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REF. No. 9333/84				

BILLITON AUSTRALIA

THE METALS DIVISION OF THE SHELL COMPANY
OF AUSTRALIA LIMITED

E.L. 39/83 - CATTLEY RANGE

Progress Report on Exploration for the Period
23/8/83 - 22/8/84

OPEN FILE

Author : R.G. Wright
W.D. Smyth

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D/LD 51/03	Black Marsh 4041/IL2 - IP/Resistivity Survey Line OON	1:5 000
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SUMMARY

Two prospect areas on Cambrian volcanics exposed on the Cattley Range licence have been investigated.

Work has involved gridding, soil and stream geochemistry, rock chip sampling and geophysical surveys.

Results have downgraded both localities but further regional mapping and bulk leach stream sampling is warranted to fully evaluate the potential of the ground.

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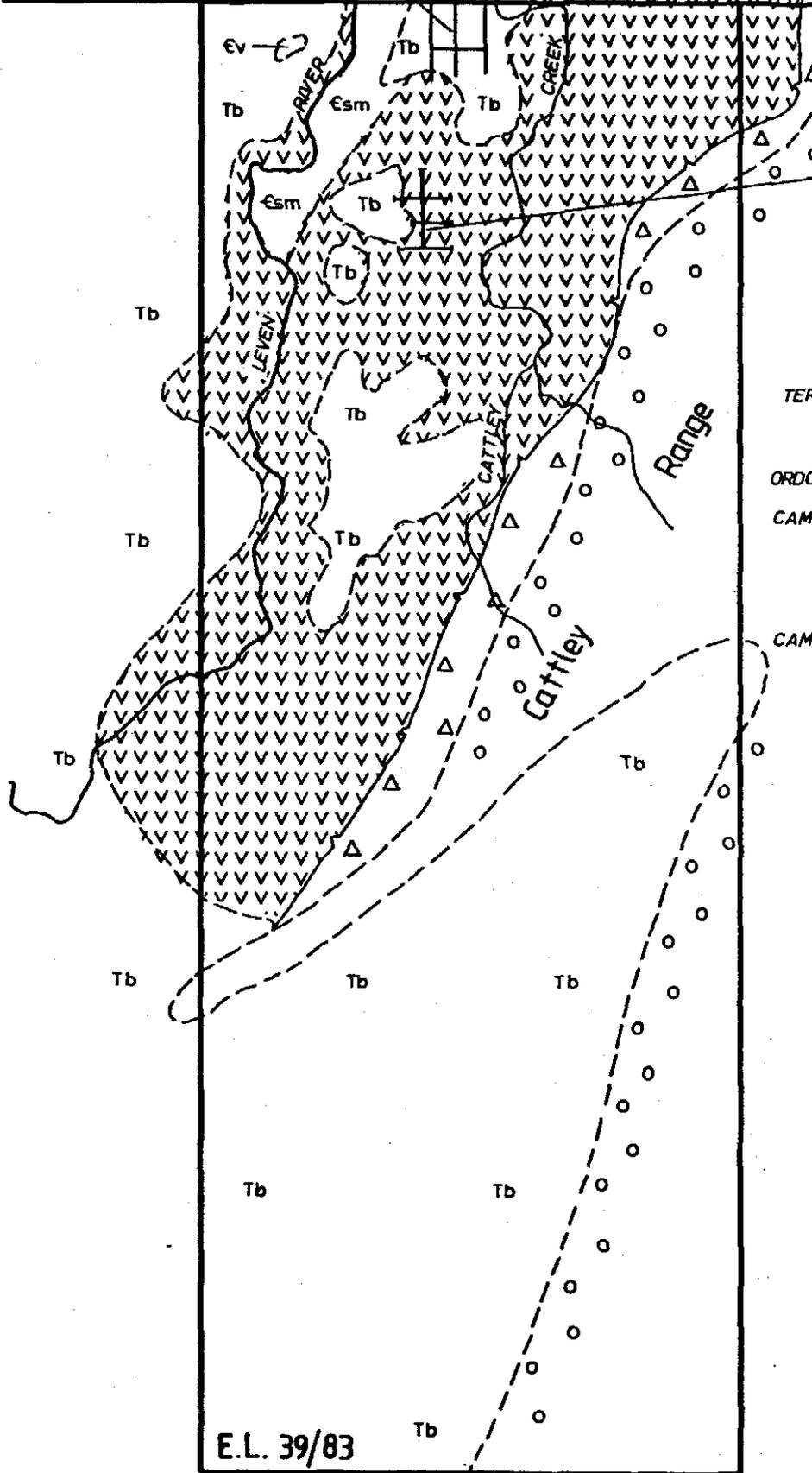
350006

E.L. 36/79

LOONGANA

BLACK MARSH
INPUT ANOMALY

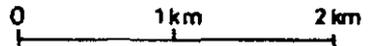
S 411 000 N



Pb,Zn STREAM SEDIMENT ANOMALY

LEGEND

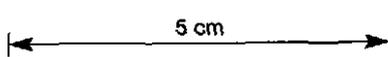
- TERTIARY Tb BASALT
- ORDOVICIAN o OWEN CONGLOMERATE
- CAMBRIAN? △ JUKES BRECCIA EQ.
- Esm ? QUE RIVER BEDS
- CAMBRIAN VVVV VOLCANICS.



The Shell Company of Australia Limited METALS DIVISION	
E.L. 39/83 CATTLEY RANGE GEOLOGY	
SCALE 1:50000	DATE 23-12-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE D'PORT	REP.No.
ORG No D/L051/012	FIG No 1

E.L. 39/83

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1.0 INTRODUCTION

Exploration Licence 39/83 - Cattley Range was granted to the Shell Company of Australia Ltd. on the 22nd August, 1983.

The licence, of 44 sq km, covers an area of poorly exposed Cambrian volcanics situated west of the Cattley Range. (Refer Fig. 1).

The area has potential for volcanogenic basemetal mineralization as it lies on strike and NE from Aberfoyle's Que River - Hellyer discoveries.

2.0 LOCATION & ACCESS

The licence is situated approximately 50 km due south of Burnie in northern Tasmania.

Access is obtained along various forestry tracks and haulage roads from A.P.P.M.'s timber concession, east of Guildford.

3.0 PREVIOUS INVESTIGATIONS

The area was previously held as E.L. 10/74 by Geopeko Pty. Ltd. This company concentrated most of its efforts on the eastern exposure of the volcanics in the Bond Range area, where several minor base metal and tin prospects were explored. These were finally related to the probable effects of a Devonian intrusive at depth - possibly an extension of the Dolcoath Granite.

In the Cattley Range locality Geopeko's exploration consisted of a DIGHEM II survey and follow-up regional stream sediment survey.

The stream sediment survey mostly showed only low order Cu, Pb, Zn values except for one drainage area with Pb values ranging from 60 ppm to 120 ppm (background approximately 20 ppm).

The DIGHEM II survey located one main anomalous zone situated at 405 000mE, 5 410 200mN.

The EM anomalies located at this site have conductive grades of 1 and 2. They represent conductive variations associated with an EW elliptically shaped resistivity low of 50 ohm m. The resistivity low is a subsurface phenomenon not related to surface conductivity.

A magnetic anomaly occurs adjacent to the resistivity low but there is no direct correlation between the magnetic and conductive anomalies.

No detailed ground follow-up was undertaken over the area by Geopeko and this portion of E.L. 10/74 was eventually relinquished.

Details of the Geopeko investigations are provided in Pemberton, 1981 and 1983.

4.0 REGIONAL GEOLOGY

The licence covers an area of poorly exposed Cambrian volcanics situated about 20 kms NE and on strike of the Que River area.

Further to the NE acid-intermediate volcanics outcrop near Mt. Tor.

The volcanics are exposed on the northern half of the licence and to the south and east are overlain by possible Jukes Breccia equivalent and Owen Conglomerate - Moina Sandstone. (Refer Fig. 1). Basalt of Tertiary age covers the western and southern portions of the licence.

