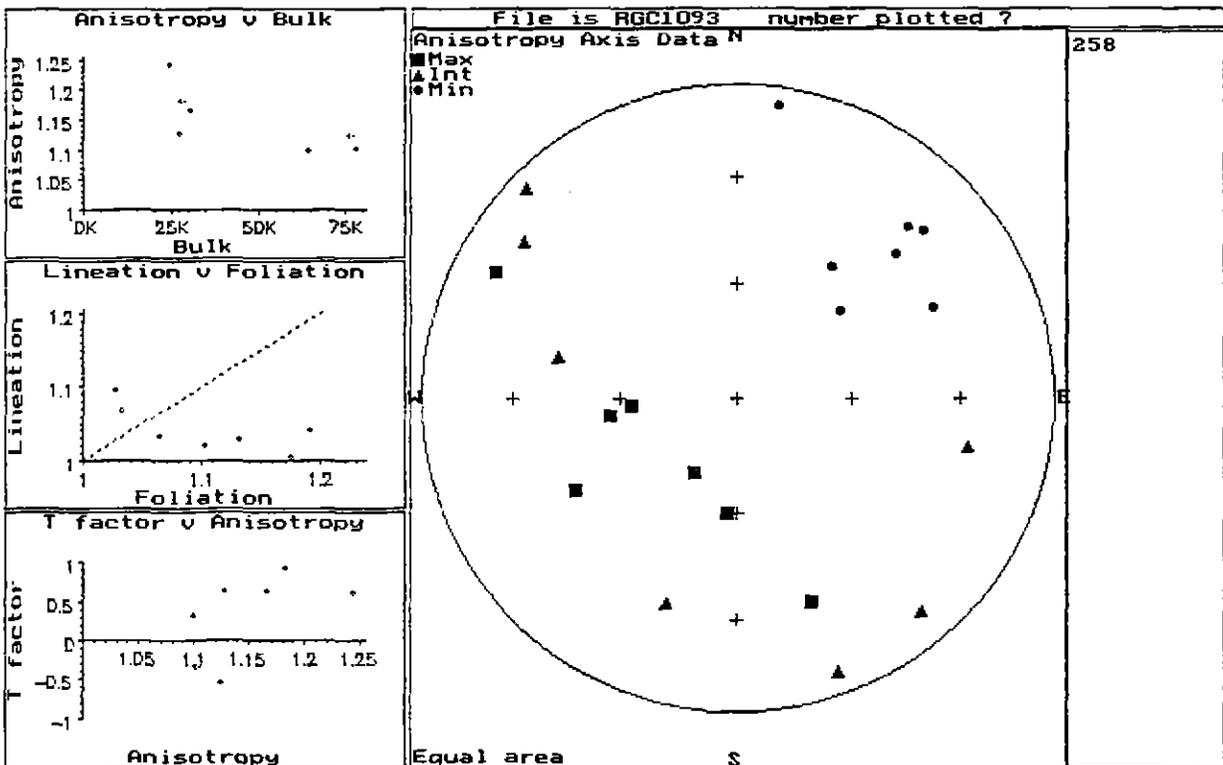
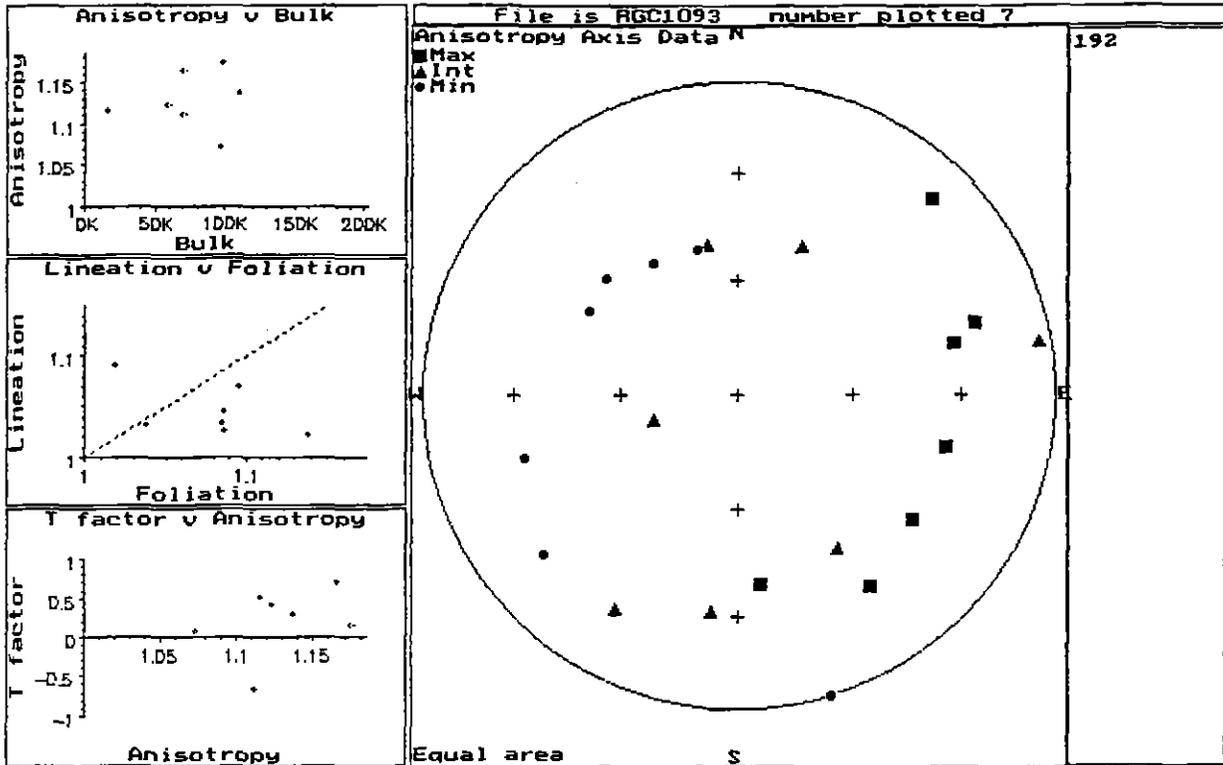
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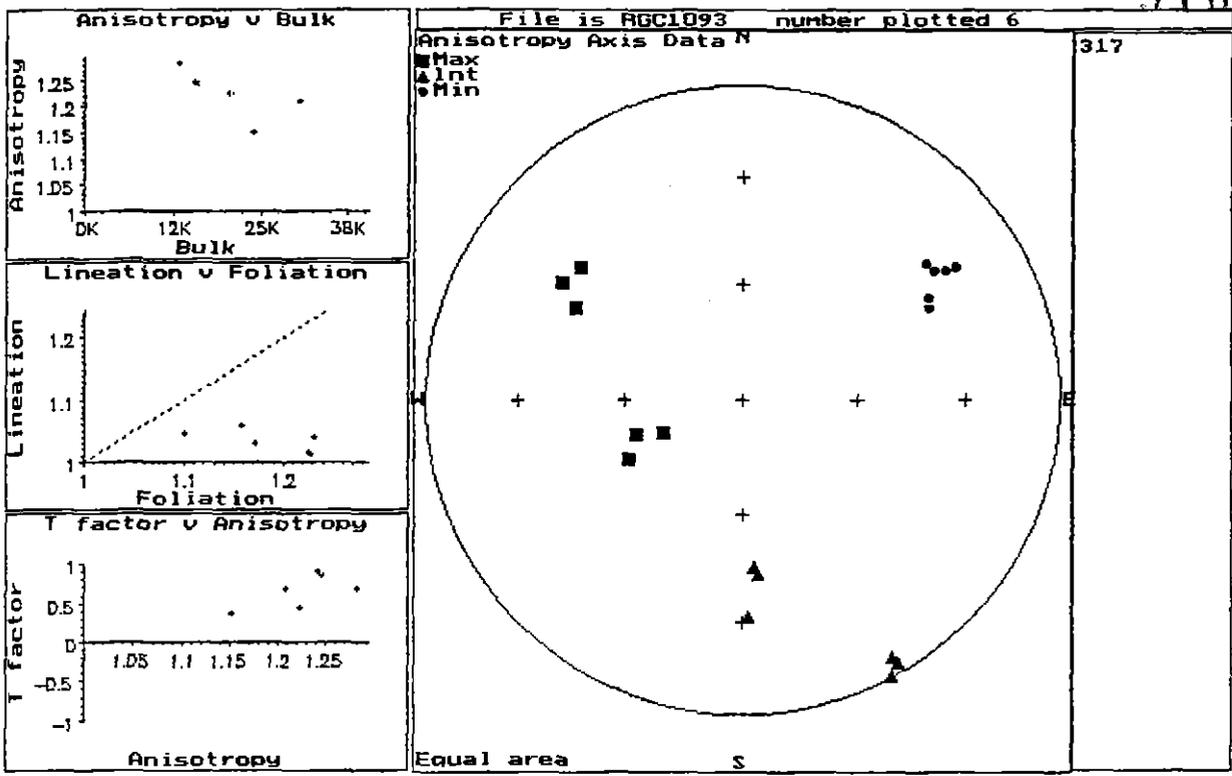
nm

