ENVELOPE 2958

TENEMENT:

EL 273, Comstock

TENEMENT HOLDER:

Amoco Minerals Australia Company

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AMOCO MINERALS AUSTRALIA COMPANY

FINAL REPORT

E.L. 273, SOUTH AUSTRALIA

JOHN JOHNSON - MAY 1977

and a detailed evaluation was carried out. This consisted of gridding, soil sampling, detailed geologic mapping, ground magnetics and I.P., followed by diamond drilling.

SUMMARY

Exploration Licence No. 273 encompasses an area of 12 square kilometers and is located 25 kilometers north of Quorn in South Australia.

The tenement protects an area of strongly leached basal Cambrian siltstones and sandstones which contain anomalous base metal geochemistry. These overlie the Proterozoic Pound Quartzite. These units have been folded into a synclinal structure which was considered favourable for the concentration of base metal sulphides.

Detailed exploration included soil sampling, magnetics and induced polarization surveys which indicated favourable targets for drilling. Two diamond holes were drilled which failed to intersect economic grades of mineralization.

CONCLUSIONS AND RECOMMENDATIONS

No further exploration is recommended within Exploration Licence No. 273 and the tenement should be relinquished.

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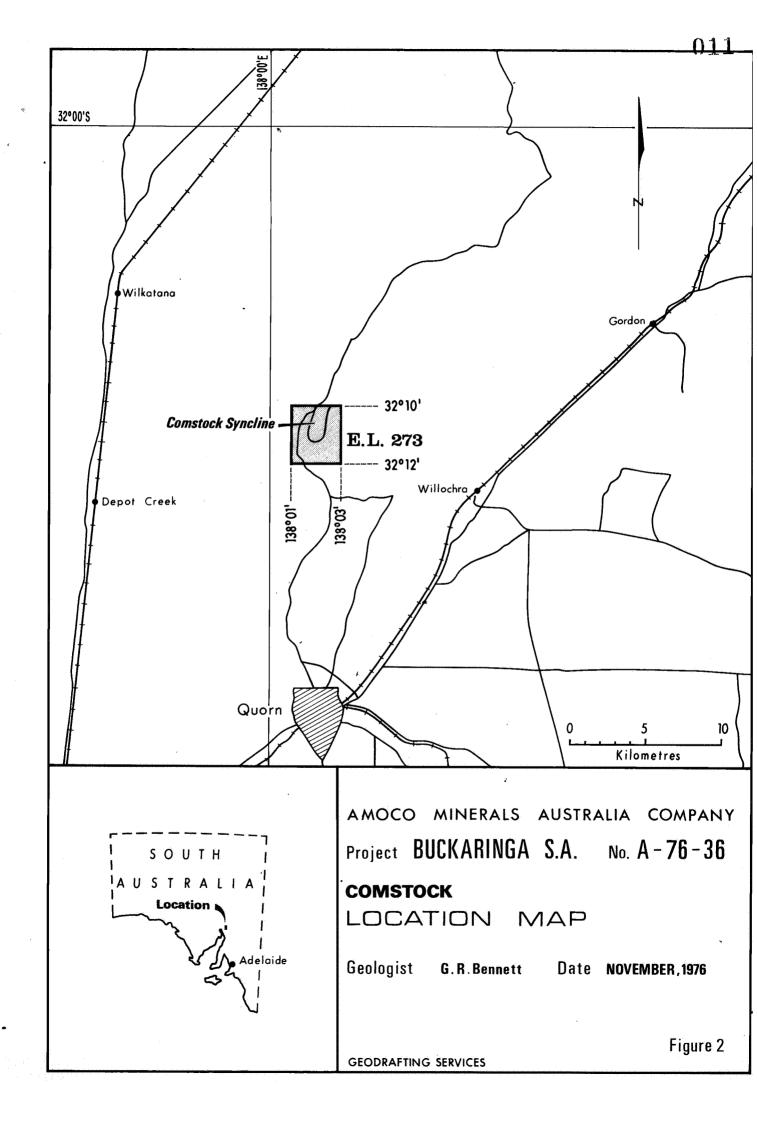
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LOCATION AND ACCESS

The area is located 250 kilometers north of Adelaide in South Australia and more accurately, 25 kilometers north of Quorn. Major rail and road services are nearby and the tenement is well served by farm tracks. The property is favourably situated with respect to power, water, and population (Figures 1 and 2).





4

OWNERSHIP

Exploration Licence No. 273 is held soley by Amoco Minerals Australia Company.

DESCRIPTION OF THE PROPERTY

Exploration Licence No. 273 encompasses an area of 12 square kilometers and was granted for a period of 12 months from November 23rd, 1976 (Figure 2). The tenement allows Amoco Minerals prospecting rights for copper, lead, zinc, silver, gold, cobalt and molybdenum.

GEOLOGY

Regionally, Upper Proterozoic and Cambrian sediments have been folded into a series of synclines and anticlines. The stratigraphic units considered to have economic interest are the Parachilna Formation and the basal portion of the Wilkawillina Limestone.

Stratigraphy

The stratigraphy of the Exploration Licence area can be divided into the following:-

a. Upper Proterozoic:

The Pound Quartzite is a hard, massive, white to light brown, quartz sandstone of medium grainsize. It is well bedded and in places exhibits such features as

b. Cambrian

The Parachilna Formation is essentially a thin bedded siltstone unit with minor sandstone and shaley lenses. It is generally poorly exposed and extensively weathered. It varies in colour from white to yellow-brown depending on the limonitic-hematitic content. The unit is estimated to be 100 to 120 meters thick.

The Wilkawillina Limestone is a massive, well bedded, grey limestone directly overlying the Parachilna Formation in this area. This unit is largely masked by soil cover.

Structure

The above units have been tightly folded about north-south trending axes. The Comstock Syncline plunges approximately 25° to the north, and the eastern and western limbs dip at about 60° towards the center of the basin. Several major faults cut obliquely across the syncline and minor faulting is common in the nose area.

Drilling results led to a reassessment of the outcrop geology. A poorly outcropping quartz horizon in the central portion of the syncline which was previously considered part of the Parachilna Formation, was re-interpreted as representing a small anticline in the basement Pound Quartzite. This markedly downgraded mineralization potential of the property.

Mineralization

Anomalous base metal values are confined to conformable manganiferous ironstones and ferruginous shales and sandstones, although no conclusive evidence of layered or stratiform massive sulphides was noted during surface exploration. Petrologic examination of specimens suggested that the base metals formed as discrete sulphide grains in interstices of the sandstones.

Drilling failed to intersect base metal sulphides in either hole. Low zinc values, up to 1%, were recorded in manganese rich iron stones in each drill hole. A narrow zone (approximately 20 centimeters) contained 1.2% zinc probably as a carbonate. This is discussed more fully by Pontifex (Appendix 1).

Amoco Mapping

The Comstock Syncline was mapped at a scale of 1:2,000 using air photos for control. The information was then transferred to 1:5,000 scale basemap. Mapping was hindered by soil and alluvial cover in the valley floor and by Pound Quartzite scree on the valley sides.

The aim of this mapping was to determine the attitude and probable thickness of the prospective Parachilna Formation. Very few field measurements of value could be obtained from this unit due to its highly weathered nature. The most meaningful attitudes were determined on the Pound Quartzite.

GEOCHEMISTRY

Soil Geochemistry

The southern portion of Comstock Syncline was sampled at 20 meter intervals along traverses 60 meters apart, and the northern portion at 40 meter intervals along traverses 180 meters apart. A total of 455 samples were collected from the 'B' horizon and sieved to the minus 80 mesh and analysed for copper, lead and zinc.

Copper

The main copper anomaly is centered at 750N, 300W within a discontinuous zone having a 250 meter strike length and width of 50 meters. Copper values are approximately five times background.

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Two smaller second order anomalies, twice background occur on lines 810N, 120E and 450N, 240W (Enclosure 1).

Lead

The lead anomalies although smaller, are coincident with copperzinc anomalies. The 250 ppm contour on the western limb trends parallel to the strike of the country rock (see Enclosure 1). Background values are about 100 ppm.

Zinc

Three elongate anomalous zinc anomalies, which are ten times background, are associated with discontinuous manganese ironstone outcrop on both western and eastern limbs of the fold. In the vicinity of the fold hinge there is a broad elongate second order zinc anomaly enclosing small highly anomalous zones (Enclosure 1). Background for zinc in 'B' horizon soils is about 100 ppm.

The strongest and best defined zone on the western limb extends for a distance of 360 meters and has a maximum width of approximately 40 meters. The highest zinc value in this zone is 1,500 ppm at 750N, 300W. A broad elongate zone of lower geochemistry is centered at approximately 540N, 30W. This broad zone could correlate with shallow dipping beds within the hinge area.

A small, though strong, zinc anomaly is centered on line 810N, 120E with coincident anomalous copper and lead. This anomaly is associated with a prominent outcrop of limonite impregnated shales.

Rock Geochemistry

The gossanous zone is anomalous in copper and zinc. From ten samples submitted, six are anomalous. Sample No. 14369 of ferruginized, manganiferous, tuffaceous sulphide bearing arenite contains 950 ppm copper, 170 ppm lead, 2,500 ppm zinc, 1% manganese, 13 ppm arsenic, 5.4 ppm silver and 200 ppm antimony. From polished section description, the gossan

Sample No. 14368, sampled near No. 14369, was anomalous in coper 950 ppm, lead 200 ppm, zinc 2,500 ppm, arsenic 25 ppm, silver 3.8 ppm, manganese 1% and antimony 240 ppm. From polished section description, sulphides are associated with leached voids in the volcanic rock fragments.

Sample No. 14370 contains anomalous copper 520 ppm, lead 290 ppm, zinc 2,000 ppm, arsenic 21 ppm, silver 2.8 ppm, manganese 1% and antimony 400 ppm. From polished section description, this argillaceous siltstone and sandstone contains oxidised and sparse unaltered pyrite and chalcopyrite of a few microns in size. Portions of the rock are, however, cavernous because of the removal by leaching of sulphides after oxidation and boxwork formation.

Anomalous antimony and arsenic values are associated with anomalous copper-zinc geochemistry indicating that these two elements could be pathfinders during reconnaissance programs.

GEOPHYSICS

Magnetometer and induced polarization surveys were carried out over the gridded area.

Magnetics

A ground magnetometer survey over seven line kilometers of grid with readings at 20 meter intervals was carried out using a Proton G816 magnetometer. The contoured magnetics show that the trend of the magnetic highs is generally offset downdip from the anomalous zone, (Figure 1).

A high located at 810N, 40E indicates a dip of approximately 75 degrees west of a shallow body, 30 to 40 meters below surface.

Induced Polarization

Induced polarization and resistivity survey was conducted over 4.8 kilometers of grid. A dipole-dipole array with a dipole spacing of 100 meters was used. Resistivity pseudosections show distinct resistivity contrasts between the resistive Pound Quartzite and the conductive Parachilna Formation.

Percentage Frequency Effect pseudosections indicate a strong I.P. effect between three and five times background on three of the six lines surveyed. These responses locate electrical conductors at approximately 810N, 50W, 620N, 50W, 450N, 150W (Enclosure 1).

The I.P. conductor is coincident with anomalous zinc quochemistry.

PETROLOGY

Three surface samples were submitted to A.W.G. Whittle for mineralogic examination. Details are appended to this report. One specimen was submitted to I. Pontifex for identification and this report is also appended.

DRILLING

Two holes were drilled on the Comstock Prospect within E.L. 273, for a total of 505 meters. The contractor employed was Longyear Australia Pty. Limited using a Longyear 38 wireline rig. Both holes were angle holes, BSA-77-1 being at minus 60 degrees and BSA-77-2 at minus 80 degrees. Core recovery on the first hole was quite good, however, on the second hole it was extremely poor being as low as 10% over some sections.