5.0 INVESTIGATIONS COMPLETED

5.1 Regional Survey

A brief reconnaissance survey was made by W.D. Smyth across the licence.

Prospective Cambrian volcanics appear to be restricted to the north part of the licence, west of the Cattley Range.

The Cambrian Volcanics consist mainly of a dacitic, fine-grained felsic rock, possibly a tuff. A few agglomeratic horizons and a major feldspar porphyry intrusive was noted. The volcanics are not as acid as at Black Bluff and no andesites were located.

A micaceous, arkosic sandstone/greywacke was located in the north-western portion of the licence. Similar rocks to the immediate north at Mt. Tor had been thought by Geopeko to be Silurian. However, they may be equivalents of the Que River Beds (shales, dark greenish brown micaceous sandstones and grits). Silurian rocks to the south near Mt. Cripps consists of predominantly siliceous quartz sandstone with interbedded cleaved siltstone and slate. The Que River Beds in the Que River area conformably overlie the andesites in the hanging wall(?) of the Que River Mine.

Minor thin patches of Tertiary basalt are present overlying the Cambrian, however, the major thickness of Tertiary basalt commences to the west of the licence area.

5.2 Black Marsh Input Anomaly 4041/IL2

This anomaly, situated close to the northern boundary of the licence, was originally located by the DIGHEM II survey flown for Geopeko Ltd. in early, 1980.

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The anomaly was named Mariner II and limited reconnaissance geology and stream sampling was carried out. (Refer J. Pemberton, 1981 & 1983). Results were discouraging and no further work was undertaken.

The anomaly was located again during an INPUT survey flown for Shell in January, 1982. The survey was being flown over E.L. 36/79 - Loongana just to the north of Geopeko's E.L. 10/74.

An overflight line located the priority 3, five channel anomaly on 2 adjacent lines just south of the EW boundary between the two licences. Results suggested the anomaly was a poor conductor.

Later, a trial line of magnetics and VLF was run across the area. (Refer plan D/LD 51/01).

The ground magnetics located a 2000 nT anomaly which is offset slightly north from the INPUT feature. No clear VLF anomaly was detected although there was a possible cross-over at 25N on Japan's frequency. A small grid was established over the area and covered with a magnetic survey. (Refer plan D/LD 51/02).

A Max-Min survey was completed along line 200E and outlined a shallow (20 - 40m) conductor at 350N. (Refer plan D/LD 51/13).

The anomaly was further tested with one line of IP along the OON baseline (Refer plan D/LD 51/03).

There is no obvious resistivity low on the IP line that readily explains the INPUT anomaly, although there is evidence of a surficial conductive layer between 250W and 350E judging by the increase in resistivity with dipole spacing. Chargeabilities are predominantly low (<5 msecs) with a few higher

values, especially at the western end of the line where higher resistivity values are apparent which suggest shallower bedrock.

It appears that both the INPUT and the aeromagnetic anomaly are caused by Tertiary basalt, possibly enhanced by the steep topography. Results from broad-spaced "C" horizon soil sampling are shown on plan D/LD 51/04. Results reflect the basalt cover rocks.

5.3 Stream Sediment Anomaly

A small grid was established over an area drained by several small streams containing moderately anomalous, 60 - 120 ppm Pb values.

The area was originally located by Geopeko stream sampling about 1.5 km south of the Black Marsh grid (Refer Fig. 1 and plan D/LD 51/011). No followup work was carried out by Geopeko over the stream anomaly as the geochemistry was regarded as too weak for follow-up.

Shell established a small grid over the area but no outcrop was located during mapping by W. Smyth. Float fragments generally consist of a fine grained felsic rock, possibly a tuff. Basalt covers the western side of the grid. Soil samples were collected from the "C" horizon at 20m intervals on the grid. Results are shown plotted on plans D/LD 51/06, 14, 15 & 16. The higher order Pb, Zn, Fe and Mn values trace out a poorly defined NE trend.

The association of Pb, Zn with Fe, Mn probably indicates that scavenging of basemetal has taken place due to the weathering of Cambrian and Tertiary volcanics. Previous Geopeko work in the Bond Range area highlighted the build-up of Fe, Mn at the edge of Tertiary basalt outcrops. Low to moderate order Pb, Zn values characterized these exotic concentrations.

Overall, further work on the grid does not seem warranted due to the very low tenor and the Fe, Mn association of the basemetal geochemistry.

Limited mapping, rock chip sampling and stream sediment sampling was carried out in a poorly exposed area 4 km SSW of the grid.

Sample location sites are shown plotted on plan D/LD 51/011.

Assay results for -80#, panned concentrates and rock chip samples were all low order for Cu, Pb, Zn, Ni, Cd, Co, Bi, Fe, Mn, Ag, Mo and Au. Results are included as Appendix 1.

A suite of 6 rock samples were sent to CMS for petrology. Descriptions are included as Appendix 2.

6.0 CONCLUSIONS & RECOMMENDATIONS

The licence area covers prospective acid-intermediate volcanics situated 20 km NE and on strike from the Que River - Hellyer area.

The volcanics are poorly exposed and require further regional mapping to outline their extent and degree of alteration.

Followup over a prominent DIGHEM/INPUT feature has shown it to be caused by a conductive layer within the Tertiary basalt.

Gridding and soil sampling over a low order Pb, Zn stream anomaly have outlined a NE trending zone of patchy, low order basemetal in soil.

To fully evaluate the potential of the licence it is recommended that bulk leach stream sediments be collected over the ground at a density of 1-2/sq km.

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The sampling will test for the possibility of low level gold values which may reflect the presence of volcanogenic base-metal mineralization. Check assaying for Cu, Pb, Zn, Ag, As, Sb, Ba, Fe and Mn should also be undertaken as part of the survey.

Followup, as warranted, should be carried out over zones of geological/geochemical interest.

REFERENCES

PEMBERTON, J., 1981. Progress Report on E.L. 10/74. Black Bluff, Tasmania. February 1980 - June, 1981. Unpubl. Geopeko Rep., June, 1981.

PEMBERTON, J., 1983. Relinquishment Report on Part of E.L. 10/74, Black Bluff. Unpubl. Geopeko Rep., Feb. 1983.

APPENDIX 1

GEOCHEMICAL ASSAY RESULTS

Report COM 840340	-80# Stream Sediment
Report COM 840339	Stream Sediment Panned Concentrates
Report COM 840342	Rock Chip Samples



COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

350016

Head Office and
Central Laboratory
305 SOUTH ROAD,
MILE END SOUTH
STH. AUST. 5031
TEL: (08) 43 5722
TELEX: AA89323



NATA REGISTERED No. 1526

OUR REF: COM 840340
YOUR REF: 4481/LD51/WDS/234

Mr. P. Ruxton,
The Shell Co. of Aust. Ltd,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

14.3.84

Dear Peter,

RE: JOB COM 840340

Enclosed are the assays for the samples delivered to our
laboratory on the 29th February 1984.

Yours sincerely,
COMLABS PTY LTD

per

Cattley Range
LD51

Stream Sed.

-80ff.



