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CRA EXPLORATION PTY. LIMITED

PROGRESS REPORT, ROCKY CAPE EL1/77

TROWUTTA - DEMPSTER PLAINS AREA

PERIOD ENDING 28TH FEB. 1983

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1. SUMMARY

A regional stream sediment sampling programme at an approximate density of 1 sample per 2 sq. km. has been completed following recommendations that the Smithton trough shows similarity to the major shale hosted lead-zinc ore deposits of the Selwyn Basin, Canada.

Field Mapping has indicated that the Smithton trough is a dominantly fault controlled basin, where horst and graben type faulting is predominant. Geologically, the trough comprises a sequence of basalts and associated volcanics overlying cherts and dolomites ascribed to the Smithton dolomite. This sequence of rocks unconformably overlies older sedimentary rocks comprising black pyritic shales, quartzites and siltstones.

The stream sediment programme revealed lead anomalies in the Julius River, the Meryanna area, Wents Creek, Stephens Rivulet and an arsenic anomaly in the Sumac rivulet. Resampling of the latter three anomalies failed to repeat the lead and arsenic values initially obtained.

Detailed follow up at the Julius River and the Meryanna area includes detailed stream sediment sampling, gridding, 'C' horizon soil sampling and ground geophysics (magnetics, VLF and limited S.P.). Aeromagnetic and airborne INPUT targets were followed up and found to be caused by basalt and black shales respectively.

2. INTRODUCTION

Following recommendations (Legge, 1980) that parts of the Rocky Cape group showed similarities in stratigraphic and structural style with the Selwyn basin style of shale-hosted lead-zinc mineralisation, the Trowutta - Dempster Plains area was selected specifically for this type of target.

Further confirmation as to the suitability of this area was given by an evaluation of past stream sediment data which indicated regionally anomalous copper, lead and zinc values within the Smithton trough.

This report details the exploration conducted between 1981 - 1983 which has entailed a major programme of regional stream sediment sampling at an average density of 1 sample per 2 sq. km. and subsequent follow up over selected target areas.

3. CONCLUSIONS

Regional stream geochemistry has proved an effective technique in assessing this area. Two targets, the Julius River and the Meryanna area were considered worthy of further exploration, whilst the remainder have little potential for the development of lead-zinc mineralisation.

Detailed exploration at the Julius River anomaly indicated that although a strong stream sediment response was obtained, soil geochemistry showed that the anomaly was of limited extent. Geophysical methods employed were unable to distinguish between a true anomaly and a karst source.

Possible strike extensions to this anomaly were tested with negative results. It is concluded that the anomaly is derived from either a disseminated source within the chert or dolomite or from minor shears within these units.

The Meryanna area is characterised by very weak soil geochemistry, coincident with a zone of limonitic outcrops having a predominant zinc-nickel rich geochemistry. Ground magnetics indicates that the high amplitude/high frequency responses obtained are indicative of shallow, near surface sources. The limonitic outcrops lie on relative topographic highs and are concluded to represent erosional basaltic remnants.

Despite the structural and lithological similarities to the Selwyn basin, it is considered that the black shale sequences exposed at the eastern margin of the trough have insufficient thickness to enable the generation of brines sufficiently rich in metals to produce economic mineralisation.

The possibilities of mineralisation within the chert and dolomite seem equally remote. It is postulated that the process of silicif-ation evidenced by the widespread chert outcrop in this area has leached out any metals within these rocks and if deposited has been subsequently eroded.

4. RECOMMENDATIONS

It is recommended that this portion of EL1/77 as shown on Plan TASh 1269 be relinquished.

5. HISTORY OF PREVIOUS INVESTIGATIONS

Little previous work has been undertaken in this part of EL1/77 owing to the lack of known mineralisation. It has been subject to three regional drainage programmes by Pickands Mather Int. (stream sediments), ANZECO and CRAE (panned concentrates). Anomalies obtained from these surveys were marginal and not thoroughly evaluated.

Previous drainage data has been collated and subjected to statistical evaluation using a computer package program entitled MICROGAS in order to obtain regional lead-zinc target areas (Weir 1982). Results from this evaluation indicated that the Trowutta - Dempster Plains district showed elevated values for lead (18 ppm), zinc (125 ppm) copper and cobalt and was therefore a prime target area for further exploration.

Geophysical information in this area is poor. The area was included in the 1956 aeromagnetic survey conducted by RTZ and in part by an airborne INPUT survey conducted by ESSO AUSTRALIA in 1973. Anomalies obtained from the INPUT survey were briefly examined and the majority attributed to black shales.

6. GEOLOGY

6.1 Regional Geology

The two major sources of regional mapping within the Smithton trough are Longman and Matthews 1961 and Matthews (1960) whose stratigraphy is summarised in Table 1. More recently, the Mines Department has published the 1:50 000 Smithton geological sheet to the north of the area with which some correlation has been established.

	Age	Details	Thickness (feet)
Upper Palaeozoic	Permian	Sandstone	100+
		Siltstone, mudstone, shale (fossiliferous)	220
		Mudstone	210
		Tillite	140+
	Devonian	Tabberabberan Orgeny, folding, intrusion of pink granite with Sn, W, Pb and Ag mineralization?	
Lower Palaeozoic	Cambrian	Basalt, tuff and interbedded greywackes	1,000+
		Greywacke, black and grey shale and intraformational breccia	500
		Breccia containing fragments of dolomite and chert in dolomite matrix	100—
	Disconformity		
"Younger" Precambrian		Smithton Dolomite (grey dolomite, chert and oolitic limestone)	1,200
	Unconformity ?		
		Bryant Hill Quartzite (quartzite and conglomerate)	2,000+
		Intrusion of basic dykes?	
		Interbedded quartzite, shale, sub-greywacke and rare conglomerate	2,000
		Black and blue-grey pyritic shale	1,000
		Interbedded green chloritic shale and quartzite	5,000+
		Neasy Formation (quartzite, slate and phyllite)	5-10,000
"Older" Precambrian		Intrusion of basic dykes, now amphibolites (?)	
		Keith Beds (schist and quartzite)	"several thousand"

Fig. 1 - Statigraphy of the Bluff point and Trowutta Quadrangles. Longman and Matthews - 1961.

6.2 Photo interpretation (Plan TASh 1253)

A photo interpretational study of EL1/77 was undertaken by Prof. S.W. Carey, and completed in 1981. The study was made at a scale of 1:40 000 and based on fracture analysis from which photogeological formations were proposed.

A description of the pertinent photogeological formations with regard to this portion of EL1/77 follows:

Nu and Upsilon Groups

These groups are probably of Cambrian age and occupy the trough of the Montagu synclinorium. They are characterised by subdued relief and a good deal of carbonate is suspected.

Sigma Group

This is the dominant group within the portion of EL1/77 and includes the Smithton dolomite. The Sigma Group underlies the Upsilon group conformably and overlies the Phi group with unconformity. The study indicates that folding is more characteristic than faulting and that there may be some overprinting of the WNW Tyennan fold trends by later NNE Tabberabberan folds. The group often has strong, positive total intensity aeromagnetic anomalies which are probably caused by basaltic lavas and other volcanics.

Phi Group

Sink holes are common within this group which is generally characterised by low relief and scant outcrop. The formation appears to contain much dolomite and little quartzite.

Epsilon Group

The Epsilon group correlates in part with the Balfour and Interview groups and has the photogeological texture of slates and greywackes.

6.3 Present Investigations (Plan TASh 1270)

Reconnaissance field mapping and rock chip sampling has been undertaken over the majority of roads in this area in conjunction with limited stream and ridge and spur traverses.

6.3.1 Structure

The overall structural setting of the Smithton trough appears to be an initial basin whose sedimentation has been dominated and controlled by two major NE trending faults, the Duck River fault and the Julius River fault. A Third, parallel ERTS photolineament is apparent to the SE of the Julius River fault.

The faulting is of horst and graben style and has resulted in the formation of three structural/lithological domains between which reasonable correlation can be obtained.

1. NW Domain - The structural attitude of this domain is characterised by a regional N.W. bedding trend. Moderate to steep anticlinal folding is observed with dips varying between 50 and 70 degrees to the SW or NE.

2. Central Domain - The central domain is bounded by the Duck River and Julius River faults and is characterised by an intense aeromagnetic signature. The domain is interpreted as being a downfaulted rift within which the greatest thickness of basic volcanics and associated sediments has accumulated.

3. SE Domain - Gentle folding or warping about NE axes is characteristic of this domain. A possible low angle unconformity separates the Smithton dolomite and underlying quartzites from the older sedimentary rocks observed to the east.

6.3.2 Rock Type Descriptions

Descriptions are given in stratigraphic order.

Cambrian Volcanics

The unit mapped as Cambrian volcanics includes basalts, tuffs and associated tuffaceous sediments. The unit is most extensive in the central domain though several outhers crop out to the east.

The basalt is typically fine grained and composed of plagioclase, pyroxene, chlorite and magnetite and is often amygdaloidal.

Pyrite and native copper are occasionally present. Scoriaceous textures are common and in some cases pillow structures may be observed. The weathered outcrop is typically red-brown in colour.

Purple tuffaceous mudstones appear to underly the basalt in the vicinity of the Kanmunnah bridge and in the Stephens Rivulet. The rock is distinctly purple in colour, is well bedded and has an earthy, tuffaceous texture.

A basal? tuffaceous breccia can be observed to the west of the Julius River and is typically a green chloritic rock containing a variety of angular to sub angular volcanic fragments.

Cambrian Siltstones

A siltstone-greywacke unit underlies the basic volcanics and is observed in all three domains. The unit is a fine grained, well bedded argillaceous rock varying to a siltstone. The rock is generally well sorted and no grading has been determined but it occasionally contains mudstone clasts or pellets up to 3 mm across. Finely disseminated pyrite is often observed and the rock when fresh is grey to black, though weathers to an orange brown colour. Lithic fragments have been identified by petrological examination and a primary or reworked volcanic component may be present.

Dolomite Breccia

Domomite breccia is observed only in the vicinity of the Julius River. The rock is composed of sub angular to sub rounded clasts of dolomite and chert set in a fine grained dolomitic matrix. The unit is well bedded and appears to be conformable with the surrounding rocks and could therefore represent an intraformational breccia. A distinct facies change is apparent to the north of the Arthur River where the rock can be described as a dolomitic

siltstone, though it still retains angular fragments of chert and dolostone set in a pyritic, black, carbonaceous matrix. This unit is quite distinct and provides a good marker horizon.

Chert

The term chert has been used purely as a mapping term to describe a suite of highly silicified rocks rather than in the context of a chemical sediment. The rock is restricted to the SE domain, is highly silicified, shows a variety of textures and varies from white to black in colour. Textures vary from a well banded rock thought to represent alternating layers of original mudstones and dolomite sediments to a variety of breccias.

Stromatolitic structures composed of concentrically banded layers of fine grained grey and white material have been observed, though not in situ, and may indicate a shallow water depositional environment. Small ovoid clasts? are common and are reminiscent of an oolitic carbonate rock.

Dolomite

A dolomitic unit apparently underlies the chert and appear to be conformable though the contact between the two units has not been observed. The dolomite outcrop is very patchy and irregular and it is uncertain whether the chert represents highly silicified dolomite or exists as a separate unit.

The dolomite itself is a white fine grained to crystallise poorly bedded rock that crops out in the Julius River and at a number of other localities to the south east. Karst features are common, such as caves and sinkholes.

Quartzite

A generally massive white quartzite underlies the dolomite and appears to be equivalent to the Forest quartzite as mapped in the Smithton area by the Department of Mines. The quartzite is moderately well bedded though sedimentary structures appear to have been destroyed.

UNCONFORMITY

Quartzite

An impure quartzite with numerous shaley partings and interbeds is observed to the south east of the area and conformably underlies the black shales.

Black Pyritic Shales

Black, pyritic, carbonaceous shales are observed to the south east, in the vicinity of the Horton River. Euhedral pyrite crystals are developed along bedding planes and are often rimmed by calcite and occasionally accentuate ripple marks. Concretionary nodules are also frequently developed and contain some pyrite, though no relict structures have been observed within the nodules. Limonitic coatings after pyrite are common. The unit shows a gradational contact with the underlying green chloritic banded

siltstones.

Green Chloritic Siltstones

This unit is exposed in the most southern part of the area. The rock is a green often highly chloritic siltstone showing compositional banding. A well developed slatey cleavage is prominent in places and the unit is probably equivalent to the Balfour type pyjama siltstones.

7. GEOPHYSICS (PLAN TASh 1254)

Geophysical targets arising from previous airborne surveys have been ground checked with mapping as the main method. Traversing using ground magnetics was considered unnecessary as the anomalies were caused by Cambrian basalts. The anomalies are as follows -

1. A belt of high magnetic intensity trending south west of Trowutta, attributable to a substantial thickness of Cambrian basalt.

2. The Lagunta Creek anomaly - caused by Cambrian basalt with associated purple mudstones and tuffaceous breccia. An INPUT anomaly is located to the south of the magnetic anomaly and is attributed to black shale.

3. A north easterly trend of low intensity anomalies aligned on an ERTS photolinear - attributed to basalt.

8. GEOCHEMISTRY PLANS TASh 1257-1064 TO 1271-1276

A programme of regional stream sediment sampling was instigated at a density of 1 sample per 1-2 sq. km. in order to resample anomalies obtained from previous surveys, and to obtain more information on the prospective dolomite/black shale belt as well as routine road mapping and chip sampling.

A total of approximately 270 minus 80# stream sediment samples were collected in this area between 1981 - 1983. Geochemical assay ledgers are located in Appendix 1 and 2. Bulk grab samples weighing approximately 2 kg. were collected from suitable trap sites within creeks, dried, sieved to -80#, and routinely analysed by Analabs for the following elements -

Cu Pb Zn Ni Co Ag by AAS

Ba by ICP

As using a vapour hydride determination. Sn, W by XRF.

Occasional batches were submitted for Au, V, Sb, Bi.

Initial concern using the -80# fraction owing to a lack of identifiable dispersion trains was overcome by analysing a suite of samples for both the -80# and the -10# +20# fractions. In general, the -80# fraction was the more sensitive and was utilised throughout the survey.

Element thresholds were calculated using log-probability plots after Sinclair (1976) and are located in Appendix 3.

8.1 Rock Chip Sampling

Routine rock chip samples have been collected along roads and within creeks. The samples have been analysed for a range of elements, Cu, Pb, Zn, Ni, Co, As, Sn, W by AAS and XRF. Locations are plotted on Plan TASh 1265-1268, and assay details are given in Appendix 4.

Assay ranges for the more important elements are outlined in Table 1.

Table 1 - Approximate element ranges for the major rock types

	Element ppm					
Rock Type	Cu	Pb	Zn	Ni	Co	As
Basic volcanics	31-320	2-30	51-200	71-158	33-86	2-10
Grey, green to red Shaley siltstones	36-150	13-22	18-120	25-145	11-56	9-19
Dolomite breccia	10-30	13-33	15-27	25-51	19-27	18
Chert	5-19	1-39	4-26	75-340	1-5	1-11
Dolomite	1-12	1-28	6-85	18-242	2-14	1-5
Quartzite (older)	8-150	2-6	11-29	33-240	5-9	3-5
Black Shales	3-290	3-117	10-99	27-310	7-42	2-250
Green chloritic banded siltstones	2-230	1-72	51-151	8-140	8-43	1-16
Chloritic Shales	8	7	106	38	14	2
'Pyjama rocks'	8-18	7-10	38-106	38-46	14-18	2-9

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Samples having high arsenic values, especially the black shales were resubmitted for gold analyses. Pyrite taken from the black shales was also tested for gold but maximum assays returned were 0.03 ppm Au.

8.2 Element Thresholds

Probability curves and calculations are located in Appendix 3

Lead

Lead shows a complex distribution with approximately 90% of the samples under 30 ppm Pb. Threshold values have been selected at the following intervals.

Background	< 24 ppm
High background	possibly anomalous 24-54 ppm
Anomalous	> 54 ppm

Zinc

Zinc has a relatively simple distribution with four distinct populations. Threshold values have been selected at -

Background	< 30 ppm
High Background	30 - 85 ppm
Possibly anomalous	85 - 420 ppm
Anomalous	> 420 ppm

Copper

A very complex distribution is evident from the cumulative frequency calculation since the distribution of copper is reasonably constant up to 200 ppm. Threshold values have been selected at -

Background	< 27.5 ppm
High Background	27.5 - 64 ppm
Possibly anomalous	64 - 100 ppm
Anomalous	> 100 ppm

Nickel

Nickel has a relatively simple distribution with three major populations evident. Threshold values have been selected at -

Background	< 24 ppm
High Background	24 - 80 ppm
Possibly anomalous	80 - 370 ppm
Anomalous	> 370 ppm

Arsenic

The Arsenic distribution is simple with 88% of the samples being less than 10 ppm As. Threshold values have been selected at -

Background	< 6.4 ppm
High Background	6.4 - 10 ppm
Possibly anomalous	10 - 30 ppm
Anomalous	> 30 ppm

Barium

The Barium distribution probably suffers from a lack of data especially at the lower population levels. Thresholds have been selected at -

Background	< 60 ppm
High Background	60 - 95 ppm
Possibly anomalous	95 - 250 ppm
Anomalous	> 250 ppm

Cumulative frequency calculations have not been made for Sn, W, Ag as their assays are all in the background category.

8.3 Interpretation

The following anomalous targets were obtained from the regional stream sediment sampling programme and either marked for follow up or eliminated on the basis of their geochemistry and/or geological setting.

Anomalous - possibly anomalous values of Cu, Ni, Co generally indicated a derivationfrom the Cambrian volcanic sequences and were eliminated from the list of true anomalies.

Julius River

Anomalous values of lead (340 ppm) and zinc (2500 ppm) were obtained in a tributary of the Julius River. This was considered the major target in this area since low responses of copper and nickel were obtained.

Wents Creek

A 195 ppm lead value was obtained from Wents Creek which occurs approximately 2 km to the north east of the Julius River anomaly.

Meryanna Area

The first pass of sampling in this area failed to obtain anomalous lead-zinc values. However, limonitic float collected simultaneously assayed Zn 4150 ppm, Cu 154 ppm, Ni 860 ppm, Co 450 ppm and was considered worthy of further investigation.

Resampling of this creek gave anomalous lead values of 63 ppm and 125 ppm and justified its categorisation as a true anomaly.

Stephens Rivulet

Anomalous values of copper (180 ppm), lead (440 ppm), zinc (1000 ppm) nickel (480 ppm) were obtained in a tributary of the Stephens Rivulet, east of the Blackwater Road. Initial appraisal indicated the presence of basalt, however, the high tenor of the lead and zinc values was considered unusual.

The geological position of this anomaly is favourable, at the junction of the Duck River and Marrawah faults.

Sumac Rivulet

A single arsenic (89 ppm) nickel (480 ppm), cobalt (107 ppm), zinc (580 ppm) occurs in a tributary south of the Sumac road.

Trowutta Area

Numerous copper, nickel, cobalt anomalies were obtained from creeks draining the escarpment north of the Arthur River. Outcrop and float at all these localities indicated a basaltic source and no further work was required.

Julius River South

Marginally anomalous values for lead (70 ppm, 48 ppm) were obtained in the upper reaches of the Julius River. However, nickel values are in the range of 154 - 230 ppm Ni, cobalt 210 ppm, whilst copper was low.

The anomaly was attributed to the Cambrian volcanic sequence cropping out in this vicinity.

9. DETAILED INVESTIGATIONS

Follow up work and more detailed investigations were completed at the following localities: (Plan TASh 1270)

1. Wents Creek
2. Sumac Rivulet
3. Stephens Rivulet
4. Julius River
5. Meryanna area

The first stage of follow up included resampling of the original sites and then collecting stream sediments at 100 - 200 m intervals up the relevant creeks to close off the anomaly. Gridding, soil geochemistry and ground geophysics were employed at only the Julius River and Meryanna areas.

9.1 Wents Creek

Resampling of the original 195 ppm Pb anomaly at the original and a number of other sites within this creek failed to repeat the original anomaly. Maximum values obtained were, 5 ppm Pb. Outcrop in this vicinity revealed a monotonous sequence of flat lying chert.

9.2 Sumac Rivulet

The original 95 ppm arsenic anomaly was not repeated during resampling of the original site. Arsenic values from 2 stream sediments and one panned concentrate were all less than 50 ppm As. Maximum assay values were 10 ppm Pb, 120 ppm Zn and 24 ppm Cu.

Outcrop in the creek was dominantly dolomite. No further work was conducted at this locality.

10. STEPHENS RIVULET (PLANS TASh 1250-1252)

A strong lead-zinc anomaly was obtained from two samples in the Stephens Rivulet. Values of 440 ppm Pb, 1000 ppm Zn were obtained in a tributary, whilst values of 110 ppm Pb and 460 ppm Zn were obtained from the main creek, just above the junction with the anomalous tributary.

Follow up comprised geological mapping collection of stream sediment samples at 100 - 200m intervals and charting the creek using compass

and topofill. Assay ledgers are located in Appendix 5.

The initial batch of stream sediment samples including the resamples of the original sites returned very low lead assays, maximum 8 ppm Pb. However, the copper and zinc values were very consistent, approximately 120 ppm Cu, 200 ppm Zn. This is consistent with a basaltic derivation as indicated by mapping.

Further resampling below the anomaly and higher up the tributary was instigated, and the samples sent to Comlabs in South Australia for analysis, together with the original anomalous samples.

Assay values returned were comparable, especially for the original samples, but were an order of magnitude higher than those analysed at Analabs at the lower detection levels.

Geologically, the anomaly lies within basalt and away from the junction of the Marrawah and Duck River faults. Since the lead anomaly could not be repeated, no further work was undertaken.

11. JULIUS RIVER (PLANS TASh 65-72)

Follow up methods utilised at the Julius River anomaly include detailed stream geochemistry, gridding, soil geochemistry, ground magnetics and limited S.P. The anomaly is located in part within the Julius River Forest Reserve owing to the existence of caves in dolomitic rocks.

11.1 Geology (Plan TASh 65)

The geology of this area is simple with chert apparently conformably overlying dolomite cropping out in the Julius River. Strike of the rocks is to the NNE with gentle westerly dips up to 30 degrees. The dolomite is a white crystalline dolomite whilst the chert varies in colour from grey to black and in texture.

11.2 Geochemistry

11.2.1 Stream Geochemistry

The anomalous tributaries draining into the Julius River were mapped using compass and topofill, whilst -80# stream sediments were collected at 100m intervals. The stream sediments show an even dispersion train down both creeks with a maximum of 1900 ppm lead, 2650 ppm zinc, and 3.25% manganese at a spring located near the source. The anomaly is diluted down to 90 ppm and 50 ppm lead over a distance of 400m and 250m respectively, and is lost within the Julius River itself.

11.2.2 Soil Geochemistry

In addition to bank sampling at 25m intervals, four 400m grid lines bearing 270^{o} mag., spaced 100 - 150m apart were flagged and sampled at 25m intervals using a power auger. Grid lines were not cut as is customary, since the area falls within the Forest Reserve. 'c' horizon samples were dried and sieved to -80 mesh and analysed for Cu, Pb, Zn, Ni, Co, As, Ag, Fe and Mn by AAS.

Results were very disappointing with the anomaly reflected by one sample 100m south west of the original anomaly. Maximum assay values returned were 240 ppm Pb, 6800 ppm Mn, 385 pp Zn, 75 ppm As and 56 ppm Cu. It is interesting to note that background values are slightly higher over the dolomite as compared with the chert. Geochemical assay ledgers are located in Appendix 6.

11.3 Geophysics

Ground magnetic and VLF measurements were taken at 25m intervals over the grid, whilst a trial line of S.P. was conducted between the middle and south lines. Ground magnetic profiles are very flat and no anomalies obtained. VLF profiles indicate weak cross overs in the vicinity of the anomaly, whilst S.P. gave a broad response of moderate amplitude at the baseline.

Geophysical profiles are located in Appendix 7.

A possible strike extension to the Julius River anomaly was indicated by a lead anomaly at Wents Creek. Four reconnaisance ground magnetic and VLF traverses were completed between the two creeks. Ground magnetic profiles were generally flat, though a slight increase in intensity to the south east was obtained on line 2350S. One strong VLF cross over was obtained on line 2000S, 775mE and corresponds to a sinkhole.

11.4 Discussion

Initial conclusions regarding follow up to this anomaly indicated that a sub-chert source may be causative since geophysical methods failed to distinguish between a mineralised or karstic source.

Further follow up included collection of a water sample at the spring seepage, collection of three panned concentrates and more rock chip sampling.

The water sample failed to detect any lead, thus ruling out the possibility of a sub-chert source whilst the panned concentrates (max 350 ppm Pb) indicated that the lead is being adsorped on to clays in the -80 mesh fractions. Rock chip sampling failed to detect any substantial amounts of lead (max 30 ppm Pb).

It is concluded that the anomaly is derived from the concentration of minor amounts of lead derived from a disseminated source within the chert and dolomite.

11.5 Strike Extensions to the Julius River Anomaly

Following the disappointing results obtained at the Julius River, the strike extensions to this anomaly were mapped and stream sediment sampled in more detail, since it was felt that lead 'was in the system'.

Stream sediment sampling failed to produce any further anomalies whilst mapping indicated the importance of the dolomite breccia

as a marker horizon which has been traced 2 km south of the Sumac road. Details of this mapping are incorporated in Plan TASh 1270.

12. MERYANNA ANOMALY (PLANS TASh 1240-1248)

Initial attention was focused on the Meryanna anomaly by the location of limonitic float found in the creek during reconnaissance stream sediment sampling. The float returned maximum assay values of 4150 ppm zinc, 154 ppm Cu, 860 ppm Ni and 450 ppm cobalt, whilst the stream sediments were poor.

Resampling of this site returned stream sediment assays of 125 ppm and 63 ppm lead.

A base line bearing 020^{o} mag. and three reconnaissance grid lines were centered on limonitic outcrops within the creek and routine 'c' horizon soil geochemistry completed. Limonitic float was recorded at the end of the 0 and 100N lines. Reconnaissance traversing indicated the continuation of limonitic outcrops and float for approximately 400m to the north east.

The grid was subsequently extended 500m to the north and an extra 150m to the south east. 'C' horizon soil sampling, ground magnetics and VLF were completed over the whole grid whilst SP was conducted on only three lines.

12.1 Geology

The geology of this area is characterised by an inferred northerly trending anticline, thus exposing the Forest quartzite in its core. This is a white, saccharoidal quartzite giving rise to white sandy soils. The quartzite is flanked on either side by outcrops of grey black chert. Dips are gentle, in the order of 20 degrees to the east or west.

Limonitic outcrops appear to follow the regional strike, but appear to be distributed haphazardly in the quartzite and to a lesser extent in the chert. Minor Tertiary? gravels overly the chert and quartzite. The limonite outcrops are generally composed of goethite with lesser hematite. Cellular structures are variously developed.

The chert in this area is highly silicified and cellular structures are observed in places within a more earthy variety of the chert.

12.2 Geochemistry

12.2.1 Stream Geochemistry

The creek system was mapped using compass and topofill and corrected with respect to the roads. Stream sediment samples were collected at 100m intervals in the tributary containing 125 ppm lead. Assay values were poor, maximum 9 ppm lead. Geochemical assay ledgers are located in Appendix 8.

12.2.2 Soil Geochemistry

'C' horizon soil sampling was undertaken at 25m intervals along the grid lines. Samples were routinely assayed for Cu, Pb, Zn, Mn, Fe, As, Ba by Analabs.

Threshold values were determined using log-probability plots (Appendix 9) and are as follows -

Copper

Background	< 7.5 ppm
High Background	7.5 - 12.5 ppm
Possibly anomalous	12.5 - 40 ppm
Anomalous	>40 ppm

Lead

Background	< 7.5 ppm
High Background	7.5 - 12.5 ppm
Possibly anomalous	12.5 - 33 ppm
Anomalous	> 33 ppm

Zinc

Background	< 9.5 ppm
High Background	9.5 - 48 ppm
Possibly anomalous	48 - 85 ppm
Anomalous	> 85 ppm

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Iron

Background	< 6400 ppm
High Background	6400 ppm - 3%
Possibly anomalous	3.0% - 4.8%
Anomalous	> 4.8%

Barium

Background	< 25 ppm
High Background	25.85 ppm
Possibly anomalous	85-420 ppm
Anomalous	> 420 ppm

Arsenic

Background	< 6.4 ppm
High Background	6.4 - 10 ppm
Possibly anomalous	10-25 ppm
Anomalous	> 25 ppm

Manganese

Background	< 45 ppm
High Background	45 - 90 ppm
Possibly anomalous	> 90 ppm

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An anomalous horizon, coincident with the limonitic outcrop has been delineated with a strike length of 500 metres, maximum width 50 metres and is best defined by iron, arsenic copper and barium. Maximum values within this zone are iron 6.8%, arsenic 108 ppm, copper 38 ppm, zinc 93 ppm, lead 45 ppm, barium 485 ppm and manganese 100 ppm.

A second parallel line of anomalies of similar assay tenors is evident to the east, strike length 125 m width 40 metres.

Further spot highs are located on line 600N and are open ended.

12.2.3 Rock Chip Geochemistry

Rock chip samples were collected from the major limonite outcrops and returned maximum assay values of 280 ppm copper, 34 ppm lead, 630 ppm zinc, 170 ppm arsenic. A suite of limonitic rocks was assayed for Ag, Co, Cd, Ni, Sn, W and Au. Poor results were returned.

12.3 Geophysics

Ground magnetics and VLF were completed over the whole grid, stations being read at 12.5 metre intervals, whilst S.P. was utilised over three lines, 100S, 0, 100N.

Ground magnetic profiles are generally flat but interrupted by high amplitude/high frequency anomalies indicative of small near surface sources. The VLF profiles are generally flat with cross overs corresponding to creeks or swamps.

S.P. profiles are ambiguous and may indicate lithological changes. Profiles are located in Appendix 10 .

12.4 Discussion

The geochemical anomaly obtained by 'C' horizon soil sampling is well defined despite low assay values and comprises coincident iron, arsenic, barium and copper. Lead and zinc are also coincident but to a lesser degree. Geophysically, the prospect is unexciting since magnetic responses imply shallow near surface. causative bodies.

The geochemical profiles infer that the limonitic outcrops correspond to slight topographic highs and therefore it is concluded that the anomaly is caused by small basaltic erosional remnants. Basalt outcrops are located approximately 2 km to the north. A fault source cannot be ignored but photo interpretation shows a lack of linears trending through the gridded area.

13. KEYWORDS

Lead, zinc, shale-hosted, Selwyn Basin (Canada), geol. mapping - regional, assays - surf, geochemical - drainage, geophysics - mag, EM, SP.

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14. LOCATION

Burnie 1:250,000 sheet SK 55-3.

15. LIST OF REFERENCES

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1. Geochemical assay ledgers - streams 1981 - 82
2. " " " " 1982 - 83
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4. Geochemical assay ledgers - Rock chips.
5. Geochemical " " - Stephens Rivulet.
6. Geochemical " " - Julius River.
7. Geophysical profiles - Julius River.
8. Geochemical assay ledgers - Meryanna area.
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11. Petrographic Reports.

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TASh

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1253	2.	Photo interpretation of the Trowutta - Dempster plains area.
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1257	5.	Regional stream geochemistry 1981 - 82. Sample locations.
1260	6.	" " " " Cu
1258	7.	" " " " Pb
1259	8.	" " " " Zn
1263	9.	" " " " Ni
1262	10.	" " " " Co
1264	11.	" " " " As
1261	12.	" " " " Sn
1271	13.	Regional stream geochemistry 1982 - 83. Sample locations.
1272	14.	" " " " Cu
1273	15.	" " " " Pb
1274	16.	" " " " Zn
1275	17.	" " " " As

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1276	18.	Regional stream geochemistry 1982 - 83. Ba
1265	19.	Rock chip sampling 1981 - 82. Sample locations.
1266	20.	" " " " Cu
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1250	24.	" " Geology.
1252	25.	" " Stream geochemistry Cu, Pb, Zn.
65	26.	Julius River Geology.
66	27.	" " stream geochemistry Pb, Zn, Mn.
67	28.	" " sample locations.
70	29.	" " Cu
68	30.	" " Pb
69	31.	" " Zn
75	32.	" " Ni
74	33.	" " Co
76	34.	" " As
73	35.	" " Ag
71	36.	" " Fe
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1240	38.	Meryanna grid. Sample locations.
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1243	41.	" " " " " Pb
1244	42.	" " " " " Zn
1245	43.	" " " " " Fe
1246	44.	" " " " " As
1247	45.	" " " " " Ba
1248	46.	" " " " " Mn.

APPENDIX ONE

GEOCHEMICAL ASSAY LEDGERS - STREAMS 1981 - 82

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE Pb-Zn FOLLOW UP No. ..... Sample numbers 934041 – 934063 Collected by D. J. WEIR Sheet no. 1

Area / Prospect JULIUS R + LEIGH R. Date 21/9/81

Map / Photo reference ARTHUR R. 1:100 000 TOPO. Analysed by ANALABS PERTH DPO no. 30060 30061

ALL STREAM SEDS SIEVED TO −80#

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** s sample type ****	Carbon Tot % /10	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Cr	Mn	Sn	W.	Ag	Grid ref	Geological Observations
934041	P.C.	3	3		✓				3	19	10	315	148	55	1160	635	5	10	0.1		Julius R. L.H. Trib. above SUMAC RD. (5 dishes).
934042	SS	3	3		✓				3	19	28	350	100	67	460	4150	n.a		–	✓	" " " " " " " "
934043	P.C.	3	4		✓				3	33	45	470	240	68	3.75	530	3	<10	–		Julius R. above SUMAC RD. (5 dishes)
934044	SS	3	4		✓				3	32	33	285	126	58	2650	1560	n.a		0.1	✓	" " " "
934049	f									2	15	20	12	2	155	315	n.a		0.1		Bl. Mn rich Chert Julius R. L.H. Trib. above SUMAC RD.
934050	oc/gs									11	10	20	26	15	10	550	"		–		Black Mudstone – Julius R.
934053	S.S.	2	1.5		✓				3	41	48	290	154	57	355	1450	"			✓	9c + Float basic chloritic volcanics.
934054	f									67	39	96	153	35	95	1250	"				Above locality. basic chloritic volcanics.
934055	S.S.	3	2		✓				4	52	15	280	177	68	350	2300	"			✓	9c Weathered scoriaceous volcanics. Float: green chloritic volcanics.
934056	f									72	10	187	126	46	90	860	"				Above locality Weathered or-brn. volcanics.
934057	S.S.	1	0.5		✓					45	28	190	230	210	395	2120	"			✓	float: basic volcanics.
934058	f		MISSING		SAMPLE.																Above locality. or-brn. volcanics.
934059	gs.									19	10	40	21	25	125	730	n.a				Gossan up mainstream from 934061 on side of logged hill.
934060	gs.									17	9	25	22	16	5	615	"				fine g. grey flinty chert?
934061	S.S.	2	0.5		✓				3	31	24	91	42	27	40	1200	"			✓	9c Porphyritic volcanic rock?
934062	S.S.	3	0.5		✓				3	4	8	32	6	8	30	810	"			✓	float 9c. chert
934063	S.S.	4	2.0		✓				3	24	70	210	78	35	115	1700	"			✓	float: Volcanics

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE Pb-Zn follow-up No. ..... Sample numbers: 934064 – 934086 Collected by: D.J. WEIR Sheet no. 2

Area / Prospect: JULIUS R. Date: 25/9/81

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET. Analysed by: ANALABS COOCE DPO no. 30061 30063

ALL STREAM SEDS SIEVED TO –80#

Sample No.	Type (ss * / oc / f / s)	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Topo Control 1/10	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Cr	Mn				Grid ref	Geological Observations
934064	SS	3	2		✓				3	15	32	300	52	69	125	3150	/				o/c Dolomite.
934065	ss.									3	14	14	8	3	130	175					hematitic brecciated Chert?
934066	ss.									9	18	27	20	6	185	250					or-brn. weathered f.g. Volcanic.
934067	ss.									6	14	24	23	14	15	260					Dolomite.
934068	ss.									5	15	25	17	6	270	215					black chert.
934069	SS	3	2		✓				3	8	25	167	29	45	860	1500	/				o/c: Dolomite Float: Same
934070	ss.									2	9	28	24	15	10	110					Dolomite. above locality, downstream.
934071	ss.									3	11	25	18	12	5	35					Dolomite
934072	S.S.	3	2		✓				3	43	16	114	81	28	375	380	✓				o/c. weathered basic volcanics.
934073	ss.									122	12	119	97	33	70	200					Above locality. basic weathered volcanics
934074																					
934075																					
934076	oc/gs									3	25	17	28	8	25	85					f.g. Siliceous cherty Dolomite.
934077	CS	10m	2	1m						5	5	35	7	3	20	25					Bl. friable Schist. interbanded with Dolomite Carbonaceous in parts
934078	SS.	0	2		✓				3	3	4	20	7	4	40	30	/				R.H. tributary Julius R. Float: Mn Stained chert?
934079	S.S.	20	10		✓				3	18	21	131	56	31	135	1350	✓				Julius R.
934080	f									1	8	17	11	4	70	120					Mn Stained chert. locality as 934078.
934081	S.S.	0	1		✓				4	9	9	106	14	6	10	125	✓				LH. Tributary Julius R. o/c Finely laminated Dolomite.
934082	oc/gs									2	29	6	17	11	–	35					Above locality: Finely laminated Dolomite
934083	SS	10	5		✓				3	20	23	165	73	38	80	2200	✓				o/c Dolomite Julius R.
934084	oc/gs									2	30	7	18	14	5	275					Above locality, Grey finely laminated Dolomite.
934085	S.S.	2	1		✓				2	9	15	84	39	24	175	1900	✓				RH. Trib Julius R. float: Chert
934086	f									1	3	10	8	5	175	350					Above locality.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE Pb-Zn follow up No. ..... Sample numbers 934087 – 934109 Collected by D.J. WEIR Sheet no. 3

Area / Prospect JULIUS R. Date .....

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS CAIRNS DPO no. 30063 30064

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Topo /10	Cu	Pb	Zn	Ni	Co	Cr	Mn				Grid ref	Geological Observations
934087	S.S.	1	1		✓					3	11	41	100	46	42	100	4000	/				Spring Seepage into L.H. Trib of Julius R. Float: quartz.
934088	f										2	13	7	8	4	140	190					Bl. Mn Stained chert from Julius R. 2 above confluence.
934089	oc/gs										8	18	35	13	8	230	155					Dolomite with Cherty bands. Siliceous.
934090	S.S.	5	2		✓					5	21	92	780	39	20	30	2700	/				L.H. Trib Julius R. o/c + Float: Dolomite.
934091	oc/gs										5	16	260	36	9	200	2800					Above locality: Dolomite.
934092	S.S.	3	2		✓					4	50	340	2500	94	50	45	1.4%	/				L.H. Trib. Julius R. Float 913. + bl. f.g. volcanic? rock.
934093	f										2	5	38	8	3	75	170					Above locality Bl. f.g. volcanic/Tuffaceous? rocks.
934094	S.S.	15	10		✓					7	21	25	186	79	40	200	2400	/				Julius R. o/c Dolomite
934095	S.S.	2	2		✓					4	38	33	206	184	56	105	2700	/				R.H. Trib. Julius R. Float: D67 + f.g. black Obsidian looking rock Chert
934096	f										6	7	10	19	5	370	360					Above locality Obsidian type rock → Chert
934097	S.S.	7	5		✓					3	21	24	175	61	31	300	1350	/				Julius R. o/c mudstone + Dolomite.
934098	f										18	21	37	173	12	105	190					Above locality. Bl. Pyritic mudstone
934099	oc/gs										10	33	15	25	19	10	175					Breccia Dolomite. – Sub rounded D67. fragments in f.g. Dolomitic matrix
934100	S.S.	1	1		✓					4	49	38	250	260	66	275	2300	/				RH Trib Julius R. float Dolomite + f.g. green mudstone.
934101	f										9	13	15	122	9	110	245					Above locality: Dolomite
934102	S.S.	2	1.5		✓					3	52	31	196	171	46	175	1350	/				R.H. Trib. Julius R. o/c + Float: grey Shales.
934103	oc/gs										46	26	94	75	31	20	120					Above locality: grey Shales.
934104	S.S.	1	1		✓					3	39	17	179	182	48	315	2050	/				RH. Trib Julius R. Float: grey Shales. 913. Geossanous rock.
934105	f										8	5	34	40	22	250	1560					Above locality. Pale Or- yell Gossanous rock + boxworks.
934106	S.S.	1	1		✓					4	43	17	130	175	51	365	1900	/				L.H. Trib. Julius R. Float: 913. Silic. green mudstone. + gossan.
934107	f										44	12	63	95	38	55	1200					Green silicified mudstone.
934108	S.S.	2	1		✓					5	52	18	250	220	53	170	2400	/				R.H. Trib. Julius R. Float: 913. Dolomite grey Py. & Siliceous mudst
934109	f										116	13	120	125	28	390	1200					Above locality. Dolomite. float

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE - Pb-Zn follow up No. ..... Sample numbers 934110 – 934115 Collected by D.J. WEIR Sheet no. 4

Area / Prospect JULIUS R. Date .....

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS, COOEE DPO no. 30064

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** s sample type ****	Carbon Topo /10	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Cr	Mn	As	Bi	Sn/W	Grid ref	Geological Observations
934110	S.S.	40	10		✓				4.	27	15	169	82	36	280	1300	n.a	n.a	n.a	✓	Julius R. Float: Chert. Dolomite.
934111	SS.	0.5	0.5	✓	✓				3.	1	6	4	4	2	10	10	n.a	n.a	n.a	✓	Wents Creek. V. Organic No. o/c or float. -Seepage?
934112	S.S.	1	1	✓	✓				2.	<1	41	5	4	2	10	25	n.a	n.a	n.a	✓	Wents Creek. No o/c / Float.
934113	S.S.	1	1	✓	✓				2.	1	<1	3	3	2	20	5	n.a	n.a	n.a	✓	Wents Creek. NO o/c / Float.
934114	S.S.	2	1.5		✓				3.	35	10	103	66	31	1500	415	n.a	N.a.	n.a.	✓	RH Trib of Julius R. above Samac Rd. o/c Or-brown Scoriaceous Volcanics.
934115.	o/c/gs									41	2	47	76	25	n.a	n.a	28	<2	6/<10		Or-brn. Weath. Scoriaceous Volcanics.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name LEIGH RIVER · EL 12/80 No. Sample numbers 934337 934351 - 934371 Collected by D.J. WEIR Sheet no. 1

Area / Prospect LEIGH RIVER Date 10/2/82

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET Analysed by ANALABS, COOEE DPO no 30071

Sample No.	Type (ss * / oc / f / s)	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Tupo /10	Metal content ppm or % Cu	Pb	Zn	Ni	Co	As	Ag	Bi	Sn	W	Grid ref	Geological Observations
934362	SS	5	10		✓					4	8	10	37	10	4	4	<0.1	<10	6	<10	✓	Leigh R. o/c weath. whitish banded Siltstone.
934363	OC	gs									13	55	89	45	11	5	<0.1	n.a	4	<10		whitish weath. banded Siltstone. Bed: 248°M/7s olcon 240/70N.
934364	OC	gs									53	72	74	62	19	90	0.4	n.a	<3	<10		Black Pyritic Shales: Coarse xtalline Pyrite 205/15NW
934365	OC	gs									34	27	55	49	17	50	0.4	n.a	3	<10		Black Pyritic Shales: mod. Carbonaceous. 220/20SW
934366	SS	0.25	1	✓	✓					2	8	11	16	11	4	9	<0.1	<10	4	<10	✓	RH Trib Leigh R. No o/c / float. o/c in Leigh: Bl. Py. Shales
934367	OC	gs									7	1	23	41	9	6	0.2	n.a	<3	<10		Dk. grey. amygdaloidal Tuffaceous rock + Py. interbedded in bl. Shales.
934368	SS	5	20		✓					3	9	11	26	12	5	6	<0.1	<10	<3	<10	✓	Leigh R. o/c grey Tuffaceous rock. 140/40W
934369	OC	gs									5	9	39	51	10	8	0.1	n.a	<3	<10		grey, Tuffaceous rock. Minor limonite after Py?
934370	OC	gs									7	18	85	62	8	6	<0.1	n.a	<3	<10		" " " "
934371	SS	0.25	1		✓					4	25	5	70	45	19	2	<0.1	<10	3	<10	✓	RH Trib Leigh R. No o/c. Float: Bl Shales, Tuffaceous rock + quartz

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name LEIGH RIVER EL 12/80 No. Sample numbers 934372 - 934377, 934380 - 934 394 Collected by D. J. WEIR Sheet no. 2

Area / Prospect LEIGH RIVER — HORTON RIVER. Date 10/2/82

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET. SANDY CAPE 1:100 000 TOPO SHEET. Analysed by ANALABS COOGEE. DPO no 30071, 30072

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH	Tot/10	Cu	Pb	Zn	Ni	Co	As	Ag	Bi	Sn	W/Sb		
		o/c sample type ***																		
		s sample type ****																		
934372	ss	5	10		✓			6	9	7	24	17	5	4	<0.1	<10	7	10	✓	LEIGH R. 0% grey-green silicified siltstone Float: Siltstone, 913, + Tuffaceous rock.
934373	oc	9/s							74	5	120	140	43	6	<0.1	n.a.	3	<10		Above locality grey-green silicified siltstone.
934374	f	9/s							9	7	27	76	6	7	<0.1	n.a	<3	<10		Above locality. Tuffaceous rock.
934375	oc	9/s							330	1	98	64	48	2	0.1	n.a	3	<10		green siltstone ± Fe stng.
934376	ss	0	1.5		✓			3	10	3	41	20	11	3	0.1	<10	4	<10	✓	RH Trib LEIGH R 0% Chert. Float: Chert + green siltstone
934377	ss	5	8		✓			3	16	10	21	16	9	3	<0.1	<10	8	<10	✓	LEIGH R. 0% green siltstone.
934380	ss	0	1		✓			4	11	1	26	20	5	2	0.1	<10	<3	<10	✓	LH Trib LEIGH R. No 0% Float: 913, Chert, 913 ls, grey-green siltstone.
934381	ss	0	1		✓			3	12	1	32	19	8	3	<0.1	<10	8	10	✓	LH Trib LEIGH R. Float: 913, Chert, grey siltstone.
934 382	ss.	5	15		✓			3	13	14	42	28	10	3	0.1	<10	4	<10	✓	LEIGH R. No 0% or float.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name LEIGH RIVER EL 12/80 No. Sample numbers 934395 - 934416 Collected by D.J. WEIR Sheet no. 3

Area / Prospect LEIGH R - HORTON RIVER Date 10/2/82

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET Analysed by ANALABS, COOKE DPO no. 30071 30073 30075

Sample No.	Type	ss channel **						Carbon Topo 1/0	Metal content ppm or %											Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ni	Co	As	Ag	Bi	Sn	W Sb			
		o/c sample type ***																			
		s sample type ****																			
934412	OC	S/S							2	9	27	60	4	3	<0.1	.	4	<4			TRIAS CK. Grey Shale - Mudstone Sl. Silicified.
934413	SS	1	4		✓			2	5	8	24	12	3	1	<0.1	.	<3	<4		✓	TRIAS CK. Nc Grey Shales - Mudstone.
934414	SS	0	1.5	✓	✓			2	9	9	33	18	4	3	<0.1	.	<3	6		✓	RH TRIB TRIAS CK. Nc Grey Shales - Mudstone.
934415	OC	S/S							3	27	38	46	5	4	<0.1	.	6	<4			Above locality : Grey Shales.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591046 045

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. Sample numbers: 934497 - 934502, 934601 - 934609 Collected by: D.J. WEIR Sheet no: 3

Area / Prospect: TROWUTTA AREA. Date: 23/2/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET. Analysed by: ANALABS CODE 6 DPO no: 30074, 30076.

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Tot/Lo	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Ag	As	Sn	W		Grid ref	Geological Observations
934497	SS	0	3	✓	✓					2	9	3	30	17	4	<0.1	1	<4	<4	✓		LH TRIB ROGER R. No o/c No float. Cattle Contamination.
934498	SS	0.5	3	✓							26	8	130	66	37	<0.1	5	<4	<4	✓		RH TRIB ROGER R. No o/c. No float. Marshy Site. Cattle contam.
934499	f										8	9	74	74	23	<0.1	45	<4	<4			above locality. adjacent field. Pisolitic Gossan - basalt derived??
934500	o/c	g/s									28	23	79	71	16	<0.1	2	<4	<4			by Sawmill. grey-black mudstone.
934501	SS	1	3		✓					3	13	8	96	42	23	0.3	4	<4	<4	✓		BOUNDARY CK. No o/c Float: Cleared.
934502	S.S.	0.5	2	✓	✓					2	59	9	130	120	23	<0.1	2	5	<4	✓		DOBSONS CK. No o/c Basalt. V. Boggy.
934601	SS										15	12	54	29	16	0.1	7	13	<4	✓		DUCK RIVER.
934602	SS										11	12	37	22	9	<0.1	5	<4	<4	✓		LAIRDS CK.
934603	SS										52	14	160	120	45	<0.1	11	130	<4	✓		FAHEYS CK.
934604	Rc	g/s									19	10	200	45	48	<0.1	5	<4	<4			Gossan float in Paddock.
934605	SS										79	11	230	250	85	<0.1	7	<4	<4	✓		RH TRIB DUCK R.
934606	SS										41	13	130	73	39	0.1	6	44	<4	✓		DUCK R.
934607	SS										83	12	130	76	45	<0.1	3	<4	<4	✓		DOBSONS CK.
934608	SS										31	9	140	99	37	<0.1	7	6	<4	✓		BOUNDARY CK.
934609	SS										43	12	62	73	35	<0.1	2	<4	<4	✓		NOLAN CK.

✓

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591047

046

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. Sample numbers 934473 - 934496 Collected by D.J. WEIR Sheet no. 2

Area / Prospect TROWUTTA AREA. Date 23/2/82

Map / Photo reference ARTHUR R. 1:100,000 SHEET. Analysed by ANALABS COOEE DPO no. 30074

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon Topo /10	Cu	Pb	Zn	Ni	Co	Ag	As	Sn	W		Grid ref	Geological Observations
34473	SS	1.5	1.5	✓	✓				3	99	7	210	200	54	<0.1	6	5	<4	✓		LH TRIB SPINKS CK. No o/c Float: Basalt.
34475	SS	0.5	0.5		✓				4	91	10	150	150	38	<0.1	8	<4	<4	✓		DRY DOG CK. o/c + Float: Basalt. minor Purple Mudstone float on paddock track
34476	SS	0	1		✓				3	78	13	94	64	26	<0.1	15	6	<4	✓		RH TRIB SPINKS CK No o/c No float Boggy
34477	SS	2	2		✓				4	160	4	210	95	53	<0.1	2	<4	<4	✓		RH Tnb ROGER R. o/c + Float: Basalt.
34478	OC	g/s								100	10	130	83	48	<0.1	2	<4	<4			Above locality: Basalt.
34479	SS	5	7		✓				5	84	8	220	130	64	<0.1	5	<4	<4	✓		ROGER R. o/c + Float Basalt.
34480	SS	2	3		✓				4	130	4	230	120	90	<0.1	2	<4	<4	✓		LH Tnb ROGER R. o/c + Float Basalt
34481	SS	0.5	3		✓				3	70	7	250	190	53	<0.1	9	12	<4	✓		LH Trib ROGER R. o/c Creamy brown Siltstone.
34482	SL	g/s								58	15	63	120	26	<0.1	17	<4	<4			Above locality Creamy brown Siltstone.
34483	SS	1	2	✓	✓				3	100	6	180	170	75	<0.1	6	<4	<4	✓		LH Tnb ROGER R. o/c Amygdaloidal basalt Float: Siltstone + Basalt.
34484	S.S.	1.5	3	✓	✓				3	69	6	270	190	49	<0.1	7	8	<4	✓		POLONSKI CK. No o/c Float Basalt + Siltstone
34485	S.S.	0.5	1		✓				4	140	3	160	150	180	<0.1	2	<4	<4	✓		RH Tnb ROGER R. o/c + Float Basalt. Mn Stng. Cattle contam.
34486	S.S.	1	3		✓				4	130	4	200	130	130	<0.1	2	<4	<4	✓		RH Tnb ROGER R. o/c + Float Basalt. mod. Mn Stng.
34487	SS	1.5	6	✓	✓				3	36	6	130	59	43	<0.1	5	<4	<4	✓		ROGER R. No o/c. Float: Basalt. Mn Stng.
34488	S.S.	1.5	2	✓	✓				3	130	5	200	190	55	<0.1	6	<4	<4	✓		WITELANS CK. No o/c Float Basalt + Hematitic nodules. Mn Stng.
34489	†									130	6	150	110	50	<0.1	2	<4	<4			Above locality: Basalt
34490	S.S.	2	5		✓				3	39	9	94	71	27	<0.1	4	<4	<4	✓		DUCIC RD. o/c fg. banded brown Tuff. minor Mn Stng.
34491	OC	g/s								130	8	130	220	47	<0.1	2	6	<4			above locality: brown, banded Tuff.
34492	SS	0.5	1		✓				6	95	14	230	150	70	<0.1	15	<4	<4	✓		† + Float. grey-black Mudstone.
34493	OC	g/s								30	18	57	67	27	<0.1	5	<4	<4			above locality: grey-black Mudstones
34494	SS	0.5	3	✓					3	11	5	53	26	13	<0.1	2	<4	<4	✓		CANNON CK. o/c Pale grey Siltstone-Mudstone. float chert
34495	OC	g/s								8	7	35	37	13	<0.1	<1	<4	<4			Above locality Pale grey Siltstone-Mudstone.
34496	†									4	8	22	170	7	0.1	1	<4	<4			above locality Chert.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591048 047

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CREEK EL 1/77 No. Sample numbers: 934451 – 934474 Collected by: D.J WEIR, B. MORLEY Sheet no: 1

Area / Prospect: TROWUTTA AREA Date: 23 Feb 1982

Map / Photo reference: ARUNTA RIVER 1:100 000 TOPO SHEET Analysed by: ANALABS COOKE DPO no: 30074

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Total Carbon %	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Ag	As	Sn	W		Grid ref	Geological Observations
																					Farming area: Isolated possibilities of contamination by pesticides etc
934451	SS.	0	2		✓				2	50	25	85	55	52	0.1	4	45	<4	✓		LH Trib Roger R. Poor Site. No %c, No Float. Urban contam?
934452	SS	2	2	✓	✓				2	91	9	150	90	49	<0.1	3	5	<4	✓		Roger R. No %c No Float.
934453	SS	2	4	✓	✓				2	87	7	170	89	51	<0.1	2	<4	<4	✓		ROGER R. No %c No Float.
934454	SS.	0	0.5	✓					2	54	4	55	44	19	0.1	1	<4	<4	✓		LH Trib ROGER R. No %c/Float Drain? Organic rich sediment
934455	SS	0	1	✓	✓				2	66	7	80	53	23	<0.1	2	<4	<4	✓		LH Trib ROGER R. No %c/Float Poor Site. V Organic
934456	SS	3	3		✓				3	100	10	190	120	65	<0.1	4	<4	<4	✓		ROGER R. %c + Float: Basalt.
934457	OC	g/s								31	17	130	71	40	<0.1	3	40	<4			Above locality: Basalt.
934458	SS	2	2		✓				3	130	17	240	180	67	<0.1	3	5	<4	✓		MONTAGU R.: No %c. Float: Basalt.
934459	SS	1.5	3	✓	✓				2	120	14	200	160	52	<0.1	4	<4	<4	✓		SPINKS CK. No %c/Float. Cattle Contamination.
934460	SS.	0.5	1		✓				2	76	17	180	190	56	<0.1	3	<4	<4	✓		GREENES CK. No %c. Float: Basalt
934461	SS	0.5	1	✓	✓				3	98	24	170	130	51	<0.1	4	11	<4	✓		LH Trib WILLIAMSONS CK. No %c Float Basalt.
934462	SS.	0	2	✓	✓				3	75	13	85	85	28	<0.1	6	<4	<4	✓		RH Trib FAHEYS CK. No %c/Float. Poor Site ORGANIC Basalt in Road Cutting
934463	SS	0	5	✓					3	44	7	180	120	44	<0.1	13	<4	<4	✓		LH TRIB FAHEYS CK No %c. Float: Basalt. Swampy
934464	SS	0.5	1		✓				4	61	12	180	140	67	0.1	17	<4	<4	✓		FAHEYS CK: %c Brown Siltstone.
934465	OC	g/s								46	42	88	45	11	<0.1	22	4	<4			Above locality: Brown Siltstone.
934466	SS	1	2		✓				5	120	7	190	110	65	<0.1	6	<4	<4	✓		LH TRIB MCDONALDS CK. No %c FLOAT: Basalt Mod Mg Sing.
934467	SS	1	2		✓				4	170	3	130	97	71	<0.1	2	<4	<4	✓		RH Trib MCDONALDS CK. %c & Float: Weathered Amygdaloidal basalt & Minor related Tuff.
934468	OC	g/s								110	10	230	130	62	<0.1	2	<4	<4			Above locality: Grey. Spotted Tuff.
934469	SS	1.5	2		✓				3	140	6	160	150	69	<0.1	2	<4	<4	✓		LH TRIB WILLIAMSONS CK. No %c Float: Basalt.
934470	SS	0.5	1		✓				4	92	18	310	340	58	<0.1	5	<4	<4	✓		WILLIAMSONS CK. No %c. Float: Basalt.
934471	SS	0.5	2	✓	✓				4	160	8	120	120	90	<0.1	4	<4	<4	✓		RH TRIB WILLIAMSONS CK. No %c, Float: Basalt.
934472	SS	2	4		✓				3	72	9	260	220	62	<0.1	12	<4	<4	✓		RH TRIB SPINKS CK. %c fg brown Tuff & 2mm clasts.
934474	OC	g/s								110	13	190	210	47	<0.1	2	<4	<4			Above locality: fg. brown Tuff. & clasts.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591049 048

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name RICKY CAPE EL 1/77 No. ..... Sample numbers 934610 - 934632 Collected by B. MORLEY. Sheet no. .....