The manganiferous and ferruginous sections of each hole were split and the half core bulked and analysed in either 30 centimeter or 100 centimeter lengths. All samples were crushed, pulverized and analyzed for copper, lead, zinc, silver and magnanese by A.C.S. Laboratories, Adelaide. Results from these analyses are included in the drill logs enclosed. A detailed description of each hole follows,

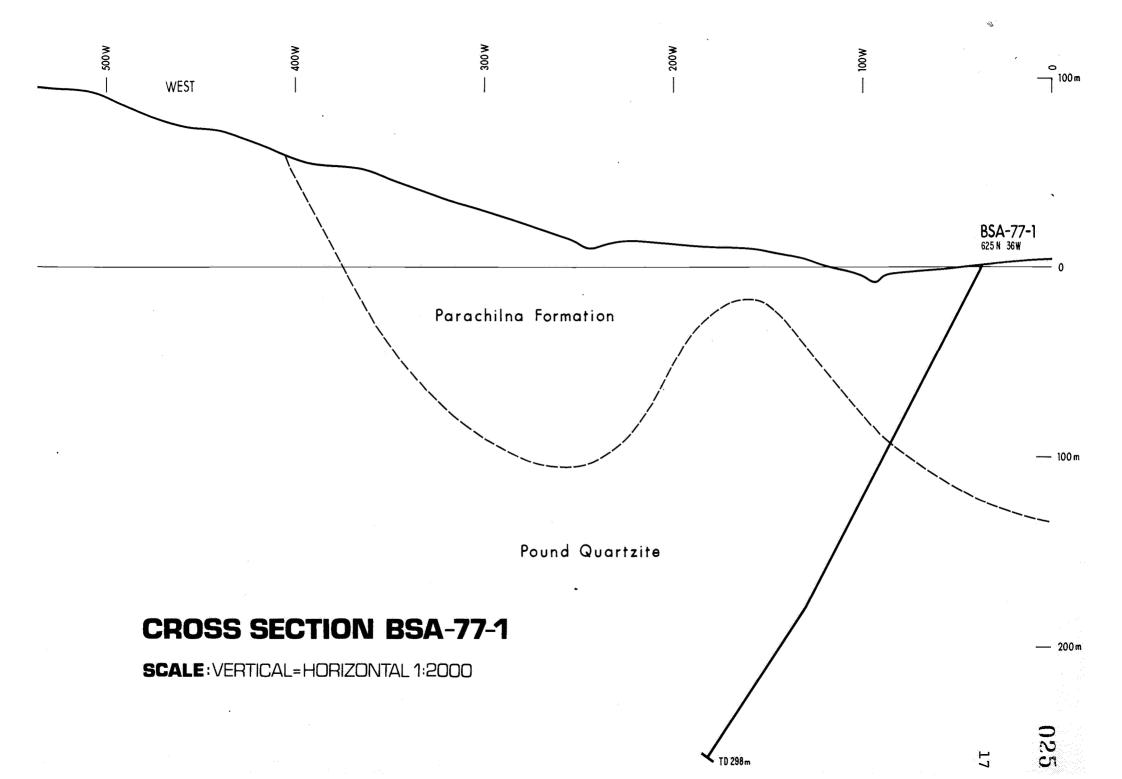
Grid Location: 625N, 36W. Declination: 60° heading grid west. Total Depth: 298 meters

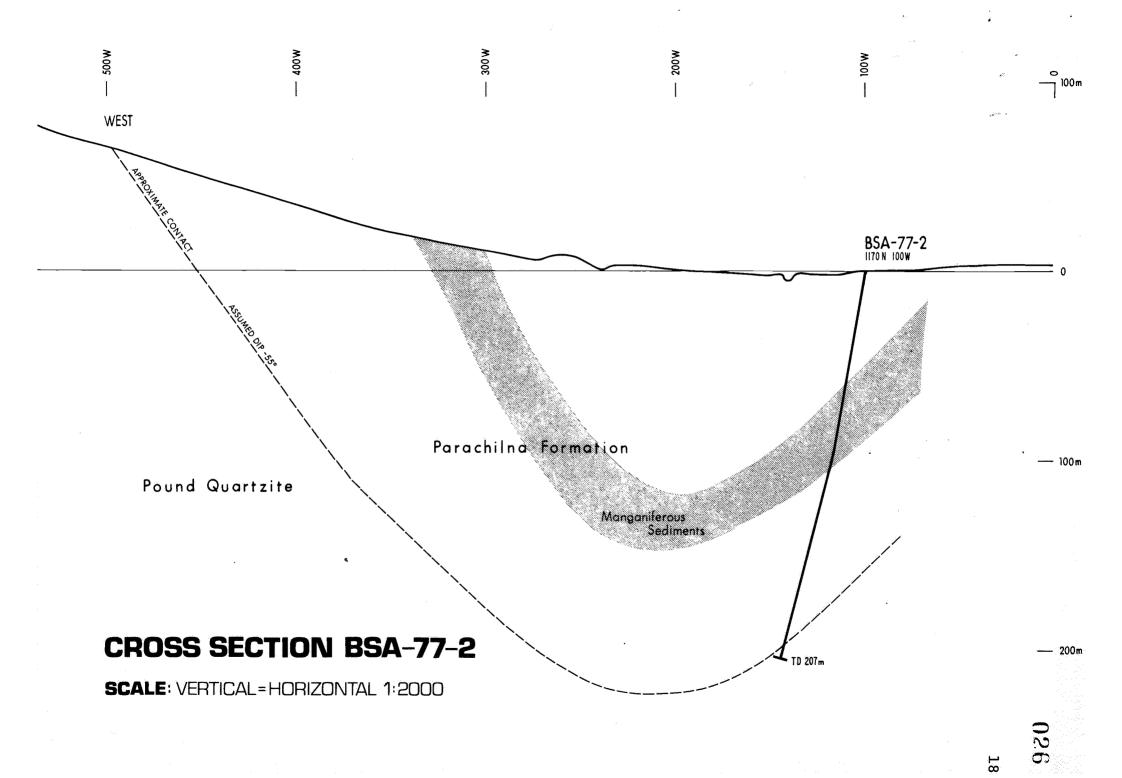
This hole was collared in an ironstone capping and diamond coring commenced immediately. The capping contained significant zinc values but no evidence of sulphides was noted. After passing through the ironstone, heavily weathered shales and siltstones were encountered to nearly 90 meters. At approximately 100 meters a quartzitic horizon was intersected. Surface evaluation showed this was apparently a thin bed and drilling proceeded. The hole, however, was terminated in the quartzite and it is suspected that this represents a refold of the Pound Quartzite. The hole failed to intersect the anomalous zone. The explanation of drill results are illustrated in the section for hole BSA-77-1. No evidence of sulphide mineralization was noted in the hole.

Hole No. BSA-77-2

Grid Location: 1170N, 100W. Declination: 80° heading grid west. Total Depth: 207 meters.

This hole was collared on an alluvial flat and tricone drilling was used to 58 meters. Minor near surface core drilling was necessary to penetrate abundant large quartzite boulders in the overburden. Coring commenced in a manganiferous sediment which again contained significant zinc values (up to 1%). A narrow carbonate horizon intersected at approximately 140 meters also contains 1% zinc values. However, no sulphides were noted in the hole, although it should be noted that core recovery was extremely poor. Oxidation was much deeper in this hole (approximately 150 meters vertically).





The information contained in this report was compiled and collated by John Johnson.

FOR JOHN JOHNSON

AMOCO MINERALS AUSTRALIA COMPANY

TOTAL EXPENDITURE TO MAY 31, 1977

EXPLORATION LICENCE NUMBER 273

Salaries	5,806.28
Supplies Office	1,208.35
Cookery	1,778.57
Field Office Rent	88.00
Field Supplies	1,109.15
Freight	351.36
Travel	2,287.92
Communications	31.80
Geophysics	1,433.00
Drilling	31,076.11
Other Contractors	255.73
Assays	1,058.80
Equipment Rental	2,525.76
Equipment Operation & Maintenance	816.80
Property Acquisition	8.00?
Overhead	15,551.24
	was and a second

65,386.87

T.J. CONQUEST

Accountant

APPENDICES TO FINAL REPORT EL. 273, SOUTH AUSTRALIA

INCLUDES

GEOCHEMICAL ASSAY RESULTS
MINERALOGICAL REPORTS
GROUND MAGNETICS DATA SHEET
INDUCED POLARIZATION SURVEY
DRILL LOGS

GEOCHEMICAL ASSAY RESULTS

GEOCHEMICAL AND MINERALOGICAL

LABORATORIES (WA) PTY. LTD.

21 WYNYARD STREET, BELMONY, PERTH, W.A. 6104

Registered Laboratory Number 847



Phone:

65 4322 (3 Lines)

Telex: 92418

Cables: Geochem Perth

Your Ret. 7381	Our Ref. P14032
Date In 20.12.76	Date Out 5.1.77
Client ANGCO MINERALS AT	USTRALIA CO.

REPORT

Samples Identification

As per sheets.

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Geochemical Analysis by Atomic Absorption Spectrophotometry. Sample attach by methods giving highest extraction within cost-limitations. Conditions carefully controlled to give high precision. Suitable for levels up to 1%.

Sorting

Sorting Analysis. As above but technique extended to operate in percentage range. Generally suitable for levels up to 15%

Geochemical Analysis by Colorimetry. Used for elements which cannot be determined by AAS due to poor \$\tilde{\text{CANA}} \text{Constitution} = Sample attack by methods giving highest extraction within cost limitations. Generally suitable for levels up to 1000 ppm. Above 1000 ppm AAS can usually be used.

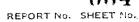
PRECISION is determined with standards similar in composition to the samples. The value given is $\frac{1}{2}$ two standard deviations. This means that if the analysis is repeated sixteen times, on average only one result will differ from the mean by more than the value given. Results are usually rounded to the nearest 0.5 standard deviation.



This loboratory is registered by the National Association of Testing Authorities, Australia.

These results comprising [32] pages, have been obtained in accordance with the Association's terms of registration.

NATA SIGNATORY



Typist:P.Cardoso

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ts in parts per million unless otherwise stated.	



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All results in parts per million unless otherwise stated.



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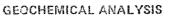


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	207	82	100	660	2950
	&GN	104	120	530	2100
ROMERO NOBELANGUA (SONO) SEBENCE (SONO)		100 100 anni anni anni anni anni anni anni an		COO	4000
INTERN STANDA					
	367	73	190	470	5200
	1003	86	74	357)	1760
	1201	110	60	290	1450
	1407	50	104	130	540
E. M. SAN VINSTAN AND STANSON SECTION	1.603		92		1100
	1063	150	250	720	4100
	2007	\$4	140	390	1400
	2207	96	150	410	1600
	2453	74	90	210	400
фійстор, 90 містаўліка септаў га с	TOTAL SE	TO	The state of the s	253 man sugar minimum munimum mananan mananan m	430
	19 19 19 19 19 19 19 19 19 19 19 19 19 1	13	80	42	260
	3. Car	16	56	40	180
5307	3353	16	60	23	130
5703	(¢	72		1400	N 17.
5700	15 11-12 6-2-12	Sign of Sign o	74.	CAS	9309

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SYDNEY - DARWIN - KALGOORLIE - PERTH

GEOCHEMICAL ANALYSIS

All results in parts per million unless otherwise stated.



	•	•			
Analyst	Sn	EC	83	EC	
Sample No.	Cts	273	FF or a substitute of the subs		······································
570N 40G	70	70	700	9500	
602	44	66	400	2700	
80%	42	72	170	1500	
100%	120	260	680	2650	
1202 W	90	2.70 	SSO	2500	miningenius,
1402	90	170	300	2450	
1603	100	180	310	1250	
1803	140	170	250	400	
2008	64	140	110	220	
	Star Star Gen Star Gen Star Star Star Star Star Star Star Star	era demantificiale habiteria este accada a la construir esta esta esta esta esta esta esta esta	le Q	170	e le Grandle i desc
INTERNAL STANDARD					
2403	. 16	116	23	70	
2603	18	29	40	290	
2603	13	28	36	230	
2002	20	26	40	300	
201 *	76	114	720	A 1%	ang special state of the speci
&(%)	86	85	470	3900	· · · · · · · · · · · · · · · · · · ·
GUN	130	100 .	840	5000	
800	84	94	800	4900	
1001	52	150	260	1250	
7203	1.05	1.50	340	6500	AND THE R. P. LEWIS CO. P. L.
1407	346	65	370	6500	
160%	250	50	5 00	9000	
L ect	220	3.3	550	7500	
202	250	113	520	2700	
59774 2273 #	220		419	4200	



SYDNEY - DARWIN - KALGOORLIE - PERTH

GEOCHEMICAL ANALYSIS

All results in parts per million unless otherwise stated.



214032/7

Analyst	Sn		2N	BC	
Sample No.	Ca		in	Pha	Registracy and region would not be proposed as the second of the second
570n 24Cii	74	360	450	2400	
2684	60	450	360	290	· · · · · · · · · · · · · · · · · · ·
2051	150	490	160	420	
3007	58	280	150	330	
33/33	4,6	250	210	290	managaines es escriber es es en
3407	36	100	180	280	
360%	18	1650	48	260	· ·
	18	50	48	250	
570n 40Ca	18	46	46	190	·
<u> </u>		Manufactura (September 20. Asserts Asserts) has been been selected to the sele	CAS	CCOO	Halifornia Elizabet in ha popula el helente en n
INTERNAL STANDARD					
9,4303 6,7403	38	74	266	2300	angungania an e en non menang menang di energe
6 G3	36	42	92	650	
100%	2.8		64	600	
1402	24	26	50	320	
1803	30	60	70	250	eadar marpovansky wydoniesky d
2233	48	100	66	190	
2603	16	40 .	34	130	
2073	10	20	38	220	
777	52	<u>00</u>	700	7500	
na demonstrativa en constitutiva della constitutiva della constitutiva della constitutiva della constitutiva d	206	and the second control of the second control		2003 anuju, anuangangan irah sarapan makanga anu rapa urapa naka	annaner a enconnectedor com
\$ 17 Ab \$ 2.800 mg	170	85	330	1950	en rijaan sersema delkale da de elkales was
140)	97 kg 178 6000 kg	3.95	330	1900	rappagagagagagagagagagagagagagagagagagag
105J	210		350	6630	
oge story	23.0	<u> </u>	020	6000	dere della seguina di competenti di competenti di competenti di competenti di competenti di competenti di comp
6 900 2300	3/5/3	3.575	(40	>37%	



SYDNEY - DARWIN - KALGOORLIE - PERTH

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All results in parts per million unless otherwise stated.