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ANALYTICAL REPORT

350017

JOB COM840340

O/N : 4481/LD51/WDS/234

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Cd	Co	Bi
4233	26	20	36	6	<1	6	12
4234	16	12	22	<4	<1	6	8
4235	10	16	30	<4	<1	6	10
4236	8	6	16	<4	<1	<4	12
4237	10	10	26	<4	<1	<4	8
4238	10	28	32	<4	<1	<4	<4
4239	12	42	30	<4	<1	10	4
4240	14	40	40	8	<1	16	6
4241	8	10	16	6	<1	<4	6
4242	24	20	40	6	<1	12	6
4243	14	18	32	8	<1	12	12
4244	10	32	60	150	<1	14	16
4245	34	8	180	<4	<1	44	<4
4246	12	14	22	<4	<1	<4	<4
4247	10	12	20	<4	<1	<4	<4
4248	14	12	24	<4	<1	<4	6
4249	8	8	14	<4	<1	<4	<4
4250	8	8	16	<4	<1	<4	<4
4251	8	10	16	<4	<1	<4	6
4252	8	10	14	<4	<1	<4	<4

Method of Analysis : Cu Pb Zn Ni Cd Co Bi : AAS1



ANALYTICAL REPORT

350018

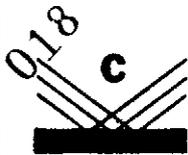
JOB COM840340

O/N : 4481/LD51/WDS/234

Results in ppm

SAMPLE	%Fe	Mn	Ag	Mo	Au
4233	1.50	190	<1	<4	<0.05
4234	1.00	460	<1	<4	<0.05
4235	0.90	880	<1	<4	<0.05
4236	0.70	85	<1	<4	<0.05
4237	1.05	95	<1	<4	<0.05
4238	2.40	260	<1	<4	<0.05
4239	4.40	1650	<1	<4	<0.05
4240	4.70	1200	<1	<4	<0.05
4241	0.50	55	<1	<4	<0.05
4242	1.55	1550	<1	<4	<0.05
4243	2.35	560	<1	<4	<0.05
4244	2.90	830	<1	<4	<0.05
4245	6.60	570	<1	<4	<0.05
4246	1.50	85	<1	<4	<0.05
4247	0.80	130	<1	<4	<0.05
4248	1.20	290	<1	<4	<0.05
4249	0.60	36	<1	<4	<0.05
4250	0.60	40	<1	<4	<0.05
4251	0.60	42	<1	<4	<0.05
4252	0.65	34	<1	<4	<0.05

Method of Analysis : Fe Mn : AAS2
 Ag Mo : AAS3
 Au : AAS5A



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LD51 277

Head Office and
Central Laboratory
305 SOUTH ROAD,
MILE END SOUTH
STH. AUST. 5031
TEL.: (08) 43 5722
TELEX: A889323



NATA REGISTERED No. 1526

350019

OUR REF.: COM 840339
YOUR REF.: 4480/LD51/WDS/233

Mr. P. Ruxton,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

13.3.84

Dear Peter,

RE: JOB COM 840339

Enclosed are the assays for the samples delivered to our
laboratory on the 29th February 1984.

Yours sincerely,
COMLABS PTY LTD

per : 

*Cattley Range
Stream Sediment
Panned Conc.*



ANALYTICAL REPORT

350020

JOB COM840339

O/N : 4480/LD51/WDS/233

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Cd	Co	Bi
4233	34	120	580	10	<1	<4	8
4234	34	48	80	8	<1	<4	<4
4235	30	24	75	6	<1	<4	<4
4236	22	14	22	<4	<1	<4	<4
4237	12	12	30	6	<1	<4	<4
4238	12	20	16	4	<1	<4	<4
4239	18	24	24	6	<1	<4	6
4240	34	22	38	16	<1	<4	16
4241	12	10	16	6	<1	<4	16
4242	16	10	20	8	<1	<4	<4
4243	24	12	34	10	<1	<4	<4
4244	20	10	34	10	<1	<4	<4
4245	26	6	160	110	<1	36	<4
4246	16	10	12	6	<1	<4	10
4247	18	10	16	10	<1	<4	<4
4248	14	12	10	10	<1	<4	<4
4249	6	10	8	6	<1	<4	8
4250	14	10	12	6	<1	<4	10
4251	18	14	18	8	<1	<4	8
4252	20	12	16	8	<1	<4	<4

Method of Analysis : Cu Pb Zn Ni Cd Co Bi : AAS1



ANALYTICAL REPORT

350021

JOB COM840339

O/N : 4480/LD51/WDS/233

Results in ppm

SAMPLE	Sn	W03	Ba	Au
4233	4	30	250	<0.05
4234	4	50	270	<0.05
4235	6	40	270	<0.05
4236	8	30	330	<0.05
4237	4	30	270	<0.05
4238	4	40	250	<0.05
4239	<4	20	220	<0.05
4240	10	25	250	<0.05
4241	6	35	250	<0.05
4242	8	45	240	<0.05
4243	6	55	240	<0.05
4244	<4	35	185	<0.05
4245	4	<10	130	<0.05
4246	10	35	250	<0.05
4247	4	25	300	<0.05
4248	12	30	310	<0.05
4249	<4	20	220	<0.05
4250	4	25	350	<0.05
4251	6	35	290	<0.05
4252	6	30	300	<0.05

Method of Analysis : Sn W03 Ba : XRF1
Au : AAS5A



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TELEX: AA89323

350022



NATA REGISTERED No. 1526

OUR REF.: COM 840342

YOUR REF.: 4483/LD51/WDS/236

Mr. P. Ruxton,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

15.3.84

Dear Peter,

RE: JOB COM 840342

Enclosed are the assays for the samples delivered to our
laboratory on the 29th February 1984.

Yours sincerely,
COMLABS PTY LTD

per :

*Rock chip samples
LD51*

022



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ANALYTICAL REPORT

350023

JOB COM840342

O/N : 4483/LD51/WDS/236

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi
4284	34	12	14	<4	<4	<4
4287 A	14	10	65	<4	<4	<4
4287 B	14	4	36	<4	<4	<4
4288	10	14	50	6	14	<4
4289	10	24	10	<4	<4	<4
4290	14	6	38	<4	<4	<4
4291	26	4	20	<4	<4	<4
4292	100	65	120	60	34	10
4293	26	30	110	32	20	<4
4294	20	24	46	60	10	<4
4295	8	8	30	<4	6	<4
4296	6	6	22	<4	6	<4
4297	6	20	36	<4	<4	<4
4298	8	6	14	<4	<4	<4
4299	10	12	110	<4	<4	<4
4300	16	210	140	28	12	<4

Method of Analysis : Cu Pb Zn Ni Co Bi : AAS1

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- 2 -



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ANALYTICAL REPORT

350024

JOB COM840342

O/N : 4483/LD51/WDS/236

Results in ppm

SAMPLE	Cd	Ag	Au
4284	<1	<1	<0.05
4287 A	<1	<1	<0.05
4287 B	<1	<1	<0.05
4288	<1	<1	<0.05
4289	<1	<1	<0.05
4290	<1	<1	<0.05
4291	<1	<1	<0.05
4292	<1	2	<0.05
4293	<1	<1	<0.05
4294	<1	<1	<0.05
4295	<1	<1	<0.05
4296	<1	<1	<0.05
4297	<1	<1	<0.05
4298	<1	<1	<0.05
4299	<1	<1	<0.05
4300	<1	<1	<0.05

Method of Analysis : Cd : AAS1
 Ag : AAS3
 Au : AAS5A

02A

350025

APPENDIX 2

PETROLOGICAL REPORT CMS 84/1/4

Six rock samples were received for identification and petrological description. Representative thin-sections were prepared and examined together with their respective cobaltinitrite-stained offcuts. Brief tabulated petrological descriptions are attached. These incorporate data from oblique incident and transmitted light microscopy, and include interpretative comments.