Area / Prospect STEPHENS RIVULET. Date 15/3/82.

Map / Photo reference SANDY CAPE 1:100 000 TOPO SHEET. Analysed by ANALABS, COOEE. DPO no 30076.

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Ag	As	Sn	W		Grid ref	Geological Observations
934610	SS										69	10	190	100	52	<0.1	5	<4	<4	✓		RH tnb KEPPLE CK.
934611	SS										78	8	190	110	46	<0.1	6	<4	<4	✓		LH tnb KEPPLE CK.
934612	SS										56	11	180	120	47	<0.1	9	<4	<4	✓		RH tnb KEPPLE CK
934613	SS										50	11	200	140	52	<0.1	8	<4	<4	✓		KEPPLE CK.
934614	SS										24	6	120	66	21	<0.1	4	<4	<4	✓		RH tnb KEPPLE CK.
934615	SS										56	9	190	100	41	<0.1	6	4	<4	✓		KEPPLE CK.
934616	SS										70	8	190	110	47	<0.1	8	<4	<4	✓		LH tnb STEPHENS RVT.
934617	SS										66	11	180	110	43	<0.1	5	<4	<4	✓		LH tnb STEPHENS RVT.
934618	SS										65	9	160	89	43	0.1	4	<4	<4	✓		STEPHENS RVT.
934622	SS										67	70	240	85	37	0.2	8	19	<4	✓		STEPHENS RVT.
934623	SS										120	12	210	100	51	<0.1	2	<4	<4	✓		STEPHENS RVT.
934624	SS										100	9	170	98	73	<0.1	3	<4	<4	✓		LH TRIB STEPHENS RVT
934625	SS										97	9	230	120	53	0.1	6	<4	<4	✓		LH TRIB STEPHENS RVT.
934626	SS										120	9	230	110	57	<0.1	4	<4	<4	✓		LH TRIB STEPHENS RVT.
934627	SS										140	110	460	120	59	0.2	5	<4	<4	✓		STEPHENS RVT.
934629	SS										28	11	110	65	31	0.1	5	<4	<4	✓		RH TRIB STEPHENS RVT.
934630	SS										180	9	280	150	57	<0.1	1	<4	<4	✓		RH TRIB STEPHENS RVT.
934632	SS										54	7	140	72	34	0.1	3	<4	<4	✓		STEPHENS RVT.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R PLORATION . GEOCHEMICAL SAMI L GER

591050049

Tenement name ROCKY CAPE EL1/77 No. Sample numbers 934577 - 934599 C ted by B. Morley Sheet no.

Area / Prospect Sumac Rvt. + Julius R. Date 29/3/82

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET. Analysed by ANALABS COOEE DPO no. 30082 30085

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH	Topo	Cu	Pb	Zn	Ag	Sn	W	Au	Co	Ni	As		
		o/c sample type ***																		
		s sample type ****																		
934577	S.S.	S	3-4	✓				1	8	8	580	x	<4	<4	✓	107	480	89	376406	R/H FORK SUMAC RIVULET
934578	F.	S	3-4	✓				1	7	12	290	x	<4	<4		64	190	55	376406	CHERT / DOL
934579	S.S.	m	5-6	✓				1	17	12	97	x	<4	<4	✓	21	46	7	378405	L/H FORK SUMAC RIVULET.
934580	F.	m	5-6	✓				1	11	10	55	0.1	<4	<4		17	136	7	378405	CHERT / DOL.
934581	S.S.	m	3	✓				1	6	7	23	x	<4	5	✓	7	17	2	378390	R/H FORK OF SUMAC RIVULET APPROX 1.5 K UP FROM BRIDGE.
934582	F	m	3	✓				1	12	21	12	0.2	<4	<4		8	145	x	372390	FLOAT CONTAINS CHERT / DOL
934583	S.S.	m	3	✓				1	27	12	97	0.1	<4	<4	✓	21	46	x	370390	R/H FORK OF SUMAC RIVULET APPROX 1.6 K UP FROM BRIDGE
934584	F.	m	3	✓				1	23	21	45	0.1	<4	<4		16	156	5	370390	FLOAT CONTAINS CHERT / DOL.
934585	S.S.	S	1.5	✓				1-2	65	14	270	0.1	<4	<4	✓	57	260	6	371400	R/H TRIB SUMAC RIVULET ABOUT 1K FROM BRIDGE.
934586	F.	S	1-5	✓				1-2	59	40	115	x	<4	<4		22	55	9	371400	FLOAT CONTAIN PYRITIC CHERT.
934587	F.								12	25	21	0.1	<4	6		9	21	6	371400	BLACK SHALE } R/H TRIB SUMAC RIV
934588	F.								11	8	43	x	<4	<4		11	35	8	371400	PYRITIC VOLCANIC }
934589	S.S.	m	3	✓				1	31	11	161	0,1	<4	<4	✓	48	110	3	331401	TOP JULIUS RIVER AT SECOND L/H FORK R/H FORK.
934590	F.	m	3	✓				1	14	4	70	0,2	<4	<4		36	380	12	331401	FLOAT CONTAINS COSSANOUS CHERT.
934591	S.S.	S	2	✓				2-3	5	8	25	0,2	<4	<4	✓	16	15	2	333401	TOP JULIUS RIVER ABOVE SECOND L/H FORK L/H FORK.
934592	F.	S	2	✓				2-3	4	2	9	<0,1	<4	<4		7	150	<1	333401	FLOAT CONTAINS CHERT/DOL.
934593	S.S.	S	1-5	✓				3	7	10	69	0,2	<4	<4	✓	8	18	2	340410	L/H TRIB COMING INTO JULIUS RIVER
934594	F.	S	1-5	✓				3	10	13	18	<0,1	<4	<4		17	26	2	340410	FLOAT CONTAINS CHERT/DOL.
934595	S.S.	M-F	5	✓				1	16	14	116	0,3	<4	<4	✓	20	37	4	390414	SUMAC RIVULET BELOW BRIDGE.
934596	F.	M-F	5	✓				1	14	2	13	0,2	<4	<4		7	520	2	390414	FLOAT CONTAINS CHERT/DOL.
934597	S.S.	m	1-5	✓				1	4	7	30	0,1	<4	<4	✓	8	11	1	391411	CREEK FLOWING INTO SUMAC ON R/H SIDE BELOW BRIDGE.
934598	F.	m.	1-5	✓				1	10	2	21	0,1	<4	<4		14	375	2	391411	FLOAT CONTAINS CHERT/DOL.
934599	c/c								15	4	9	0,1	<4	<4		6	106	28	386410	C/C THRIE 1KM S/E OF SUMAC BRIDGE. COSSANOUS CHERT BRECCIA.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R. PLORATION . GEOCHEMICAL SAMP. GER

591051 050

Tenement name ROCKY CAPE EL1/77 No. Sample numbers 934554 - 934576 Collected by B. Morley. Sheet no.

Area / Prospect N. of Arthur R Date 29/3/82

Map / Photo reference ARTHUR RIVER 1:100 000 Topo sheet. Analysed by ANALABS CODEE DPO no. 30082

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Topo	Metal content ppm or % Cu	Pb	Zn	Ag	Sn	W	Au	Co	Ni	As	Grid ref	Geological Observations
934554	S.S.	S	12m	✓						6	13	10	23	x	<4	<4	✓	3	9	1	410486	W/SANDSTONES & QUARTSITES L/H TRIB OF ARTHUR
934555	F.	S	1.5m	✓						6	16	6	8	x	<4	<4		8	250	x	410486	W/SANDSTONES & QUARTITES L/H TRIB OF ARTHUR.
934556	S.S.	DRY	1.0	✓						1-2	9	5	11	x	<4	<4	✓	3	11	2	422503	W/SANDSTONE & QUARTSITES L/H TRIB OF ARTHUR
934557	F.	DRY	1.0	✓						1-2	9	22	9	x	<4	<4		7	74	4	422503	W/SANDSTONE & QUARTZITES L/H TRIB OF ARTHUR
934558	S.S.	S	3.0	✓						2	19	12	37	x	<4	4	✓	15	15	5	420505	QUARTSITES L/H TRIB OF ARTUR.
934559	F.	S	3.0	✓						2	7	13	35	x	<4	<4		21	41	6	420505	QUARTITES L/H TRIB OF ARTHUR
934560	S.S.	m	5.0	✓						2	31	12	119	x	<4	<4	✓	28	42	11	420507	QUARTSITES L/H TRIB OF ARTHUR.
934561	F.	m	5.0	✓						2	6	4	11	x	<4	<4		7	9	4	420507	QUARTSITES L/H TRIB OF ARTHUR.
934562	S.S.	m	2-3	✓						3	10	14	17	x	<4	<4	✓	9	240	4	425510	QUARTSITES L/H TRIB OF ARTHUR
934563	F	m	2-3	✓						3	6	6	41	0.1	<4	<4		9	39	13	425510	QUARTSITES L/H TRIB OF ARTHUR
934564	F.	m	2-3	✓						3	9	47	8	x	<4	5		14	68	2	425506	GOSSAN, SAME AREA AS ABOVE
934565	S.S	DRY FLOAT	2.	✓						2	6	5	21	x	<4	<4	✓	3	14	4	412471	L/H TRIB OF ARTHUR OPP JOY CRK.
934566	F	DRY FLOAT	2.	✓						2	3	5	18	x	<4	<4		3	89	1	412471	FLOAT CONTAINS CHERT/QUARTS.
934567	S.S	m	3	✓						4	6	5	19	0.1	30	<4	✓	3	18	x	416480	L/H TRIB OF ARTUR WITH FLOAT COM-
934568	F.	m	3	✓						4	154	12	4160	x	<4	<4		450	860	91	416480	TAINING GOSSANOUS IRON RICH ROCK.
934569	S.S	S	1.5	✓						3	4	8	33	x	<4	<4	✓	5	14	6	401450	SUMAC SPUR 3-1
934570	F	S	1.5	✓						3	5	8	14	x	<4	7		5	240	2	401450	FLOAT CONTAINS CHERT/QUARTS
934571	S.S.	S-m	1.5	✓						2	5	7	19	x	<4	<4	✓	6	13	4	390448	SUMAC SPUR 3 R/H TRIB INTO ARTHUR.
934572	F.	S-m	1.5	✓						2	13	9	12	0.1	<4	<4		9	280	7	390448	FLOAT CONTAIN CHERT/QUARTZITES, SAMPLE MINERALIZED
934573	S.S	S	2	✓						2	19	195	230	0.4	<4	<4	✓	2	8	7	365445	R/H SIDE OF JUNCTION ON WHENTS CRK
934574	F.	S	2	✓						2	11	5	5	x	<4	4		7	280	x	365445	FLOAT CONTAINS CHERT/QUA.
934575	S.S										7	4	29	x	<4	<4	✓	5	19	x	368444	L/H SIDE OF JUNCTION WHENTS CRK
934576	F.										7	15	6	x	<4	<4		4	200	1	368444	FLOAT CONTAINS CHERT/QUA & QUARTSITE

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R. PLORATION . GEOCHEMICAL SAMPI GER

591052 051

Tenement name ROCKY CAPE EL1/77. No. ● Sample numbers 934600, 934903-934909, 934941-934950 Colle● by B. MOXLEY. Sheet no

Area / Prospect Sumac Rivulet. Date 14/4/82.

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET. Analysed by ANALABS COOEE. DPO no 30082, 30085.

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Tops	Cu	Pb	Zn	Ag	Sn	W	Au	Co	Ni	As	Grid ref	Geological Observations
											Metal content ppm or %											
934600	S.S.	S	2	✓						1	4	6	21	0.2	<4	<4	/	5	11	<1	403410.	R/H FORK INTO LAMPREY CRK.
934903	F.	S	2	✓						1	3	8	13	<0.1	5	<4		6	56	1	403410.	FLOAT CONTAINS PYRITIC CHERT.
934904	S.S.	S-m	3	✓						1	4	7	21	0.2	<4	<4	/	8	11	<1	401409.	R/H FORK LAMPREY CRK.
934905	F.	S-m	3	✓						1	7	6	15	0.2	<4	<4		7	29	6	401409.	FLOAT CONTAINS. CHERTS.
934906	S.S.	S	1	✓						1	3	3	16	0.1	<4	<4	/	3	9	<1	374384.	LH trib Sumac Rvt. No qz float quartzite.
934907	F.										4	6	4	0.1	<4	<4		2	160	1	374384.	float: Quartzite. above locality
934908	S.S.	S	2	✓						1	4	7	15	0.1	<4	14	/	3	8	<1	372383.	RH trib Sumac Rvt. float Dolomite
934909	F.										4	1	3	0.1	<4	<4		2	202	<1	372383.	above locality float dolomite
934941	S.S.	m	3	✓	✓					1	21	10	137	0.2	<4	4	/	29	59	1	354380.	LH trib Sumac Rvt. float Dolomite
934942	F.										9	6	65	0.2	<4	<4		21	141	2	354380.	above locality float Dolomite
934943	S.S.	m	4	✓	✓					1	53	10	219	0.2	<4	<4	/	45	76	1	353383.	RH trib Sumac Rvt. float Dolomite
934944	F.										440	9	90	0.3	6	<4		38	68	2	353383.	above locality float Dolomite
934945	S.S.	S	1.5	✓	✓					1	4	5	11	<0.1	<4	<4	/	4	7	1	361381.	LH trib Sumac Rvt. float Dolomite.
934946	F.										11	7	29	0.2	<4	<4		9	348	5	361381.	above locality Dolomite
934947	S.S.	S	1	✓	✓						6	15	17	<0.1	4	6	/	4	14	<4	365381.	LH trib Sumac Rvt. float Dolomite
934948	F.										5	2	4	<0.1	<4	10		4	297	1	365381.	above locality Dolomite.
934949	S.S.	S	1		✓					3	4	10	17	0.1	<4	4	/	7	12	<1	366373.	RH trib Sumac Rvt. float Dolomite
934950	F.										2	4	17	0.2	<4	6		7	32	<1	366373.	above locality. Dolomite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591053

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

052

Tenement name. ROCKY CAPE GL 1/77. No. Sample numbers 934801 - 934822 Collected by M. LAAN. Sheet no.

Area / Prospect. RECONNAISSANCE Date 12/5/82

Map / Photo reference. SANDY CAPE 1:100 000 TOPO SHEET. Analysed by ANALABS CODES. DPO no. 30084

Sample No.	Type	ss channel **						Carbon Tops /10	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Ni	Co	As	Sn	W			
		o/c sample type ***																		
		s sample type ****																		
934801	SS	S-M	2		✓			3	115	3	190	<0.1	105	51	<1	5	5	/		LN trib EKBERG CK. No % Float: basic volcanics.
934802	SS	0	0.5		✓			3	150	7	145	0.1	98	50	2	45	<4	/		RH trib EKBERG CK. No % Float: basic volcanics.
934803	SS	S-M	2		✓			3	106	9	170	<0.1	110	43	3	4	<4	/		LH trib CHESTER CK. No % Float: basic volcanics.
934804	SS	0	0.5		✓			2	39	3	85	0.1	59	26	4	<4	<4	/		RH trib CHESTER CK. No % Float: basic volcanics.
934805	SS	S	3	✓	✓			2	72	2	86	<0.1	54	23	<1	<4	<4	/		EKBERG CK. No % Float: quartz.
934806	SS	S	2	✓				2	89	7	95	<0.1	65	27	2	92	<4	/		CHESTER CK. No % Float: quartz.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591054

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

Tenement name: ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by: M. LAWN, D.J. WELK Sheet no. .....

Area / Prospect: RECONNAISSANCE Date: 12/5/82

Map / Photo reference: SANDY CAPE 1:100 000 TOPO SHEET Analysed by: ANALABS COOKE DPO no. 30084 30085

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Ni	Co	As	Sn	W		Grid ref	Geological Observations
		o/c sample type *** / s sample type ****																		
934883	oc	GS							33	15	34	<0.1	140	16	5	<4	<4			* weathered, v. poorly sorted Greywacke. rounded qtz fragments
934897	oc	GS							66	12	80	<0.1	160	25	8	<4	<4			* weathered poorly sorted sed. rock greywacke?
934901	ss	1.5	1.5		v			4	4	3	12	<0.1	12	2	1	<4	<4	/		
934902	ss	1.5	1.5		v			4	5	2	11	0.2	14	4	<1	<4	<4	/		

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

APPENDIX TWO

GEOCHEMICAL ASSAY LEDGERS - STREAMS 1982 - 83

591056 055

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. ..... Sample numbers..... Collected by: B. MORLEY Sheet no. .....

Area / Prospect: RAPID RIVER. Date: 18/8/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET. Analysed by: ANALABS DPO no: 30089

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon TOPO /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba					Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****																		
1055 002	SS	s	1		✓			1	7	4	14	8	<50	35	/					LH trib Rapid R. 9c whitish Dolomite.
003	oc	g/s							4	5	23	24	<50	5						f.g. whitish Dolomite - calcite veining. - above locality.
004	SS	s	1		✓			2	2	<1	8	4	<50	10	/					LH trib Rapid R.
005	f								2	1	4	8	<50	15						above locality: quartz float.
006	f								3	2	8	12	<50	115						m.g. banded quartzite.
007	SS	f-m	2		✓			2	5	8	41	12	<50	100	/					LH trib Rapid R.
008	o/c	g/s.							5	2	24	41	50	10						above locality grey-bl. v.f.g. Dolomite Vuggy & Calcite infill.
009	SS	f-m	2		✓			2	2	<1	10	9	<50	130	/					L.H. trib Rapid R
1055 010	f								7	<1	9	29	<50	260						Spotted pale brown quartzite. above locality ferruginous along joint/bedding plane.
011	SS	m	2		✓			2	6	2	22	9	<50	140	/					Joy ck.
012	o/c	g/s							3	<1	9	25	<50	160						above locality. white, poorly sorted quartzite & some carbonaceous matter. Sl. micaceous.
013	SS	m	2		✓			1	4	4	20	7	<50	80	✓					RH trib Lawson R.
014	oc	g/s							4	2	6	62	<50	90						above locality Silicified black shale minor disseam py along bedding
015	SS	m	1		✓			3	5	3	13	9	<50	135	✓					RH trib Lawson R.
016	oc	g/s							3	2	10	34	<50	375						above locality black shale disseam py + py concentrated along bedding.
017	oc	g/s							4	1	17	28	<50	350						ferruginous gossan, minor Mn. after shale?
018	oc	g/s							8	3	19	43	<50	340						black pyritic shale quartz veins along bedding
019	SS	m	2		✓			2	5	2	8	7	<50	100	✓					RH trib Lawson R.
1055 020	oc	g/s							24	4	11	27	<50	260						above locality black finely bedded Shale.
021	SS	m	2		✓			2	11	10	21	10	<50	115	/					RH trib Lawson R.
022	o/c	g/s							4	2	10	64	<50	140						above locality. white, spotted Sandstone - quartzite.
023	SS	m	2		✓			1	4	4	13	10	<50	130	/					RH trib Lawson R.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591057 056

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. Sample numbers Collected by: B. Morley Sheet no. 2
Area / Prospect: RAPID RIVER Date: 18/8/82
Map / Photo reference: ARTHUR RIVER Analysed by: ANALABS COOKE DPO no. 30089

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon Topo /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba					Grid ref	Geological Observations
1055024	f									5	3	25	34	<50	255						ferruginous breccia slightly spotted. - mainly quartz.
025	ss	s	1		✓				2	3	3	9	5	<50	50	✓					LH tnb Lawson R.
026	ss	s	1		✓				1	5	5	17	5	<50	55	✓					RH tnb Lawson R.
027	ss	s	1		✓				1	4	4	12	8	<50	105	✓					RH tnb Lawson R.
028	f									3	1	5	100	50	40						above locality. med grained brownish sandstone → quartzite. well sorted.
029	ss	f-m	2		✓				2	5	9	19	7	<50	65	✓					RH tnb Lawson R.
1055030	o/c	s/s								4	3	9	16	<50	150						above locality. white f.g. spotted siltstone → qtz Sandstone.
031	ss	f-m	2.5		✓				1	6	8	16	7	<50	80	✓					Lawson R.
032	oc	s/s								4	4	23	34	<50	210						above locality ferruginous well bedded siltstone. — vuggy.
033	ss	s	1		✓				2	16	63	20	10	<60	100	✓					LH tnb LAWSON RD ON THYATER RD. SPUR TA.
034	Missing Sample.																				LH tnb Lawson R.
035	f									47	29	21	79	100	175						f.g. black shale.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591058

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77. No. ..... Sample numbers..... Collected by: D.J. WEIR Sheet no. .....

Area / Prospect: JULIUS RIVER. GEOL TRAVERSES. Date: 18/8/82

Map / Photo reference: ARTHUR RIVER 1:100 000 TOPO Analysed by: ANALABS COOEE. DPO no: 30088

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Topo /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba					Grid ref	Geological Observations
934867	oc	cs	5m								38	26	72	24	<50	225						grey-black baked shale. well cleaved. Pyrite?
934868	oc	gs									139	15	88	104	50	185						f.g. reddish mudstone Quartz Vugs + Cavities along bedding planes.
934869	f										41	4	65	101	<50	730						f.g. greenish rock. v. hard. Goethite stain weathering. Circular siliceous inclusions.
934870	ss	s	1m		✓					4	73	14	210	250	<50	580	✓					RH trib Julius R. oc f.g. greenish basalt ? inclusions minor Py.
934871	oc	gs									57	9	103	140	<50	200						above locality. Dolomite breccia Calcareous matrix.
934872	ss	s	0.5		✓					2	56	16	230	250	<50	560	✓					RH trib Julius R. o/c Siliceous greywacke float: chert cherty Dol.
												,										Just upstream from 934105
934873	f										11	6	61	176	50	90						ferruginous highly weathered chert.
934874	f										32	9	43	47	50	280						grey-black Pyritic Shale, minor clasts V. Calcareous
934875	ss	s	1.0		✓					3	6	4	37	7	<50	15	✓					LH trib Julius R. No o/c float: Chert + Dol. Breccia?
934876	oc	cs	5m								17	4	40	42	<50	1720						Dolomite breccia. clasts up to 4mm minor disem py. well bedded.
934877	ss	s	1		✓					4	78	11	196	183	50	505	✓					o/c + float: banded mudstones.
934878	oc	cs	2pm								156	7	198	290	<50	680						Dr-brn. weathered siltstone-mudstone - grey bl. bands. Carbonaceous?
934879	ss	m	2.0		✓					4	43	7	220	153	<50	150	✓					o/c + float Tuffaceous breccia sub Lr. clasts of basalt? ? character minor Py.
934880	oc	gs									68	70	210	176	<50	185						Above locality: Tuffaceous breccia.
934932	f										44	11	108	125	<50	55						Tuffaceous breccia.
934933	ss	s	1.0		✓					3	18	5	54	310	<50	60	✓					No o/c. + float: Tuffaceous breccia.
934934	ss	m	1.0		✓					5	81	12	230	220	<50	360	✓					o/c f.g. dr-brown mudstones.
934935	oc	gs									5	22	11	22	<50	535						f.g. black mudstone.
934936	oc	cs	10m								10	8	45	49	<50	15						Greyish f.g. Dolomite
934937	oc	cs	5m								4	6	24	140	50	20						black Carbonaceous? Siltstone - Shale. Sheared - Slickensides? fault zone?
934938	oc	gs									26	13	26	61	50	135						Dolomite breccia - clasts of chert up to 10cm.
934939	oc	gs									9	21	132	52	<50	30						Dijolitic gossan - possibly Dol breccia hematite + magnetite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591059

058

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL1/77 No. ..... Sample numbers ..... Collected by: D.J. WEIR. Sheet no. .....

Area / Prospect: JULIUS RIVER. GEOL TRAVERSES. Date: 18/8/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET Analysed by: ANALABS COOEE DPO no: 30088 30092

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH	Tot % /10	Cu	Pb	Zn	Ni	As	Ba						
		o/c sample type ***																		
		s sample type ****																		
934940	oc	g/s							3	3	16	22	<50	5						White - creamy crystalline Dolomite slightly sparry.
934995	ss	m	1.0		v			6	47	20	250	220	<50	310	/					RH trib Julius R. 9% Dolomite whitish well bedded.
934996	oc	gs							55	10	104	156	<50	590						Breccia. f.g. greenish chloritic Sub cr clasts max 50mm. Matrix + some clasts Calcareous.
934997	ss	s	1.0		v			2	2	1	10	3	<50	5	/					RH trib Wests Ck. No 9% float; chert.
934998	ss	m-f	1.0		v			3	4	8	37	7	<50	70.	✓					LH trib Julius R. No 9%. Float chert. Contamination from Quarry?
1055063	oc	gs.							18	6	24	24	<1	10						Sheared Dolomite - platey. Shale interbands. 1 minor Carbonate vein -g.
064	oc	gs							15	6	43	23	1	15						Dolomite & Shaley interbands.
065	oc	gs.							20	10	33	37	1	30						black Pyritic Shale, Carbonate rich.
066	oc	gs.							9	7	72	94	2	5						grey f.g. Dolomite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591060 059

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name... ROCKY CAPE EL 1/77. No. ..... Sample numbers..... Collected by... D.J. WEIR. Sheet no. .....

Area / Prospect... REGIONAL. JULIUS R. Date... 29/8/82

Map / Photo reference... ARTHUR R. 1:100 000 TOPO SHEET. Analysed by... ANALABS COOKE. DPO no... 30092

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Tab /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba					Grid ref Sumac	Geological Observations
934 999.	oc	9/s.									19	40	120	33	4	440					Spur 10-2	Grey banded Siltstone. Ferruginous bands.
935000	oc	gs.									45	11	36	39	13	115					Julius R.	Weathered black Shale. Ferruginous along bedding after Py?
1055034	oc	gs.									29	12	62	88	7	245						Dolomite breccia. minor Py. f.g. grey matrix.
035	oc	cs	20m.								30	12	48	56	7	345						Dolomitic mudstone breccia minor Py.
036	oc	gs.									12	20	14	12	8	325						f.g. black Carbonaceous mudstone. v. minor Py.
037	oc	gs.									21	9	40	37	6	145						Dolomite breccia.
038	SS	s	1.5		v					2.	38	10	220	137	7	165	✓					RH trib Julius R. No %c float: quartz
039	SS	m	4.5		v					2	31	10	205	137	8	145	✓					Julius R. %c breccia dolomite & cherty clasts
1055040	SS	m	3		v					2	16	10	102	55	5	80	✓					LH trib Julius R. No %c Float: quartz, Dolomite breccia.
041	SS	m	3		v					2	32	11	200	137	6	180	✓					Julius R. Resample 934589.
042	SS	s	1		v					3	4	2	13	7	3	20	✓					LH trib Julius R. No %c Float: chert & quartz.
043	SS	s	0.5		v					3	26	29	189	63	17	350	✓					N.H. trib Julius R. %c Dolomite breccia float grey shale.
044	SS	s	0.5	v	v					2	9	5	43	12	6	35	✓					LH trib Julius R. No %c Float: Chert
045	SS	m	1		v					2	31	20	188	101	17	275	✓					RH trib Julius R. No %c.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591061060

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name RICKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR Sheet no. .....

Area / Prospect Sumac River. Date .....

Map / Photo reference ARTHUR RIVER 1:100000 TOPO SHEET. Analysed by ANALABS COOCE DPO no. 30093

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon TOPO /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba					Grid ref	Geological Observations
1055067	SS.	m	2		v					3	5	17	60	16	8	45	✓					L.H. trib Sumac Rvr. No % float: quartz. Resample of:
1055068	SS	m	3		v					3	6	9	30	12	<1	35	✓					LH trib Sumac Rvr. % Dolomite. Resample of:
1055069	SS	m	3		v					3	26	13	130	54	3	135	✓					Sumac Rvr. % Dolomite float: quartz + Chert. Resample of:
1055070	OC	O/s.									9	7	20	21	<1	180						Above locality. Pale cream coloured dolomitic? shale.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591062 061

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: RECKY CAPE EL 1/77 No. Sample numbers Collected by: D.J. WEIR, B. HORLEY, N. BRUNKER Sheet no.

Area / Prospect: REGIONAL Date: 3/9/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET. Analysed by: ANALABS COOEE DPO no: 30093, 30094

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon Topo /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba	Mo	Sn	W		Grid ref	Geological Observations
1055071	SS	S	4		✓				2.	7	9	18	10	<1	80	n.d	n.d.	n.d.	✓		WHITEHEAD CK. No % Float quartz. Sst. % in vicinity. Organic rich? black soil.
1055072	SS	S	1.5		✓				2	6	6	16	14	<1	80	"	"	"	✓		LH trib WHITEHEAD CK. No % Float quartz. SST. float in vicinity.
1055073	SS.	S	0.5	✓	✓				2	4	5	15	10	<1	115	"	"	"	✓		LH trib WHITEHEAD CK. No % Float: quartz + minor bl. shale.
1055074	SS	S	4		✓				2	7	9	21	16	4	115	"	"	"	✓		WHITEHEAD CK. No % Float: quartz.
1055075	SS	S	0.5	✓	✓				2.	7	6	14	11	<1	60	"	"	"	✓		RH trib WHITEHEAD CK. V. organic. Poor site. Hasn't eroded through button grass.
																					No % Float quartz.
1055076	SS.	S	7		✓				2.	9	15	23	13	4	125	"	"	"	✓		TRIAS CK. No % Fine gravel quartz float.
1055077	SS.	S	1		✓				2	5	5	18	8	<1	80	"	"	"	✓		RH trib TRIAS CK. Poor site. V. organic No % No Float.
1055078	SS.	S	1.5		✓				2	9	10	21	18	3	80	"	"	"	✓		RH trib TRIAS CK. No % No float - qtz rich gravel.
1055079	SS.	m	1		✓				3	4	6	15	8	<1	5	"	"	"	✓		LH trib LAGUNTA CK. No % Float: quartz + chert.
1055080	SS	S	10		✓				3	11	5	30	29	<1	40	"	"	"	✓		LAGUNTA CK. No % Float chert.
1055081	SS.	S	10		✓				3	17	8	82	69	<1	105	"	"	"	✓		LAGUNTA CK. No % No Float.
1055082	f									36	5	88	111	<1	275	"	"	"			reddish highly weathered basalt?
1055083	SS	m	1.5		✓				2	1	2	8	3	<1	40	<2	<4	<4	✓		LH trib NUGGET CK. No % No Float. Qtz gravel in sample mod. organic.
1055084	SS	m-f	2.5		✓				2	2	3	9	2	<1	25	<2	<4	<4	✓		NUGGET CK. No % No float. Qtz gravel in sample.
1055085	SS	m	2.5		✓				3	41	9	153	77	<1	185	<2	<4	<4	✓		LH trib HORTON R. No % Float Quartz lite?
1055086	SS.	m-f	1		✓				2.	3	1	11	7	<1	5	<2	8	<4	✓		RH trib LOVELLS CK. No % Float: grey siltstone + Quartz.
1055087	SS	m	2		✓				2	4	6	43	12	3	50	<2	60	<4	✓		LOVELLS CK. No % No Float.
1055088	SS	m	1		✓				1	5	15	24	8	<1	180	<2	<4	<4	✓		WHITEHEAD CK. SYSTEM. No % No Float.
1055089	SS	m	1		✓				1	6	10	21	8	<1	105	<2	<4	<4	✓		WHITEHEAD CK SYSTEM. No % No Float.
1055090	SS	m	2.5	✓	✓				2	7	6	21	20	<1	15	<2	<4	<4	✓		Trib LAGUNTA CK. No % No float.
1055091	SS	S	1		✓				3	132	11	66	61	<1	40	<2	<4	<4	✓		RH trib LAGUNTA CK. No % Float Basalt.
1055092	f	S/S.								36	4	91	66	<1	15	<2	4	<4			F.g. greenish amygdaloidal basalt. Above locality.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

062

591063

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL1/77 No. ..... Sample numbers ..... Collected by: D.J WEIR, M. BRUNKER. Sheet no. .....

Area / Prospect: REGIONAL Date: 15/9/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET. Analysed by: ANALABS COBEE DPO no: 30094

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * / oc / f / s	fl	wi	al	co	ca	pH	Topo /10	Cu	Pb	Zn	Ni	As	Ba	Mo	Sn	W			
		o/c sample type ***																		
		s sample type ****																		
1055093	SS	m	3	✓	✓			3	125	6	375	161	<1	80	<2	<4	<4	/		RH tmb LAGUNTA CK. No Tc float: Basalt
1055094	f	g/s.							161	3	150	90	<1	70	<2	<4	<4			Above locality. f.g. greenish Amygdaloidal Basalt.
1055095	SS	m	15		✓			2.	3	8	13	3	<1	75	<2	<4	<4	/		LAGUNTA CK. No Tc No float.
1055096	S.S.	S	1.5		✓			1	25	11	91	58	<1	115	<2	<4	<4	/		WHITEHEAD CK. SYSTEM No Tc No Float.
1055097	S.S.	m	1.5		✓			1	5	14	16	4	<1	75	<2	<4	<4	/		WHITEHEAD CK. SYSTEM. No Tc No Float.
1055098	S.S.	S	3		✓			2	1	6	8	3	<1	40	<2	<4	<4	/		WHITEHEAD CK. No Tc No Float. Bank dilution?
1055099	SS	S	2		✓			2	1	5	6	3	<1	45	<2	<4	<4	/		WHITEHEAD CK SYSTEM. No Tc No Float. Bank dilution?
1055100	SS	S	1		✓			1	1	3	4	3	<1	50	<2	<4	<4	/		WHITEHEAD CK. SYSTEM. No Tc No float. Mod. Organic.
1055101	SS	m	2.5		✓			2	2	6	8	4	<1	50	<2	<4	<4	/		WHITEHEAD CK. SYSTEM. No Tc No float.
1055102	SS	S	3		✓			2	2	4	6	3	<1	40	<2	<4	<4	/		WHITEHEAD CK. SYSTEM. No Tc No float.
1055103	SS	S	1.5		✓			1	7	16	19	9	4	105	<2	<4	<4	/		WHITEHEAD CK. SYSTEM No Tc Float Black Shale.
1055104	f	g/s.							13	57	21	30	<1	265	<2	<4	<4			Above locality. Black Shale float.
1055105	SS	S	0.5		✓			3	126	7	340	145	<1	100	<2	<4	<4	/		LH tmb HORTON R. No Tc Float f.g. greenish basalt.
1055106	SS	m	1		✓			3	105	10	285	126	<1	130	<2	<4	<4	/		LH tmb HORTON R. Tc + Float: Purple tuffaceous mudstone Poorly Sorted.
1055107	OC	g/s							61	9	163	158	<1	165	<2	<4	<4			Above locality Purple tuffaceous mudstone Poorly Sorted.
1055108	SS	S	1		✓			3	180	8	300	260	<1	95	<2	<4	<4	/		LH tmb HORTON R. No Tc Float: Basalt + quartz.
1055109	SS	S	1		✓			3	95	12	202	110	3	115	<2	<4	<4	/		RH tmb LAGUNTA CK. No Tc Float: Basalt.
1055110	SS	m	10	✓	✓			2	18	9	71	43	<1	65	<2	<4	<4	/		LAGUNTA CK. reddish staining. No Tc Float Chert? Amorphous Silica rock.
1055111	SS	m	2.5		✓			1	13	87	14	7	<1	80	<2	<4	<4	/		WHITEHEAD CK. SYSTEM. No Tc Nc float Sl. organic.
1055112	OC	g/s							19	17	28	35	29	170	26	<4	<4			Carbonaceous black Shale.
1055113	SS	m	1.5		✓			1	6	7	8	5	<1	45	<2	<4	<4	/		WHITEHEAD CK SYSTEM. No Tc No float. Black Shale Tc nearby.
1055114	SS	S	1	✓	✓			1	7	10	7	6	<1	30	<2	<4	<4	/		WHITEHEAD CK. SYSTEM No Tc No float v. organic.
1055115	SS	f	1.5		✓			1	2	4	8	4	<1	45	<2	<4	<4	/		WHITEHEAD CK SYSTEM. No Tc No float.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. Sample numbers Collected by: R.J. WEIR, M. BRUNKER Sheet no.

Area / Prospect: REGIONAL Date: 28/9/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET Analysed by: ANALABS COOEE DPO no.: 30095, 30096, 30097

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Topo /10	Metal content ppm or % Cu	Pb	Zn	Ni	As	Ba	Mo	Sn	W		Grid ref	Geological Observations
1055116	SS	S	0,5		✓					1	8	6	6	8	<1	65	1	<4	<4	✓		WHITEHEAD CK. SYSTEM. No ?c No float.
1055117	SS	S	10		✓					1	3	9	7	9	<1	70	0.5	<4	<4	✓		WHITEHEAD CK. SYSTEM. No ?c No float bank dilution?
1055129	SS	m-s	2.5		✓					1	3	6	7	12	<1	90	1	<4	<4	✓		LH trib whitehead ck. No ?c No float
1055130	SS	S	12	✓	✓					1	5	13	12	12	<1	140	2	<4	<4	✓		Whitehead ck. No ?c Float: bl.sh., grg, chlor. Siltstone
1055131	SS	S	1		✓					1	2	5	4	9	<1	30	0.5	<4	<4	✓		LH trib whitehead ck No ?c Float Sandstone.
																		Fe	Mn			
1055158 *	SS	S	1		✓					4	23	125	275	92	13	120	2	2.55%	160	✓		RH trib Unnamed ck (LH trib Arthur R). ?c + float Chert.
1055159	SS	m-f	3		✓					3	18	63	125	24	17	80	<2	7500	235	✓		Unnamed ck (LH trib Arthur R). ?c Chert + limonitic gossan.
1055160	SS	m-f	2	✓	✓					4	81	61	305	150	18	465	2	16.0%	2750	✓		Unnamed ck. (LH trib Arthur R. No ?c Float: f.g. Or-brn Siltstones.
1055161	SS	m-f	2	✓	✓					4	99	22	200	130	15	385	2	14.5%	2000	✓		Above ck. LH trib. No ?c Float: Or-brn. Siltstone-mudstone.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591065 064

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR M. BRUNKER Sheet no. .....

Area / Prospect REGIONAL (N. of ARTHUR R.). Date .....

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS COOKE DPO no. 30097

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH	Topo Tio	Cu	Pb	Zn	Ni	As	Ba	Mo	Fe	Mn			
		o/c sample type ***																		
		s sample type ****																		
1055162	SS	m-f	1.5		✓			6	98	28	450	420	13	550	<1	19,5	4850	✓		RH trib Unnamed ck. (LH trib ARTHUR R.) 9c+Float: grey finely banded Shale - Siltstone.
1055163	SS	m-f	2		✓			6	MISSING		SAMPLE									Above CREEK LH trib. 9c+Float: grey banded siltstone.
1055164	oc	g/s							165	16	100	105	19	840	2	6,5	395			grey banded Shale - Siltstone. Carbonaceous. graded bedding. f. disSem py ± 1%.
1055165	oc	g/s.							26	17	22	62	22	375	2	3.1	165			Sheared black Carbonaceous Shales.
1055166	oc	g/s.							45	10	81	180	11	500	2	1.3	545			Dolomite Breccia. Dk. grey f.g. matrix & chert Clasts. ± 2% py in nodules? + replacing? Chert clasts.
1055167	SS	m-f	2.5	v	✓			2.	89	17	280	220	13	410	<1	13,5	1700	✓		LH trib ARTHUR R. No 9c Float banded siltstones, quartz.
1055168	SS	m	1.5		✓			3	90	20	290	215	18	430	<1	11.5	2050	✓		LH trib ARTHUR R. No 9c Float: chert, quartz + Dolomite?
1055169	SS	m-f	3		✓			4	68	36	245	140	20	350	<1	13,0	3100	✓		LH trib ARTHUR R. No 9c Float: Chert / Dolomite?
1055170	SS	m-f	3		✓			6	12	41	170	40	12	75	<1	5,25	1950	✓		CANNON CK. 9c Dolomite Float: chert.
1055171	SS	m	2		✓			2	20	43	150	39	16	145	<1	4,65	5250	✓		LH trib ARTHUR R. 9c + Float Chert + qtz. Minor Mn Stng.
1055172	SS	m	1.5		✓			5	3	18	14	11	2	65	<1	6100	35	✓		LH trib ARTHUR R. No 9c Float chert + flaggy sandstone red-purple.
1055177	f								230	21	1050	290	58	35	4	27,5	435			Gossan from Unnamed trib ARTHUR R. v. limonitic & Chert clasts. minor Mn Stng.
1055178	f								59	10	360	310	8	115	2	3,2	2,25			highly Mn rich gossan - wad?
1055179	9c.	g/s.							265	19	720	380	50	35	2	15,5	605			limonitic gossan + minor boxworks. Sub Ar Chert clasts.
1055180	9c	g/s.							55	15	740	190	42	240	<2	35,0	455			limonitic gossan. v. heavy - basitic? & qtz goethite / limonite?
									Ag	Co	Cd	Ni	Sn	W	Au	Pb(XRF)				
1055177									<0,1	31	2.1	320	<4	39	<0,005	10				
178									<0.1	152	8,1	400	<4	5	<0,005	8				
179									<0.1	30	2,2	350	<4	28	<0,005	7				
180									<0.1	12	0.8	75	<4	44	<0,005	19				

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

APPENDIX THREE

CUMULATIVE FREQUENCY CALCULATIONS FOR STREAM SEDIMENTS

CUMULATIVE FREQUENCY CALCULATION Area: TROWOTTA - DEMPSTER PLAINS Element Pb Name D.J. WEIR Date 7/2/83.

L 1/77

ppm	Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1	5	5	1.9			
1.25	0	5	1.9			
1.5	0	5	1.9		1.9	2.8
2	7	12	4.4		4.4	6.7
2.5	0	12	4.4		4.4	6.7
3	12	24	8.8		9.8	13.4
4	21	45	16.7		16.7	25.5
5	23	68	25.2		25.2	38.4
6	19	87	32.2		32.2	49.1
7	21	108	40.0		40.0	61.0
8	22	130	48.1		48.1	73.3
9	22	152	56.3		56.3	85.8
10	25	177	65.6		65.6	
12.5	16	193	71.5	70	1.5	6.2
15	23	216	80.0		10.0	41.5
20	16	232	85.9		15.9	66.0
25	8	240	88.9		18.9	78.4
30	7	247	91.5		21.5	89.2
40	7	254	94.1		24.1	
50	4	259	95.9	96A		
60	0	259	95.9			
70	5	264	97.8		1.9	
80	0	264	97.8		1.9	
90	0	264	97.8		1.9	4.3
100	1	265	98.2		2.3	5.1
125	2	267	98.9		3.0	7.2
150	0	267	98.9		3.0	7.2
200	1	268	99.25		3.4	8.2
250	0	268	99.25			
300	0	268	99.25			
400	1	269	99.63		3.7	
500	1	270	100.		4.1	
600						
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

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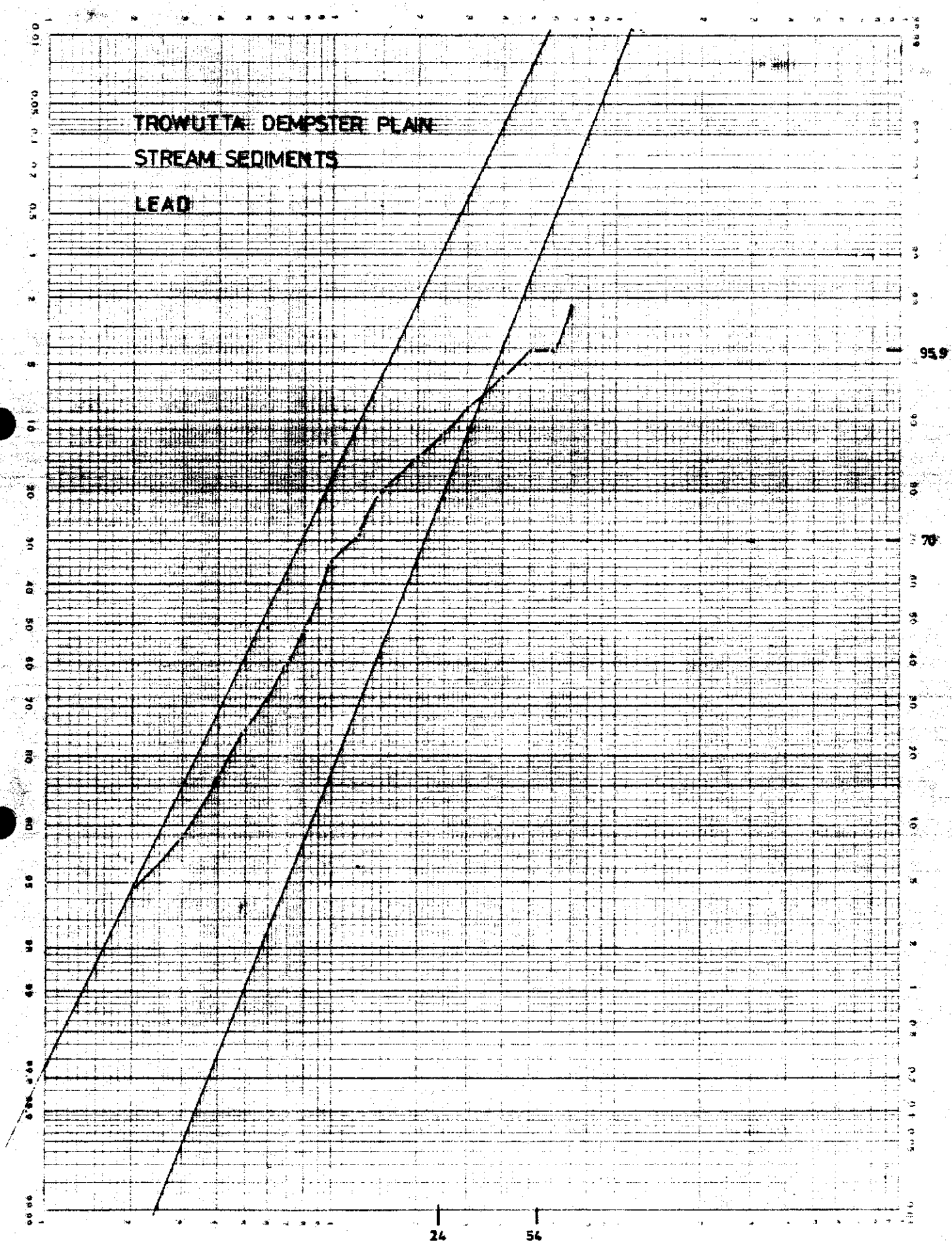


CUMULATIVE FREQUENCY CALCULATION Area: TROWUTTA - DEMASTER PLAINS Element: Zn Name: D.J. WEIR Date: 7/2/83

EL 1/77

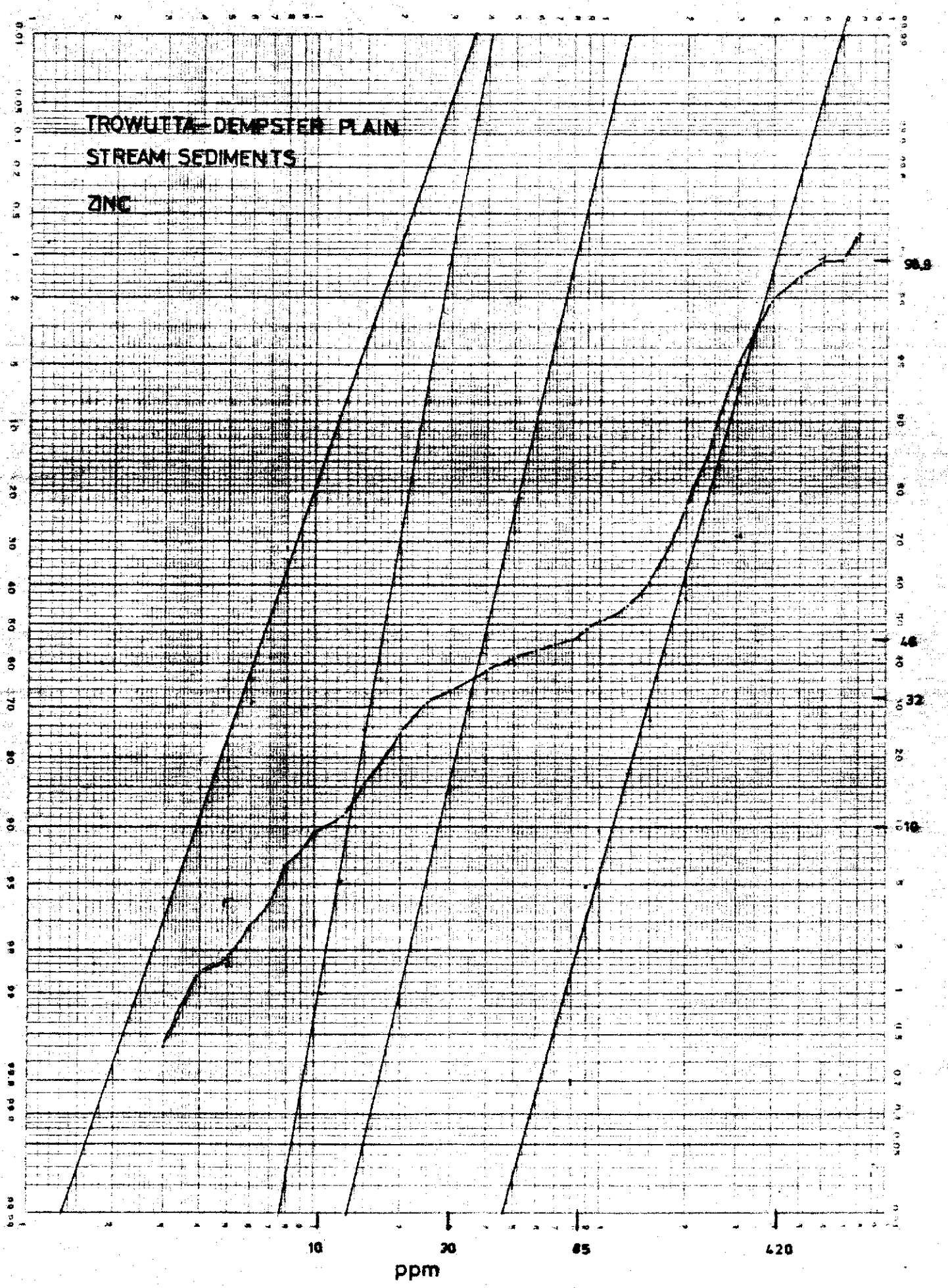
ppm	Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1						
1.25						
1.5						
2						
2.5						
3	1	1	0.4		0.4	4.3
4	4	5	1.4		1.4	15.1
5	1	6	1.8		1.8	19.4
6	3	9	2.9		2.9	31.2
7	3	12	3.9		3.9	41.9
8	7	19	6.4		6.4	68.8
9	3	22	7.3		7.3	80.6
10	5	27	9.3		2.3	
12.5	8	31	11.1	10	1.1	5.2
15	12	43	15.4		5.4	25.6
20	25	68	24.3		14.3	67.8
25	20	88	31.1		21.1	
30	8	96	33.9	25	4.9	14.6
40	13	109	38.2		6.2	47.6
50	9	118	41.4		9.4	72.3
60	6	124	43.6		11.6	89.2
70	4	128	45.0		13.0	
80	3	131	46.1	46	0.1	0.2
90	7	138	48.6		2.6	4.9
100	7	145	51.1		5.1	9.7
125	11	156	55.0		9.0	17.1
150	15	171	60.4		14.4	27.4
200	46	217	76.8		30.8	58.6
250	33	250	88.6		42.6	81.0
300	18	268	95.0		49.0	93.2
400	8	276	97.9		51.9	98.7
500	2	278	98.6		52.6	
600	1	279	98.9	98.9		
700	0	279	98.9			
800	1	280	99.3		0.4	
900	0	280	99.3		0.4	76.4
1000	1	281	99.6		0.7	43.6
1250	0	281	99.6		0.7	
1500	0	281	99.6		0.7	
2000	0	281	99.6		0.7	
2500	1	282	100		1.1	
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

068

591069

069

591070
Zn



CUMULATIVE FREQUENCY CALCULATION Area: TROWUTTA – DEMPSTER PLAINS [redacted] ment. Cu

[redacted] 1/77 Name..... Date.....

