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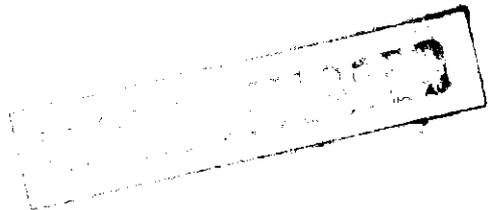
**Mineral Resources Division**

**E.L. 6/85 - JUKES DARWIN**

**Report on Exploration Activity  
August, 1987 to August, 1988**

**E.Z. Report No. T233**

**D. Gardner,  
August, 1988**



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**SUMMARY**

Exploration at Jukes-Darwin in 1988 involved detailed mapping and sampling of the Mt. Lyell Consols-Mt. Lyell Extended area and of Norms Quartz Prospect. In addition reconnaissance mapping and sampling continued in the Findons and South Darwin Plateau areas.

Results were generally poor. At Mt. Lyell Consols-Mt. Lyell Extended no significant geochemical anomaly could be outlined to follow on from last years work. Neither Findons area nor the South Darwin Plateau yielded results that warrant detailed follow up.

At Norms Quartz Prospect, a 170m long anomalous outcrop of quartz vein up to 1.5m thick has been delineated with Au grades up to 6.68 g/t. Possible extension both down dip and along strike should be tested with diamond drilling and further sampling.

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## 1. INTRODUCTION

### 1.1. Location

E.L. 6/85, the Jukes-Darwin E.L., covers an areas of 70 sq.km. situated 20km south of Queenstown in Western Tasmania (Fig. 1). The E.L. includes the West Coast Range, between Mt. Jukes and South Darwin Peak, and parts of the valleys to the west containing the Clarke and Garfield Rivers.

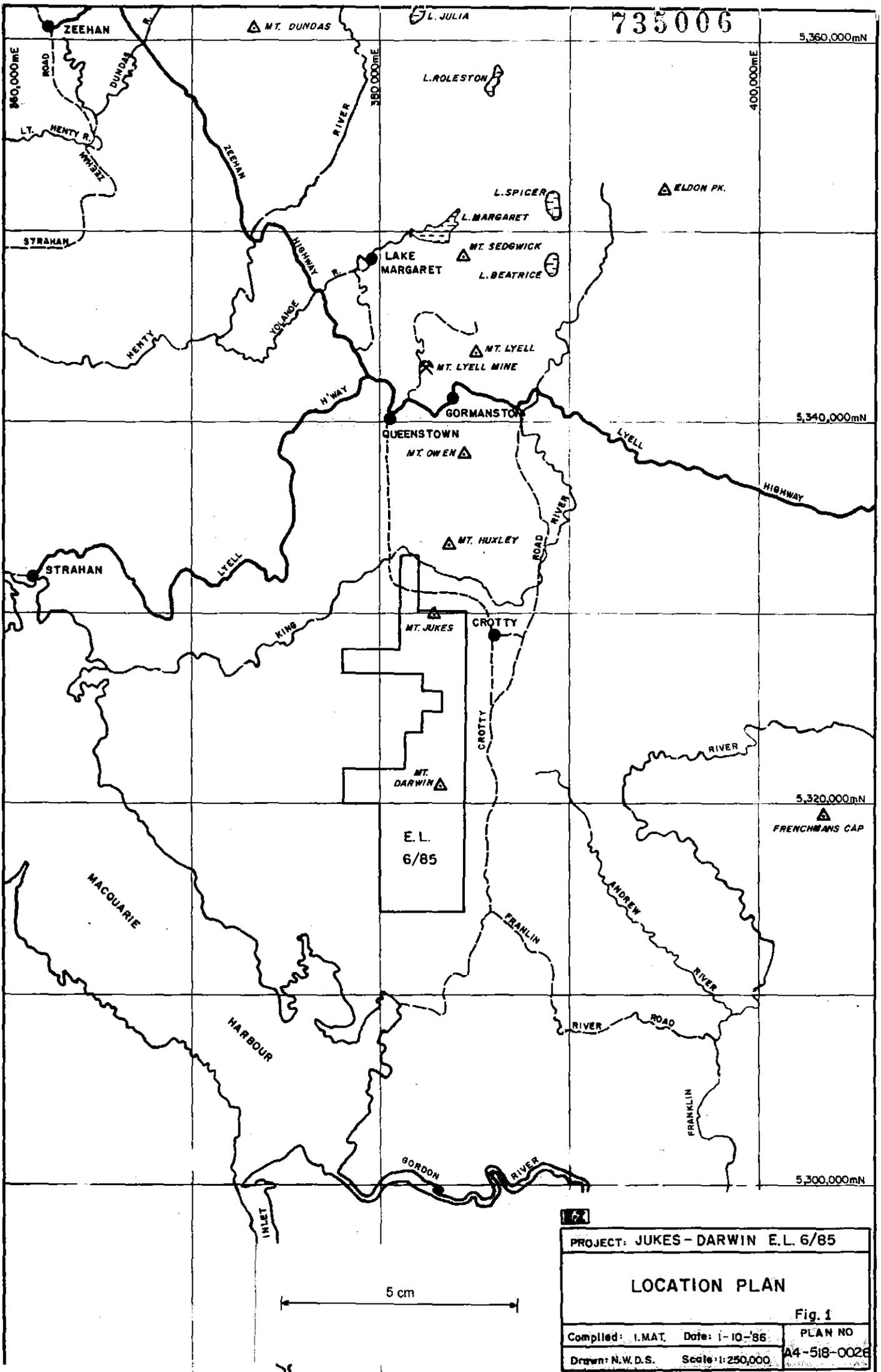
The West Coast Range is a north-south trending, monodnock mountain chain, the peaks being separated by lower ridges and east-west trending valleys. Within the E.L. the highest point is Mt. Jukes (1,168m) and the lowest point on the range is at 480m. To the east of the range the Kelly Basin Road runs along at 240m, while to the west the Clarke and Garfield valleys descend below 200m. Within the average E.L. width of 5km this altitude variation represents a very rugged topography:

The top of the West Coast Range has a sub alpine vegetation and is relatively open, however the steep flanks to the east and west are covered with dense regrowth vegetation, with small pockets of rain forest along some creeks.

### 1.2. Access

Access to the E.L. is via the Kelly Basin Road. This is gained from Queenstown via the new HEC road from Lynchford over Jukes Saddle to Crotty, or from the Crotty Road, 10km east of Queenstown on the Lyell Highway (Fig. 1).

The Kelly Basin Road (unsealed) continues south from Crotty. 6km south of Crotty a 4WD track heads west with one branch going to East Darwin and the other up to Intercolonial Spur (see Fig. 2). This route was used to access the Intercolonial Spur to Upper Lake Jukes section of the E.L. in 1987.



PROJECT: JUKES - DARWIN E.L. 6/85

**LOCATION PLAN**

Fig. 1

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Drawn: N.W.D.S.	Scale: 1:250,000	A4-518-0026

Another 4WD track heads west from the Kelly Basin Road, 5km further south, giving access to the South Darwin Plateau, and the south ridge of Mt. Darwin.

Helicopter access was used to establish and/or support camps at Mt. Lyell Consols and on the South Darwin Plateau.

### 1.3. Regional Geology

The E.L. is situated within the Cambrian Mount Read Volcanics. The volcanics (and correlates) extend in a belt from Elliot Bay in south west Tasmania to just north of Que River, where they are covered by Tertiary basalts. The belt is ~210km long and between 5 and 15km wide.

Major mineral deposits in the Mt. Read Volcanics include Mt. Lyell, Rosebery, Que River and Hellyer, all volcanogenic massive sulphide deposits, with significant gold, as well as base metal, contents.

Corbett (1979) divides the Mount Read Volcanics in the E.L. into three sequences (see Fig. 2). The Western Sequence is a volcanosedimentary sequence. The Central Sequence contains feldspar phyric acid volcanics, including lavas, ashflows, agglomerates, ashfall tuffs, and intrusives. The Eastern Sequence is a quartz-feldspar phyric assemblage of volcanoclastics, tuffs and some porphyries.

Corbett interprets the Western Sequence to be the oldest based on evidence from other areas in the Mount Read Volcanics. Within the E.L. the Western Sequence - Central Sequence contact is poorly exposed, but where seen it is faulted. The Eastern Sequence overlies the Central Sequence on steeply dipping unconformities or faults.

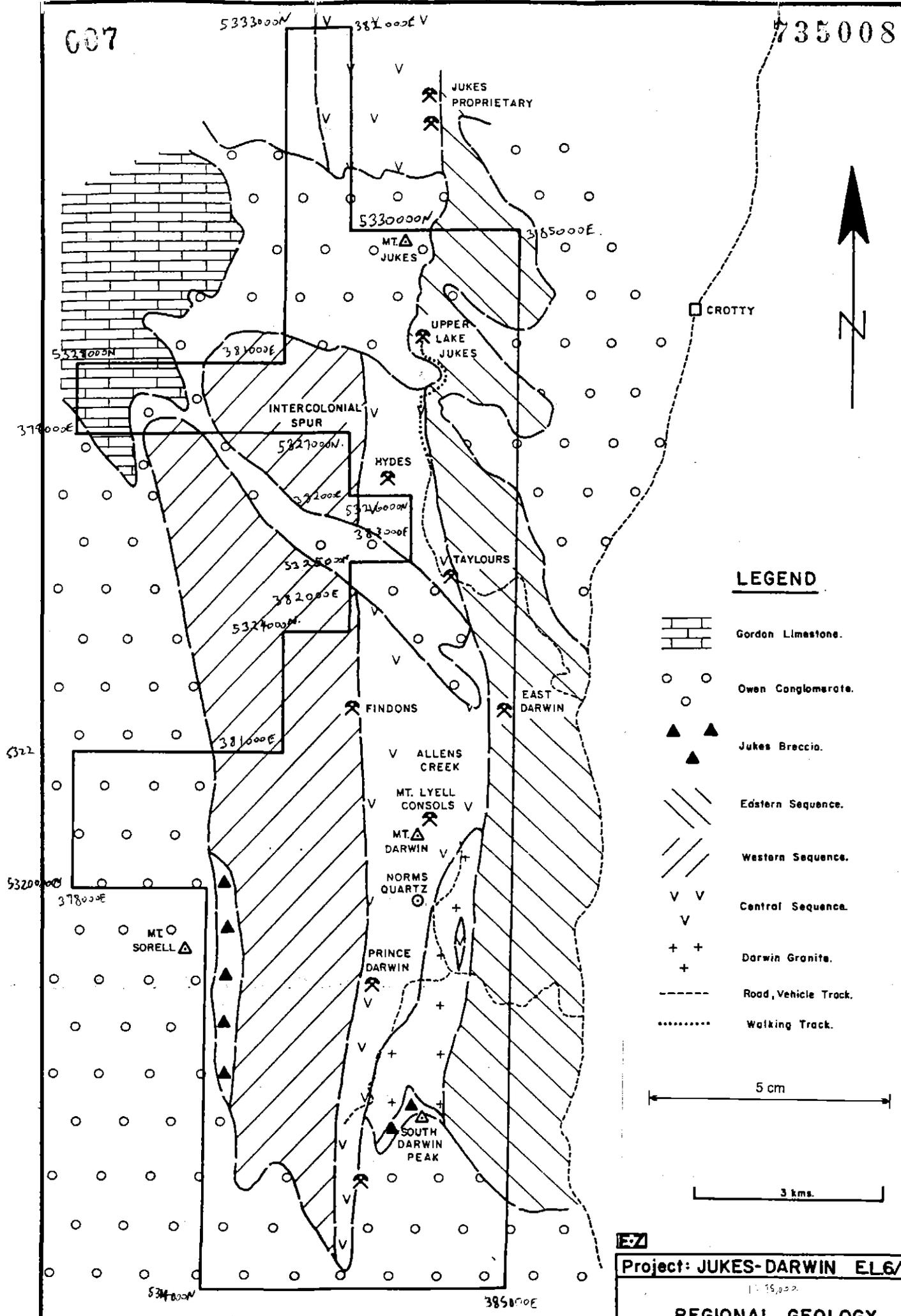
The Cambrian Darwin Granite (see Fig. 2) intrudes the Central Sequence, outcropping south of Mt. Darwin, and may underlie the whole of the West Coast Range (Ross Large pers. comm.). Corbett (1979) states that the granite-Eastern Sequence contact is faulted, with clasts of reworked granite occurring within Eastern Sequence lithologies.

607

5333000N

382000E

735008



**LEGEND**

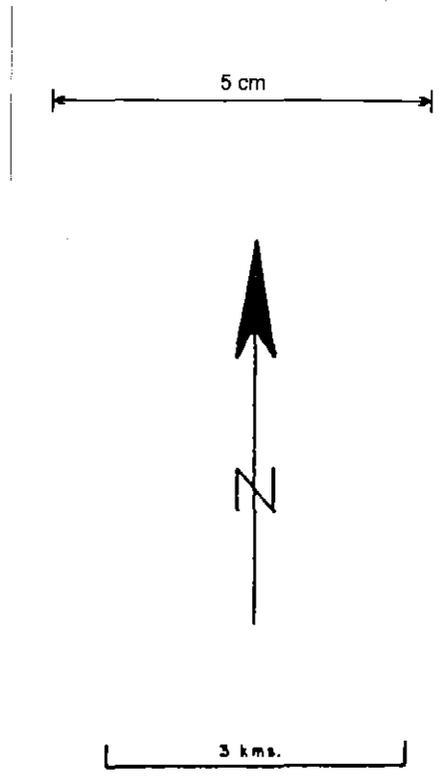
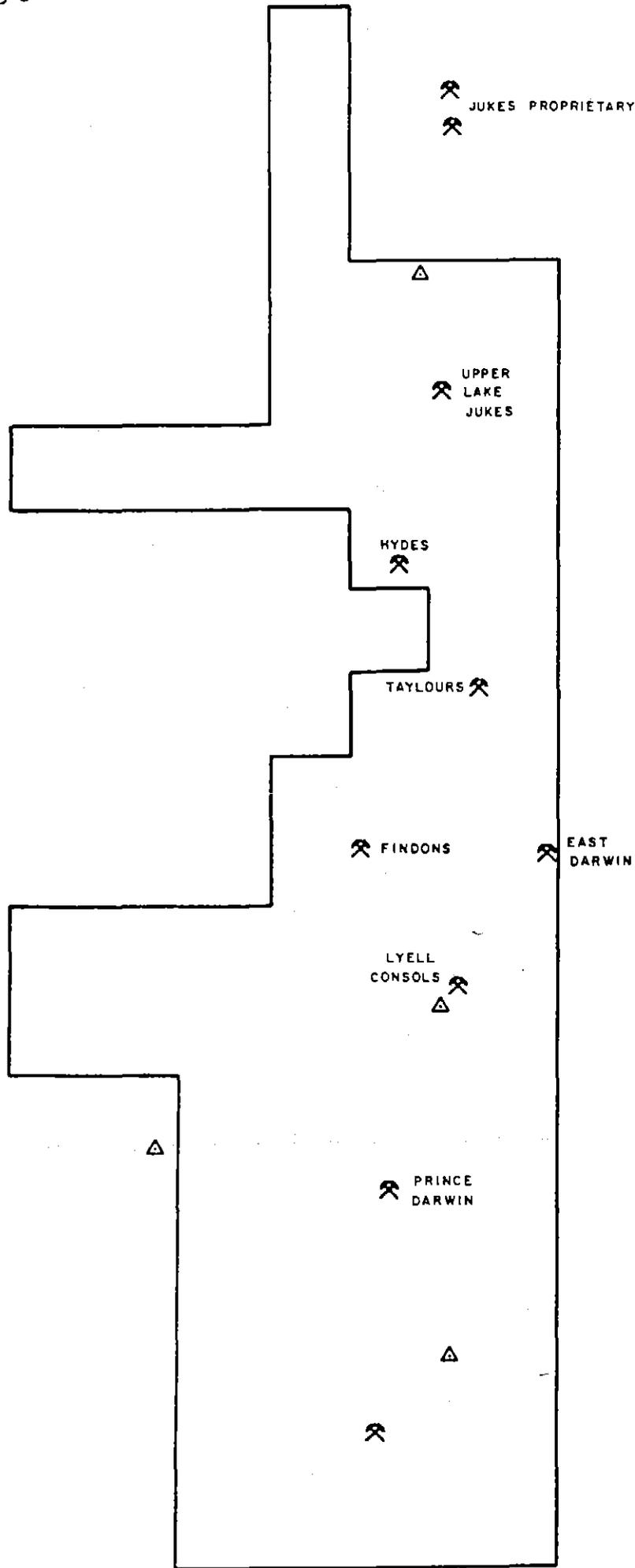
-  Gordon Limestone.
-  Owen Conglomerate.
-  Jukes Breccio.
-  Eastern Sequence.
-  Western Sequence.
-  Central Sequence.
-  Darwin Granite.
-  Road, Vehicle Track.
-  Walking Track.

5 cm

3 kms.

Project: JUKES-DARWIN EL6/85	
1: 15,000	
<b>REGIONAL GEOLOGY</b>	
Compiled: P.A.R./D.G. Drawn: N.W.D.S.	PLAN NO.
DATE: Feb. 1987, Apr. 1988.	FIG 2

N.B. - Modified after N. White - 1975 and K. Corbett - 1979



**Figure 3**  
 PROJECT: JUKES - DARWIN E.L. 8/85  
**MAJOR PROSPECTS**  
 Compiled: P.A.R. Date: FEB. 1987 PLAN NO  
 Drawn: N.W.D.S. Scale:

The Cambrian rocks in the area are unconformably overlain by Cambro-Ordovician Owen Conglomerate.

The major Cambrian lithological trend is north south (see Fig. 2). The Devonian Tabberabberan Orogeny has produced a ubiquitous, doubly dipping, north west striking cleavage that dips steeply east and west. The intersections of this cleavage develop elongate rhombic patterns on many exposed surfaces.

#### 1.4. Previous Work

The Jukes-Darwin area has been prospected since the late 1800's and a large number of old workings are scattered over the E.L. (Fig. 3). Visits by government geologists produced the first major documentation of the area, the most notable being Loftus Hills (1914). Loftus Hills described over 20 sections worked in the Jukes Darwin field. Most old workings prospected magnetite-haematite veins or quartz-chlorite veins and lodes, for copper minerals and gold.

Modern exploration programmes have been carried out by several major companies including Lyell-E.Z. Exploration, B.H.P., I.N.A.L. and Goldfields. Most of this work was designed to look for sulphide deposits of Rosebery or Mt. Lyell type. Old workings were the focus of substantial geochemical and geophysical exploration programmes. Diamond drill holes have been drilled at Upper Lake Jukes (Lyell-E.Z. Exploration 1956-58) and at East Darwin (I.N.A.L. 1972-74). Electromagnetic and induced polarization surveys have defined several large areas of chlorite alteration (with magnetite-haematite veining) on Intercolonial Spur and at Allans Creek.

Geochemistry focused on base metals. Although old workings yielded some significant values no major anomalies were found. Gold was rarely assayed for, and where this did occur bulk assays over many metres were taken.

E.Z. took up the ground in October, 1985 after it was relinquished by Mt. Lyell in 1984. Mt. Lyell kept control of the Jukes Pty. area north of Mt. Jukes (Fig. 3), but have since relinquished this too.

### 1.5. Exploration Philosophy

The Jukes-Darwin area has been known to be altered and mineralized, since the late 1800's. Consistent exploration by a number of major exploration companies since 1950 has employed a variety of modern techniques, without discovery of a major orebody.

The decision by E.Z. to take up ground that they had previously held, and which has been explored by others, was in order to determine the potential for bulk low grade gold deposits.

The area is relatively copper rich suggesting that it may be low in the volcanic pile (based on a classical sequence of metal elements in massive sulphides) and thus have the potential for epithermal mineralization.

As was stated previously, very few gold assays have been performed on samples from the area. Of these however, a number would be attractive in today's economic climate.

In 1905 a selected crushing of 143 tons of ore from the Lake Jukes Mine produced 14oz of Au i.e. 3 g/t Au. A sample collected from the Lake Jukes Mine battery in 1907 assayed 2.4 g/t Au.

The I.N.A.L. exploration programme (Ruddock, 1974) sampled float from Intercolonial Spur assaying 3.9 g/t Au. In 1983/84 Goldfields (Roberts and Cartwright, 1984) collected samples from near the summit of Mt. Darwin assaying up to 3.8 g/t Au.

### 1.6. E.Z. Exploration

Initial reconnaissance mapping and sampling in 1985/86 (Mathison and Taylor, 1986) highlighted 3 areas that were considered worthy of follow-up. In the 1986/87 summer season these 3 areas (Mt. Lyell Consols-

Allans Creek, Upper Lake Jukes and Intercolonial Spur, Fig. 2) were examined by detailed grid based mapping and sampling (Mathison and Gardner, 1987). In addition reconnaissance mapping and sampling was undertaken over the South Darwin Plateau and its flanks.

The 1987 work found that little potential existed for bulk low grade gold deposits in the Central Sequence rocks. Only sporadic anomalous gold grades in the order of 0.1 g/t Au were found.

The most promising results come from the Mt. Darwin area. On the NE flank of Mt. Darwin a band of chert running between the Mt. Lyell Consols and Mt. Lyell Extended adits had several samples assaying >0.1 g/t Au associated with it, and a grab sample from the dump of the Mt. Lyell Extended adit assayed 5.8 g/t Au. A sample of quartz float, with sulphides, from the south ridge of Mt. Darwin assayed 21 g/t Au (Norms Quartz Prospect, Fig. 2). These two areas were selected for follow-up in 1988. It was also decided to continue the reconnaissance coverage of the Lease looking at the Findons areas and the Prince Darwin to South Darwin Peak area (Fig. 2).

012

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## 2.0 WORK COMPLETED

Work completed on the Jukes Darwin E.L. in 1988 is summarised below.

	Mt. Lyell Consols- Mt. Lyell Extended	Norms Quartz	Findons	South Darwin Plateau
Grid Cutting Lkm	2.8	0.4	-	-
Pegging Lkm	2.8	0.6	-	-
Mapping Lkm	2.8	0.6	2 km <sup>2</sup>	2.5 km <sup>2</sup>
Sampling Lkm	2.8	0.2	2 km <sup>2</sup>	2.5 km <sup>2</sup>
Adit Mapping (m)	90	-	55	-

*No of Samples*

Rock	171	109	63	39
Stream Sediment	1	0	5	0
Panned Concentrate	0	0	1	0

### 3.0. MT. LYELL CONSOLS - MT. LYELL EXTENDED

#### 3.1. Work Completed

A grid was established between these two workings (Fig. 4) in order to follow-up anomalous results from last seasons work, and to detail a 'chert' band mapped last season. The grid was mapped and sampled (20m continuous chip samples where possible). The Dardus Creek adit (4m long) and Mt. Lyell Extended adit (85m long) were mapped and sampled, and additional samples taken from the Mt. Lyell Consols adit (Fig's 5, 6, 7).

#### 3.2. Results

*Geology* (From a report by A. Habets, 1988) ?

The geology of the grid area is shown in Fig. 4 (plan 4). Pink and green feldspar phyric acid volcanics (mainly rhyolite lavas) of the Central Sequence are the dominant lithology in the area. These are variably chloritised and silicified, the pink colour being due to K-feldspar alteration.

