

000

70-633

007001

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LTD.
West Coast Mines

REPORT ON EXPLORATION AT THE JUPITER COPPER PROSPECT

BY

M. E. GARDNER

REPORT NO. 102

May 1970

CONTENTS

		<u>PAGE</u>
1.	Introduction	1
2.	Location	1
3.	Geology	1 - 2
4.	Mineralisation	2
5.	Old Workings	3 - 4
6.	Geochemistry	4 - 5
7.	Geophysics	5 - 6
	a) Electromagnetic	
	b) Induced Polarisation	
8.	Diamond Drilling	6
9.	Conclusions	7
10.	Recommendations	7

LIST OF PLATES

Plate 1	Jupiter Area Main Plan, showing geology, old workings, cut lines and I.P. anomalies.
2	Geological plan of Jupiter No. 1 Adit
3	Geochemical soil survey - 'A' horizon, copper
4	" " " - 'C' horizon, copper
5	" " " - 'A' horizon, lead
6	" " " - 'C' horizon, lead
7	" " " - 'A' horizon, zinc
8	" " " - 'C' horizon, zinc
9	" " " - 'A' horizon, manganese
10	" " " - 'C' horizon, manganese
11	I.P. Survey - Line 108 ^s
12	" - Line 1
13	" - Line 2
14	" - Line 3
15	" - Line 4
16	Cross-Section through Jupiter No. 1 Adit.
17	✓ ✓ ✓ ✓ - DH 138-139

APPENDICES

1.	Diamond Drill Hole Log	-	JP 138	2 pages
2.	" " " "	-	JP 139	✓

1. Introduction

The Jupiter copper lode was discovered in the early 1890's, and a small amount of rich ore was extracted between then and 1896. The workings were later examined and sampled by the Mt. Lyell Company in the 1920's.

The Natone Valley I.P. survey in 1960/1 indicated an anomaly over the No. 1 Adit. Bainbridge visited the area in 1965, and concluded that the anomaly was caused by pyrite mineralisation of no economic interest.

The present investigation commenced in 1968. Since then a programme of geological mapping, geochemical soil sampling, I.P. surveying and diamond drilling has been carried out.

2. Location

The Jupiter copper prospect lies within EL 1/62 Mt. Black, approximately 1000 feet south-east of the old Jupiter lead/zinc mine, which is about 3 miles from Rosebery on the Williamsford Road.

Access is by means of bulldozed track from the Williamsford Road.

The terrain is rugged and deeply dissected by small creeks flowing into the Natone Valley. The area is covered mainly by thick scrub.

3. Geology

The Jupiter copper mineralisation lies within the Primrose Pyroclastics, a formation of the Mt. Read Volcanic Group, close to the western contact with the sedimentary rocks of the Rosebery Group.

004

Bedrock exposure in the Jupiter area is very poor, due partly to a covering of Pleistocene glacial material over the south-western part of the area. Outcrops are restricted mostly to the ridge-tops and steeper slopes, and were only mapped on or close to the cut lines, so that the geological contacts indicated in Plate 1 are largely interpretative.

The host rocks for the copper mineralisation are schists, which appear to occur as small irregular lenses within the normal crystal tuffs of the Primrose Pyroclastics. This setting is similar to that of the old Jupiter lead/zinc mine close by, but there does not appear to be any direct connection between the two.

The schist host rocks are mainly quartz or quartz-sericite schists, with patchy chloritisation in places. The schistosity is strong, due to the alignment of sericite and chlorite flakes and quartz augen, and masks any bedding planes that may have existed. The strike of the schistosity is generally between 150° and 180° M, dipping steeply to the east at $60-80^{\circ}$. This appears to conform with the schistosity in the enveloping crystal tuffs.

The schists grade laterally through less sheared rocks into the more massive crystal tuffs, though a weak schistosity is still apparent in these. They are predominantly fine-grained quartz, quartz-feldspar, or feldspar crystal tuffs, quartz and albite being the crystal components in an extremely fine light-coloured sericitic matrix.

4. Mineralisation

Disseminated pyrite with minor chalcopyrite is seen throughout the schists, and occasional specks of pyrite are also found in the tuffs. In the more chloritic schists, the mineralisation becomes more intense, with segregations and narrow veins of semi-massive pyrite-chalcopyrite. These veins, as observed in the No. 1 Adit, do not appear to conform to the schistosity of the host rocks, and are somewhat irregular with no preferred orientation. There does not appear to be a sympathetic relationship between the chlorite content of the schists and the degree of sulphide mineralisation.

005

5. Old Workings

The No. 1 Adit (Plate 2) was driven as a crosscut for a distance of 295 feet on a bearing of 242° M. After passing through sheared tuffs and lightly chloritised schists, the first significant mineralisation was encountered at 120 feet from the portal. This was a narrow vein of massive pyrite/chalcopyrite dipping at about 65° back towards the portal, and striking oblique to the schistosity. This vein was driven on (32 ft. south and 21 ft. north), but it apparently pinched out quickly. It is from this vein that most of the ore was extracted. Some stoping was done above the north drive, with a rise at least 20 ft. high at the end. A winze was sunk at the start of the south drive, (according to old reports to a depth of at least 87 feet) and stoping can be seen on the north side above the water level, which is now about 20 ft. below the adit floor. The width of the vein as seen in the adit varies from a few inches to one foot, but old reports indicate that in the stoped areas it could have been at least 2 feet, with assays of up to 10 per cent copper.

The next 50 feet along the adit from the winze is a zone of strongly chloritised schists, with patches of strongly disseminated pyrite-chalcopyrite, and occasional narrow irregular veinlets, with heavy malachite staining. This passes into a zone of weakly mineralised tuffs, until about 245 feet from the portal, where another winze was sunk. This was apparently sunk on another zone of semimassive pyrite/chalcopyrite, but no evidence for this can be seen in the short drive (9ft. north, 12ft. south). The depth of the winze is unknown, but old assays indicate grades of at least 2.5 per cent copper.

From this last winze to the end, the adit passed through weakly mineralised sheared tuffs.

A few chip samples were taken from the adit, but the badly weathered and oxidised state of the walls make them unreliable. Therefore a diamond drill hole was put in approximately parallel to the adit, as described later.

The No. 2 Adit was driven at a later date lower down the hillside (see Plate 1), again as a crosscut, on a bearing of 228° M for approximately 175 feet. However it does not appear to have reached the main mineralised zone. Chip sampling along this adit gave negligible copper values (less than 0.12 per cent copper), except for one sample at 40-60 ft. from the portal which assayed at 0.70 per cent copper.

In addition there are several pits and trenches in the area, often showing disseminated pyrite with occasional minor chalcopyrite.

Close to the eastern end of Line 123S is an old shaft, of unknown depth. No mineralisation could be seen in its walls, and the dump material consisted of massive crystal tuff, with a few specimens of quartz schist showing finely disseminated pyrite. About 200 feet down the hillside and further to the south is an old adit, partly collapsed, and again no evidence of mineralisation could be found in the dump material.

6. Geochemistry

In 1969 a grid was cut across the area, with lines at 250 ft. intervals parallel to the old Natone grid. Nine lines were cut, from 103S to 123S, and a geochemical soil survey was carried out.

First an orientation survey was undertaken across the known mineralisation on line 108S. Both 'A' and 'C' soil horizons were sampled, and analysed by emission spectroscopy for copper, lead, zinc, silver, arsenic and manganese. Following this the full survey was carried out, both 'A' and 'C' horizons, and analysed by atomic absorption spectrophotometry for copper, lead, zinc, silver and manganese. The results, excluding those for silver which were, with only a few exceptions, all below the limit of detection, have been plotted on plan (Plates 3-10).

The results can be summarised as follows:-

Copper (Plates 3 and 4). A good anomaly was detected on line 108S over the known mineralisation, with some moderately high values also on Line 105½S, but no high values were recorded on lines south of Line 108S. The anomalous values picked up on Line 103S can be attributed to contamination from the No. 2 Adit dump.

007

Lead and Zinc (Plates 5 - 8) 'C' horizon samples show a small anomaly on Line 108S, but both 'A' and 'C' zinc results (and lead to a lesser extent) show an anomaly at the eastern end of Line 110½S. This correlates well with the I.P. anomaly on Line 2, and the presumed strike extension of the schist host rock. Other erratic high values can be attributed to dump contamination, or high manganese, which indicates the presence of manganese and iron oxides which act as scavengers for base metal ions.

The geochemical survey indicates a possible strike length of 800 ft. for the mineralised zone, but with probably lower grades away from the No. 1 Adit.

7. Geophysics

a) Electromagnetic.

R.E.M. was attempted on the geochemical grid, but was defeated by interference from the nearby power line.

b) Induced Polarisation

A new grid was cut in early 1970, with the baseline parallel to the presumed strike of the mineralisation, and four 1600 ft. traverse lines - Line 1 400 ft. north of the No. 1 Adit, and Lines 2, 3 and 4 at 400 ft. intervals south of the adit (see Plate 1).

In 1960/1 the Natone I.P. survey had indicated a strong anomaly on Line 108S over the Jupiter No. 1 Adit (see Plate 11). Therefore it was decided to try and define the strike extent of the mineralisation using I.P. on the new grid.

