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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
WEST COAST MINES

**REPRODUCED**

JUKES DARWIN AREA.

(E.L. 13/65 & SPL.140)

Report on Exploration Work Completed by  
Electrolytic Zinc Company of Australasia  
Limited between December 1974 and July 1975.

Distribution.

- 1. Exploration Manager, Melbourne.
- ② B.H.P. Limited, Melbourne.
- 3. " " "
- 4. " " "
- 5. Manager, West Coast Mines.
- 6. Geology Department, West Coast Mines.
- 7. " " " " " "

Report No.123

R.E. Williams

August 1975.

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	-80	+ 120 mesh
		+ 120 mesh

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SUMMARY

Exploration by the Electrolytic Zinc Company of Australasia Limited in the Jukes-Darwin area, has been directed to the location of economic copper - lead - zinc sulphide mineralisation in the pyroclastic phases of the Cambrian Mt. Read Volcanics.

The initial areas selected, the valleys of the Clark and Garfield Rivers, were explored by geological mapping and stream sediment geochemistry.

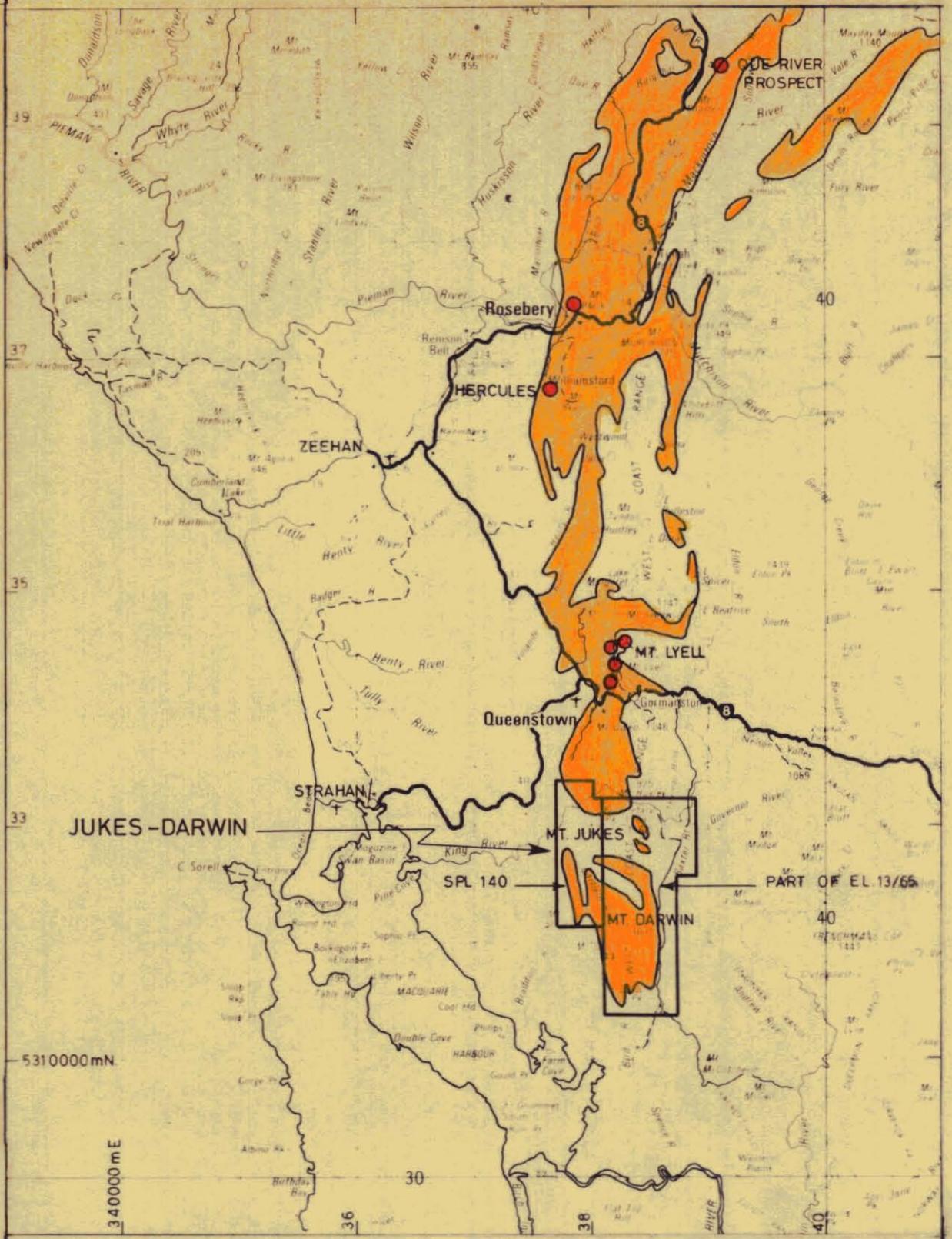
Geological mapping has downgraded the potential of both areas as the pyroclastic volcanics appear to be minor in comparison to the proportion of acid lavas.

The geochemical stream sediment sampling programme does not appear to have located any copper - lead - zinc anomalies warranting further investigations. Copper anomalies in the drainage on the west flank of Mt. Darwin are interpreted to represent a further development of hematite - magnetite - minor sulphide mineralisation similar to the Prince Darwin mineralisation.

Recommendations for further work, basically a continuation of the current programme, have been suggested.

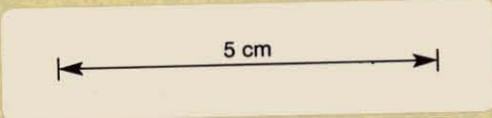
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### LEGEND

- SIGNIFICANT BASEMETAL MINERALISATION
- CAMBRIAN MT. READ VOLCANICS



<b>ELECTROLYTIC ZINC CO. OF A'ASIA. LTD.</b>		
LOCATION	PLAN OF	REF. NO.
JUKES - DARWIN	AREA	
DATE : AUG. 1975	DRAWN:	<b>FIGURE 1</b>
SCALE: 1 : 500 000	GEOLOGY: R.E.W.	

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INTRODUCTION

In accordance with letters of intent between the Broken Hill Proprietary Company Limited, International Nickel Australia Limited, and the Electrolytic Zinc Company of Australasia Limited, the latter company began exploration work within Exploration Licence 13/65 in early December 1974.

Also, as stated in the proposed Joint Venture Agreement, the Electrolytic Zinc Company applied for a Special Prospectors Licence over 46 <sup>2</sup>kms of ground adjoining the western side of the Jukes Darwin area of E.L.13/65. This area has been granted by the Mines Department as S.P.L.140 and is termed Lynchford.

Exploration continued until late March 1975, when field activity was suspended due to the onset of winter weather conditions.

Location, Access, Physiography, Vegetation & Climate.

Reference is made to Ruddock (1974) for coverage of these aspects.

Descriptions of E.L.13/65 (Part One) and SPL.140 are included as Appendix 1.

Previous Work.

Reference is made to Ruddock (1974) for a detailed coverage of the previous exploration of the Jukes - Darwin Area.

Logging of Huon Pine has been carried out in the valleys of both the Clark and Garfield Rivers, apparently up to the 1930's. It would be surprising if the timber cutters were not at least amateur prospectors.

Work conducted by I.N.A.L. during 1972/74 period included the following:-

- (i) Turair electromagnetic and aeromagnetic survey of the Jukes-Darwin ridge and flanking pyroclastics.
- (ii) Detailed ground investigations of the known mineralisation along the Jukes - Darwin ridge.
- (iii) Drilling of four diamond drill holes in two of the more interesting prospects.

### Regional Geology.

All the known major base metal mineralisation occurs within the Cambrian Mt. Read Volcanics. These volcanics, calc-alkaline in composition, formed in a continental margin type environment known to have extended from the Lewis River area on the S.W. coast of Tasmania, northwards through Mt. Darwin, Mt. Lyell, Rosebery and the Que River prospect where the volcanics swing eastwards under a cover of Tertiary basalt.

The regional geology, based on interpretations by Corbett et al (1974) and Ruddock (1974) is presented as Plate 1. of this report. Although the distribution of the various rock types within the Mt. Read Volcanics is reasonably well known, the stratigraphic sequence is questionable.

The interpretation postulated by Ruddock (1974) is as follows:-

- (i) Inner, Central Rhyolitic Core. Massive rocks, predominantly lavas and air-fall tuffs and agglomerates characterised by ubiquitous hematite - magnetite veins, - considered to represent an early pyroclastic fall phase.
- (ii) Flanking Pyroclastic Rhyolites: Schistose rocks, predominately ignimbrites, on the west and east flanks, - considered to represent a later pyroclastic flow phase.
- (iii) The subvolcanic Darwin granite appears to have intruded the Central Rhyolitic Core prior to the pyroclastic flow phase as clasts of the granite occur in the flanking pyroclastics on the eastern side of the South Darwin Plateau.
- (iv) The Upper Cambrian Jukes Conglomerate unconformably overlies the volcanics and contains clasts of the Mt. Read Volcanics and the Darwin granite.
- (v) Ordovician Owen Conglomerate unconformably overlies all the Cambrian rocks.

The sequence proposed by Corbett et al (1974) is as follows:-

- (i) Central Lava Belt. Consists of units of the Massive Darwin type lava and quartz and felspar porphyry lavas.

(ii) Flanking Pyroclastics; Termed the Queenstown pyroclastics to the west of the Central Lava Belt and pyroclastics of the Lake Selina area to the east. The Queenstown pyroclastics are dominantly tuffs and agglomerates with minor sediments and lavas. Conflicting relationships as to the earliest unit exist and it has been suggested that the pyroclastics and the central core lavas interfinger.

(iii) Tyndall Group.

1. Comstock Tuff - dominantly ashfall pyroclastics with interbedded sediments.
2. Jukes Formation - volcanoclastic conglomerate and breccia.

The Tyndall Group rests unconformably on the earlier Cambrian volcanics.

(iv) Ordovician Owen Conglomerate.

Mapping by the E.Z. Company in the Clark and Garfield River valleys suggests the units in these valleys, Ruddocks "western flanking pyroclastics" are not similar to those on the east side of the South Darwin Plateau.

Dr. K. Corbett, of the Geological Survey of Tasmania, from mapping in the area between Queenstown and the South Darwin Plateau, has suggested that the western pyroclastics could be the earliest unit and are overlain by the Central Lava Belt, with the eastern pyroclastics unconformably overlying the lavas (Pers Comm. 1975).

The younging of the sequence to the east has similarities to the stratigraphy at Rosebery. This has major implications when the ore potential of the various pyroclastic horizons is considered. Prior to any further prospecting of the pyroclastics to the east of the Jukes - Darwin ridge it would be desirable to solve these stratigraphic problems.

#### Objectives of the Electrolytic Zinc Co. of A'Asia Ltd.

Previous exploration activity has been concentrated on the examination of the original copper prospects and their immediate surroundings.

The target has been a Mt. Lyell type ore body within lithologies similar to that at Mt. Lyell. Little or no attention has been given to the possibility of Rosebery type orebodies (massive Cu-Pb-Zn sulphides) occurring in the pyroclastics and interbedded sediments on the flanks of the central ridge of rhyolitic lavas.

The whole of the Jukes - Darwin part of E.L. 13/65 was covered by a combined airborne magnetic and Turair E.M. survey in 1973. The effectiveness of this type of survey should be questioned as:-

- (i) the rugged topography usually causes excess ground clearance problems.
- (ii) although usually associated with conductive sulphides, the dominant mineralogy of a Rosebery type ore body is non-conductive sphalerite.

The objective of the E.Z. Co. was, and remains, to investigate the flanking pyroclastic sequences for Rosebery or Que River type Pb-Zn mineralisation.

The method of exploration considered most suitable in the Jukes - Darwin area was geological mapping and stream sediment geochemistry.

INVESTIGATIONS BY THE ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED BETWEEN DECEMBER 1974 AND JULY 1975

INTRODUCTION.

During the 1974/75 field season, the objective was to investigate the potential of the pyroclastic sequence to the west of the Jukes - Darwin ridge with the priorities being the Clark River valley and the Garfield River valley. Geological mapping and geochemical stream sediment sampling were selected as the initial methods.

Field Operations.

Clark River Valley.

The pre-existing 4WD track constructed by B.H.P. from the H.E.C. access road to the South Darwin Plateau was repaired. A walking track was then cut down into the Clark Valley and a camp established for up to 10 men. Cutting of the access track commenced early in December. Using this camp, the contract line cutters cut out most of the streams subsequently sampled by the E.Z. Company sampling parties.

The sampling programme was completed by the beginning of February using two sample parties with a geologist, working with one of the sample parties. All distances were taped and aluminium tags used to mark co-ordinates. Sampling methods will be discussed under geochemistry.

Garfield River Valley.

Access to the Garfield River Valley is more difficult than to the Clark Valley. Vehicle access is limited to the East Darwin area. Walking tracks were then used to climb over the north side of Mt. Darwin and then to descend into the Garfield Valley. Relocation and cutting out of the access track into the Garfield Valley was more difficult than expected due to the heavy regrowth of barrabush. At the end of February, the camping equipment was transferred, by helicopter, from the Clark Valley campsite to the Garfield River campsite.

Streams, other than the major watercourses, proved difficult to follow in the heavy regrowth and the cutting out of the drainage was rather limited. Sampling commenced on the 10th March and was abandoned on the 20th March after several days of heavy rain made access along the Garfield River an arduous business. A further two weeks of rain ended the field season and the camping equipment was recovered by helicopter in mid April.

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A limited number of stream sediment samples were collected from the streams on the eastern side of the Jukes - Darwin ridge when sampling was completed in the Clark drainage and access had yet to be gained into the Garfield drainage.

### Geology.

Geological mapping by the E.Z. Company has been limited to that mapping completed while one geologist worked with a stream sediment sampling party in the Clark and Garfield drainage surveys. This mapping is presented as Plates 2 to 4 of this report. Previous detailed mapping by I.N.A.L. and B.H.P. has also been reduced and plotted on these plans. The legends for the E.Z. Company and the I.N.A.L. mapping are presented on Plate 5.

Most of the rock identifications are based on hand specimen examination. Only six rocks have been examined in this section. See Appendix 2. The usual difficulty with hand specimen examination of Mt. Read volcanics is the separation of porphyritic lavas from crystal tuffs. Based on the limited thin section examinations, the more problematic rocks have been described as porphyritic lavas rather than pyroclastics.

### Clark River Valley.

The following sequence, from east to west was mapped in the Clark Valley.

- (i) Massive, fine grained pink, and pink and green siliceous lavas, rarely with felspar phenocrysts.

Massive veins and stockworks of hematite - magnetite - minor sulphides are common. The unit is probably the so called "Darwin type" rhyolite of Corbett et al.

- (ii) The western contact of the above unit is often against a black shale unit which may be represented by a single massive shale unit or by several thin units. No facings were found within this unit but the dips vary from flat ( $45^{\circ}$ ) west in the south to vertical in the north.

- (iii) Sequence of porphyritic rhyolitic lavas including the following units:
  - (a) rhyolites with plagioclase phenocrysts
  - (b) rhyolites with quartz and plagioclase phenocrysts with no K-felspar in the matrix.
  - (c) rhyolites with quartz phenocrysts in a K-felspar rich matrix.
  - (d) minor tuff units and a thin quartz sericite schist unit.
- (iv) Jukes Breccia and volcanoclastic conglomerate. This unit was not mapped in situ but boulders are found in the streams draining the E side of Mt. Sorrell.

