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EL 2635

CUTANA AREA

PARTIAL RELINQUISHMENT REPORT FOR THE PERIOD 28/10/86 TO 26/8/2000

Submitted by

MIM Exploration Pty Ltd
2001

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M.I.M. EXPLORATION PTY. LTD.

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TECHNICAL REPORT

No. 2782

TITLE

EL 2635 "Cutana"

South Australia

Partial Surrender Report

(Reissued)

AUTHOR	C F Dell
DATE	April 2001
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M.I.M. EXPLORATION PTY LTD

(ACN 009 681 118)

TECHNICAL REPORT

No. 2782

TITLE: **EL 2635 "CUTANA", SOUTH AUSTRALIA. Partial Surrender Report for EL 2635 (formerly EL 1363, 1752, 1772, 1976).**

ISSUING DEPARTMENT: **EXPLORATION**

AUTHOR: **C.F. DELL**

INVESTIGATIONS CONDUCTED BY: **MIM EXPLORATION**

SUBMITTED BY: **M. McGEOUGH**

DATE: **DECEMBER 2000**

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District Geologist - South Australia

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52082	EL2635 "CUTANA" showing Area Relinquished	1:250,000

M.I.M. EXPLORATION PTY LTD

EL 2635 "CUTANA"

SOUTH AUSTRALIA

Partial Surrender Report for EL 2635 (formerly EL 1363, 1752, 1772, 1976)

SUMMARY

Aim of Project

To locate economic deposits of gold and copper mineralisation within the "Cutana" licence.

Object of Report

To report on all exploration activities conducted to date by M.I.M Exploration over the Dey Hill area of EL 1976, following relinquishment of approximately 120km^2 from the area and the subsequent granting of a new licence as EL 2635.

Location

EL 2635 is located approximately 20 kilometres east of Olary and 20 kilometres west of Cockburn in eastern South Australia. The lease straddles the Barrier Highway and the railway line between Adelaide and Broken Hill.

Tenure

Mount Isa Mines has held the area since October 1986, under ELs 1363, 1752, 1772, 1976 and 2635. On 1st August 1994 an area of 485km^2 was granted to Mount Isa Mines Limited (MIM Ltd) for a period of one (1) year as EL 1976. MIM Ltd applied for an extension to the licence, which was granted until the 31st July 1999. MIM Ltd applied for a new licence over the Cutana area, which was granted over a reduced area of 365 km^2 as EL 2635. The licence on EL 2635 expires on 26th August 2002.

M.I.M. Exploration Pty Ltd

EL 2635 "Cutana" (formerly EL 1363, 1752, 1772, 1976)

Partial Surrender Report

1. INTRODUCTION

This report details the results of exploration activities conducted by M.I.M Exploration Pty Ltd (MIMEX) over the Dey Hill portion of EL 1976, prior to the area being relinquished and a new licence (EL 2635) being granted.

2. LOCATION AND ACCESS

Previous Exploration Licence EL 1976 and current Exploration Licence 2635 are located approximately mid-way between the settlements of Olary and Cockburn in eastern South Australia. The Barrier Highway and the Trans Australian Railway both run through the northern part of the licence area. The boundaries of this tenement fall within the longitudes 140°25'E and 140°40'E and the latitudes 32°10'S and 32°26'S. EL 2635 is located on the Olary (SI54-2) 1:250,000 geological map sheet, which is produced by Primary Industries and Resources South Australia (PIRSA).

Vehicular access is generally good via station roads, tracks and along fencelines. Vegetation consists predominantly of low saltbush and bluebush with lesser patches of scrubby eucalypt and acacia. The undulating topography and low vegetation cover allows four wheel drive access to almost all areas within the licence, except after rainfall when conditions become extremely boggy and/or slippery.

3. TENURE

Mount Isa Mines has held the area since October 1986, under ELs 1363, 1752, 1772, 1976 and 2635.