The work was carried out by McPhar Geophysics Pty. Ltd., using 100 ft. spreads, and the results are shown in Plates 12-15. A definite anomaly was recorded on Line 2, and a probable anomaly occurs on Line 1, both corresponding to the presumed strike extent of the No. 1 Adit mineralisation. Additional probable anomalies were recorded on Line 2 (500 ft. west of baseline) and Line 4 (200 ft. west of baseline). These both correlate with separate small lenses of schist recorded during the geological mapping. The schists on Line 4 were strongly chloritised with evidence of weak pyrite mineralisation.

008

The I.P. work indicates a possible strike extent of about 800 feet for the mineralised zone, but gave a weaker response towards the extremities.

8. Diamond Drilling

To obtain an accurate grade of the mineralisation exposed in the No. 1 Adit, a diamond drill hole (JP138) was drilled sub-parallel to the adit. It was collared 10 feet north of the portal at -5°, and drilled to a depth of 367 feet. Following this, JP139 was drilled to obtain a deeper intersection. It was collared at the same position at -45° and drilled to a depth of 333 feet.

The results are plotted on the cross-section (Plate 16), and show that both holes intersected the main zone of mineralisation, which appears to have a richer footwall zone within it. Also, JP139 intersected an additional narrow zone of mineralisation which appears to correlate with that in the second winze in the adit.

The main mineralised intersections are tabulated as follows:-

JP138	125' - 165'	40 ft. @ 0.58% Cu
	145' - 165'	20 ft. @ 0.83% Cu
JP139	122' - 163'	41 ft. @ 1.16% Cu
	145' - 163'	18 ft. @ 1.65% Cu ^{2.05%?}
	220' - 230'	10 ft. @ 1.37% Cu

It should be noted that the mineralisation consists of sporadic high values associated with narrow zones of massive to semi-massive sulphides, within relatively barren material containing only weakly disseminated sulphides.

Evidence of leaching of chalcopyrite was observed in the core of JP138, which could account for the lower grades obtained in that hole.

009

007010

9. Conclusions

The geochemical and I.P. surveys indicate a possible strike extent of the No. 1 Adit mineralisation of at least 800 feet. Diamond drilling on one section shows a true thickness of approximately 40 feet at a grade of about 1.0 per cent copper, and the JPl39 intersection was approximately 200 feet below surface down-dip.

With these dimensions indicated, this prospect is worth further investigation.

10. Recommendations

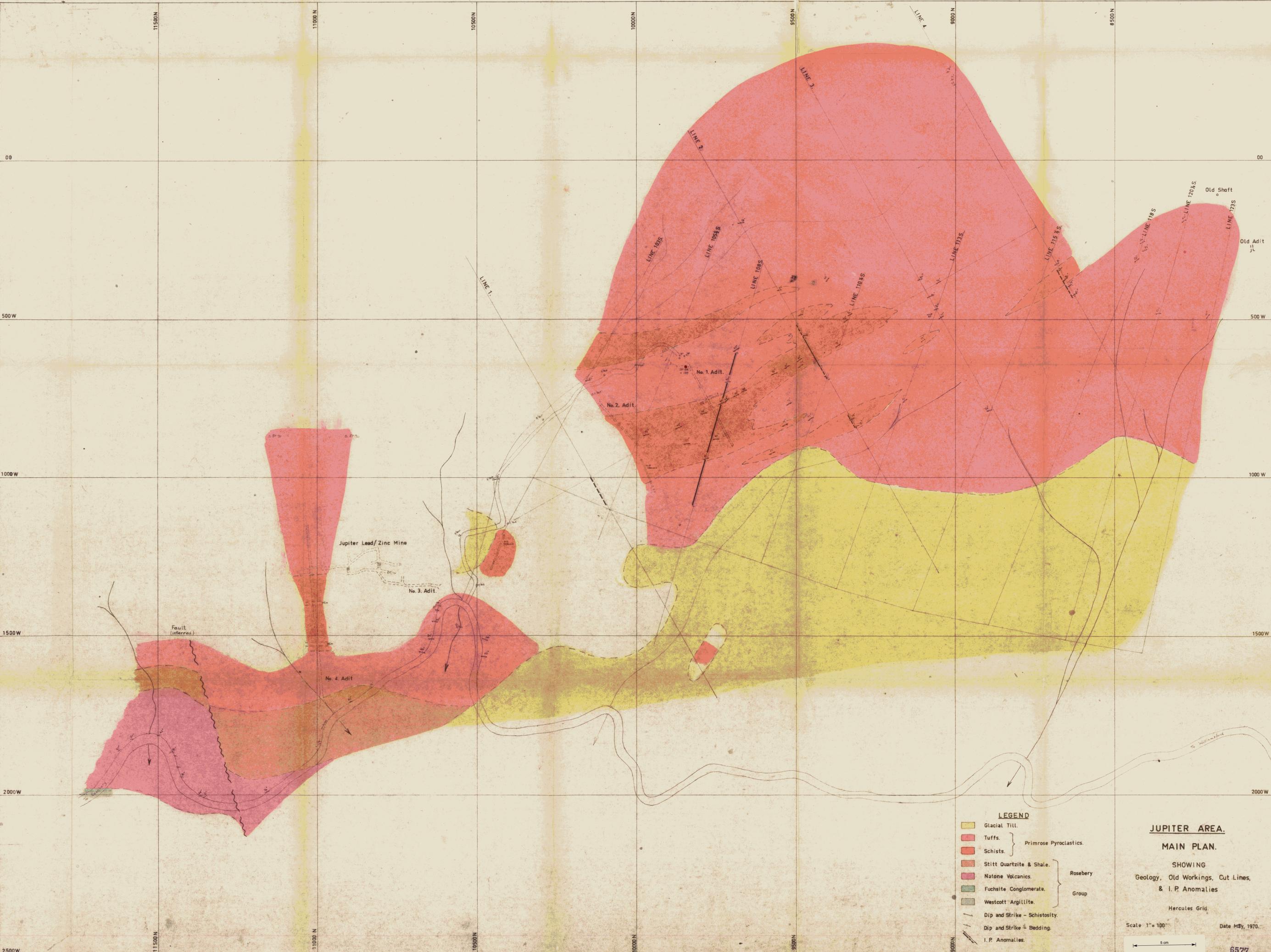
It is recommended initially that two more diamond drill holes should be drilled:-

- 1) at a site on Line 1 close to the access track, to intersect the mineralisation at a depth of approximately 150 feet below surface. This would require little site preparation.
- 2) a similar hole on Line 2. For this the access track will need to be extended by approximately 500 feet.

These holes will give some indication of the strike length and thickness of the mineralisation, and any further work can be based on the results obtained.

M. S. Gardner

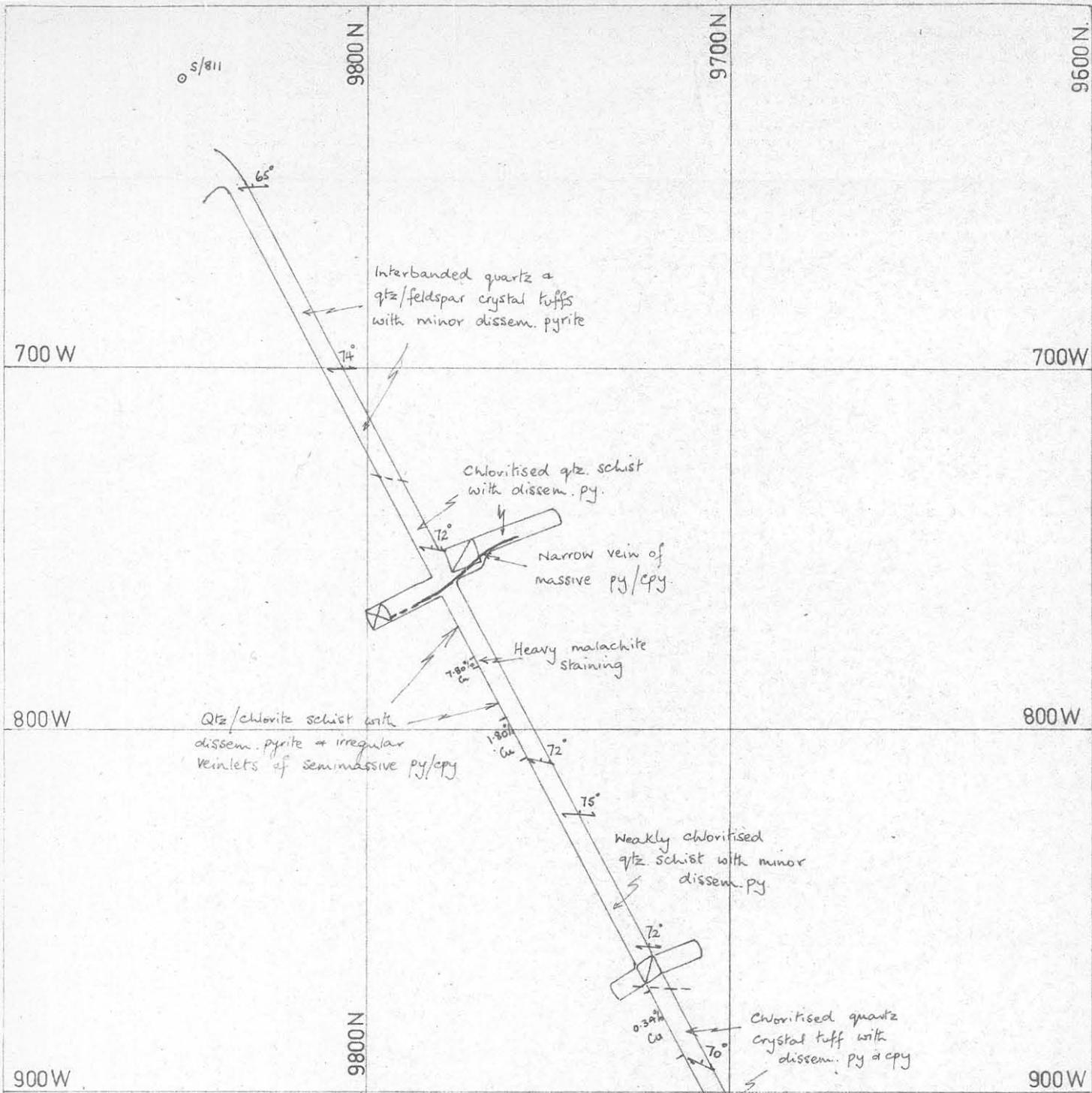
Holes to intersect at grade again ?
Q



LEGEND

- Glacial Till.
- Tuffs. } Primrose Pyroclastics.
- Schists. }
- Stitt Quartzite & Shale. } Rosebery Group
- Natone Volcanics. }
- Fuchsite Conglomerate. }
- Westcott Argillite. }
- Dip and Strike - Schistosity.
- Dip and Strike - Bedding.
- I.P. Anomalies.