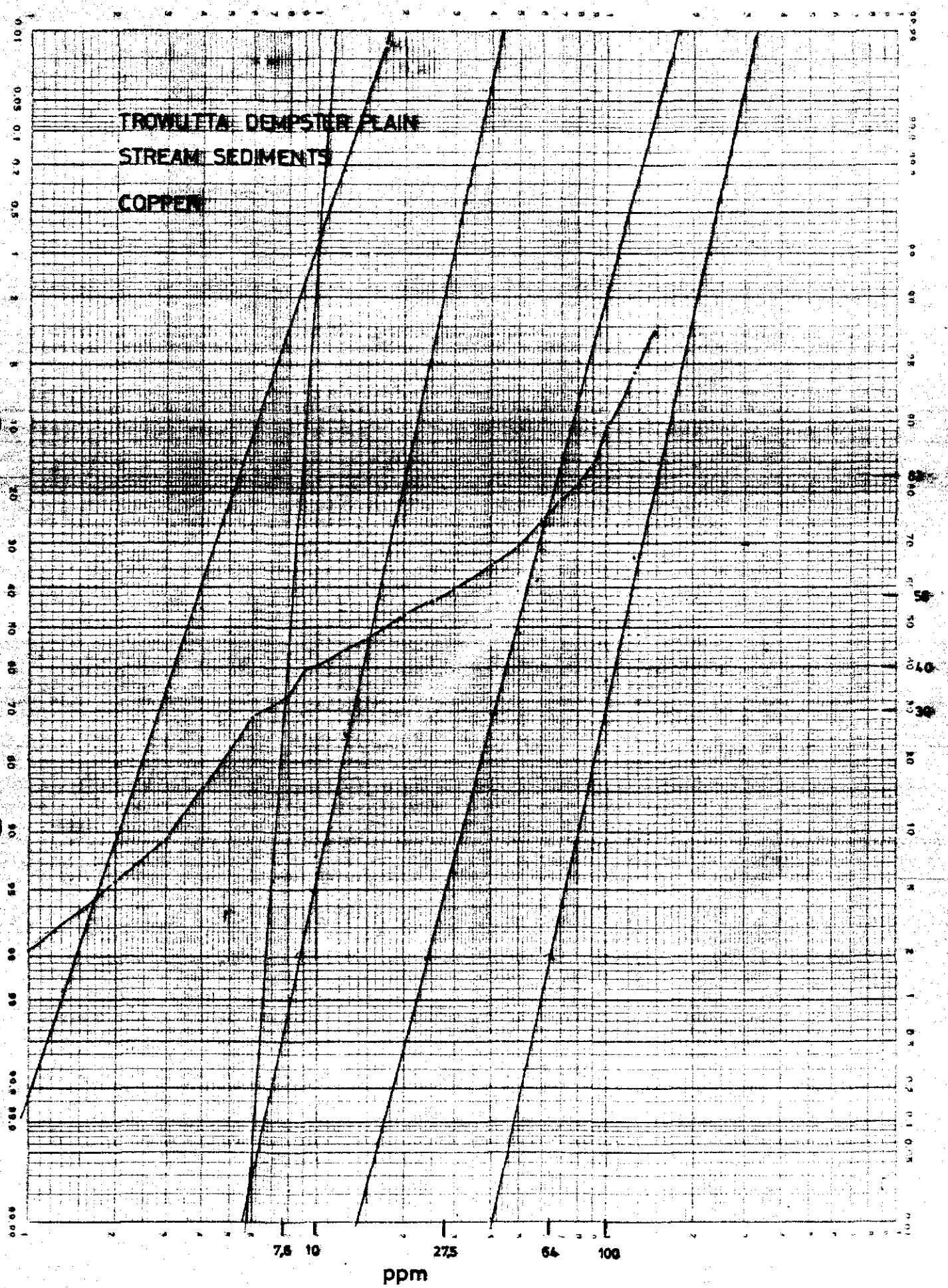
ppm	Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1	6	6	2.2		2.2	7.8
1.25	0	6	2.2			
1.5	0	6	2.2			
2	9	15	5.6		5.6	19.8
2.5	0	15	5.6			
3	10	25	9.3		9.3	32.9
4	17	42	15.6		15.6	55.1
5	17	59	21.9		21.9	77.4
6	17	76	28.3		28.3	
7	6	82	30.5	30	0.5	5.7
8	9	91	33.8		3.8	43.7
9	13	104	38.7		8.7	
10	4	108	40.1	40	0.1	6.1
12.5	11	119	44.2		4.2	25.5
15	8	127	47.2		7.2	43.6
20	17	144	53.5		13.5	81.8
25	8	152	56.5		16.5	
30	8	160	59.5	58	4.5	6.3
40	15	175	65.1		7.1	29.8
50	12	187	69.5		11.5	48.3
60	13	200	74.3		16.3	68.5
70	11	211	78.4		20.4	85.7
80	9	220	81.8		23.8	
90	7	227	84.4	82	1.4	8.2
100	14	241	89.6		6.6	38.8
125	13	254	94.4		11.4	67.1
150	17	261	97.0		14.0	82.4
200	8	269	100.		17.0	
250						
300						
400						
500						
600						
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

070

591071

071

591072

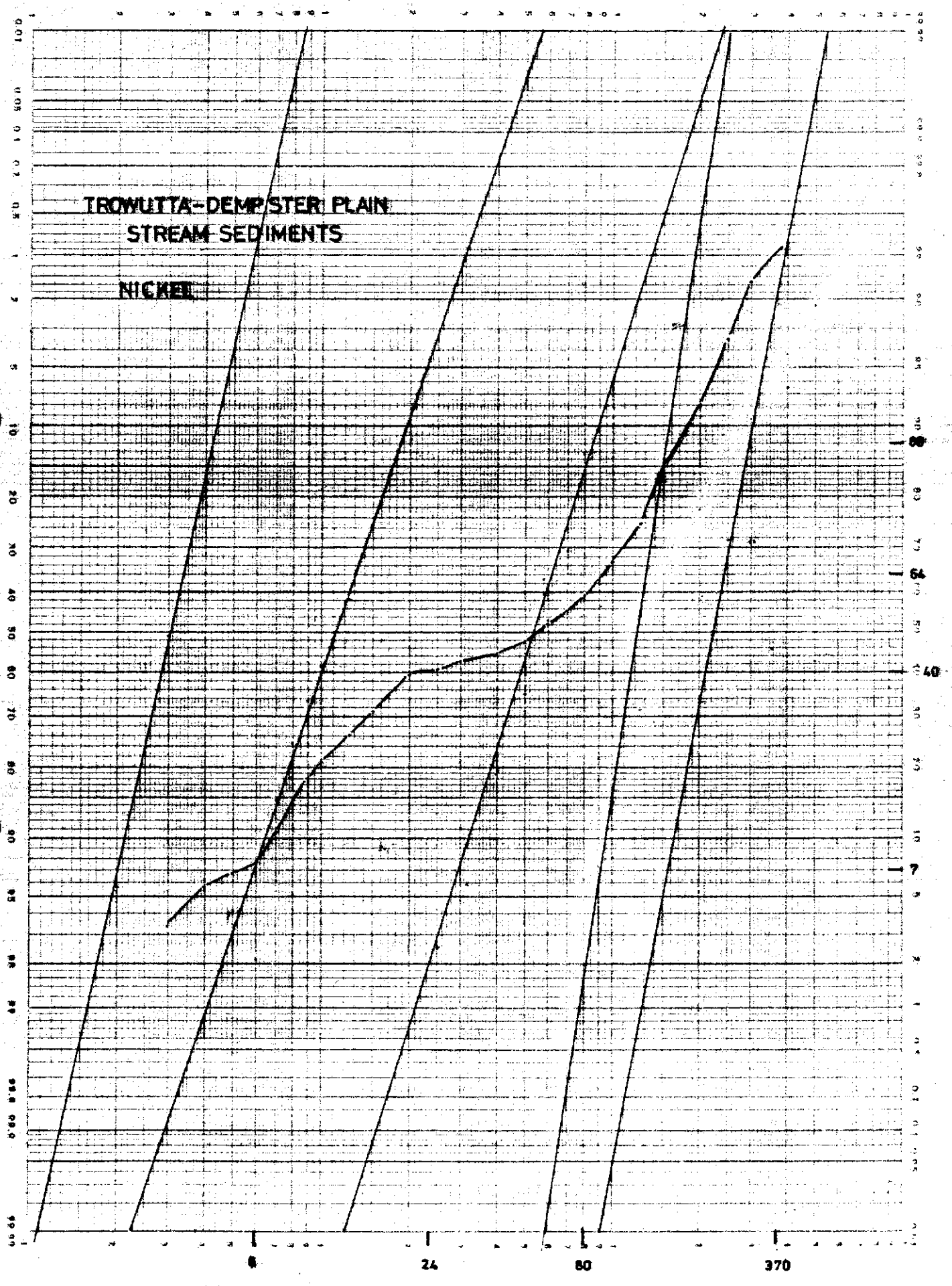


CUMULATIVE FREQUENCY CALCULATION Area: TROUTTA - DEMPSTER PLAINS Element: Ni Name: D.J. WEIR Date: 7/2/83

ppm		Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1							
1.25							
1.5							
2	1						
2.5		1	1	0.4			
3	111	0	1	0.4		0.4	5.8
4	1111	8	9	3.4		3.4	49.3
5	1111	6	15	5.7		5.7	82.6
6	11	3	18	6.9		6.9	
7	1111 1111 1	2	20	7.7	7.0	0.7	2.1
8	1111 111	11	31	11.9		4.9	14.9
9	1111 111	8	39	14.9		7.9	24.1
10	1111 11	8	47	18.0		11.0	33.5
12.5	1111 1111 1111	7	54	20.7		13.7	41.8
15	1111 1111 1111	14	68	26.1		19.1	58.2
20	1111 1111 1111 1111 11	14	82	31.4		24.4	74.4
25	11	22	104	39.8		32.8	
30	1111	2	106	40.6		0.6	2.6
40	1111	5	111	42.5	40	2.5	11.0
50	1111 1111	5	116	44.4		4.4	19.3
60	1111 1111 1	9	125	47.9		7.9	34.6
70	1111 1111	11	136	52.1		12.1	53.1
80	1111 1111	10	146	55.9		15.9	69.7
90	1111 111	10	156	59.8		19.8	86.8
100	1111 1111 11	8	164	62.8		22.8	
125	1111 1111 1111 1111 11	11	175	67.0	64	3.0	14.2
150	1111 1111 1111 1111 1111	22	197	75.4		11.4	54.0
200	1111 1111 1111 1111	25	222	85.1		21.1	
250	1111 1111 11	18	240	92.0	88	4.0	33.3
300	1111	12	252	96.6		8.6	71.7
400	11	5	257	98.5		10.5	87.5
500	11	2	259	99.2		11.2	93.3
600		2	261	100		12	
700							
800							
900							
1000							
1250							
1500							
2000							
2500							
3000							
4000							
5000							
6000							
7000							
8000							
9000							
10000							

073

591074


TROWUTTA-DEMPSTER PLAIN
STREAM SEDIMENTS
NICKEL
8
24
80
370
64
40
7

CUMULATIVE FREQUENCY CALCULATION Area: TROWOTTA - DEMPSTER PLAIN. Element AS Name D.J. WEIR Date 7/2/83

EL 1/77

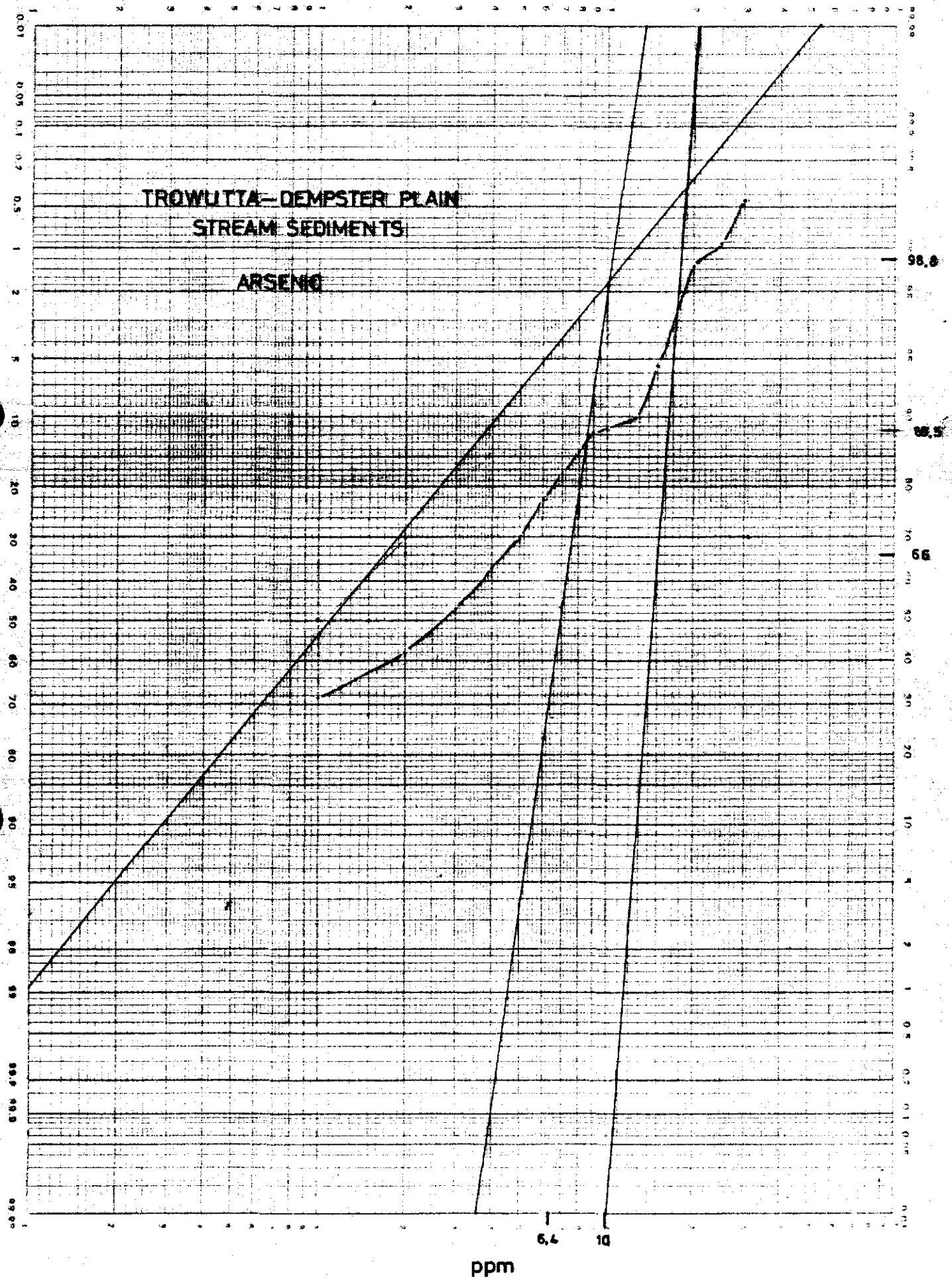
ppm	Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1	70	70	31.9			
1.25	0	70	31.9			
1.5	0	70	31.9		31.9	50.6
2	22	92	42.0		42.0	66.6
2.5	0	92	42.0		42.0	
3	24	116	53.0		53.0	84.1
4	24	140	63.0		63.0	
5	13	153	69.9	66.0	3.9	18.0
6	17	170	77.6		11.6	53.5
7	10	180	82.2		16.2	74.7
8	8	188	85.8		19.8	91.2
9	3	191	87.2		21.2	97.7
10	1	192	87.7		21.7	
12.5	5	197	89.95	88.5	0.5	5.0
15	10	207	94.52		6.0	59.4
20	9	216	98.63		10.1	
25	1	217	99.08		0.3	
30	1	218	99.54		0.7	
40	0					
50	0					
60	0					
70	0					
80	0					
90	1	219	100.			
100						
125						
150						
200						
250						
300						
400						
500						
600						
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

074

591075

075

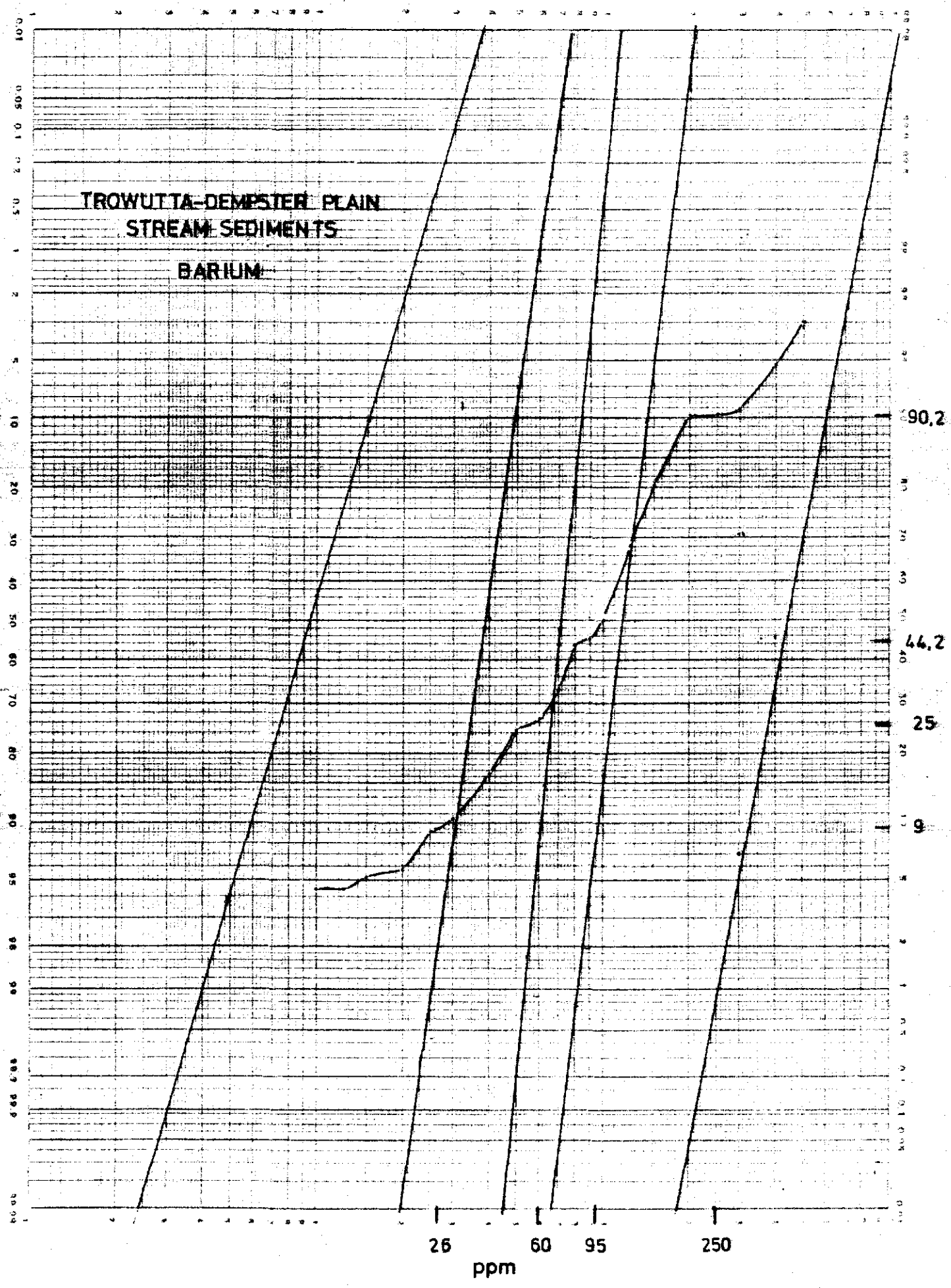
591076


TROWUTTA–DEMPSTER PLAIN
STREAM SEDIMENTS
ARSENIC
98.8
95.5
66
6.4
10
ppm

CUMULATIVE FREQUENCY CALCULATION Area: TROUTTA - DEMPSTER PLAIN Element Ba Name D.J. WEIR Date 7/2/83.

ppm						Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1											
1.25											
1.5											
2											
2.5											
3											
4											
5	IIII					2	2	1.5			
6						0	2	1.5			
7						0	2	1.5			
8						0	2	1.5			
9						0	2	1.5		1.5	22.1
10	IIII					4	6	4.5		4.5	
12.5						0	6	4.5		4.5	66.2
15	II					2	8	6.1		6.1	89.7
20	I					1	9	6.8		6.8	
25	III					3	12	9.1	9.0	0.1	0.7
30	II					2	14	10.6		1.6	10.5
40	IIII	III				8	22	16.7		7.7	50.7
50	IIII	IIII				10	32	24.2		15.2	
60	III					3	35	26.5	25.0	1.5	7.9
70	IIII	IIII				9	44	33.3		9.3	43.9
80	IIII	IIII	IIII			14	58	43.9		18.9	
90	II					2	60	45.5	44.2	1.3	3.6
100	IIII	I				6	66	50.0		5.8	16.1
125	IIII	IIII	IIII	IIII	IIII	24	90	68.2		24.0	66.5
150	IIII	IIII	IIII	I		16	106	80.3		36.1	
200	IIII	IIII	III			13	119	90.2	90.2		
250						0	119	90.2			
300	I					1	120	90.9		0.7	7.1
400	IIII					5	125	94.7		4.5	45.9
500	III					3	128	97.0		6.8	69.4
600	IIII					4	132	100		9.8	
700											
800											
900											
1000											
1250											
1500											
2000											
2500											
3000											
4000											
5000											
6000											
7000											
8000											
9000											
10000											

591078


TROWUTTA-DEMPSTER PLAIN
STREAM SEDIMENTS
BARIUM
90,2
44,2
25
9
26
60
95
250
ppm

APPENDIX FOUR

GEOCHEMICAL ASSAY LEDGERS - ROCK CHIPS

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. ... Sample numbers: 934116 - 934122 ... Collected by: ... Sheet no. 1

Area / Prospect: JULIUS RIVER ... Date: 5 / 1 / 82

Map / Photo reference: ARTHUR RIVER 1:100,000 TOPO ... Analysed by: ANALABS COOEE ... DPO no: 30069

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag Ni	Mo Co	Mn As	Au Bi	Sn	W	Grid ref	Geological Observations
934116	OC	GS 30m									14	39	26	195	2	4	<2	<3	<10		CHERT, CALCITE, MINOR DOLOMITE
934117	OC	GS 50m									8	2	9	210	2	2	2	25	<10		" " " "
934118	F	GS 50m									5	2	8	140	2	1	<2	7	<10		" "
934119	OC	GS 40m									9	5	10	200	2	1	<2	5	<10		CHERT, MINOR CALCITE VEINING
934120	OC	GS 40m									8	5	9	230	2	1	<2	4	<10		CHERT (COLLOFORM DEPOSITION)
934121	OC	GS 100m									14	6	15	340	3	2	<2	8	<10		IRON-STAINED CHERT
934122	F	GS 50m									8	4	30	220	7	3	<2	4	<10		CHERT, QUARTZITE, PURPLE/WHITE SILTSTONE

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

079

934116-934122

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name Rocky Cape EL 1/77 No. .... Sample numbers 934133 - 934140 Collected by K. Robinson Sheet no. 1
Area / Prospect Julius River - Sumac Roads Date 8-12-81
Map / Photo reference Arthur River 1:100 000 Topo Sheet Analysed by ANALABS Cooee DPO no. 30065

Sample No.	Type ss* oc f s	ss channel ** fl / o/c sample type *** / s sample type ****	wi	al	co	ca	pH	Carbon	Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W		Grid ref	Geological Observations
934133	OC	GS	200 m						160	2	150	83	44	6	<2	4	<10			Weathered basalt
934134	OC	GS	100 m						72	4	54	65	26	10	<2	4	10			Banded mudstone / siltstone + volcanics
934135	OC	GS	100 m						75	5	83	81	25	9	<2	<3	<10			Weathered, layered basalt
934136	OC	GS	100 m						60	2	190	131	39	7	<2	5	<10			Volcanic shale / clay
934137	OC	GS	100 m						66	7	150	65	39	14	<2	4	<10			" " "
934138	OC	GS	100 m						45	6	160	103	26	18	<2	4	<10			Green siltstone, weathered basalt.
934139	OC	GS	100 m						320	2	72	130	55	6	<2	7	<10			Weathered basalt + assoc. mudstone.
934140	OC	GS	100 m						180	<1	65	80	67	6	<2.	<3	<10			Basalt, minor qtz veins + mudstone.

80165

* Sample type ss = stream sediment oc = outcrop f = float s = soil
** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591082081

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: Rocky Cape GL 1/77 No. ..... Sample numbers: 934141 – 934157 Collected by: K.A. Robinson Sheet no. .....

Area / Prospect: Inglis River SUMAC ROADS Date: 9/12/81

Map / Photo reference: Inglis River 1:100 000 Topo. Analysed by: ANALABS COOEE. DPO no: 30065

Sample No.	Type ss * / oc / f / s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W	Ba	Grid ref	Geological Observations
934141	OC							RC 25m			130	1	30	87	30	2	<2	5	<10			Olivine – qtz – porphyry?
934142	OC							RC 75m			170	<1	30	89	36	2	<2	4	<10			Nodular weathered basic volcanics
934143	OC							RC 100m			57	10	120	134	47	5	<2	8	<10			Volcanics – Tuffaceous Scoria.
934144	OC							RC 300m			120	5	40	122	44	9	<2	7	<10			Weathered Tuff to mudstone
934145	OC							RC 50m			76	10	69	127	47	7	<2	7	<10			Weathered nodular basalt
934146	OC							RC 25m			150	13	120	145	56	9	<2	3	<10			Weathered basalt + mudstone
934147	OC							RC 25m			36	22	31	153	13	14	<2	10	<10			Black (siliceous) nodular siltstone / shale
934148	OC							RC 100m			79	8	70	123	65	5	<2	7	<10			Weathered basalt
934149	OC							RC 75m			42	30	31	25	11	18	<2	4	<10			Shale, well cleaved ± disseminated Py.
934150	OC							RC 25m			82	19	18	63	14	19	<2	6	<10			Red-purple shales, Fe stng.
934151	OC							RC 100m			15	6	15	95	4	5	<2	3	<10			Chert / minor Dolomite.
934152	OC							RC 100m			12	3	8	154	2	3	<2	4	10			Banded Chert.
934153	OC							RC 75m			66	24	39	41	22	19	<2	5	<10			Siltstone – Shale.
934154	OC							RC 25m			71	8	130	127	55	6	<2	6	<10			Limestone Breccia + minor Py.
934155	OC							RC 25m			52	6	110	124	36	5	<2	3	10			*Limestone Breccia + minor Py
934156	OC							RC 50m			10	3	7	131	2	2	2	6	<10			Finely laminated Chert.
934157	OC							RC 50m			9	1	5	170	5	2	<2	4	<10			Banded Chert & Siliceous.

*Limestone clasts in a f.g. dark green calcareous matrix.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591083 082

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: Rocky Cape EL 1/77 No. Sample numbers: 934158 – 934173 Collected by: K.P. Robinson Sheet no.

Area / Prospect: Tinders River Sumac Roads Date: 10/12/81

Map / Photo reference: Arthur River 1:100 000 Tarkine Sheet Analysed by: ANALABS CODES DPO no: 30065

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W	Mn.	Grid ref	Geological Observations
934158	oc							RC 40m			56	9	130	173	3	5	<2	<3	<10			Limestone Breccia
934159	oc							RC 40m			53	8	120	173	42	4	<2	<3	<10			" "
934160	oc							GS 200m			52	13	54	72	40	7	<2	<3	<10			Chert - banded
934161	oc							RC 10m			24	6	34	47	22	6	<2	<3	<10			Pyritic grey Dolomite
934162	oc							GS 150m			73	42	49	79	74	12	<2	7	<10			Basalt / Siltstone / Shale.
934163	oc							GS 150m			11	5	14	132	6	5	<2	<3	<10			Chert, Dolomitic, minor calcite
934164	oc							RC 15m			7	2	7	115	3	2	<2	4	<10			" " " "
934165	f							GS 100m			9	5	17	186	2	<1	<2	3	<10			" " " "
934166	f							GS 50m			8	2	6	170	4	1	2	<3	<10			" " " "
934167	f							GS 50m			8	3	4	151	2	1	<2	<3	<10			" " " "
934168	f							GS 50m			8	1	5	132	3	<1	<2	5	<10			" " " "
934169	f							GS 50m			9	8	11	133	5	1	<2	<3	<10			" " " "
934170	f							GS 50m			13	23	20	270	5	7	<2	<3	<10			" " " "
934171	f							GS 100m			19	2	6	143	3	11	<2	6	<10			" " " "
934172	f							GS 200m			11	4	6	141	2	3	<2	9	<10			Weathered Siliceous Chert + Dolomite.
934173	oc							RC 20m			10	7	14	163	2	3	<2	3	<10			Chert, Dolomitic, minor Calcite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** [illegible]

591084 083

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name... ROCKY CAPE EL 1/77 ... No. ... Sample numbers 934182 - 934248 ... Collected by K.P. Robinson ... Sheet no. ...
Area / Prospect... SUMAC RIVULET Sumac Roads 934240 - 934243 ... Date 15/12/81
Map / Photo reference... ARTHUR RIVER 1:100 000 Topo ... Analysed by ANALABS COOEE ... DPO no. 30065

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W			
		o/c sample type ***																		
		s sample type ****																		
934182	OC	GS	75m						49	20	49	49	9	12	<2	4	<10			Brown Siltston
934183	F	GS	50m						16	21	16	93	19	29	<2	5	<10			Chert, Slightly Ferruginous.
934184	OC	GS	50m						24	15	24	51	8	16	<2	4	<10			Chert. Slightly conglomeratic
934185	OC	GS	75m						13	6	13	119	3	4	3	<3	<10			Dolomitic Chert
934186	OC	RC	20m						62	11	140	74	12	28	<2	6	<10			Pyritic, Siliceous mudstone
934187	OC	RC	30m						69	6	25	34	13	5	<2	<3	<10			" " "
934188	f	GS	50m						11	5	19	119	2	3	<2	<3	<10			Banded Siliceous chert - Shatery
934189	OC	GS	75m						10	8	16	45	2	3	<2	<3	<10			" " " " "
934190	OC	GS	75m						9	4	4	190	3	3	<2	3	<10			" " " " "
934191	OC	GS	75m						11	6	9	193	2	5	<2	<3	<10			" " " " "
934192	OC	GS	75m						8	3	3	106	2	2	2	<3	<10			" " " " "
934193	OC	GS	75m						14	6	11	240	5	4	<2	<3	<10			Quartzite, Qtz Siltstone / Lutite
934194	OC	RC	20m						9	4	29	109	9	4	<2	<3	<10			Quartzite, diagen Py - minor
934195	OC	RC	40m						150	2	14	33	5	3	<2	3	10			Quartz arenite - feldspathic SST.
934196	OC	GS	100m						8	3	17	47	6	5	<2	<3	<10			v. Siliceous Chert.
934197	OC	GS	50m						12	4	13	24	6	7	<2	<3	<10			Quartzite
934198	OC	GS	75m						11	6	16	149	2	3	<2	4	<10			Chert - Dolomite
934199	OC	GS	75m						16	35	65	178	3	2	<2	<3	<10			" "
934200	OC	GS	100m						140	39	270	101	42	20	<2	4	<10			Bedded tuff - mudstone?
934240	OC	GS	60m						12	5	16	49	7	14	<2	3	<10			Siltstone
934241	OC	GS	100m						19	7	7	420	5	5	<2	<3	<10			Contact zone - siltstone - tuff.
934242	OC	GS	50m						10	5	18	31	7	8	<2	4	<10			Siltstone - mudstone
934243	OC	GS	75m						9	3	15	41	8	5	<2	<3	<10			Weathered Siliceous Chert.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL1/77 No. ..... Sample numbers 934201 - 934223 Collected by M. LAAN. Sheet no. 1

Area / Prospect BLACKWATER ROAD Date 4/12/81

Map / Photo reference SANDY CAPE 1:100 000 TOPO. FORESTRY BLUFF POINT SPECIAL 40 cm : 1" Analysed by ANNALABS, CORK DPO no. 30066

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W.	Grid ref	Geological Observations
		o/c sample type *** / s sample type ****																	
934201	oc/cs		50m						138	9	106	82	56	9	<2	9	<10		Fresh f.g. basalt & pillow structures
202	oc/cs								160	8	124	114	68	5	<2	9	<10		weathered basalt to purple mudstone contact.
203	oc/cs								82	14	110	106	44	13	<2	43	10		Purple mudstone.
204	oc/cs		0.37 miles.						52	13	140	158	56	10	<2	<3	<10		Weathered basalt
205	oc/cs		0.48 miles.						76	15	86	86	34	9	<2	5	<10		weathered, reddish basic? Tuffs.
206	oc/cs		0.6 miles.						80	14	82	104	30	8	<2	<3	<10		" " " "
207	oc/cs		0.6 miles						74	17	82	62	28	8	<2	4	<10		" " " "
208	oc/gs								12	10	14	32	8	12	<2	7	<10		Weathered siltstones.
209	oc/gs								20	11	30	44	12	27	<2	<3	10		Black, Pyritic, graphitic Shale.
934210	oc/gs								24	10	22	42	8	19	<2	8	<10		Black Shale → yell-grey on weathering.
211	oc/gs								26	17	22	48	6	17	<2	5	<10		laminated Shales.
212	oc/cs		50m.						22	12	24	32	8	18	<2	6	<10		Black Pyritic Shale
213	oc/gs								18	22	22	28	4	15	<2	7	<10		Black graphitic Shale + Pyrite.
214	oc/gs								20	11	36	74	10	11	<2	3	<10		banded Shales, graphitic + narrow Chert band.
215	oc/gs								6	9	22	28	16	1	<2	<3	10		Dolomitic Lst. + Calcite veining.
216	oc/gs								10	1	4	320	8	79	<2	7	<10		Comminuted nodules within clay: Lst. Contact. - Small Sulphides.
217	oc/gs								14	19	72	76	24	12	<2	7	<10		Red. weathered clay.
218	oc/gs								104	12	116	132	50	12	<2	3	10		mixed zone of banded siltstones & tuffs.
219	oc/gs								4	8	10	38	14	2	<2	<3	<10		Massive dolomitic limestone.
934220	oc/gs								300	8	108	126	86	3	<2	<3	<10		weathered basic volcanics, Tuffs.
221	oc/gs								38	14	50	68	4	6	<2	6	<10		Shale within contact zone + volcanics minor Pyrite.
222	oc/gs								94	17	104	58	44	3	<2	3	15		Ashfall tuff, Poorly Sorted.
934223	oc/gs								28	24	22.	94	10	17	<2	5	<10		Black Pyritic Shale.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. Sample numbers 934224 - 934239, 934274 Collected by M. LAAN. Sheet no. 2

Area / Prospect BLACKWATER ROAD. Date 4/12/81

Map / Photo reference SANDY CAPE 1:100 000 TOPO SHEET FORESTRY BLUFF POINT SPECIAL 40CH 11* Analysed by ANALABS COOEE DPO no 30066

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W			
		o/c sample type ***																		
		s sample type ****																		
934 224	oc/gs								6	25	8	58	2	5	<2	5	<10			shales & minor quartz veins.
225	oc/gs								14	9	12	66	4	4	<2	4	<10			banded grey & white shales
226	oc/gs								32	31	28	36	8	25	<2	4	<10			Black pyritic shales.
227	oc/gs								24	10	22	70	4	6	2	<3	<10			Black pyritic shale.
228	oc/gs								8	46	10	26	2	3	<2	4	10			Black pyritic, graphitic shales.
229	oc/gs								8	7	106	38	14	2	2	10	<10			Green chloritic shales.
934 230	oc/gs								14	36	56	102	10	5	<2	8	<10			Grey shales & minor quartzites.
231	oc/gs								18	7	78	40	14	3	<2	<3	<10			green, brown spotted chloritic siltstone.
232	oc/gs								18	10	38	46	14	9	<2	6	<10			" " " "
233	oc/gs								8	10	66	40	18	3	2	5	<10			banded pink & green siltstones.
234	oc/gs								28	7	58	300	10	6	<2	4	<10			Chert & conglomerate boulders.
235	oc/gs								140	11	40	98	68	3	<2	<3	<10			basic? volcanic tuffs.
236	oc/gs								8	4	4	156	4	2	<2	6	<10			laminated grey shale.
237	oc/gs								12	9	6	240	8	3	<2	<3	<10			massive dolomitic limestone.
238	oc/gs								60	13	74	80	26	14	<2	5	<10			basic tuffs.
239	oc/gs								72	17	66	108	26	22	<2	4	10			Tuffs & interbedded mudstone.
934 274	oc/gs								8	4	6	360	10	68	<2	<3	<10			Black, nodular agglomerate as per 934216

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & len th) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: Rocky Cape EL 17/77 No. ..... Sample numbers: 934244 - 934245 Collected by: K.P. Robinson Sheet no. 6

Area / Prospect: Tatlins River SUMAC COADS Date: 5/12/81

Map / Photo reference: Arthur River 1:100,000 Topo Sheet. Analysed by: ..... DPO no: 3006S

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	As	Bi	Sn	W		Grid ref	Geological Observations
934245	OC							GS 100m			59	13	35	57	20	15	<2	7	<10			Contact zone. Siltstone - sheathed basalt.
934244	OC							RC 20m			6	4	33	29	7	3	3	<3	<10			Quartzite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers 934246 - 934265 Collected by K.P. Johnson Sheet no. .....

Area / Prospect HORTON RIVER SUMAC ROADS Date 16/12/81

Map / Photo reference ARTHUR RIVER 1:100,000 Tas. Analysed by ANALABS, Cooee DPO no 30065 30070

Sample No.	Type ss * oc f s	ss channel ** fl / wl / al / co / ca / pH; o/c sample type ***; s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	As	B	Sn	W	Au.	Grid ref	Geological Observations
934246	OC	RS 100 cm		10	<1	14	29	7	3	3	5	<10			Contact zone Chert – Quartzite
934247	f	RC 1 m		14	3	9	181	4	4	<2	<3	<10			Black Cryptocrystalline Chert.
934248	f	RS 50 cm		9	3	7	147	2	3	<2	3	<10			Chert – Dolomite
934249	OC	GS 100 cm		7	2	5	101	1	3	<2	4	<10			" "
934250	OC	GS 35 cm		7	<1	4	162	2	2	<2	3	<10			banded grey Chert – Shales.
934251	OC	GS 75 cm		11	4	5	230	2	4	<2	<3	<10			" " " "
934252	OC	GS 50 cm		23	10	34	290	5	10	<2	<3	40			Chert - Fe stained
934253	OC	GS 30 cm		7	2	14	39	7	6	<2	7	<10			Interbedded quartzite & Siltstone
934254	OC	GS 150 cm		11	7	12	109	5	3	<2	4	10			Weathered Chert.
934255	OC	RC 20 cm		7	<1	6	153	2	3	<2	3	<10			Chert, Dolomite
934256	OC	RC 30 cm		9	6	25	61	6	3	<2	5	<10			Quartzite
934257	OC	GS 50 cm		32	11	20	35	12	11	<2	6	10			Grey Pyritic sandstone & Qtz veinlets.
934258	OC	GS 50 cm		19	4	25	43	9	10	<2	5	10			Contact zone Black Pyritic Shales and Quartz veinlets
934259	OC	GS 75 cm		8	7	23	51	5	5	<2	9	<10			Grey Shales

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wl = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. ... Sample numbers: 934297-934302 Collected by: A. McKinnon Sheet no. 4

Area / Prospect: JULIUS RIVER Date: 8.1.82

Map / Photo reference: ARTHUR RIVER, 1:100,000 Topo. Analysed by: ANALABS CODEE DPO no. 30069

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag Ni	Mo Co	Mn As	Au Bi	Sn	W	Grid ref	Geological Observations
934297	OC							GS 50m			7	1	8	100	1	1	<2	<3	<10		CHERT, CALCITE.
934298	OC							GS 75m			6	<1	7	140	2	1	<2	4	<10		GREY SILICIFIED CHERT.
934299	OC							GS 50m			5	3	13	75	1	1	<2	<3	<10		CHERT - BANDED, SILICIFIED, ETC.
934300	OC							GS 75m			5	3	8	170	2	2	<2	20	<10		" - " , " , "
934301	F							GS 70m			9	<1	13	97	2	3	<2	3	<10		CHERT.
934302	F							GS 100m			98	4	82	86	39	10	<2	3	<10		CHERT BRECCIA, SILTSTONE, TUFF, MALACHITE

088

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* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name... ROCKY CAPE EL 1/77 ... No. ... Sample numbers... 93+323 – 93+336 ... Collected by ... A. Richmond ... Sheet no. ... 7 ...

Area / Prospect... ST JULIUS RIVER ... Date... 15.1.81 ...

Map / Photo reference... ARTHUR RIVER, 1:100,000 Topo. ... Analysed by... ANALABS COOEE ... DPO no... 30069 ...

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag Ni	Mo Co	Mn As	Au Bi	Sn	W	Grid ref	Geological Observations
93+323	OC							GS 75m			4	4	4	63	2	1	<2	<3	<10		CHERT – BANDED, PLANE NINTE
93+324	OC							GS 75 m			5	<1	4	41	1	1	<2	5	<10		" CONTACT " , " "
93+325	OC							GS 50 m			5	3	8	96	5	2	<2	5	<10		CHERT, WEATHERED QTZ, MICA, FELS. SAN
93+326	OC							RC 25m			13	3	7	17	10	2	<2	10	<10		PYRITIC SANDSTONE OF ABOVE.
93+327	OC							GS 50m			10	22	27	25	7	5	<2	<3	<10		BLACK PYRITIC SHALE & PYRITIC SAND
93+328	OC							GS 75m			5	3	6	28	5	1	2	6	<10		QTZ & MICA SILTSTONES.
93+329	OC							GS 40m			29	3	10	21	6	29	<2	4	<10		GREY MICA SLATES/S & MINOR, PYRITIC MICA SCH
93+330	OC							GS 40m			83	13	28	48	11	90	2	4	<10		CONTACT OF GREY SHALES & DARK BLACK
93+331	OC							GS 50m			34	32	13	27	10	21	2	6	<10		PYRITIC BLACK SHALES
93+332	OC							GS 50m			29	114	26	50	7	52	<2	<3	<10		BANDED PYRITIC GREY & BLACK SHALES
93+333	OC							GS 70m			11	19	7	44	5	10	<2	9	<10		BLACK PYRITIC SHALES.
93+334	OC							GS 50m			15	12	9	34	7	19	<2	6	<10		" " "
93+335	OC							GS 40m			35	11	10	29	8	27	<2	6	<10		" " "
93+336	OC							GS 75m			4	<1	10	31	7	3	<2	20	<10		BAKED SILTSTONE TO QUARTZITE.

089

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* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

APPENDIX FIVE

GEOCHEMICAL ASSAY LEDGERS - STEPHENS RIVULET

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name... ROCKY CAPE EL 1/77 ... No. ... Sample numbers... Collected by... D.J. WEIR ... Sheet no. ...
Area / Prospect... Stephen's Rivulet – follow up. ... Date... 5/8/82
Map / Photo reference... Sandy Cape 1:100 000 Topo. ... Analysed by... ANALABS CODES ... DPO no... 30087

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Topo /10	Metal content ppm or % Cu	Pb	Zn	As	Ba						Grid ref Downstream of Spur B	Geological Observations
934847	SS	m-f	2.5		✓					3	146	3	158	<50	80	✓					100m	oc + f : green, f-g. basalt.
934848	SS	m-f	2.5		✓					4	141	4	178	<50	90	✓					200m	" " " " "
934849	oc	Rc	10m								116	2	138	<50	110						295m	brown, tuffaceous rock, bedded, Amygdaloidal.
934850	SS	m-f	2.0		✓					3	138	4	205	<50	100	✓					300m	oc basalt
934851	SS	m	5		✓					4	138	4	230	<50	105	✓					400m	oc basalt
934852	SS	m	4		✓					3	123	5	260	50	115	✓					500m	No o/c float: basalt.
934853	SS	f	2		✓					4	121	6	270	<50	115	✓					710m	oc + float : basalt.
934854	SS	m	3		✓					3	130	6	260	<50	120	✓					800m	oc + float : basalt.
934855	SS	S	0.5		✓					4	161	8	320	<50	135	✓						LH trib 25m upstream. oc + float : basalt.
934856	SS	m	4.0		✓					3	127	6	280	<50	125	✓					1000m	No o/c float: basalt.
934857	SS	S	1.0		✓					3	151	7	173	<50	65	✓						RH trib. No o/c float: basalt.
934858	SS	m-f	3.0		✓					3	133	5	270	<50	115	✓					1200m	oc + float : basalt.
934859	SS	m-f	2.0		✓					3	129	6	300	<50	135	✓					1400m	oc + float : basalt.
934860	SS	m	4.0		✓					3	118	5	270	<50	115	✓					1600m	No o/c float: basalt.
934861	SS	m	1.5		✓					4	91	7	260	<50	145	✓						LH trib 25m upstream. ReSample 934628. o/c + Float : basalt.
934866	oc	9/s.									1070	4	130	<50	65							Above locality : basalt, native Cu?
934862	SS	m	3.0		✓					3	123	8	250	<50	125	✓					1700m	No o/c. Float: basalt.

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* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. Sample numbers Collected by: D.J. WEIR. Sheet no.

Area / Prospect: STEPHENS RIVULET FOLLOW UP. Date: 31/8/82

Map / Photo reference: SANDY CAPE 1:100 000 TOPO. Analysed by: COMLABS S.A. DPO no: 30091

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Topo /10	Cu	Pb	Zn	Ni	As	Ba.					Grid ref	Geological Observations
											Metal content ppm or %											m. upstream of bridge on Blackwater Road
1055046	ss.	m-f	4		✓					2.	55	20	145	90	5	145	✓				200m.	Dolomite ?c.
1055047	ss	3	4		✓					2	55	22	150	100	9	135	✓				400m	Dolomite ?c.
1055048	ss	s-m	4		✓					3	60	24	165	120	7	155	✓				600m	No ?c.
1055049	ss	s-m	4		✓					2	65	24	165	110	3	135	✓				800m	No ?c.
050	ss	s	3		✓					2.	65	20	180	120	4	125	✓				1000	No ?c Float basalt.
051	oc	ss.									55	20	60	70	5	65					1030	m.g. purple tuffaceous mudstone.
062	oc	ss									18	22	100	90	<2	75					1076	m.g. brown-purple tuffaceous rock.
053	ss	m	3		✓					3	75	28	185	140	8	155	✓				1200	?c Tuffaceous rock. brn-purp. m-g.
054	ss	s-m	4		✓					2.	80	26	180	140	4	155	✓				1400	No ?c.
1055055	ss	s	0.5		✓					2.	55	30	135	140	10	150	✓				1405	LH trib Stephens Rvt. No ?c Float Siltstone.
056	ss.	m	4		✓					3	95	24	210	150	3	165	✓				1600-1640	?c Purple-grey mudstone.
057	ss	m	3		✓					3.	95	24	210	140	6	160	✓				1800	?c purple tuffaceous rock.
																					RH trib @ 1987 m.	
1055058	ss.	6	1.5		✓					4	100	26	260	210	8	190	✓				100m	?c + float basalt.
059	ss	s	1.0		✓					3	80	24	220	160	7	175	✓				200-225m	?c + float basalt.
1055060	ss	s	1.0		✓					4	65	22	160	130	3	155	✓				325m	?c + float basalt.
1055061	bank. ss.										80	26	230	170	10	170					25m.	bank sample
1055062	ss.	s	1		✓					2	30	16	95	65	4	180.	✓				850m.	RH trib Stephens Rvt. Resample of 934629.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR. Sheet no. .....

Area / Prospect MERYANNA AREA Date 21/1/83.

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS CODEE DPO no. 30456.

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Tupo /10	Metal content ppm or % Cu	Pb	Zn	As	Ba	Sn	W				Grid ref	Geological Observations
1055400	SS	m	35		v					3	7	26	44	14	115	110	<4	✓				Unnamed ck. LH trib Arthur R. 9c black shale & limonitic coatings
																						Float: Same + quartz, quartzite.
1055401	OC	Gs									7	16	29	210	35	30	<4					limonitic coating from black shale - above locality.
1055402	OC	Gs									31	39	76	42	300	4500	<4					Black shale - above locality.
1055403	SS	S	15	v	v					2	20	35	360	28	105	20	<4	✓				Unnamed ck. LH trib Arthur R.

591094

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

APPENDIX SIX

GEOCHEMICAL ASSAY LEDGERS - JULIUS RIVER

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL1/77 No. Sample numbers: 934445 - 934553 Collected by: D.J. WEIR Sheet no.

Area / Prospect: JRHUS RIVER FOLLOW UP. - ROCK CHIPS. Date: 15/3/82.

Map / Photo reference: ARTHUR RIVER 1:100 000 SHEET Analysed by: ANALABS CODEE DPO no: 30077

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As.	Grid ref	Geological Observations
934445	oc							rc	5m x 0.5m intervals		5	10	13	21	13	135	2800	0.2	3	T1 75m	dolomite - creamy-white rock ± minor grey staining.
446	f										15	34	330	66	9	1050	3450	0.1	3	T1 175m	Ferruginous dolomite ± mod. Mn staining.
447	f ~~gs~~										4	9	105	56	4	700	3250	0.2	4	T1 190m	grey-black cherty dolomite mod Mn Stng.
448	oc							rc	5m x 0.5m intervals		25	59	360	140	19	2700	5150	0.2	7	T1 225m	grey, f.g. dolomite. Slightly siliceous. Mod. Mn + Fe Stng.
449	f										11	54	265	37	17	1900	7100	0.1	12	T1 360m	DK grey chert ± Mn Stng.
450	f										16	69	700	56	29	5850	9000	0.2	8	T1 360m	DK grey-black weathered Dolomite? Ferruginous in places. Mn Stng.
934551	oc.							rc	15m x 1m intervals		18	104	155	190	20	3150	8750	0.2	9	T1 400-415m	DK. grey-black chert. - Orange Fe stng.
934552	f										10	7	16	180	2	160	4650	0.2	2	T3 100m	grey-white chert.
553	f										4	17	18	200	3	350	6100	0.2	3	T3 125m	grey-white chert, oolitic in part?

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. Sample numbers 934503 - 934514 Collected by D.J. WEIR. Sheet no.

Area / Prospect JULIUS RIVER FOLLOW UP. STREAM SEDS. - 80# 934634 - 934635 Date 15/3/82.

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET. Analysed by ANALABS CODEE DPO no. 30077 30079

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	cs	pH	o/c sample type ***	s sample type ****	Carbon Tot/To	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As	Sn/W	Grid ref	Geological Observations
934503	SS.	2m³/s	3		✓					3	32	134	1400	84	37	7250	2.45	<0.1	18		T1 038m	Chert float minor Mn Stng. ✓
504	SS	2	3		✓					3	20	84	685	36	17	2350	8750	<0.1	10		T1 100m	Dolomite outcrop. ✓
505	SS	2	3		✓					3	30	147	1250	63	31	6850	1.85	<0.1	15		T1 150m	Chert float Mn Stng. ✓
506	SS	2	3		✓					3	84	590	3450	210	87	2.35	3.25	0.3	24		T1 200m	Chert float Mn Stng. ✓
507	SS	2	3		✓					3	120	820	4450	365	200	8.15	7.35	<0.1	72		T1 300m	Chert float Mn Stng. ✓
508	SS	2	3		✓					3	180	1900	2650	210	290	3.25	4.85	0.1	65		T1 400m	Chert outcrop Mn + Fe Stng. ✓
509	SS.	2	3		✓					3	150	147	2650	195	96	2.35	4.00	0.3	70		T1 425m	Chert float. ✓
934 510	SS.	–	1.5		✓					3	55	8	390	27	5	545	5700	<0.1	5		T2 25m	Dry gully. - washway? ✓
511	SS	1m	1.5		✓					3	5	3	56	9	5	265	2450	0.1	3		T3 50m	Chert float ✓
512	SS	1	1.5		✓					3	6	8	70	11	9	625	3750	0.1	4		T3 100m	Chert float ✓
513	SS	1	1.5		✓					3	7	5	76	11	1	440	3600	<0.1	3		T3 125m	Chert float. ✓
514	SS	–	0.5		✓					2	4	1	46	8	3	95	2300	0.1	3		T4 25m	Chert float. ✓
934 634	SS	1	1.5		✓					3	23	50	760	47	23	1150	4.15%	<0.1	13	<3/<10	T5 25m	Chert float ✓
635	SS	1	2.0		✓					3	36	168	1850	81	35	4950	3.75	<0.1	18	<3/<10	T5 100m	Chert float. ✓
636	NOT SAMPLED																					

59107

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591098 097

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL1/77 No. ..... Sample numbers 934515 - 934536, 934543 Collected by D.J.WEIR Sheet no. 1

Area / Prospect JULIUS RIVER FOLLOW UP - SOIL SAMPLES. Date 15/3/82

Map / Photo reference ARTHUR RIVER 1:100000 TOPO SHEET. Analysed by ANALABS CODEE. DPO no 30077

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As			
		o/c sample type ***																		
		D(m)	s sample type ****																	
934515	S	1m		B/c	all	hand / Power			29	23	53	74	34	1000	4.15	0.1	16		T1 0R	Yellow brown soil. Dolomite chips.
516	S	0.5		B/c	auger	samples.			3	2	14	145	1	30	2150	0.1	4		T1 0L	Grey soil & chert fragments.
517	S	0.8		B/c					25	19	48	49	31	1300	3.70	<0.1	14		T1 25R	Orange brown clayey soil.
518	S	0.5		C					3	<1	14	38	1	20	1450	0.1	3		T1 25L	Grey, gravelly soil
519	S	1.2		B/c					40	17	93	94	31	1350	6.25	<0.1	16		T1 050R	Orange brown clayey soil.
934 520	S	1.1		B/c					12	11	120	54	14	300	2.45	<0.1	11		T1 050L	Olive green brown clay.
521	S	0.3		B					29	20	96	56	61	2350	3.56	<0.1	12		T1 075R	grey-brown soil.
522	S	0.5		B/c					14	5	79	43	3	70	4400	<0.1	4		T1 075L	DK. grey soil - high water table.
523	S	1.3		C					10	7	38	34	15	280	9250	<0.1	10		T1 100R	Pale cream loam. Dolomite chips.
524	S	1.5		B/c					43	7	240	36	8	80	8800	<0.1	8		T1 100L	Grey-black gravelly mud.
525	S	0.6		B/c					35	22	68	94	65	635	4.05	<0.1	21		T1 125R	Orange-brown soil.
526	S	1.0		B/c					4	3	46	14	2	45	4250	<0.1	4		T1 125L	DK. grey-black soil & chert chips.
527	S	0.9		B/c					23	17	47	44	10	105	4.00	0.1	16		T1 150R	Orange brown soil.
528	S	1.5		B/c					12	4	64	21	5	245	6950	<0.1	10		T1 150L	DK. grey-black soil-mud.
529	S	0.6		B					7	14	34	23	9	125	3.10	0.1	13		T1 175R	Orange-brown loam.
* 543	S	1.2		B/c					15	2	165	26	4	35	6000	<0.1	5		T1 200L	DK grey-black clayey soil & Black siliceous shaley chips.
530	S	0.7		B/c					11	3	62	19	5	270	7150	<0.1	5		T1 225R	light grey-brown soil.
531	S	1.2		B/c					22	5	220	21	5	40	5300	0.1	5		T1 250L	DK. grey-black soil, clayey. Chert & black siliceous shaley fragments.
532	S	1.2		B/c					22	31	385	45	15	350	1.65	<0.1	16		T1 275R	greeny-grey clayey soil & chert fragments.
533	S	0.6		B					40	23	545	26	8	350	4750	<0.1	8		T1 300L	grey-DK. grey soil.
534	S	0.9		B/c					13	11	225	21	7	200	6850	<0.1	7		T1 325L	DK grey-greenish soil & black siliceous shaley fragments.
535	S	0.8		B/c					8	3	83	9	5	305	5400	0.1	7		T1 350L	DK grey soil & siliceous black shaley fragments.
536	S	1.1		B/c					15	30	470	35	11	140	8300	0.1	12		T1 375R	DK grey-green soil & black sil. shaley fragments.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591099 098

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. Sample numbers 934537 - 934550 Collected by D.J. WEIR. Sheet no. 2

Area / Prospect JULIUS RIVER FOLLOW UP - SOIL SAMPLES 934444 Date 15/3/82.

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET. Analysed by ANALABS COOEE. DPO no. 30077

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As	Grid ref	Geological Observations
934 537	S	1.0	B/C								30	22	385	33	8	70	7400	<0.1	8	T1 400L	DK. grey - black Soil.
538	S	0.6	B/C								60	31	720	48	12	355	7250	0.1	7	T1 425R	DK. blue - grey soil & black Soil Shaley fragments.
539	S	0.7	B/C								325	180	1950	275	130	3,90	3,40	0.4	44	T1 450L	Greeny - brown Soil & cherty fragments.
540	S	1.2	B								15	6	200	25	7	410	1,65	<0.1	11	T3 025R	DK grey brown clayey Soil.
541	S	1.0	B/C								4	2	84	13	2	35	4000	<0.1	4	T3 025L	DK grey-black clayey Soil
542	S	1.1	B/C								26	4	190	58	7	415	7150	<0.1	6	T3 050R	DK grey - black soil & black Siliceous shaley fragments.
544	S	0.8	B/C?								16	8	225	26	9	144	8850	<0.1	7	T3 050L	grey Soil & Chert fragments
545	S	0.9	B.								17	10	270	56	16	170	8550	0.2	5	T3 075R	DK. grey - black clayey Soil.
546	S	0.9	B								19	12	83	31	5	45	9000	0.1	5	T3 075L	light grey clayey Soil + few Chert fragments.
547	S	0.7	B?								2	2	16	5	<1	50	1450	0.2	3	T3 100R	light grey Soil & Chert fragments + DK brown humus.
548	S	0.25	B?								2	<1	16	5	<1	70	1100	<0.1	4	T3 125L	light grey Soil & Chert fragments.
549	S	0.3	B?								2	2	11	5	<1	40	1050	<0.1	4	T3 150	grey - brown Soil.
550	S	1.2	B.								7	3	63	5	6	250	2750	<0.1	4	T3 175	DK. grey brown Soil.
934 444	S	1.0	B/C.								6	2	60	11	3	205	4400	0.1	5	T4 047m	DK. grey - black clayey Soil & Chert fragments.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591100 099

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name Rocky Cape EL 1/77 No. ..... Sample numbers 934915 - 934931 Collected by B. Morkey Sheet no. .....

Area / Prospect Julius River Follow-up Date 5/4/82

Map / Photo reference Arthur River 1:100 000 Topo Sheet Analysed by Amdel Adelaide, Cooee DPO no 30081

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As	Grid ref	Geological Observations
934915	S	1,0									5	17	119	89	46	1110	6,00	<0,1	6	150W SL	
916	S	0,5									1	<1	7	13	3	15	1050	<0,1	<1	175W BL	Grey loam
917	S	1,0									2	<1	7	26	1	5	500	0,2	<1	150W BL	Grey soil + chert fragments
918	S	1,0									1	<1	4	36	2	5	700	<0,1	<1	125W BL	Grey loam
919	S	1,2									1	1	8	31	2	10	700	0,1	1	100W BL	Grey-brown soil
934920	S	1,0									3	3	19	94	3	35	1700	0,1	<1	75W BL	Brown organic rich soil + grey-white flecks.
921	S	1,2									3	2	48	18	5	10	2600	0,1	1	50W BL	Grey clay
922	S	1,0									1	<1	6	28	2	5	350	0,1	1	25W BL	White - grey clay
923	S	0,6									2	1	10	76	2	10	750	0,1	<1	0 BL	" " "
924	S	0,8									3	1	13	27	1	10	800	0,1	1	25E BL	Brown Organic rich soil + white flecks.
925	S	0,5									2	2	14	26	1	15	1000	<0,1	<1	50E BL	Grey loam
926	S	0,6									2	2	13	15	2	10	650	0,1	1	75E BL	" "
927	S	0,5									1	1	11	23	1	20	800	<0,1	<1	100E BL	Brown Organic rich soil
928	S	1,0									1	1	10	32	1	15	1100	<0,1	<1	125E BL	Grey clay
929	S	0,6									1	<1	4	30	2	10	700	0,1	<1	150E BL	White - grey soil
934930	S	0,4									1	<1	7	33	2	5	800	<0,1	<1	175E BL	" " "
931	S	0,2									1	<1	6	16	1	10	600	<0,1	<1	200E BL	" " "

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591101 100

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers 934637 - 934659 Collected by B. Morley. Sheet no. .....