A single adit, possibly the Tasman - Darwin prospect was located during mapping but numerous outcrops of hematite - magnetite occur within the most easterly unit, the so called "Darwin type" rhyolite. Alluvial gold has been recorded in the Clark Valley and numerous streams have been excavated but most of these excavations are believed to be due to the activities of timber cutters. On the south western side of Slate Spur a minor amount of gouging has been carried out on a very narrow (< 5 cms) qtz vein occurring in a vertical fault which has the common SE - NW strike.

The rocks to the west of the "Darwin type" rhyolite are not considered to represent a pyroclastic sequence and are correlated with the quartz and felspar porphyry lavas of Corbett et al.

The contact between this unit and the Jukes Breccia on the eastern slopes of Mt. Sorell was not observed.

Loftus Hills (1914) has reported slates on the eastern end of Slate Spur. Corbett (Pers Comm 1975) has mapped black slates on the eastern flank of Mt. Sorell.

Garfield River Valley.

Geological mapping in the Garfield River Valley was less successful than in the Clark Valley as most of the mapping was completed in the Garfield River which runs roughly parallel to the strike of the volcanics.

The following sequence, from east to west, was recognised.

- (i) Massive, fine grained, blue-green rhyolite which no doubt equals the corresponding unit in the Clark Valley.
- (ii) Although no contacts were observed, two outcrops of black shale are interpreted to mark the western boundary of the above unit. No structural data was recorded from the black shales.
- (iii) West of the black shale mapping is not sufficient to determine the stratigraphy and the sequence appears to consist of dominantly quartz and felspar porphyritic lavas, usually grey-green in colour, and minor ash flow quartz and felspar crystal tuffs. Fiamme were only observed in one outcrop so that the identification of many of the crystal tuff units may be erroneous and the rocks may be porphyritic lavas. A north, north west striking shale unit was mapped in the most downstream part of the Garfield. A contact between the "central lavas" and the "western pyroclastics" has been indicated on the interpretation of the geology. (Plates 1 and 3).

Although considerable evidence of logging operations was observed, no prospect pits of any description were located. Hematite - magnetite float is present in the streams draining Mt. Darwin and in the Garfield River.

#### Stream Sediment Geochemistry.

Stream sediment geochemistry was selected as the most applicable technique to locate Cu - Pb - Zn sulphide mineralisation in the Jukes - Darwin area. Although problems exist with the application of stream sediment geochemistry on the West Coast of Tasmania, the technique has been successfully used in exploration of the Cambrian Volcanics.

No orientation survey was completed before collection of samples in the Clark drainage commenced but previous experience in the Rosebery area has suggested that the standard -80 mesh fraction analysed for Cu, Pb, Zn and Ag following a total extraction technique would be satisfactory. Subsequently, 35 samples were selected from the Clark drainage sampling, selection being based on the -80 mesh results, and the following size fractions analysed for Cu, Pb, Zn and Ag:

- 20 + 40 mesh
- 40 + 80 mesh
- 80 + 120 mesh
- 120 mesh.

The results indicated that the original -80 mesh was the best compromise and thus sampling continued using the -80 mesh fraction.

The selection of the optimum sample spacing remains a problem and there is no doubt that the spacing of 200 ft. used in Clark and Garfield drainage surveys would amount to over sampling in the general routine stream sediment survey. The actual cost of collecting and analysing the extra samples collected with this spacing is insignificant compared to the cost of obtaining access to the area and traversing the streams.

Geochemical populations have been interpreted from the analytical results using cumulative frequency plots. The populations determined are indicated below:

- (1) Copper
  - $\cong$  40 ppm
  - $\wedge$  40 ppm  $\vee$  10 ppm
  - $\equiv$  10 ppm
- (2) Lead
  - $\cong$  65 ppm
  - $\wedge$  65 ppm  $\vee$  40 ppm
  - $\equiv$  40 ppm  $\cong$  20 ppm
  - $\wedge$  20 ppm
- (3) Zinc
  - $\cong$  65 ppm
  - $\wedge$  65 ppm  $\vee$  25 ppm
  - $\equiv$  25 ppm  $\cong$  10 ppm
  - $\wedge$  10 ppm

Plans of the geochemical stream sediment sampling are included with this report as Plates 5 to 11, and the analytical results are included as Appendix 3a.

DISCUSSION OF STREAM SEDIMENT SAMPLING RESULTS.Copper

The results for copper are the most interesting with the Prince Darwin hematite - pyrite zone producing an anomaly and apparent mineralisation on the west flank of Mt. Darwin producing anomalies in both the Clark and Garfield Rivers.

The closest sample to the Prince Darwin mineralisation is 1500 feet downslope with  $\geq 40$  ppm Cu extending for 1200 ft. downstream and  $> 10$  ppm Cu results extending an additional 1400 ft. downstream. The Prince Darwin mineralisation was drilled by B.H.P. in 1970/71 (Taylor 1971).

The anomalies in the Clark and Garfield River extend for considerably greater distances downstream from the initial anomalous samples and are of similar magnitude to those from the Prince Darwin mineralisation. Hematite - magnetite floaters occur in both drainage areas and the geological mapping suggests the west flank of Mt. Darwin is probably the strike extension of the Prince Darwin mineralisation. This type of mineralisation is not considered to be of economic significance.

Lead.

Results for lead are not encouraging except for three high results, 210 ppm (10106) and 155 ppm (10102, 10103) for samples collected from a small stream which cuts the black shale unit marking the contact between massive siliceous lavas and the porphyritic lavas. These anomalous results are considered to represent the black shale background geochemistry and not sulphide mineralisation as the Cu, Zn and Ag results are not anomalous.

Zinc

Erratic anomalous results occur and are generally co-incident with anomalous copper results. No zinc results are considered significant.

Conclusions from Stream Sediment Geochemistry.

The following conclusions are drawn:

- (i) The technique appears valid.
- (ii) The copper anomalies in the drainage on the west side of Mt. Darwin need to be considered in context with the geological and geophysical data.
- (iii) In theory the sample density could be considerably reduced. This is not recommended as the extra data gained with the close spacing costs very little compared to the cost of traversing the streams. Where streams are difficult to follow, or even to locate at the junction with larger streams, the close spaced sampling provides some indication of the contribution of base metals from these streams.

CONCLUSIONS.

The following conclusions are drawn:-

1. The geology of the Clark and Garfield River valleys cannot be considered encouraging due to the lack of pyroclastic rocks and the predominance of lava flows. This environment is not similar to that which hosts the Rosebery or Hercules Mines.
2. Stream sediment geochemistry appears to be a successful exploration technique in this environment.
3. The stream sediment geochemistry indicates anomalous copper mineralisation in the streams draining the western flank of Mt. Darwin. Hematite - magnetite float occurs in these streams and as the geology is similar it is presumed that mineralisation analagous to the Prince Darwin zone is producing the copper anomalies. Plate 5. of Loftus Hills. (1914) indicates an adit on the west flank of Mt. Darwin but no mention of this adit is made in the text.

3. cont'd.

The position of this adit is probably less than 350 metres from the plotted position of Turair anomaly Number 55. This Turair anomaly, which lies outside the loop, was considered by Linford (1973) to represent a noisy phase trace of doubtful value.

4. The stratigraphy of the Mt. Read Volcanics in the Queenstown - Jukes - Darwin area has yet to be resolved satisfactorily.

RECOMMENDATIONS.

The following recommendations are made:-

1. Although the problems of the stratigraphy need to be resolved to enable decisions as to the potential of the various pyroclastic units to be determined, there is no guarantee that the problems will be solved in the immediate future. Therefore it is recommended that exploration proceed on the assumption that both the pyroclastic units have equal potential.
2. The following exploration should be completed in future field seasons:-
  - (a) Complete a stream sediment sampling programme over the pyroclastics to the east of the Jukes - Darwin ridge.
  - (b) Continue geological mapping and the associated stream sediment sampling programme in the area north of the Garfield River valley.
3. Suspend all exploration activity on the western side of the Jukes - Darwin ridge if the Mines Department carries out the intention expressed by K. Corbett (Pers Comm) to map the area in the Garfield, Thomas Currie and King River confluence. A further decision could then be made based on the improved geological knowledge of the area.

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APPENDIX 1.

## Survey Descriptions of SPL.140 and E.L.13/65 (Part One)

S.P.L.140, covering 46 square kilometres, is defined as follows:-

"Commencing at the north-west angle of the area whose grid co-ordinates are 377 000 m E, 5 334 000 m N, thence grid east to a western boundary of E.L.10/69 southerly to grid co-ordinates 379 840m E. 5 332 045m N easterly to grid co-ordinates 380 755m E, 5 332 055m N again southerly to 5 321 000m N grid west to 377 000m E aforesaid thence grid north to the point of commencement."

Part One of E.L.13/65, covering 44.5 square miles is defined as follows:-

"Commencing at the NW corner of the area whose grid co-ordinates are 810,000 yds. N, 360 000 yds. E, thence 5 miles grid E, 4 miles grid S, 1½ miles grid W, 7 miles again grid S, 3½ miles again grid W and 11 miles grid N to the point of commencement."

APPENDIX 2.

Mineralogical Reports

Specimens P.400 to P.405  
inclusive.

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# Ian R. Pontifex & Associates

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MINERALOGY — PETROLOGY  
GEOLOGY  
SECTION PREPARATION

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MINERALOGICAL REPORT NO. 1709

March 20, 1975

TO: General Manager-Mining Division,  
Electrolytic Zinc Co. of Australasia Ltd.,  
P.O. Box 21,  
ROSEBERY, Tasmania 7470

YOUR REFERENCE: REW/RP  
Your letter dated 24/2/75

MATERIAL: Rock samples; Jukes-Darwin area

IDENTIFICATION: p400 to 405 inclusive

WORK REQUESTED: Thin section and petrographic  
description

SAMPLES & SECTIONS: Returned air freight to:-  
West Coast Mines,  
Rosebery, Tasmania 7470



IAN R. PONTIFEX & ASSOCIATES

P400: meta-rhyolite; essential quartz phenocrysts, groundmass of potash feldspar and siliceous glass shows fairly extensive clay-sericite alteration.

This rock contains phenocrysts of quartz (15-20%) altered plagioclase (7-10%) and potash feldspar (2-3%), average size about 1 mm, randomly disposed through a much finer, weakly layered groundmass. The quartz crystals are generally subrounded, embayed and some are invaded by the groundmass. They are also stressed and rarely fractured; some form small groups. The feldspar crystals are extensively microfissured and replaced by sericite + clays and as such tend to merge into the groundmass.

The groundmass consists of wavy, parallel (iron stained), shredded streaks of sericite through a diffuse microcrystalline to cryptocrystalline mosaic of potash feldspar (largely indicated by staining) clouded by clays and crowded by small (0.1 mm) spheroidal "grains" of microcrystalline quartz mosaic - apparently after volcanic glass. Minor, fine, altered plagioclase and potash feldspar crystals, smaller than the phenocrysts, are also scattered with common orientation through the groundmass. Accessory flakes of biotite are present. The clay-sericite alteration may be partly deuteric, but seems certainly to be partly due to superimposed (regional) metamorphism.

This is a volcanic of rhyolitic composition. It is not absolutely certain whether it is a tuff or a lava, however the relationship of groundmass to phenocrysts, gross textural features, and in the context of the suite as a whole, it is classified as a rhyolite (lava). There is no evidence of sulphides (or other opaques).

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P401: meta rhyolite; stressed and partly recrystallised, fairly advanced clay-sericite-chlorite alteration in groundmass, largely of metamorphic origin, accessory limonite replicas after pyrite

Quartz phenocrysts (20%), average size 2 mm, and plagioclase phenocrysts (5-7%) of similar size are evenly distributed through a finer groundmass, having a pronounced, wavy foliation-banding. The quartz crystals are extensively stressed and slightly recrystallised, and commonly deeply embayed due to resorption by the groundmass. Plagioclase phenocrysts are stressed, bent and oriented in the plane of the foliation, chemically they are virtually unaltered.

The groundmass consists of diffuse patches of essential microcrystalline partly recrystallised quartz (?after glass), strung out through a matrix of argillised, cryptocrystalline potash felspar (high-lighted by staining). Minor shredded streaks of sericite and extremely fine chlorite also occur through the groundmass, and tend to emphasis the foliation. Accessory chlorite pseudomorphs after ?hornblende and biotite, with accompanying fine epidote and leucoxene are present.

Accessory limonite pseudomorphs after pyrite occur in a small lens.

P402: glassy rhyolitic lava; groundmass  
 recrystallised and as a result silicified,  
 with minor accompanying sericite  
 and chlorite

Phenocrysts of quartz (10-15%) and of  
 plagioclase (10-12%), average size about 1.5 mm, are  
 evenly distributed with generalised common alignment  
 through a much finer, fairly homogeneous groundmass.  
 The quartz phenocrysts are typically subrounded,  
 moderately embayed, but generally unstressed. The  
 plagioclase crystals commonly show signs of stress  
 deformation and are variably clouded by fine sericitic  
 alteration products.

The groundmass consists of a rather diffuse  
 microcrystalline to cryptocrystalline mosaic of quartz  
 with minor fine shredded streaks of sericite defining  
 a vague foliation, and minor, dispersed extremely fine  
 flakes of dark green chlorite and sericite. Potash  
 feldspar is absent, conceivably the primary groundmass  
 consisted largely of siliceous glass now recrystallised  
 to a contaminated "cherty" aggregate.

P403: rhyolitic volcanic (probable breccia, possible lava); fairly extensively silicified and to a lesser degree sericitised; accessory limonite pseudomorphs after fine ?carbonate

Phenocrysts of subrounded quartz (10-15%) and of plagioclase (10-15%) have an average size of 1 mm, and are randomly disposed through a generally microcrystalline but rather heterogeneous groundmass. These phenocrysts are commonly stressed, recrystallised and aggregated, some are invaded by the groundmass along fractures and embayments.

The groundmass consists of a patchy, diffuse cryptocrystalline to microcrystalline quartz mosaic with shredded streaks and lenses of sericite having a generalised common orientation and producing a vague foliation. Much of this quartz is the result of secondary silicification. Potash feldspar is absent. Fine (0.2 mm) angular fragments of quartz are scattered and rarely occur in groups.

Fine (0.1 mm) rhomb to cubic replicas composed of a mixture of limonite and fine quartz (5-7%) are clustered in rough lens-like areas, these may be after pyrite but the common rhomb-form indicates that they are most likely after fine carbonate.

This is a silicified rhyolitic volcanic, the patchy nature of the groundmass suggests that it may be a breccia composed of a welded silicified aggregate of rhyolite fragments, of virtually identical composition, rather than a lava as represented by other rocks in the suite.

U26

P404: meta rhyolite; extensively silicified and to a lesser degree sericitised; minor limonite-silica replicas after fine ?carbonate

This is a homogeneous, weakly foliated meta-rhyolite, also characterised by a silicified groundmass, devoid of potash feldspar. Subrounded and extensively embayed quartz phenocrysts (7-10%), plagioclase crystals (7-10%), lesser, finer angular quartz fragments and silicified biotite are evenly disposed through a quartzose groundmass.

The plagioclase crystals are virtually completely replaced by sericite. The groundmass consists of a cryptocrystalline to rather diffuse microcrystalline quartz mosaic, with disseminated fine single quartz "grains", and fairly abundant parallel shredded streaks of sericite. Mixtures of limonite and minor silica pseudomorphically replace very fine rhomb to cube shaped crystals (5-7%) of former carbonate (or possibly pyrite), and are randomly dispersed.