JUPITER AREA.
MAIN PLAN.
 SHOWING
 Geology, Old Workings, Cut Lines,
 & I.P. Anomalies
 Hercules Grid.
 Scale 1" = 100'
 Date MSB, 1970.
 5 cm



JUPITER COPPER PROSPECT.

No 1. ADIT.

GEOLOGICAL PLAN.

Hercules Grid.

Scale 1" = 40'

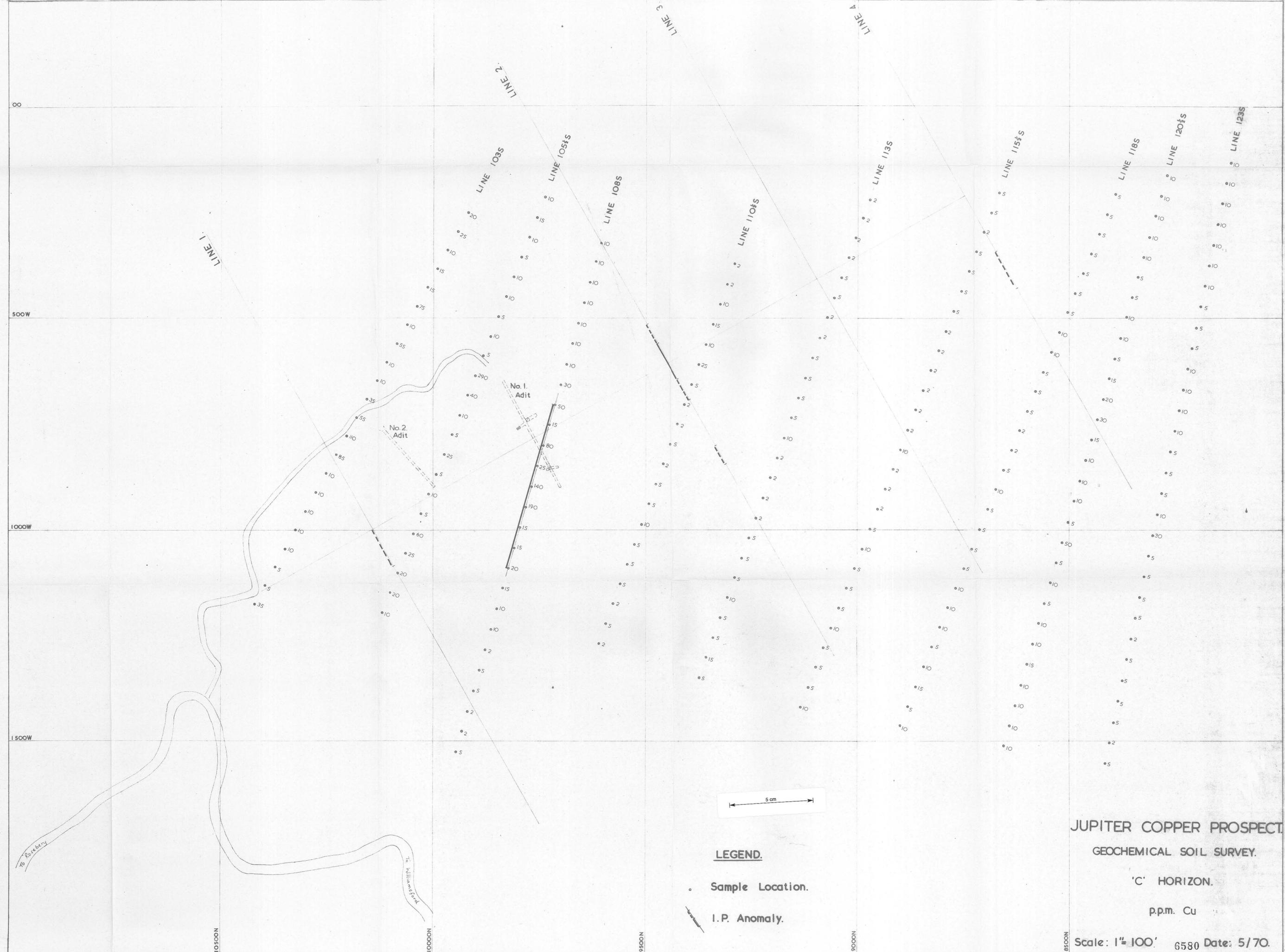
Date May, 1970.