4	/ GEOMINA	Air resurts in pa	a to per minion unless oth	GLANISE STOCKOL		
	Analyst	ेड 24 देव 24	XG.	SN	EC	
Sa:	mple Na.	Ca	por sur la company de la compa	Zn		and the same has constructed and the same same same same same same same sam
630N	3000	. 68	94	240	500	
	3403	14	140	26	260	
63 08	18660	. 20	140	36	223	
690N	60	36	48 +	290	3900	
	And Significant Commencer	US	£6	210	950	terinar englishay werings spak
	403	58	140	37 0	2100	
	602	, PS)	106	400	1450	alliano, o provinces constituinamento saterante.
	803	74	94	430	1650	oler mangener ya . Allessa (antalonesia
	1003	72	74,	410	650	and the second s
en meddette operatorizaten byke		36.	EO	230	550	Ri strantius and " Asja aans
INTER STARC		- Spinistell symbologischem und die 1984 voorbijnen und de 1984 voorbijnen de 1984 voorbijnen de 1984 voorbijnen voorbijn				
	A STATE OF THE STA	60	68	140	340	ognasana a če na contrânje rednancje ce
	160%	64	69	160	240	
	100	26	42	60	250	
	2002	26	46	70	250	approximate which the second
	22303 - 8	22.	54	66	200	entertant experimental entertan
***************************************	2403	16		40	260	
	25052	34	24	36	210	
	2363	16	28	38	200	
	2003	18	26	30	240	
and a state of the	The state of the s	S6		450	6003	elikk siir liighte dan de terr dessenster vo
	Literatura de la companya del companya de la companya del companya de la companya	34	33	1,4	290	
	(6)	28	30		350	
	COL		259	300	23.00	are, distribution and a self-secretor spring
	M. The first sign of the state	ana panakan panakan panakan di Sama (Sama Sama).	90 S	329	2630	managa an equip - a
F + 75.5 +	the state of the s	J# 614 J#1	# : #	and the fire	4, 98 11 14	



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GEOCHEMICAL ANALYSIS

All results in parts per million unless otherwise stated.



ρ	Analyst	SM	EC	SW	EC	
Sar	mple No.	Cu	23	Zn	Mn	
69011	\$ 1.503 & 4.503	160	<i>84</i>	350	1550	
	1667	290	103	480	3900	
	lsow	180	170	350	850	
	2001	30	170	42	140	
nit. 15. oktobel 150 biokoben 15	2, bu 53 annual transformation and transformation a	34	220	55 	190	alaye sera dan dan jeli selang an ne
	2401	28	380	56	190	
-	2600	30	350	62	170	-
•	2307	20	330	46	120	
	3807	18	160	36	150	······································
and the state of t	and the second s	35 in presente consissament and a series of the series of	Ps () complementarizan en complementario de la comp	enconcentration transfer of the conference of th	. A CO CO CONTRACTOR OF THE CO	ezonisko iz kalonosko nizakisko brez
INTER DIANG		aparting at high sub-substitution (sub-substitution) and a sub-substitution at the substitution at the sub		ingrava malangsam. I springsy og system er som 23 skolinging mensperatur s securit		
,	3401	## # Ellips "My Self Self Self Self Self Self Self Self	30	46	220	
	3600	86	98	170	1650	
	30/3	60	103	350	2850	· ·
ESCN	4008	65	60	350	5400	
750n		S. C.	S. S.	200	800	er open skale siele eine vereine (skale siele
and the second s	202	68	60	250	1550	
	603	68	70	320	1250	
•	60%	68	100	300	750	an againmeathachail indiang productive debugging and pro-
	To the second se	<u>l. (</u>		270	420	· / ***********************************
		enterententententententententententententente	S. F. J.	nic secondario inches con con con a con	nausiausus varan para eri karan br>Karan karan ka	- Al-Kill Million depth in the philosophy of the annience
·	2/03	62	90	420	699	s die philipidal des production of the control of t
	1.703	79	64	170	330	ومشبها مرجعتات والدودانية ساف
	Marie Carlos Signatures (1995)	46		92	170	
e entre con an analogo anno an anno anno an		***	60	y 12 mg	100	e a an atara para aran a de entre en se sud
ু জুৰি <i>চু</i> ঞ্	9200	ं े ्र	49	毛秀 .	7 006	



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All results in parts per million unless otherwise stated.



The state of the s		*			
Analyst	SN	3C .	~ 54 ~ 54	EC	
Sample No.				Mes	outer and state of the state of
750X 220Z	22	62	60	250	
2403	16	40 .	32	240	n - Marijaninga - Marijaninga - padamatra
2603	16	34	36	320	ententelectual esta alla alla alla alla alla alla alla a
2991	18	30	40	369	
3903 %	18	36	44	320	
203	105	94	570	1300	72 TA
403	72	78	500	4400	
6C i	54	90	200	1500	
8 <i>C</i> U	36	38	50	600	
1 1.6 000	44	5.9 2.9	\$ %	500	
INTERNAL STANDARD					
1267	72	120	300	3500	
1403	140	150	200	4800	
1 603	92	60	200	1700	
1909	170	62.	320	1250	
2007 *	100	73	359	1100	· and section and part of the second section in the second
22 C1	200	78	370	1150	
2407	220	90	350	950	
2603	230	94	390	1050	
2200	430	120	900	2000	
2003	500	200	1500	2450	
3203	359	20%	880	1500	
\$4(3)	1.7.2 2.7.2	260	200	470	
360	Ç.A.	239	230	350	
25.00	62			240	
7.77% Bb.77 3	54	201	110	193	
	na namangapanjanganganga nya njekiti 181915 najirit dibanga pamananjaman ni n	and was represented the second property of the contract of the	ment in a 1.000 recomment of their filtrature states and an increase and		



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GEOCHEMICAL ANALYSIS

All results in parts per million unless otherwise stated.



· A crown	All results in par	ts per million unless othe	SLANISE PEGERO"		
Analyst	811	ZC	SN	EC	
Sample No.		PS	200	<i>Vi</i> n	
370N 20E	64	56	350	1250	-
4.OE	72	5/4	260	2150	
608	56	52.	250	3700	
803	72	78	360	1500	
1008	46	eng jag La	230	750	
1207	58	50	150	380	-
140%	56	50	140	310	
1603	60	60	140	320	***************************************
1007	4,0	1.4	83	200	
en en esta de la companya de la comp La companya de la co		Fig. Fig. Fig.	E S	TO TO	dijan zakrronija
INTERMAL STANDARD					
2802	34	120	68	200	·
2453	99 2.5.	34	52	200	
2502	16	34	30	130	-
2503	16	30	32	160	
Section (Company)	23	20	42	300	and the second beautiful to
201	83	60	340	1650	
4.073	74	62	330	1650	
65	73	204	250	2350	
SIN			240	2150	
		er Androppin suke er vittade in en opsig er en opsig er er engelen en prome i verkenbenen.	235	2750	n.e. Naponhiwa yapa
1277	7 la	<u> </u>	350	2100	-
1463		90	68	430	
160:	34	30	59	220	
45.27		3.5	66	320	
	22	30	33	240	
	The second secon				



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	Walter War and Market			•	¥	
	Analyst	SM	EG	SN	Sala.	
Sa	ample No.	C11	Pio	211		. co-hadistra sussessiones considerates
8707	1969 604	24	32	66	150	
	24.03	130	80	200	440	أران المراجع المراجع المراجعة المراجعة
	2604	160	118	320	1500	, to
	2864	210	3.50	400	1700	
	3000 W	223	118	540	1750	
•	32 07	170	130	490	1300	
	3404	104	240	220	403	
	3607	50	83	70	190	
	3807	50	96	62	200	
670X	4001 on one to a new grann acceptance a colonia conservativa e new colonia colonia colonia colonia colonia colonia c	The second secon		62	223	
	RAL					
9504	1) of the 6 \$9 % a	1.0	22	34	130	
	603	2. E.	28	36	120	
	xoor	59	114	430	2200	
	1400	68	190	630	2100	
THE TRACE WINDOWS AND		9 6	68	300	240	indicipal dans of the second natural section as
· ·	2203	20	40	4.6	350	
	2.602	4 %.	32	26	120	
	201	24	36	62	330	
and the second s	60.1	20	94	250	<u> </u>	
or constant the constant of the	The state of the s	100	Section 1 and the second section of the section of		959	Military - part weeks depleted from
		123	110	220	1000	
	\$300T	60	44	93	1000	
denne des nymestes banque	22.73	18. 18.	44	92	450	entrique sa sorri — timonativo
	2		\$2	- 33	2.0	
on the state of th		\$ B	32	65	569	
		The state of the s			The same and the s	

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All results in parts per million unless otherwise stated.



	The state of the s					
	Analyst	SN	EC	SN	EC	
	Sample No.	Cu		ZS2		nkažanskom potru pokretik pri zadopným por nakonom kryvi i r nako
	990n 3407	50	38	70	500	
	990N 38 <i>CH</i>	20	32	38	200	
810 N	720n 20s	62	50	240	900	
•	60%	90	56	290	650	
:	100%	146	74	880	1250	
	. 1402	64	4 T. C.	340	1000	er grand and the second se
	1663	48	70	140	300	
	2208	24	100	44	100	
•	2602	14	70	28	120	
	3000 *	24	- 6	5 5	120	
	INTERNAL STANDARD					
	200	220	160	9.00	1100	
	600	50	86	240	1150	
	1007	92	110	240	2500	
	1463	86	50	180	1030	
	1007	35	30	50	200	•
	2200	20	34	32	270	-
	26জ	140	250	. 180	400	
	3 607	150	250	150	370	
	2407	250	200	1200	2309	
NO18	F999 3307 *	140	233	430	590	
	påre dikkanser mykerskildt til Sillektimoniere skund dagerine stat, bærskende av stelen men entre strikere ess	anyakan ke telengi daki da historia (keminganyak meninganyak kengalak daki berapa da mangan daki berapa da man	ng palam na bandhalan katalan kananan ang arabin, da dan ang ang arabin dan da manan pinakan ang ang ang ang a	на чуванный нутой народу, навымення не 1900, чтання выподнування от на 1907 год.	маран эту на распорина филосопия формация на постоящих тосу об 15°0 гуду и поставарання на отна	and an artist print the contract of the contra
		and the second s		فالمنافظة المقادلة ا		
	The second section of the second section of the second section of the second section of the second section sec	erenne se un servici accessor (e.) <u>accessor de proportion</u> la res ervicio de la servicio de la conse ssión de la consessión		eren ener a la caracteria e como en		

GEOCHEMICAL AND MINERALOGICAL

LABORATORIES (WA) PRY. LTD.

21 WYNYARD STREET, BELMONT, PERTH, W.A. 6104

Registered Laboratory Number 847



Pho

Phone: Telex: Caples: 65 4322 (3 Lines)

92418

Geochem Perth

Your 17 7371.	Our Ref. P14032
Oate In 20.02.76	Date Out 5.1.77
Client	· ·
MIROCO ERVERALS AC	EGTEALIA CO.

Samples Identification

As per sheets.

AMALYTICAL AEPORT

REMARKS

All samples have been checked.

ANALYTICAL TECHNIQUE	ELEMENTS	PRECISION	AT LEVEL	LIMIT OF DETECTION
AAS (8010 _A)	Cu Pb Xn	10%	300ppm	2
Col/Rol0 ₄	Å3	30%	50gpm	2.
Col/Fuction	Sa	30%	30рры	20
AAS (Aque Rogie)	As	20%	2ppm	0.2
	Ma	10%	1000ppm	2
Col/Fusion	Sb	2.0%	160 _{PF} m	2
LG 5	Au	20%	1.Cppm	0.05

AAS

Geochemical Analysis by Atomic Absorption Spectrophotometry. Sample attack by methods giving highest extraction within cost-limitations. Conditions carefully controlled to give high precision. Suitable for levels up to 1%.

Sorting

Sorting Analysis. As above but technique extended to operate in percentage range. Generally suitable for levels up to 15%.

Geochemical Analysis by Colorimetry. Used for elements which cannot be determined by AAS due to poor start of the sensitivity — Sample attack by methods giving highest extraction within cost limitations. Generally suitable for levels up to 1000 ppm. Above 1000 ppm AAS can usually be used.

PRECISION is determined with standards similar in composition to the samples. The value given is \pm two standard deviations. This means that if the analysis is repeated stateen times, on average only one result will differ from the mean by nore than the value given, Results are usually rounded to the nearest 0.5 standard deviation.



This laboratory is registered by the National Association of Testing Authorities, Australia.

These results, comprising 2 peges, have been obtained to accordance with the Association's terms of registration.

TOYOUR

GR OPAIN

GEOMIN LABORATORIES

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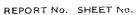
GEOCHEMICAL ANALYSIS

All results in parts per million unless otherwise stated.



Typist:P.Cardozo P16032/1

	An ittaures in part				
Analyst	CF	EC	C?	HD	D.
Sample No.	Cu	Pb	Zn	As	S
14366	190	98	1600	12	Z.
67	230	100	1800	127	ж
68	3.10	200	2500	25	2.
69 ,	950	170	2500	13	×
79	520	290	20 00	21	33
7 p	200	70	820	61.	in amazani wa wa wa
72	210	70	940	200	x
73	530	230	780	210	×
74	290	72	1400	20	х
			7		
14375 INTERNAL STANDERD	850		3300	6	*
1817 E. 12 (174 F)	250	23	3300	6	*
1817 E. 12 (174 F)	850	23	3300	6	*
1817 E. 18 C. V. K.	850		3300	5	*
1817 E. 18 C. V. K.	850	23		6	×
1817 E. 18 C. V. K.			3300	5	X A CONTRACTOR OF THE CONTRACT
1817 E. 18 C. V. K.	850			6	*
1917 E. 18 E. I.A. K.		23			X Y
	250				
ISTERION					
ISTERION		23			





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GEOCHEMICAL ANALYSIS

All results in parts per million unless otherwise stated.