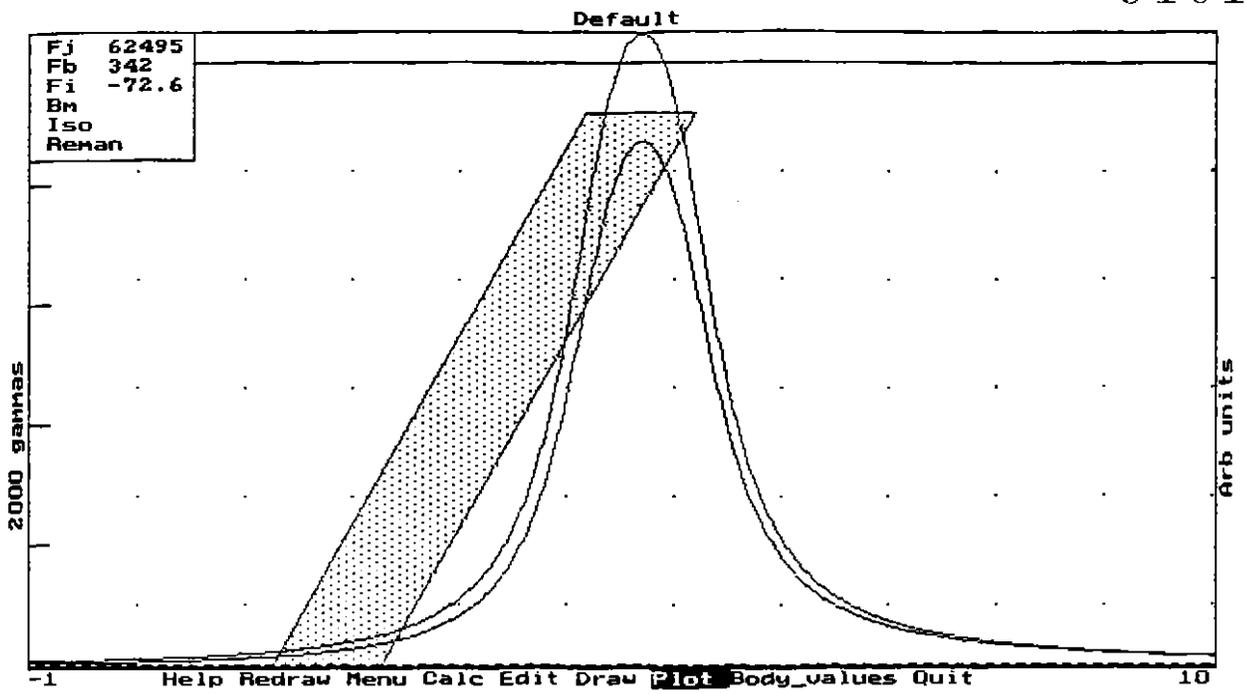
317



Equal area







Division of Exploration and Mining Institute of Minerals, Energy and Construction


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Sydney Australia

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Facsimile: (02)887 8921
Telex: 25817

8 September 1993

Mr S.T. Mudge
RGC Exploration Pty Ltd
PO Box 590
Fyshwick ACT 2609

RECEIVED

10 SEP 1993

RGC - CANBERRA

Dear Steve,

Here are the results from the three samples sent last week. The results are very interesting with multicomponent remanence and an average Koenigsberger ratio of 1.75. Both remanence and susceptibility decrease with depth. There is an increase in magnetic foliation with depth, and the magnetic fabric of the lower sample strongly reflects the cleavage that is visible.

I trust these results are adequate for your task but please do not hesitate to call if you have any queries. The invoice for \$300 will be sent under separate cover marked to your attention.

Kind regards,

Phil Schmidt

Australian Science. Australia's Future

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Facsimile: (09) 387 8642
Telex: 92178

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Facsimile: (03) 803 2052

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*Queensland Centre for
Advanced Technologies*
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Facsimile: (07) 212 4455

Perth
*Rock Mechanics
Research Centre*
PO Box 437, Nedlands
WA 6009
Telephone: (09) 389 8421
Facsimile: (09) 389 1000

APPENDIX 9

REPORT ON THREE COMPONENT, PULSE EM RESULTS FROM THE GARFIELD
PROSPECT, SOUTH WEST TASMANIA

BY

R.C. DEAKIN

Report on
Three Component, Down Hole
Pulse EM Results

from

The Garfield Prospect, South West Tasmania

on behalf of

R.G.C. Exploration Pty Ltd

by

R. C. Deakin
(R. Deakin & Assoc)

March 1994

CONTENTS

	<u>Page No.</u>
1. INTRODUCTION	1
2. DISCUSSION OF RESULTS	1
3. CONCLUSIONS	3

FIGURES

Plate No.

- G1 Drill Hole/Loops Locality Diagram
- G2 Current Filament Modelling - Loop 1
- G3 Current Filament Modelling - Loop 2

1. INTRODUCTION.

- 1.1 During November 1993, RGC Exploration contracted Outer Rim Exploration Services to carry out three component, down hole, TEM surveys of a single drill hole at their Garfield prospect in the Mt. Lyell district of South West Tasmania.
- 1.2 Outer Rim Exploration Services (ORES) used the Crone, three component, down hole, pulse EM (PEM) system which records an axial (Z) component and two orthogonal X and Y components of the secondary TEM field. The X and Y components are corrected for probe rotation to give a resultant X component pointing upwards in the direction of hole azimuth and a resultant Y component that points horizontally to the left of an observer looking in the direction of hole azimuth.
- 1.3 At the Garfield Prospect drill hole GAR 001 was logged with the three component Crone TEM system for two surface Tx Loops, Loop 1 encompassing the drill hole collar and Loop 2 located north of the collar. The location of the Loops and drill hole Gar 001 are shown on Plate G1.
- 1.4 Drill hole GAR 001 was targeted geologically and subsequently found to have narrowly missed the source of coincident magnetic and IP anomalies which are centred just east of the drill hole at approximately 2150E/2050N. Interpretation of the magnetic anomaly by RGC indicates that the drill hole probably intersected a small apophysis of the main anomaly source which occurs above and to the north of the drill hole.

2. DISCUSSION OF RESULTS.

- 2.1 The three component Crone results are generally indicative of a resistive terrain with no significant anomalies.

It is difficult to reconcile the results as they appear to be inconsistent. The Z component results for both loops show a consistent signal; positive results decreasing in amplitude down hole for Loop 1 and a negative to positive zero cross over which migrates down hole in time for Loop 2. Those signatures are approximately consistent with a half space effect but do not agree with the respective X and Y component results.

The overall result particularly for Tx Loop 2, suggests a half space effect where the subsurface current filament is 'trapped' in a location near the hole. This may be symptomatic of a fault zone or conductive overburden acting as a weak conductor or a locus for current channelling.

2.2 Significant aspects of the X and Y component results are:-

(a) Dramatic data character in the 0m to 100m depth interval for early times which is not reflected in the Z component data.

(b) A dramatic change in data character from channel 4 to channel 6 which also does not occur within the Z component results.

Those apparent inconsistencies in the three component results for both Tx Loops suggest a possible problem with the data or its subsequent processing. One possible explanation is that Crone's rotation processing of the X and Y component data is inaccurate for low signal levels.

2.3 To compare the field results with the other geophysics (magnetics and IP), some simple current filament modelling was carried out. A small conductor emulated by a sphere model was invoked at a location within and near the centre of the interpreted magnetic anomaly source. The calculated Z, X and Y TEM anomalies were compared to channel 6 of the field data.

The results for Tx Loop 1 are shown on Plate G2 and for Tx Loop 2 on Plate G3. They illustrate the approximate spatial character expected from a small conductor coincident with the magnetic body. The interesting result here is that the X and Y components for both Tx Loops, for time channels 5 or more, are approximately consistent with the calculated conductor anomaly. The Z component results are however significantly different.

2.4 The X and Y component data for both Tx Loops might therefore be consistent with a very weak conductor that is approximately coincident with part of the interpreted magnetic body; the Z component data however is not. The X and Y component results have decayed to background noise levels by about channel 6 or 7 whereas the Z component results reflect a coherent signal to at least channel 12.