Area / Prospect Julius River - Follow up. Date 22/3/82

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by Analabs, Cooee. DPO no. 30079

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As	Grid ref	Geological Observations
934637	S	0,6									33	14	88	52	39	2250	5,25	<0,1	10	TS 25R	Brown-Yellow Clay
638	S	0,5									25	15	45	53	36	1050	4,90	<0,1	11	TS L	Brownish Clay
639	S	0,7									53	15	110	84	37	1150	7,35	<0,1	13	TS 50R	Brownish Clay
934 640	S	1,0									69	29	129	86	54	2050	9,15	<0,1	21	TS 75L	Brown - Yellow Clay
641	S	0,8									33	18	75	61	31	625	5,75	<0,1	9	TS 75R	Brown - Yellow Clay.
642	S	0,5									45	17	113	83	77	3700	5,60	<0,1	15	TS 100L	Brown - Yellow Clay
643	S	0,6									3	2	8	53	4	55	3700	0,1	2	TS 100R	Light Grey Soil.
644	S	1,0									5	1	10	21	2	65	4550	0,1	2	TS 125L	Brown Clay
645	S	0,4									16	11	39	33	5	290	1,00	0,2	8	TS 125R	Greyish Soil.
646	S	0,8									7	3	22	18	3	75	4450	0,1	2	TS 150R	Greyish Soil + Organic Material.
647	S	0,6									37	20	165	65	55	1500	4,25	<0,1	16	TS 150L	Dark brown Clay
648	S	0,4									5	4	15	17	2	90	3550	0,2	2	TS 175R	Grey-brown Clay
649	S	1,0									16	23	190	46	19	445	1,55	<0,1	12	TS 175L	Greyish Clay
934 650	S	1,0									18	6	37	25	5	150	7150	0,2	5	TS 200R	Brown Sandy Clay
651	S	1,0									11	7	43	28	6	135	6850	0,1	6	T2 25R	L. Brown Soil.
652	S	1,0									6	3	68	13	3	65	2550	0,1	2	T2 25L	Greyish Soil
653	S	0,8									19	4	270	20	6	585	6100	0,2	7	T2 50L	Greyish mud
654	S	1,0									11	11	43	32	11	120	1,25	<0,1	12	T2 50R	Greyish mud-clay
655	S	1,0									5	<1	49	25	3	70	2250	0,2	2	T2 75R	Grey-brown Soil
656	S	0,7									11	3	67	17	4	155	4550	0,1	5	T2 75L	Grey-brown Soil.
657	S	0,5									4	5	12	41	5	285	6660	0,2	3	T1 475R	Grey-brown Soil
658	S	0,4									39	20	310	158	250	13,0	33,0	<0,1	260	T1 475L	Dark brown - black Soil
934 659	F										19	11	165	93	161	7,55	34,5	<0,1	220	T1 475L	Fe, Mn rich Gossan / Wad.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591102101

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name Rocky Cape EL 1/77 No. Sample numbers 934660 - 934682 Collected by B. Morley Sheet no.

Area / Prospect Julius River Follow up. Date 22/3/82

Map / Photo reference Arthur River 1:100 000 Topo Analysed by Analabs Coorparoo DPO no 30079 30081

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %									Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As		
		o/c sample type ***																	
		s sample type ****																	
934660	S	1,2							1	<1	5	59	3	15	1000	<0,1	<1	375 N.L	Grey-brown Sandy Soil.
661	S	0,6							1	<1	4	95	4	10	850	<0,1	<1	350 N.L	" " " "
662	S	1,0							4	1	14	33	2	30	2100	<0,1	<1	325 NL	white - grey soil
663	S	0,8							2	1	9	64	3	25	2650	<0,1	<1	300 NL	Brown - grey soil
664	S	1,0							2	<1	8	94	4	20	850	<0,1	<1	275 NL	" " "
665	S	0,6							2	<1	13	5	2	15	650	<0,1	<1	250 NL	" " "
666	S	0,6							2	<1	8	32	3	15	1000	<0,1	<1	225 NL	" " "
667	S	0,6							4	1	23	23	3	15	1750	<0,1	<1	200 NL	" " "
668	S	0,6							2	<1	12	24	2	25	1600	<0,1	<1	175 NL	" " "
669	S	0,6							6	4	26	26	2	30	1500	<0,1	<1	150 NL	white - grey soil
934 670	S	0,8							4	4	23	24	3	35	1600	<0,1	<1	125 NL	" " "
671	S	0,8							9	5	42	22	3	35	3350	<0,1	<1	100 NL	Dark grey clay
672	S	0,8							4	2	34	15	1	25	1650	<0,1	<1	75 NL	DK. grey soil
673	S	0,7							2	1	5	16	3	30	2300	<0,1	<1	50 NL	Grey - white soil
674	S	0,5							1	<1	12	13	3	10	850	<0,1	<1	25 NL	white - Grey soil + Chert f'ments.
675	S	0,5							1	<1	8	14	1	15	900	0,1	<1	0 NL	Grey - white soil " "
676	S	0,6							41	23	76	83	42	160	4170	<0,1	7	0 ML	Yellow Clay
677	S	0,6							5	9	14	13	4	20	1,40	<0,1	<1	25 ML	Brown Clay
678	S	0,8							29	21	40	38	13	85	2,65	0,1	19	50 ML	Brown Clay
679	S	0,6							21	31	281	47	31	1050	2,40	<0,1	20	75 ML	Brown - yellowish Clay
934 680	S	0,5							7	4	27	12	4	30	4500	<0,1	1	125 ML	Brown - Grey Clay - loam
681	S	0,5							7	9	39	12	3	25	2700	<0,1	<1	150 ML	Greyish Clay + Organic rich
682	S	0,8							4	1	16	11	2	20	1400	0,1	<1	175 ML	Grey brown Clay + Organic rich.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591103 102

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: Rocky Cape EL 1/77 No. ..... Sample numbers: 934683 - 934700, 934910 - 934914 Collected by: B. Mosley. Sheet no. .....

Area / Prospect: Julius R. Follow up Date: 25/4/82

Map / Photo reference: Arthur River 1:100 000 Topo Sheet. Analysed by: Analabs Coore. DPO no: 30081

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ni	Co	Mn	Fe	Ag	As.	Grid ref	Geological Observations
											Metal content ppm or %										
934683	S	1,0									3	6	14	11	1	15	900	<0,1	<1	200 ML	Brown Soil + Grey flecks
684	S	0.8									3	1	9	9	1	20	1400	<0,1	<1	225 ML	Grey Clay
685	S	0,5									4	1	17	7	1	25	1900	<0,1	<1	250 ML	Grey-White Soil + humus
686	S	0.4									3	2	17	4	2	15	300	<0,1	<1	275 ML	Grey-White Soil
687	S	0,6									1	2	8	10	2	30	2000	0,1	<1	300 ML	Grey-brown Soil
688	S	0.4									1	2	6	8	2	30	1700	<0,1	<1	325 ML	Greyish flecks in humus
689	S	0.9									1	<1	3	7	2	20	1350	0,1	<1	350 ML	White-grey Soil
934 690	S	0,7									2	3	7	4	1	25	800	0,1	<1	375 ML	" " "
691	S	0,6									2	1	9	6	2	55	2500	0,1	<1	400 ML	" " "
692	S	0,8									2	4	10	9	2	50	1100	<0,1	<1	200E SL	Grey Soil
693	S	1,0									1	<1	5	6	1	25	550	<0,1	<1	175E SL	Grey-White Soil
694	S	1,0									1	1	4	4	1	25	1200	<0,1	<1	150E SL	Grey Soil + Chert f'gments.
695	S	0,5									2	2	9	5	2	100	4250	<0,1	<1	125E SL	Greyish Soil + humus
696	S	0,2									1	1	6	4	<1	5	500	0,1	<1	100E SL	Grey loam
697	S	0,2									1	<1	3	3	<1	15	550	<0,1	<1	75E SL	" "
698	S	0,3									3	2	28	4	1	35	550	0,1	<1	50E SL	Greyish Soil + humus.
699	S	1,0									4	6	6	165	2	15	1050	0,1	<1	25E SL	Grey-White loam
934 700	S	0,7									56	240	385	349	59	6800	4.45	0,1	75	0 SL	Black Clay
934 910	S	1,2									4	4	17	86	2	35	1250	<0,1	1	25W SL	Grey White Soil + humus
911	S	0,8									3	<1	16	34	2	15	500	<0,1	<1	50W SL	" " " "
912	S	0,7									2	1	14	48	1	10	550	0,1	<1	75W SL	" " " "
913	S	1,0									3	3	16	39	1	15	950	0,1	<1	100W SL	" " " "
914	S	1,0									4	3	22	20	1	55	1400	<0,1	<1	125W SL	" " " "

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit [illegible]

591104

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR. Sheet no. .....

Area / Prospect JULIUS R. Date 4/8/82.

Map / Photo reference ARTHUR R. 1:100 000 TOPO Analysed by ANALABS COOEE DPO no. 30087 30099 30100.

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon Topo /10	Cu	Pb	Zn	Ni	As	Ba	Mo	Fe	Mn	Grid ref	Geological Observations
934844	S.S.	m	2.5		✓				3	3	4	17	n.d	<50	10				✓	RH trib. RAPID R. Resample of 934569 o/c + f chert.
934845	SS.	m	2		✓				3	5	11	18	"	<50	65				✓	RH trib ARTHUR R. Resample of 934571 o/c + f chert
934846	S.S.	m-f	2.5		✓				3	21	5	28	"	<50	10				✓	LH trib Wents Ck. Resample of 934573. o/c black carbonaceous amorphous chert.
934863	Ss	s	3		✓				2	6	5	44	n.d.	<50	50				✓ L.H	Sumac Rvt. 550m upstream of bridge. No o/c float: white Dolomite.
934864	Pc.	5 panfuls			wt: 72,22g.					24	5	120	"	<50	40					Sumac Rvt: below locality + upstream. o/c Dolomite. RS of: 934
934865	Ss	m	4		✓				2	23	10	105	"	<50	120				✓	Sumac Rvt: o/c Dolomite. resample of: 934
1055173	Water Sample.									<0,02	<0,05	—	S 2,25	pH 6,5	E.C. 390	Cl. 30,96	<0,05	0,10		T1 trib of Julius R. At Spring. ± 412m up T1.
1055174	Pan Con.	4 heaped dishes.								21	87	250	21	9	10	<2	1,65	455		T1 412m. at Spring.
1055175	Pan Con	4 heaped dishes.								48	350	1350	81	8	50	<2	1,145	5350		T1 350-375m.
1055176	Pan Con.	4 heaped dishes.								33	150	1200	62	8	50	2	2,40	3350		T1 250-275m.
																			NB.	Flagged in bush as 1055245-249.
1055 277	oc	cs	12,5m							5	22	134	n.a	<1	5		2300	665		T1 350-365m mainly grey chert
278	oc	"	"							7	30	220	"	<1.	10		3300	1200		T1 365m-375m "
279	oc	"	"							2	4	35	"	<1	<5		1300	180		T1 375m-390m "
280	oc	"	"							3	7	27	"	<1	<5		650	100		T1 390m-400m "
1055 281	oc	"	"							3	6	26	"	<1	5		1400	115		T1 400m-412m. Dolomite o/c.

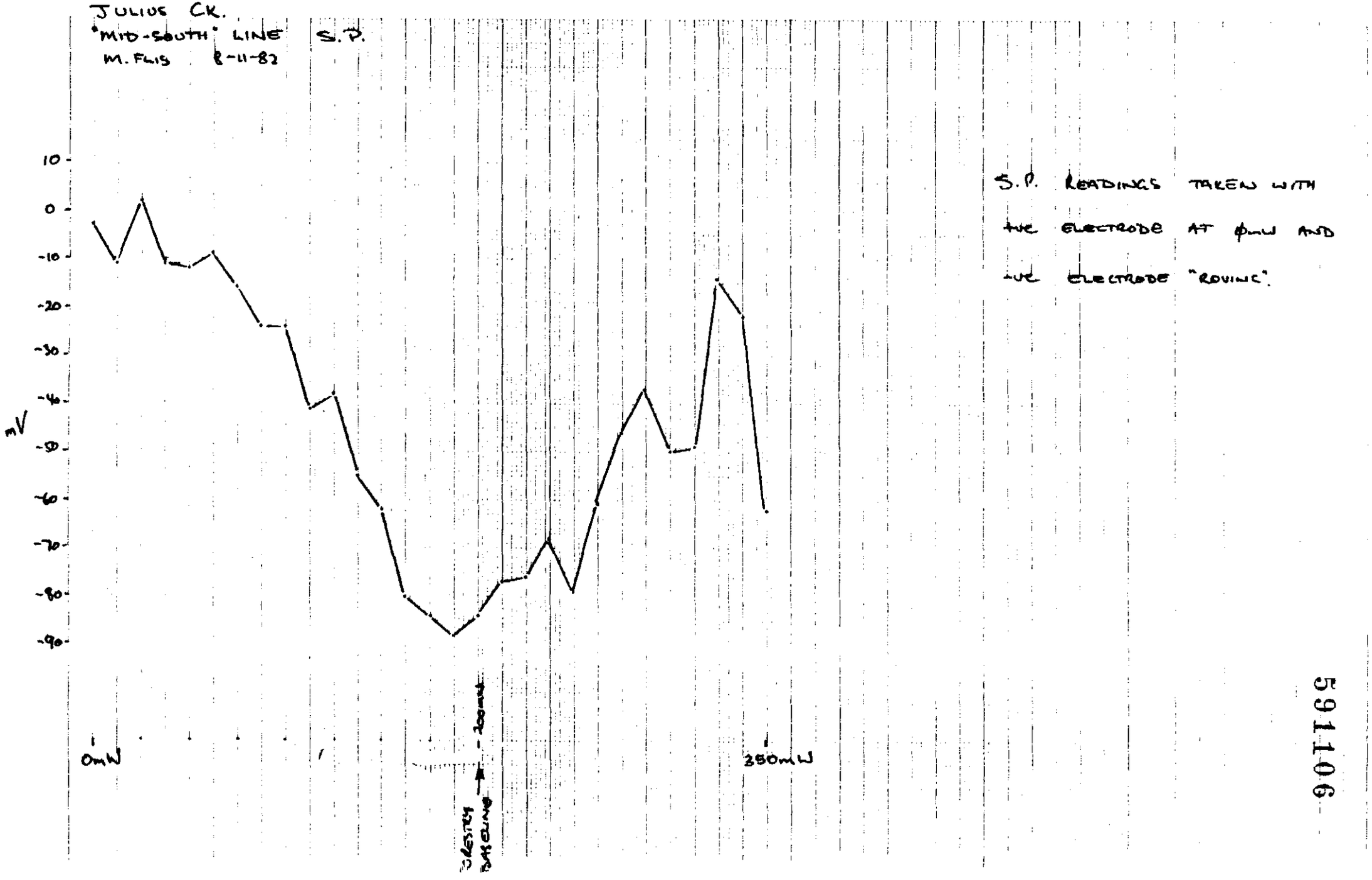
* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

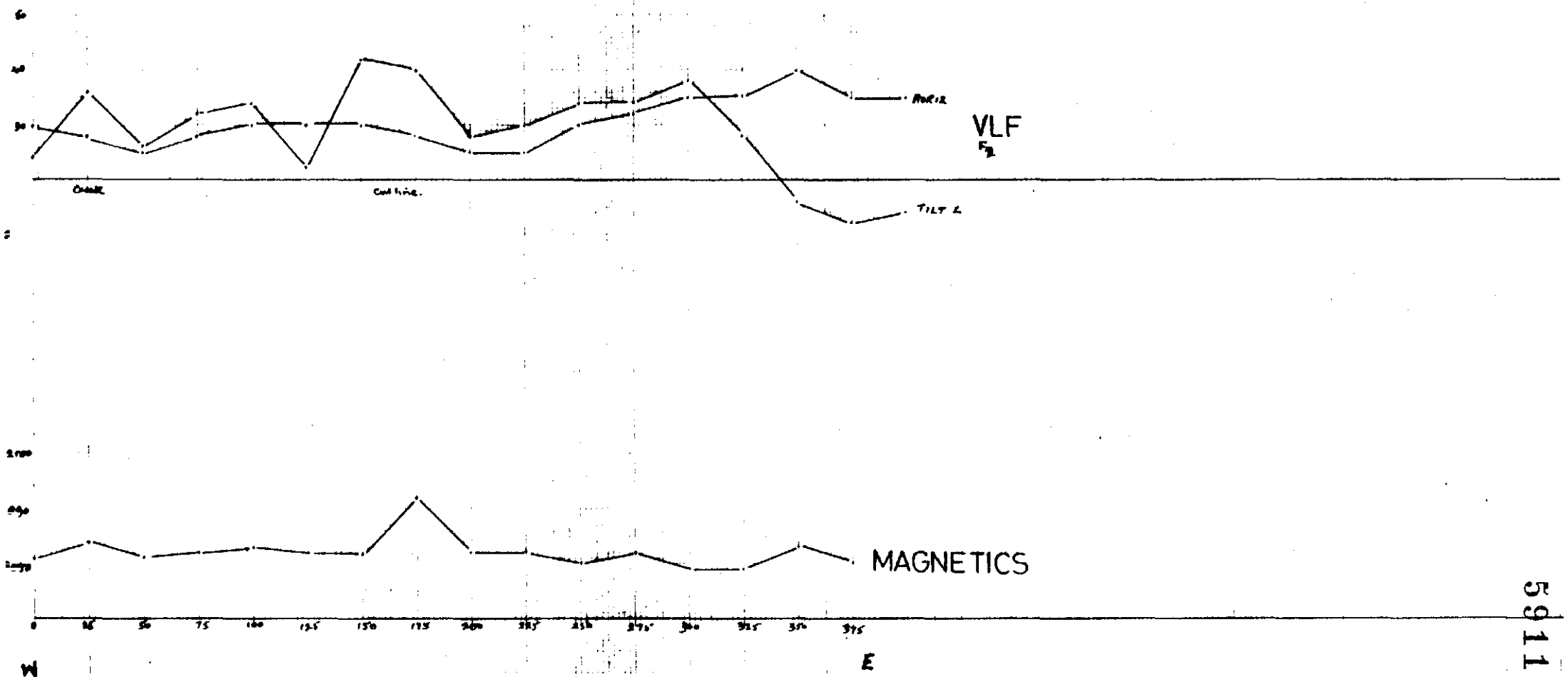
*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

APPENDIX SEVEN

GEOPHYSICAL PROFILES - JULIUS RIVER

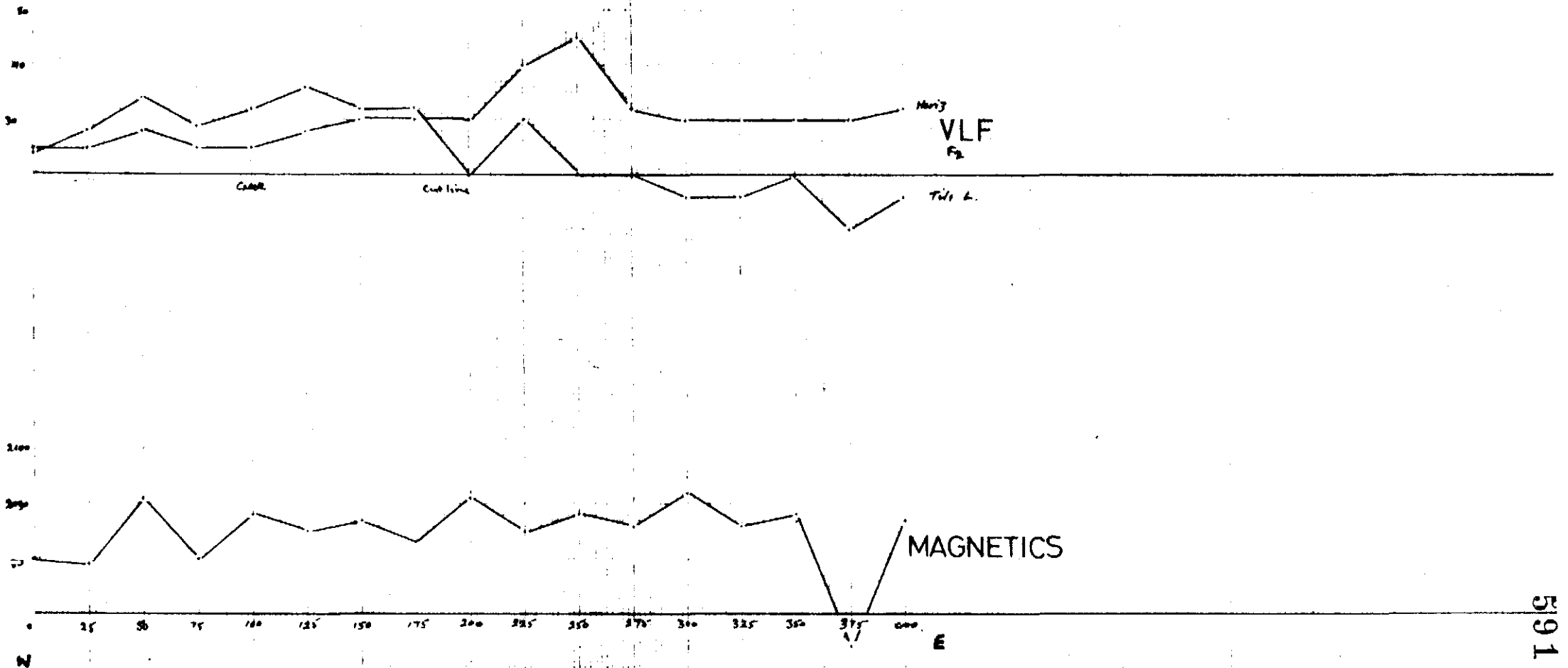

JULIUS CK.
"MID-SOUTH" LINE S.P.
M. FLIS 8-11-82
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
mV
S.P. READINGS TAKEN WITH
THE ELECTRODE AT ØmN AND
-ve ELECTRODE "ROVING".
0mN
350mN
591106

JULIUS R. GRID.
NORTH LINE.

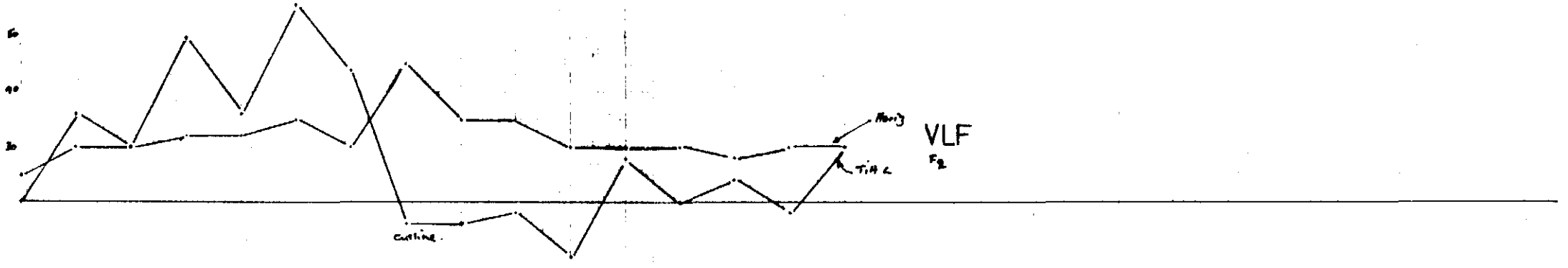


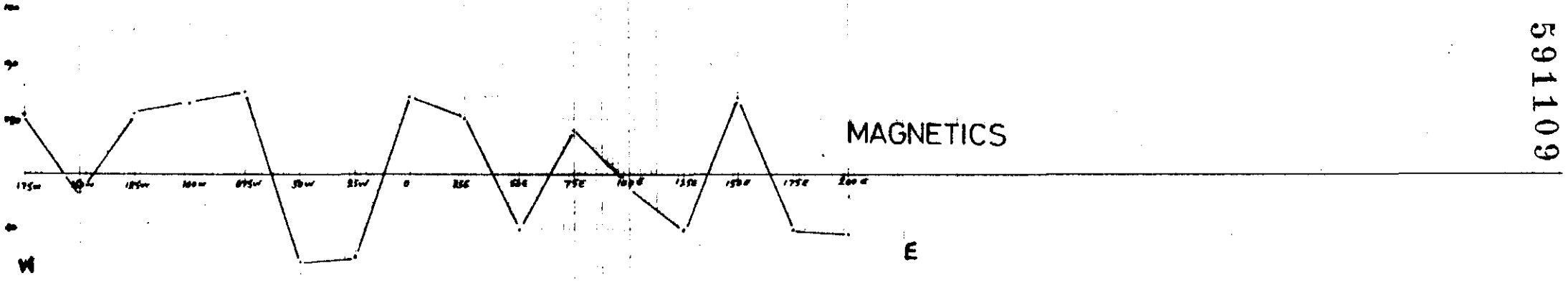
59110

JULIUS R. GRID.
MIDDLE LINE.

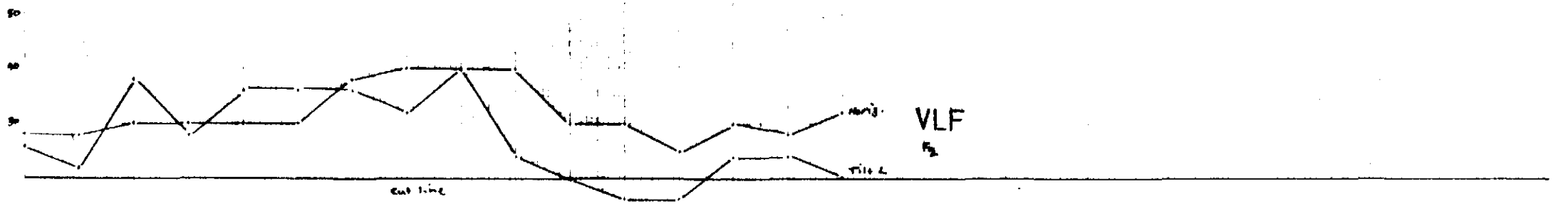


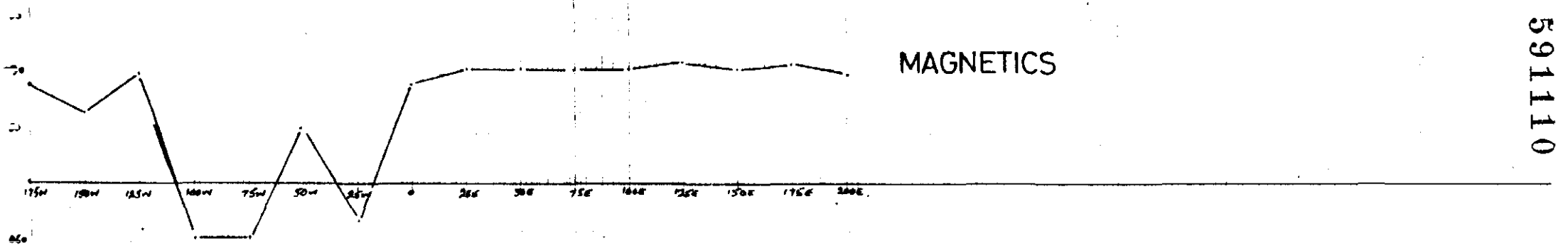
JULIUS R. GRID.
SOUTH LINE





JULIUS A. GRID.
BOTTOM LINE.

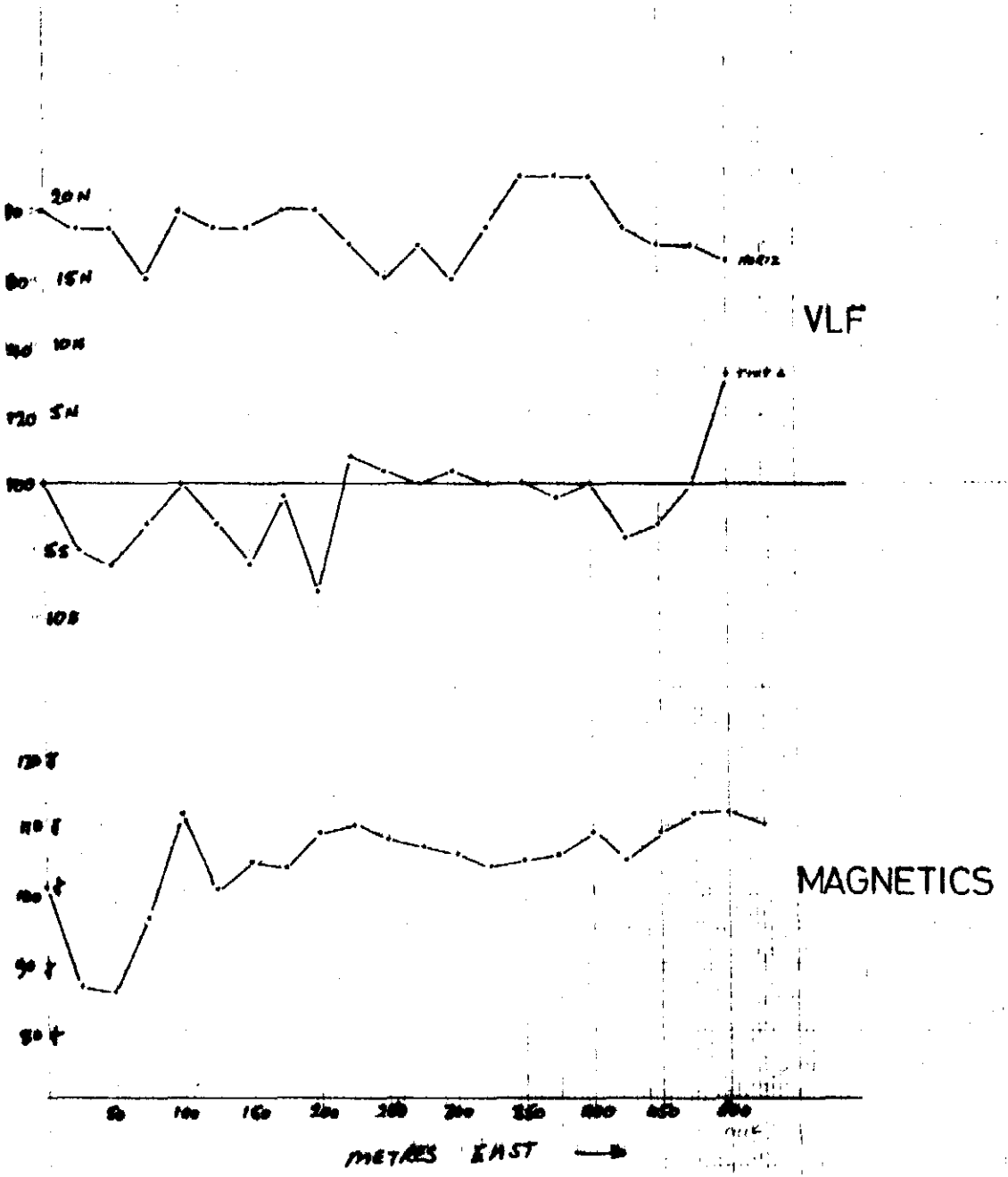




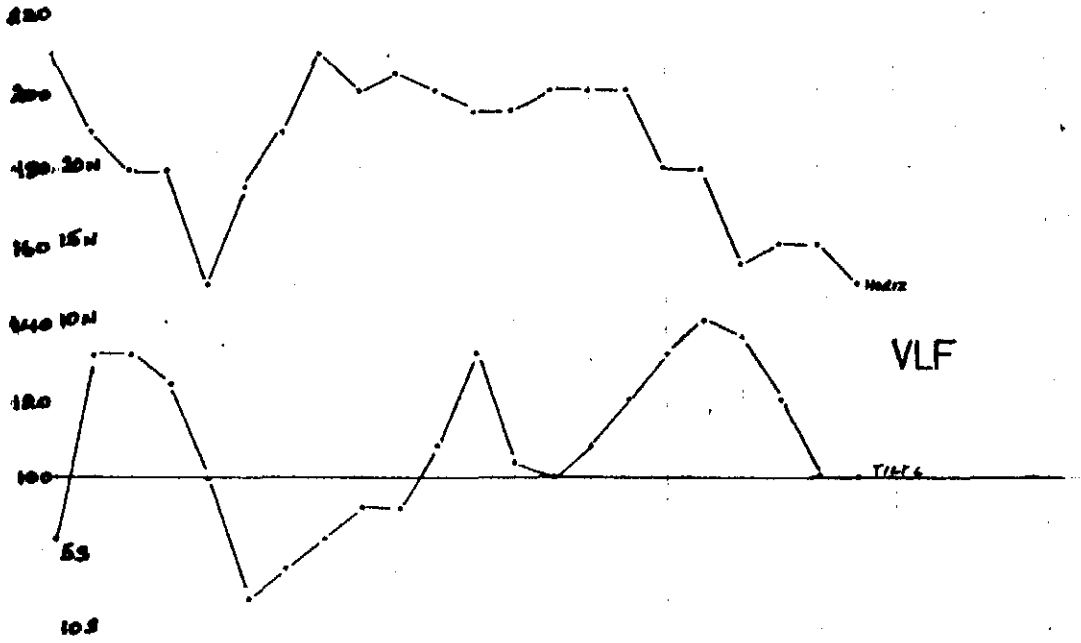
W E

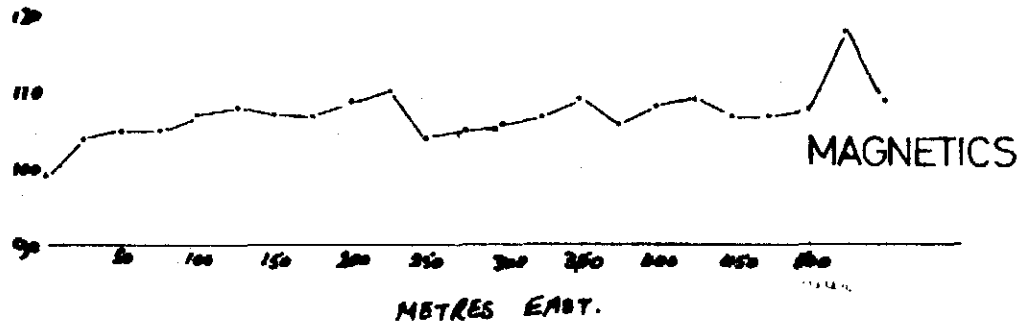
5911110

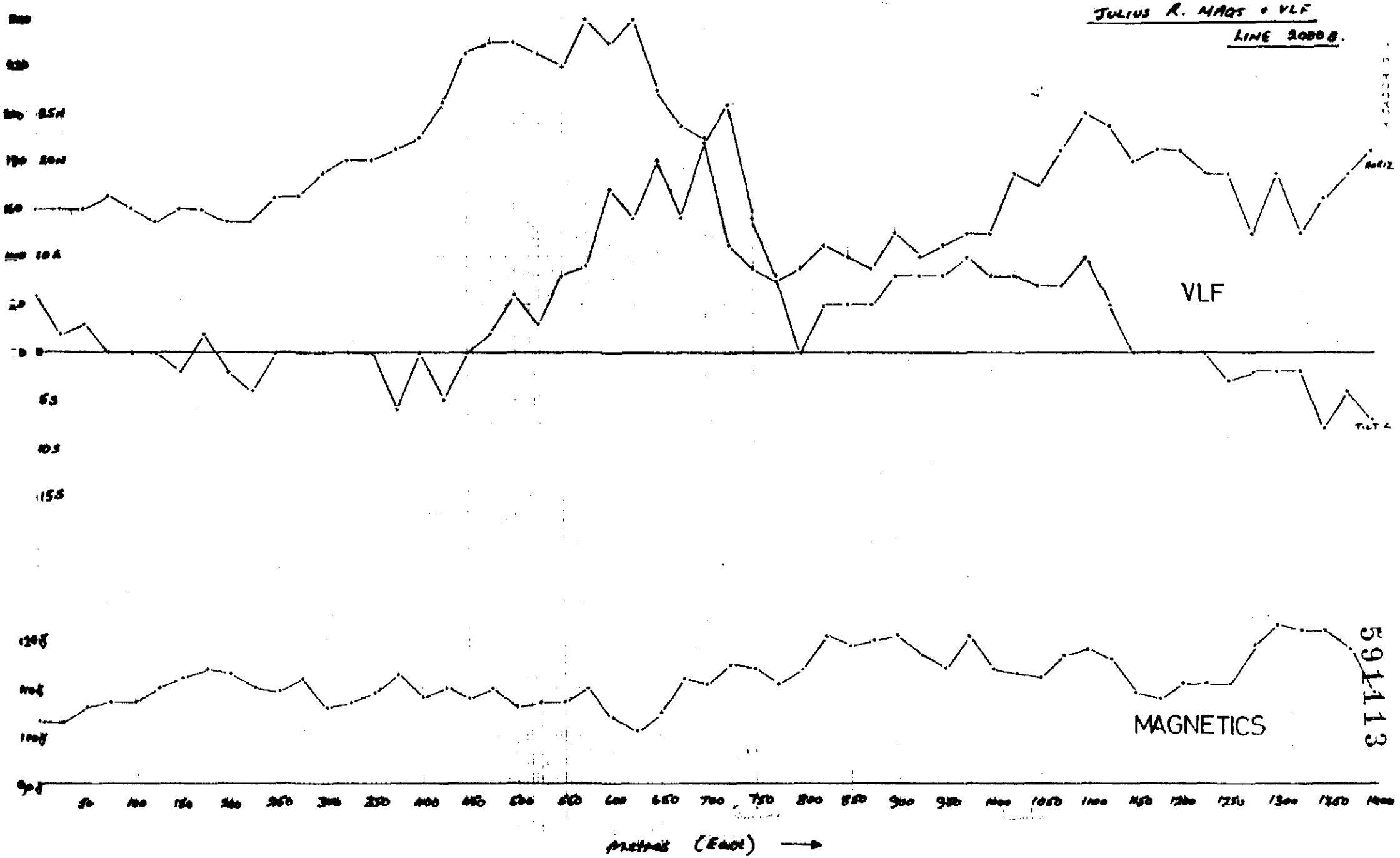
JULIUS R. REC. MAGS + VLF.
5005.

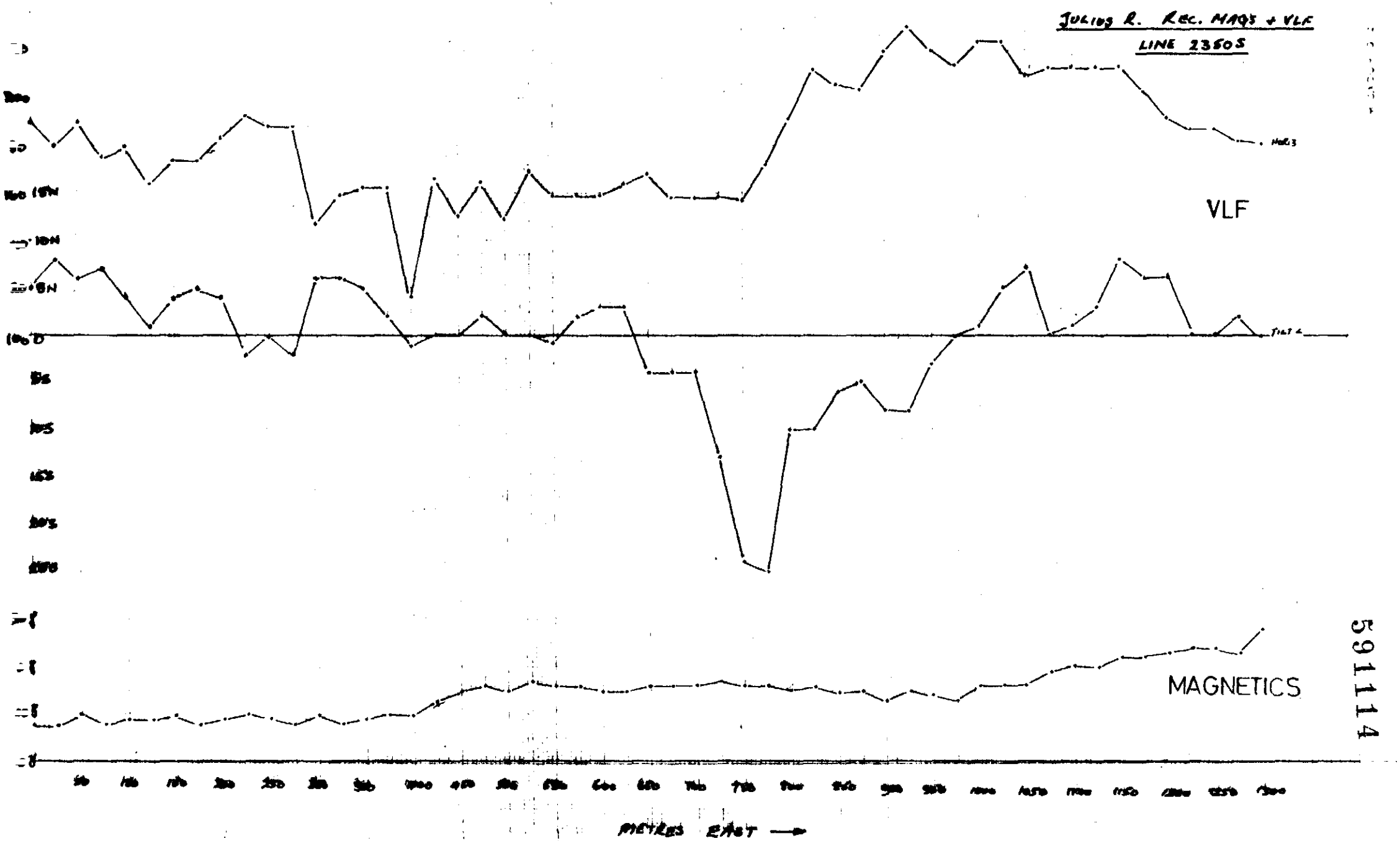


JULIUS R. REC MAGS + VLF
'0' LINE






JULIUS R. HAAS • VLF
LINE 2000 E.
VLF
MAGNETICS
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
59-1113


JULIUS R. REC. MAGS + VLF
LINE 2350S
VLF
MAGNETICS
METRES EAST

APPENDIX EIGHT

GEOCHEMICAL ASSAY LEDGERS - MERYANNA AREA

591116 115

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL 1/77. No. ..... Sample numbers ..... Collected by D.J. WEIR. M. BRUNKER Sheet no. .....

Area / Prospect MERRYANNA GRID. Date 8/11/82.

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS CODEE. DPO no. 30100

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations
1055181	S	50cm	B/c								30	44	33	108	100	5,90	20				100S/250E	orange brown sandy soil. sl. ferruginous? chert frags.
182	S	30cm	B/c?								14	8	93	50	20	3,05	75				225E	chocolate brown soil & reddish hematitic? frags.
183	S	30cm	B/c								7	2	9	8	5	5100	35				200E	grey-dark grey sandy soil & quartz chips.
184	S	30cm	B/c.								4	1	5	5	<5	1900	15				175E	pale grey sandy soil & chert frags.
185	S	40cm	B/c								11	<1	9	1	5	4950	35				150E	dk. grey sl. shaley soil & bl. chert chips.
186	S	10cm	B/c.								9	<1	10	<1	5	6450	50				125E	grey-white sandy soil & chert chips.
187	S	80cm	B/c?								9	4	30	<1	55	5100	45				100E	Dark brown gravelly soil. - bank of stream.
188	S	65cm	B/c?								13	6	13	2	45	3000	20				75E	Dark grey-black soil & black shaley fragments.
189	S	50cm	B/c								6	<1	6	1	<5	2300	20				50E	Dark grey brown soil & chert fragments.
1055190	S	40cm	B/c								8	2	8	3	<5	7050	55				25E	greyish brown soil, humic & chert frags.
191	S	35cm	B/c								5	1	6	3	<5	2400	20				100S/0	greyish sandy soil & chert frags.
192	S	45cm	B/c								4	2	5	2	<5	2750	20				100S/25W	grey-light grey sandy soil & chert frags.
193	S	40cm	B/c								4	2	5	1	<5	2700	20				50W	grey-brown soil & chert frags.
194	S	70cm	C								7	2	7	2	<5	3000	20				75W	light grey sandy soil & chert frags.
195	S	35cm	B/c								5	1	4	1	<5	2600	25				100W	grey brown sandy soil & chert frags. slightly damp.
196	S	50cm	B/c								10	3	8	2	10	4550	35				125W	grey-black soil & chert frags.
197	S	80cm	C								18	3	15	2	15	2600	25				150W	grey-black soil. sl. organic? black shale fragments.
198	S	40cm	B/c								5	<1	6	2	10	1900	15				175W	grey-dark grey sandy soil & chert frags.
199	S	50cm	C								8	1	8	1	5	9150	55				200W	grey-black soil & chert fragments.
1055200	S	40cm	O								7	2	9	1	<5	3400	30				225W	light grey soil & chert frags.
1055217	S	30cm	B/c								6	4	6	2	<5	4750	35				100S/250W	light grey brown sl. gravelly soil & chert fragments.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591117 116

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL1/77 No. ..... Sample numbers..... Collected by: D.J. Weir, M. Bauniker. Sheet no. .....

Area / Prospect: MERRYANNA GRID Date: 8/11/82

Map / Photo reference: ARTHUR R 1:100 000 TOPO SHEET. Analysed by: AMDEL ADDEE. DPO no: 30100

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %									Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	As	Ba	Fe	Mn				
		o/c sample type ***																	
		s sample type ****																	
1055218	S	70cm	B/c.						14	8	16	7	280	2,160	20				0/250E	yellow-brown clayey soil & chert + ferruginous chips.
219	S	80cm	B/c?						11	12	16	15	245	3,30	10				225E	Orange-brown clay, sl. ferruginous.
220	S	60cm	C						7	13	7	3	5	3850	25				200E	grey-white sandy soil & chert frags.
221	S	35cm	B/c						4	<1	10	3	55	2900	25				175E	grey-white sandy soil & chert frags.
222	S	40cm	B/c						10	6	10	3	15	5700	40				150E	grey-white sandy soil & chert chips.
223	S	80cm	B/c						21	55	32	7	85	4000	15				125E	grey-brown & orangey col. soil. & chert frags.
224	S	40cm	B/c						6	<1	11	2	10	4450	30				100E	grey-baown sandy clay + chert frags.
225	S	40cm	B/c?						8	2	18	1	5	3850	25				75E	grey-black loam + some humic material + chert frags.
1055226	S	40cm	B						6	<1	7	<1	<5	4600	35				50E	greyish loam + humic material + chert frags.
227	S	45cm	C						6	1	9	1	<5	4550	30				25E	grey-white sandy soil & chert frags.
228	S	70cm	B/c						19	13	38	3	175	5650	20				0/0	pale brown sandy clay & chert frags.
229	S	40cm	B/c						23	7	23	1	10	4650	30				0/25W	light grey sandy soil & chert frags.
230	S	80cm	'c'						6	1	8	1	<5	3300	20				50W	light grey sandy soil & chert frags.
231	S	35cm	B/c						3	3	3	1	<5	1600	10				75W	grey brown sandy soil & chert frags. slight humic content.
232	S	60cm	C						4	<1	4	1	<5	2050	15				100W	light grey sandy soil & milky white chert frags.
233	S	30cm	B/c						8	3	8	2	<5	7850	60				125W	light grey brown loam & chert fragments.
234	S	30cm	C						8	<1	7	<1	<5	2450	20				150W	light grey soil. sl. clayey + more f.g.
235	S	50cm	B/c						6	5	14	<1	<5	2850	25				175W	light grey-brown soil, sl. silty. & chert frags.
1055236	S	30cm	C						3	3	6	<1	<5	1300	10				200W	light grey sandy soil & chert fragments.
237	S	30cm	B/c						9	3	10	1	5	3450	35				225W	grey-brown sandy soil & chert fragments.
1055238	S	30cm	B/c						4	2	13	2	5	3300	30				250W	grey-grey brown gravelly soil & chert chips.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL1/77 No. ..... Sample numbers ..... Collected by: D.J. WEIR, H. BRUNKER. Sheet no. .....

Area / Prospect: MERRYANNIA GRID. Date: 8/11/82

Map / Photo reference: ARTHUR R. 1:100 000 TOAD SHEET. Analysed by: ANALABS COOEE. DPO no: 30100

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations
1055239	S	30cm	C								9	4	22	8	80	1,75	100				100N/25E	Purple - Or brown sandy soil + ferruginous + hematitic? chips.
240	S	110cm	B/c								16	9	26	21	420	4.90	60				225E	yellow - brown clay
241	S	110cm	B/c								38	21	58	14	485	6,80	30				200E	yellow brown clay.
242	S	100cm	B/c								7	10	17	1	285	1,25	20				175E	yell-grey-brown sandy soil.
243	S	60cm	B/c?								10	27	31	13	180	3,10	20				150E	orange brown sandy soil ? quartz frags.
244	S	70cm	B/c.								8	11	87	1	70	4500	20				125E	Dark brown-grey sandy clay ? quartz frags.
245	S	40cm	B/c								5	5	14	3	10	4100	35				100E	pale grey sandy soil ? rounded quartz pebbles - gravels?
1055246	S	80cm	B/c								18	21	58	15	35	2,30	35				75E	brown-grey gravelly soil ? quartz frags. Wet.
247	S	30cm	B								7	5	18	2	5	6100	60				50E	Darkish brown soil ? Chert frags.
248	S	25cm	B/c								6	<1	14	3	10	3400	25				25E	Grey white soil ? Chert Chips.
249	S	40cm	B/c								4	3	14	3	5	1850	20				100N/0	pale grey-white gravelly sand.
250	S	50cm	B/c								6	4	13	2	5	4000	35				100N/25W	light grey brown soil ? grey shaley chert frags.
251	S	50cm	B/c								4	5	28	2	10	2450	25				50W	light grey-whitish sandy soil ? quartz + chert frags.
252	S	30cm	B/c								7	9	11	2	10	3100	30				75W	grey-brown sandy soil ? chert frags.
253	S	35cm	B/c								6	8	25	2	30	3050	30				100W	whitish grey sandy soil ? chert frags + quartz.
254	S	45cm	B/c								10	7	36	1	15	5850	60				125W	grey brown sandy soil ? chert frags.
255	S	50cm	B/c								4	3	16	2	5	1900	25				150W	light grey brown sandy soil ? chert frags.
1055256	S	30cm	B/c								6	2	10	1	5	3350	30				175W	pale grey-yellow-brown sandy soil ? chert frags.
257	S	30cm	B/c								5	<1	10	<1	<5	2350	20				200W	pale grey-brown sandy soil ? chert chips.
258	S	30cm	B/c								4	4	22	1	5	1600	25				225W	pale grey-brown sandy soil ? chert frags.
1055259	S	35cm	B/c								5	5	17	1	5	2150	20				250W	pale grey-whitish sandy soil ? chert frags ? quartz.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** [illegible]

591119 118

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL1/77. No. ..... Sample numbers ..... Collected by D.J. WEIR, M. BRUNKER. Sheet no. .....

Area / Prospect MERRYANNA ROADS AREAS. Date 15/11/82

Map / Photo reference ARTHUR RIVER 1:100 000 TOPO SHEET. Analysed by ANALABS GOOCE. DPO no. 30451, 30100

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon Tot% /10	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations NB. Flagged in bush: Numbers 1055250 – 266.
1055260	f	GS									35	A2	520	21	30	44,50	1,30				100N/235E	Limonitic gossan, minor Mn.
1055861	f	GS									49	21	390	170	255	14.0	1,70				100N/275E	Black Mn rich gossan, limonitic. whitish core of slightly cellular chert.
1055262.	oc.	GS									6	2	25	7	5	1,05	175				± 170m NE of 100N/250E	V. hard, siliceous cellular chert. Cellular parts defining bedding? Minor hematitic staining.
1055263	oc/f?	GS									280	15	350	70	10	13,5	150				± 175m NE of 100N/250E	Chert breccia? Angular chert fragments set in limonitic / hematitic matrix.
1055264.	oc/f.?	GS									73	59	630	140	5	41,5	5150				± 210m NE of 100N/250E	Limonitic Mn rich gossan. Cherty. in tree roots.
1055265	ss.	S	1		✓					3	12	8	31	1	30	1,05	105			✓		RH trib 100m NE of junction. No % float Chert.
1055266	ss	S	0,5	✓	✓					3	11	9	18	2	50	1,35	100			✓		RH trib 200m NE of junction. No % float: qtz gravels + Chert.
1055267	ss	S	0,5	✓	✓					2	8	7	19	2	70	1,20	65			✓		RH trib 300m NE of junction. No % float: qtz gravels + Chert.
1055268	ss	—	0,5	✓	✓					2	8	8	16	3	125	9900	35			✓		RH trib 380m NE of junction. No % float Chert.
1055269	oc/f?	GS									30	9	230	22	10	43,5	2400					Highly Fe rich geode – gossan & Mamillary goethite.
1055270	ss.	M	1,0	✓						2	19	27	210	4	90	3,40	985			✓		Unnamed ck. LH trib ARTHUR R. 2and of Meryanna road. No % No float.
1055271	ss.	S	0,5	✓	✓					2	11	16	340	17	45	3,00	2850			✓		Above ck. 2 junction & road. % cream coloured sparry dolomite.
1055272.	oc	GS.									4	8	86	8	5	3,70	575					cellular chert, sl. ferruginous. minor bright red, hematitic? staining.
1055273	ss	S-M	0,5	✓	✓					2	6	5	20	<1	25	6000	45			✓		Trib of above ck 2 361m. 100m N. No % Float cream col. cellular chert + gossan.
1055274	f	GS.									29	34	610	160	85	37,5	595					127m. V. limonitic gossan + boxworks. & pieces of angular chert fragments.
1055275	ss.	—	0,5	✓	✓					3	3	4	9	<1	10	1950	20			✓		243m No % Float chert + quartz.
1055276	ss.	—	0,5	✓	✓					3	4	4	10	<1	25	1700	20.			✓	±	302m. No % Float: chert.
											Ag	Co	Cd	Ni	Sn	W	Au	Pb (XRF)				
1055260											<0.1	24	0,4	17	<4	40	0.108	<4				
1055261											<0,1	100	2.0	240	<4	<4	<0.005	28				
1055264											<0,1	220	0,2	720	4	13	<0,005	61				
1055269											<0.1	76	0,3	130	<4	33	<0,005	<4				
1055274											<0,1	45	0,3	280	6	39	<0,005	25				

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

591120 119

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR. Sheet no. .....

Area / Prospect MERYANNA GRID ..... Date 6/12/82

Map / Photo reference ARTHUR RIVER 1:100 000 TOAD SHEET Analysed by ANALABS COOKE. DPO no. 30453

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %									Grid ref	Geological Observations
	ss * / oc / f / s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	As	Ba	Fe	Mn				
		o/c sample type ***																	
		s sample type ****																	
1055291	S	70cm	B/C						25	9	25	19	130	1,00	20			200N/400E	Orange-brown clay & quartz fragments.
292	S	70cm	B/C						15	4	20	13	155	2.00	25			375E	Orange brown clay.
293	S	70cm	B/C						19	9	25	9	235	2.70	25			350E	Orange brown clay
294	S	70cm	B/C						7	6	12	0,5	160	1700	15			325E	Grey brown wet soil & quartz fragments.
295	S	110cm	C						7	5	15	0,5	335	2450	15			300E	light grey-brown clay & rounded quartz frags.
296	S	20cm	B/C						4	0,5	16	0,5	20	950	20			275E	Grey-brown sandy soil & sub angular q/z. frags.
297	S	40cm	B/C						5	1	8	2	5	2350	25			250E	White sandy soil & quartz fragments.
298	S	110cm	C						10	13	16	0,5	520	1950	10			225E	Yellow-white clay.
299	S	100cm	B/C						23	9	18	12	215	3,70	35			200E	Orange brown clay.
1055 300	S	70cm	B/C						24	16	43	10	180	1.80	60			175E	Orange brown sandy soil.
301	S	30cm	B/C						3	0,5	8	0,5	5	1450	10			150E	cream-grey sandy soil & quartz and chert frags.
302	S	60cm	C?						6	5	17	0,5	60	3350	35			125E	olive green-brown sl. gravelly soil. - creek wash.
303	S	40cm	B						2	3	10	0,5	5	1400	30			100E	cream-grey sandy soil & rounded quartz gravel.
304	S	60cm	C						4	13	16	0,5	55	2100	20			75E	DK. grey-brown sandy soil & chert frags.
305	S	50cm	C						3	3	8	0,5	25	1650	15			50E	cream-grey sandy soil & rounded quartz?/ chert? fragments.
306	S	20cm	B/C						2	1	24	0,5	5	2250	25			25E	grey-white sandy soil & chert fragments.
1055 307	S	50cm	C						3	1	21	0,5	15	5850	70			200N/ 0	grey-white gravelly soil & chert frags.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591121 120

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGER

Tenement name ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR Sheet no. .....

Area / Prospect MERYANNA GRID. Date 6/12/82

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS, COOEE DPO no. 30453

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations
1055308	S	70cm	B/c							-	26	14	26	9	235	9400	35				300N/400E	Purple brown clay ↑ rounded quartz ↑ chert fragments.
309	S	100cm	B/c								24	10	21	9	135	2,75	300				375E	pale orange-brown clay - wet.
310	S	70cm	B/c								34	7	30	9	165	4,100	36				350E	Orange brown clay.
311	S	60cm	B/c								70	9	62	15	130	7,65	140				325E	Orange brown clay.
312	S	90cm	B/c								25	15	28	14	345	3,20	30				300E	brown - orange brown clay.
313	S	70cm	B/c								18	17	33	12	505	2,55	25				275E	pale or-brown - yell clay.
314	S	50cm	B/c								11	9	17	7	265	1,65	20				250E	Chocolate brown loamy soil.
315	S	30cm	B/c								9	2	19	0,5	75	1,00	35				225E	Chocolate brown soil ↑ quartz and goethite frags.
316	S	30cm	B/c								5	2	8	0,5	5	9100	20				200E	Pale grey-white sandy soil ↑ chert and quartz fragments.
317	S	30cm	B/c								8	9	20	10	105	1450	50				175E	Chocolate brown soil ↑ goethite fragments.
318	S	70cm	B/c								32	32	75	15	220	5,35	20				150E	Orange brown loamy soil sl. clayey.
319	S	40cm	B/c								9	6	64	12	15	5,05	65				125E	Chocolate brown sl. sandy soil ↑ goethite clasts.
320	S										2	2	5	0,5	100	7000	20				100E	
321	S	20cm	B?								1	1	12	0,5	30	1250	5				75E	Pale grey-brown sandy soil with rounded quartz fragments.
322	S	60cm	B/c								7	10	22	0,5	140	1,90	20				50E	Orange brown clay ↑ goethite frags.
323	S	80cm	B/c								13	18	41	9	310	2,45	10				25E	Pale or-grey-white clay.
1055324	S	40cm	B/c								2	1	15	0,5	5	2000	15				300N/0	grey-brown sandy soil ↑ chert + grs frags.

