

PROGRESS REPORT ON E.L. 9/74

947001

81-1580.

BIRCH INLET

TASMANIA

1980/81

J. PEMBERTON
DEVONPORT
JUNE, 1981

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1. INTRODUCTION

The Birch Inlet Exploration Licence 9/74 covers an area of 285 square kilometres south of Queenstown on the West Coast of Tasmania (see fig 1.). The area is held under a joint venture agreement by Geopeko, Union Oil Development Corporation and Aquitaine Australia Minerals Pty. Ltd.

An outcrop area of approximately 50 square kilometres of the Mount Reid equivalent Lucas Volcanics has been the target for exploration in this area. A progress report by C.D. Strickland, 1978, summarises previous exploration in the E.L.

A DIGHEM II airborne electromagnetic survey was flown over the Licence in December 1980. This report describes the results and follow up of the DIGHEM II survey as well as prospect development work at Viking 22 and 17.

2. SUMMARY

The Geopeko Union Oil Joint Venture was joined by Aquitaine Australia Minerals in 1980.

A DIGHEM II airborne electromagnetic/resistivity/magnetic survey was flown in December 1980.

Ground follow up of the DIGHEM anomalies was completed during February 1981. Two prospects (Viking 17 and 22) were gridded during this time. C Horizon hand auger samples were taken and analysed for Cu, Pb, Zn, Ag, Fe and Mn. Ground magnetics were read on both grids and dipole-dipole IP over one line on Viking 17.

The Viking 22 grid has three areas with anomalous geochemistry. There is no outcrop over the anomalies and costeans will be dug during the next field season.

No encouraging results were obtained from the Viking 17 area. The report by P. Lewis on the DIGHEM follow up does not recommend any further work.

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3. RECOMMENDATIONS

Three costeans are planned on the Viking 22 geochemical anomalies. An IP/resistivity survey will be conducted in the Viking 10 area.

Regional mapping is planned in the south west of the area over a broad magnetic anomaly. The sequence in this part of the E.L. is interpreted to be stratigraphically highest and would correlate with interesting areas in the Elliott Bay licence.

No further work is planned at Viking 17.

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4. BACKGROUND

In the late 1950's the Mt Lyell-Electrolytic Zinc partnership carried out broad reconnaissance exploration in the Birch Inlet area. Airborne magnetics, electromagnetics and radiometrics were flown with regional stream sediment samples being taken.

The Broken Hill Proprietary Co. Ltd. held the Birch Inlet area as part of a larger E.L. (13/65) during the 1960's. They concentrated their exploration efforts on the coastal regions.

Detailed exploration during the 1972-1974 period was conducted by Australasian Minerals Inc. (E.L. 2/72). Scintrex flew the northern third of the area using the Turair EM system. A series of widely spaced soil sampling traverses in conjunction with geological mapping and rock chip sampling were completed during this time. The conclusion from this work was that the area did not hold significant potential for outcropping mineralization and discontinued work in 1974.

Union Oil Development Corporation pegged the E.L. in 1974 and worked from February to mid April 1975. A regional grid with 800m lines was established and used as a base for ground geophysics, soil augering and rock chip geochemistry. In April 1975 the southern third was flown by Georex using the "H400" EM system.

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A joint venture agreement between Geopeko and Union Oil was finalised in December 1976. Geopeko spent a field season from January 1977 to March 1977 in the E.L. Regional mapping at 1:10,000 scale and a stream sediment survey were undertaken. Detailed work on various prospects involved gridding, C horizon soil sampling and geophysics which included magnetics, gradient array IP and VLF (EM) techniques.

Five prospects were recommended for further follow up work. No work was done in the 1978 and 1979 field seasons.

In early 1980 Aquitaine entered the Geopeko-Union Oil Joint Venture.

5. DIGHEM II SURVEY

The DIGHEM II survey was flown in December 1980 over 585 line kilometres with a line spacing of 150 metres.

In February 1981 P. Lewis and K. Glasson of Aquitaine followed up the various DIGHEM II anomalies on the ground. The report compiled by P. Lewis in the appendix covers the geophysical character and follow up work completed during their field visit (see Appendix 1).

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6. VIKING 22 AND VIKING 10.

The Viking 22/10 area was chosen as one of the two prospects for detailed follow up during the 1981 field season. This prospect was recommended because of the anomalous stream sediment geochemistry and C horizon soil sampling obtained during the 1977 field season. A DIGHEM II anomaly to the west of the geochemically anomalous area is coincident with an EM anomaly from the 1975 survey.

A grid was established over the Viking 22/10 area with a 1 kilometre north south base line and 800 metre east west lines every 200 metres. Viking 10 grid is an extension of the Viking 22 grid centred on 9600N/9600E. Two lines of 400 metres were cut on 9700N and 9500N with 9600N being extended 200 metres west.

C horizon hand auger samples were taken every 25 metres (see figures 3, 4, 5 & 6).

The grid was mapped at 1:2,500 (see fig 2). Ground magnetics were read over both grids (see plan 1).

The geological mapping revealed a sequence of north south striking, steeply dipping rhyolitic quartz feldspar biotite porphyries, porphyritic lavas and quartz feldspar crystal/lithic tuffs. A well developed cleavage parallel to strike and dipping at 60°-80° to the west was present in most rock types. Sericitic, chloritic and silicic alteration was visible at various places over the grid but did not develop a distinguishable alteration zone.

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Results from the C horizon auger sampling for Cu, Pb, Zn, Ag, Fe and Mn confirmed the regional strike of the various rock types and defined three areas with anomalous geochemistry:-

- a. Viking 10 - Line 9700N has two sample sites with Zn assaying 410ppm and 455ppm while Pb assayed 520ppm and 120ppm (see fig 4&5).
- b. 9800N 10,200E/9,600N 10,300E - A zone with Zn peaking at 800ppm and Pb at 410ppm.
- c. 9000N 10,100E - Two areas of high Pb at 445ppm and 500ppm with Zn at 550ppm.

The latter two areas are supported by high Fe results. These eastern areas were covered by dense forest and a resulting lack of outcrop.

A series of costeans over the geochemical highs in the forest covered areas will identify the anomalous horizons and indicate their significance.

As a result of the failure of the Moving Source Turam equipment the planned EM survey over Viking 10 was not completed. A suitable survey would be given high priority in any future work in the Viking 22/10 area

7. VIKING 17

Viking 17 is situated on the south eastern side of the E.L. Union Oil geologists followed the Mines Department in placing this prospect in the Lower Cambrian D'Aguiar Group. In C.D. Stricklands 1978 Progress Report the Viking 17 area was considered to be part of the Precambrian. Field work this season by Aquitaine and Geopeko geologists has not resolved this problem with some favouring a Lower Cambrian age and others Precambrian.

The prospect was followed up as a result of two DIGHEM II anomalies with an associated magnetic anomaly.

An offset north south baseline of 1.6km was cut with 4.125 kilometres of line spaced at 200 metre intervals. 174 C horizon hand auger samples were taken every 25 metres. These samples were analysed for Cu, Pb, Zn, Ag, Fe, Mn, W and Sn (see fig 8, 9, 10 & 11). *SA & W both below detection limit.*

Magnetics was read over the grid while dipole-dipole IP was done on line 9,800N at 50 metre spacing (see plan 2, 3 & 4). The grid was mapped at 1:2,500 scale (see fig 7).

A sequence of quartzites, quartz mica schists and mica schists strikes at 170° with a change to 120° in the north of the prospect. The sequence dips at 80° to the west with the mica schists being well cleaved parallel to bedding. A series of near east west faults is interpreted from the aerial photographs. These faults affect the magnetics on line 10,000N.

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Two small pits were dug on line 9800N at 9690E and 9605E on the magnetic peaks. Highly micaceous schists were encountered which were not magnetic but contained graphite.

The B-C horizon hand auger samples defined a weakly anomalous zone on line 9200N and 9000N. Zn, Cu and Fe have spot highs of 295ppm, 165ppm and 4.9% respectively. Pb is offset on line 9200N with a peak of 85ppm. On line 9600N Cu and Pb have spot highs of 90ppm and 160ppm respectively.

Although the magnetic anomaly is unexplained the lack of any geochemical anomalies down grades this prospect with no future work being planned.

8. REFERENCES

Strickland, C.D., 1978 Progress Report: Exploration Licence
9/74 - Brich Inlet Area - Tasmania.
Report to Tasmanian Mines Department.

REPORT ON GEOPHYSICS WORK, E.L. 9/74

BIRCH INLET

TASMANIA

1980/81

J. SUMPTON
DEVONPORT
JUNE, 1981.

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1. DIGHEM RESPONSE OVER THE VIKING 17 AND VIKING 10
2. VIKING 17
3. VIKING 22
4. VIKING 10
5. SUMMARY AND CONCLUSIONS

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1. DIGHEM RESPONSE OVER THE VIKING PROSPECTS

As has been stated elsewhere the DIGHEM airborne EM survey failed to produce any obvious targets for ground followup. However, two areas with some EM and/or magnetic response were investigated.

VIKING 17

This is a broad conductive zone represented best on lines 110, 111 and 112 and open to the south. The interpretive programme has generated a number of "possible" conductors within this zone, but in view of their amplitude and the generally high noise level afflicting this survey no confidence can be placed in their location or validity. The large response from the coplanar coils also points to this being a conductive rock unit. The magnetic anomaly, however, could, from the airborne data, have a more discrete source. It is also open to the south.

VIKING 10

This is a "possible" conductor generated by the processing software. It is difficult to be convinced of the validity of this response from the profiles, and it lies well within the somewhat extended aero dynamic noise envelope. Even if this response is real it must be considered a difficult target for ground followup because of its low amplitude.

2. VIKING 17

A Moving Source Turam - EM (modification of Scintrex SE-77 Multifrequency Turam unit) survey was planned at Viking 17 as followup to the airborne EM survey. However, equipment failure caused this to be abandoned. In order to obtain some electrical data on the area one line of Dipole Dipole IP/Resistivity was surveyed (line 9800N, Dipole spacing 50m). The data shows that almost all of the section lies within a zone of low resistivity (in places extremely low for this environment). This zone extends from at least about 9600E on the west to 9800E on the east, although it is poorly closed at either end. This source also seems to be highly chargeable, though once again interpretation is hampered by lack of background. The Resistivity section is consistent with airborne EM data i.e. the source of both is a broad conductive horizon, most probably the graphite bearing schists mapped in the area. The line spacing of 200m is somewhat large to adequately evaluate the Viking 17 magnetic anomaly. The shape of the anomaly changes radically from line to line. Though no magnetic material was encountered in the pits dug on line 9800N, the source must lie very near the surface on lines 9600N and 10 000N, whilst the source under line 9800N appears deeper. The zone of low resistivity detected on line 9800N is coincident with the magnetic peak. If the model of a vertical prism of approximately the same width as the inferred conductive zone (about 180m) is used, the depth to the top of this body would be approximately 40m. The lack of correlation between lines and the off set north of line 10 000N may be reflecting the pattern of faults which is inferred to exist. The anomaly is open to the south.

3. VIKING 22

The Viking 22 grid was covered with ground magnetics. Broad low amplitude responses were encountered where magnetite was observed in outcrop.

4. VIKING 10

As with Viking 17 and MST-EM survey was planned at Viking 10. However, equipment failure prevented this also. In view of the marginal nature of the airborne EM response and the anomalous geochemistry on the grid, an Induced Polarization/Resistivity survey would be a more appropriate followup approach.

5. SUMMARY AND CONCLUSIONS

Geophysical ground followup of DIGHEM anomalies was hampered by equipment problems. Nevertheless it is reasonably certain that the Viking 17 EM response is caused by the graphitic shists mapped on the grid. The magnetic anomaly at Viking 17 has not been adequately explained from the data available. The ground magnetics over Viking 22 revealed little of interest and no satisfactory data was obtained at Viking 10.

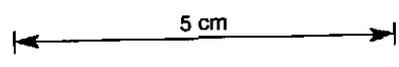
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DIGHEM II PROFILES OVER VIKING 17 AND VIKING 13
BIRCH INLET

HORIZONTAL SCALE 1:14300

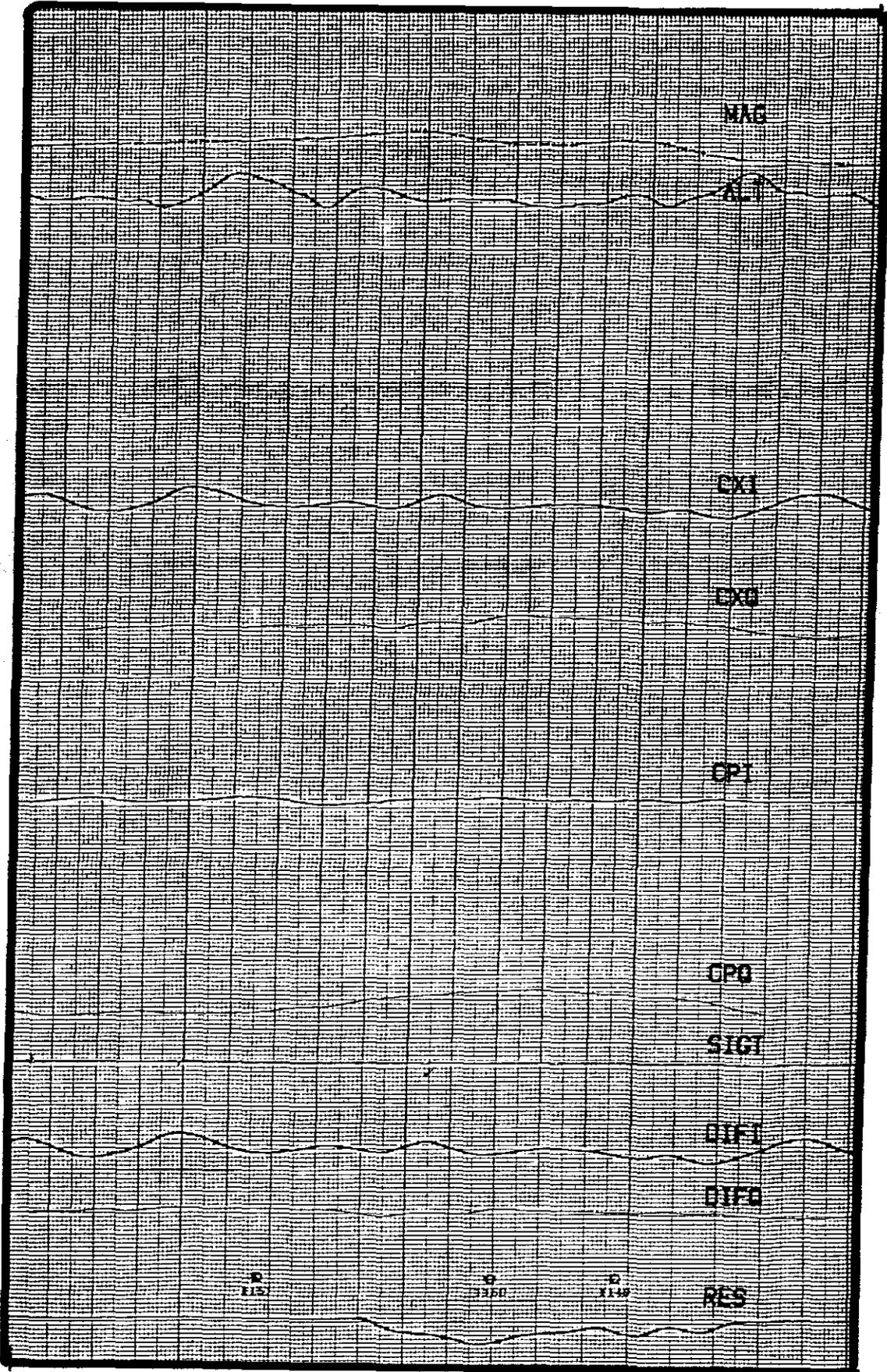
VERTICAL SCALES



MAGNETOMETER	1cm=143nT
EM CHANNELS	1cm=14ppm
CONDUCTANCE	1cm=14mhos

NOTE: PROFILES HAVE BEEN PHOTOGRAPHICALLY REDUCED
TO 70% OF ORIGINAL SIZE

AVERAGE EM BIRD HEIGHT 41m.