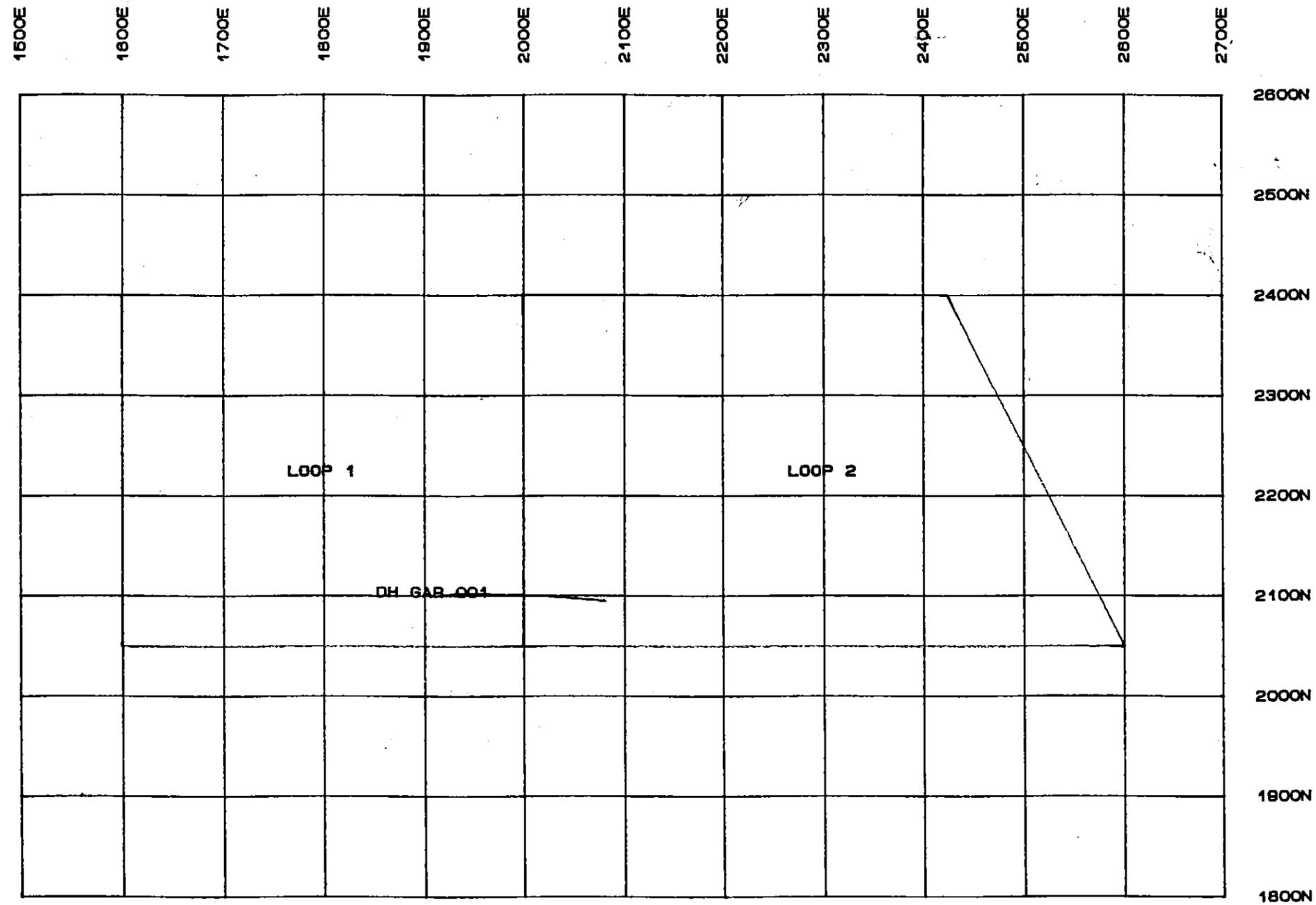
3. CONCLUSIONS.

The Crone three component down hole TEM survey of DH GAR 001 has not detected any anomalies of significance which might indicate off-hole conductors.

The results appear to be internally inconsistent and some doubts on the accuracy of the X and Y components emerge from the data interpretation.

A conductor within or coincident with the interpreted magnetic & IP anomaly source will give down hole TEM anomalies that might be considered consistent with the measured X and Y component results (channel 6+) although a very poor conductor would be inferred. The Z component data however are not indicative of any conductor coincident with the magnetic body; those results suggest the existence of a shallow, weakly conductive fault zone or conductive overburden.

R. Deakin & Assoc.



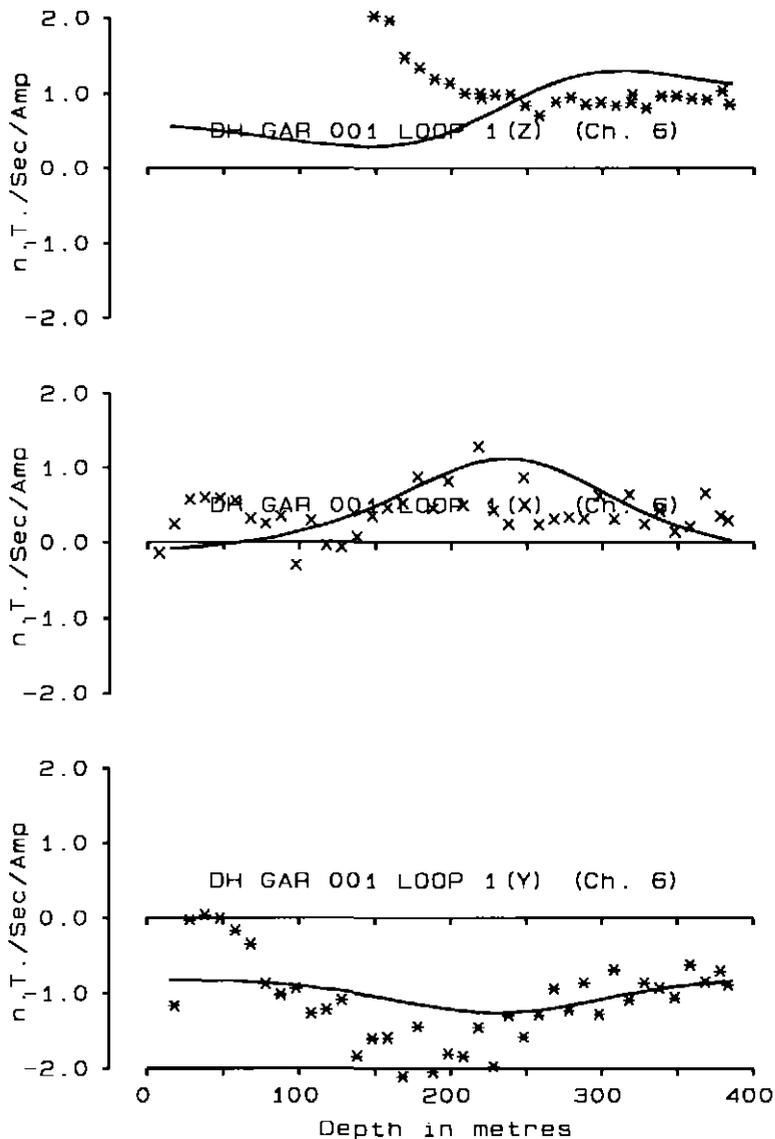
Projection from: 180.0 deg Azimuth
and: 90.0 deg Tilt

5 cm

R.G.C. Exploration

Garfield
Mt. Lyell, Tas.
DH TEM Survey Gar 001
Loop/Drill Hole Locations

Hor. Scale - 1:5000



R. Deakin & Assoc.

R.G.C. Exploration

Film S1

Type = Sphere

Centre x y z Co-ords are :

2150.0E 2030.0N 180.0RL

Radius = 10.0 m

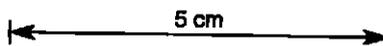
Garfield

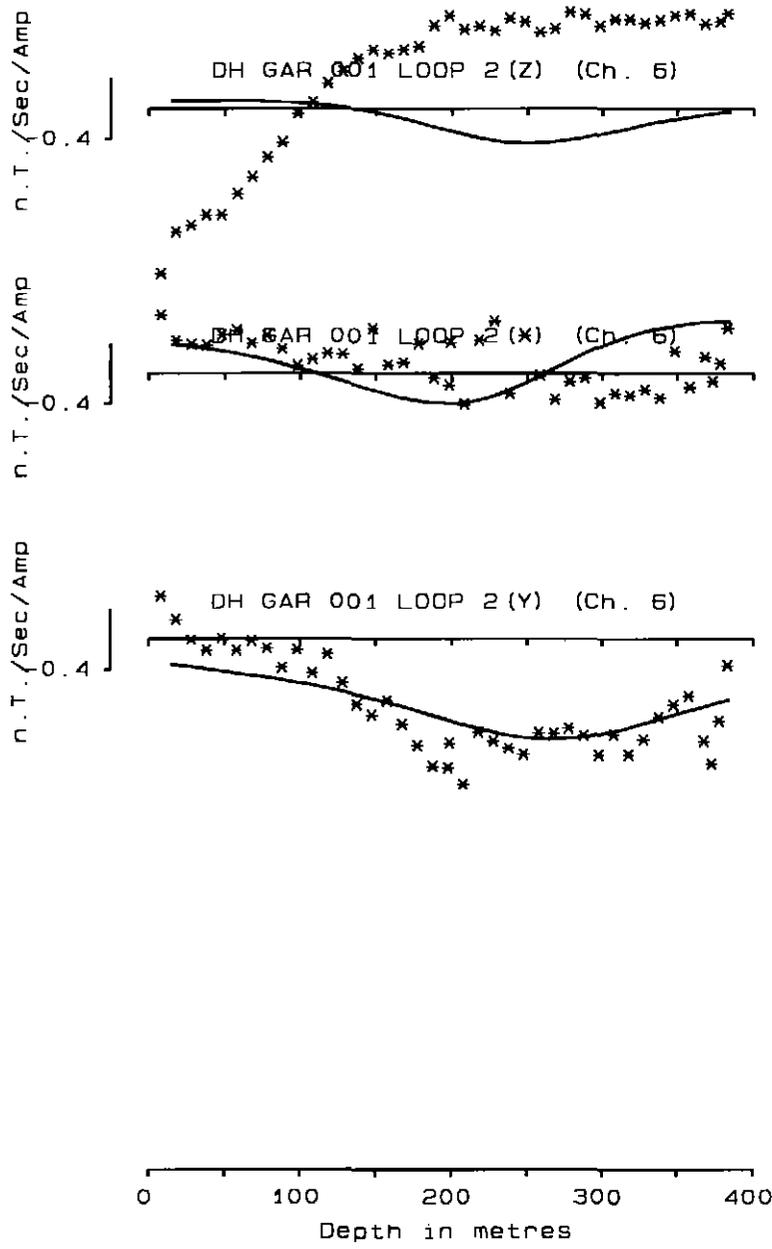
Mt. Lyell - Tas.