P14032/1A

Analyst	CP.	CP	SN	EC	
Sample No.	Δg		Sb	Au	HII AII DII NO VIII CONTRACTORIA NO
14500	2.8	2200	600	*	
67	3.8	1100	600	×	
63 .	3.8	>1%	240	33	
· 69	5.4	>1%	200	x	
25	2.5	>1%	400	35	
73	2.2	1200	200	K	
ing sign E Cou	3.6	650	460	ĸ	
73	15	>1%	400	x	-
76	1.6	>1%	1.20	26	
	3.3	>2%	2/40	Z	
enterminantificacijas pero na 100. je o minima kinoj na programani kinojnog kajo pastoj nastoj kajo	upper deput de artificación de - sep inconseguences destigas incospersos destinho minimo i to se minimo de art			and a second	
STE NOS ESSE Monte terrente en el en en en en en en el el entre en	ter alla, kantani, sisa mujutta kitota talagi anternaman arlamba menarkin mana			and the state of t	and the second s
and the state of t	agus august is at shadannag - agu manangasannag ant igan manganan a balanan malaya. Is sa saman agus		errent fan de steel		A commence of the contract of
e againtean guirren digna - marin es aren arine arine arine au grecorren per a arine agua an agua an ann an ai - 2	oogisiakka sageministoriamistoriamistoriamistoriamistoriamistoriamistoria filministoriamistoriamistoriamistori	and the second s			
			aren manarar yang ang atau menangan ang atau ang atau ang atau ang atau ang atau atau atau atau atau atau atau	, <u></u>	
мания на принципання до построи в под под него на принципання на принципання на принципання на принципання на п На принципання на пр		ermenye udani di ina qorahar niser ya ingi rarar araba yaya analasin haka ingi di analasin ka da ka a fanan an	er tillingstatterskytti sede en dynastition y dit variettis yr Ambritaskynsket (Maare (Maare (Ma	almos (* - e Toro (* Ambres (* - Telp) link (* Ambrille) pill de glegale halde en rejrie (yales, mor	ndimmenyalar vilik mindendi i kadardik dadi dimelak pedi mindek pedi mindeka i kayan y -
anan kanan aya ayara arang arang arang arang ang arang a				and the second s	
		**************************************	ary Allenda'r all, cannada e e g'eir e e e e e e e e e e e e e e e e e e		
	·			na van komuni van valken kunn sien sien sien van kensel van de seen van de seen van de seen van de seen van me	- The state of the
	kannangan ang atawa kanangan malaman ang pambanan ang atawa ang atawa ang atawa ang atawa ang atawa ang atawa a			eniferana, dimensiona anno anno anno anno anno anno anno	
removember interestation to the security of the contraction of the security security security as a security we	anti frantzione manifestriale distinuti specifica sidulusi interiore distinuti e del estenzi soci	. Stylinik, Mutather, impilik gripular ingelikar interimentation integrals material make. Sudibining	erkeligte fordellistige Juliuseschaft dem wederliebenderholder eilbereite.	t er is commune van - man soc e manningscommen australisase essas de fron en	Production and Audit and the Section Committee of the Section (Section Committee of the Section
· · · · · · · · · · · · · · · · · · ·		n, ka na sanaka ara manaharan manaharan pampan pampan mang pambanan pambanan basab dalah kalaba sa	overelinininin seksing selalang dan belang d	hannyddyn P Marre (ngar si'n dddd Addd raid dad sinnaddydgygnangar, arbyn dd	y alamananana da salahan da salah
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ANALYTICAL RESULTS

05 A.C.S. Laboratories Pty. Ltd 50 MARY STHEE UNLEY, S.A. 506 P.O. BOX :

13 APR MUNDEY, S.A. 506 PHONE: 272 5733

Samples from: **moco Maierals (*ust) Coy.

Area: Quern.

Samples of: Comes.

Preparation: Crushed & rulverised.

Sheet No.: 1.

Batch No.: A S. A21. (Your O/N E. 4004) Date: 5.4.77.

SAMPLES WILL BE DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

	Sample Description	CurpM	Philip	ZnFFM	NaPrM	MnFaM		
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5 ,								

ANALYTICAL METHODS:

Cu, th, Za, Tq, Mn by the following HCl leach and HCl/HNO3 leach in latter styres of 0.254 sample.

DISTRIBUTION: *moco Minerals - With Sydney Signed

Cuorn.

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- constack

051

UNLEY, S.A. 506

P.O. BOX : UNLEY, S.A. 509 PHONE: 272 5733



Samples from: Amoco Minerals (Aust) Company.

Area: Quorn.

Samples of: Core & Rocks.

Preparation: Crushed & sulverised.

Batch No.: A S. 429

Sheet No.: 1.

Date: 13.4.77.

Samp	le Descripti	ion	CupPM	PPPPM	ZnPPM	*qPPM	MnPFM		
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ANALYTICAL METHODS:

Uu, rb, 2m, 5σ , Mn By AAS föllowing HCl leach and HCl/HNO3 leach in latter stages of 0.25 σ

s-mole.

DISTRIBUTION:

*moco Minerals (Mist) Coy, Signed Sydney, & (Mr. J. Johnson). This Laborato Authorities As

This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reportured except in tuil.

MINERALOGICAL REPORTS

A.W.G. Whittle and Associates

Ian R. Pontifex and Associates

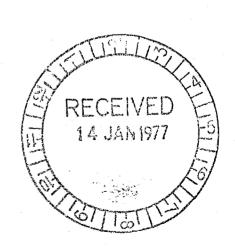
A.W.G. WHITTLE & ASSOCIATES. HINGRALOGICAL REPORT.

Report A1000 14/76.

SAMPLES 14368 - 370.

(Order W 7382)

P.G. Mattinson.



DISTRIBUTION:

Copies 1 & 2 - Perth.

January 12, 1977.

SAMPLES 14368 - 370.

The report provides from one thin and three polished sections, descriptions, classifications and interpretations of the origin of the metal contents in rock outcrop samples which were submitted by Mr. P.G. Mattinson.

Analyses by A.C.S. Laboratories Pty. Ltd are appended.

The preparation of a thin section which would yield useful results was possibly only from 14369. However, all three samples were examined comparatively from polished sections.

The thin section of 14369 indicates that these are lithic tuffaceous siltstones and sandstones. The bedding is an expression of size classification within the sediment, hence there are finer and coarser siltstone lamellae which are interspersed with others containing sand-grade size lithic fragments. The latter include fragments of quartzite, and of silicified acid volcanic rock.

The entire matrix component amongst the clastic quartz and rock fragments has been completely impregnated by goethite; and by more or less manganese oxides, both of which are exotic supergene additions to the sediments. The selected bedding plane-oriented zones in which manganese oxides are dominant may be readily seen in the transverse cuts through the hand specimens.

The specific information available from the polished sections is as follows.

14368. Ferruginised-manganiferous tuffaceous-argillaceous aronite. Cu 940; Pb 280; Zn 2400; Ag 2; As 40; Sn 50; Sb < 30

The textural and structural characteristics are comparable with those of 14359. While large areas of the rock matrix consist of ferruginised clays, 3-4 mm thick bands of highly concentrated manganese oxides extend at wide intervals, for distances of several, cm through the rock. There is no boxwork; and there is no evidence

of fine sulphide inclusions in the clastic quartz grains. However, small leach voids in the volcanic rock fragments indicate that minor amounts of sulphides were contained by these.

14369. Ferruginised-manganiferous tuffaceous sulphide-bearing arenite. Cu 880; Pb 430; En 2000; Ag 5; As 60; Sn 100; Sb 430

There are more numerous fragments of altered volcanic rock in this sample; and furthermore, much of the coarser clastic quartz contains oxidised fine grained sulphides, as well as sparse persistent pyrite and sphalerite of a few microns size.

The rock matrix was selectively ferruginised and manganese-oxide-impregnated, as in the case of 14368; but within the matrix the secondary oxides outlined remnants of sulphide boxwork and leach voids of 0.1-0.2 mm size. The identities of these sulphides cannot be accertained from the remnants, but there appears to have been at least 10% clastic sulphide grains.

14370. Ferruginised-manganiferous tuffaceous-argillaceous arenite. Cu 650; Pb 590; Zn 2000; Ag 2; As 20; Sn 100; Sb < 30

This thinly bedded sequence of argillaceous siltstones and sandstones also contains scattered lithic fragments, as well as quartz grains with oxidised and sparse unaltered pyrite and chalcopyrite of a few microns size. It can be said to be somewhat tuffaceous.

There is an abundance of manganese oxides along some of the bedding planes. Those portions of the rock which display only ferruginisation are however cavernous because of the removal by leaching of stratiform sulphides. Since there is absolutely no residual boxwork, no comment in respect to the identities of these sulphides can be made.

CONCLUSION.

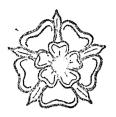
These rocks exhibit very little positive evidence in boxwork or fine sulphides, of more than minor amounts of the base metal sulphides. However, they contain proportions of the products of volcanic rocks; and they did contain small proportions of clastic pyrite.

It will be noted that the geochemical characteristics of all three rocks are similar. This is consistent with their being comparable facies, each with a significantly high proportion of exotic manganese oxides.

Although the rocks were in part leached, exotic manganese oxides have since accumulated in them. These oxides can be considered to have progressively adsorbed the base metals from the circulating groundwaters which deposited the manganese and iron oxides. The metals have surely accumulated in the near surface environment from the trace amounts which were present in these and in contiguous tuffaceous rocks. The samples supplied would not in themselves appear to have significant potential for base metal sulphides; for in depth below the manganiferous zones, it is unlikely that the geochemical values would be as high.

A.W.G. Whittle & Associates, Mineralogical Consultants.

January 12, 1977,



ADELAIDE

SYDNEY

A.C.S. Laboratories Pty. Ltd.

50 MARY STREET UNLEY, S.A. 5061 P.O. BOX 3 UNLEY, S.A. 5061 PHONE: 272 2412 TELEX: AA82623

ANALYTICAL RESULTS

Samples from:

Dr. A.W.G. Whittle & Assoc.

Area:

Samples of:

Rocks.

Preparation:

Crushed & pulverised.

Sheet No.: 1.

Batch No.: A

1869.

(Your O/N 327)

Date: 7.1.77.

SAMPLES WILL BE DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

	· Sample Description	Cuppm	Pbppm	Znppm	Agppm	Asppm	Snppm	Sbppm
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NALYTICAL METHODS:

Cu, Pb, Zn, Ag by AAS following HCl leach and HCl/HNO3 leach in latter stages of 0,25g sample

As by modified Gutzeit method. Sp.,

Emission Spectrography Scheme

Dr. A.W.G. Whittle & Assoc.

Signed..

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DISTRIBUTION:

Jan R. Pontifex & Associates Pty. Ltd.

TEL. 332 6744 A.H. 31 3816 26 KENSINGTON ROAD, ROSE PARK SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD SOUTH AUSTRALIA 5067

MINERALOGICAL REPORT NO. 2134

29th April, 1977

TO:

Mr. J. Johnson,

Amoco Minerals Australia Co.,

c/- L. Reay,

218 Tapleys Hill Road,

SEATON, S.A. 5023

YOUR REFERENCE:

Sample personally delivered

MATERIAL:

Rock sample

IDENTIFICATION:

No. 41

Project A-76-36

WORK REQUESTED:

Petrographic examination

SAMPLE & SECTIONS:

Retained

PONTIFEX & ASSOCIATES PTY. LTD.

Sample 41

Project A-76-36:

vaguely layered, (sandy) impure
magnesic-dolomite or magnesite,
clouded with fine carbonaceous material;
dislocated and recrystallised; trace
disseminated pyrite and rare
trace chalcopyrite

This is a massive microcrystalline, generally dark grey rock with a somewhat disrupted, fine wavy layering (and local laminations), and erratic discontinuous white stringers.

The main reason for this examination was to find why it seemed heavier than "normal". An S.G. determination indicated a value of 3.47.

In thin section it is seen to consist of essentially microcrystalline to cryptocrystalline carbonate. This carbonate is commonly clouded by, and the layering more or less delineated by ultra fine opaque dust, almost certainly of organic derivation, but not clearly crystalline (graphite).

Local poorly defined areas of quite coarsely crystalline carbonate are relatively clear. Accessory (3–5%) single, subrounded to subangular quartz grains, average size 0.3 mm are randomly scattered. The white stringers are recrystallised carbonate, with some central drusy cavities.

Sample 41 contd. :

Petrology alone cannot confirm the carbonate species, but considered together with the S.G., acid reaction and alizarin red staining, essentially the whole of the rock appears to consist of impure magnesic-dolomite or magnesite.

In a rough polished section, accessory (1%), extremely fine (2–10 micron), grains of pyrite and lesser chalcopyrite were seen randomly dispersed through darker coloured domains in the rock.

Jan R. Pontifex & Associates Pty. Ltd.

TEL. 332 6744 A.H. 31 3816

26 KENSINGTON ROAD, ROSE PARK SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD **SOUTH AUSTRALIA 5067**

MEMORANDUM TO:

Mr. J. Johnson,

Amoco Minerals Australia Co.,

c/- L. Reay, 218 Tapleys Hill Road,

SEATON, S.A. 5023

MEMORANDUM FROM:

I. R. Pontifex

SUBJECT:

Chemical analysis sample No. 41

(Project A-76-36)

DATE:

11th May, 1977

Following our recent phone conversation I herein confirm, on paper, the chemical assay analysis for sample no. 41, previously described in my Report No. 2134, dated 29/4/77. The results reported by A.C.S. Laboratories are:-

Cu	<0.01%	(15 ppm)
РЬ	<0.01%	(190ppm)
Zn	1.22%	
Fe	26.0%	
Мп	16.0%	

In the light of these results I would suggest that the carbonate which forms the great majority of this sample, and previously identified as impure magnesic-dolomite or magnesite, is in fact a more complex carbonate, involving substitution of Ca and Mg by Fe, Mn and probably Zn.