P405: meta rhyolite; stressed with the groundmass partly recrystallised involving development of minor sericite in the groundmass

This rock may be compared with P400 and 401 rather than 402, 403 and 404, largely by virtue of essential primary potash feldspar in the groundmass. Subrounded and rarely euhedral quartz phenocrysts (10%) and plagioclase phenocrysts (7-10%) have an average size of 1 mm and are randomly dispersed through a much finer groundmass. The quartz crystals are stressed, plagioclase is commonly almost completely altered by fine clay-sericite.

The groundmass consists of very fine (0.2 mm) diffuse patches of microcrystalline quartz (?after glass) loosely packed and evenly distributed through a matrix of cryptocrystalline potash feldspar.

Minor ultra fine sericite, trace chlorite and iron oxide dust is dispersed, imparting a weak foliation. Minor quartz veinlets ± sericite cut the rock at random.

APPENDIX 3a.

Geochemical Stream Sediment Sample  
Data.

-80 mesh fraction.

U29

498030



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## LABORATORY REPORT

44 BALACLAVA ST., WOOLLOONGABBA 4102  
Phone (072) 91 6986 A/H 55 0776  
TELEX ALSEV 42344

R. W. YERBURY  
DIRECTOR

BATCH No.: 23A CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALIA LTD.  
ORDER No. LTR. 20/1/75 AREA: ROSEBERY TASMANIA DATE RECEIVED: 23/1/75  
SAMPLE TYPE: STREAM No. OF SAMPLES: 128 DATE COMPLETED: 31/1/75  
SEDIMENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
010000		5	20	10	<1						
010001		10	20	25	<1						
010002		5	10	25	<1						
010003		<2	10	10	<1						
010004		10	30	30	<1						
010005		5	15	5	<1						
010006		10	20	10	<1						
010007		5	20	10	<1						
010008		5	20	10	<1						
010009		5	20	10	<1						
010010		10	20	10	<1						
010011		10	15	15	<1						
010012		10	20	40	<1						
010013		10	15	5	<1						
010014		5	15	10	<1						
010015		<2	15	5	<1						
010016		5	15	5	<1						
010017		20	15	20	2						
010018		15	15	5	<1						
010019		10	15	10	<1						
010020		20	20	10	<1						
010021		25	30	85	<1						
010022		40	20	10	<1						
010023		35	25	10	<1						
010024		25	15	10	<1						
010025		30	20	10	<1						
010026		30	40	85	1						
010027		40	30	45	<1						
010028		20	45	30	1						
010029		15	40	15	<1						
010030		10	25	20	<1						
010031		20	30	60	<1						
010032		10	20	15	<1						
010033		10	20	10	<1						
010034		<2	15	5	<1						
010035		5	20	10	<1						
010036		15	25	15	<1						
010037		10	25	10	<1						
010038		20	40	30	1						
010039		25	35	20	<1						
010040		20	35	15	<1						



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498031



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## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

SHEET 2

BATCH No.: 23A CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALIA LTD.  
 ORDER No.: LR 20/1/75 AREA: ROSEBERRY TASMANIA DATE RECEIVED: 23/1/75  
 SAMPLE TYPE: STREAM No. OF SAMPLES: 128 DATE COMPLETED: 31/75  
SEDIMENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
010040		20	35	15	<1					
010041		25	45	35	<1					
010042		20	45	20	<1					
010043		25	45	20	<1					
010044		30	60	40	<1					
010045		20	40	30	<1					
010046		25	50	30	<1					
010047		40	40	30	<1					
010048		30	60	65	<1					
010049		20	40	20	<1					
010050		40	45	35	<1					
010051		20	30	20	<1					
010052		20	50	35	<1					
010053		25	40	25	<1					
010054		30	40	20	<1					
010055		35	35	30	<1					
010056		65	30	30	<1					
010057		50	15	30	<1					
010058		30	20	20	<1					
010059		10	20	20	<1					
010060		10	20	15	<1					
010061		10	20	15	<1					
010062		10	20	20	<1					
010063		10	20	15	<1					
010065		15	30	50	<1					
010066		10	15	30	<1					
010067		10	25	15	<1					
010068		10	20	20	<1					
010069		10	20	25	<1					
010101		10	35	15	<1					
010102		20	155	30	<1					
010103		10	155	30	<1					
010104		10	20	15	<1					
010105		15	15	15	<1					
010106		30	210	50	1					
010107		10	20	25	<1					
010108		2	20	10	<1					
010109		10	25	15	<1					



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METHODS:

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BATCH No.: 23A CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALIA LTD.  
 ORDER No.: JTR. 20/1/75 AREA: ROSEBERRY TASMANIA DATE RECEIVED: 23/1/75  
 SAMPLE TYPE: STREAM No. OF SAMPLES: 128 DATE COMPLETED: 31/1/75  
SEDIMENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
<del>010040</del>		20	35	15	<1					
<del>010041</del>		25	45	35	<1					
<del>010042</del>		20	45	20	<1					
<del>010043</del>		25	45	20	<1					
<del>010044</del>		30	60	40	<1					
<del>010045</del>		20	40	30	<1					
<del>010046</del>		25	50	30	<1					
<del>010047</del>		40	40	30	<1					
<del>010048</del>		30	60	65	<1					
<del>010049</del>		20	40	20	<1					
<del>010050</del>		40	45	35	<1					
<del>010051</del>		20	30	20	<1					
<del>010052</del>		20	50	35	<1					
<del>010053</del>		25	40	25	<1					
<del>010054</del>		30	40	20	<1					
<del>010055</del>		35	35	30	<1					
<del>010056</del>		65	30	30	<1					
<del>010057</del>		50	15	30	<1					
<del>010058</del>		30	20	20	<1					
<del>010059</del>		10	20	20	<1					
<del>010060</del>		10	20	15	<1					
<del>010061</del>		10	20	15	<1					
<del>010062</del>		10	20	20	<1					
<del>010063</del>		10	20	15	<1					
<del>010065</del>		15	30	50	<1					
<del>010066</del>		10	15	30	<1					
<del>010067</del>		10	25	15	<1					
<del>010068</del>		10	20	20	<1					
<del>010069</del>		10	20	25	<1					
010101		10	35	15	<1					
010102		20	155	30	<1					
010103		10	155	30	<1					
010104		10	20	15	<1					
010105		15	15	15	<1					
010106		30	210	50	1					
010107		10	20	25	<1					
010108		2	20	10	<1					
010109		10	25	15	<1					

### METHODS:



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TELEX ALSEV 42344

## LABORATORY REPORT

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD  
 ORDER No.: Ltr 3/2/75 AREA: Rosebery, Tas DATE RECEIVED: 6/2/75  
 SAMPLE TYPE: Stream Sedi-ment No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm
10071		5	15	25	bld*
10072		2	10	15	bld
10073		10	20	10	bld
10074		5	10	15	bld
10075		2	10	10	bld
10076		5	15	10	bld
10077		5	20	10	bld
10078		5	15	10	bld
10079		5	15	10	bld
10080		5	15	10	bld
10081		2	10	5	bld
10082		5	15	10	bld
10083		5	15	10	bld
10084		5	15	10	bld
10085		5	10	10	bld
10086		5	15	20	bld
10087		10	30	10	bld
10088		2	10	10	bld
10089		5	10	10	bld
10090		5	10	10	bld
10091		2	10	10	bld
10092		5	20	10	bld
10093		2	10	15	bld
10094		5	10	10	bld
10095		2	15	5	bld
10096		2	15	10	bld
10097		5	25	10	bld
10098		2	20	10	bld
10099		2	20	15	bld
10100		2	30	10	bld
<del>10160</del>		2	20	10	bld
<del>10161</del>		5	25	10	bld
<del>10162</del>		10	20	10	bld
<del>10163</del>		10	15	10	bld
<del>10164</del>		10	15	10	bld
<del>10165</del>		10	20	10	bld
<del>10166</del>		5	10	10	bld
<del>10167</del>		5	15	10	bld
<del>10168</del>		5	15	10	bld
<del>10169</del>		5	15	5	bld



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METHODS:

bld = Below Limit of Detection  
 \*Ag bld = Less than 1 ppm

Cu Pb Zn - Method 1

Ag - Method 1  
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033

498034



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TELEX ALSEV 42344

R. W. YERBURY  
DIRECTOR

SHEET 3

BATCH No.: 23A CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALIA LTD  
ORDER No. LR 20/1/75 AREA: ROSEBERY TASMANIA DATE RECEIVED: 23/1/75  
SAMPLE TYPE: STREAM No. OF SAMPLES: 128 DATE COMPLETED: 31/1/75

### SEDIMENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
010110		5	20	20	<1						
010111		5	10	15	<1						
010112		5	15	10	<1						
010113		10	25	10	<1						
010114		10	20	15	<1						
010115		5	25	10	<1						
010116		2	10	10	<1						
010117		5	15	10	<1						
010118		35	20	15	<1						
010119		40	20	10	<1						
010120		45	25	10	<1						
010121		40	20	10	<1						
010122		60	20	30	<1						
010123		30	15	20	<1						
010124		50	20	10	<1						
010125		70	20	15	<1						
010126		2	5	10	<1						
010127		5	30	10	<1						
010128		5	10	5	<1						
010129		5	20	10	<1						
010130		10	20	10	<1						
010131		5	15	10	<1						
010132		5	10	5	<1						
010133		5	15	10	<1						
010134		2	10	10	<1						
010135		5	15	10	<1						
010136		10	20	10	<1						
010137		10	20	10	<1						
010138		5	20	10	<1						
010139		5	20	10	<1						
010140		5	15	5	<1						
010141		5	20	10	<1						
010142		5	10	5	<1						
010143		10	20	10	<1						
010144		2	10	5	<1						
010145		5	20	5	<1						
010146		5	20	10	<1						
010147		2	15	5	<1						
010148		10	10	10	<1						
010149		10	20	15	<1						



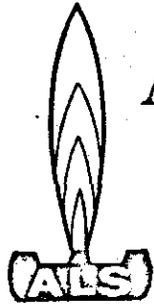
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#### METHODS:

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034

498035



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TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

SHEET 4

BATCH No.: 23A CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALIA LTD.  
 ORDER No.: LTR. 20/1/75 AREA: ROSEBERY TASMANIA DATE RECEIVED: 23/1/75  
 SAMPLE TYPE: STREAM No. OF SAMPLES: 128 DATE COMPLETED: 31/1/75  
SEDIMENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
010150		10	20	20	<1						
010151		10	20	20	<1						
010152		10	25	20	<1						
010153		10	15	15	<1						
010154		10	20	15	<1						
010155		10	15	15	<1						
010156		10	20	10	<1						
010157		10	20	15	<1						
010158		10	15	15	<1						
010159		10	20	10	<1						



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METHODS:

Cu Pb Zn Ag - METHOD 1.

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498036



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TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD  
ORDER No.: Ltr 3/2/75 AREA: Rosebery, Tas DATE RECEIVED: 6/2/75  
SAMPLE TYPE: Stream Sedi-ment No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
<del>10071</del>		5	15	25	bld*					
<del>10072</del>		2	10	15	bld					
<del>10073</del>		10	20	10	bld					
<del>10074</del>		5	10	15	bld					
<del>10075</del>		2	10	10	bld					
<del>10076</del>		5	15	10	bld					
<del>10077</del>		5	20	10	bld					
<del>10078</del>		5	15	10	bld					
<del>10079</del>		5	15	10	bld					
<del>10080</del>		5	15	10	bld					
<del>10081</del>		2	10	5	bld					
<del>10082</del>		5	15	10	bld					
<del>10083</del>		5	15	10	bld					
<del>10084</del>		5	15	10	bld					
<del>10085</del>		5	10	10	bld					
<del>10086</del>		5	15	20	bld					
<del>10087</del>		10	30	10	bld					
<del>10088</del>		2	10	10	bld					
<del>10089</del>		5	10	10	bld					
<del>10090</del>		5	10	10	bld					
<del>10091</del>		2	10	10	bld					
<del>10092</del>		5	20	10	bld					
<del>10093</del>		2	10	15	bld					
<del>10094</del>		5	10	10	bld					
<del>10095</del>		2	15	5	bld					
<del>10096</del>		2	15	10	bld					
<del>10097</del>		5	25	10	bld					
<del>10098</del>		2	20	10	bld					
<del>10099</del>		2	20	15	bld					
10160		2	30	10	bld					
10160		2	20	10	bld					
10161		5	25	10	bld					
10162		10	20	10	bld					
10163		10	15	10	bld					
10164		10	15	10	bld					
10165		10	20	10	bld					
10166		5	10	10	bld					
10167		5	15	10	bld					
10168		5	15	10	bld					
10169		5	15	5	bld					



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METHODS: bld = Below Limit of Detection  
\*Ag bld = Less than 1 ppm

Cu Pb Zn - Method 1  
Ag - Method 1  
Signatory

036

498037



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TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

Sheet 2

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD

ORDER No.: Ltr 3/2/75 AREA: ROSEBERY, TAS. DATE RECEIVED: 6/2/75

SAMPLE TYPE: Stream No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75  
Sediment

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10170		5	15	10	bld					
10171		5	15	10	bld					
10172		10	20	10	bld					
10173		5	20	10	bld					
10174		2	15	10	bld					
10175		5	10	10	bld					
10176		2	10	5	bld					
10177		2	10	5	bld					
10178		2	10	5	bld					
10179		2	15	5	bld					
10181		5	15	65	<1					SEE BATCH 27B SHEET. 2.
10180		2	15	5	bld					
10182		2	20	10	bld					
10183		5	30	15	bld					
10184		2	10	10	bld					
10185		2	10	10	bld					
10186		2	15	10	bld					
10187		2	15	5	bld					
10188		bld*	10	10	bld					
10189		2	15	10	bld					
10190		bld	10	5	bld					
10191		5	20	10	bld					
10192		5	20	10	bld					
10193		2	20	10	bld					
10194		2	15	10	bld					
10195		5	20	10	bld					
10196		5	20	10	bld					
10197		5	20	10	bld					
10198		5	20	10	bld					
10199		5	20	10	bld					
10200		5	20	10	bld					
10201		2	25	10	bld					
10202		2	20	5	bld					
10203		5	20	10	bld					
10204		5	20	5	bld					
10205		10	30	15	bld					
10206		20	45	25	1					
10207		15	35	20	bld					
10208		20	35	20	bld					
10209		15	35	20	bld					

SEE BATCH 27B SHEET. 2.