DH TEM Survey Gar 001

Film. Modelling Loop 1

Hor. Scale - 1:5000





R. Deakin & Assoc.

R.G.C. Exploration

Film S1

Type = Sphere

Centre x y z Co-ords are :

2150.0E 2030.0N 180.0RL

Radius = 10.0 m

Garfield

Mt. Lyell - Tas

DH TEM Survey Gar 001

Filmt. Modelling Loop 2

Hor. Scale - 1:5000

CRONE GEOPHYSICS & EXPLORATION LTD

OUTER-RIM EXPLORATION SERVICES

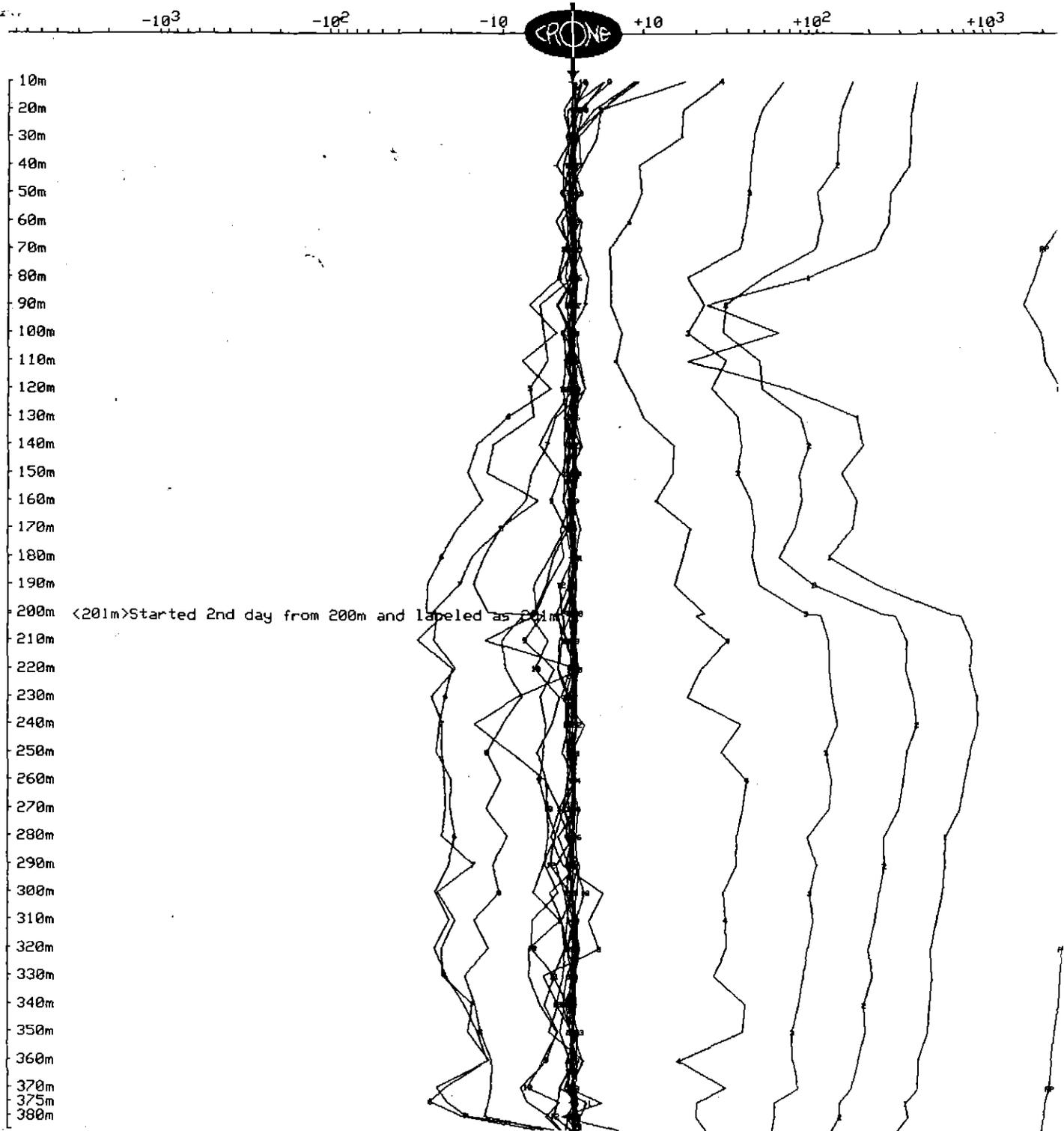
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Hole : GAR-001
Tx Loop : 2, HILL
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Y COMPONENT dBy/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2000

916167



5 cm

CRONE GEOPHYSICS & EXPLORATION LTD

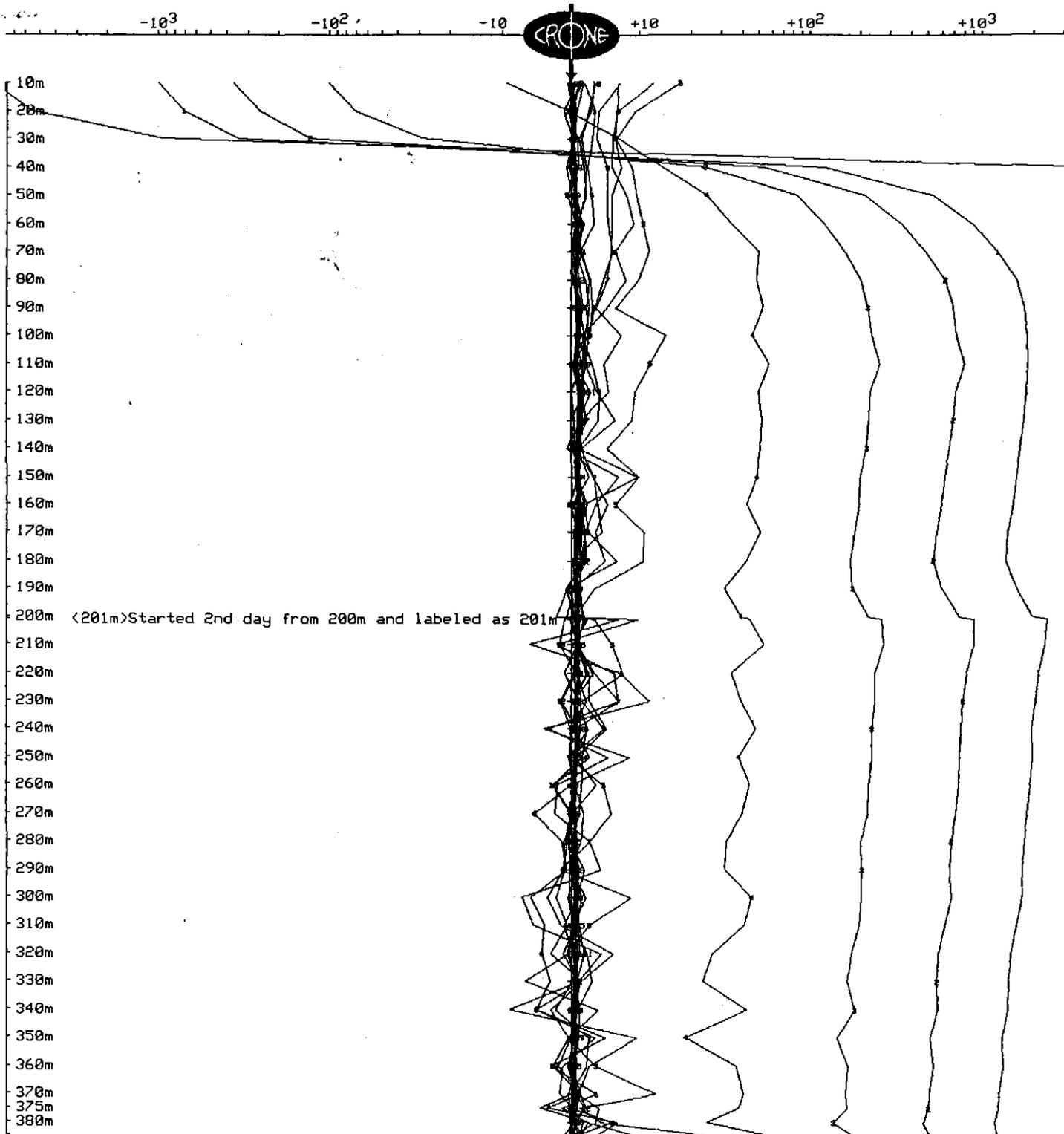
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Data Corrected for Probe Rotation using Orientation Tool #2
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Scale: 1:2000