.../2

Jan R. Pontifex & Associates Pty. Ltd.

TEL. 332 6744 A.H. 31 3816

26 KENSINGTON ROAD, ROSE PARK SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD **SOUTH AUSTRALIA 5067**

MEMORANDUM . TO:

Mr. J. Johnson,

Amoco Minerals Australia Co..

c/- L. Reay, 218 Tapleys Hill Road,

SEATON, S.A. 5023

MEMORANDUM FROM:

T. R. Pontifex

SUBJECT:

Chemical analysis sample No. 41

(Project A-76-36)

DATE:

11th May, 1977

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.../2

Memorandum to J.Johnson

Re-assessment of the thin section indicates that much of the "opaque dust" referred to in Report 2134 is probably manganese oxide. Certainly the clear crystalline carbonate appears to be predominantly "dolomitic", however some faintly brownish layers may approach a siderite composition.

To positively establish the mode of occurrence of the Zn, and the identity of the carbonate species, it is suggested that several more representative samples are examined in thin and polished section in conjunction with selected chemical analysis.

IAN R. PONTIFEX

Memorandum to J. Johnson

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IAN R. PONTIFEX

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GRID WARTS

Amow Mininals Australia Company 1977

29587

Scale 1:25...

INDUCED POLARIZATION SURVEY

Solo Geophysics and Company

TELEPHONE 54 66

22 AVENUE ROAD PROSPECT SOUTH AUSTRALIA 5082

29th December, 1976.

Mr. Bryce Roxbrough, Amoco Minerals Aust. Co., P.O. Box 949, NORTH SYDNEY, N.S.W. 2060.

Dear Bryce,

Enclosed are four copies of data obtained on the Induced Polarization survey at the Buckaringa Prospect near Quorn in South Australia during period December 14th to 18th.

lines:	1155N	100 met	re dipole	dipole	from	4E	to	4W
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One copy of each of above lines has also been forwarded to Phil Matinson in Perth. Owing to the timing of the survey the Christmas period delayed processing of the data.

Thank you for the opportunity to assist your exploration programme.