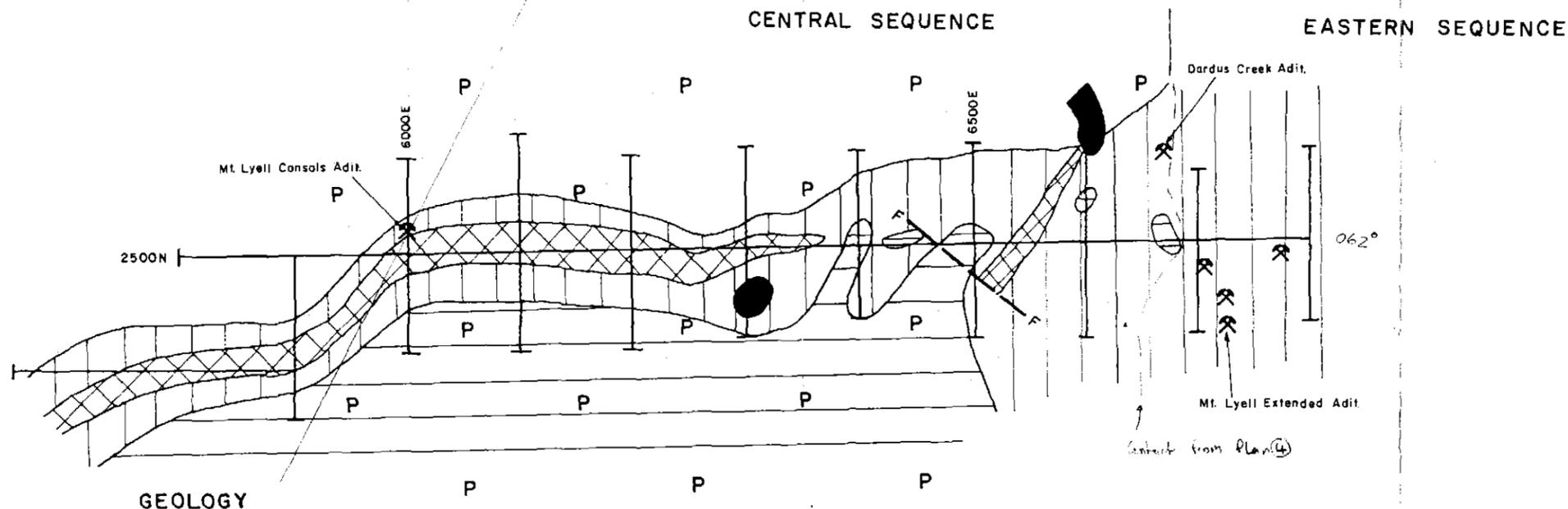
Between the Mt. Lyell Consols and Mt. Lyell Extended workings is a NE trending band of ultrafine microgranular quartz with minor, but pervasive sericite (Mathison and Gardner, 1987, Appendix 1). The unit is probably an intensely silicified fine grained volcanic (possibly a water laid ash as suggested by INAL's 1974 report). This 'chert' band is brecciated in places and contains disseminated pyrite (5-40%). Steeply dipping bedding was seen in places. The band thins to the north east and is cut by an E-W fault (see Fig. 4). The south west termination was not seen.

The chert band is surrounded by a parallel trending zone of green-grey chloritised silicified volcanics. Chloritisation varies from replacement of feldspar phenocrysts to totally chloritised patches. This zone contains disseminated pyrite and occasionally chalcopyrite and galena. Sulphides (up to 50%) are found in a

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GEOLOGY

**LEGEND**

**P** Fine to medium grained pink alteration of Feldspar phryic acid volcanics (Rhyolite) showing variable chloritization.

Mappable band of impure Chert. Ultrafine microgranular Quartz. Showing minor brecciation in parts. Disseminated Pyrite 5-40%.

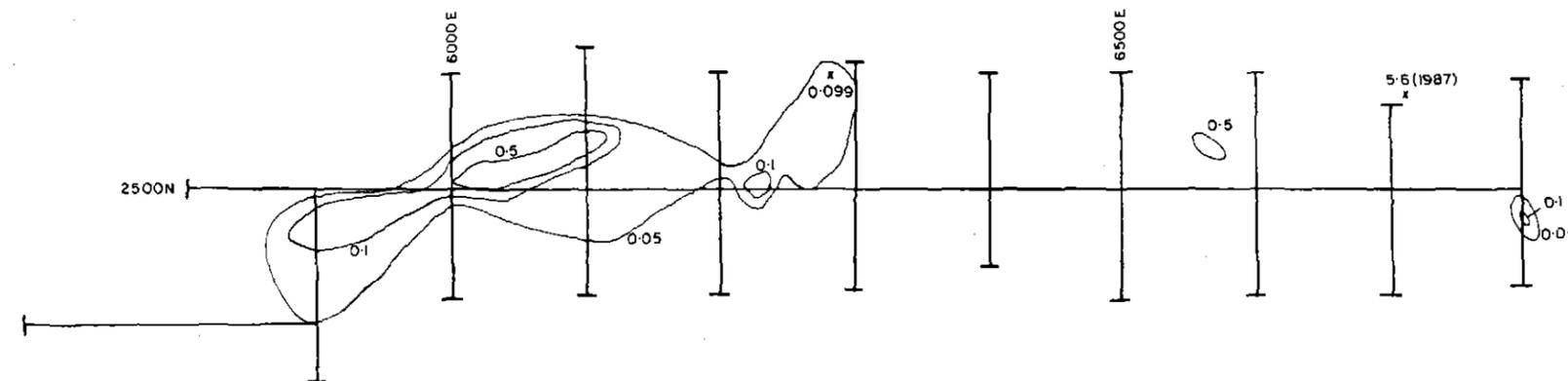
Green to green grey chloritic and silicious zone surrounding Chert zone. Variable chloritization of feldspar phenocrysts to total alteration.

Silicification of feldspar-phryic lava and fine grained pink altered lava. Some gossan, pyrite and minor brecciation.

Intense chloritic alteration of pyritic acid volcanics. Strongly cleaved.

Old workings.

Fault position, approximate.



**Au GEOCHEMISTRY**  
Contour values in p.p.m. Au.

**E-2**

Project: JUKES - DARWIN E.L.6/85

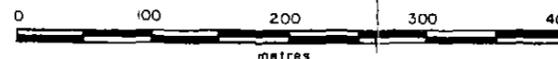
MT. LYELL CONSOLS - MT. LYELL EXTENDED  
GEOLOGY and Au GEOCHEMISTRY

Survey: D.G. & A.H. Scale: 1:5000

Date: April, 1988

Drawn: N.W.D.S. - 25-6-88

FIG. 4.



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small working near the 6800E line. Scattered pyrite stringers up to 5mm thick occur in a working above the Mt. Lyell Extended adit. Sulphide concentration generally increases towards the north east of the zone. At least 3 adits and 7 surface workings intersect this zone.

Traces of magnetite, galena and barite are found in the pink altered volcanics. These tend to be in small veins occurring both north and south of the chloritic and chert zones.

Towards the eastern end of the grid the rocks become generally more chloritic and cleaved (the cleavage trends north west and dips steeply east and west) and resemble Eastern Sequence lithologies.

The Central Sequence/Eastern Sequence contact was not fixed accurately (Fig. 4) but both the Dardus Creek (Fig. 6) and Mt. Lyell Extended (Fig. 7) adits are close to the contact, and the Mt. Lyell Extended adit may actually intersect the contact.

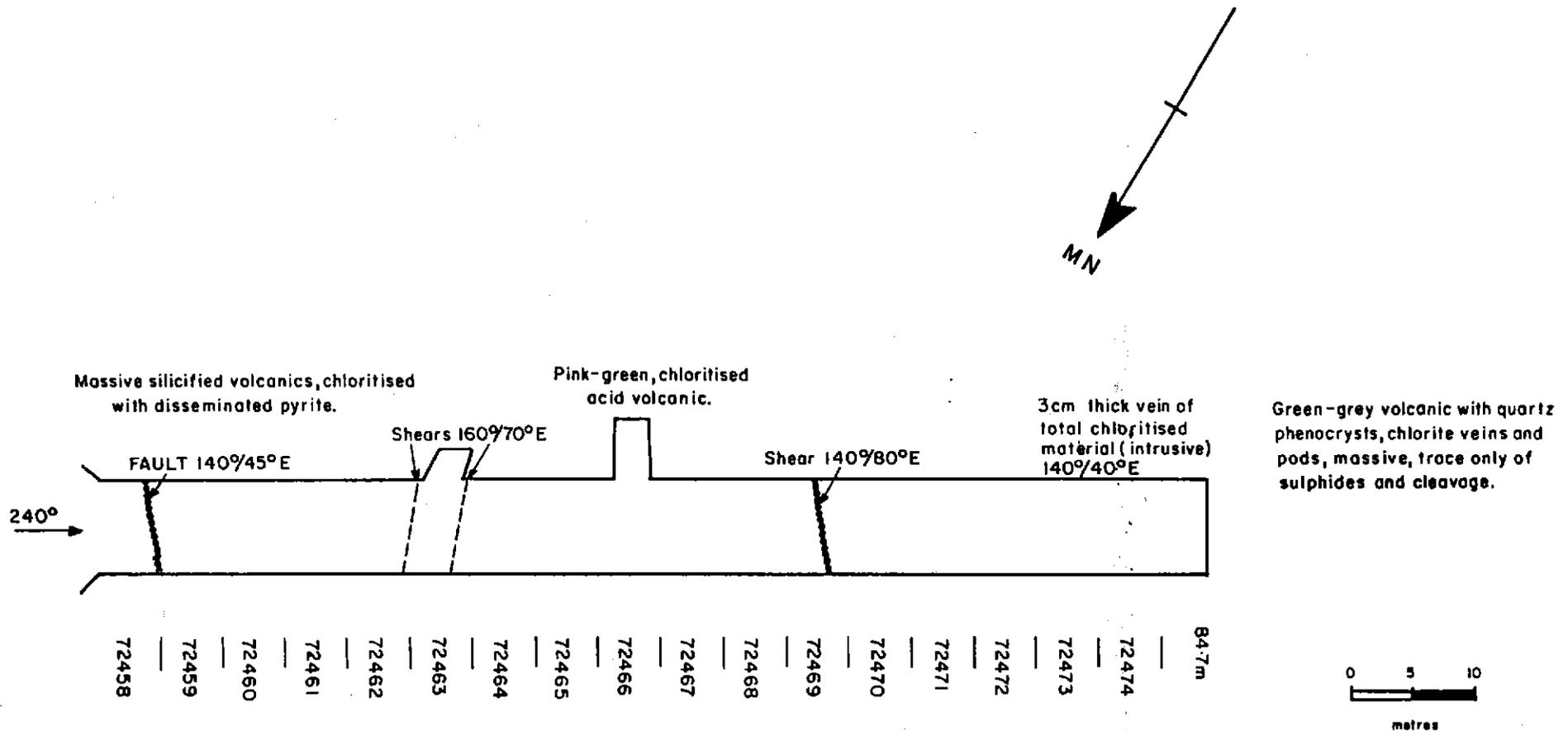
### *Geochemistry*

Assays from systematic sampling of the Mt. Lyell Consols-Mt. Lyell Extended grid were generally low in both gold and base metals (Plans 2, 3). The sampling of the Mt. Lyell Extended and Dardus Creek adits produced similar results.

A contoured plot of gold results from the grid is shown in Fig. 4. The major anomaly (3 samples  $>0.5$  g/t Au) is associated with the Mt. Lyell Consols adit. Detailed sampling of this adit (P. Ruxton 1987, A Habets 1988, Fig. 7) produced no values  $>0.1$  g/t Au.

The only other anomaly of any size is from 2 spot samples between lines 6500E and 6600E that assayed 0.472 and 0.516 g/t Au.

A 1987 grab sample from the Mt. Lyell Extended area had assayed 5.8 g/t. This sample was recorded as from the Mt. Lyell



Massive silicified volcanics, chloritised with disseminated pyrite.

Pink-green, chloritised acid volcanic.

3cm thick vein of total chloritised material (intrusive) 140°/40°E

Green-grey volcanic with quartz phenocrysts, chlorite veins and pods, massive, trace only of sulphides and cleavage.

FAULT 140°/45°E

Shears 160°/70°E

Shear 140°/80°E

240°

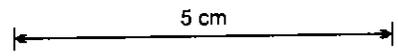
72458 72459 72460 72461 72462 72463 72464 72465 72466 72467 72468 72469 72470 72471 72472 72473 72474 84.7m



**LEGEND**

- FAULTS and Shears.
- ===== FAULT breccia and clay.

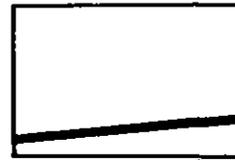
**NOTE:** Adit passes beneath a surface working at approx. 50m of silicified and chloritised fine lava with 40% pyrite.  
Adit sampled at random between 5m intervals on both sides.



PROJECT: JUKES-DARWIN E.L. 6/85	
LYELL CONSOLS EXTENDED ADIT	
Compiled: A.H. Date: Mar. '88	Plan No.
Drawn: N.W.D.S. Scale: 1: 500	Fig. 5

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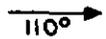
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Very fine chloritic intrusive ?  
with minor pyrite 10cm thick  
bounded by clay band 070°/20° N.

Intensely chloritised lava approaching a chlorite schist  
20% pyrite with a trace of quartz phenocrysts.

69258 X



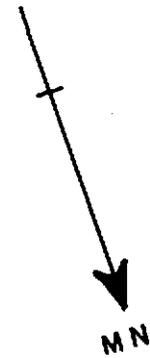
77057

77056

70°

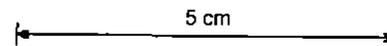
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77055

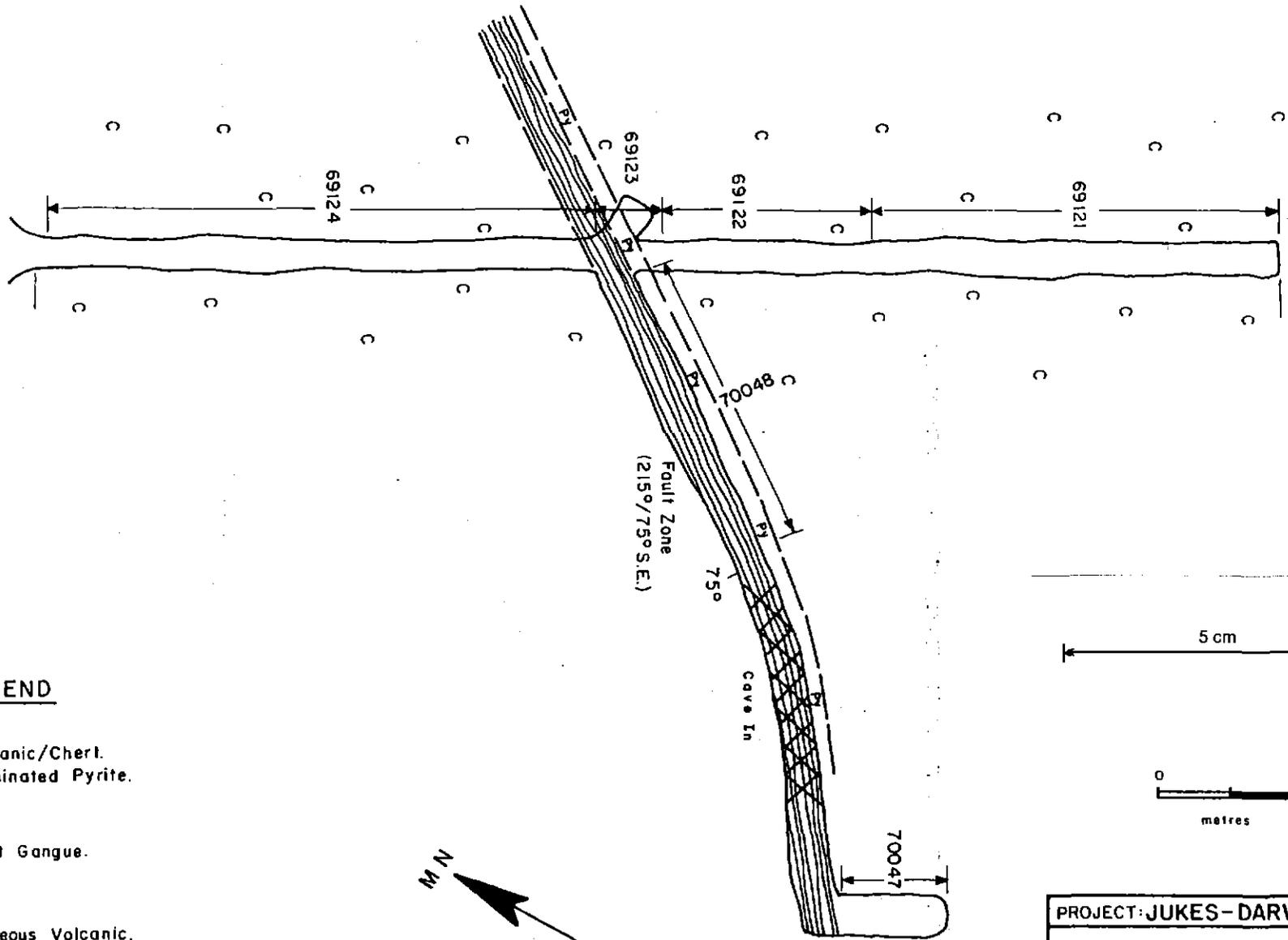


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NOTE: Adit sampled at random between 2m intervals on both sides.



PROJECT: JUKES-DARWIN E.L. 6/85	
DARDUS CK. ADIT	
Compiled: A.H. Date: Mar '88	Plan No.
Drawn: N.W.D.S. Scale: 1 = 50	Fig. 6



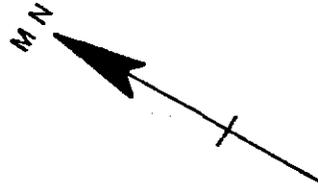
**LEGEND**

C = Silicified Volcanic/Chert.  
2-5% Disseminated Pyrite.



= Chloritic Fault Gangue.

Py = Chloritic/Siliceous Volcanic.  
20-40% Pyrite.



5 cm

0 5  
metres

PROJECT: JUKES-DARWIN E.L. 6/85	
ALLANS CREEK GRID	
LYELL CONSOLS ADIT	
Compiled: P.A.R./A.H. N.T.S.	Plan No.
Drawn: NWDS Date: 1/87 B 3/88	Fig. 7

735019

Extended adit dump (Fig. 4) its position however corresponds to the shorter adit, now called the Dardus Creek Adit. Both adits were sampled with 5m continuous chip samples. The Mt. Lyell Extended adit (Fig. 5) had no value  $>0.03$  g/t Au, while the Dardus Creek adit had one value  $>0.03$  g/t Au (sample 77055 assayed 0.119 g/t Au, Fig. 6).

These results do not support the anomalous results from the 1987 sampling and indicate that the area has little potential for economic gold mineralisation.

### 3.3. Conclusions

This area can now be considered to have been intensely explored. Follow-up of last years work with a second more detailed grid failed to produce a sizable geochemical anomaly.

Although the geology and alteration are interesting, without a more positive geochemical response it is impossible to define a realistic drill target.

No further work on this area can be recommended unless a new model for mineralisation leads to reappraisal.

#### 4.0. NORMS QUARTZ PROSPECT

##### 4.1. Work Completed

Work in this area was aimed at following up a 1987 quartz float sample (assaying 21 g/t Au) collected from the south ridge of Mt. Darwin (Fig. 2). After initial sampling of the quartz vein had been completed a small grid was established to test for extensions of the vein. Sections of this grid were sampled by a combination of methods including rock chip, auger and mattock.

A traverse across the outcropping vein, from 30m into the footwall to 30m into the hangingwall, was made. Rock chip samples were collected, sampling continuously over 2m intervals. These samples were assayed for a range of elements to determine whether a halo existed around the vein.

##### 4.2. Results

###### *Geology*

Quartz float assaying 21 g/t (1987 sample) was traced back to two small pits on the crest of the south ridge of Mt. Darwin (Fig. 2) These pits expose a quartz vein containing abundant pyrite and some chalcopyrite (Fig. 8).

North west of these pits the quartz (with no sulphides) outcrops continuously for 200m, striking 300° mag. and dipping 30° NE. Close to the pits (5000N, 5000E Fig. 8) the outcropping vein has a thickness of 1-1.5m but to the NW this rapidly diminishes to <0.5m. The vein peters out into fine wispy veinlets before disappearing.

South east of the two pits the outcrop can be traced for 10m before being obscured by soil cover and thick scrub (again no sulphides are found). The thickness cannot be seen but is probably 1-2m. Some float is found down hill from the last



outcrop, but no continuation of the vein was found when sampling and mapping line 5100E (Fig. 8).

With a strike of  $300^{\circ}$  mag. and dipping  $30^{\circ}$  NE, and assuming that the vein is planar, the trace of the outcrop should pass through 4975N, 5100E, as shown in Fig. 8, and head towards the alluvial workings on the creek and the Darwin Granite. No quartz outcrop was found in the creek, however large quartz boulders were found around the alluvial workings and downstream from there (none were found upstream). A quartz boulder was also found at 4596N.

Two other quartz veins have been sampled, one above and one below the main vein (Fig. 8). The lower quartz vein is of similar dimensions to the main vein and has a small cutting into the footwall at one point. The upper vein is approximately 30m long and up to 0.5m thick.