916169

CRONE GEOPHYSICS & EXPLORATION I

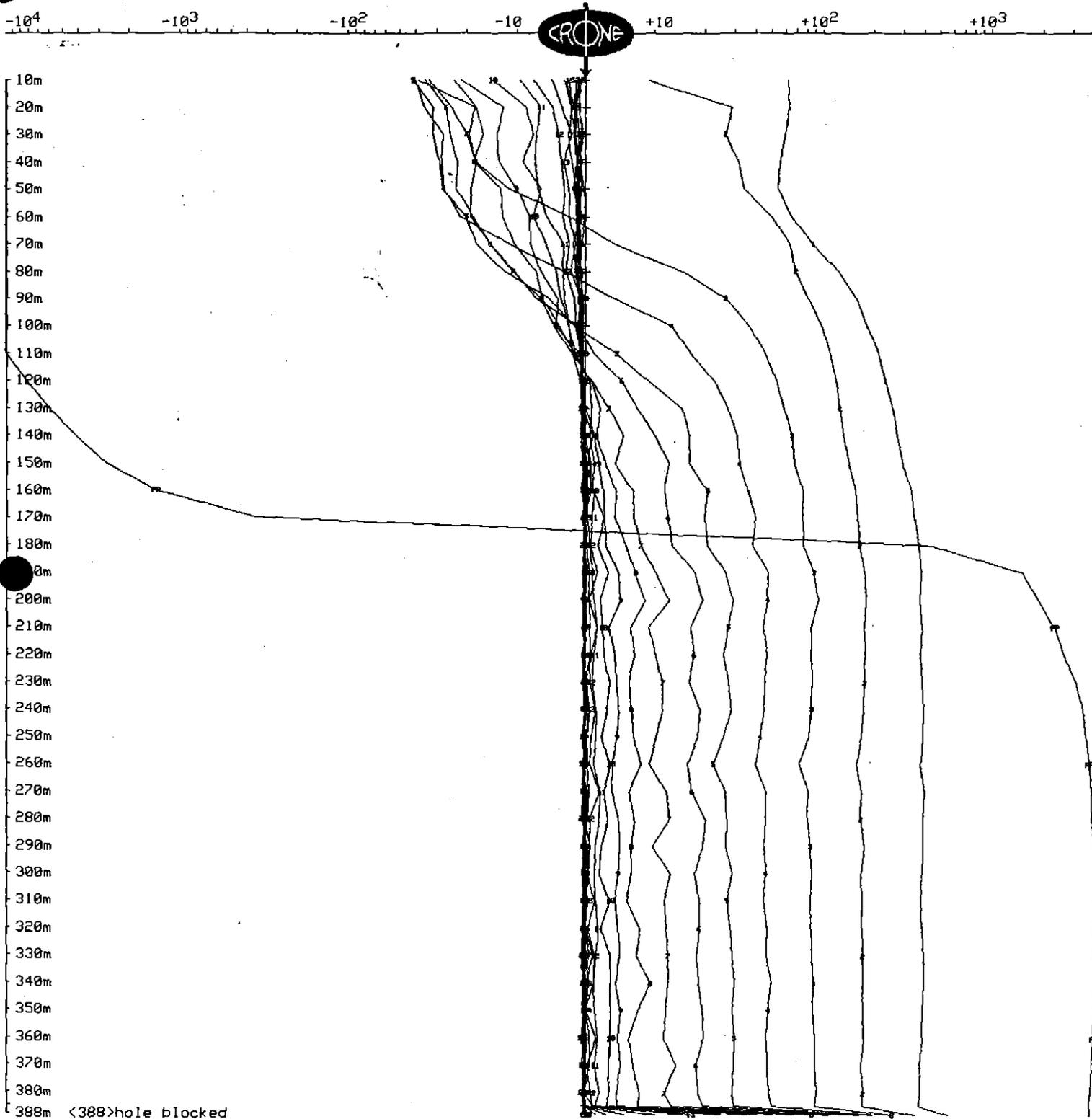
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Tx Loop : 2,HILL
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Z COMPONENT dBz/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2000



5 cm

CRONE GEOPHYSICS & EXPLORATION LTD

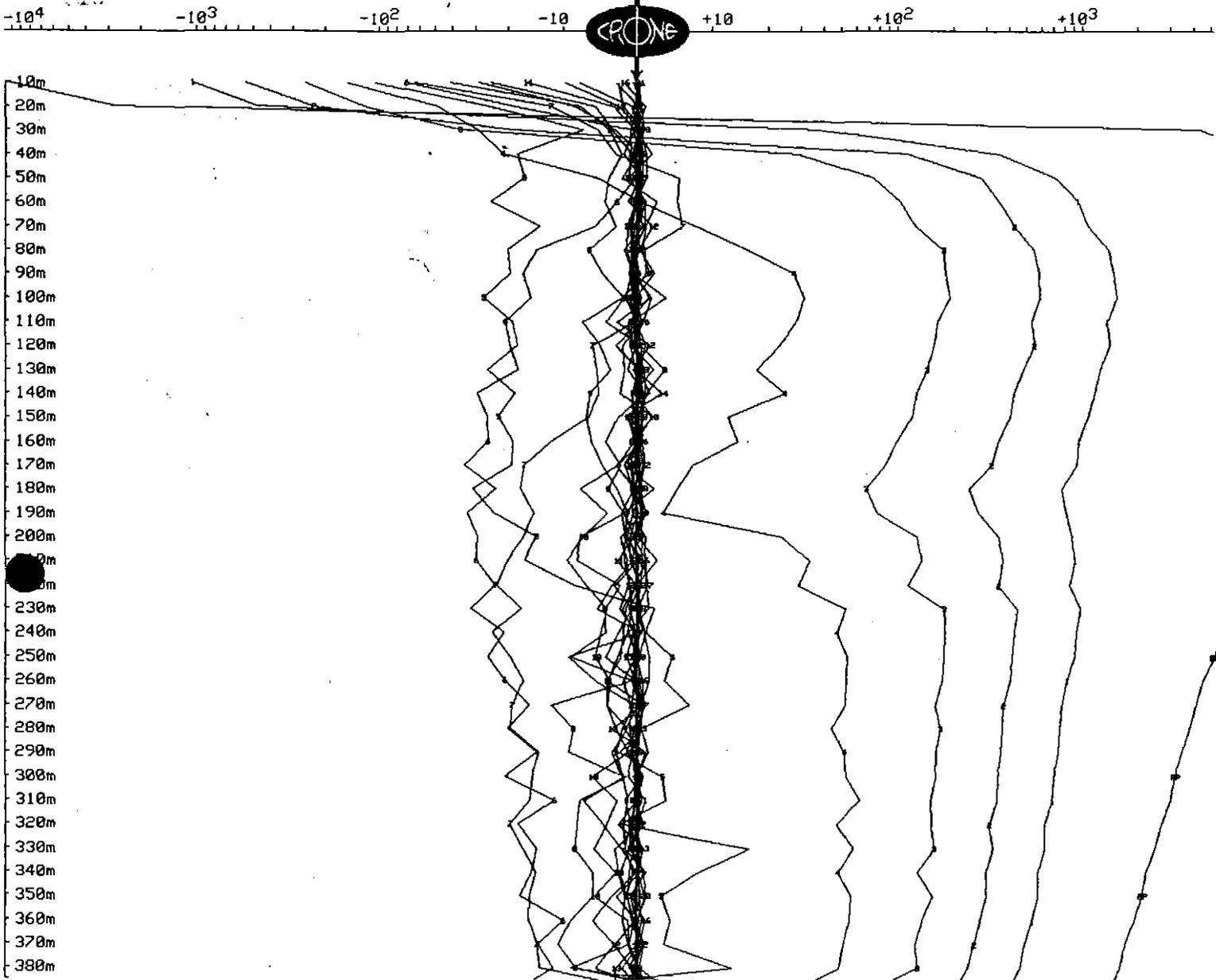
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Scale: 1:2500



CRONE GEOPHYSICS & EXPLORATION LTD

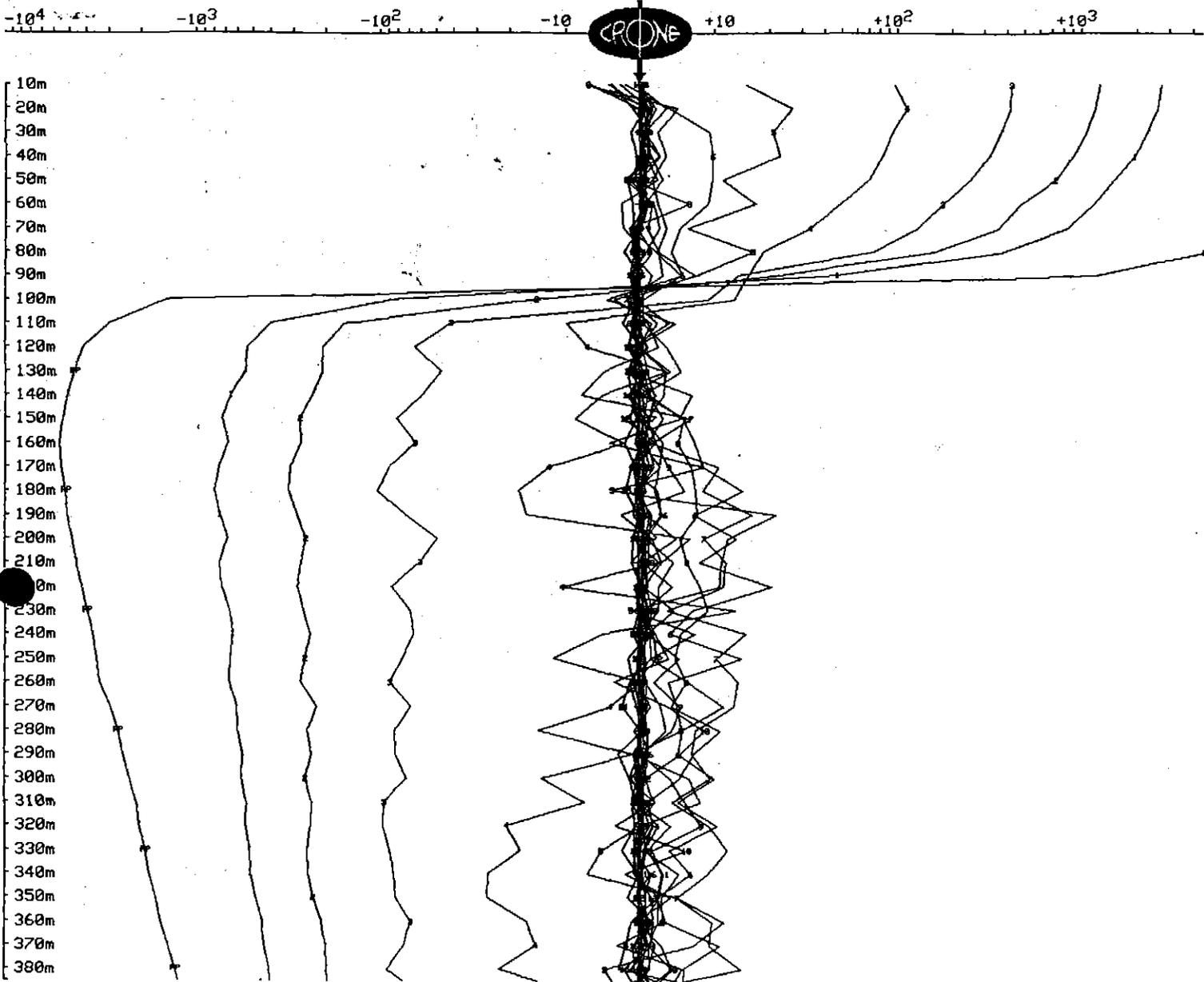
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Grid : GARFEILD
Date : 25/11/93