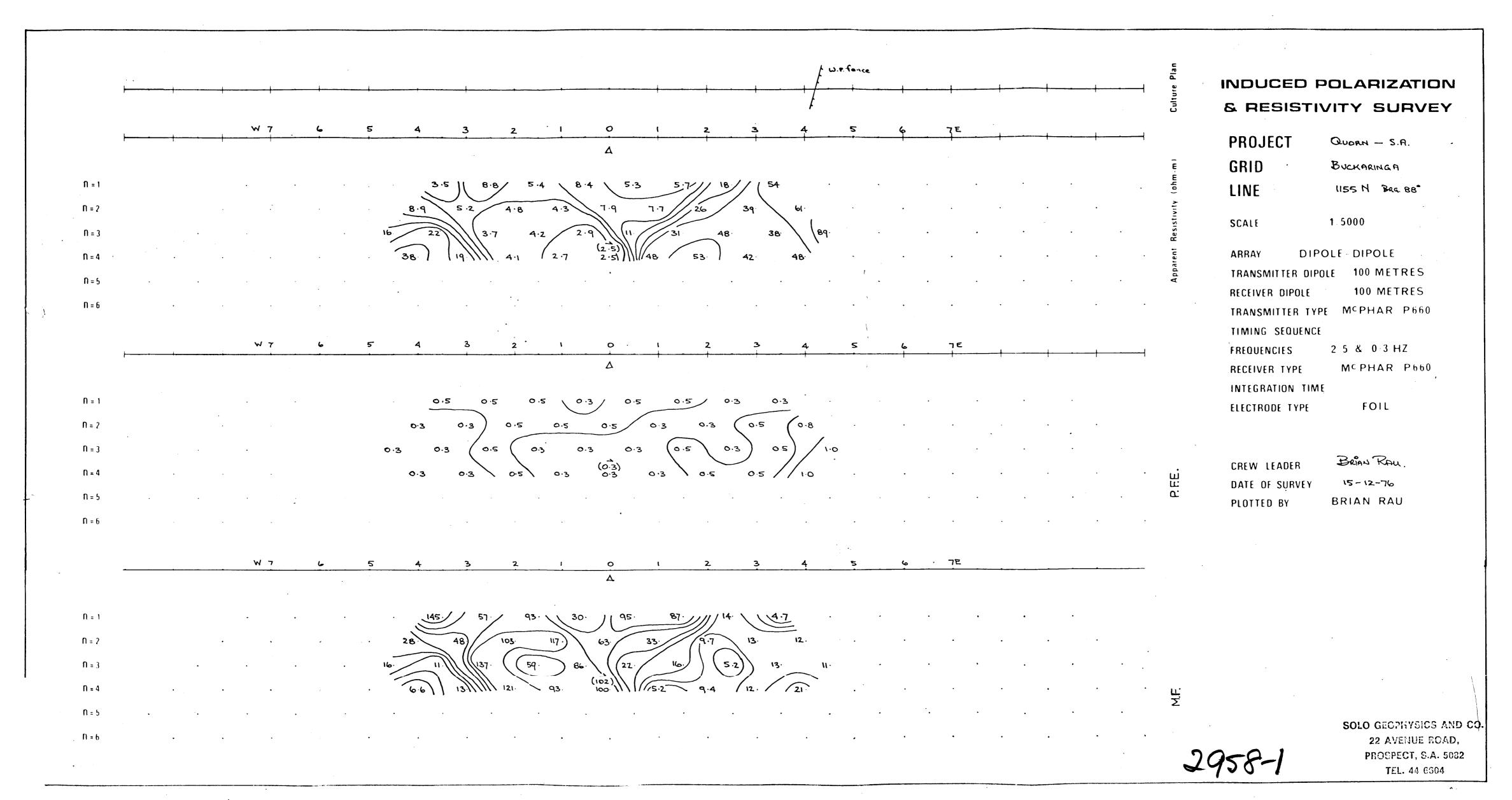
Yours sincerely,

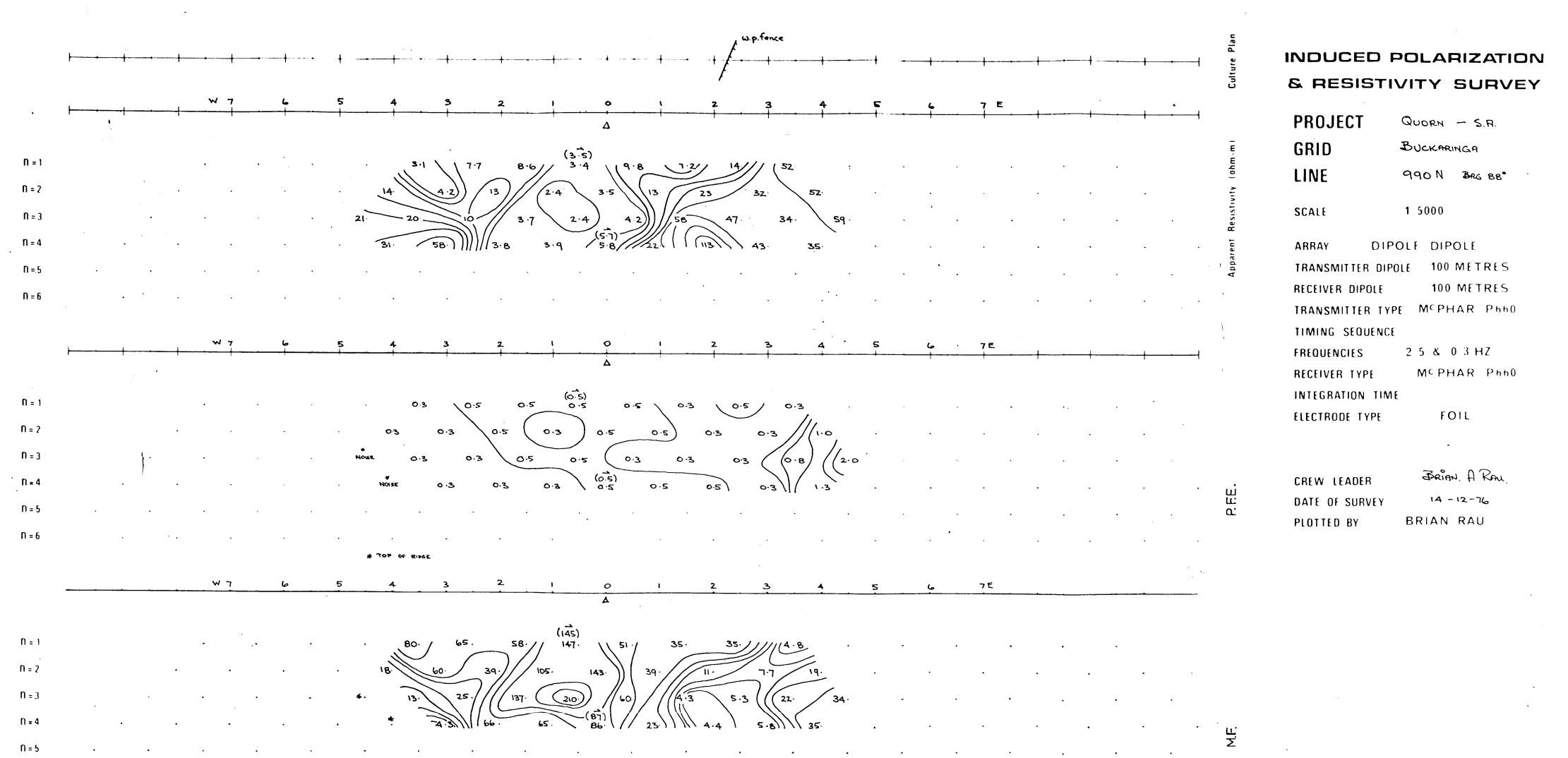
B. A. RAU

copies: B. Roxbrough, Sydney 4

P. Matinson, Perth 1

file 1

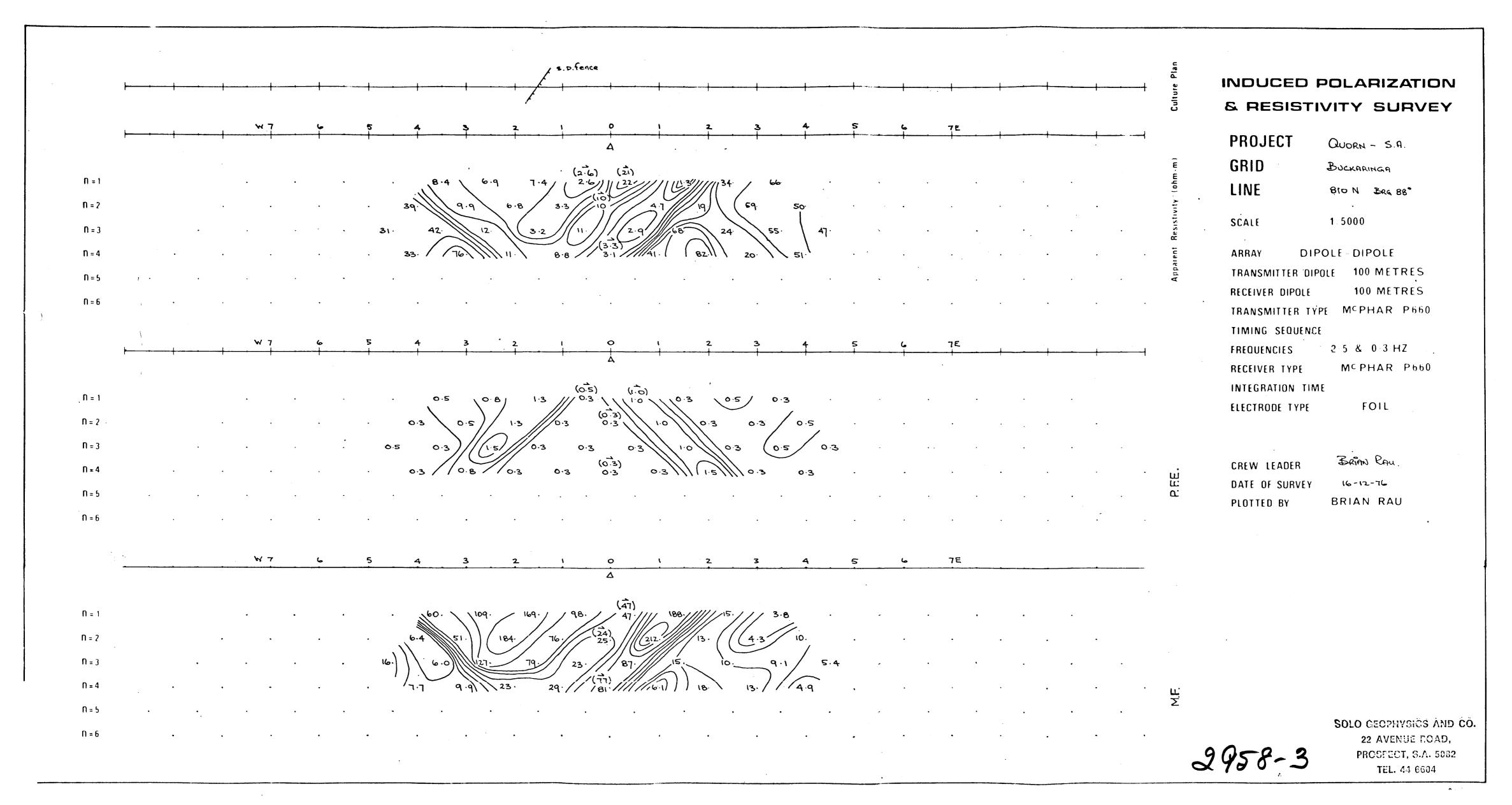


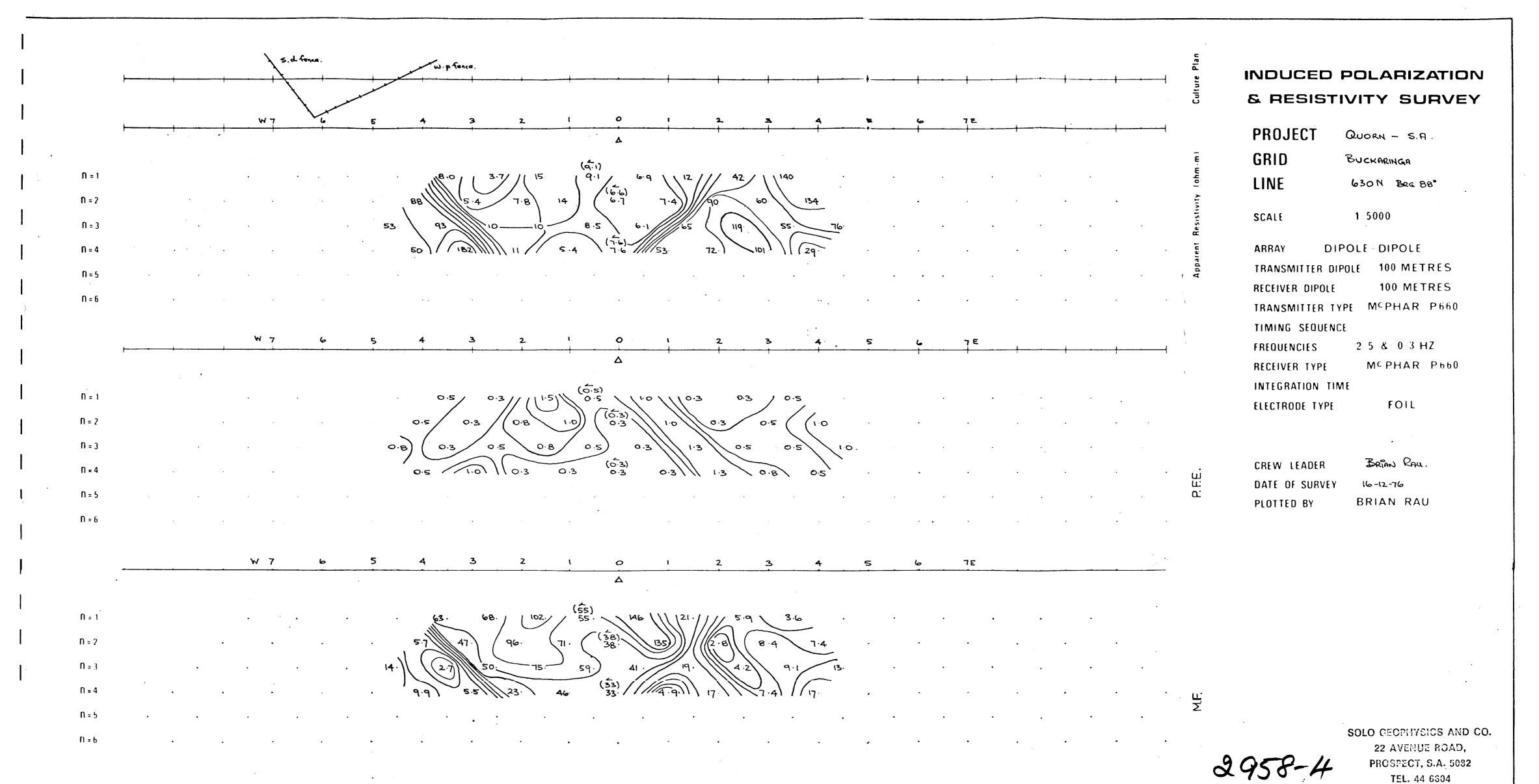


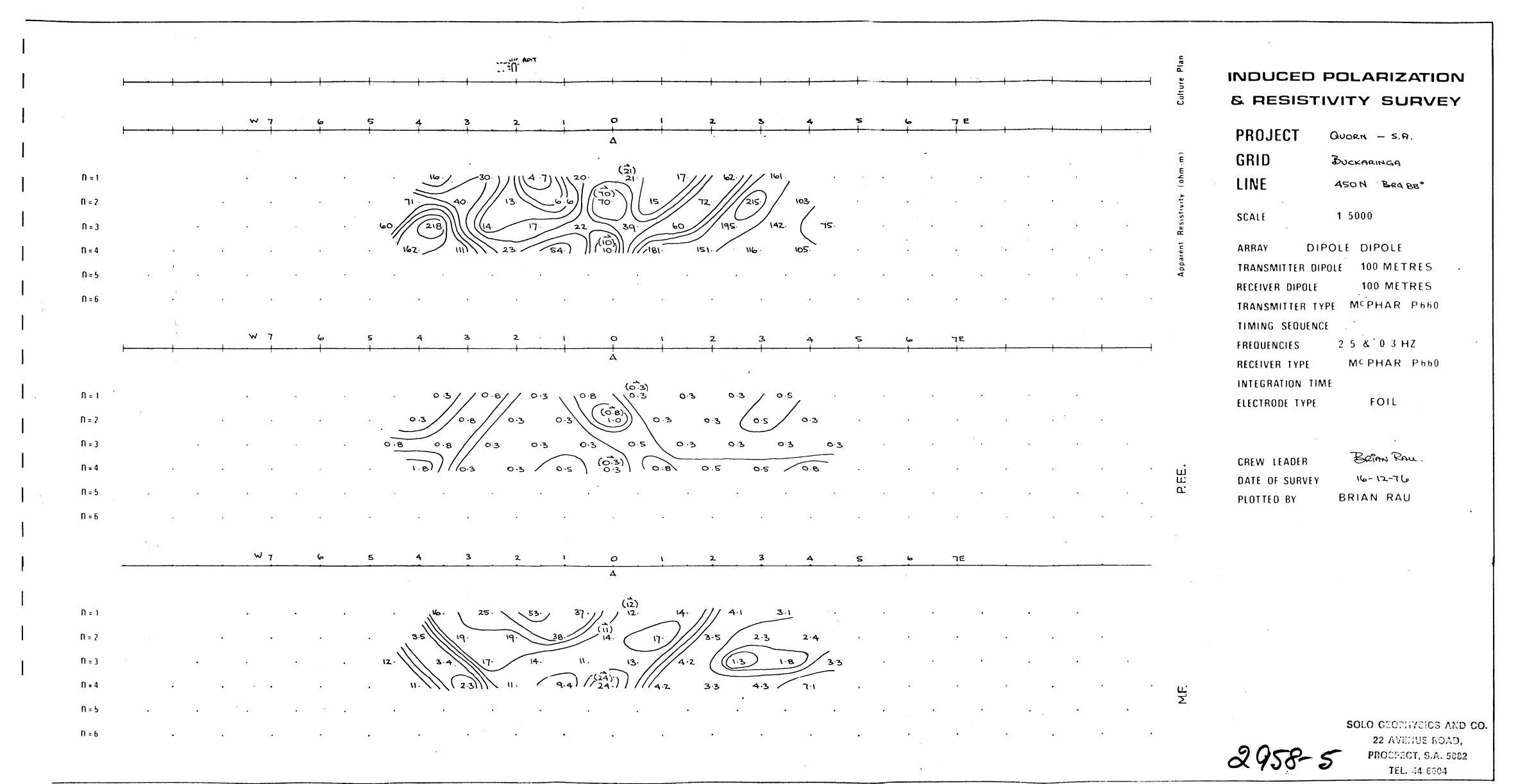
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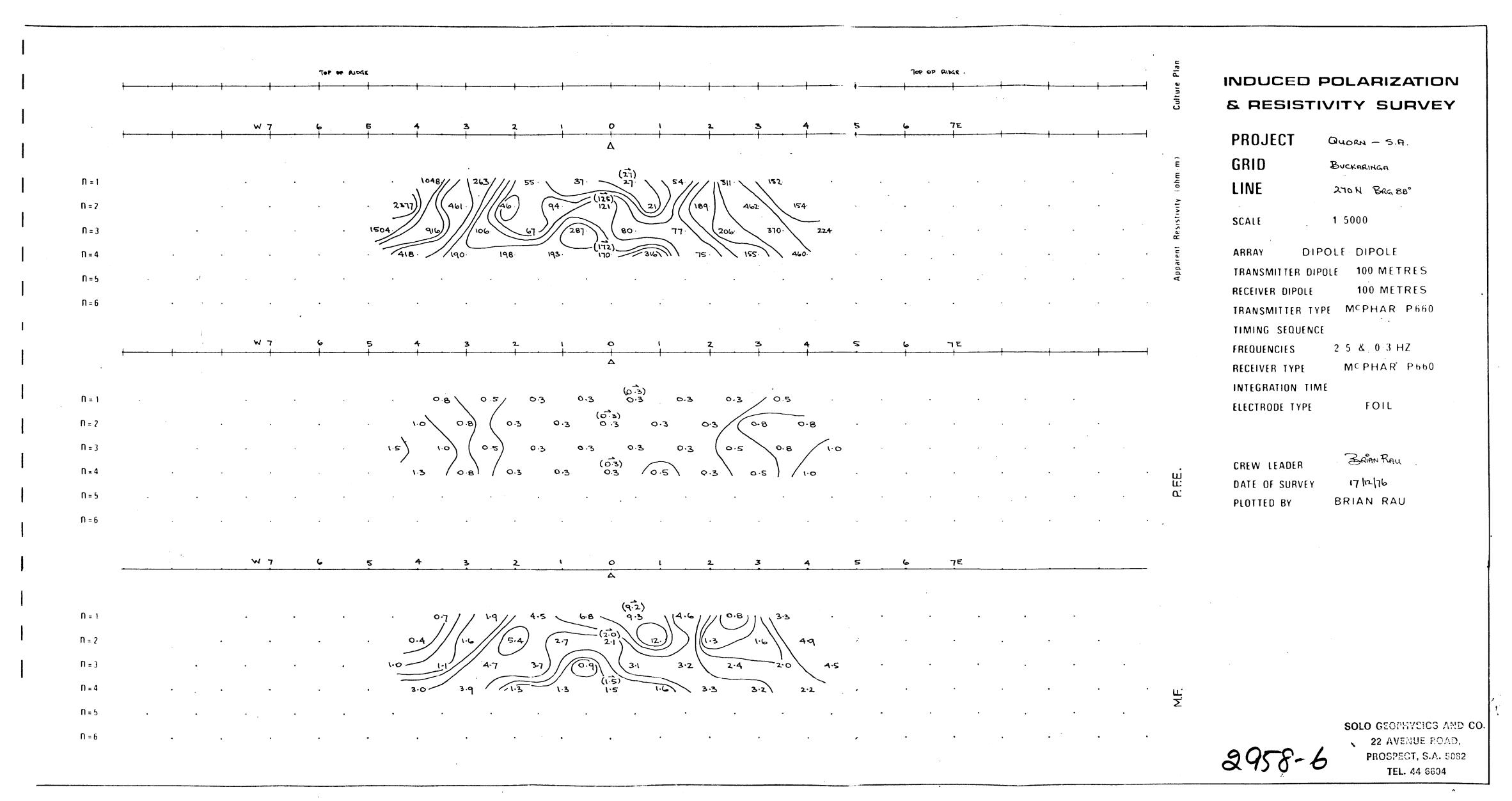
SOLO GEOPHYSICS AND CO. 22 AVENUE ROAD, PROSPECT, S.A. 5082 TEL. 44 6304