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METHODS:

\*bld = Below Limit of Detection  
Cu bld = Less than 2 ppm

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037

498038



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TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

Sheet 3

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD  
 ORDER No.: Ltr 3/2/75 AREA: ROSEBERY, TAS DATE RECEIVED: 6/2/75  
 SAMPLE TYPE: Stream No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75  
Sediment

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10210		20	25	20	bld					
10211		20	25	15	bld					
10212		15	35	15	bld					
10213		15	35	15	bld					
10214		30	35	30	1					
10215		30	40	15	bld					
10216		15	30	15	bld					
10217		20	35	20	bld					
10218		20	40	15	bld					
10219		15	40	20	bld					
10220		15	35	15	bld					
10221		15	35	20	bld					
10222		15	30	15	bld					
10223		10	30	15	bld					
10224		15	30	15	bld					
10225		10	30	15	bld					
10226		15	30	20	bld					
10227		15	30	20	bld					
10228		15	30	15	bld					
10229		15	30	15	bld					
10230		10	20	10	bld					
10231		10	20	10	bld					
10232		15	30	15	bld					
10233		15	30	15	1					
10234		10	20	10	bld					
10235		10	25	15	bld					
10236		10	25	20	bld					
10237		10	20	10	bld					
10238		10	20	10	bld					
10239		5	15	10	bld					
10240		2	10	5	bld					
10241		2	10	5	bld					
10242		5	20	5	bld					
10243		2	10	5	bld					
10244		2	10	5	bld					
10245		2	20	5	bld					
10246		2	15	5	bld					
10247		5	20	10	bld					
10248		5	25	10	bld					
10249		10	15	10	bld					



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METHODS:

*R. M. King*  
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## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

Sheet 4

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD  
ORDER No.: 3/2/75 Ltr AREA: ROSEBERY, TAS. DATE RECEIVED: 6/2/75  
SAMPLE TYPE: Stream No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75

Sediment

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10250		5	20	10	bld					
10251		bld	15	5	bld					
10252		5	10	10	bld					
10253		2	10	5	bld					
10254		5	20	10	bld					
10255		5	15	10	bld					
10256		10	20	10	bld					
10257		5	15	10	bld					
10258		10	25	15	bld					
10259		5	15	10	bld					
10260		10	20	10	bld					
10261		5	20	5	bld					
10262		5	20	10	bld					
10263		5	20	10	bld					
10264		5	20	5	bld					
10265		10	20	15	bld					
10266		10	20	10	bld					
10267		5	15	10	bld					
10268		10	25	10	bld					
10269		10	25	10	bld					
10270		5	15	10	bld					
10271		10	20	10	bld					
10272		5	20	10	bld					
10273		5	15	5	bld					
10274		5	20	10	bld					
10275		2	15	5	bld					
10276		5	20	10	bld					
10277		10	20	10	bld					
10278		5	20	10	bld					
10279		5	20	10	bld					
10280		5	20	10	bld					
10281		10	20	10	bld					
10282		5	20	10	bld					
10283		5	15	10	bld					
10284		5	20	10	bld					
10285		5	80	20	bld					
10286		5	20	10	bld					
10287		10	20	10	bld					
10288		5	15	10	bld					
10289		5	20	10	bld					



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METHODS:

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R. W. YERBURY  
DIRECTOR

Sheet 5

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD  
 ORDER No.: 3/2/75 Ltr AREA: ROSEBERY, TAS. DATE RECEIVED: 6/2/75  
 SAMPLE TYPE: Stream No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75  
Sediment

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10290		10	20	10	bld					
10291		10	20	10	bld					
10292		10	40	185	bld					
10293		10	25	10	bld					
10294		10	30	15	bld					
10295		5	30	10	bld					
10296		5	30	15	bld					
10297		5	20	5	bld					
10298		5	20	10	bld					
10299		5	20	10	bld					
10300		10	25	10	bld					
10500		2	15	5	bld					
10501		5	15	5	bld					
10502		5	15	5	bld					
10503		5	20	5	bld					
10504		5	20	5	bld					
10505		2	20	10	bld					
10506		5	20	10	bld					
10551		5	20	10	bld					
10552		2	15	5	bld					
10553		5	15	10	bld					
10554		5	15	10	bld					
10555		5	20	10	bld					
10556		2	20	10	bld					
10557		5	20	5	bld					



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METHODS:

Cu Pb Zn Ag - Method 1

*R. W. Yerbury*  
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J40

498041



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## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

BATCH No.: 27B CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALASIA PTY LTD  
 ORDER No.: LTR 6/2/75 AREA: ROSEBERRY TAS. DATE RECEIVED: 21/2/75  
 SAMPLE TYPE: STR SED. No. OF SAMPLES: 60 DATE COMPLETED: 3/3/75

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm
10507		15	30	20	1
10508		25	20	25	1
10509		25	30	20	1
10510		10	20	15	1
10511		50	30	40	1
10512		10	20	15	<1
10513		15	20	20	<1
10514		20	25	30	<1
10515		5	25	10	<1
10516		10	15	20	<1
10517		10	20	40	<1
10518		10	20	10	<1
10519		10	25	10	<1
10520		10	55	35	1
10521		15	20	20	<1
10522		15	15	15	<1
10523		10	20	10	<1
10524		5	25	15	<1
10525		5	25	5	<1
10526		10	30	20	<1
10527		5	25	10	<1
10528		5	25	10	<1
10529		5	25	10	<1
10530		25	50	20	<1
10531		20	30	10	<1
10532		20	40	15	<1
10534		2	25	5	<1
10535		5	25	5	<1
10538		10	40	20	<1
10539		20	35	15	<1



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METHODS:

Cu, Pb, Zn, Ag by Method 1.

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041

498042



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R. W. YERBURY  
DIRECTOR

SHEET. 2.

BATCH No.: 27B CLIENT: ELECTROLYTIC ZINC

ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_

SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
10540		20	50	10	<1						
10541		10	35	10	<1						
10542		20	65	15	<1						
10543		2	40	10	<1						
10544		2	25	5	<1						
10545		2	40	15	<1						
10546		2	50	15	<1						
10547		2	70	10	<1						
10558		5	40	15	<1						
10559		5	20	10	<1						
10560		2	10	5	<1						
10561		5	20	10	<1						
10562		5	15	5	<1						
10563		5	20	5	<1						
10564		5	20	15	<1						
10565		5	15	10	<1						
10566		10	40	15	<1						
10567		10	45	25	<1						
10568		20	55	40	<1						
10569		10	45	10	<1						
10570		10	70	5	<1						
10572		2	15	2	<1						
10573		5	10	5	<1						
10574		2	10	5	<1						
10575		10	15	10	<1						
10576		5	5	5	<1						
10577		5	20	10	<1						
10578		10	20	10	<1						
10579		5	15	5	<1						
10181		5	15	65	<1						



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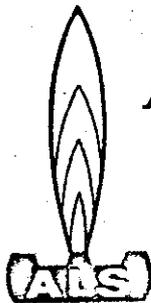
METHODS:

Signatory

*Roy W. Yerbury*

042

498043



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R. W. YERBURY  
DIRECTOR

Sheet 5

BATCH No.: 3B CLIENT: ELECTROLYTIC ZINC CO (AUST) LTD  
 ORDER No.: 3/2/75 Ltr AREA: ROSEBERY, TAS. DATE RECEIVED: 6/2/75  
 SAMPLE TYPE: Stream No. OF SAMPLES: 184 DATE COMPLETED: 10/2/75  
 Sediment

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
<del>10290</del>		10	20	10	bld					
<del>10291</del>		10	20	10	bld					
<del>10292</del>		10	40	185	bld					
<del>10293</del>		10	25	10	bld					
<del>10294</del>		10	30	15	bld					
<del>10295</del>		5	30	10	bld					
<del>10296</del>		5	30	15	bld					
<del>10297</del>		5	20	5	bld					
<del>10298</del>		5	20	10	bld					
<del>10299</del>		5	20	10	bld					
<del>10300</del>		10	25	10	bld					
<del>10500</del>		2	15	5	bld					
<del>10501</del>		5	15	5	bld					
<del>10502</del>		5	15	5	bld					
<del>10503</del>		5	20	5	bld					
<del>10504</del>		5	20	5	bld					
<del>10505</del>		2	20	10	bld					
<del>10506</del>		5	20	10	bld					
10551		5	20	10	bld					
10552		2	15	5	bld					
10553		5	15	10	bld					
10554		5	15	10	bld					
10555		5	20	10	bld					
10556		2	20	10	bld					
10557		5	20	5	bld					



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METHODS:

Cu Pb Zn Ag - Method 1

*R. W. Yerbury*  
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DIRECTOR

SHEET. 2.

BATCH No.: 27B CLIENT: ELECTROLYTIC ZINC  
ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10540		20	50	10	<1					
10541		10	35	10	<1					
10542		20	65	15	<1					
10543		2	40	10	<1					
10544		2	25	5	<1					
10545		2	40	15	<1					
10546		2	50	15	<1					
10547		2	70	10	<1					
10558		5	40	15	<1					
10559		5	20	10	<1					
10560		2	10	5	<1					
10561		5	20	10	<1					
10562		5	15	5	<1					
10563		5	20	5	<1					
10564		5	20	15	<1					
10565		5	15	10	<1					
10566		10	40	15	<1					
10567		10	45	25	<1					
10568		20	55	40	<1					
10569		10	45	10	<1					
10570		10	70	5	<1					
10572		2	15	2	<1					
10573		5	10	5	<1					
10574		2	10	5	<1					
10575		10	15	10	<1					
10576		5	5	5	<1					
10577		5	20	10	<1					
10578		10	20	10	<1					
10579		5	15	5	<1					
10181		5	15	65	<1					



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METHODS:

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04

*Mr. Davant* *Geordie*

498045



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## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

BATCH No.: 35C CLIENT: ELECTROLYTIC ZINC CO AUST LTD  
ORDER No.: LR 19/3/75 AREA: ROSEBERRY TASMANIA DATE RECEIVED: 24/3/75  
SAMPLE TYPE: STREAM No. OF SAMPLES: 110 DATE COMPLETED: 26/3/75

### SEDIMENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10610		20	25	15	<1					
10611		15	10	10	<1					
10612		15	20	10	<1					
10613		10	10	10	<1					
10614		20	10	10	<1					
10615		15	30	10	<1					
10616		20	20	10	<1					
10617		5	10	5	<1					
10618		10	15	15	<1					
10619		10	15	5	<1					
10620		15	25	15	<1					
10621		10	10	10	<1					
10622		10	20	5	<1					
10623		15	20	10	<1					
10624		15	15	10	<1					
10625		10	10	10	<1					
10626		15	15	5	<1					
10627		20	20	10	<1					
10628		15	30	10	<1					
10629		15	20	5	<1					
10630		10	20	2	<1					
10631		10	20	10	<1					
10632		15	20	5	<1					
10633		15	15	10	<1					
10634		20	15	10	<1					
10635		10	10	5	<1					
10636		15	15	10	<1					
10637		10	20	10	<1					
10638		15	15	2	<1					
10639		10	10	5	<1					

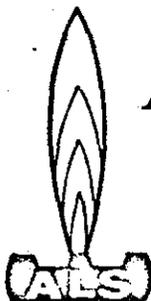


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METHODS: Cu Pb Zn Ag by Method 1

Signatory *Ray W. Yerbury*

498046



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Sheet 2

R. W. YERBURY  
DIRECTOR

BATCH No.: 35C CLIENT: ELECTROLYTIC ZINC CO AUST LTD  
 ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
 SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10640		10	20	2	<1					
10641		10	15	5	<1					
10642		30	25	10	<1					
10643		20	30	10	<1					
10644		5	15	2	<1					
10645		<2	20	10	<1					
10646		2	15	10	<1					
10647		2	<5	2	<1					
10648		<2	15	25	<1					
10649		<2	15	5	<1					
10650		<2	15	10	<1					
10651		<2	10	5	<1					
10652		<2	10	5	<1					
10653		<2	15	10	<1					
10654		<2	10	10	<1					
10655		<2	20	10	<1					
10656		2	10	10	<1					
10657		10	5	10	<1					
10658		5	5	10	<1					
10659		10	10	10	<1					
10660		10	<5	15	<1					
10661		5	10	110	<1					
10662		5	20	30	<1					
10663		15	15	10	<1					
10664		15	10	40	<1					
10665		20	10	15	<1					
10666		15	15	10	<1					
10667		20	15	15	<1					
10668		25	10	10	<1					
10669		75	20	25	<1					



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METHODS:

Signatory *R. W. Yerbury*

046

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## LABORATORY REPORT

Sheet 3

R. W. YERBURY  
DIRECTOR

BATCH No.: 35C CLIENT: ELECTROLYTIC ZINC CO AUST LTD  
 ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
 SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10670		20	15	10	<1					
10671		20	10	10	<1					
10672		45	15	15	<1					
10673		20	15	10	<1					
10674		40	15	15	<1					
10675		15	10	10	<1					
10676		20	20	60	<1					
10677		15	10	10	<1					
10678		15	20	10	<1					
10679		30	20	10	<1					
10680		15	15	10	<1					
→ 10681		15	10	10	<1					
10682		<2	5	10	<1					
→ 10683		<2	10	10	<1					
10684		<2	10	10	<1					
10685		<2	<5	10	<1					
10686		<2	10	5	<1					
10687		<2	10	5	<1					
→ 10688		<2	10	10	<1					
10689		2	20	5	<1					
10690		2	15	10	<1					
10691		2	10	10	<1					
10692		5	10	10	<1					
→ 10693		2	15	5	<1					
10701		30	20	5	<1					
10702		30	20	10	<1					
10703		30	15	10	<1					
10704		25	20	10	<1					
10705		20	20	10	<1					
10706		25	20	10	<1					

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R. W. YERBURY  
DIRECTOR

Sheet 4

BATCH No.: 350 CLIENT: ELECTROLYTIC ZINC CO AUST LTD  
 ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
 SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
10707		30	15	10	<1						
10708		30	15	10	<1						
10709		60	20	15	<1						
10710		55	25	15	<1						
10711		40	20	10	<1						
10712		70	25	10	<1						
10713		80	40	130	<1						
10714		15	25	10	<1						
10715		15	25	10	<1						
10716		5	30	10	<1						
10717		<2	20	10	<1						
10718		2	35	10	<1						
10719		<2	15	10	<1						
10720		5	25	10	<1						
10721		5	25	10	<1						
10722		10	15	10	<1						
10723		<2	10	5	<1						
10724		<2	10	5	<1						
10725		<2	10	5	<1						
10726		<2	10	<2	<1						



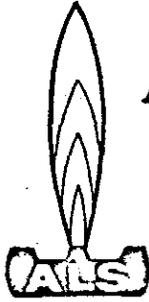
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METHODS:

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TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

SHEET 2.

BATCH No.: 180 CLIENT: ELECTROLYTIC ZINC CO OF AUST.

ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_

SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
10757		5	30	10	<1						
10758		2	5	10	<1						
10759		5	15	10	<1						
10760		2	10	5	<1						
10761		2	15	10	<1						
10762		2	10	10	<1						
10763		50	20	15	<1						
10764		60	30	15	<1						
10765		35	20	15	<1						
10766		<2	20	5	<1						
10767		<2	5	10	<1						
10768		<2	10	5	<1						



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METHODS:

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049

498050



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## LABORATORY REPORT

44 BALACLAVA ST., WOOLLOONGABBA 4102  
Phone (072) 91 6986 A/H 55 0776  
TELEX ALSEV 42344

R. W. YERBURY  
DIRECTOR

BATCH No.: 18D CLIENT: ELECTROLYTIC ZINC CO OF AUSTRALIA  
ORDER No.: LTR 21/3/75 AREA: ROSEBERY, TAS. DATE RECEIVED: 7/4/75  
SAMPLE TYPE: STREAM SEDI- / No. OF SAMPLES: 42 DATE COMPLETED: 9/4/75  
MENT

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10727		10	5	10	<1					
10728		15	15	10	<1					
10729		10	15	10	<1					
10730		15	30	10	<1					
10731		15	15	15	<1					
10732		15	10	10	<1					
10733		15	15	10	<1					
10734		10	20	10	<1					
10735		10	15	10	<1					
10736		2	15	5	<1					
10737		5	20	10	<1					
10738		10	20	10	<1					
10739		10	25	10	<1					
10740		10	30	10	<1					
10741		2	20	5	<1					
10742		10	15	5	<1					
10743		5	15	5	<1					
10744		5	20	10	<1					
10745		5	25	10	<1					
10746		10	20	15	<1					
10747		5	20	10	<1					
10748		10	30	15	<1					
10749		2	10	10	<1					
10750		5	35	5	<1					
10751		2	20	5	<1					
10752		10	25	10	<1					
10753		5	20	10	<1					
10754		5	25	5	<1					
10755		2	15	5	<1					
10756		2	10	5	<1					

METHODS: Cu Pb Zn Ag by method 1



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APPENDIX 3b.Geochemical Stream Sediment Sample  
Data.