007012

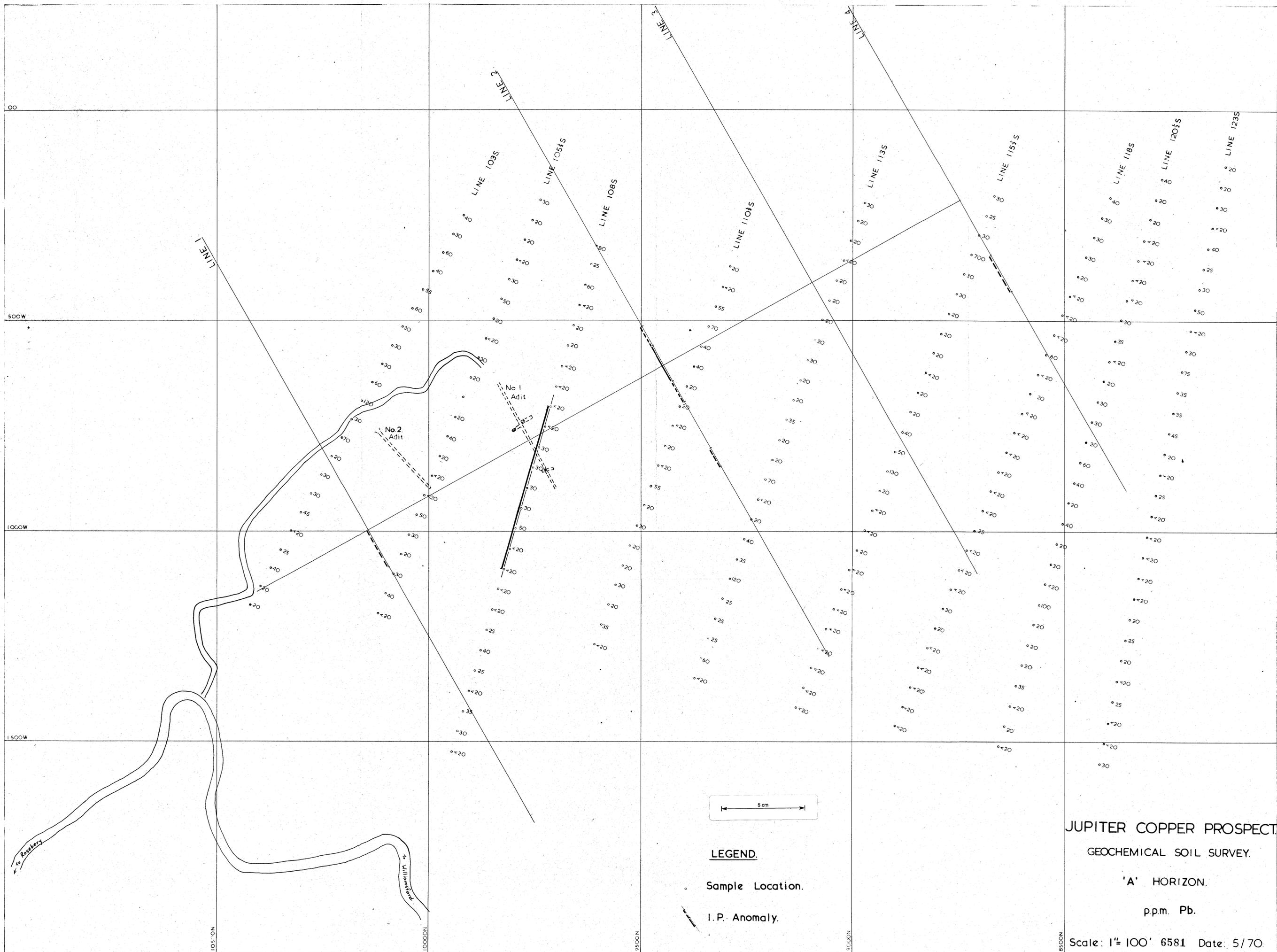
5 cm

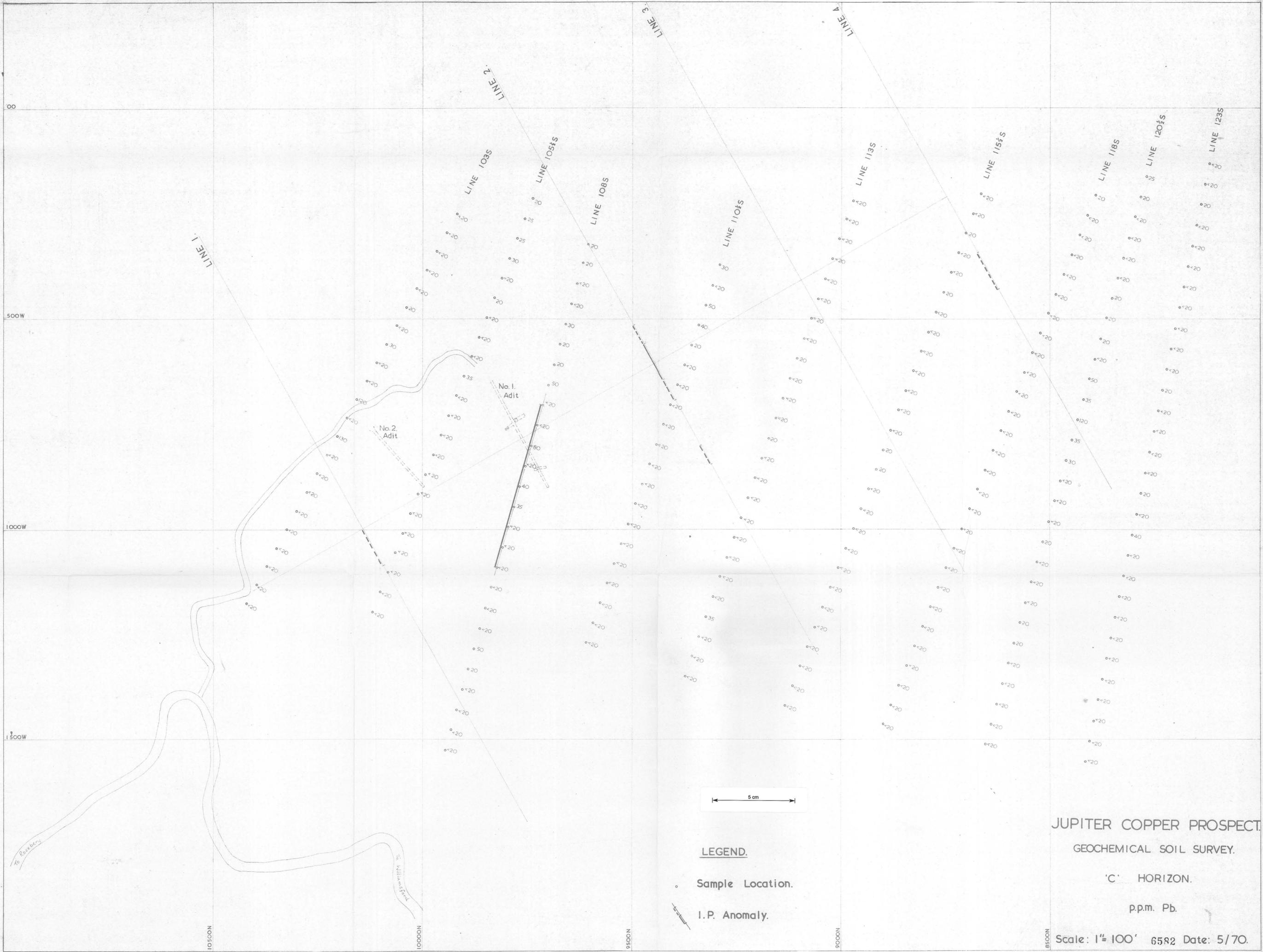


JUPITER COPPER PROSPECT
GEOCHEMICAL SOIL SURVEY.
 'A' HORIZON.
 p.p.m. Cu
 Scale: 1" = 100'
 Date: 5/70.



JUPITER COPPER PROSPECT
 GEOCHEMICAL SOIL SURVEY.
 'C' HORIZON.
 p.p.m. Cu
 Scale: 1" = 100' 6580 Date: 5/70.





JUPITER COPPER PROSPECT
GEOCHEMICAL SOIL SURVEY.

'C' HORIZON.

ppm. Pb.

Scale: 1" = 100' 6582 Date: 5/70.

LEGEND.

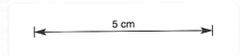
- Sample Location.
- I.P. Anomaly.



JUPITER COPPER PROSPECT
GEOCHEMICAL SOIL SURVEY.

'A' HORIZON.
ppm. Zn.

LEGEND.
○ Sample Location.
--- I.P. Anomaly.

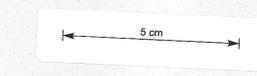


Scale: 1" = 100' 6583 Date: 5/70.



JUPITER COPPER PROSPECT
GEOCHEMICAL SOIL SURVEY.

'C' HORIZON
ppm Zn.



LEGEND.

- Sample Location.
- I.P. Anomaly.

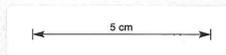
Scale: 1" = 100' (6584 Date: 5/70.



JUPITER COPPER PROSPECT
GEOCHEMICAL SOIL SURVEY.

'A' HORIZON.
p.p.m. Mn.

LEGEND.
● Sample Location.
--- I.P. Anomaly.



Scale: 1" = 100' 6585 Date: 5/70.

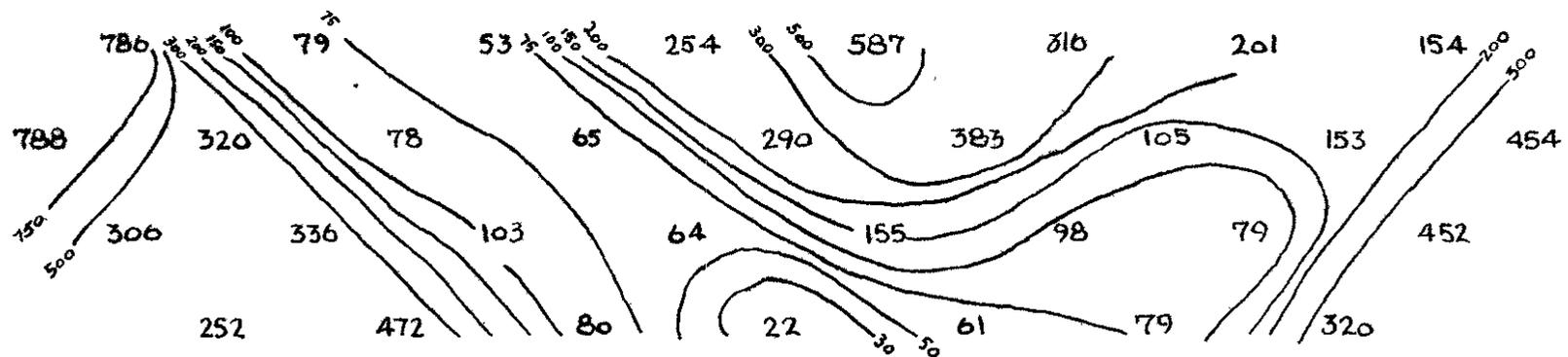


JUPITER COPPER PROSPECT
GEOCHEMICAL SOIL SURVEY.

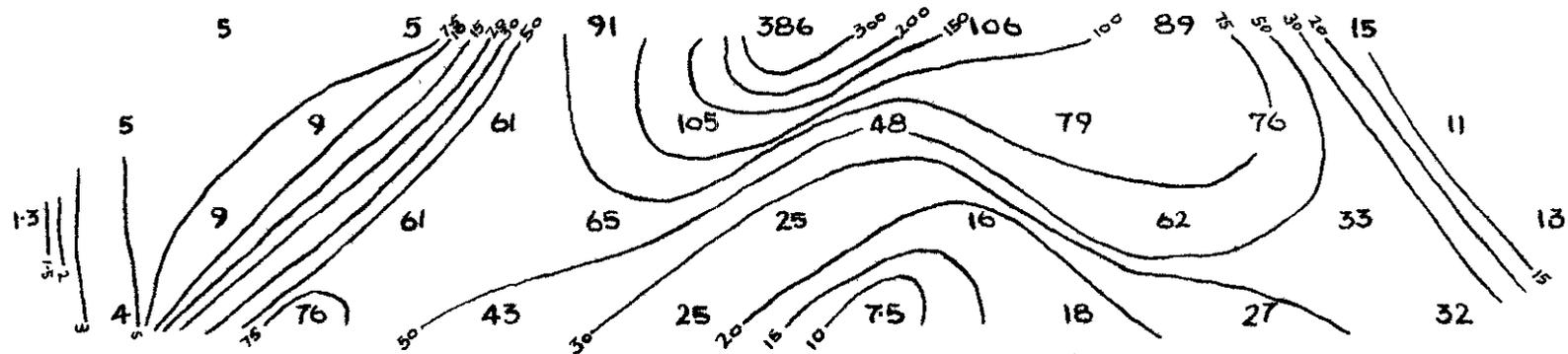
'C' HORIZON.
pp.m. Mn.

Scale: 1" = 100' 6586 Date: 5/70.

- LEGEND.**
- Sample Location.
 - I.P. Anomaly.