Hole : GAR-001
Tx Loop : 1, VALLEY
File name : GAR1XY1.PEM

Data Corrected for Probe Rotation using Orientation Tool #2
X COMPONENT dBx/dt nanoTesla/sec - 23 channels and PP

Scale: 1:2500



5 cm

CRONE GEOPHYSICS & EXPLORATION LTD

BOREHOLE PEM

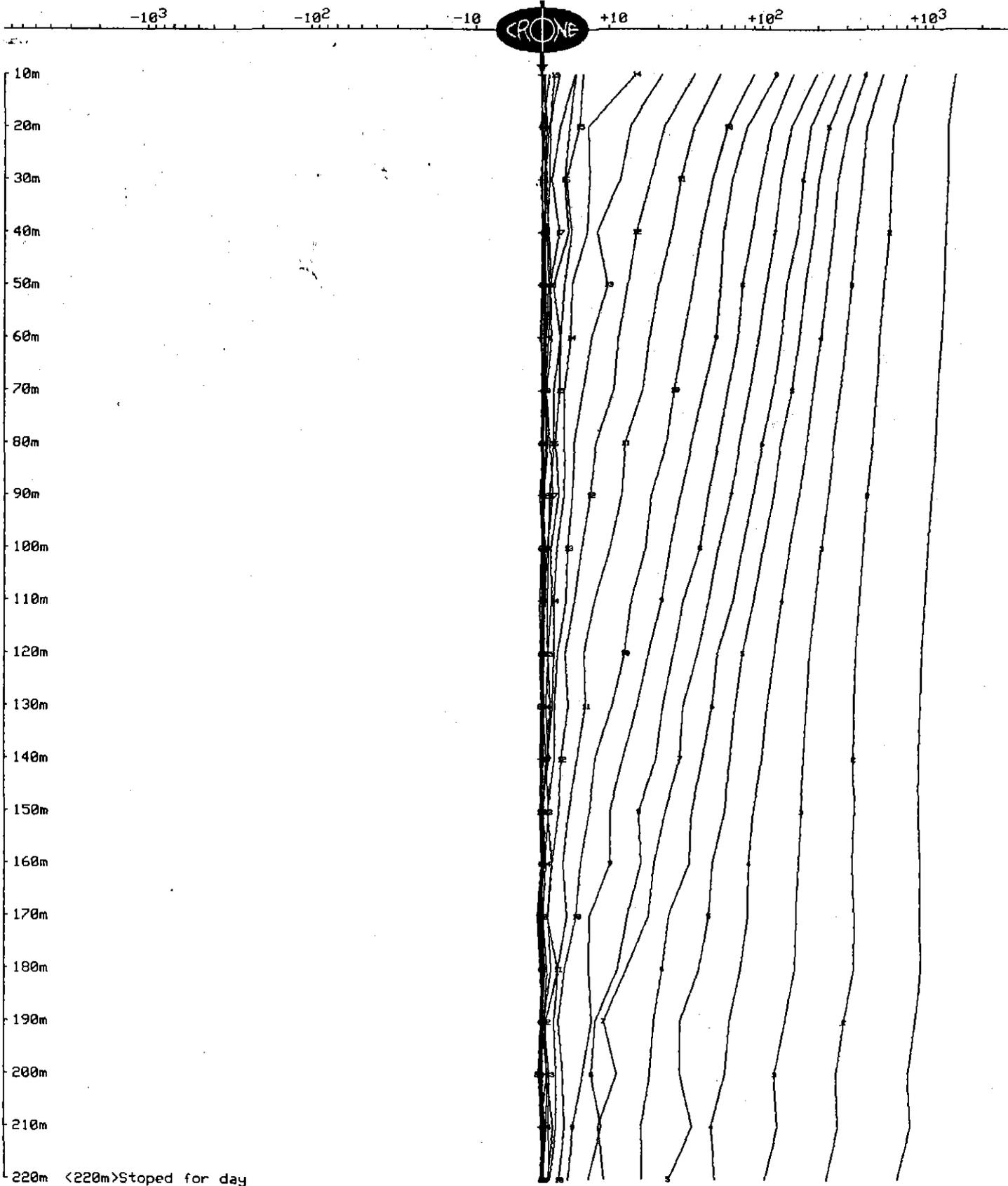
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Tx Loop : 1, collar
File name : GAR1Z1.PEM

916172

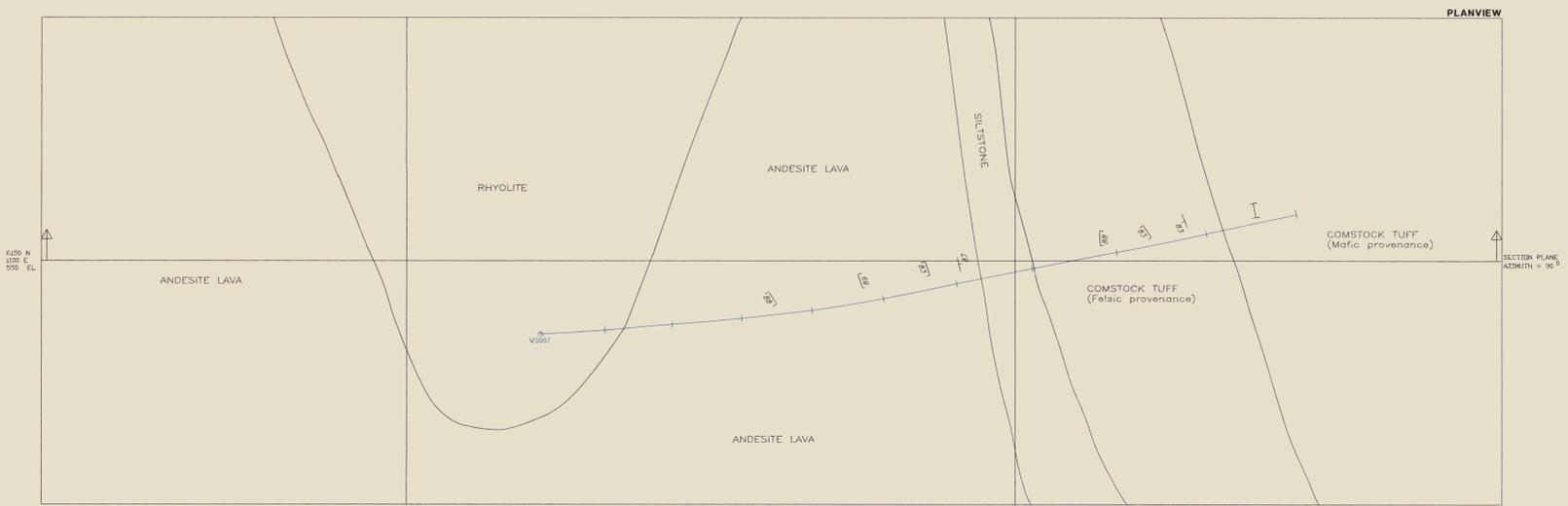
Z COMPONENT dBz/dt nanoTesla/sec - 23 channels and PP