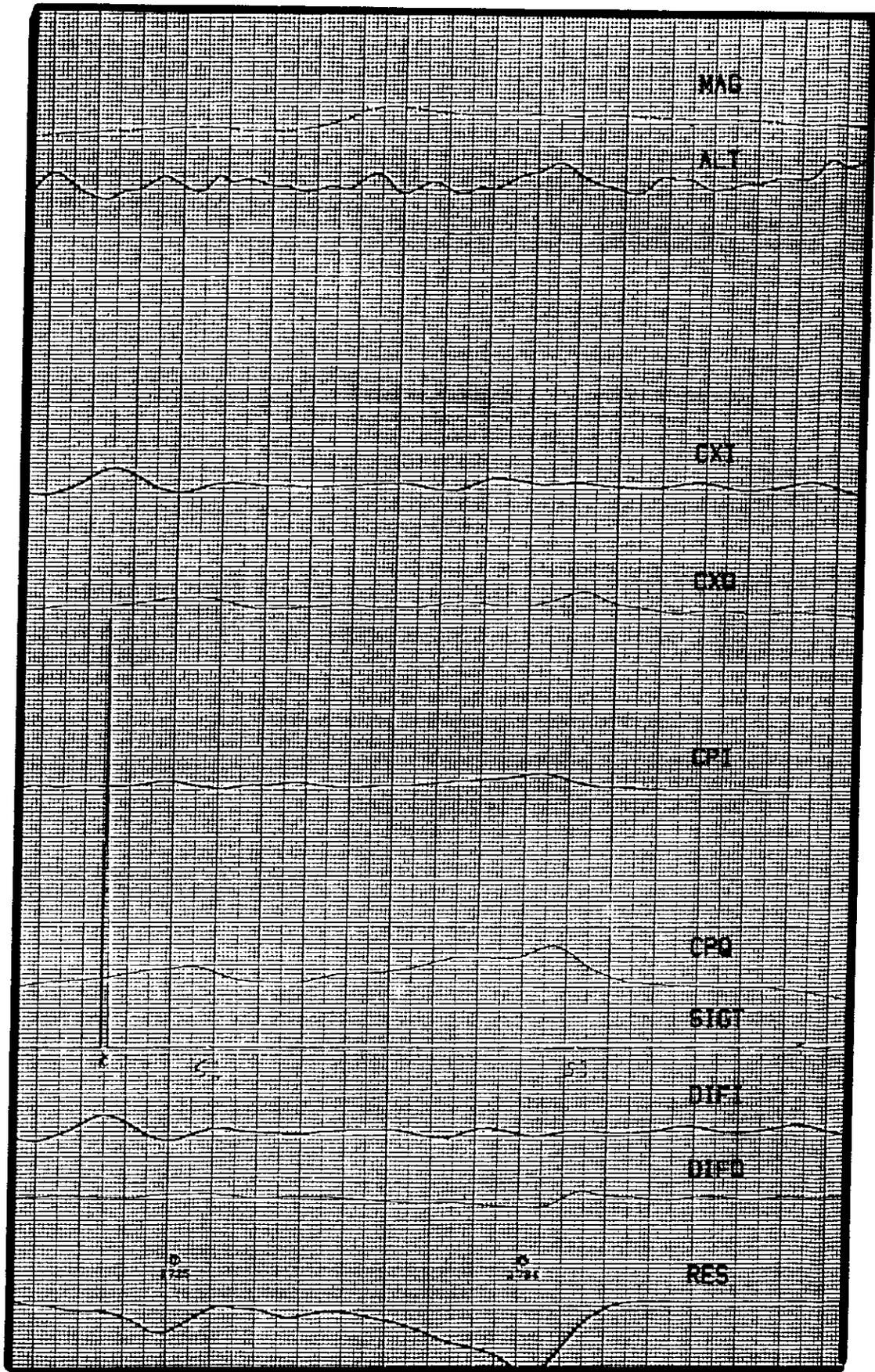
5 cm

VIKING 10

LINE 76

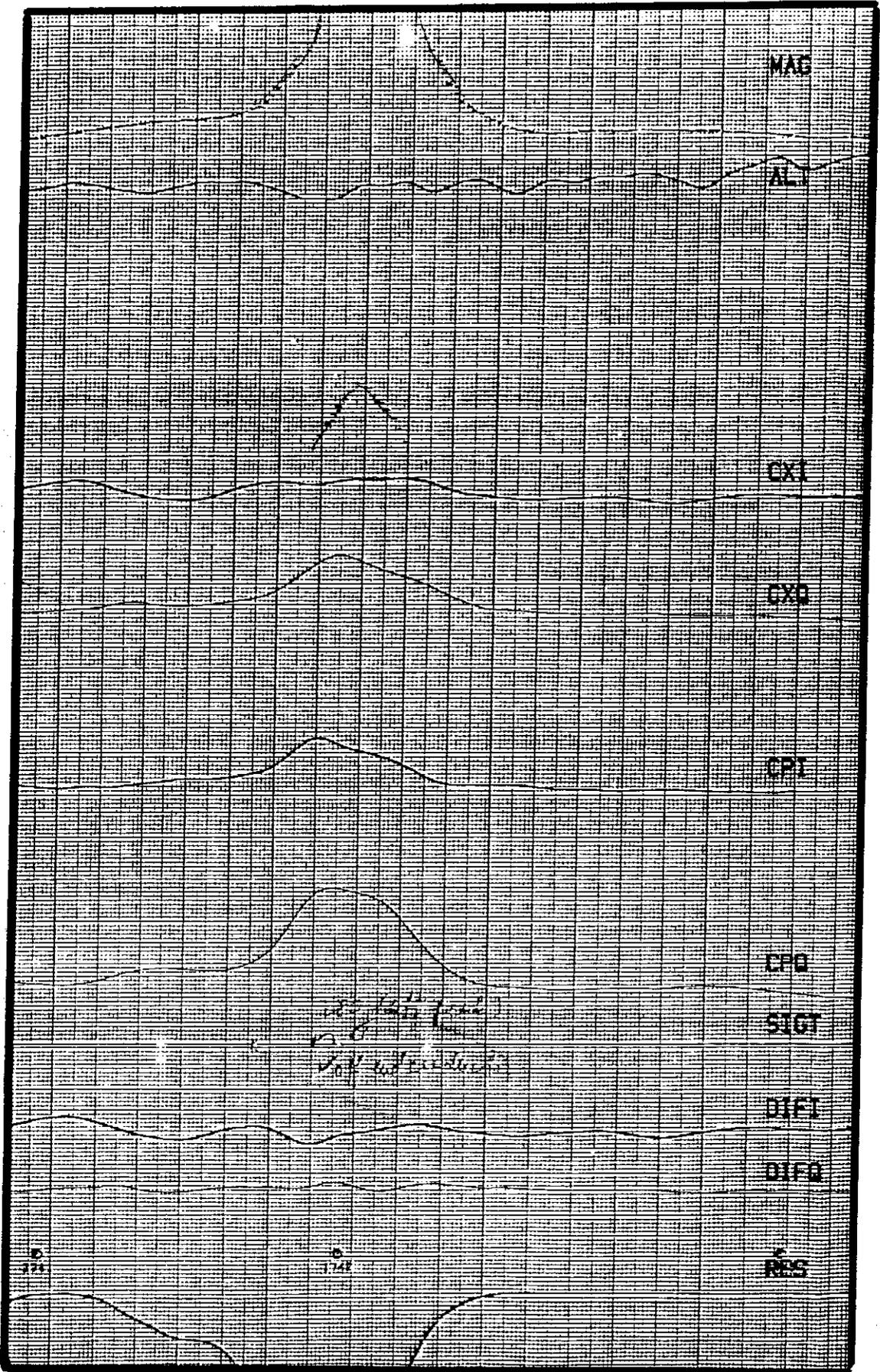
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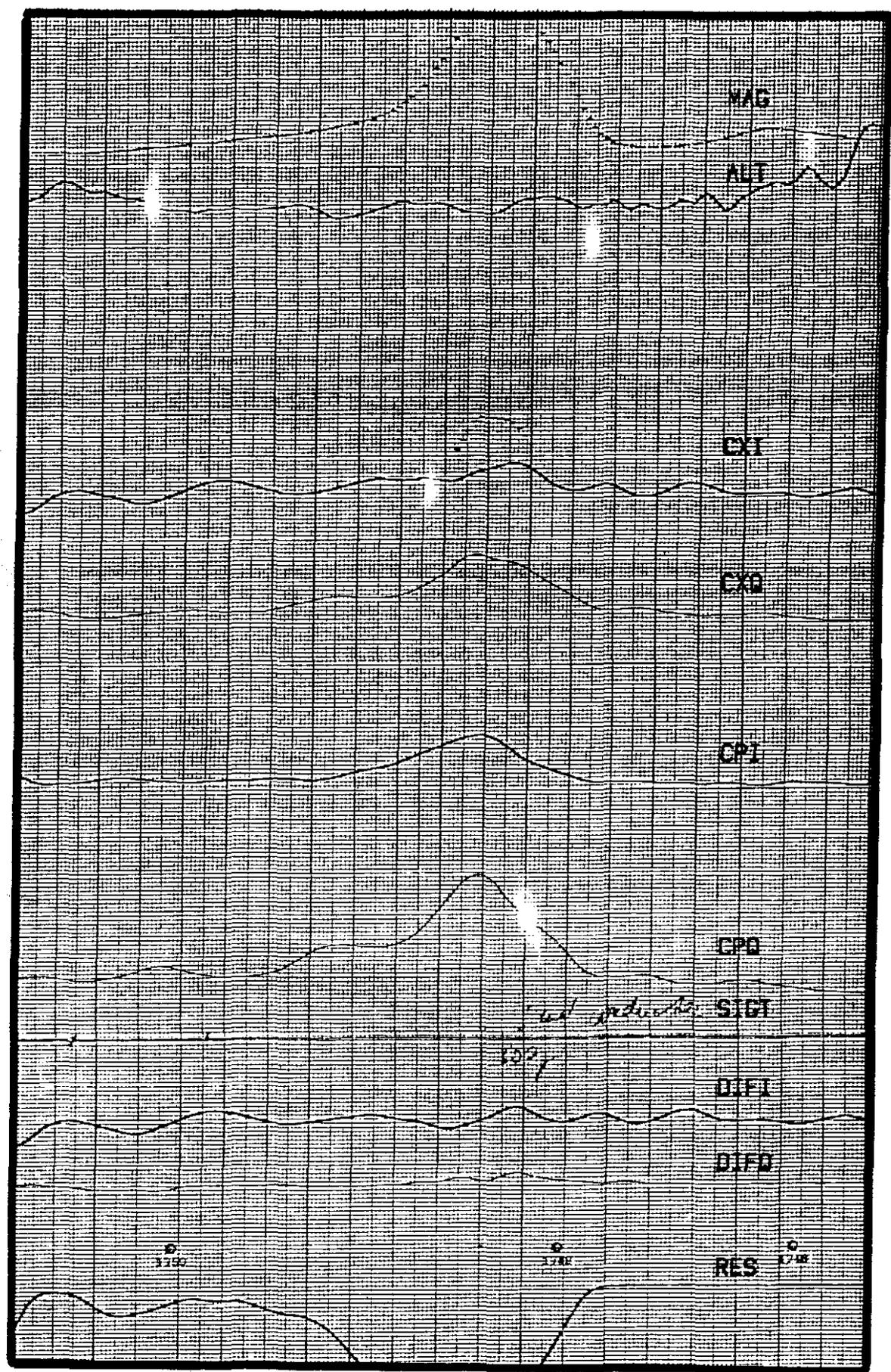
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VIKING 17

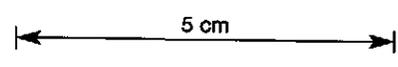
LINE 110





VIKING 17

LINE 112



E.L. 9/74 BIRCH INLET, TASMANIA

FIELD VISIT 16-22 FEBRUARY 1981 BY P. LEWIS AND K. GLASSON

CONTENTS

- 1) INTRODUCTION
- 2) FIELD REPORT ON DIGHEM ANOMALIES
- 3) NOTES ON GEOLOGY, PLUS CROSS SECTION.