## Selected Samples

- 20           + 40 mesh
- 40           + 80 mesh
- 80           +120 mesh
- 120 mesh

051

FILE - JAMES L. DIXON GEOCHEMISTRY

498052

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R. W. YERBURY  
DIRECTOR

## LABORATORY REPORT

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TELEX ALSEV 42344

BATCH No.: 8C CLIENT: ELECTROLYTIC ZINC CO. OF AUST. LTD.  
ORDER No.: LTR 26/2/75 AREA: ROSEBERY, TAS. DATE RECEIVED: 5/3/75  
SAMPLE TYPE: STR - SED. No. OF SAMPLES: 124 DATE COMPLETED: 11/3/75

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10015 -20 + 40		5	15	15	<1					
10015 -40 + 80		5	15	10	<1					
10015 -80 + 120		5	15	20	<1					
10015 -120		5	35	15	1					
10017 -20 + 40		15	20	15	1					
10017 -40 + 80		10	15	10	1					
10017 -80 + 120		20	10	15	1					
10017 -120		Insufficient sample.								
10022 -20 + 40		20	5	10	<1					
10022 -40 + 80		20	5	10	<1					
10022 -80 + 120		25	15	10	<1					
10022 -120		45	15	20	1					
10024 -20 + 40		20	15	10	<1					
10024 -40 + 80		15	20	10	<1					
10024 -80 + 120		30	10	5	<1					
10024 -120		35	20	15	<1					
10040 -20 + 40		20	25	15	<1					
10040 -40 + 80		15	20	10	<1					
10040 -80 + 120		45	35	30	<1					
10040 -120		20	30	20	<1					
10045 -20 +40		20	35	20	<1					
10045 -40 + 80		40	20	25	1					
10045 -80 + 120		Insufficient sample								
10045 -120		Insufficient sample								
10047 -20 + 40		40	30	20	<1					
10047 -40 + 80		30	30	20	<1					
10047 -80 + 120		Insufficient sample								
10047 -120		Insufficient sample								
10050 -20 + 40		25	30	30	<1					
10050 -40 + 80		35	25	20	<1					



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METHODS: Cu, Pb, Zn, Ag - 1

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TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

SHEET. 2.

BATCH No.: 8C CLIENT: ELECTROLYTIC ZINC CO. OF AUST. LTD.  
 ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
 SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10050 -80 +120		40	50	20	<1					
10050 -120		50	95	40	<1					
10055 -20 + 40		35	25	20	1					
10055 -40 + 80		20	25	20	<1					
10055 -80 + 120		Insufficient sample								
10055 -120		Insufficient sample								
10057 -20 + 40		40	20	25	<1					
10057 -40 + 80		45	15	240	<1					
10057 -80 + 120		Insufficient sample								
10057 -120		Insufficient sample								
10075 -20 + 40		5	25	5	<1					
10075 -40 + 80		2	10	5	<1					
10075 -80 + 120		2	10	5	<1					
10075 -120		2	10	10	<1					
10080 -20 + 40		10	50	10	<1					
10080 -40 + 80		5	30	5	<1					
10080 -80 + 120		5	20	5	<1					
10080 -120		5	20	10	<1					
10085 -20 + 40		10	20	15	<1					
10085 -40 + 80		5	20	5	<1					
10085 -80 + 120		5	15	5	<1					
10085 -120		10	15	10	<1					
10090 -20 + 40		5	5	10	<1					
10090 -40 + 80		5	5	10	<1					
10090 -80 + 120		5	5	10	<1					
10090 -120		5	15	10	<1					
10101 -20 + 40		5	5	10	<1					
10101 -40 + 80		2	20	10	<1					
10101 -80 + 120		2	15	15	<1					
10101 -120		5	30	20	<1					



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METHODS:

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 TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
 DIRECTOR

SHEET 3.

BATCH No.: 8C CLIENT: ELECTROLYTIC ZINC CO. OF AUST. LIMITED.  
 ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
 SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm						
10102 -20 + 40		30	200	40	<1						
10102 -40 + 80		30	240	30	<1						
10102 -80 +120		Insufficient sample									
10102 -120		20	140	55	<1						
10104 -20 + 40		10	25	5	<1						
10104 -40 + 80		10	25	5	<1						
10104 -80 +120		5	10	5	<1						
10104 -120		10	25	10	<1						
10106 -20 + 40		35	145	60	1						
10106 -40 + 80		30	175	30	1						
10106 -80 +120		Insufficient sample									
10106 -120		Insufficient sample									
10118 -20 + 40		30	15	15	<1						
10118 -40 + 80		30	20	10	<1						
10118 -80 +120		25	15	5	<1						
10118 -120		35	40	15	<1						
10120 -20 + 40		35	20	10	<1						
10120 -40 + 80		35	25	5	<1						
10120 -80 +120		40	20	5	<1						
10120 -120		50	25	10	1						
10122 -20 + 40		95	30	15	<1						
10122 -40 + 80		85	25	15	<1						
10122 -80 +120		65	40	10	<1						
10122 -120		70	25	20	<1						
10124 -20 + 40		45	20	20	<1						
10124 -40 + 80		40	30	10	1						
10124 -80 +120		35	25	10	1						
10124 -120		50	40	15	1						
10125 -20 + 40		40	20	10	<1						
10125 -40 + 80		30	20	10	<1						



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 TELEX ALSEV 42344

R. W. YERBURY  
 DIRECTOR

SHEET. 4.

BATCH No.: 8C CLIENT: ELECTROLYTIC ZINC CO OF AUST. LIMITED.  
 ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
 SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10125 -80 + 120		40	30	10	<1					
10125 -120 "		75	15	20	1					
10166 -20 + 40		2	10	10	<1					
10166 -40 + 80		2	10	5	<1					
10166 -80 + 120		<2	10	5	<1					
10166 -120		5	20	10	<1					
10169 -20 + 40		5	25	15	<1					
10169 -40 + 80		2	20	5	<1					
10169 -80 + 120		2	10	2	<1					
10169 -120		5	15	20	<1					
10172 -20 + 40		5	5	10	<1					
10172 -40 + 80		5	30	5	<1					
10172 -80 + 120		10	30	10	<1					
10172 -120		15	30	35	<1					
10173 -20 + 40		5	5	5	<1					
10173 -40 + 80		5	10	5	<1					
10173 -80 + 120		5	5	5	<1					
10173 -120		10	20	10	<1					
10175 -20 + 40		5	10	5	<1					
10175 -40 + 80		2	20	2	<1					
10175 -80 + 120		2	10	5	<1					
10175 -120		5	15	20	<1					
10180 -20 + 40		2	15	5	<1					
10180 -40 + 80		2	5	5	<1					
10180 -80 + 120		5	30	10	<1					
10180 -120		2	10	5	<1					
10185 -20 + 40		5	5	10	<1					
10185 -40 + 80		2	10	10	<1					
10185 -80 + 120		2	30	5	<1					
10185 -120		5	15	10	<1					



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Phone (072) 91 6986 A/H 55 0776  
TELEX ALSEV 42344

## LABORATORY REPORT

R. W. YERBURY  
DIRECTOR

SHEET 5.

BATCH No.: 8C CLIENT: ELECTROLYTIC ZINC CO OF AUST. LTD.  
ORDER No.: \_\_\_\_\_ AREA: \_\_\_\_\_ DATE RECEIVED: \_\_\_\_\_  
SAMPLE TYPE: \_\_\_\_\_ No. OF SAMPLES: \_\_\_\_\_ DATE COMPLETED: \_\_\_\_\_

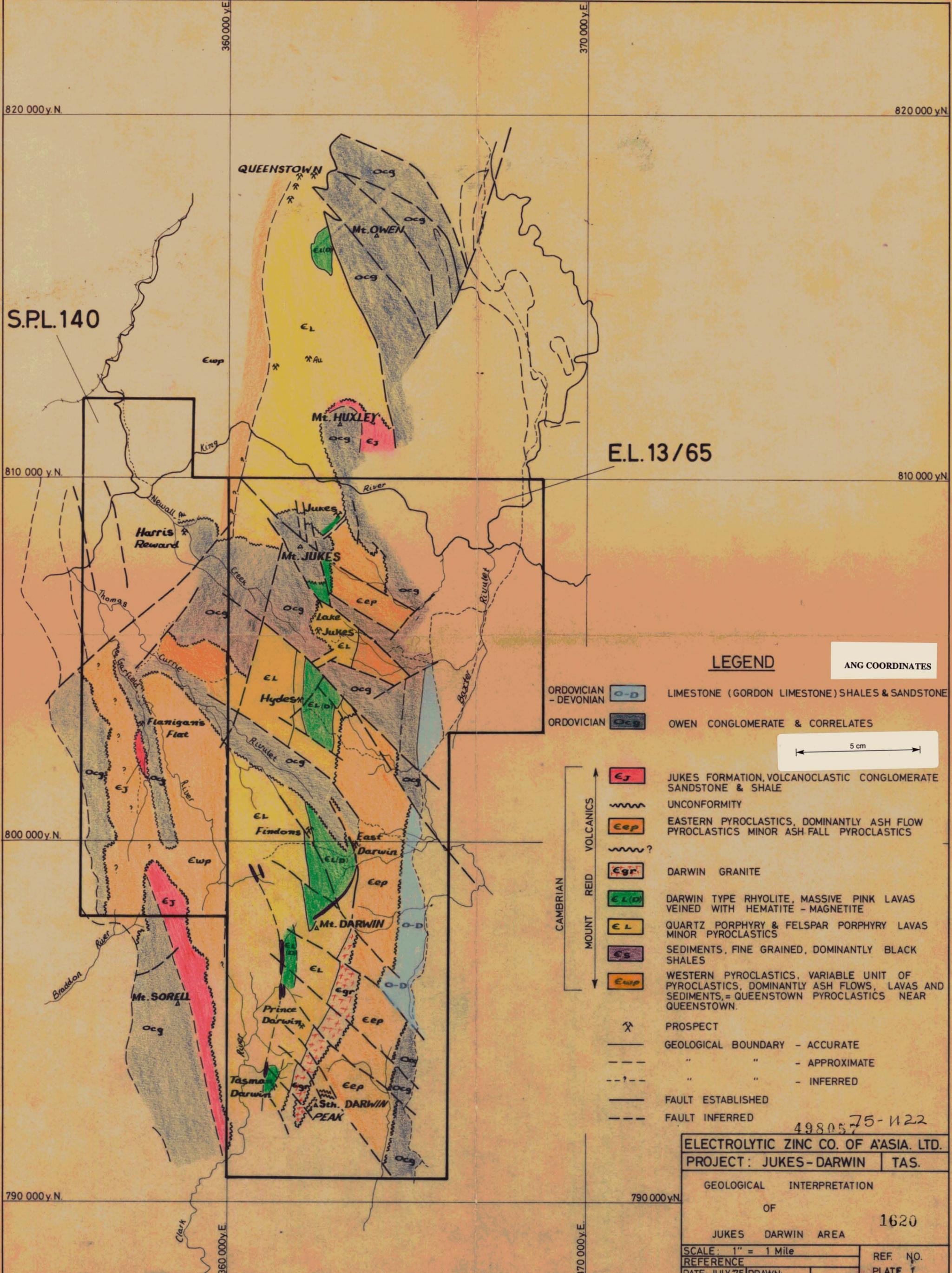
SAMPLE No.	LAB No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm					
10190 -20 + 40		5	20	10	<1					
10190 -40 + 80		<2	20	5	<1					
10190 -80 + 120		<2	20	5	<1					
10190 -120		<2	15	10	<1					
10195 -20 + 40		2	30	20	<1					
10195 -40 + 80		2	35	10	<1					
10195 -80 + 120		2	25	5	<1					
10195 -120		5	30	15	<1					
10210 -20 + 40		15	35	20	1					
10210 -40 + 80		15	35	15	<1					
10210 -80 + 120		15	60	15	1					
10210 -120		20	40	20	1					
10211 -20 + 40		20	25	20	1					
10211 -40 + 80		15	20	10	<1					
10211 -80 + 120		15	20	15	<1					
10211 -120		15	20	15	<1					



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METHODS:

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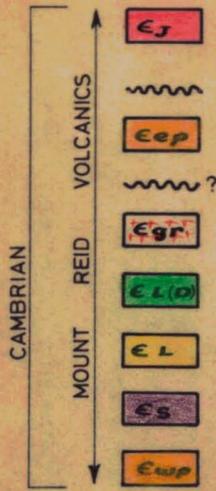
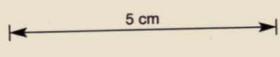
S.P.L.140

E.L.13/65

**LEGEND**

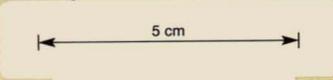
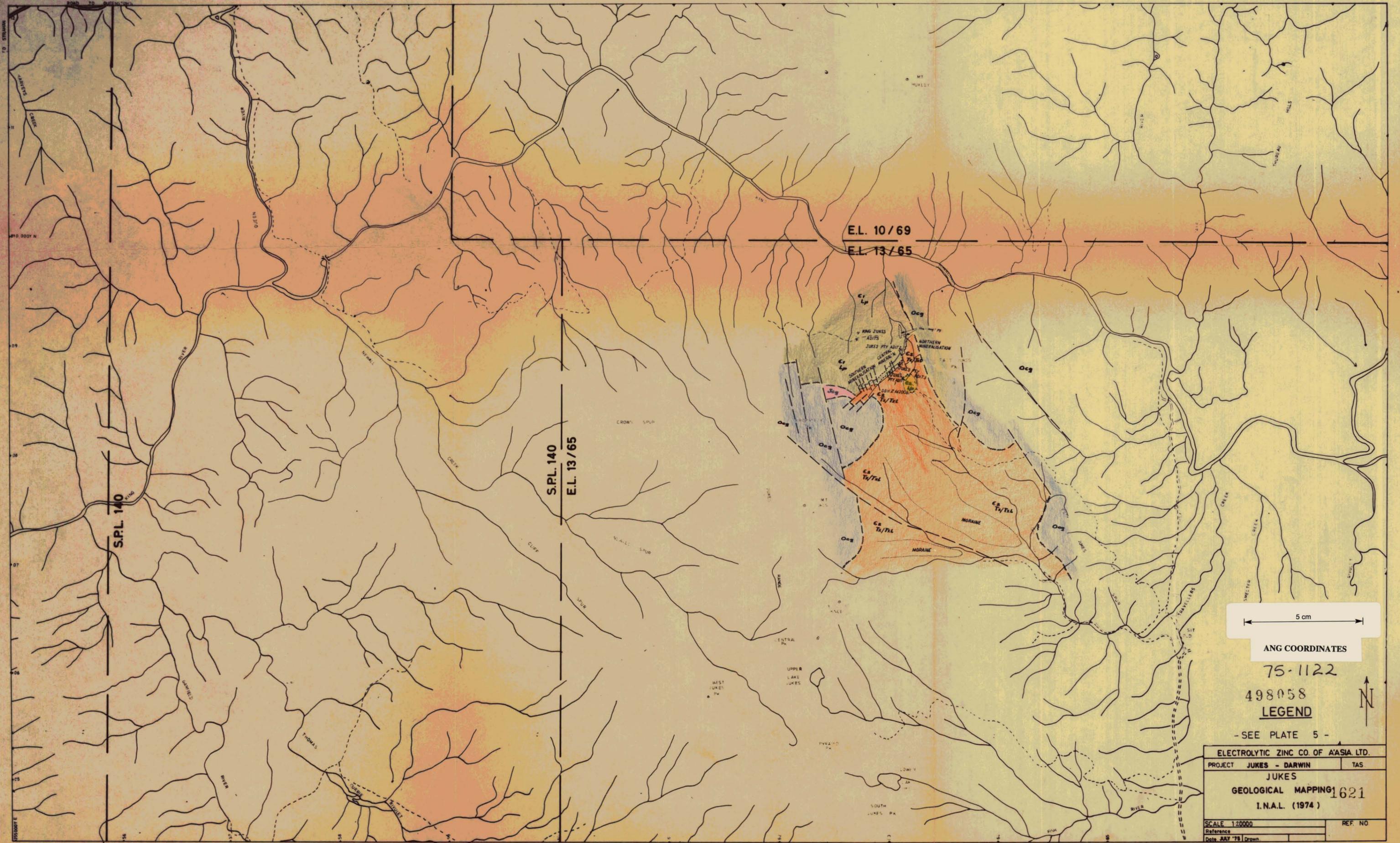
ANG COORDINATES

