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GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LIMITED

A JOINT VENTURE BETWEEN PEKO-WALLSEND OPERATIONS LIMITED AND
PENNZOIL AUSTRALIA LIMITED.

PROGRESS REPORT ON E.L. 24/73 to DECEMBER 1979.

by

R.R. LARGE and W. HERRMANN

OPEN FILE

MICROFILMED

DEVONPORT

JULY, 1980.

AMG REFERENCE POINTS ADDED

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INTRODUCTION

Exploration Licence 24/73 of 106sq km covers a sequence of Cambrian sediments and volcanics which form the Dial Range Trough situated to the south of Penguin in Northern Tasmania (figure 1).

In the period 1974 to 1978 Pennzoil investigated a number of prospects within the E.L., concentrating most of their activity in the area of the Dial Copper Mine. A number of copper geochemical and I.P. targets were defined on a grid covering the area and tested by a programme of six drill holes.

In September 1978 a Joint Venture was signed between Peko-Wallsend Operations Limited and Pennzoil Australia Limited whereby Peko acquired a 52 percent interest upon the expenditure of \$136,533 within three years.

This report deals with the exploration activities by Geopeko in E.L. 24/73 between December 1978 and December 1979.

SUMMARY AND CONCLUSIONS

1. Initial investigations by Geopeko indicate good potential for tin mineralization associated with pyritic horizons in the Cateena Group of the Dial Range Trough.
2. The mineralization maybe of volcanogenic or sedimentary origin and occurs within the lower most member of the Cateena Group overlying the Lobster Creek Volcanic of Lower Cambrian age.
3. Detailed prospect evaluation on the Dial Mine Grid has revealed a number of soil tin anomalies with encouraging geophysical responses.
4. Five tin-sulphide targets have emerged which require drill testing.
5. Further tin mineralization has been recorded in pyritic breccias 1-2km south of the Dial Mine Grid (Venture 4).
6. Regional reconnaissance of old prospects within the E.L. has revealed significant Pb-Zn stream anomalies draining from the area of Badger's workings.

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RECOMMENDATIONS

1. Further geophysics be carried out over the five target areas on the Dial Mine Grid to aid in targeting of drill holes.

2. The five targets be tested with at least one drill hole each. A percussion/diamond combination would be most suitable.
Total expected drilling is 400 metres percussion and 500 metres diamond drilling.

3. Regional panned concentrate drainage sampling be carried out to test for tin mineralization along the eastern contact of the Lobster Creek Volcanics.

4. Preliminary follow-up work be carried out over the mineralized breccias south of Dial Mine (Venture 4) and the Pb-Zn stream anomalies near the Badgers Prospect (Venture 3).

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1 2 3 4 5 6 KM

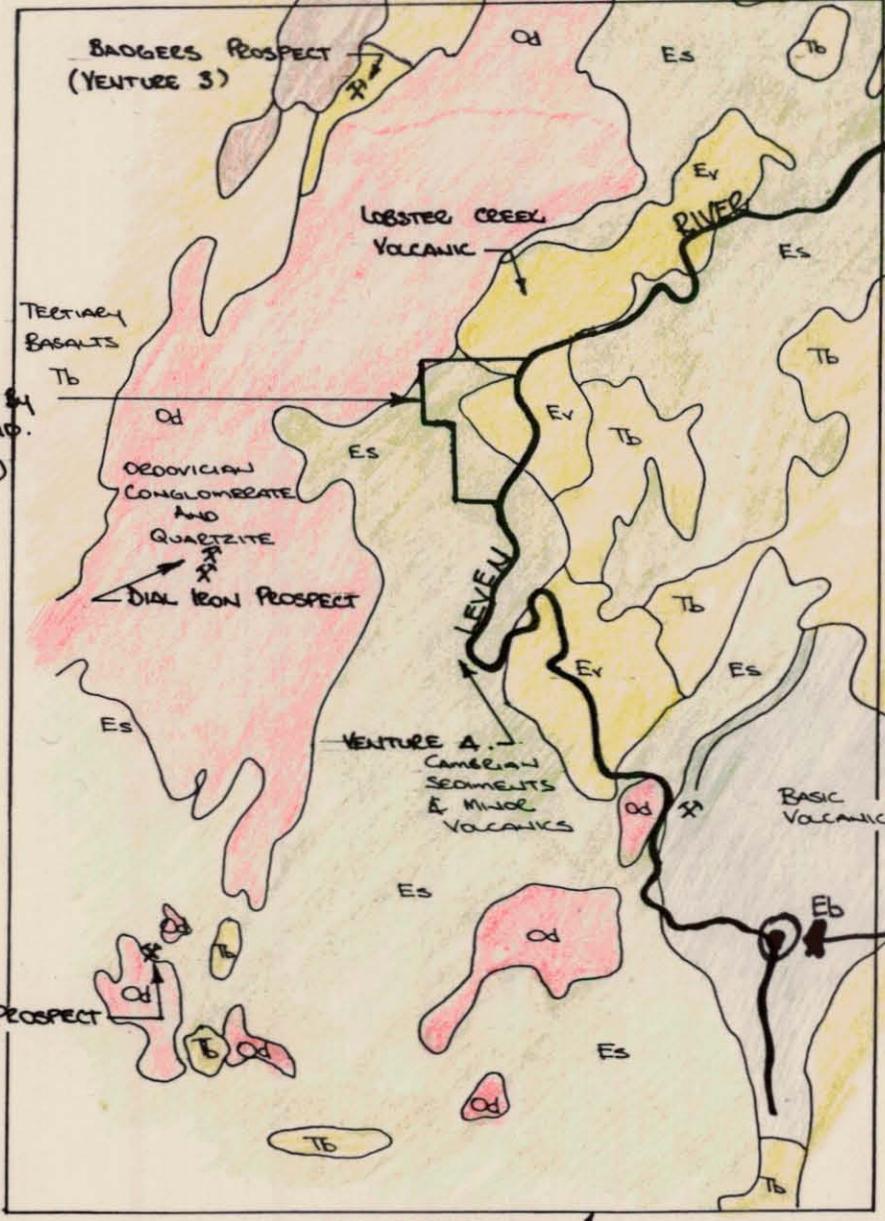
SCALE 1 : 90 500

5 cm

AMG
425900E
5447700N

AMG REFERENCE POINTS ADDED

AREA COVERED BY
DIAL MINE GRID.
(VENTURES 1+2)



AMG
422700E
5436800N

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LEGEND:

- Tb TERTIARY BASALT. Eb BASIC VOLCANICS
- Od ORDOVICIAN CONGLOMERATE AND QUARTZITE.
- Es EV CAMBRIAN SEDIMENT, MINOR VOLCANICS
- Pe PRECAMBRIAN SEDIMENT.



DATE:
GEOL:
DWN:
CHKD:

GEOPEKO LIMITED
DEVONPORT, TASMANIA.

Scale: _____

NO TS 24/73

FIG 1: SIMPLIFIED GEOLOGY
FROM BURNS. (1964)
PROSPECT LOCATION DIAGRAM.
E.L. 24/73 DIAL RANGE, TASMANIA.

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REGIONAL GEOLOGY

Geology of the Dial Range Trough is described in detail by Burns (1964). The trough comprises a number of units of volcanics interbedded with major accumulations of sediments. Tectonic activity during the development of the trough has caused impersistence of rock units and led to the development of major sedimentary slumps.

The main rock units listed by Burns (1964) are given below;

	Thickness (m)
Beecraft megebreccia and correlates	150m
Radfords Creek Group (mudstone, sandstone conglomerate and volcanics)	250m+
-----Disconformity?-----	
Motton spilite	0-530m
Barrington Chert	80-850+m
-----Unconformity-----	
Cateena Group (mudstone, sandstone, acid to intermediate volcanics)	1100+m
-----Disconformity?-----	
Lobster Creek Volcanics	300m

Investigations by Geopeko have concentrated on the Lobster Creek Volcanics and the lower members of the Cateena Group.

PREVIOUS WORK BY PENNZOIL

Work by Pennzoil in the period 1974-1978 is outlined in reports by Graham (1975) and Chapman (1976, 1977). In brief, Pennzoil concentrated their efforts in the area of the Dial Copper Mine. This work included gridding, geological mapping, B-horizon soil geochemistry, magnetics, gradient

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array I.P., plus magnetic I.P. and vertical loop E.M. on selected lines. Copper soil anomalies and I.P. anomalies were defined over gossanous sediment breccias within a lower unit of the Cateena Group. These anomalies were subsequently tested by six drill holes. The results indicated minor mineralization within pyrite-rich sediment breccias and tuffaceous horizons. The best grades were 0.43% Cu over 8.4m (75.5-83.9m) in D.D.H. 3 and 0.37% Cu over 5m (113-118m) in D.D.H. 4.

INITIAL INVESTIGATIONS BY GEOPEKO

Petrographic descriptions of selected core samples from the Pennzoil drill holes (see appendix 1) indicated the widespread occurrence of fine grained tourmaline, both within the Lobster Creek Volcanics and adjacent Cateena Group sediments, and suggested the possibility of tin mineralization within the area. A number of mineralized samples were collected from the core and analysed for tin with significant results listed below;

XRF Scans (Geopeko Lab-Gordon)

Sample No.	Sn	Zn	Cu	D.D.H.	metres
KR 2953	500	10	(20	6	154
KR 2954	5000	1000	40	6	151
KR 2955	20	50	20	6	170
KR 2944	50	50	2500	3	42

All mineralized intersections from the Pennzoil drill holes were subsequently split into quarter core and assayed for Sn, W, Mo, Cu, Pb, Zn, Ag, Mn, Bi and Fe. Results are given in appendix II.

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Tin values were seen to show a rough correlation with copper, exhibiting a variation from less than 20ppm Sn up to 400ppm. The most anomalous values occur in the gossanous sediment breccias as shown below.

Table 1: Variation in tin content of major lithologies in Pennzoil's drill holes.

Lithology	Sn range ppm	Sn average ppm (approx.)
Mudstones, siltstones, greywackes and tuffaceous sediments	20 to 47	25
Argillised tuffs	20 to 100	60
Pyritic sediment breccias and gossanous breccias	40 to 440	150
Lobster Creek volcanics D.D.H. 6 only	all 20	(20

Although no economic tin grades were revealed the results were encouraging as they indicated the prescence of elevated tin values within particular mineralized horizons toward the base of the Cateena Group. Previous experience indicates that the major tin-sulphide occurences in Tasmania (e.g. Cleveland and Renison Bell) have a halo of elevated tin values in the country rocks surrounding the deposit. Therefore the pattern of tin distribution in the Dial Mine area may indicate proximity to a major tin-sulphide orebody.

REGIONAL GEOCHEMISTRY

Following on from the recognition of the central portion of the Dial Range Trough as a potential environment for tin mineralization a preliminary panned concentrate stream sediment survey was undertaken to sample all streams draining east into the Leven River and cutting the contact of the Lobster Creek Volcanics and the Cateena Group. Twenty seven samples were collected and analysed for Sn, W and Au. Minus 80 mesh samples were collected from most of the streams (20 out of 27) and were analysed for Cu, Pb and Zn. The results are plotted on plans TS 24/73/5 to 8. Anomalous values for Sn ranging from 115 to 1600ppm were recorded in ten streams, extending from east of Mt. Duncan to just north of Keddies Creek. The most anomalous value, 1600ppm Sn, was recorded in Stanton Creek which drains the Dial Mine area, and confirmed this as the most potential zone for tin mineralization. A value of 620ppm Cu was recorded in the minus 80 mesh fraction from the same locality.

DIAL MINE GRID (Venture 1 and 2)

The south-eastern portion of the Dial Mine Grid of Pennzoil was re-established and has been designated Venture 2. A further eight kilometres of grid was cut to the north covering the Western contact of the Lobster Creek Volcanics and the northward strike extent of the pyritic gossanous breccias within the Cateena Group. The latter extension is designated Venture 1.

The following investigations have been carried out on the total grid area;

1. Detailed geological mapping (plans TS 24/73-9 and TS 24/73-10)
2. B/C horizon soil geochemistry (plans TS 24/73-11 to 15)

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3. Magnetics (plan 4714 S/B).
 4. Self potential (plan 4722 S/B).
 5. V.L.F.-E.M. (plan 5118 S/B).

A further seven in-fill grid lines were placed over four anomalous zones with coverage by S.P. and V.L.F.-E.M.

Grid Geology

Outcrops on the grid is fair to good and allows the distinction of a number of rock units, which are described in detail below.

Lobster Creek Volcanics:

Outcrops on the eastern side of the grid and on the western banks of the Leven River. The unit forms massive grey to pink outcrops having a medium grained homogeneous texture composed of euhedral plagioclase (altered to clay/sericite) and hornblende + biotite (altered to chlorite) phenocrysts plus small quartz phenocrysts dispersed in a microcrystalline ground mass of quartz and feldspar. Very fine grained clusters of tourmaline occur throughout particularly near the margins of the unit.

Smith (1899) described the unit as a syenite while Twelvetrees (1903) suggested it to be an intrusion related to the Devonian Husetop Granite (see Burns, 1964). Samples sent to Mr. Ian Pontifex were described as 'micro porphyritic granodiorite' and 'micro porphyritic tonalite (see appendix 1). Burns (1964) considers the unit.....

"may be a laccolith or diapiric igneous intrusion but the lack of alteration in the Cateena Group makes this unlikely".

On the Dial Grid the western contact of the Lobster Creek Volcanics is cut by a major fault with apparent movement of the southern block 450m west. However the north-west trending contacts of the unit on either side of the fault appear conformable with the overlying Cateena Group sediments. It is the writers opinion that the Lobster Creek Volcanic unit is a sub volcanic intrusive/extrusive body varying from micro-granodiorite to dacite. On the Dial Grid the unit takes the form of a massive dome-like extrusive possibly situated above a Cambrian intrusive body at the centre of the Dial Range Trough.

Much of the Lobster Creek Volcanics outcropping on the grid are strongly altered with complete replacement of feldspars by clays and sericite and biotite/hornblende by chlorite. Vuggy quartz veins carrying minor pyrite occur within the most intensely altered zones. These veined and altered zones (see map TS 24/73-10) are considered to represent hydrothermal channel-ways for mineralising solutions which permeated up through the Lobster Creek Unit and into the overlying Cateena Group.

Cateena Group:

Consists dominantly of fine to coarse sediments and sedimentary breccias with minor horizons of dacitic to rhyolitic volcanics. The major lithologies outcropping on the grid are;

Mudstones; vary from cream, brown through pink to purple colours. The pink varieties are finely laminated.

Sandstones: dominantly massive grey units interbedded with minor greywackes. Some of the greywackes may be tuffaceous.

Sediment breccias: poorly bedded breccias composed of mudstone, sandstone and chert fragments in an argillaceous matrix. Maybe brown, cream or pink in colour.

Dacitic crystal tuffs: resemble the Lobster Creek Volcanics but are finer grained with a tuffaceous texture.

Gossanous and pyritic breccias: brown to red iron-rich breccias, extremely weathered and oxidized with a porous texture at the surface. Pyrite which is almost completely replaced by limonite and goethite varies from 5 to 30%.

The pyrite occurs both within the fragments and in the matrix of the breccias. The fragments are typically angular, from 2mm upto 50mm across and composed of chert, mudstone, sandstone and massive pyrite. Rough bedding is seen in some outcrops and interbeds of fine green to grey pyritic cherts are present in places.

The best exposure of fresh pyritic breccias occurs in the Keddies adit on Dial Creek. The adit bearing 190° magnetic cuts through the Lobster Creek Volcanics and into the pyritic breccias (see figure 3). About 35 metres of pyritic breccias are exposed. A massive pyrite band about 1.5m wide with 30-60% pyrite and minor chalcopyrite occurs 22 metres from the contact with the volcanics, and strikes parallel to that contact.



ACTUAL SCALE

Figure 2: Textures in the sulphide breccias from Keddies Adit.

 Massive pyrite fragments

 disseminated pyritic fragments

 black chert fragments

 rhyolite-chert fragments

 laminated pyrite-quartz-argillite matrix

The evidence available strongly suggests these mineralized breccias are of sedimentary rather than late tectonic origin. The textures displayed by fresh pyritic breccias from Keddies adit (see figure 2) indicate that much of the pyrite composing the breccia fragments is syngenetic in nature and has been disrupted, brecciated and redeposited during periods of soft sediment slumping.

Structure:

The Cateena Group sediments and tuffs are folded in a synclinal structure which passes through the centre of the grid about 200-400m west of the Lobster Creek Volcanic contact.

The major E.N.E. trending fault which displaces the Lobster Creek Volcanic contact does not appear to be cutting the synclinal structure in fact the Cateena Group lithologies can be traced across the fault without marked displacement. This suggests that the fault is an early structure which developed during the deposition of basal units of the Cateena Group onto the Lobster Creek Volcanics.

Sediment slumping during movement along the fault may have contributed to the development of the sediment breccias which constitute much of the basal part of the Cateena Group.

Soil Geochemistry

A programme of hand auger geochemical soil sampling was conducted over the entire grid with samples taken at 25m intervals along each line and the minus 80 mesh fraction analysed for Sn, W, Cu, Pb, Zn.

An orientation pit was hand dug to 1.0 metre at 2300N, 1850E to investigate the grain size and optimum sampling depth for Sn evaluation on the grid. Duplicate channel samples were taken at regular intervals down the pit and analysed for total sample and the -80 mesh fraction as follows:

A. Total Sample Analysis

<u>Sample No</u>	<u>Depth</u>	<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Sn</u> <u>ppm</u>	<u>W</u> <u>ppm</u>
KR 4023	0.1-0.4m	200	20	10	1100	30
KR 4025	0.4-0.7m	240	30	5	500	(5
KR 4027	0.7-1.0m	290	25	5	385	(5

B. -80 Mesh Analysis

<u>Sample No</u>	<u>Depth</u>	<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Sn</u> <u>ppm</u>	<u>W</u> <u>ppm</u>
KR 4022	0.1-0.4m	240	25	25	390	15
KR 4024	0.4-0.7m	250	20	10	400	30
KR 4026	0.7-1.0m	290	20	5	420	30

C. Panned Concentrate Sample

<u>Sample No</u>	<u>Depth</u>	<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Sn</u> <u>ppm</u>	<u>W</u> <u>ppm</u>
KR 4028	1.0m	330	40	10	6000	120

This orientation has shown that although a 0.1-0.4m depth, total sample analysis, will highlight the Sn values, the standard -80 mesh fraction analysis will give adequate character to all elements analysed for anomaly definition.

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Analytical results from the sampling on the grid are given in appendix IV and plotted on plans (TS 24/73-11 to 15). A summary of the significant geochemical features is given below:

Tin: Background tin values range from less than 5ppm to 20ppm with anomalous values from 20 to a maximum of 1300ppm. Three significant anomalies have been revealed over the Cateena Group.

	Centre	Area)200ppm Sn
Anomaly 1	2400N, 1725E	100mx250m
Anomaly 2	2000N, 1725E	30mx400m
Anomaly 3	2700N, 2200E	50mx150m

Anomaly 1 and 2 are aligned along strike and are over a sequence of gossanous pyritic sediment breccias. Anomaly 3 also occurs over pyritic breccias, in a wedge bounded on the west by the conformable contact of the Lobster Creek Volcanics and to the south by the faulted contact of the same volcanics.

Elevated levels of tin from 20 to 90ppm also occur over the altered sections of the Lobster Creek Volcanic body but no coherent anomalies are revealed.

Tungsten: Soil values are typically less than 10ppm. A low order anomaly with values from 20 to 60ppm is coincident with tin anomaly 1.

Copper: Background values of copper over both the Cateena Group and Lobster Creek Volcanic body vary from 10 to 80ppm with anomalous values from 80 to 1600ppm. Poorly defined copper anomalies are associated with the tin anomalies 1 and 2. However the maximum

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concentration of copper occurs on line 2095N, over the copper anomaly previously defined and tested by Pennzoil. This area was not covered by the present sampling.

Zinc: Background values vary from 2 to 20ppm with weakly anomalous values up to 125ppm concentrated in a narrow zone adjacent to the conformable contact of the Lobster Creek Volcanic body.

Lead: Shows a similar distribution to zinc, being concentrated in the Cateena Group adjacent to the Lobster Creek Volcanic body and forming poorly defined halos around tin anomalies 1 and 2.

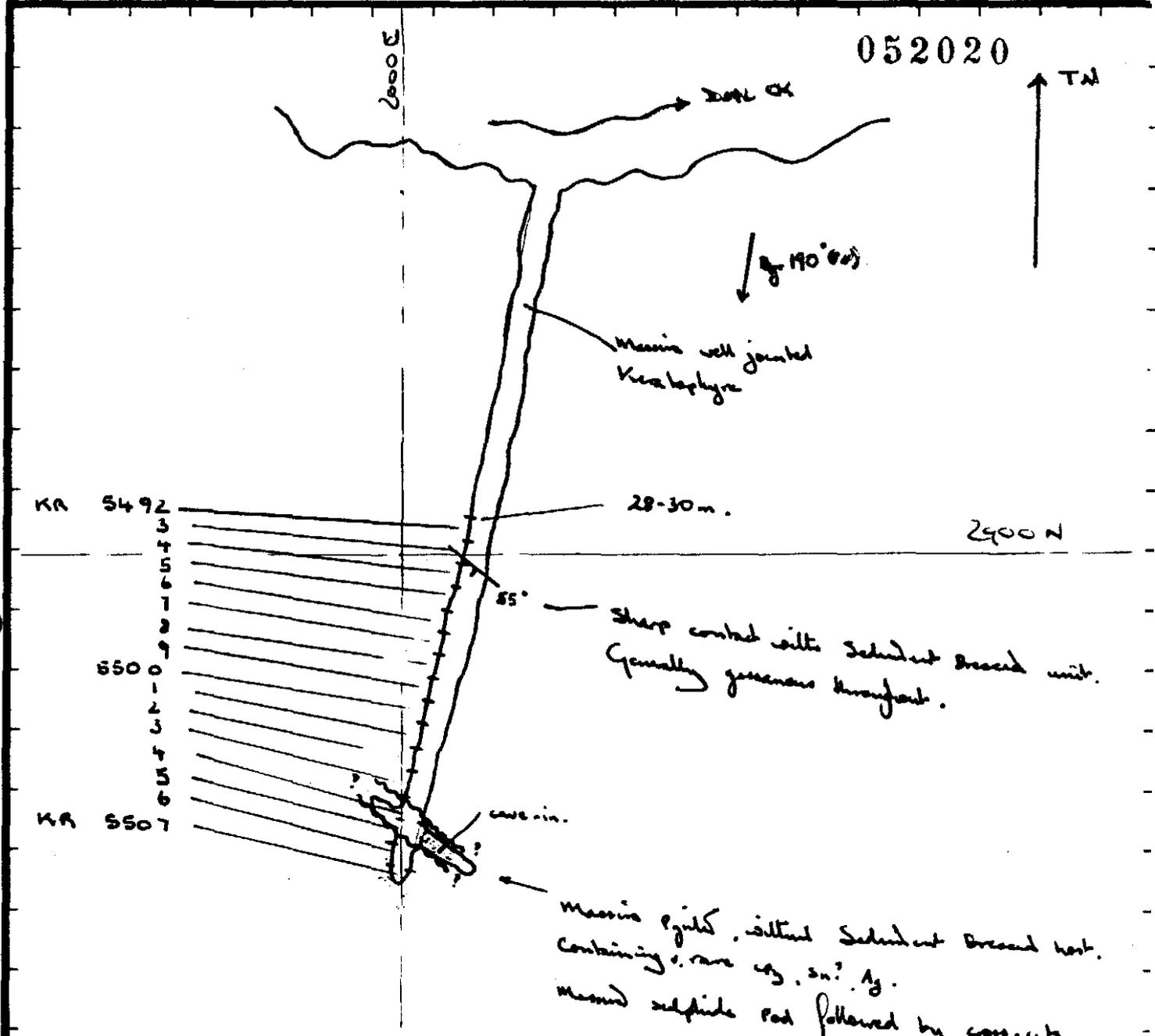
Rock Geochemistry

Three adits were inspected in the grid area and rock chip samples taken where possible.

1. Keddie's Adit (2930N, 2012E) - The western wall of the adit was sampled over 2m intervals through the pyritic breccias.
Results are shown in figure 3.
2. Davies Adit (approx 2530N, 2675E) - driven into the Lobster Creek Volcanics with no visible mineralization. (fig 4).
3. Dial Mine Adit (2000N, 2025E) - driven to intersect the contact of the Lobster Creek Volcanic body and the pyritic breccias (fig. 5). The adit was too dangerous to sample, however a surface gossan sample of the pyritic breccias was taken (KR 5099).

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SAMPLE NO.	CU PPM	PB PPM	ZN PPM	SN PPM	W PPM	AU PPE
5492	115	20	35	65	-10	5
93	165	20	35	-5	-10	5
94	50	20	65	-5	-10	15
95	30	25	60	-5	-10	5
96	40	20	95	-5	-10	5
97	20	15	90	45	-10	3
98	25	25	65	25	-10	3
99	50	20	60	15	-10	5
5500	85	20	75	5	-10	10
01	25	20	75	5	-10	5
02	20	20	50	15	-10	5
03	60	20	30	10	-10	15
04	85	30	45	120	-10	10
05	300	35	35	145	-10	15
06	130	25	75	315	-10	5
07	40	30	65	10	-10	3

FIG. 3.

LEGEND: Location: (See 1:10000 Geology).

GEOPEKO LIMITED
KING ISLAND

Scale: 1:500

No K

DATE: 20879

GEOL: CDS

DWN: CDS

CHKD:

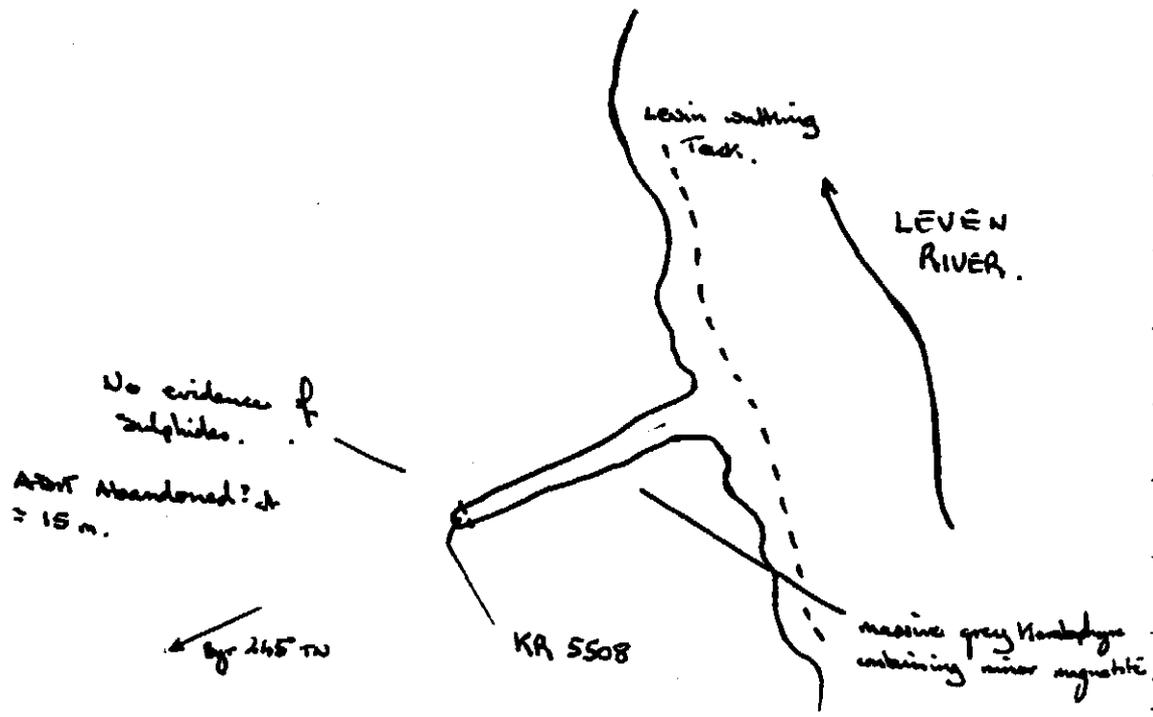
DIAL RANGE.

KEDDIES ADIT.

GEOCHEMICAL SAMPLING.

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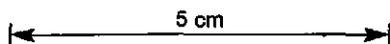
SAMPLE NO.	CU PPM	PB PPM	ZN PPM	SN PPM	W PPM	AU PPB
KA 5508	15	30	50	5	-10	10

FIG. 4

LEGEND:

-
-
-
-

Location: (see 1:10000 Geology)



DATE: 20.8.74
 GEOL: CDJ
 DWN: CDJ
 CHKD:

GEOPEKO LIMITED
KING ISLAND

Scale: 1:500

NO K

DIAL RANGE
 DAVIES ADIT.
 GEOCHEMICAL SAMPLING.

021

052022

T.N. ↑

SAMPLE NO.	CU PPM	PB PPM	ZN PPM	SN PPM	W PPM	AU PPB
KR5099	980	280	195	45	-10	120

Surface gossan sampled
over 3 metres (N-S)
(KR 5099)

approx contact

2025 E

2050 E

2000 N LINE.

Ox minor goss
Schistose breccia present
Minor Mn/Fe oxides visible
No massive sulphides intersected

= Dip 262°

Highly oxidized.

Dangerous Adit!

Numerous slumps present in
day rich keratophyre.

No geochemical samples taken.

Adit does not intersect massive gossans
visible at surface on line 2000 N.

1000 E BASE LINE.
DIAL MINE GRID.

FIG. 5

LEGEND:

5 cm

GEOPEKO LIMITED
KING ISLAND

Scale: 1:500

NR K

DIAL MINE GRID
ADIT @ 2000 N / 2025 E
GEOCHEMICAL SAMPLING.

DATE: 20.8.78
GEOL: UG
DWN: UG
CHKD:

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Results of the sampling at Keddie's adit show mildly anomalous values of tin (120-315ppm Sn) in the massive pyritic, breccias at the end of the adit.

Three samples of gossanous and hematitic breccias were taken from outcrops on the western bank of the Leven River about 1.3km south of the Dial Mine Grid. This is designated Venture 4. The results are listed below, and sample positions shown on plan TS 24/73-3.

<u>Sample Number</u>	<u>Cu</u> ppm	<u>Pb</u> ppm	<u>Zn</u> ppm	<u>Sn</u> ppm	<u>W</u> ppm	<u>Au</u> ppb	<u>Rock type</u>
KR 5510	35	20	15	0.26%	-10	5	gossanous breccia
KR 5511	25	20	35	70	-10	10	gossanous breccia
KR 5512	20	15	20	360	-10	10	massive hematite

Further follow up work is required to evaluate the gossanous outcrops at this locality.

Magnetic Survey:

A Geometrics G816 magnetometer was employed, with stations 12.5m apart along each of the grid lines. Contours for the total magnetic field intensity are shown in plan TS 4722 S/B.

Broad magnetic anomalies up to 400 nT above background occur over the Lobster Creek Volcanics and are probably caused by fine disseminated magnetite dispersed in the volcanics.

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A sharply defined 500nT anomaly is coincident with tin anomaly 2 on the northern end of the grid and is open to the north. This may reflect magnetite or pyrrhotite mineralization associated with the tin anomaly.

A weak linear NW trending magnetic low occurs over tin anomaly 1, whilst tin anomaly 3 shows no magnetic expression.

Self Potential Survey:

Measurements were taken with a Fluke 8020A meter on all lines, with readings 25m apart. The S.P. contours are shown on plan 4722S/B. No corrections have been made for topography.

A broad minus 140mV anomaly is situated in the north-east corner of the grid over the Lobster Creek Volcanic body and extending across the major fault which cuts the body. A smaller minus 60mV anomaly forms a shoulder on the eastern side of the major anomaly, and is coincident with tin anomaly 3.