1) INTRODUCTION

The Birch Inlet E.L. is located south of Queenstown on the west coast of Tasmania. It is part of a joint venture between A.A.M.-Geopeko-Union Oil in which Geopeko are operators. A Dighem survey was flown over the licence in December 1980.

The field visit by P. Lewis and K. Glasson was made to assess the geology and check Dighem anomaly sites. After a review of the data with Geopeko staff it was decided that two areas warranted ground follow-up, named Viking 17 and 22. The Viking 22 area is an unexplained stream geochem. anomaly located by previous work while 17 covers a magnetic anomaly (aeromag.) flanked by weak Dighem features. The result of the Dighem survey were disappointing and no definite bedrock conductors of merit were selected from the data.

A field crew provided by Geopeko has completed the work at the two grid areas. This included; gridding, soil sampling, geological mapping, ground magnetics and some M.S.T. surveying (a three coil Turam method - moving source turam). The results of this work will be available soon.

2) FIELD REPORT ON DIGHEM ANOMALIES

Not all anomalies were visited, priority was given to those located within the Lucas Volcanics. In some areas access was difficult, so nearby outcrop were inspected when available. No up grading features were found at any site which would warrant further follow-up.

<u>ANOMALY NO.</u>	<u>DESCRIPTION</u>
Line 16A	Not visited, discounted by geophysical interpretation of character.
Line 37A	Anomaly with weak airborne character which is located in a creek. Nearby outcrop is of fine acid tuff, no evidence of sulphide. Probable surficial response in zone of deeper weathering associated with a creek (?fracture controlled).
Line 49B	Poor airborne response with surficial character. Located in peat bog near creek. No exposure in area. Written off as a surficial conductor.
Line 46B	Selected as a quadrature response with possible surficial cause. Anomaly is sited on the flank of a ridge of uniform massive metaquartzite. Possible Pre-Cambrian basement.

No evidence of mineralisation. This response may be an "edge effect" at the contact of resistive quartzite and adjacent less resistive units.

The following anomalies are in the same area but were not field checked; Line 36G, 48E, 40F.

Line 64D A weak airborne response with some character - CPI displaced to one side of CXI.

Picked anomaly site occurs in a dissected creek. Nearby outcrop consists of quartz sericite tuff (m.g.) with local areas of quartz float, from veining.

No evidence of mineralisation or alteration.

Cause of anomaly not definitely determined. Could be a weathered zone along creek?

Line 74B An anomaly sited in peat bog developed in a shallow depression. No outcrop located nearby. Probably a surficial or edge effect response.

Line 76C (located in the vicinity of Viking 10).

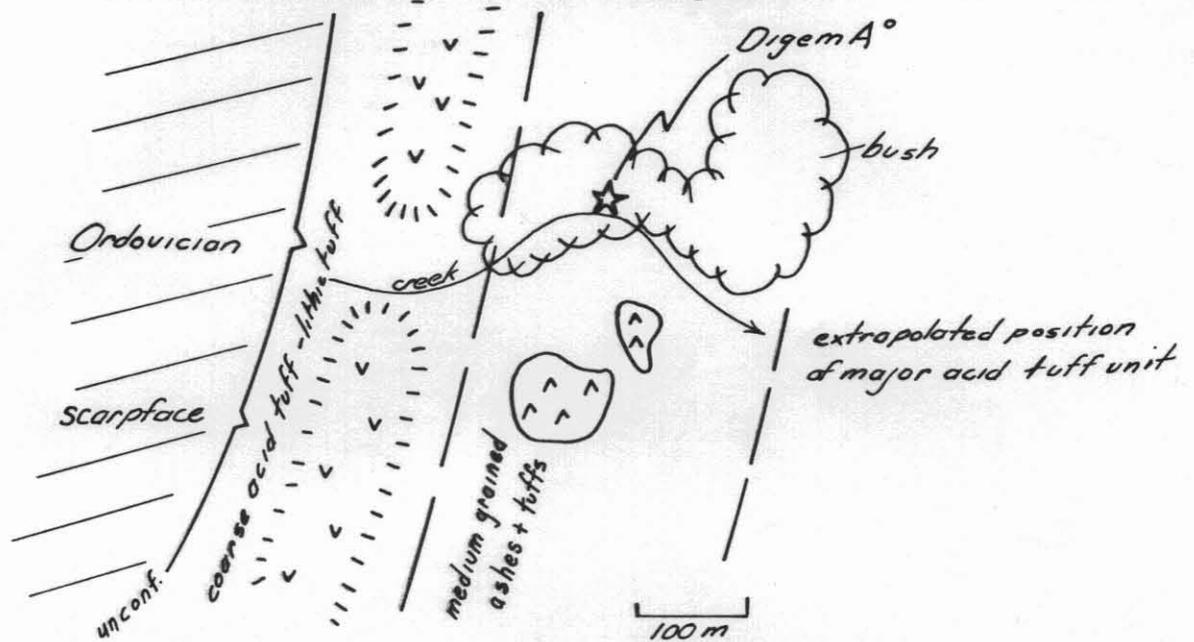
This response is located in a creek bed adjacent to ridges covered with quartz scree. It is likely that the margin of the prominent N-S well developed thick quartz veins are highly weathered and contain water charged clays, sufficient to give an airborne response.

Outcrop to the east are of medium to coarse acid-intermediate tuffs with no evidence of mineralisation. There is a unit with some chlorite-sericite development but no pyrite is present.

Line 86A

The anomaly is interpreted from the analogue record as a surficial feature in a zone of quadrature response.

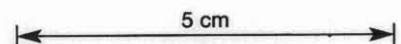
A well outcropping section of rocks is present immediately south and west of the anomaly site as illustrated on the following sketch.



The anomaly is sited in a creek on strike from barren volcanics and is probably not a significant bedrock response.

Line 89B

Located at the unconformable contact of Cambrian volcanics (lithic tuff) and non-exposed Ordovician beds. See above sketch.



Not considered as a significant bedrock response. Possibly fault gouge in displacements at the unconformity, within Ordovician.

Line 94C

An area of moderate outcrop the anomaly is sited in a shallow water course.

Adjacent outcrop contains quartz veining (massive) and m-f.g. acid tuff.

There is no evidence of mineralisation or alteration, and consequently this location is not considered worthy of follow-up even though this response is a possible bedrock conductor.

Line 98A

The Dighem anomaly falls in a area of dense rainforest at the foot of a scarp marking the base of the Ordovician.

It was not visited but is discounted for the same reasons as 89B.

Line 103A

Located at the base of the Ordovician scarp face 1 km south of 98A.

Outcrops on the nearby ridge consist of massive uniform sheared recrystallised quartzite. Because of these unprospective rock-types the anomaly has been written off, but not explained.

Lines 91D
98A
95A

Not visited, occur in dense rainforest.

It is interpreted that these responses are located about the sediment - Volcanic interface at the base of the Lucas Volcanics.

Despite quite favourable stratigraphic location the lack of evidence, for a mineralising episode, in outcrops on strike to the north down-grades their potential.

It is known, from recent work at Viking 17 that quartz chlorite schists are present at the interface and these may be the cause of the geophysical responses.

104D Not visited, inaccessible, and probably in Pre-Cambrian.

Line 104B All three anomalies lie on a general N-S trend
108C along the boundary between sediments and
110D volcanics.

Outcrops close to 110D were visited. The sediments exposed consist of well bedded pure quartzite and quartz-muscovite sandy siltstones. To the west the volcanics are coarse grained intermediate tuffs.

Anomaly 110D is located above the valley floor between the two rock types in an area of no exposure. All the lithologies appear to be barren of pyrite.

The anomaly may be caused by a unit of chlorite schists or some other conductive unit overlying the quartzites, as is the case with anomalies 111C, 110D and 108F situated 1 km to the east.

Line 108F These responses appear to be aligned in a trend
 110E marking the location of a conductive lithology
 111C (quartz-chlorite schist).

A grid is being constructed over this area,
 (Viking 17) covering the airborne e.m. anomalies
 and aeromag. feature present about 111C.

The work to be done includes soil sampling, ground
 magnetics and turam (MST). Results of this
 programmed will be reported shortly.

3) BIRCH INLET: NOTES ON STRATIGRAPHY AND ENVIRONMENT

From the traversing completed in the area the following possible
 stratigraphic divisions are recognised (described below):

Ordovician: clastic sediments

---unconformity---

Cambrian-Lucas Volcanics (1) dominantly acid pile

(11) acid - intermediate pile.

-Basal Sediments

--disconformity (not proved)--

Pre-Cambrian: clastic sediments.

PRE-CAMBRIAN: Topographically the unit forms a sequence of long
 N-S striking ridges. These ridges consist mainly of
 massive uniform meta-quartzite, probably with interbeds of
 meta-conglomerate. The unit has a consistent moderate (60° - 70°)
 dip to the west and the most westerly ridge, possibly forming the
 top of the sequence, is a thick prominent unit of conglomerates.
 (Schist units may occur within the sequence but were not located
 during traversing).

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The break of slope leading to Moores Valley proper is taken as the boundary with the basal Cambrian sediments. Lack of exposure and thick scrub masks the proposed contact.

CAMBRIAN: BASAL SEDIMENTS

It is assumed that the sequence, such as at Viking 17, of quartzite, quartz-mica siltstone-sandstone and quartz chlorite schist is Cambrian in age and underlies the volcanics. As previously mentioned the lower contact with the Pre-Cambrian is postulated to be disconformable, but not proved. In the Viking 17 area it is fairly clear that the volcanics directly overlie the basal sediments with no discernable change in attitude.

For the above reasons it is possible that the "basal sediments" represent reworked basement, similar in composition but possibly containing a higher proportion of schist units. The unit is about 1 km across in the Viking 17 region and appears to thin to 500m or less on Union Oil line 1600N.

The rock type/mineral causing the magnetic anomaly at Viking 17 will be described after the grid mapping is completed.

LUCAS VOLCANICS

I have made two broad subdivisions of the volcanic sequence based on gross rock composition namely a basal acid-intermediate pile succeeded by a dominantly acid pile. It can be argued that the two broad units defined above represent separate, but similar, volcanic episodes. Overall there is a monotonous sequence of medium to coarse grained tuffs probably of an ash flow depositional origin. The contact zones between flows, as marked on section, contain a more mixed assemblage of ash-tuff to coarse lithic tuff varieties, as would be expected.

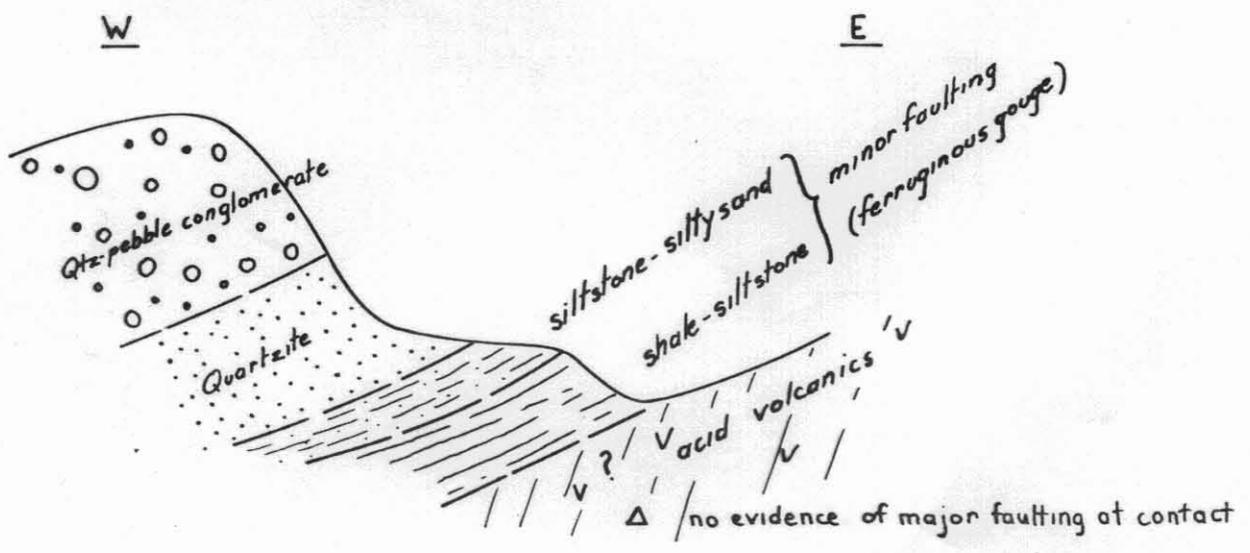
1) Acid-Intermediate Pile: At least two of the ridges to the (bottom) east of the pile consist of coarse intermediate (dacitic) tuffs with a quartz-feldspar-sericite-chlorite-minor epidote composition. Sericite-chlorite alteration, associated with deformation, is common. However, the main bulk of the pile is more acid in character with a simple quartz-sericite-minor chlorite mineralogy.

11) Acid Pile: A mixture of medium to coarse acid tuffs, with pervasive sericite alteration and a pronounced foliation. In the south below Circle Hill outcrop is generally poor and may reflect a fining of the volcanics, that is gradual change to ash-tuff members with a fine matrix and fewer quartz fragments.

Overlying this pile is an ash-tuff member in turn overlain by coarse lithic tuff. This lithic tuff forms a prominent ridge at the base of the main Ordovician scarpface. It is possible that the lithic tuff member belongs to the overlying Tindall Group as postulated in Elliott Bay.