- ORDOVICIAN - DEVONIAN O-D LIMESTONE (GORDON LIMESTONE) SHALES & SANDSTONE
- ORDOVICIAN Ocg OWEN CONGLOMERATE & CORRELATES
- EJ JUKES FORMATION, VOLCANOCLASTIC CONGLOMERATE SANDSTONE & SHALE
- UNCONFORMITY
- Eep EASTERN PYROCLASTICS, DOMINANTLY ASH FLOW PYROCLASTICS MINOR ASH FALL PYROCLASTICS
- ?
- Egr DARWIN GRANITE
- EL(D) DARWIN TYPE RHYOLITE, MASSIVE PINK LAVAS VEINED WITH HEMATITE - MAGNETITE
- EL QUARTZ PORPHYRY & FELSPAR PORPHYRY LAVAS MINOR PYROCLASTICS
- ES SEDIMENTS, FINE GRAINED, DOMINANTLY BLACK SHALES
- Ewp WESTERN PYROCLASTICS, VARIABLE UNIT OF PYROCLASTICS, DOMINANTLY ASH FLOWS, LAVAS AND SEDIMENTS, = QUEENSTOWN PYROCLASTICS NEAR QUEENSTOWN.
- X PROSPECT
- GEOLOGICAL BOUNDARY - ACCURATE
- - - " " - APPROXIMATE
- - ? - " " - INFERRED
- FAULT ESTABLISHED
- - - FAULT INFERRED



4980575-1122

ELECTROLYTIC ZINC CO. OF ASIA. LTD.	
PROJECT: JUKES-DARWIN	TAS.
GEOLOGICAL INTERPRETATION	
OF	
JUKES DARWIN AREA	
1620	
SCALE: 1" = 1 Mile	REF. NO.
REFERENCE	DATE: JULY 75
DATE: JULY 75	DRAWN:
	PLATE 1



ANG COORDINATES

75-1122

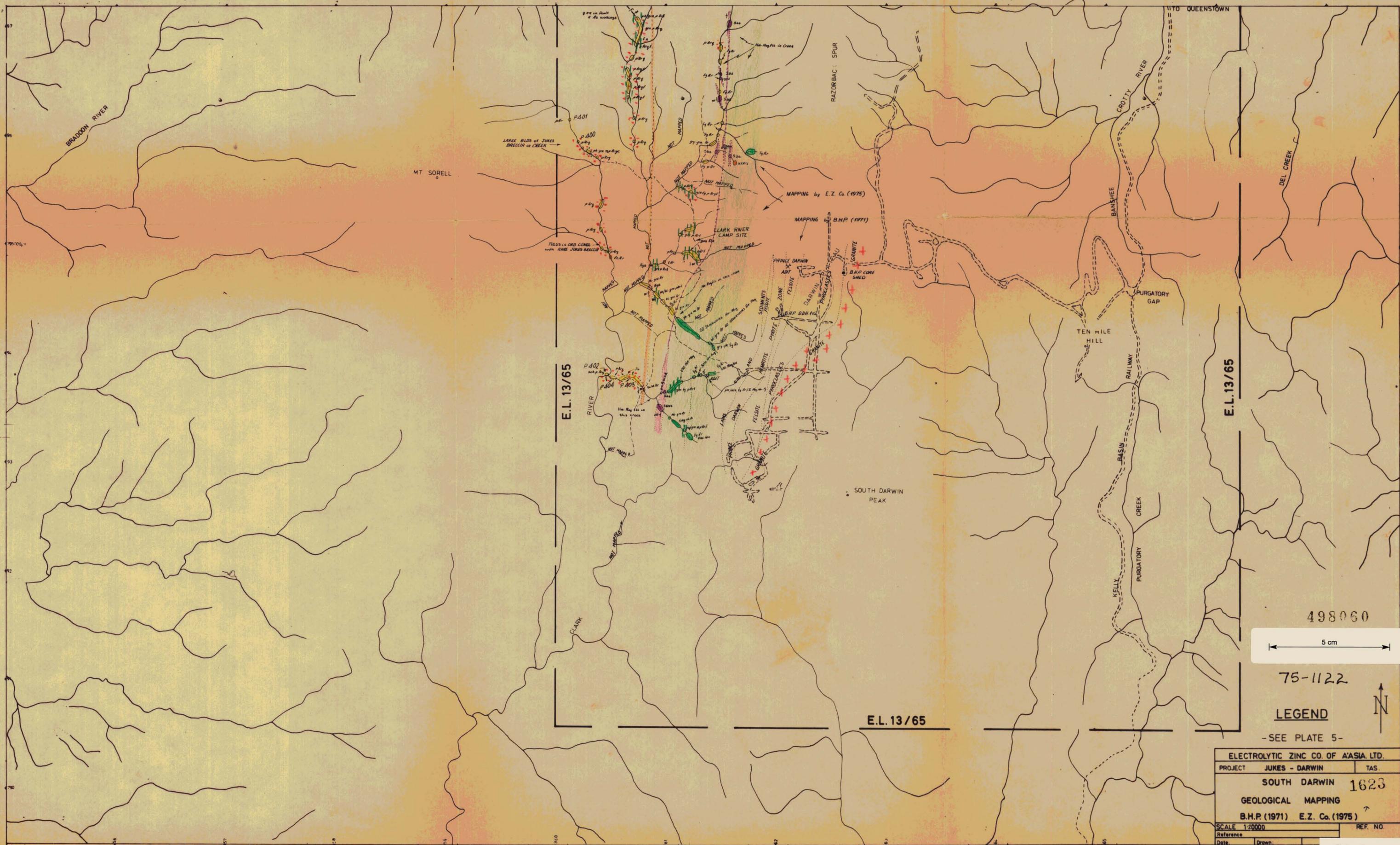
498058

LEGEND

- SEE PLATE 5 -

ELECTROLYTIC ZINC CO. OF ASIA LTD.		
PROJECT	JUKES - DARWIN	TAS
JUKES		
GEOLOGICAL MAPPING		1621
I.N.A.L. (1974)		
SCALE	1:20000	REF. NO
Reference		
Date	JULY '78	Drawn





E.L.13/65

E.L.13/65

498060



75-1122

LEGEND

- SEE PLATE 5 -

ELECTROLYTIC ZINC CO. OF ASIA LTD.	
PROJECT	JUKES - DARWIN TAS.
SOUTH DARWIN 1623	
GEOLOGICAL MAPPING	
B.H.P. (1971) E.Z. Co. (1975)	
SCALE	1:20000
Reference	REF. NO
Date	Drawn

PLATE 4

ANG COORDINATES

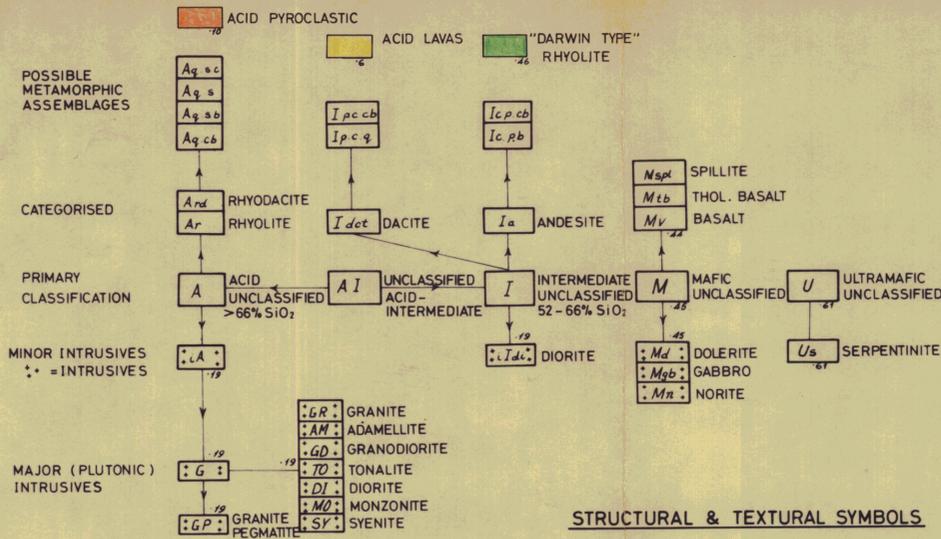
LEGEND FOR ELECTROLYTIC ZINC CO. A'ASIA. LTD. (1975) MAPPING

LEGEND FOR I.N.A.L. (1974) MAPPING

TOPOGRAPHICAL SYMBOLS

IGNEOUS ROCKS

SILICATE MINERALOGY

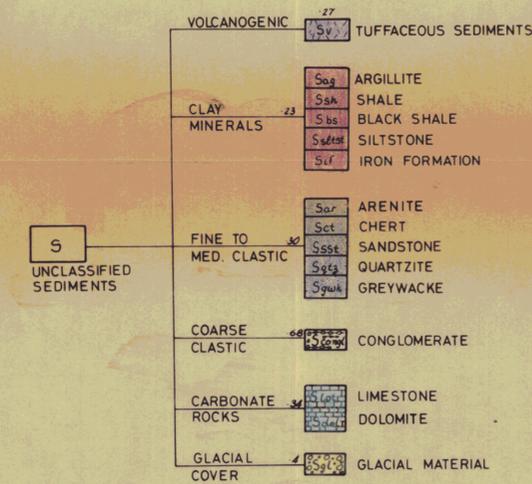


20	q	QUARTZ
51	k	K-FELSPAR
47	ab	ALBITE
45	p	PLAGIOCLASE
44	px	PYROXENE
40	b	BIOTITE
40	c	CHLORITE
59	cb	CARBONATE
37	s	SERICITE
46	e	EPIDOTE
64	t	TALC
45	ba	BARITE
45	f	FELSPAR
17	ab	ALBITISED
55	cbid	CARBONATED
45	cid	CHLORITISED
39	sid	SERICITISED
30	sil	SILICIFIED

STRUCTURAL & TEXTURAL SYMBOLS

SULPHIDE MINERALOGY

SEDIMENTARY ROCKS



t	UNDIFFERENTIATED TUFF
lt	LITHIC TUFF
xt	CRYSTAL TUFF
vt	VITRIC TUFF
lpt	LAPILLI TUFF 4-32mm
bt	BRECCIA >32mm
ag	AGGLOMERATE >32mm
bm	BOMBS
fm	FIAMME (LENGTH IN cms.)
pm	PUMICE
af	ASH FLOW
ae	QUARTZ EYES/AUGEN TEXTURE
pl	PILLOWS
fb	FLOW BANDING
lv	FLOW BRECCIA
la	LAVA
a	AMYGDALOIDAL
s	SPHERULITIC
p	PORPHYRITIC
cl	CLOTS
ac	ACICULAR
o	OPHTIC
cm	CHILLED MARGIN
pm	PEGMATIC
v	VEINS
m	MASSIVE
c	CLEAVED
sch	SCHIST
ox	OXIDISED
lat	LATERITE
bd	BEDDED
x bd	CROSS BEDDED
thbd	THICK BEDDED
thbd	THIN BEDDED
lam	LAMINATED
g	GRADED OR DIRECTION OF DECREASING GRAIN SIZE
lc	LODE CAST
sf	SCOUR & FILL

MINERALISATION

STADTLER 104/2	dis	10% DISSEMINATED
	dis	10-20% "
	dis	~2.5% "
	str	STRINGER
	mas	MASSIVE

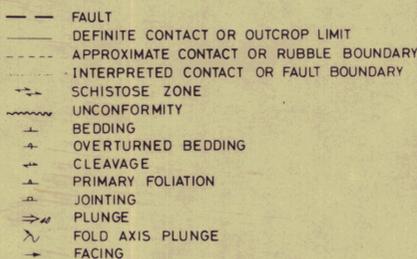
COLOURS

pl	PALE
dk	DARK
pk	PINK
rd	RED
org	ORANGE
yel	YELLOW
ol	OLIVE
grn	GREEN
bl	BLUE
gr	GREY
blk	BLACK

IGNEOUS GRAIN SIZE

vco	VERY COARSE GRAINED >5 cm
co	COARSE GRAINED 5cm-5mm
mg	MEDIUM GRAINED 5mm-1mm
fg	FINE GRAINED <1mm

STRUCTURAL SYMBOLS



ORDOVICIAN Ocg OWEN CONGLOMERATE: SANDSTONES, GRITS, & CONGLOMERATE

Jcg JUKES CONGLOMERATE: MATERIAL DERIVED FROM CAMBRIAN VOLCANICS

Flw WATER-LAID TUFFS, FINE GRAINED, BANDED, SEEN AS UPPERMOST UNIT, IN EAST

Ixc CRYSTAL TUFFS: FINE TO MEDIUM GRAINED GREY-GREEN ROCKS, WITH 'PORPHYRITIC' APPEARANCE FROM QUARTZ XENOCRYSTS AND CHLORITISED GLASSY SHARDS. REPRESENTS IGNI-MBRITE FLOWS

Ixl CRYSTAL LITHIC TUFFS, MEDIUM-COARSE GRAINED HETEROGENEOUS ROCKS WITH GREY GREEN CRYSTAL TUFF MATRIX BETWEEN CLASTS. CLASTS MEASURE 1x1.5cm. TO 10x20cm. USUALLY ANGULAR TO SUB-ROUNDED. FREQUENT CLASTS OF PORPHYRITIC LAVAS BUT MAINLY TUFFS. SOMETIMES PYRITIC (ie. PYRITE BOMBS) REPRESENT BASALT PARTS OF IGNI-MBRITE FLOWS

Lp LAVAS, PORPHYRITIC (PHENOCLASTS 2-5mm. ACROSS)