A second broad anomaly is developed west of tin anomaly 1, and appears to trend down towards the area of mineralization tested by Pennzoil in D.D.H. 1,2,3 and 5.

Two sharp narrow anomalies are developed on lines 2000N and 1900N, adjacent to the contact of the Lobster Creek Volcanic and along strike to the south of the massive pyritic mineralization intersected in Pennzoil's D.D.H. 4.

Very low Frequency - E.M.

A V.L.F.-E.M. survey was conducted over the entire grid. The survey was aimed at defining conductive zones which relate to massive sulphide accumulations.

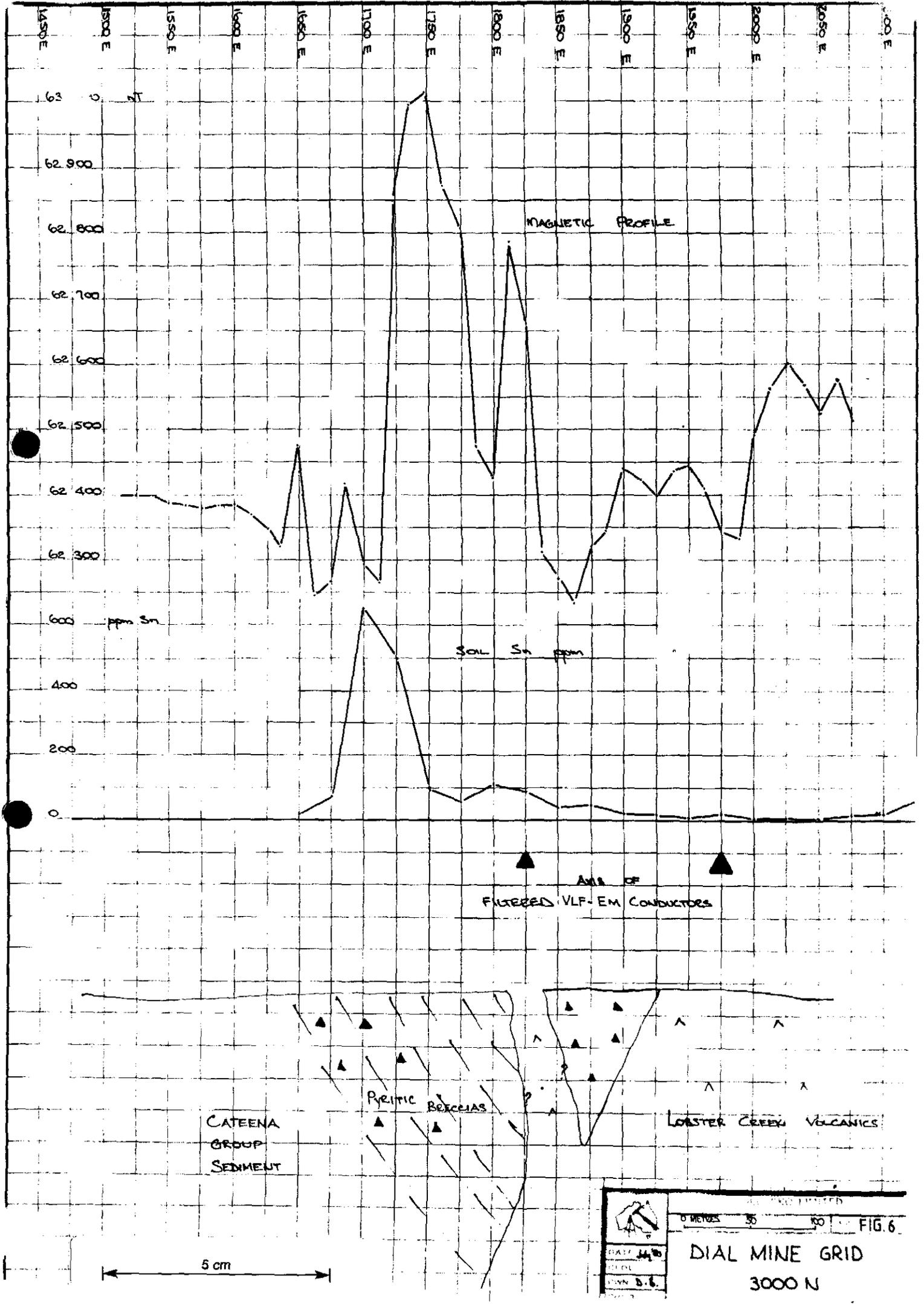
A Geonics E.M. 16 V.L.F. receiver was used in conjunction with the signal from the North West Cape (NWC) transmitter. Readings were taken at 25 metre intervals. Profiles of 4726S/B vertical in-phase and quadrature components are shown in plan. Plotting of the profiles is such that an easterly dip of the in-phase component indicates the presence of a conductor. The in-phase profiles have been filtered in accordance with the method outlined by Fraser (1969). This filtering process phase shifts the profiles (as well as noise filtering) to produce a positive high at the point of maximum easterly dip. This positive high is a contourable parameter and is shown in plan 5118S/B.

A series of narrow linear anomalous zones, striking north west across the grid are apparent from the contour plan. Some of these anomalies probably relate to rock contacts. For example the anomaly extending from 2300N, 2000E to 1900N, 2250E is directly over the contact between the Lobster Creek Volcanics and the Cateena Group.

The previous drilling by Pennzoil indicated the depth of oxidation in this area varies from 80 to 120 metres, and is considerably greater than normal for Tasmanian conditions. With this in mind, it is considered likely that the V.L.F.-E.M. anomalies defined on the grid relate to near surface geological features and that this survey may not be in touch with the sulphide zones at depth.

025

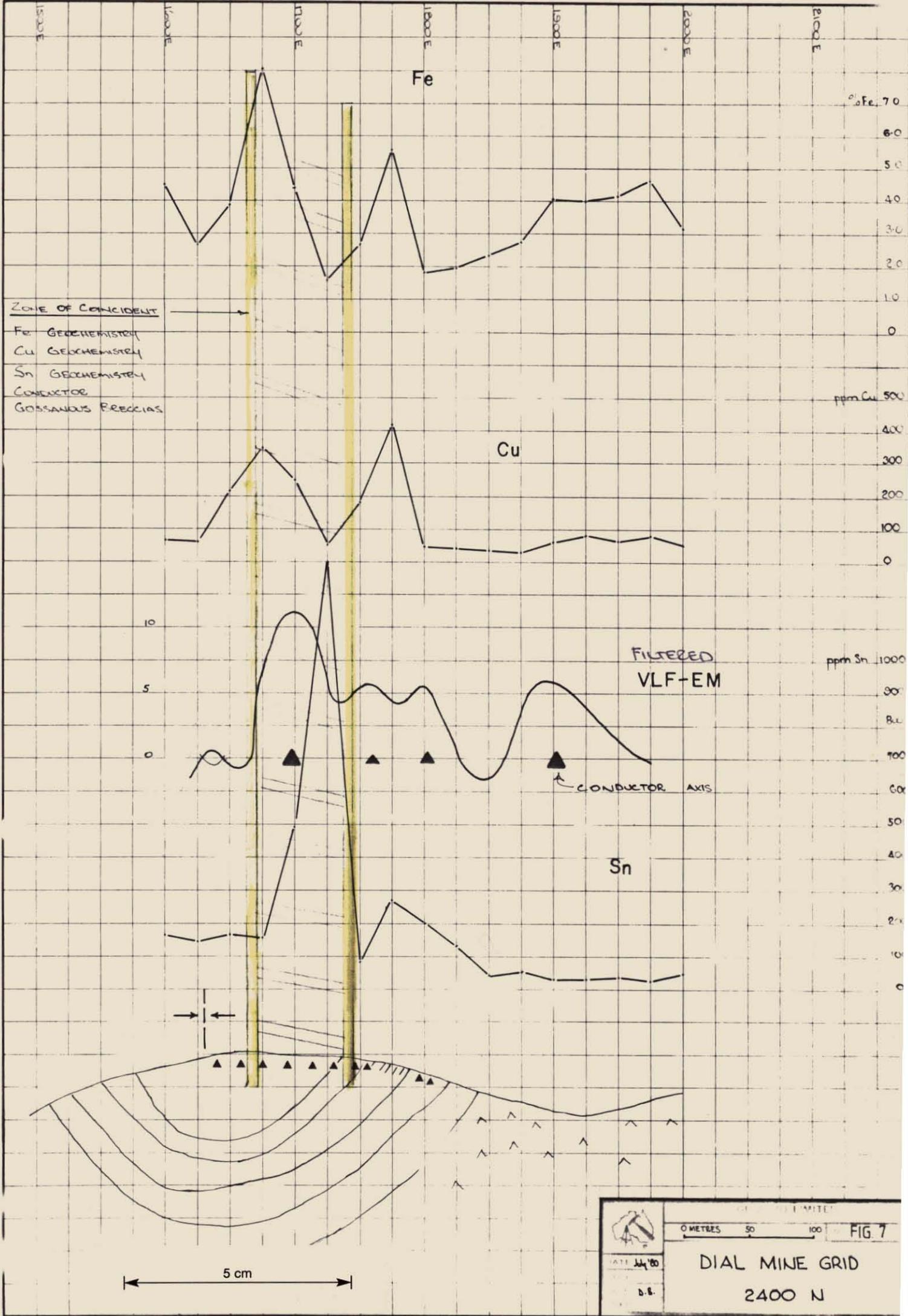
052026



	Scale 0 METERS 50 100		FIG. 6
	DIAL MINE GRID		
	3000 N		
	TOWN D. 6.		

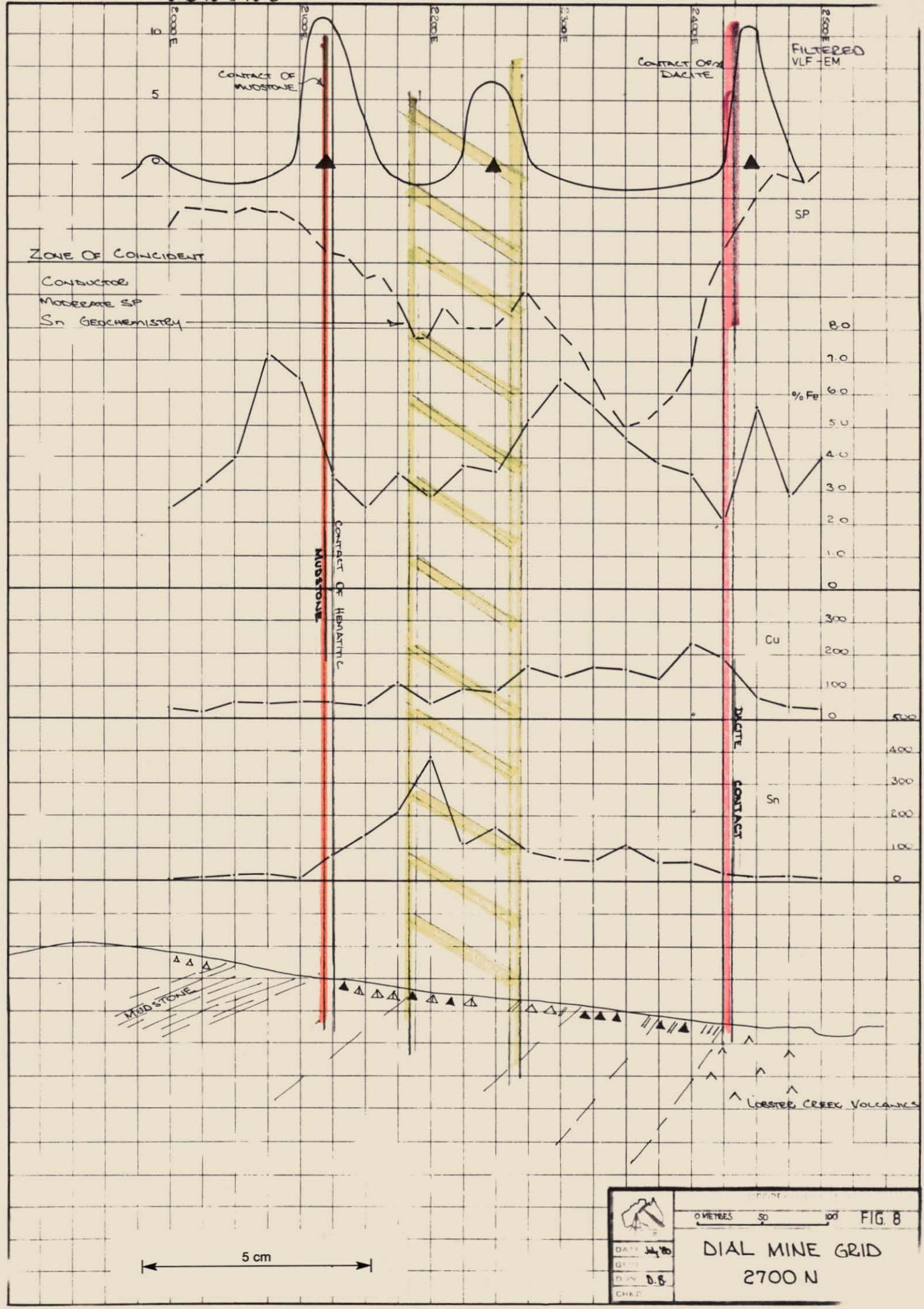
026

052027



021

052028



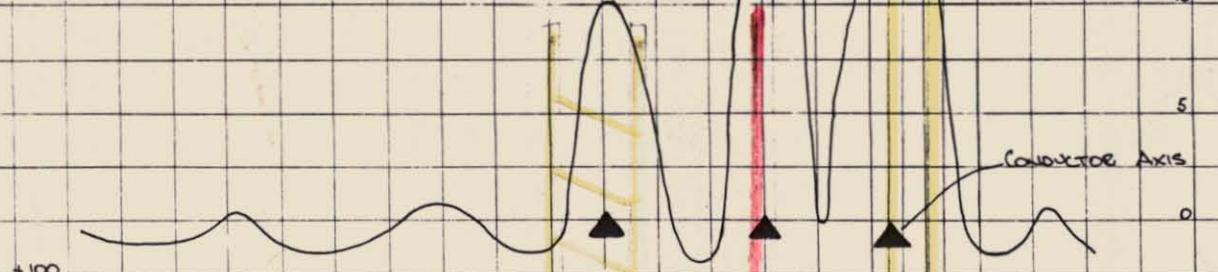
	0 METRES	50	100	FIG 8
	DIAL MINE GRID			
	2700 N			
	DATE	July 80		
GRID				
DRAWN	D.B.			
CHECK				

028

052029

20

FILTERED
VLF-EM



+100
+80
+60
+40
+20
0
-20
-40
-60
-80
-100
-120

S.P.
M.V.

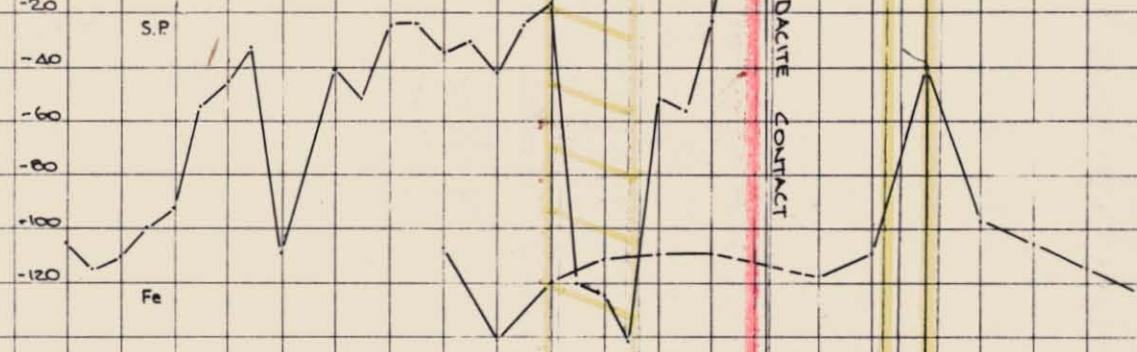
ZONE OF CONDUCTIVITY

CONDUCTOR
GOOD S.P.
OLD WORKINGS
PYRITIC BRECCIA OUTCROPS

ZONE OF CONDUCTIVITY

CONDUCTOR
MILD S.P.
Fe RICH
Sn BEARING } PROBABLE
PYRITIC VEIN
IN THE DACTYL

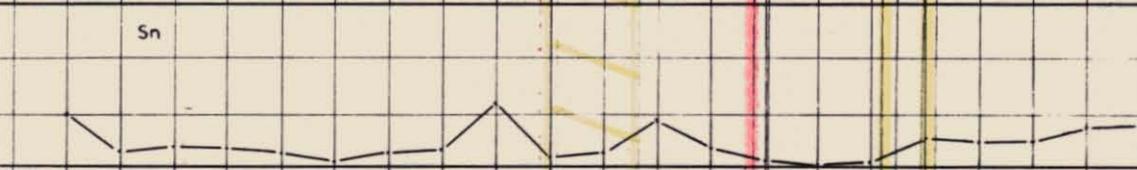
DACTYL CONTACT



S.P.

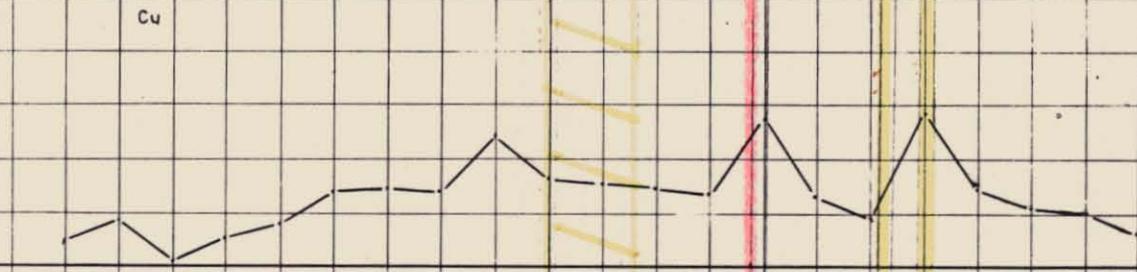
Fe

% Fe



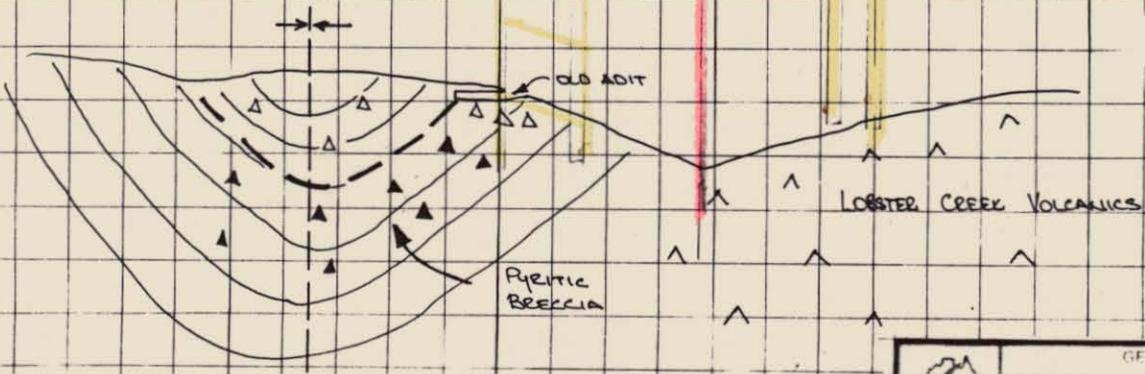
Sn

Sn ppm



Cu

Cu ppm



5 cm

	GEOPEKO LIMITED		FIG 9
	OREFEES	50 100	
	DATE	July '80	
	CHECKED	D.B.	

DIAL MINE GRID
2000 N

029

052030



Potential and Forward Programme

The definition of significant soil tin anomalies in association with magnetic and S.P. anomalies over gossanous sedimentary breccias adjacent to the Lobster Creek Volcanic body indicates good potential for a massive sulphide tin orebody in the Dial Range trough.

Five targets have emerged on the grid which require further testing. These are;

1. The coincident magnetic and tin soil anomaly at 3000N, 1725E (see fig 6).
2. The tin soil anomaly at 2400N, 1725E which has an associated copper and iron geochemical response and a coincident V.L.F.-E.M. anomaly (see fig 7).
3. The coincident tin soil anomaly and S.P. anomaly at 2700N, 2200E (see fig 8).
4. The S.P. anomaly at 2000N, 2050E which lies adjacent to Old Workings of the Dial Mine, and is associated with a weak V.L.F.-E.M. response (see fig 9).
5. The S.P. anomaly at 1900N, 2275E which lies adjacent to the Lobster Creek Volcanic contact and is displaced 35m west of a moderate V.L.F.-E.M. anomaly (see fig 10).

Before drilling it is proposed to conduct traverses of dipole-dipole IP or an appropriate EM method over each anomaly zone in order to provide further information which may aid in the targeting of drill holes.

Dipole-dipole I.P. is recommended because of its success in defining the sulphide zone previously intersected by Pennzoil in D.D.H. 4. Only one line (2200N) of dipole-dipole IP was read by Pennzoil on the old grid.

Orebody Model

The strataform and syngenetic nature of pyrite mineralization within the sediment breccias of the Cateena Group adjacent to the upper contact of the Lobster Creek Volcanics on the Dial Mine Grid suggests the pyrite and associated tin and copper mineralization maybe of sedimentary - volcanogenic origin and coveal with the development of the Cambrian Dial Range Trough.

Most occurences of sulphide-tin mineralization in the Cambrian in Western Tasmania are ascribed to metasomatic and/or hydrothermal replacement origin of carbonate horizons, with Devonian Granite as the source rock (e.g. Groves, 1972). A volcanogenic origin for some occurences has been suggested by Hutchinson (1979) but is not seriously considered by most Tasmanian geologists (e.g. Solomon 1980).

A sketch indicating the writers impression of the genesis of mineralization in the grid area is shown in figure 11.

Three styles of mineralization are possible in this environment.

- a) Stratiform lenses of tin mineralization within pyritic breccias in the Cateena Group toward the contact with the Lobster Creek Volcanics.

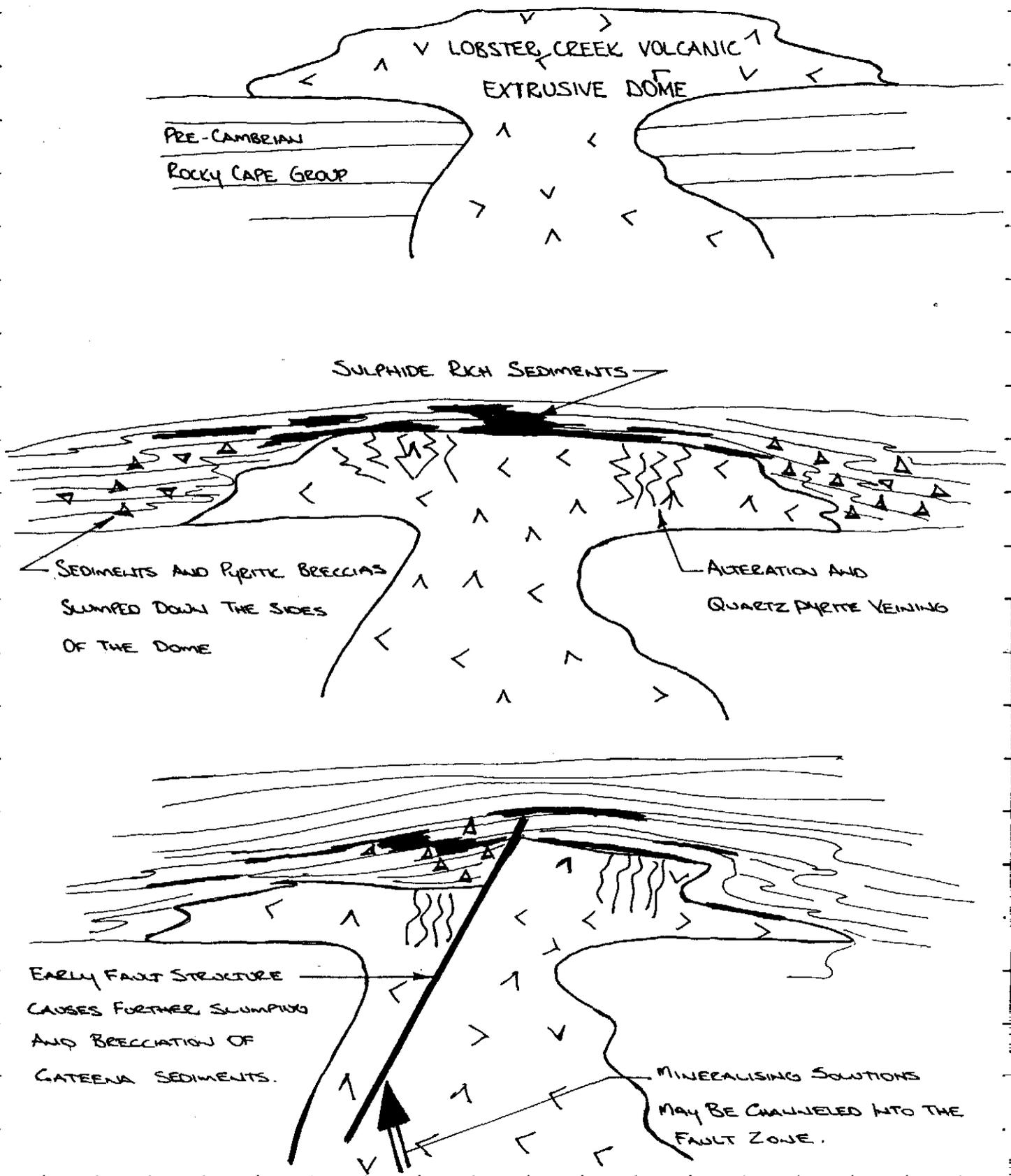
- b) Vein-type mineralization at the top of the Lobster Creek body.

- c) Replacement mineralization along the major fault cutting the contact.

033

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FIG. 11: PROPOSED GEOLOGICAL HISTORY
DIAL GRID AREA.



LEGEND:

-
-
-
-

0 300 m.

5 cm



DATE:
 GEOL:
 DWN:
 CHKD:

GEOPEKO LIMITED
DEVONPORT, TASMANIA.

Scale:

No TS 24/73

FIG. 11: PROPOSED GEOLOGICAL
HISTORY IN DIAL GRID AREA.

E.L. 24/73 DIAL RANGE, TASMANIA.

034

OTHER PROSPECTS IN E.L. 24/73.

There are numerous small prospects and occurrences of mineralization in the Dial Range area and apparently very little prospecting has been undertaken on them, during the present century.

Breif geological reconnaissance was made of three areas known as Badgers/Iron Cliffs, Kaines, and Dial Iron Prospects.

The locations of these prospects are shown on Figure 1.

Dial Iron Prospect

Located on the western slope of Mount Riana, this prospect was visited to test the possibility that the iron occurrence might be associated with skarn mineralization having potential for tin and tungsten.

Geological reconnaissance indicated that the iron occurs in a hematitic pebble conglomerate and that the hematite was derived from erosion of an older deposit, possibly of the type occurring 4km. south-west of Penguin.

The several rock chip and stream sediment samples taken at the locality have not shown significant anomalies in Cu, Pb, Zn, Sn and W; (Refer Appendix IV) and no further work is recommended.

Kaine's Prospect

T.D. Hughes in 1953 reported on an occurrence of barite located about 4.5km south-east of Riana. The barite is reported to have occured as veins "interbedded with the country rocks" (breccias) and according to K.L. Burns (1964) also contained specks and threads of chalcopyrite and pyrite.

035

The area is now thickly overgrown with blackberries and bracken; however several shallow trenches were located about 80 metres west of Kaine's Creek and presumably corresponding to the workings described by Hughes. The rocks in this vicinity are andesitic lithic crystal tuffs and fine to medium grained tuffaceous mudstone/greywacke but no barite or direct evidence of mineralization was located.

Several rock chip samples were taken from the mullock adjacent the trenches and from outcrops in Kaine's Creek, and these showed anomalous barium values upto 860ppm. (Refer: Appendix IV) Barium values are considerably higher in the tuffaceous-greywacke samples than in the volcanic or pyroclastic rocks sampled - suggesting that the barite may be (syngenetically) associated with a sedimentary facies and that the conformable veins of Hughes are possibly chemical sediments. However, the base metal contents of the rocks and stream sediments from the vicinity are not considered anomalous and the possibility that the reported barite mineralization is associated with massive sulphides would appear to be rather remote. No further work has been recommended.

Badger's/Iron Cliffs Area (Venture 3)

The Iron Cliffs Prospect on McBride's Creek in the north-central part of the E.L. has been frequently mentioned in Mines Department reports dating back to 1895 and was the subject of a geological mapping and diamond drilling program carried out by the Tasmanian Mines Department and reported by K.L. Burns in 1961.

036

(K.L. Burns, 1961 "The Iron Cliffs Mine, Penguin"
Tech. Report, Department of Mines, Tas. 5, 117-136.)

Badger's Prospect is about 100-200 metres east of the Iron Cliffs outcrop in an eastern tributary of McBride's Creek. These areas have been collectively entitled the Venture 3 prospect.

The dominant feature of the Iron Cliff area is a north trending steeply east dipping body (or bodies?) of limonitic ironstone extending for at least 500m. along strike and varying from less than 5 metres in width at the southern end to over 150 metres at the northern extension.

The ironstone consists of earthy, concretionary or botryoidal limonite with patches of quartz and minor fragmental (?) hematite and appears to be connected along strike to the north with the hematitic "ore" at the "Tasmanian Iron Mines" adjacent to the Iron Cliff's Road and Penguin Creek.

The ironstone is enclosed by mudstones and fine sandstones reported to belong to the "Younger" PreCambrian Rocky Cape Group and is situated within a few metres of a supposed Cambrian unconformity surface on which have been deposited conglomerates, pebbly greywacke/mudstones, and feldspathic sandstones (tuffs?) passing up into interbedded sandstones and siltstones, of the Dundas Group. (Burns, 1961)

The ironstone in part appears to be localized within a large fault zone but elsewhere is seen to interfinger with and "replace" the enclosing sediments. Barite has been reported in the diamond drill core, apparently as "dykes" cutting the ironstone and the (overlying) Cambrian mudstones. Sulphide mineralization with traces of lead, silver and copper has been noted in faults which offset the ironstone and are therefore of a younger generation.