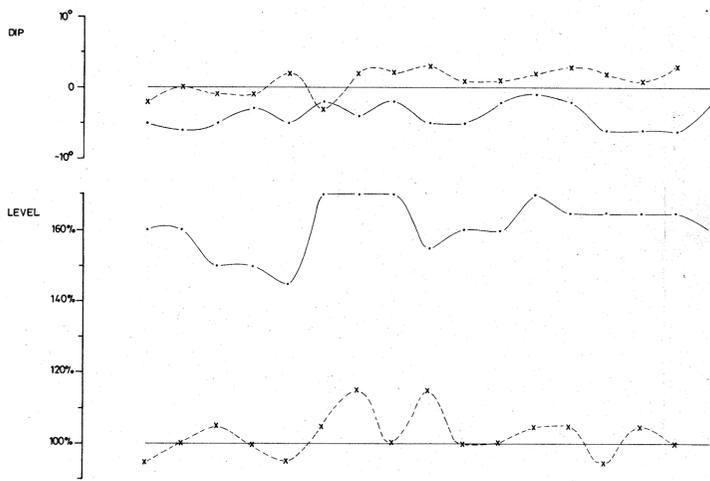
D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
12562 (T.S. 48580)	<u>Pelitic Ash</u> . Extensively argillised cryptocrystalline feldspathic material (?albite) with thinly disseminated splintery to angular silt-sized quartz grains. Minor veinlets of quartz, white mica, chlorite, ferruginised carbonate.	Massive to faintly laminated. Vaguely relict vitroclastic.	Thinly disseminated silt-sized clastic white mica flakes. Conspicuous ultrafine clastic leucoxenic	Interpreted as a devitrified, argillised, altered silty vitroclastic (pelitic) ash on relict textural grounds. Distal subaerially transported characteristics.
12564	<u>Ignimbrite</u> . Extensively sericitised cryptocrystalline feldspathic material with disseminated sericite-pseudomorphed feldspar crystals/crystal fragments.	Eutaxitic, flame-structured. Weakly sheared.	Disseminated oxidised/leucoxenised opaques, rare quartz crystal fragments.	Welded "dacitic" vitric-crystal tuff; devitrified, extensively argillised (sericitised) and mildly sheared.
12565	<u>Porphyritic Trachyandesite</u> . Phenocrysts/phenocrystal clusters of weakly argillised plagioclase (andesine), K-feldspar and montmorillonite-pseudomorphed ferromags. Groundmass of argillic alkali feldspar laths with a quartz mesostasis.	Glomeroporphyritic, with an even-grained homogeneous groundmass.	Leucoxenised opaques, rare cognate xenoliths, minor sericite-quartz veinlets, rare oxidised pyrite.	Strictly a quartz trachyandesite. Homogeneous fabric is not inconsistent with a semi-chilled minor intrusive, dependant on field relationships.
12568	<u>"Rhyodacitic" Tuff</u> . Frequent partly albitised/carbonate-stained alkali feldspar crystals/crystal fragments in a matrix of sericite-stained, felsitic, devitrified felsic glass. Thinly disseminated fine-grained pyrite.	Crystal-rich fragmental; coarsely felsitic (devitrified) flow-structured, vaguely eutaxitic matrix.	Leucoxenised opaques, rare devitrified lava clasts, quartz crystal fragments.	Devitrified, moderately sericitised acid tuff. Finer detail obscured by coarse felsitic devitrification, but general features consistent with a welded vitric-crystal tuff.
12571	<u>"Dacitic" Pitchstone</u> . Disseminated sericite-pseudomorphed feldspar phenocrysts in an extensively sericitised felsitic (devitrified) groundmass with thinly disseminated quartz microphenocrysts.	Weakly porphyritic, weakly flow-structured, microfelsitic. Very incipiently sheared.	Leucoxenised/oxidised opaques; minor cherty quartz-kaolin pseudomorphed ferromag phenocrysts.	Devitrified, extensively sericitised, very incipiently sheared intermediate-acid pitchstone (glassy lava). Dacitic characteristics, but with compositional detail obscured by alteration.
12572 (T.S. 48585)	<u>Volcanomict Lithic Sandstone</u> . Framework of kaolinised subangular "rhyolitic" lava clasts, angular to subangular quartz grains, conspicuous illitic/degraded biotite flakes. Ill-defined kaolinitic-illitic matrix.	Poorly sorted silty fine to medium sandy clastic. Weakly bedded; incipiently sheared.	Oxidised/leucoxenised clastic opaques; rare oxidised pyrite.	Strongly acid-volcanomict (reworked tuffaceous) lithic sandstone, thoroughly argillised; incipiently sheared. Conspicuous clastic biotite reflects biotite-rhyolitic source.

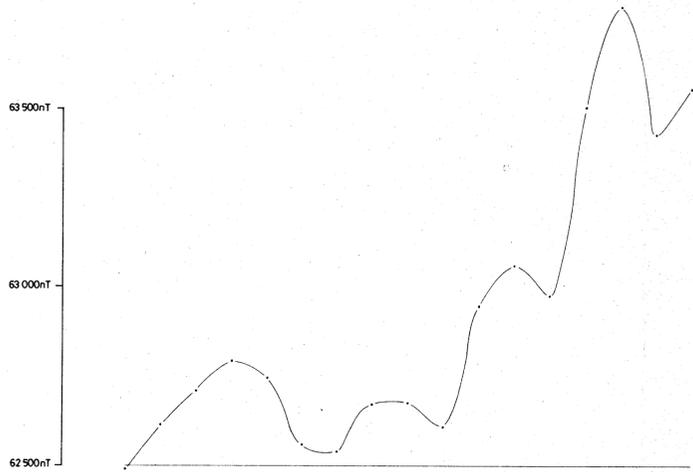
350028

027

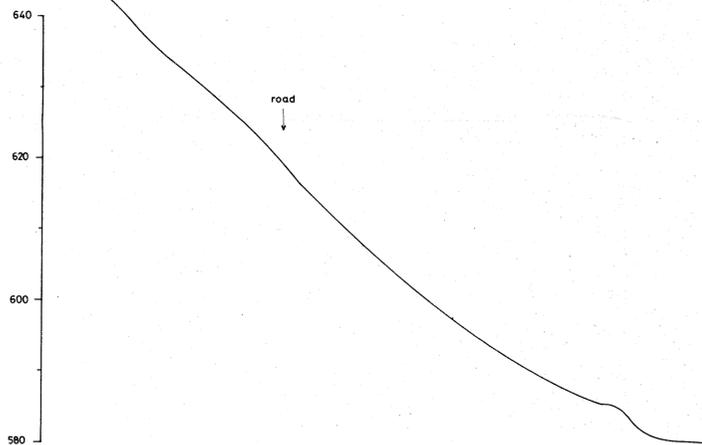
V.L.F. - EM
 - - - N.W. Cape (+ve dip to N)
 x - - - Japan (+ve dip to E)
 N.B. Large drift in N.W.C. level



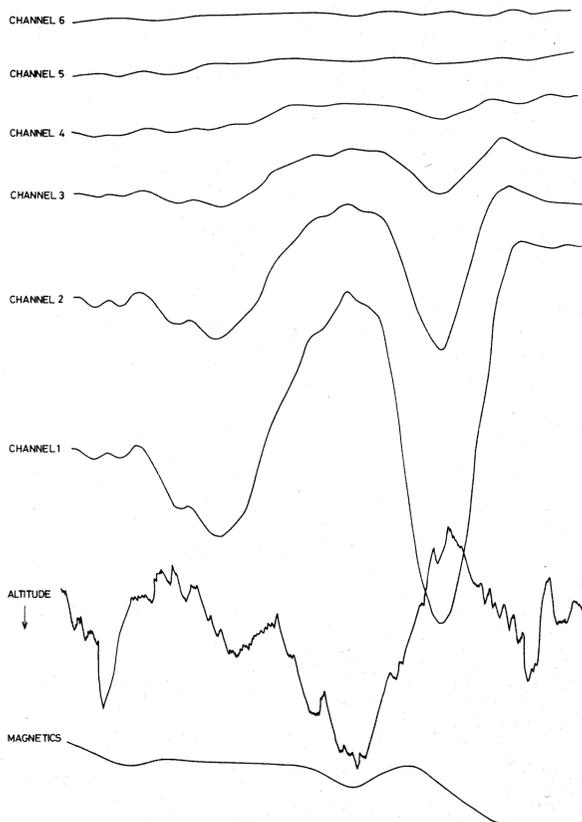
MAGNETICS



APPROX. TOPOGRAPHY & CULTURE (Metres A.S.L.)