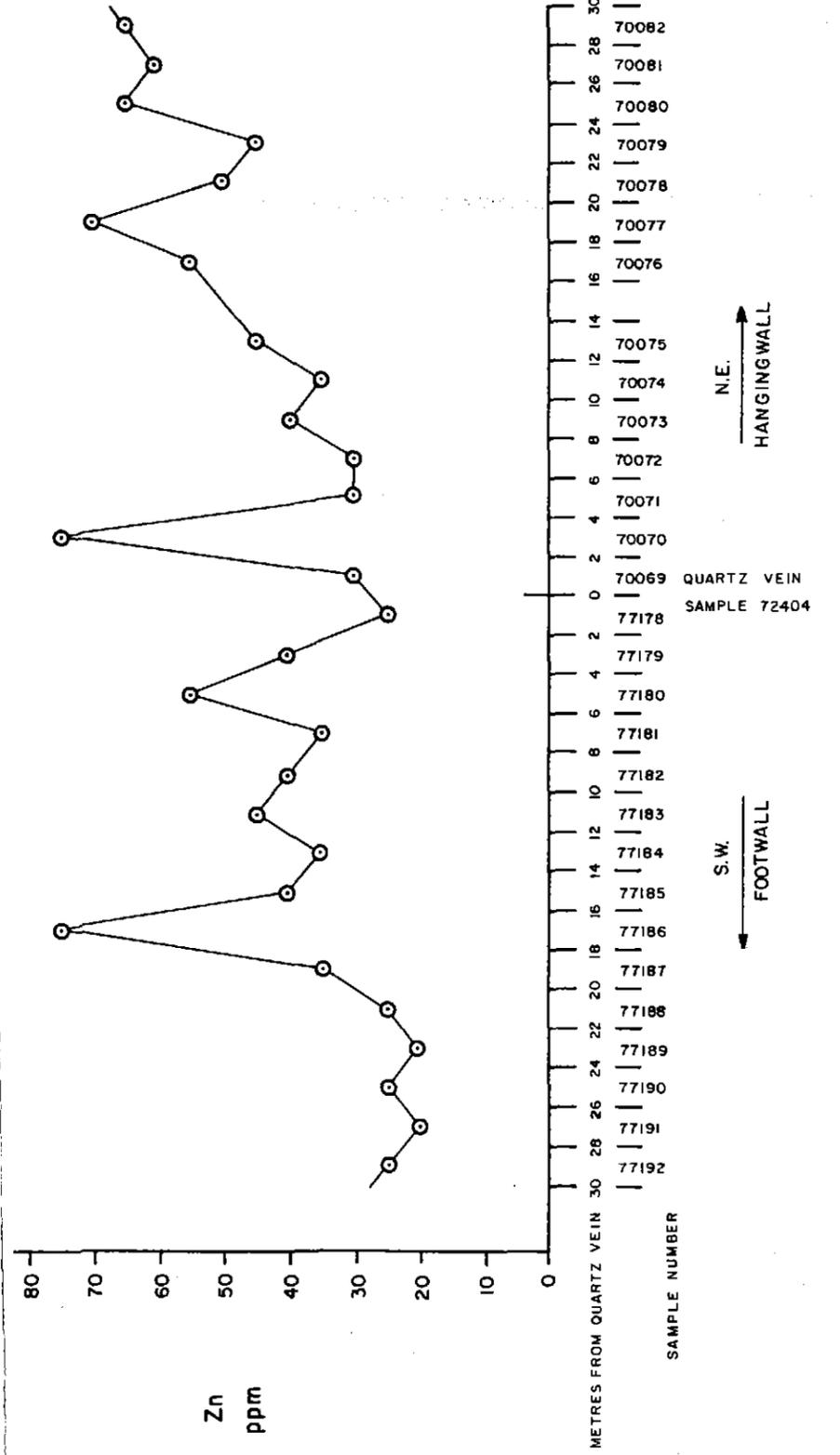
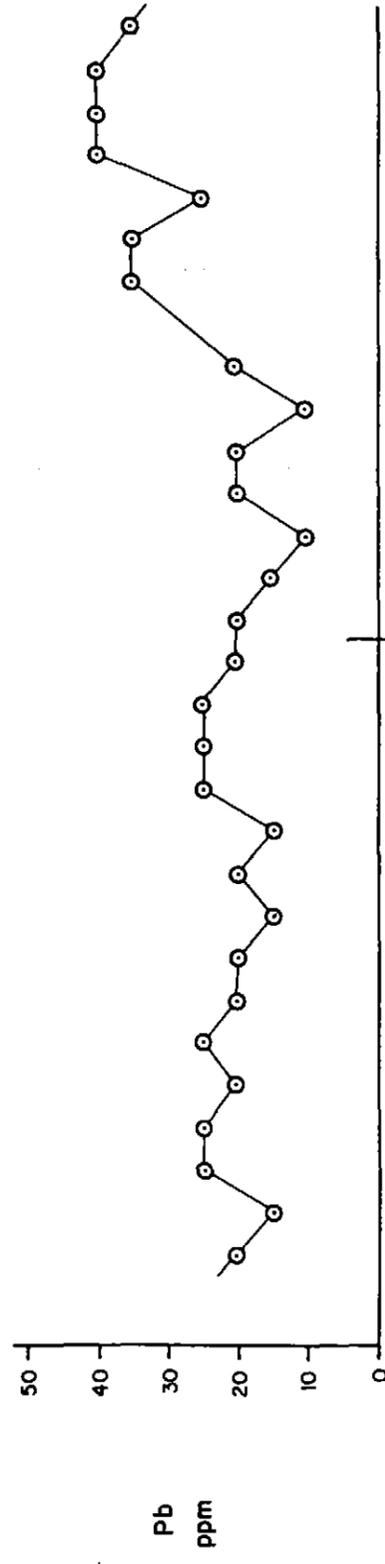
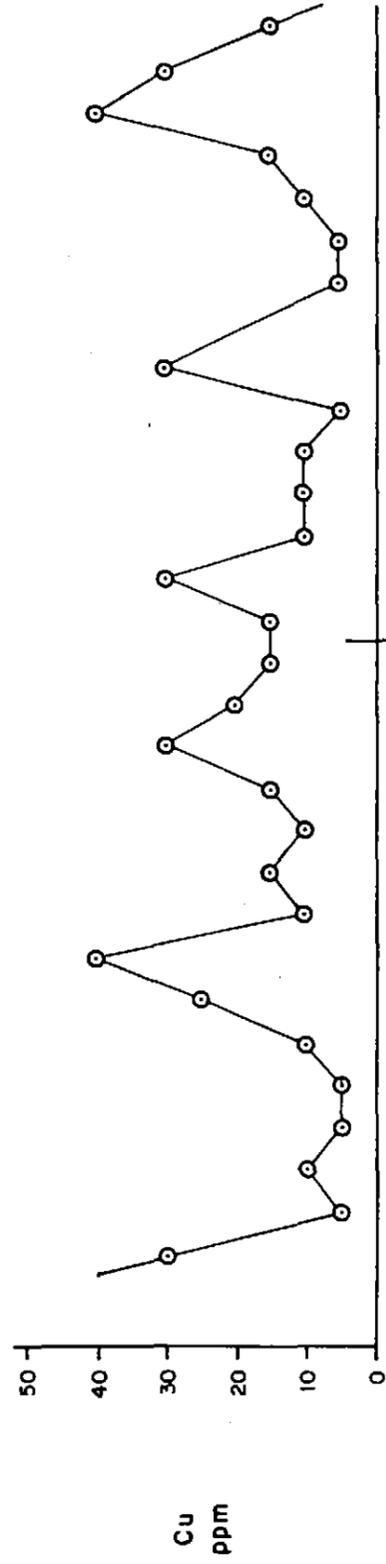
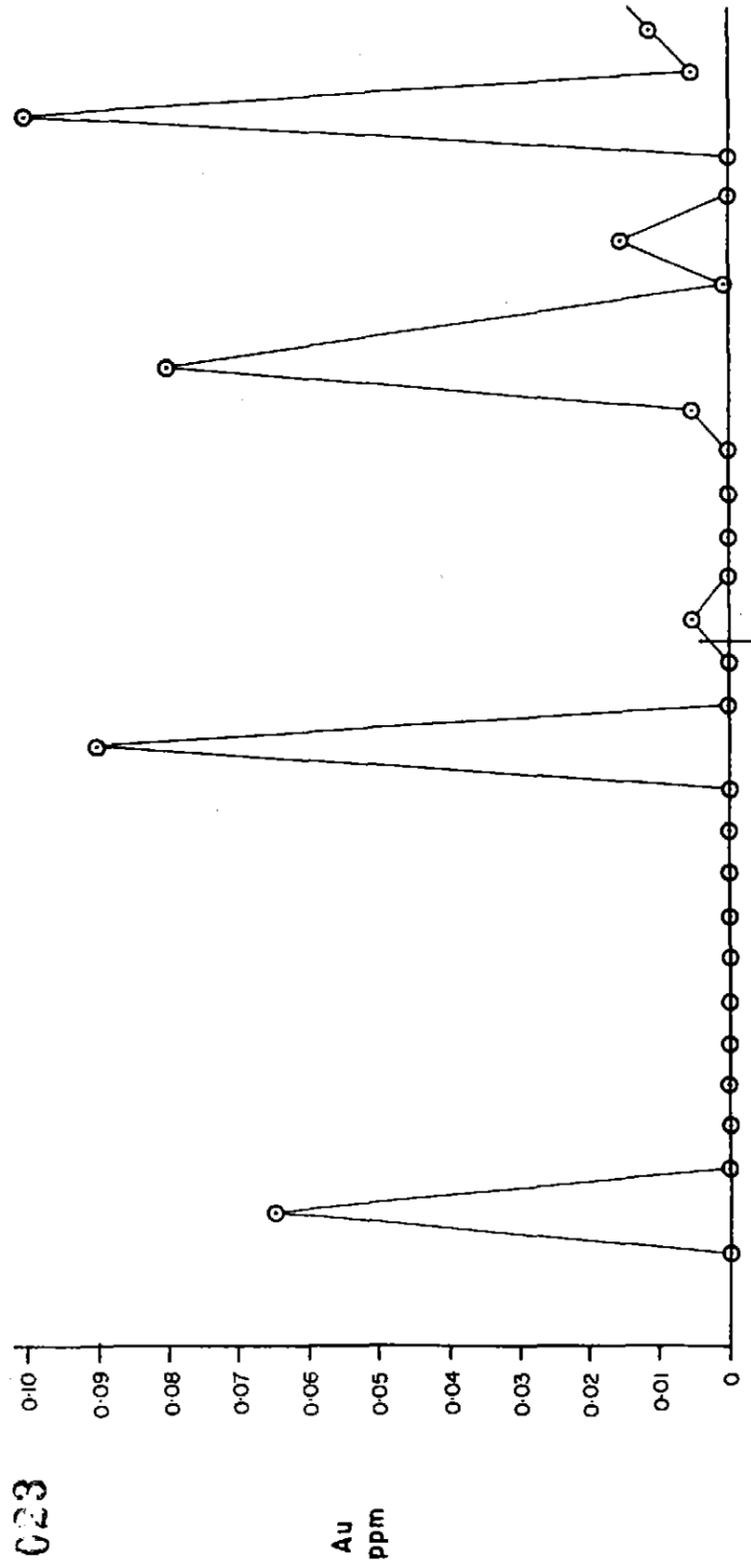
The quartz veins occur completely within Central Sequence rocks. These are generally a block hard pink lava. In several places, particularly between the main and lower veins, patches of rock occur with dark green chloritic streaks forming a strong foliation. Some streaks have a vague lensoid shape. The rock is not cleaved, but hard and siliceous. Sample 77167 is of this character. Where (on line 5100E) the outcrop was buried by soil the rock has a slightly weathered softer white character.

In the east of the area the Central Sequence is intruded by the Darwin Granite and is locally hornfelsed.

### *Geochemistry*

The quartz float with pyrite and chalcopyrite collected in 1987, assayed 21 g/t Au, resampling of the two pits gave assays of 6.68 and 4.2 g/t Au (Fig. 8). This is the only place where sulphides have been found with the quartz, and has the highest grade samples.

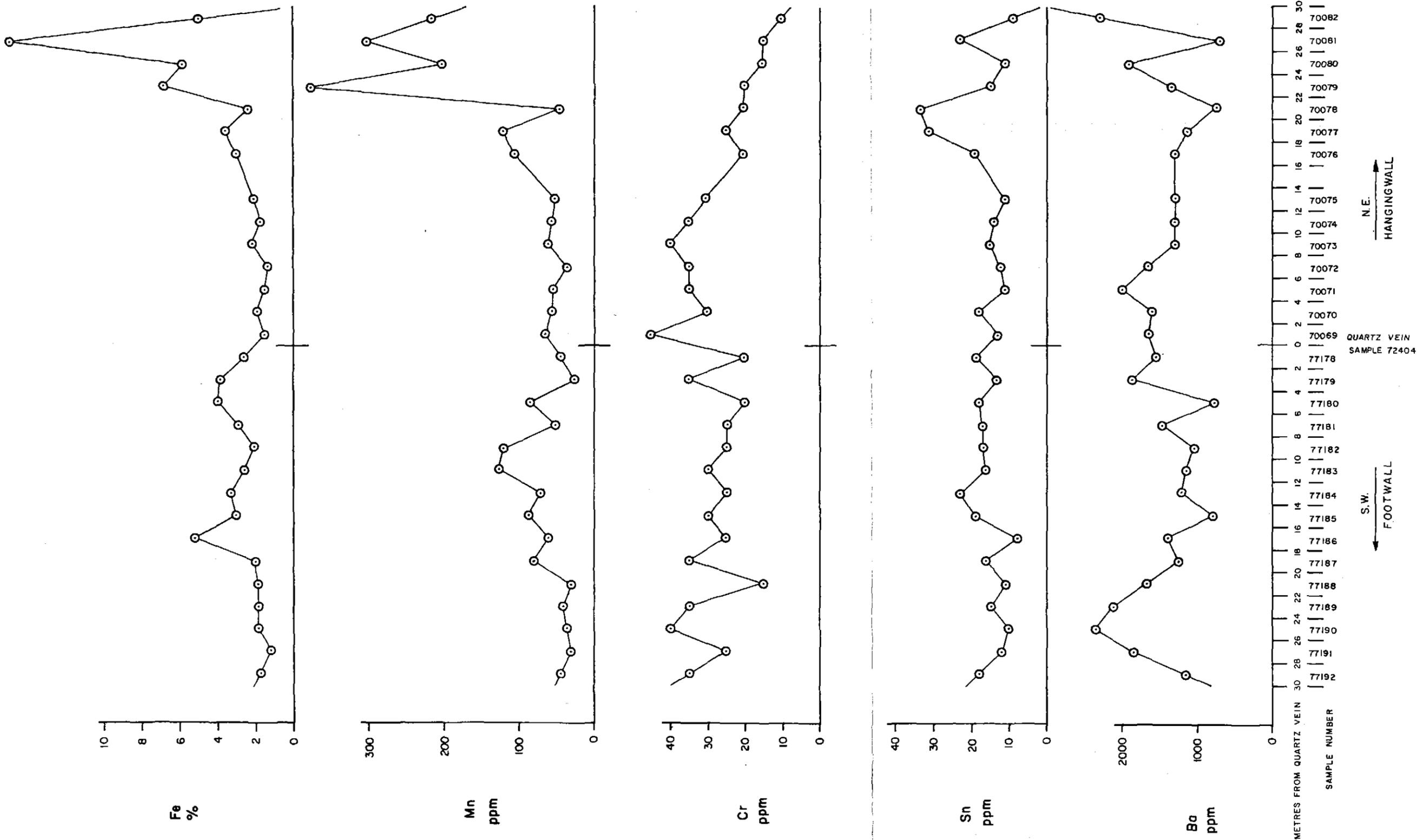
GEOCHEMICAL RESULTS for  
SAMPLES ACROSS NORMS QUARTZ VEIN  
Fig. 9a - APRIL, 1988



### GEOCHEMICAL RESULTS for SAMPLES ACROSS NORMS QUARTZ VEIN

Fig. 9b - APRIL, 1988

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Quartz samples with high Au values are found up to 100m NW of 5000N, 5000E (1.97 g/t Au) and up to 70m SE of 5000N, 5000E (3.72 g/t Au) giving an anomalous outcrop length of 170m (Fig. 8).

Although the quartz vein peters out to the north east, the south eastern extension has not been found. Line 5100E was sampled every 5m to try and detail this extension. Samples were a combination of rock chip auger, and mattock, and should represent bedrock geochemistry. If the vein is planar (strike 300° mag. dip 30° NE) then it should out very close to the sample of volcanics that assayed 0.255 g/t Au (Fig. 8) at 4975N, 5100E. There is plenty of room to hide a 1-2m quartz vein within the 5m sample spacing.

A series of rock chip samples over 2m intervals were taken from points A-B from footwall to hangingwall across the main quartz vein (Fig. 8). These were assayed for a number of elements to determine whether the vein had a geochemical 'halo'. The results for Au, Cu, Pb, Zn, Fe, Mn, Cr, Sn and Ba are shown in Figure 9 (W and As were assayed for but results were either below detection or too low to make a graph meaningful).

The graphs show no clear trend in any of the elements either increasing or decreasing towards the vein. The quartz float sample (1987) was analysed for a number of elements (Mathison and Gardner 1987) and returned with low values for Cr, Mo, W and Sn possibly indicating that it was not high temperature, or granite associated, unlike seven other anomalous samples. The similarly low results in Cr, W and Sn for the surrounding rocks may support this.

A sample of Central Sequence Volcanics caught up in the vein of 5000N, 5000E assayed 5.73 g/t Au indicating that mineralisation is not confined entirely to the vein. All samples from the immediate footwall or hangingwall however assayed <1.0 g/t.

Sampling of the two other quartz veins produced lower Au values, with the upper vein assaying 0.14 g/t Au and the lower vein having a maximum of 0.046 g/t Au. Although these values are

less impressive than the main vein, these values are still anomalous.

Base metal assays in the area are all insignificant (Plans 6,8).

#### 4.3. Conclusions

This years work has shown that Norms Quartz Prospect is an area with consistently anomalous Au geochemistry. Although the maximum vein width outcropping is only 1.5m an outcrop length of 170m of anomalous vein is known. Sampling to the east of the ridge has not closed off the potential 150m strike length from the last outcrop to the Darwin Granite. The vein is both thickest and of highest grade where the outcrop disappears.

To be of any interest, significantly thicker widths of high Au grades are necessary than have been found so far. However what the vein does at depth (closer to its source?) is as yet completely unknown. It would be possible to significantly increase our knowledge of the surface expression of the vein east of the ridge with persistence. This however will give no information on the situation at depth.

Initially 2 diamond drill holes of approximately 30m each are required to test the down dip extension of  
a) the vein at 5000N 5000E and b) the vein at the two pits. These holes would be vertical, collared approximately 35m NE of the vein to intersect the vein 20m below the surface.

A negative result from these holes would probably lead to the prospect being dropped. A positive result should be followed up with further work on the eastern extension of the vein. I.P. (both surface and down hole) if the drill holes contain quartz with significant sulphides, and further drilling of the down dip continuation of the vein. The dependence of further work on the results of the initial holes means that these should be drilled as early in the summer as possible.

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## 5.0. FINDONS

### 5.1. Work Completed

Reconnaissance mapping and sampling was carried out on the area west of Snake Creek (including the Findons group of workings)(Fig's 2, 10). The Findons adit was mapped and sampled.

### 5.2. Results

#### *Geology*

The Findons area (Fig. 10, Plan 13) is covered by massive pink and green lavas of the Central Sequence. To the west these become less siliceous and more cleaved approaching the boundary with the Western Sequence. Where seen the contact has some associated shearing (faulting?) but is probably gradational. The number of clastic lenses in the lavas increase to the west. The typical Western Sequence lithology is a sericitic chlorite schist possibly slightly quartz phyrlic.

Mineralisation at Findons workings consists of small accumulations of chalcopyrite and pyrite in very dark green hard chloritic pods (trending north west). A number of these dark green pods can be seen in the area (besides the workings) and some have associated pyrite and minor chalcopyrite.

The Findons main adit was mapped and sampled (Fig. 11). Copper staining was abundant but no sulphides were seen. A fine cherty rock found at the end of the adit may correspond to the chert unit just west of the workings (Fig. 10).

A3-518-0065

382 000mE

383 000mE

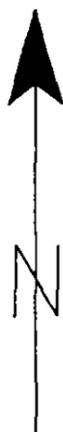
735029

△ Conglomerate Peak

88-2861

### WESTERN SEQUENCE VOLCANICS

Green cleaved chloritised felsic volcanics, quartz phytic in places.



### OWEN CONGLOMERATE

#### LEGEND

X Sample Location (rockchip)

0.030 Au value (g/t).

#### Notes

Au results below 0.020, left blank.

Only 1988 samples shown.

? Gradational Boundary?

Unconformable Boundary

cherty band

adit

pit

FINDONS WORKINGS

pit

△ Snake Peak

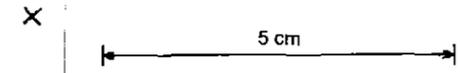
5 323 000mN

### CENTRAL SEQUENCE VOLCANICS

Pink and green fine grained siliceous lavas, minor clastic lenses, variably chloritised.

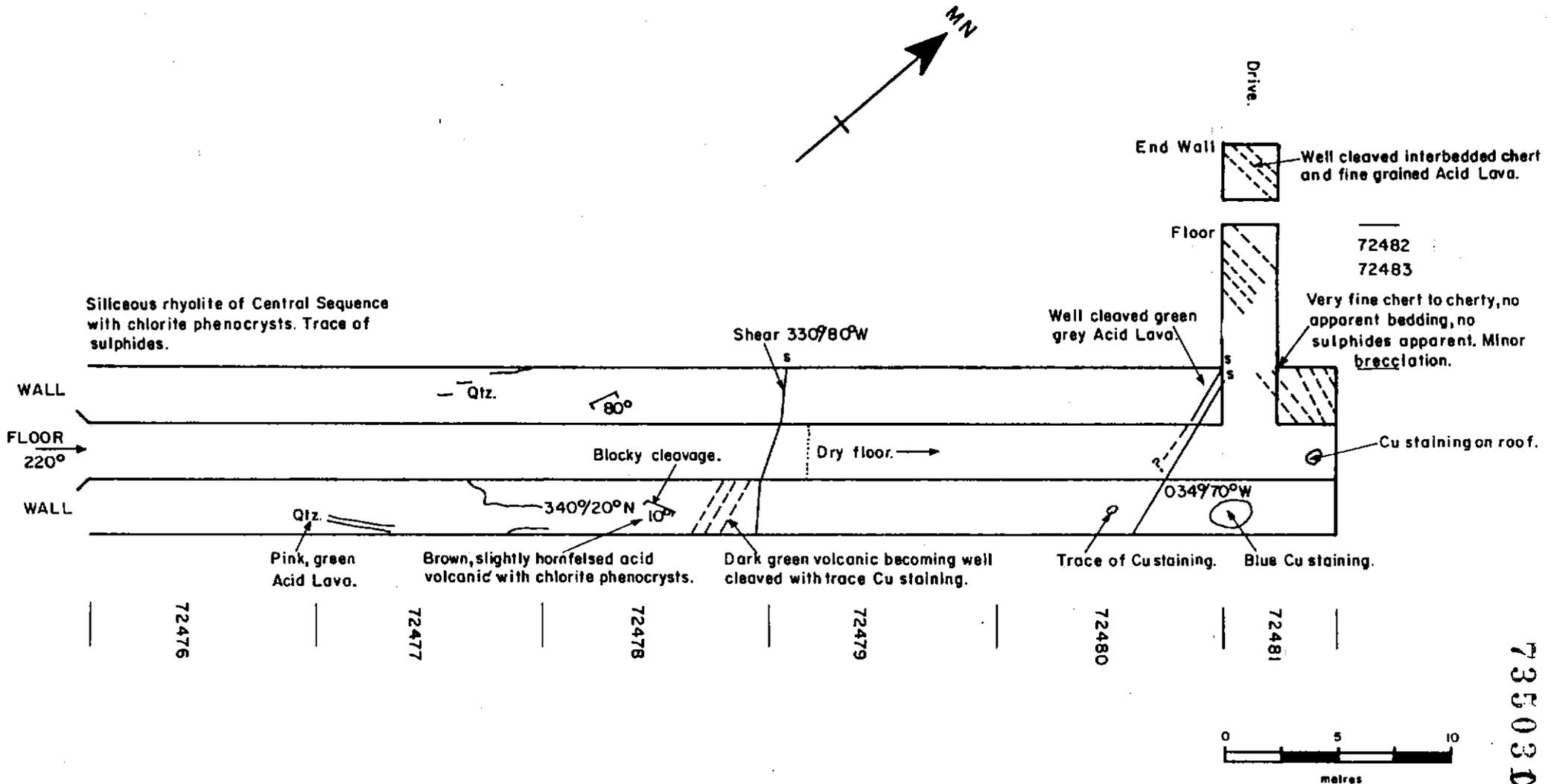
Zone of volcanic-clastic lenses

Cleavage better developed



E-Z Fig 10	
Project: JUKES-DARWIN E.L.6/85	
FINDONS AREA	
GEOLOGY and SAMPLE LOCATIONS	
Survey: D. Gardner.	Scale: 1:5000
Date: 29-4-88	No.
Drawn: N.W.D.S. - 25-6-88	A3-518-0065

028



735030

**LEGEND**

- Trace bedding.
- s Shear.
- ∟ Cleavage.