037

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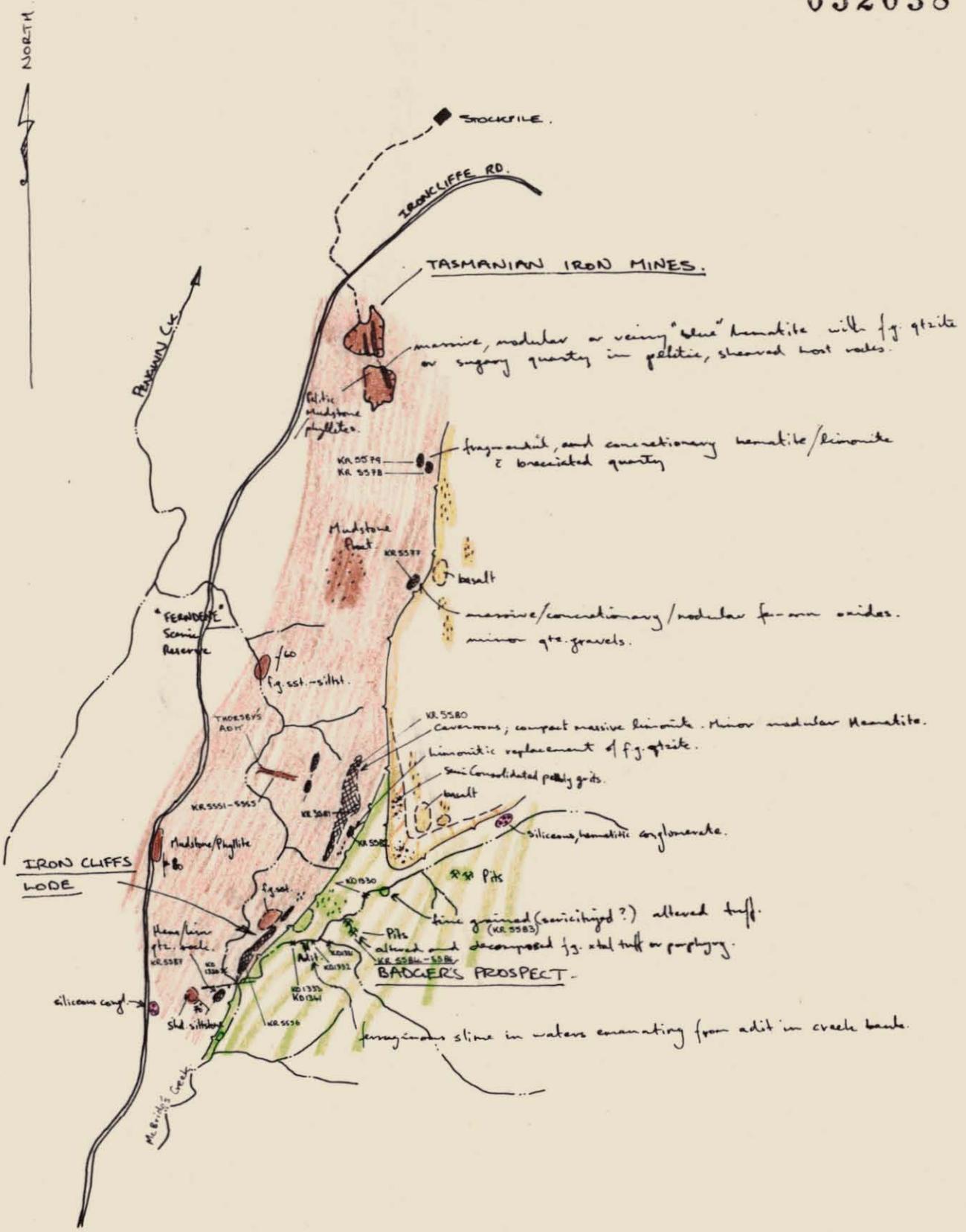


FIG. 12

TRACED FROM 1:10000 ENLARGEMENT OF AIRPHOTO: HELWING R.G. T 754-239

LEGEND:

- fine grained sst, siltst. mudst. of Pe. Roddy Cape Gp.
- UNCONFORMITY.
fine grained?, mudst. and altered tuffs. -Dunlops Gp.
- UNCONFORMITY.
(Hematitic) siliceous conglomerate of Ord. Owen Gp.
- sub basaltic gneiss } Tertiary
basaltic flows

DATE: 30/6/70
 GEOL: W.F.
 DWN: W.F.
 CHKD:

GEOPAKO LIMITED
KING ISLAND

Scale: 1:10000

NO K

DIAL RANGE EL. 24/73.
 VENTURE 3. AREA. (IRON CLIFFS)
 SKETCH PLAN.

038

Rock chip samples, collected during this writer's breif visit to the area indicate that the ironstone is locally, weakly anomalous in Cu, Pb, Zn and Ba.

Several small adits at creek level and shallow pits have been developed in the Badger's Prospect area just east of the Iron Cliff. Most of these are now collapsed and offer no indication of the style of mineralization present. Early reports mentioned a small production of silver bearing galena and the prescence of lead, zinc iron and copper sulphides, apparently confined to (Tabberabberan) fault fissures.

Sediment samples collected from the streams in the area indicate strong anomalies in Cu, Pb, Zn downstream from the Badger's area.

Peak values of 600ppm Cu, 1700ppm Pb, and 800ppm Zn were recorded (Ref Appendix IV) but these are clearly enhanced by seepage of ground water from the old workings which is visible as a thick, orange, ferruginous floe in the creek.

The diamond drill holes of 1960 evidently did not penetrate below the zone of oxidation and did not conclusively resolve whether the ironstone represented a gossanous capping of a sulphide body or an altered/oxidized PreCambrian hematitic iron ore body. The latter possibility was favoured by Burns.

However, the close and coincidental association of barite and anomalous base metal values with a large, apparently partly conformable, limonitic body is rather suggestive of a massive sulphide style of mineralization.

039

052040

27.

An inspection of the Mines Department drill core and further research into Burn's work on the prospect (only partial plans were published in his report of 1961) would probably be highly instructive and is recommended as the next stage in our assessment of this enigmatic prospect.

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041

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APPENDIX 1

PETROGRAPHIC DESCRIPTIONS OF ROCK SAMPLES FROM THE
DIAL MINE GRID

by

PONTIFEX AND ASSOCIATES PTY. LTD.

DIAL GRID - D.D.H. 4, 127m CATEENA GROUP

KR 2940: acid volcanic breccia (composed of rhyolitic lapilli and ash); moderately argillised silicified and pyritised + accessory baryte (by volcanic-exhalative agencies)

This rock has a gross breccia texture composed of random, loosely packed aggregate of angular to subrounded fragments, varying in size up to 30 mm. These fragments consist essentially of extremely fine quartz (including crypto and rarely microcrystalline varieties), generally intimately mixed with clay and/or sericite. Ultrafine chlorite, epidote and trace barite are dispersed through some fragments.

The fragments as a group are interpreted to consist of very fine rhyolite tuff (ash fall) or tuffaceous siltstone.

The matrix between fragments consists of essentially the same extremely fine siliceous, argillaceous and sericitic material generally showing evidence of streaky flow, and carrying abundant fine single crystal quartz grains, and blebs of microcrystalline quartz (after glass). This is interpreted as rhyolitic ash-flow tuff.

Discontinuous stringers, and drusy cavities consist largely of fine quartz mosaic, + extremely fine barite and pyrite.

Fine pyrite crystals are dispersed throughout all domains (matrix and fragments), more intense in some areas than in others.

The rock is identified as a volcanic breccia, in the broadest sense, being composed of rhyolitic lapilli and ash, it has been moderately argillised, silicified and pyritised + trace baryte, almost certainly by volcanic exhalative agencies.

043

KR 2941: microporphyrific felsite, complete pervasive clay-sericite alteration of probable hydrothermal origin + trace fine pyrite

Phenocrysts of euhedral plagioclase crystals (15-20%), average size 1 mm, are completely pseudomorphically replaced by quite coarse sericite. Locally these occur in clusters of 2 or 3, all are evenly and randomly disposed through a mass of extremely fine, and somewhat clouded clay-sericite.

Minor relict micro-laths in this mass, indicates that it was primarily composed of microcrystalline feldspar. Accessory very small, more or less bleb-like quartz is also scattered through this altered groundmass. Trace, minute pyrite grains occur locally.

The rock is a feldspar (probably plagioclase) porphyry. There is insufficient quartz to consider it a genuine acid (rhyolitic) facies; it may be a leuco-andesite but there is really insufficient mafic material to confirm this.

DIAL GRID - CATEENA GROUP

KR 2942: probable acid volcanic breccia;
 sporadic, primary argillic sericitic silicic
 and pyritic alteration, including 'zoned'
 euhedral quartz and trace tourmaline
 (pneumatolytic)

This rock has a breccia texture on the same scale as 2940, indeed both in hand specimen, and in thin section the rock is similar in composition to 2940.

Most fragments consist of a mixture in variable proportions of extremely fine clay-sericite and quartz, with some quartz grading to microcrystalline mosaic. (Limonite impregnation conceals the composition of many fragments.)

The interfragmental matrix consists of similar material, fairly extensively impregnated by limonite. It contains abundant scattered euhedral crystals of quartz, and grains of microcrystalline quartz.

The euhedral quartz crystals contain minute (10 micron) inclusions of ? tourmaline along crystal directions, and rare local clusters of very fine tourmaline are present.

Limonite replicas after fine pyrite can be confidently identified in fragments and matrix.

This rock may be fairly confidently interpreted as an acid volcanic breccia, which has been moderately and sporadically silicified, sericitised, argillised and pyritised. The euhedral nature of single quartz crystals + tourmaline indicates pneumatolytic mineralisation.

These characteristics compare with the volcanic breccia 2940, and epithermal mineralisation in 2943.

045

Pontifex & Associates Pty. Ltd.

052046

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26 KENSINGTON ROAD, ROSE PARK
SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD
SOUTH AUSTRALIA 5067

MINERALOGICAL REPORT NO. 2684

24th August, 1979

TO: Mr. C.D. Strickland,
GeoPeko Ltd.,
P.O. Box 598,
DEVONPORT, Tasmania 7310

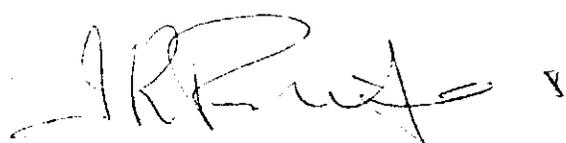
YOUR REFERENCE: Your letter dated 9/8/79
Order No. KP2264

MATERIAL: Rock Samples (4)

IDENTIFICATION: KR 5086
KR 4894
KR 4898
KR 5091

WORK REQUESTED: Petrographic description
and comments

SAMPLES & SECTIONS: Returned to you with
this report


PONTIFEX & ASSOCIATES PTY. LTD.

LOBSTER CREEK VOLCANIC - DIAL MINE GRID

KR 5086 : microporphyritic granodiorite;
extensive alteration of plagioclase
to clay/sericite and hornblende/biotite
to chlorite; several patches of tourmaline

Original phenocrysts in this rock up to 1.5 mm consist of euhedral plagioclase crystals (30%), now almost completely altered to clay/sericite; and of irregular crystals of hornblende + biotite (total 20%), now completely replaced by chlorite. Minor, small quartz phenocrysts (10%) are scattered.

These are randomly disposed through a fairly homogeneous, microcrystalline groundmass of quartz and potash feldspar intricately intergrown with subordinate random plagioclase laths, extensively altered to clay/sericite.

Minor fine chlorite is also scattered through the groundmass. Minute crystals of rutile and limonitised carbonate accompany the chloritised mafic phases.

Small (2 mm), sheaf-like aggregates of blue tourmaline (5 - 7%) are randomly scattered throughout, without any specific or diagnostic mode of occurrence.

This is a microporphyritic, intrusive with gross granodioritic gradational to adamellitic composition. The alteration is 'hydrothermal', conceivably deuteric, but the tourmaline suggest some pneumatolytic-related agencies.

KR 4894 : microporphyritic tonalite intrusive;
(less potassic equivalent of KR5086);
complete sericitic alteration of plagioclase,
chlorite-limonite alteration of biotite,
accessory patches of tourmaline

This rock consists of small phenocrysts up to 1.5 mm, of euhedral plagioclase (25%) completely sericitised; biotite (10%), completely chloritised and then limonitised. Lesser much smaller crystals of quartz (5 - 7%) are incipiently phenocrystal.

These are randomly disposed through a microcrystalline mosaic of quartz and completely sericitised plagioclase, in similar essential abundance. Minor oxidised fine biotite is also disseminated. Potash feldspar is absent.

Fine bluish-green tourmaline (3 - 5%) occurs in small clusters in the groundmass, more or less at random, although it does tend to accompany fine quartzose patches.

This is a microporphyritic intrusive, varying from KR5086 in that K-spar is absent (i.e. it is tonalitic), and biotite is the only primary mafic phase. Alteration and enrichment in tourmaline is the same as in KR5086.

043

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LOBSTER CREEK VOLCANIC - DIAL MINE GRID

KR4898 : microporphyritic tonalite intrusive;
zoned plagioclase phenocrysts and
matrix-plagioclase completely sericitised,
biotite ± hornblende completely oxidised;
trace interstitial tourmaline

This has the same texture and essential composition as the two samples above and must surely be closely related to them.

Phenocrysts up to 1.5 mm consist of former euhedral (and zoned) plagioclase crystals (30%) completely replaced by sericite, and former biotite and probable lesser hornblende (total about 20%), completely replaced by limonitised-chlorite. Several very incipient quartz phenocrysts are present. Generally the plagioclase phenocrysts are more distinctive than in 5086 and 4894.

These phenocrysts are scattered through a fairly homogeneous groundmass of fine quartz mosaic, essential sericitised plagioclase laths, and minor, disseminated oxidised biotite.

There is no evidence of potash felspar.

Trace bluish-green tourmaline is interstitial.

KR5091 : exceptionally highly lithic 'cherty' arenite, a fairly immature sediment derived from a volcanogenic siliceous exhalative source rock, + minor single crystal quartz grains and pyrite; sericite and trace ultrafine tourmaline interstitial

This rock consists of a vaguely layered, rather loose-packed aggregate of generally subangular but some subrounded to rounded grains.

The bulk of these grains (about 60% of the rock) are reasonably well sorted within the range of 0.3 to 1 mm, although rare grains of the same composition measure up to 2 mm. These grains consist of a crypto- to diffuse fine microcrystalline mosaic of silica, incorporating minor disseminated sericite. This sericite is similarly oriented in some 'grains', which may reflect an original bedding.

Basically these 'grains' are sericitic-chert, in which case they may be considered as fragments, packed together in a detrital aggregate. Each is slightly different from adjacent grains.

About 20% of the grains, or fragments, are dominated by sericite, intimately admixed with subordinate cherty silica.

Discrete single crystal grains of quartz (10%), average size 0.3 mm are scattered to form a small part of the aggregate. These are variably angular (broken), to subrounded and seem most likely to be volcanogenic.

Intergranular areas are occupied by sericite \pm minor fine silica, and thus are difficult to distinguish from some grains.

K5091 continued:

Secondary iron oxides are also widespread through intergranular spaces. Locally these incorporate boxwork after very fine pyrite (? 5 - 7%), but at least half of this hematite/limonite does not display any diagnostic evidence of origin.

Trace extremely fine tourmaline occurs in clusters in rare intergranular spaces.

This rock seems most likely to be a lithic-arenite, i.e. a coarse sediment composed mainly of detritus derived from a (reworked) volcanic exhalative siliceous facies, or possibly a chemical chert. The minor apparent volcanic quartz crystal grains tend to support the former interpretation, and the pyrite is conceivably detrital, derived from the same source.

Intergranular material may have derived by incipient hydrothermal alteration of detrital clays, + fine glass detritus.

Possibly, but seemingly less likely, the whole rock is a tuff, derived from a siliceous exhalative, with the sorting formed during submarine deposition.

051

APPENDIX NO. 2
ANALYTICAL RESULTS

1.

SAMPLE NO.	METREAGE	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	Bi ppm	Fe %	As ppm	W ppm	Mo ppm	Sn ppm		
HOLE 1														
KR 3990	95-96	115	20	70	5	520	(20	5.7	100	5	2	(20		
91	-97	105	20	60	(2	370	(20	4.7	10	10	2	130		
92	-98	115	20	50	(2	390	(20	4.9	90	5	(2	57		
93	-99	40	40	50	(2	640	(20	5.0	100	5	(2	47		
94	-100	65	30	55	(2	280	(20	4.5	30	5	(2	33		
95	-101	70	60	40	(2	350	(20	4.6	40	5	(2	42		
96	-102	75	40	55	(2	670	(20	5.3	10	5	(2	24		
97	-103	70	20	65	(2	720	(20	6.3	20	2	(2	44		
98	-104	100	40	45	(2	660	(20	5.7	10	10	(2	(20		
99	104-105	70	(20	55	(2	760	(20	6.3	10	(2	(2	38		
KR 4000	140-141	25	40	60	(2	940	(20	6.1	20	5	(2	59		
01	-142	15	30	80	(2	920	(20	5.3	30	5	(2	(20		
02	-143	30	60	50	(2	880	(20	5.3	10	20	(2	(20		
03	-144	15	20	65	5	940	(20	5.7	60	5	(2	(20		
04	144-145	40	30	50	(2	930	(20	5.2	70	(2	(2	20		
HOLE 2														
KR 4005	50-51	75	20	15	(2	80	(20	3.1	80	(2	(2	(20		
06**	-52	55	(20	20	(2	130	(20	5.0	100	(2	(2	(20		
06		55	20	20	(2	130	(20	4.9	100	(2	(2	(20		
07	-53	45	20	15	(2	70	(20	3.7	30	(2	(2	(20		
08	-54	70	(20	20	(2	120	(20	5.3	40	(2	5	(20		
09	-55	180	40	35	(2	135	(20	3.0	400	10	(2	(20		
KR 4010	-56	70	(20	30	(2	310	(20	9.0	900	(2	(2	(20		
11	-57	40	30	35	(2	290	(20	8.6	80	(2	(2	20		
12	-58	30	40	60	(2	350	(20	9.6	60	10	(2	24		
13	-59	60	40	80	10	520	(20	3.3	40	5	(2	(20		
14	59-60	10	30	80	(2	800	(20	4.3	20	2	(2	22		
15	110-111	20	40	125	(2	3300	(20	6.4	30	(2	(2	23		
KR 4016	111-112	80	50	90	(2	3600	(20	6.5	10	(2	(2	(20		

* Denotes duplicate of previous sample.
 (Denotes less than.

** Denotes repeat and check.

052052

052

ANALYTICAL RESULTS

SAMPLE NO	METREAGE	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	Bi ppm	Fe %	As ppm	W ppm	Mo ppm	Sn ppm
HOLE 3												
KR 3943	40-41	190	100	15	(2	25	(20	6.3	200	5	(2	74
44	-42	110	80	10	(2	25	(20	4.5	)1000	5	(2	94
45	-43	1450	350	25	(2	40	40	26.5	)1000	2		72
46	-44	1750	260	25	(2	30	20	36.0	)1000	2	Chemical	230
47	-45	1400	220	20	(2	30	20	28.5	)1000	10	Inter-	45
48	-46	1500	240	20	(2	40	20	30.5	)1000	(2	ference	44
49	-47	355	100	10	(2	25	(20	10.0	)1000	(2	(2	180
KR 3950	-48	1100	160	15	(2	45	30	20.5	)1000	(2	(2	78
51	-49	195	40	10	(2	20	(20	4.4	)1000	40	(2	(20
52	49-50	250	60	15	(2	50	(20	8.5	)1000	10	(2	59
53	80-81	3750	170	90	5	45	(20	11.5	)1000	40	(2	(20
54	-82	9750	170	55	(2	70	(20	8.9	)1000	10	2	76
55	-83	)10000	80	90	(2	110	(20	4.7	)1000	10	(2	45
56	-84	295	(20	30	(2	230	(20	2.1	100	20	2	33
57	-85	60	(20	55	(2	620	(20	4.1	100	10	2	42
58	-86	130	20	45	(2	180	(20	3.2	800	40	2	59
59**	-87	110	30	30	(2	145	(20	4.7	400	40	2	79
59		115	30	30	(2	150	(20	4.5	300	40	(2	
KR 3960	-88	240	30	245	(2	730	(20	6.9	200	20	(2	(20
61	-89	310	20	60	(2	85	(20	8.1	)1000	5	2	(20
62	-90	40	20	350	(2	640	(20	4.5	300	(2	2	48
63	-91	130	20	65	(2	385	(20	3.7	80	(2	(2	(20
64	91-92	120	(20	60	(2	390	(20	3.5	100	2	(2	28
65	115-116	95	20	70	(2	900	(20	4.9	100	(2	(2	(20
66	-117	35	30	70	(2	610	(20	2.9	80	(2	(2	(20
67	-118	10	(20	35	(2	860	(20	2.6	20	(2	(2	(20
68	-119	20	(20	55	(2	860	(20	3.0	100	(2	(2	(20
69	-120	25	(20	50	(2	1020	(20	2.9	20	(2	(2	(20
KR 3970	-121	10	20	30	(2	700	(20	2.5	20	(2	(2	30
71	121-122	15	(20	30	(2	490	(20	2.0	60	(2	(2	21
72	135-136	50	40	60	(2	1640	(20	5.7	90	(2	(2	44
73	-137	50	30	55	(2	980	(20	5.3	1000	(2	(2	(20
74	-138	90	60	70	5	1550	(20	6.5	80	(2	(2	34
75	-139	60	40	70	(2	1380	(20	4.3	80	(2	(2	(20
76	-140	20	20	30	(2	630	(20	3.1	60	(2	(2	(20
77	-141	50	30	55	(2	680	(20	3.8	80	(2	(2	(20
78	-142	115	60	115	(2	1020	(20	6.0	100	(2	(2	23
KR 3979	143-144	30	30	60	(2	880	(20	5.7	80	2	(2	(20

* Sample from previous surface ** Denotes limit and check

052053

ANALYTICAL RESULTS

SAMPLE	NO	METREAGE	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	Bi ppm	Fe %	As ppm	W ppm	Mo ppm	Sn ppm
KR	3980	-145	70	40	70	5	1260	(20	6.5	60	2	(2	(20
	81	-146	80	40	110	(2	1270	(20	5.0	40	5	(2	47
	82	-147	70	40	40	(2	1240	(20	4.4	600	5	2	34
	83	-148	40	20	40	(2	640	(20	2.5	60	2	(2	(20
	84	-149	35	(20	55	(2	730	(20	3.3	300	(2	(2	(20
	85	149-150	45	(20	45	(2	610	(20	2.8	80	(2	(2	(20
	86**	198-199	30	(20	20	(2	1060	(20	2.0	90	(2	(2	(20
	86		30	(20	20	(2	1060	(20	2.1	80	(2	(2	
	87	-200	20	20	25	(2	760	(20	2.1	300	(2	(2	(20
	88	-201	40	40	20	(2	520	(20	9.3	80	(2	(2	(20
KR	3989	201-202	65	20	25	(2	1110	20	3.5	20	5	(2	(20
<u>HOLE 5</u>													
KR	3874	42-43	900	60	70	(2	315	(20	2.4	800	5	(2	77
	75	-44	1150	30	25	(2	290	20	8.9	100	10	(2	170
	76	-45	240	30	20	(2	70	(20	4.6	10	10	(2	82
	77	-46	350	30	40	(2	3000	(20	6.1	200	20	(2	58
	78	-47	1100	60	80	(2	3100	(20	13.60	100	20	(2	49
	79	-48	1150	60	35	(2	820	20	9.5	200	10	(2	70
KR	3880	42-49	2300	240	40	(2	395	(20	6.2	800	10	(2	70
	81	-50	400	40	20	(2	395	(20	4.8	600	20	2	78
	82	-51	1550	420	30	5	215	20	2.5	)1000	10	(2	91
	83	-52	115	(20	5	(2	340	(20	1.14	100	10	(2	46
	84	-53	300	20	10	(2	40	(20	3.2	100	10	(2	44
	85	-54	900	30	40	(2	50	(20	5.4	400	10	2	44
	86	-55	360	40	10	(2	25	(20	3.9	800	10	(2	(20
	87	65-66	80	30	10	(2	25	(20	3.2	80	40	2	(20
	88	-67	290	40	10	(2	20	(20	6.7	800	10	2	110
	89	-68	1150	50	10	(2	65	20	6.6	)1000	40	2	76
KR	3890	-69	370	20	10	(2	60	(20	3.9	)1000	20	(2	110
	91	-70	340	30	15	(2	110	(20	3.9	)1000	20	(2	74
	92**	-71	315	30	(2	(2	55	20	4.6	)1000	10	2	110
	92		310	30	(2	(2	60	(20	4.7	1000	10	(2	
	93	-72	305	(20	5	(2	50	(20	4.2	800	40	(2	260
	94	-73	120	(20	10	(2	30	(20	3.4	200	40	2	33
	95	-74	100	40	10	(2	20	(20	3.2	40	20	2	(20
	96	-75	90	(20	10	(2	10	(20	3.0	10	10	(2	(20
KR	3897	-76	65	20	10	(2	10	(20	3.4	30	10	2	36

* Denotes duplicate of previous sample
 † Denotes...

** Denotes... check

054

APPENDIX No. 2

4.

ANALYTICAL RESULTS

SAMPLE NO.	METREAGE	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	Bi ppm	Fe %	As ppm	W ppm	Mo ppm	Sn ppm
KR 3898	65-77	90	30	10	(2	30	(20	3.4	100	5	5	26
99									30	5	2	(20
KR 3900	-79	260	20	10	(2	20	(20	3.2	30	5	(2	(20
01	-80	130	40	15	(2	30	(20	2.3	30	5	(2	(20
02	-81	1100	30	10	(2	20	(20	2.2	30	(2	(2	72
03	-82	1300	30	10	(2	30	(20	1.3	80	5	2	42
04	-83	190	20	10	(2	70	(20	3.15	40	2	(2	93
05	-84	115	30	15	(2	130	20	3.9	30	10	2	(20
06	-85	130	(20	10	(2	60	(20	3.0	20	10	2	(20
07	-86	170	(20	10	(2	40	(20	3.4	40	20	2	(20
08	-87	255	30	10	(2	270	(20	3.2	300	20	5	65
09	-88	250	30	20	(2	110	(20	5.3	20	60	5	40
KR 3910	-89	290	40	10	(2	220	(20	4.85	300	60	5	87
11	-90	310	20	15	(2	35	(20	3.8	30	60	(2	27
12**	-91	300	90	15	(2	35	(20	5.3	60	40	5	130
12		300	90	15	(2	30	(20	8.3	80	20	5	
13	-92	1050	160	20	(2	400	20	8.3	)1000	20	5	320
14	-93	2000	80	20	(2	770	30	2.4	1000	(2	2	400
15	-94	1300	40	15	(2	680	(20	2.2	600	20	(2	220
16	-95	1250	30	10	(2	760	20	5.6	600	10	(2	190
17	-96	1700	40	15	(2	265	(20	4.8	20	20	5	85
18	-97	1750	40	5	(2	190	(20	9.1	)1000	10	5	78
19	-98	3650	60	5	(2	85	(20	8.3	)1000	20	(2	52
KR 3920	-99	3350	80	10	(2	580	(20	5.8	)1000	20	(2	65
21	-100	850	50	20	(2	400	(20	7.3	800	2	(2	98
22	-101	340	80	15	(2	170	(20	5.7	1000	20	2	84
23	-102	1050	40	10	5	65	(20	3.1	3000	10	(2	55
24	102-105	1000	60	40	(2	2100	(20	9.2	800	5	(2	120
25	112-113	210	120	15	(2	75	(20	3.4	100	10	(2	140
26	-114	950	50	20	(2	60	(20	5.1	400	(2	(2	150
27	114+114.6	1550	80	110	(2	70	(20	15.5	1000	10	(2	150
28	116.3-117	1000	60	180	(20	120	(20	5.5	100	100	2	110
29	117-118	1300	80	400	(2	70	(20	7.4	3000	)200	(2	110
KR 3930	-119	390	30	40	(2	50	(20	2.7	30	60	2	38
31	-120	1700	80	90	(2	30	(20	4.4	80	80	2	45
32	-121	1050	40	20	(2	40	(20	4.2	30	(2	2	30
33	-122	340	(20	45	(2	75	(20	2.0	30	10	2	34
34	-123	230	30	20	(2	130	(20	8.9	10	40	2	25
35	-124	850	50	25	5	70	(20	4.4	60	20	2	41
36	-125	3100	50	10	5	50	(20	8.8	40	5	(2	68

* Denotes... of... sample

** Denotes... great and check

052055

055

APPENDIX NO. 2
ANALYTICAL RESULTS

5.

SAMPLE NO.	METREAGE	Co ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	Bi ppm	Fe %	As ppm	W ppm	Mo ppm	Sn ppm
KR 3937	-117-126	270	20	40	(2)	600	(20)	5.4	30	5	(2)	62
38	-127	140	20	70	(2)	830	(20)	5.5	20	(2)	(2)	160
39**	-128	135	40	60	(2)	810	(20)	4.9	20	5	(2)	110
39		130	50	70	(2)	810	(20)	4.8	20	5	(2)	
KR 3940	-129	70	20	80	(2)	1000	(20)	5.5	30	(2)	(2)	65
41	129-130	310	40	650	(2)	950	(20)	6.8	30	100	(2)	49
KR 4017	155-156	30	(20)	30	(2)	1980	(20)	3.0	10	(2)	(2)	(20)
18	-157	40	20	40	(2)	1840	(20)	3.3	30	(2)	(2)	(20)
19**	-158	130	(20)	30	(2)	830	(20)	2.9	300	(2)	(2)	21
19		130	(20)	25	(2)	830	(20)	2.9	400	(2)	(2)	
20	-159	10	20	30	(2)	650	(20)	7.6	10	(2)	(2)	(20)
KR 4021	159-160	15	(20)	20	(2)	720	(20)	7.4	20	(2)	(2)	(20)
HOLE 6												
KR 3833	145-146	10	(20)	25	(2)	540	(20)	1.68	10	(2)	(2)	(20)
34	-147	10	(20)	10	(2)	400	(20)	0.86	(5)	(2)	(2)	(20)
35	-148	10	(20)	15	(2)	540	(20)	0.74	10	(2)	(2)	(20)
36	-149	10	(20)	30	(2)	760	(20)	2.0	20	(2)	(2)	(20)
37	-150	10	(20)	45	(2)	760	(20)	2.4	20	(2)	(2)	(20)
38	-151	30	20	50	(2)	1010	(20)	1.94	400	(2)	2	(20)
39	-152	10	(20)	75	(2)	290	(20)	2.0	800	(2)	2	(20)
KR 3840	-153	10	40	90	(2)	250	(20)	2.5	100	(2)	2	(20)
41	-154	10	(20)	50	(2)	340	(20)	2.5	20	(2)	(2)	(20)
42	-155	10	20	45	(2)	350	(20)	2.2	10	(2)	(2)	(20)
43	-156	15	50	70	(2)	1740	30	2.2	20	5	2	(20)
44	-157	20	80	80	(2)	2100	(20)	1.88	10	(2)	(2)	(20)
45	-158	25	90	95	(2)	1920	(20)	2.4	10	(2)	(2)	53
46	-159	15	50	55	(2)	1740	(20)	2.2	10	(2)	(2)	(20)
47	-160	40	50	40	(2)	980	(20)	2.4	10	(2)	(2)	(20)
48	-161	35	70	70	(2)	1680	(20)	2.4	10	(2)	(2)	(20)
49	-162	15	100	20	(2)	1780	(20)	2.2	10	(2)	(2)	(20)
KR 3850	-163	15	60	20	(2)	1420	(20)	3.0	(5)	5	(2)	(20)
51	-164	15	70	15	(2)	1660	(20)	2.2	(5)	(2)	(2)	(20)
52	-165	20	50	20	(2)	1670	(20)	2.6	10	5	(2)	(20)
53	-166	15	40	10	(2)	1060	(20)	2.4	(5)	(2)	(2)	(20)
54	-167	10	60	15	(2)	1420	(20)	2.0	10	(2)	(2)	(20)
55	-168	20	60	20	(2)	1280	(20)	2.6	10	5	2	(20)
KR 3856	-169	30	50	25	(2)	960	20	2.4	10	(2)	(2)	(20)

* Denotes duplicate of previous sample

** Denotes control and check

052056

056

APPENDIX NO. 2
ANALYTICAL RESULTS

6.

