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GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LIMITED

ELLIOTT BAY AREA - TASMANIA

PROGRESS REPORT: EXPLORATION LICENCE 27/76

REGIONAL EVALUATION: 1978-79 FIELD SEASON

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ANSWERED	DEPT. OF MINES			E & IL
REF. No.				

by

C.D. STRICKLAND

OPEN FILE

DEVONPORT, TASMANIA.

SEPTEMBER, 1979.

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SUMMARY

Exploration Licence 27/76 is currently held by Geopeko, a Division of Peko-Wallsend Operations Limited and occupies a total area of 329 square kilometres.

This report details the nature and results of the regional evaluation programme carried out north of the Lewis River during February and March 1979.

Reconnaissance stream sediment sampling and geological mapping commenced on the 17-2-79 from a camp site on the Hudson River. A total of 263 stream sediment samples were collected, an average density of 10 samples per square kilometre. Regional geological mapping at 1:10,000 scale and rock sampling was carried out in conjunction with the stream sediment geochemistry.

A continuation of the regional investigation also involved the location and evaluation of eight Geox A.E.M. anomalies utilizing V.L.F. (E.M.), S.P., and Dipole-Dipole I.P. techniques when applicable.

The expenditure incurred by Geopeko for the financial year 1978-79 is presented below.

Note: The summary of costs shown relate to all exploration activities within E.L. 27/76 and include the regional geological, geochemical and geophysical programme presented in this report together with the prospect evaluation programmes that were carried out concurrently at Voyagers 1, 2, 3, 5, 10 and 12. These prospect reports are planned to be compiled as separate entities and cannot be costed independently.

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Diamond Drilling	\$25765.13
Maintenance Drilling	22038.95
Geology	29169.30
Drafting	5627.33
Leasing	677.27
Gridding	5484.89
Geochemistry (Base-including auger drilling)	15252.86
Geophysics (Base)	12588.35
General Field Expenses	55433.08
Administration Expenses	15563.84
Geochemistry (Sydney)	3325.00
Geophysics (Sydney)	<u>24885.00</u>
	\$215,811.00

INTRODUCTION

Exploration Licence 27/76 termed Elliott Bay is currently held by Geopeko, a Division of Peko-Wallsend Operations Limited and occupies an area of 329 square kilometres in the land district of Montgomery, south west Tasmania. (See Figure 1.)

Exploration activities within E.L. 27/76 during the periods 1976-77 and 1977-78 are covered in detail by Strickland C.D. (September 1978).

This report presents the results of the continuation of the 1976-77 regional evaluation programme, carried out north of the Lewis River, during February and March 1979.

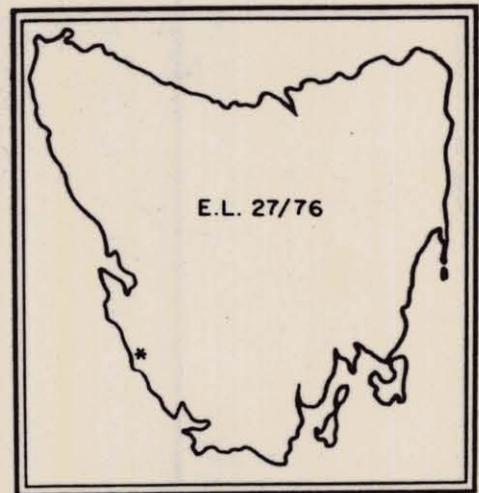
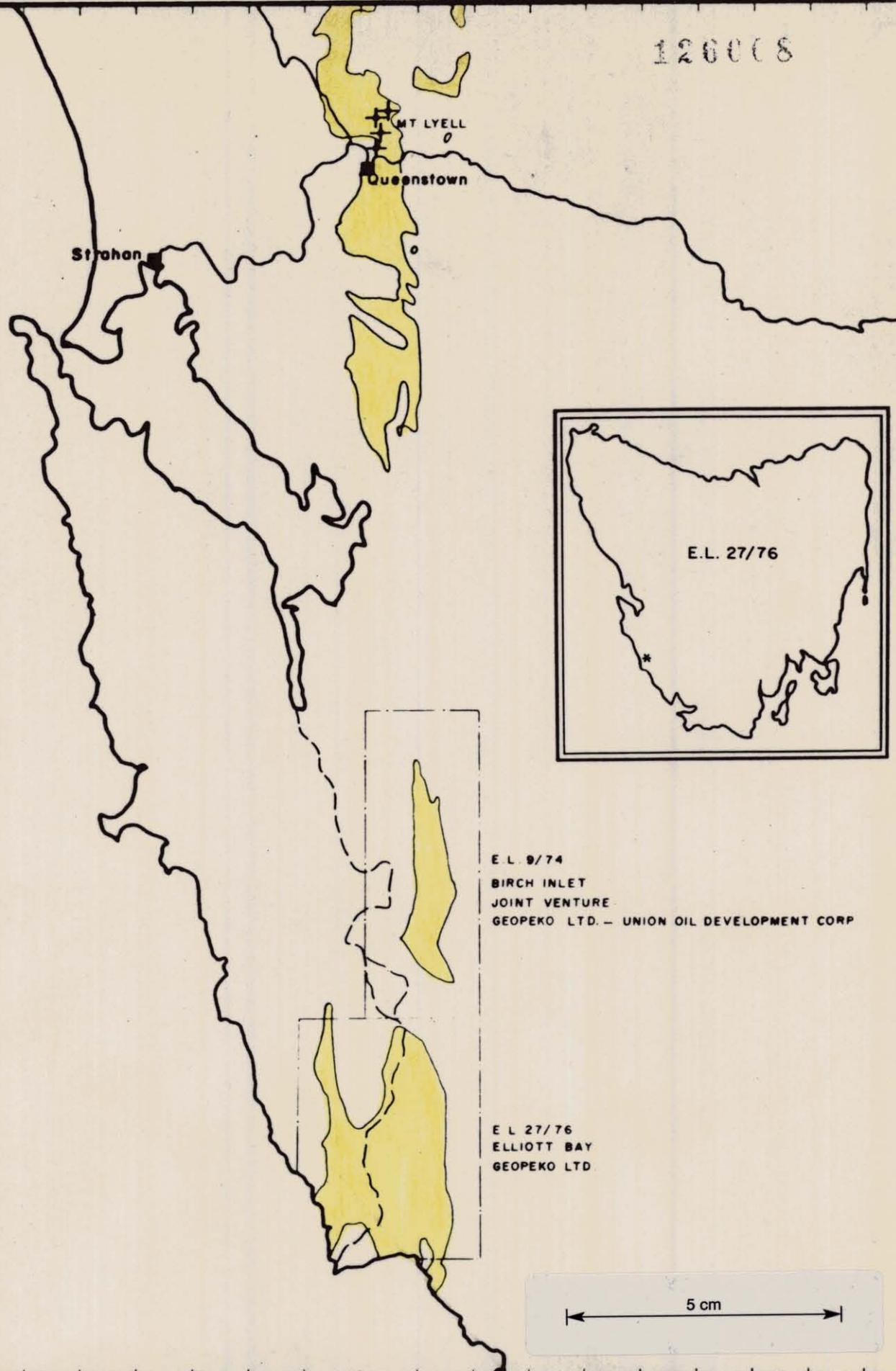
The 1978-79 exploration programme consisted of:

- a) Regional geological mapping at 1:10,000 scale.
- b) Geochemical stream sediment sampling.
- c) Reconnaissance gridding of selected prospects.
- d) C-horizon soil geochemistry of selected prospects.
- e) Ground geophysical follow up of prospects, utilizing V.L.F. (E.M.), Dipole-Dipole I.P. and S.P. techniques. Mudge, S.T. (June 1979).

In addition to the Regional Evaluation programme presented in this report, activities within E.L. 27/76 during the 1978-79 field season included prospect development activities at Voyagers 1, 2, 3, 5, 10 and 12. These prospect reports are planned to be compiled as separate entities as the geological, geochemical and geophysical field data is compiled and evaluated.

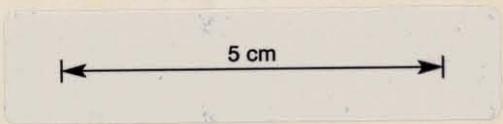
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E.L. 9/74
 BIRCH INLET
 JOINT VENTURE
 GEOPEKO LTD. - UNION OIL DEVELOPMENT CORP

E.L. 27/76
 ELLIOTT BAY
 GEOPEKO LTD



LEGEND	
	Significant Basemetal Mineralization
	Mt Read Acid Volcanics
	Road
	Track

DATE 18.4.78
 GEOL C D S
 DWN J P M
 CHKD C S D

GEOPEKO LIMITED
 KING ISLAND

Scale 1:500 000

Fig No. 1

LOCATION MAP
 E.L. 27/76

A list of the proposed reports is as follows:

- a) Progress Report: Voyager 1 and Voyager 5 Prospects.
- b) Progress Report: Voyager 2 Prospect.
- c) Progress Report: Voyager 3 Prospect.
- d) Progress Report: Voyager 10 Prospect.
- e) Progress Report: Voyager 12 Prospect.

CONCLUSIONS

1. A planned division of man power and equipment enabled a continuation of the regional reconnaissance survey to be carried out concurrently with the diamond drilling evaluation of prospect targets in the southern portion of the E.L. 27/76.
2. Considerable time and effort was expended attempting to locate and evaluate minor A.E.M. anomalies in the heavily forested area between the Hudson and Lewis Rivers. It is considered that future A.E.M. anomaly evaluations should be attempted later in the exploration programme at which stage the geological and geochemical characteristics of the environment of the anomaly are known. This staging will eliminate spurious anomalies and enable a more intense effort to be concentrated on favourable A.E.M. anomalies.
3. Utilizing the results achieved to date, both from the regional and the prospect exploration carried out within E.L. 27/76 a broad stratigraphic control exists with respect to anomalous geochemical responses. Further regional reconnaissance programmes must have as prime aim the understanding of the regional stratigraphy of this portion of the Mt. Reid Volcanics for maximising our ore search techniques. It is essential to continue to define the dominantly volcanoclastic-sedimentary unit within the centre of the E.L. which is postulated as continuous stratigraphic horizon and contains to date the Voyager 2 and Voyager 3 base metal prospects.

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A second important horizon to evaluate is the western contact of the quartz-feldspar porphyry unit which appears to be associated with gold mineralization and has been the subject of the Voyager 12 prospect investigation.

RECOMMENDATIONS

1. It is essential that during the coming 1979-80 field season the regional geological and geochemical evaluation be continued northwards to enable a systematic development of favourable prospects throughout the whole E.L. 27/76.
2. It is recommended that the detailed, labour intensive and time consuming task of locating and evaluating minor A.E.M. anomalies be postponed at this stage. It is envisaged that following the regional geochemical and geological coverage the A.E.M. anomalies coinciding with favourable characteristics would be fully investigated.
3. To enable a satisfactory level of geological evaluation it is essential that the geological staffing of future programmes be increased. The regional mapping teams must be able to operate fully independently and not be responsible for the supervision of prospect development programmes.
4. Based upon the significant identification of minor scheelite mineralization associated with a magnetite bearing chemical sediment horizon in the Voyager 1 area it is recommended that further investigations be carried out on the magnetic anomalies within E.L. 27/76 during the 1979-80 regional evaluation.

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5. It is recommended that all efforts be made to attempt a completion of the regional geological and geochemical evaluation of E.L. 27/76 during the 1979-80 field season; a challenging situation involving large areas of dense forest.

The regional reconnaissance investigations will continue to involve the following:

- stream sediment sampling at 10-15 samples per square kilometre
- geological mapping at 1:10,000 scale, utilizing photo enlargements.

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ACTION SHEET

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GEOLOGY

The Lower-Middle Cambrian rocks within Exploration Licence 27/76 are known locally as the Lewis River Volcanics and are considered equivalents of the Mount Read Volcanics.