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*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591122

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

Tenement name: ROCKY CAPE EL 1/77 No. ..... Sample numbers..... Collected by: D.J. WEIR. Sheet no. .....

Area / Prospect: MERYANNA GRID. Date: 6/12/82

Map / Photo reference: ARTHUR R. 1:100 000 TOPO SHEET Analysed by: ANALABS PERTH DPO no: 30453

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations
1055325	S	90cm	B/c							-	5	11	15	14	165	1,80	10				400N/400E	Orange brown clay & rounded 9/3 pebbles.
326	S	60cm	B/c								7	15	15	7	160	1,70	10				375E	Orange brown clay.
327	S	40cm	B/c								4	4	23	05	90	1,20	15				350E	Light brown sandy soil & goethite frags.
328	S	60cm	B/c								11	10	66	10	300	2,10	15				325E	Orange brown clays.
329	S	80cm	B/c								30	13	32	12	485	4,35	30				300E	Orange brown clay.
330	S	90cm	B/c								15	9	22	7	190	2,75	15				275E	Orange brown clay.
331	S	60cm	B/c								36	6	38	8	65	2,75	35				250E	Orange brown clay.
332	S	70cm	B/c								40	5	44	12	75	5,75	40				225E	Orange brown clay.
333	S	70cm	B/c								26	21	35	9	505	3,80	35				200E	Orange brown clay.
334	S	100cm	B/c								6	9	18	<1	215	3250	15				175E	Grey-brown gravelly soil - wet.
335	S	40cm	B/c								6	8	21	<1	60	9900	35				150E	Grey brown sandy soil & chert frags
336	S	70cm	B/c								10	21	24	11	435	3,50	10				125E	Pale orange brown clay.
337	S	40cm	B/c								2	<1	11	<1	<5	2400	20				100E	Grey-white sandy soil & quartz frags.
338	S	25cm	B?								1	<1	12	<1	20	1000	5				75E	Pale grey-white sandy soil & quartz frags.
339	S	20cm	B?								6	13	28	<1	70	1,50	30				50E	brown sandy loam.
340	S	40cm	B/c								3	<1	12	<1	15	4250	25				25E	Pale grey brown sandy soil & angular quartz fragments.
1055341	S	25cm	B/c								2	<1	13	<1	<5	650	10				400N/0	Pale grey-brown sandy soil & rounded quartz pebbles.

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** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591123

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LOGGER

Tenement name: ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by: D.J. WEIR Sheet no. .....

Area / Prospect: MERYANNA GRID. Date: 6/12/82

Map / Photo reference: ARTHUR R. 1: 100 000 TOPO SHEET. Analysed by: ANALABS COOEE DPO no: 30453

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	As	Ba	Fe	Mn					
		o/c sample type ***																		
		s sample type ****																		
1055 342	S	20cm	B/c					-	2	<1	6	<1	<5	1250	10				500N/400E	cream coloured sandy soil + quartz + chert frags.
343	S	20cm	B/c						2	<1	7	<1	<5	2000	20				375E	creamy sandy soil + quartz (lite)? frags.
344	S	30cm	B/c						5	<1	20	<1	5	2,45	35				350E	pale brown clay soil + goethite frags.
345	S	40cm	B/c						3	6	19	<1	40	1,175	20				325E	brown sandy soil + goethite frags.
346	S	10cm	B?/c	7c nearby.					1	<1	10	<1	<5	650	10				300E	whitish sandy soil + qtzite? / silic. chert frags.
347	S	20cm	B/c						2	<1	7	<1	<5	2000	15				275E	grey-brown sandy soil + qtzite / chert frags.
348	S	60cm	B.						2	<1	6	<1	20	1700	10				250E	olive green-brown silty mud. — swampy.
349	S	30cm	B/c						3	2	6	<1	25	3550	25				225E	pale grey-brown sandy soil + qtz(lite)? frags.
350	S	80cm	B/c						6	6	11	<1	95	2000	15				200E	grey-brown sandy soil + qtz frags.
351	S	80cm	B/c						2	<1	11	<1	25	1700	15				175E	brown sandy soil + qtz + chert frags - wet.
352	S	30cm	B/c						3	<1	17	<1	<5	1000	20				150E	Brown, v. gravelly soil + rounded chert + quartz frags.
353	S	20cm	B/c						2	<1	17	<1	35	750	10				125E	Brown-white sandy soil + rounded qtz pebbles.
354	S	20cm	B/c						2	<1	9	<1	<5	500	5				100E	Pale grey sandy soil + grey silic. chert frags.
355	S	20cm	B/c						1	<1	15	<1	<5	450	5				75E	creamy sandy soil + silic. chert. frags.
356	S	30cm	B/c						2	<1	8	<1	<5	1950	15				50E	pale grey sandy soil + qtz + chert frags.
357	S	30cm	B/c						2	<1	15	<1	<5	450	5				25E	brown-white sandy soil + qtz frags.
1055 358	S	30cm	B/c						1	<1	7	<1	<5	500	5				500N/0	grey-white sandy soil + qtz frags.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

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*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591124 123

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE EL1/77 No. ..... Sample numbers ..... Collected by D.J. WEIR Sheet no. .....

Area / Prospect MERYANNA GRID. Date 6/12/82

Map / Photo reference ARTHUR R. 1:100 000 TOPO SHEET. Analysed by ANALABS COOKE DPO no. 30453

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations
1055 359	S	50cm	B/c							-	11	19	54	15	140	2,65	235				600N/1006	Orange brown clay ± goethite frags.
360	S	20cm	B?								12	32	79	21	125	3,65	46				375E	Red brown soil ± goethite frags.
361	S	70cm	B								5	7	15	<1	105	3950	20				350E	Grey mud ± qtzite frags — creek wash?
362	S	60cm	B								6	19	18	12	115	6650	15				325E	Creamy brown gravelly soil ± qtzite frags — wet.
363	S	40cm	B/c								3	<1	30	14	10	1,00	55				300E	Grey-brown sandy-gravelly soil ± chert + qtzite frags.
364	S	40cm	B/c								4	<1	7	<1	<5	2350	20				275E	Pale grey brown sandy soil ± qtz frags.
365	S	50cm	B/c								15	22	26	34	135	1,30	10				250E	Orange brown clay ± Rockall? qtzite? frags.
366	S	10cm	B.	o/c Nearby.							5	24	30	9	95	9050	10				225E	Brown sandy soil
367	S	40cm	B/c								3	<1	12	<1	5	1100	10				200E	Grey-brown sandy soil ± qtzite + silic chert frags.
368	S	120cm	B								4	6	8	<1	40	4450	15				175E	Grey-brown mud.
369	S	80cm	B/c								42	20	134	35	100	3,70	30				150E	Orange brown clay
370	S	20cm	B/c								2	<1	9	<1	<5	2750	15				125E	Pale grey white sandy soil ± qtzite frags.
371	S	25cm	B/c								3	<1	7	<1	<5	2700	20				100E	Pale grey-brown sandy soil ± qtzite chips.
372	S	80cm	B/c								4	<1	15	<1	<5	3800	30				75E	Pale grey-white sandy soil ± qtzite frags.
373	S	30cm	B/c								2	<1	6	<1	<5	1300	20				50E	Pale grey sandy soil ± qtzite frags.
374	S	40cm	B/c								3	<1	12	<1	<5	2900	25				25E	Pale grey sandy soil ± qtzite frags.
1055 375	S	60cm	B/c								1	<1	6	<1	<5	650	5				600N/0	Pale grey sandy soil ± qtzite/sst. chips.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

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C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by: D.J. WEIR . Sheet no. .....

Area / Prospect: MERYANNA GRID. Date: 6/12/82

Map / Photo reference: ARTHUR R. 1:100 000 Topo Sheet. Analysed by: ANALABS COOEE DPO no: 30453

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	As	Ba	Fe	Mn				Grid ref	Geological Observations
1055376	S	110cm	B								16	18	52	8	170	5650	35				100S/350E	Yell-brown mud. Sl. Organic – Swampy.
377	S	60cm	B/c								27	45	55	23	45	1,00	35				325E	Orange brown sandy soil ± chert fragments.
378	S	40cm	B/c								6	13	26	16	35	9700	20				300E	Purple-brown gravelly soil ± qtz + chert frags. – Wet.
1055 379	S	70cm	B/c								6	13	16	11	240	1,00	10				100S/275E	Yellow-brown clay – Sl. Sandy.
1055380	S	40cm	B/c								2	5	15	<1	10	1350	10				0/400E	light brown sandy soil ± quartz frags.
381	S	60cm	B/c								3	<1	11	<1	<5	2050	20				375E	Cream-grey sandy soil ± chert frags.
382	S	30cm	B/c								4	3	16	<1	50	5500	25				350E	brown clayey-sandy soil ± qtz frags – Wet.
383	S	70cm	B/c								8	23	20	13	495	8050	15				325E	Orange-grey loam ± chert frags.
384	S	30cm	B/c								4	5	12	<1	140	5850	10				300E	Brown sandy soil ± goethite frags.
1055 385	S	30cm	B/c								3	<1	6	<1	5	2600	20				0/275E	grey-white sandy soil ± silic chert frags.
1055 386	S	40cm	B/c								4	1	11	<1	5	1300	15				100N/400E	grey brown sandy soil ± angular qtz + chert frags.
387	S	20cm	B/c								3	<1	11	<1	45	2800	25				375E	grey-white sandy soil ± angular quartz frags.
388	S	70cm	B/c								3	4	8	<1	120	1850	10				350E	grey sandy soil ± rounded angular quartz frags – Wet.
389	S	80cm	B/c								5	6	13	<1	255	1,00	15				325E	Orange-brown Clay.
390	S	110cm	B/c								11	8	20	13	255	1,75	20				300E	Orange brown loam – Sl. Sandy.
1055 391	S	60cm	B/c								11	10	20	11	150	1,85	25				100N/275E	Orange brown loam – Sl. Sandy.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

591126 125

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name: ROCKY CAPE EL 1/77 No. ..... Sample numbers ..... Collected by: D.J. WEIR Sheet no. .....

Area / Prospect: MERYANNA GRID. Date: 6/12/82

Map / Photo reference: ARTHUR R. 1:100 000 Topo Sheet. Analysed by: ANALABS COOEE DPO no: 30453

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * / oc / f / s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	As	Ba	Fe	Mn					
		o/c sample type ***																		
		s sample type ****																		
1055282	oc	gs.							48	4	48	180	45	1,30	205				200N/170E	f.g. greenish grey chert. v. cellular. weathered rim.
1055283	oc	gs.							81	5	610	260	50	28,5	645				200N/400E	Limonitic / goethite gossan. v. Coarse boxworks.
1055284	oc	gs.							18	1	320	34	15	31,5	610				300N/170E	Limonite / goethite rich gossan.
1055285	oc	gs.							7	6	155	35	55	25,5	485				300N/125E	Limonite / goethite rich gossan.
1055286	oc	gs.							33	13	450	42	15	16,0	435				400N/225E	Limonite / goethite rich gossan.
1055287	oc/f?	gs.							6	<1	31	9	5	1,25	190				600N/100E	siliceous chert - cellular.
1055288	oc	gs.							14	1	91	23	25	30,0	405				500N/350E	Limonite / goethite rich gossan.
1055289	oc	gs							5	3	19	12	<5	6,30	55				500N/325E	Ferruginous chert.
1055290	oc	gs.							13	<1	210	36	<5	35,0	5550				250N/0	Limonite / goethite rich gossan.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A B or C horizon

APPENDIX NINE

CUMULATIVE FREQUENCY CALCULATIONS - SOILS, MERYANNA GRID

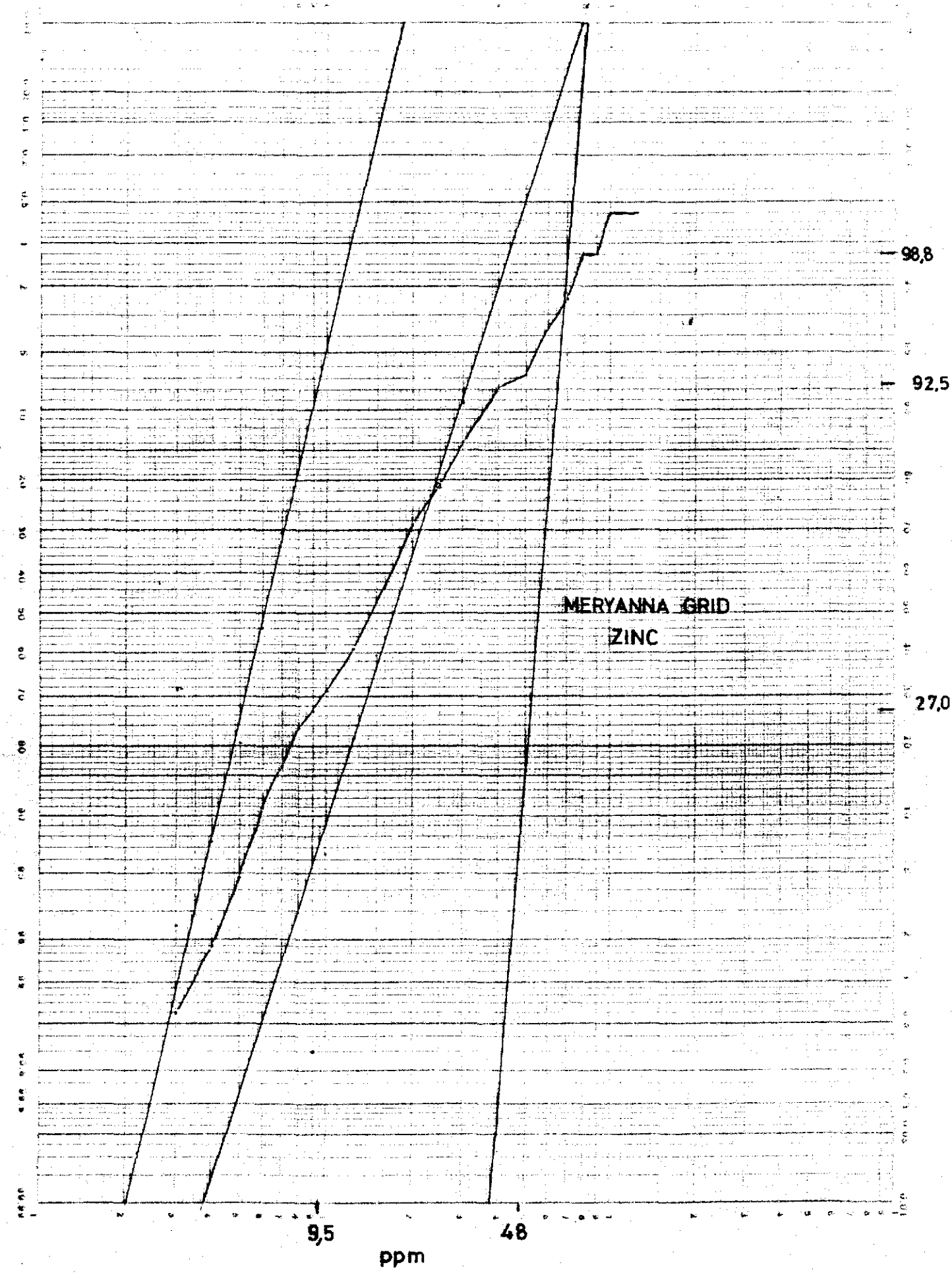
CUMULATIVE FREQUENCY CALCULATION Area: MERYANNA GRID Element: ZINC Name: Date:

ppm	Tot.	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1						
1.25						
1.5						
2						
2.5						
3	1	1	0.6		0.6	2.5
4	2	3	1.8		1.8	7.6
5	5	8	4.8		4.8	20.3
6	10	18	10.9		10.9	46.2
7	9	27	16.4		16.4	69.5
8	12	39	23.6		23.6	100
9	6	45	27.2	27.0	0.2	0.3
10	7	52	31.5		4.5	6.9
12.5	16	68	41.2		14.2	21.8
15	19	87	52.7		25.7	33.5
20	30	117	70.9		43.9	67.4
25	13	130	78.8		51.8	79.6
30	12	142	86.1		59.1	90.8
40	10	152	92.1		65.1	100
50	2	154	93.3	92.5	0.8	15.7
60	5	159	96.4		3.9	76.5
70	2	161	97.6		5.1	100
80	2	163	98.8	96.8	0	
90	0	163	98.8		0	
100	1	164	99.4		0.6	
125	0	164	99.4		0.6	
150	1	165	100			
200						
250						
300						
400						
500						
600						
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

127

591128

128



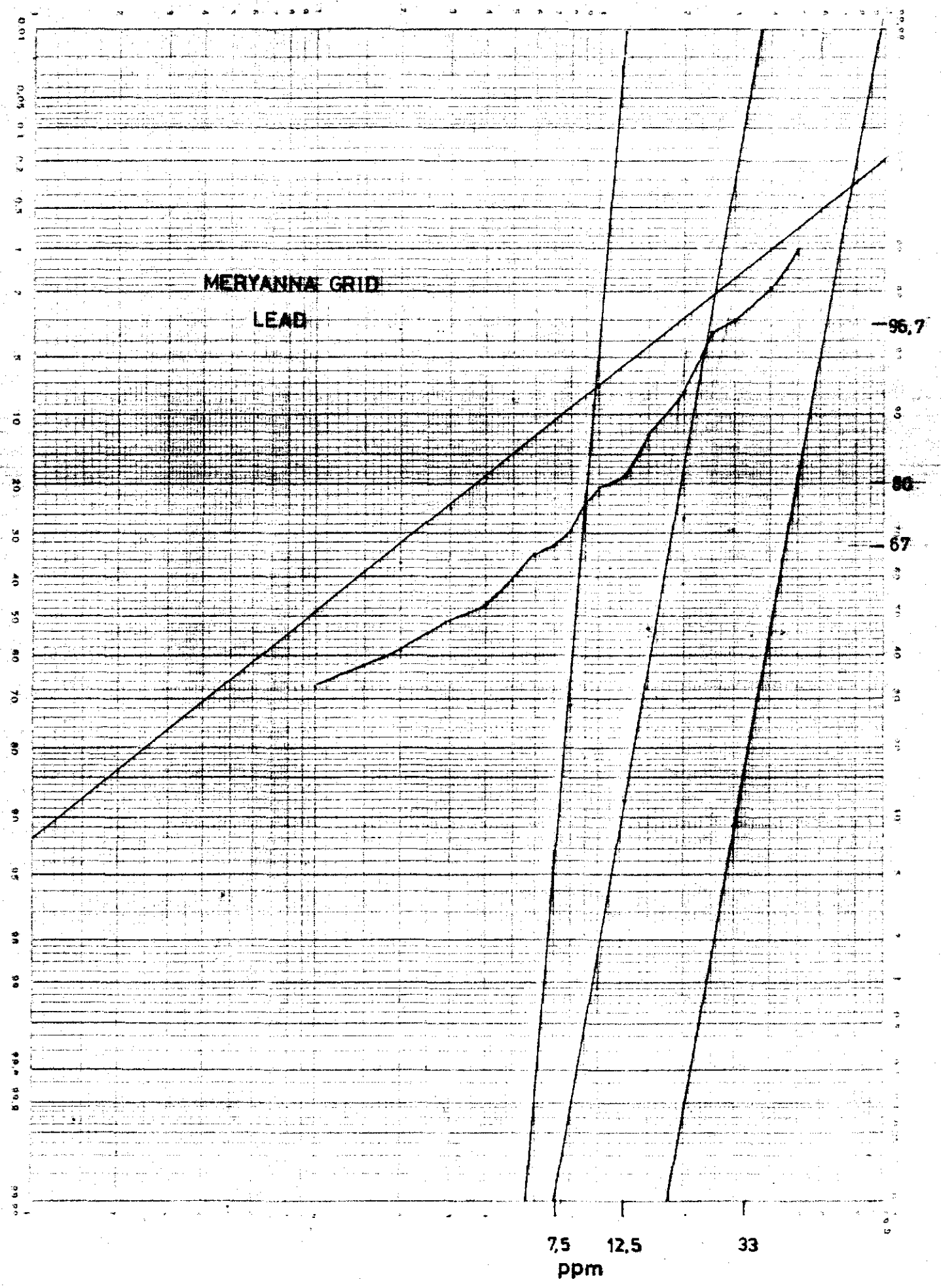
CUMULATIVE FREQUENCY CALCULATION Area: MARYANNA GRID Element: LEAD Name: Date:

ppm		Tot	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III	43	43	26.2		26.2	40.2
1.	𝍸 𝍸 II	12	55	33.5		33.5	51.4
1.5							
2	𝍸 𝍸 III	13	68	41.5		41.5	63.7
2.5							
3	𝍸 𝍸 II	12	80	48.8		48.8	74.9
4	𝍸 III	8	88	53.6		53.6	82.2
5	𝍸 𝍸	10	98	59.8		59.8	91.7
6	𝍸 IIII	9	107	65.2		65.2	
7	IIII	4	111	67.7	67.0	0.7	5.4
8	𝍸	5	116	70.7		3.7	28.7
9	𝍸 𝍸	10	126	76.9		9.9	76.7
10	𝍸	5	131	79.9		12.9	
12.5	III	3	134	81.7	80.0	1.7	10.4
15	𝍸 𝍸	10	144	87.8		7.8	47.6
20	𝍸 II	7	151	92.1		12.1	73.8
25	𝍸 II	7	158	96.4		16.4	
30	I	1	159	97.0	96.7	0.3	9.1
40	II	2	161	98.2		1.5	45.5
50	II	2	163	99.4		2.7	81.8
60	I	1	164	1		3.3	
70							
80							
90							
100							
125							
150							
200							
250							
300							
400							
500							
600							
700							
800							
900							
1000							
1250							
1500							
2000							
2500							
3000							
4000							
5000							
60^0							
7000							
8000							
9000							
10000							

129

591130

130



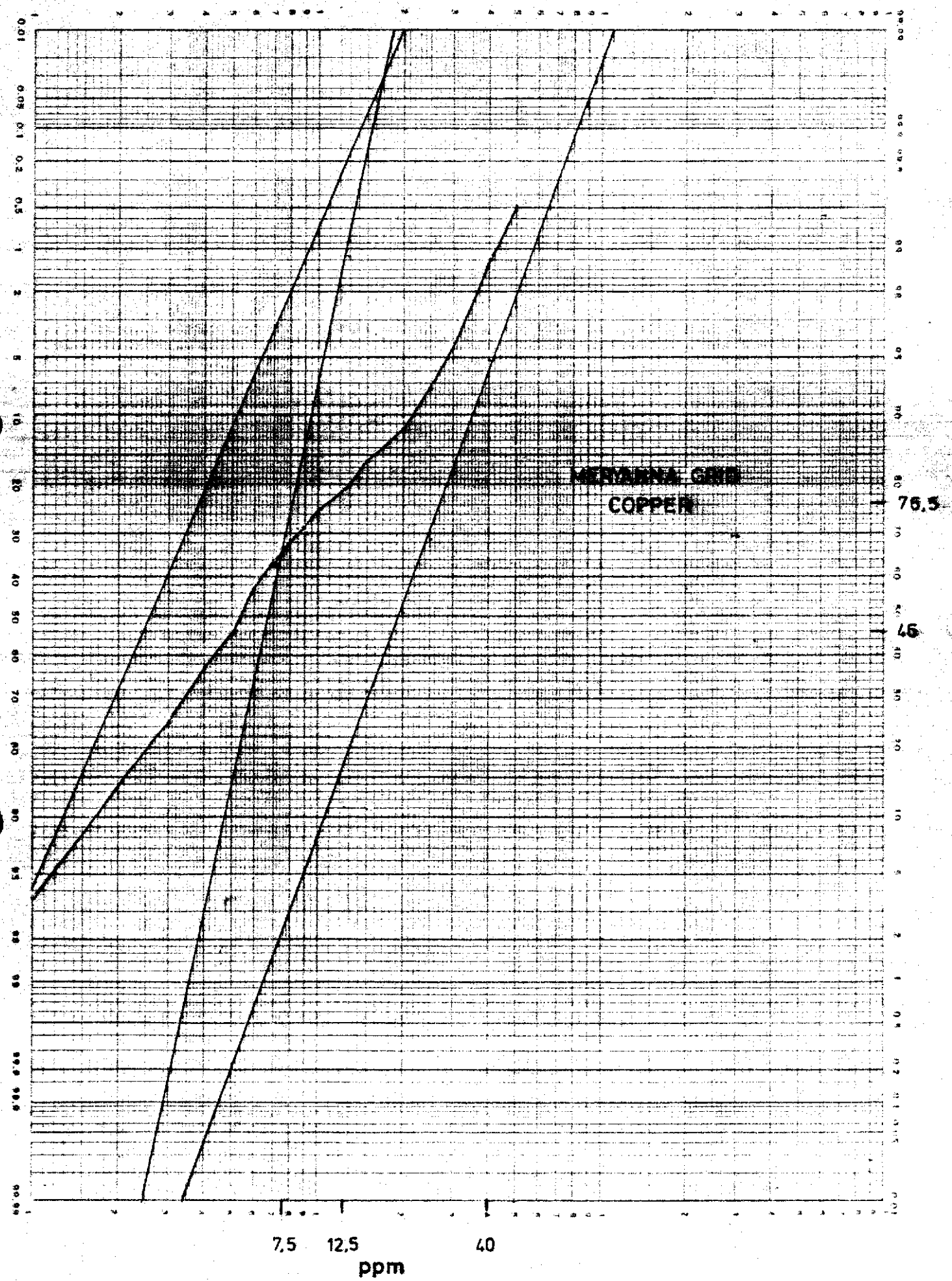
CUMULATIVE FREQUENCY CALCULATION Area:.... MARY ANNA GRID .... Element.... COPPER .... Name.... Date....

ppm		Tot	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1	𝍸 I	6	6	3.7		3.7	8.3
1.25							
1.5							
2	𝍸 𝍸 𝍸 II	17	33	14.1		14.1	31.5
2.5							
3	𝍸 𝍸 𝍸 III	18	41	25.2		25.2	56.3
4	𝍸 𝍸 𝍸 IIII	19	60	36.8		36.8	82.1
5	𝍸 𝍸 III	13	73	44.8		44.8	
6	𝍸 𝍸 𝍸 IIII	19	92	56.4	46.	10.4	35.2
7	𝍸 𝍸 I	11	103	63.2		17.2	58.3
8	𝍸 III	8	111	68.1		22.1	74.9
9	𝍸 I	6	117	71.8		25.8	87.5
10	𝍸 I	6	123	75.5		29.5	
12.5	𝍸 I	6	129	79.1	76.5	2.6	11.1
15	𝍸 III	8	137	84.0		7.5	31.9
20	𝍸 II	7	144	88.3		11.8	50.2
25	𝍸 II	7	151	92.6		16.1	68.5
30	𝍸	5	156	95.7		19.2	81.7
40	𝍸	5	161	98.8		22.3	94.9
50	I	1	162	99.4		22.9	97.5
60				99.4		22.9	
70	I	1	163	1		23.5	
80							
90							
100							
125							
150							
200							
250							
300							
400							
500							
600							
700							
800							
900							
1000							
1250							
1500							
2000							
2500							
3000							
4000							
5000							
6000							
7000							
8000							
9000							
10000							

31

591132

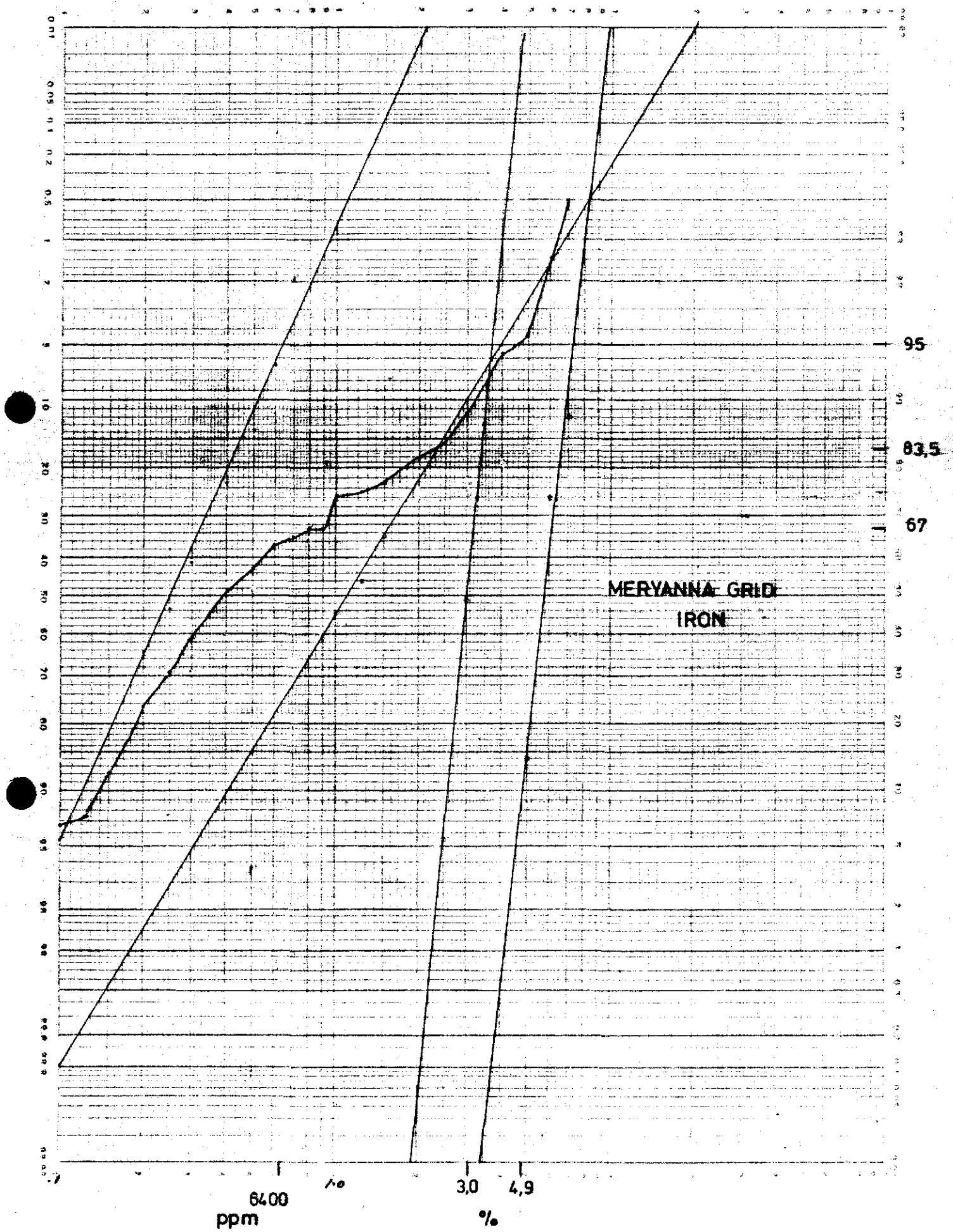
132



CUMULATIVE FREQUENCY CALCULATION Area: MARYANNA GRID Element: Fe Name: Date:

ppm	Tot	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1						
1.25						
1.5						
2						
2.5						
3						
4						
5						
6						
7						
8						
9						
10						
12.5						
150						
200						
250						
300						
400						
500						
600						
700						
800						
900						
1000	11	11	6.7		6.7	10.0
1250	1	12	7.4		7.4	11.1
1500	8	20	12.3		12.3	18.4
2000	19	39	23.9		23.9	35.7
2500	12	51	31.3		31.3	46.8
3000	14	65	39.9		39.9	59.6
4000	19	84	51.5		51.5	77.0
5000	10	94	57.7		57.7	86.3
6000	8	102	62.6		62.6	93.6
7000	5	107	65.6		65.6	98.1
8000	2	109	66.9		66.9	
9000	0	109	66.9		66.9	
10000	12	121	74.2	67	7.2	45.6
12500	2	123	75.5		8.5	53.8
15000	3	126	77.3		10.3	65.2
20000	9	135	82.8		15.8	
25000	2	137	84.1	83.5	0.6	5.4
30000	8	145	88.9		5.4	49.1
40000	9	154	94.5		11.0	
50000	2	156	95.7	95.	0.7	14.0
60000	5	161	98.7		3.7	74.0
70000	1	162	99.4		4.4	88.0
80000	1	163	100.0		5	
90000						
100000						

591135



CUMULATIVE FREQUENCY CALCULATION Area:.....MERYANNA GRID..... Element...Ba.... Name.....Date.....

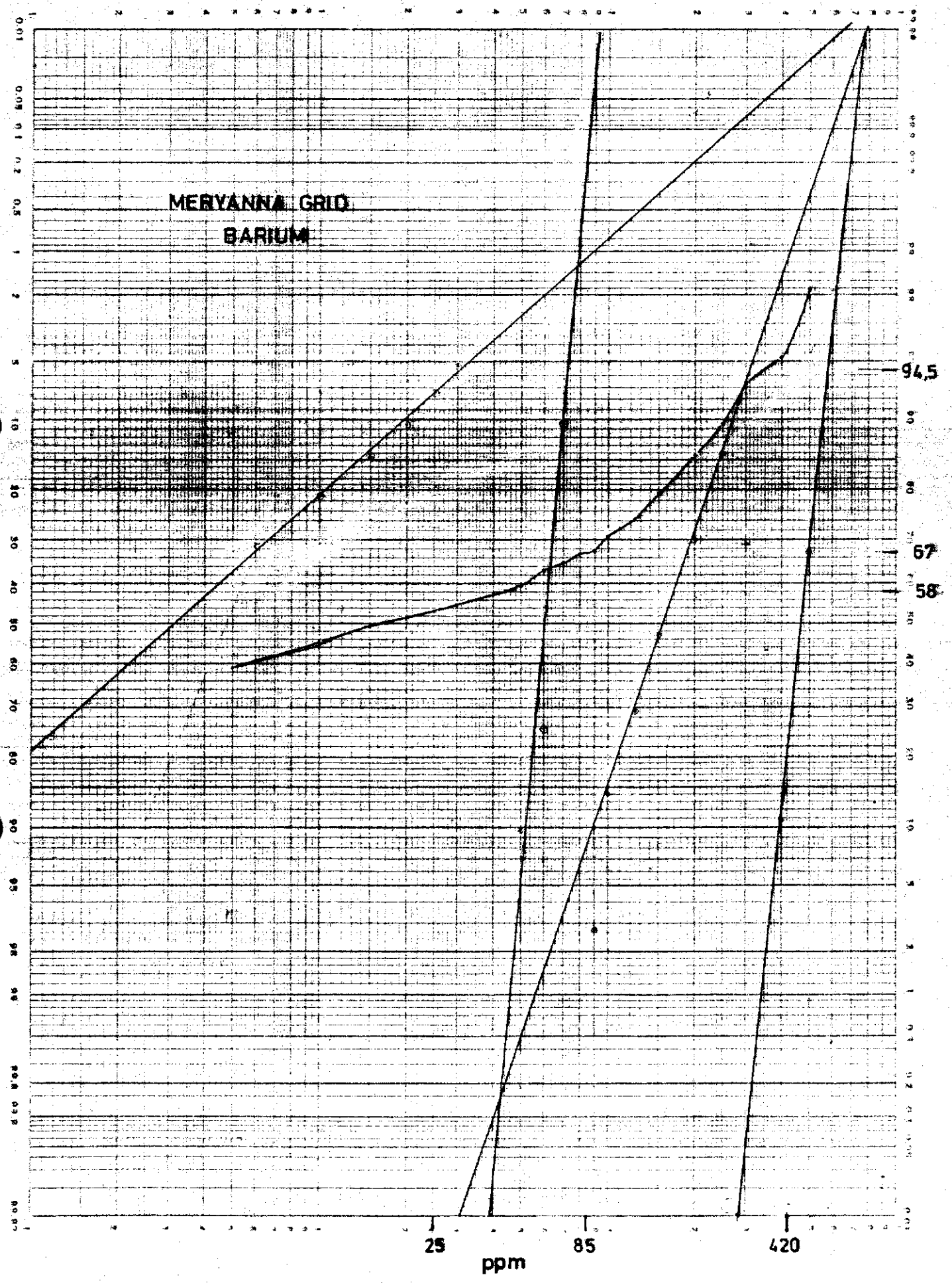
ppm	Tot	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
45	40	40	24.4		24.4	42.1
5	25	65	39.6		39.6	68.4
6						
7						
8						
9						
10	10	75	45.7		45.7	78.9
12.5						
15	6	81	49.4		49.4	85.3
20	4	85	51.8		51.8	89.5
25	3	88	53.7		53.7	92.7
30	2	90	54.9		54.9	94.8
40	5	95	57.9		57.9	
50	3	98	59.8	58.0	1.8	3.7
60	5	103	62.8		4.8	25.9
70	3	106	64.6		16.6	89.7
80	3	109	66.5		18.5	
90	2	111	67.7	67	0.7	2.7
100	5	116	70.7		3.7	14.1
125	6	122	74.4		7.7	29.3
150	8	130	79.3		12.3	46.8
200	10	140	85.4		18.4	70.0
250	7	147	89.6		22.6	85.9
300	6	153	93.3		26.3	
400	3	156	95.1	94.5	0.6	10.9
500	5	161	98.2		3.7	67.3
600	3	164	100		5.5	
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

135

591136

136

591137



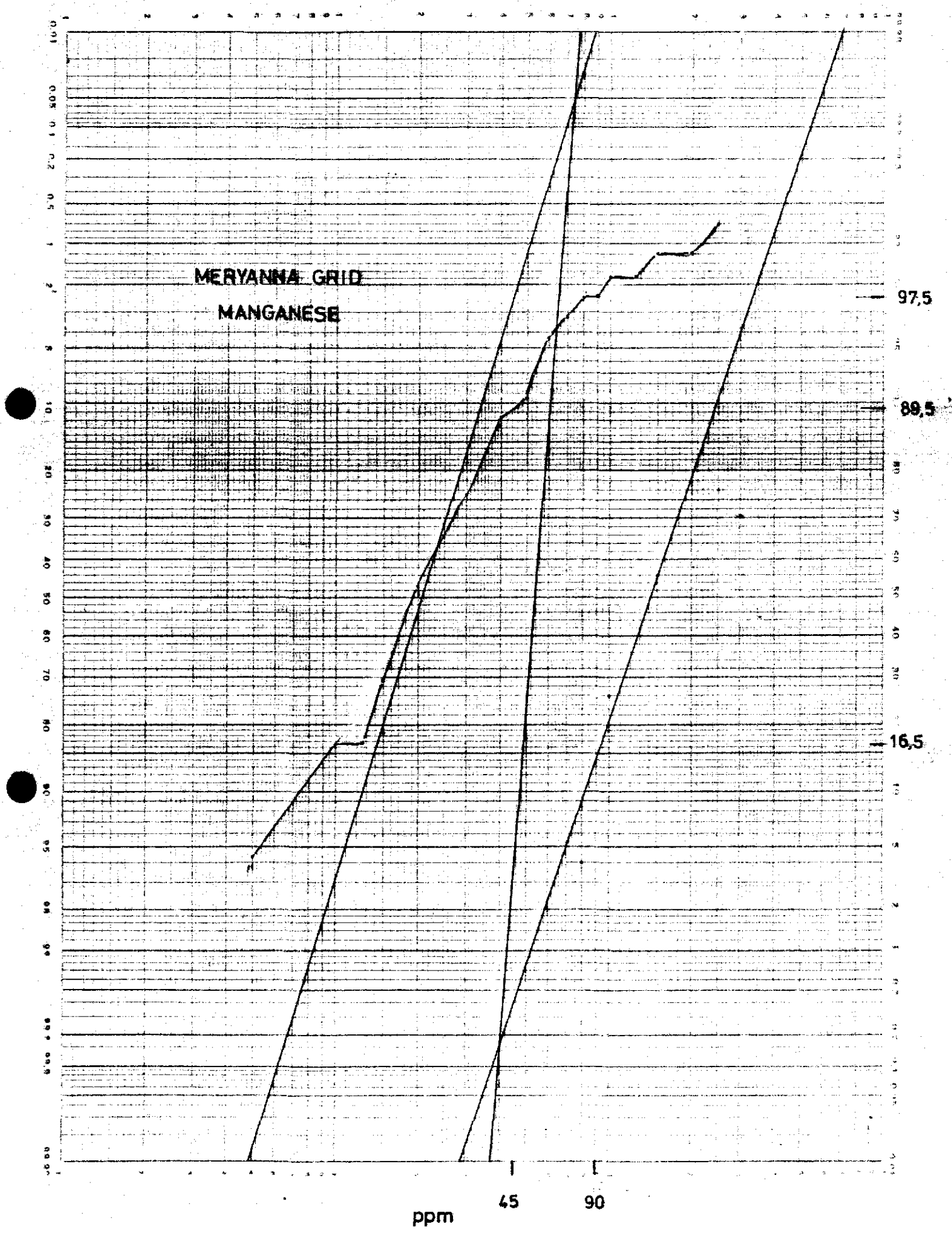
CUMULATIVE FREQUENCY CALCULATION Area: [redacted] MERRY ANNA GRID ment MANGANESE Name..... Date..... 137

ppm	Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1						
1.25						
1.5						
2						
2.5						
3						
4						
5	7	7	4.3		4.3	
6						
7						
8						
9						
10	20	27	16.5		16.5	
12.5						
15	22	49	29.9	16.5	13.4	18.6
20	38	87	53.1		36.6	50.9
25	31	108	65.9		49.4	68.7
30	15	123	75.0		58.5	81.4
40	22	145	88.4		71.9	
50	4	149	90.8	89.5	1.3	17.6
60	8	157	95.7		6.2	83.8
70	2	159	96.9		7.4	
80	1	160	97.6	97.5	0.1	4.0
90			97.6		0.1	4.0
100	1	161	98.2		0.7	28.0
125			98.2		0.7	28.0
150	1	162	98.9		1.4	56.0
200			98.9		1.4	56.0
250	1	163	99.6		1.9	76.0
300	1	164	1		2.5	
400						
500						
600						
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

591138

138

591139

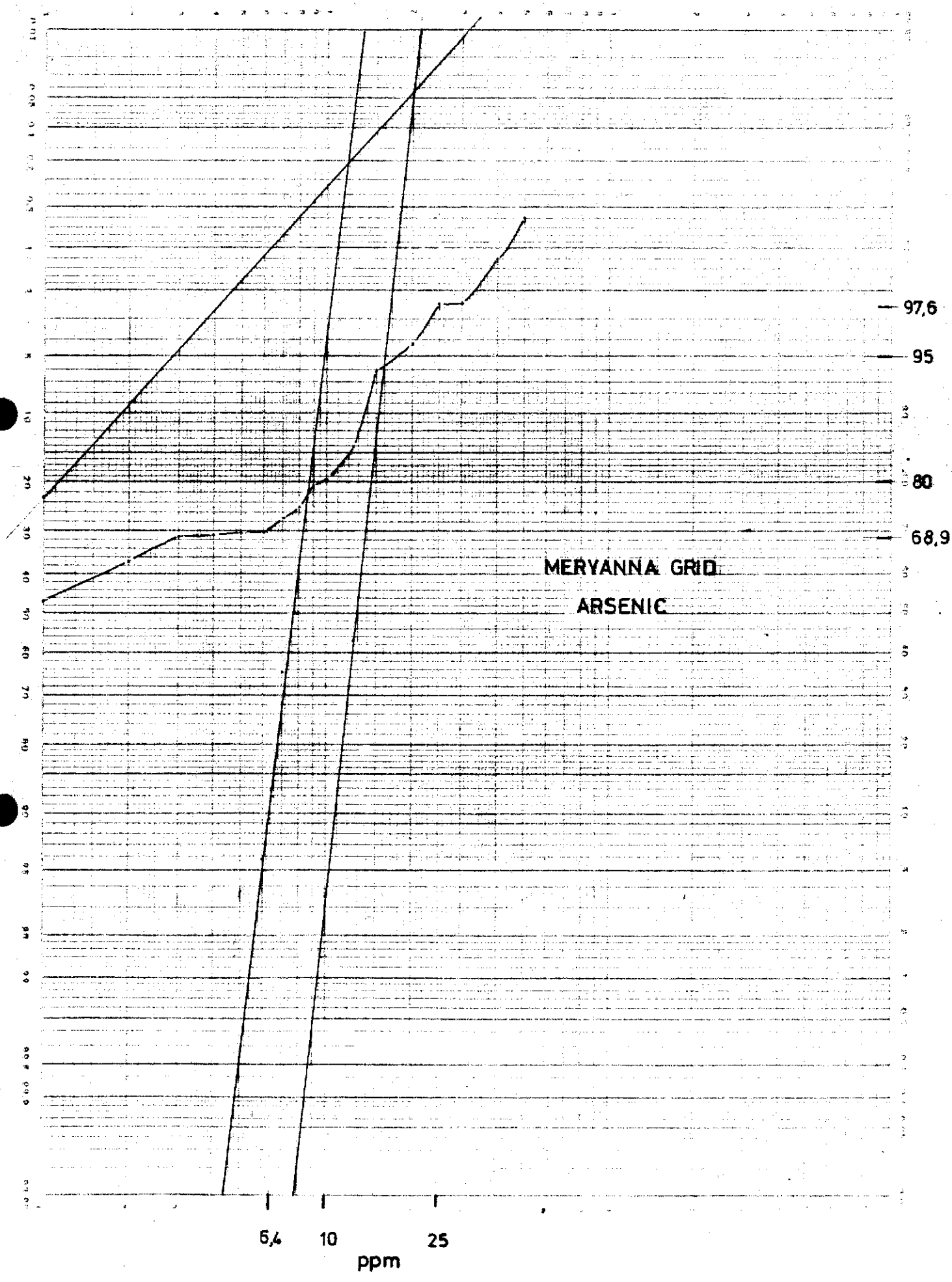


CUMULATIVE FREQUENCY CALCULATION Area: MERYANNA GRID Element: As Name: Date:

ppm	Total	Cum. Tot	% Cum. Tot	Breaks	Remainder	Recalc. %
1	68	68	41.5		41.5	60.2
1	19	87	53.0		53.0	76.9
1.5		87	53.0		53.0	76.9
2	17	104	63.4		63.4	92.0
2.5		104	63.4		63.4	92.0
3	9	113	68.9		68.9	
4	0	113	68.9		68.9	
5	1	114	69.5	68.9	0.6	5.8
6	0	114	69.5		0.6	5.8
7	5	119	72.6		3.7	35.6
8	4	123	75.0		6.1	58.6
9	7	130	79.3		10.4	
10	2	132	80.5	80.0	0.5	3.6
12.5	9	141	86.0		6.0	43.2
15	13	154	93.9		13.9	
20	3	157	95.7	95.0	0.2	
25	3	160	97.6		2.6	
30	0	160	97.6			
40	2	162	98.8	97.6		
50	1	163	99.4			
60	0					
70	0					
80	0					
90	0					
100	0					
125	1	164				
150						
200						
250						
300						
400						
500						
600						
700						
800						
900						
1000						
1250						
1500						
2000						
2500						
3000						
4000						
5000						
6000						
7000						
8000						
9000						
10000						