SAMPLE NO	METREAGE	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	Bi ppm	Fe %	As ppm	W ppm	Mo ppm	Sr ppm
KR 3857	145-170	20	30	20	(2)	260	(20)	2.0	(5)	(2)	(2)	(20)
58	-171	30	30	15	(2)	380	(20)	2.4	10	(2)	(2)	(20)
59	-172	15	40	20	(2)	1090	(20)	1.94	10	(2)	(2)	(20)
KR 3860	-173	20	60	40	(2)	1140	(20)	2.6	10	(2)	(2)	(20)
61	-174	15	40	50	(2)	1310	20	2.6	(5)	(2)	(2)	(20)
62	-175	40	20	40	(2)	725	20	4.4	20	(2)	(2)	(20)
63	-176	10	40	40	(2)	1220	(20)	3.2	(5)	(2)	(2)	(20)
64	-177	10	60	30	(2)	1580	(20)	2.2	(5)	(2)	(2)	(20)
65	-178	20	70	40	(2)	1020	(20)	2.2	(5)	2	(2)	(20)
66	-179	25	40	30	(2)	850	(20)	2.2	10	(2)	(2)	(20)
67	-180	20	30	35	(2)	1050	(20)	2.3	(5)	(2)	(2)	(20)
68	-181	35	60	40	(2)	1620	20	2.7	(5)	(2)	(2)	(20)
69	-182	115	(20)	50	(2)	250	(20)	3.4	(5)	(2)	(2)	(20)
KR 3870	-183	15	40	40	(2)	1560	(20)	2.9	(5)	(2)	(2)	(20)
KR 3871	183-184	10	60	30	(2)	1100	20	2.3	(5)	(2)	(2)	(20)

• Denotes duplicate of previous sample
 (Denotes loss of sample

•• Denotes repeat and check

052057

057

ANALYTICAL RESULTS

SOIL SAMPLES - DIAL MINE GRID

SAMPLE NUMBER		Fe %	Mn ppm	Bi ppm	Au ppb		
KS	4197	3.84	50	20	20		
	98	4.40	50	20	10		
	99	4.32	80	20	5		
KS	4200	4.80	90	20	20		
	01	5.20	170	40	20		
	02	8.00	190	115	15		
	03	4.56	250	20	40		
	04	4.16	880	30	20		
	05	Insufficient		Sample			
	06	4.56	120	20	25		
	07	4.56	90	20	10		
	08	4.48	105	20	15		
	09	4.00	20	20	10		
	10	2.96	10	10	10		
KS	4211	4.64	20	20	15		
KS	4221	3.84	540	5	15		
	22	4.32	920	5	15		
	23	3.68	410	(5	35		
	24	3.84	110	5	15		
	25	3.76	70	(5	5		
	26	3.68	70	(5	5		
	27	5.20	270	5	70		
	28	4.64	300	5	30		
	29	4.72	145	5	20		
KS	4230	5.60	0.11%	5	30		
	31	5.60	0.10%	5	30		
	32	6.40	0.13%	20	35		
	33	4.64	0.10%	10	10		
	34	5.60	0.17%	10	10		
	35	4.40	180	(5	10		
	36	3.92	70	15	20		
	37	3.52	100	10	30		
	38	3.76	20	5	3		
	39	4.72	10	10	20		
KS	4240	Insufficient		Sample			
	41	5.52	15	10	35		
KS	4242	0.24	10	(5	10		
KS	4358	3.52	160	(5	20		
	59	3.84	340	10	10		
KS	4360	4.56	450	5	25		
	61	4.80	480	10	35		
	62	5.60	400	20	I.S.		
	63	6.40	240	15	20		

● Denotes duplicate of previous sample.

●● Denotes repeat and check.

(Denotes less than.

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052059

SAMPLE NUMBER		Fe %	Mn ppm	Bi ppm	Au ppb		
KS	4364	5.20	240	15	15		
	65	3.52	125	10	5		
	66	3.76	300	15	5		
	67	2.80	180	10	3		
	68	3.52	160	25	5		
	69	2.48	115	10	5		
KS	4370	3.44	20	5	15		
KS	4371	3.84	20	10	5		
KS	4396	3.12	30	15	5		
	97	4.56	45	10	20		
	98	4.16	80	20	20		
	99	4.00	50	20	10		
KS	4400	4.08	130	30	15		
KS	4409	6.40	35	20	10		
	10	7.20	135	15	I.S.		
	11	4.00	105	30	3		
	12	3.12	20	10	10		
KS	4413	2.40	30	10	15		
KS	4451	4.32	125	20	10		
	52	2.72	175	30	3		
	53	Insufficient		Sample			
	54	1.92	20	60	2		
	55	1.84	10	65	10		
	56	5.60	10	30	3		
	57	2.64	20	30	40		
	58	1.60	10	20	10		
	59	4.40	20	65	10		
KS	4460	7.20	20	40	25		
	61	7.60	20	40	I.S.		
	62	3.92	10	30	15		
	63	2.64	10	10	10		
KS	4464	4.64	20	10	5		
KS	4502	4.08	800	10	5		
	03	2.88	230	10	5		
	04	5.60	135	20	10		
KS	4505	2.08	185	10	5		
KS	4714	3.76	0.19%				
	15	4.88	0.12%				
	16	11.2	0.64%				
	17	9.20	0.36%				
	18	8.00	0.50%				
	19	3.92	200				
KS	4720	1.84	65				

* Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

059

SAMPLE NUMBER		Fe %	Mn ppm	Bi ppm	Au ppb		
KS	4721*	1.92	75				
	22	7.60	680				
	23	8.00	0.23%				
	24	11.2	1.04%				
	25	5.60	0.20%				
	26	3.20	760				
	27	2.72	360				
	28	2.72	120				
	29	1.92	480				
KS	4730	2.96	115				
	31*	2.84	120				
	32	2.72	240				
	33	3.92	35				
	34	0.64	15				
	35	1.16	160				
	36	0.48	40				
	37	5.60	80				
	38	5.60	65				
	39	6.80	40				
KS	4740	6.40	120				
	41*	7.20	110				
	42	4.80	40				
	43	5.60	60				
	44	3.20	180				
	45	3.28	165				
	46	6.40	480				
	47	6.00	0.14%				
	48	5.20	640				
	49	3.20	580				
KS	4750	3.76	520				
	51*	3.68	520				
	52	3.28	920				
	53	3.08	640				
	54	3.36	320				
	55	4.56	240				
	56	3.84	80				
	57	3.36	65				
	58	5.60	100				
	59	3.84	40				
KS	4760	3.12	60				
	61*	3.28	80				
	62	1.92	45				
	63	2.24	40				
	64	2.72	60				
	65	4.48	75				
	66	3.68	125				
	67	3.68	105				
	68	4.80	80				
	69	2.52	60				
KS	4770	2.60	15				
	71*	2.20	15				
	72	2.72	10				
KS	4773	8.60	55				

* Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

060

SAMPLE NUMBER	Fe %	Mn ppm	Bi ppm	Au ppb		
KS 4774	7.20	20				
75	9.00	40				
76	1.38	5				
77	8.60	75				
78	7.12	115				
79	1.90	10				
KS 4780	8.60	10				
81*	8.40	10				
82	2.40	5				
83	2.34	5				
84	2.34	(5				
85	1.72	5				
86	2.36	15				
87	2.30	10				
88	2.34	30				
89	10.0	660				
KS 4790	10.8	170				
91*	10.6	155				
92	11.6	80				
93	9.60	80				
94	10.4	35				
95	7.4	0.10%				
96	1.84	70				
97	4.00	55				
98	3.40	15				
99	1.48	10				
KS 4800	3.60	5				
01*	3.40	5				
02	2.64	10				
03	1.50	5				
04	1.86	(5				
05	2.04	15				
06	1.98	5				
07	1.94	(5				
08	1.28	(5				
09	3.20	10				
KS 4810	5.60	20				
11*	5.20	20				
12	4.60	15				
13	1.10	(5				
14	1.94	5				
15	4.00	10				
16	3.20	35				
17	3.60	45				
18	4.00	95				
19	3.40	310				
KS 4820	4.61	60				
21*	4.40	55				
22	2.80	195				
23	4.24	185				
24	4.00	110				
25	1.84	10				
26	5.21	20				
KS 4827	5.08	45				

• Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

061

SAMPLE NUMBER		Fe %	Mn ppm	Bi ppm	Au ppb		
KS	4828	5.40	60				
	29	5.20	35				
KS	4830	3.04	270				
	31*	3.28	250				
	32	1.98	10				
	33	1.94	(5				
	34	2.20	(5				
	35	3.12	(5				
	36	0.76	5				
	37	1.88	5				
	38	1.88	(5				
	39	2.80	(5				
KS	4840	0.11	(5				
	41*	0.11	(5				
	42	2.00	5				
	43	4.60	10				
	44	3.04	(5				
	45	2.88	5				
	46	1.96	10				
	47	3.20	80				
	48	3.82	310				
	49	4.60	115				
KS	4850	3.36	105				
KS	4954	3.44	100				
	55	2.80	20				
	56	3.84	15				
	57	6.40	10				
	58	1.36	10				
	59	1.60	10				
KS	4960	1.36	5				
	61	5.20	2				
	62	4.40	10				
	63	3.76	10				
	64	0.32	5				
	65	0.32	5				
	66	2.40	15				
	67	2.24	10				
	68	2.32	10				
	69	1.92	5				
KS	4970	3.92	5				
	71*	4.32	10				
	72	3.76	50				
	73	3.44	20				
	74	3.76	40				
	75	4.00	50				
	76	4.72	70				
	77	3.28	90				
	78	2.40	35				
	79	3.84	35				
KS	4980	3.84	35				
	81*	3.76	35				
KS	4982	3.60	20				

• Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

062

SAMPLE NUMBER		Fe %	Mn ppm	Bi ppm	Au ppb			
KS	4983	2.72	10					
	84	1.12	5					
	85	4.16	5					
	86	3.92	5					
	87	3.36	10					
	88	0.72	10					
	89	6.00	15					
	KS	4990	2.88	80				
		91*	2.64	105				
92		1.76	200					
93		3.76	110					
94		4.24	160					
95		4.80	290					
96		3.44	280					
97		3.52	290					
98		2.96	340					
KS	5000	3.36	700					
	01	3.44	720					
	02	3.20	460					
	03	3.04	540					
	04	2.96	940					
	05	4.64	120					
	06	3.92	360					
	07	4.16	250					
	08	6.40	65					
	09	4.40	35					
KS	5010	1.92	50					
	11	0.24	25					
	12	0.16	10					

* Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

ANALYTICAL RESULTS

SOIL SAMPLES - DIAL MINE GRID

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4177	55	20	20	15	(10
78	65	35	30	60	(10
79	55	20	10	25	(10
KS 4180	35	15	10	40	10
81	55	15	10	25	(10
82	40	15	10	60	(10
83	75	20	10	45	(10
84	70	20	10	25	(10
85	35	20	10	10	(10
86	35	20	10	20	(10
87	90	20	45	35	(10
88*	90	15	40	25	10
89	80	15	5	25	10
KS 4190	105	20	15	30	10
91	195	30	15	120	30
92	230	20	10	455	30
93	290	30	5	140	10
94	240	20	2	170	20
95	50	20	5	60	30
96	45	10	10	145	40
97	75	15	10	80	10
98*	80	15	10	80	(10
99	105	20	10	75	(10
KS 4200	115	20	15	50	(10
01	150	20	20	50	(10
02	290	90	35	55	20
03	95	25	20	10	10
04	135	30	25	5	(10
05	275	25	30	10	10
06	140	35	15	35	10
07	150	85	15	85	10
08	140	80	10	80	(10
09	160	55	10	25	10
KS 4210	165	40	5	15	(10
11	240	40	20	115	20
12	140	25	10	30	10
13	145	35	10	25	(10
14	140	40	10	10	10
15	80	30	10	20	20
16	50	20	5	30	10
17	10	15	5	30	10
18*	10	15	2	35	(10
19	85	25	10	25	10
KS 4220	45	20	5	95	30
21	20	30	85	(5	(10
22	30	30	75	(5	(10
KS 4223	10	15	25	10	(10

● Denotes duplicate of previous sample.

●● Denotes repeat and check.

(Denotes less than.

064

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4224	10	15	25	20	(10
25	5	10	20	10	(10
26	15	20	15	90	(10
27	100	85	60	40	(10
28	90	40	20	70	(10
29	105	25	15	95	(10
KS 4230	100	20	25	20	(10
31*	110	25	25	25	(10
32	155	20	35	(5	(10
33	120	35	25	(5	(10
34	140	20	20	(5	(10
35	110	20	20	(5	(10
36	105	20	15	(5	(10
37	105	25	10	5	(10
38	145	20	10	5	(10
39	120	20	5	(5	(10
KS 4240	80	20	5	5	(10
41*	85	20	5	10	(10
42	5	5	5	5	10
43	20	30	5	5	(10
44	100	30	10	(5	(10
45	50	15	2	10	10
46	70	25	5	(5	(10
47	65	30	10	5	(10
48	80	20	10	(5	(10
49	5	10	2	(5	(10
KS 4250	45	20	5	10	(10
52*	45	20	10	5	(10
53	70	20	5	5	10
54	50	20	5	20	10
55	30	30	2	20	(10
56	35	50	5	5	10
57	30	15	5	(5	(10
58	20	10	2	(5	(10
59	15	10	5	(5	(10
KS 4260	185	30	15	(5	(10
61*	185	30	15	20	(10
62	100	30	15	(5	(10
63	120	35	15	130	(10
64	75	20	20	(5	(10
65	150	30	55	15	(10
66	80	35	20	(5	(10
67	105	20	10	(5	(10
68	50	20	10	(5	(10
69	30	30	10	(5	(10
KS 4270	60	25	10	(5	(10
71*	55	25	10	(5	(10
72	100	30	20	(5	(10
73	140	20	15	10	(10
74	110	20	15	5	(10
75	60	20	10	(5	(10
KS 4276	30	20	5	(5	(10

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

065

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4277	35	20	10	5	(10
78	50	20	10	20	(10
79	50	20	20	(5	(10
KS 4280	40	20	20	(5	(10
81*	40	20	25	5	(10
82	40	20	30	(5	(10
83	25	15	25	(5	(10
84	10	10	20	(5	(10
85	10	10	20	(5	(10
86	15	10	15	(5	(10
87	20	10	15	(5	(10
88	65	10	10	(5	(10
89	115	15	10	40	(10
KS 4290	90	10	20	5	(10
91*	80	10	20	(5	(10
92	80	10	20	(5	(10
93	95	10	10	5	(10
94	55	10	20	(5	(10
95	30	10	5	(5	(10
96	45	10	5	(5	(10
97	45	5	115	35	(10
98	95	25	25	(5	(10
99	100	30	20	5	(10
KS 4300	35	10	5	(5	(10
01*	35	15	5	40	(10
02	60	10	5	(5	(10
03	20	10	2	(5	(10
04	35	10	5	(5	(10
05	20	10	5	35	(10
06	40	15	15	15	(10
07	50	15	10	(5	(10
08	25	20	15	(5	(10
09	30	20	10	120	(10
KS 4310	45	20	10	15	(10
11*	40	20	10	(5	(10
12	30	15	10	(5	(10
13	20	30	15	45	(10
14	25	40	15	(5	(10
15	35	60	30	(5	(10
16	30	40	30	105	(10
17	20	35	30	45	(10
18	20	40	40	(5	(10
19	20	35	40	10	(10
KS 4320	25	30	35	15	(10
21*	25	30	35	15	(10
22	35	25	35	30	15
23	50	50	30	25	(10
24	40	20	15	20	(10
25	35	25	25	20	(10
26	30	25	25	25	(10
27	30	20	25	30	(10
28	35	25	35	20	(10
KS 4329	5	5	5	10	15

* Denotes duplicate of previous sample

● ● Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4330	70	15	25	20	(10
31*	65	20	25	20	10
32	20	15	20	25	(10
33	25	15	20	25	(10
34	40	15	20	20	(10
35	70	20	25	15	(10
36	60	20	20	20	(10
37	40	15	25	15	(10
38	50	20	25	20	(10
39	25	20	15	30	(10
KS 4340	25	15	10	25	(10
41*	25	15	10	20	(10
42	30	15	10	45	(10
43	50	15	5	50	(10
44	35	20	10	25	(10
45	60	15	10	30	(10
46	25	10	5	20	(10
47	35	10	10	15	20
48	10	10	5	10	(10
49	35	10	5	55	(10
KS 4350	55	10	5	90	15
51*	55	10	5	100	(10
52	45	15	10	30	(10
53	40	15	15	15	(10
54	55	25	5	40	10
55	145	15	5	(5	(10
56	65	15	5	75	10
57	60	15	5	45	(10
58	230	20	15	60	(10
59	125	10	25	60	(10
KS 4360	150	25	25	80	(10
61*	155	25	25	145	(10
62	155	25	35	65	(10
63	130	25	25	70	(10
64	165	20	20	90	(10
65	80	15	10	160	(10
66	90	10	20	115	(10
67	50	15	10	385	(10
68	105	15	10	205	(10
69	40	15	5	140	(10
KS 4370	50	15	10	80	(10
71	60	15	10	75	(10
72	20	30	10	40	(10
73	15	30	5	10	(10
74	5	10	5	160	10
75	10	10	5	120	(10
76	25	10	5	65	(10
77	10	10	5	50	10
78	10	10	5	40	10
79	10	10	5	20	10
KS 4380	60	15	20	235	10
81*	70	15	10	230	20
82	40	10	5	70	(10
KS 4383	15	10	5	15	(10

* Denotes duplicate of previous sample

• • Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4384	20	10	5	85	10
85	30	10	10	70	(10
86	10	10	5	90	10
87	50	20	20	20	(10
88	30	20	15	30	10
89	40	15	10	40	20
KS 4390	55	15	10	15	(10
91*	50	15	10	10	(10
92	50	40	20	10	(10
93	40	20	30	10	(10
94	5	10	10	60	30
95	15	10	5	10	(10
96	50	10	10	45	(10
97	80	15	10	20	(10
98	65	10	10	35	10
99	80	20	10	30	10
KS 4400	60	20	20	30	(10
01	15	15	10	(5	(10
02	10	15	20	(5	(10
03	10	15	10	(5	(10
04	50	15	15	15	(10
05	40	15	15	20	(10
06	75	20	15	65	(10
07	75	20	15	30	(10
08	40	20	35	(5	(10
09	50	30	10	10	(10
KS 4410	45	25	25	20	(10
11	50	20	10	20	(10
12	20	15	5	10	(10
13	30	15	5	(5	(10
14	45	15	10	10	(10
15*	45	20	10	(5	(10
16	45	15	5	60	(10
17	120	25	20	50	(10
18	65	20	15	25	(10
19	65	25	10	45	(10
KS 4420	50	25	10	175	(10
21	85	35	40	35	(10
22	70	20	15	35	(10
23	145	30	20	50	(10
24	65	35	10	10	(10
25*	55	35	10	25	(10
26	45	25	10	40	(10
27	40	40	10	10	(10
28	100	25	10	90	(10
29	85	20	10	50	(10
KS 4430	230	40	60	55	(10
31	130	25	30	55	(10
32	65	20	35	60	(10
33	75	30	125	(5	(10
34	55	25	35	55	(10
35	55	25	40	45	(10
KS 4436	125	30	20	5	(10

* Denotes duplicate of previous sample

** Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	
KS 4437	110	25	10	15	(10	
38	80	25	10	25	(10	
39	145	25	10	30	(10	
KS 4440	90	25	10	20	(10	
41	50	25	10	30	(10	
42	50	25	10	5	(10	
43	45	25	70	5	(10	
44	30	25	15	(5	(10	
45	60	30	25	25	(10	
46	90	40	85	25	(10	
47*	85	40	80	(5	(10	
48	50	30	60	(5	(10	
49	15	10	5	95	(10	
KS 4450	120	40	10	30	(10	
51	60	20	20	15	(10	
52	30	15	15	50	(10	
53	35	20	15	40	(10	
54	40	20	10	130	20	
55	55	20	5	200	40	
56	420	90	5	270	30	
57	180	20	10	80	(10	
58	50	25	5	0.13%	50	
59	250	35	5	495	60	
KS 4460	350	60	10	155	10	
61*	340	60	10	140	10	
62	120	20	5	165	40	
63	60	15	10	145	50	
64	65	20	10	160	30	
65	35	30	80	(5	(10	
66	40	25	70	5	(10	
67	100	30	120	20	10	
68	95	30	80	55	10	
69	45	10	20	25	10	
KS 4470	20	10	10	25	(10	
71*	15	10	10	15	(10	
72	120	30	20	10	(10	
KS 4473	95	30	35	15	(10	
KS 4475	80	20	35	65	(10	
76	40	30	70	90	(10	
77	60	20	10	50	(10	
78	85	20	15	85	(10	
79	120	20	20	90	(10	
KS 4480	240	30	70	95	(10	
81	30	15	20	35	20	
82	60	15	20	15	10	
83	80	20	110	20	(10	
84	20	20	30	(5	(10	
85	20	20	30	10	(10	
86	20	20	10	15	10	
87	40	20	25	20	(10	
88	40	20	20	45	10	
89	30	20	50	35	(10	
KS 4490	40	25	55	90	(10	

* Denotes duplicate of previous sample

** Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4491	150	20	50	105	(10
92	70	20	10	15	(10
93	40	20	10	10	(10
94	90	25	15	20	(10
95	100	25	15	15	(10
96	95	25	20	10	10
97	100	20	20	15	(10
98	100	15	15	25	(10
99	65	20	10	20	(10
KS 4500	95	20	10	25	(10
01*	100	20	20	35	(10
02	30	35	105	10	(10
03	40	20	25	20	(10
04	70	25	20	20	(10
05	190	20	15	25	(10
06	45	15	10	110	10
07	60	20	10	30	(10
08	60	30	5	85	20
09	50	20	10	15	(10
KS 4510	10	5	10	130	40
11*	10	5	(2	135	20
12	10	10	2	135	30
13	10	5	2	155	40
14	105	40	10	175	10
15	20	15	5	270	30
16	35	30	5	130	20
17	40	25	5	200	(10
18	380	100	10	185	(10
19	90	25	5	105	(10
KS 4520	55	30	10	20	10
21*	40	30	5	5	(10
22	90	25	10	20	(10
23	80	20	10	5	(10
24	100	25	25	10	(10
25	85	20	30	(5	(10
26	90	25	20	20	(10
27	65	20	20	15	(10
28	220	50	20	40	(10
29	100	20	20	30	(10
KS 4530	100	20	10	30	(10
31*	100	20	10	30	(10
32	35	20	5	135	20
33	40	20	5	60	10
34	110	25	10	25	(10
35	70	20	20	40	(10
36	50	20	10	30	(10
37	115	20	10	30	(10
38	110	25	15	30	(10
39	210	20	15	20	(10
KS 4540	70	15	30	5	(10
41	60	20	20	25	(10
42*	60	20	20	20	(10
43	70	15	10	25	(10
KS 4544	75	20	15	15	(10

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	
KS 4545	90	20	20	15	(10	
46	60	15	20	15	(10	
47	50	15	20	25	(10	
48	30	15	15	(5	(10	
49	60	20	20	15	(10	
KS 4550	100	20	20	15	(10	
KS 4651*	100	20	20	20	(10	
52	70	20	20	20	(10	
53	60	20	20	30	(10	
54	70	20	20	20	(10	
55	70	20	30	15	(10	
56	40	40	110	(5	(10	
57	45	40	110	(5	(10	
58	40	30	45	(5	(10	
59	90	25	40	10	(10	
KS 4660	120	20	40	(5	(10	
61*	115	20	35	10	(10	
62	135	20	40	10	(10	
63	150	25	25	10	(10	
64	125	25	20	5	(10	
65	100	25	20	5	(10	
66	115	20	20	5	(10	
67	120	20	20	(5	(10	
68	105	20	20	(5	(10	
69	140	20	20	(5	(10	
KS 4670	100	20	20	(5	20	
71	80	20	10	10	(10	
72	70	15	10	10	10	
73*	70	20	10	(5	(10	
74	95	20	10	(5	(10	
75	120	20	10	(5	(10	
76	95	20	10	10	(10	
77	90	20	20	10	(10	
78	50	20	80	15	(10	
79	200	35	60	70	(10	
KS 4680	400	30	30	630	(10	
81*	390	30	30	675	10	
82	250	25	20	495	(10	
83	280	50	15	90	(10	
84	210	30	10	55	(10	
85	45	10	5	365	30	
86	560	50	10	90	30	
87	90	25	5	75	20	
88	370	80	10	65	20	
89	180	45	10	75	30	
KS 4690	150	30	5	140	20	
91*	150	30	10	135	20	
92	145	30	5	140	30	
93	140	30	5	150	40	
94	155	20	5	25	20	
95	100	20	10	80	30	
96	110	25	10	75	30	
KS 4697	65	20	5	95	30	

* Denotes duplicate of previous sample

** Denotes repeat and check.

(Denotes less than.

052072

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	
KS 4698	60	20	5	80	30	
99	560	135	10	70	(10	
KS 4700	390	110	10	90	20	
01*	410	120	10	80	20	
02	40	15	10	110	50	
03	720	70	40	105	(10	
04	420	50	10	200	40	
05	0.16%	130	20	150	10	
06	220	45	10	125	50	
07	400	70	20	95	10	
08	150	30	10	65	20	
09	320	50	15	75	20	
KS 4710	140	35	10	85	20	
11*	160	35	15	90	20	
12	180	75	15	75	20	
13	115	50	80	45	30	
14	40	30	70	10	(10	
15	55	30	60	15	(10	
16	150	35	195	55	(10	
17	95	30	70	115	(10	
18	0.11%	35	90	510	(10	
19	220	30	20	220	(10	
KS 4720	30	10	10	65	(10	
21*	30	10	10	65	(10	
22	90	30	50	25	(10	
23	95	30	80	25	(10	
24	70	30	150	45	(10	
25	35	20	50	65	(10	
26	10	25	40	(5	(10	
27	10	20	20	(5	(10	
28	10	15	15	(5	(10	
29	10	20	20	(5	(10	
KS 4730	5	15	20	(5	(10	
31*	5	10	15	10	(10	
32	5	15	15	55	(10	
33	40	30	10	10	(10	
34	20	40	10	15	(10	
35	35	20	40	185	(10	
36	30	10	10	245	10	
37	50	30	20	170	(10	
38	75	35	15	400	(10	
39	80	30	15	35	(10	
KS 4740	65	30	20	45	(10	
41*	70	40	20	60	(10	
42	60	30	20	75	(10	
43	60	35	15	20	(10	
44	20	20	15	35	(10	
45	30	25	20	10	(10	
46	45	20	25	20	(10	
47	50	25	20	35	(10	
48	40	30	30	40	(10	
49	30	20	30	25	(10	
KS 4750	130	20	35	10	(10	
51*	120	20	45	5	(10	

* Denotes duplicate of previous sample

** Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4752	110	20	30	10	(10
53	90	20	30	15	(10
54	85	20	30	25	(10
55	120	25	50	20	(10
56	45	20	30	20	(10
57	50	20	35	20	(10
58	50	20	50	185	(10
59	150	20	20	55	(10
KS 4760	80	20	20	30	10
61*	75	20	20	35	10
62	30	15	20	100	(10
63	20	10	20	425	(10
64	50	15	25	70	(10
65	70	20	30	30	(10
66	40	20	30	15	(10
67	40	20	25	20	(10
68	60	20	30	20	(10
69	20	25	15	20	10
KS 4770	15	20	10	20	(10
71*	10	20	15	20	10
72	60	30	10	165	10
73	65	40	10	295	(10
74	65	90	10	80	(10
75	110	75	15	75	(10
76	35	20	5	265	(10
77	25	30	20	85	(10
78	25	30	20	65	(10
79	10	20	5	20	(10
KS 4780	25	45	5	20	(10
81*	30	45	5	20	(10
82	15	30	5	(5	(10
83	5	25	5	(5	(10
84	5	20	5	20	(10
85	10	20	5	15	10
86	20	20	10	60	(10
87	50	20	10	70	(10
88	40	20	10	85	(10
89	65	45	25	5	(10
KS 4790	55	30	25	30	(10
91*	55	35	30	35	(10
92	50	40	35	15	(10
93	50	40	25	5	(10
94	50	40	30	5	(10
95	50	35	40	5	(10
96	135	30	20	130	(10
97	110	25	15	30	(10
98	65	25	5	20	(10
99	5	20	5	65	10
KS 4800	5	30	5	155	(10
01*	5	30	10	150	(10
02	25	20	10	(5	(10
03	25	20	10	(5	(10
04	35	25	5	(5	(10
KS 4705	25	30	10	95	(10

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KS 4706	5	15	5	(5	(10
07	5	20	5	(5	(10
08	10	20	5	(5	(10
09	15	20	10	205	(10
KS 4810	20	30	15	195	(10
11*	20	30	25	180	(10
12	65	30	20	145	(10
13	5	15	10	10	10
14	20	20	10	25	(10
15	40	30	10	15	(10
16	40	40	15	10	(10
17	60	20	20	10	10
18	95	25	20	10	(10
19	140	30	30	10	10
KS 4820	115	30	25	5	(10
21*	125	30	25	25	(10
22	50	25	20	15	(10
23	45	25	20	20	(10
24	260	40	25	40	(10
25	90	35	20	30	10
26	50	25	20	200	(10
27	100	30	25	20	(10
28	75	30	30	15	(10
29	60	30	25	20	(10
KS 4830	50	30	20	100	(10
31*	50	30	15	110	(10
32	20	30	10	90	(10
33	30	20	10	75	(10
34	15	20	10	120	(10
35	15	20	10	100	(10
36	10	30	5	160	10
37	40	15	10	160	10
38	70	20	5	185	(10
39	30	20	5	55	(10
KS 4840	2	20	2	115	(10
41*	2	5	10	100	(10
42	45	20	5	120	30
43	40	20	15	30	(10
44	90	20	5	5	(10
45	45	20	5	30	(10
46	10	20	5	30	(10
47	60	20	15	45	(10
48	80	20	20	30	(10
49	110	25	20	15	(10
KS 4850	90	30	20	25	(10
KS 4954*	95	25	20	30	(10
55	65	25	10	50	(10
56	110	30	10	115	(10
57	330	115	10	110	(10
58	45	25	10	40	(10
59	45	30	10	90	(10
KS 4960	35	25	5	175	20

* Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	
KS 4961	165	50	10	220	(10	
62	210	45	10	205	20	
63	130	25	10	155	10	
64	5	20	10	145	20	
65	5	10	10	160	30	
66	20	20	10	165	30	
67	40	25	10	60	(10	
68	65	25	10	135	30	
69	45	20	10	270	(10	
KS 4970	80	25	10	200	(10	
71*	85	30	10	190	(10	
72	40	30	10	35	(10	
73	25	25	10	10	(10	
74	40	30	15	20	(10	
75	75	30	20	30	(10	
76	90	25	25	35	(10	
77	145	30	30	65	(10	
78	85	15	10	80	(10	
79	230	30	10	80	(10	
KS 4980	185	30	10	80	(10	
81*	165	30	10	70	(10	
82	90	25	10	30	(10	
83	50	15	10	85	(10	
84	25	20	10	95	10	
85	380	55	10	95	(10	
86	310	105	5	150	20	
87	140	30	10	70	10	
88	20	10	5	110	30	
89	460	60	15	125	10	
KS 4990	30	15	20	5	(10	
91*	25	25	20	10	(10	
92	25	25	20	15	(10	
93	55	15	15	10	(10	
94	85	20	20	10	(10	
95	85	25	25	15	(10	
96	70	25	25	10	(10	
97	65	15	25	15	(10	
98	50	20	30	20	(10	
99	70	25	30	25	(10	
KS 5000	60	20	35	30	(10	
01	65	20	35	25	(10	
02	40	10	20	20	(10	
03	25	15	20	30	(10	
04	45	20	30	45	(10	
05	60	25	25	50	(10	
06	40	25	20	60	(10	
07	45	25	10	50	(10	
08	50	35	20	60	(10	
09	25	20	10	40	(10	
KS 5010	25	15	10	20	(10	
11	5	10	5	25	(10	
KS 5012	2	(5	5	25	(10	
KS 3618	2	5	20	10	(10	

* Denotes duplicate of previous sample

** Denotes repeat and check.

(Denotes less than.