The area was originally granted to Mount Isa Mines as EL 1363, which covered an area of 769 km^2, on October 28, 1986. This tenement expired in October 1991 and was replaced by EL 1752 on November 18, 1991. EL 1752 was surrendered on January 17, 1992 as the tenement had been mistakenly granted in the name of M.I.M. Exploration.

On April 22, 1992 EL 1772 was granted in the name of Mount Isa Mines. This licence was subsequently surrendered on January 21, 1994 when an application was made for a smaller area, including a small extension just to the south of the northern boundary of EL 1772. On 1st August 1994 an area of 485km^2 incorporating the Dey Hill area was granted to Mount Isa Mines Limited (MIM Ltd) for a period of one year as EL 1976. An extension was applied for and granted, with the licence expiring on 31st July 1999.

MIM Ltd applied for a new licence over the Cutana area, which was granted over a reduced area of 365 km^2 as EL 2635. The new licence retains the original boundaries of EL 1976, except for an area of approximately 11km by 11km centred about Dey Hill, which has been relinquished. The licence on EL 2635 expires on 26th August 2002.

Exploration work within the licence area has been conducted by MIMEX, a wholly owned subsidiary of M.I.M. Holdings Limited, on behalf of Mount Isa Mines Limited.

4. EXPLORATION

4.1 Pre 1986

In the 1950s the South Australian Department of Mines carried out airborne and ground follow up surveys for uranium in the vicinity of the Radium Hill Mine, and later at a district scale.

In the early 1960s Mines Exploration Pty Ltd extended their regional Broken Hill IP survey to cover areas in the south east of the "Cutana" licence including the Ballara prospect. Follow up drilling on an anomaly at Ballara intersected low-grade zinc mineralisation.

Between 1977 and 1982 Australian Selection Pty Ltd conducted a programme of geological mapping, sampling, RAB drilling, EM surveying and percussion drilling. This programme identified a few metres of low-grade zinc mineralisation, with the best intersection being 2m @ 0.65% Zn.

4.2 Post 1986 - MIMEX

Initial exploration efforts by M.I.M were not focussed on the area that has been relinquished, however, in 1987 exploration activities were focussed toward locating Pb/Zn mineralisation in the Ballara district. Efforts were directed toward locating the position of the Bimba Formation, which was believed to be prospective for stratiform/stratabound Pb-Zn mineralisation.

July 1989 - January 1991

- 26.5km of ground magnetics on eight lines
- 341 RAB holes drilled on eight RAB lines

Ground magnetic surveys were conducted to detect the presence of the magnetic Upper Albite Formation and the inferred overlying Bimba Formation beneath a cover of Tertiary sands and clays. Drilling identified anomalous zinc values, which were thought to represent strike continuation of mineralisation found by Broken Hill South and Seltrust at the Ballara prospect.

1991 - 1992

- Interpretation of aeromagnetic data undertaken
- Grid lines 25, 26 and 28 extended and ground magnetics read over lines
- Infill RAB drilling

- Ongoing review of Seltrust geology, drilling and EM/IP data

Aeromagnetic interpretation defined a prospective northeast – southwest trending zone 12km long by 2km wide containing a synformal structure with sheared/faulted margins and some cross faults. Ground magnetics improved coverage of prospective zone. Review of data revealed that Seltrust drilling did not completely test PEM anomalies.

1992 – 1993

- 7.7km of TEM completed at Ballara/Dey Hill as lines 700m long
- Regional mapping at 1:15000 scale commenced
- 71.8km of 200m spaced gravity traverses and 10m spaced ground magnetics completed
- Soil gas sampling adjacent to percussion holes was undertaken
- Existing RAB holes re-assayed for Fe, Ba, Co, Na, and As

TEM surveying was undertaken to test for extensions of known mineralisation. Regional mapping and gravity traversing was undertaken with the aim of investigating the Ballara synform to the south, target generation and to tie-in this information with all Ballara data. Soil gas sampling results were inconclusive. Detailed re-assaying was undertaken as experience in adjacent licences indicated correlation may exist between those elements listed above and stratigraphy.