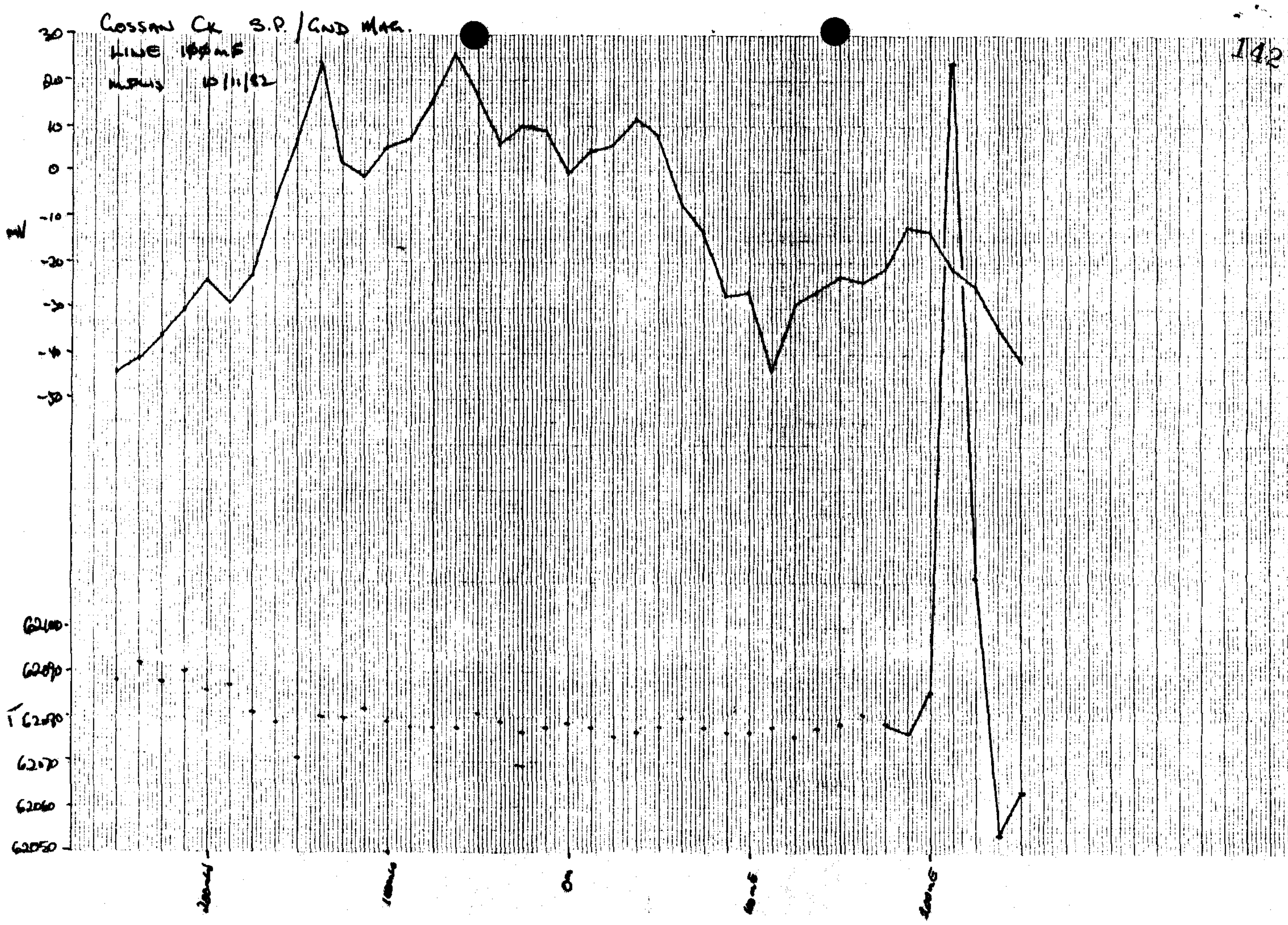
139

591140

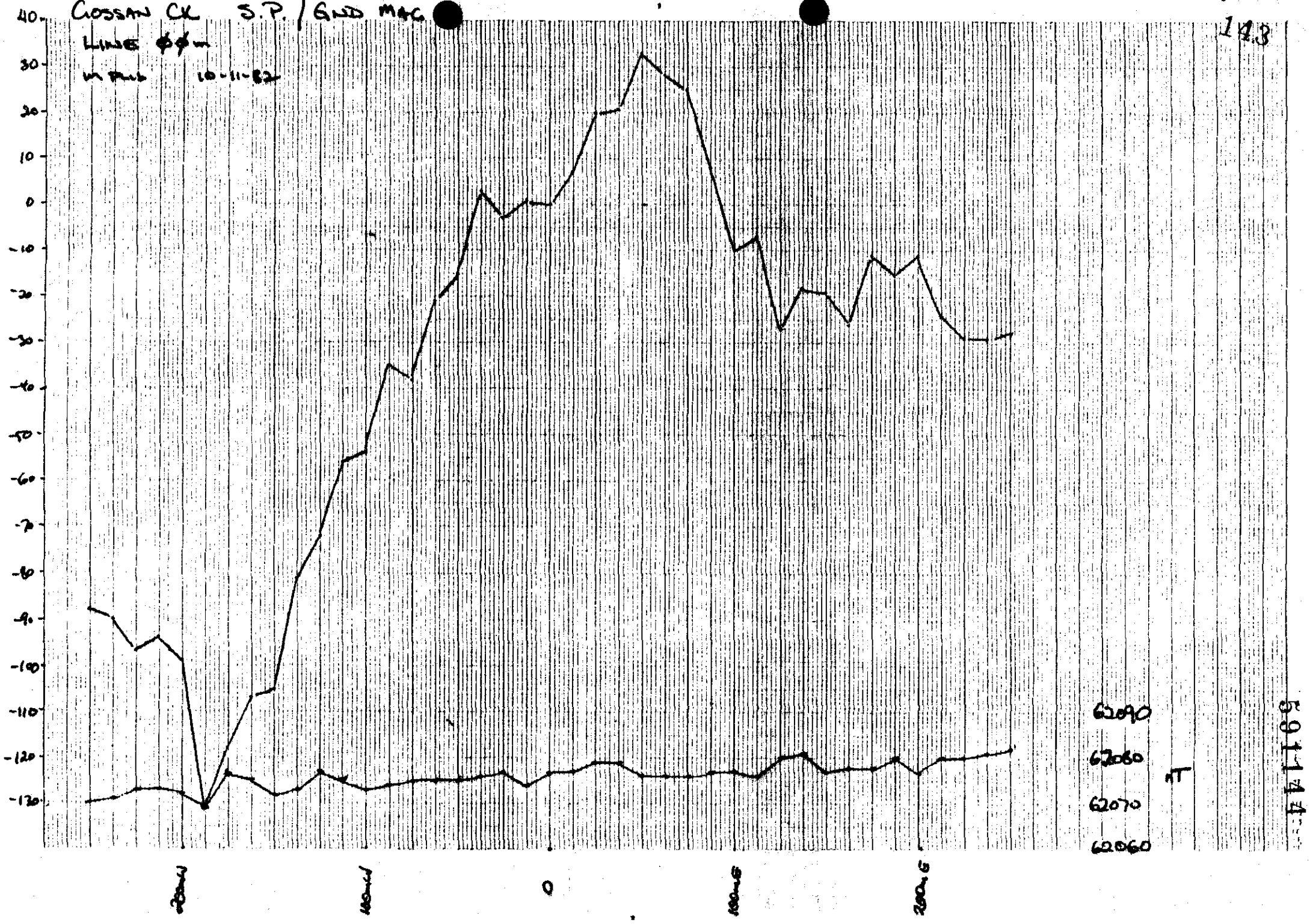

97,6
95
80
68,9
MERYANNA GRID
ARSENIC
6,4
10
25
ppm

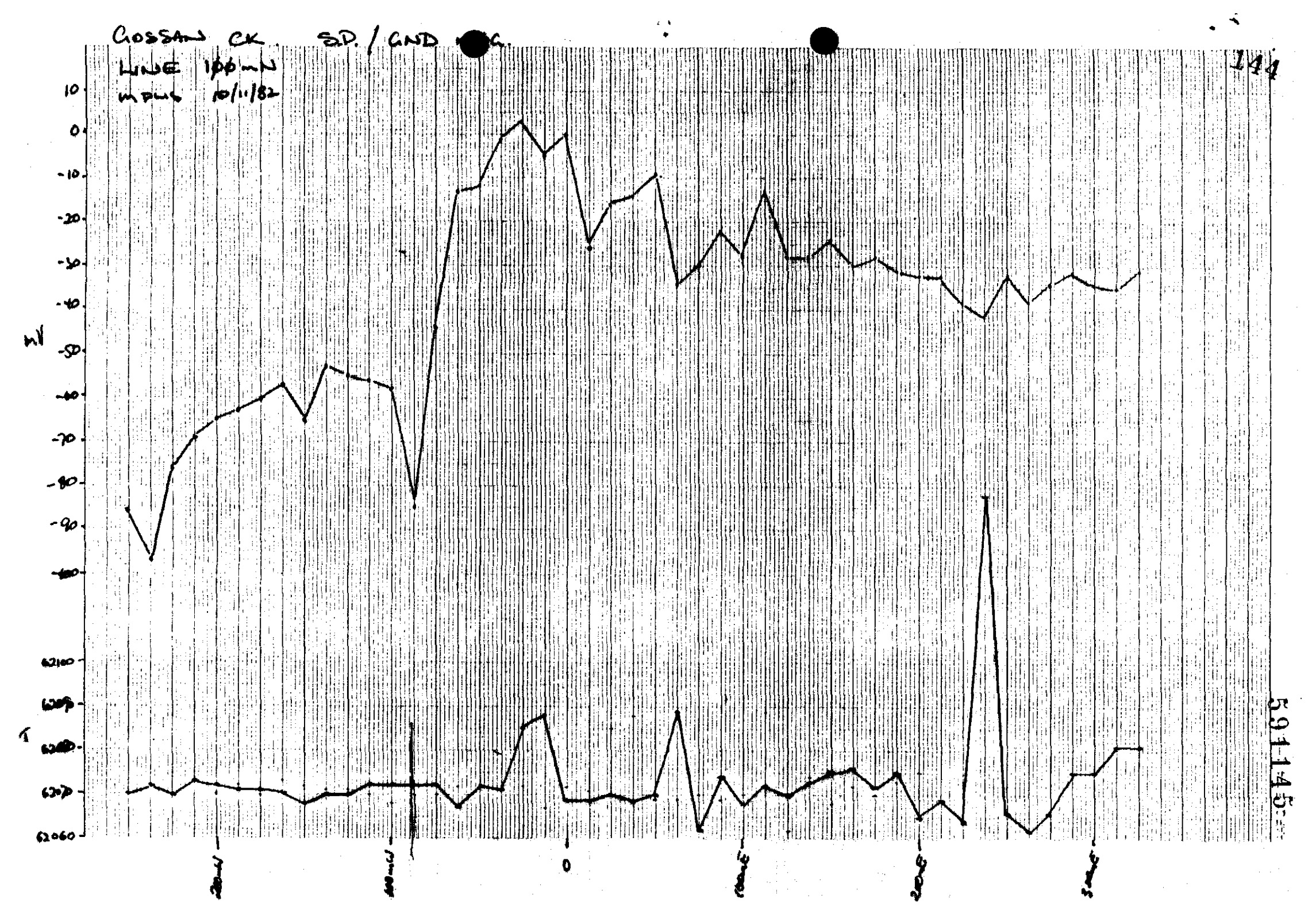
APPENDIX TEN

GEOPHYSICAL PROFILES - MERYANNA GRID

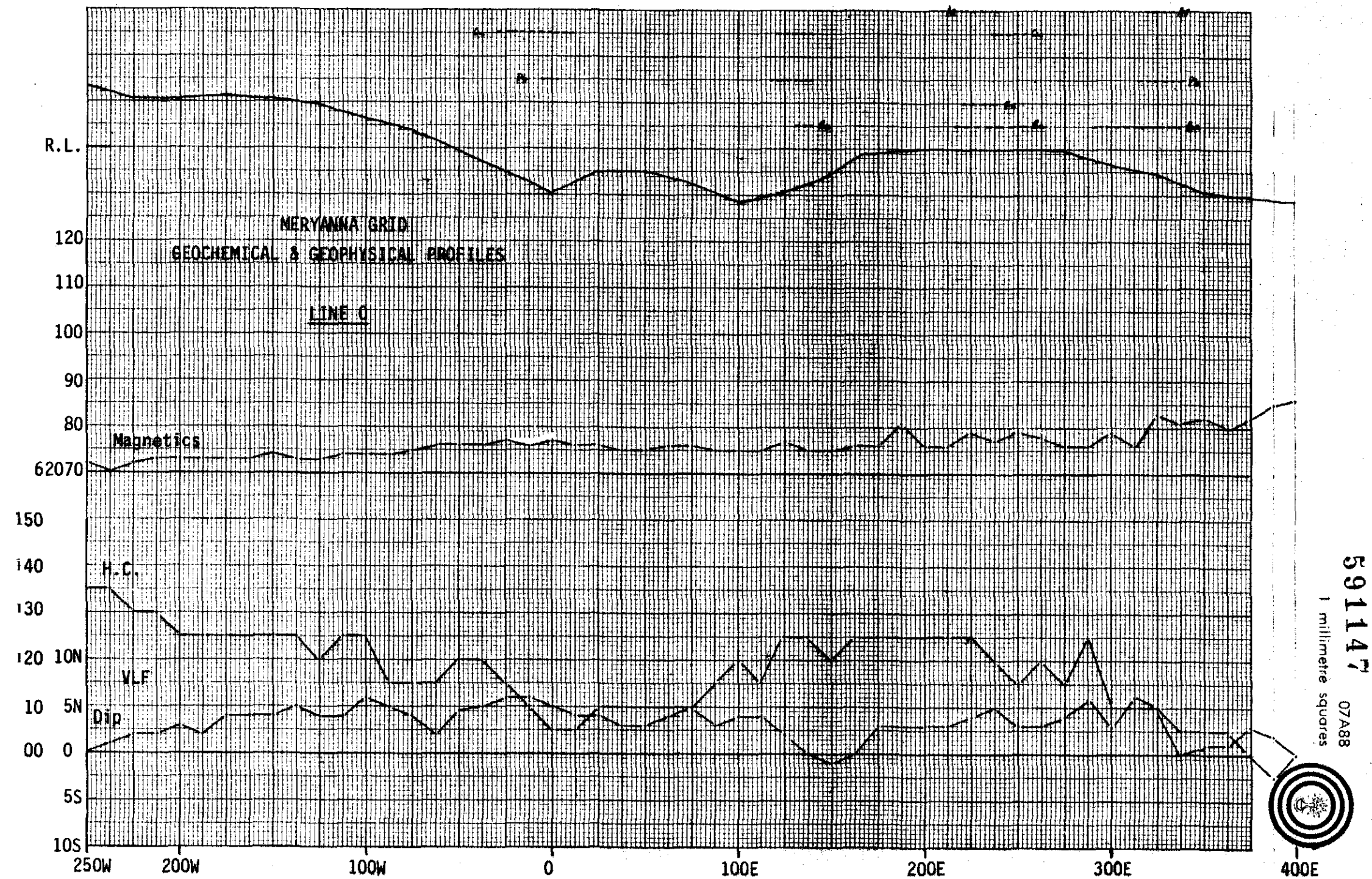

GOSSAN CK S.P./GND MAG.
LINE 100mE
10/11/82
30
20
10
0
-10
-20
-30
-40
-50
mV
62100
62090
62080
62070
62060
62050
0

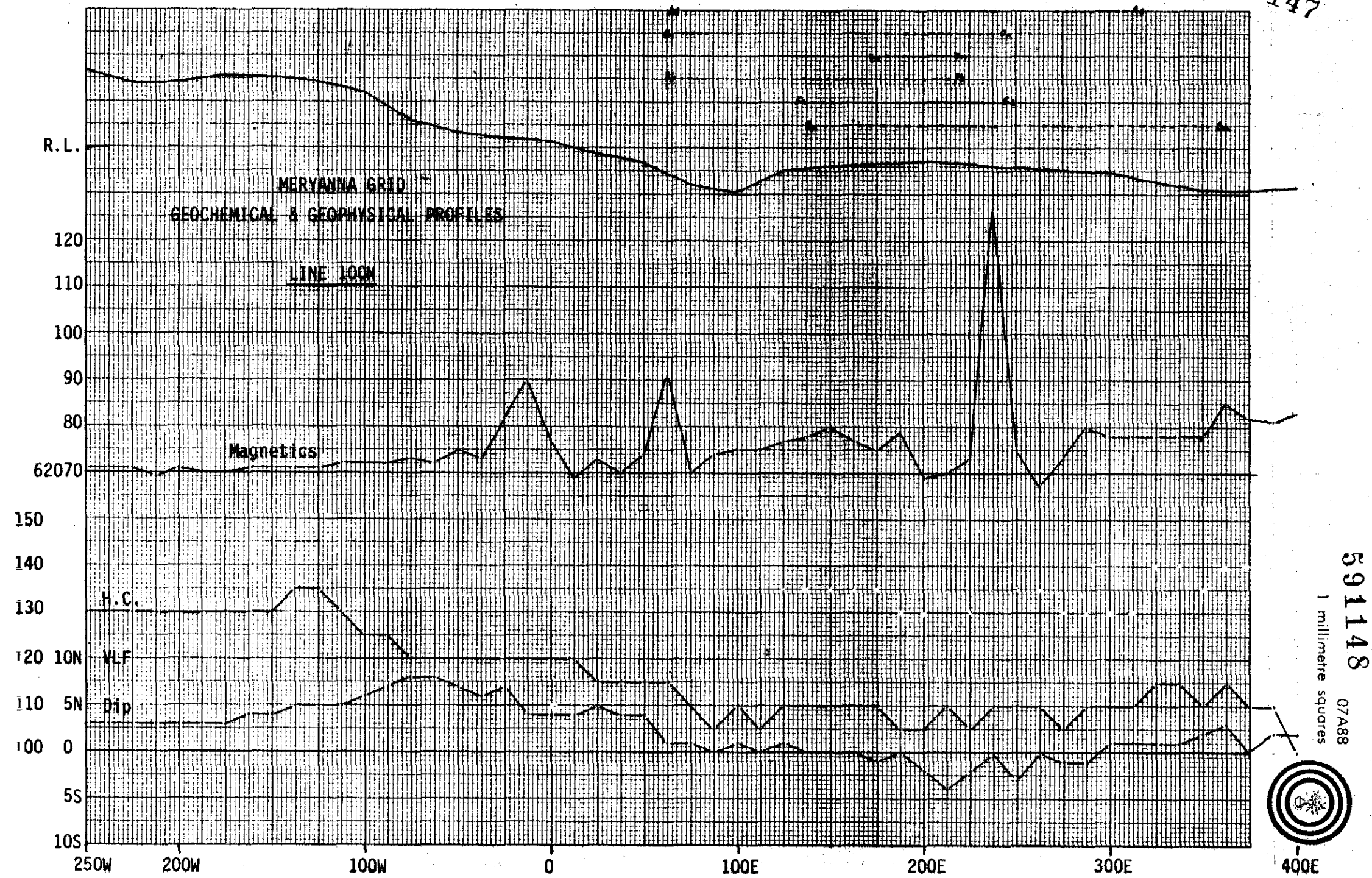
591143

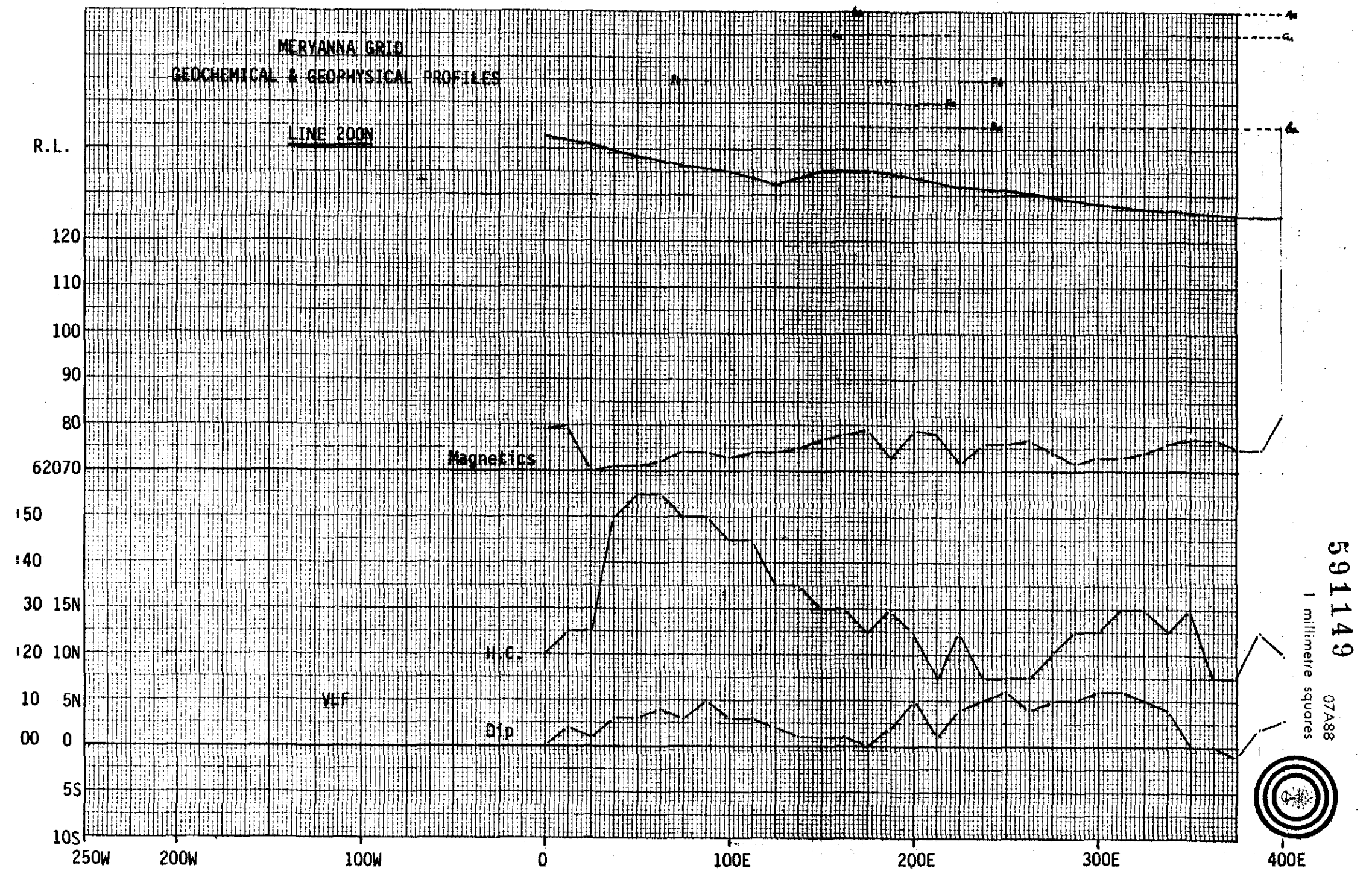

COSSAN CK S.P. / GRID MAG
LINE 00 N
10-11-82
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
62090
62080
62070
62060
T
200S
100S
0
100N
200N
9011444

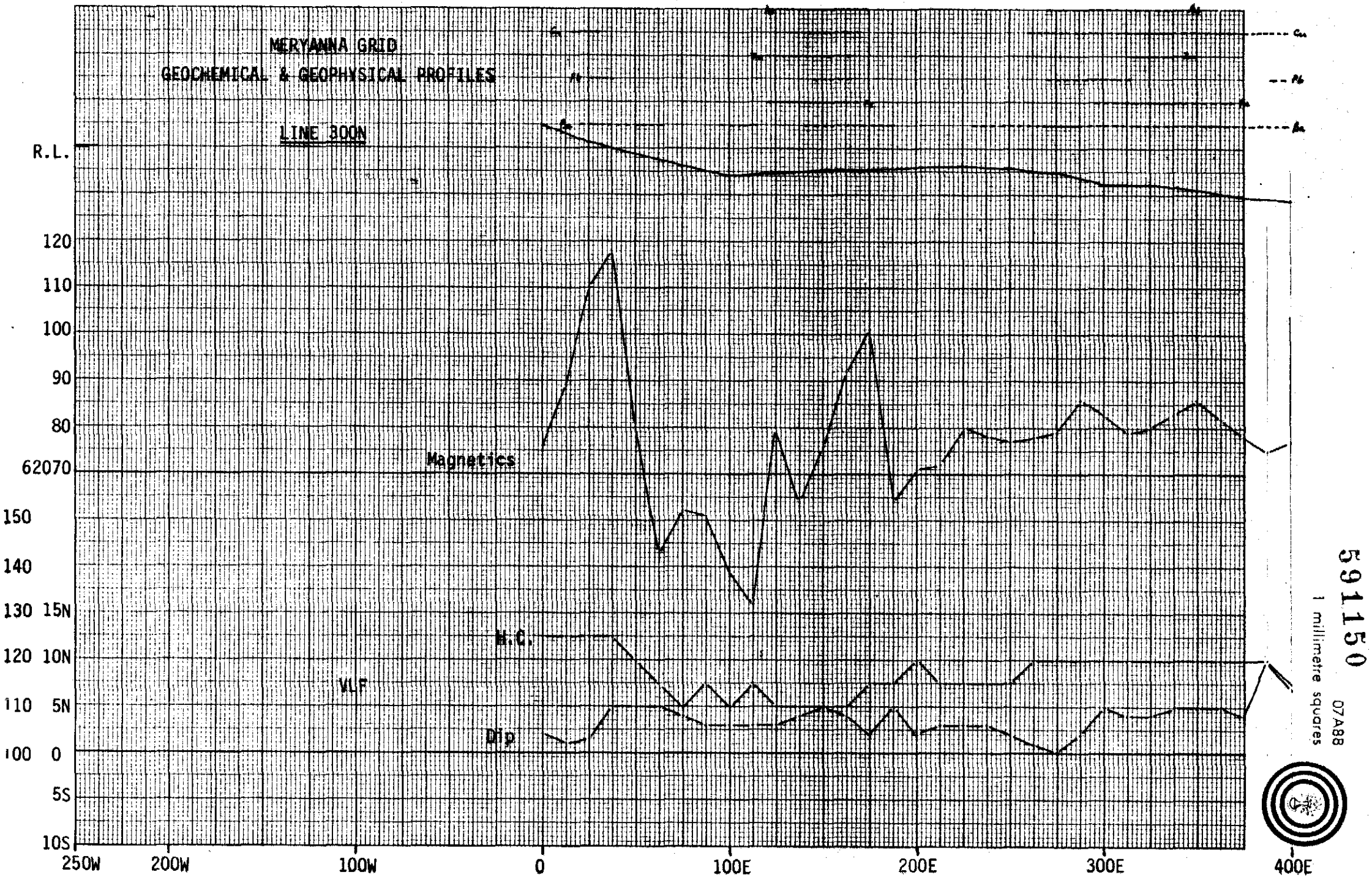

COSSANS CK SP / GND
LINE 100mN
MPLUS 10/11/82
14
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
mV
62100
62080
62060
T
0
5911450

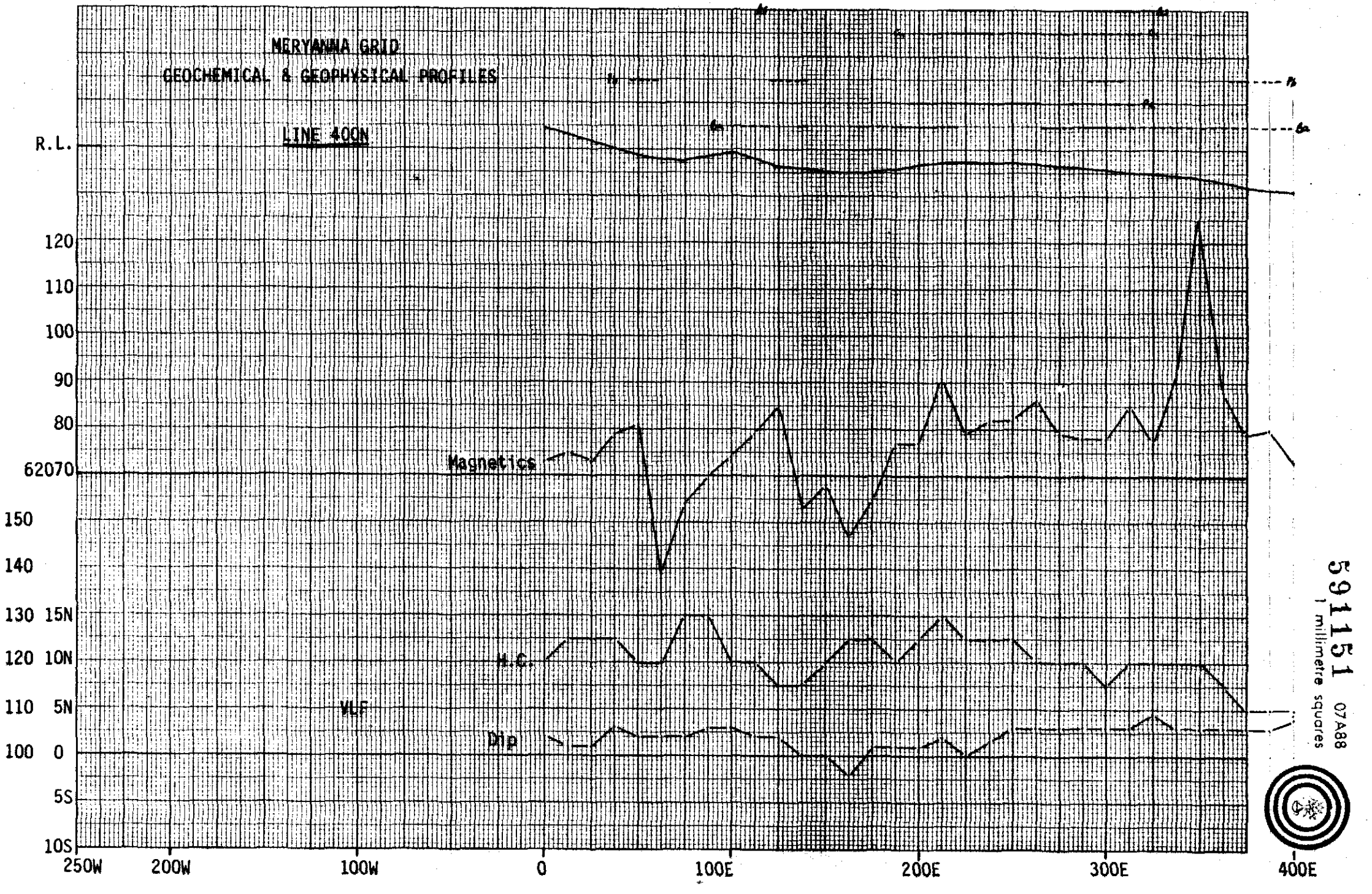
591146
1 millimetre squares
07A88

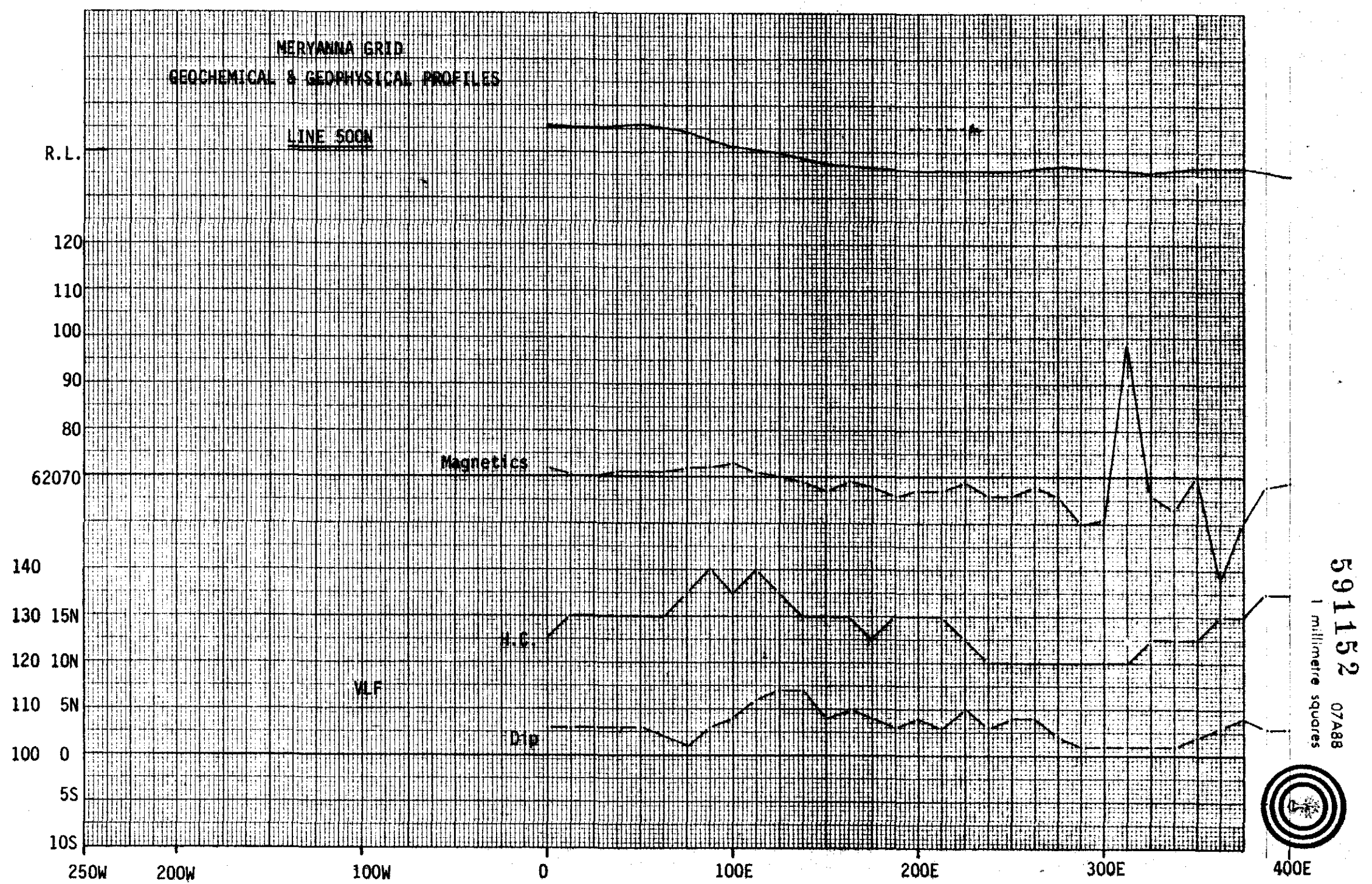

R.L.
MERYANNA GRID
GEOCHEMICAL & GEOPHYSICAL PROFILES
LINE 0
120
110
100
90
80
Magnetics
62070
150
140
130
120
10
00
H.C.
10N
VLF
5N
Dip
0
5S
10S
250W
200W
100W
0
100E
200E
300E
400E
591147
07A88
1 millimetre squares

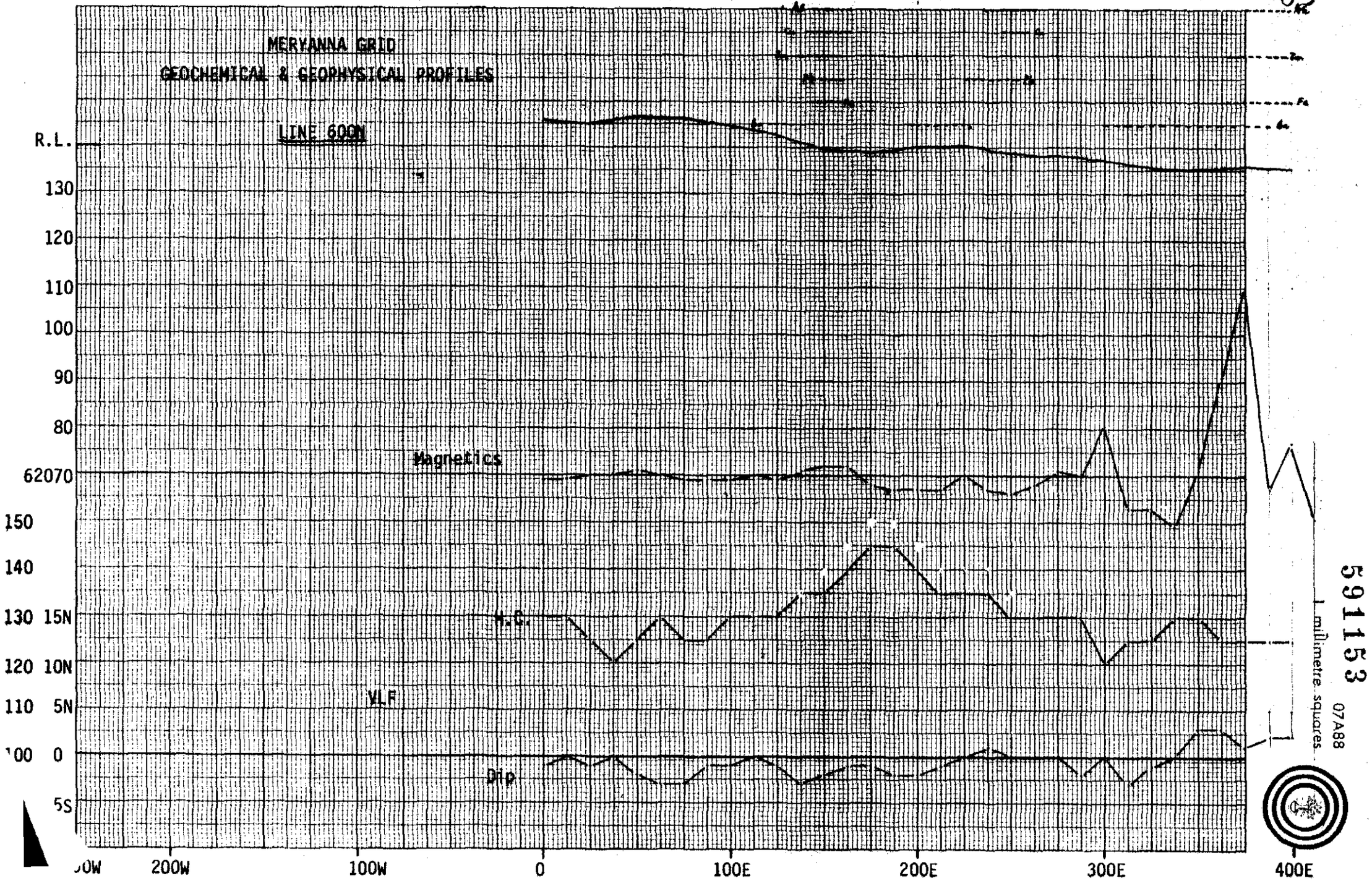





MERYANNA GRID
GEOCHEMICAL & GEOPHYSICAL PROFILES
LINE 300N
R.L.
120
110
100
90
80
62070
150
140
130 15N
120 10N
110 5N
100 0
5S
10S
Magnetics
M.C.
VLF
Dip
250W
200W
100W
0
100E
200E
300E
400E
5911150
07A88
1 millimetre squares




MERYANNA GRID
GEOCHEMICAL & GEOPHYSICAL PROFILES
LINE 500N
R.L.
120
110
100
90
80
62070
Magnetics
140
130 15N
120 10N
110 5N
100 0
5S
10S
H.C.
VLF
Dip
250W
200W
100W
0
100E
200E
300E
400E
591152
07A88
1 millimetre squares


MERYANNA GRID
GEOCHEMICAL & GEOPHYSICAL PROFILES
LINE 600N
R.L.
130
120
110
100
90
80
62070
150
140
130 15N
120 10N
110 5N
100 0
5S
Magnetics
H.G.
VLF
Dip
200W
100W
0
100E
200E
300E
400E
1 millimetre squares
07A88

APPENDIX ELEVEN

PETROGRAPHIC REPORTS

1-154

591155

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. D.J. Weir
Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BURNIE / TAS. 7320

2nd November, 1981

REPORT CMS 81/10/11

YOUR REFERENCE:	D.P.O. No. 30062
DATE RECEIVED:	7th October, 1981
SAMPLE NOS.:	5 Samples
SUBMITTED BY:	D.J. Weir
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
G.P.O. Box 384D
MELBOURNE / VIC. 3001

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BELLERIVE / TAS. 7018

for

H.W. Fander, M. Sc.

REPORT CMS 81/10/11

Five specimens were received for petrological examination and results are summarised in the attached table. Descriptions incorporate data from stereobinocular and petrological microscopic examination of representative thin-sections and offcuts, and include interpretative comments.

Summary

Sample 934051 represents an amygdaloidal basalt with a "spilitic" alteration assemblage of albite, chlorite and epidote accompanied by conspicuous fine-grained pyrite and traces of prehnite. Part of the area sectioned comprises relatively amygdaloidal ("scoriaceous") flow breccia, suggestive of a flow-marginal facies. In view of the association of pyrite with a prehnite alteration assemblage, Cu-geochemistry may be warranted.

The remaining four samples can be classified as carbonaceous cherts. These rocks are rather featureless, but there is evidence of differential modes of origin. Samples 934052 and 934095 appear to be primary cherts or, conceivably, diagenetically chertified limestone in the case of 934052. In contrast, 934080 and 934093 both exhibit evidence of secondary silicification, postdating a weak tectonic overprint. These rocks were possibly impure metacarbonates (?talc-dolomite rocks).

This interpretation requires consideration in the light of field evidence. The apparent association of partly nodular carbonate and chert facies is reminiscent of the basal zones of the Crimson Creek Formation.

D. Cowan, B. Sc.

Classification - Composition	Fabric	Accessories	Comments
Altered Basalt. Albitised plagioclase phenocrysts, fresh augite microphenocrysts in plagioclase-microlathic/granular augite groundmass, argillic mesostasis. Disseminated chlorite (~~-epidote-pyrite~~) ~~amygdales~~.	Glomeroporphyritic, amygdaloidal, basaltic. Sporadicchlorite-pyrite films, veinlets.	Leucoxenised opaques. Patchy prehnite, minor allanite (at cores of amygdale epidote).	Grades marginally into relatively chloritised (+ prehnite) scoriaceous breccia. "Spilitic" alteration pattern. Unstressed.
Chert. Cherty crypto- to microcrystalline quartz, variably stained with ultrafine carbonaceous matter. Sporadic quartz veinlets.	Nodular on sub- to millimetric scale. Vague ?carbonate-pseudomorphous microtextures.	None detected.	Vague affinities with nodular cherts of "Red Rock" sequence Renison area, but non-hematitic. Conceivably a silicified oolithic carbonate, but no positive evidence.
"Chert". Cherty microcrystalline quartz incipiently stained with carbonaceous matter. Frequent microfilms carbonaceous matter and degraded ?talc.	Vaguely nodular (sim. 934052). Reflects weak relict tectonic fabric (pre-quartz).	None detected.	Essentially quite similar to 934052. Weak relict slaty cleavage predates bulk of cherty silicification. ?Silicified impure limestone or dolomi
"Chert". Cherty microcrystalline quartz with irregularly distributed carbonaceous stainings, minor degraded ?talc films.	Similar to 934080, but with vague segmented nodular features.	None detected.	Closely related to 934093. VAgue relic tectonic fabric is very weak in comparison. ?Silicified impure limestone or dolomite.
Chert. Cherty crypto- to microcrystalline quartz with very thinly disseminated fine silt-sized clastic quartz grains, muscovite flakes. WEak, but pervasive carbonaceous ~~stainings~~.	"Nodular", sub- to millimetric, ovoid, microcrystalline clasts, cryptocrystalline matrix.	Minor traces "syngenetic" pyrite, rare diagenetic dolomite rhombs.	Affinities with 934052, but interpreted as a chert breccia (as against nodular chert). Clasts are homogeneous, featureless.

591158

157

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. D.J. Weir
Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
BURNIE / TAS. 7320

15th November, 1982

REPORT CMS 82/10/36

YOUR REFERENCE:	D.P.O. No. 30098
DATE RECEIVED:	26th October, 1982
SAMPLE NOS.:	1055166
SUBMITTED BY:	D.J. Weir
WORK REQUESTED:	Petrology

Copy to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
G.P.O. Box 3840
MELBOURNE / VIC. 3001

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
ROSNY PARK / TAS. 7018

H.W. Fander.

H.W. Fander, M. Sc.

158

591159

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 15th November, 1982

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION
1055166
Gritty, Pyritic, Carbonaceous, Dolomitic Siltstone

Job No. CMS 82/10/36 Date Received: 26.10.1982

Reference D.P.O. No. 30098

Sample No. 1055166

Nature of Sample: Hand Specimen

DESCRIPTION **SECTION No.** 44414

a. Hand Specimen:

Black carbonaceous, pyritic sediment with angular rock fragments.

b. Microscopic:

This is a carbonaceous, pyritic, dolomitic siltstone with clastic sand- and grit-sized fragments.

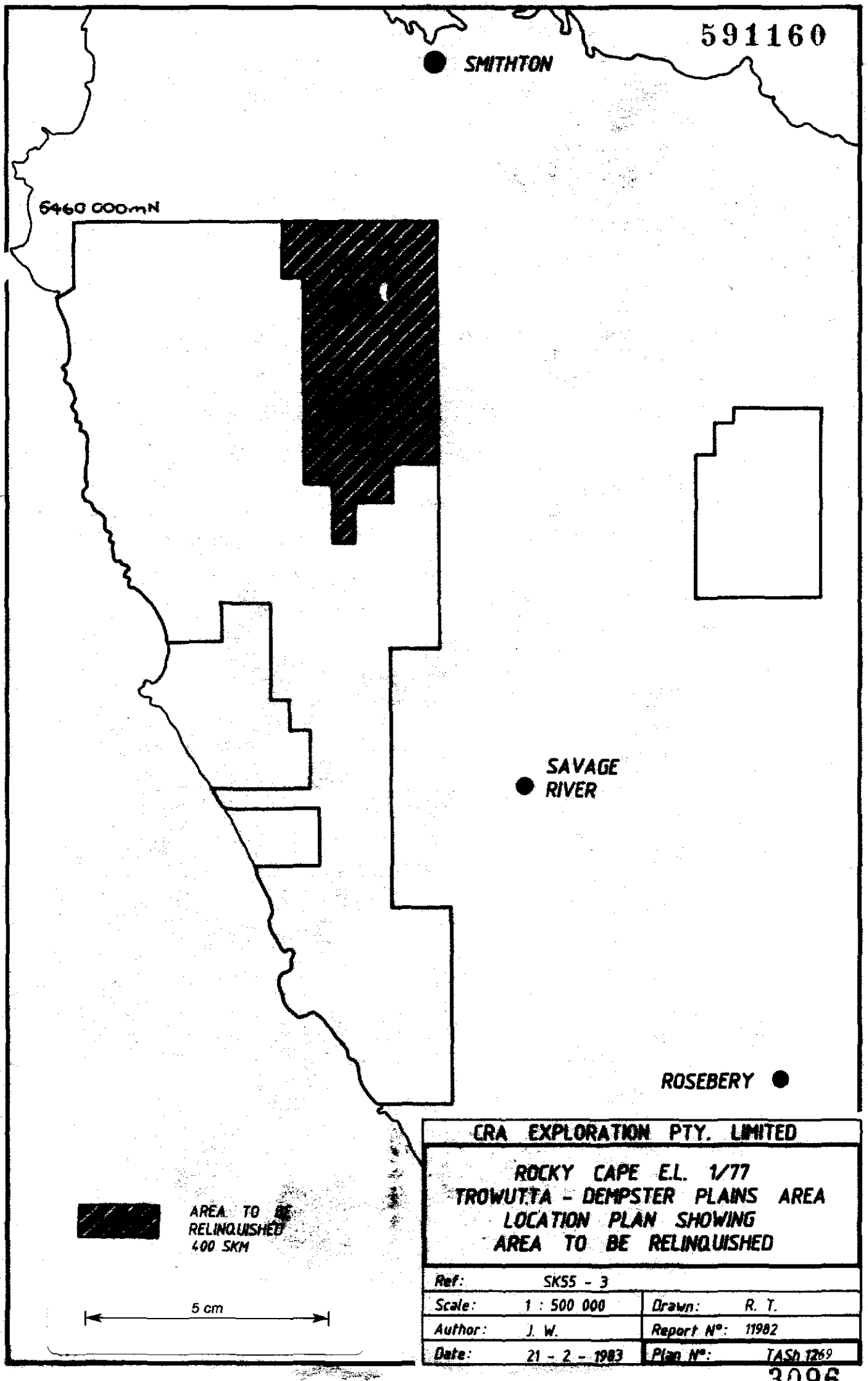
The clastic fragments, which are generally subangular to angular and of lensoid to tabular shapes showing depositional alignment, consist of dolostone, dolomitic chert, pyritic dolostone, finely laminated carbonaceous, pyritic shale, and isolated grains of pyritised trachyte-andesite. It is believed that in many of the pyrite-bearing fragments, the pyrite was pre-depositional; however, there is also evidence to suggest that some fragments were pyritised in situ, after deposition. No fossils were recognised.

The host rock consists of fine dolomite, carbonaceous matter, authigenic pyrite, clay minerals and quartz, with small clay and chert pellets, representing partly chemical, partly clastic deposition. Many of the coarser fragments may have been quite locally derived, some of them perhaps from contemporaneous sediments; the igneous grains are reworked.

Thus, the rock is not of tectonic origin; it would be termed a sedimentary breccia if pebble-sized grains were > 50 % and were angular. However, conditions of sedimentation were fairly disturbed, even though a reducing environment prevailed.

H.W. Fander, M. Sc.

591160



CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
LOCATION PLAN SHOWING
AREA TO BE RELINQUISHED

Ref:	SK55 - 3		
Scale:	1 : 500 000	Drawn:	R. T.
Author:	J. W.	Report N°:	11982
Date:	21 - 2 - 1983	Plan N°:	TASh 1269

3096

5 460 000 mN

5 450 000 mN

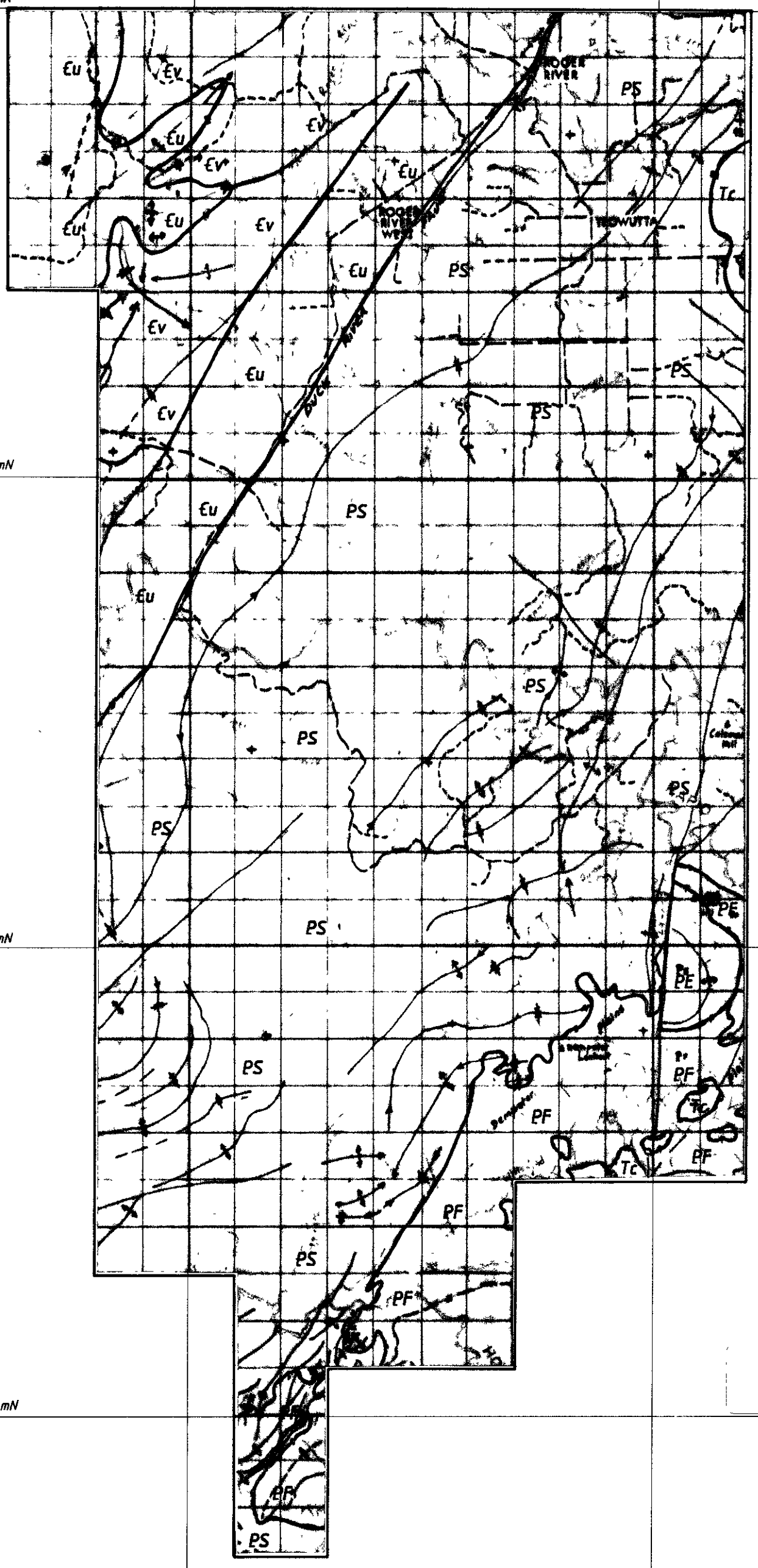
5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE

350 000 mE



LEGEND

TERTIARY

Conglomerates	Tc

CAMBRIAN

Nu Group	Ev
Upsilon Group	Eu

PRECAMBRIAN

Sigma Group	PS
Phi Group	PF
Epsilon Group	PE

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

PHOTO INTERPRETATION

Ref	SK55 - 3		
Scale	1 . 100 000	Drawn	R T.
Author	J W	Report N°	11982
Date	16 - 2 - 1983	Plan N°	TASh 1253

5911161

3057


CRA EXPLORATION PTY. LIMITED
ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
GEOLOGY PLAN & AREAS
OF DETAILED INVESTIGATIONS
Ref: SK55 - 3
Scale: 1 : 50 000
Drawn: R T.
Author: J. W.
Report Nº. 11982
Date: 17 - 2 - 1983
Plan Nº. TASh 1270
5 cm
LEGEND
Ɛvu Cambrian undifferentiated volcanics Dominantly basalt tuffaceous mudstones, tuffaceous breccia
Ɛb Basalt
Ɛt Tuffaceous breccia.
Ɛs Cambrian Siltstones
pƐdb Dolomite Breccia
pƐc Chert
pƐd Dolomite
pƐq Quartzite
Unconformity
pƐq' Quartzite
pƐsh Black Pyritic Shale
pƐs Green Banded Chloritic Siltstones
Dip & Strike of Bedding
Axis of Anticline
Axis of Syncline
Fault
ERTS Photolineament
Areas of Detailed Investigations
DOMINANTLY ALLUVIUM
N.W. DOMAIN
CENTRAL DOMAIN
S.E. DEMPSTER DOMAIN
DUCK RIVER FAULT
JULIUS RIVER FAULT
DEMPSTER PLAINS
MERYANNA GRID
WENTS CREEK
JULIUS RIVER
JULIUS RIVER SOUTH
STEPHENS RIVULET
SUMAC RIVULET
Trowutta Arch
Nabageena
Sunny Hills
Rogerton
Trowutta
Greenacres
Roger River
Junction Plain
Spinks Rise
Croles Hill
Colemans Hill
Red Hat Hill
Lone Bush Hill
Forked Tree Hill
Dempster Lookout
Sumac Lookout
Kanunnah Bridge
Lake Chisholm
Lost Hill
Mt Frankland
Looneys Flat
Balfour
Mine workings
Swamp
ARTHUR RIVER
Duck River
Montagu River
Horton River
Lindsay River
Leigh River
Julius River
Rapid River
POILINNA RD
BRODIES RD
TROWUTTA ROAD
MAGUIRES
DOHERTYS RD
LANGLEYS ROAD
REIDS ROAD
SCOTTS ROAD
BRYDGES ROAD
REYNOLDS ROAD
GUN ROAD
MERYANNA ROAD
WEST ROGER ROAD
SUMAC ROAD
LEENSONS ROAD
TERRAGOMNA ROAD
ELDRIDGE ROAD
JAEGERS ROAD
Gravel Pits

3098

5 460 000 mN

5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE

350 000 mE

ANOMALIES INVESTIGATED

5 cm

CRA EXPLORATION PTY. LIMITED

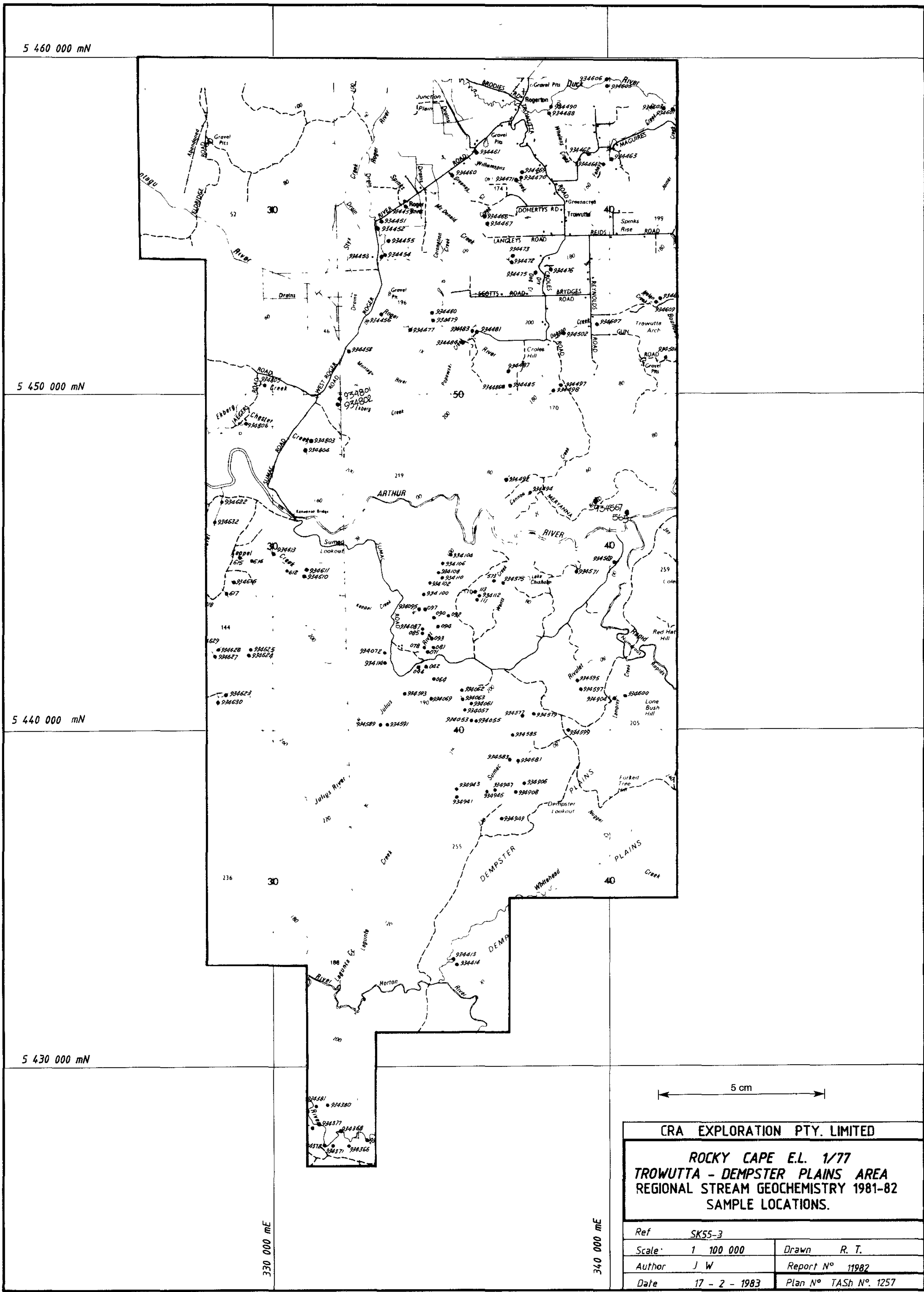
ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

GEOPHYSICAL ANOMALIES

Ref. SK55 - 3	
Scale 1 100 000	Drawn R T.
Author J W	Report N° 11982
Date 16 - 2 - 1983	Plan N° TASh 1254

5911163

3099



CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY 1981-82
SAMPLE LOCATIONS.

Ref	SK55-3		
Scale	1 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N°. 1257

3100

5 460 000 mN

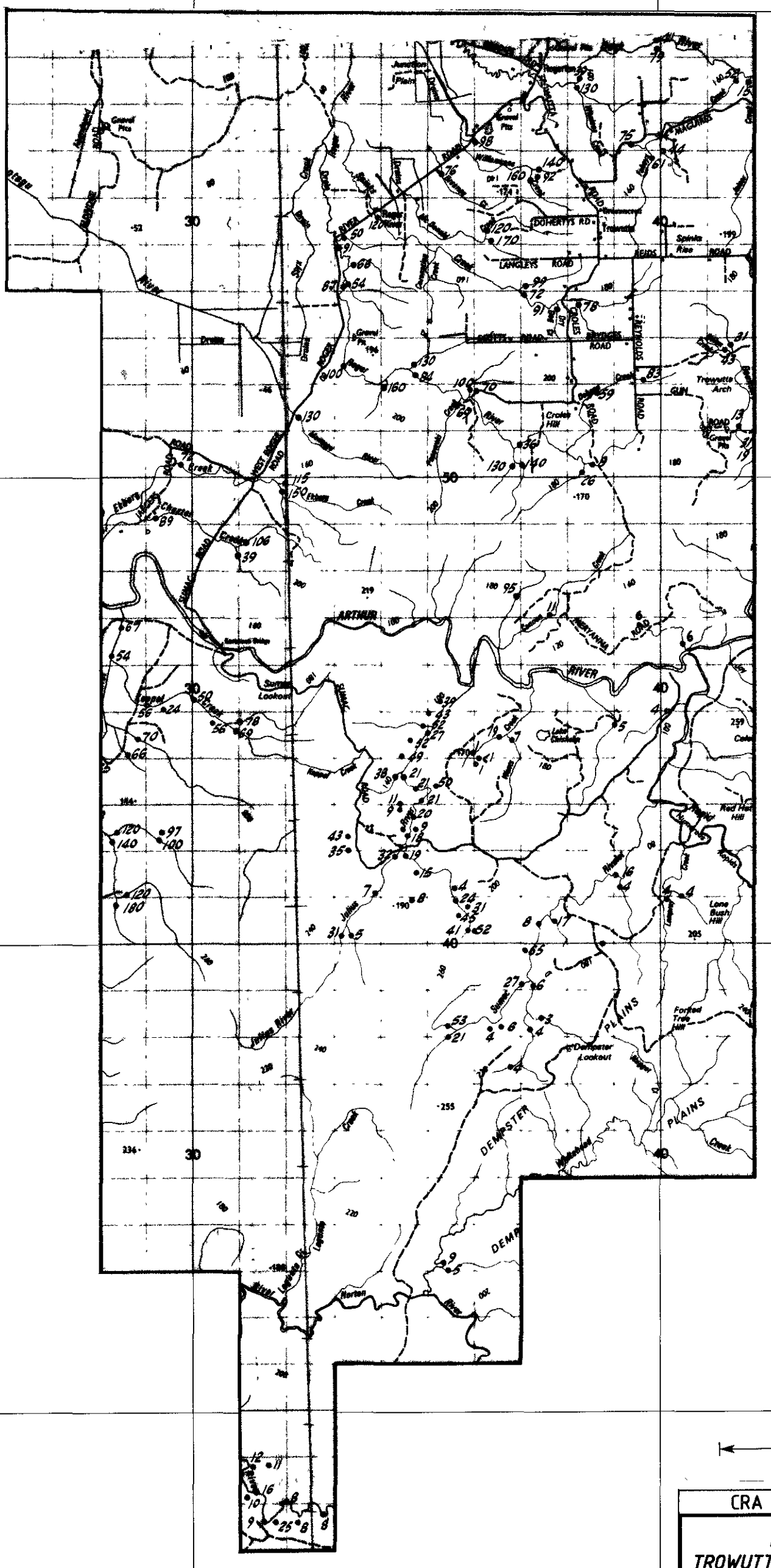
5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE



5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

REGIONAL STREAM GEOCHEMISTRY 1981-82, Cu.

Ref	SK55-3		
Scale	1 : 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N°.1260

59 1165

3101

5 460 000 mN

5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

REGIONAL STREAM GEOCHEMISTRY 1981-82.Pb.

Ref	SK55-3		
Scale	1 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N° 1258

5911166

3102

5 460 000 mN

5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
ZINC
REGIONAL STREAM GEOCHEMISTRY 1981-82.

Ref	SK55-3		
Scale	1 : 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N° 1259

3103

5 460 000 mN

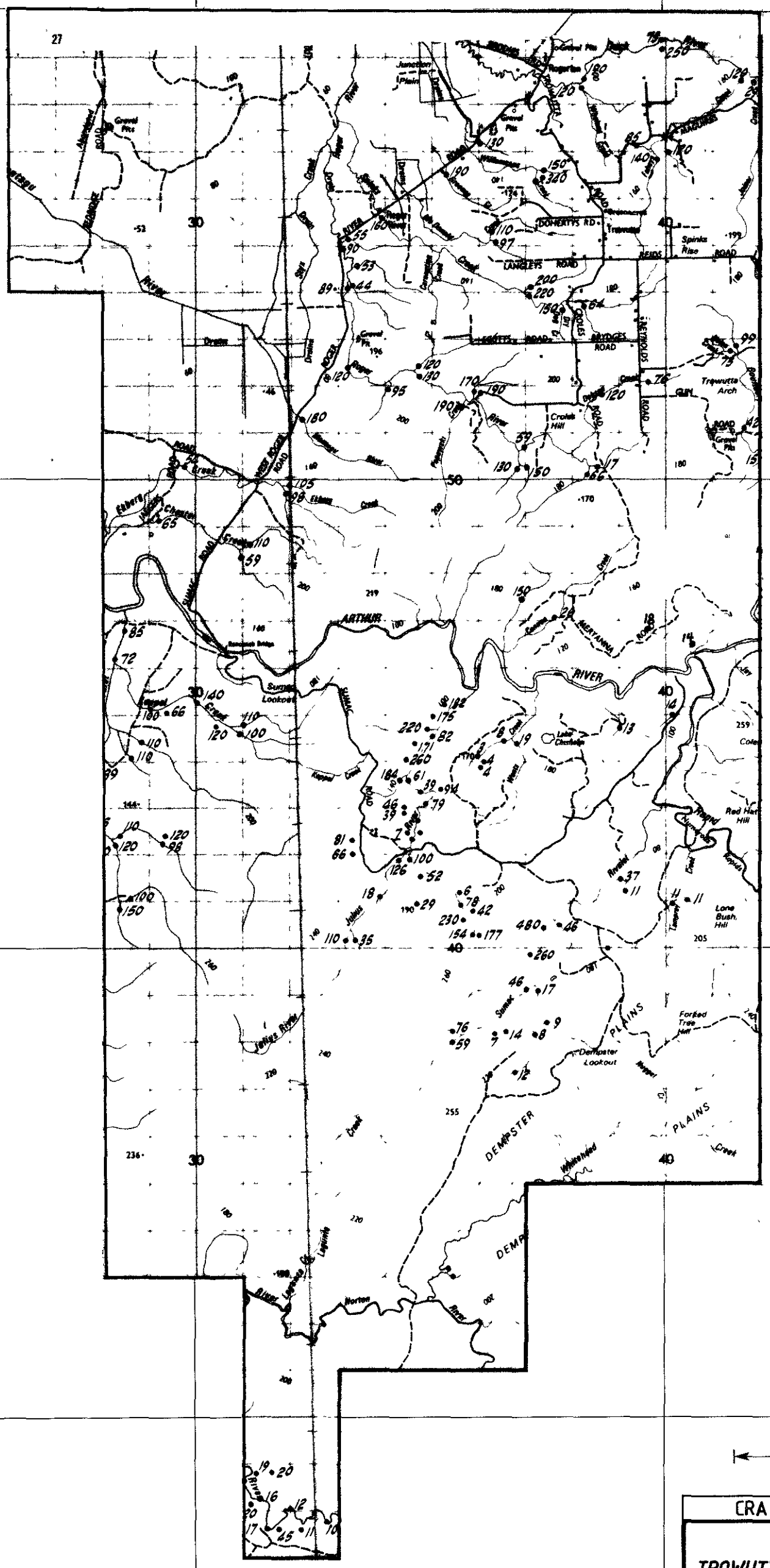
5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE



5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

REGIONAL STREAM GEOCHEMISTRY 1981-82.Ni.