075

ANALYTICAL RESULTS

ROCK SAMPLES - E.L. 24/73

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm	Au ppb	Sn ppm	W ppm
KR 4022	240	25	25		390	15
23	200	20	10		0.11%	30
24	250	20	10		400	30
25	240	30	5		500	(5
26	290	20	5		420	30
27	290	25	5		385	(5
KR 4028	330	40	10		0.60%	120
KR 5099	980	280	195	120	45	(10
KR 5418	195	580	240	20	150	(10
19	460	145	25	20	320	(10
20	260	180	105	20	195	20
21	350	75	35	20	300	(10
22	620	90	50	25	80	(10
KR 5423	250	100	60	20	225	(10
KR 5492	115	20	35	5	65	(10
93	165	20	35	5	(5	(10
94	50	20	65	15	(5	(10
95	30	25	60	5	(5	(10
96	40	20	95	5	(5	(10
97	20	15	90	3	45	(10
98	25	25	65	3	25	(10
99	50	20	60	5	15	(10
KR 5500	85	20	75	10	5	(10
01	25	20	75	5	5	(10
02	20	20	50	5	15	(10
03	60	20	30	15	10	(10
04	85	30	45	10	120	(10
05	300	35	35	15	145	(10
06	130	25	75	5	315	(10
07	40	30	65	3	10	(10
08	15	30	50	10	5	(10
09	0.17%	70	15	55	135	(10
KR 5510	35	20	15	5	0.26%	(10
11	25	20	35	10	70	(10
KR 5512	20	15	20	10	360	(10

● Denotes duplicate of previous sample.

●● Denotes repeat and check.

(Denotes less than.

076

ANALYTICAL RESULTS

DRAINAGE SAMPLES E.L. 24/73

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm	Sn ppm.	W ppm
		<u>PANNED CONCENTRATES</u>				
KD	1301	10	15	60	120	25
	02	2	10	20	210	10
	03	(2	10	25	165	15
	04	2	10	25	15	(10
	05	2	10	30	I.S.	I.S.
	06	2	15	60	I.S.	I.S.
	07	(2	10	20	15	(10
	08	65	10	75	105	15
	09	5	10	30	60	10
KD	1310	95	25	40	0.16%	40
	11	20	15	45	120	15
	12	20	10	45	435	(10
	13	15	15	20	45	(10
	14	30	25	100	370	15
	15	20	20	60	115	(10
	16	10	10	45	65	(10
	17	15	15	90	35	(10
	18	15	15	85	15	(10
	19	15	20	30	15	(10
KD	1320	20	20	20	(5	(10
	21	10	30	35	5	10
	22	2	10	10	30	(10
	23	15	45	20	(5	(10
	24	25	70	75	(5	10
	25	5	20	45	10	(10
	26	10	25	20	(5	(10
	27	15	15	70	5	10
	28	20	25	60	(5	10
KD	1329	2	20	40	5	10
		<u>MINUS 80 MESH</u>				
KD	1501	95	10	110	25	(10
	02	5	15	30	10	(10
	03	620	40	90	100	10
	04	55	15	60	10	(10
	05	100	30	280	I.S.	I.S.
	06	45	20	70	5	(10
	07	50	30	210	10	(10
	08	30	20	100	15	(10
	09	50	35	165	5	(10
KD	1510	30	20	200	10	(10
	11	30	30	250	15	(10
	12	30	30	60	I.S.	I.S.
	13	70	55	65	I.S.	I.S.
	14	25	30	70	(5	(10
	15	2	10	15	(5	(10
	16	40	95	50	I.S.	I.S.
	17	20	80	40	I.S.	I.S.
KD	1518	15	30	60	(5	(10

● Denotes duplicate of previous sample.

●● Denotes repeat and check.

(Denotes less than.

077

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm
KD	1519	45	70	95	(5	(10
KD	1520	35	30	55	(5	(10
	21	30	25	55	(5	(10
KD	1522	2	25	70	(5.	(10

• Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

078

ANALYTICAL RESULTS

SAMPLE NUMBER		Ag ppm	Au ppb			
		<u>PANNED CONCENTRATES</u>				
KD	1301	(1	35			
	02	(1	20			
	03	(1	15			
	04	(1	10			
	05	(1	15			
	06	(1	10			
	07	(1	5			
	08	(1	5			
	09	(1	3			
KD	1310	(1	5			
	11	(1	15			
	12	(1	15			
	13	(1	20			
	14	(1	20			
	15	(1	95			
	16	(1	85			
	17	1	30			
	18	(1	10			
	19	(1	15			
KD	1320	(1	5			
	21	(1	25			
	22	(1	40			
	23	(1	20			
	24	(1	45			
	25	(1	25			
	26	(1	30			
	27	(1	3			
	28	(1	5			
KD	1329	(1	5			
		<u>MINUS 80 MESH</u>				
KD	1501	(1	10			
	02	(1	5			
	03	1	10			
	04	(1	10			
	05	1				
	06	1				
	07	1				
	08	1				
	09	1	980			
KD	1510	(1				
	11	(1				
	12	1				
	13	1				
	14	(1	10			
	15	(1	3			
	16	1				
	17	1				
KD	1518	1	50			

• Denotes duplicate of previous sample.

•• Denotes repeat and check.

(Denotes less than.

073

SAMPLE NUMBER	Ag ppm	Au ppb				
KD 1519	1					
KD 1520	(1	80				
21	(1	35				
KD 1522	(1	25				

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

APPENDIX IV

Results of Rock chip and Drainage samples from Dial Iron,
Kaine's and Iron Cliff/Badger's Prospects.

<u>DIAL IRON</u>	<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Ba</u> <u>ppm</u>	<u>Sn</u> <u>ppm</u>	<u>W</u> <u>ppm</u>
KR 5559 Cherty pebble congl; hematitic matrix	5	20	5		(5	(10
KR 5560 Cherty pebble congl. c̄ large hematite clasts	10	45	10		(5	(10
KR 5561 Cherty pebble congl. c̄ large hematite clasts	10	220	10		(5	(10
KR 5562 Cherty pebble congl. c̄ large hematite clasts	10	55	10		(5	(10
KR 5563 Hematitic conglomerate	10	60	10		(5	(10
KD 1335 Stream sediment sample (-80 mesh)	10	20	10	150	(5	(5
KD 1336 Stream sediment sample (-80 mesh)	10	15	5	60	5	10
KD 1337 Stream sediment sample (-80 mesh)	10	20	10	70	25	(10
<u>KAINE'S PROSPECT</u>						
KR 5564 Purple andesitic feldspar porphyry	5	30	35	290	10	(10
KR 5565 Mudstone; fine tuffaceous layers	35	20	65	410	5	(10
KR 5566 Tuffaceous greywacke	5	30	110	860	5	(10
KR 5567 Coarse crystal lithic tuff	10	20	50	340	10	(10
KR 5568 Andesitic crystal tuff	10	10	55	320	(5	(10
KD 1338 Stream sediment sample (-80 mesh)	15	20	50	830	5	(10
KD 1339 Stream sediment sample (-80 mesh)	20	20	65	330	(5	(10
KD 1340 Stream sediment sample (-80 mesh)	15	20	55	260	(5	(10

081

052082

APPENDIX IV (Continued)

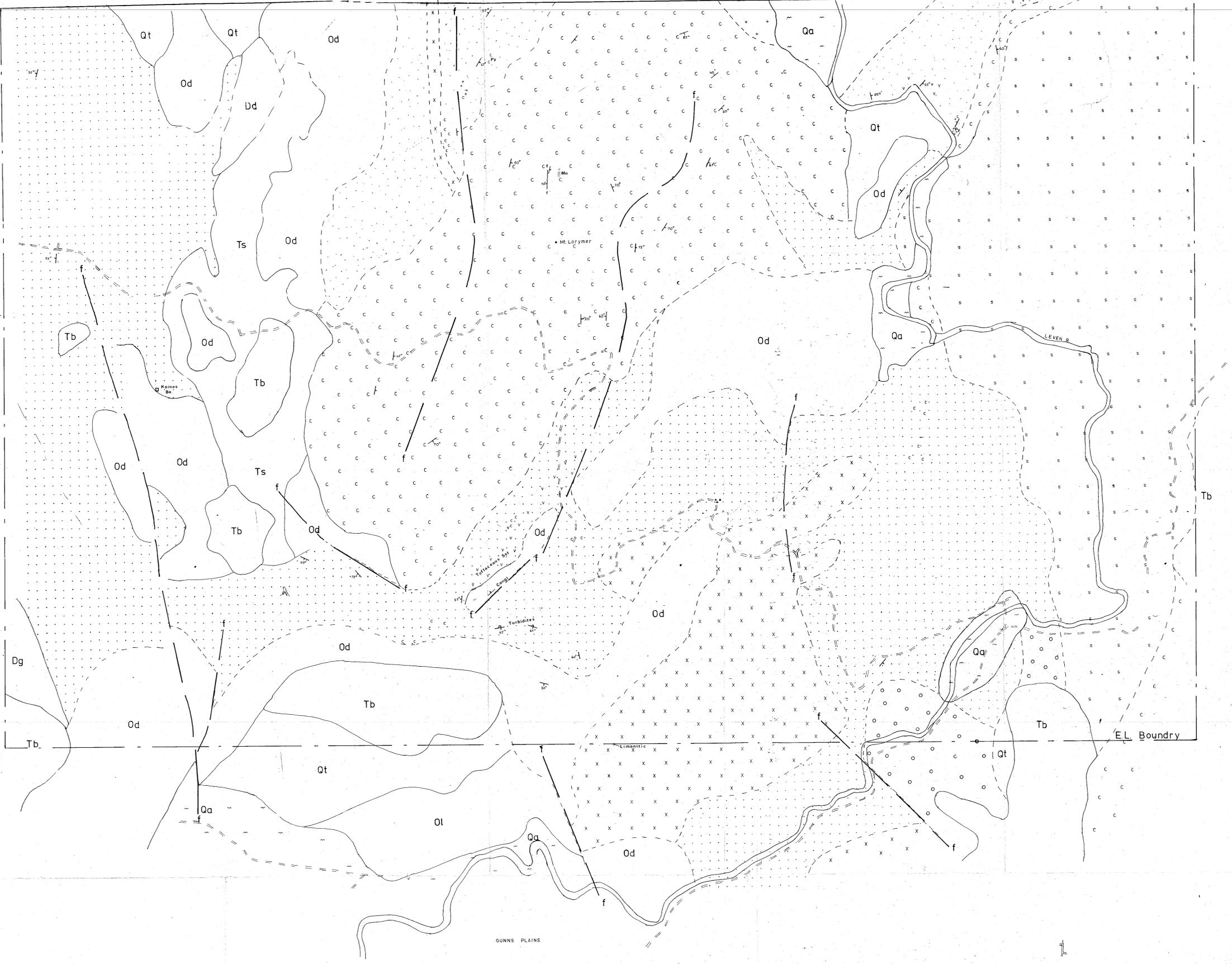
<u>VENTURE 3</u>		<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Ba</u> <u>ppm</u>	<u>Sn</u> <u>ppm</u>	<u>W</u> <u>ppm</u>	<u>Au</u> <u>pp</u>
KR 5551	Massive/earthy and concretionary limonite	230	110	130	440	10	(10	15
KR 5552	Massive/earthy and concretionary limonite	260	140	80	330	(5	(10	10
KR 5553	Massive/earthy and concretionary limonite	180	190	95	210	(5	(10	10
KR 5554	Massive/earthy and concretionary limonite c̄ approx. 20% qtz.	170	170	80	110	(5	(10	5
KR 5555	Massive/earthy and concretionary limonite c̄ approx. 20% qtz.	70	50	145	310	10	(10	5
KR 5556	Limonite and breccia qtz	500	330	190	1100	(5	(10	(3
KR 5557	Altered xtal tuff c̄ dissem. lim. blebs	100	250	40	140	10	(10	15
KR 5558	Altered xtal tuff c̄ dissem. lim. blebs	75	180	30	90	5	10	10
KD 1330	Stream Sediment Sample	65	30	20		(5	(10	
KD 1331	Stream Sediment Sample	380	80	70				
KD 1332	Stream Sediment Sample	195	640	700	150	10	(5	
KD 1333	Stream Sediment Sample	600	1700	800				
KD 1334	Stream Sediment Sample	65	100	150	170	(5	(5	
		<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Ba</u> <u>ppm</u>	<u>Ag</u> <u>ppm</u>		
KD 1341	Ferruginous sludge from creek below Badger's adit	220	820	80		3		

082

052083

APPENDIX IV (Continued)

		<u>Cu</u> <u>ppm</u>	<u>Pb</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Ba</u> <u>ppm</u>	<u>Ag</u> <u>ppm</u>
KR 5577	Concretionary/nodular limonite	85	30	115	740	4
KR 5578	Fragmental Hem/ conc. limonite	40	135	80	2.15%	3
KR 5579	Fragmental Hem/conc. limonite	30	20	55	1.37%	3
KR 5580	Limonite, nodular hematite	95	35	65	70	4
KR 5581	Compact, massive limonite	90	30	95	40	3
KR 5582	Limonite replacing fine qtzite?	580	40	120	50	4
KR 5583	Altered tuff, limonite stained	260	95	80	80	3
KR 5584	Ferrug. Clay from Mullock	75	880	1000	130	3
KR 5585	Ferrug. Clay from Mullock	45	290	620	60	4
KR 5586	Weathered crystal tuff	165	115	75	100	3
KR 5587	Hem-lim-qtz	120	5	135	(10	4



T. N.

LEGEND

Quat.	Qa	Alluvium
	Qt	Talus
Tert.	Ts	Sand & gravel
Ord.	Ol	Gordon Limestone
	Od	Terrigenous sed.
Ord?	o o	Conglomerate (Sprent E.)
Cambrian	(dots)	Sediments - mainly siltst. & greywacke (Radford's Crk. Mudstone, Gog Range Greywacke)
	(c c c)	Chert & sil. siltst.
	(v v v)	Tuffs (Appelbee Vol.)
	(s s s)	Motton Spillite
	(c c c)	Barrington Chert
	(v v v)	Cateena Mudstone
	(v v v)	Volcanics
Igneous Rocks		
Tert.	Tb	Basalt
Dev.	Dd	Dolerite
	Dg	Housetop Granite
Camb	(x x x)	Laher Gies Volcanics
	(dots)	Mineralized or gossanous rocks
	(square)	Abandoned prospect

SCALE 1:10344

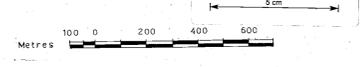
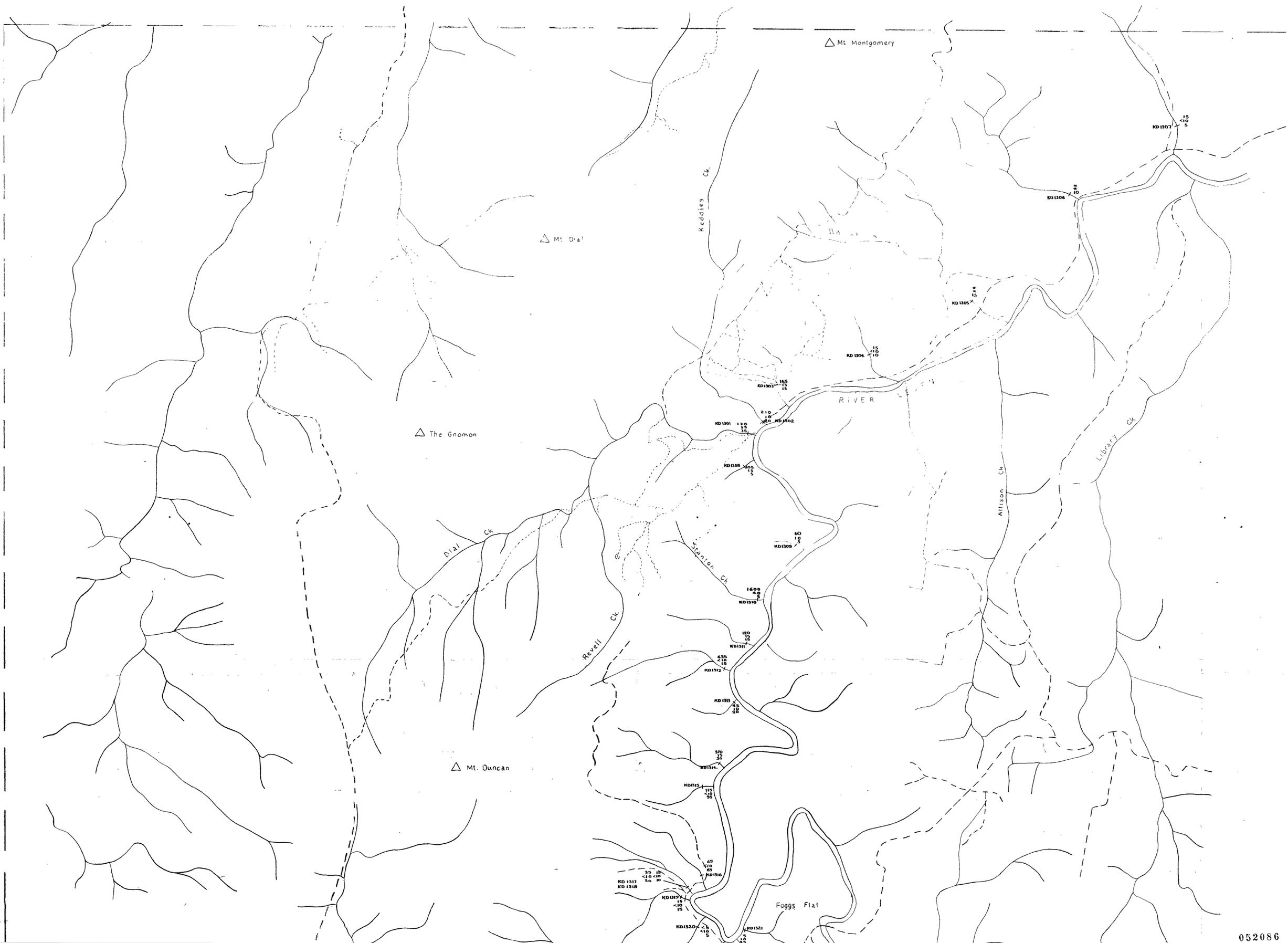


PLATE 1
PLATE 2

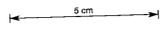
052085 80-1476 Vol. 2

GEOPEKO LIMITED
No. TS 24/73 - 4
DIAL RANGE E.L. 24/73
REGIONAL GEOLOGY 078
Taken from Devonpart 1 inch to 1 mile Geology (Burns 1964)

078



052086



LEGEND:

435 ppm Sn
 <10 ppm W
 15 ppb Au
 KD 1312 Sample Number

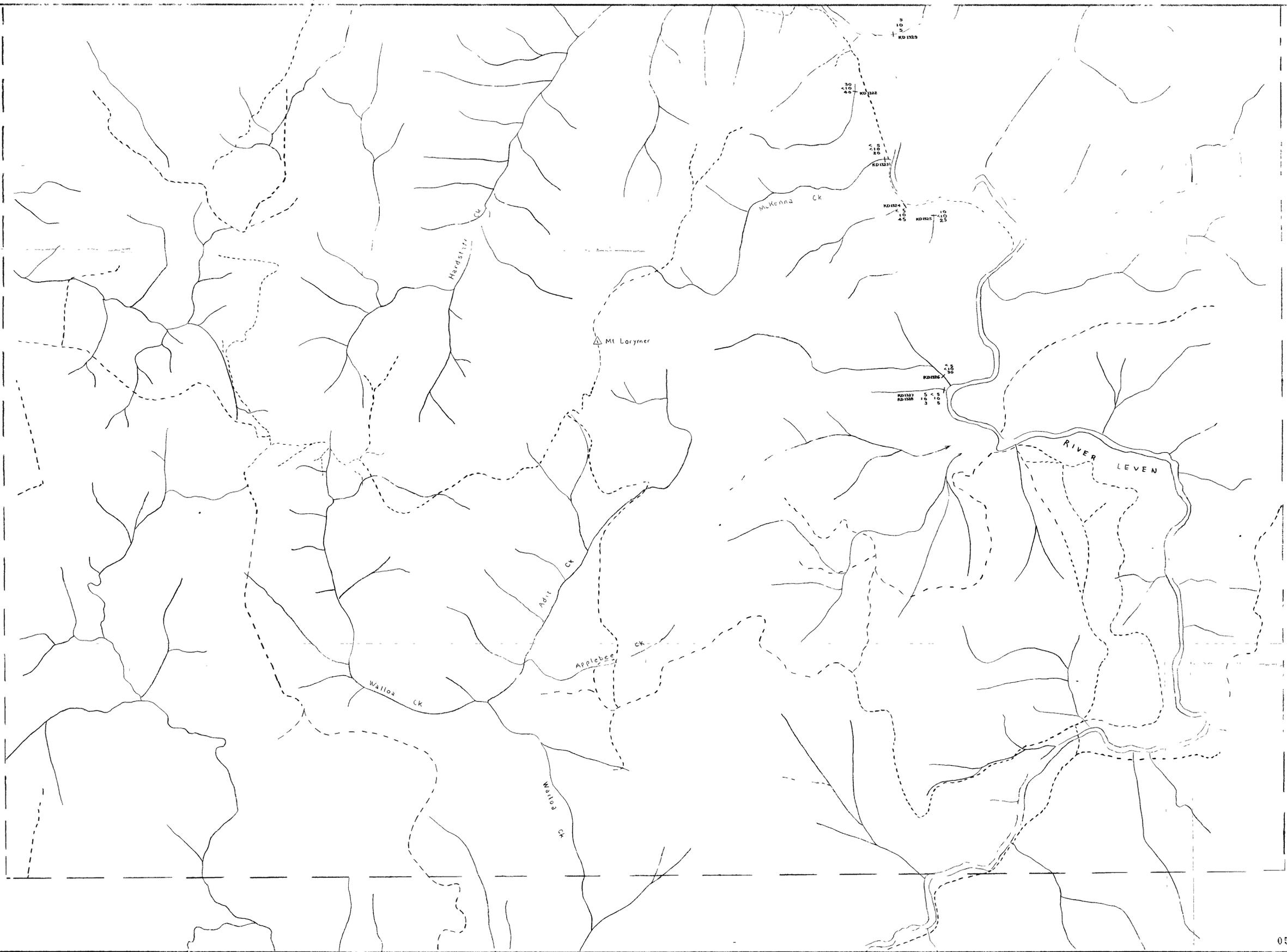
* Insufficient sample for analysis

Preparation: pulverised concentrates,
 Analysis: Sn, W by XRF
 Au. by method 120 A (A.L.S. Bris)

1
2

DATE: July 1980
 GEOLOGIST: C DS
 DRAWN: C D S
 CHECKED:

GEOPEKO
 A DIVISION OF PEKO-WALLSEND OPERATIONS LTD
 No. TS24/73-5
 SCALE: 1:10,000 approx.
 E.L. 24/73 DIAL RANGE, TASMANIA
PANNED CONCENTRATE SAMPLE RESULTS
 Sn W Au
 079
 80-1474 Vol 2



052087 5cm

LEGEND

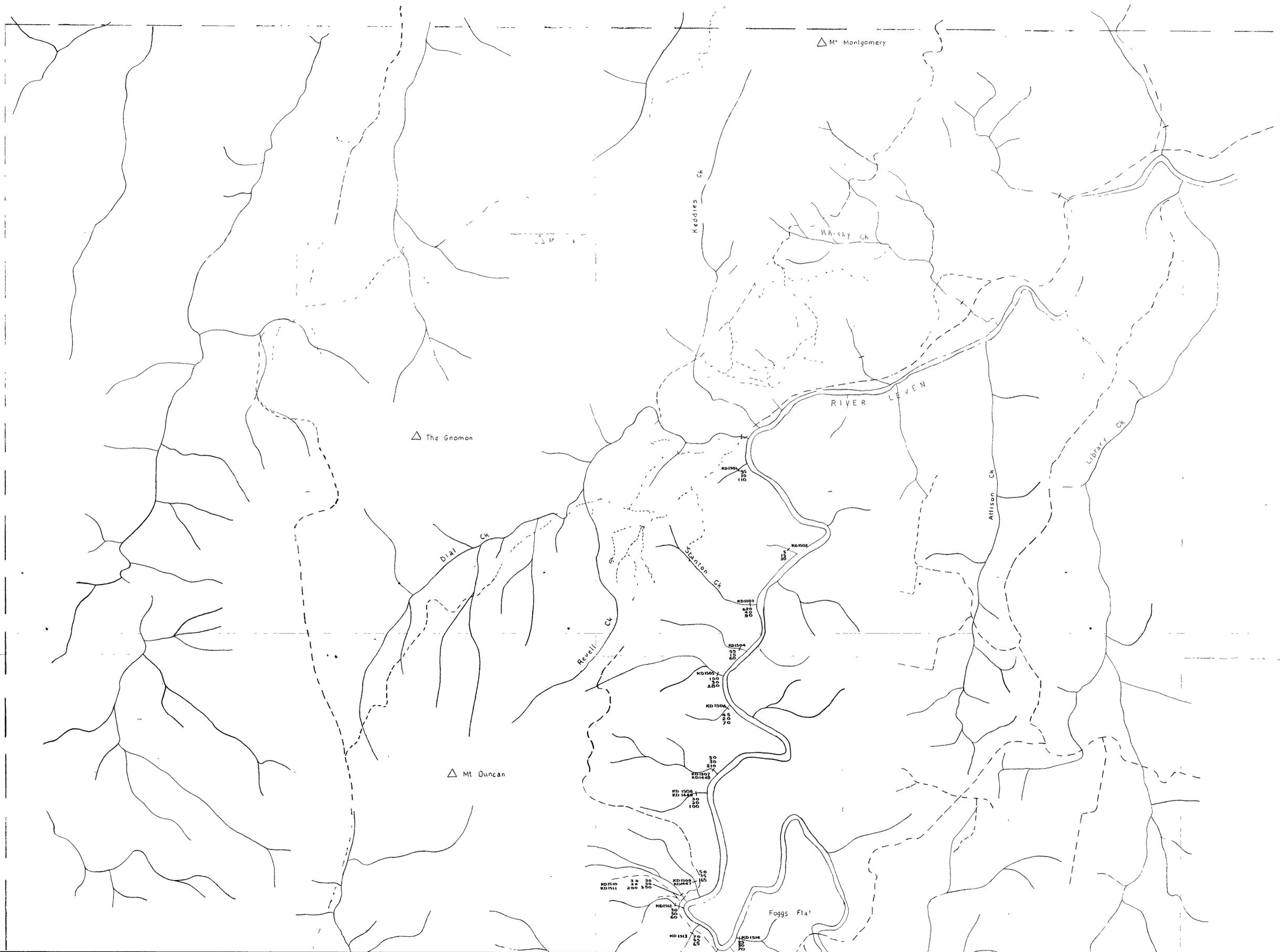
120 ppm Sn
 15 ppm W
 15 ppm Au
 KD 1311 Sample number

Preparation pulverised concentrates
 Analysis Sn W by XRF
 Au by method 120A (ALS)

1
2

July 1980
 CDS
 SPS
 22-

DIVISION WALLSEND OPERATIONS LTD
 No TS24/73-6
 1:10,000 approx
 EL 24/73 DIAL RANGE, TASMANIA
PANNED CONCENTRATE SAMPLE RESULTS
Sn W Au 080
 80-1474 Vol 2



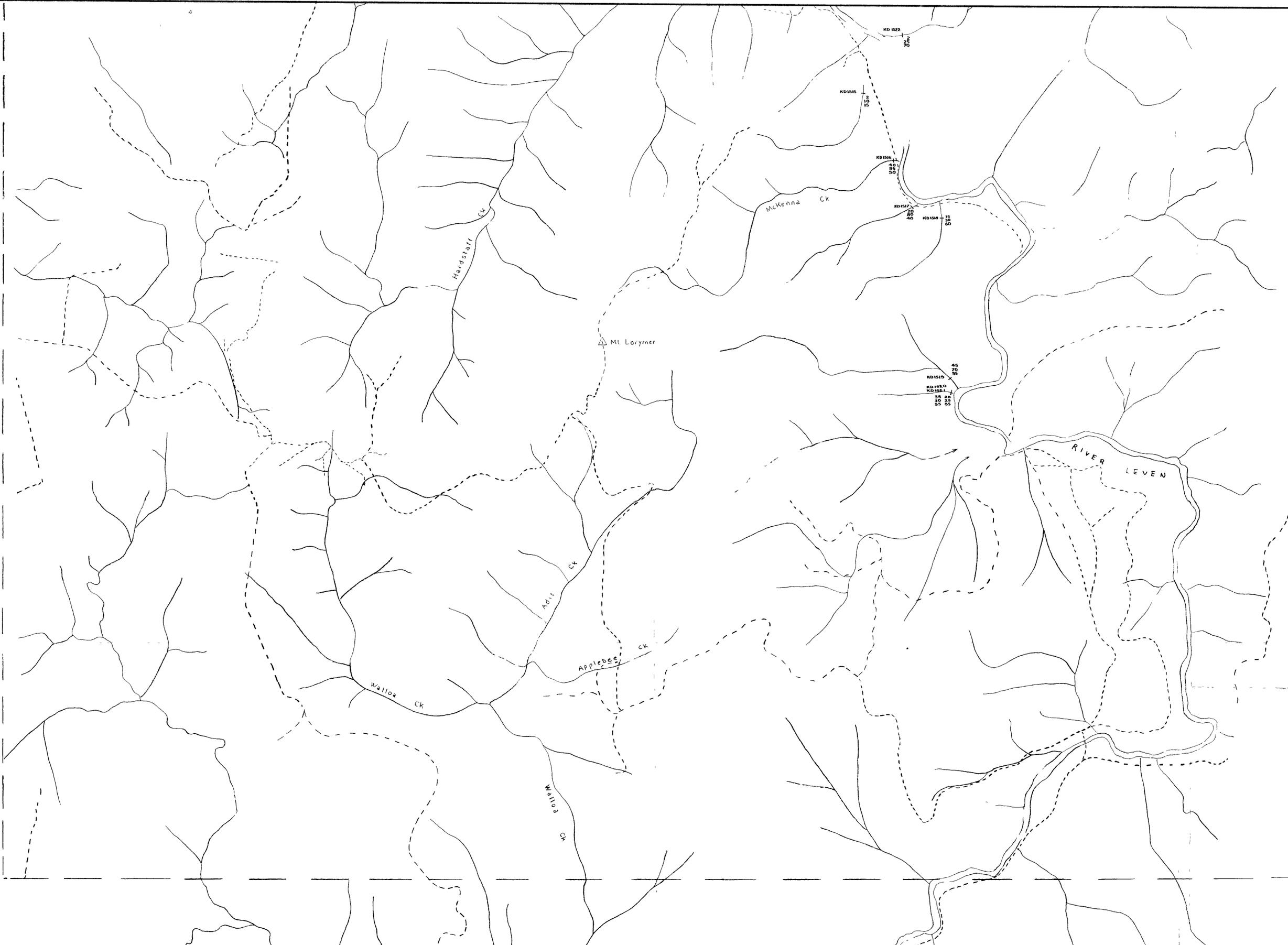
LEGEND

KD 1507 Sample number
 30 30 30
 210 30 30
 Preparation Sieved to -80 mesh
 Analysis Cu, Pb, Zn by AAS (A L S Bris)

1
2

DATE JULY 1980
 GEOLOGIST C D S
 DRAWN C D S
 CHECKED J P H

GEOPEKO
 A DIVISION OF PEKO-WALLSEND OPERATIONS LTD
 SCALE 1:10,000 approx
 No TS24/73-7
 E L 24/73 DIAL RANGE, TASMANIA
STREAM SEDIMENT SAMPLE RESULTS
 Cu Pb Zn 081
 052088 80-1474 Vol 2



052089



LEGEND:

KD 1507 Sample number
 50 ppm Cu
 30 ppm Pb
 210 ppm Zn
 Preparation sieved to -80 mesh
 Analysis Cu, Pb, Zn by AAS (ALS Brs)