INPUT LINE 3181



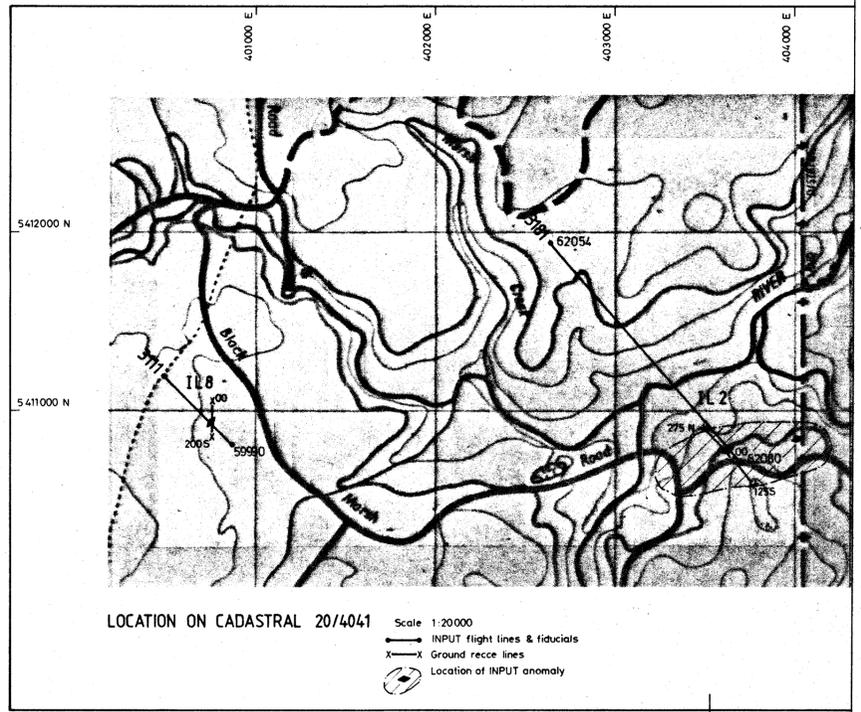
NW. 62050 IL 2 62080 S.E.



The Shell Company of Australia Limited	
METALS DIVISION	
E.L. 39/83 CATTLE RANGE	
INPUT ANOMALY 4041/IL 2	
INITIAL GROUND CHECK	
SCALE 1:7500	DATE 4-8-82
AUTHOR G. GAMES	DRAWN H.L.S.
OFFICE DEVOIRPORT	REP. No.
ENCL. No.	DRG. No. D/L051/01

350029

5 cm



MAX-MIN
 COIL SEPARATION = 200M
 IN PHASE ———
 OUT PHASE - - - -

222 Hz
 +20%
 0
 -20%

888 Hz
 +20%
 0
 -20%
 -40%

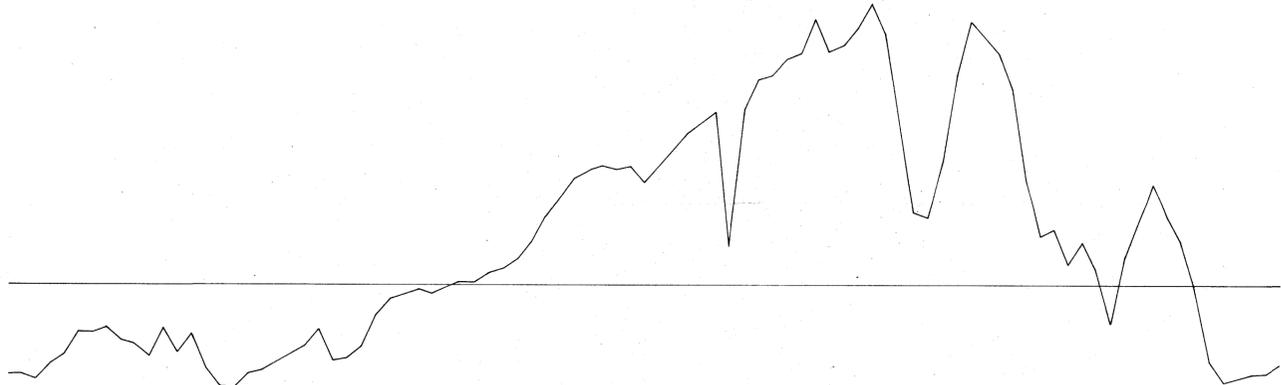
+20%
 0
 -20%
 447 Hz

0
 -20%
 -40%
 -60%
 1777 Hz

N.B. 2000nT mag anomaly

GROUND MAGNETICS
 READING SCALE = 200nT/cm

63000nT
 62000nT



300 S 100 S 100 N 300 N

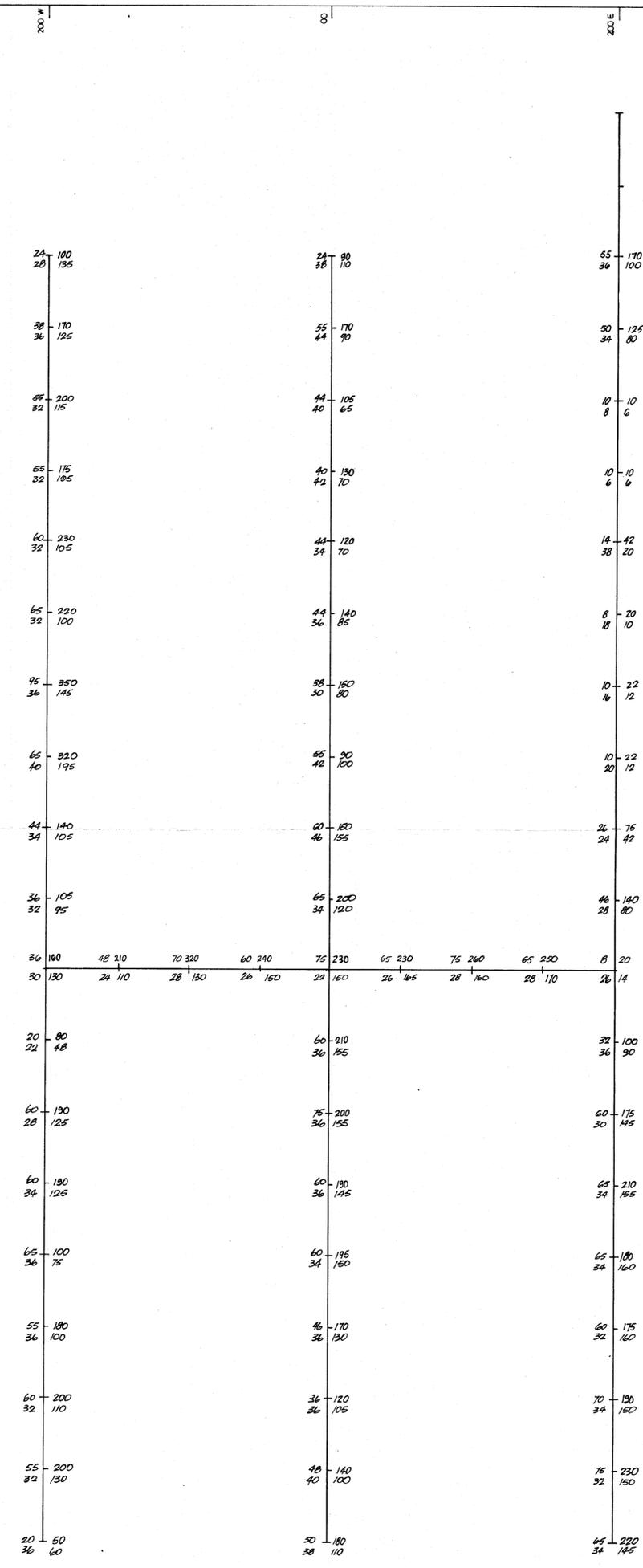
200M 100 0



The Shell Company of Australia Limited METALS DIVISION	
E.L. 39/83 CATTLE RANGE IL2-BLACK MARSH RD.-LINE 200E	DATE 28-9-82
MAX-MIN	DRAWN H.L.S.
GROUND MAGNETICS 030	OFFICE DEWOPORT
	REP. No.
	ENCL. No.
	DRG No. B/LD 57/13