Ref.	SK55-3		
Scale	1 : 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N°.1263

3916168

3104

5 460 000 mN

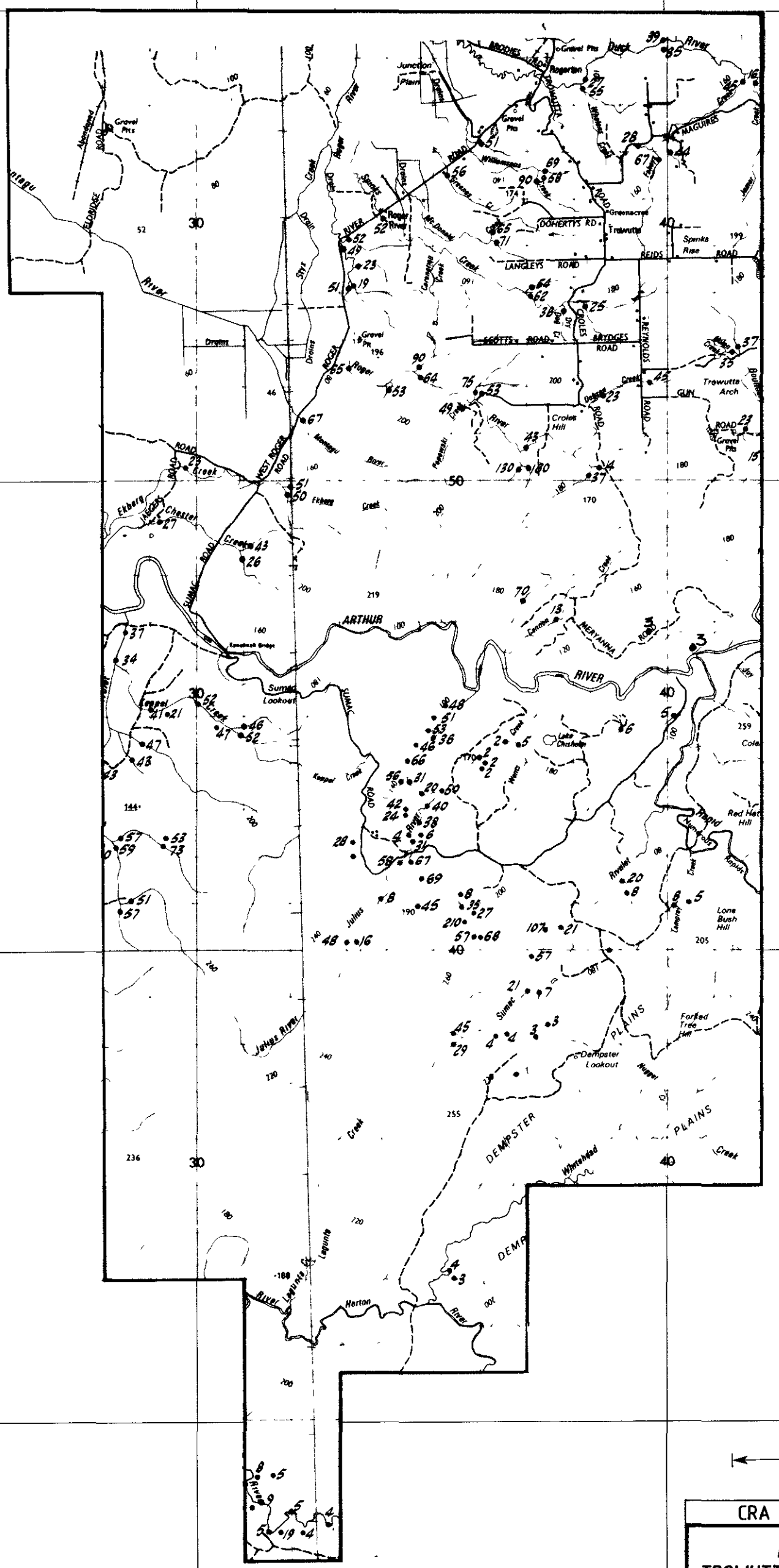
5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE



5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

REGIONAL STREAM GEOCHEMISTRY 1981-82.Co.

Ref	SK55-3		
Scale	1 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N° 1262

5911169

3105

5 460 000 mN

5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY 1981-82.As.

Ref.	SK55-3		
Scale	1 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N° 1264

50114 10

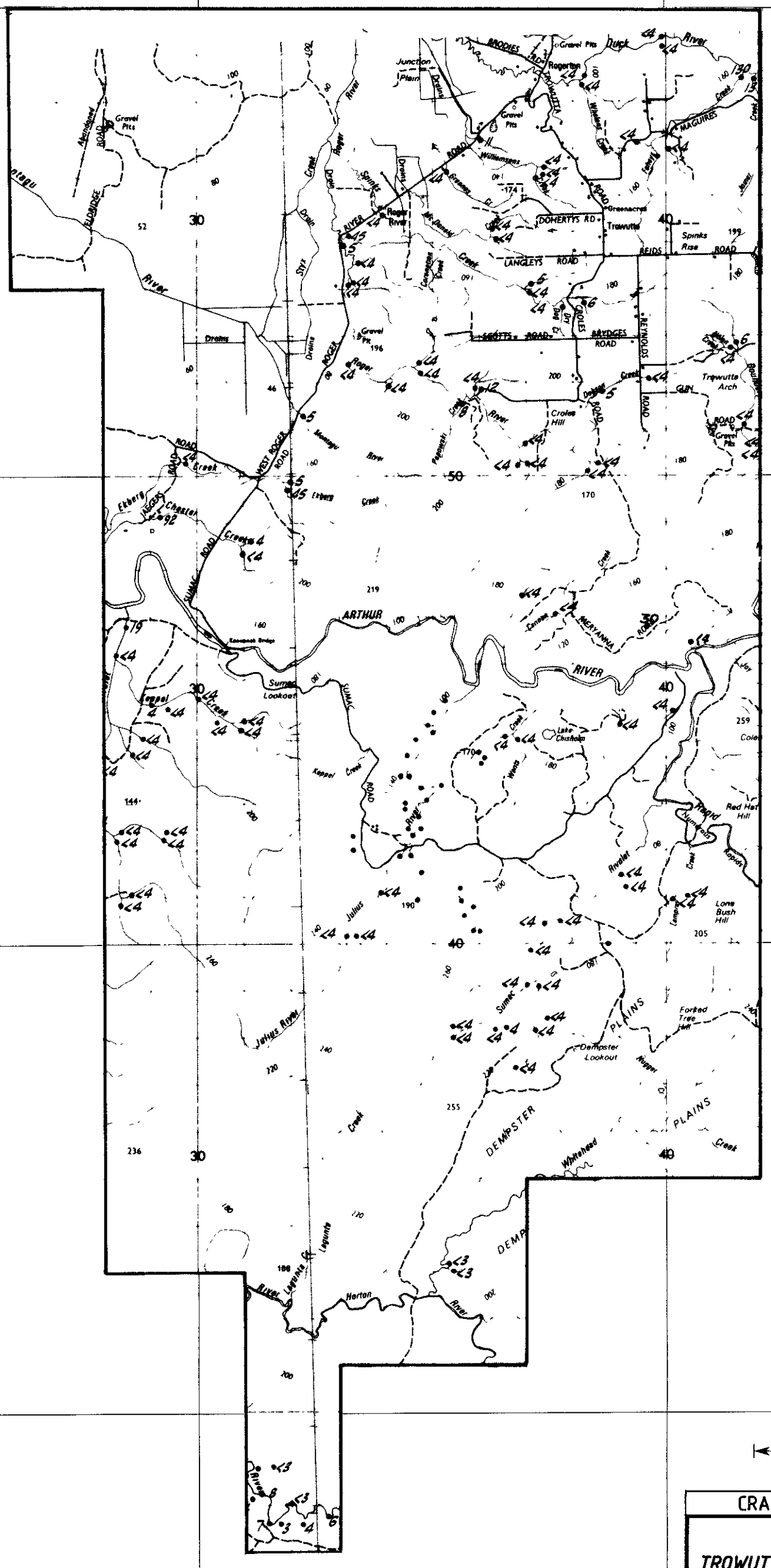
3106

5 460 000 mN

5 450 000 mN

5 440 000 mN

5 430 000 mN



330 000 mE

340 000 mE

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA

REGIONAL STREAM GEOCHEMISTRY 1981-82.Sn.

Ref	.SK55-3		
Scale	1 : 100 000	Drawn	R. T.
Author	J W	Report N°	11982
Date	17 - 2 - 1983	Plan N°	TASh N°.1261


CRA EXPLORATION PTY. LIMITED
ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY
SAMPLE LOCATIONS
Ref: SK55 - 3
Scale: 1 : 50 000
Drawn: R. T.
Author: J. W.
Report No. 11982
Date: 17 - 2 - 1983
Plan No. TASh 1271
** NOTE **
934998 STREAM SEDIMENT SAMPLE 1982 - '83 (with sample number)
STREAM SEDIMENT SAMPLE 1981 - '82 (see plan No. TASh 1257 for sample No.)
5 cm
POILINNA
Nabageena
Sunny Hills
Swamp
Rogerton
Trowutta
Greenacres
Roger River
Junction Plain
Gravel Pits
Spinks Rise
Trowutta Arch
Croles Hill
Kanunnah Bridge
Sumac Lookout
Lake Chisholm
Colemans Hill
Red Hat Hill
Lone Bush Hill
Forked Tree Hill
Dempster Lookout
Lost Hill
Looneys Flat
Balfour
Mine workings
Mt Frankland
ARTHUR RIVER
Duck River
Montagu River
Roger River
Julius River
Horton River
Lindsay River
Leigh River
Rapid River
Keppel Creek
Ekberg Creek
Chester Creek
Cannon Creek
Whitehead Creek
Laguna Creek
Nugget Cr
Trias Creek
DEMPSTER PLAINS
SUMAC PLAINS
BRODIES RD
TROWUTTA ROAD
MAGUIRES ROAD
DOHERTYS RD
LANGLEYS ROAD
REIDS ROAD
SCOTTS ROAD
BRYDGES ROAD
REYNOLDS ROAD
CROLES ROAD
GUN ROAD
WEST ROGER ROAD
SUMAC ROAD
MERYANNA ROAD
LEENSONS ROAD
TERRAGOMNA ROAD
ELDRIDGE ROAD
MALOMBTO RD
JAEGERS ROAD
1055163
1055162/164
1055161
1055160
1055167
1055168
1055169
1055170
1055171
1055172
1055400-402
1055271
1055403
1055158
1055159
1055270
1055011/012
1055009/010
1055007/008
1055004/005
1055002/003
934870
934877
934879
934933
934872
934875
934934
934995
934998
934846
934997
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934845
934864/65
934863
1055045
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1055038
1055039
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1055080
1055079
1055095
1055091/092
1055093/4
1055090
1055131
1055099
1055113
1055111
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1055114
1055115
1055084
1055083
1055098
1055102
1055097
1055096
1055103/104
1055089
1055088
1055071
1055073
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1055129
1055130
1055116
1055117
1055109
1055106/7
1055085
1055110
1055108
1055105

591172

3108

** NOTE **

6 STREAM SEDIMENT SAMPLE 1982 - '83 (with value in ppm)

STREAM SEDIMENT SAMPLE 1981 - '82 (see plan N°. TASh 1260 for value)

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY
1982 - '83 Cu

Ref: SK55 - 3	
Scale: 1 : 50 000	Drawn: R. T.
Author: J. W.	Report N°. 11982
Date: 17 - 2 - 1983	Plan N°. TASh 1272

5911173

3109

Swamp
60
Montagu
ELDRIDGE
ROAD
Abandoned
Gravel Pits
Roger River
Junction Plain
Drains
MALONEYS
Mill Creek
White Water Creek
Abandoned
Nabageena
Hills
Sunny
Duck River
Gravel Pits
BRODIES RD
Rogerton
TROWUTTA
Lairds
ROAD
Creek
Whelens Creek
MAGUIRES
Williamsons
Greenes Cr
Spinks Drain
Roger River
Mc Donald Creek
Greenacres
DOHERTYS RD
Trowutta
Spinks Rise
REIDS ROAD
LANGLEYS ROAD
Coronation Creek
Styx River
Fahey's
Joiner
Ryan Creek
Harry
Gravel Pits
TERRAGOMNA ROAD
LEENSONS
Langford Creek
Drains
Gravel Pit
196
ROGER
Dry Dog Cr.
CROLES
SCOTTS ROAD
BRYDGES ROAD
REYNOLDS
Molan Creek
Trowutta Arch
GUN
ROAD
Gravel Pits
Boundary
Gun Creek
Dobsag Creek
Croles Hill
Papowski Creek
Montagu River
WEST ROGER ROAD
Ekberg Creek
AEGERS ROAD
Chester
SUMAC ROAD
Creek
Rapids
Francis Creek
MILK
Starting Creek
Gravel Pit
Lawson
ARTHUR
Kanunnah Bridge
Sumac Lookout
Keppel Creek
Keppel
Rivulet
Stephens
Blackwater
Julius River
Julius
Cannon
MERYANNA ROAD
Lake Chisholm
Wents
Coleman's Hill
Red Hat Hill
Rapid
Numerous Rapids
Pithouse
Lamprey Creek
Lone Bush Hill
Joy Creek
Dempster Lookout
Nugget Cr
Forked Tree Hill
PLAINS
DEMPSTER
Whitehead
Lost Hill
Dodds
Sumac
Tries
Horton River
Lagunta Cr
Looneys Flat
Balfour
Mine workings
Lindsay
Leigh River
Frankland Creek
Mt Frankland
30
40
50
60
·130
·52
·36
·46
·144
·174
·199
·188
·170
·190
·255
·239
·238
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·272
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** NOTE **

● 5 STREAM SEDIMENT SAMPLE 1982 - '83 (with value in ppm)

○ STREAM SEDIMENT SAMPLE 1981 - '82 (see plan N°. TASh 1258 for value)

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY
1982 - '83 Pb

Ref: SK55 - 3	
Scale: 1 : 50 000	Drawn: R. T.
Author: J. W.	Report N°. 11982
Date: 17 - 2 - 1983	Plan N°. TASh 1273

5911174

3111

** NOTE **

● 8 STREAM SEDIMENT SAMPLE 1982 - '83 (with value in ppm)

○ STREAM SEDIMENT SAMPLE 1981 - '82 (see plan N°. TASh 1259 for value)

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY
1982 - '83 Zn

Ref: SK55 - 3	
Scale: 1 : 50 000	Drawn: R. T.
Author: J. W.	Report N°. 11982
Date: 17 - 2 - 1983	Plan N°. TASh 1274

5 cm

5911175

3110

** NOTE **

● 8 STREAM SEDIMENT SAMPLE 1982 - '83 (with value in ppm)

○ STREAM SEDIMENT SAMPLE 1981 - '82 (see plan N°. TASh 1264 for value)

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY
1982 - '83 As

Ref: SK55 - 3	
Scale: 1 : 50 000	Drawn: R. T.
Author: J. W.	Report N°. 11982
Date: 17 - 2 - 1983	Plan N°. TASh 1275

591176

3112

** NOTE **

● 8 STREAM SEDIMENT SAMPLE 1982 - '83 (with value in ppm)

○ STREAM SEDIMENT SAMPLE 1981 - '82

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
REGIONAL STREAM GEOCHEMISTRY
1982 - '83 Ba

Ref: SK55 - 3	
Scale: 1 : 50 000	Drawn: R. T.
Author: J. W.	Report N°. 11982
Date: 17 - 2 - 1983	Plan N°. TASh 1276

5911777

5 460 000 mN

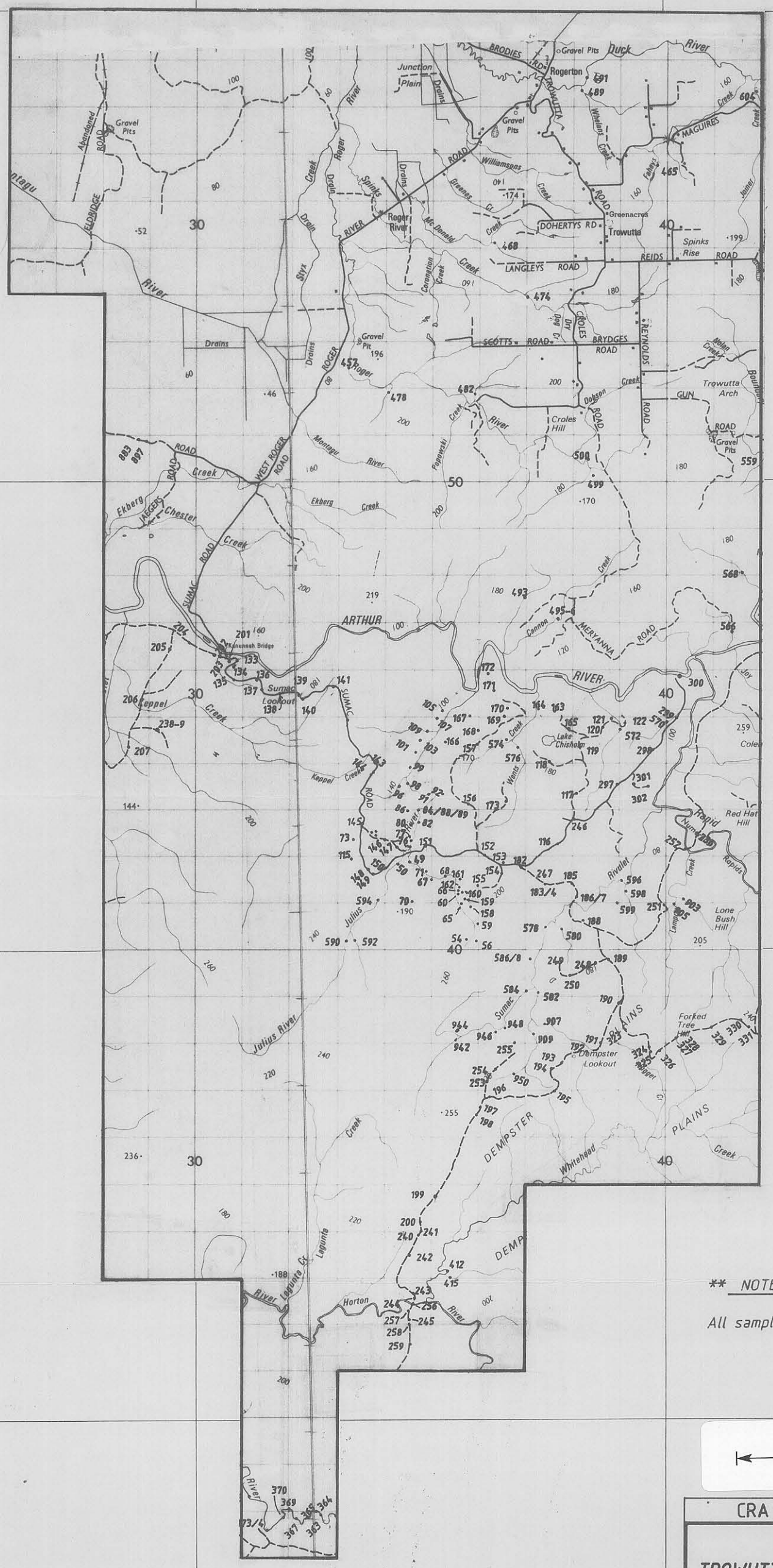
5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE



** NOTE **

All samples 934 series.

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
ROCK CHIP SAMPLING 1981-82
SAMPLE LOCATIONS

Ref: SK55-3	
Scale: 1 : 100 000	Drawn. R. T.
Author: J. W	Report N°. 11982
Date 17 - 2 - 1983	Plan N°. TASh N°.1265

5911178

3114

5 460 000 mN

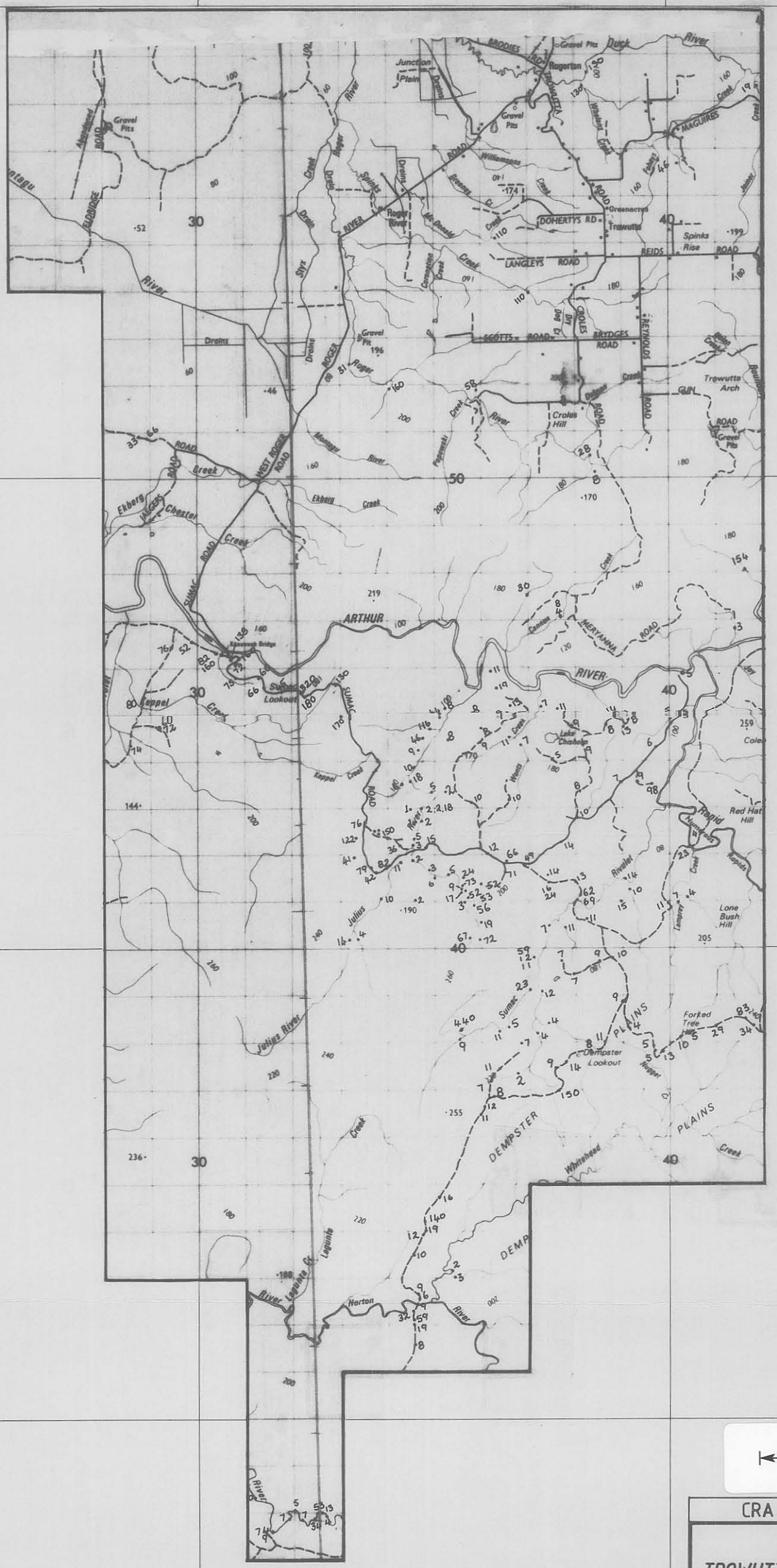
5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE



5 cm

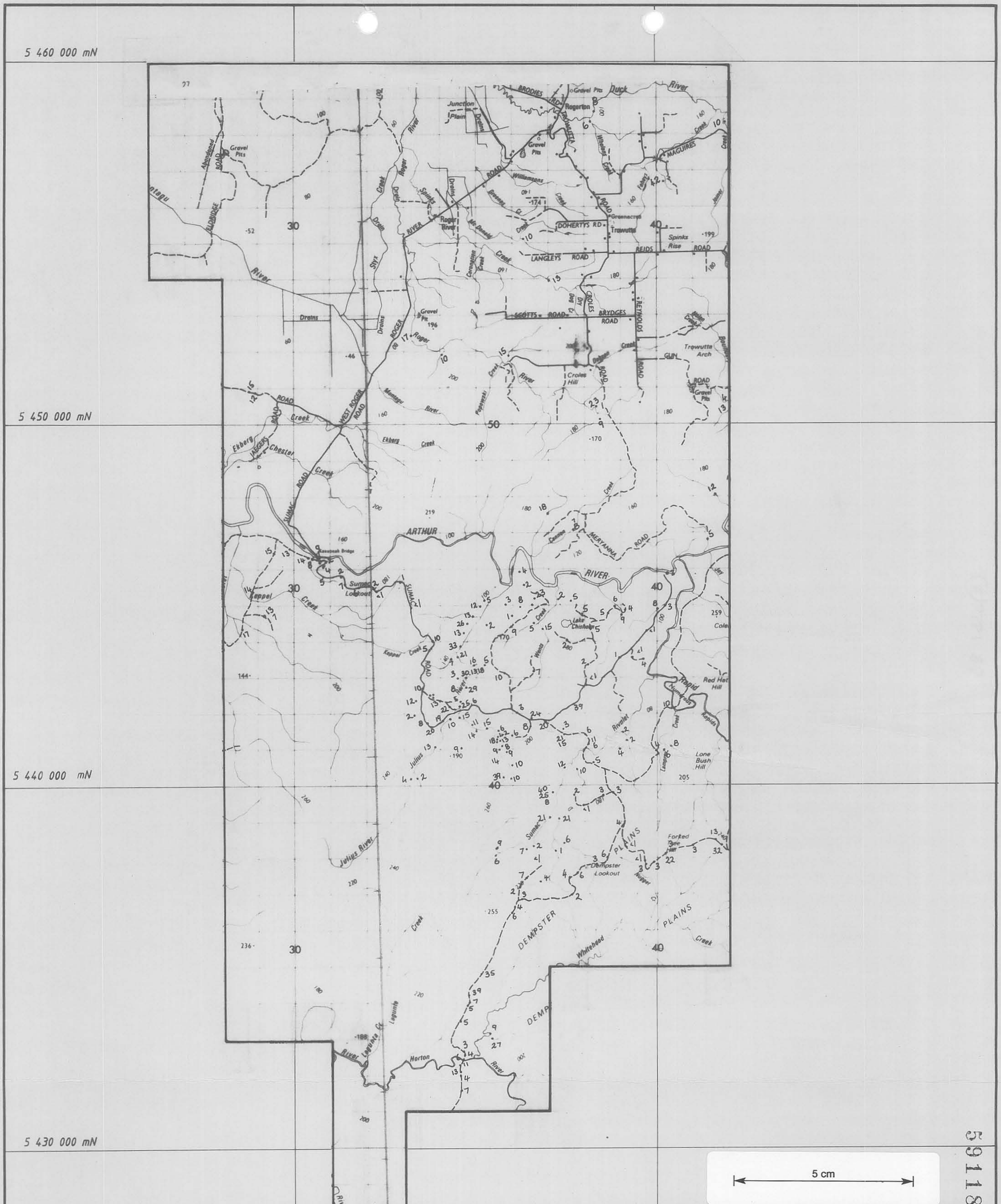
CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
ROCK CHIP SAMPLING 1981-82.
COPPER

Ref:	SK55-3		
Scale:	1 : 100 000	Drawn.	R. T.
Author:	J. W	Report N°.	11982
Date:	17 - 2 - 1983	Plan N°.	TASh N°.1266

63/179

3115



5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
ROCK CHIP SAMPLING 1981-82.
LEAD

Ref:	SK55-3		
Scale:	1 : 100 000	Drawn.	R. T.
Author:	J. W	Report N°. 11982	
Date	17 - 2 - 1983	Plan N°.	TASh N°.1267

591180

3118

5 460 000 mN

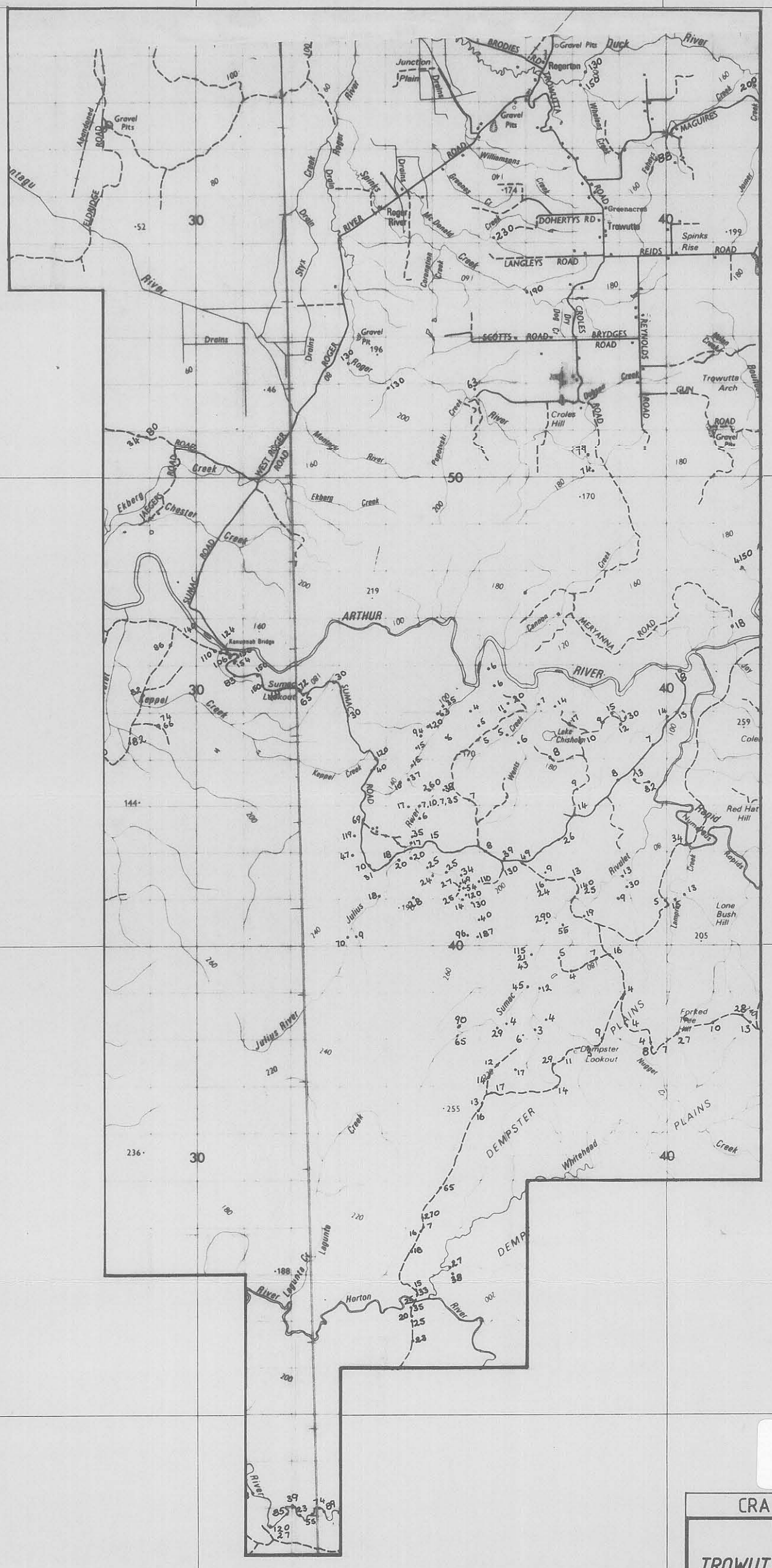
5 450 000 mN

5 440 000 mN

5 430 000 mN

330 000 mE

340 000 mE



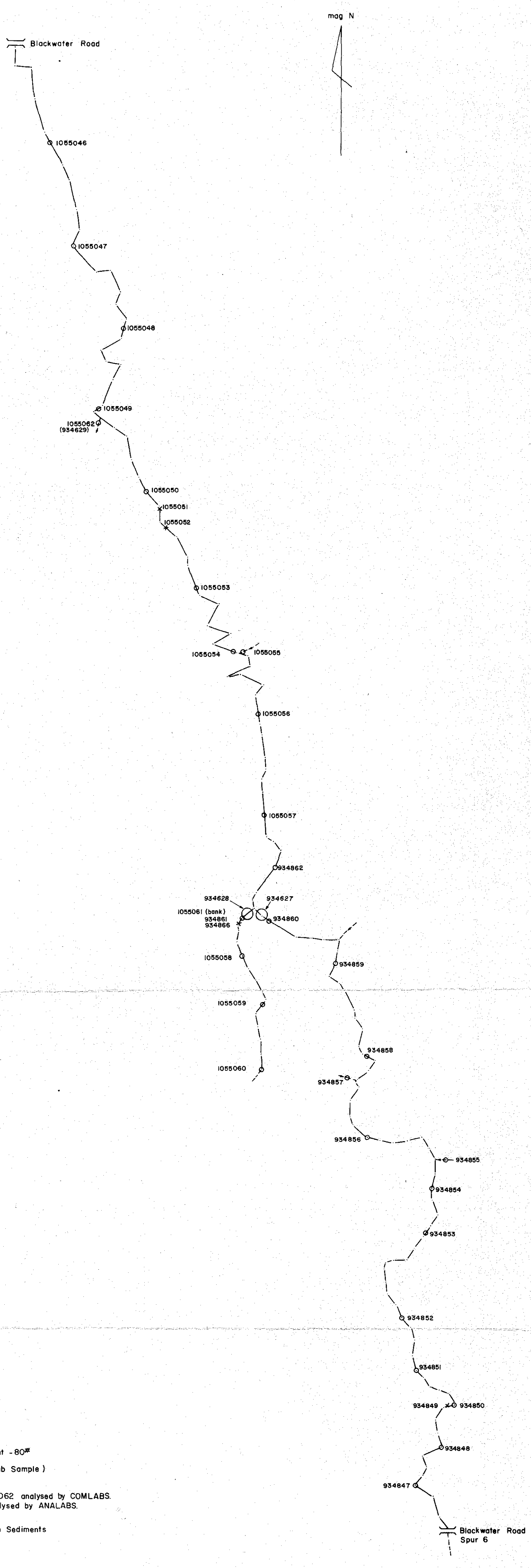
CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L. 1/77
TROWUTTA - DEMPSTER PLAINS AREA
ROCK CHIP SAMPLING 1981-82.
ZINC

Ref:	SK55-3		
Scale:	1 : 100 000	Drawn.	R. T.
Author:	J. W	Report N°.	11982
Date	17 - 2 - 1983	Plan N°.	TASh N°. 1268

23/11/81

3117



LEGEND

- o Stream Sediment - 80#
- × Rock Chip (grab Sample)

NOTE: 1055046 - 1055062 analysed by COMLABS.
934 series analysed by ANALABS.

◯ 1981-82 Stream Sediments

50 0 100 Metres
SCALE: 1:5000

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77

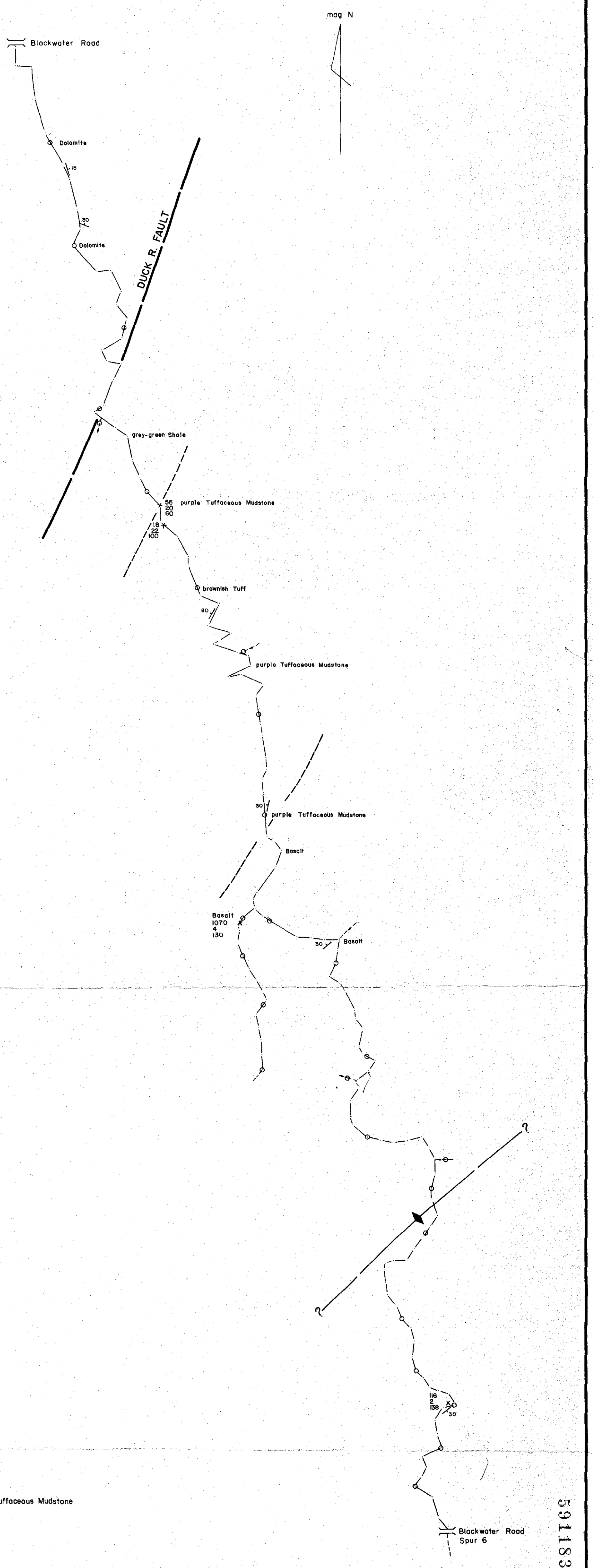
STEPHENS RIVULET

SAMPLE LOCATIONS

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TASh1251

591182

3118



LEGEND

- Basalt
- Cambrian — Purple + Brown Tuffaceous Mudstone
- Grey green Shale
- Dolomite
- Fault
- 20 — Dip and Strike of Bedding
- Axis of Anticline (Inferred)
- x 116 Cu / 2 Pb / 138 Zn — Rock Chip Geochemistry

50 0 100 Metres
SCALE: 1:5000

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77

STEPHENS RIVULET

GEOLOGY AND ROCK CHIP PLAN

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1250

5911183

3119

mag N

Blackwater Road

55
20
145

55
22
150

60
24
165

65
24
165

30
16
95

65
20
180

75
28
185

80
26
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55
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135

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210

95
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210

123
8
250

180
440
1000

140
110
460

80
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230

118
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270

91
7
260

100
26
260

129
6
300

80
24
220

65
22
160

133
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270

151
7
173

127
6
280

161
8
320

130
6
260

121
6
270

123
5
260

138
4
230

138
4
205

141
4
178

146
3
158

Blackwater Road
Spur 6

LEGEND

Cu
Pb
Zn

High Pb Values analysed by COMLABS.

Cu
Pb
Zn

1981 - 82 Stream Sediments

50 0 100 Metres

SCALE: 1:5000

5 cm

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77

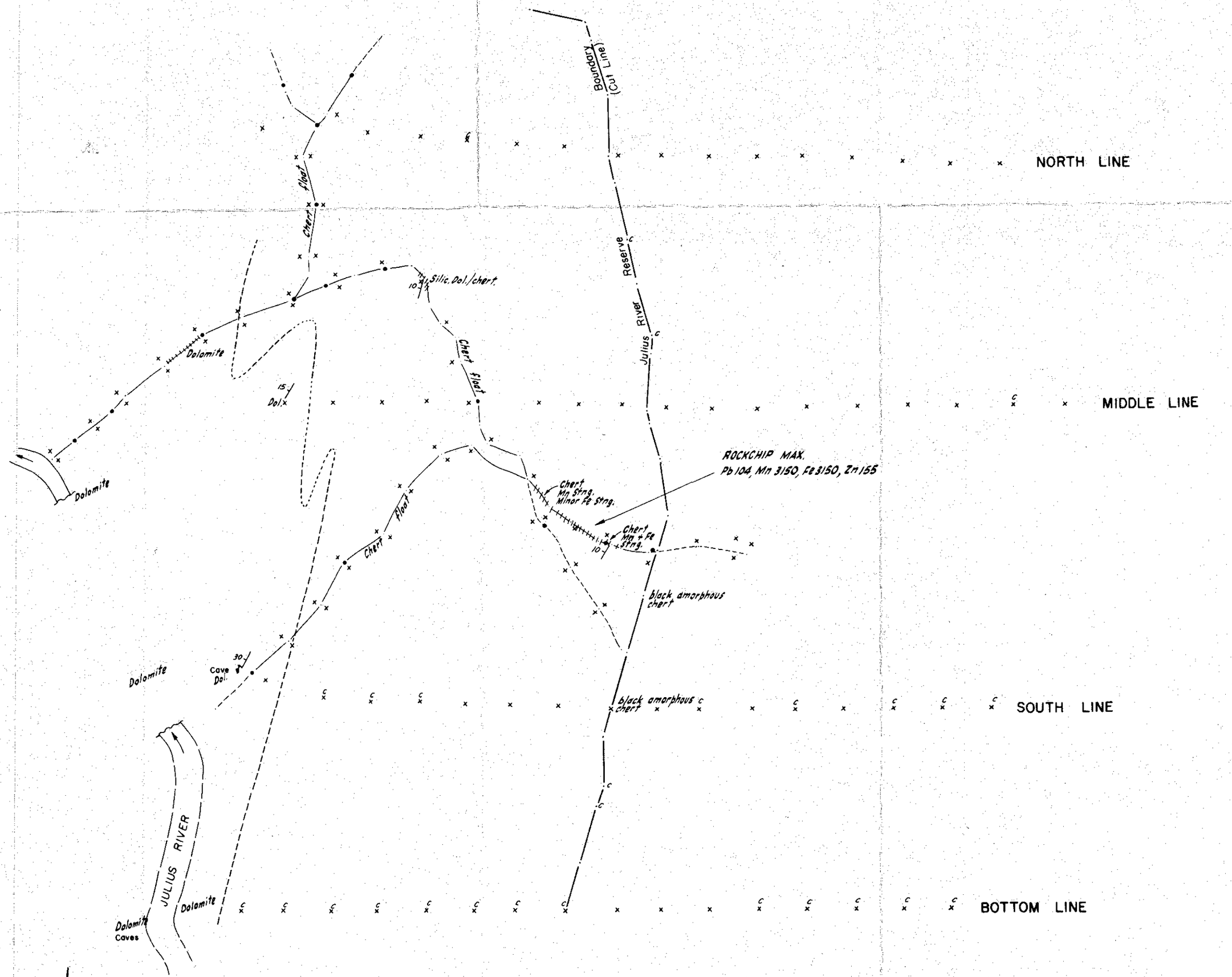
STEPHENS RIVULET

STREAM GEOCHEMISTRY

Geologist : J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1252

911184

3120



LEGEND

× Soil Sample Location

Stream Sediment Sample Location

Creek

5911185

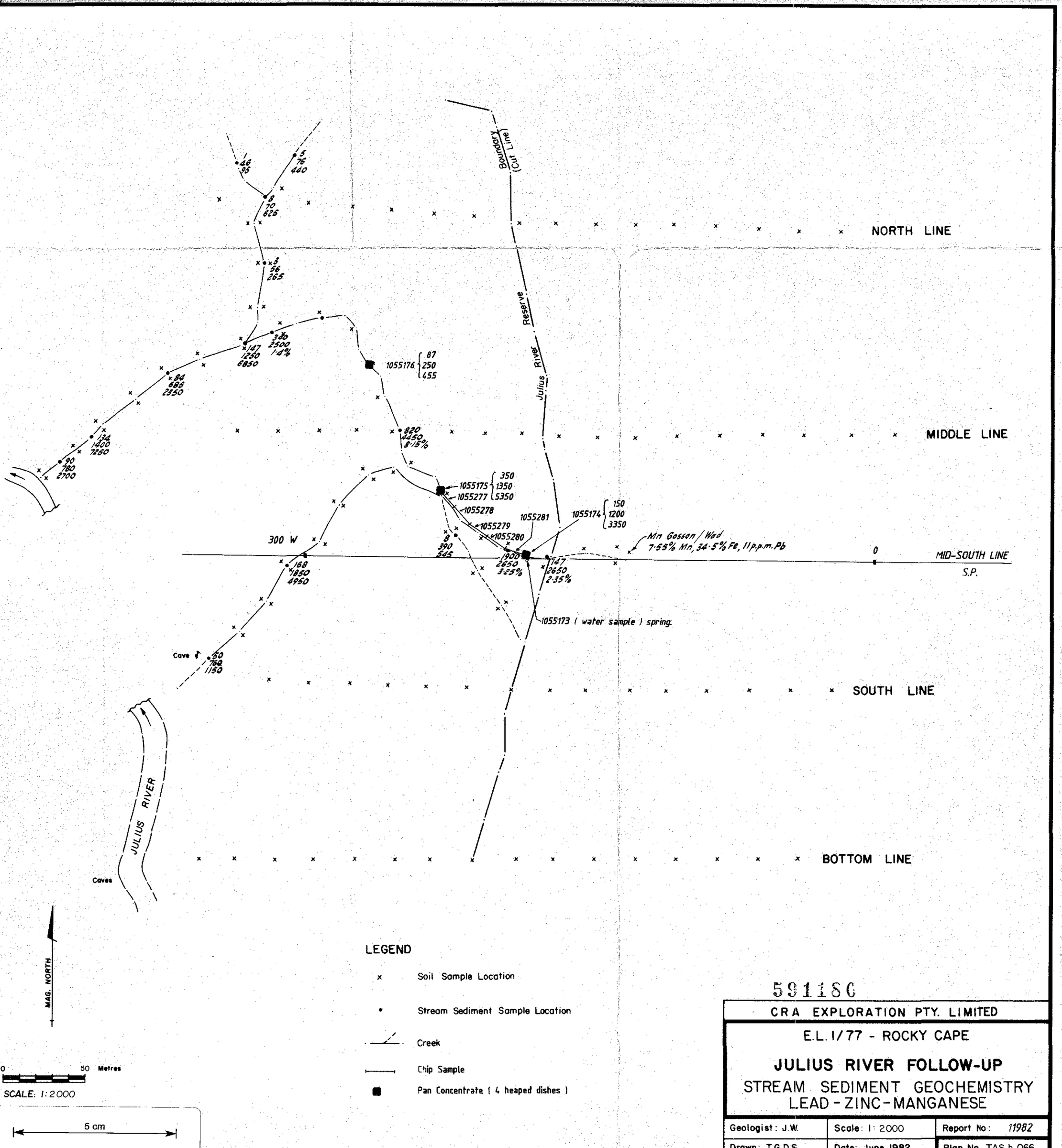
CRA EXPLORATION PTY. LIMITED

E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP GEOLOGY PLAN

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TAS h 065

3121



591186

CRA EXPLORATION PTY. LIMITED

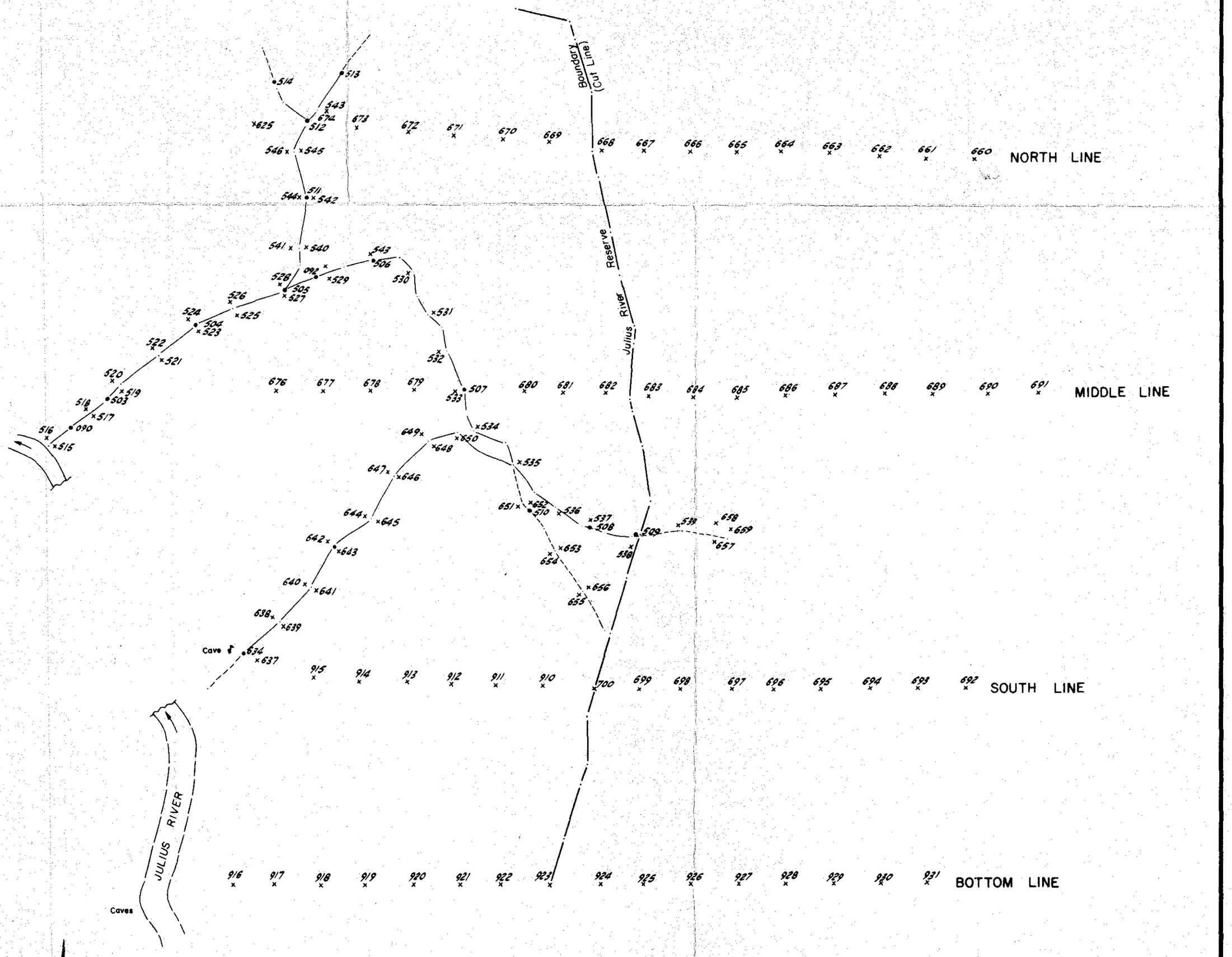
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

STREAM SEDIMENT GEOCHEMISTRY
LEAD - ZINC - MANGANESE

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No TAS h 066

3122



591187

CRA EXPLORATION PTY. LIMITED

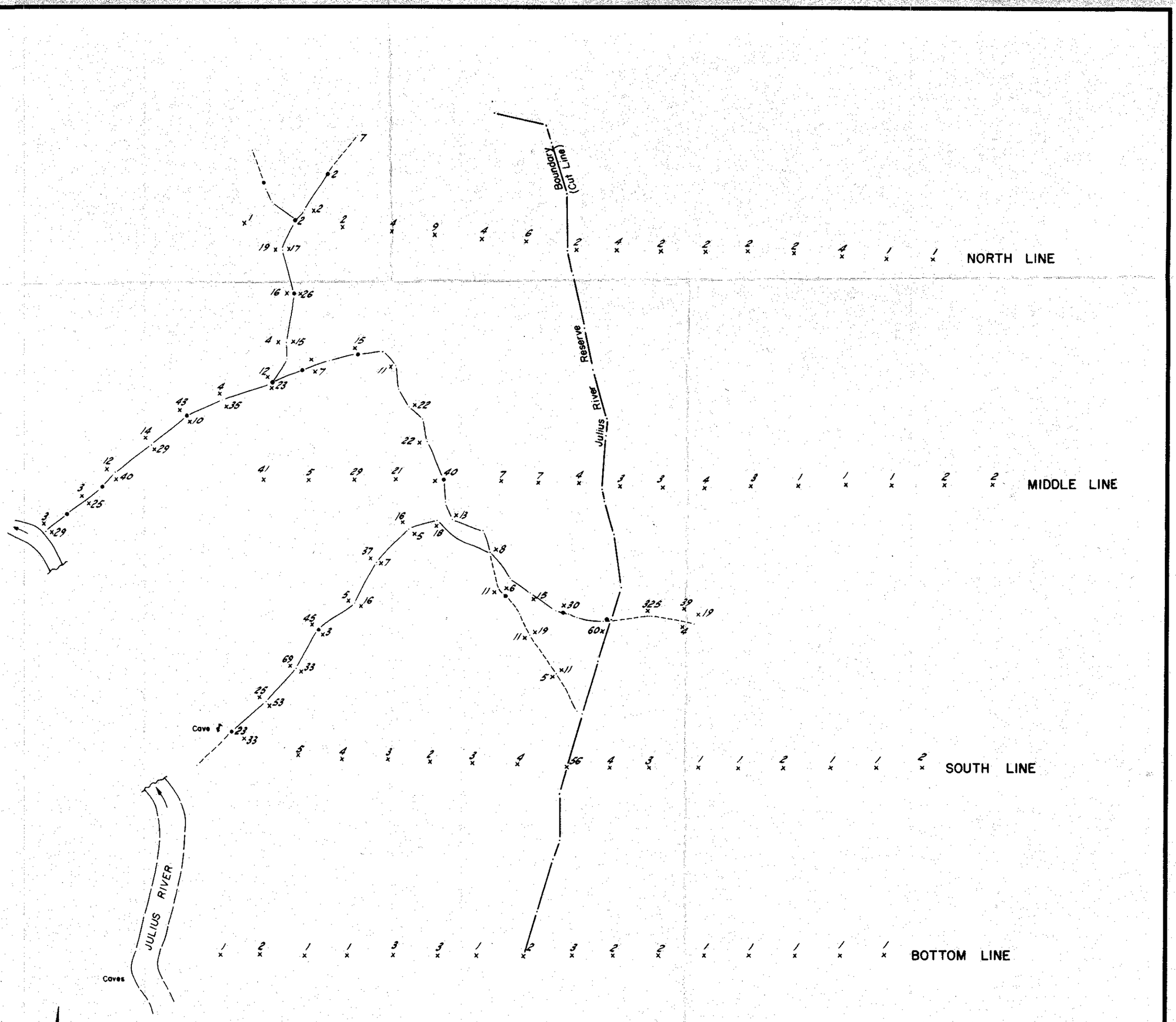
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP SAMPLE LOCATIONS

(NUMBERS PREFIXED 934)

Geologist: J.W.	Scale 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TAS h 067