Essentially the Lewis River Volcanics consist of a sequence of fine to coarse grained porphyritic quartz-felspar rhyolitic lavas, pyroclastics, volcanoclastic sediments and a high level intrusive coarse grained rhyolitic porphyry which is faulted against the Precambrian quartzites of the Arthur Group to the East.

Strickland C.D. (1978) describes in detail the regional setting, tectonic history and the local geology obtained from the 1:10,000 scale geological mapping completed during the 1976-77 and 1977-78 field seasons. This report extends the regional geological mapping and evaluation programme north of the Lewis River and refers to the geological maps Sheets KT 27/76 3A-6A in the folder of this report.

The rock units within the Elliott Bay E.L. 27/76 have been categorized in the following lithological types and ages.

Precambrian:

Undifferentiated quartzites and metasediments.

Cambrian:

- Porphyritic quartz-felspar rhyolitic lava
- Feldspar-quartz-biotite porphyry.
- Rhyolitic lithic pyroclastics.
- Rhyolitic crystal pyroclastics.
- Rhyolitic vitric pyroclastics.
- Volcanoclastic sediments.

015
Upper Cambrian?

Granite

Ordovician:

Owen Conglomerate.

Tertiary:

Macquarie beds.

Quaternary:

Alluvial and colluvial deposits.

The geological maps are essentially 'fact maps' but also display a certain amount of interpretation. A close inspection of the mapping along the streams will show that in areas of good bedrock exposure the local geology is complex.

In addition to the many rocks identified and plotted during the geological mapping, 190 rocks were sampled for closer macroscopic study after diamond sawing - these rock samples are in storage at Geopeko, Devonport.

016

GEOCHEMISTRY

Stream Sediment Sampling.

As this exercise was a continuation of the regional geochemical evaluation programme, the same guidelines as in 1976-77 were used, namely a sample spacing of 200 metres, the size fraction for analysis (-80 mesh) and a density of approximately 10-15 samples per square kilometre.

A total of 263 samples of the fine sediment material were collected from the streams, creeks and rivers draining the prospective area of the Lewis River Volcanics. In addition to samples being taken every 200 metres along the drainage systems, one in ten locations were resampled to serve as checks.

Due to the difficulty of accurately positioning the sample locations on aerial photographs in this region, film copies of the 1:10,000 scale base maps were used to record the locations, each point being measured on the ground from a recognisable stream junction.

The sample locations were marked by flagging tape and numbered with aluminum tags. Details of location and type of sample were recorded on cards (KD series) which are filed in the Devonport Office.

The samples were dried and rebagged as necessary prior to despatch to A.C.S. Laboratories, Adelaide. The -80 mesh fraction was separated and analysed by A.A.S. for Cu, Pb and Zn.

The analytical results are tabulated in Appendix No. 1 and are presented on the following maps located in the folder of this report.

- 1) Drainage Sample Location Map:
Sheet KT 27/76 3C - 6C
- 2) Drainage Geochemical Results,
Copper, Lead and Zinc:
Sheets KT 27/76 3B - 6B

Sheets KT 27/76 3B - 6B display in colour coded symbolic format the creek systems interpreted as anomalous by a combination of statistical and eyeball techniques.

Threshold values for Cu, Pb and Zn are 5ppm, 65ppm and 55ppm respectively. Strickland, C.D. (September 1978). The probability density distribution plots or 'cumulative frequency' plots of the log 10 concentrations of Cu, Pb and Zn are shown in figure 2.

C-Horizon Auger Sampling.

Previous experience based upon geochemical orientation soil sampling within the Mt. Read Volcanics and its correlatives has indicated a sample depth of 2.0m or bedrock as the optimum depth of C-horizon geochemical soil sampling.

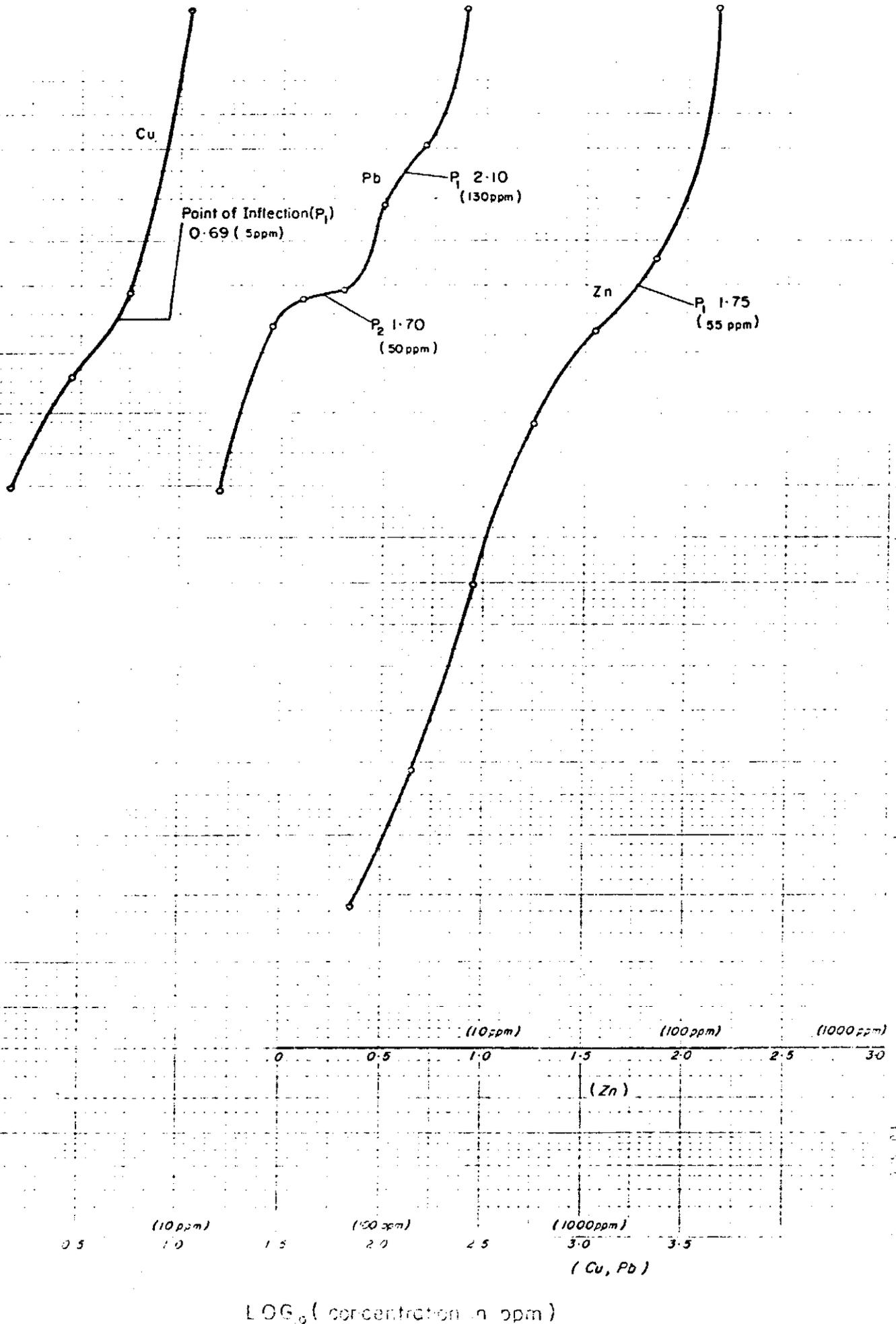
C-horizon soil sampling is usually carried out using a Jacro 200 auger rig mounted on the rear of a Bombardier (Muskeg or J5 type), however the auger sampling carried out during this reconnaissance programme was in localities inaccessible to the drilling rig. Holes were hand augered to refusal at 25 metre centres using suitably modified steel 38mm diameter wood augers.

018

Cumulative Frequency Plots — *stream sediment geochemistry*

Cu, Pb and Zn results : Lewis River Volcanics

ELLIOTT BAY E.L. 27/76



" Cumulative Frequency % "

019

C-horizon auger sampling was carried out on the A.E.M. 40-41 tape and compass baseline (00N) between 325W - 1550E.

A total of 69 holes were completed, producing 77 samples including 8 duplicates, for a total depth of 32.70 metres and an average depth of 0.47 metres per hole.

All soil samples were dried and rebagged as necessary, prior to despatch to A.C.S. Laboratories, Adelaide. The -80 mesh fraction was separated and analysed by A.A.S. for Cu, Pb and Zn. The sample book numbers (KS series), and the analytical results are tabulated in Appendix No. 2. Sheet KT 27/76 2G presents in profile form the Cu, Pb and Zn results.

GEOPHYSICS

Geophysical investigations carried out by Geopeko during the 1978-79 field season consisted of V.L.F. (E.M.) follow up of airborne electromagnetic anomalies resulting from the Geoex (1975) electromagnetic and aeromagnetic survey flown for the Broken Hill Proprietary Company.

Ground surveys involved the establishment of local tape and compass grids, the locations of which are presented on the 1:10,000 scale geological maps, Sheets KT 27/76 3A - 6A.

Anomaly evaluation techniques involved V.L.F. (E.M.), S.P. and Dipole-Dipole I.P. A detailed report on all aspects of the Elliott Bay reconnaissance geophysics carried out during 1978-79 is presented by Mudge, S.T. (June 1979).

DISCUSSION OF RESULTSA. Regional Geophysical Evaluation1. A.E.M. 35 (384 700E, 5 246 800N A.M.G.)

This anomaly occurs several hundred metres north of Voyager 12 and was studied in conjunction with the Voyager 12 prospect evaluation programme.

Voyager 12 is the subject of a separate report - "Progress Report on Voyager 12. Elliott Bay 27/76. Strickland C.D. 1979".

2. A.E.M. 36 (385,800E, 5 247 700N A.M.G.)

Three east-west tape and compass traverses totalling 2050 metres were positioned in the vicinity of this airborne electromagnetic anomaly.

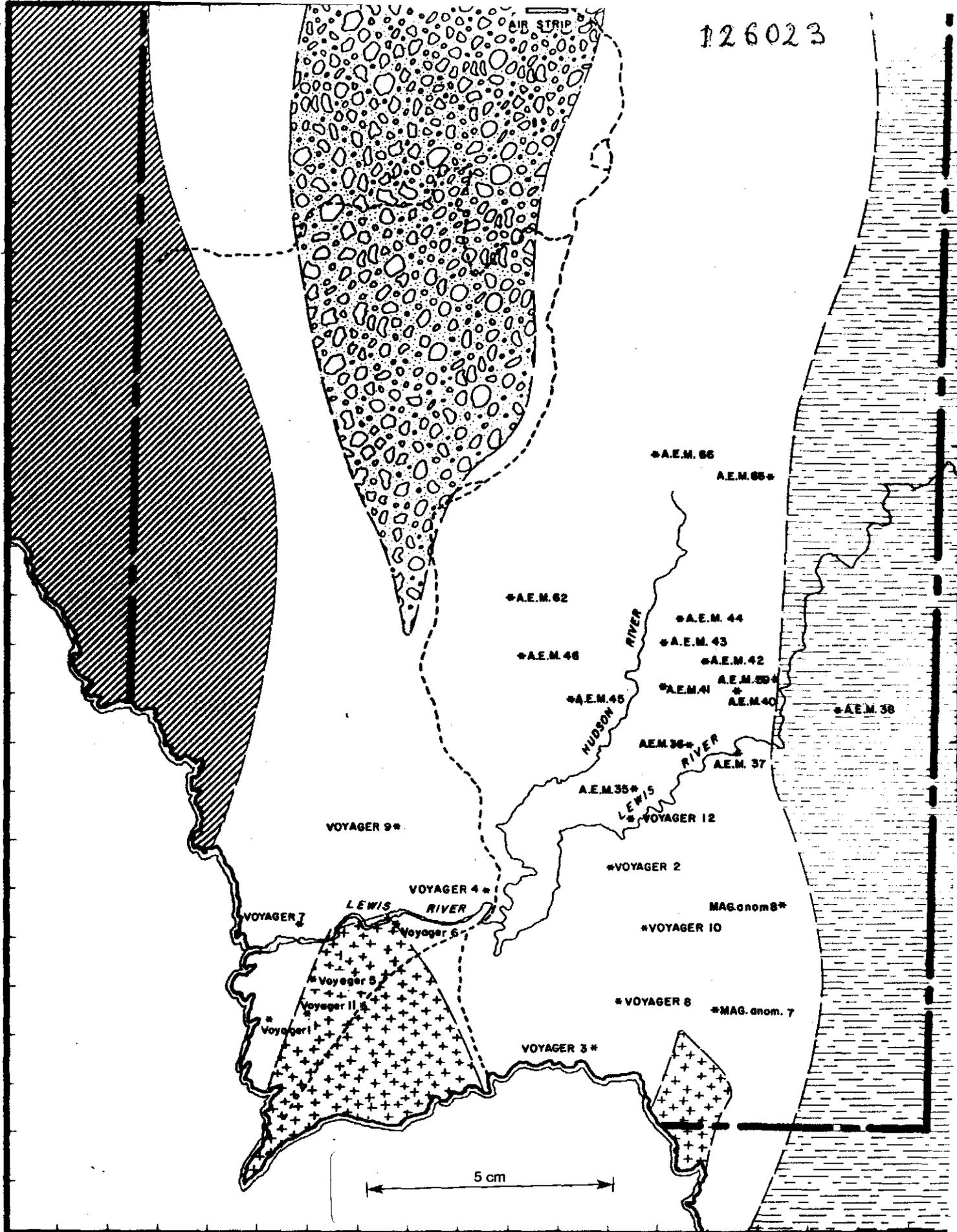
Lack of outcrop, abundance of white angular quartz scree and dense forest vegetation restricted the geological appraisal of this locality. Lithologies within the environs of the anomaly consist of crystal and lithic tuff pyroclastics, porphyritic quartz-feldspar rhyolitic lavas and biotite rich feldspar-quartz porphyry. No explanation for the A.E.M. anomaly was encountered.