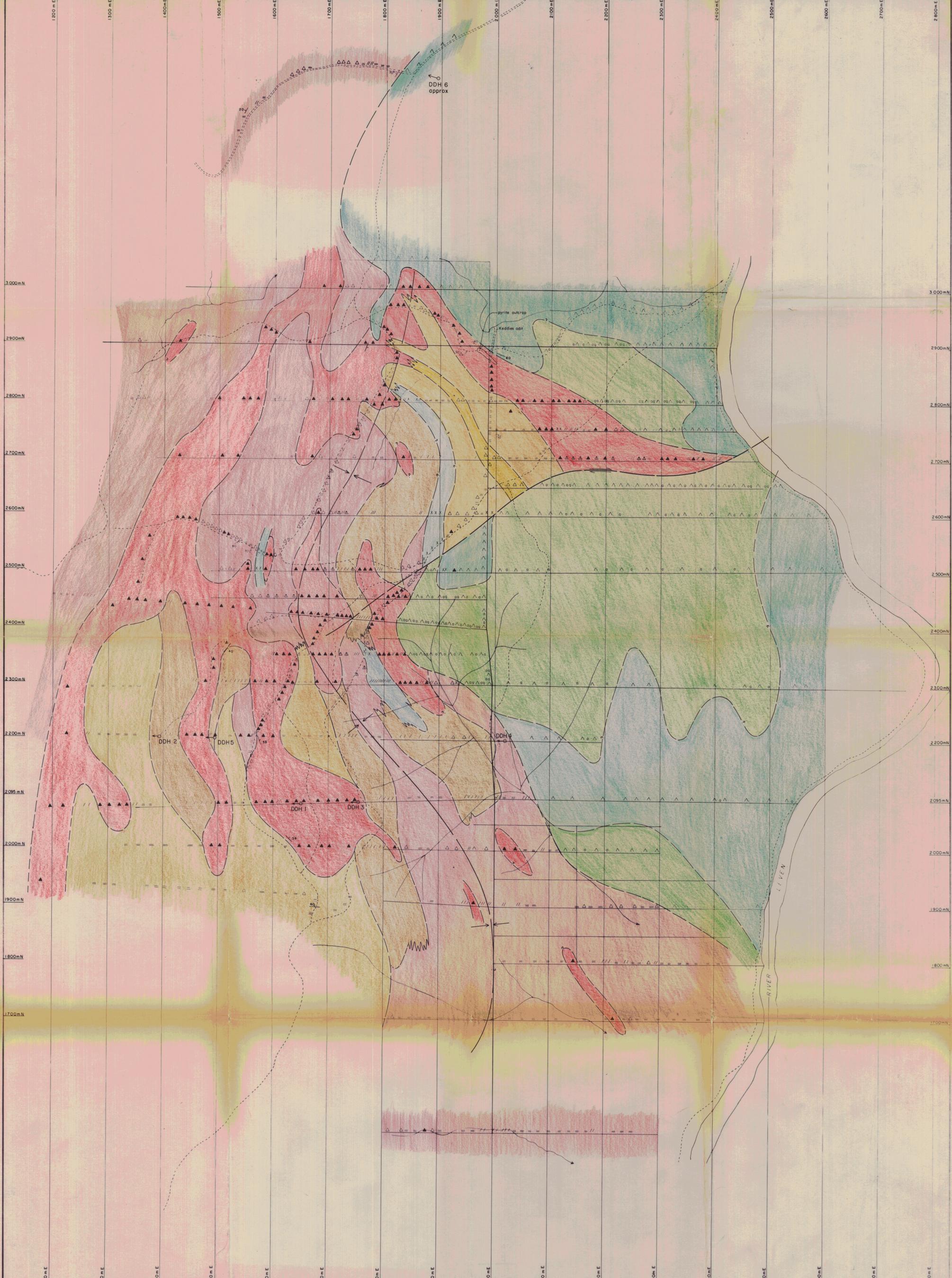
1
2

DATE JULY 80
 GEOLOGIST C O S
 DRAWN J B S
 CHECKED

GEOPEKO
 A DIVISION OF PEKO-WALLSEND OPERATIONS LTD
 No TS24/3-8
 EL 24/73 DIAL RANGE, TASMANIA 082
STREAM SEDIMENT SAMPLE RESULTS
 Cu Pb Zn
 80-1474 II



LEGEND GATEENA GROUP 19-15 Gossanous and ferruginous sediment breccia 19-58 Dominantly shales mudstones argillites (pink purple cream and brown) 19-56 Dominantly massive grey sandstones minor greywackes (fe-indicates iron oxide veining after pyrite) 19-3 Siliceous fine breccia and coarse grits 19-40 Dacitic crystal tuff 19-33 Rhyolitic tuffs 19-65 Interbedded argillaceous breccias sandstone mudstone shale greywacke and minor dacitic tuffs (undifferentiated)		LOBSTER CREEK VOLCANIC 19-41 Massive dacite and porphyritic dacite 19-44 Altered dacite (sericite clays) commonly cut by quartz-FeO veins (after atz-py)		 DATE JULY '80 GEOLOGIST C G S R R L DRAWN J P M CHECKED B L	GEOPEKO A DIVISION OF PEKO - WALLSEND OPERATIONS LTD SCALE 1:2500 No TS 24/73-9 EL 24/73 DIAL MINE GRID, TASMANIA GEOLOGY MAP 052090 FACT 083 5cm	
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--



- LEGEND**
- GATEENA GROUP**
- 19-15 Gassanous and ferruginous sediment breccia
 - 19-58 Dominantly shales, mudstones, argillites (pink, purple, cream and brown)
 - 19-56 Dominantly massive grey siltstones, minor greywackes (fe-indicates iron oxide veining after pyrite)
 - 19-3 Siliceous fine breccia and coarse grits
 - 19-40 Dacitic crystal tuff
 - 19-33 Rhyolitic tuffs
 - 19-65 Interbedded argillaceous breccias, sandstone, mudstone, shale, greywacke and minor dacitic tuffs (undifferentiated)

- LOBSTER CREEK VOLCANIC**
- 19-41 Massive dacite and porphyritic dacite
 - 19-46 Altered dacite (sericite, clays) commonly cut by quartz-FeO veins (after qtz-py)



DATE JULY 80
 GEOLOGIST RRL
 DRAWN JPM
 CHECKED EN

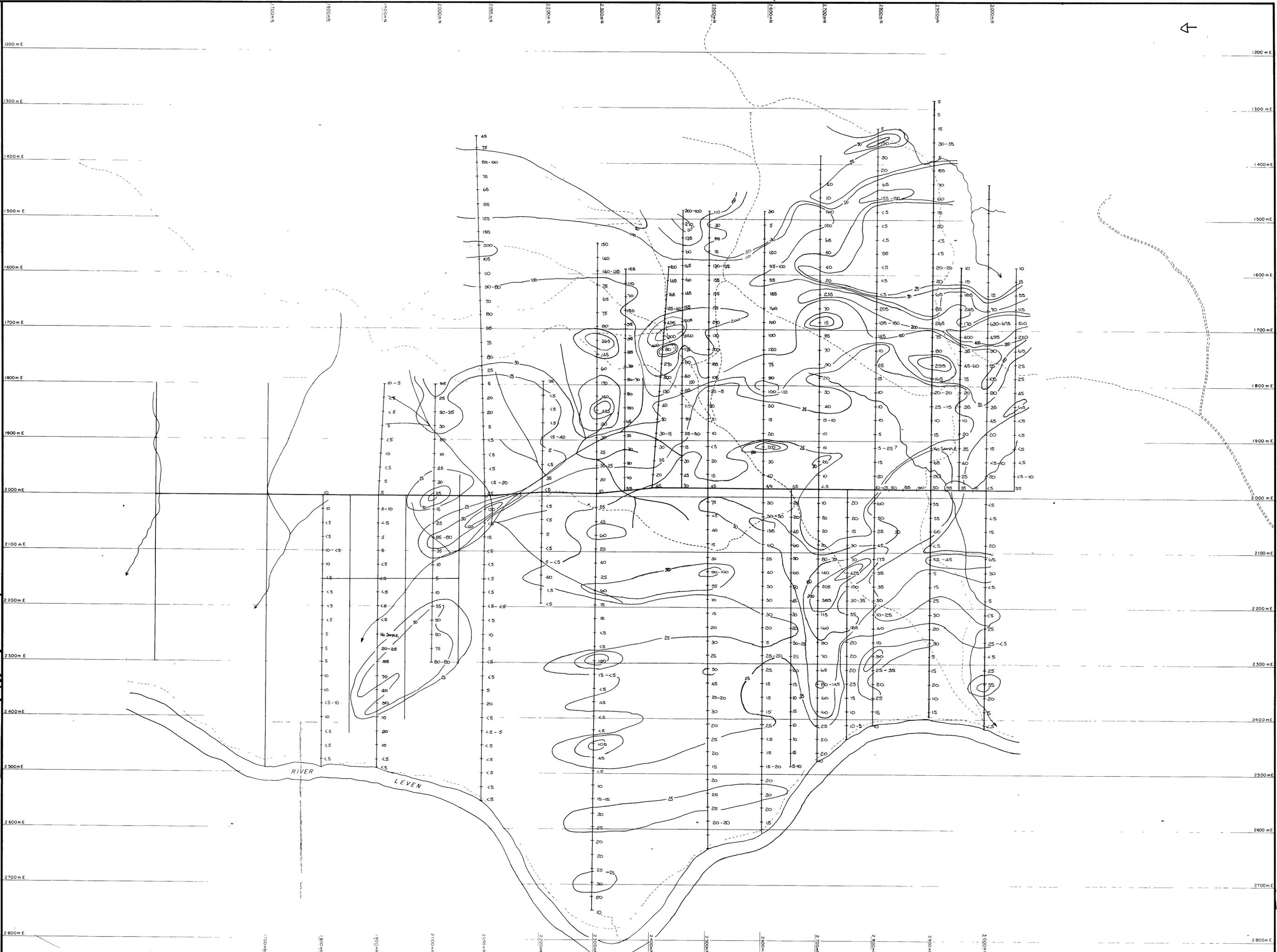
GEOPEKO
 A DIVISION OF PEKO - WALLSEND OPERATIONS LTD

SCALE 1:2500

EL 24/73 DIAL MINE GRID, TASMANIA
 GEOLOGY MAP 052091
 INTERPRETATION 084

No TS 24/73-10

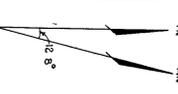
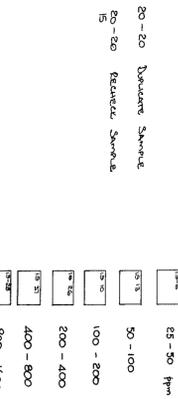
80-1476



ANALYTICAL METHODS
 Cu, Pb, Zn, Ag - AAS (method 1)
 As - XRF (method 2A)
 Au - AAS Carbon Rod (method 100A)
 Sn, W - XRF (method 2A)

Australian Laboratory Services - Brisbane QLD

20-20 Vanadium Sample
 50-50 Recorder Sample
 15



DATE JULY 1988
 GEOLOGIST R.R.E.
 DRAWN J.P.
 CHECKED G.L.

GEPEKO
 A DIVISION OF PEKO-WALLSEND OPERATIONS LTD
 SCALE 1:2500
 EL 24/73 DIAL MINE GRID, TASMANIA
 C - HORIZON GEOCHEMISTRY RESULTS
 Sn & CONTOURS
 052092
 085
 50 14-76 431 2



ANALYTICAL METHODS
 Ca, Pb, Zn, Ag - AAS (method 1)
 Ba - XRF (method 5A)
 Au - AAS Carbon Seal (method 10A)
 Sn, Ni - XRF (method 5B)

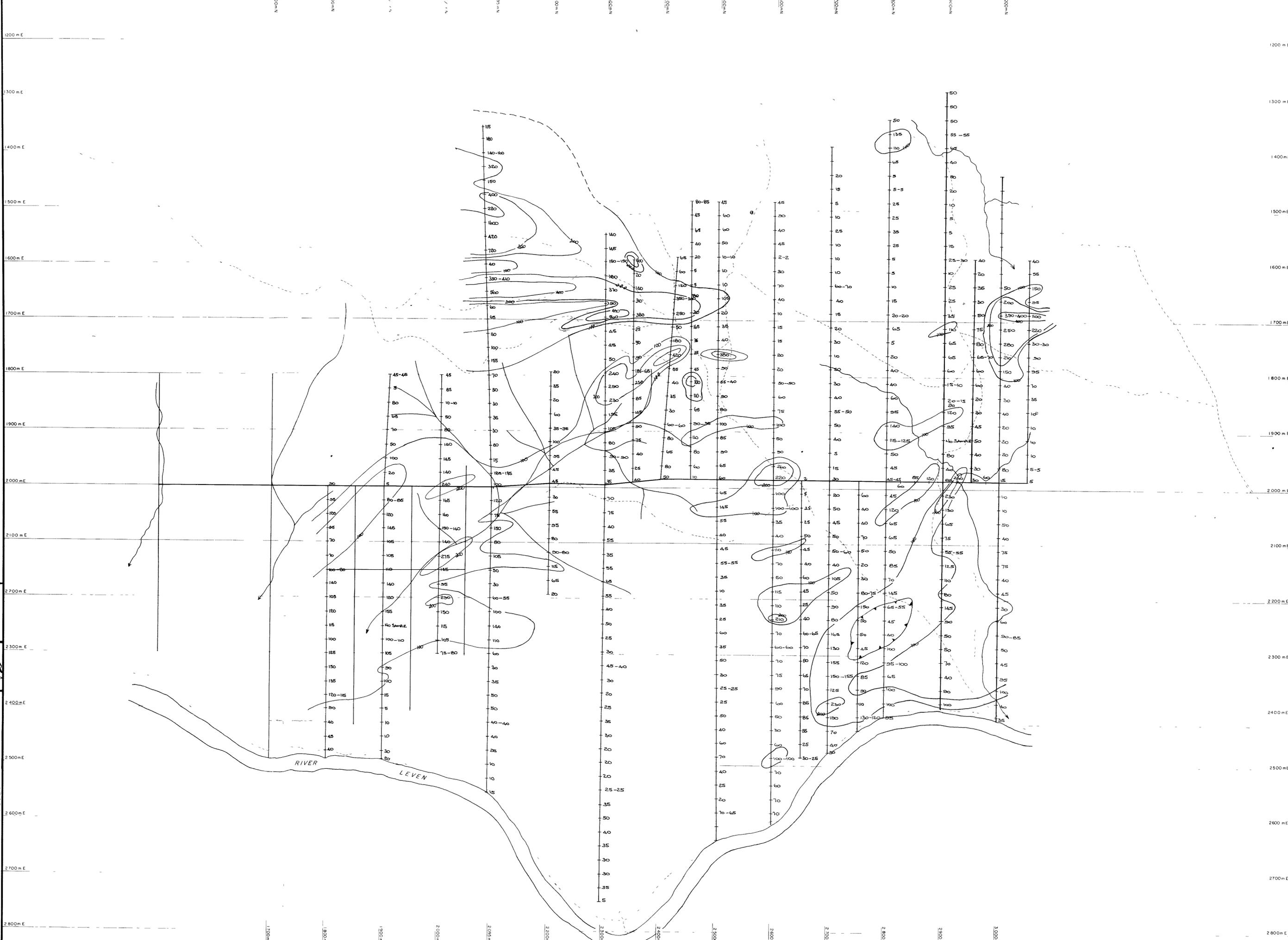
410-410 Duplicate Sample
 410-410 Receiver Sample
 410

5-2 10-20 ppm
 5-15 20-40
 5-10 >40

TU
 MN
 12° E

DATE JULY 1980
 DRAWN J.P.H.
 CHECKED G.A.

GEODEKO
 A DIVISION OF PERCIVAL WALSHE OPERATIONS LTD
 SCALE 1:2500
 EL 24/73 DIAL MINE GRID, TASMANIA
 G-HORIZON- GEOCHEMISTRY RESULTS
 W CONTOURS
 052093
 086
 80 147L 1412



LEGEND

ANALYTICAL METHODS

Cu, Pb, Zn, Ag - AAS (method 1)
 Ba - XRF (method SA)
 Au - AAS Carbon Rod (method 100A)
 Sn, W - XRF (method SA)

Asbestos Laboratory Services - Brisbane QLD

GEO LINE

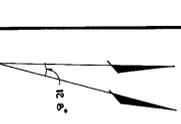
— HAND ASSESS HOLE

DUPLICATE SAMPLE

20-20 Duplicate Sample
 20-20 Reference Sample

CONCENTRATION RANGES

100 - 500 ppm
 50 - 100
 200 - 400
 > 400



PROJECT INFORMATION

DATE: JULY 1980
 GEOLOGIST: C.B.S.
 DRAWN: J.S.H.
 CHECKED: E.L.

GEOPARK

A DIVISION OF PERKINS-WALLENDE OPERATIONS LTD

EL 24/73 DIAL MINE GRID, TASMANIA

C - HORIZON GEOCHEMISTRY RESULTS
 Cu
 CONTOURS

NO TS 24/73-13

SCALE 1:2500

5m

SD 1470 4/12



LEGEND

ANALYTICAL METHODS
 Cu, Pb, Zn, Ag - AAS (method 1)
 Ba - XRF (method 2A)
 Au - AAS Carbon Red (method 20A)
 Sm, Hf - XRF (method 2A)

20-20 DRYLAND SAMPLE
 20-20 **ESTUARINE SAMPLE**

25-50 ppm
 50-100
 >100

TL
 MLI

DATE JULY 1980
GEOLGIST R.R.E.
DRAWN J.P.B.
CHECKED R.L.

GEPEKO
 A DIVISION OF PENN-WALLSEND OPERATIONS LTD
 No TS 24/73-14

EL 24/73 DIAL MINE GRID, TASMANIA
C-HORIZON GEOCHEMISTRY RESULT Zn CONTOURS
 052095
 088

5m

30-4424 1/61 III



ANALYTICAL METHODS
 Cu, Pb, Zn, Ag - AAS (normal)
 Co - XRF (method 9A)
 Au - AAS (Carbon Rod (method 70A))
 Sm, Ni - XRF (method 9A)

ANALYTICAL METHODS
 20-20 DUPLICATE SAMPLE
 20-20 RECHECK SAMPLE
 15

Legend

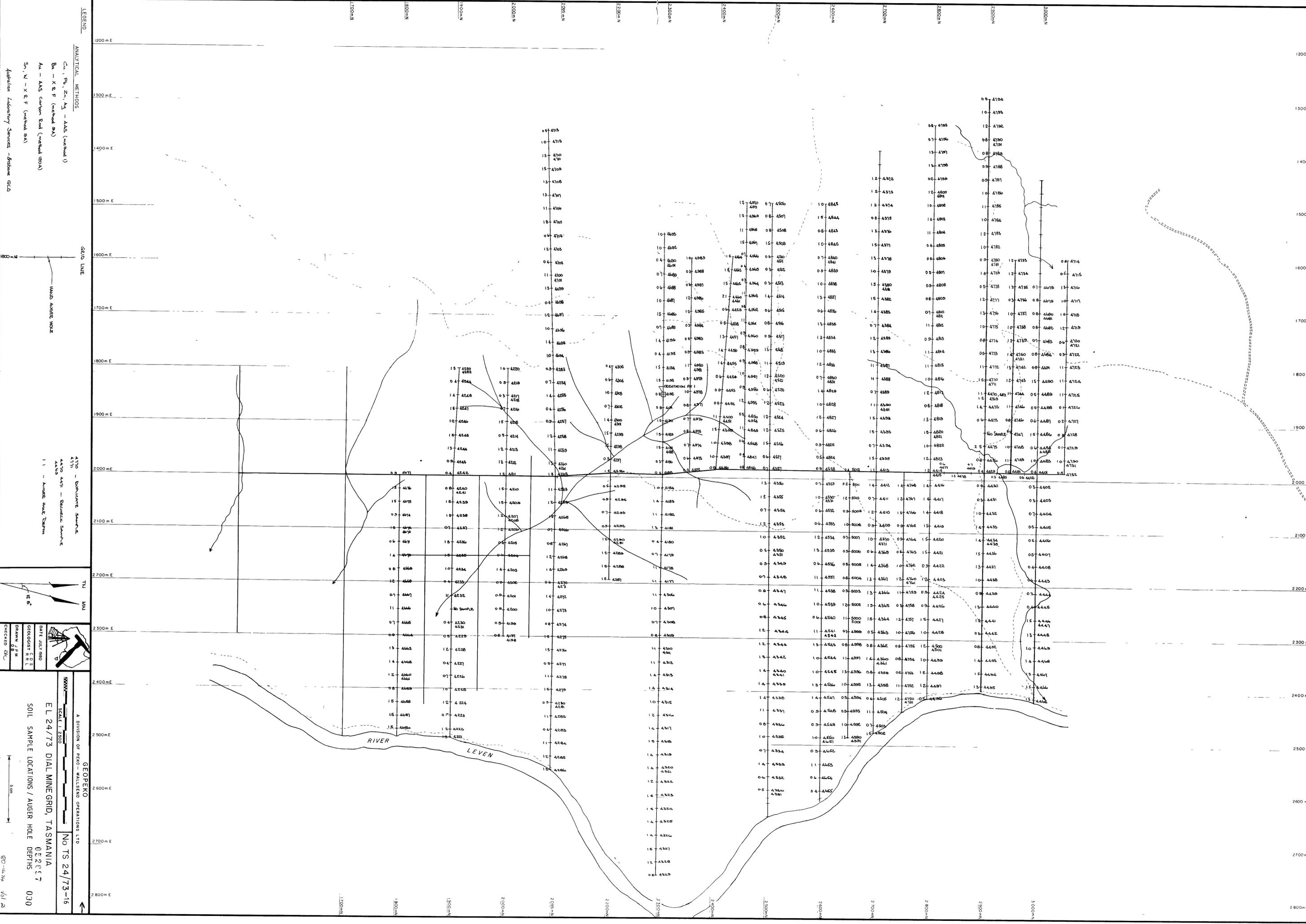
25-50 ppm
 50-100
 >100

Scale
 1:2500
 5m

Geopero
 A DIVISION OF REVO-WALLSTEIN OPERATIONS LTD
 No TS 24/73-15
 EL 24/73 DIAL MINE GRID, TASMANIA
 C-HORIZON GEOCHEMISTRY RESULTS
 Pb CONTOURS
 089

Metadata
 DATE JULY 1980
 GEOLOGIST R R L
 DRAWN R B M
 CHECKED [Signature]

Other
 Trench
 Green Line
 1600m E
 1700m N
 1800m N
 1900m N
 2000m N
 2100m N
 2200m N
 2300m N
 2400m N
 2500m N
 2600m N
 2700m N
 2800m N



LEGEND

ANALYTICAL METHODS

Ca, Pb, Zn, Ag - AAS (method 1)
 Ba - XRF (method 2A)
 Au - AAS Carbon Rod (method 100A)
 Sm, V - XRF (method 2A)

Geological Laboratory Services - Sedgwick QLD

GRID LINE

WALL AUGER NOISE

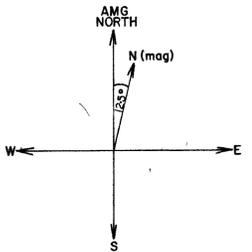
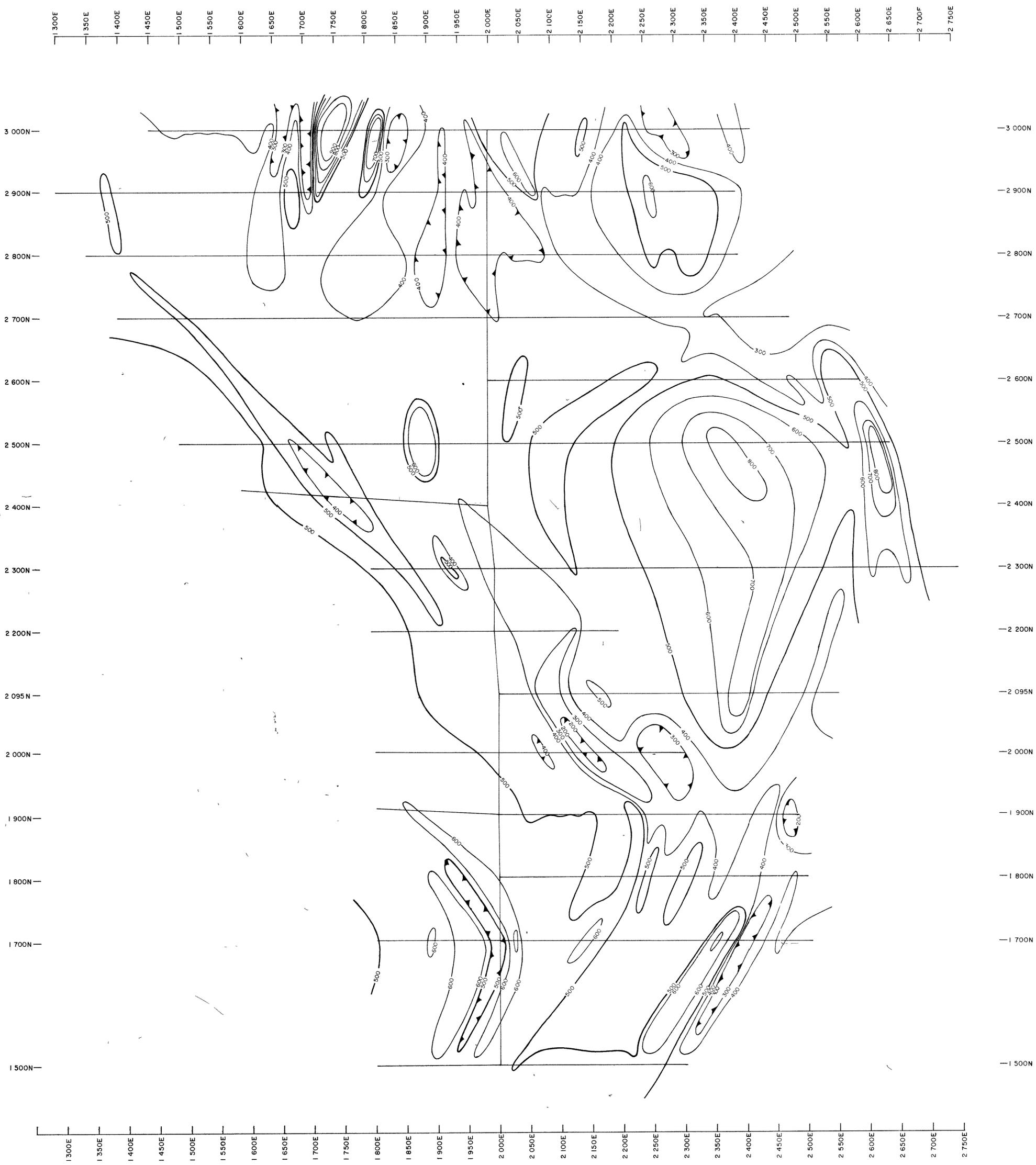
AT10 - Conductive Sample
 AT11
 AT10 AT11 - Resistive Sample
 AT15
 1 - - Auger Hole Depth

Scale 1:500

DATE JULY 1980
 GEOLOGIST R.R.L.
 DRAWN J.P.W.
 CHECKED B.L.