**NOTE:** Adit sampled at random between 10m. intervals on both side walls.

5 cm

PROJECT: JUKES-DARWIN E.L.6/85	
FINDONS ADIT	
Compiled: A.H. Date: Mar.1988	Plan No.
Drawn: N.W.D.S. Scale: 1:250	Fig. 11

### *Geochemistry*

Assay results were disappointing with only 2 samples assaying >0.1 g/t Au. The highest value (0.726 g/t Au) was from a tiny quartz vein containing galena(?), in magnetite haematite stained lava (Fig. 10). Other sampling in this area produced no good values.

A sample from one of the green chlorite pods (no visible sulphides) assayed 0.192 g/t (Fig. 10). Results from the main workings were however disappointing. The highest value of 0.081 g/t came from a pit in dark chloritic rock, with pyrite. The highest value from Findons adit (Fig. 11) was sample 72483 at 0.024 g/t Au. Several high Cu values were recorded in the workings up to 0.5% Cu.

Base metal values (Plan 10,12) were insignificant.

### 5.3. Conclusions

The poor results from the reconnaissance warrant no further work.

## 6.0. SOUTH DARWIN PLATEAU

### 6.1. Work Completed

Reconnaissance mapping and sampling of this area carried on from 1987. The Prince Darwin-South Darwin Peak area was covered. Attempts to find the Prince Darwin workings were unsuccessful.

### 6.2. Results

#### *Geology*

Reconnaissance mapping has delineated the intrusive contact of the altered Darwin Granite with the hornfelsed Central Sequence (Plan 23). A small patch of Central Sequence sitting on the granite contains a small chloritic pod with minor pyrite and chalcopyrite similar to the Findons mineralisation. A small trench tests this pod.

Lack of outcrop has prevented the detecting of the Eastern Sequence Contact with the Darwin Granite.

The Prince Darwin Mine was not located.

#### *Geochemistry*

All assay results were extremely low (Plan 20,21,22). No sample assayed  $>0.08$  g/t Au. Base metal values were similarly poor.

### 6.3. Conclusions

Although a fair proportion of this area has not yet been covered the lack of encouraging results means the area warrants no special attention. Reconnaissance could be completed as part of a program based on Norms Quartz Prospect.

## 7.0. FUTURE WORK

### 7.1. Proposed Program 1988/89

1. 2 drill holes to be drilled at Norms Quartz Prospect to test the quartz vein at depth.  
2 x 30m vertical holes collared:
  - i) 35m NE of 5000N 5000E
  - ii) 35m NE of the two pitsto be drilled with a man portable diamond drill.
  
2. Possible follow up to 1. include:
  - i) detailing of Eastern extension of veins to granite contact.
  - ii) I.P. downhole and surface to detect quartz & sulphides.
  - iii) extensive sampling of upper and lower quartz veins.
  - iv) follow-up drilling, at least 2 x 100m holes, stepped back further NE.
  
3. Completion of South Darwin reconnaissance during initial drilling at Norms Quartz Prospect.

### 7.2. Other Work

Several other areas in the lease have loose ends or question marks associated with them. Although not high priority, this work would be useful if for instance a joint venture partner was available.

Areas that could receive more attention include:

1. Completion of reconnaissance in the Intercolonial Spur area with attention to the Hydes-Hal Jukes workings.
  
2. Re-appraisal of the potential at Upper Lake Jukes, with further sampling and/or structural interpretation to produce a 'speculative' drill target.

033

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## 8.0 REFERENCES

MATHISON, I.J. and GARDNER, D., 1987

E.L. 6/85 Jukes-Darwin

Report on Exploration August, 1986 - August, 1987

E.Z. Report No. T226

MATHISON, I.J. and TAYLOR, S., 1986

Progress Report on Exploration October, 1985 - September, 1986 in

E.L. 6/85 Jukes-Darwin

E.Z. Report No. T219.

? Habets, 1988 - p8

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**APPENDIX 1**

**A1 Geochemical Results**

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# ANALABS

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## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER NO.

PAGE

1 OF 7

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Au	15/03/88	900892	27.1.08.05210
----------	------------	----	----	----	----	----	----	----------	--------	---------------

1	70001	1750	530	85	4.95	450	0.066			
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2	70002	35	85	75	2.36	200	0.005			
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3	70003	40	<5	90	3.05	360	0.009			
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4	70004	180	<5	90	3.51	485	0.009			
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5	70005	20	<5	50	2.17	230	0.014			
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6	70006	20	<5	45	2.35	300	0.012			
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7	70007	30	<5	45	2.34	180	<0.005			
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8	70008	60	40	40	2.29	100	0.015			
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9	70009	190	2000	85	4.59	1400	0.043			
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10	70010	20	<5	30	2.53	105	<0.005			
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11	70011	65	5	45	2.61	140	<0.005			
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12	70012	15	<5	10	2.21	60	0.287			
----	-------	----	----	----	------	----	-------	--	--	--

13	70013	30	20	20	2.46	100	0.075			
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14	70014	65	120	25	2.92	140	0.073			
----	-------	----	-----	----	------	-----	-------	--	--	--

15	70015	65	95	55	3.58	375	0.077			
----	-------	----	----	----	------	-----	-------	--	--	--

16	70016	90	200	40	3.31	145	0.012			
----	-------	----	-----	----	------	-----	-------	--	--	--

17	70017	70	35	30	3.22	75	0.010			
----	-------	----	----	----	------	----	-------	--	--	--

18	70018	780	180	55	3.33	510	0.035			
----	-------	-----	-----	----	------	-----	-------	--	--	--

19	70019	120	<5	30	4.25	210	0.041			
----	-------	-----	----	----	------	-----	-------	--	--	--

20	70020	235	70	25	3.90	145	0.017			
----	-------	-----	----	----	------	-----	-------	--	--	--

21	70021	140	160	30	3.33	110	0.024			
----	-------	-----	-----	----	------	-----	-------	--	--	--

22	70022	1055	260	50	3.35	185	0.200			
----	-------	------	-----	----	------	-----	-------	--	--	--

23	70023	25	55	40	2.58	200	0.013			
----	-------	----	----	----	------	-----	-------	--	--	--

24	70024	30	<5	40	2.22	130	<0.005			
----	-------	----	----	----	------	-----	--------	--	--	--

25	70025	25	5	60	2.19	115	<0.005			
----	-------	----	---	----	------	-----	--------	--	--	--

Results in ppm unless otherwise specified  
 T = element present but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

AUTHORISED OFFICER

Cheryl Catlow

## ANALABS

A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

27.1.08.05210

15/03/88

900892

2 OF 7

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Au			
1	70026	265	410	100	3.89	575	0.577			
2	70027	135	410	110	4.68	780	0.588			
3	70028	75	170	85	3.00	300	0.018			
4	70029	70	190	70	3.49	145	0.047			
5	70030	85	600	100	2.87	485	0.059			
6	70031	120	225	30	3.09	130	<0.005			
7	70032	160	160	55	4.54	400	0.023			
8	70033	90	<5	20	3.00	110	0.033			
9	70034	40	75	20	2.24	65	0.022			
10	70035	60	235	45	3.05	65	<0.005			
11	70036	35	255	35	2.57	135	0.029			
12	70037	10	20	40	1.85	250	0.009			
13	70038	35	115	65	3.74	800	0.010			
14	70039	40	70	350	2.66	245	<0.005			
15	70040	40	330	35	2.55	165	<0.005			
16	70041	35	155	30	2.70	130	0.013			
17	70042	60	15	30	2.96	60	0.012			
18	70043	35	<5	50	3.45	190	0.011			
19	72401	620	55	15	3.40	60	4.200			
20	72402	415	20	40	3.64	100	6.680			
21	72403	15	<5	70	3.48	120	0.615			
22	72404	20	<5	20	2.76	115	2.750			
23	72405	10	<5	10	1.49	70	1.230			
24	72406	10	<5	35	3.65	100	0.197			
25	72407	20	<5	125	6.35	385	<0.005			

Results in ppm unless otherwise specified

T = element present, but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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# ANALABS

## ANALYTICAL DATA

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SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER NO.

PAGE

27.1.08.05210	15/03/88	900892	3 OF 7
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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Au
----------	------------	----	----	----	----	----	----

1	72408	180	960	60	3.70	135	0.054
2	72409	180	300	50	3.75	460	0.044
3	72410	50	<5	10	0.70	50	<0.005
4	72411	200	145	60	3.50	435	0.046
5	72412	325	80	110	3.20	1050	<0.005
6	72413	165	210	55	2.60	115	0.060
7	72414	90	15	45	3.00	145	0.013
8	72415	160	175	15	2.93	20	0.215
9	72416	110	<5	40	3.53	225	0.020
10	72417	395	<5	55	5.65	245	0.046
11	72418	120	<5	50	3.20	155	0.043
12	72419	45	<5	60	1.55	245	<0.005
13	72420	25	<5	30	1.70	50	0.008
14	72421	70	<5	40	2.97	80	<0.005
15	72422	65	<5	30	2.65	75	<0.005
16	72423	50	15	65	2.17	225	<0.005
17	72424	35	5	25	2.75	60	0.008
18	72425	130	<5	75	3.25	135	<0.005
19	72426	25	<5	55	3.35	150	<0.005
20	72427	25	<5	10	3.10	70	0.007
21	72428	320	310	65	4.65	590	0.026
22	72429	85	120	40	3.85	880	0.018
23	72430	35	<5	20	2.90	180	0.016
24	72431	10	<5	50	4.13	180	0.010
25	72432	30	<5	290	7.35	740	<0.005

Results in ppm unless otherwise specified

1 = element present, but concentration too low to measure  
X = element concentration is below detection limit  
- = element not determined

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*Cheryl Catano*

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## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Au				
		27.1.08.05210							15/03/88	900892	4 OF 7
1	72433	510	45	90	4.45	255	0.022				
2	72434	15	<5	55	2.40	335	0.008				
3	72435	<5	<5	40	2.23	140	<0.005				
4	72436	10	<5	45	2.42	205	<0.005				
5	72437	10	<5	50	2.80	250	<0.005				
6	72438	25	10	30	2.47	50	<0.005				
7	72439	40	2700	2450	8.47	430	0.032				
8	72440	55	<5	60	3.05	105	<0.005				
9	72441	5	5	65	1.32	185	0.012				
10	72442	5	<5	60	1.75	140	<0.005				
11	72443	25	105	50	2.77	110	0.165				
12	72444	35	<5	120	4.40	1300	<0.005				
13	72445	20	<5	45	3.10	170	<0.005				
14	72446	45	<5	50	2.75	40	<0.005				
15	72447	65	<5	30	2.15	140	0.008				
16	72448	10	<5	45	2.65	375	<0.005				
17	72449	10	10	25	2.05	90	0.008				
18	72450	10	<5	20	0.79	15	<0.005				
19	72451	105	<5	50	3.52	540	<0.005				
20	72452	280	<5	90	4.25	135	0.010				
21	72453	9650	15	110	5.25	130	0.067				
22	72454	2550	<5	80	4.45	630	0.071				
23	77003	20	<5	25	2.15	240	<0.005				
24	77004	5	<5	20	1.33	55	<0.005				
25	77008	265	<5	30	3.60	30	0.009				

Results in ppm unless otherwise specified  
 T = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

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*Cheryl Cathie*

## ANALABS

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## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

		27.1.08.05210				15/03/88	900892	5 OF 7		
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Au			
1	77009	155	<5	35	3.12	55	0.007			
2	77010	145	<5	40	2.45	40	0.010			
3	77011	35	<5	210	6.55	285	0.009			
4	77012	40	80	60	2.85	95	0.016			
5	77013	20	5	25	2.00	65	<0.005			
6	77014	15	<5	70	3.02	210	<0.005			
7	77015	10	<5	65	2.95	190	<0.005			
8	77016	35	15	90	4.50	360	<0.005			
9	77017	30	35	20	2.63	30	0.007			
10	77018	80	60	60	4.00	795	0.042			
11	77019	20	<5	50	2.58	110	<0.005			
12	77020	35	5	50	2.40	135	<0.005			
13	77021	15	<5	35	2.00	85	0.016			
14	77022	20	<5	45	2.58	170	<0.005			
15	77023	30	10	50	3.35	205	<0.005			
16	77024	70	<5	25	2.25	60	0.007			
17	77025	20	20	60	3.17	265	0.040			
18	77026	30	<5	20	3.30	180	0.007			
19	77027	140	70	20	2.00	80	<0.005			
20	77028	20	<5	35	2.90	105	<0.005			
21	77029	25	5	50	3.30	170	<0.005			
22	77030	10	<5	50	3.17	145	<0.005			
23	77031	5	<5	35	1.92	90	<0.005			
24	77032	35	<5	25	2.55	105	<0.005			
25	77033	20	<5	20	2.50	120	<0.005			

Results in ppm unless otherwise specified

T = element present, but concentration too low to measure

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— = element not determined

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Cheryl Cathie

## ANALABS

A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

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27.1.08.05210

15/03/88

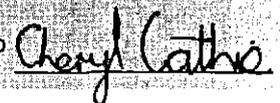
900892

6 OF 7

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Au			
1	77034	405	105	130	7.60	615	0.011			
2	77035	240	<5	45	4.95	85	<0.005			
3	77036	80	785	10	1.87	55	0.010			
4	77037	10	65	25	2.50	150	0.008			
5	77038	30	75	75	3.87	515	0.008			
6	77039	45	220	60	3.10	510	0.010			
	77040	85	65	75	4.17	190	0.010			
8	77041	80	65	20	4.27	100	<0.005			
9	77042	55	100	25	2.40	120	0.041			
10	77043	50	60	60	2.75	100	<0.005			
11	77044	60	<5	35	1.25	85	<0.005			
12	77045	115	690	45	3.05	375	0.041			
13	77046	310	145	30	3.50	100	0.062			
14	77047	135	20	35	3.03	200	0.006			
15	77048	135	10	30	3.30	110	0.010			
16	77049	90	350	105	4.05	1150	0.090			
17	77050	190	115	55	2.95	215	0.630			
18	77051	120	285	70	2.90	165	0.011			
19	77052	35	<5	55	2.67	130	<0.005			
20	77053	25	<5	45	2.45	95	<0.005			
21	77001	10	<5	15	0.35	10	<0.005			
22	77005	25	<5	20	0.87	25	0.114			
23	77006	<5	<5	10	0.35	10	<0.005			
24	77007	<5	<5	10	0.36	5	0.012			
25										

Results in ppm unless otherwise specified  
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A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

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27.1.08.05256

28/03/88

900894

1 OF 8

TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Mn	Fe	Au
1	70044	330	-	40	-	175	-	250	25.60	0.016
2	70045	870	-	315	-	105	-	18200	6.97	0.472
3	70046	855	-	200	-	135	-	34900	8.36	0.516
4	70047	595	-	-	590	-	1260	12900	6.42	0.048
5	70048	165	-	50	-	160	-	690	3.89	0.020
6	72455	20	-	15	-	75	-	75	2.47	0.011
7	72456	80	-	5	-	85	-	140	4.91	0.007
8	72457	60	-	80	-	175	-	155	5.66	0.009
9	72458	1250	-	20	-	95	-	245	7.23	0.027
10	72459	580	-	5	-	105	-	595	4.27	0.020
11	72460	390	-	5	-	140	-	835	4.36	0.007
12	72461	170	-	5	-	100	-	580	3.97	0.006
13	72462	7650	-	5	-	110	-	750	6.63	0.027
14	72463	235	-	<5	-	80	-	1150	5.29	<0.005
15	72464	405	-	<5	-	80	-	510	5.16	0.005
16	72465	1150	-	15	-	125	-	1050	5.15	0.007
17	72466	150	-	5	-	90	-	1045	5.30	<0.005
18	72467	45	-	10	-	115	-	680	5.05	<0.005
19	72468	40	-	10	-	65	-	990	3.99	<0.005
20	72469	25	-	5	-	90	-	785	4.65	0.007
21	72470	70	-	35	-	90	-	805	4.14	<0.005
22	72471	25	-	5	-	80	-	1000	4.99	<0.005
23	72472	30	-	5	-	80	-	1210	4.05	0.007
24	72473	35	-	10	-	70	-	810	3.84	<0.005
25	72474	35	-	<5	-	75	-	700	4.00	<0.005

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## ANALABS

A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

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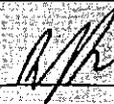
		27.1.08.05256				28/03/68		900894		2 OF 8	
TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Mn	Fe	Au	
1	72475	60	-	-	2230	2300	-	235	4.60	0.110	
2	72476	95	-	35	-	100	-	200	3.98	0.008	
3	72477	45	-	20	-	50	-	120	2.11	0.005	
4	72478	210	-	30	-	85	-	380	3.62	0.005	
5	72479	5650	-	70	-	145	-	640	5.15	0.013	
6	72480	1600	-	40	-	180	-	2200	7.62	0.020	
7	72481	260	-	10	-	130	-	8000	7.87	0.005	
8	72482	900	-	15	-	75	-	390	4.15	0.005	
9	72483	3100	-	65	-	160	-	1350	7.90	0.024	
10	72484	2000	-	50	-	195	-	1700	18.80	0.016	
11	72485	530	-	20	-	190	-	1550	18.80	0.008	
12	72486	45	-	<5	-	25	-	80	1.93	0.005	
13	72488	35	-	10	-	25	-	80	1.76	0.007	
14	72489	75	-	<5	-	20	-	90	1.38	0.005	
15	72490	105	-	5	-	20	-	65	1.53	0.005	
16	77054	85	-	5	-	165	-	540	5.08	0.010	
17	77055	120	-	<5	-	160	-	1150	6.00	0.119	
18	77056	160	-	15	-	120	-	1050	6.00	0.016	
19	77057	245	-	10	-	160	-	1000	7.10	0.029	
20	77101	50	-	20	-	50	-	50	1.45	0.021	
21	77102	1600	-	10	-	350	-	1000	17.30	0.009	
22	77103	7850	-	25	-	150	-	1550	16.10	0.081	
23	77104	150	-	45	-	340	-	1200	10.90	0.192	
24	77105	190	-	60	-	405	-	2000	15.30	0.082	
25	77106	50	-	30	-	115	-	560	3.25	0.006	

Results in ppm unless otherwise specified

T = element present, but concentration too low to measure

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A Division of Macdonald Hamilton &amp; Co. Pty Ltd.

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		27.1.08.05256				28/03/88		900894		3 of 8	
TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Mn	Fe	Au	
1	77107	-	1.27	-	40	255	-	1600	17.50	0.022	
2	77108	250	-	20	-	50	-	275	4.75	0.005	
3	77109	160	-	20	-	110	-	265	5.80	0.048	
4	77110	35	-	20	-	20	-	180	2.81	0.005	
5	77111	115	-	15	-	30	-	360	3.79	0.013	
6	77112	330	-	15	-	145	-	1550	14.30	0.008	
7	77113	20	-	15	-	25	-	460	1.96	0.009	
8	77114	70	-	70	-	65	-	420	4.03	0.005	
9	77115	15	-	15	-	45	-	230	2.52	0.005	
10	77116	45	-	15	-	40	-	165	4.66	0.006	
11	77117	40	-	10	-	15	-	65	1.61	0.005	
12	77118	240	-	15	-	85	-	530	11.20	0.013	
13	77119	25	-	10	-	25	-	620	2.48	0.005	
14	77120	70	-	30	-	45	-	130	6.24	0.009	
15	77121	40	-	50	-	135	-	185	3.98	0.005	
16	77122	30	-	15	-	30	-	100	2.65	0.005	
17	77123	15	-	5	-	20	-	50	3.30	0.005	
18	77124	10	-	15	-	50	-	170	1.30	0.005	
19	77125	15	-	15	-	35	-	100	1.55	0.005	
20	77126	20	-	15	-	25	-	50	1.46	0.005	
21	77127	15	-	35	-	40	-	100	1.00	0.005	
22	77129	90	-	65	-	35	-	95	1.85	0.005	
23	77130	35	-	25	-	30	-	70	7.29	0.030	
24	77131	80	-	40	-	25	-	50	50.50	0.008	
25	77132	10	-	10	-	15	-	30	0.95	0.005	

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## ANALABS

A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

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28/03/88

900894

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TUBE No.	SAMPLE No.	Cu	Cu	Pb	Pb	Zn	Zn	Mn	Fe	Au
1	77133	15	-	30	-	25	-	90	5.35	0.005
2	77134	45	-	25	-	35	-	80	9.77	0.006
3	77135	5	-	15	-	15	-	30	18.70	0.726
4	77136	20	-	25	-	45	-	95	5.34	0.008
5	77137	15	-	20	-	20	-	55	7.39	0.005
6	77138	40	-	15	-	45	-	125	1.96	0.005
7	77139	45	-	15	-	55	-	225	3.06	0.010
8	77140	25	-	30	-	40	-	1040	1.68	0.005
9	77141	375	-	15	-	75	-	1950	8.02	0.005
10	77142	1450	-	15	-	105	-	3050	14.00	0.007
11	77143	65	-	15	-	35	-	210	3.47	0.005
12	77144	30	-	35	-	30	-	170	1.69	0.005
13	77145	15	-	15	-	30	-	50	1.18	0.005
14	77146	60	-	15	-	25	-	55	1.85	0.005
15	77147	95	-	15	-	20	-	105	2.28	0.005
16	77148	30	-	10	-	20	-	800	2.86	0.005
17	77149	170	-	5	-	30	-	1200	5.66	0.005
18	77150	160	-	5	-	35	-	1350	5.78	0.008
19	77151	15	-	10	-	55	-	285	3.56	0.005
20	77152	30	-	5	-	30	-	335	1.60	0.005
21										
22										
23	DETECTION	5	0.05	5	5	5	5	5	0.05	0.005
24	UNITS	PPM	%	PPM	PPM	PPM	PPM	PPM	%	PPM
25	METHOD	101	103	101	103	101	103	101	101	313

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A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

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27.1.08.0527B

07/04/88

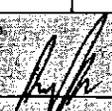
900895

1 OF 2

TUBE No	SAMPLE No	Cu	Pb	Zn	Ag	Mn	Au	AuChk		
1	77058	210	25	120	<0.5	1050	<0.005	-		
2	77059	35	20	190	<0.5	1300	<0.005	-		
3	77060	5	<5	185	1.0	1650	<0.005	-		
4	77061	5	<5	155	<0.5	1025	<0.005	-		
5	77062	30	<5	55	<0.5	130	0.060	0.050		
6	77063	40	5	190	<0.5	385	<0.005	-		
7	77064	35	<5	215	<0.5	250	<0.005	-		
8	77065	30	115	120	<0.5	485	<0.005	-		
9	77066	45	<5	50	<0.5	740	<0.005	-		
10	77067	35	<5	50	<0.5	40	<0.005	-		
11	77068	140	620	130	<0.5	290	<0.005	-		
12	77069	25	5	10	<0.5	60	0.612	0.755		
13	77070	20	5	45	1.0	65	<0.005	-		
14	77071	15	10	45	0.5	30	<0.005	-		
15	77072	20	5	65	1.0	70	0.016	-		
16	77073	15	5	40	<0.5	85	0.218	-		
17	77074	20	5	20	<0.5	70	0.123	-		
18	77075	20	<5	15	<0.5	35	<0.005	-		
19	77076	30	10	15	0.5	20	1.840	2.100		
20	77077	20	5	35	0.5	35	<0.005	-		
21	77078	25	10	50	<0.5	110	<0.005	-		
22	77079	25	5	70	0.5	95	<0.005	-		
23	77080	10	10	25	<0.5	70	<0.005	-		
24	77081	25	<5	65	<0.5	145	<0.005	-		
25	77082	30	5	60	<0.5	65	<0.005	-		

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## ANALYTICAL DATA

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27.1.08.05278

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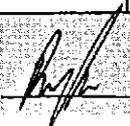
900895

2 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Mn	Au	AuChk		
1	77083	50	5	40	<0.5	75	<0.005	-		
2	77084	30	10	75	<0.5	75	<0.005	-		
3	77085	25	10	55	1.0	125	<0.005	-		
4	77086	50	5	70	<0.5	780	<0.005	-		
5	77087	45	10	40	1.5	80	<0.005	0.009		
6	77088	30	<5	60	<0.5	110	<0.005	-		
7	77089	70	10	100	<0.5	195	0.009	-		
8	77153	35	10	50	<0.5	130	<0.005	-		
9	77154	35	<5	125	<0.5	330	<0.005	-		
10	77155	40	10	15	0.5	60	0.017	-		
11	77156	20	<5	55	0.5	210	<0.005	-		
12	77157	30	25	90	<0.5	425	<0.005	-		
13	77158	30	180	150	<0.5	565	<0.005	-		
14	77159	90	185	170	<0.5	335	0.012	-		
15	77160	20	<5	275	<0.5	485	<0.005	-		
16	77161	25	<5	35	<0.5	20	0.006	-		
17	77162	25	<5	105	<0.5	195	<0.005	-		
18	77163	25	<5	185	<0.5	155	<0.005	-		
19	77164	50	210	155	<0.5	265	<0.005	-		
20										
21										
22										
23	DETECTION	5	5	5	0.5	5	0.005	0.005		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
25	METHOD	101	101	101	101	101	313	313		

Results in ppm unless otherwise specified  
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735048

# ANALABS

## ANALYTICAL DATA

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27.1.08.05320

14/04/88

900897

1 OF 1

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Mn	Fe	As			
1	77090	25	5	60	225	2.85	<0.008			
2	77165	15	<5	25	130	1.82	<0.008			
3	77166	85	<5	60	90	3.00	<0.008			
4	77167	35	10	40	65	2.25	<0.008			
5	77168	10	<5	35	55	3.61	<0.008			
6	77169	40	<5	110	195	5.65	<0.008			
7	77170	10	<5	55	125	6.78	0.046			
8	77171	35	10	35	125	3.75	<0.008			
9	77172	15	5	40	85	8.04	<0.008			
10	77173	20	10	30	130	4.53	<0.008			
11	77174	45	5	20	135	3.49	<0.008			
12	77175	65	10	30	225	5.20	<0.008			
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	5	0.05	0.008			
24	UNITS	PPM	PPM	PPM	PPM	%	PPM			
25	METHOD	101	101	101	101	101	313			

Results in ppm unless otherwise specified.  
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A Division of Macdonald-Hamilton &amp; Co. Pty Ltd.