V.L.F. (EM) carried out on the grid recorded responses at 00N/150E and 100S/215E, apart from both responses being located on a south-east flowing creek system no explanation of the conductor type is available without additional geophysical coverage.

* Refer to figure 3 for Prospect locations.

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LEGEND

	Ordovician conglomerate
	Granite
	Mt READ volcanics
	Dundas group
	P.C. quartzite

DATE: Oct. 79
 GEOL: C.D.S.
 DWN: J.P.M.
 CHKD: CDB.

GEOPEKO
 Scale: 1:100,000
 Fig 3
ELLIOTT BAY
E.L. 27/76
Prospect Location Map

- 023
3. A.E.M. 37 (386,800E, 5 247 550N A.M.G.)

Difficult access and time prevented an examination of this location.

Photogeological evidence positions this anomaly within the Lewis River Volcanics, thus it warrants a reconnaissance investigation.

4. A.E.M. 38 (388 750E, 5 248 450N A.M.G.)

This anomaly, from photogeological evidence, is positioned within the Precambrian Arthur Group. This type of linear anomaly within the quartzites and quartz-mica schists was not considered favourable for base metal massive sulphide potential, and thus has not been investigated.

5. A.E.M. 39 (387 500E, 5 249 100N A.M.G.)

Difficult access through dense forest and lack of time prevented a reconnaissance investigation of this A.E.M. anomaly.

Access was planned from a continuation of the A.E.M. 40/41 traverse east to 2500E. This anomaly lies within the Lewis River Volcanics and warrants investigation.

6. A.E.M. 40 (386 750E, 5 248 850N A.M.G.)

Lack of outcrop in the vicinity of this anomaly, together with no significant response with V.L.F. (EM) and S.P. techniques read on line 00N, leave the cause of this A.E.M. anomaly unexplained.

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Examination of the bedrock geology within this area would be more successfully carried out in the creek systems during the future drainage sampling of this locality, than on grid lines through the forest where outcrop is almost non existent.

7. A.E.M. 41 (385,250E, 5 248 900N A.M.G.)

Geophysical examination of this anomaly, as with A.E.M. 40 (above) was carried out on line 00N utilizing V.L.F. (EM) and S.P. techniques. No significant anomalous results were received.

Geological mapping of 00N in the area of A.E.M. 41 has indicated the presence of crystal tuff and crystal vitric tuff pyroclastic and float examples of quartz feldspar-biotite porphyry at approximately 600E.

C-horizon hand auger geochemistry was carried out at 25 metre centres between 325W-1550E on line 00N. Analytical results received for Cu, Pb and Zn show coincident spot highs at 325W and 50W of 10, 60, 50 and 20, 140, 140ppm Cu, Pb and Zn respectively. Between 550E-625E peak values for Cu, Pb and Zn are 20, 160 and 120ppm. These erratic results are not considered significant in themselves and A.E.M. 41 remains incompletely explained/located.

8. A.E.M. 42 (386 100E, 5 249 450N A.M.G.)

Difficult access and lack of available time prevented an examination of this location. The anomaly is situated within the Lewis River Volcanics and warrants a reconnaissance geological and geophysical investigation.

9. A.E.M. 43 (385,250E, 5 249 800N A.M.G.)

Reconnaissance geological mapping on line 00N in the approximate location of A.E.M. 43 indicated the presence of crystal and crystal lithic tuff pyroclastics. Lack of available outcrop has prevented a more comprehensive assessment of this area.

V.L.F. (EM) evaluation of the single 700m traverse reported no significant response, and thus did not warrant testing with S.P.

The cause of the anomaly remains unexplained.

10. A.E.M. 44 (385,550E, 5 250 300N A.M.G.)

As with A.E.M. 43 reconnaissance geological mapping in the forest areas provides little detail. An indication of crystal lithic pyroclastics is present on the single 650m traverse through A.E.M. 44.

V.L.F. (EM) provided no significant response and the anomaly remains unexplained.

11. A.E.M. 45 (383,400E, 5 248 650N A.M.G.)A.E.M. 46 (382,400E, 5 249 500N A.M.G.)

On the 1975 Georex airborne electromagnetic anomaly map these two anomalies are part of a linear feature present on four flight lines. In order to geologically and geophysically evaluate this feature six east-west traverses were tape and compass gridded at 200 metres apart, a total of 3825 metres.

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V.L.F. (EM) detected a weak response on three consecutive traverses, namely 00N/500E, 200N/300E and 400N/220E, however the results from all lines were noisy. Follow up Dipole-Dipole I.P. on traverse 00N detected no significant anomalies.

Geological mapping in the environs of A.E.M. 45/46 has indicated a variety of rhyolitic lithologies including porphyritic lavas and dominated by lithic vitric tuffs. This locality has a number of prominent topographic highs which are abundantly capped with white quartz scree and semirounded (Tertiary)? pebbles. Outcrop is limited and restricted to the shallow stream valleys. No geological explanation is available for the presence of the A.E.M. anomalies.

12. A.E.M.62 (382 150E, 5 250 650N A.M.G.)

This anomaly is located approximately 2.4 kilometres east of Wart Hill and was tape and compass gridded with three 100 metre spaced traverses, a total of 1825 metres.

The prospect is situated within the Lewis River Volcanics approximately 1 kilometre east of the southern portion of the Mt. Osmund syncline, a north plunging structure composed of Ordovician 'Owen Type' conglomerate. Geological mapping of the Cambrian volcanics in this area has indicated the presence of a complex suite of pyroclastic lithologies, predominately crystal and lithic tuff varieties. The pyroclastics appear to be intercalated with porphyritic rhyolitic lavas and this area has abundant narrow iron stained quartz veins irregularly distributed throughout.

At approximately 135S/70W an outcrop of ferruginous brecciated lithic vitric crystal tuff is present.

Reconnaissance V.L.F. (EM) detected an anomalous response at 00N/125W, however follow up Dipole-Dipole I.P. on line 00N failed to indicate an I.P. anomaly. Mudge, S.T. (1979) considers that the large contrast in resistivities detected during the I.P. survey may relate to the conglomerate contact, however outcrops of Lewis River Volcanics have been mapped for up to 1 kilometre west of the A.E.M. centre and thus the syncline's unconformable contact is too far west to have caused that influence.

As the anomaly has no I.P. response associated with it no additional evaluation is recommended.

13 A.E.M. 65 (387 300E, 5 253 200N A.M.G.)
 A.E.M. 66 (385 000E, 5 253 600N A.M.G.)

Photogeology positions these two anomalies within the Lewis River Volcanics, and as such they warrant reconnaissance evaluation.

The 1978-79 field season was completed before access was gained to these areas.

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B. Regional Geochemical Evaluation

(1) Geochemical drainage sampling

For this section refer to Sheets KT 27/76 3B-6B which present in colour coded format the creek systems interpreted as anomalous for Cu, Pb and Zn. As this report presents the results of a continuing exploration programme it has been necessary for the purposes of uniformity to retain the originally calculated thresholds for Cu, Pb and Zn. Based upon the current results, the Pb and Zn thresholds appear suitable, however the 5ppm threshold for Cu is regionally unspecific and highlights too broad an area, although analyses were carried out by the same laboratory using the same techniques as with the 1977-78 samples. It is thus important when considering the Cu thresholds north of the Lewis River to elect a value of 10ppm as anomalous.

Highly anomalous Cu, Pb and Zn results are present in the creek systems draining an area of approximately 1.5 square kilometres centred at 384,700E, 5 246 600N A.M.G. Four creeks contain anomalous results and drain an area between the Hudson and Lewis Rivers. Peak values present for Cu, Pb and Zn are 105, 820 and 80ppm respectively. This area is termed Voyager 12 and is the subject of a separate report. "Progress report on Voyager 12, Elliott Bay E.L. 27/76" by Strickland C.D. 1979.

Scattered anomalous Pb and Zn values occur in the environs Voyager 4. A total of four anomalous locations are present and contain peak values of 100ppm Pb and 130ppm Zn.

At approximately 380 850E, 5 249 000N A.M.G. an isolated sample anomalous in Cu and Zn is present. Geochemical analyses of this sample recorded 50ppm Cu and 145ppm Zn.

Anomalous Zn occurs in three grouped streams centred on 383,600E, 5 251 500N, A.M.G., values range from 70-100ppm Zn.

Geochemical drainage sampling i.e. stream sediment analysis continues to be a successful regional reconnaissance technique for rapidly delineating zones anomalous in Cu, Pb or Zn.

(11) C-Horizon geochemistry

Appart from the 1978-79 prospect evaluation programmes where C-horizon auger geochemistry was used intensively, this geochemical technique played a minor part in the regional programme.

Traverse 00N was handaugered at 25 metre centres at A.E.M. 41 between 325W and 1550E. Analytical results received for Cu, Pb and Zn show coincident spot highs at 325W and 50W of 10, 60, 50 and 20, 140 and 140ppm Cu, Pb and Zn respectively. Between 550E-625E peak values for Cu, Pb and Zn are 20, 160 and 120ppm. These erratic results are not considered significant in themselves. Sheet KT 27/76 2G presents in profile form the Cu, Pb and Zn results for this traverse.

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Unpublished Geopeko report.

GEOPEKO.



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Senior Geologist.

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APPENDIX NO. 1

A1

ANALYTICAL RESULTS

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm			
KD 1051	5	(20	25			
2	5	(20	25			
3	5	(20	30			
4	5	20	45			
5	5	(20	25			
6	5	(20	30			
7	5	30	50			
8	5	(20	145			
9	5	(20	35			
60	(2	(20	40			
1	(2	(20	10			
2	5	(20	30			
3	(2	(20	20			
4	(2	(20	15			
5	(2	(20	20			
6	5	(20	40			
7	5	20	100			
8	5	(20	35			
9	5	20	60			
9**	5	20	55			
70	5	20	15			
1	5	(20	30			
2	(2	20	20			
3	(2	20	15			
4	(2	(20	10			
5	10	20	35			
6	(2	(20	20			
7	(2	(20	50			
8	(2	(20	30			
9	(2	20	15			
80	(2	(20	15			
1	5	20	15			
2	(2	(20	20			
3	(2	(20	10			
4	(2	(20	15			
5	(2	20	10			
6	(2	20	10			
7	5	30	30			
8	(2	(20	20			
9	(2	(20	20			
9**	5	(20	20			
90	(2	(20	20			
1	(2	20	10			
2	5	30	50			
3	5	40	80			
4	(2	50	50			
KD 1095	(2	20	40			

• Denotes duplicate of previous sample.