1993 - 1994

- Repeat IP survey on line 101(Pb/Zn anomaly with associated gravity anomaly)
- Repeat IP survey on line 102 (Pb/Zn anomaly with associated magnetic and gravity anomaly)
- 2000m line of 10m spaced gravity stations along line 102
- Regional mapping at 1:15000 was completed

IP survey over line 101 outlined a strong IP source at 125-175m depth. Survey over line 102 outlined a moderate IP conductor at 100m depth with coincident magnetic and gravity anomaly. Regional mapping was merged with aeromagnetics and other geophysical data in an attempt to outline a stratigraphic framework.

1994 - 1995

- Diamond drill hole MCD – 3/94 was RC pre-collared to 90m then NQ cored to 436.7m to test the gravity and IP anomalies flanking Peak Hill Fault near Ballara zinc prospect
- Reverse Circulation hole MCRC – 2/94 was drilled 280m north-west of MCD – 3/94 to a depth of 120m, and was designed to determine the source of the IP anomaly.

MCD – 3/94 intersected a sequence of quartz-feldspar-biotite-muscovite schist with lesser sections of recrystallised gneiss. Staurolite and garnet porphyroblasts are developed over tens of metres throughout the hole. The most significant intersection occurred between 93-97m and returned 204ppm Cu, 1665ppm Pb and 6184ppm Zn. Mineralisation occurs on the contact of a mafic dyke and is associated with trace

amounts of pyrrhotite. Trace gold mineralisation (0.09g/t) occurs between 129-141m and is associated with a brecciated shear zone.

Hole MCRC – 2/94 intersected lithologies similar to those in diamond hole MCD – 3/94. A 12m zone from 98m contained a few percent pyrite. There were no significant assays of gold or base metals. The source of the IP anomaly was not explained in either hole.
[Refer to Appendices 1 and 2 for geological logs and assay results.]

1997 – 1998

- High Frequency Photo Lineament (HFPL) analysis to identify significant structural trends which may host mineralisation was conducted over EL 1976. The survey included approximately 12km^2 of the north-east corner of the relinquished area.

The survey identified regional scale WNW oriented lineaments that intersect NNE lineaments. No follow up work was conducted in the relinquished area.

5. CONCLUSION

Exploration activities since 1987 have tested magnetic and IP anomalies, as well as testing for strike extensions to known base metal mineralisation. However, results have been disappointing, with all efforts failing to locate economic concentrations of base metal or gold mineralisation. Major structures have been identified, but do not appear to have focussed ore fluids in the relinquished area. As no encouraging results have been obtained for the effort expended, this area of the licence has been deemed to be no longer prospective and therefore relinquished.