11 E 12 13 14 15 16 17 18 19 20 E



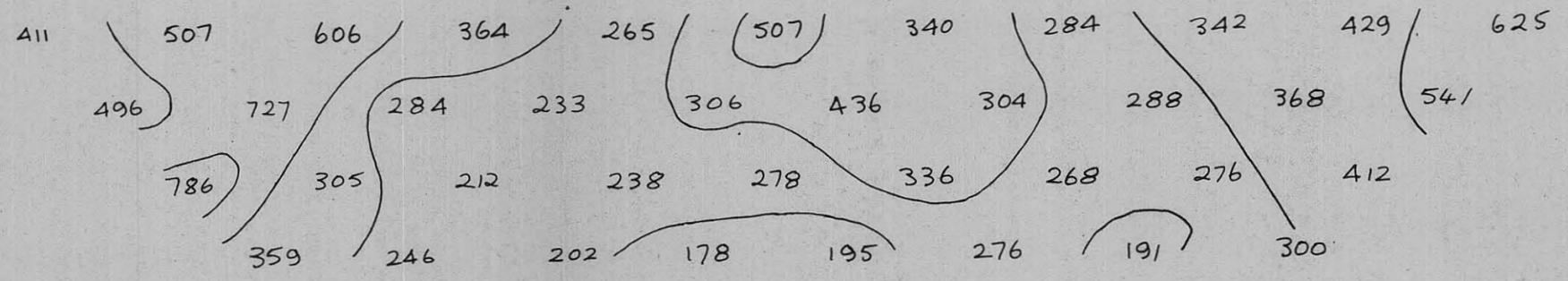
007021
6587

5 cm

I. P. SURVEY.

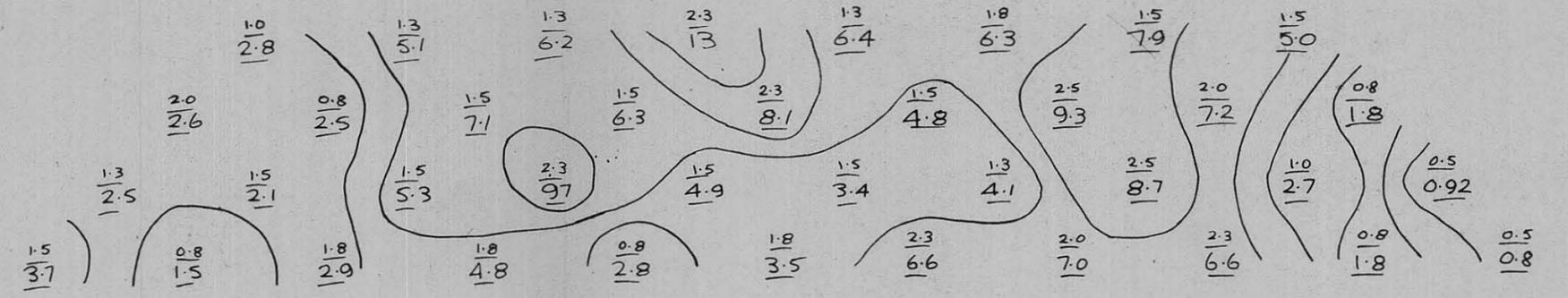
Natone Area
Line 1085 • Natone Grid
100 ft Spreads
Scale: 100 ft to 1 inch.
Frequency: $2\frac{1}{2} + \frac{1}{4}$ C.P.S.
Survey: BH & E.D.
Traced: SK Date 3/62

010



$\frac{Pa}{2\pi}$

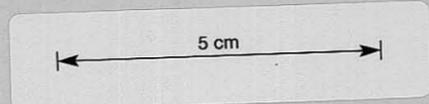
8W | 7W | 6W | 5W | 4W | 3W | 2W | 1W | 0 | 1E | 2E | 3E | 4E | 5E | 6E | 7E | 8E



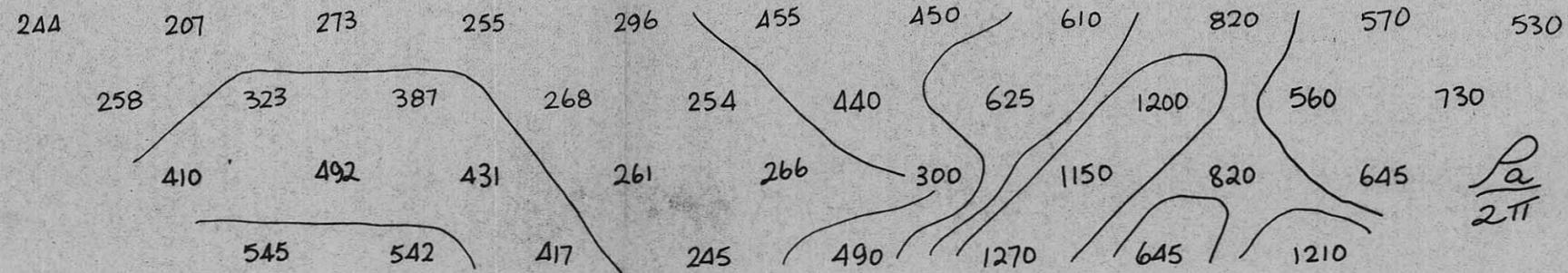
M.F.

007022

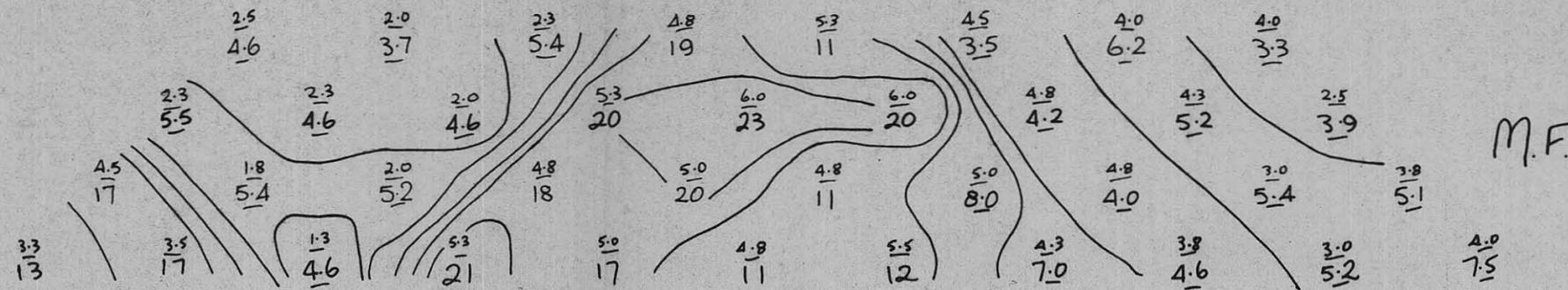
JUPITER CU. PROSPECT.
 I. P. SURVEY
 LINE I.
 100 Ft Spreads.
 Scale 1" = 100'
 Frequency: 2.5 / 0.3
 Survey: D.W.
 Traced: V.T. Date 4/70.



011



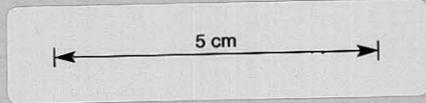
8W | 7W | 6W | 5W | 4W | 3W | 2W | 1W | 00 | 1E | 2E | 3E | 4E | 5E | 6E | 7E | 8E



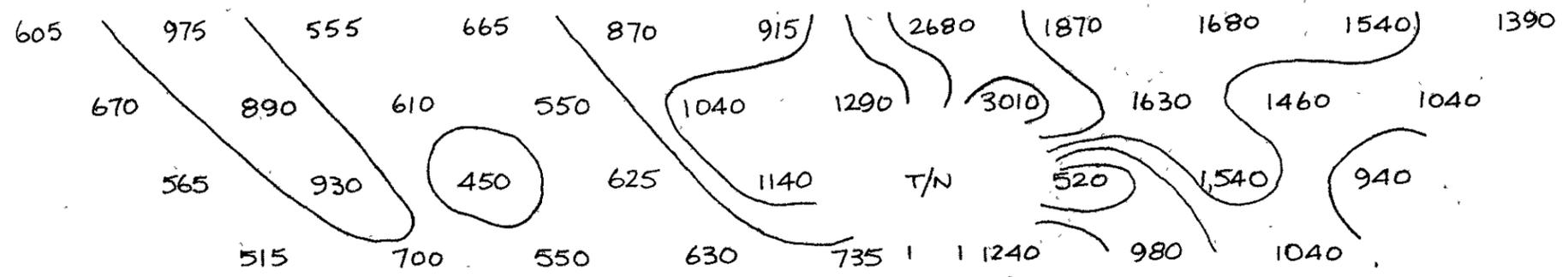
007023

JUPITER CU. PROSPECT.
I. P. SURVEY
LINE 2.