•• Denotes repeat and check.

(Denotes less than.

032

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm			
KD	1096	(2	40	100			
	7	(2	20	70			
	8	(2	40	30			
	9	(2	(20	10			
	100	(2	40	40			
	1	50	820	65			
	2	(2	50	30			
	3	(2	120	30			
	4	5	40	75			
	5	(2	20	10			
	6	(2	(20	10			
	7	(2	20	15			
	8	(2	50	15			
	9	(2	60	10			
	10	(2	20	5			
	1	10	40	15			
	2	5	30	10			
	3*	5	40	25			
	4	(2	40	30			
	5	(2	30	15			
	6	5	100	25			
	7	5	20	10			
	8	(2	20	20			
	9	5	50	10			
	9**	5	40	10			
	20	(2	30	10			
	1*	(2	20	30			
	2	(2	30	5			
	3	(2	40	(2			
	4	10	40	20			
	5	(2	20	20			
	6	(2	20	20			
	7	(2	30	10			
	8	(2	30	(2			
	9	(2	20	15			
	30	5	40	20			
	1*	(2	30	20			
	2	(2	40	40			
	3	(2	20	50			
	4	(2	20	25			
	5	(2	(20	10			
	6	(2	30	10			
	7	(2	(20	10			
	8	(2	(20	(2			
	9	(2	20	20			
	40	(2	(20	10			
	1*	(2	20	10			
	2	(2	20	10			
	3	(2	20	20			
	4	(2	(20	10			
	5	(2	20	20			
	6	5	20	(2			
KD	1147	(2	30	20			

• Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

033

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm			
KD	1148	(2	(20	10			
	9	(2	20	30			
	50	10	30	45			
	1	85	240	30			
	2	105	210	80			
	3	25	90	15			
	4	(2	20	(2			
	5	(2	20	5			
	6	5	20	50			
	7	10	50	50			
	8	(2	(20	35			
	8**	(2	(20	25			
	9	(2	(20	35			
	60	(2	(20	15			
	1*	(2	(20	30			
	2	(2	30	10			
	3	(2	20	15			
	4	(2	20	10			
	5	10	(20	10			
	6	(2	30	20			
	7	(2	20	10			
	8	(2	30	30			
	9	(2	20	15			
	70	(2	(20	20			
	1	(2	20	10			
	2*	(2	20	10			
	3	(2	20	20			
	4	(2	30	30			
	5	(2	20	(2			
	6	(2	20	(2			
	7	5	20	30			
	8	(2	(20	30			
	8**	(2	20	45			
	9	5	(20	20			
	80	(2	20	40			
	1*	5	40	30			
	2	5	(20	20			
	3	(2	20	20			
	4	(2	20	15			
	5	(2	30	15			
	6	(2	20	15			
	7	(2	20	35			
	8	(2	(20	20			
	9	(2	20	15			
	90	(2	(20	40			
	1*	5	20	50			
	2	(2	(20	5			
	3	(2	(20	10			
	4	(2	(20	10			
	5	(2	(20	(2			
	6	(2	(20	15			
	7	5	(20	30			
KD	1198	(2	(20	30			

• Denotes duplicate of previous sample

•• Denotes repeat and check.

(Denotes less than.

034

SAMPLE NUMBER	Cu ppm	Pb ppm	Zn ppm			
KD 1199	(2	(20	10			
200	5	(20	20			
1	(2	20	50			
1**	(2	20	45			
2	(2	20	20			
3	(2	20	10			
4	5	20	15			
5	(2	(20	15			
6	5	20	10			
7	5	(20	5			
8	10	(20	10			
9	(2	(20	20			
10	5	40	25			
1*	10	40	35			
2	5	60	35			
3	(2	20	25			
4	5	50	35			
5	5	40	20			
6	(2	(20	25			
7	10	20	30			
8	5	20	35			
9	10	(20	15			
20	(2	(20	20			
1*	(2	(20	15			
1**	(2	(20	15			
2	(2	20	40			
3	(2	20	30			
4	(2	(20	35			
5	(2	20	20			
6	10	20	25			
7	(2	20	20			
8	5	(20	20			
9	5	(20	30			
30	(2	20	25			
1*	5	(20	20			
2	5	20	10			
3	10	(20	20			
4	5	(20	10			
5	5	20	30			
6	(2	(20	10			
7	(2	(20	15			
8	10	(20	45			
9	5	(20	15			
40	10	(20	20			
1*	(2	20	20			
1**	(2	20	15			
2	(2	(20	10			
3	(2	(20	20			
4	5	20	20			
5	10	30	20			
6	5	30	15			
7	(2	(20	30			
8	(2	20	10			
KD 1249	(2	(20	10			

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm			
KD	1250	(2	(20	10			
	1	5	(20	20			
	2	5	30	35			
	3	(2	(20	30			
	4	(2	30	65			
	5	(2	(20	25			
	6	10	30	45			
	7	(2	(20	45			
	8	5	30	50			
	9	5	(20	30			
	60	(2	(20	20			
	1*	(2	20	30			
	2	(2	(20	10			
	3	(2	(20	10			
	4	(2	(20	10			
	5	5	30	10			
	6	(2	(20	5			
	7	(2	20	(2			
	8	5	(20	15			
	8**	(2	20	15			
	9	(2	(20	10			
	70	5	20	30			
	1*	5	40	10			
	2	(2	20	20			
	3	10	20	20			
	4	(2	20	20			
	5	(2	60	65			
	6	(2	30	20			
	7	5	20	50			
	8	(2	(20	15			
	9	5	(20	15			
	80	5	30	10			
	1*	(2	20	10			
	2	(2	30	20			
	3	(2	20	20			
	4	5	20	15			
	5	5	20	20			
	6	5	30	25			
	7	5	20	35			
KD	1288	5	20	25			
KD	1288**	5	20	25			
KD	1351	(2	30	10			
	2	(2	40	10			
	3	10	30	10			
KD	1354	5	(20	15			
KD	1401	5	30	10			
	2	(2	20	25			
	3	(2	20	45			
	4	10	60	55			
	5	5	30	40			
	6	(2	30	20			
KD	1407	5	(20	15			

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

030

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm			
KD	1407**	5	(20	15			
	8	(2	40	30			
	9	5	20	15			
	10	5	(20	15			
	1	(2	20	10			
	2	(2	20	10			
	3	(2	20	20			
	4	(2	20	10			
	5	(2	20	15			
	6	(2	30	10			
	7	(2	20	25			
	8	(2	30	10			
	9	(2	(20	10			
	20	(2	20	20			
KD	1421	(2	20	15			

PREPARATION:

Dried and sieved to -80 mesh.

ANALYTICAL METHODS:

Cu, Pb, Zn, by A.A.S.
 following conc. HCL leach and HCL/HNO₃
 leach in latter stages for 1 hour of
 0.25 g sample.

● Denotes duplicate of previous sample

●● Denotes repeat and check.

(Denotes less than.

ANALYTICAL RESULTS

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm			
KS	3912	10	60	50			
	3	(2	20	20			
	4	(2	20	10			
	5	(2	20	30			
	6	(2	40	20			
	7	(2	40	20			
	8	(2	20	20			
	9	(2	40	20			
	20	(2	20	20			
	1*	(2	20	30			
	2	(2	20	30			
	3	(2	20	30			
	4	20	140	140			
	5	(2	40	40			
	6	(2	60	50			
KS	3927	(2	40	30			
KS	3929	(2	(20	60			
	30	5	60	110			
KS	3931*	10	60	100			
	1**	10	60	100			
KS	3933	(2	20	40			
KS	3935	(2	20	40			
	6	(2	20	20			
	7	(2	20	20			
	8	(2	60	20			
	9	(2	40	20			
	40	5	20	50			
	1*	10	20	40			
	2	5	40	30			
	3	(2	20	20			
	4	(2	40	30			
	5	(2	40	20			
	6	(2	40	(20			
	7	(2	60	20			
	8	(2	60	30			
	9	10	40	20			
	50	20	40	60			
	1*	20	60	60			
	2	10	60	40			
	3	10	160	110			
	3**	10	140	100			
	4	10	140	100			
KS	3955	(2	40	10			

● Denotes duplicate of previous sample.

●● Denotes repeat and check.

(Denotes less than.

030

SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm				
KS	3957	(2	20	20				
	8	(2	40	20				
	9	(2	20	10				
	60	(2	20	10				
	1*	(2	20	20				
	2	(2	40	20				
	3	10	20	10				
	KS	3964	5	40	10			
	KS	3967	5	40	20			
		8	10	40	20			
9		10	60	60				
70		20	60	40				
1*		20	100	40				
2		10	40	20				
3		10	40	30				
4		5	20	20				
5		5	20	10				
6		10	100	80				
7		(2	20	20				
8		(2	(20	20				
KS		3979	5	(20	20			
KS		3981	10	(20	20			
	2*	5	(20	10				
	3	5	20	10				
	4	(2	20	10				
	4**	(2	20	10				
	5	(2	(20	10				
	6	10	20	10				
	7	10	20	20				
	8	5	20	20				
	9	10	(20	10				
	90*	5	(20	20				
	1	10	20	10				
	2	10	(20	20				
	3	(2	(20	10				
	4	10	80	80				
KS	3995	10	60	20				

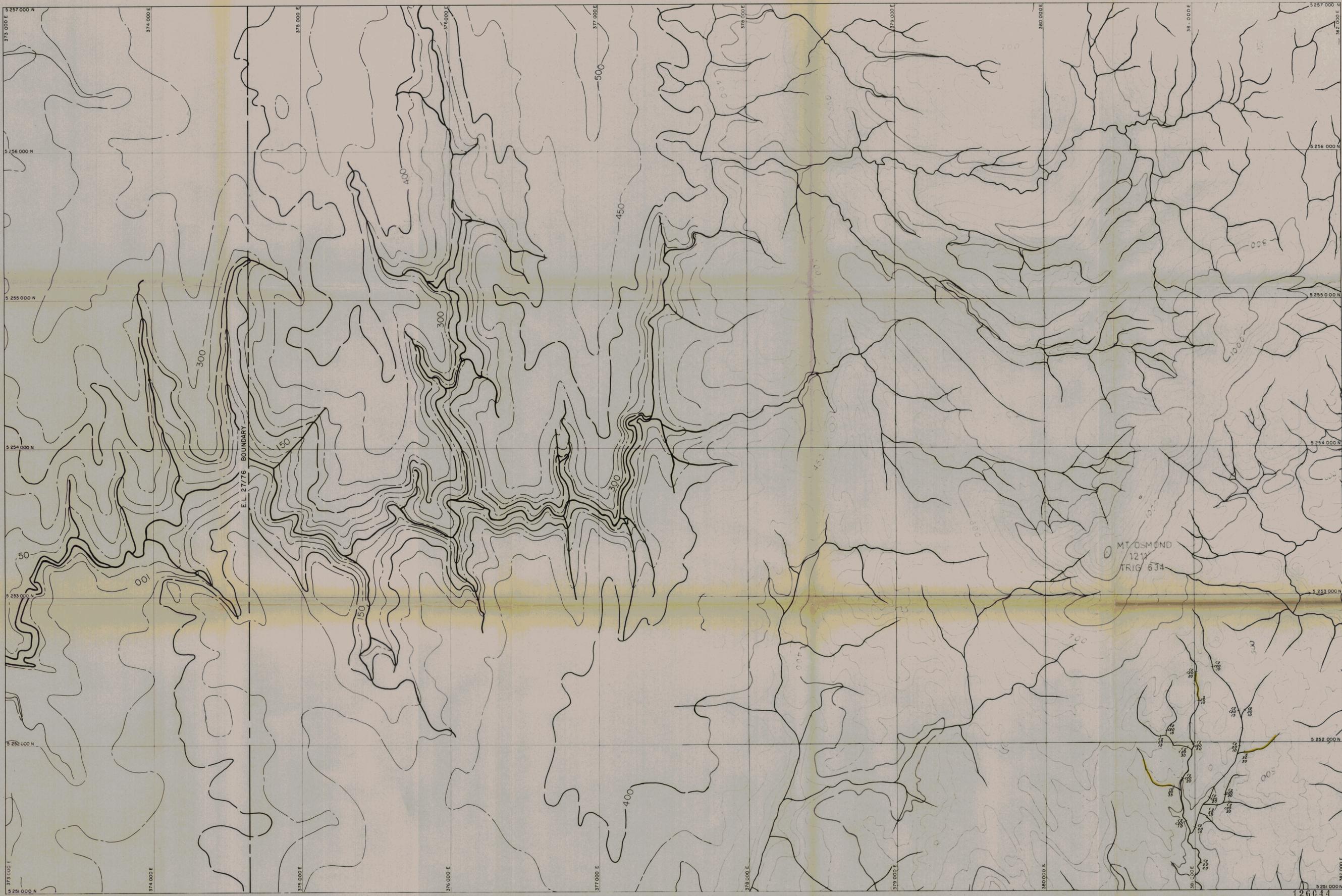
PREPARATION: Dried and sieved to -80mesh.