Darwin Granite C Darwin Granite: SUBVOLCANIC, INTRUDE CENTRAL CORE RHYOLITES. CLASTS OF GRANITE OBSERVED IN OVERLYING FLANKING PYROCLASTICS

Ixc/Ixl CRYSTAL TUFFS, CRYSTAL-LITHIC TUFFS AND BANDED ASHES. SLUMP STRUCTURES WELL-DEVELOPED IN BANDED ASHES

Ixc CRYSTAL TUFF

Ixl CRYSTAL-LITHIC TUFF

Agg AGGLOMERATE

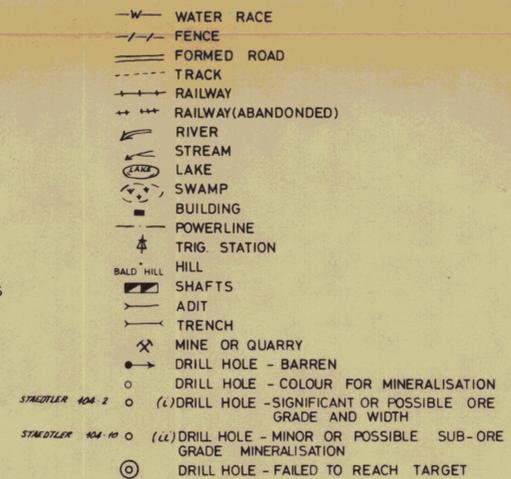
Tl LITHIC TUFF (INCLUDES LAPILLI TUFFS)

Ah BANDED ASH

Ch CHERT (POSSIBLY WATER-LAID ASHES)

Lp LAVAS, MASSIVE PINK PORPHYRITIC VEINED BY HEMATITE-MAGNETITE

bx	BOXWORK
su	SULPHIDES
gs	GOSSAN
pm	PENTLANDITE
hm	HEMATITE
cc	CHALCOCITE
bn	BORNITE
cp	CHALCOPYRITE
sp	SPHALERITE
ga	GALENA
py	PYRRHOTITE
il	ILLMENITE
lc	LEUCOXENE
mg	MAGNETITE



OPERATION OF LEGEND

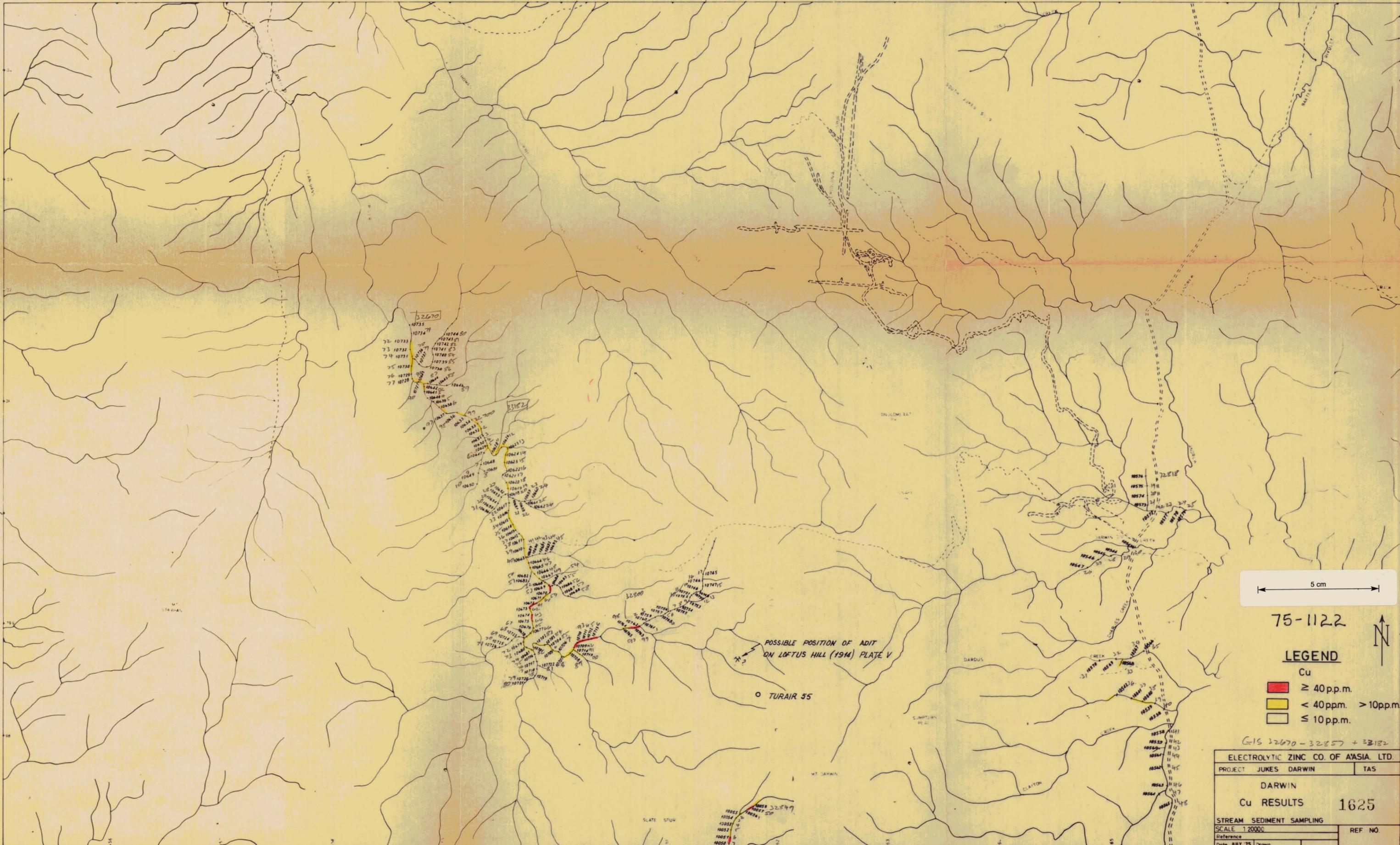
DESCRIBING ROCK UNITS

- CAPITAL LETTER - INDICATES PRIMARY CLASSIFICATION eg A - ACID IGNEOUS ROCKS
  - LOWER CASE LETTERS - INDICATES THE FOLLOWING:
    - AS PREFIXES IN PROGRESSIVE ORDER
      - COLOURS eg (i) grn M - GREEN MAFIC IGNEOUS ROCK
        - pk/grn A - PINK FRAGMENTS OR PHENOCRYSTS IN AN ACID IGNEOUS ROCK WITH A GREEN MATRIX
        - STRUCTURAL OR TEXTURAL FEATURES
          - agw & A - CRYSTAL TUFF OF ACID COMPOSITION
          - x b d S - CROSS BEDDED SEDIMENTARY ROCK
      - AS SUFFIXES IN PROGRESSIVE ORDER
        - CATEGORISED eg (i) Ar = RHYOLITE, (ii) Ssh = SHALE
        - MINERALOGY eg (i) pAr - RHYOLITE WITH FELSPAR PHENOCRYSTS
        - Ag s - QUARTZ SERICITE ROCK OF ACID IGNEOUS ORIGIN
        - Ar ab - ALBITISED RHYOLITE
- EXAMPLE - pk/grn clwd xt vt Ar d ab cd  
 pk/grn (COLOURS) - PINK CRYSTALS IN A GREEN MATRIX, clwd (STRUCTURAL FEATURE) - CLEAVED, xt vt (TEXTURE) - CRYSTAL VITRIC TUFF, A (PRIMARY SUBDIVISION) - ACID IGNEOUS ROCK, rd (CATEGORISED) - RHYODACITE, ab (PRIMARY MINERALOGY) - ALBITE PHENOCRYSTS, cd (ALTERATION MINERALOGY) - CHLORITISED.

75-1122

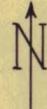
10. COLOUR OF CUMBERLAND 'DERWENT' N° 19 PENCIL

ELECTROLYTIC ZINC CO. OF A'ASIA. LTD.	
PROJECT: JUKES - DARWIN	TAS.
GEOLOGICAL LEGEND 498061	
FOR GEOLOGICAL REPORT NO.123	
PLATES 2,3,4	
REF. NO.	
DATE: AUG.1975	REVISED.
PLATE 5	



5 cm

75-1122

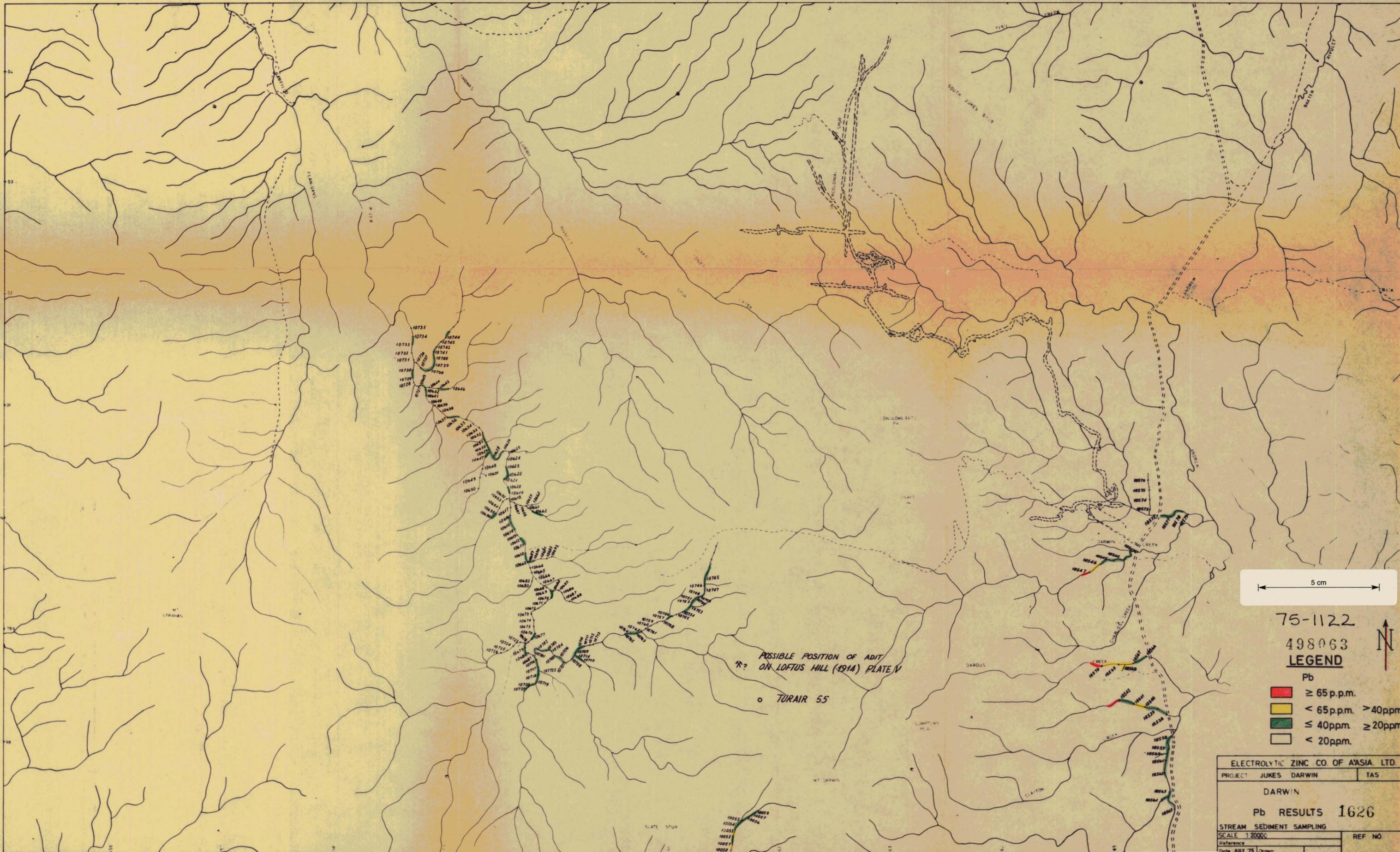


**LEGEND**

- Cu
- ≥ 40 pp.m.
- < 40 pp.m. > 10 pp.m.
- ≤ 10 pp.m.

GIS 32670-32857 + 33182

ELECTROLYTIC ZINC CO. OF ASIA, LTD.	
PROJECT JUKES DARWIN	TAS
DARWIN	
Cu RESULTS	1625
STREAM SEDIMENT SAMPLING	
SCALE 1:20000	REF NO
Reference	
Date JULY 75	Drawn



5 cm

75-1122

498063

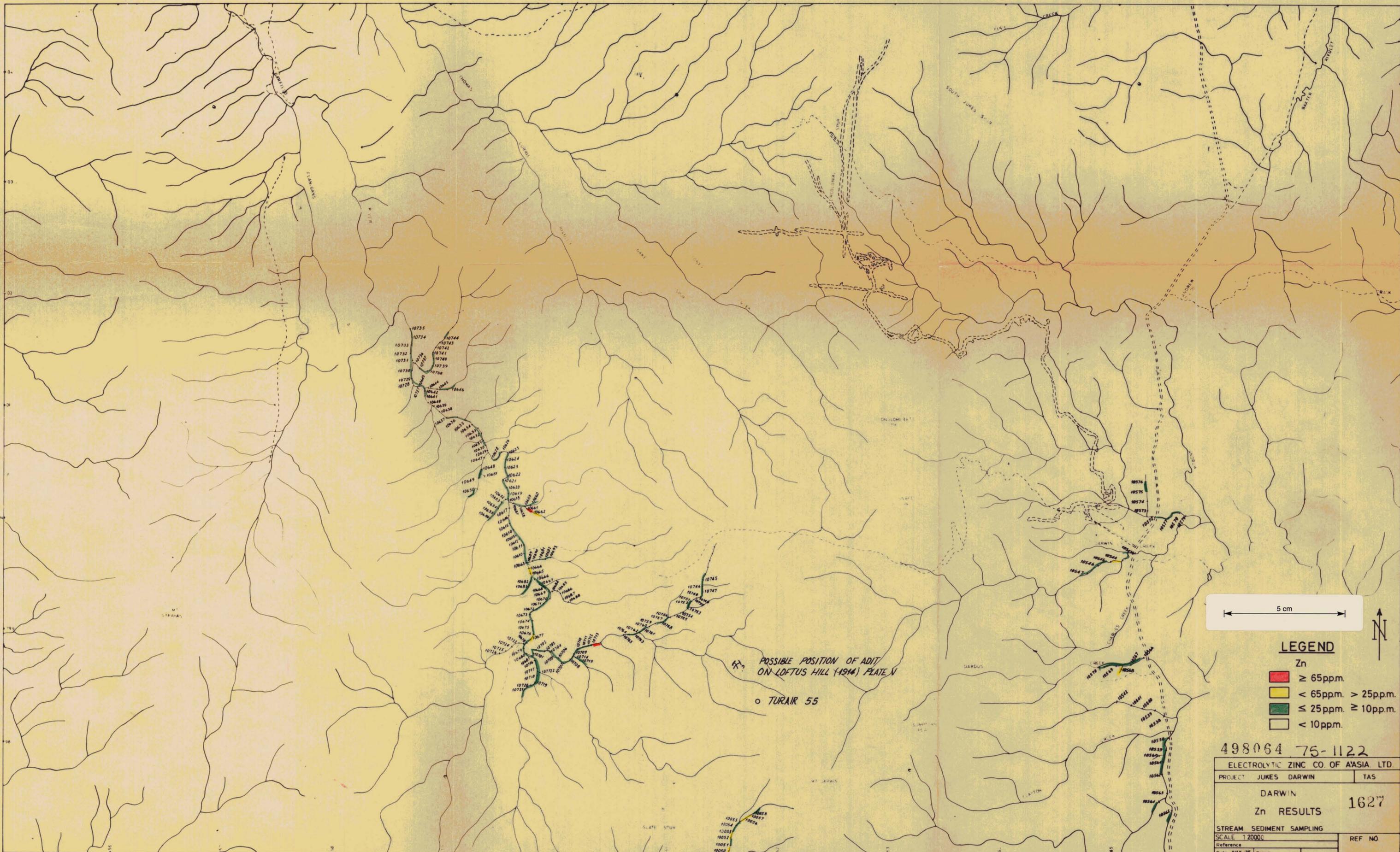
**LEGEND**

- Pb
- ≥ 65 p.p.m.
  - < 65 p.p.m. > 40 p.p.m.
  - ≤ 40 p.p.m. ≥ 20 p.p.m.
  - < 20 p.p.m.