ORDOVICIAN SEDIMENTS

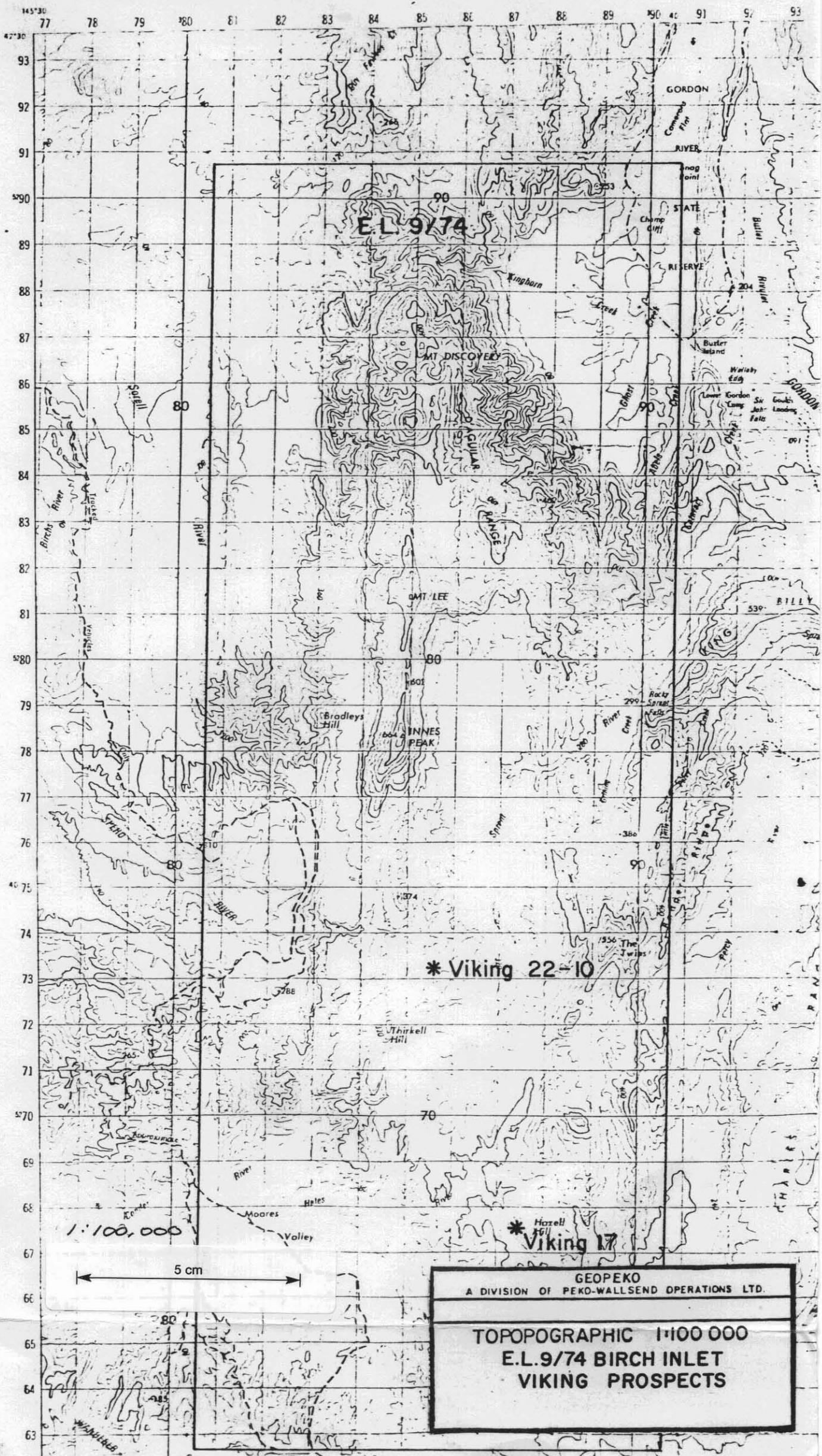
A traverse was made along the road from Moores Valley south of Innes Peak. Erosion along this graded track provides excellent exposure. The stratigraphic sequence from valley floor to ridge top is following.



The basal shale-silt have numerous chaotic fault zones consistent with slump-shear movement of partly consolidated "sloppy" beds. Most deformed zones carry iron oxide staining.

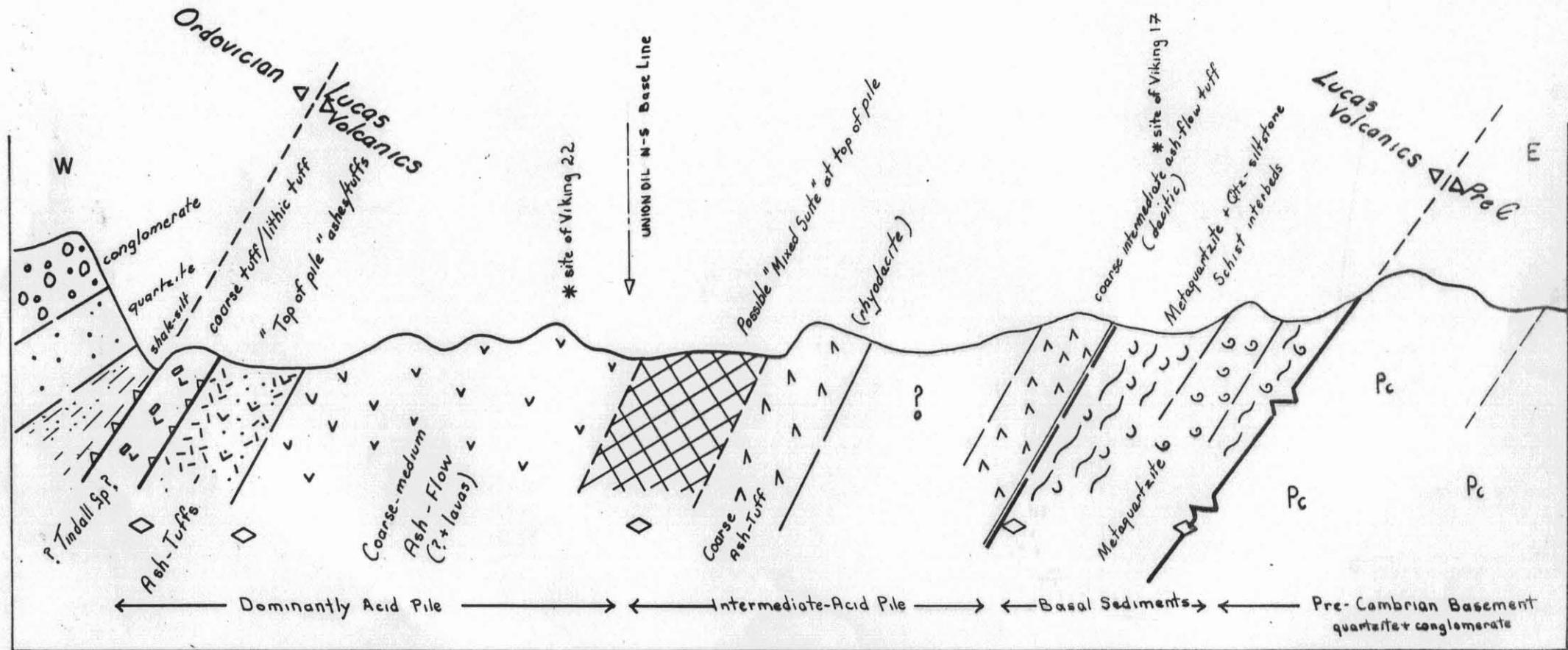
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A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

**TOPOGRAPHIC 1:100 000
E.L.9/74 BIRCH INLET
VIKING PROSPECTS**

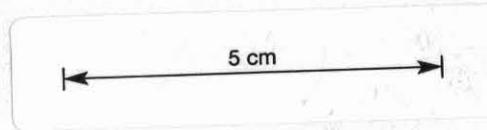


BIRCH INLET

Schematic Geological Cross Section

Horiz scale: 1:10000

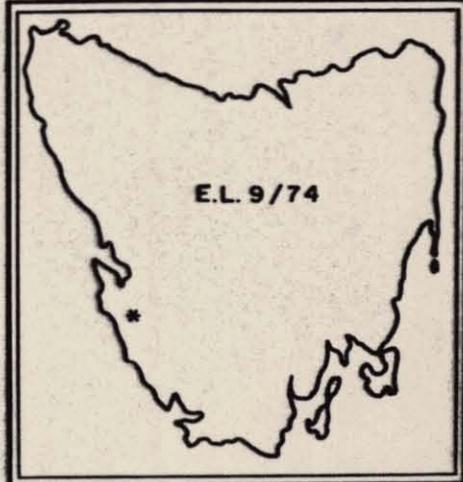
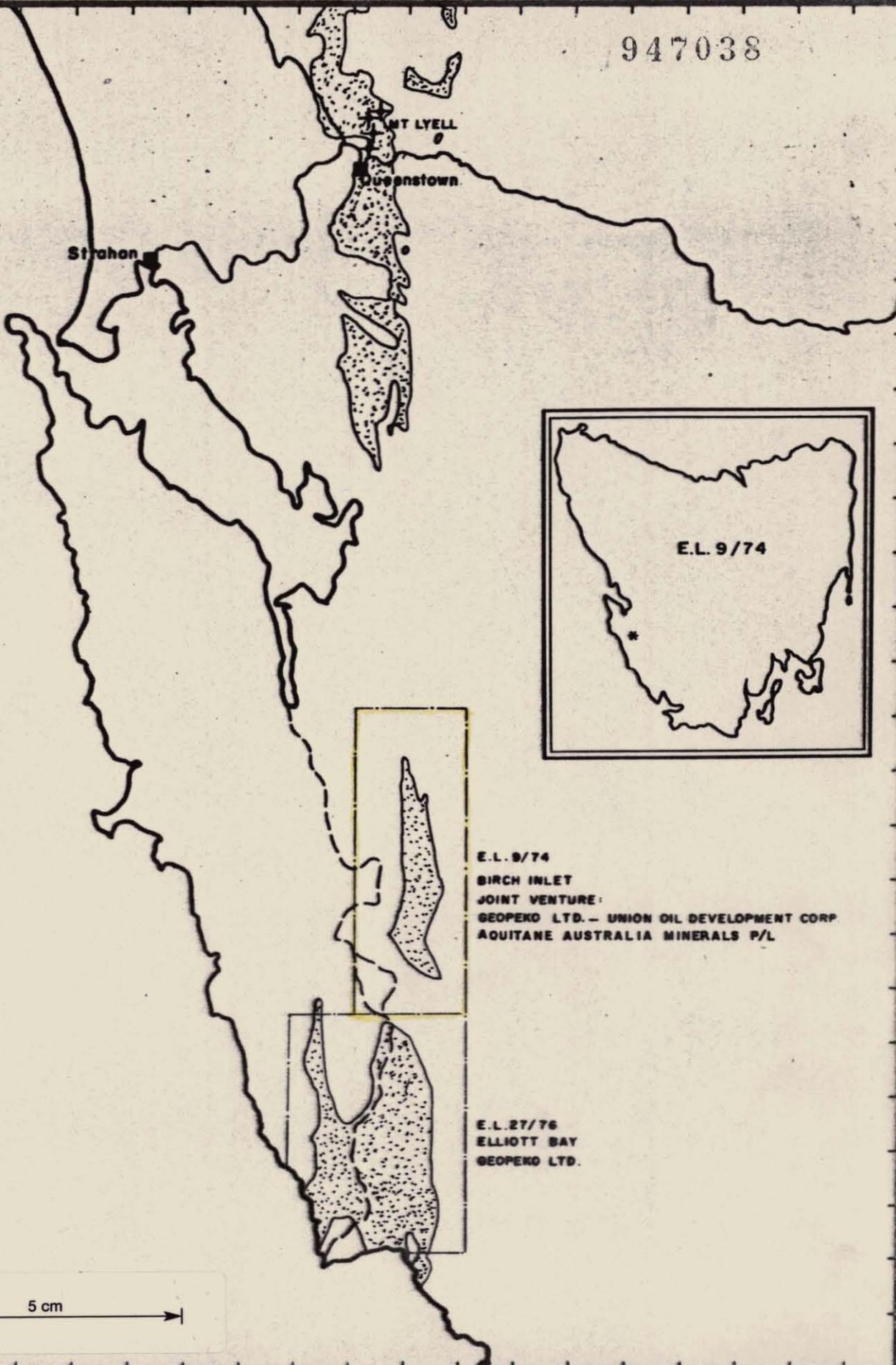
Vert scale: schematic



1982
P.C.H. march '81

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E.L. 9/74
 BIRCH INLET
 JOINT VENTURE:
 GEOPEKO LTD. - UNION OIL DEVELOPMENT CORP
 AQUITANE AUSTRALIA MINERALS P/L

E.L. 27/76
 ELLIOTT BAY
 GEOPEKO LTD.