3123



591188

CRA EXPLORATION PTY. LIMITED

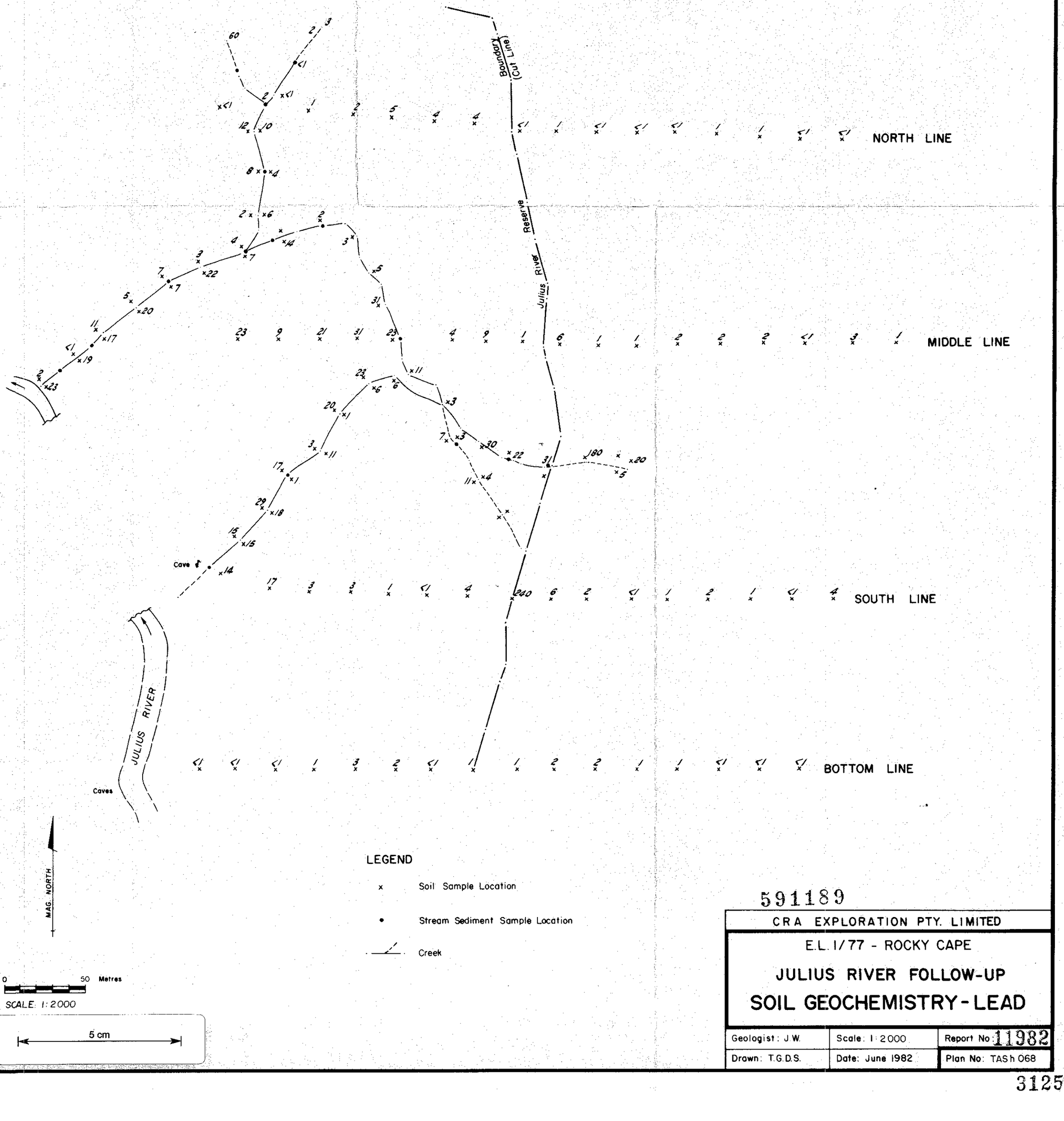
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - COPPER

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TAS h 070

3124



591189

CRA EXPLORATION PTY. LIMITED

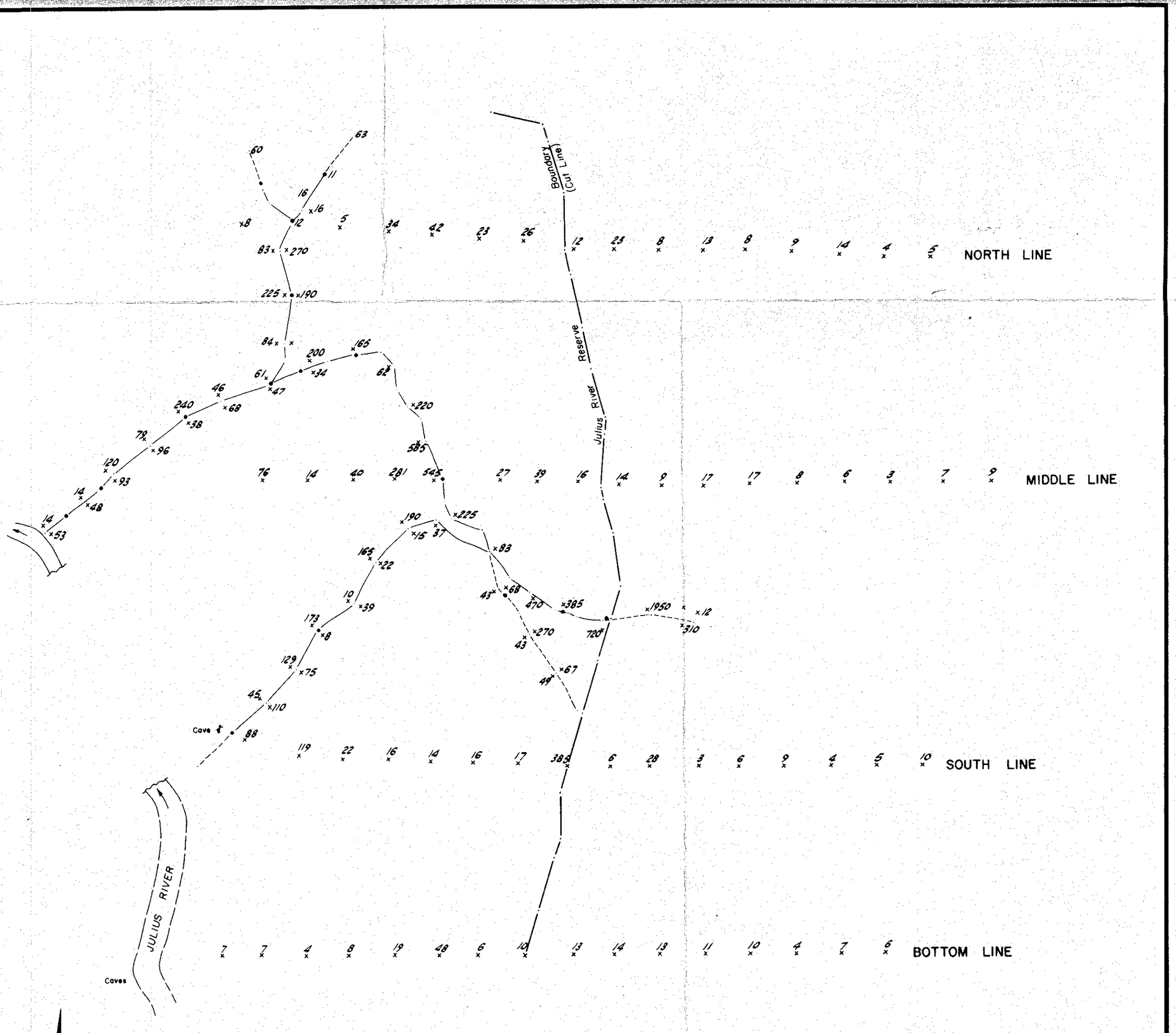
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - LEAD

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TASh 068

3125



591190

CRA EXPLORATION PTY. LIMITED

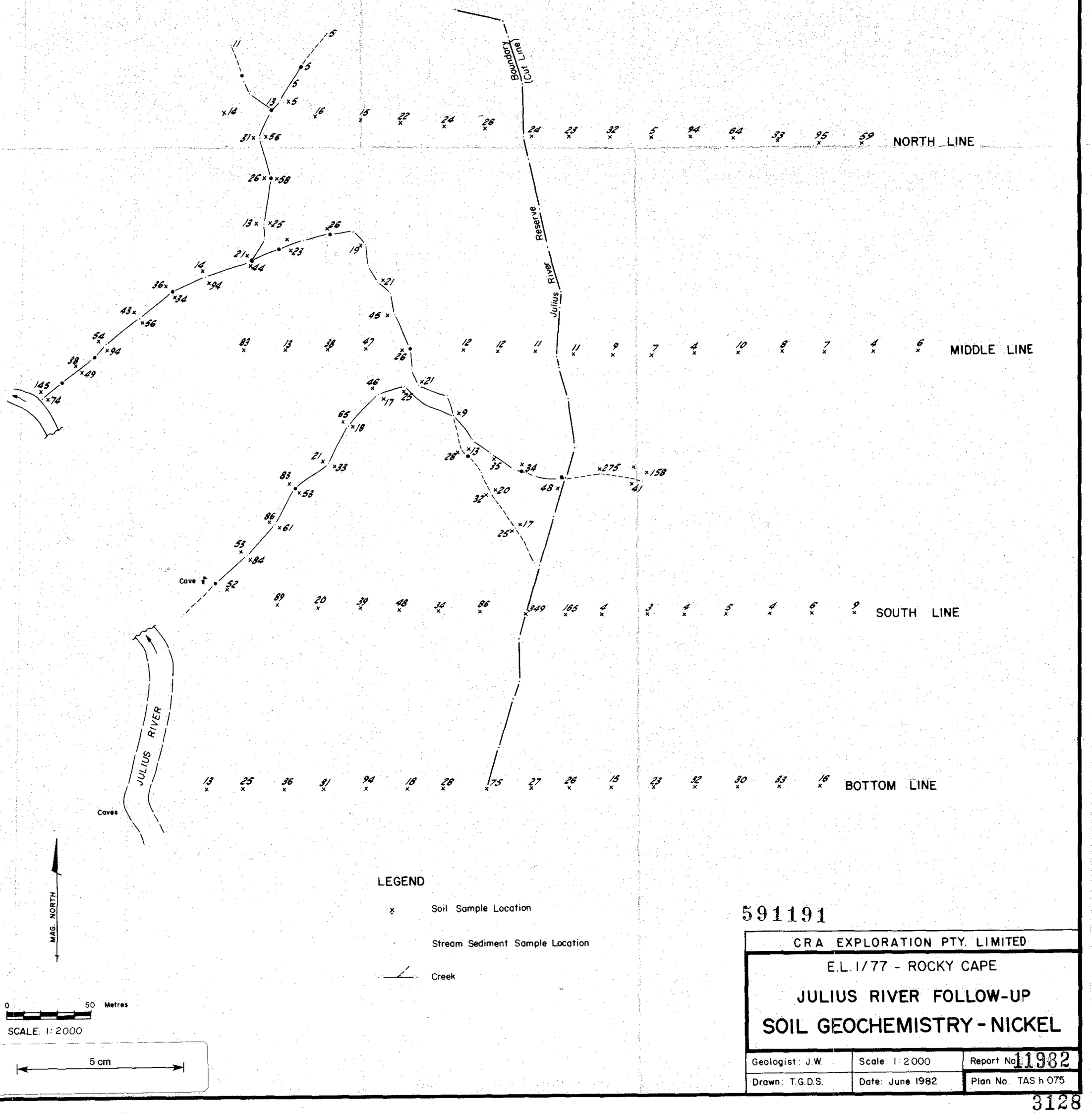
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - ZINC

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TASh 069

3126



591191

CRA EXPLORATION PTY. LIMITED

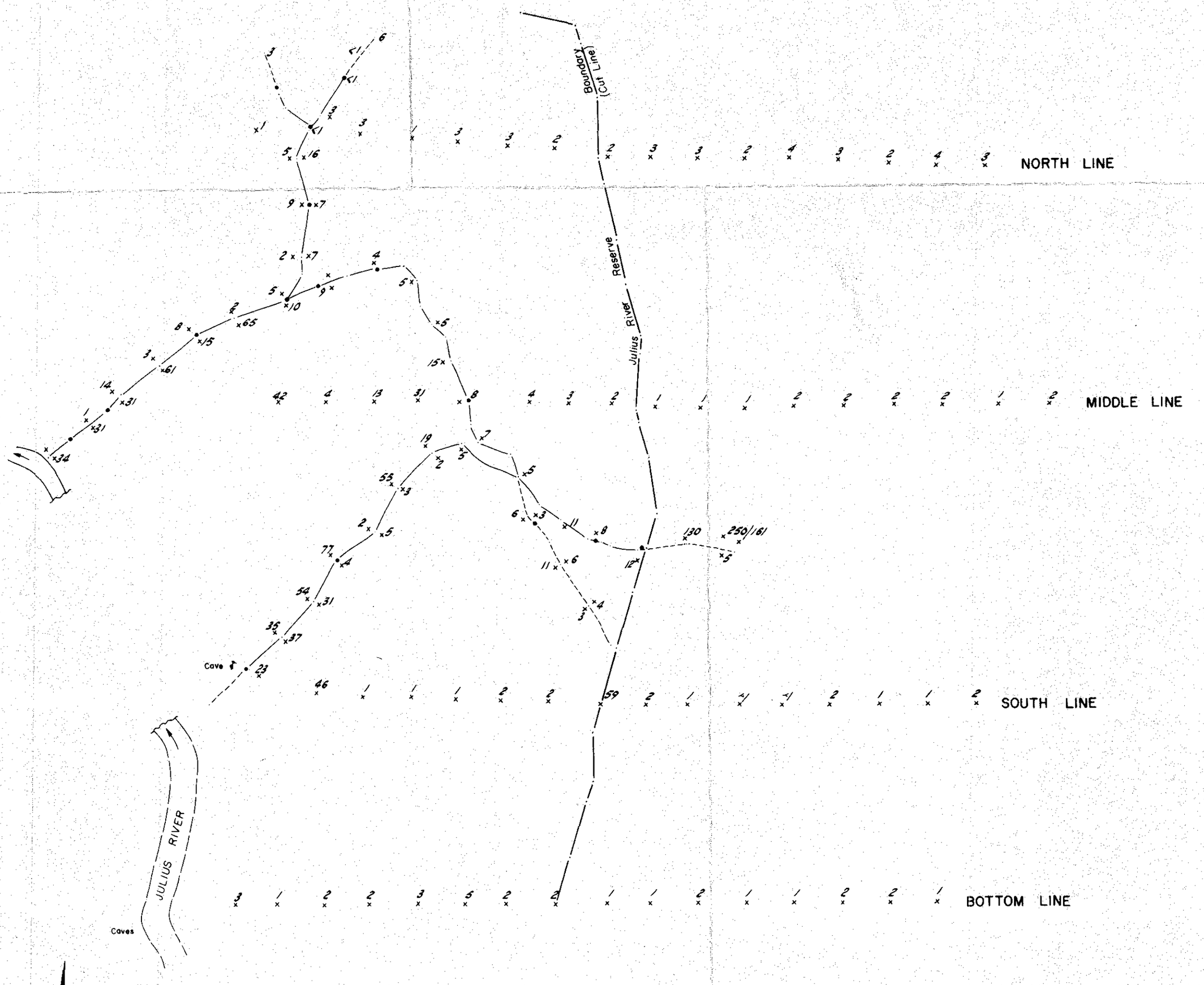
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - NICKEL

Geologist: J.W.	Scale 1:2000	Report No 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No. TAS h 075

3128



LEGEND

× Soil Sample Location

• Stream Sediment Sample Location

Creek

0 50 Metres

SCALE. 1:2000

5 cm

591192

CRA EXPLORATION PTY. LIMITED

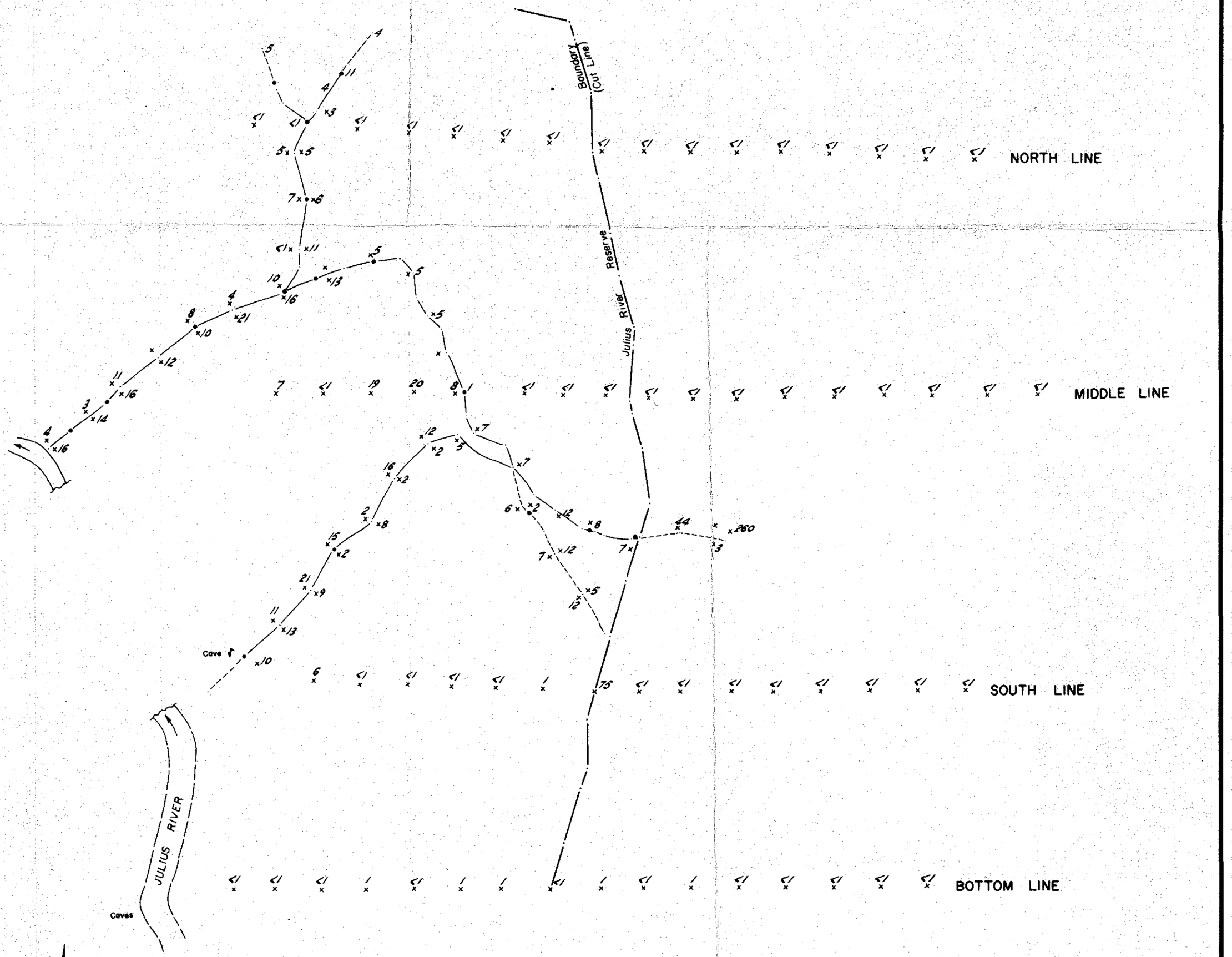
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - COBALT

Geologist: J.W	Scale 1:2000	Report No 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No. TASh 074

3127



591193

CRA EXPLORATION PTY. LIMITED

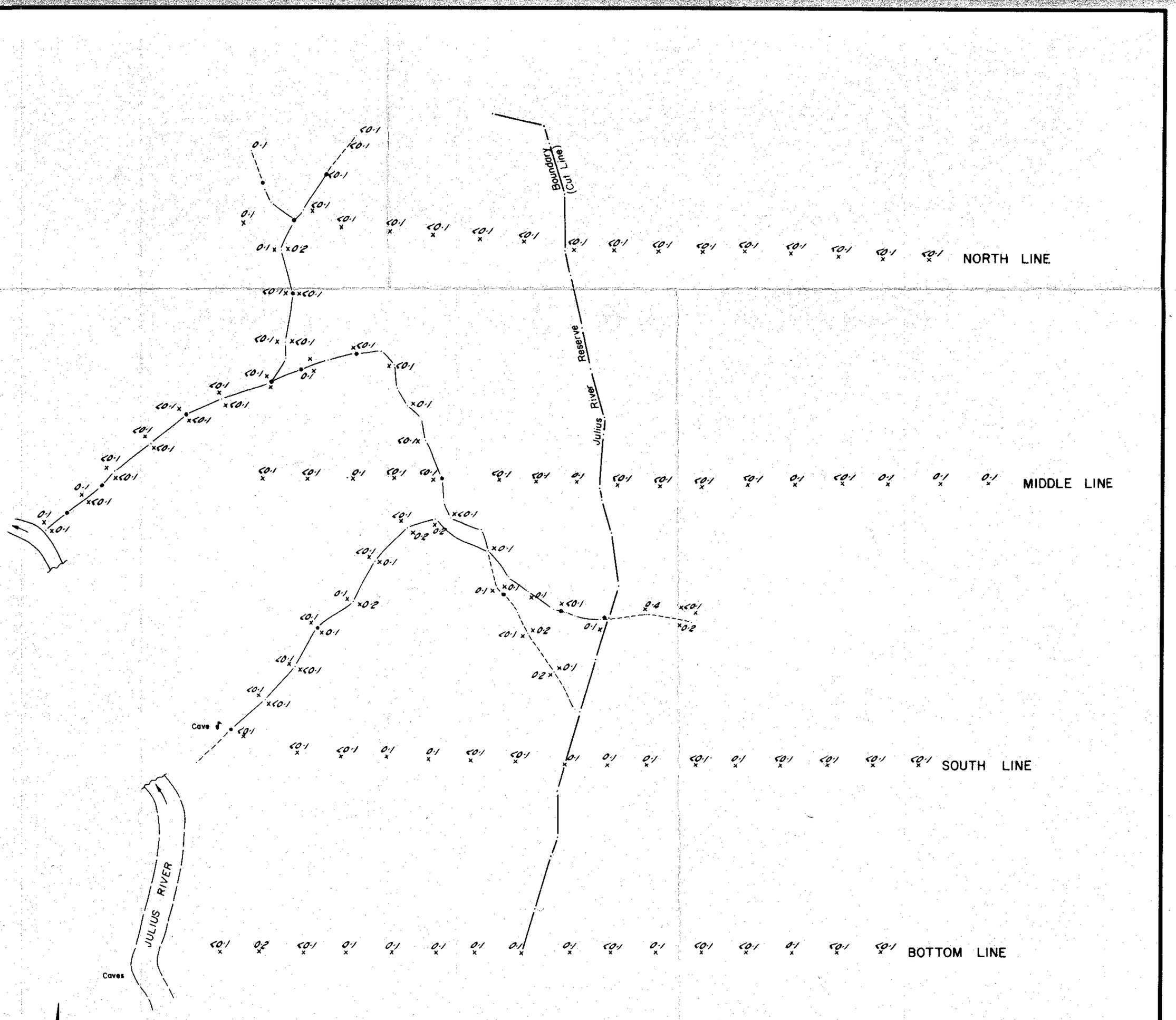
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - ARSENIC

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TAS h 076

3132



591194

CRA EXPLORATION PTY. LIMITED

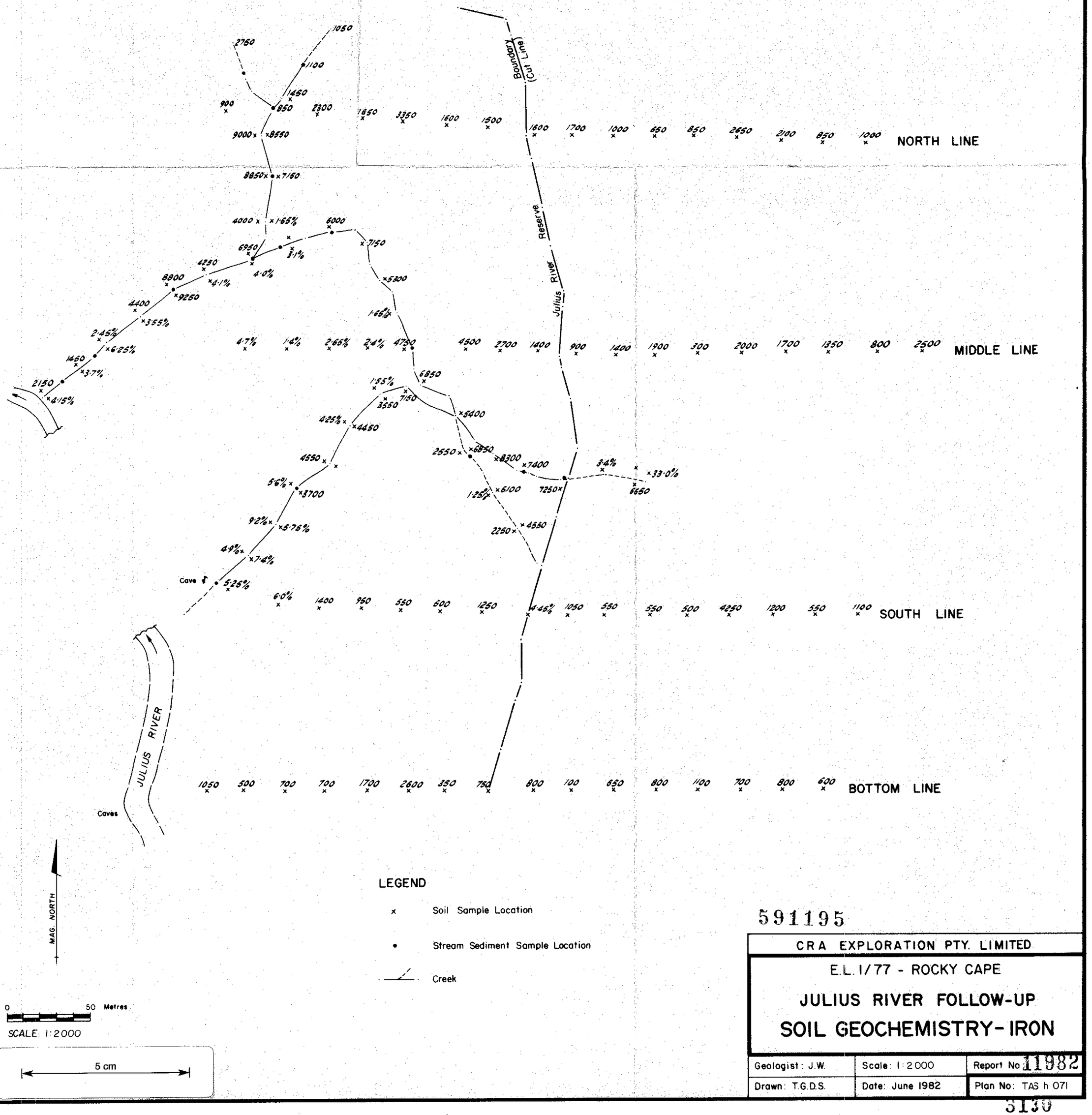
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - SILVER

Geologist: J.W.	Scale: 1:2000	Report No. 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No. TAS h 073

3129



591195

CRA EXPLORATION PTY. LIMITED

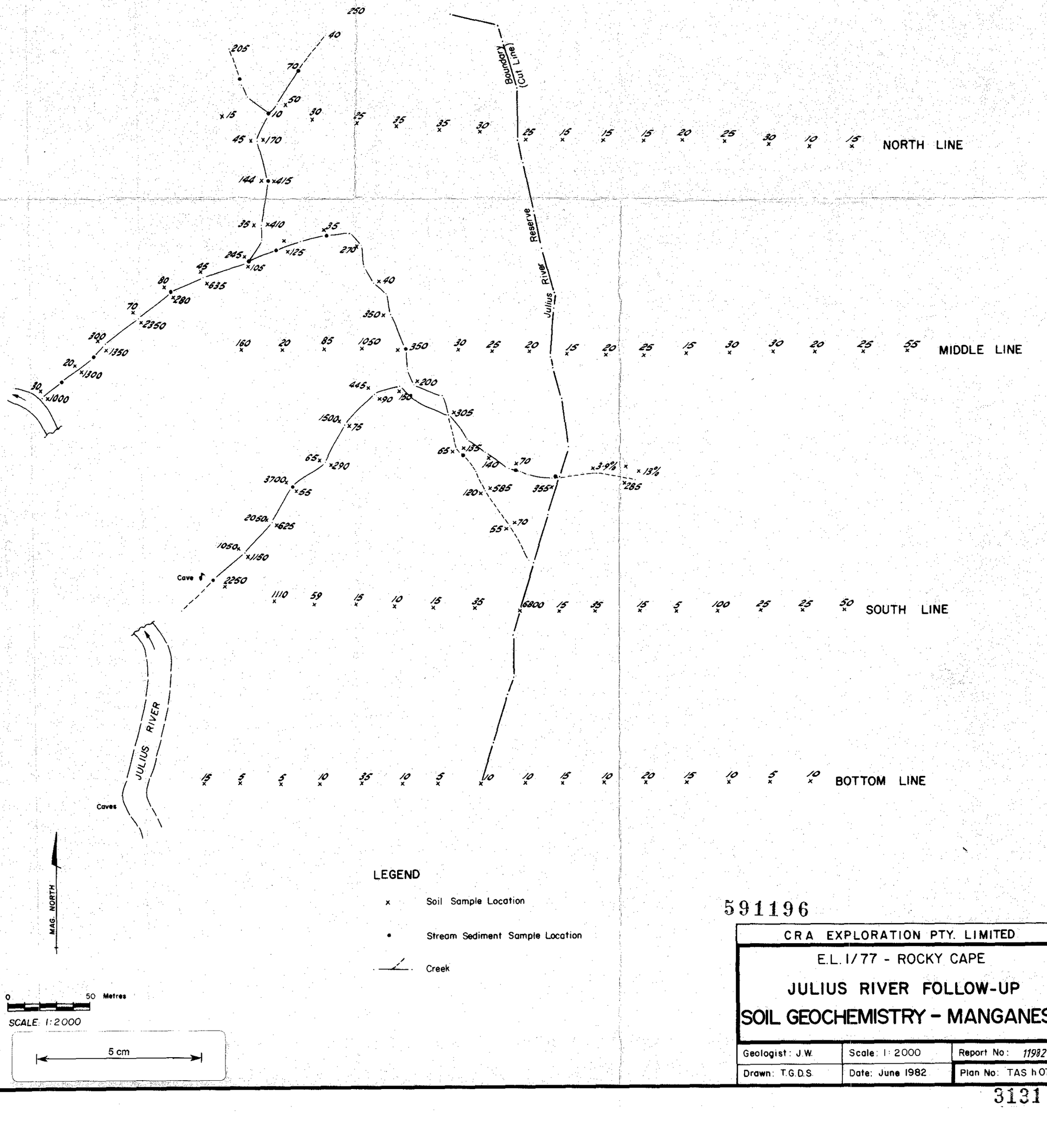
E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP

SOIL GEOCHEMISTRY - IRON

Geologist: J.W.	Scale: 1:2000	Report No 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TAS h 071

3130



591196

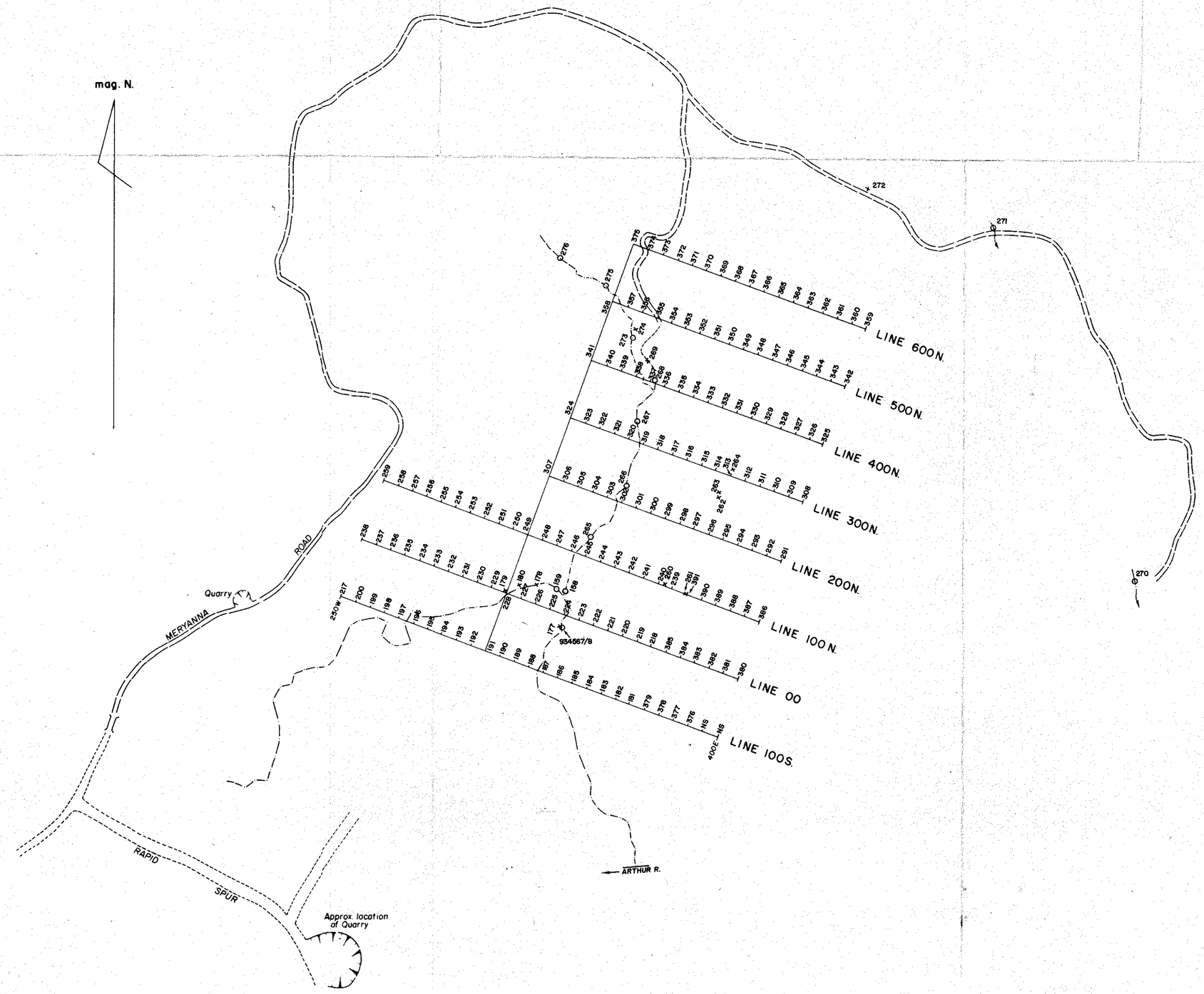
CRA EXPLORATION PTY. LIMITED

E.L. 1/77 - ROCKY CAPE

JULIUS RIVER FOLLOW-UP
SOIL GEOCHEMISTRY - MANGANESE

Geologist: J.W.	Scale: 1:2000	Report No: 11982
Drawn: T.G.D.S.	Date: June 1982	Plan No: TAS h072

3131



LEGEND

O 275	Stream Sediment -80#
x 263	Rock Chip (grab Sample)
- 291	Soil Sample

All numbers 1055 series.

KEY:

Surveyed Track

Unsurveyed Track

Stream

5 cm

50 0 100 Metres

SCALE. 1:5000

591107

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77

MERYANNA GRID

SAMPLE LOCATIONS

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1240

LEGEND

T?g	White Sub rounded quartz gravels	
Lim	Limonite	- Dominantly cellular goethite often silicified with occasional boxwork development - derived from residual basalt ?
P€c	Chert	- f.g. siliceous chert often cellular.
P€s	Black Shale	- Well cleaved black shale - minor limonitic cappings, after pyrite.
P€q	Quartzite	- White, generally massive quartzite - gives rise to white sandy soils In part may be highly siliceous chert.

Inferred geological boundary.

Anticline

X 49 Cu, 20 Pb, 300 Zn, 150 As — Rock Chip Geochemistry

Surveyed Track

Unsurveyed Track

Stream

591198

5 cm

50 0 100 Metres

SCALE: 1:5000

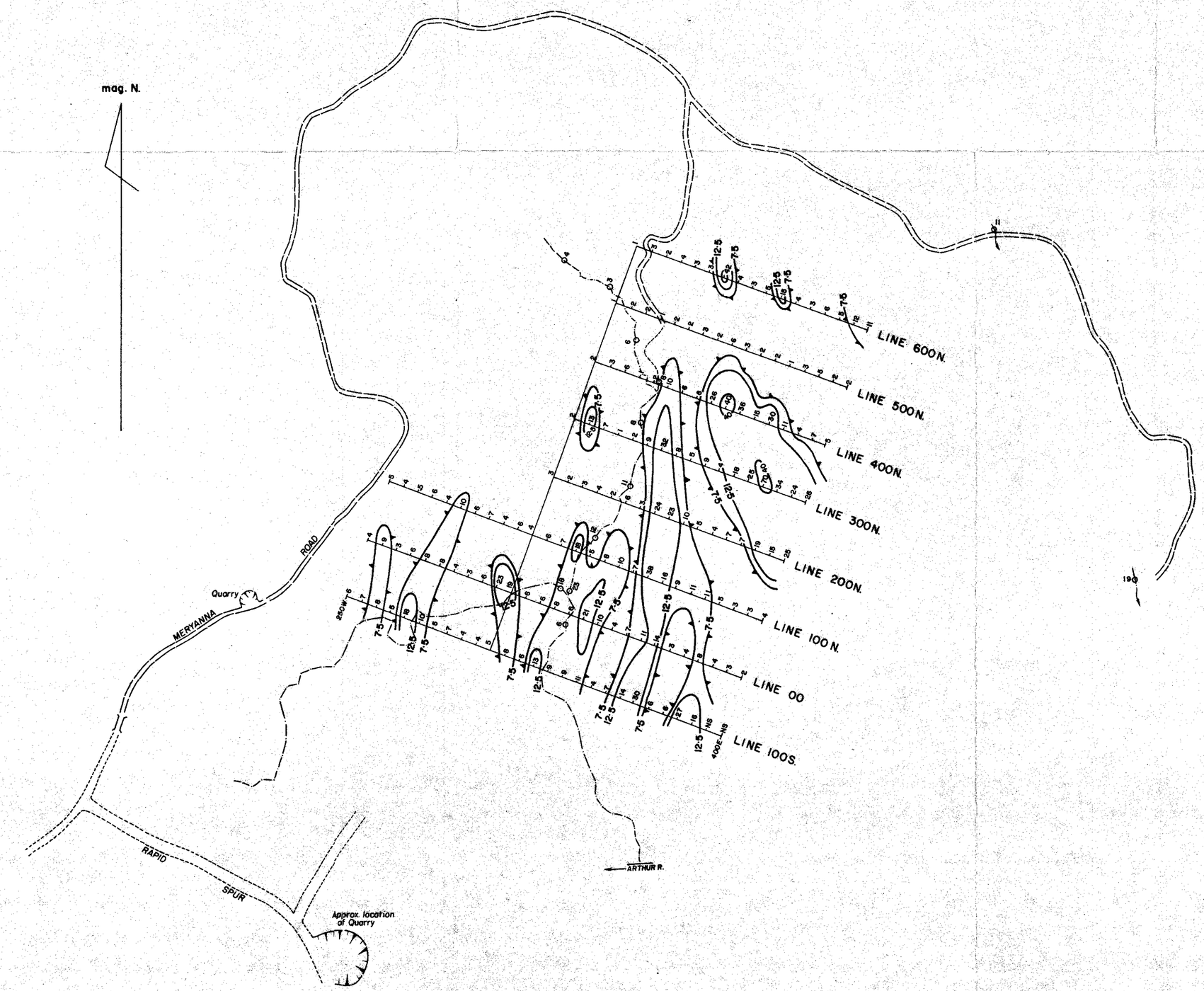
CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77
MERYANNA GRID
GEOLOGY AND ROCK CHIP PLAN

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1241

3134

mag. N.



LEGEND

- <7·5 p.p.m.
- 7·5 - 12·5 p.p.m. H.B.G.
- 12·5 - 40 p.p.m. P.A.
- >40 p.p.m. A.

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

5 cm

50 0 100 Metres
SCALE: 1:5000

591199

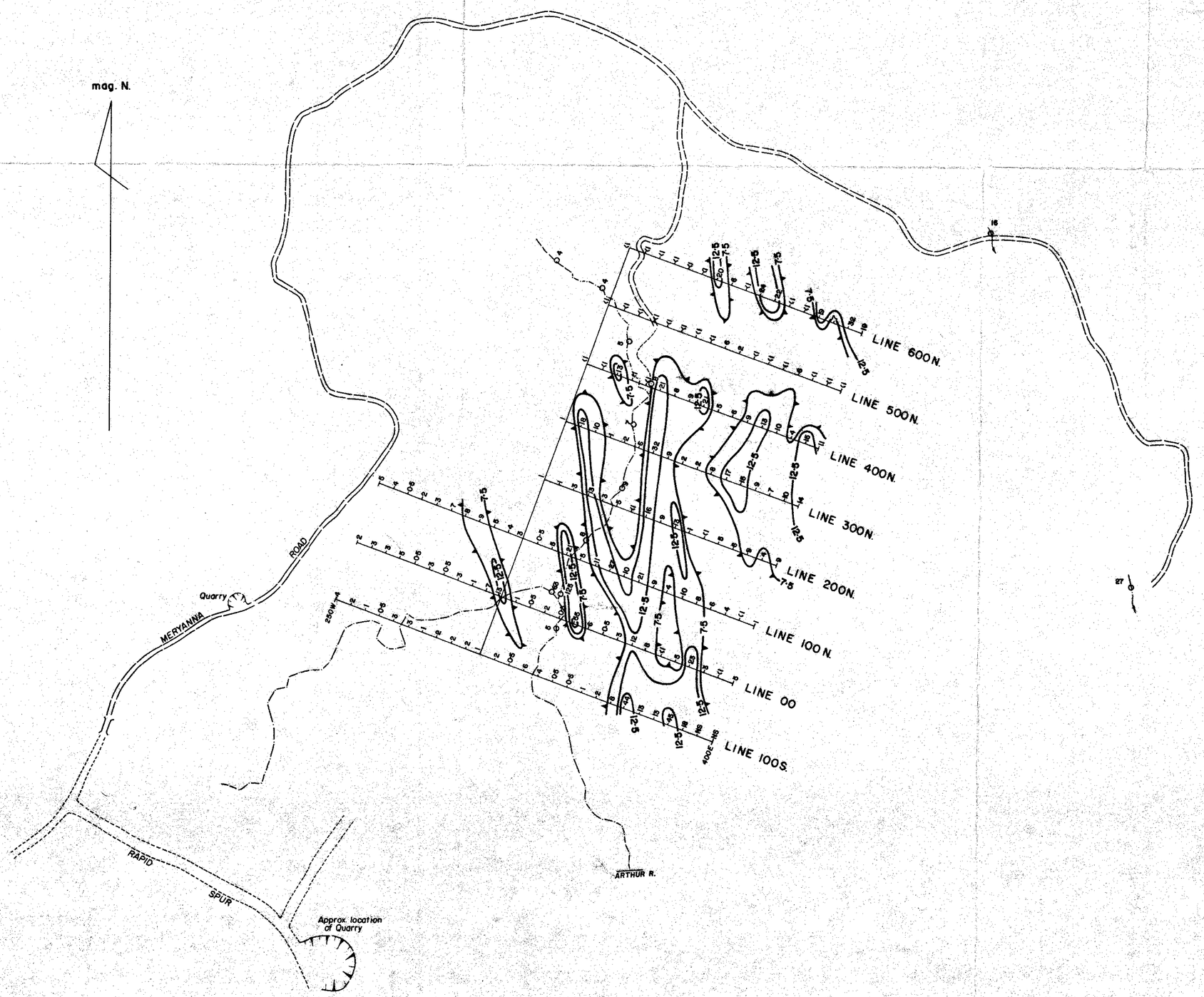
CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77
MERYANNA GRID

SOIL GEOCHEMISTRY - COPPER

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1242

mag. N.



LEGEND

- ☐ <7·5 p.p.m.
- ☐ 7·5 - 12·5 p.p.m. H.B.G.
- ☐ 12·5 - 33·0 p.p.m. P.A.
- ☐ >33·0 p.p.m. A

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

5 cm

50 0 100 Metres

SCALE. 1:5000

591200

CRA EXPLORATION PTY. LIMITED

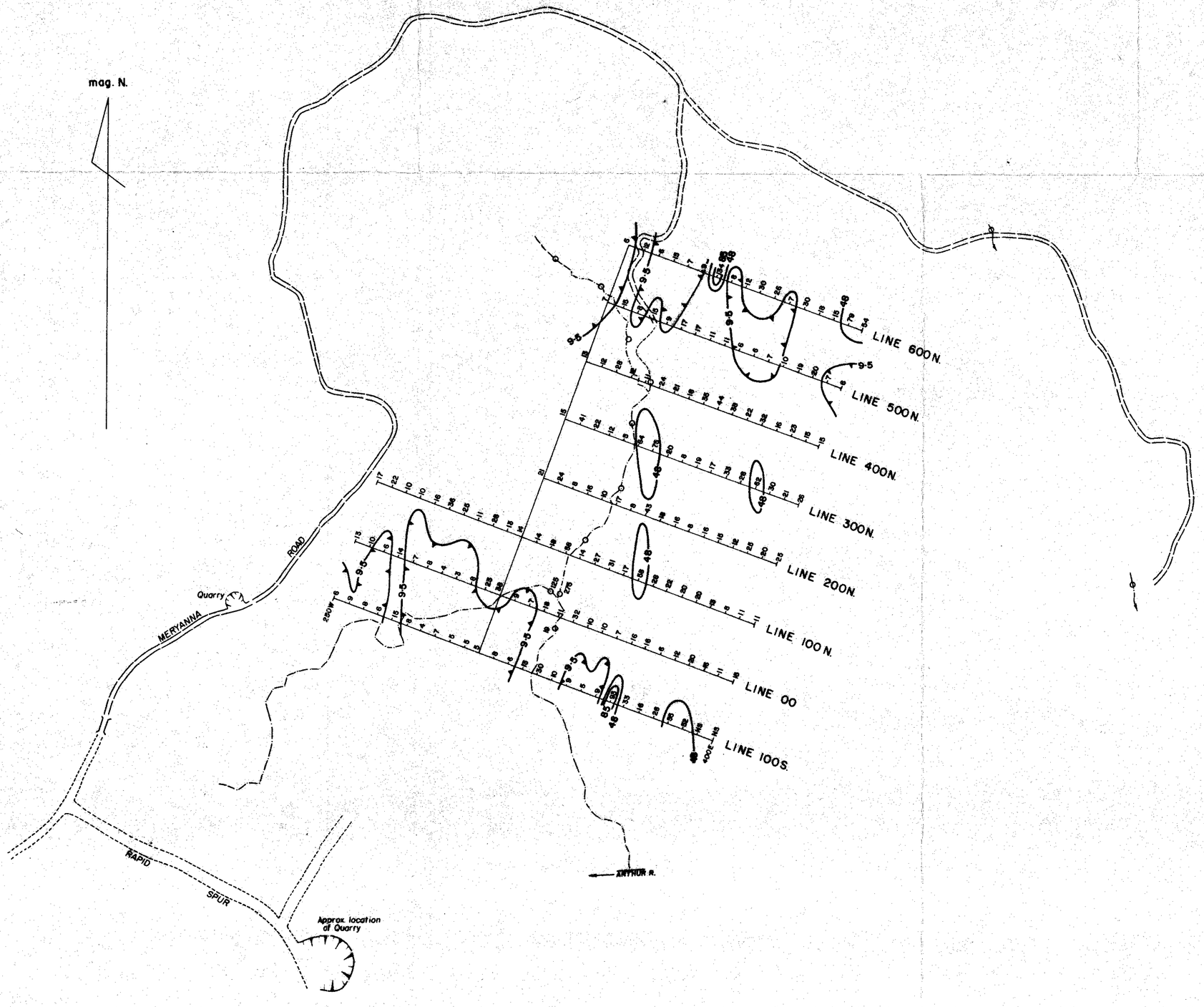
ROCKY CAPE E.L.1/77

MERYANNA GRID

SOIL GEOCHEMISTRY - LEAD

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h1243

mag. N.



LEGEND

- ‹9·5 p.p.m.
- 9·5 - 48 p.p.m. H.B.G.
- 48 - 85 p.p.m. P.A.
- ›85 p.p.m. A.

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

5 cm

50 0 100 Metres

SCALE: 1:5000

591201

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77

MERYANNA GRID

SOIL GEOCHEMISTRY - ZINC

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1244

mag. N.

LINE 600N.

LINE 500N.

LINE 400N.

LINE 300N.

LINE 200N.

LINE 100N.

LINE 00

LINE 100S.

MERYANNA ROAD

Quarry

RAPID SPUR

Approx. location of Quarry

ARTHUR R.

LEGEND

- ‹0·64%
- 0·64% - 3·0% H.B.G.
- 3·0% - 4·8% P.A.
- ›4·8% A.

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

5 cm

50 0 100 Metres

SCALE: 1:5000

591202

CRA EXPLORATION PTY. LIMITED

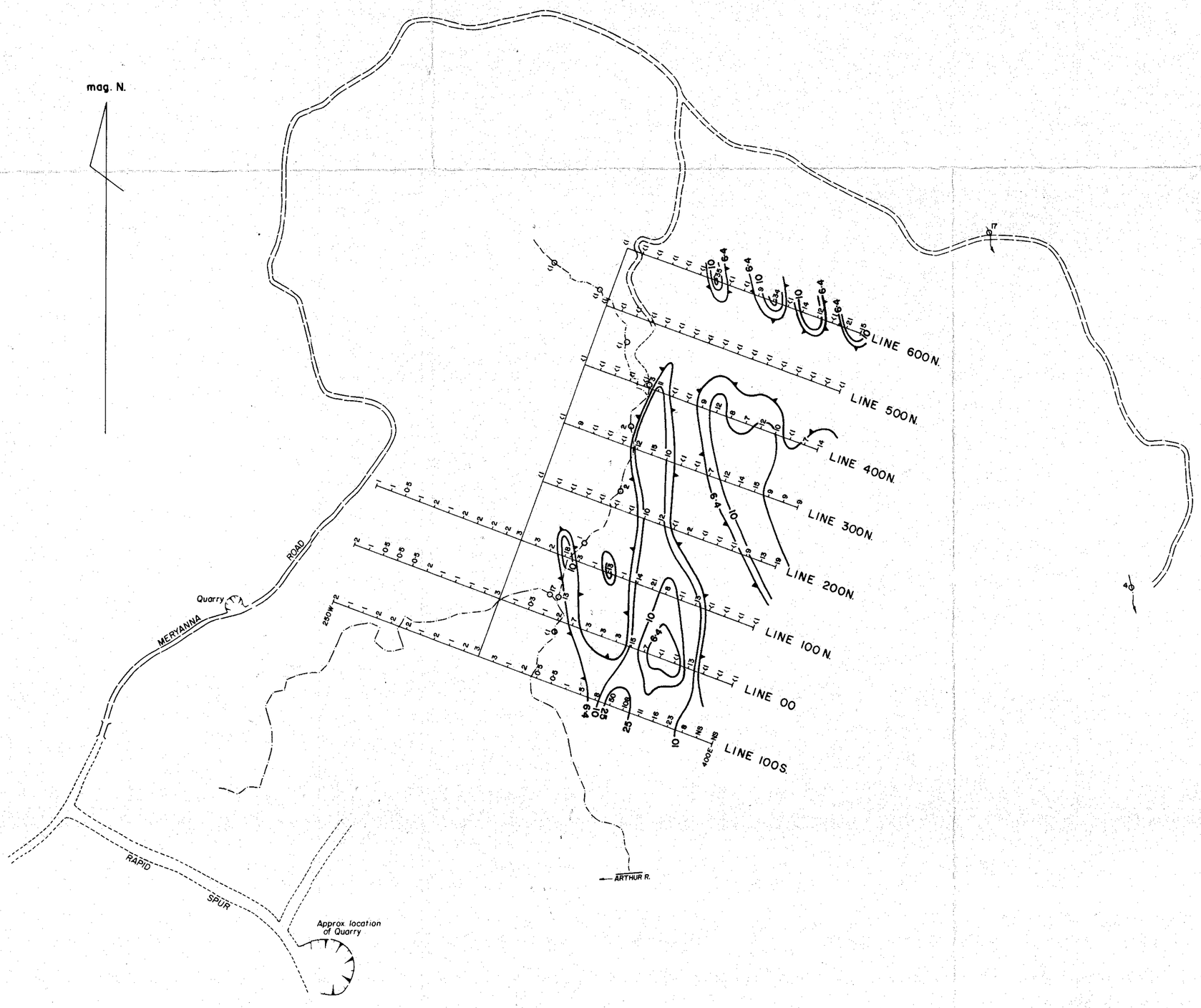
ROCKY CAPE E.L.1/77

MERYANNA GRID

SOIL GEOCHEMISTRY - IRON

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1245

mag. N.



LEGEND

- ‹6·4 ppm.
- 6·4 - 10 ppm. H.B.G.
- 10 - 25 ppm. P.A.
- ›25 ppm. A.

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

591203

5 cm

50 0 100 Metres

SCALE: 1:5000

CRA EXPLORATION PTY. LIMITED

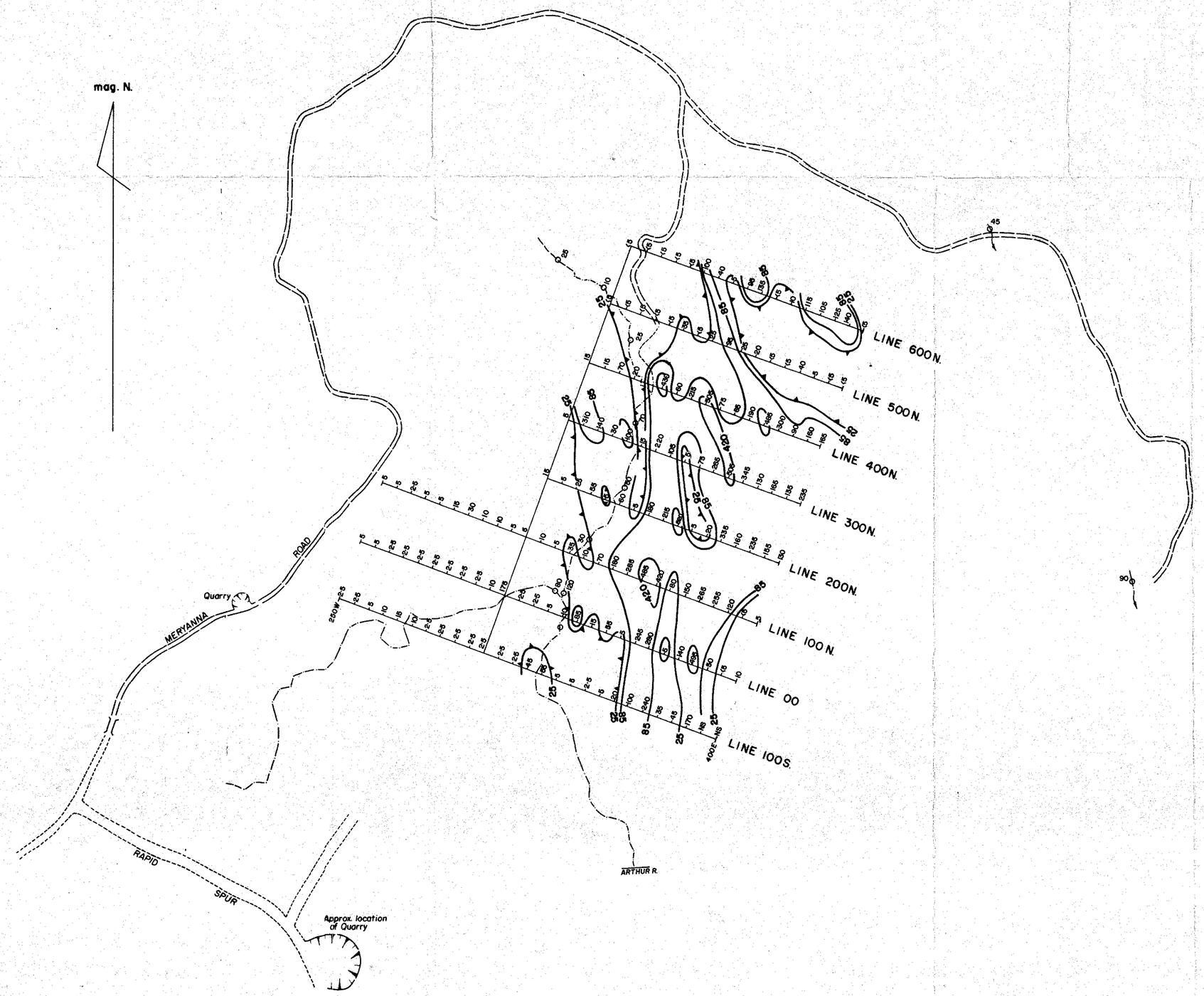
ROCKY CAPE E.L.1/77

MERYANNA GRID

SOIL GEOCHEMISTRY - ARSENIC

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1246

mag. N.



LEGEND

- ☐ <25 ppm.
- ☐ 25 - 85 ppm. H.B.G.
- ☐ 85 - 420 ppm. P.A.
- ☐ >420 ppm. A.

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

5 cm

50 0 100 Metres
SCALE. 1:5000

591204

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77

MERYANNA GRID

SOIL GEOCHEMISTRY - BARITE

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb. 1983	Plan No: TAS h 1247

mag. N.

LEGEND

- ‹45 p.p.m.
- 45 - 90 p.p.m. H.B.G.
- ›90 p.p.m. P.A.

KEY:

- Surveyed Track
- Unsurveyed Track
- Stream

5 cm

50 0 100 Metres
SCALE: 1:5000

591205

CRA EXPLORATION PTY. LIMITED

ROCKY CAPE E.L.1/77
MERYANNA GRID

SOIL GEOCHEMISTRY - MANGANESE

Geologist: J.W.	Scale: 1:5000	Report No: 11982
Drawn: T.G.D.S.	Date: Feb 1983	Plan No: TAS h 1248