ANALYTICAL METHODS: Cu, Pb, Zn, by A.A.S. following hot conc. HCL leach and HCL/HNO₃ leach in latter stages for 1 hour of 0.25 g sample.

• Denotes duplicate of previous sample

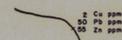
•• Denotes repeat and check.

(Denotes less than.



126044

LEGEND



ANALYTICAL METHODS: Cu, Pb and Zn by AAS following conc HCL leach and HCL/HNO₃ leach in latter stages for 1 hour of 0.25g sample.

A.C.S. Laboratories Pty LTD.

Anomalous Values - Drainage Samples:

(colour marked from sample location upstream to next location)

Copper 5 ppm (4.0% of total population)
 Lead 65 ppm (2.0% of total population)
 Zinc 55 ppm (2.0% of total population)



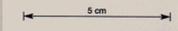
DATE: AUG. 1979
 GEOLOGIST: C.O.S.
 DRAWN: J.P.M.
 CHECKED: CUG

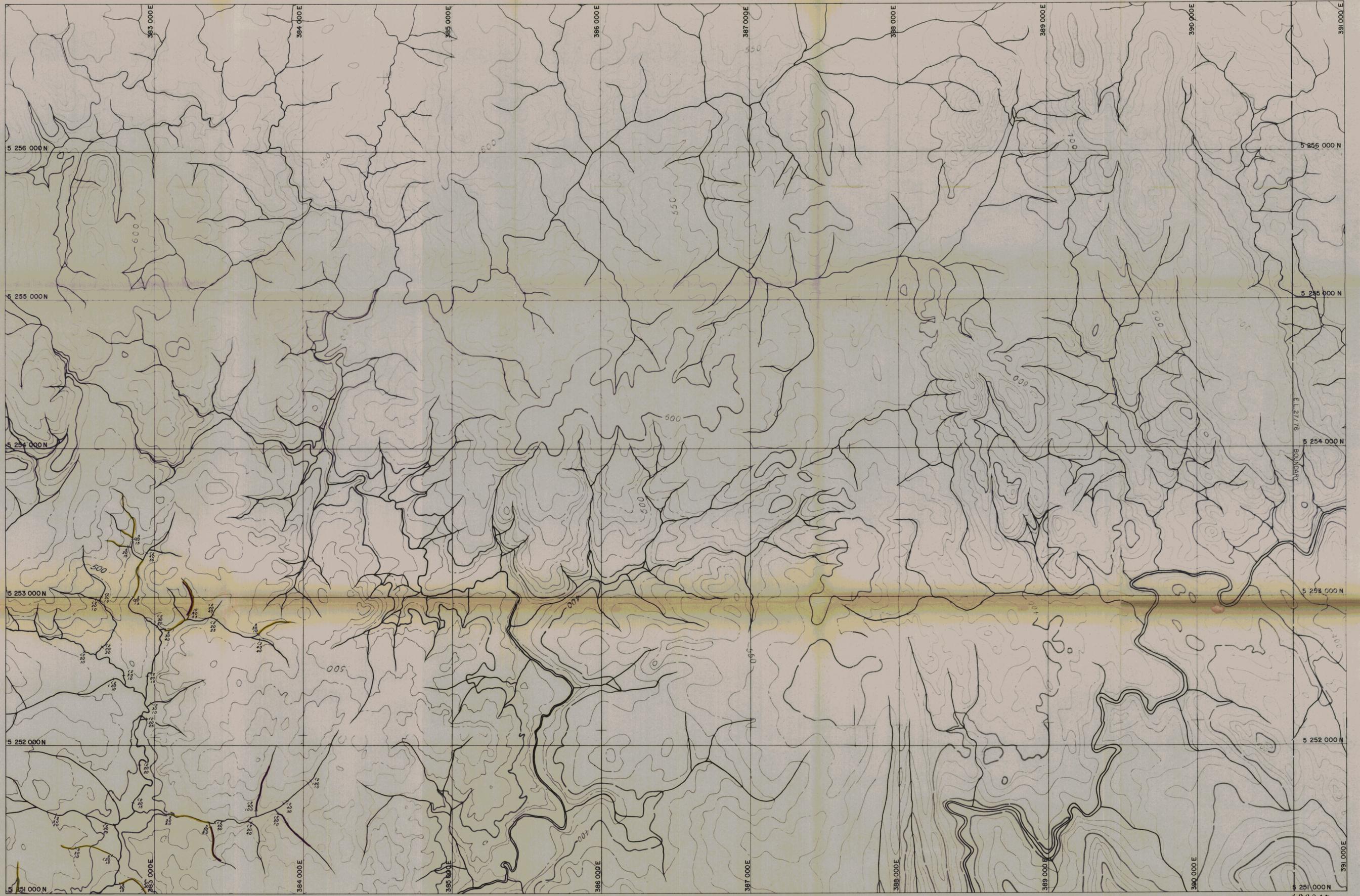
GEOPEKO
 A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.
 SCALE 1:10,000
 79-1395

E.L. 27/76
ELLIOTT BAY, TASMANIA
DRAINAGE GEOCHEMICAL RESULTS
COPPER, LEAD and ZINC 006

No. KT27/76-3B

KT27/76-1	KT27/76-2
KT27/76-3	KT27/76-4
KT27/76-5	KT27/76-6
KT27/76-7	KT27/76-8





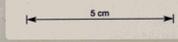
LEGEND

ANALYTICAL METHODS: Cu, Pb and Zn by AAS following conc HCL leach and HCL / HNDs each in latter stages for 1 hour of 0.25g sample.

Anomalous Values - Drainage Samples
 (colour marked from sample location upstream to next location)

Copper > 5 ppm (4.0% of total population)
 Lead > 65 ppm (2.0% of total population)
 Zinc > 55 ppm (2.0% of total population)

A.C.S. Laboratories Pty. Ltd.



GEOPEKO

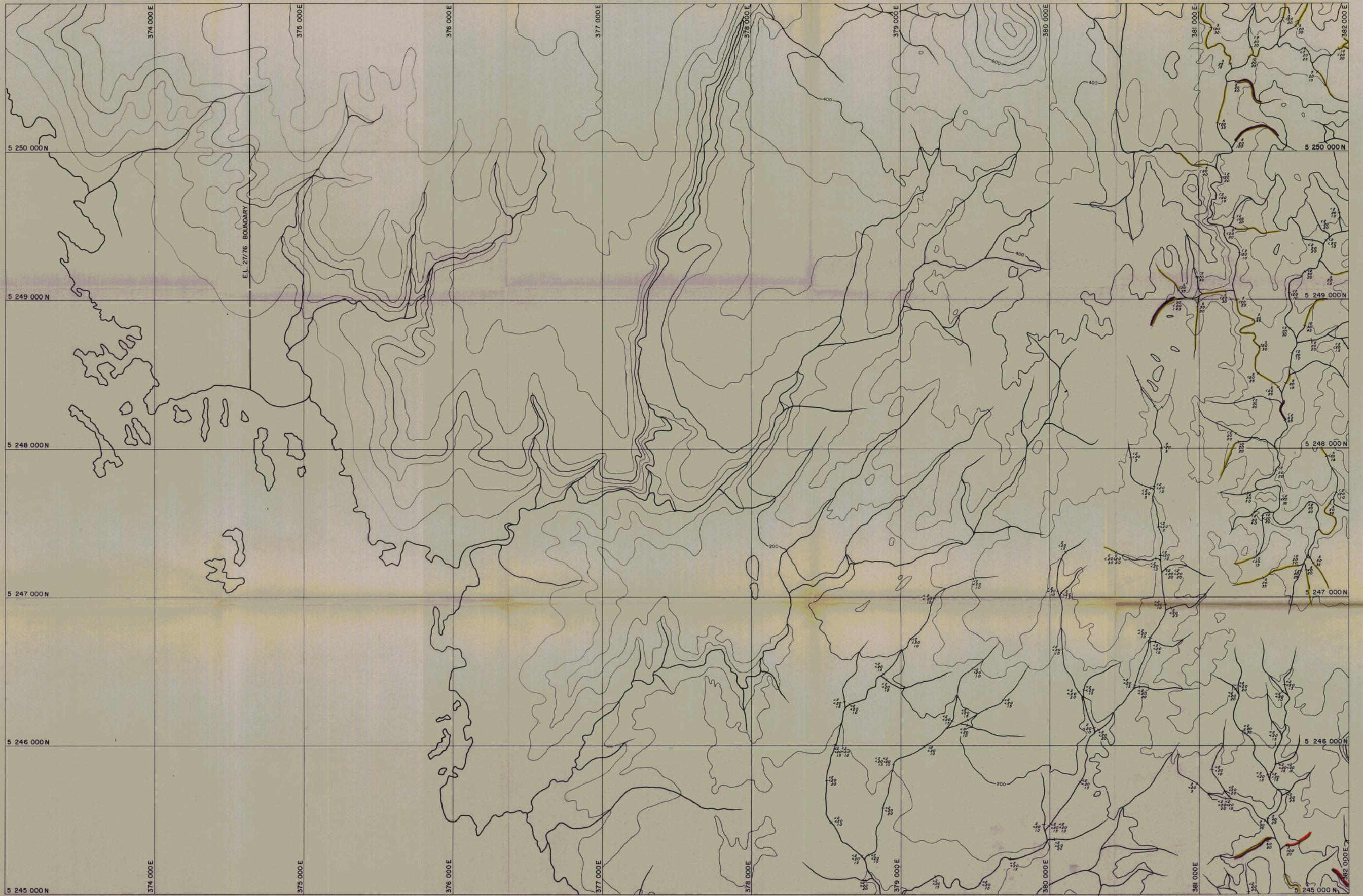
DATE: Aug 1979
 GEOLOGIST: C.D.S.
 DRAWN: J.P.M.
 CHECKED: C.M.

E.L. 27/76
ELLIOTT BAY, TASMANIA
DRAINAGE GEOCHEMICAL RESULTS
COPPER, LEAD and ZINC 007

SCALE: 1:10,000

No. **KT27/76-4B**

KT27/76-1	KT27/76-2
KT27/76-3	KT27/76-4
KT27/76-5	KT27/76-6
KT27/76-7	KT27/76-8



126046

GEOPEKO

SCALE: 1:10,000

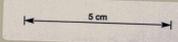
No. KT27/76-5 B

79-1295
E.L. 27/76
ELLIOTT BAY, TASMANIA
DRAINAGE GEOCHEMICAL RESULTS
COPPER, LEAD and ZINC
 003

KT27/76-1	KT27/76-2
KT27/76-3	KT27/76-4
KT27/76-5	KT27/76-6
KT27/76-7	KT27/76-8



DATE: July 1978
 Aug 1979
 GEOLOGIST: C.D.S.
 DRAWN: J.P.M.
 CHECKED: C.S.