5 cm

LEGEND:

-  Significant Base metal Mineralization
-  Mt. Read Acid Volcanics
-  Road
-  Track



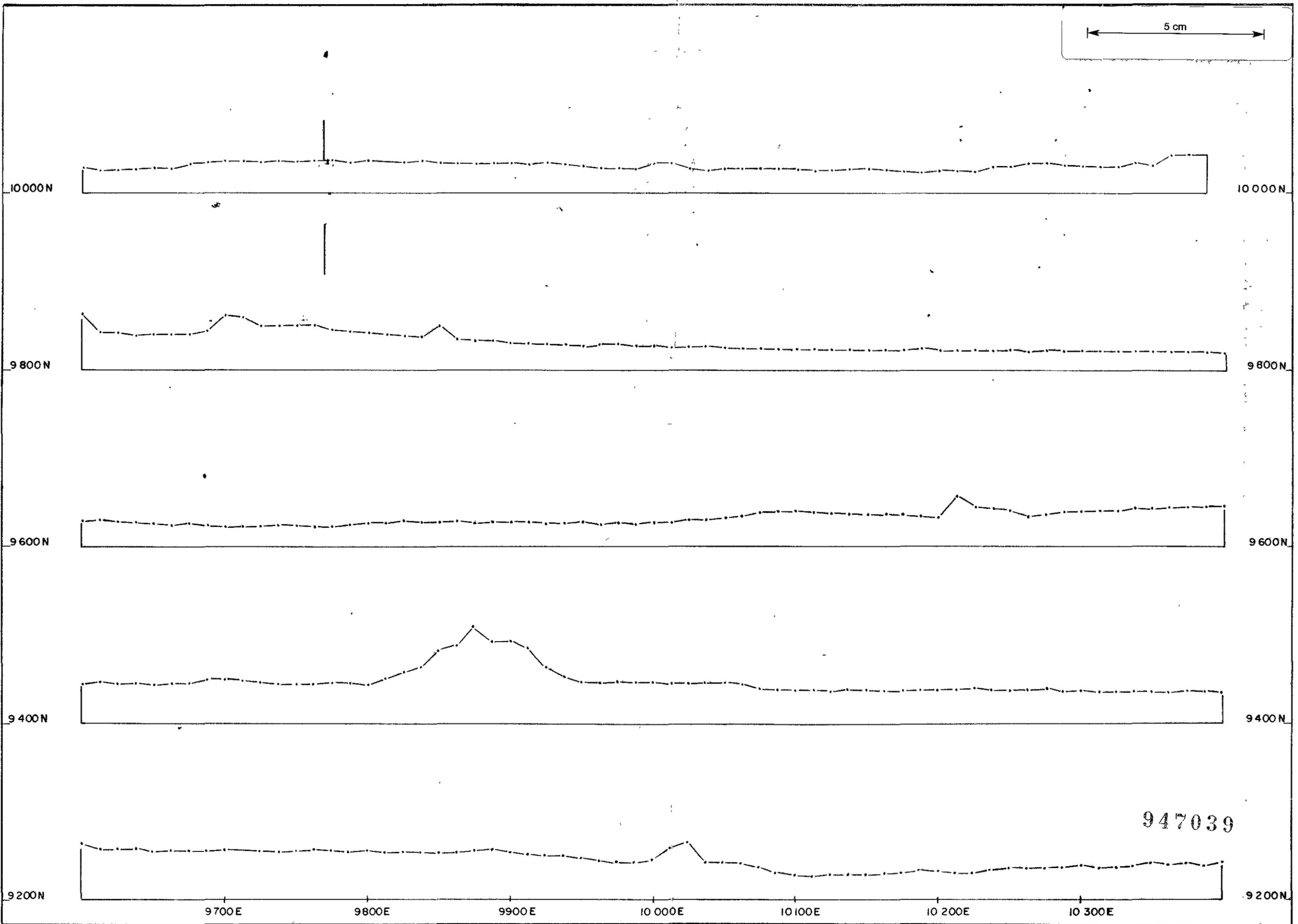
DATE:
 GEOL: C.D.S.
 DWN: J.P.M.
 CHKD: M.C.R.

GEOPEKO LIMITED
KING ISLAND

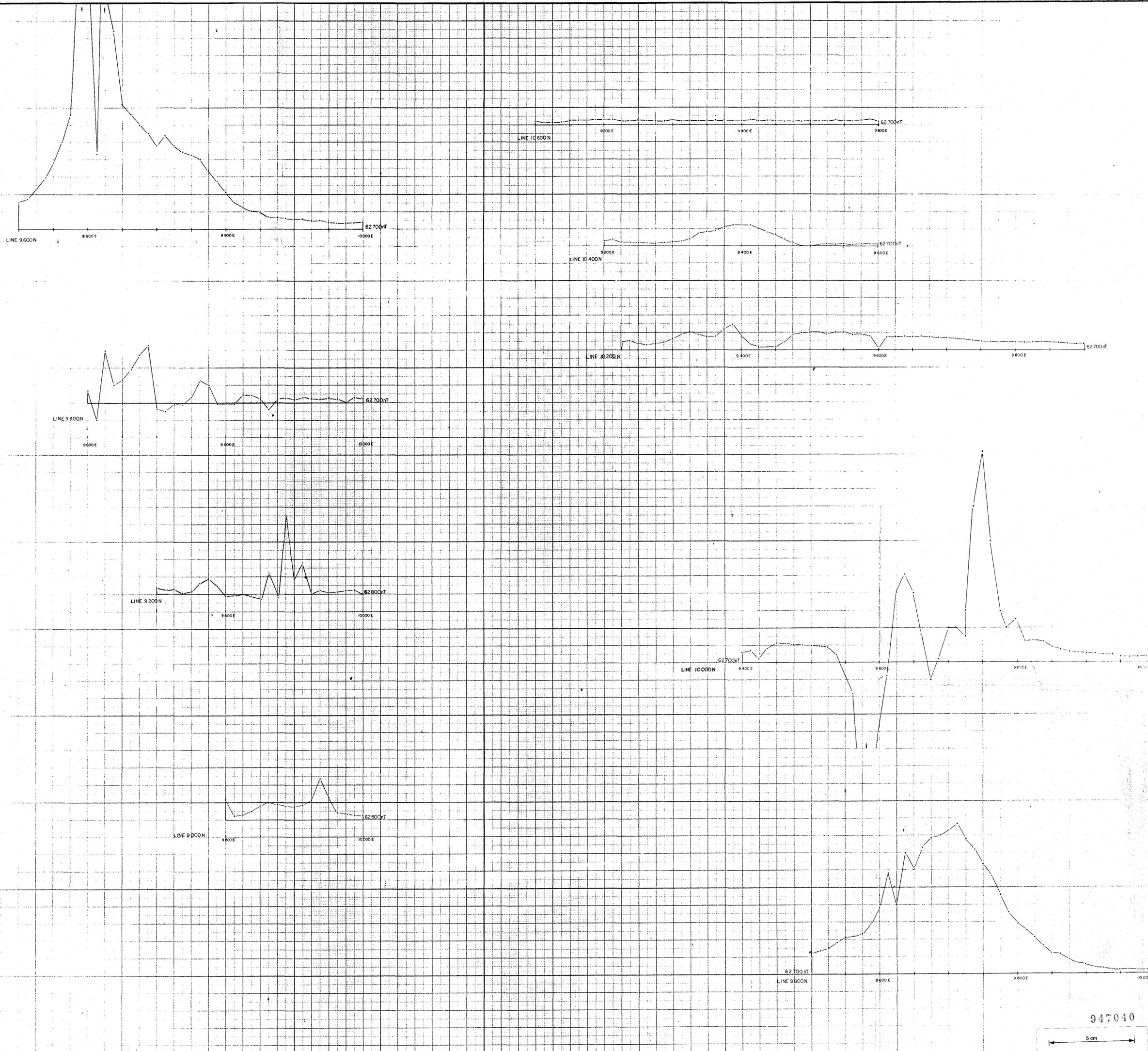
Scale: 1:500 000

Fig No. 1

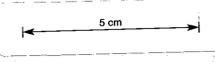
LOCATION MAP
E.L. 9/74



GEOPEKO LTD. Geophysical Surveys	Instrument	Geometrics 816	Datum	62600nT	Hor Scale	1:2500	AREA	BIRCH INLET, TASMANIA	011
	Observer	R.G.,V.T.	Drawn	R.Tognoni	Vert Scale	1cm = 100nT	PROSPECT	VIKING 22	
Plan No	TS 9/74-V22-8	Scale Fact	Date	March '81	Cont. Int		PLAN SHOWS	PROFILES OF TOTAL MAGNETIC INTENSITY	



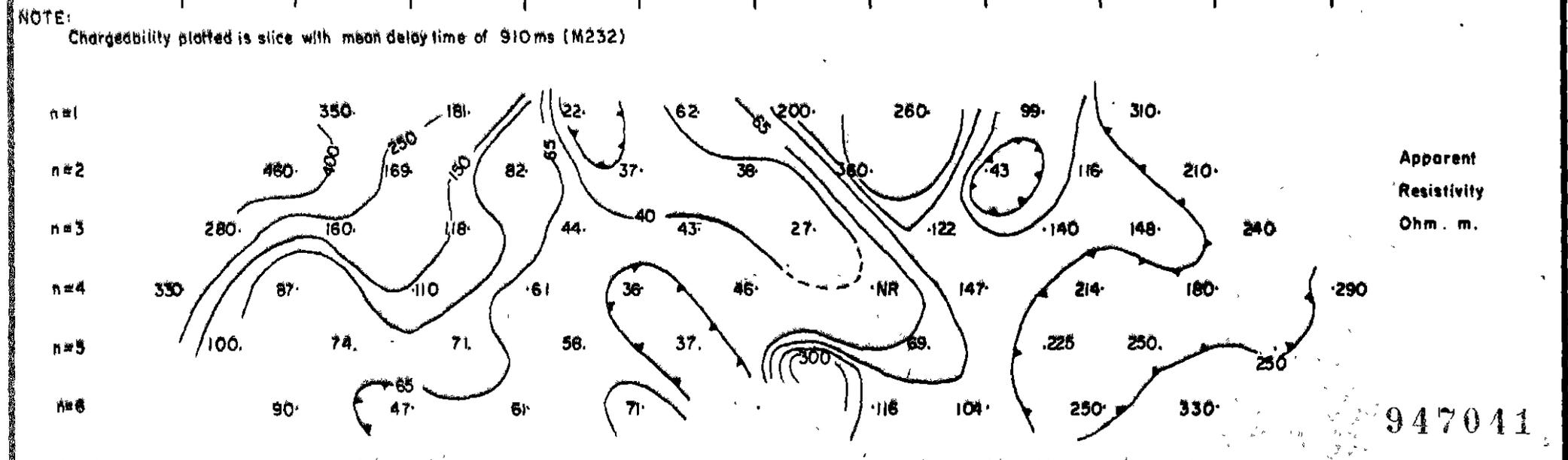
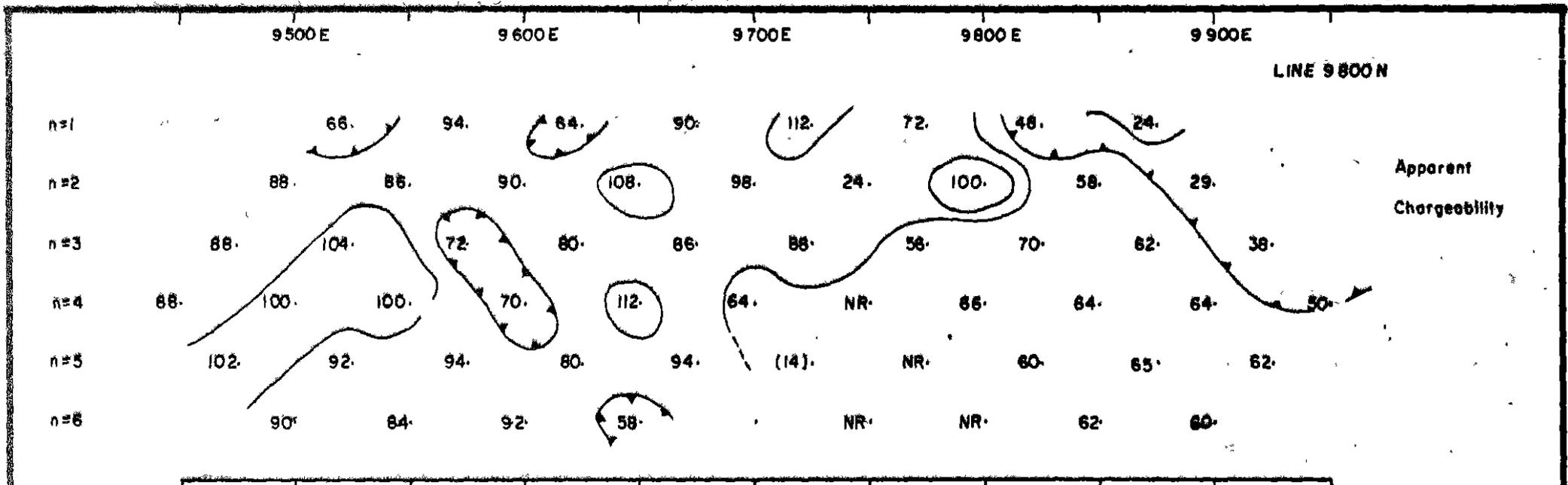
947040



GEOPEKO
Geophysical Surveys
Plan No.2 TS 9/74-VI7-8

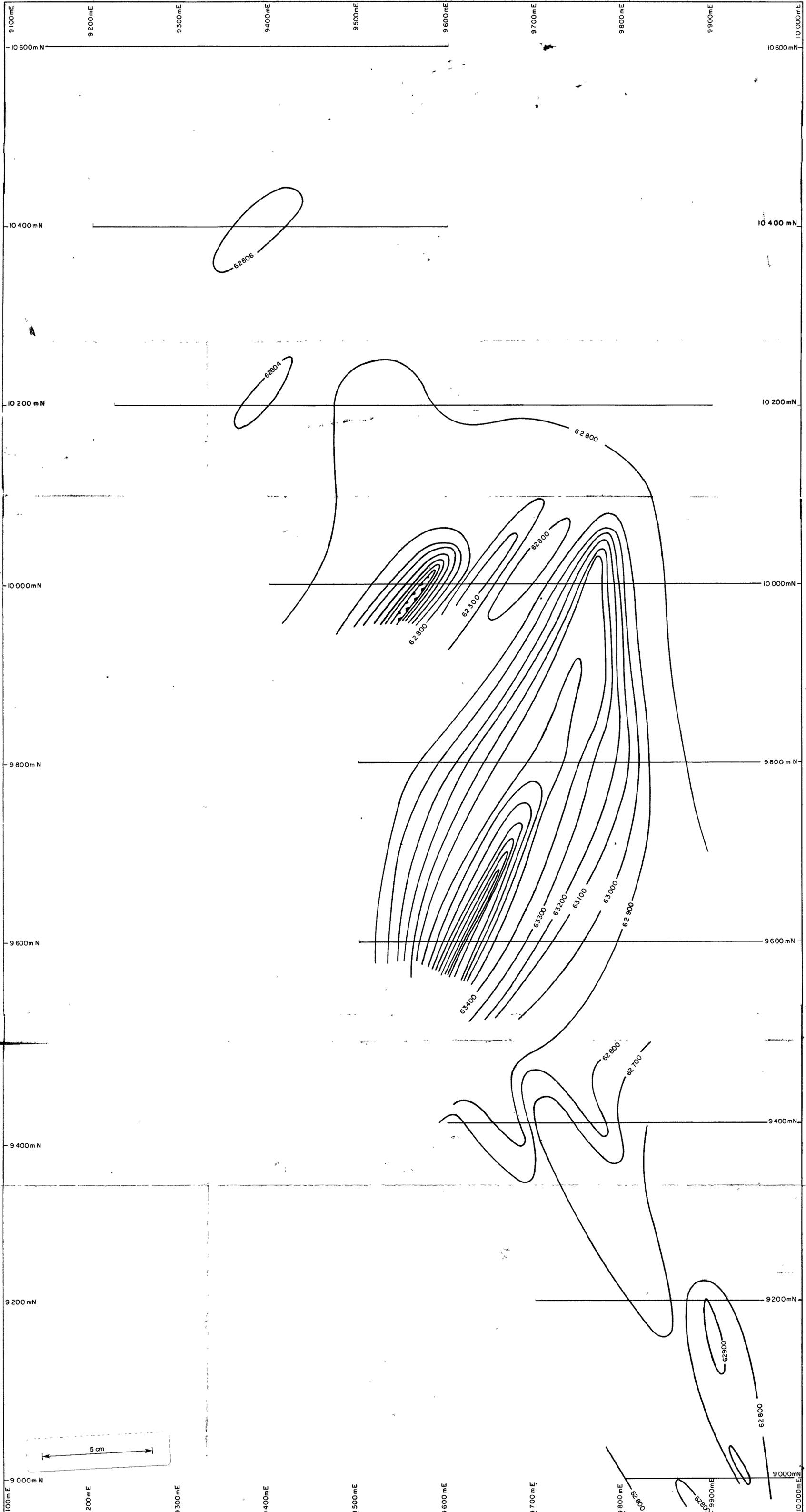
Instrument	Geometrics 816	Datum	62700nT	Hor. Scale	1:2500	AREA	BIRCH INLET, TASMANIA	012
Observer	R.G., V.T.	Drawn	R.Tognoni	Vert. Scale	1cm = 100nT	PROSPECT	VIKING 17	
Scale Fact		Date	March 1981	Cont Int.		PLAN SHOWS	PROFILES OF TOTAL MAGNETIC INTENSITY	Plan 2