100 Ft Spreads.
Scale 1" = 100'
Frequency: 2.5/0.3
Survey: B.S.
Traced: V.T. Date 4/70.

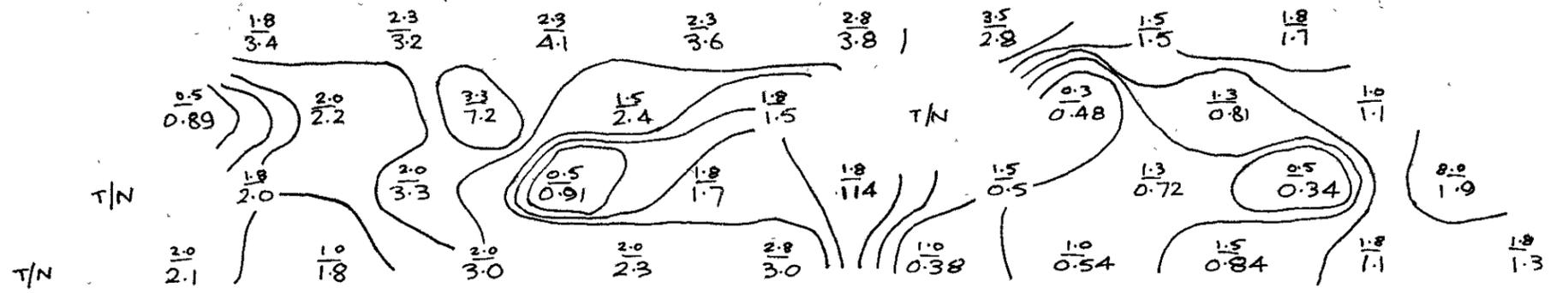


013



$\frac{P}{2\pi}$

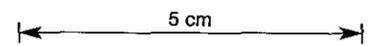
8W 7W 6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E 7E 8E



M.F.

007025

JUPITER CU. PROSPECT.
 I.P. SURVEY
 LINE 4.
 100 Ft Spreads.
 Scale 1"= 100'.
 Frequency: 2.5 / 0.3
 Survey: D.W.
 Traced: V.T. Date 4/70.



014

9800N

9700N

R.L. 1500

R.L. 1500

R.L. 1400

R.L. 1400

R.L. 1300

R.L. 1200

9800N

5 cm

E. Z. CO. W.C.M. GEOL. DEPT. YO. 548.

007026

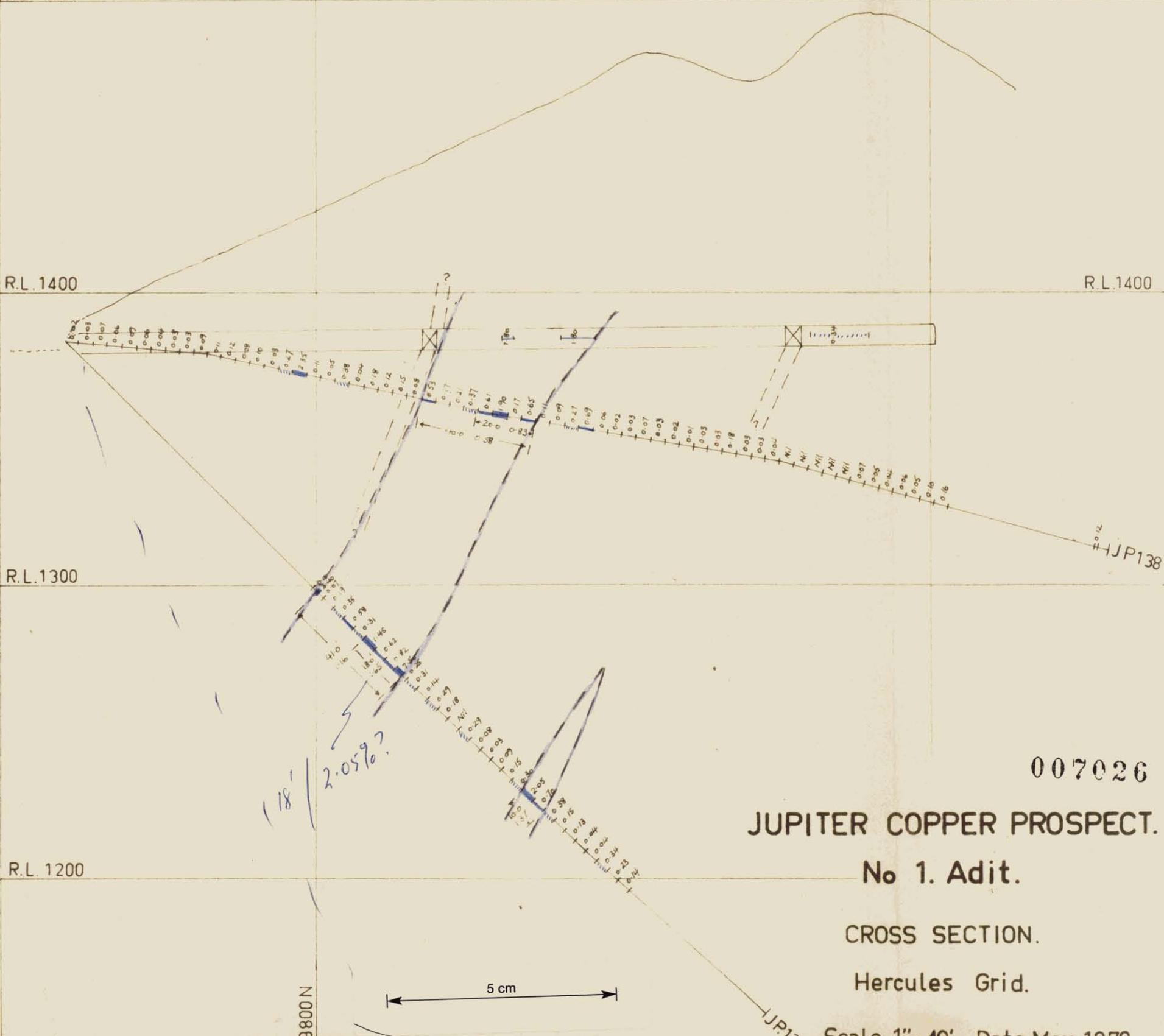
JUPITER COPPER PROSPECT.

No 1. Adit.

CROSS SECTION.

Hercules Grid.

Scale 1"=40' Date May, 1970.



015

9800 N

9700 N

RL 1500

RL 1500

1085 1559E

RL 1400

DUMP

Cu 2-35

Cu 1-90

J.P. 138

RL 1300

Cu 1-31

Cu 1-37

007027 RL 1200

JUPITER NO I. ADIT.

COPPER LODE.

Cross Section Showing Drill

Holes J.P. 138, J.P. 139.

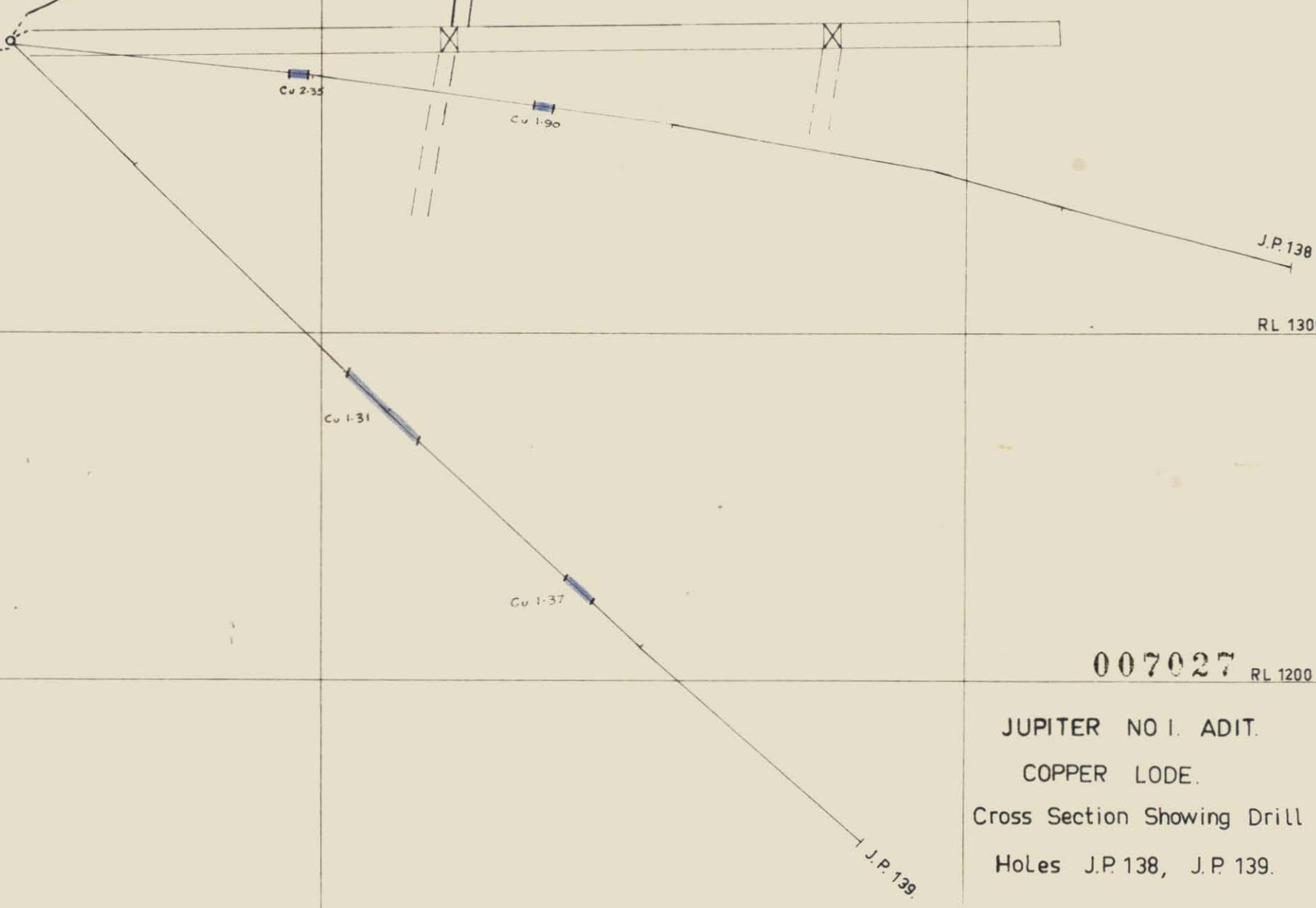
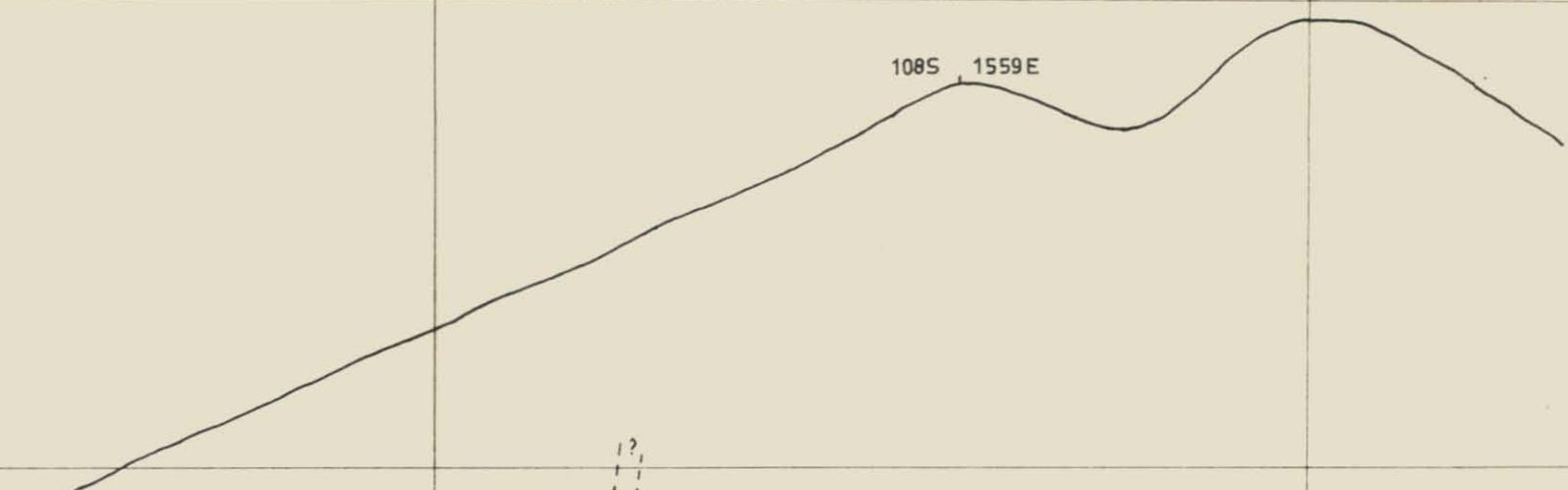
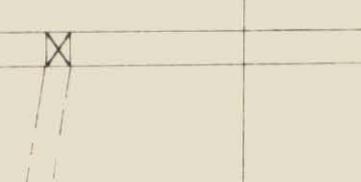
SCALE 1" = 40'