LEGEND:
 Cu ppm
 Pb ppm
 Zn ppm

ANALYTICAL METHODS: Cu, Pb and Zn by AAS following conc. HCL leach and HCL / HNO₃ leach in latter stages for 1 hour of 0.25g sample.
 A.C.S. Laboratories Pty. Ltd.

Anomalous Values - Drainage Samples
 (colour marked from sample location upstream to next location)

Copper > 5 ppm (1.0 % of total population)
 Lead > 65 ppm (2.0 % of total population)
 Zinc > 55 ppm (2.0 % of total population)



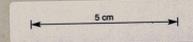
LEGEND

S	Cu	Pb	Zn
ppm	ppm	ppm	ppm

ANALYTICAL METHODS: Cu, Pb and Zn by AAS following conc. HCL leach and HCL/HNO₃ leach in latter stages for 1 hour of 0.25g sample.
A.C.S. Laboratories Pty. LTD.

Anomalous Values - Drainage Samples
(colour marked from sample location upstream to next location)

Copper	> 5 ppm	(4.0 % of total population)
Lead	> 55 ppm	(2.0 % of total population)
Zinc	> 65 ppm	(2.0 % of total population)



GEOPEKO

DATE: Jan 1978
AUG 1979

GEOLOGIST: C.D.S.

DRAWN: J.P.M.

CHECKED: C.M.R.

SCALE: 1:10,000

79-1295

E.L. 27/76

ELLIOTT BAY, TASMANIA

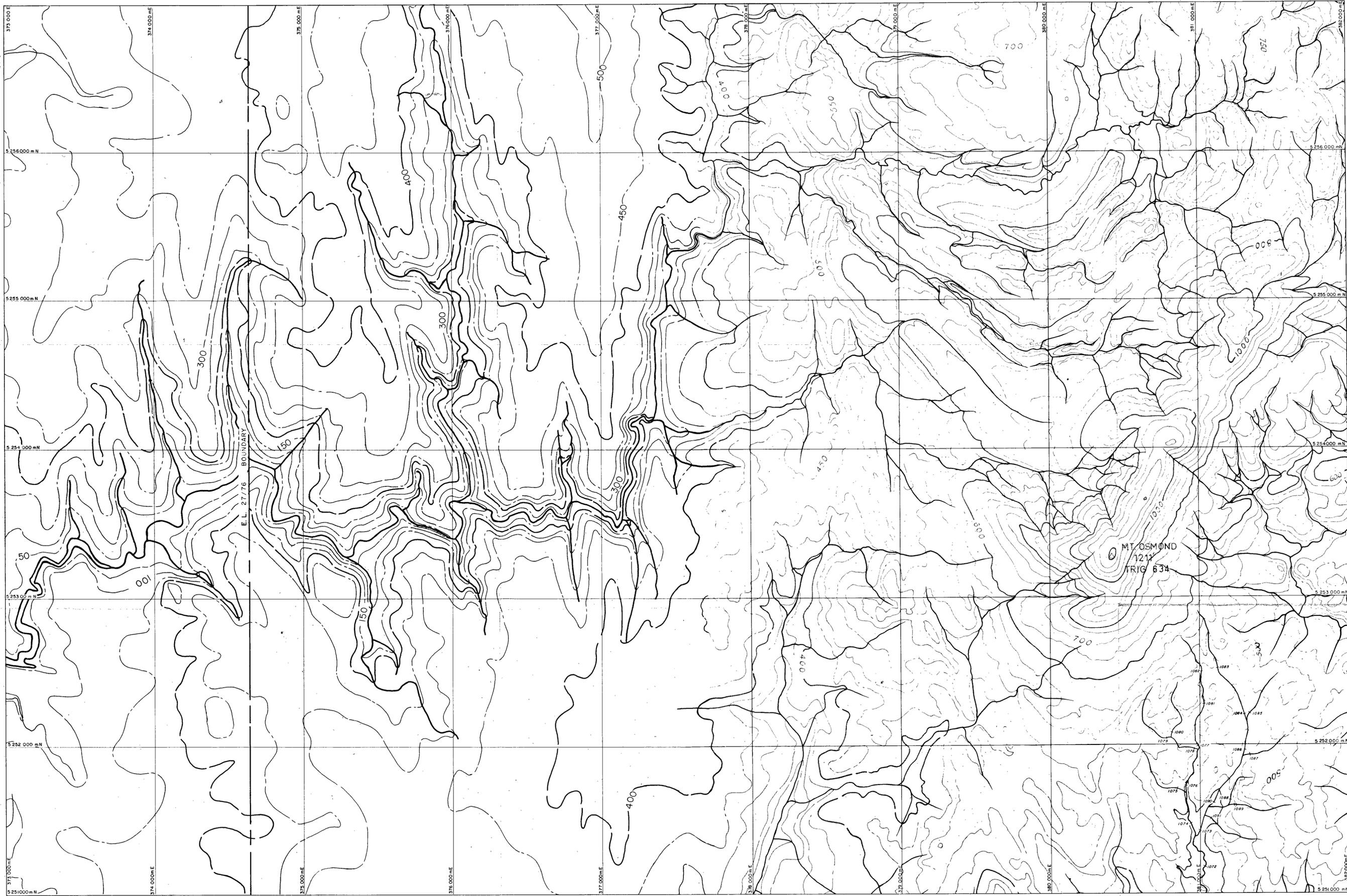
DRAINAGE GEOCHEMICAL RESULTS

COPPER, LEAD and ZINC

009

No. KT27/76-6B

KT27/76-1	KT27/76-2
KT27/76-3	KT27/76-4
KT27/76-5	KT27/76-6
KT27/76-7	KT27/76-8



LEGEND
 -1079 Drainage sample No. KD1079

	GEOPEKO	
	SCALE: 1:10 000	
	DATE: AUG 1979	
	GEOLOGIST: C D S	
DRAWN: J P M		No. KT27/76-3C KT27/76-1 KT27/76-2 KT27/76-3 KT27/76-4 KT27/76-5 KT27/76-6 KT27/76-7 KT27/76-8
CHECKED: CDS		
E.L. 27/76 ELLIOTT BAY, TASMANIA DRAINAGE SAMPLE LOCATION MAP 010		

5 cm



LEGEND
 - 1282 Drainage sample No KD 1282
 - 1280 Drainage sample No KD 1280
 - 1287 Duplicate drainage sample No 1287

DATE AUG 1979
 GEOLOGIST C D S
 DRAWN J P M
 CHECKED C S B

GEOPEKO

SCALE 10 000

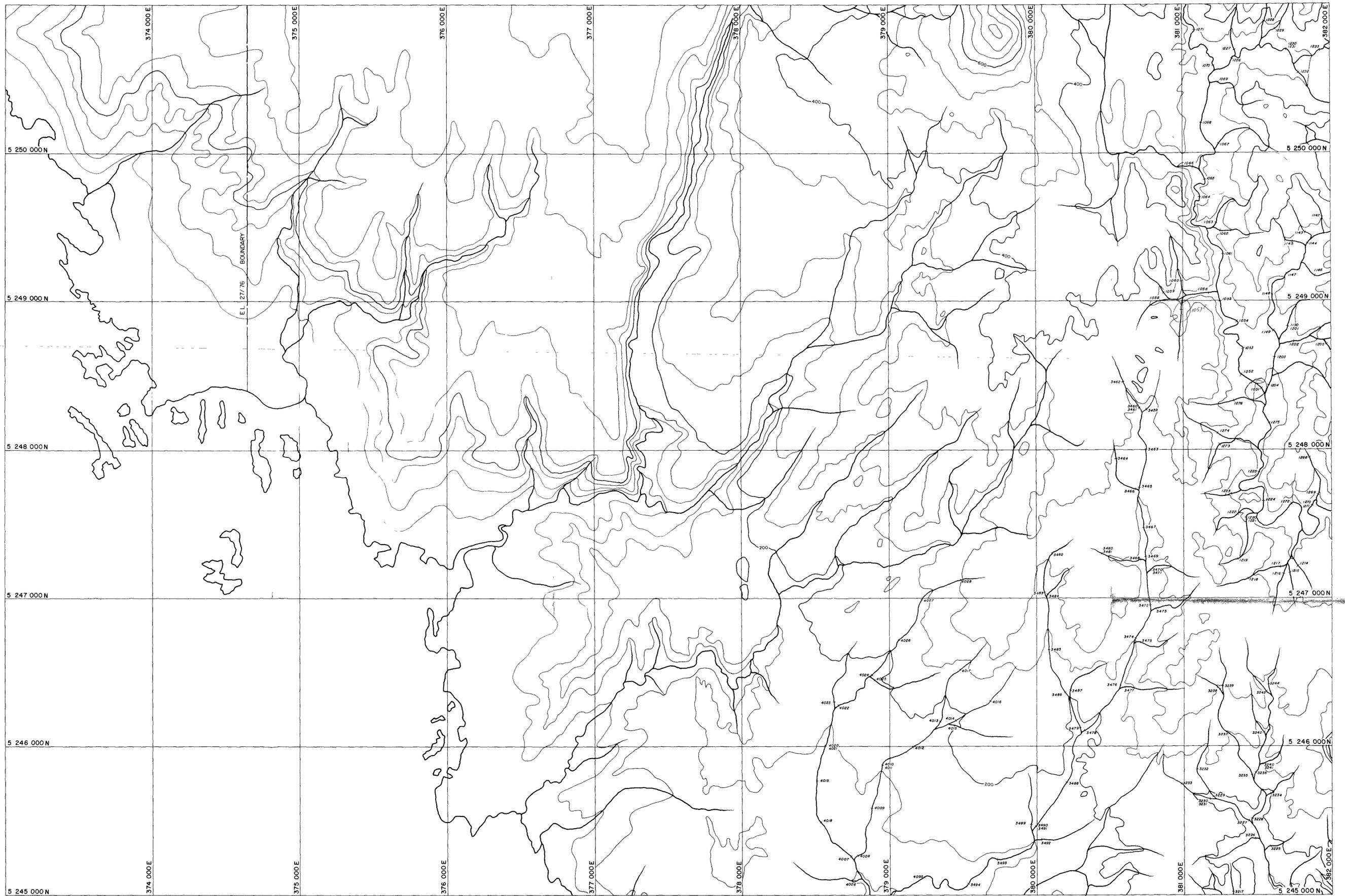
79-1395

EL 27/76
 ELLIOTT BAY, TASMANIA
 DRAINAGE SAMPLE LOCATION MAP
 011

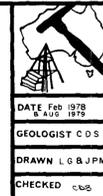
No KT27/76-4C

KT27/76 1	KT27/76 2
KT27/76 3	KT27/76 4
KT27/76 5	KT27/76 6
KT27/76 7	KT27/76 8

5 cm



LEGEND
 -4019 Drainage sample No KD 4019
 -4020 Drainage sample No KD 4020
 -4021 Duplicate drainage sample No KD 4021