Scale: 1:1000



220m <220m> Stopped for day

5 cm

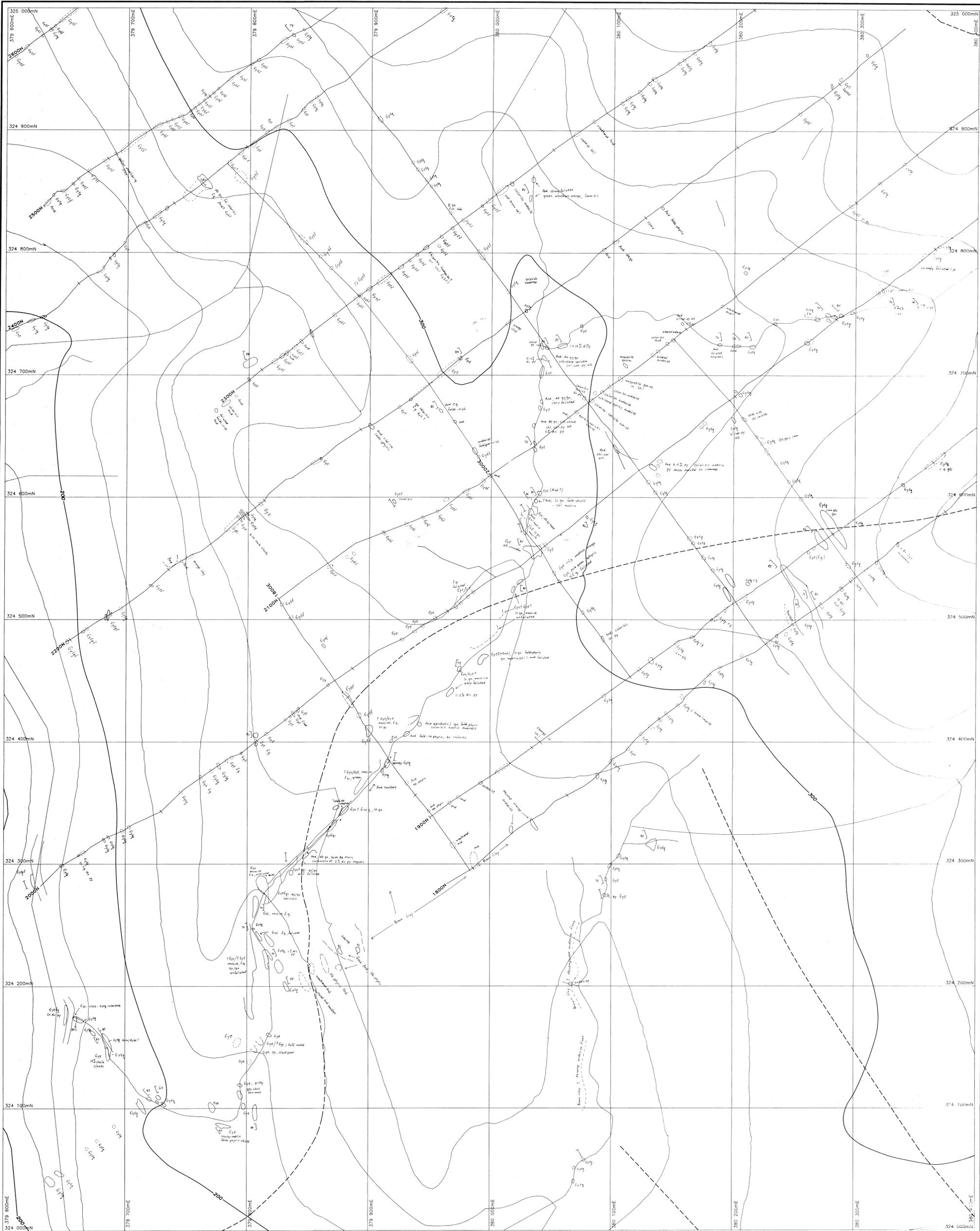


94-3569

DOWNHOLE GEOLOGY LEGEND

- VFLX CRYSTAL-RICH FELSIC VOLCANICLASTIC
- VFLM MEDIUM-GRAINED FELSIC VOLCANICLASTIC
- DFLM MEDIUM-GRAINED FELSIC EPICLASTIC
- LB BASALT LAVA
- LA ANDESITE LAVA
- VAM MEDIUM-GRAINED ANDESITIC VOLCANICLASTIC
- VFLC COARSE FELSIC VOLCANICLASTIC
- VFL FELSIC VOLCANICLASTIC
- LF FELDSPAR-PHYRIC LAVA
- EAXM MEDIUM-GRAINED CRYSTAL-RICH ANDESITIC EPICLASTIC
- SHAL SHALE
- PYRITE ALTERATION

RGC EXPLORATION PTY. LIMITED		916173
COMSTOCK AREA M.L. 30M/80		
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DATE	JUNE 1993	
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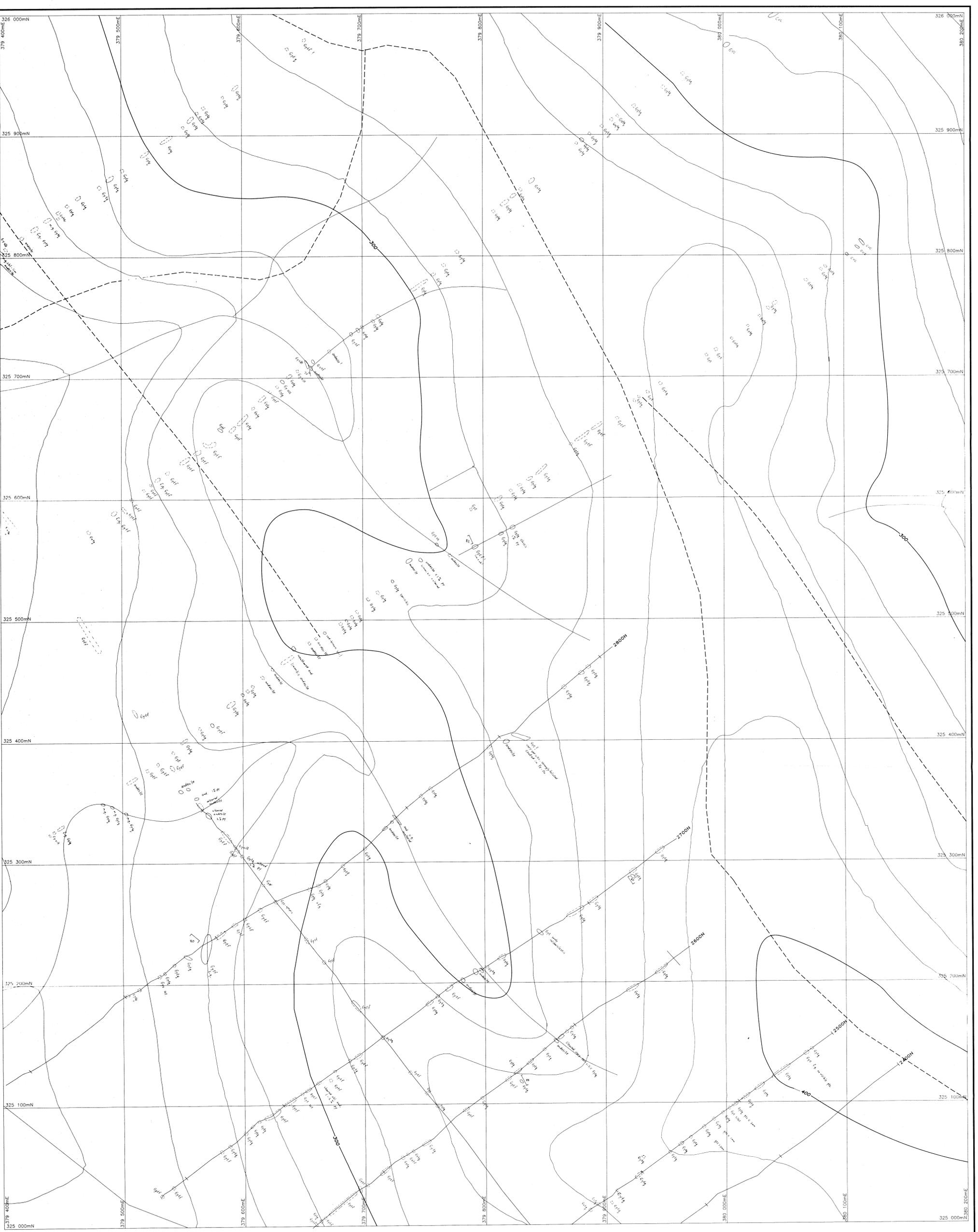
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	Ogl	GORDON LIMESTONE, COMMONLY WEATHERS TO BLACK "PUG"
	Ooc	OWEN CONGLOMERATE AND SANDSTONE
	Otc	COARSE VOLCANICLASTIC CONGLOMERATE AND SANDSTONE
	Ota	BROWN-WEATHERING ANDESITIC ROCKS, FELDSPAR ± HORNBLENDE PHYRIC
	Oya	VOLCANICLASTIC GREYWACKE, SANDSTONE
	Oyl	FINE-GRAINED WHITE LAVA, INTRUSIVES & JUVENILE VOLCANICLASTICS (± QUARTZ PHYRIC)
	Oyf	GREEN CRYSTAL-RICH EPICLASTIC, FELDSPAR-PHYRIC WITH SUBORDINATE QUARTZ & SMALL LITHIC FRAGMENTS INTERBEDDED WITH DARK GREY SHALES
	Ocf	MASSIVE FELSIC FELDSPAR-PHYRIC LAVA, UNDIFFERENTIATED
	YALOWIDE RIVER SEQUENCE	Oyf
Oyf		FINE-GRAINED WHITE LAVA, INTRUSIVES & JUVENILE VOLCANICLASTICS (± QUARTZ PHYRIC)
CAMBRIAN	Oyf	FINE-GRAINED WHITE LAVA, INTRUSIVES & JUVENILE VOLCANICLASTICS (± QUARTZ PHYRIC)
	Oyf	FINE-GRAINED WHITE LAVA, INTRUSIVES & JUVENILE VOLCANICLASTICS (± QUARTZ PHYRIC)