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Appendix 1

Drillhole MCD-3/94
Geological Log, Cross-section and Assay Results

AD012442	192	146														
891886	Au	Au:R	Au:S	Sb	Cu	Pb	Zn	Co	Ag	Ni	Mo	Mg	Mg1	As	Bi	
METHOD	GG329	GG329	GG329	GA115	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	
LDETECTI	0.02	0.02	0.02	2	4	5	4	5	2	5	10	10	10	100	20	
UDETECTI	99999	99999	99999	100	10000	5000	10000	5000	50	10000	1000	1000	100000	10000	1000	
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
891886	<	-	-	3	47	33	123	10	<	24	<	>1000	8009	<	<	
891887	<	-	-	3	30	30	37	<	<	18	17	>1000	2817	<	<	
891888	<	-	-	<	30	38	24	<	<	22	24	987	-	<	<	
891889	0.02	-	-	<	38	67	19	<	<	8	18	675	-	<	<	
891890	<	-	-	<	40	38	29	<	<	9	22	484	-	<	<	
891891	<	-	-	<	47	28	46	<	<	16	18	429	-	<	<	
891892	<	-	-	<	38	23	38	<	<	11	14	322	-	<	<	
891893	<	-	-	<	43	40	27	<	<	11	22	313	-	<	<	
891894	<	-	-	<	33	25	37	<	<	11	20	305	-	<	<	
891895	<	-	-	<	34	24	66	<	<	10	15	395	-	<	<	
891896	<	-	-	<	37	38	57	<	<	7	15	364	-	<	<	
891897	<	-	-	<	47	31	37	<	<	7	22	288	-	<	<	
891898	<	-	-	<	34	28	22	<	<	6	15	376	-	<	<	
891899	<	-	-	<	37	25	30	<	<	9	17	458	-	<	<	
891900	<	-	-	<	40	24	50	<	<	9	20	782	-	<	<	
891901	<	-	-	<	83	32	132	6	<	18	19	>1000	3004	<	<	
891902	<	-	-	<	71	26	117	6	<	15	24	>1000	2088	<	<	
891903	0.03	-	-	<	62	31	72	<	<	8	14	>1000	1177	<	<	
891904	<	-	-	<	56	29	63	<	<	7	17	>1000	1615	<	<	
891905	0.05	-	0.04	<	86	37	99	6	<	10	21	>1000	4444	<	<	
891906	0.05	-	-	<	93	34	95	6	<	8	18	>1000	3946	<	<	
891907	<	-	-	<	98	29	80	6	<	15	26	>1000	5093	<	<	
891908	<	-	-	<	136	16	140	16	<	33	22	>1000	6387	<	<	
891909	<	<	-	<	146	12	318	41	<	74	25	>1000	9228	<	<	
891910	<	-	-	<	94	13	154	41	<	44	20	>1000	6219	<	<	
891911	<	-	-	<	136	21	132	25	<	37	18	>1000	8514	<	<	
891912	<	-	-	<	59	19	146	17	<	33	13	>1000	6029	<	<	
891913	<	-	-	<	127	33	56	19	<	24	25	>1000	4281	<	<	
891914	<	-	-	<	32	10	53	17	<	36	21	>1000	8635	<	<	
891915	<	-	-	<	19	8	54	13	<	38	17	>1000	9067	<	<	
891916	<	-	-	<	21	6	33	12	<	38	27	>1000	8291	<	<	
891917	<	-	-	<	40	8	26	14	<	38	16	>1000	9128	<	<	
891918	<	-	-	<	17	8	24	16	<	41	14	>1000	8199	<	<	
891919	<	-	-	<	46	7	21	20	<	45	18	>1000	7520	<	<	