350031

5 cm

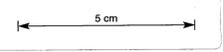


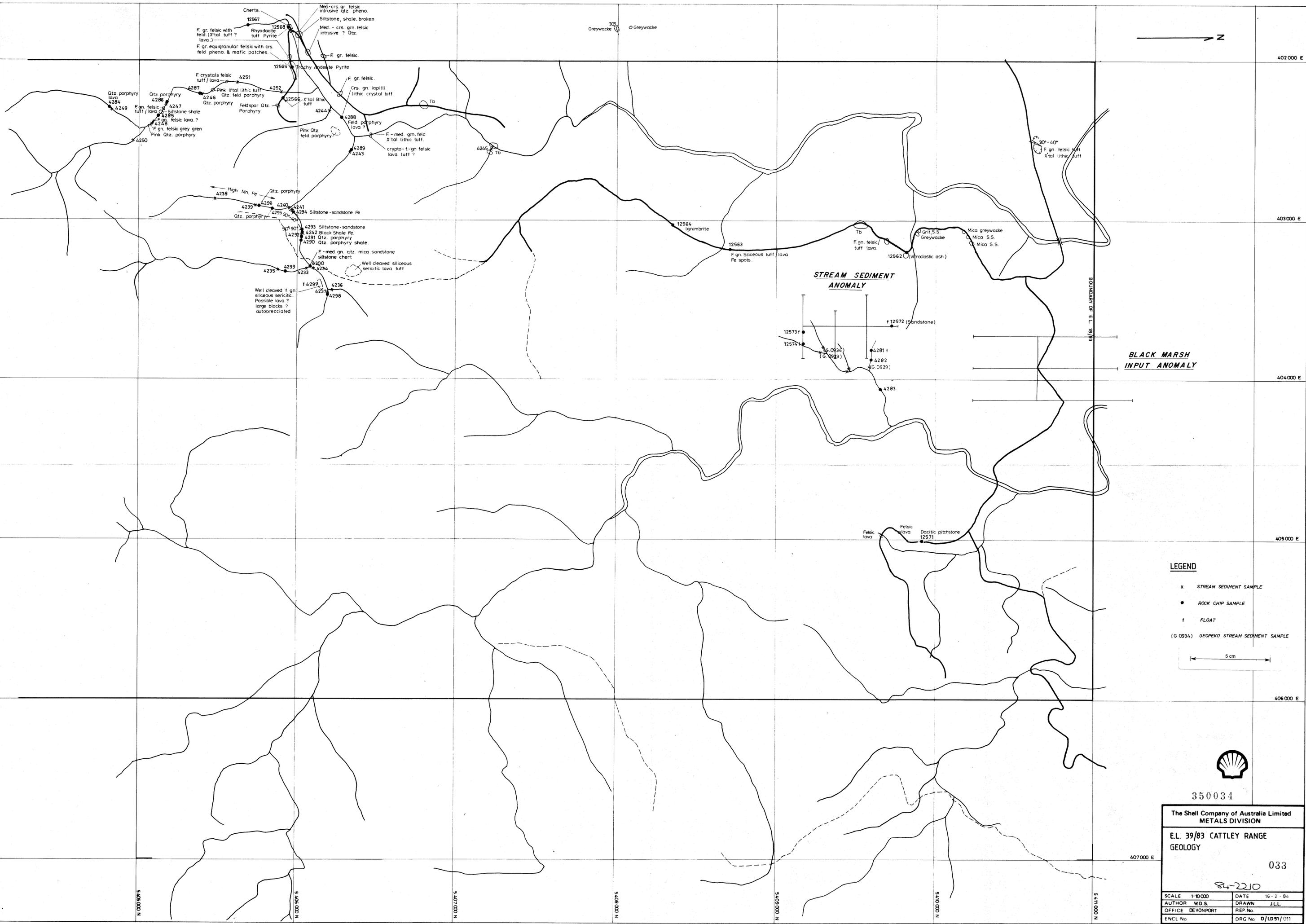
Cu | Ni
Pb | Zn
Analyses in p.p.m.



The Shell Company of Australia Limited METALS DIVISION			
E.L. 39/83 CATTLEY RANGE			
SOIL GEOCHEMISTRY 032			
Cu, Ni, Pb, Zn			
84-2210			
SCALE	1:2000	DATE	
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/LD 51/04

350033





LEGEND

- x STREAM SEDIMENT SAMPLE
- ROCK CHIP SAMPLE
- f FLOAT
- (G 0934) GEOPEKO STREAM SEDIMENT SAMPLE

5 cm

350034

The Shell Company of Australia Limited
METALS DIVISION

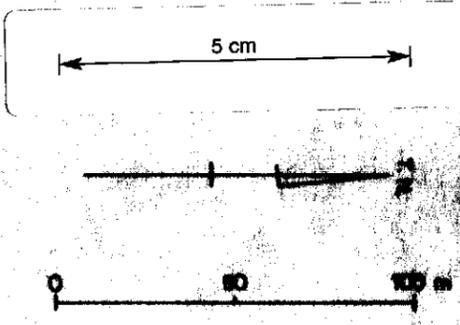
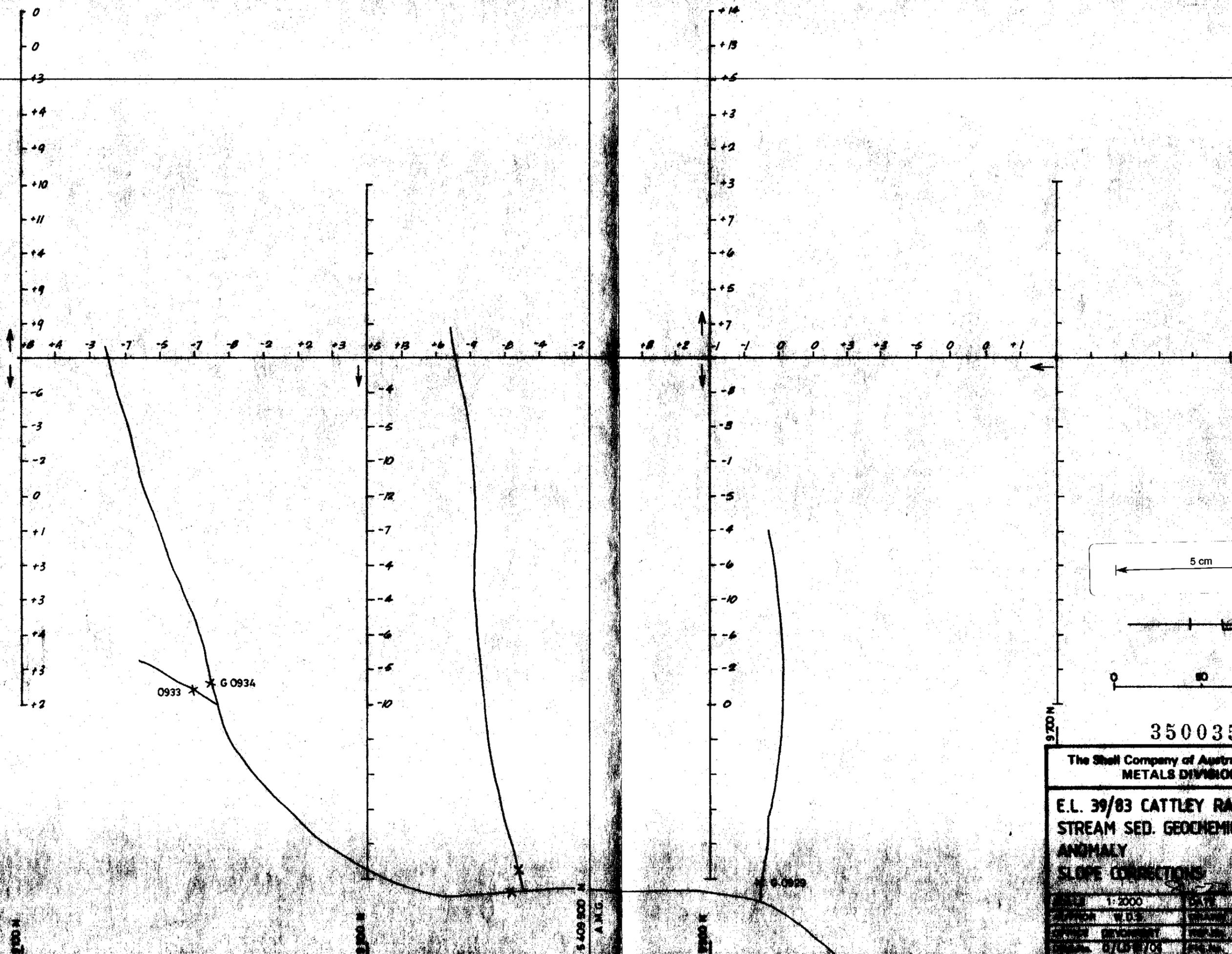
E.L. 39/83 CATTLEY RANGE
GEOLOGY