**ANALYTICAL DATA**

SAMPLE PREFIX

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27.1.08.05414

20/05/88

900901

1 OF 8

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Cr	As	Au	AuCHK
1	70049	5	10	50	0.60	60	105	-	<0.005	-
2	70050	15	45	80	18.50	65	30	-	0.050	-
3	70051	20	140	85	0.80	35	45	-	0.080	-
4	70052	15	5	35	1.20	25	45	-	0.005	-
5	70053	15	20	30	3.85	25	85	-	<0.005	-
6	70054	15	5	15	1.00	40	40	-	<0.005	-
7	70055	15	60	50	1.05	50	50	-	0.315	-
8	70057	5	<5	5	0.55	80	55	-	0.025	0.020
9	70058	140	55	10	3.80	75	115	-	4.370	3.100
10	70059	5	5	20	8.65	25	40	-	0.165	-
11	70060	5	<5	5	0.55	50	90	-	0.020	-
12	70061	5	<5	5	0.60	45	45	-	0.005	-
13	70062	5	15	25	0.75	30	65	-	0.020	-
14	70063	25	25	30	1.40	55	40	-	0.095	-
15	70064	45	15	30	1.90	30	50	-	<0.005	-
16	70065	75	25	30	3.10	80	35	-	0.010	-
17	70066	20	<5	15	1.00	50	70	-	0.140	-
18	70067	35	80	75	4.20	340	35	-	<0.005	<0.005
19	70068	20	35	35	4.70	95	40	-	5.340	6.130
20	70069	15	20	30	1.65	65	45	3	0.005	-
21	70070	30	15	75	1.90	55	30	2	<0.005	-
22	70071	10	10	30	1.55	55	35	2	<0.005	-
23	70072	10	20	30	1.35	35	35	1	<0.005	-
24	70073	10	20	40	2.15	60	40	1	<0.005	-
25	70074	5	10	35	1.75	55	35	1	0.010	-

Results in ppm unless otherwise specified.

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A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

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TUBE No	SAMPLE No	Cu	Pb	Zn	Fe	Mn	Cr	AS	Au	AuChk
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1	70075	30	20	45	2.05	50	30	1	0.080	-
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2	70076	5	35	55	2.95	105	20	1	<0.005	<0.005
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3	70077	5	35	70	3.50	120	25	1	0.015	-
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4	70078	10	25	50	2.40	45	20	1	<0.005	-
---	-------	----	----	----	------	----	----	---	--------	---

5	70079	15	40	45	6.75	375	20	2	<0.005	-
---	-------	----	----	----	------	-----	----	---	--------	---

6	70080	40	40	65	5.80	200	15	2	0.100	-
---	-------	----	----	----	------	-----	----	---	-------	---

7	70081	30	40	60	15.00	300	15	3	0.005	-
---	-------	----	----	----	-------	-----	----	---	-------	---

8	70082	15	35	65	4.80	215	10	2	<0.005	0.020
---	-------	----	----	----	------	-----	----	---	--------	-------

9	72347	15	45	25	1.95	55	25	-	0.010	-
---	-------	----	----	----	------	----	----	---	-------	---

10	72348	5	30	20	2.65	50	15	-	<0.005	-
----	-------	---	----	----	------	----	----	---	--------	---

11	72349	20	20	25	4.45	45	35	-	<0.005	-
----	-------	----	----	----	------	----	----	---	--------	---

12	72350	5	20	15	2.95	30	20	-	<0.005	-
----	-------	---	----	----	------	----	----	---	--------	---

13	72351	5	35	25	3.20	60	35	-	0.010	-
----	-------	---	----	----	------	----	----	---	-------	---

14	72352	5	20	30	3.55	70	25	-	0.010	-
----	-------	---	----	----	------	----	----	---	-------	---

15	72353	10	20	25	4.50	65	40	-	<0.005	-
----	-------	----	----	----	------	----	----	---	--------	---

16	72354	5	35	55	3.35	50	20	-	<0.005	-
----	-------	---	----	----	------	----	----	---	--------	---

17	72355	5	25	15	0.95	20	20	-	<0.005	-
----	-------	---	----	----	------	----	----	---	--------	---

18	72356	5	20	10	0.45	20	20	-	<0.005	-
----	-------	---	----	----	------	----	----	---	--------	---

19	72357	5	15	10	0.70	15	30	-	<0.005	-
----	-------	---	----	----	------	----	----	---	--------	---

20	72358	5	20	40	2.05	185	20	-	0.050	-
----	-------	---	----	----	------	-----	----	---	-------	---

21	72359	5	40	60	2.85	335	25	-	<0.005	-
----	-------	---	----	----	------	-----	----	---	--------	---

22	72360	5	35	25	1.45	35	40	-	0.015	<0.005
----	-------	---	----	----	------	----	----	---	-------	--------

23	72361	5	40	35	3.00	45	25	-	0.010	-
----	-------	---	----	----	------	----	----	---	-------	---

24	72362	10	30	30	2.60	20	35	-	0.245	0.265
----	-------	----	----	----	------	----	----	---	-------	-------

25	72363	5	20	20	1.05	30	20	-	0.070	-
----	-------	---	----	----	------	----	----	---	-------	---

Results in ppm unless otherwise specified  
 1 = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

AUTHORIZED OFFICER

## ANALABS

A Division of Macdonald Hamilton &amp; Co. Pty. Ltd.

## ANALYTICAL DATA

SAMPLE PREFIX

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900901

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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Cr	As	Au	AuChk
1	72364	5	15	35	0.90	15	30	-	<0.005	-
2	72365	5	25	20	1.10	20	20	-	<0.005	-
3	72366	25	25	50	2.25	40	25	-	<0.005	-
4	72367	5	25	35	1.90	110	35	-	0.020	-
5	72368	5	15	15	0.65	20	40	-	<0.005	<0.005
6	72369	5	25	60	3.25	110	30	-	0.015	-
7	72370	5	30	30	3.00	195	30	-	<0.005	-
8	72371	5	15	20	1.50	25	30	-	<0.005	-
9	72372	5	15	15	1.80	20	20	-	0.005	<0.005
10	72373	35	15	20	2.25	70	30	-	<0.005	-
11	72374	10	15	20	2.55	50	25	-	<0.005	-
12	72375	25	20	30	2.65	100	25	-	<0.005	-
13	72376	20	35	55	4.95	115	20	-	<0.005	<0.005
14	77176	20	25	40	3.35	220	25	-	<0.005	-
15	77177	10	15	20	1.20	80	35	-	<0.005	-
16	77178	15	20	25	2.65	45	20	1	<0.005	-
17	77179	20	25	40	3.80	25	35	1	<0.005	-
18	77180	30	25	55	4.00	85	20	2	0.090	-
19	77181	15	25	35	2.90	50	25	2	<0.005	-
20	77182	10	15	40	2.15	120	25	1	<0.005	-
21	77183	15	20	45	2.60	125	30	1	<0.005	-
22	77184	10	15	35	3.30	70	25	1	<0.005	-
23	77185	40	20	40	3.00	85	30	1	<0.005	-
24	77186	25	20	75	5.20	60	25	3	<0.005	-
25	77187	10	25	35	2.05	80	35	1	<0.005	-

Results in ppm unless otherwise specified  
 1 = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

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OFFICER



# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

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		27.1.08.05414				20/05/88		900901		4 OF 8	
TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Cr	As	Au	AuChk	
1	77188	5	20	25	1.90	30	15	1	<0.005	-	
2	77189	5	25	20	1.85	40	35	1	<0.005	-	
3	77190	10	25	25	1.95	35	40	1	<0.005	<0.005	
4	77191	5	15	20	1.25	30	25	1	0.065	-	
5	77192	30	20	25	1.90	45	35	1	<0.005	-	
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23	DETECTION	5	5	5	0.05	5	5	1	0.005	0.005	
24	UNITS	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	
25	METHOD	101	101	101	101	101	101	114	313	313	

Results in ppm unless otherwise specified  
 T = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

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# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

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900901

5 OF 8

TUBE No.	SAMPLE No.	Ba	Sn	W					
1	70049	-	-	-					
2	70050	-	-	-					
3	70051	-	-	-					
4	70052	-	-	-					
5	70053	-	-	-					
6	70054	-	-	-					
7	70055	-	-	-					
8	70057	-	-	-					
9	70058	-	-	-					
10	70059	-	-	-					
11	70060	-	-	-					
12	70061	-	-	-					
13	70062	-	-	-					
14	70063	-	-	-					
15	70064	-	-	-					
	70065	-	-	-					
17	70066	-	-	-					
18	70067	-	-	-					
19	70068	-	-	-					
20	70069	1650	13	<10					
21	70070	1600	18	<10					
22	70071	2000	11	<10					
23	70072	1650	12	<10					
24	70073	1260	15	<10					
25	70074	1300	14	<10					

Results in ppm unless otherwise specified  
 T = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

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# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

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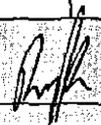
900901

6 OF 8

TUBE No.	SAMPLE No.	Ba	Sr	W						
1	70075	1290	11	<10						
2	70076	1310	19	<10						
3	70077	1140	31	<10						
4	70078	715	33	<10						
5	70079	1360	15	<10						
6	70080	1900	11	<10						
7	70081	711	23	<10						
8	70082	2290	9	<10						
9	72347	-	-	-						
10	72348	-	-	-						
11	72349	-	-	-						
12	72350	-	-	-						
13	72351	-	-	-						
14	72352	-	-	-						
15	72353	-	-	-						
16	72354	-	-	-						
17	72355	-	-	-						
18	72356	-	-	-						
19	72357	-	-	-						
20	72358	-	-	-						
21	72359	-	-	-						
22	72360	-	-	-						
23	72361	-	-	-						
24	72362	-	-	-						
25	72363	-	-	-						

Results in ppm unless otherwise specified  
 T = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

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# ANALABS

A Division of Macdonald Hamilton & Co. Pty Ltd.

## ANALYTICAL DATA

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900901

7 OF 8

TUBE No	SAMPLE No	Ra	Sn	W						
1	72364	-	-	-						
2	72365	-	-	-						
3	72366	-	-	-						
4	72367	-	-	-						
5	72368	-	-	-						
6	72369	-	-	-						
7	72370	-	-	-						
8	72371	-	-	-						
9	72372	-	-	-						
10	72373	-	-	-						
11	72374	-	-	-						
12	72375	-	-	-						
13	72376	-	-	-						
14	77176	-	-	-						
15	77177	-	-	-						
16	77178	1530	19	<10						
17	77179	1850	13	<10						
18	77180	789	18	<10						
19	77181	1490	17	<10						
20	77182	1040	17	<10						
21	77183	1140	16	<10						
22	77184	1200	23	<10						
23	77185	807	19	<10						
24	77186	1400	8	<10						
25	77187	1240	16	<10						

Results in ppm unless otherwise specified  
 T = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

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# ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

## ANALYTICAL DATA

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REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

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900901

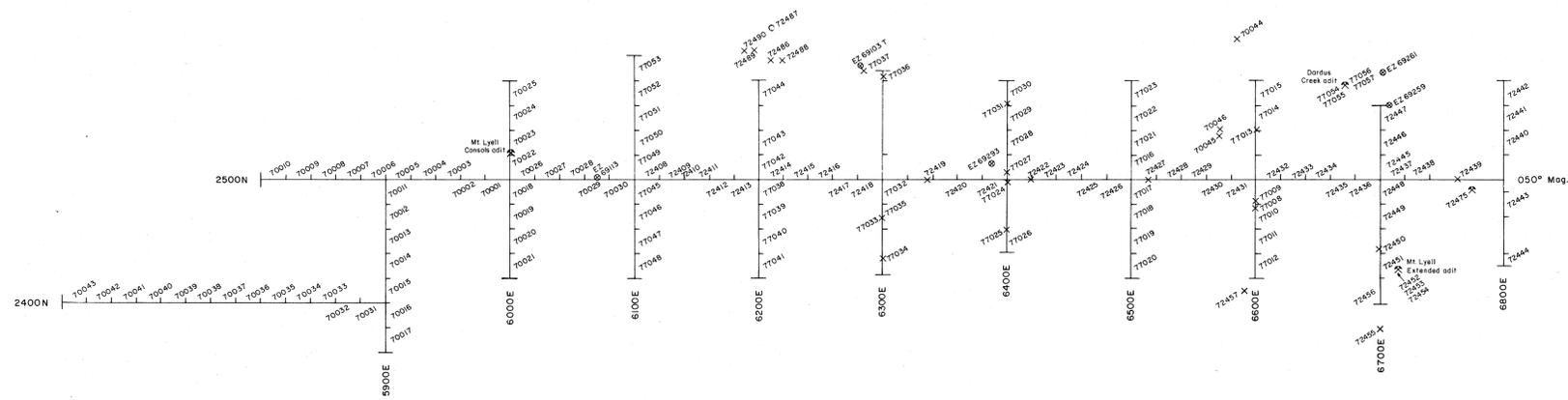
8 OF 8

TUBE No.	SAMPLE No.	Ba	Sr	W					
1	77188	1680	11	<10					
2	77189	2120	15	<10					
3	77190	2360	10	<10					
4	77191	1850	12	<10					
5	77192	1180	18	<10					
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23	DETECTION	10	3	10					
24	UNITS	PPM	PPM	PPM					
25	METHOD	401	401	401					

Results in ppm unless otherwise specified  
 T = element present, but concentration too low to measure  
 X = element concentration is below detection limit  
 - = element not determined

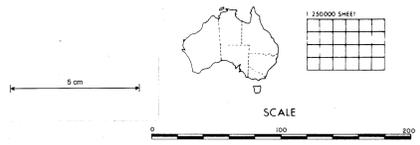
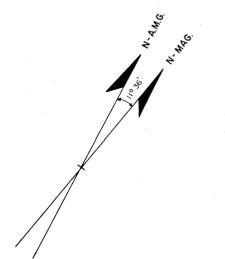
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- LEGEND**
- X T7015 Rock Chip Sample - Location & number, on grid lines.
  - ⊙ T72450 Spot Rock Chip Sample - Location & number.
  - ⊗ T72459 1987 Rock Chip Sample - Location & number.
  - ▲ T72475 Adit or mine workings.
  - ⊕ T72470 Stream Sediment Sample.

- NOTES**
1. Samples 72456 - 72474 are from underground, Mt. Lyell Extended adit.
  2. For Mt. Lyell Consols adit samples, see Allans Creek grid plan, No. AI-518-0033.
  3. Samples 69121 - 24 & 70047, B are from underground, Mt. Lyell Consols adit.



**EZ**  
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

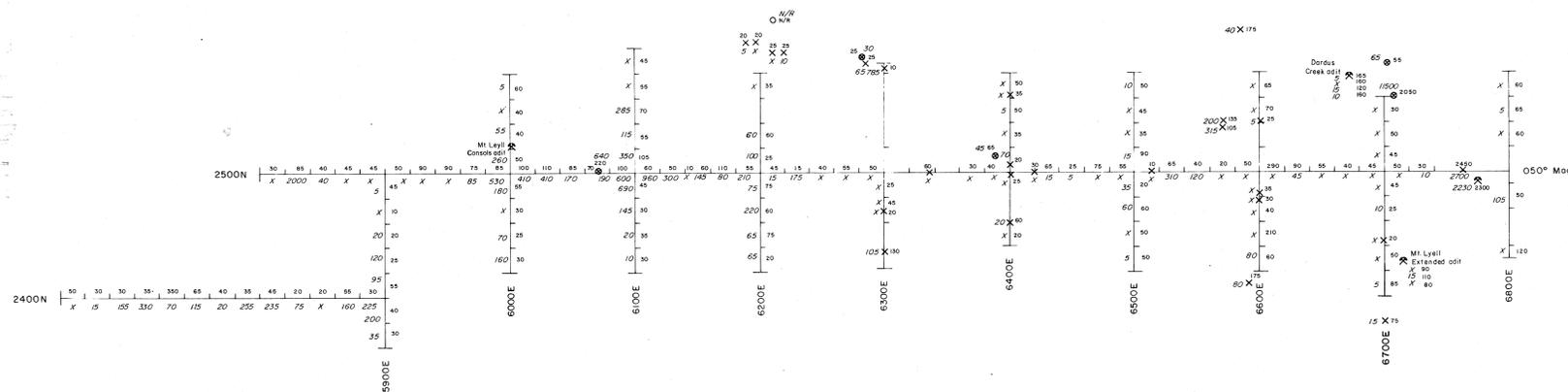
PROJECT: JUKES-DARWIN E.L. 6/85

① **SAMPLE LOCATIONS**  
**MT. DARWIN TO MT. LYELL**  
**EXTENDED ADIT GRID**

Compiled: A.H. Date: 5-3-'88 Scale: 1:2000  
AMG: Latitude: Longitude:  
Drawn: N.W.D.S. File No: PLAN NO:  
AO-518-0053

735057  
88-2861





**LEGEND**

1987 Rock Chip Sample

Pb results in ppm. Zn results in ppm.

2500N 050° Mag.

6700E 6800E

Rock Chip Sample Spot Rock Chip Sample

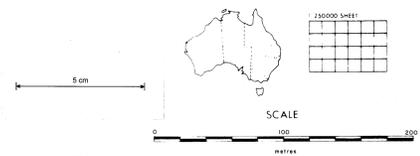
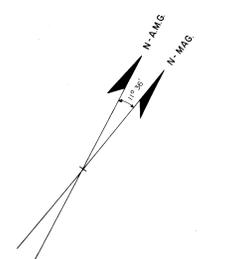
Old Workings

Stream Sediment Sample

**Notes**

1. N/R = No Results.

2. X = Below level of detection.



**EZ**  
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

PROJECT JUKES-DARWIN E.L. 6/85

3  
**GEOCHEMISTRY-Pb/Zn**  
**MT. DARWIN TO MT. LYELL**  
**EXTENDED ADIT GRID**

Compiled A.H.	Date: 5-3-'88	Scale: 1:2000
AMG	Latitude	Longitude
Drawn N.W.D.S.	File No.	PLAN NO:

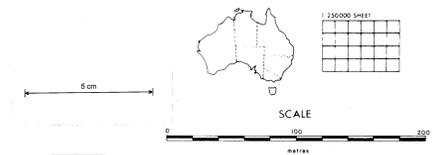
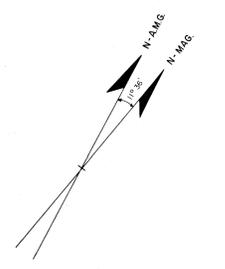
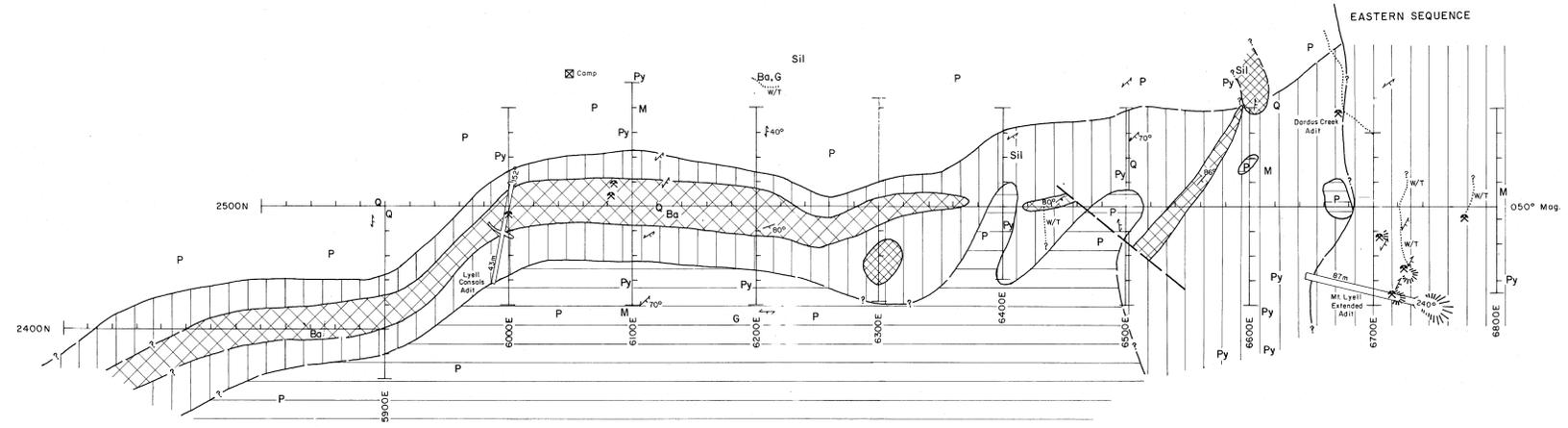
AO-518-0064

88 2861

735059

LEGEND

- P Fine to medium grained Pink Alteration of Felspar Pyric acid volcanics (Rhyolite) showing variable chloritization.
-  Mappable band of impure Chert. Ultrafine microgranular Quartz. Showing minor brecciation in parts. Disseminated Pyrite 5-40%.
-  Green to green grey chloritic and siliceous zone surrounding Chert zone. Variable chloritization of feldspar phenocrysts to total alteration.
-  Silicification of feldspar-pyric lava and fine grained pink altered lava. Some gossan, pyrite and minor brecciation.
-  Intense chloritic alteration of pyric acid volcanics. Strongly cleaved.
- M Magnetite Veining
- G Galena
- Sil Patchy Silicification
- Py Pyrite, disseminated/veining
- Ba Barite vein
- Q Quartz
-  Mine workings.
-  240 87m Adit - Length, in metres - Direction, in degrees.
-  Dump.
- W/T ..... Disused walking track, haulage track.
-  Cliff face.
-  FAULT - Position approx.
-  Geological boundary.