AD012442	192	146													
891886	Au	Au:R	Au:S	Sb	Cu	Pb	Zn	Co	Ag	Ni	Mo	Mg	Mg1	As	Bi
METHOD	GG329	GG329	GG329	GA115	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101
LDETECTI	0.02	0.02	0.02	2	4	5	4	5	2	5	10	10	10	100	20
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891921	<	-	-	<	24	9	28	13	<	25	14	>1000	15200	<	<
891922	<	-	-	<	22	8	22	17	<	38	14	>1000	12700	<	<
891923	<	-	-	<	13	<	21	15	<	36	15	>1000	10300	<	<
891924	<	-	-	<	14	<	16	16	<	38	13	>1000	10100	<	<
891925	<	-	<	<	9	<	15	11	<	36	16	>1000	9289	<	<
891926	<	-	-	<	9	5	25	11	<	40	12	>1000	14300	<	<
891927	<	-	-	<	7	<	15	13	<	35	13	>1000	13100	<	<
891928	<	-	-	<	10	7	17	12	<	34	14	>1000	11000	<	<
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891930	<	-	-	<	79	11	39	19	<	46	<	>1000	11800	<	<
891931	<	-	-	<	19	5	27	14	<	31	<	>1000	11600	<	<
891932	<	-	-	<	203	1653	6184	25	<	56	<	>1000	11900	<	<
891933	<	-	-	<	38	40	396	30	<	18	<	>1000	31600	<	<
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891942	0.1	-	-	<	189	11	115	38	<	94	<	>1000	10800	<	<
891943	0.1	-	-	<	54	35	404	23	<	<	<	>1000	13500	<	<
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891947	<	-	-	<	23	<	12	6	<	32	<	>1000	5756	<	<
891948	<	<	-	<	7	<	9	7	<	31	<	>1000	9268	147	<
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891952	<	-	-	<	92	<	38	16	<	28	<	>1000	9167	<	<
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AD012442	192	146														
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METHOD	GG329	GG329	GG329	GA115	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	
LDETECTI	0.02	0.02	0.02	2	4	5	4	5	2	5	10	10	10	100	20	
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891955	<	-	-	<	65	<	203	9	<	8	<	>1000	8947	<	<	
891956	<	-	-	<	49	7	99	8	<	11	<	>1000	5667	<	<	
891957	<	-	-	<	56	17	205	6	<	10	<	>1000	8244	<	<	
891958	<	-	-	<	63	<	172	10	<	12	21	>1000	8480	<	<	
891959	0.02	-	-	<	41	6	55	8	<	10	<	>1000	7281	<	<	
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891961	<	-	-	<	32	8	37	10	<	25	<	>1000	6827	<	<	
891962	<	-	-	<	30	9	53	9	<	15	<	>1000	5648	<	<	
891963	<	-	-	<	59	9	95	14	<	29	<	>1000	6702	<	<	
891964	<	-	-	<	27	7	156	6	<	11	<	>1000	6846	<	<	
891965	<	-	<	<	60	5	151	11	<	15	<	>1000	5583	<	<	
891966	<	-	-	<	10	<	83	<	<	<	<	>1000	5344	<	<	
891967	<	-	-	<	17	<	110	5	<	10	11	>1000	9630	<	<	
891968	<	-	-	<	19	5	50	5	<	5	<	>1000	10000	<	<	
891969	<	<	-	<	41	<	31	<	<	7	<	>1000	12100	<	<	
891970	<	-	-	<	31	<	59	19	<	11	<	>1000	8950	<	<	
891971	<	-	-	<	11	<	41	<	<	<	22	>1000	8900	<	<	
891972	0.02	-	-	<	32	13	56	10	<	19	<	>1000	7037	<	<	
891973	<	-	-	<	25	<	29	<	<	13	<	>1000	4765	<	<	
891974	<	-	-	<	39	<	76	8	<	11	<	>1000	9720	<	<	
891975	<	-	-	<	82	11	32	11	<	17	10	>1000	9592	<	<	
891976	<	-	-	<	285	13	33	109	<	56	<	>1000	11600	<	<	
891977	<	-	-	<	232	14	44	351	<	285	<	>1000	16800	481	<	
891978	<	-	-	<	17	19	16	89	<	42	<	>1000	11000	196	<	
891979	<	-	-	<	9	15	49	14	<	18	19	>1000	8019	<	<	
891980	<	-	-	<	8	16	14	15	<	54	<	>1000	18500	<	<	
891981	<	-	-	<	7	13	12	11	<	40	<	>1000	14000	<	<	
891982	<	-	-	<	7	10	7	7	<	21	37	>1000	8922	<	<	
891983	<	-	-	<	302	12	88	48	<	159	<	>1000	11900	<	<	
891984	<	-	-	<	55	12	116	13	<	19	<	>1000	7136	<	<	
891985	<	-	<	<	13	16	148	6	<	10	<	>1000	17100	<	<	
891986	<	<	-	<	52	12	92	11	<	18	<	>1000	5217	<	<	
891987	<	-	-	<	60	10	93	11	<	16	<	>1000	7282	<	<	