033

84-2210

SCALE 1:10000	DATE 10-2-84
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No. 0/LD51/011

403500 E
A.M.G.

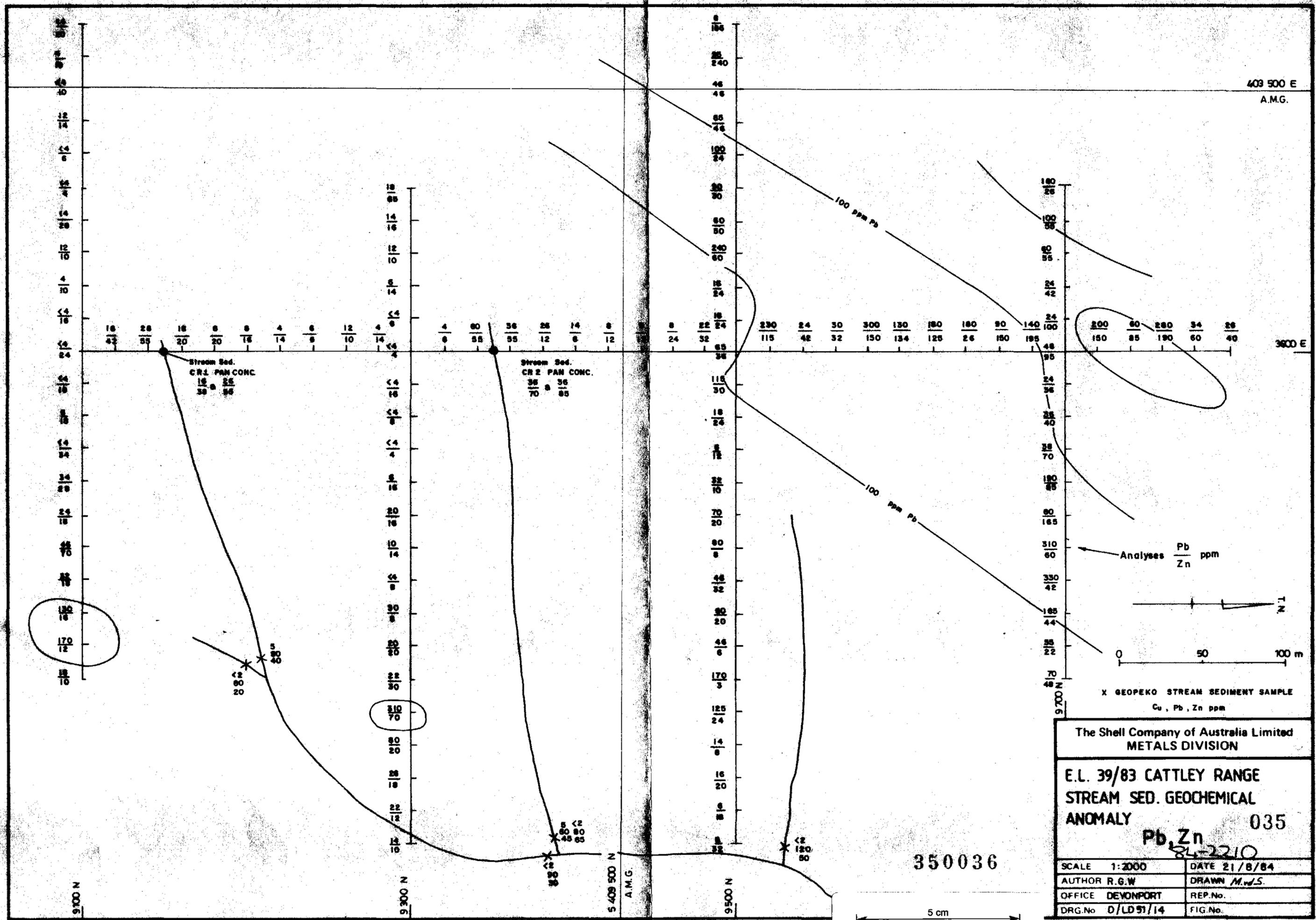


350035

The Shell Company of Australia Limited
METALS DIVISION
E.L. 39/83 CATTLEY RANGE
STREAM SED. GEOCHEMICAL
ANOMALY 034
SLOPE CORRECTIONS
SCALE 1:2000
DATE 1983
BY W.D.S.
DRAWN BY W.D.S.
CHECKED BY W.D.S.

409 500 E
A.M.G.