DATE Feb 1978
 AUG 1979
 GEOLOGIST C D S
 DRAWN L G B J P M
 CHECKED c b b

GEOPEKO

SCALE 1:10 000

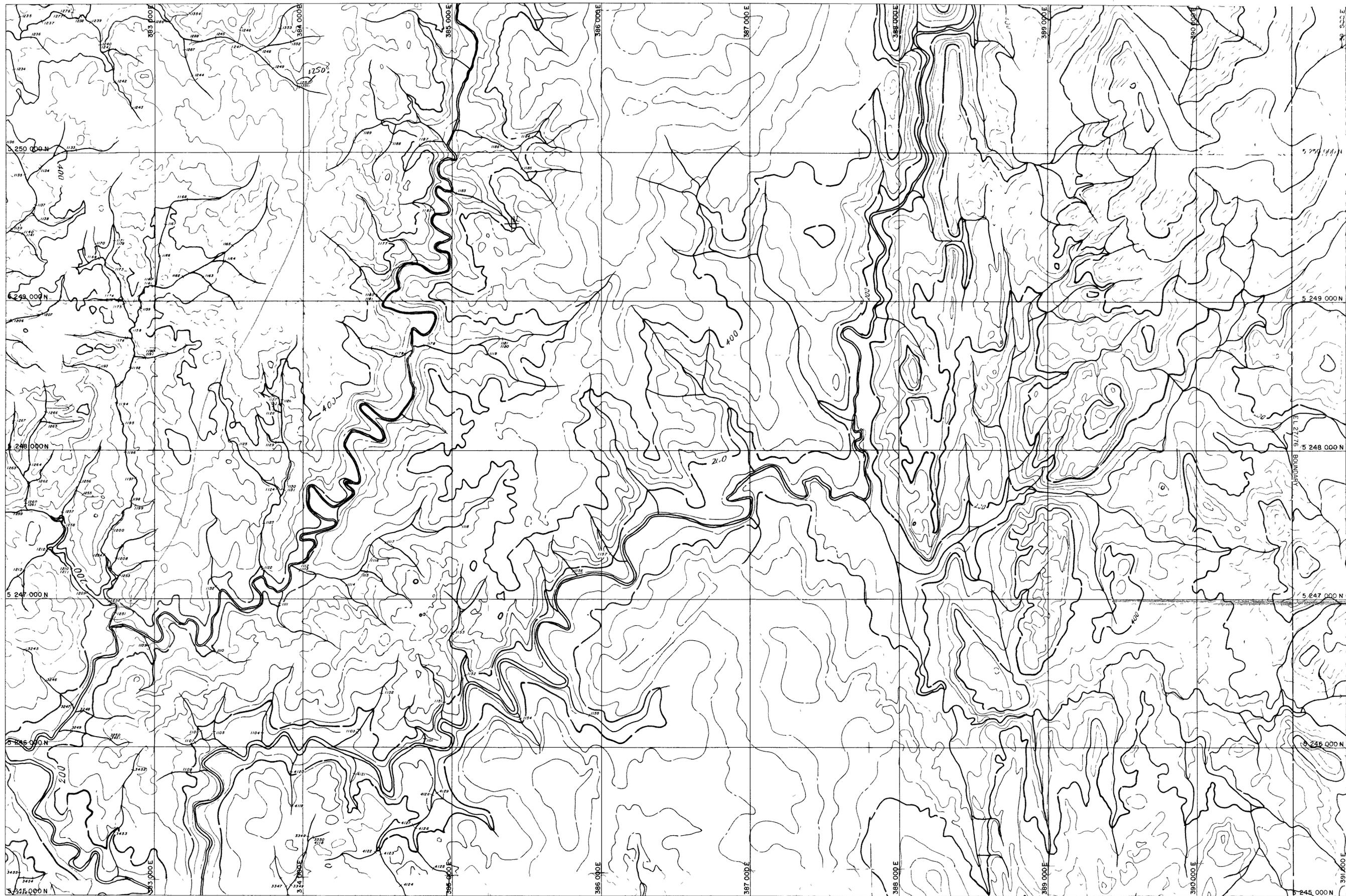
EL 27/76
ELLIOTT BAY, TASMANIA
DRAINAGE SAMPLE LOCATION MAP

79-18 75

KT27/76 1	KT27/76 2
KT27/76 3	KT27/76 4
KT27/76 5	KT27/76 6
KT27/76 7	KT27/76 8

012

5 cm



LEGEND
 - 3453 Drainage sample No KD 3453
 - 3454 Drainage sample No KD 3454
 - 3455 Duplicate drainage sample No 3451

5 cm

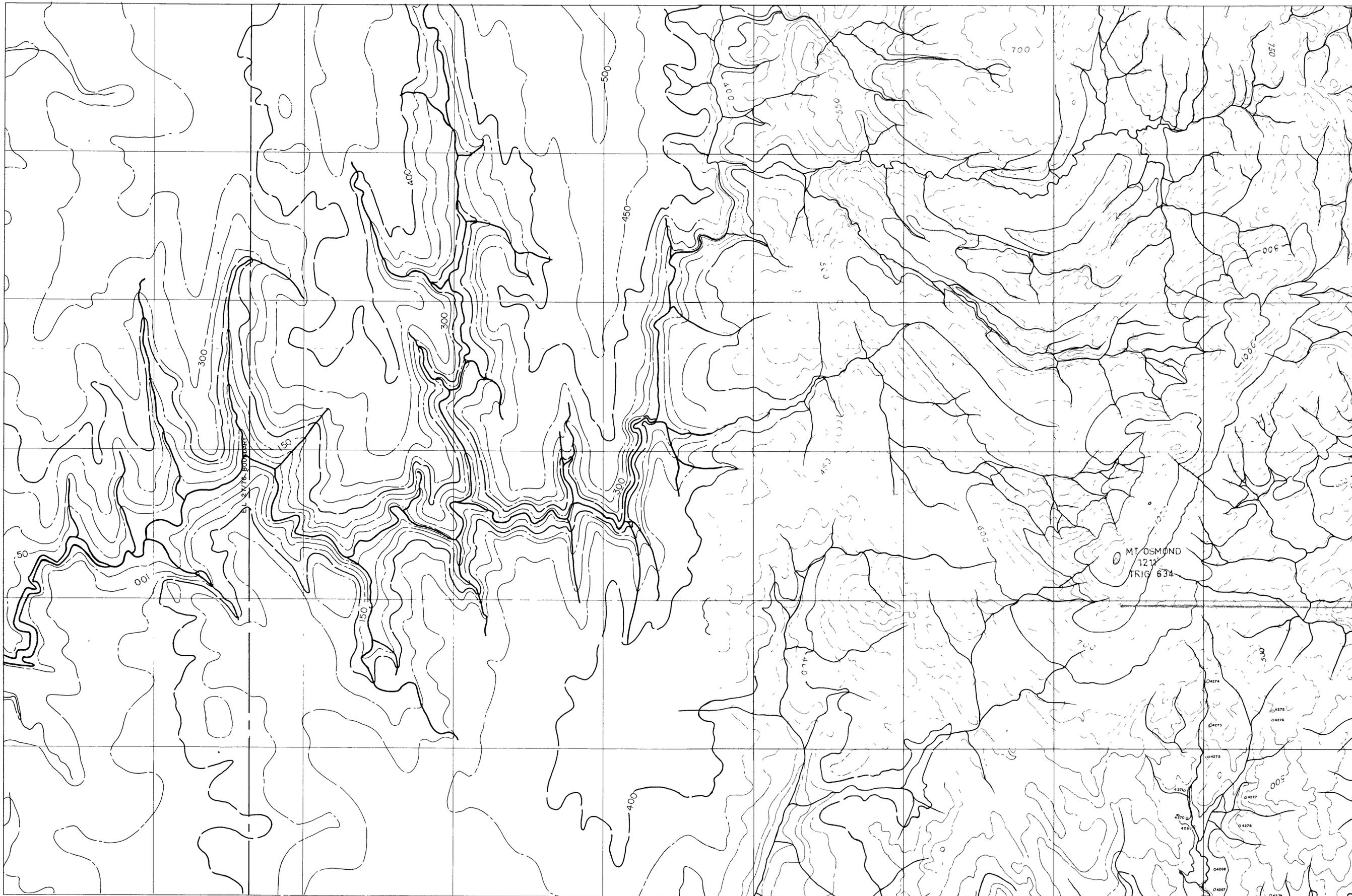
DATE AUG 1979
 GEOLOGIST C D S
 DRAWN J P M
 CHECKED

GEOPEKO

SCALE 1:10 000
 79-1392
EL 27/76
ELLIOTT BAY, TASMANIA
DRAINAGE SAMPLE LOCATION MAP
 013

No KT27/76-6 C

KT27/76 1	KT27/76 2
KT27/76 3	KT27/76 4
KT27/76 5	KT27/76 6
KT27/76 7	KT27/76 8



LEGEND

○ 4273 Outcrop sample No KR 4273

GEOPEKO

SCALE 1:10 000

79-1395

EL 27/76
ELLIOTT BAY, TASMANIA
ROCK SAMPLE LOCATION MAP

014

No **KT27/76-3D**

KT27/76 1	KT27/76-2
KT27/76 3	KT27/76 4
KT27/76 5	KT27/76 6
KT27/76 7	KT27/76 8



LEGEND:
 ○ 3599 Rock sample location and KR no. 3599


 DATE: AUGUST '79
 GEOLOGIST: C. D. S.
 DRAWN: J. P. M.
 CHECKED: J. S.