5 cm

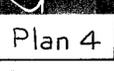


GEOPEKO		Trans	Ellipt 1-5kw	Obs	R.G	AREA	BIRCH INLET, TASMANIA
Geophysical Surveys		Recvr	Scintrex IPR8	Drwn	R.TOGNONI	PROSPECT	VIKING 17
Plan no. 3	TS9/74-V17-9	Scale	1:2500			PLAN SHOWS	Pseudosection of Dipole-Dipole I.P./Res.
		Date	March 1981				

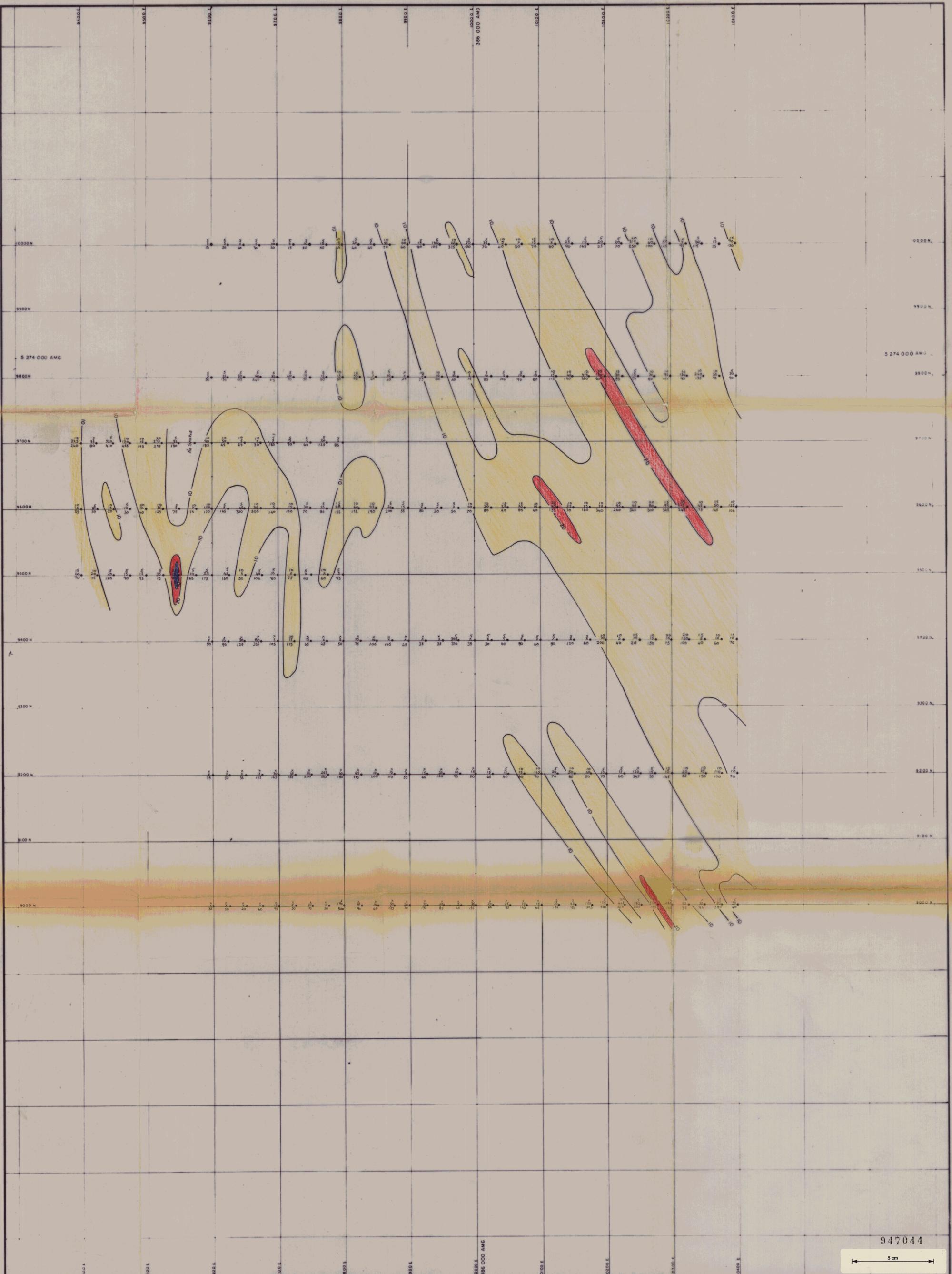
081-18



GEOPEKO LTD Geophysical Surveys Plan No 4 TS9/74-VI7-10	Instrument	Geometrics 816	Datum	Hor Scale	1:2500	AREA	BIRCH INLET TASMANIA
	Observer	R G V T	Base Peg	Vert Scale		PROSPECT	VICKING 17
	Scale Fact		Date	Cont Int	100 nT	PLAN SHOWS	CONTOURS OF TOTAL MAGNETIC INTENSITY



0851-12



LEGEND
 * Hand auger hole
 • Grid position

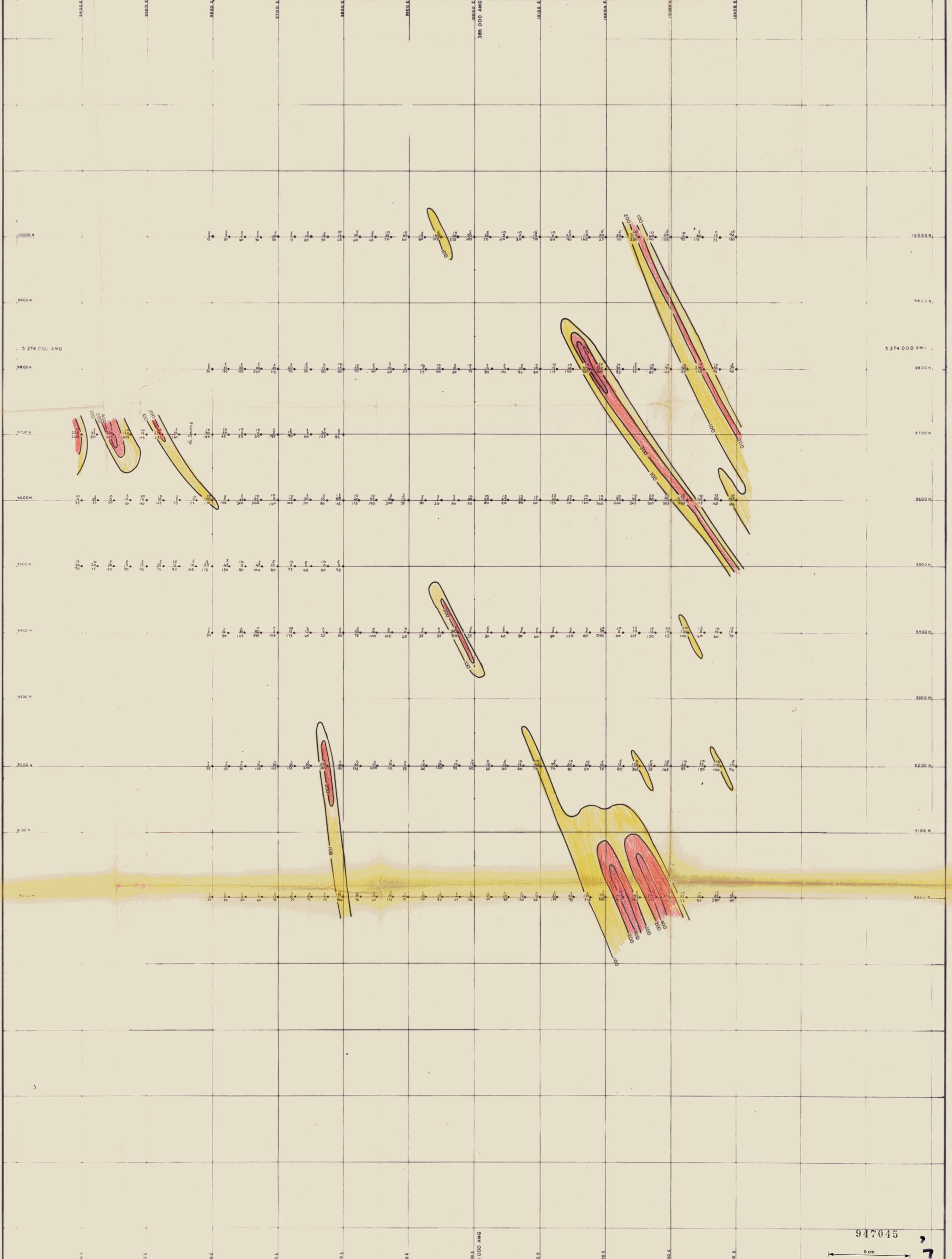
305
370
305ppm Pb
370ppm Zn

CONTOUR INTERVAL

0-9	0-9ppm
10-19	10-20ppm
20-39	20-40ppm
40-59	40ppm+



GEOPEKO
 No TS9/74-V22-3
 E.L.9/74 BIRCH INLET, TASMANIA
 VIKING 22
 C-HORIZON GEOCHEMICAL RESULTS
 Cu Contours
 00.2
 FIG. 3



LEGEND

- Hand auger hole
- Grid position

100ppm Cu
75ppm Pb
160ppm Zn

CONTOUR INTERVAL

100-199ppm
200-399ppm
400ppm+



947045

5 cm

GEOPEKO

No TS9/74-V22-4

BIRCH INLET, TASMANIA 9/74 003

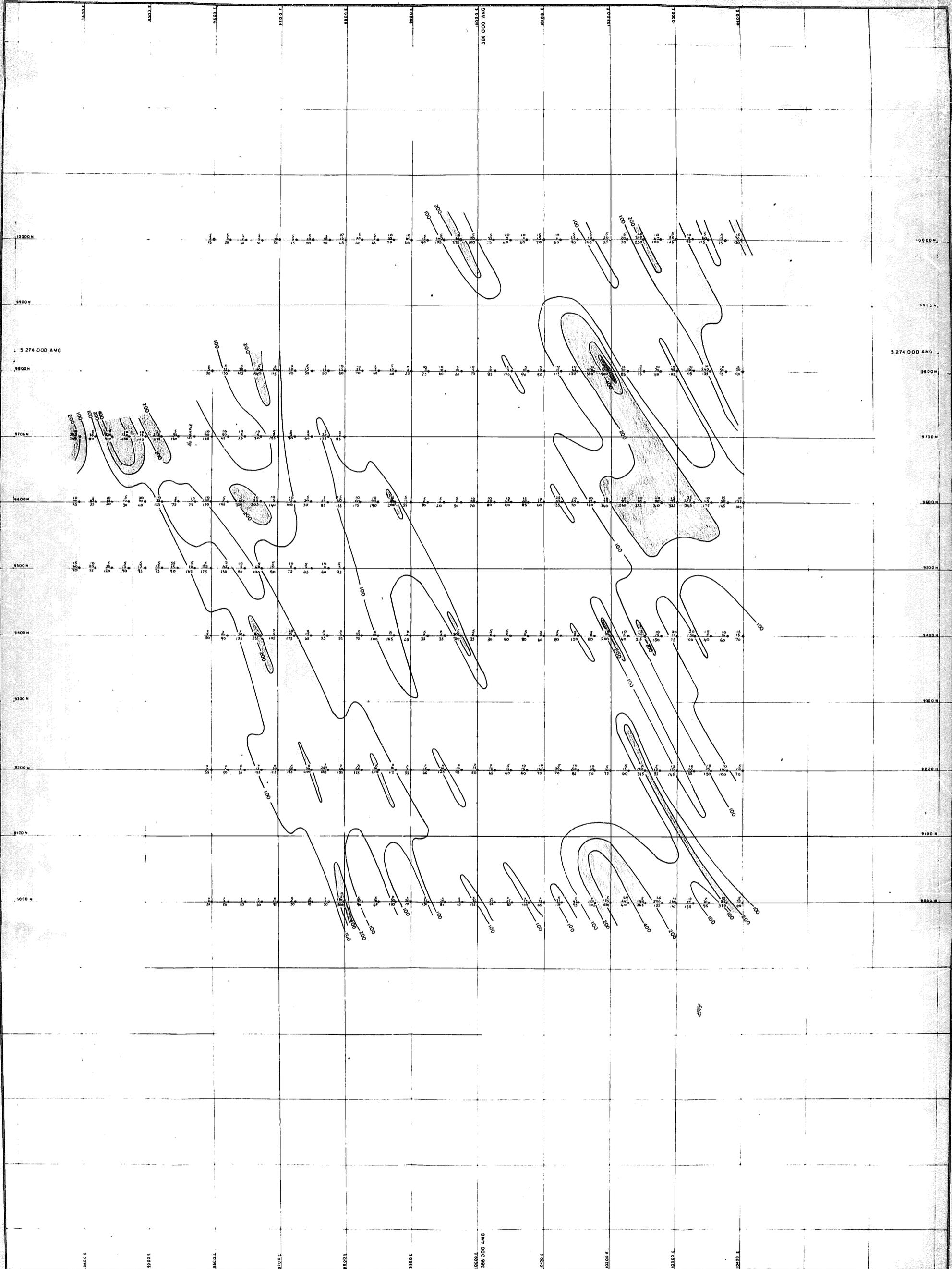
VIKING 22

C-HORIZON GEOCHEMICAL RESULTS

Pb Contours

FIG4

DATE: 9/74
DRAWN: R. T. OGDEN
CHECKED: J. P. GEDDIS



LEGEND

- Hand-dug hole
- Grid point

CONTOUR INTERVAL

10-15	10 ppm Cu
16-20	40 ppm Pb
21-25	50 ppm Zn

CONTOUR INTERVAL

10-15	0-99 ppm
16-20	100-199 ppm
21-25	200-399 ppm
26-30	400-799 ppm
31-35	800 ppm +