3000 E



The Shell Company of Australia Limited
METALS DIVISION

E.L. 39/83 CATTLEY RANGE
STREAM SED. GEOCHEMICAL
ANOMALY 035

Pb, Zn 84-2210

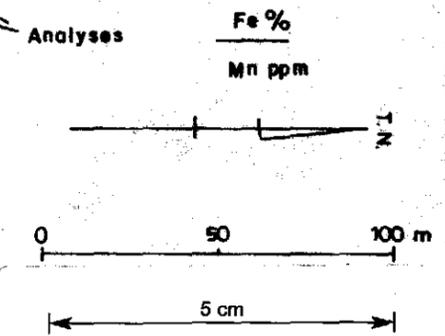
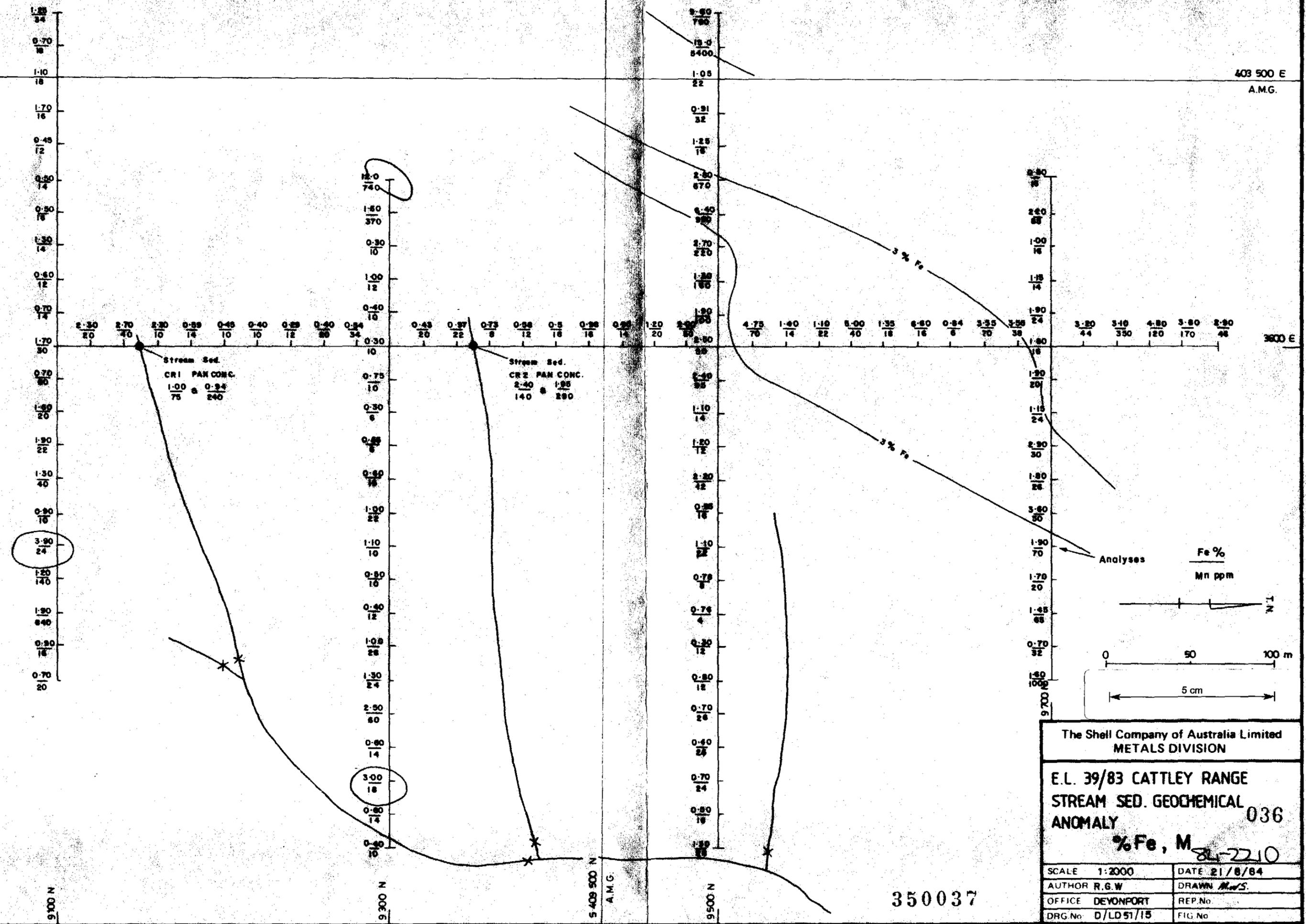
SCALE 1:2000	DATE 21/8/84
AUTHOR R.G.W	DRAWN M.v.S.
OFFICE DEVONPORT	REP.No.
DRG.No D/LD91/14	FIG.No.

350036

5 cm

403 500 E
A.M.G.

3600 E



The Shell Company of Australia Limited
METALS DIVISION

E.L. 39/83 CATTLEY RANGE
STREAM SED. GEOCHEMICAL
ANOMALY 036

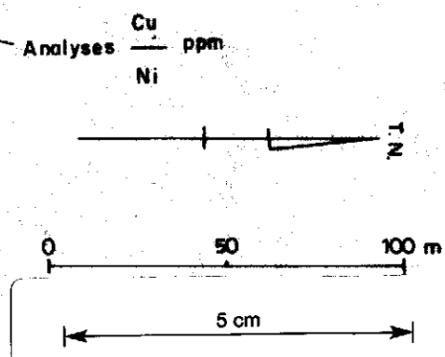
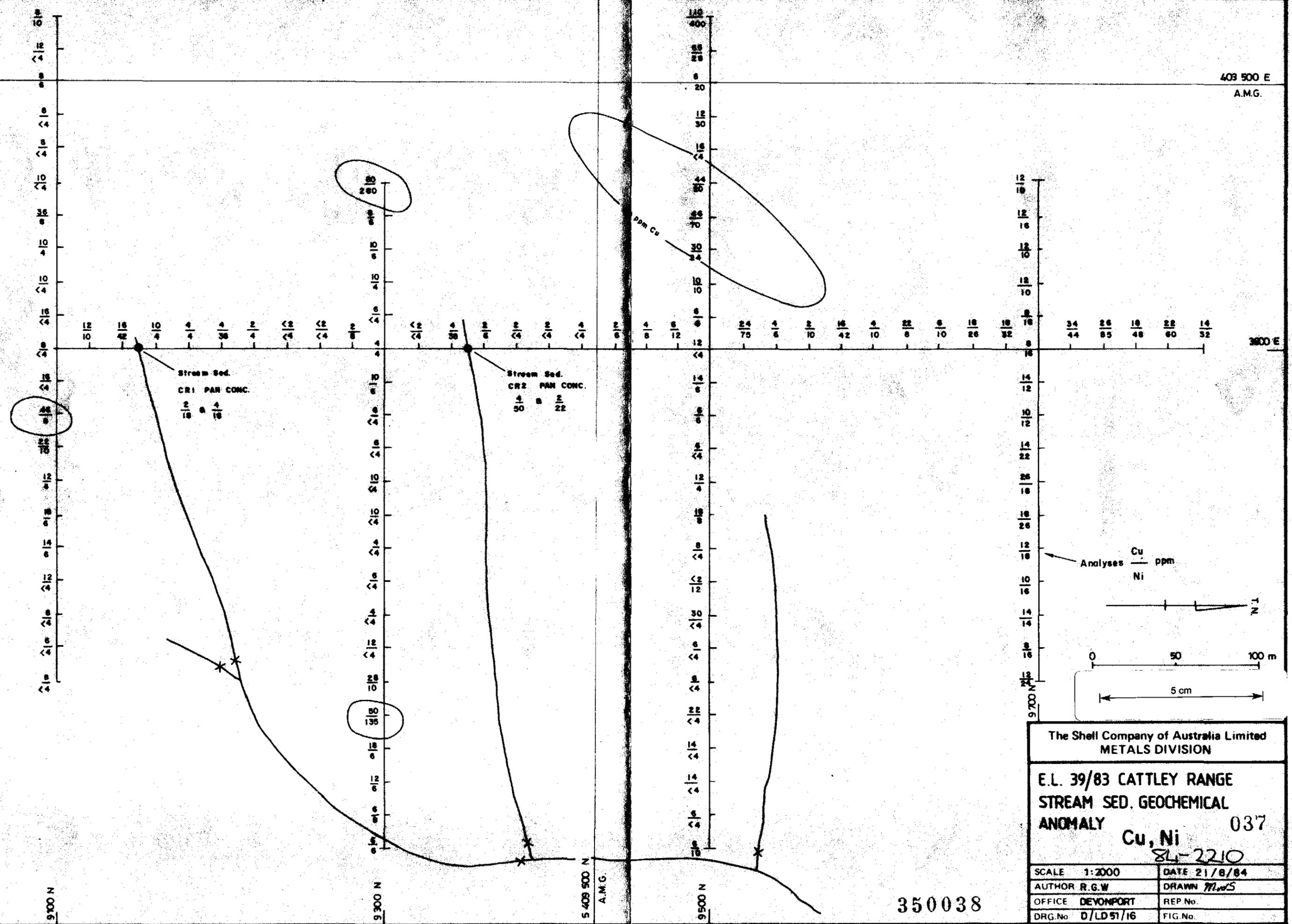
%Fe, Mn 21-2210

SCALE 1:2000	DATE 21/8/84
AUTHOR R.G.W	DRAWN M.S.
OFFICE DEVONPORT	REP.No.
DRG.No. D/LD51/15	FIG No.

350037

403 500 E
A.M.G.

3800 E



The Shell Company of Australia Limited METALS DIVISION	
E.L. 39/83 CATTLEY RANGE STREAM SED. GEOCHEMICAL ANOMALY 037	
Cu, Ni 84-2210	
SCALE 1:2000	DATE 21/6/84
AUTHOR R.G.W	DRAWN M.W.S
OFFICE DEVONPORT	REP No.
DRG.No D/LD51/16	FIG.No.

350038