**EZ**  
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

PROJECT: JUKES-DARWIN E.L. 6/85

4  
**GEOLOGY**  
MT. DARWIN TO MT. LYELL  
EXTENDED ADIT GRID

Compiled: A.H.	Date: 26-3-88	Scale: 1:2000
AMG	Latitude	Longitude
Drawn: N.W.D.S.	File No:	PLAN NO:

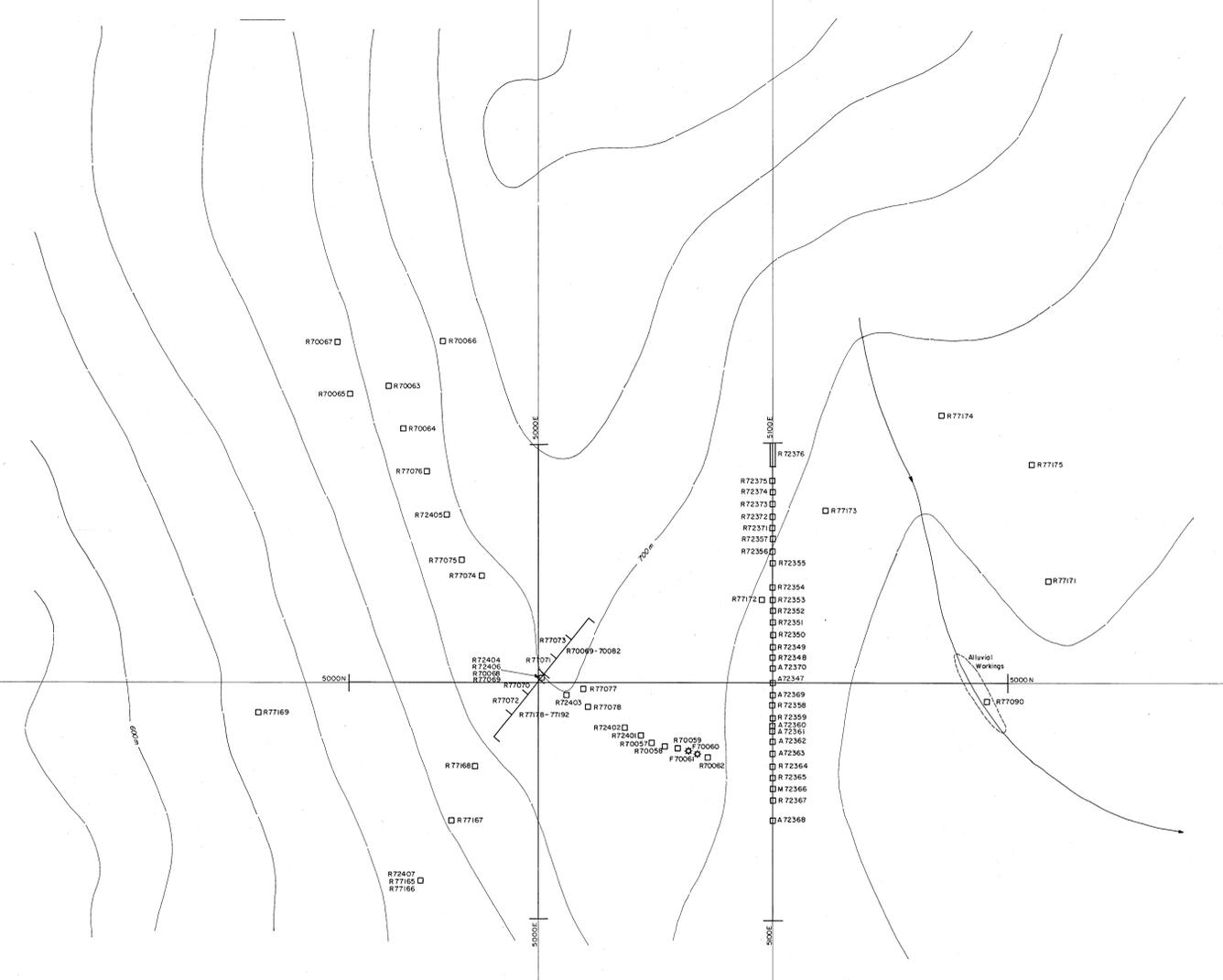
735060 AO-518-0055

88-2861

AO-518-0063

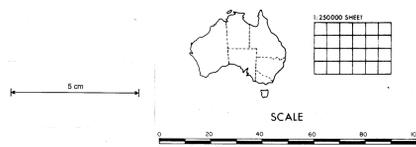
5 319 500mN

5 319 500mN



- LEGEND**
- R70064 Rock Chip Sample, Outcrop
  - A72361 Auger Sample
  - ⊗ F70060 Rock Chip Sample, Float
  - 5000E Cut Grid Line
  - ⬭ Alluvial Workings

- NOTES**
1. Samples 70069-70082, 77178-77192 are 2m spaced rock chip samples. See separate sheet.
  2. This map was compiled from 1:5000 scale mapping and the grid based sampling. Grid position not necessarily accurate.
  3. Contour interval = 20m.



88-2861

**EZ**  
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

PROJECT: JUKES-DARWIN E.L. 6/85

Ⓢ **NORMS QUARTZ PROSPECT**  
SAMPLE LOCATIONS  
TYPES AND NUMBERS

Compiled: D.G.	Date: 9-6-'88	Scale: 1:1000
AMG:	Latitude:	Longitude:
Drawn: N.W.D.S.	File No:	PLAN NO:

AO-518-0063

735061

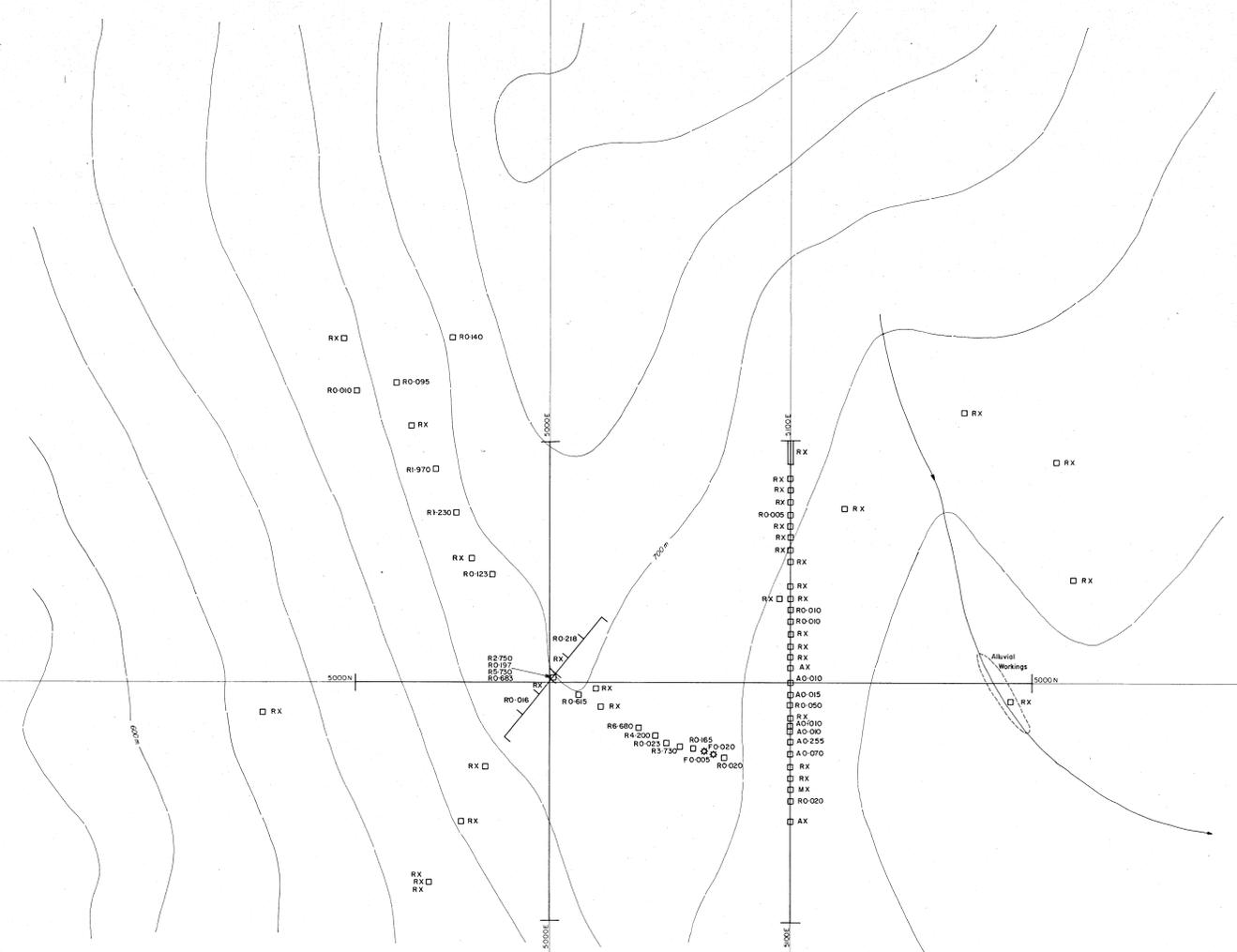


AO-518-0062

5319500mN

5319500mN

5319000mN

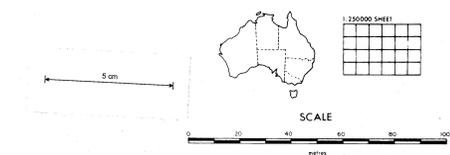


LEGEND

- Rock Chip Sample, Outcrop
- Auger Sample
- Rock Chip Sample, Float
- 1:5000E Cut Grid Line
- ⊞ Alluvial Workings

NOTES

1. Samples 70069-70082, 77178-77192 are 2m spaced rock chip samples. See separate sheet.
2. This map was compiled from 1:5000 scale mapping and the grid based sampling. Grid position not necessarily accurate.
3. Contour interval = 20m.
4. X = Below level of detection.



**EZ**  
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

PROJECT: **JUKES-DARWIN E.L. 6/85**

⑦ **NORMS QUARTZ PROSPECT**  
**GEOCHEMISTRY**  
**Au**

Compiled: D.G. Date: 9-6-'88 Scale: 1:1000  
AMG: Longitude: \_\_\_\_\_  
Drawn: N.W.D.S. File No: \_\_\_\_\_ **PLAN NO: AO-518-0062**

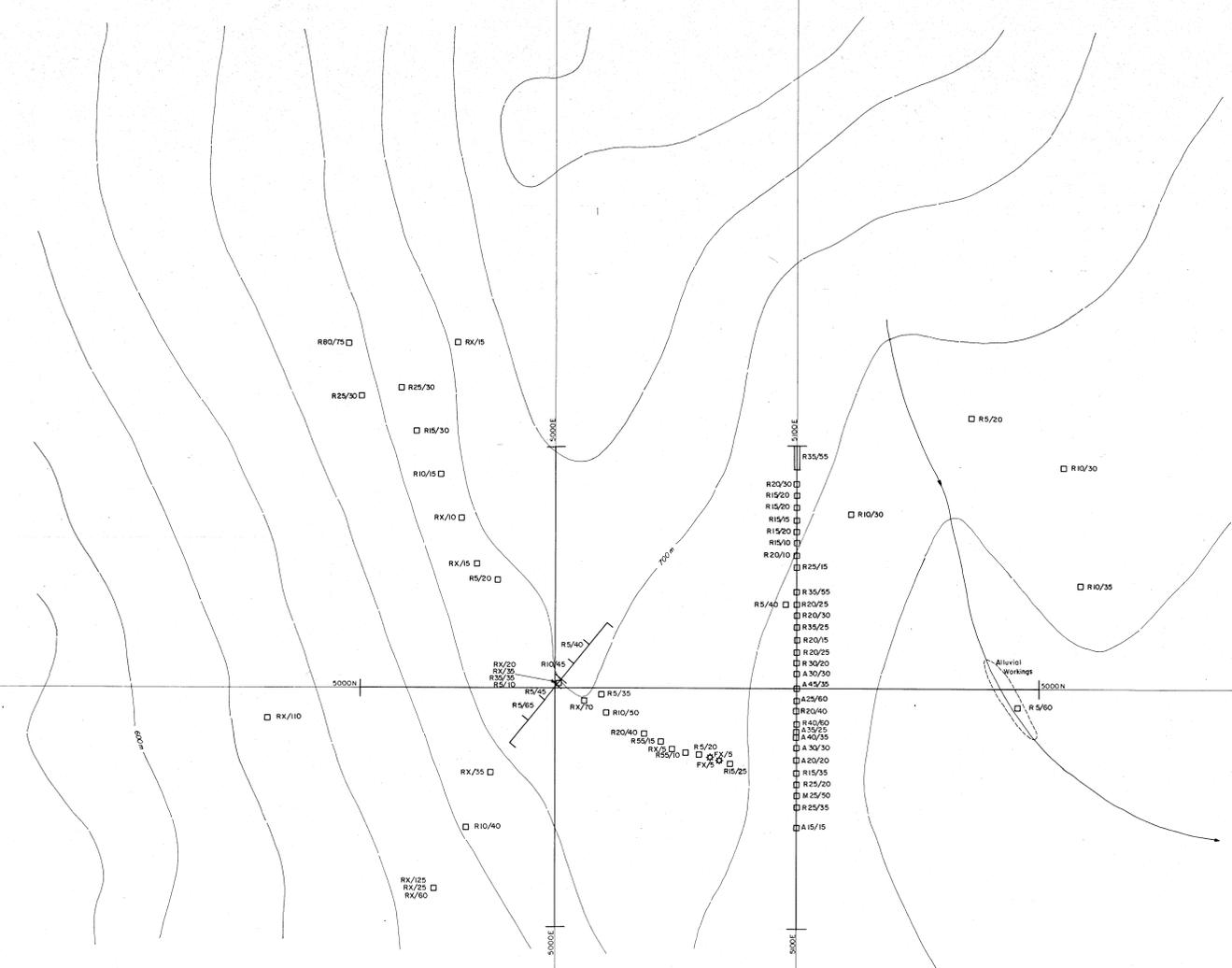
88-2861

35063

AO-518-0061

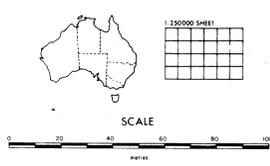
539 500m N

539 500m N



- LEGEND**
- R10/50 Rock Chip Sample, Outcrop
  - A20/20 Auger Sample
  - FX/5 Rock Chip Sample, Float
  - 5000E Cut Grid Line
  - Alluvial Workings
  - Pb  
Zn  
R10/50

- NOTES**
1. Samples 70069-70082, 77176-77192 are 2m spaced rock chip samples. See separate sheet.
  2. This map was compiled from 1:5000 scale mapping and the grid based sampling. Grid position not necessarily accurate.
  3. Contour interval = 20m.
  4. X = Below level of detection.



**EZ**  
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

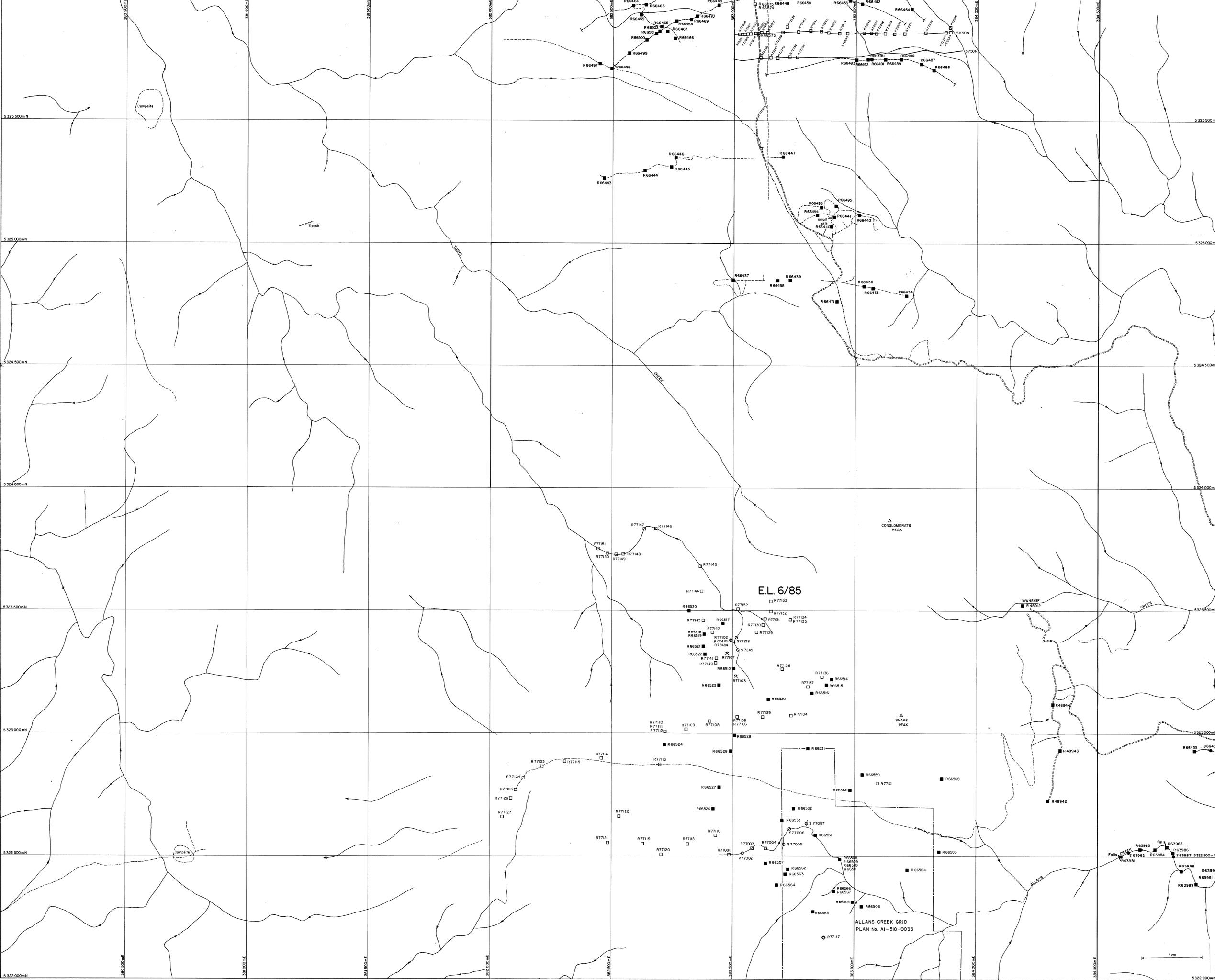
PROJECT: JUKES-DARWIN E.L. 6/85

**NORMS QUARTZ PROSPECT**  
**GEOCHEMISTRY**  
**Pb/Zn**

Compiled: D.G. Date: 9-6-88 Scale: 1:1000  
AMG: Longitude: Latitude:  
Drawn: N.W.D.S. File No: PLAN NO:  
AO-518-0061

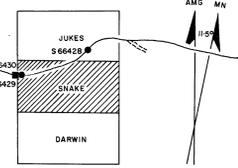
88-2861

735064



N.B. - Samples 72476-72483 taken underground in Findona Adit

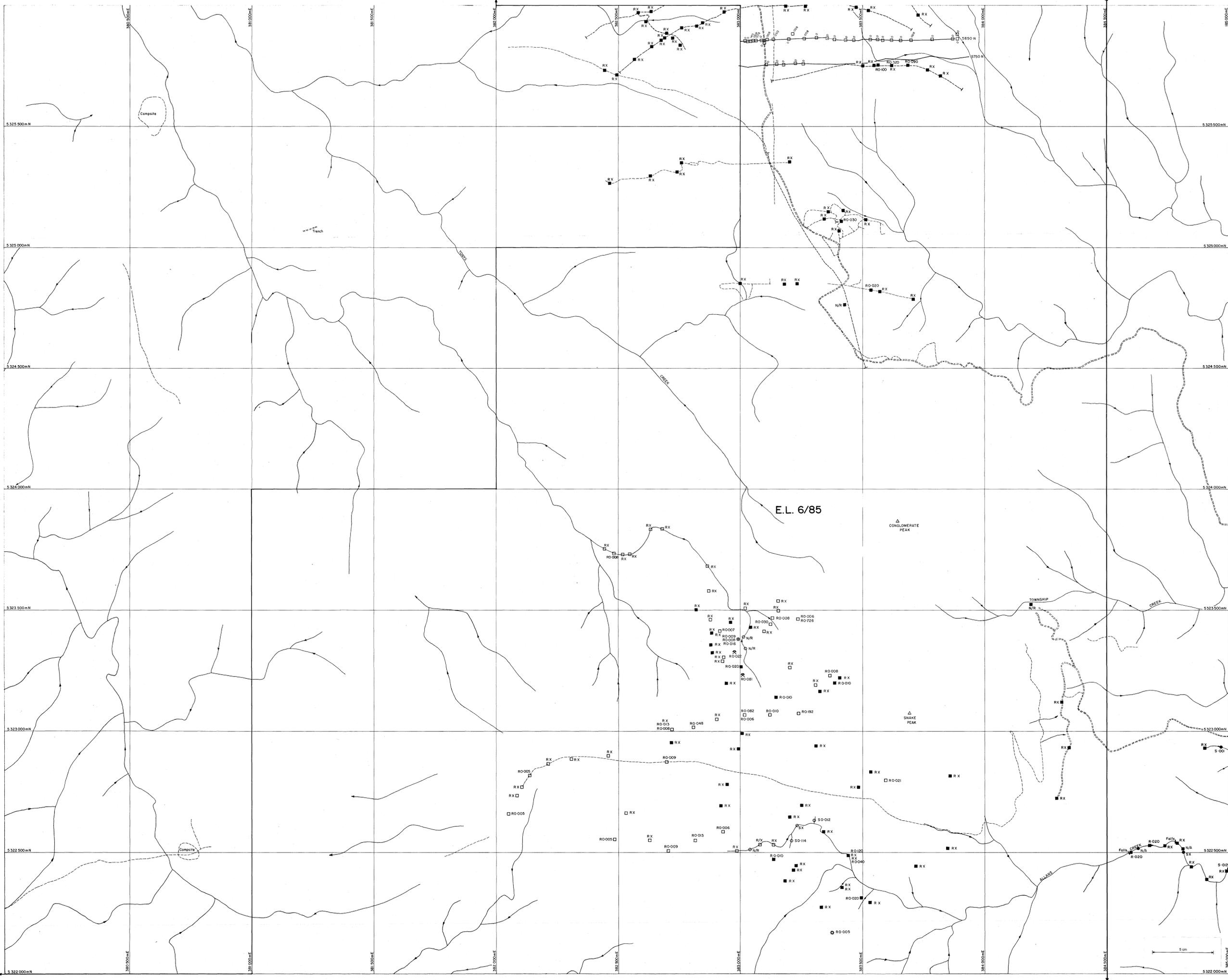
- R66439 - Rock Chip Sample. Sampled by P Gammon, 1985
- S63982 - Stream Sediment Sample Sampled by P.A. Ruston, 1987
- R66543 - Rock Chip Sample, Outcrop. P.77002 - Panned Concentrate Sample
- S56789 - Stream Sediment Sample. D. Gardner, 1987, 88
- R77002 - Panned Concentrate Sample
- R7717 - Rock Chip Sample, Float. D. Gardner, 1988
- R77107 - Rock Chip Sample, Trenches.
- R77102 - Rock Chip Sample - Adit Surface



PLAN No 12  
**ELECTROLYTIC ZINC CO. OF ASIA LTD.**  
**PROJECT: JUKES - DARWIN, TAS.**  
**88-2861**  
**SAMPLE LOCATIONS**  
**TYPES and NUMBERS**  
 735065

Scale: 1:5000	Survey: P.G./D.G.	Revised: June, 1988
Reference:	Date: 4-4-85	Ref. No.
Drawn: R.J.R.	Checked:	AO-518-0008

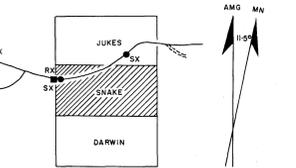




□ 005 - Rock Chip Sample.  
 ○ Below level of detection, (=005).  
 N.B. - All results are ppm. Sampled by P.A. Riston, D. Gardner, 1987, 1988.