DATE 12/26/69

9800 N

5 cm

9700 N



DIAMOND DRILL CORE RECORD

PLOTTED	SUMMARY		SURVEY DATA		
	OBJECT	RESULT	Footage	Direction	Angle
40 Plan ✓ ZD.11 40 Sect ✓ ZD.10 L.P. 100 Plan 100 Sect	To obtain accurate assay values for correlation with Jupiter No. 1 adit.	The hole intersected disseminated pyrite mineralisation over most of its length, with minor chalcopyrite between 80' and 185'			

Mine: E.L. 1/62 Mt. Black
Location: Jupiter No. 1 Adit
Co-ords: 9885N 630W (Approx.) Hercs.
R.L.: 1385' (Approx) A.S.L.
Direction: 247°M
Angle: 5°
Total Depth: 367'
Hole Size: BXM
Date Commenced: 14/8/69
Date Completed:
Logged by: DOH. BMB.

FOOTAGE		DESCRIPTION	FROM	TO	FEET	CORE REC'D	ASSAY DATA						FOOTAGE
FROM	TO						Pb %	Zn %	Cu %	Ag Oz./Ton	Au dwts.	Fe %	
0	26	Schistose quartz crystal tuff with bands of quartz felspar crystal tuff, minor disseminated pyrite occurs throughout. Rare blebs and seams of pyrite-chalcopyrite mineralisation.	0	5	5	1 3/4	0.09	0.07	0.02	0.2	Nil	0.9	
			5	10	5	2 1/4	0.09	0.10	0.03	0.2	Nil	1.3	
			10	15	5	2	0.06	0.09	0.07	0.2	Nil	1.6	
			15	20	5	4	0.06	0.09	0.06	0.3	Nil	2.0	
			20	25	5	5	0.09	0.16	0.09	<0.1	Nil	3.0	
			25	30	5	5	0.09	0.16	0.06	<0.1	Nil	2.5	
26	28	Chloritized schist with minor disseminated pyrite.	30	35	5	5	0.10	0.10	0.04	<0.1	Nil	2.9	
			35	40	5	5	0.10	0.13	0.03	0.1	Nil	2.1	
			40	45	5	5	0.14	0.15	0.03	<0.1	Nil	1.9	
28	51	Quartz and quartz felspar tuffs with disseminated pyrite and blebs of pyrite/chalcopyrite.	45	50	5	2 1/4	0.17	0.10	0.09	0.1	Nil	1.4	
			50	55	5	5	0.04	0.09	0.11	0.1	Nil	2.0	
			55	60	5	5	0.04	0.12	0.12	0.1	Nil	3.7	
51	71	Quartz crystal tuff with minor chlorite and disseminated pyrite.	60	65	5	5	0.04	0.12	0.08	0.6	Nil	2.3	
			65	70	5	5	0.04	0.11	0.10	<0.1	Nil	2.4	
			70	75	5	5	0.04	0.11	0.03	<0.1	Nil	2.3	
71	97	Quartz-felspar tuff with minor chlorite with abundant disseminated pyrite and bands and blebs of pyrite-chalcopyrite and occasional bornite.	75	80	5	5	0.05	0.08	0.27	0.1	Nil	4.2	
			80	85	5	5	0.03	0.11	2.35	0.4	0.35	11.5	
			85	90	5	5	0.03	0.09	0.11	0.2	Nil	4.2	
			90	95	5	5	0.03	0.09	0.05	0.2	Nil	2.8	
97	241 1/2	Chlorite schist with disseminated pyrite and segregations of pyrite/chalcopyrite, the chalcopyrite being frequently partially leached out. Semi massive mineralisation occurs from 150-152 153-154 235-240	95	100	5	5	0.03	0.19	0.38	0.2	Nil	6.7	
		Quartz veins occur 213 1/2-214; 214 1/2-215.	100	105	5	5	<0.01	0.33	0.04	0.1	Nil	3.7	
			105	110	5	5	<0.01	0.12	0.18	0.1	Nil	5.0	
			110	115	5	5	<0.01	0.10	0.12	<0.1	Nil	3.9	
			115	120	5	5	0.3	0.94	0.15	<0.1	Nil	6.8	
			120	125	5	4 1/2	<0.01	0.10	0.05	<0.1	Nil	9.7	
			125	130	5	4 1/2	<0.01	0.36	0.53	0.3	Nil	9.8	
			130	135	5	5	<0.01	0.15	0.17	0.2	Nil	5.3	
			135	140	5	5	0.15	0.73	0.21	<0.1	Nil	7.4	
241 1/2	245	Quartz crystal tuff with minor chlorite, disseminated pyrite and thin bands of pyrite/chalcopyrite.	140	145	5	5	0.06	0.76	0.37	<0.1	Nil	5.0	
			145	150	5	5	<0.01	0.10	0.61	<0.1	Nil	9.6	
			150	155	5	5	<0.01	0.20	1.90	0.5	<0.1	10.7	
			155	160	5	5	<0.01	0.52	0.17	<0.1	Nil	5.8	
245	248	Chloritic schist with disseminated pyrite.	160	165	5	5	<0.01	0.14	0.65	0.3	Nil	7.6	
			165	170	5	5	<0.01	0.06	0.11	<0.1	Nil	4.2	
248	253	Quartz crystal tuff, with minor disseminated pyrite and thin seam of chlorite schist with pyrite/chalcopyrite mineralisation.	170	175	5	5	0.24	0.25	0.09	<0.1	Nil	6.2	
			175	180	5	5	0.34	0.25	0.27	<0.1	Nil	7.5	
			180	185	5	5	0.30	1.40	0.69	0.5	Nil	10.3	
			185	190	5	5	Nil	0.09	0.06	<0.1	Nil	5.9	
253	275'9"	Chloritized tuff-agglomerate with much disseminated pyrite and pyrite/chalcopyrite 2" of semi massive pyrite/chalcopyrite occur at 270'3".	190	195	5	5	Nil	0.09	0.02	<0.1	Nil	6.8	
			195	200	5	5	Nil	0.37	0.03	<0.1	Nil	6.8	
			200	205	5	5	Nil	0.16	0.07	<0.1	Nil	6.9	
			205	210	5	5	Nil	0.12	0.03	0.1	Nil	6.7	
			210	215	5	5	Nil	0.10	0.02	0.1	Nil	6.3	
275'9"	354	Slightly chloritised quartz-felspar crystal tuff with minor disseminated pyrite and occasional thin seams of pyrite/chalcopyrite mineralisation. Frequent leaching cavities occur wherein leaching usually complete. Cavities are often partially refilled with a wuggy quartz. (c.f. 97-241 1/2 where leaching is usually only partially completed).	215	220	5	5	Nil	0.09	0.01	0.1	Nil	10.3	
			220	225	5	5	Nil	0.13	0.03	0.2	Nil	9.1	
			225	230	5	5	Nil	0.13	0.03	0.1	Nil	11.2	
			230	235	5	2 1/4	Nil	0.19	0.18	0.1	Nil	14.9	
			235	240	5	5	Nil	0.13	0.03	0.1	Nil	13.6	
			240	245	5	5	Nil	0.08	0.03	0.3	Nil	11.2	
			245	250	5	5	Nil	0.16	0.04	0.2	Nil	7.8	
			250	255	5	5	Nil	0.05	Nil	1.1	<0.1	6.7	
			255	260	5	5	Nil	0.16	Nil	0.1	Nil	11.6	
			260	265	5	5	Nil	0.12	0.03	0.1	Nil	11.6	