GEOPEKO

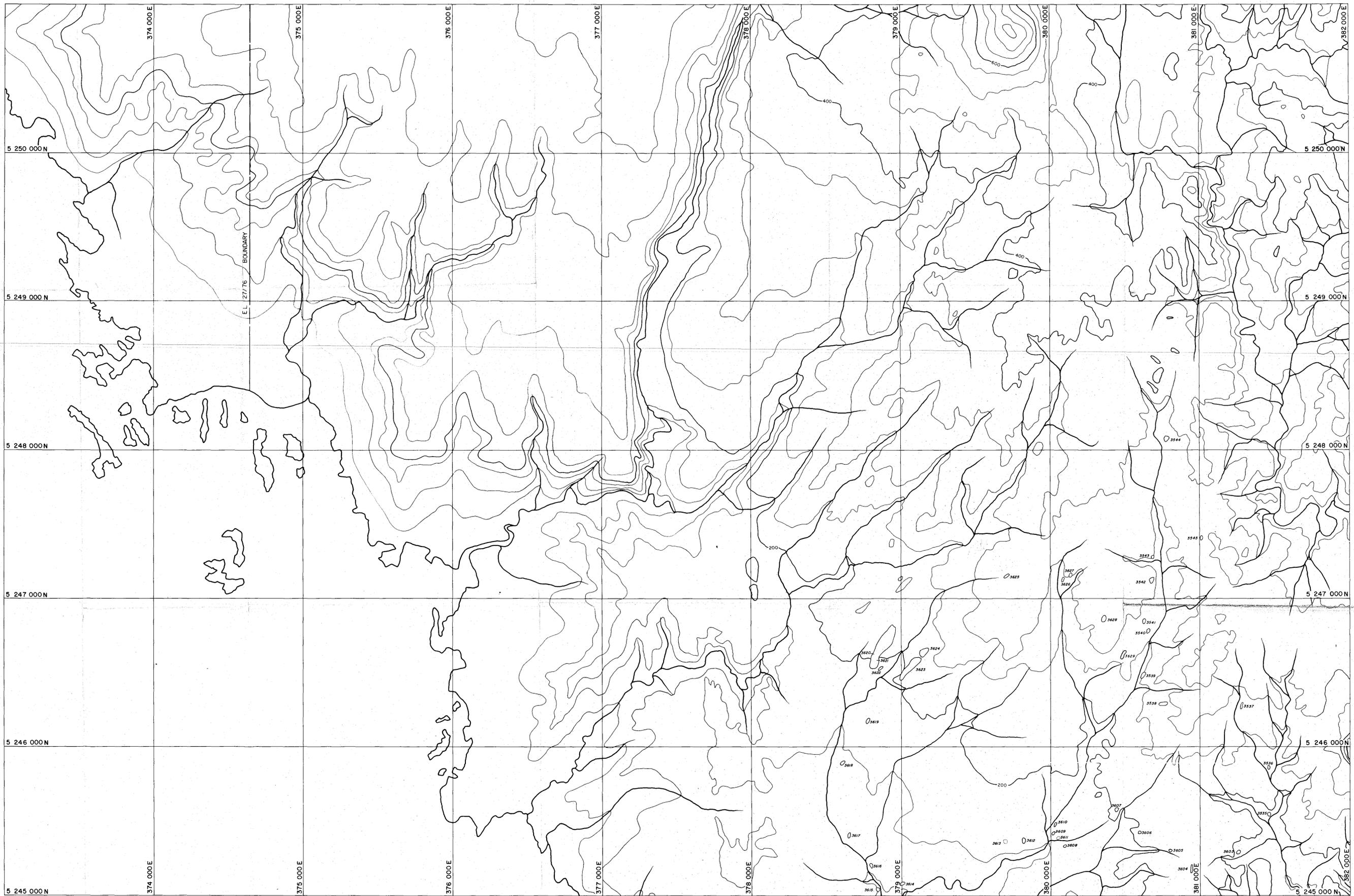
SCALE: 1:10,000

No. KT27/76-4 D

E.L. 27/76
 ELLIOTT BAY, TASMANIA
 ROCK SAMPLE LOCATION MAP
 015

KT27/76-1	KT27/76-2
KT27/76-3	KT27/76-4
KT27/76-5	KT27/76-6
KT27/76-7	KT27/76-8





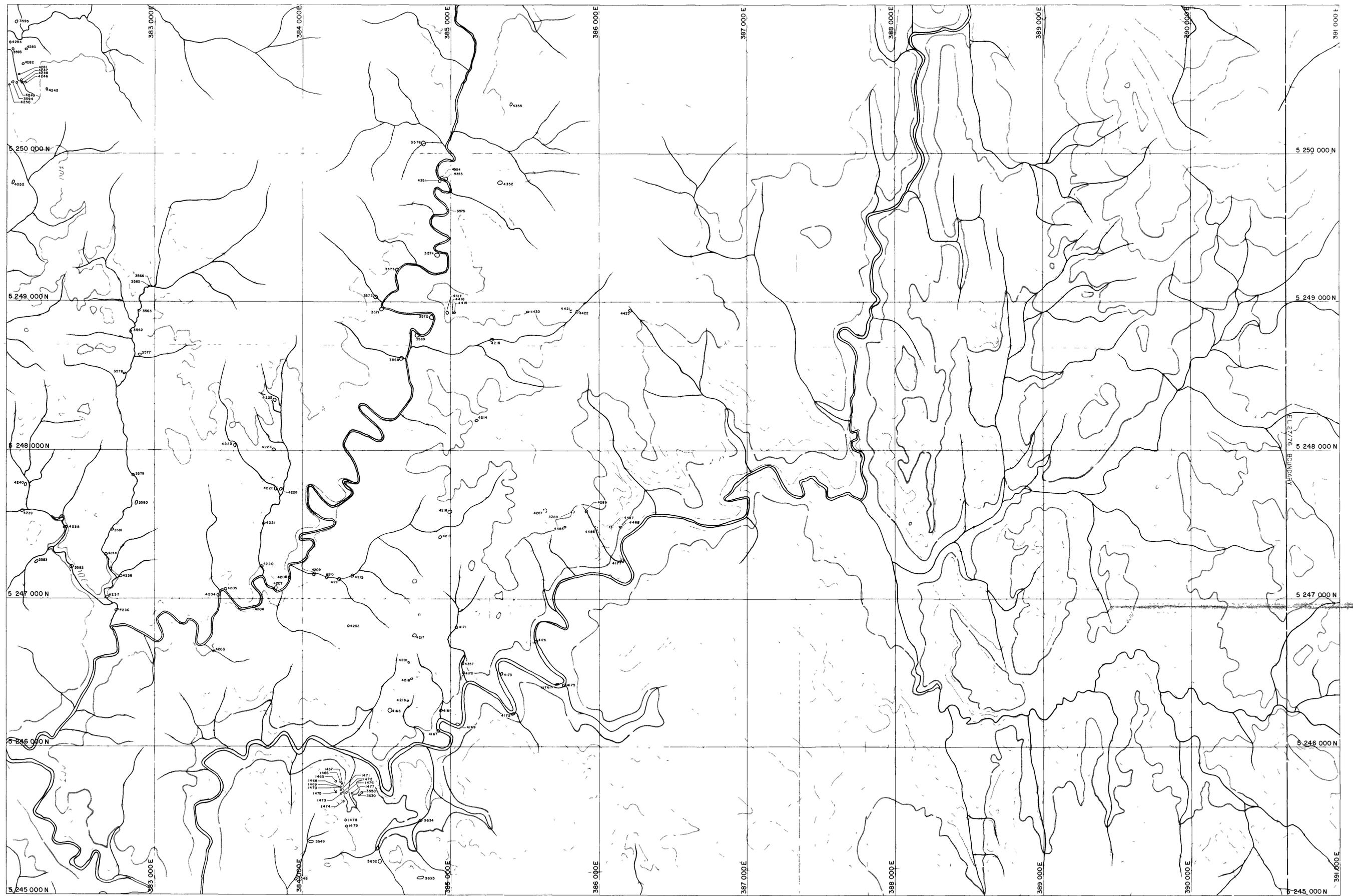
LEGEND
 ○ 3612 Outcrop sample No. KR 3612
 ○ 3613 Float sample No. KR 3613

DATE: Feb. 1976
 GEOLOGIST: C.D.S.
 DRAWN: J.P.M.
 CHECKED: C.W.B.

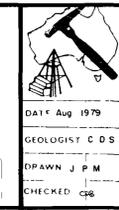
GEOPEKO
 SCALE: 1:10,000
 49-1295
E.L. 27/76
ELLIOTT BAY, TASMANIA
ROCK SAMPLE LOCATION MAP
 016

KT27/76-1	KT27/76-2
KT27/76-3	KT27/76-4
KT27/76-5	KT27/76-6
KT27/76-7	KT27/76-8

5 cm



LEGEND
 O 3549 Rock sample location and KR no 3549
 4288 Float sample location and KR no 4288



GEOPEKO

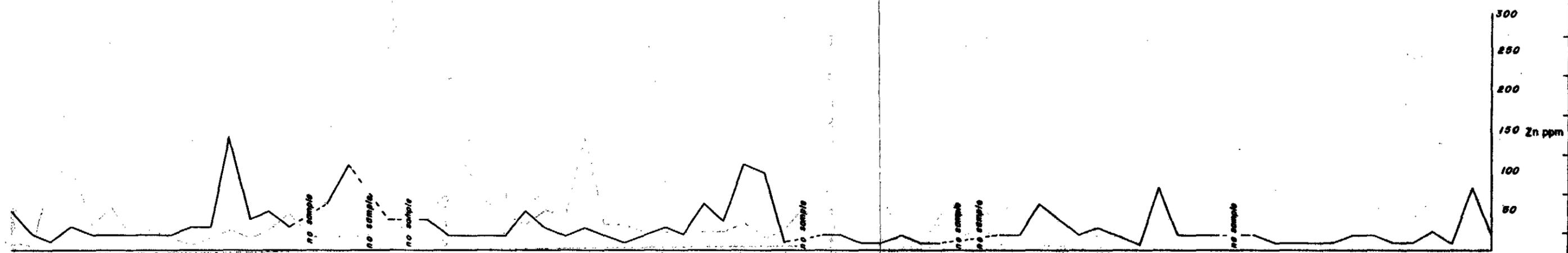
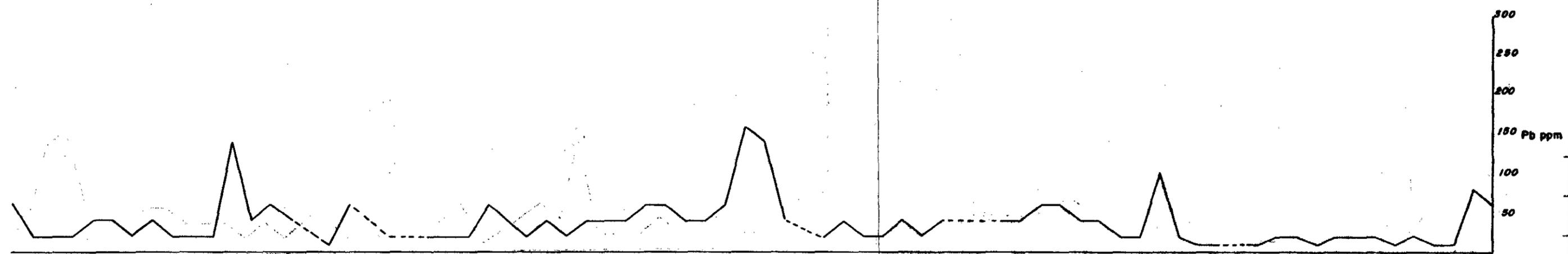
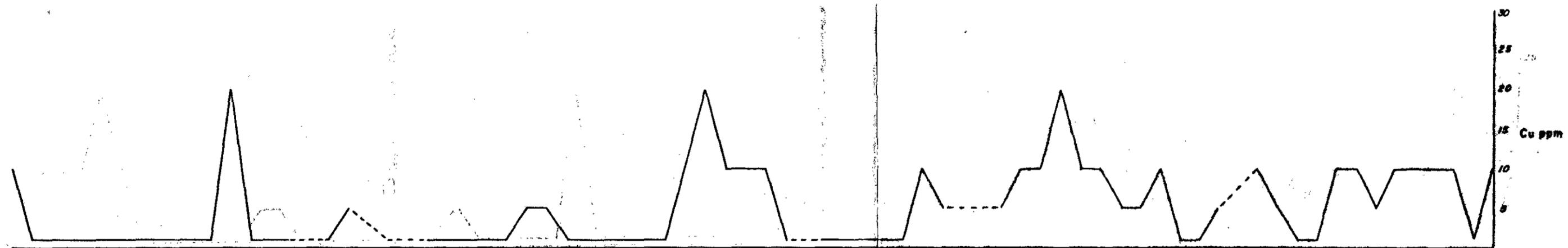
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EL 27/76
 ELLIOTT BAY, TASMANIA
 ROCK SAMPLE LOCATION MAP

No KT27/76-6 D

KT27/76 1	KT27/76 2
KT27/76 3	KT27/76 4
KT27/76 5	KT27/76 6
KT27/76 7	KT27/76 8

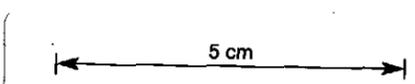
017



KS 3912 300 W
 3913 500 E
 3914 200 W
 3915 500 E
 3916 200 W
 3917 500 E
 3918 200 W
 3919 500 E
 3920-21 100 W
 3922 100 W
 3923 00
 3924 100 E
 3925 00
 3926 00
 3927 00
 3928 no sample
 3929 100 E
 3930-31 no sample
 3932 500 E
 3933 no sample
 3934 200 E
 3935 100 E
 3936 300 E
 3937 400 E
 3938 500 E
 3939 600 E
 3940-41 700 E
 3942 800 E
 3943 900 E
 3944 1000 E
 3945 1100 E
 3946 1200 E
 3947 1300 E
 3948 1400 E
 3950-51 1500 E
 3952 1600 E
 3953 1700 E
 3954 1800 E
 3955 1900 E
 3956 2000 E
 3957 2100 E
 3958 2200 E
 3959 2300 E
 3960-61 2400 E
 3962 2500 E
 3963 2600 E
 3964 2700 E
 3965 2800 E
 3966 2900 E
 3967 3000 E
 3968 3100 E
 3969 3200 E
 3970-71 3300 E
 3972 3400 E
 3973 3500 E
 3974 3600 E
 3975 3700 E
 3976 3800 E
 3977 3900 E
 3978 4000 E
 3979 4100 E
 3980 4200 E
 3981-82 4300 E
 3983 4400 E
 3984 4500 E
 3985 4600 E
 3986 4700 E
 3987 4800 E
 3988 4900 E
 3989-90 5000 E
 3991 5100 E
 3992 5200 E
 3993 5300 E
 3994 5400 E
 KS 3995

79-1395 126056

LEGEND:



DATE: 1979
 GEOL: C.D.S.
 DWN: J.P.M.
 CHKD:

GEOEKO LIMITED
 KING ISLAND
 Scale: 1:5000
 NO KT27/76-26
AEM. 40-41
C- HORIZON GEOCHEMICAL PROFILES
 Cu, Pb, Zn Results **018**