■ R-020 - Rock Chip Sample.  
 ● S-258 - Stream Sediment Sample.  
 N.B. - All results are ppm. Sampled by P. Gamman, 1987.  
 N/R - No results.  
 RX - Below level of detection.

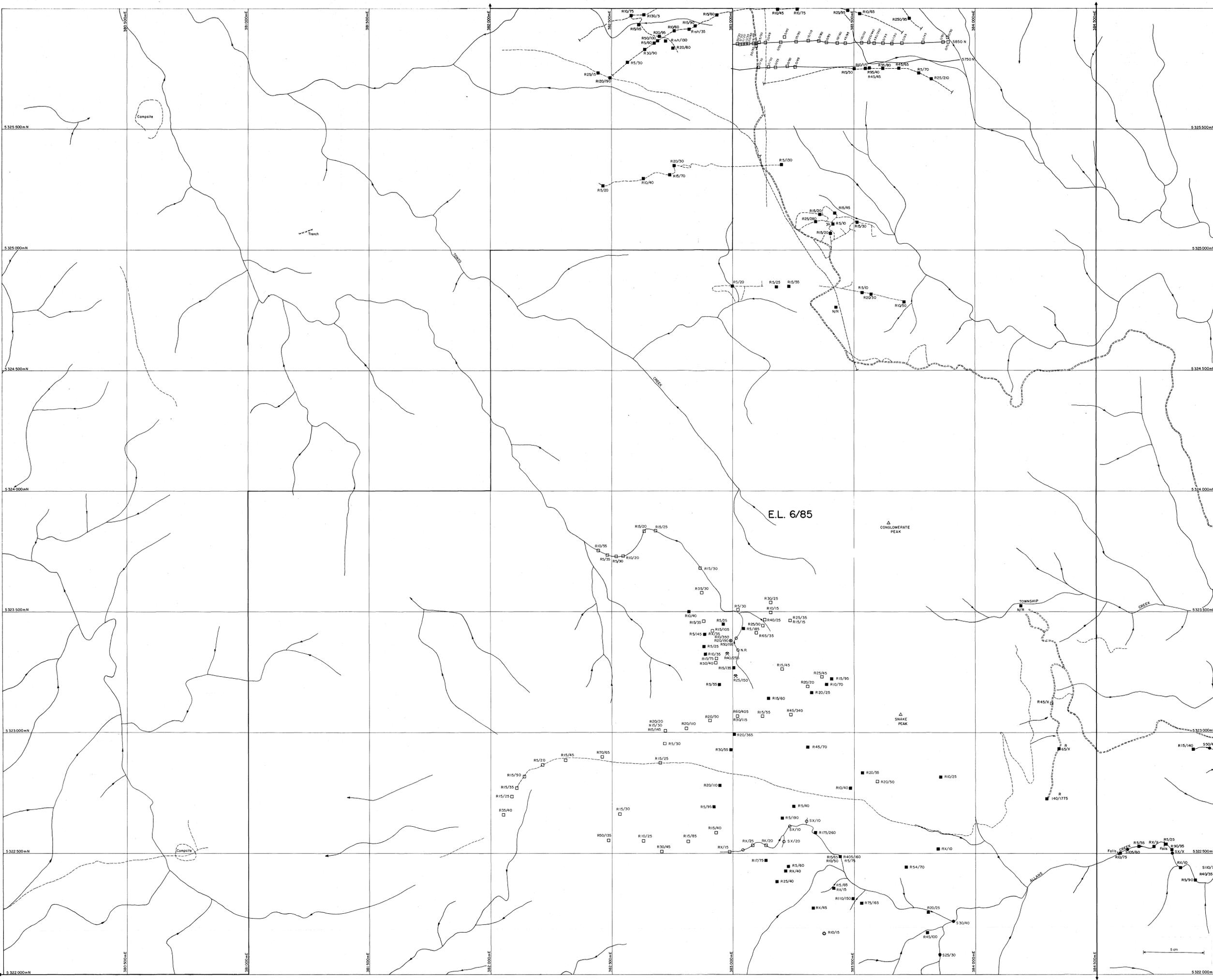
⊙ RO-005 - Rock Chip Sample, Float.  
 ⊗ RO-016 - Rock Chip Sample, Trenches.  
 ⊙ RO-008 - Rock Chip Sample, Adit Surface.  
 ⊙ SO-012 - Stream Sediment Sample.  
 N.B. - X = Below level of detection. Sampled by D. Gardner, 1988.



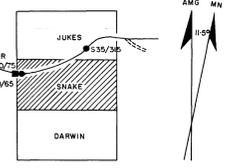
PLAN No. 13  
 ELECTROLYTIC ZINC CO. OF ASIA LTD.  
 PROJECT - JUKES - DARWIN ,TAS.

GEOCHEMISTRY  
**88-2861**  
 Au  
 735067

Scale: 1:5000	Survey: P.G./D.G.	Revised: June, 1988
Reference:	Date: 10-4-85	Ref. No.
Drawn: R.J.R.	Checked:	AO-518-0017



- IO/160 - Rock Chip Sample
- Below level of detection
- N.B. - All results are ppm
- Pb Zn
- IO/80
- Sampled by P.A. Hanton, D. Gardner, 1987, 1988
- R 90 - Rock Chip Sample.
- S50 - Stream Sediment Sample.
- N.B. - All results are ppm.
- RX - Below level of detection.
- Sampled by P. Gannon, 1985
- Pb Zn
- R10/R75
- N/R = No results.
- R10/15 - Rock Chip Sample, Float.
- △ R25/150 - Rock Chip Sample, Trenches.
- R10/350 - Rock Chip Sample, Adit Surface.
- SX/20 - Stream Sediment Sample.
- N.B. - X - Below level of detection.
- Sampled by D. Gardner, 1988.



PLAN No. 15, 16

**ELECTROLYTIC ZINC CO. OF ASIA LTD.**

**PROJECT: JUKES - DARWIN, T.A.S.**

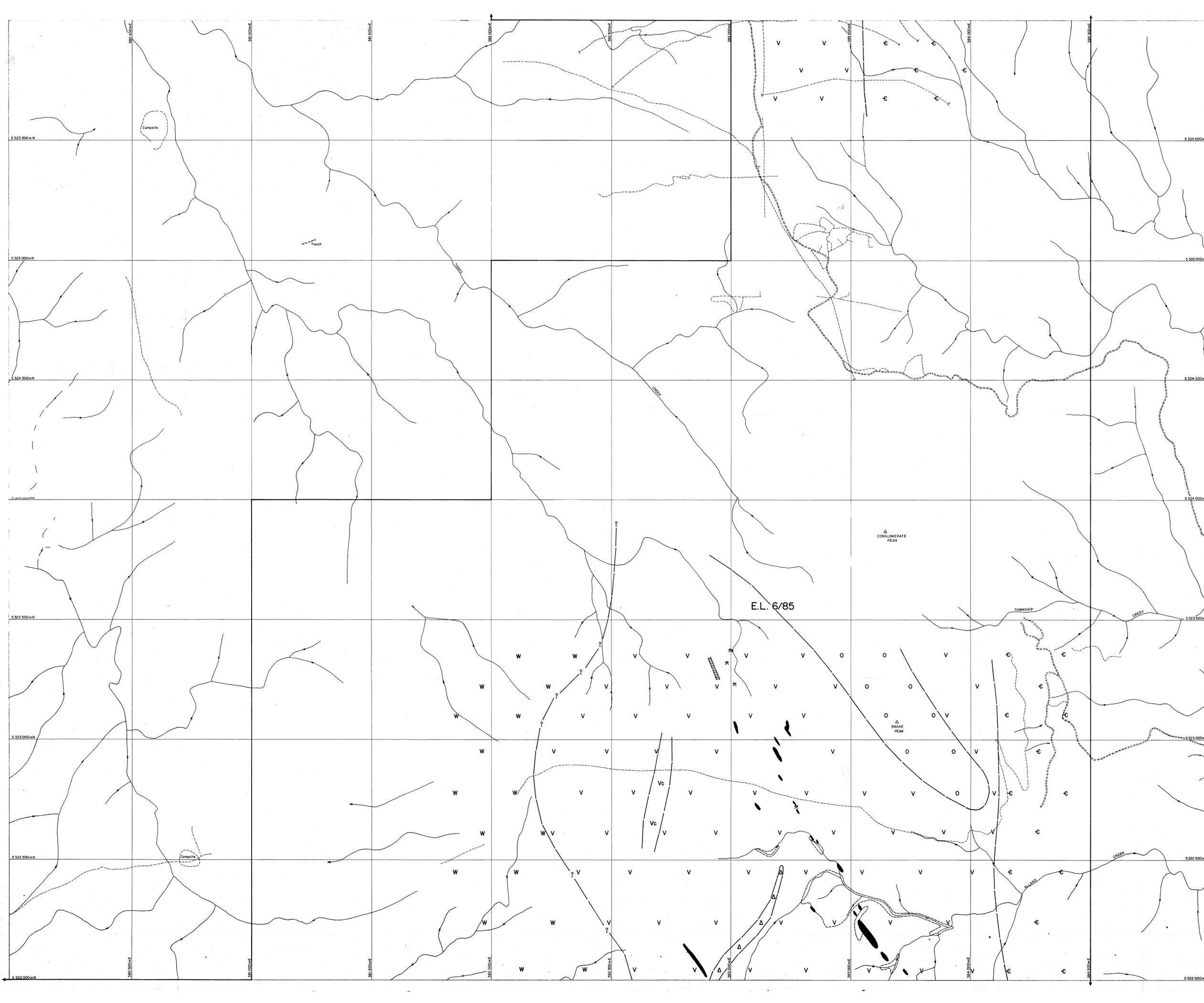
**88-2861**

GEOCHEMISTRY

Zn/Pb

735068

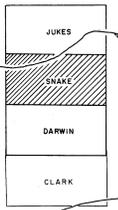
Scale: 1:5000	Survey: P.G./D.G.	Revised: June, 1988
Reference:	Date: 10-4-85	Ref. No.
Drawn: R.J.R.	Checked:	AO-518-0011



LEGEND

- \* Old workings, hardrock.
  - - - Alluvial gold workings.
  - Chloritic lodes, dark green, disseminated/vein pyrite.
  - ZZZZZ "Chert", silicified, fine grained, volcanic.
  - Owen Conglomerate.
- MOUNT READ VOLCANICS**
- W Western Sequence.
  - E Eastern Sequence.
  - V Central Sequence.
  - A Agglomerate.
  - Vc Volcaniclastic lenses.

5 cm



ELECTROLYTIC ZINC CO. OF A'ASIA LTD.  
 PROJECT: JUKES - DARWIN, TAS.

(13) **88-2861**  
 GEOLOGY INTERPRETATION

735069

Scale: 1:5000	Survey: R.A.R., D.G.	Revised: June, 1988
Reference:	Date: 18-2-'87	Ref. No.
Drawn: N.W.D.S.	Checked:	AO-518-0036

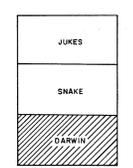
ALLANS CREEK GRID  
PLAN No. AI-518-0033

MT. LYELL CONSOL -  
MT. LYELL EXTENDED GRID  
PLAN No. AO-518-0053

E.L. 6/85

NORMS QUARTZ GRID  
PLAN No. AO-518-0095

- R48980 - Rock Chip Sample
  - S48990 - Stream Sediment Sample
  - S69934 - Stream Sediment Sample
  - R72157 - Rock Chip Sample (Outcrop)
  - ⊛ R69542 - Rock Chip Sample (Floor)
  - /// Water falls
- Sampled by  
P. Gammon, 1985
- Sampled by  
P.A. Rutter, 1987  
D. Gardner, 1987, 88



Scale: 1:5000

SHEET No. 17

**ELECTROLYTIC ZINC CO. OF ASIA LTD.**

PROJECT: JUKES - DARWIN, TAS.

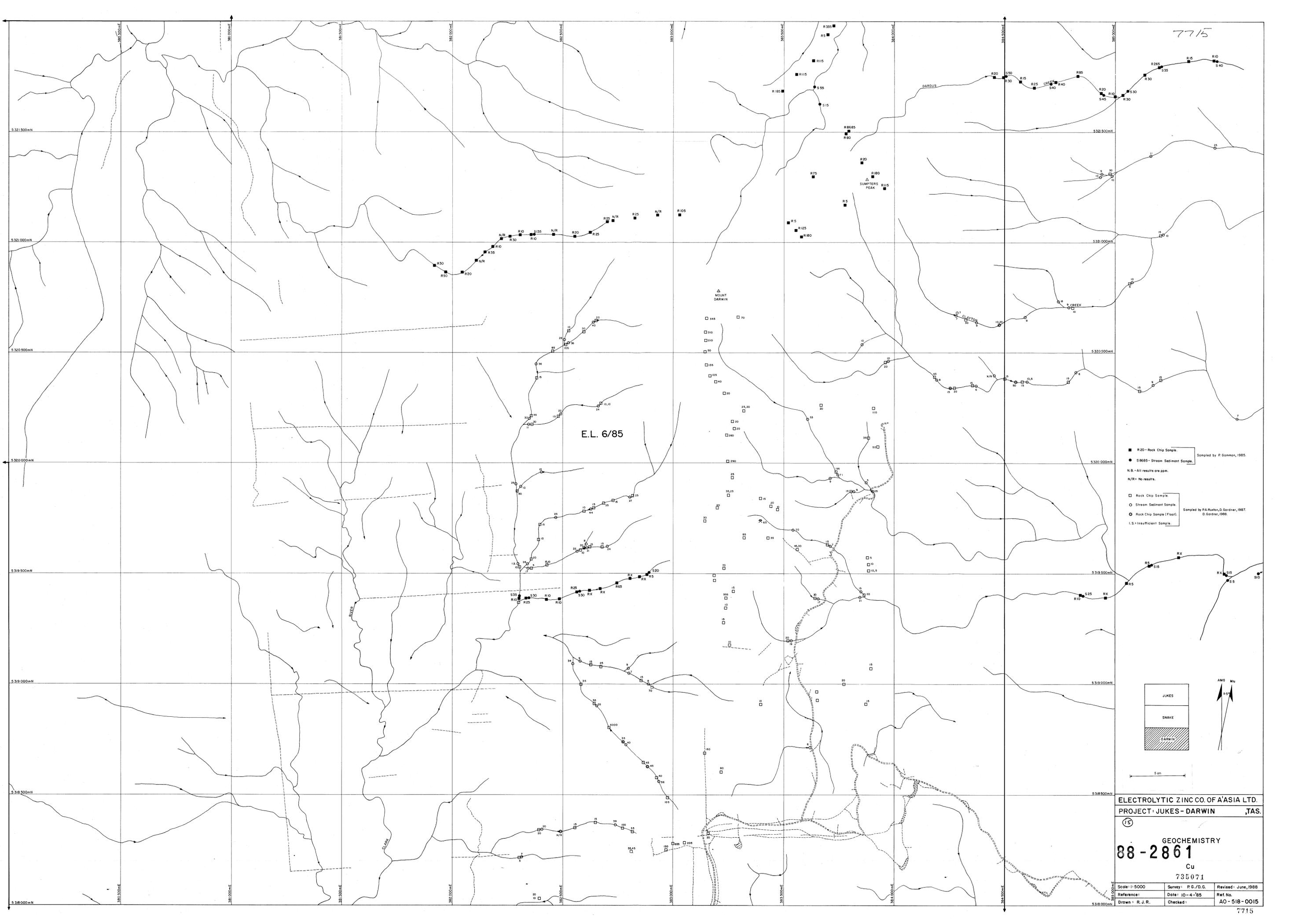
**88-2861**

SAMPLE LOCATIONS

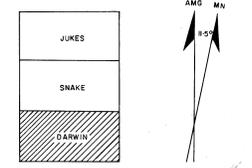
TYPES and NUMBERS

735070

Scale: 1:5000	Survey: P.G./D.G.	Revised: June, 1988
Reference:	Date: 4-4-85	Ref. No.
Drawn: R.J.R.	Checked:	AO-518-0009



■ R20 - Rock Chip Sample. Sampled by P. Gannon, 1985.  
 ● S8685 - Stream Sediment Sample.  
 N.B. - All results are ppm.  
 N/R - No results.  
 □ Rock Chip Sample.  
 ○ Stream Sediment Sample.  
 ⊙ Rock Chip Sample (Flot). Sampled by P.A. Ruxton, D. Gardner, 1987.  
 I.S. - Insufficient Sample.

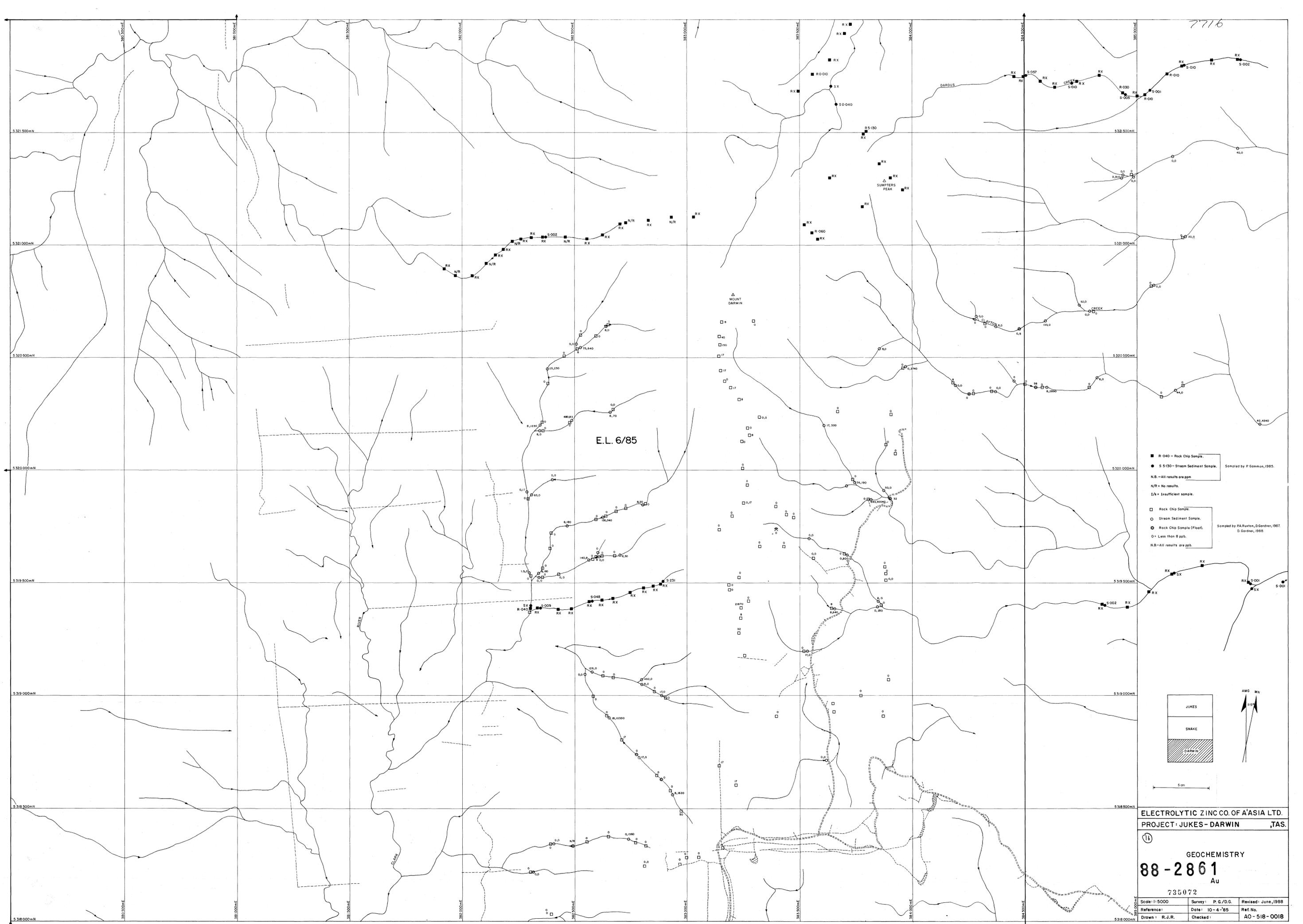


5 cm

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.  
 PROJECT: JUKES - DARWIN ,TAS.

(15)  
**GEOCHEMISTRY**  
**88-2861**  
 Cu  
 735071

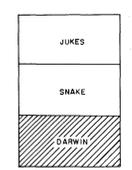
Scale: 1:5000	Survey: P.G./D.G.	Revised: June, 1988
Reference:	Date: 10-4-85	Ref. No.
Drawn: R. J. R.	Checked:	AO-518-0015



E.L. 6/85

MOUNT DARWIN

- R-040 - Rock Chip Sample.
- S-5130 - Stream Sediment Sample. Sampled by P. Gannon, 1985.
- N.B. - All results are ppb.
- N/R - No results.
- I/A - Insufficient sample.
- Rock Chip Sample.
- Stream Sediment Sample.
- ⊗ Rock Chip Sample (Float). Sampled by P.A. Ruxton, D. Gardner, 1987.
- - Less than 8 ppb. D. Gardner, 1988.
- N.B. - All results are ppb.