260-265 5 5 Nil 0.10 Nil 0.1 Nil 12.4

017

DIAMOND DRILL CORE RECORD

FOOTAGE		DESCRIPTION	FROM	TO	FEET	CORE REC'D	ASSAY DATA							DIPS
FROM	TO						Pb %	Zn %	Cu %	Ag Oz./Ton	Au dwts.	Fe %		
354	362	Felspar crystal tuff.	265	270	5	5	Nil	0.13	Nil	0.1	Nil	12.4		
			270	275	5	5	Nil	0.08	Nil	0.1	Nil	7.4		
362	363	Chlorite schist with disseminated pyrite/chalcopyrite, semi massive pyrite/chalcopyrite from 362½' - 363'.	275	280	5	5	Nil	0.15	0.07	1.4	0.1	4.2		
			280	285	5	5	Nil	0.08	0.05	0.2	Nil	3.7		
			285	290	5	5	Nil	0.14	0.04	0.1	Nil	3.2		
			290	295	5	5	Nil	0.22	0.06	0.1	Nil	6.5		
363	367	Schistose quartz crystal tuff with minor disseminated pyrite and rare chalcopyrite.	295	300	5	5	Nil	0.16	0.05	0.1	Nil	21.0		
			300	305	5	5	Nil	0.16	0.10	0.1	Nil	3.8		
			305	310	5	5	Nil	0.10	0.16	0.1	Nil	4.8		
			362	363	1	1	Nil	0.14	0.12	0.1	Nil	7.3		
							<u>AVERAGE ASSAYS:</u>							
			30	185	105		n/a	n/a	0.48	0.2	Nil	6.8		

59

APPENDIX 1

DIAMOND DRILL CORE RECORD

PLOTTED	SUMMARY		SURVEY DATA		
	OBJECT	RESULT	Footage	Direction	Angle
40 Plan 40 Sect ✓ L.P. 100 Plan 100 Sect	To test the mineralisation intersected in J.P. 138 at greater depth.	The hole intersected chalcopyrite mineralisation averaging 1.31% Cu over 33Ft. from 130 to 163 Ft.	50 100 200 300		-45 -45 -43½ -41½
			Mine: Jupiter Location: Jupiter No. 1 adit Co-ords: 9885N 630W. (App) Hercs. G. R.L.: 1385' Direction: 247°M Angle: -45° Total Depth: 333Ft. Hole Size: BXM and BX W.L. Date Commenced: 6/11/69 Date Completed: 24/11/69 Logged by: R.L.B.		

FOOTAGE		DESCRIPTION	FROM	TO	FEET	CORE REC'D	ASSAY DATA							DIPS		
FROM	TO						Pb %	Zn %	Cu %	Ag Oz./Ton	Au dwts.	Fe %			FOOTAGE	AN
0	87	Fine grained white to grey sheared sericite-quartz rock derived from vitric tuff type. Locally banded. Generally with this sericite-rich folige spaced at 1 to 2 inch intervals. Slightly chloritic @ 60, ft. Disseminated fine grained pyrite at 26 Ft. Generally contains scattered traces of fine grained pyrite throughout.														
87	273	Fine to medium grained sheared grey-green and green granular chloritic feldspar tuff. Trace to disseminated pyrite throughout commonly in thin stringers. Stringers of semimassive pyrite with trace of chalcopyrite at 87½ and 90 Ft. Semimassive fine to medium grained pyrite - chalcopyrite in irregular vein 2 to 3 inches thick at 99½ Ft. and 4 to 5 inches thick at 123 Ft. Leached pyrite zone at 131 Ft. Strongly leached zone with broken core from 142 to 148 Ft. Semi massive medium grained chalcopyrite in irregular patches from 161 to 163 Ft.	120	122	2	1¾	-0.01	0.3	0.10	0.3	Nil	7.9				
			122	123	1	1	0.22	0.25	3.4	1.4	1.3	31.7				
			123	125	2	1¾	-0.01	0.05	0.07	0.1	Nil	5.0				
			125	130	5	5	0.22	0.21	0.19	0.1	Nil	9.2				
			130	135	5	5	-0.01	0.05	0.35	0.2	Nil	6.3				
			135	140	5	5	0.20	0.24	0.58	0.3	Nil	10.2				
			140	145	5	5	-0.01	0.40	0.31	0.2	Nil	6.9				
			145	150	5	4½	0.01	0.08	1.45	0.4	Nil	8.7				
			150	155	5	5	0.29	0.26	0.62	0.5	0.1	7.6				
			155	160	5	5	0.24	0.24	0.82	0.3	0.1	6.7				
			160	163	3	3	N.D.	N.D.	7.5	1.6	0.45	26.8				
			163	165	2	2	0.40	0.50	0.25	0.3	Nil	4.7				
			165	170	5	4	0.72	0.33	0.31	0.1	Nil	5.2				
			170	175	5	5	0.24	0.27	0.14	0.1	Nil	5.3				
			175	180	5	5	-0.01	0.10	0.29	0.1	Nil	5.2				
		Traces of Chalcopyrite from 135 to 140 Ft. Short sections of massive pyrite-chalcopyrite from 140 to 150 Ft. especially abundant from 148 to 150 Ft. Massive irregular patches of chalcopyrite-pyrite at 151½ ft, 155 ft, 158 ft, 160 ft, and 160½ ft.														
		Semi-massive chalcopyrite in irregular stringers at 220 ft and 225 ft.	180	185	5	5	-0.01	0.24	0.18	0.1	Nil	5.7				
		Massive pyrite at 224 Ft. and massive pyrite-chalcopyrite (2 inches) at 236 Ft. Fairly numerous irregular stringers of semi massive pyrite from 245 to 268 Ft. Very broken core 248 to 255 Ft. Leached quartz veins from 256 to 273 Ft.	185	190	5	5	-0.01	0.08	0.01	0.1	Nil	7.4				
			190	195	5	5	-0.01	0.15	0.29	0.1	Nil	7.4				
			195	200	5	5	0.18	2.10	0.08	0.3	Nil	6.0				
			200	205	5	5	-0.01	0.2	0.03	0.1	Nil	5.5				
			205	210	5	5	0.01	0.17	0.09	0.1	Nil	7.2				
			210	215	5	5	-0.01	0.08	0.15	0.1	Nil	6.5				
			215	220	5	5	-0.01	0.06	0.30	0.1	Nil	6.1				
			220	225	5	5	-0.01	0.08	2.05	0.3	Nil	18.5				
			225	230	5	5	-0.01	0.13	0.70	0.2	Nil	11.7				
273	303	Medium grained massive olive-green granular chloritic feldspar tuff with scattered chlorite blebs.	230	235	5	5	-0.01	0.25	0.38	0.1	Nil	10.2				
			235	240	5	4¾	-0.01	0.11	0.15	0.2	Nil	8.5				
			240	245	5	5	-0.01	0.21	0.13	0.1	Nil	7.6				
303	319	Medium grained massive grey-green tuff very very broken and bracciated with quartz veins. Traces of chalcopyrite infilling cavities in quartz vein from 303 to 310 Ft.	245	250	5	5	-0.01	0.06	0.04	0.1	Nil	18.5				
			250	255	5	5	-0.01	0.06	0.04	0.1	Nil	14.1				
			255	260	5	5	-0.01	0.07	0.34	0.2	Nil	8.0				

019

ELECTROLYTIC ZINC CO. OF AUSTRALASIA LTD.
ROSEBERY — TASMANIA

007031
HOLE No. JP 139

DIAMOND DRILL CORE RECORD

FOOTAGE		DESCRIPTION	FROM	TO	FEET	CORE RECD	ASSAY DATA						DIPS		
FROM	TO						Pb %	Zn %	Cu %	Ag Oz./Ton	Au dwts.	Fe %	FOOTAGE	DIPS	
319	333	Fine to medium grained sheared grey-green feldspar tuff with chlorite flecks. Pyrite in veinlets and small patches. Scattered siderite (?) - quartz veins.	260	265	5	5	0.03	0.28	0.23	0.1	Nil	6.7			
			265	270	5	5	0.01	0.08	0.14	0.1	Nil	13.3			
			<u>AVERAGE ASSAY</u>												
			130	163	33				1.31	0.4		9.5			
			145	163	18				2.05	0.6		13.8			
			220	230	10				1.37	0.3		15.1			