ELECTROLYTIC ZINC CO. OF ASIA, LTD.		
PROJECT	JUKES DARWIN	TAS
DARWIN		
Pb RESULTS 1626		
STREAM SEDIMENT SAMPLING		
SCALE	1:20000	REF NO.
Reference		
Date	JULY 75	Drawn

POSSIBLE POSITION OF ADIT  
ON LOFTUS HILL (1914) PLATE V

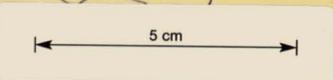
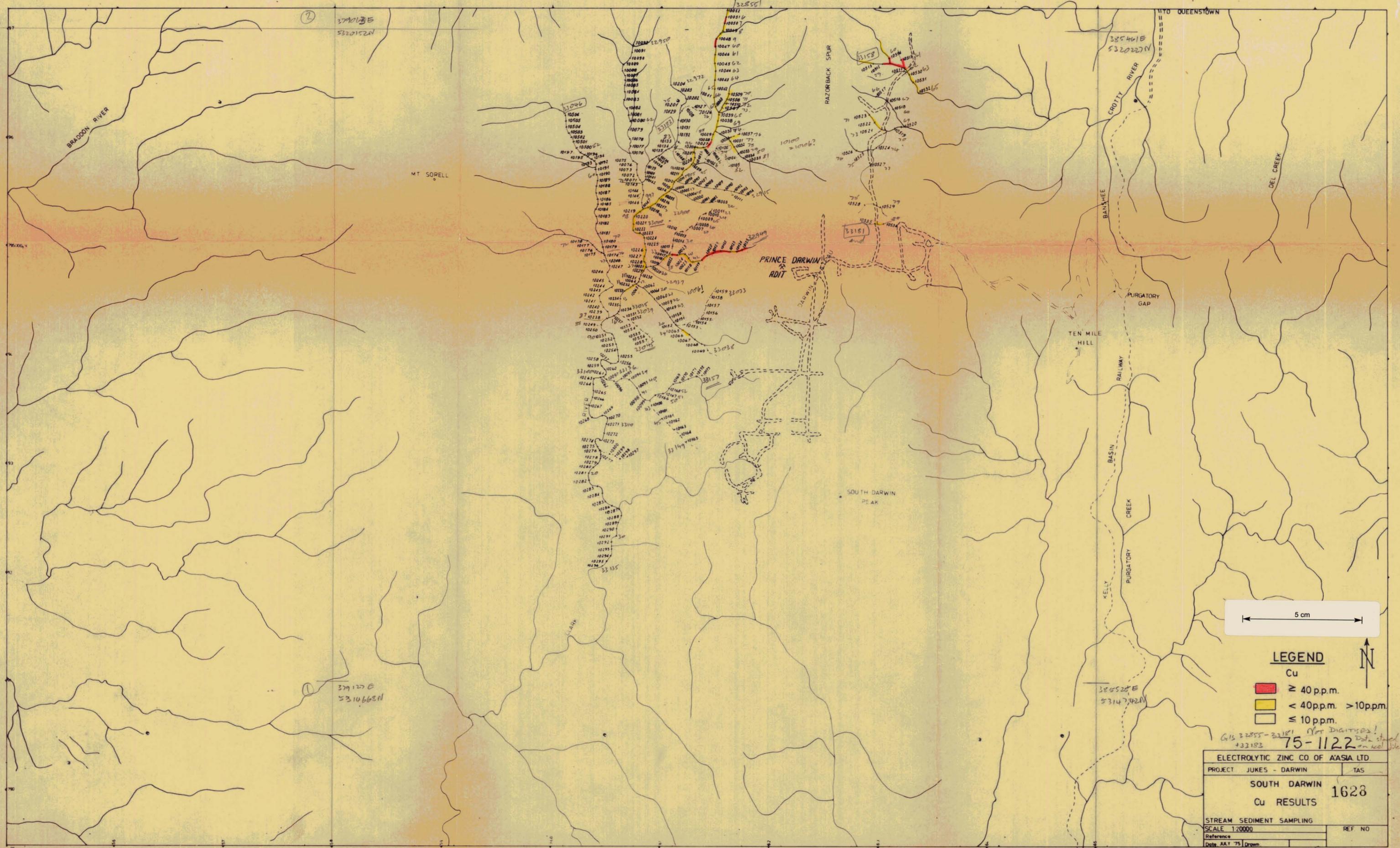
TURAIR 55



**LEGEND**

- Zn
- ≥ 65ppm.
  - < 65ppm. > 25ppm.
  - ≤ 25ppm. ≥ 10ppm.
  - < 10ppm.

498064 75-1122	
ELECTROLYTIC ZINC CO. OF ASIA LTD	
PROJECT JUKES DARWIN	TAS
DARWIN	
Zn RESULTS	1627
STREAM SEDIMENT SAMPLING	
SCALE 1:20000	REF NO
Reference	
Date JULY 75	Drawn

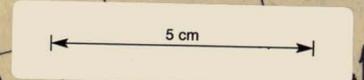
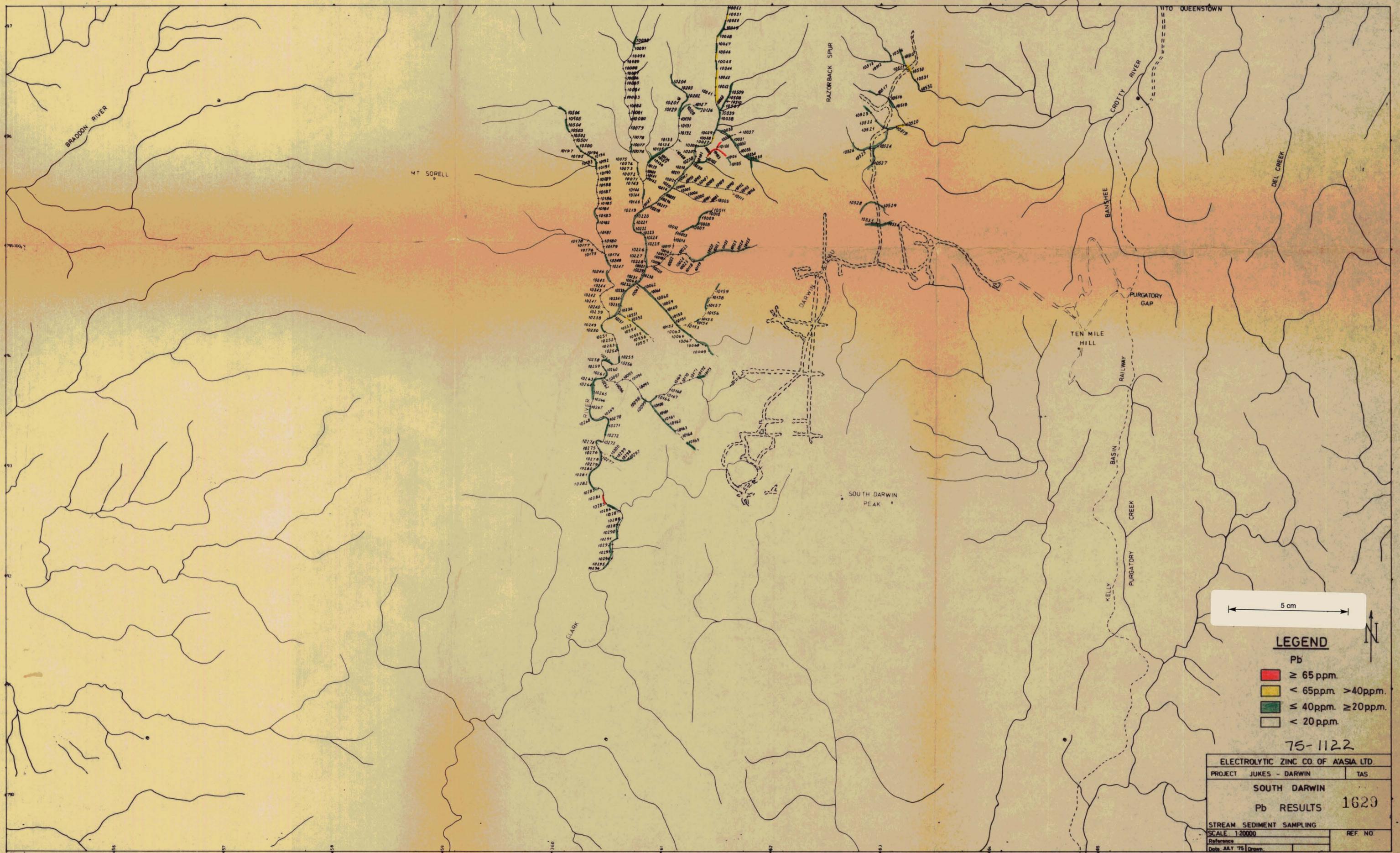


**LEGEND**

- Cu
- ≥ 40 p.p.m.
  - < 40 p.p.m. > 10 p.p.m.
  - ≤ 10 p.p.m.

*GIS 32855-33181 Not Digitised!  
+33183 75-1122 Data stored on local file*

ELECTROLYTIC ZINC CO OF ASIA LTD	
PROJECT JUKES - DARWIN	TAS
<b>SOUTH DARWIN 1623</b>	
<b>Cu RESULTS</b>	
STREAM SEDIMENT SAMPLING	
SCALE 1:20000	REF NO
Reference	
Date JULY 75	Program

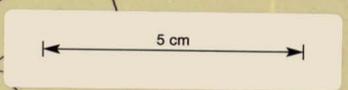
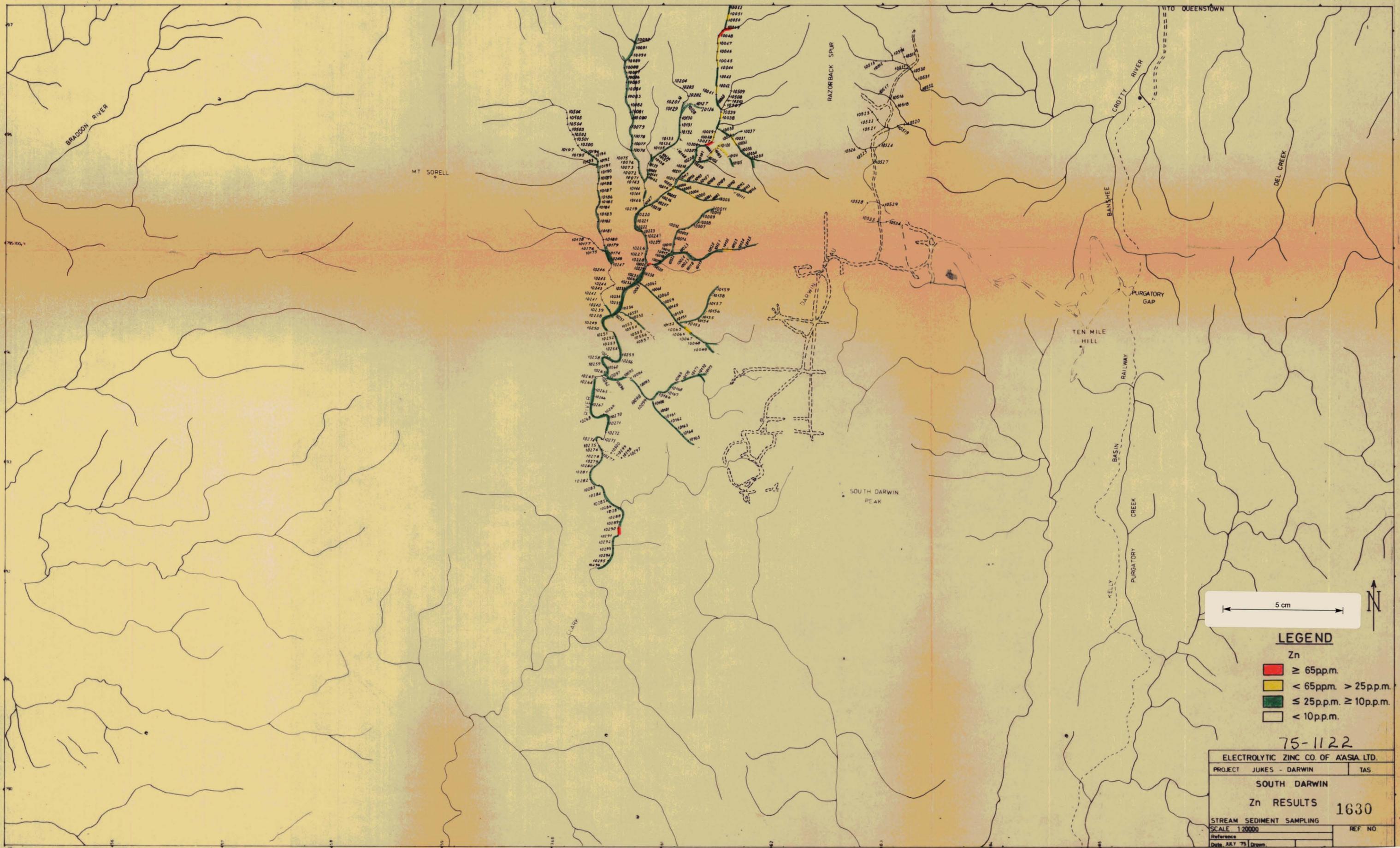


**LEGEND**

- Pb
- ≥ 65 ppm.
  - < 65ppm >40ppm.
  - ≤ 40ppm ≥ 20ppm.
  - < 20 ppm.

75-1122

ELECTROLYTIC ZINC CO. OF AASIA LTD.	
PROJECT JUKES - DARWIN	TAS
<b>SOUTH DARWIN</b>	
<b>Pb RESULTS 1629</b>	
STREAM SEDIMENT SAMPLING	
SCALE 1:20000	REF. NO.
Reference	
Date JULY 75	Drawn



**LEGEND**

- Zn
- ≥ 65pp.m.
  - < 65pp.m. > 25pp.m.
  - ≤ 25pp.m. ≥ 10pp.m.
  - < 10pp.m.

75-1122

ELECTROLYTIC ZINC CO. OF ASIA LTD.	
PROJECT JUKES - DARWIN	TAS
<b>SOUTH DARWIN</b>	
<b>Zn RESULTS</b>	
<b>1630</b>	
STREAM SEDIMENT SAMPLING	
SCALE 1:20000	REF NO
Reference	
Date JULY 75	Drawn