GEOPRO
 A DIVISION OF PERKINS-WALSLEDGE OPERATIONS LTD
 No TS 24/73-16

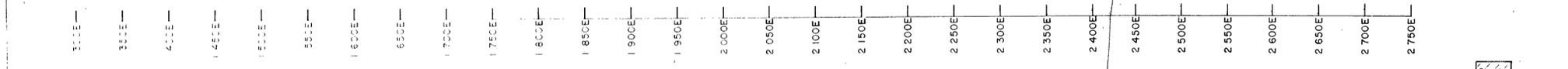
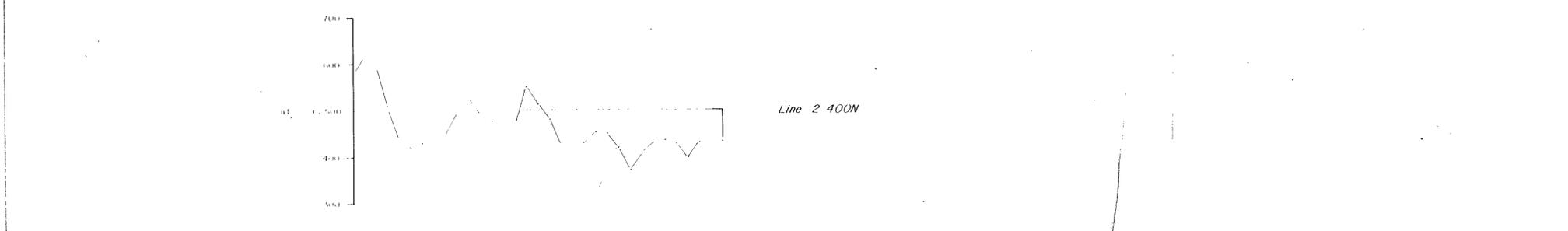
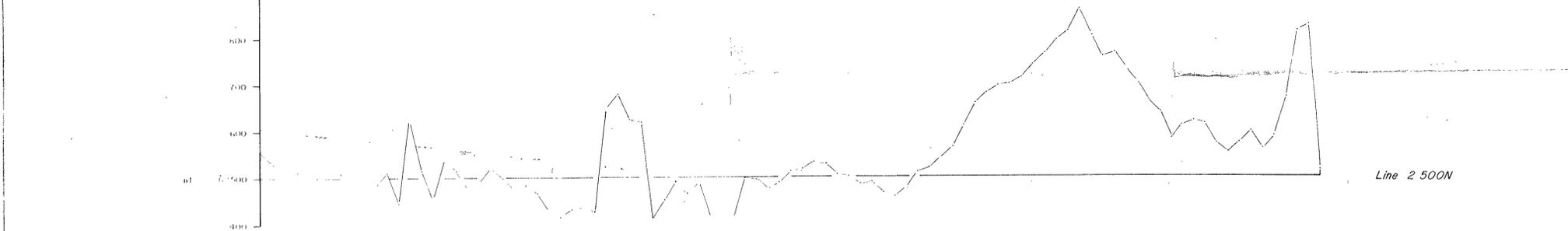
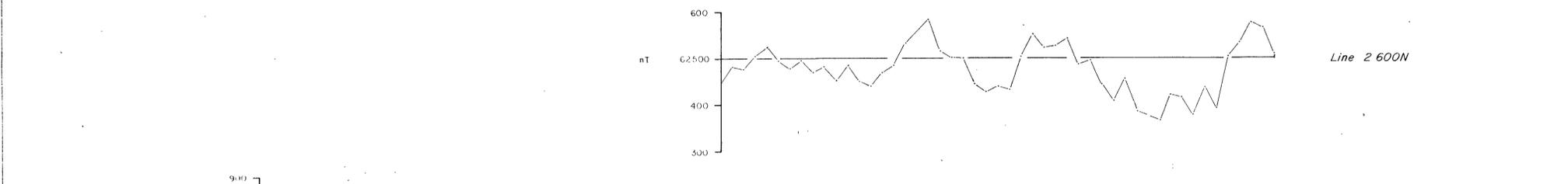
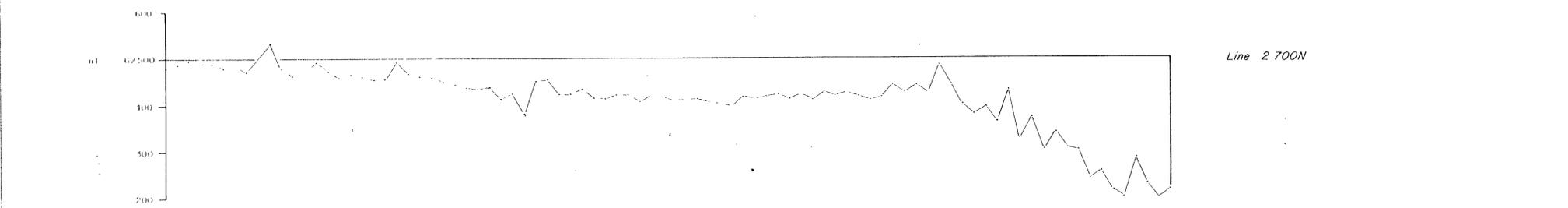
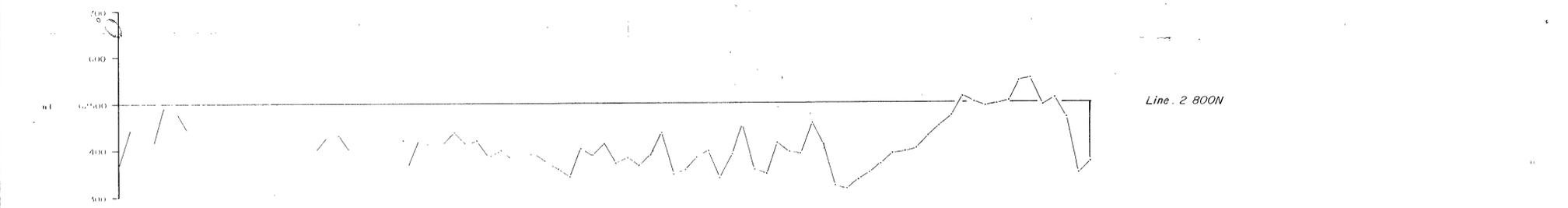
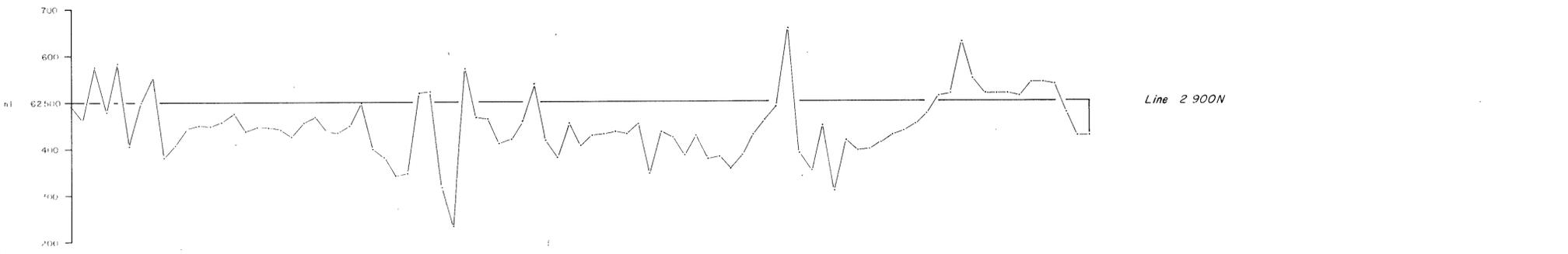
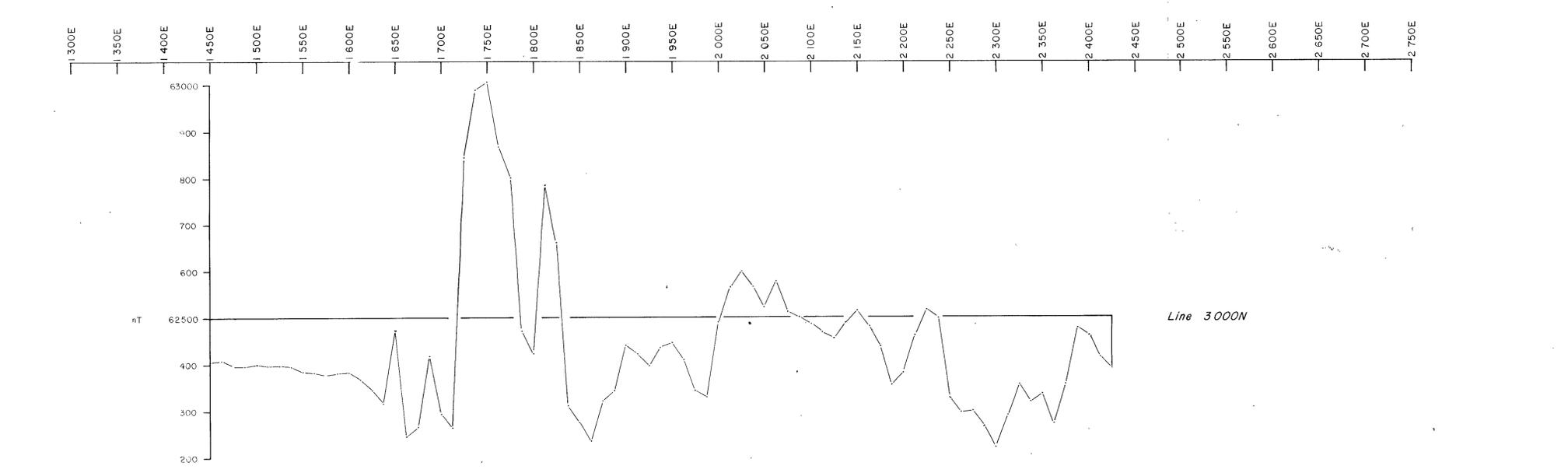
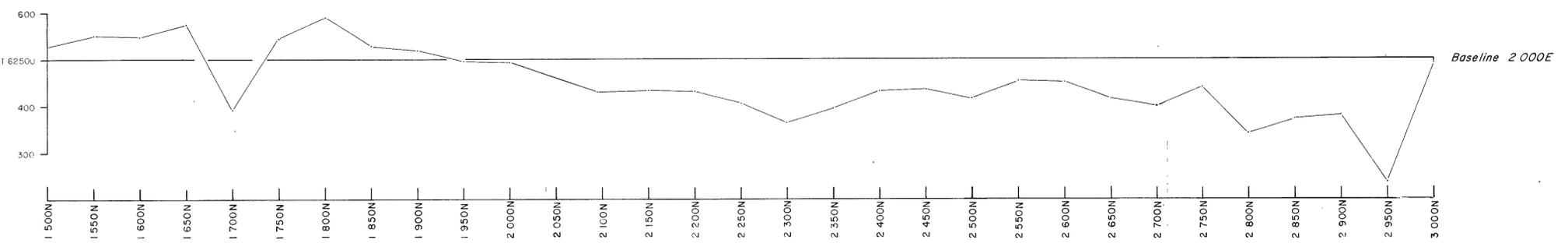
EL 24/73 DIAL MINE GRID, TASMANIA
 SOIL SAMPLE LOCATIONS / AUGER HOLE DEPTHS
 05.2.07
 030
 30-14-74, 1/1



5 cm

052098

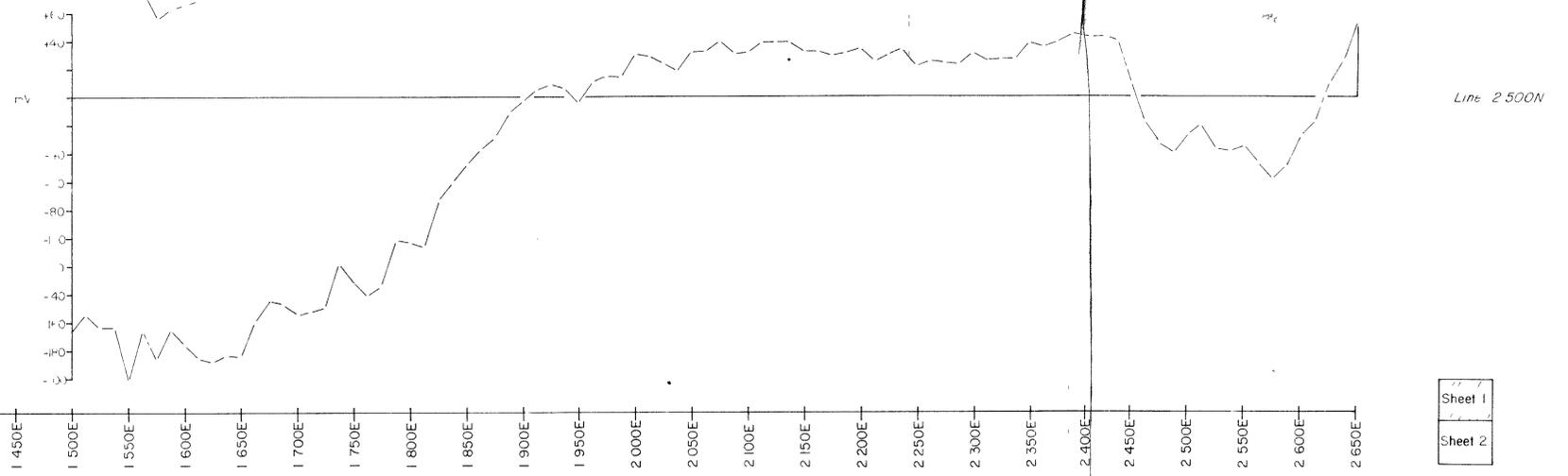
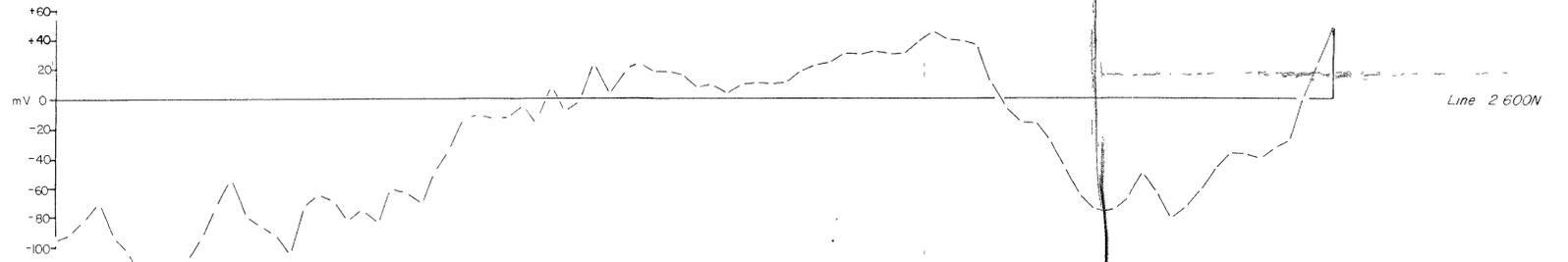
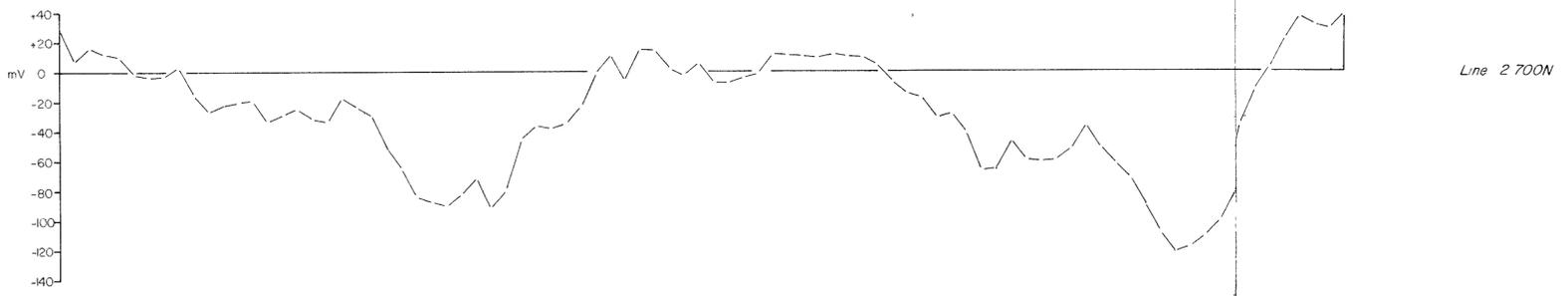
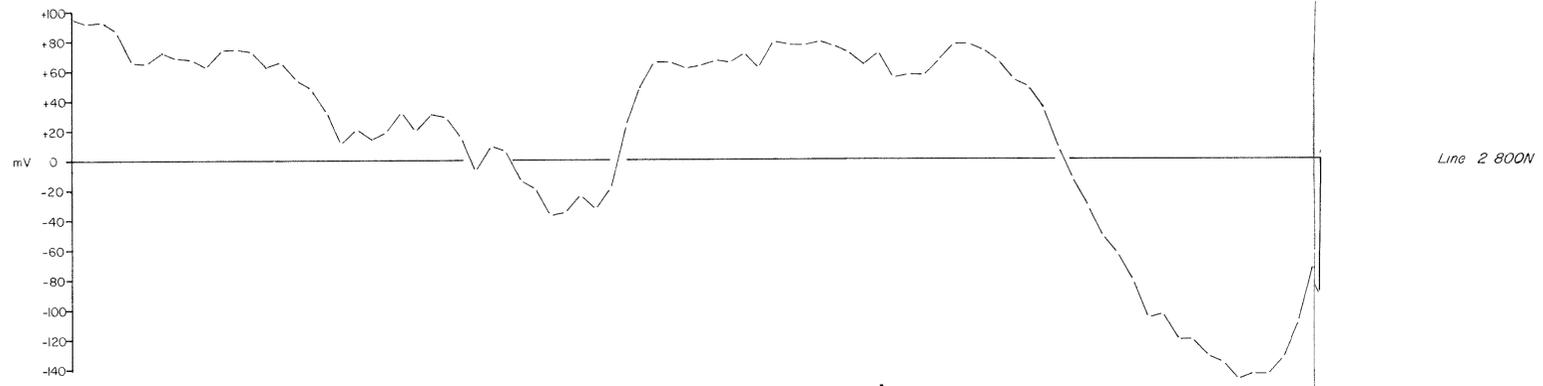
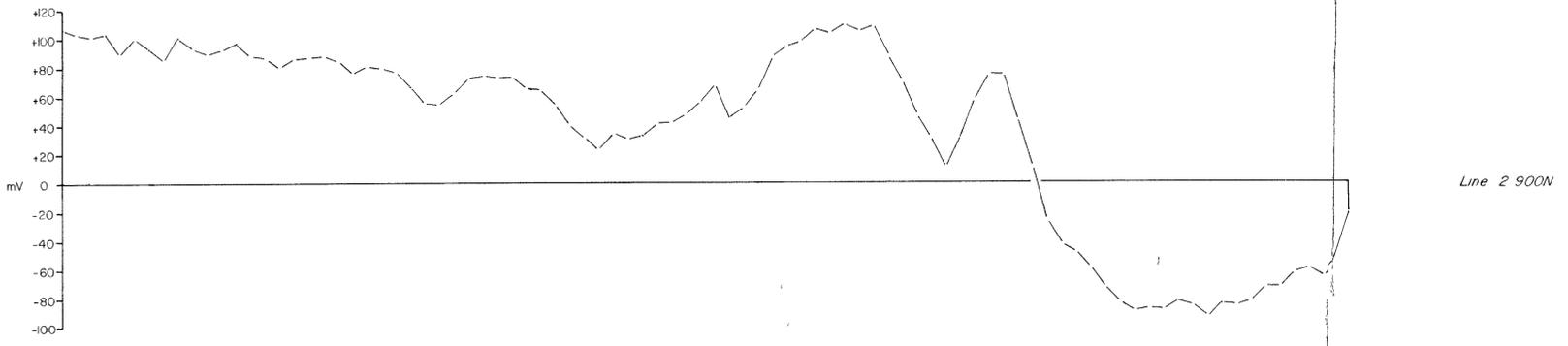
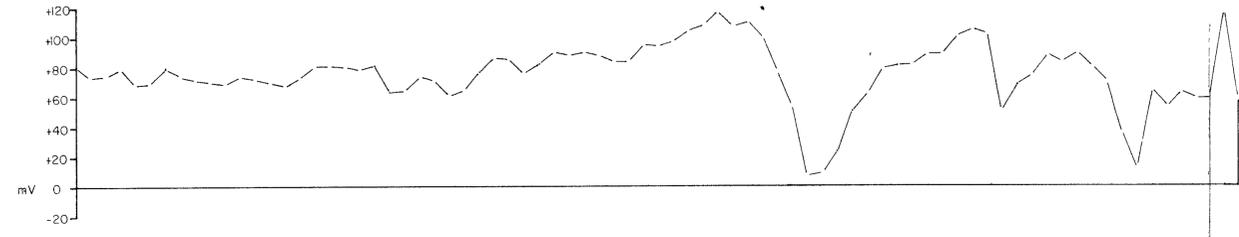
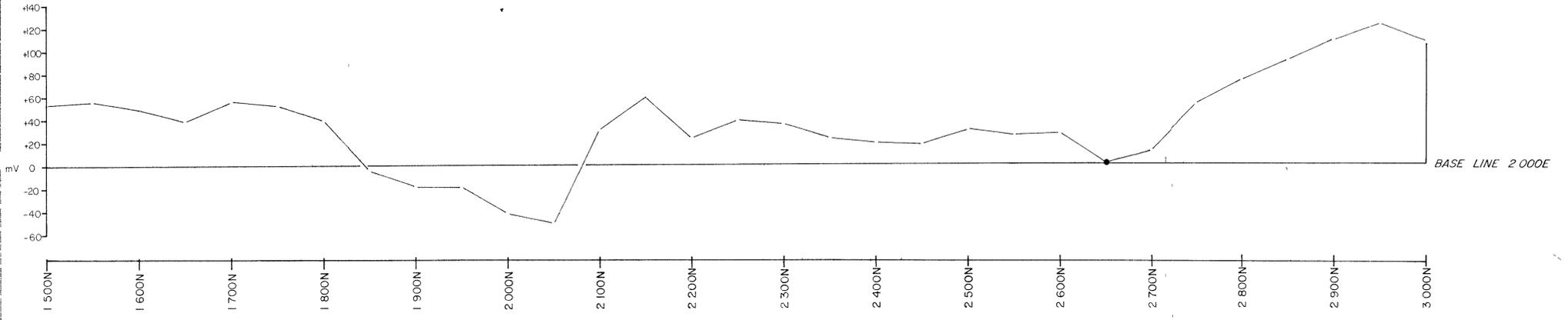
GEOPEKO LTD Geophysical Surveys Plan No 4714 S/B	Instrument	G816	Datum	62 000 nT	Hor Scale	1:2 500	AREA	Dial Range EL 24/73 Tasmania
	Observer	R Pain, S Mudge	Base Peg		Ver Scale		PROSPECT	VENTURE 182
	Scale Factor		Date	September 1979	Cont Int	100 nT	PLAN SHOWS	Contours of Total Magnetic Field Intensity



052099

5 cm

Sheet 2



Sheet 1
Sheet 2

052100

6 cm

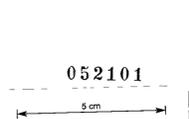
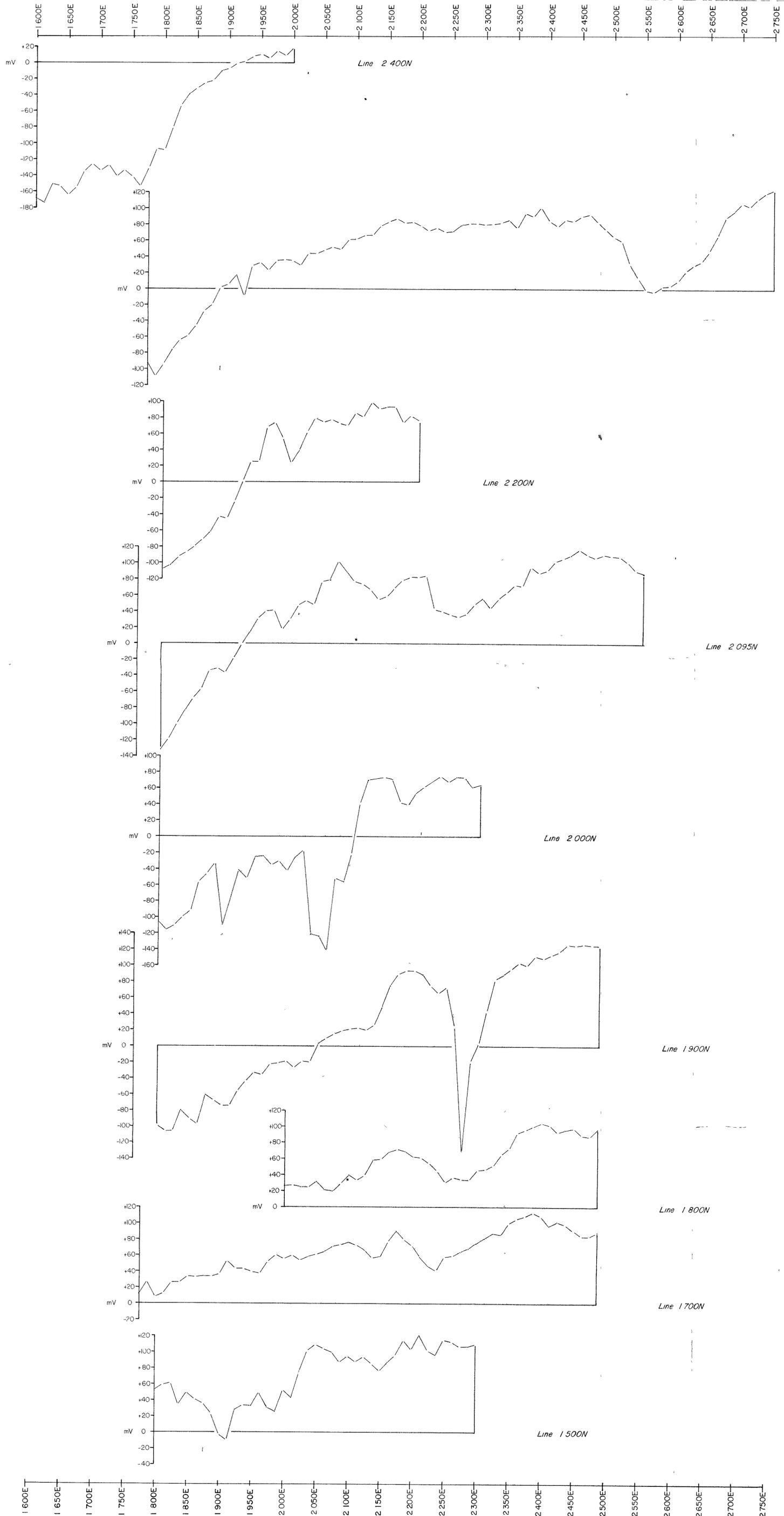
4720 S/B

Fluke 8020A
S Mudge, P Pain
August 1970

0 mV
2650N/2000E(mV)
20 mV/cm

Full Range EL 24/73 Tasmania
ENTURE 182
Files of Self Potential Sheet 1

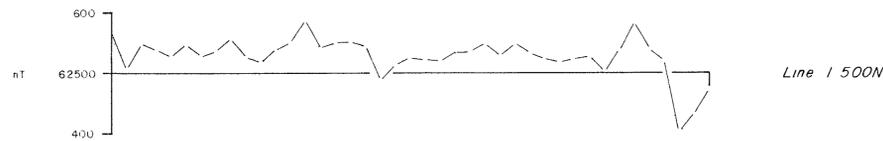
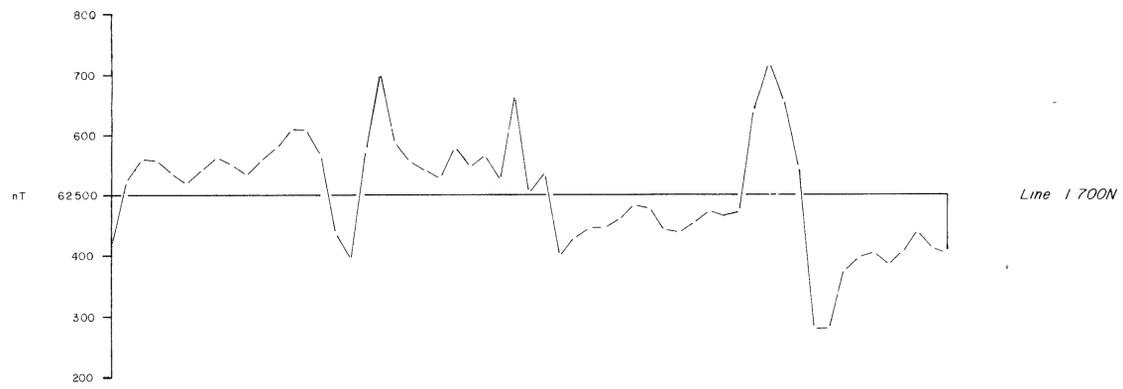
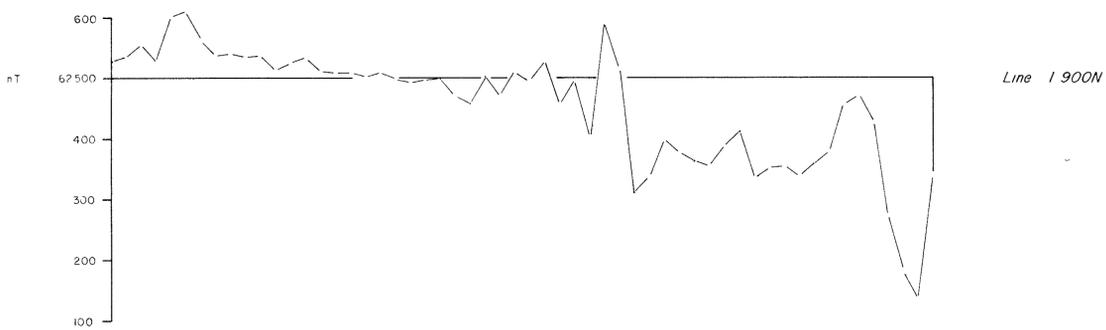
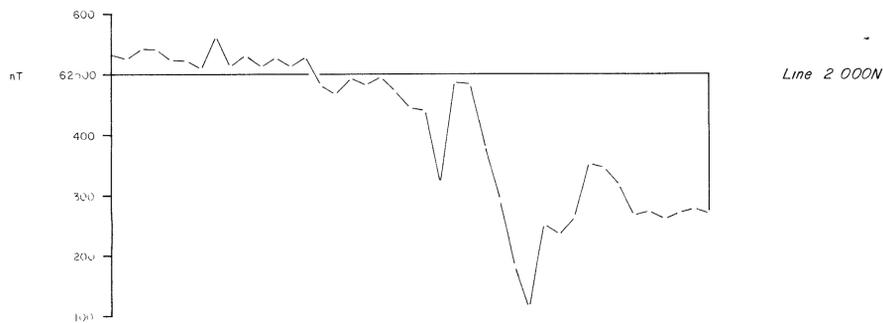
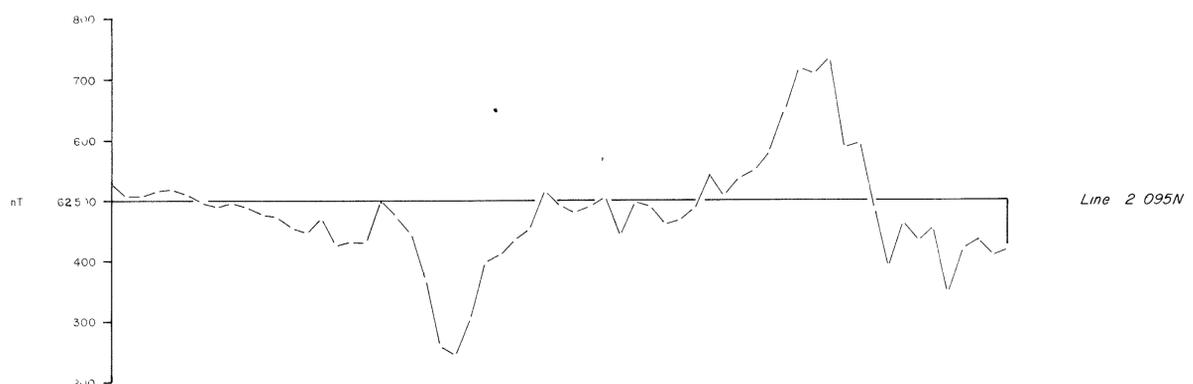
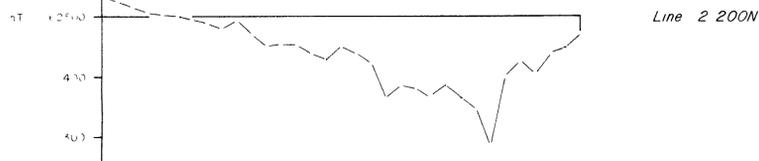
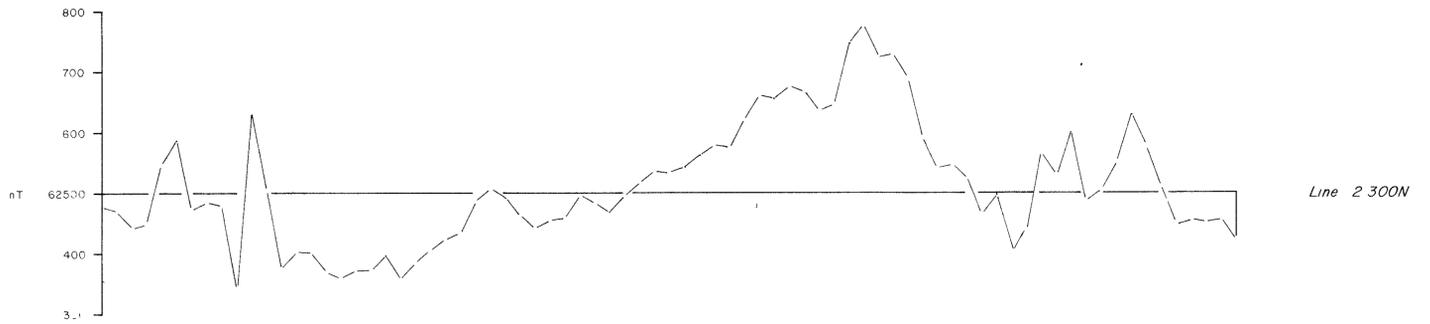
4720 S/B
80-1474 Vol 2
074



Sheet 1
Sheet 2

Fluke 8020A	0mV	12500	ARFA	Dial Range EL 24/73 Tasmania
S Mudge, R Pan	2650N/2000E (mV)	20 mV/cm	VENTURE 1 & 2	4721 S/B
August 1979			Profiles of Self Potential	Sheet 2
			095	20-1474 Vol 2

1 300E 1 350E 1 400E 1 450E 1 500E 1 550E 1 600E 1 650E 1 700E 1 750E 1 800E 1 850E 1 900E 1 950E 2 000E 2 050E 2 100E 2 150E 2 200E 2 250E 2 300E 2 350E 2 400E 2 450E 2 500E 2 550E 2 600E 2 650E 2 700E 2 750E

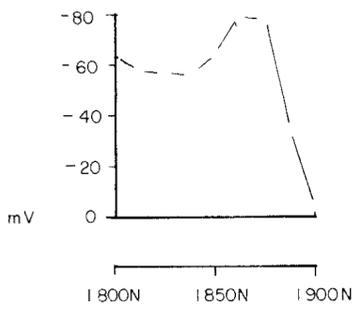


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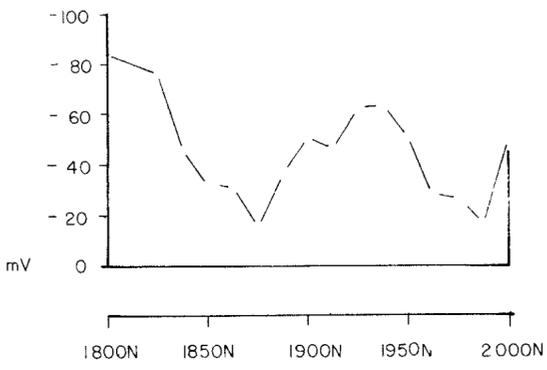
052102