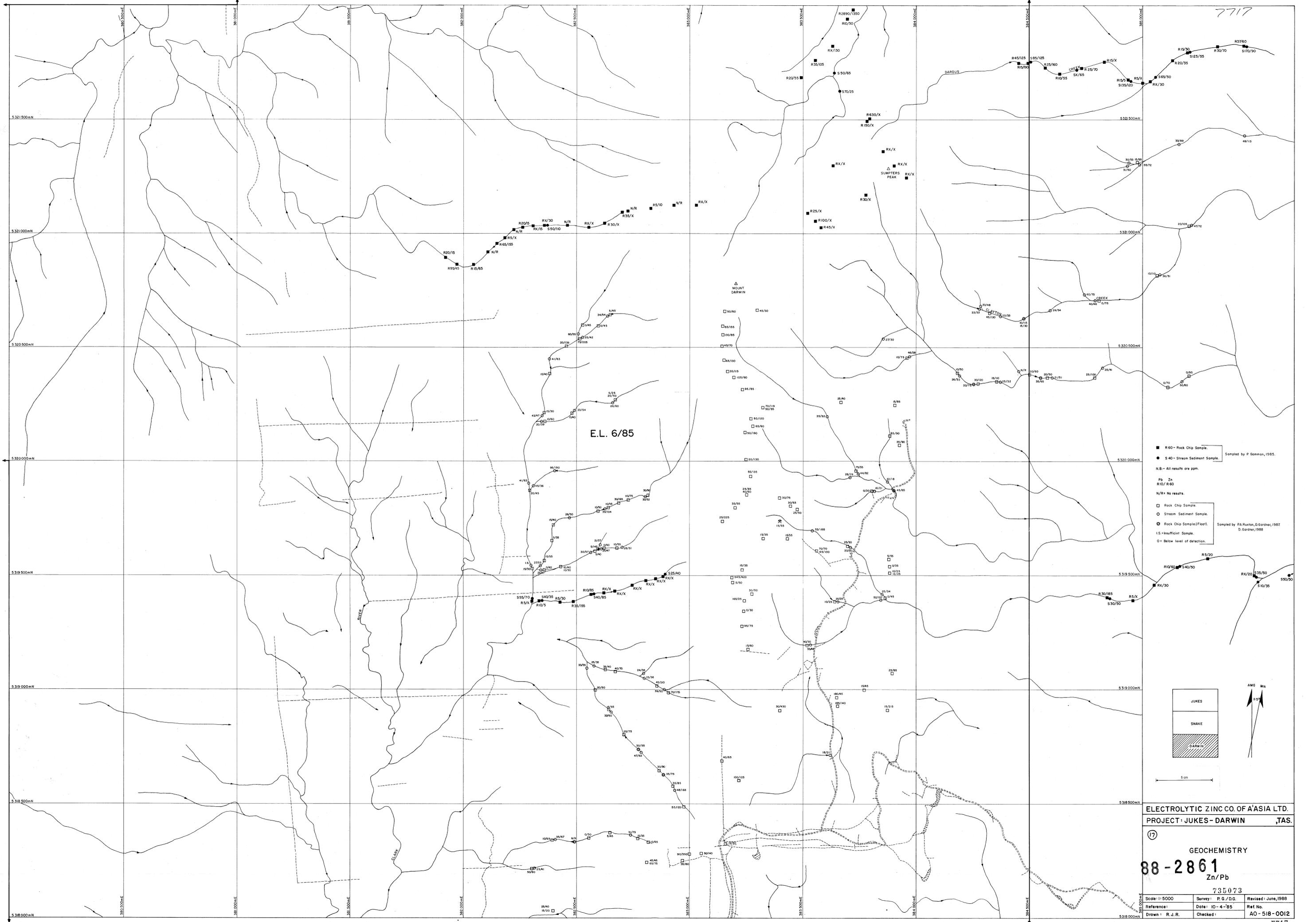
5 cm

ELECTROLYTIC ZINC CO. OF ASIA LTD.  
 PROJECT: JUKES - DARWIN, T.A.S.

(1b)

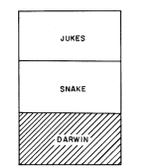
GEOCHEMISTRY  
**88-2861**  
 Au  
 735072

Scale: 1:5000	Survey: P. G./D.G.	Revised: June, 1988
Reference:	Date: 10-4-'85	Ref. No.
Drawn: R.J.R.	Checked:	AO-518-0018



E.L. 6/85

- R 60 - Rock Chip Sample. Sampled by P. Gammon, 1985.
- S 40 - Stream Sediment Sample. Sampled by P. Gammon, 1985.
- N.B. - All results are ppm.
- Pb Zn
- R10 / R 60
- N/R - No results.
- Rock Chip Sample.
- Stream Sediment Sample.
- ⊕ Rock Chip Sample (Foot). Sampled by P.A. Ruxton, D. Gardner, 1987.
- I.S. - Insufficient Sample. D. Gardner, 1988.
- O - Below level of detection.



5 cm

ELECTROLYTIC ZINC CO. OF ASIA LTD.  
PROJECT: JUKES - DARWIN, TAS.

(17)

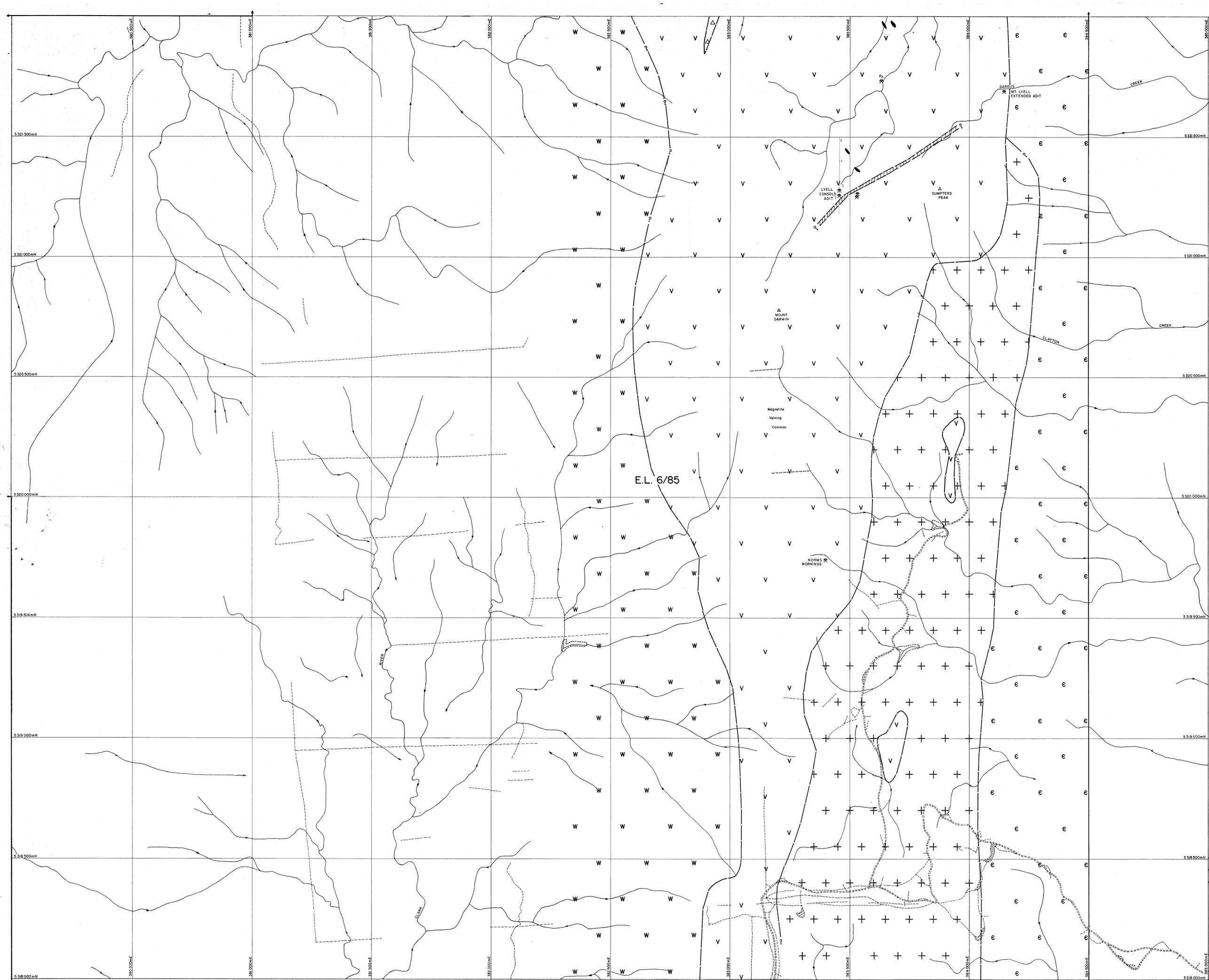
GEOCHEMISTRY

**88-2861**

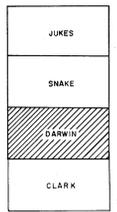
Zn/Pb

735073

Scale: 1:5000	Survey: P.G./D.G.	Revised: June, 1988
Reference:	Date: 10-4-85	Ref. No.
Drawn: R.J.R.	Checked:	AO-518-0012



- LEGEND**
- ⊗ Old Workings (Hardrock)
  - ⊕ Alluvial Gold Workings
  - ⊖ Chloritic lodes. Intensely chloritized lava with quartz/magnetite/hematite veins. ± disseminated vein pyrite.
  - ⊘ "Chert" band. Silicified fine grained volcanic (?) rock and feldspar-phyric lava. Minor brecciation. Gossanous pyrite.
  - ⊕⊕ Darwin Granite.
  - MOUNT W Western Sequence.
  - READ E Eastern Sequence.
  - V Central Sequence.
  - ⊖⊖ Volcanics Δ Agglomerate.

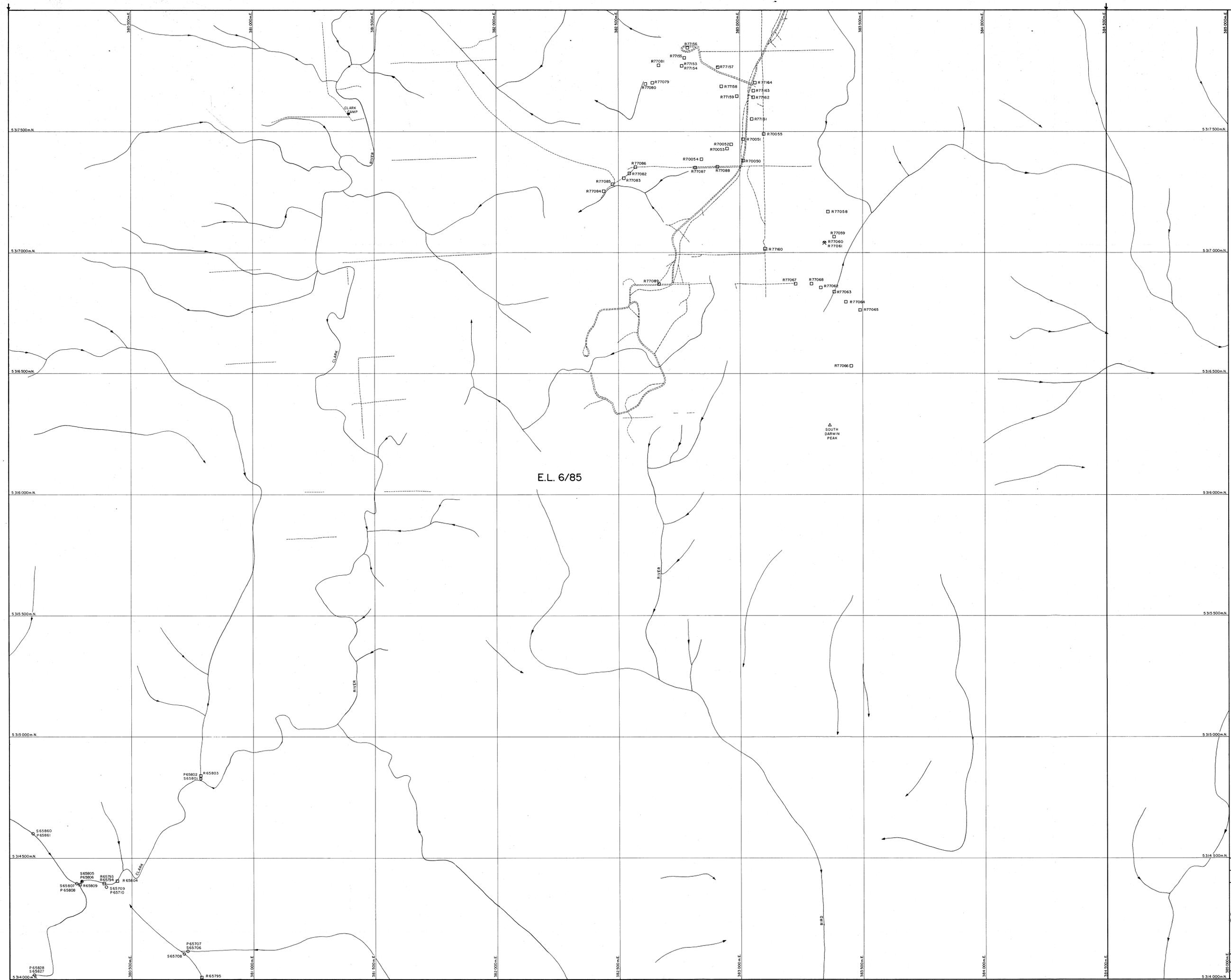


**ELECTROLYTIC ZINC CO. OF A'ASIA LTD.**  
**PROJECT: JUKEs-DARWIN, TAS.**

735074

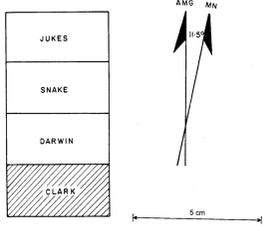
**GEOLOGY INTERPRETATION**  
**88-2861**

Scale: 1:5000	Survey: P.A. RUXTON	Revised:
Reference:	Date: 18-2-'87	Ref. No.
Drawn: N.W.D.S.	Checked:	AO-518-0037



E.L. 6/85

□ R77065 Rock Chip Sample. Sampled by  
D. Gordon, K. Vigne, 1988  
 ✕ R77066 Rock Chip Sample, Trenches.



ELECTROLYTIC ZINC CO. of ASIA LTD.  
 PROJECT: JUKES-DARWIN T.A.S.

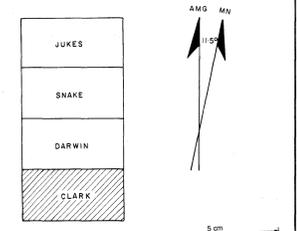
735075  
 SAMPLE TYPES  
**88-2861**  
 and  
 NUMBERS

Scale: 1:5000	Survey: 1.MAT./D.G.	Revised: JUNE, 1988
Reference:	Date: 4-12-86	Ref. No.
Drawn: N.W.D.S.	Checked:	AO-518-0028

7720

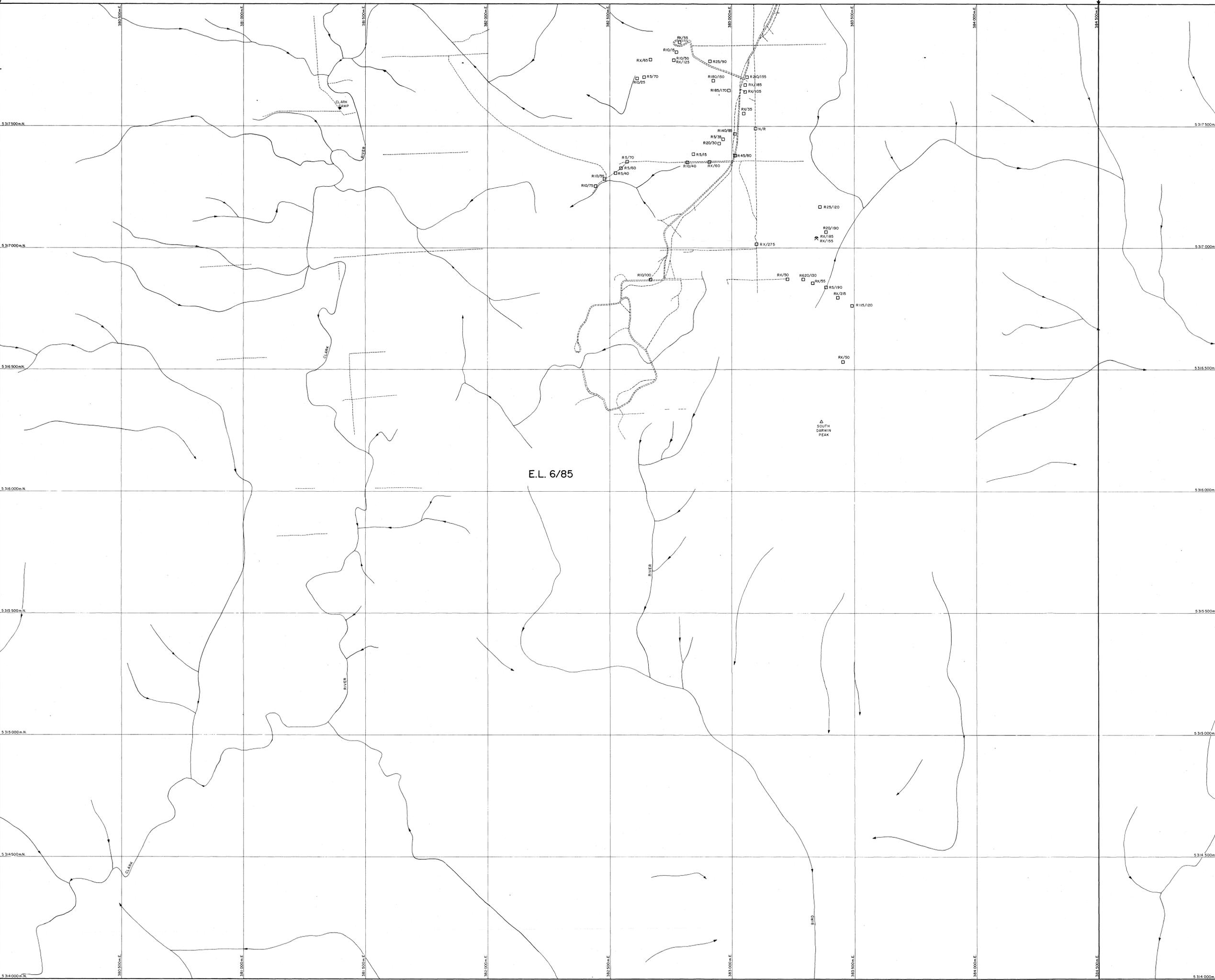
E.L. 6/85

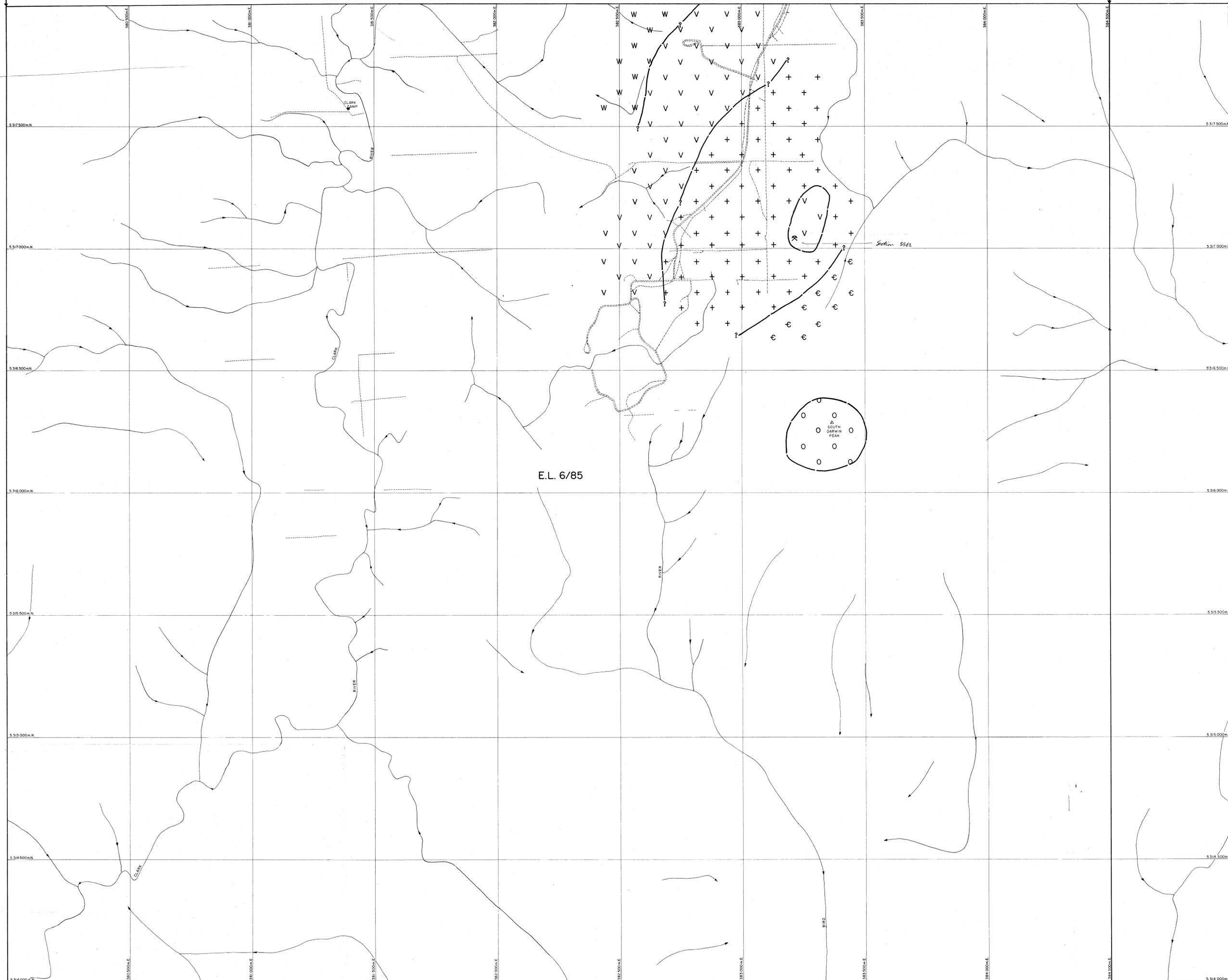
- R15 Rock Chip Sample.
- ▲ R5 Rock Chip Sample, Trenches. Sampled by G. Gardner, K. Virgo, 1988
- N/R: No result



ELECTROLYTIC ZINC CO. OF ASIA LTD.			
PROJECT: JUKES-DARWIN			TAS.
GEOCHEMISTRY			
<b>88-2861<sup>Cu</sup></b>		735076	
Scale: 1:5000	Survey: D.G.	Revised:	
Reference: -	Date: 10-6-'88	Ref. No.	
Drawn: N.W.D.S.	Checked:	AO-518-0058	



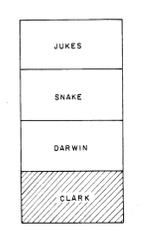




E.L. 6/85

**LEGEND**

- \* Old workings (Hardrock)
- OO Owen Conglomerate
- ++ Darwin Granite
- W Western Sequence
- E Eastern Sequence
- V Central Sequence
- Mount Road
- Volcanics



ELECTROLYTIC ZINC CO. of ASIA LTD.  
 PROJECT: JUKES - DARWIN ,TAS.  
 (23)  
**88-2861** GEOLOGY  
 INTERPRETATION  
 735079

Scale: 1:5000	Survey: D.G.	Revised:
Reference:	Date: 12-6-'88	Ref. No.
Drawn: N.W.D.S.	Checked:	AO-518-0059