GEOPEKO

Scale: 1:2500

No TS9/74-V22-5

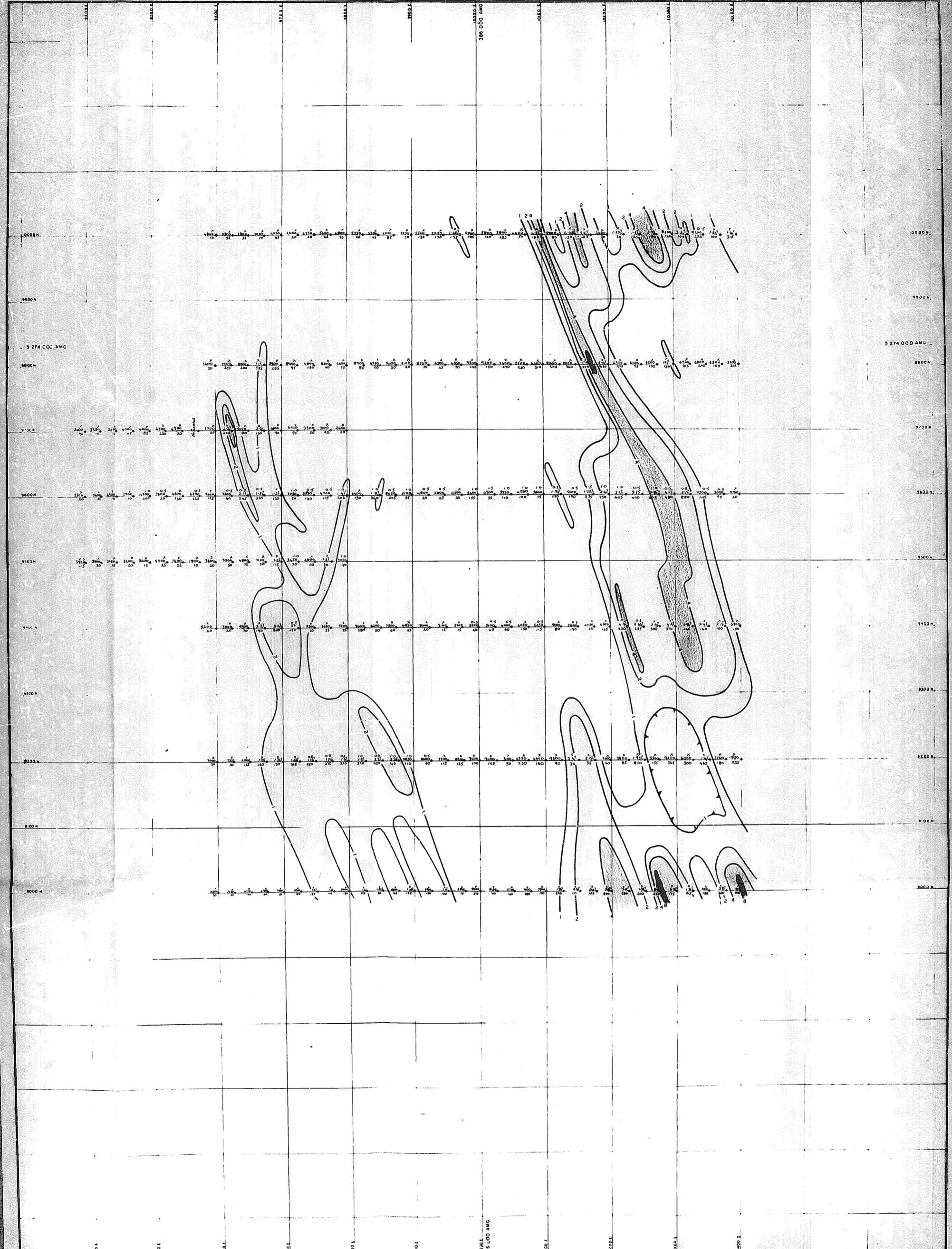
E.L.9/74 BIRCH INLET, TASMANIA 004

VIKING 22

C-HORIZON GEOCHEMICAL RESULTS

Zn Contours

FIG 5



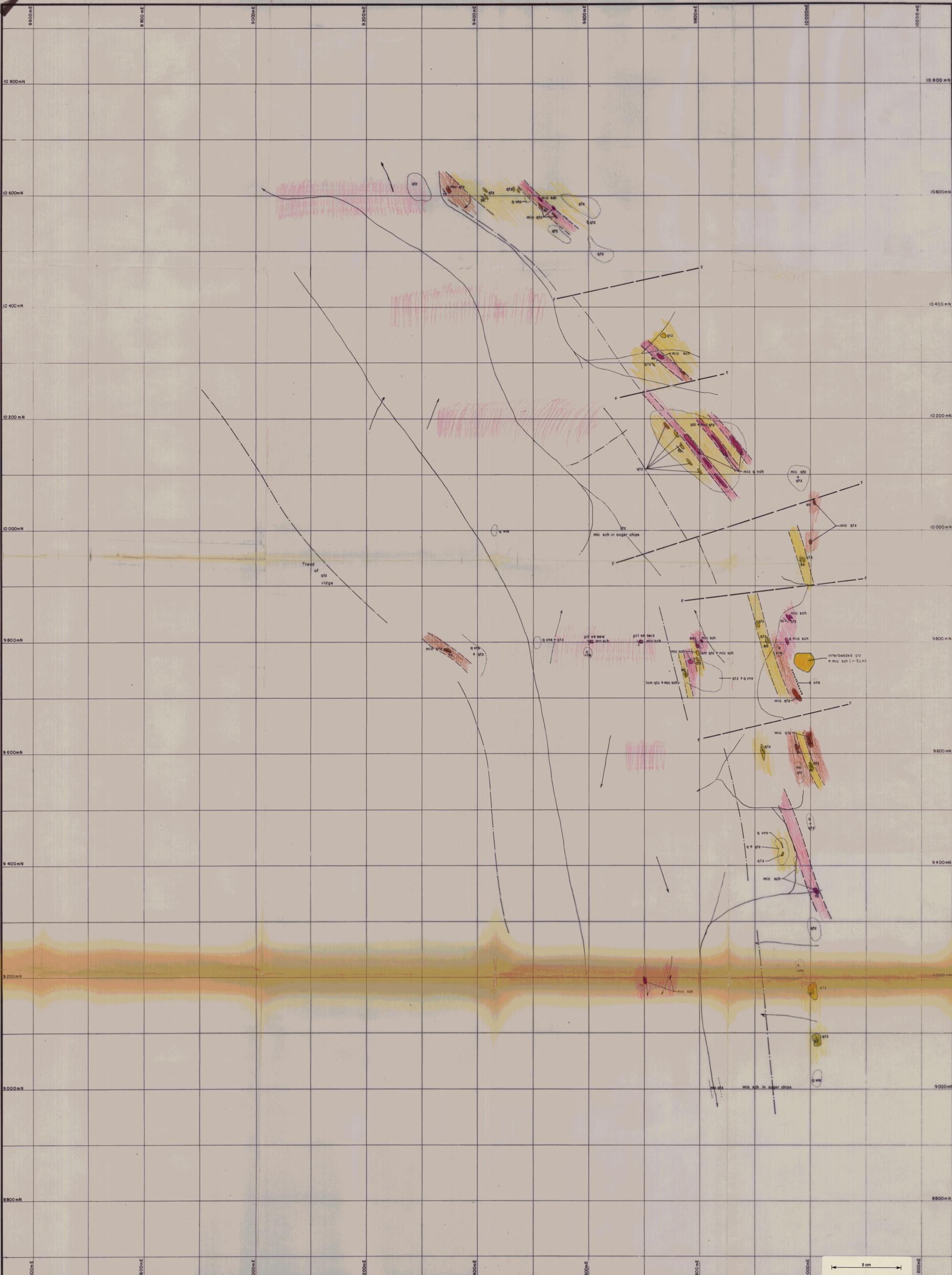
LEGEND
 • Hand auger hole
 ○ Grid position

1 0ppm Ag
 2 22% Fe
 3 149ppm Mn

CONTOUR INTERVAL
 0.1%
 0.2-0.4%
 0.5-1.0%
 1.5-2.0%
 2.5-4.0%
 4.5-5.0%
 5%+



GEOPEKO
 No TS9/74-V22-6
BIRCH INLET TASMANIA 9/74
 VIKING 22 005
 C-HORIZON GEOCHEMICAL RESULTS
 Fe Contours
 FIG 6



- LEGEND:**
- qtz ----- quartzite
 - mic sch ----- micaceous schist
 - mic qtz ----- micaceous quartzite
 - q vns ----- quartz veins
 - xxxxx ----- quartz veins
 - outcrop
 - ----- float
 - 70° ----- dip
 - 60° ----- cleavage
 - F ----- fault (interpreted)
 - contact (interpreted)
 - trend lines (interpreted)
 - streams



DATE: 17 March 1981
 GEOLOGIST: J.P.
 DRAWN: R.T., J.P.M.
 CHECKED:

GEOPEKO

0 25m 50m 75m 100m 200m 275m

SCALE: 1:2500

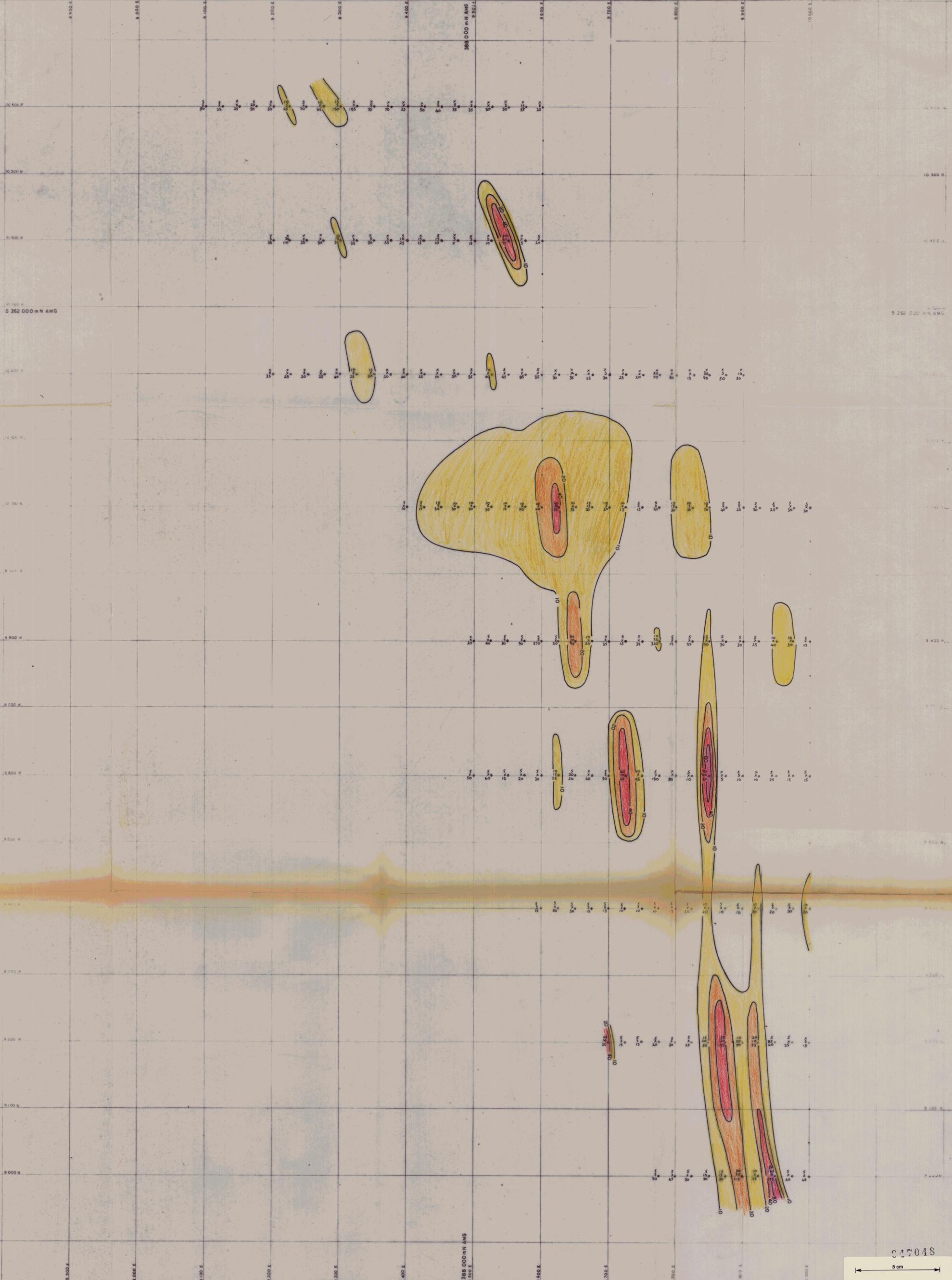
No.TS 9/74-VI7- 2

BIRCH INLET, TASMANIA
VIKING I7
GEOLOGICAL PLAN

006

947047 **FIG-7**

81-1580



LEGEND
 ● Hand auger hole
 ○ Grid position

5ppm Cu
 5ppm Pb
 15ppm Zn

CONTOUR INTERVAL

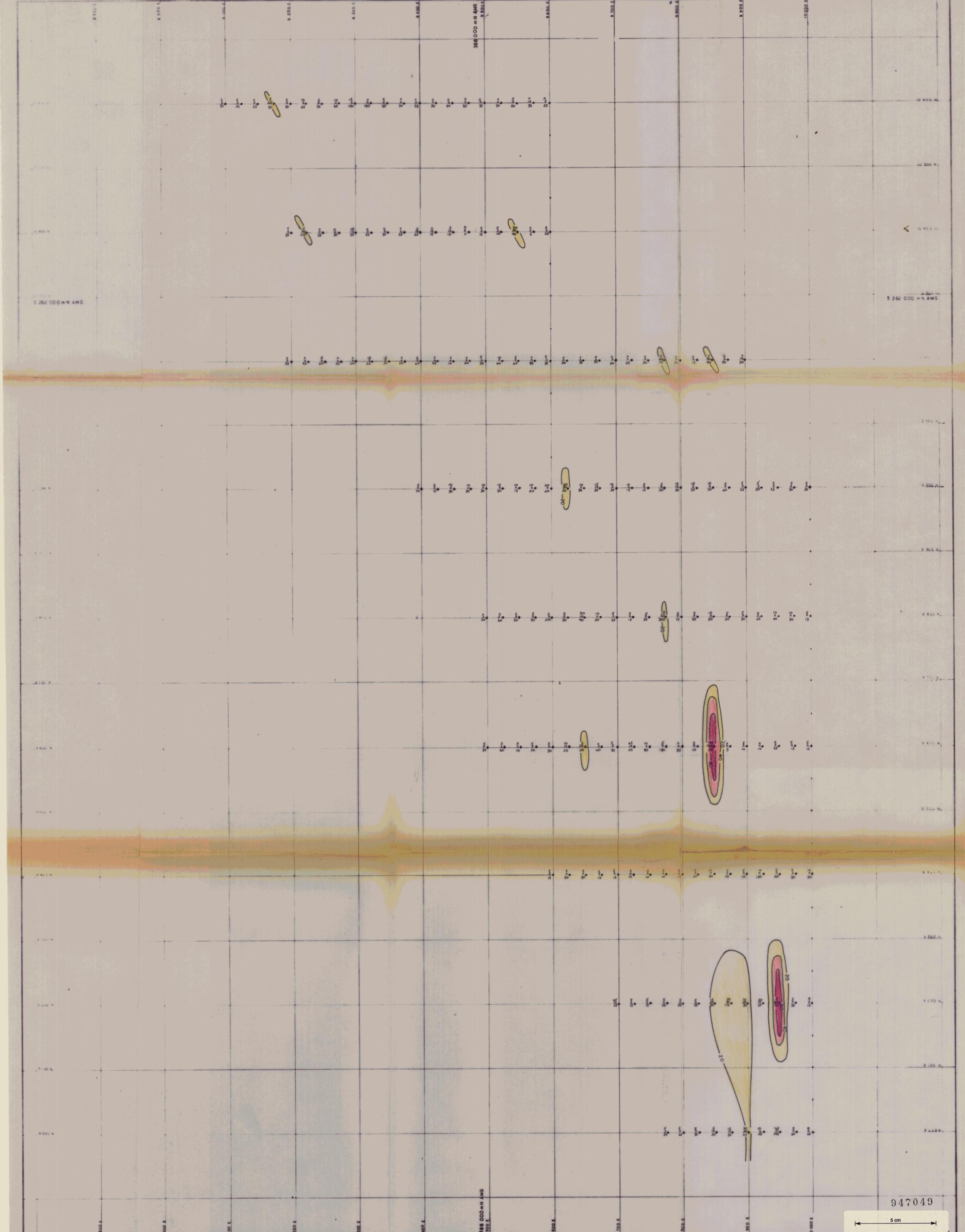
0-9	10-19	20-39	40-79	80+
-----	-------	-------	-------	-----

DATE: MARCH 81
 GEOLOGIST: JP
 DRAWN: R. DUNN
 CHECKED:

GEOPEKO
 SCALE 1:2500
 NO. TS 9/74-VI7- 3
 E.L. 9/74 BIRCH INLET, TASMANIA
 VIKING I7
 C-HORIZON GEOCHEMICAL RESULTS
 Cu Contours
 FIG. 8

017048
 5 cm

81-1560



LEGEND
 ● hand auger hole
 — Grid position

10ppm Cu
 5ppm Pb
 30ppm Zn

CONTOUR INTERVAL

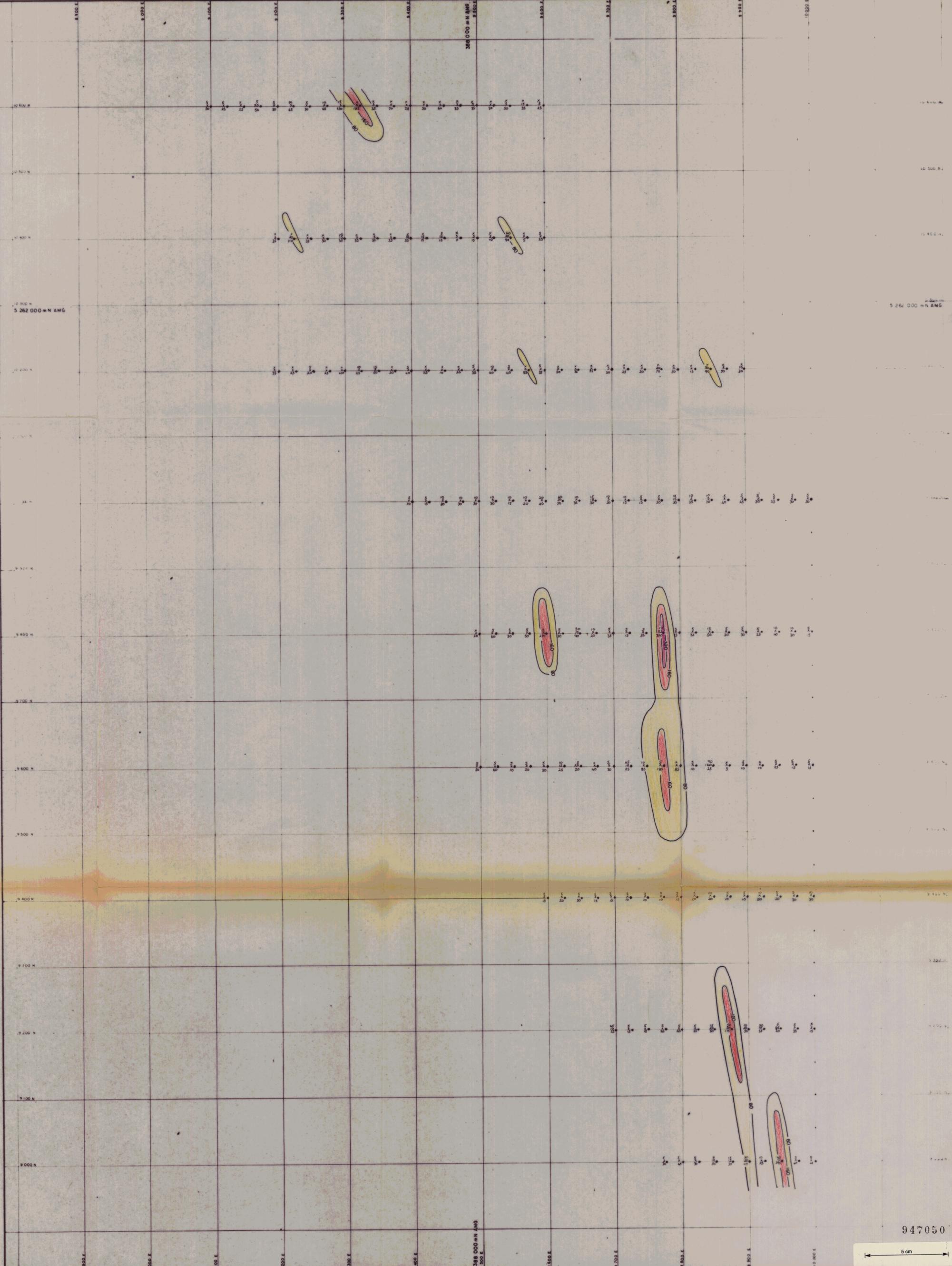
0-19ppm
20-39ppm
40-79ppm
80ppm+

DATE: MARCH '81
 GEOLOGIST: J.P.
 DRAWN: R.TODD
 CHECKED:

GEOPEKO
 NO TS 9/74-VI7-4
 E.L.9/74 BIRCH INLET, TASMANIA,
 VIKING 17
 C-HORIZON GEOCHEMICAL RESULTS
 Pb Contours
 FIG 9

947049
 5 cm

81-1580



LEGEND
 ● Hand auger hole
 ○ Grid position

45
 25
 65ppm Cu
 10ppm Pb
 25ppm Zn

CONTOUR INTERVAL

19-6	0-75ppm
19-15	80-159ppm
19-22	160-319ppm
19-22	320ppm+

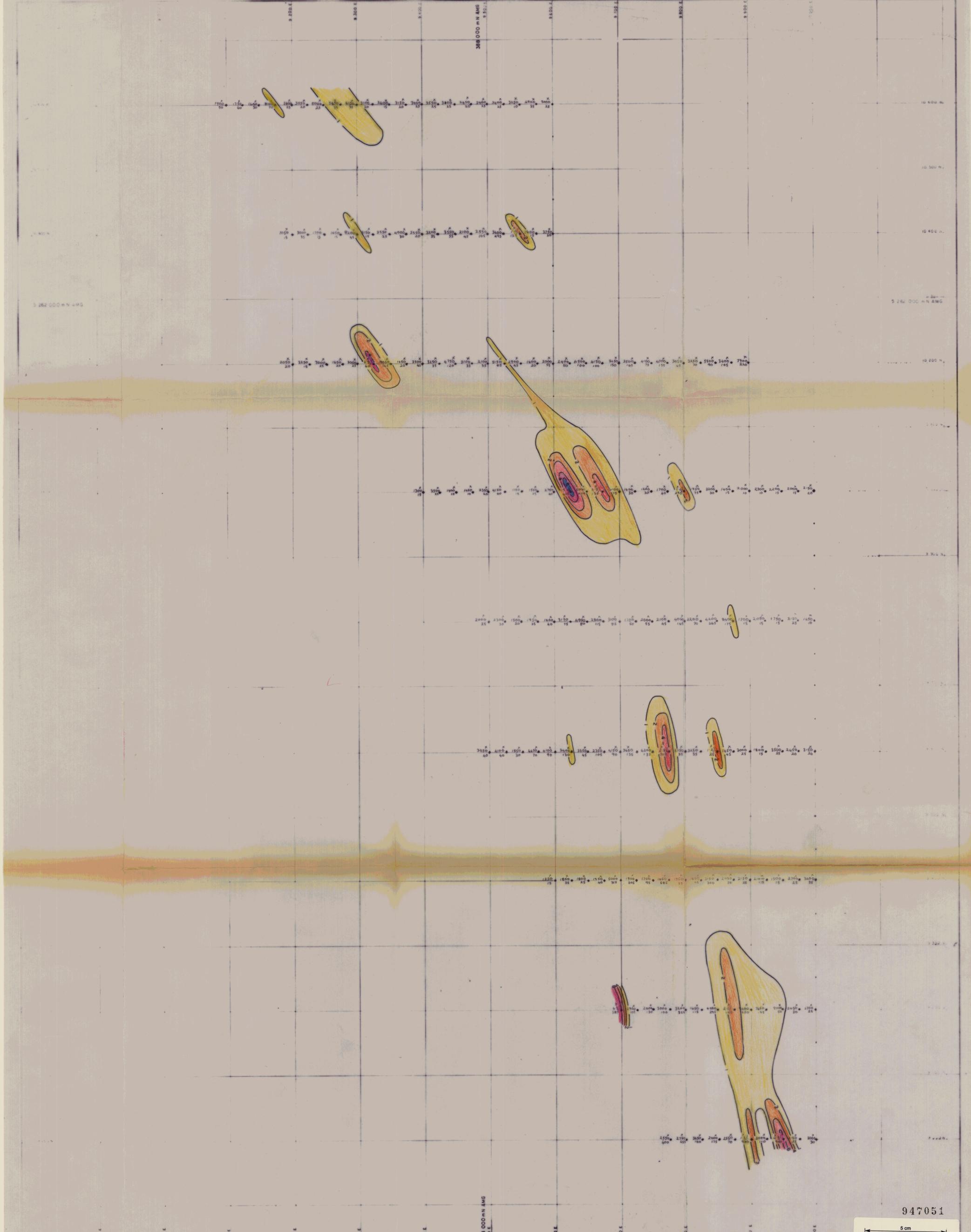
GEOPEKO
 SCALE 1:2500
 NO.TS 9/74-VI7-5
 E.L.9/74 BIRCH INLET, TASMANIA
 VIKING 17 009
 C-HORIZON GEOCHEMICAL RESULTS
 Zn Contours
 FIG 10

DATE: MARCH '81
 SEDLOGIST: J.P.
 DRAWN: R.TOUNGON
 CHECKED:

5 cm

947050

81-1580



Non detectable Ag
0.5% Fe
385ppm Mn

CONTOUR INTERVAL

0-0.5%	0.5-1%	1%-2%	2%-4%	4%-8%	8%+
19-22	19-28	19-10	19-15	19-22	19-28

947051

5 cm

GEOPEKO

NO. TS 9/74-VI7-6

E.L. 9/74 BIRCH INLET, TASMANIA

VIKING 17

C-HORIZON GEOCHEMISTRY RESULTS

Fe Contours

FIG. II

DATE: MARCH '81
GEOLOGIST: J.R.
DRAWN: R. TOLSON
CHECKED:

81-1580