5 cm

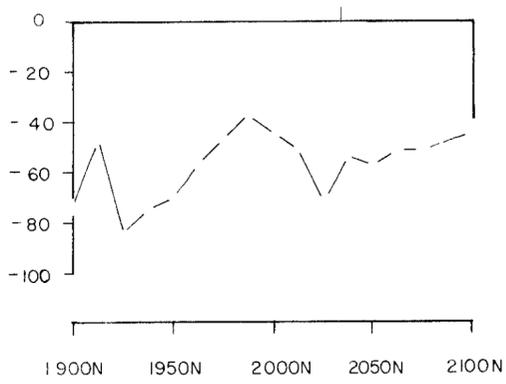
Sheet 1
Sheet 2



LINE 2300E

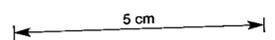


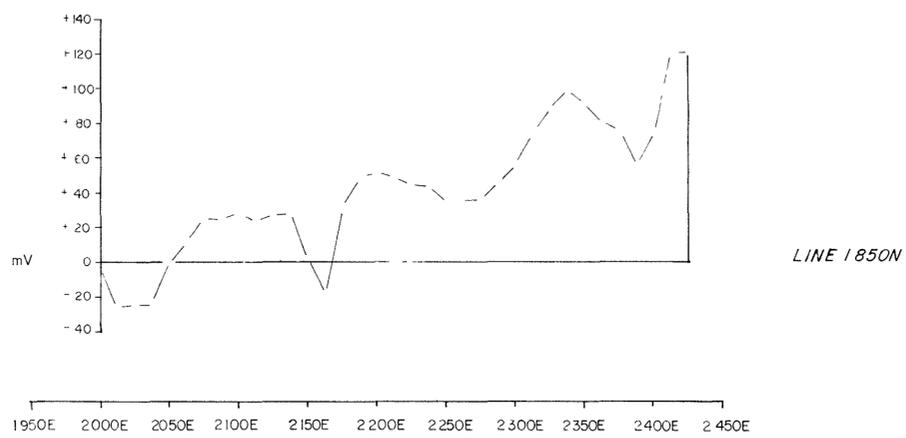
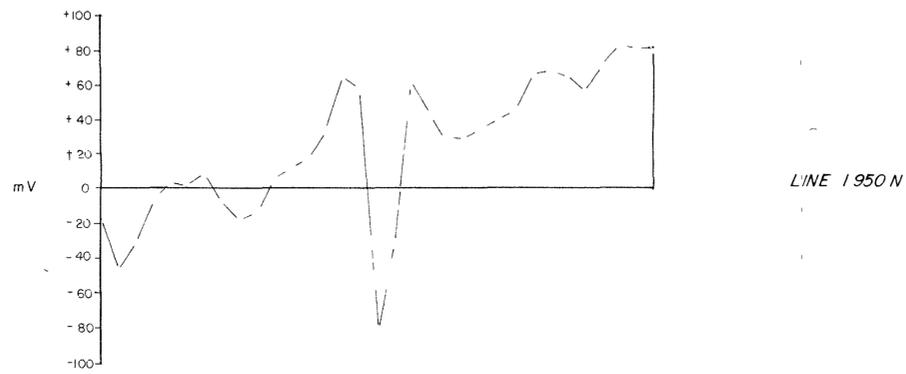
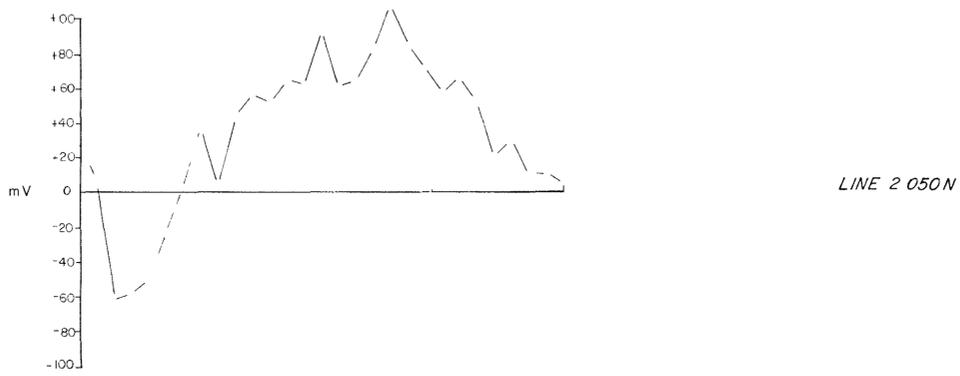
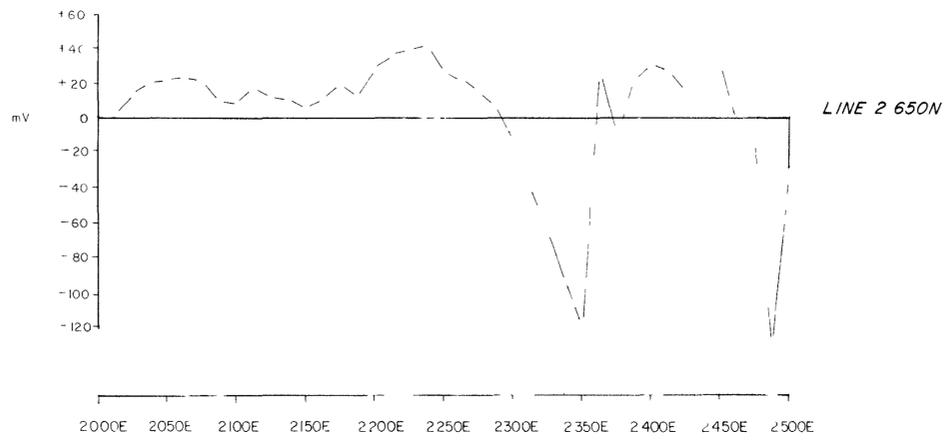
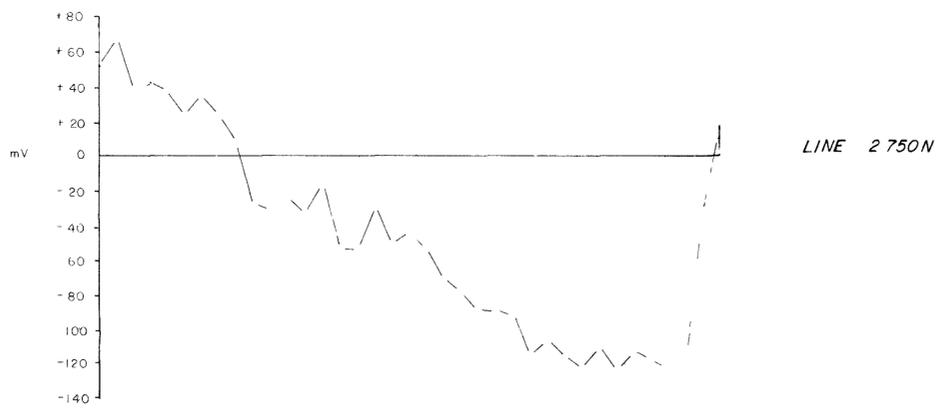
LINE 2150E



LINE 1900E

052103





052104

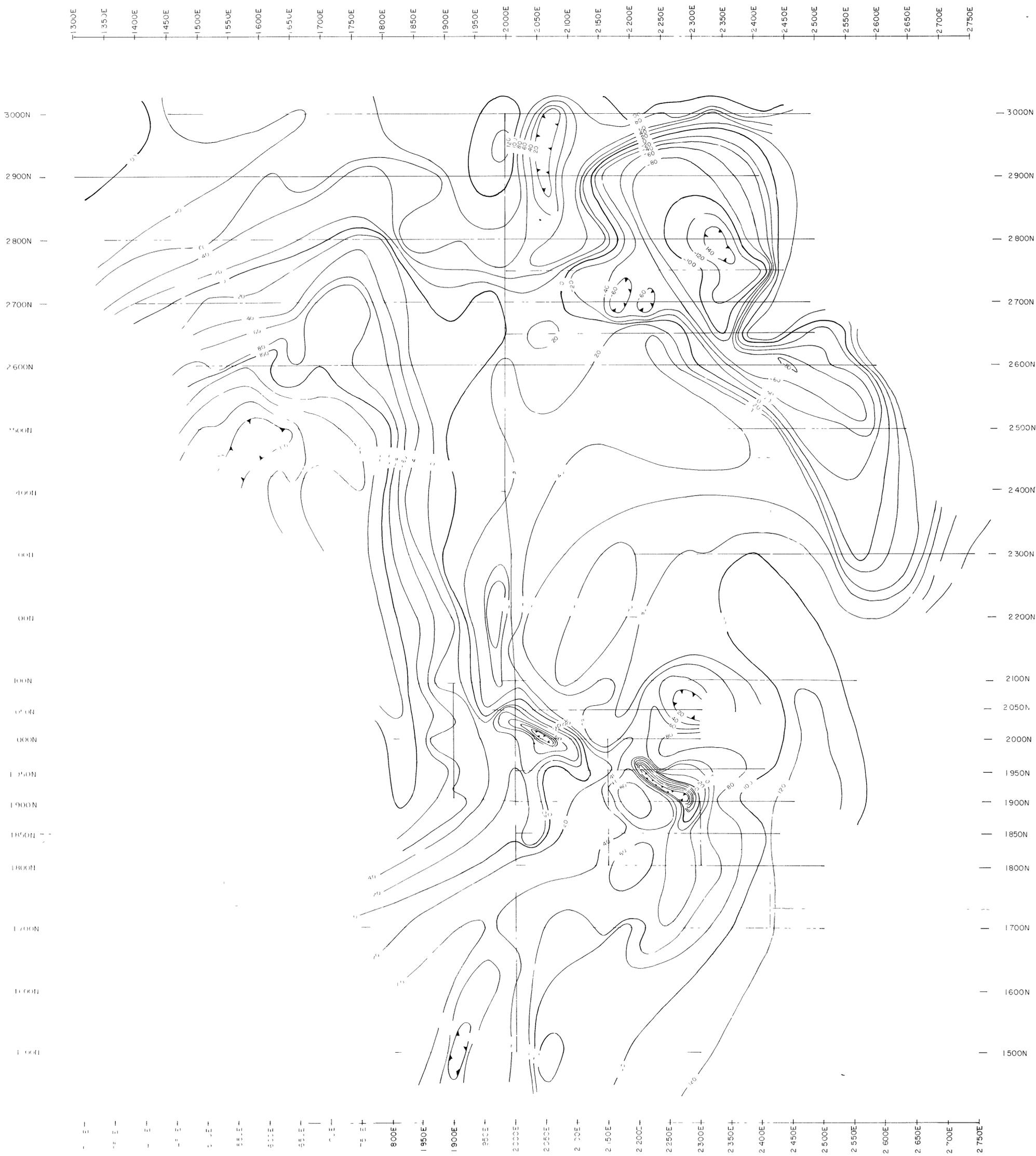
5 cm

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Geophysical Surveys
Plan No 5117 S/B

Instr. Type	Fluke 8020A	Unit		Hor. Scale	1:2500	Area	
Case	S. Mudge	Base	2650N/2000E (omV)	Vert. Scale	20 mV/cm	Project	VENTURE 1 & 2
Date			February 1980				5117 S/B

Dial Range EL 24/73 Tasmania
Profiles of SF (INFILL LINES)
80-1474 Vol. B



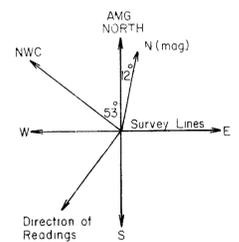
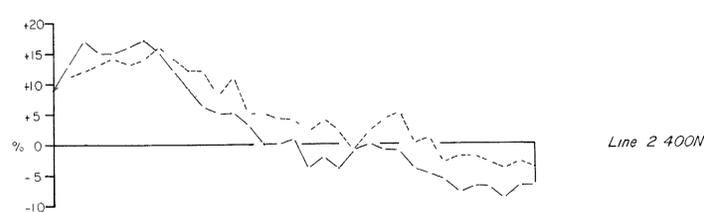
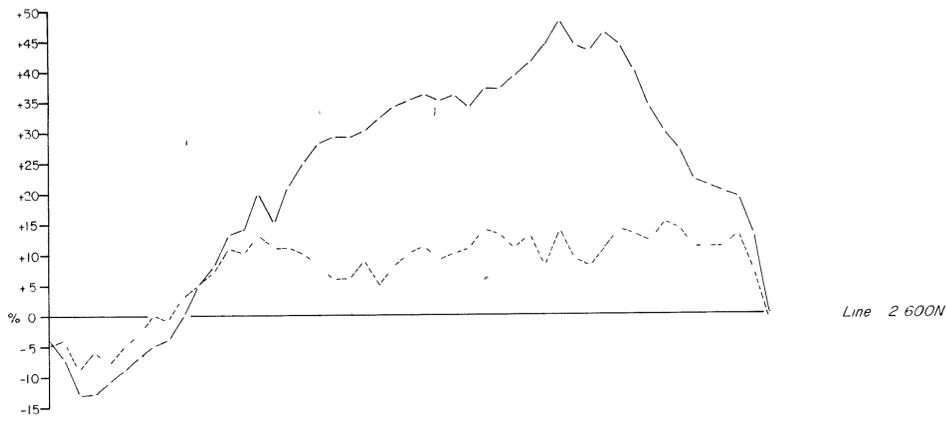
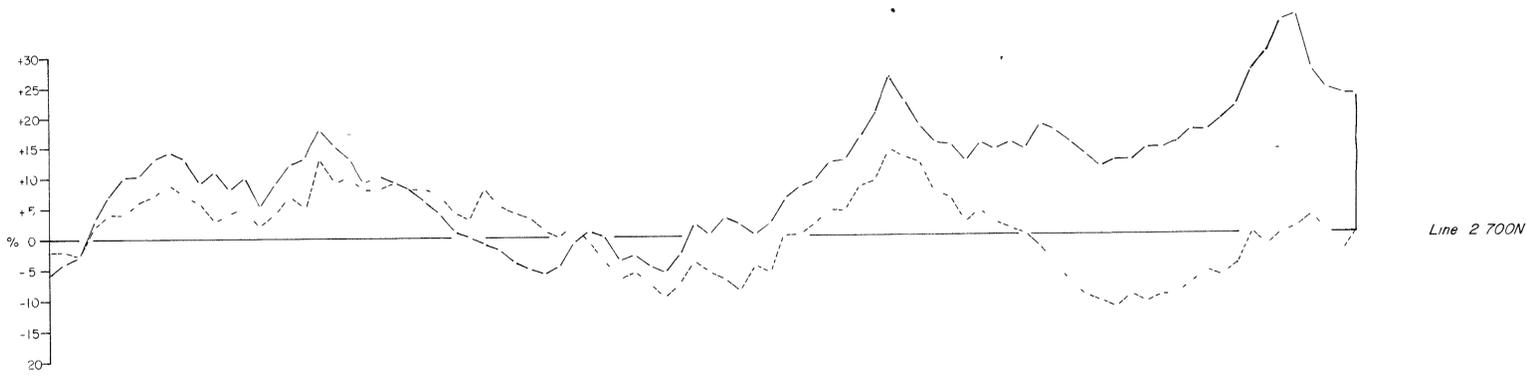
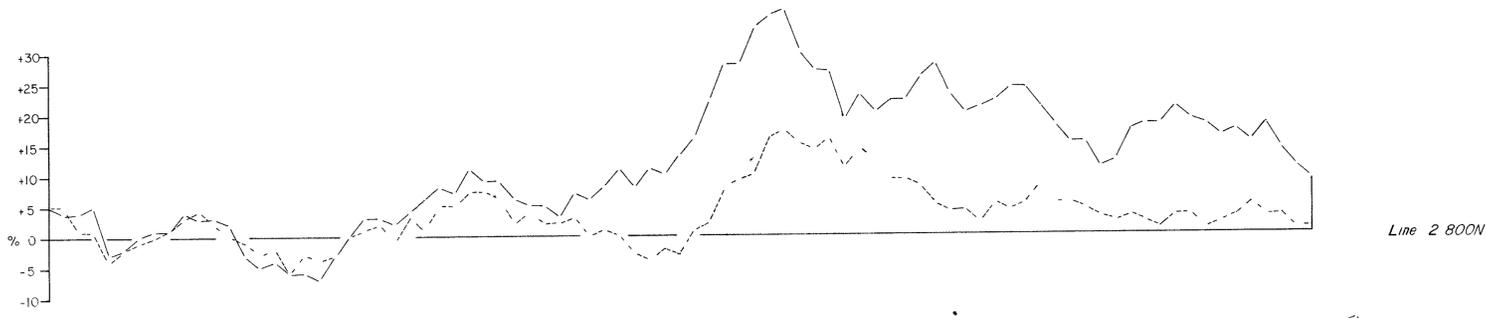
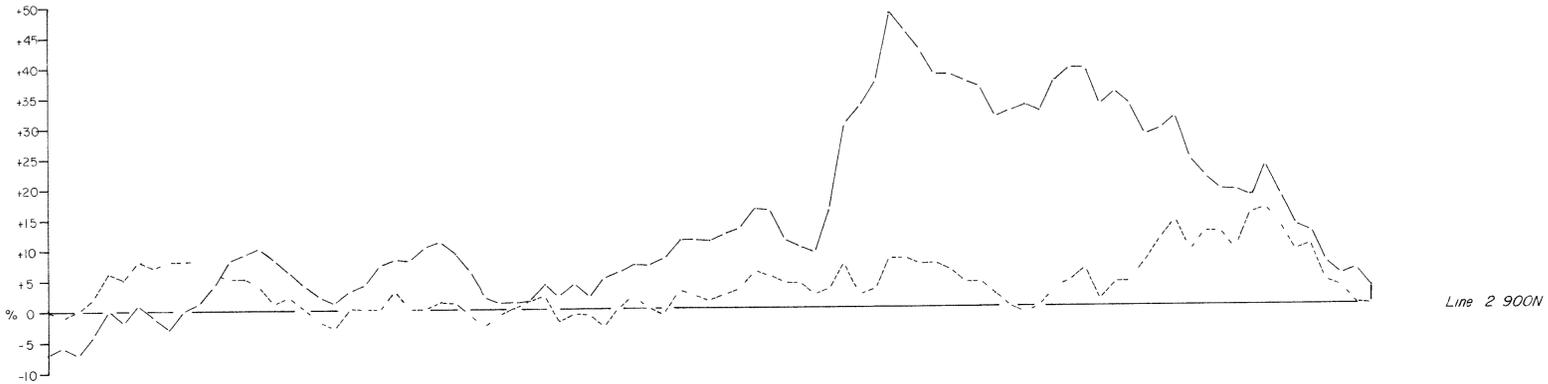
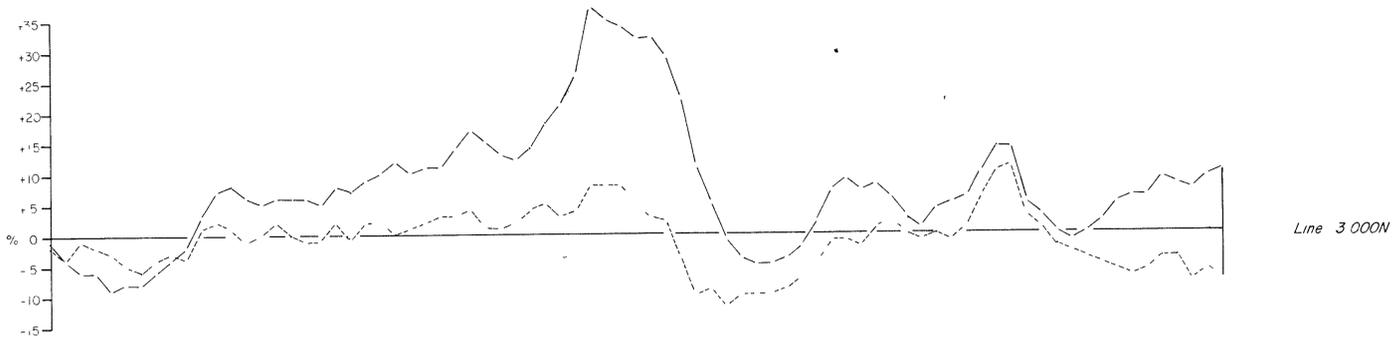


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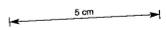
Fluke 8020A	2550N	2000E	12500	AREA	Dial Range EL 24/73 Tasmania	4722 s/a
P Pain	2000E	2000E	2000E	PERSPECT	VENTURE 1 & 2	
S Mudge	2000E	2000E	2000E		Contours of Self Potential	

1 350E 1 400E 1 450E 1 500E 1 550E 1 600E 1 650E 1 700E 1 750E 1 800E 1 850E 1 900E 1 950E 2 000E 2 050E 2 100E 2 150E 2 200E 2 250E 2 300E 2 350E 2 400E 2 450E 2 500E 2 550E 2 600E 2 650E 2 700E 2 750E 2 800E



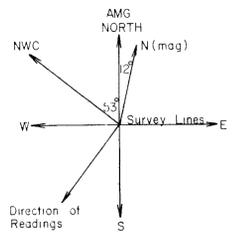
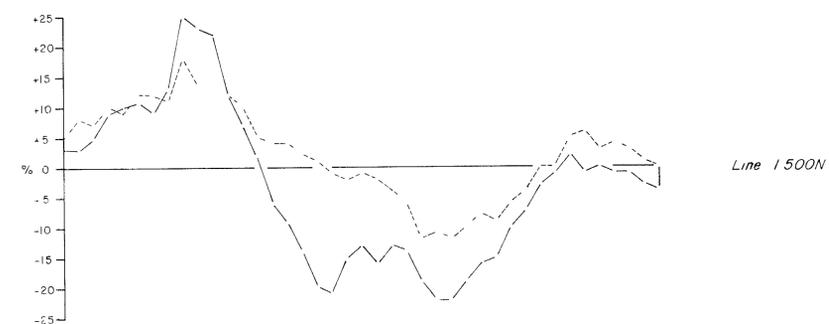
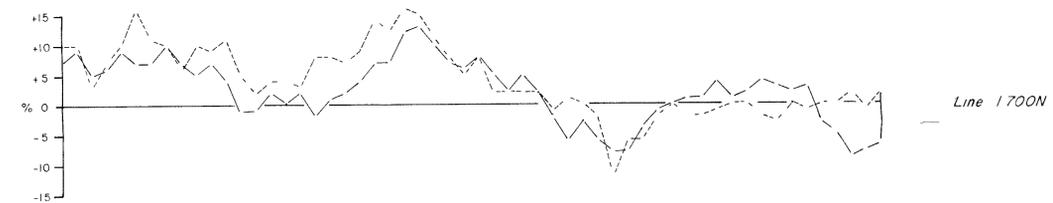
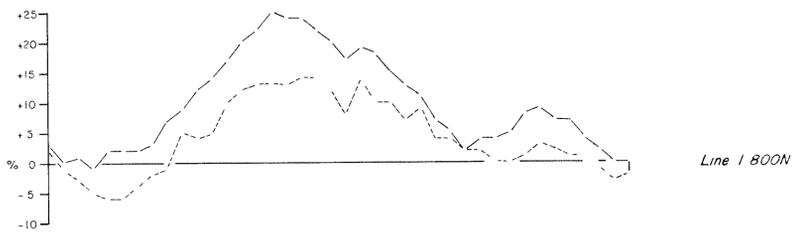
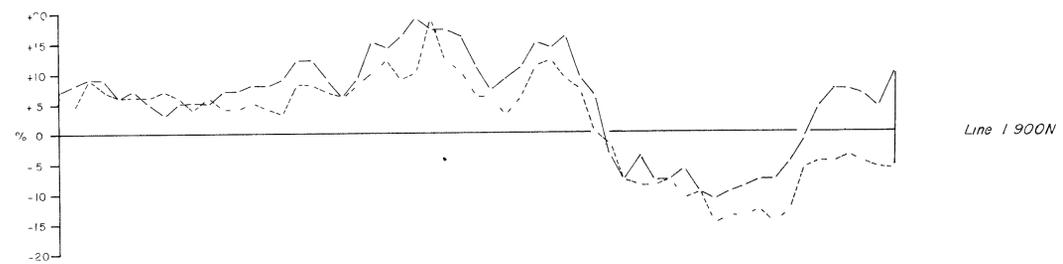
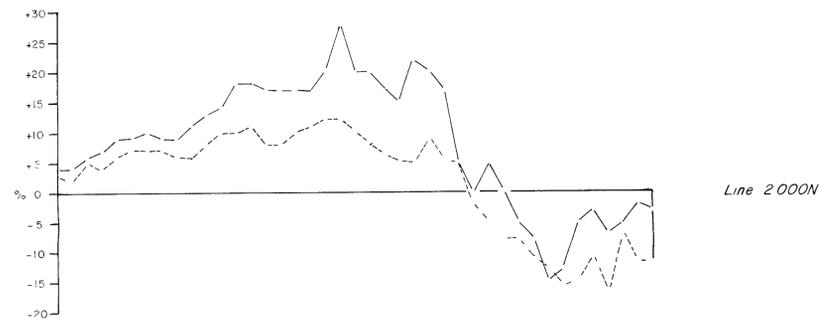
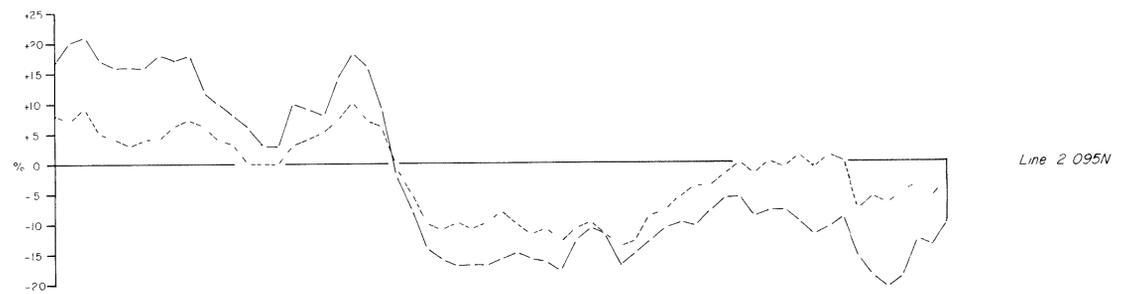
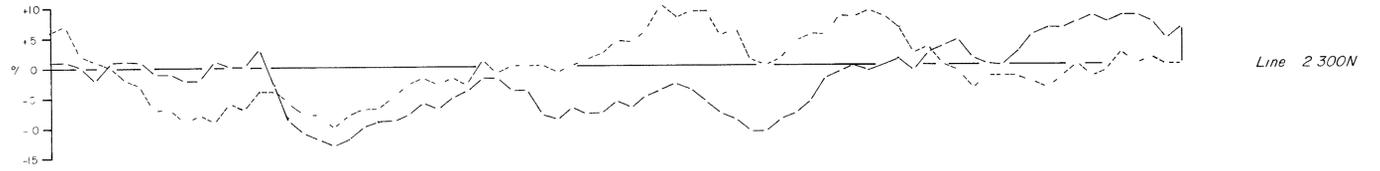
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Sheet 1
Sheet 2

1 350E 1 400E 1 450E 1 500E 1 550E 1 600E 1 650E 1 700E 1 750E 1 800E 1 850E 1 900E 1 950E 2 000E 2 050E 2 100E 2 150E 2 200E 2 250E 2 300E 2 350E 2 400E 2 450E 2 500E 2 550E 2 600E 2 650E 2 700E 2 750E 2 800E

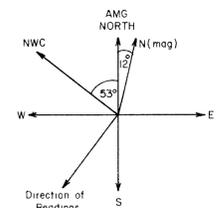
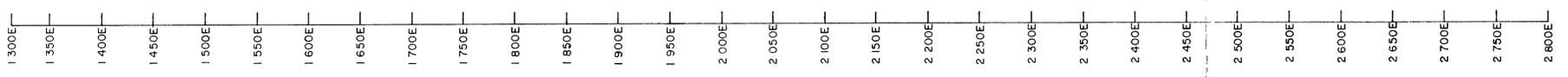
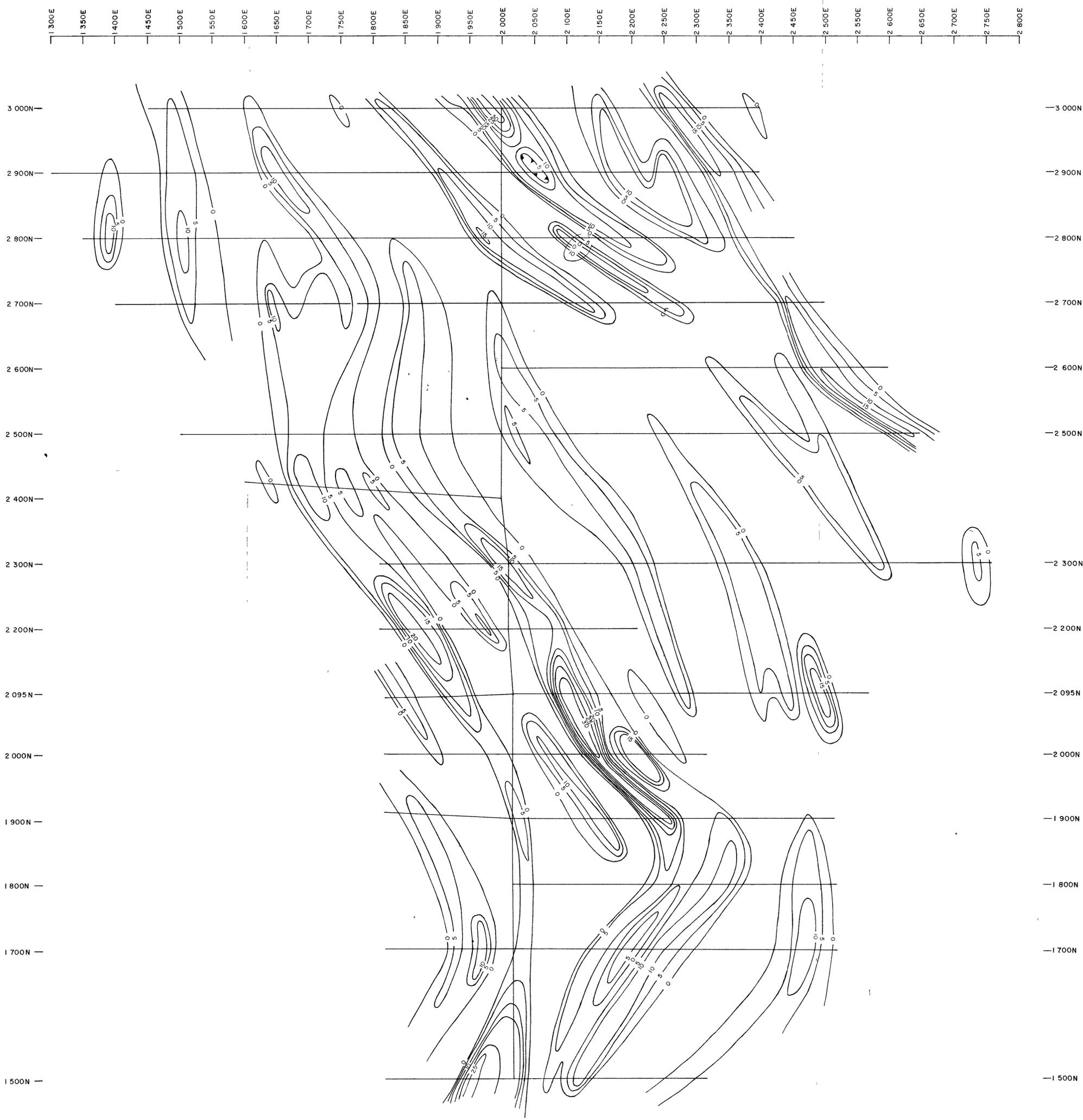


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Sheet 1
1/3/77
Sheet 1/2/77



052108
5 cm

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Geophysical Surveys
Plan No 4730 S/B

Note - Transmitter - North West Cape (NWC)

Instrument	EM16	Datum		Hor Scale	1:2500	AREA	Dial Range EL 24/73 Tasmania
Observer	R Pain, S Mudge	Base Peg		Vert Scale		PROSPECT	VENTURE 1&2
Scale Factor		Date	August 1979	Cont Int	5%	PLAN SHOWS	Contours of Filtered In-phase VLF-EM