1958-2







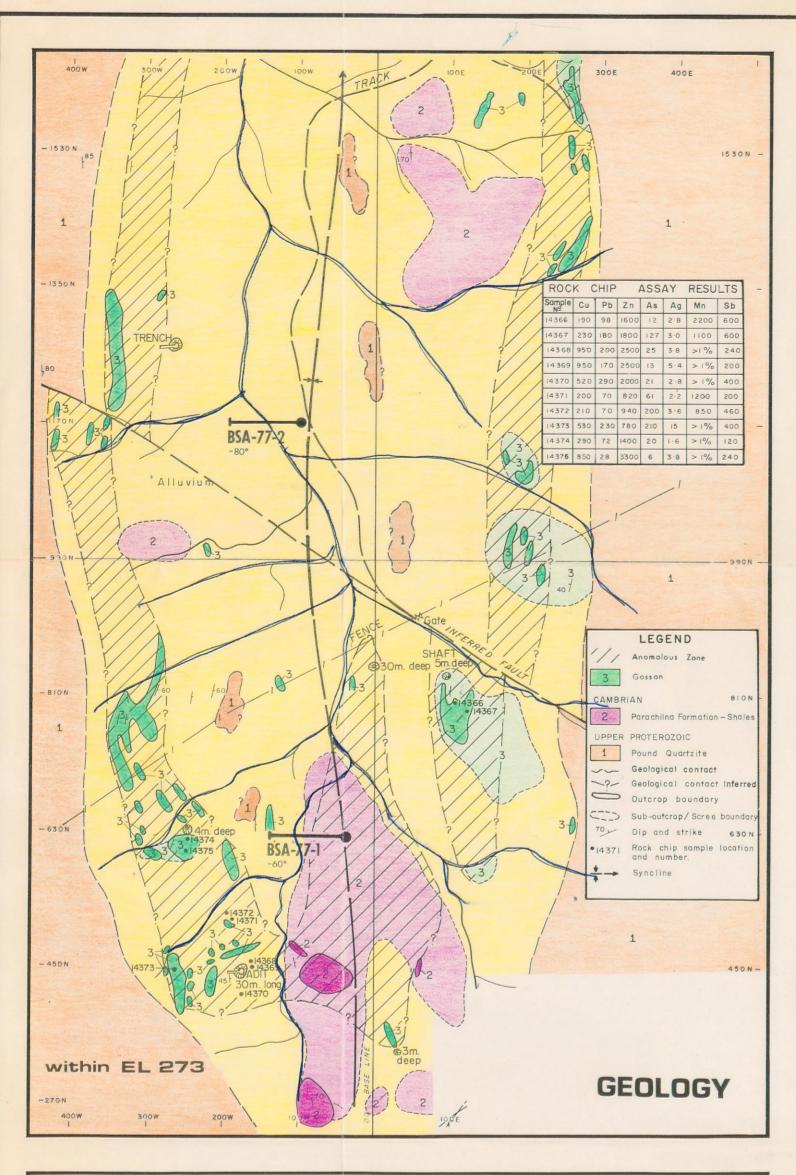


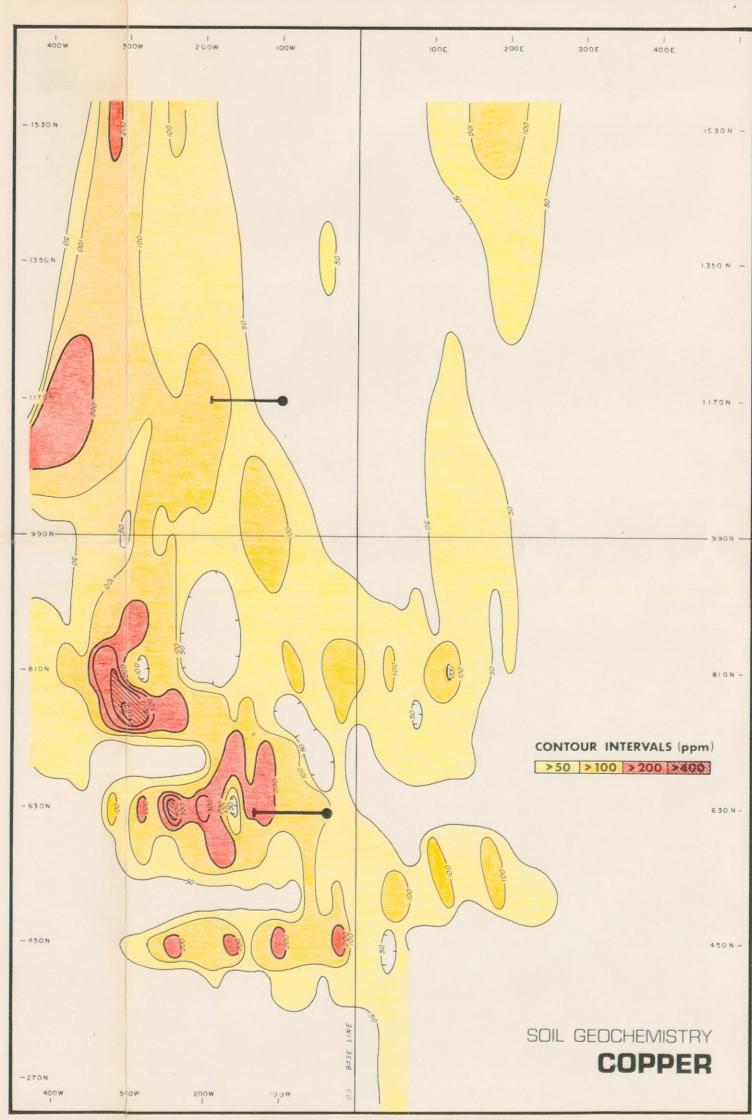
DRILL LOGS

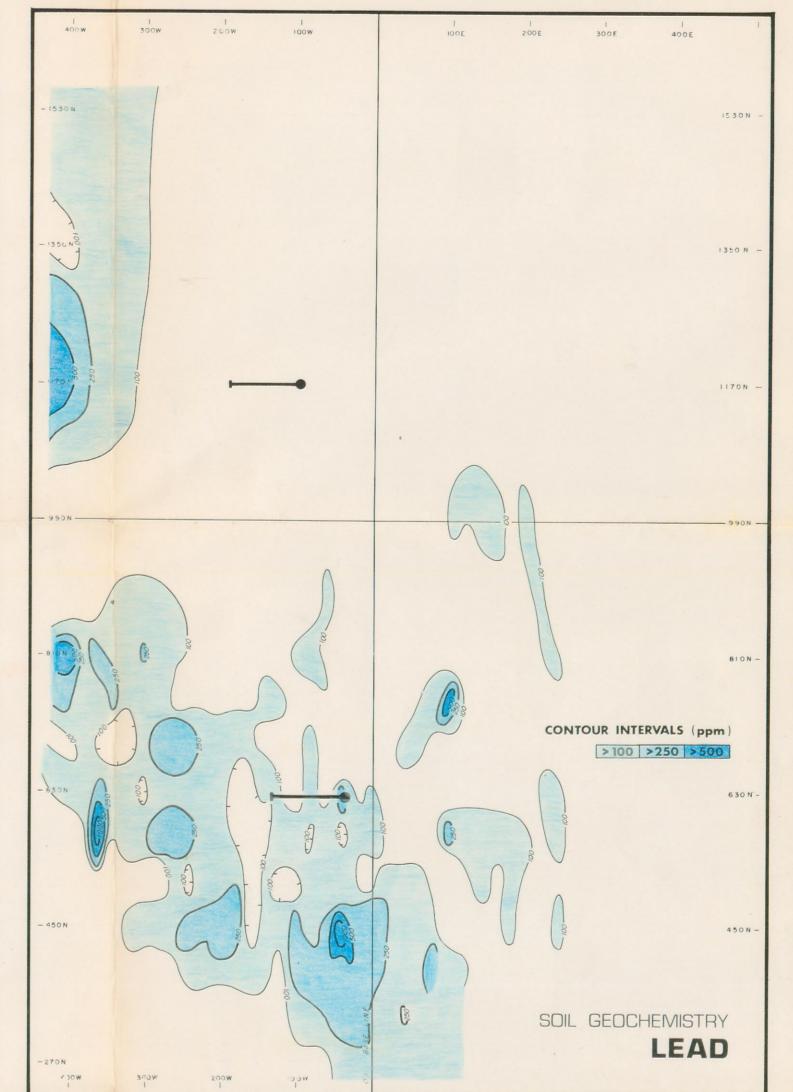
AMUCO N		stralia Company	DRILL LOG		PROJECT NO							ACID		1/2.
PROPERY	BUCKARING	Α	LATITUDE 625N	START	BORE HOL DEPTH	DIP	BEARING		H D	P 86	EARING	DEPTH	DIP	BEARING
HOLE No	BSA-77-1		DEPARTURE 36W	FINISH	100m	61°		298m	5	7120				_
DEARING:	RID 270°	TRUE	ELEVATION	LENGTH	175m	61°								
DIP COLLA		CORE SIZE NQ/BQ	DRILL SECTION	LOGGED BY J. JOHNSON	280m	573	0							
ME	ERAGE		DESCRIPTION	MINERALIZATION %	SAM	PLE NO	FROM	TO	LENGTH	- C	T pr	ASSAYS	S Ag	Mn
0.00	1.8	Weathered soil. Tr	ricone drilling	100000000000000000000000000000000000000			FROM	10	LENGIN	Cu	Pb	Zn	- Ag	P.II
					1.	$\sum_{i=1}^{n}$	1.8	2.10	0.30	140	620	2160	5	3200
1.8	10.80	Massive ferruginous	s manganese cap		2		2.10	2,50	0.40	120	680	2320	5	3300
		 			3 4		2.50	2.80 3.10	0.30	170	520 820	2700	5	4400
, 	+						3.10		0.35	160 360	620	4300	5	>18
					6		3.45	3.80	0.35	380	790	4300	5	71%
	<u> </u>				7 8		3.80 4.15		0.35	210	660	3000 4050	5 2	>1% >1%
	-	 		 	9		4.45	4.80	0.35	280_	580	4000		171%
	-				10		4.80	5.15	0.35	280	580	4000	5	718
					11		5.15		0.35	330	620	5100	2	71%
					13		5.50 5.80		0.30	200 180	720	4100 4300	2	71%
	1				14	5	6.15	-	0.35	289	630	4900		718
					15		6.50	6.80	0.30	330	820	4300	5	71%
	- - · 	 			16		6.80 7.20		04.0	360 210	490 520	4500 3250	5 2	71% >1%
		-		- -	18	·	7.90		0,30	300	710	4100	- 5	71%
	- 				19		8.20		0.30	460	340	4600	1 2	>1%
					20		8.50		0.30	470	220	5900	2	718
10.80	43.00	Soft ferruginous cl	lays. Predominantly yellow and	 	21		9.80		0.20	310	180	3700	5 5	71%
10.00	43.00	brown with a few so	cattered manganese rich iron bands.		23		10.30		0.30	250	240	4650	5	713
					24)		11.00		200	240	5700	2	2500
43.00	56.60	Oxidized light red	brown sandstone		_}					<u> </u>				
53.00	53.30	Quartz vein					-		 		+		-	+
33.00	33.30	Quartz Vein												
56.60	59.10	Purple Red siltston	nes					- 1						
FO. 30	67.90	Purple brown sandy			25		15.90	16.15	0.25	200	250	500	5	>1%
59.10	67.90	Purple brown sandy	siltstones										+	
67.90	76.90	Grey calcareous san	ndy siltstones								1			
70.90	76.90	Scattered mottled c	alay hodo								ļ	-		
70.90	76.90	Scattered mottred t	tay beus								 		 	
											1			
			······································		-				-		 -			+
-	-			· · · · · · · · · · · · · · · · · · ·						 			 	
		-												
														