SHEET LAYOUT

SHEET 1	
SHEET 2	
SHEET 3	
SHEET 4	
SHEET 5	

94-3569 1

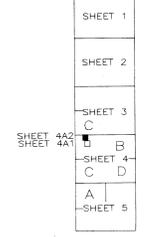
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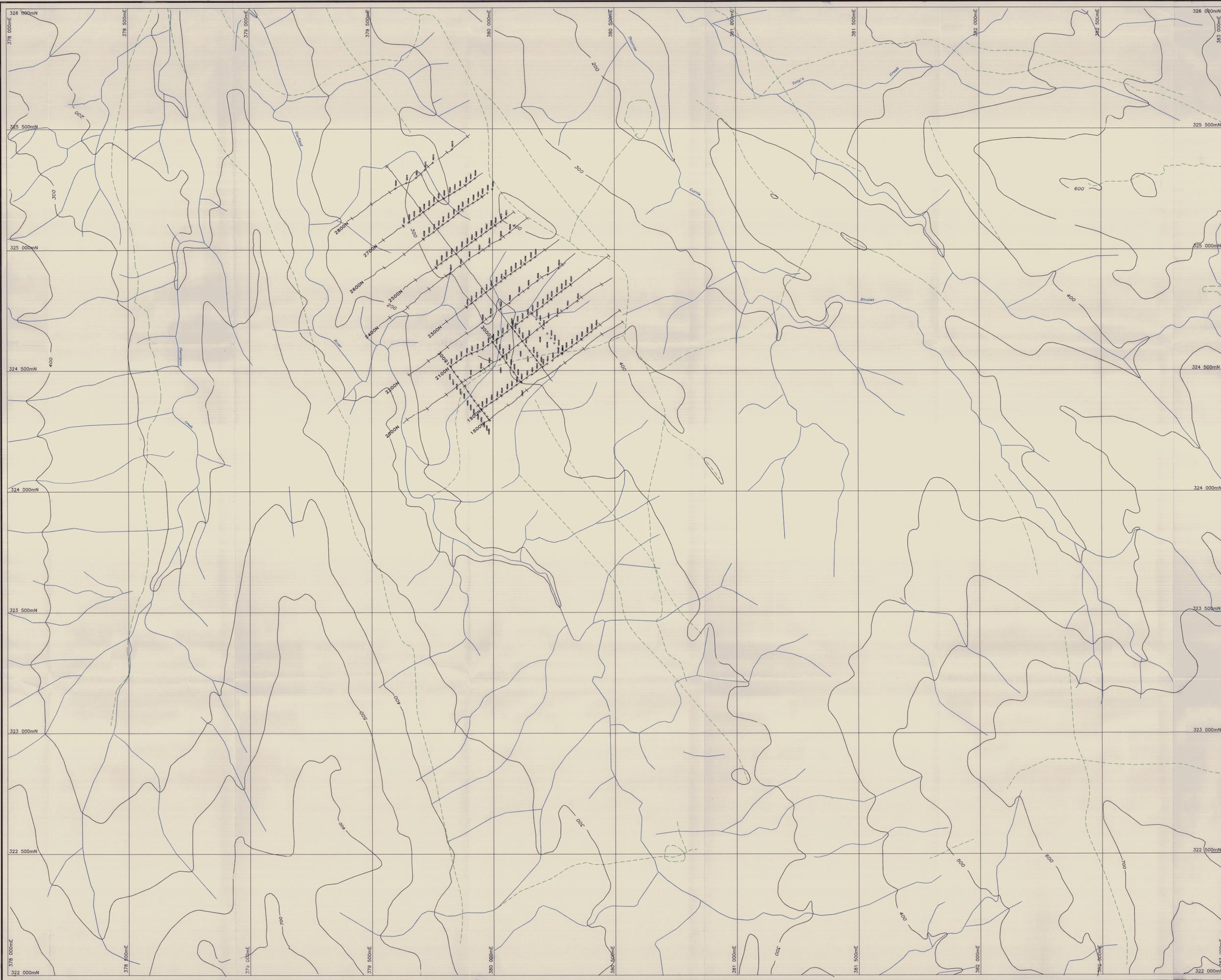
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	Oec	OWEN CONGLOMERATE AND SANDSTONE
	Etc	COARSE VOLCANIC CONGLOMERATE AND SANDSTONE
	Eta	BROWN-WEATHERING ANDESITIC ROCKS, FELDSPAR ± HORNBLENDE PHYRIC
	Eya	VOLCANIClastic GREYWACKE, SANDSTONE AND MUDSTONE
	Eyt	FINE-GRAINED WHITE LAVA, INTRUSIVES & JUVENILE VOLCANIClasticS (a) QUARTZ PHYRIC (b) FELDSPAR PHYRIC (c) MUSCOVITE PHYRIC
	Eyb	GREEN CRYSTAL-RICH EPICLASTIC FELDSPAR PHYRIC WITH SUBORDINATE QUARTZ & SMALL LITHIC FRAGMENTS, INTERBEDDED WITH DARK GREY SHALES
	Ecf	MASSIVE FELSIC FELDSPAR-PHYRIC LAVA, UNDIFFERENTIATED

SHEET LAYOUT

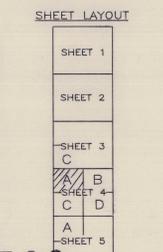


94-3569

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ROCKCHIP SAMPLE
SOIL SAMPLE



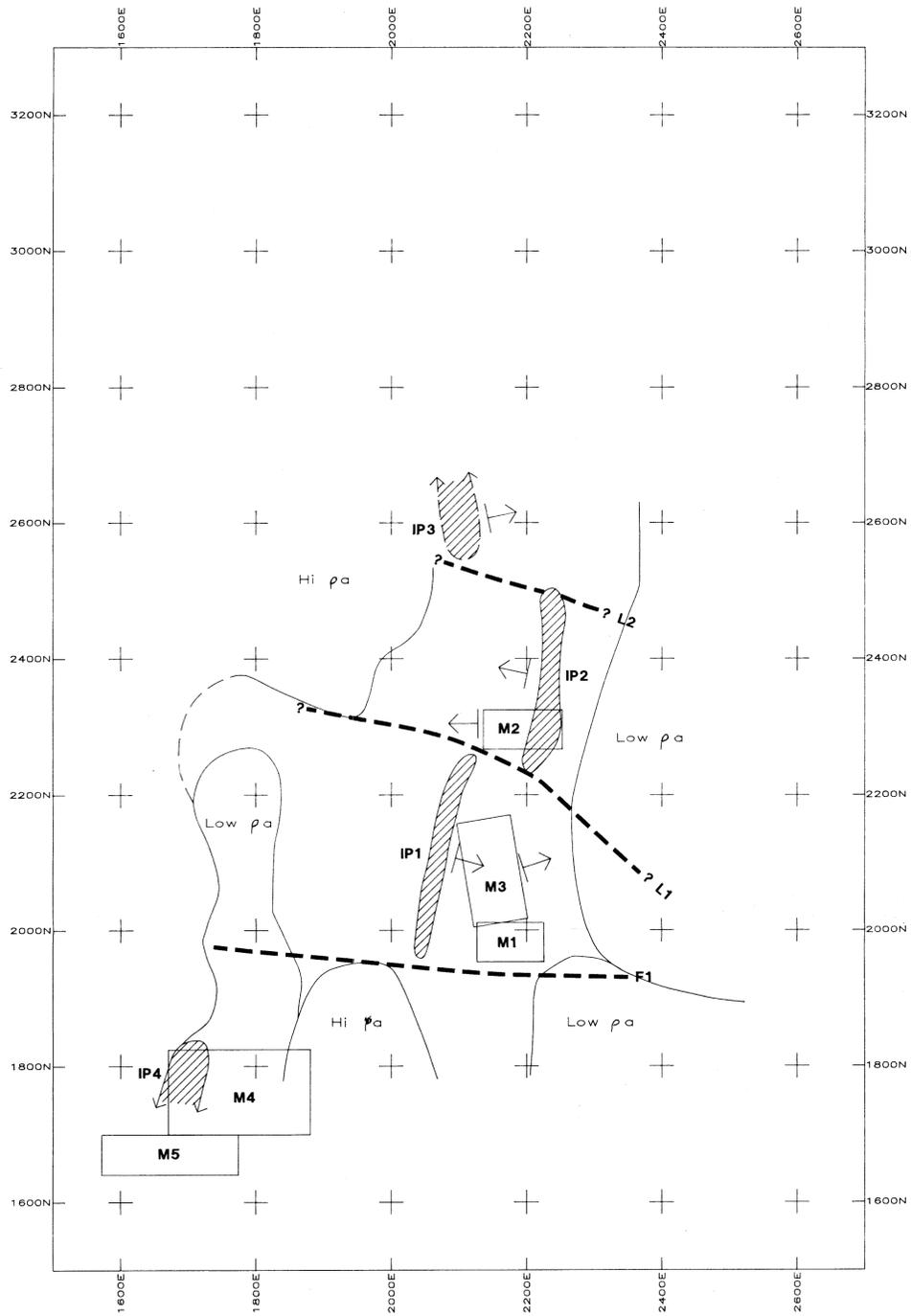
94-3569 916178

RGC EXPLORATION PTY. LTD

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DATE	MAY 1994	SOIL SAMPLE LOCATION PLAN
CHECKED		
SCALE	1:5000	

5cm

DRAWING ID. 5532/006 PLAN 6



- M1 — TOP OF DIPPING MAGNETIC BODY
- TOP OF DIPPING CHARGEABLE BODY (IP)
- PROBABLE TOP OF CHARGEABLE BODY (IP)
- — FAULT INDICATED BY IP & MAGNETICS
- ? ---? — PROBABLE IP LINEAMENT

94-3569

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COMPILED	S.MUDGE S.ROBERTS	
DRAWN	C.WELDON	
DATE	FEB 1994	
CHECKED		
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