				ļ,									+	
	+			 				<u> </u>			-		+	+
	4	1					├ <u>-</u>				+			

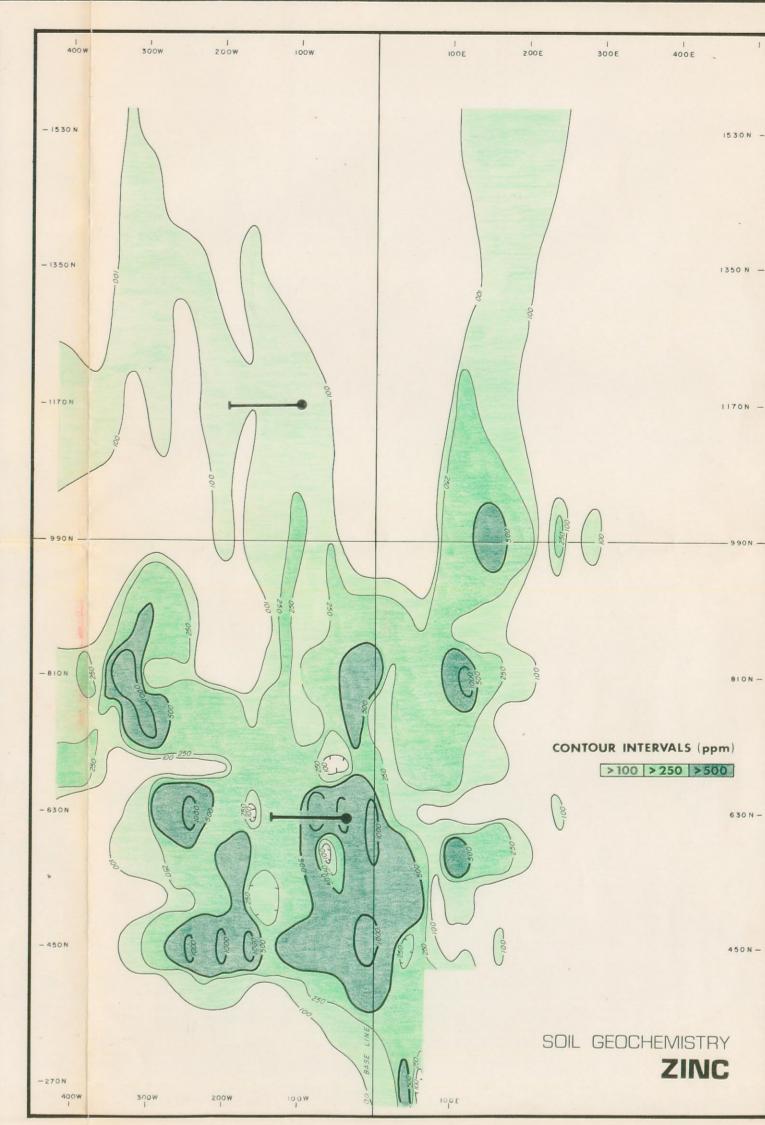
		ralia Company PROPERTY BUCKARINGA		PROJECT NO A-7	0-30	_		HOLE	NO BSA-		Paga	2/2
FROM:	TAGE TO	DESCRIPTION	MINERALIZATION %	SAMPLE NO	FROM	FOOTAGE TO	LENGTH			ASSAYS		
6.90	79.90	Yellow brown siltstone			FAUN	10	LENGIA				 	
-	1					ļ		-		· · · · ·		-
		77.10 to 77.20 Intraformational breccia										
										-		
79.90	81.70	Purple brown lime rich siltstone				ļ						
	ļl				ļ	ļ	<u> </u>		<u> </u>			<u> </u>
	ļ				1.	ļ	-		ļ		ļ	
31.70	84.75	Ferruginous yellow red interbedded fine sandstone			 	ļ			ļ			-
		and siltstones			1				 	-	-	
34.75	91.75				+	 						
54.73	91.75	Grey white calcareous siltstones				1				· · ·		
1.75	105.70	Well sorted grey quartz sandstone with calcareous							ļ		 	
, 11, 10	1 203.70	cement gray quarts same some with caroacteds							į		i	j -
.05.70	110.00	Quartz sandstone with calcareous cement being										
_		replaced gradually with silceous cement.			<u>.</u>			P				
					ļ							
10.00	298.80	Medium grained quartzite with minor clay lenses to			ļ		-					ļ
	 	10 cm (probably Pound Quartzite)			-	-			 			ļ
	ļ	END OF HOLE	-		 			·····			 	
					1	+	ļ		 			
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	1	,				1		1				<u> </u>
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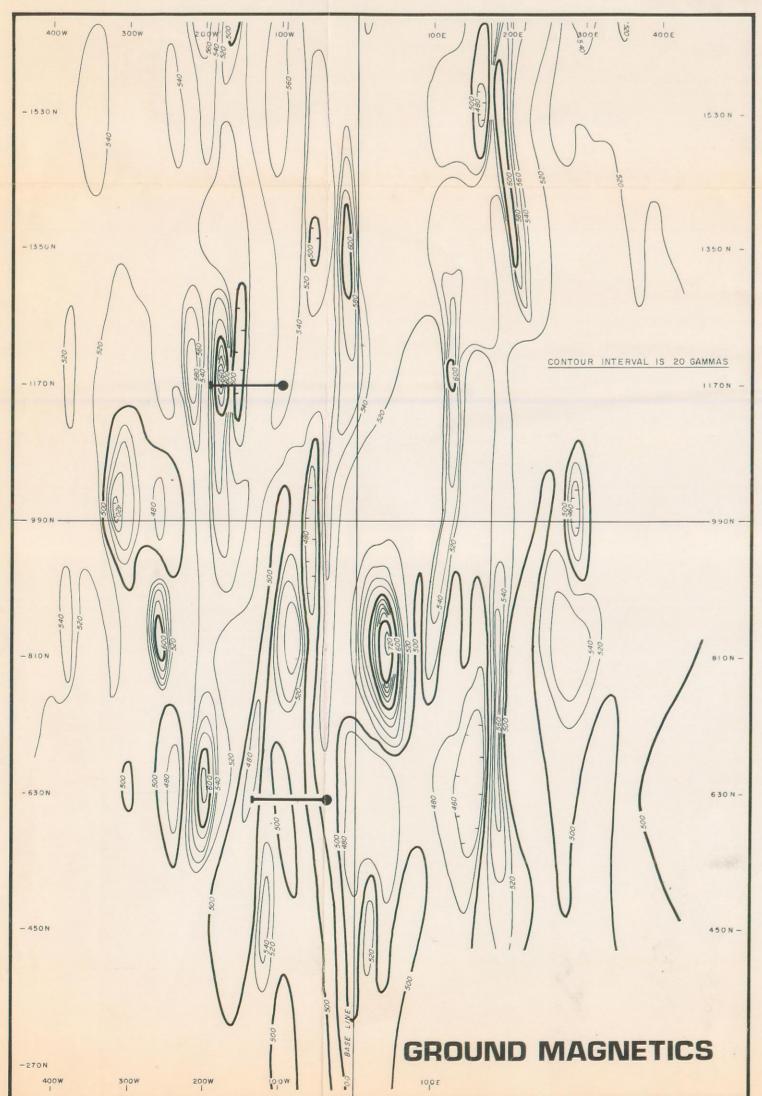
Amoco M	inerals, Aust	ralia Company	DRILL LOG				ECT NO			· 		HOLE Nº BSA-77-2 page 1/1					
PROPERY	BUCKARING		LATITUDE 1170N	START	3m 58.40m		RE HOLE	SURVEY	BEARIN	G DEP	тн Т р		RUMENT ARING	DEPTH	DIP	BEARING	
HOLE NO			GEPARTURE 1 0014	FINISH	13.90m 207m		30m	78°	Acid Etch								
	HD 270°	TRUE	ELEVATION 100W	 	10.90 128.60m	+	0.0m	76°	Acid Etch					-		,	
DIP COLLAR		CORE SIZE NQ/BQ	DRILL SECTION	LOGGED BY					EtCii	<u> </u>							
		CONE SIZE NOT DO		+		1			μ	METERAGE				ASSAYS	·		
FROM	RAGE TO		DESCRIPTION	MIN	ERALIZATION %	_[SAMP	LE NO	FROM	то	LENGTH	Cu	Pb	Zn	Ag	Mn	
	3	Precollar Tricone		-		\dashv							1	-	 		
3	13.90	NO in alluvium larg	e quartzite boulders	1		\exists		. ^.									
														<u> </u>			
		10.90 - 13.90 recen	t calcrete cap rock	-		\dashv	 ,				<u> </u>		ļ		-	ļ	
13.90	58.40	Oxidized rock (Tric	one)														
58.40	85.90	Manganese rich iron	stone	+	 	7	26	> -	58.40	59.20	0.80	390	210	3500	2	>1%	
	1-05.50	Hanganese IIch Alon	Scotte	<u> </u>			27		59.20	60.20		430	180	5500	2	>]%	
		Core size change @	61.00 m NQ to BQ		<u> </u>		28		60.20	61.00		.480	160	6000	2	>1%	
				ļ			29		61.00	62.00		230	160	6250	2	71%	
	<u></u>		rsed with numerous clay filled voids.	Como			30 31		62.00	63.00		260 200	180 140	7000 7250	2	>1% >1%	
	ļ.,	Core recovery poor	in clay rich horizons.	Core	recovery 40%					+		 		9000	5	>1%	
	-	58.40 - 64.00 mn-i	ranctons	 		-	32 33		64.90 71.00	65.80 72.00		460 70	180 160	5000	2	>1%	
	ļ		-			4	-34	,	72.00	72.80	0.80	60	160	4750	2	>1%	
	 	64.00 - 64.90 clay					35		74.00	75.00		60	180	5000	2	>13	
······································		79.90 - 84.00 clay					36		75.00	76.00	1.00	50	210	4750	2	>1%	
		84.00 - 85.90 mn-i					37		76.00	77.40	1.40	130	180	6500	2	>1%	
			· · · · · · · · · · · · · · · · · · ·	Core	recovery 30%	_+	38		77.40	79.90		70	170	6000	2	>1%	
			· · · · · · · · · · · · · · · · · · ·	 		-	39		84.00	85.00	1.00	60	210	4500	2	>1%	
85.90	175.60		y oxidized siltstones and fine			- }	40)	85.00	85.90	0.90	110	170	7750	2	138	
	-		le colour dominant brown and yellow	+		-			-	<u> </u>	<u> </u>			+ $-$	 	-	
	 	with minor grey calc	careous bands.	+		+					İ	-	ļ	†	1		
		144.20 - 144.40 har	rd grey mineral very heavy														
175 60	200.10			 	 					<u>-</u>						 	
175.60	200.10	and minor siltstones	sorted medium grained sandstone	†						-					i	1	
		did marior bracecones											ļ				
200.10	207.00	Well sorted white qu	artzite											-			
		•		 						ļ			ļ		-		
	207.00			ļ						-			 				
 .	207.00	END OF HOL	E							<u> </u>		-	-	-			
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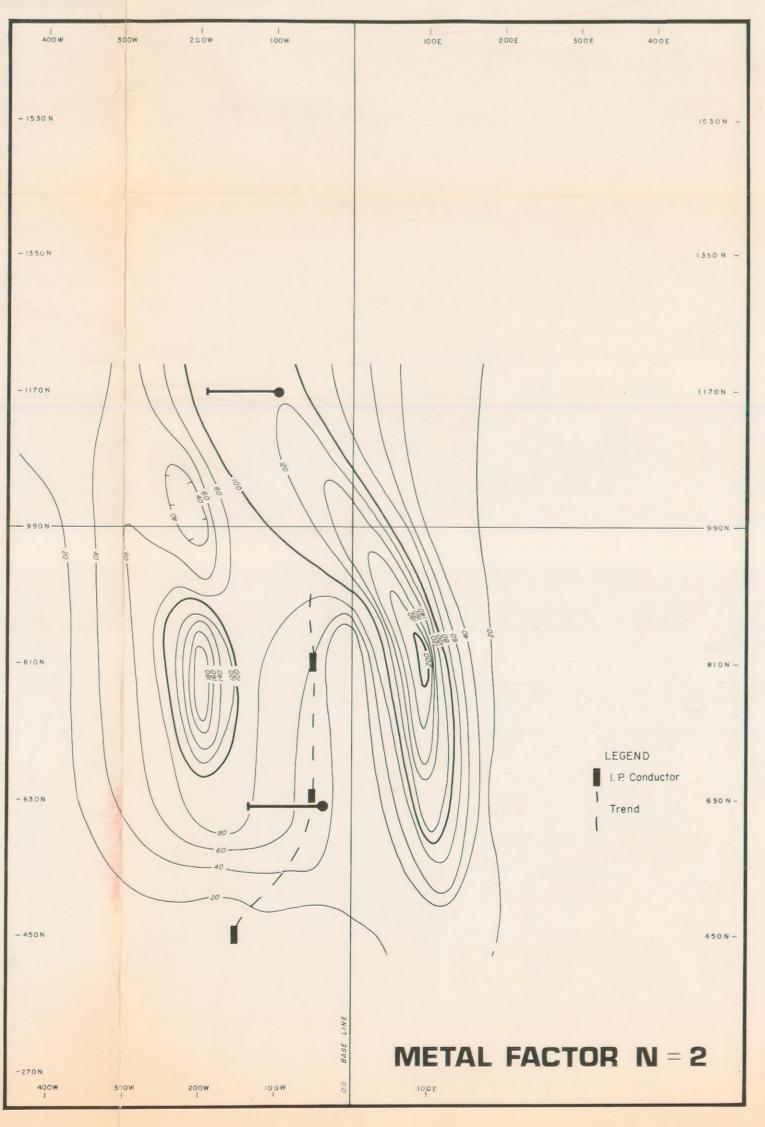


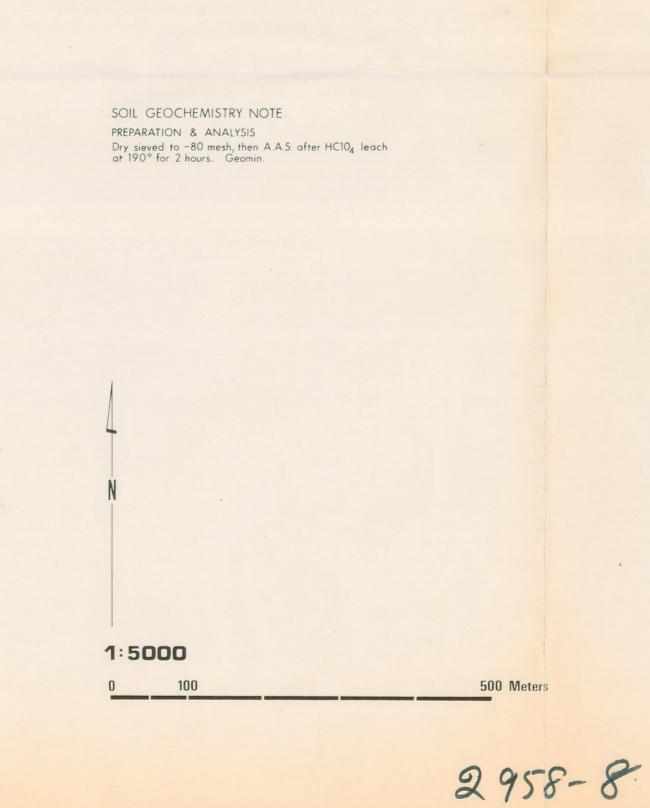


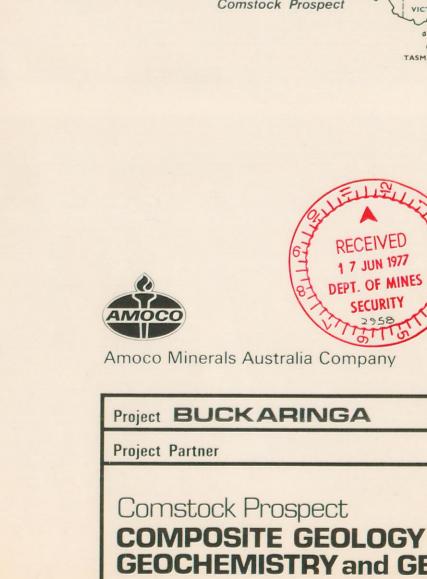












Project BUCKARINGA

Nº A-76-36

Project Partner

Comstock Prospect

COMPOSITE GEOLOGY

GEOCHEMISTRY and GEOPHYSICS

Map Ref. ANG I-54-1

Latitude 31° 17' S

Longitude 138° 5' E

Surveyed P.G.M.

Date Jon. 1977

Scale 1:5000

Drawn B.J.Z.

Date Mor. 1977

Drawing Nº M77-656