AD012442	192	146														
891886	Au	Au:R	Au:S	Sb	Cu	Pb	Zn	Co	Ag	Ni	Mo	Mg	Mg1	As	Bi	
METHOD	GG329	GG329	GG329	GA115	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	
LDETECTI	0.02	0.02	0.02	2	4	5	4	5	2	5	10	10	10	100	20	
UDETECTI	99999	99999	99999	100	10000	5000	10000	5000	50	10000	1000	1000	100000	10000	1000	
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
891988	<	-	-	<	56	16	75	9	<	18	<	>1000	4862	<	<	
891989	<	-	-	<	25	35	119	6	<	8	<	>1000	6495	<	<	
891990	<	-	-	<	28	19	95	6	<	13	<	>1000	11200	<	<	
891991	<	-	-	<	49	12	81	9	<	14	<	>1000	13100	<	<	
891992	<	-	-	<	160	13	31	9	<	15	<	>1000	5899	<	<	
891993	<	-	-	<	10	14	95	<	<	6	<	>1000	22600	<	<	
891994	<	-	-	<	111	15	25	30	<	40	<	>1000	6355	<	<	
891995	<	-	-	<	15	10	68	7	<	10	<	>1000	21800	<	<	
891996	<	-	-	<	40	6	58	10	<	17	<	>1000	11400	<	<	
891997	<	-	-	<	83	17	56	21	<	32	<	>1000	7182	<	<	
891998	<	-	-	2	43	7	58	12	<	20	<	>1000	7662	<	<	
891999	<	-	-	<	133	12	29	21	<	44	<	>1000	12400	<	<	
892000	<	-	-	<	94	13	63	19	<	41	<	>1000	9300	<	<	
892001	0.03	-	-	<	57	14	59	11	<	29	<	>1000	7264	<	<	
892002	<	-	-	<	25	12	64	35	<	41	<	>1000	9282	<	<	
892003	0.02	-	-	<	226	11	49	84	<	35	<	>1000	6737	<	<	
892004	<	-	-	<	123	17	80	34	<	58	<	>1000	16600	<	<	
892005	<	-	<	<	133	13	127	22	<	46	<	>1000	12400	<	<	
892006	0.02	-	-	<	214	10	86	33	<	75	18	>1000	10700	<	<	
892007	<	-	-	<	58	29	44	59	<	79	20	>1000	9474	129	<	
892008	<	-	-	<	117	10	137	15	<	32	21	>1000	15100	<	<	
892009	<	-	-	<	94	11	76	18	<	37	20	>1000	6727	<	<	
892010	<	-	-	<	177	8	131	22	<	38	16	>1000	13000	<	<	
892011	<	-	-	<	340	48	230	30	<	31	<	>1000	6207	<	<	
892012	<	-	-	<	688	9	788	94	<	112	<	>1000	22200	<	<	
892013	<	-	-	<	62	27	152	9	<	11	<	>1000	5096	<	<	
892014	<	-	-	<	144	8	312	23	<	52	22	>1000	9537	<	<	
892015	<	-	-	<	55	<	131	10	<	20	<	>1000	6452	<	<	
892016	<	-	-	<	113	7	228	21	<	50	24	>1000	10900	<	<	
892017	<	-	-	<	55	9	50	16	<	45	<	>1000	11800	<	<	

Appendix 2

Drillhole MCRC-2/94
Geological Log and Assay Results

PROJECT Cutana - Day Hill
PROSPECT "Ballaru"
HOLE CO-ORD Line 101 3350 N

M.I.M. EXPLORATION PTY.LTD.
ROTARY PERCUSSION DRILL LOG
open hole / reverse circulation
ROTARY : from ____ to ____
HAMMER : from 0 to 120m

MCRC-2/94
RL. COLLAR ____ m
INCLINATION 60° •
DIRECTION 290° M •

SAMPLE No.	ANALYSES ppm / %	DEPTH metres	LOG	DESCRIPTION	REMARKS	WATER
892018				Red br soil with frags weathered schist	Gamma - 110 to 120 cps	
19						
20				Weathered micaceous schist - pale red br.	Mag Susc^{y} x10^{-5} cgs 0-2m-250 2 to 120m-0 to 200.	
21						
22						
23		10				
24						
25						
26						
27						
28		20				
29						
30						
31						
32						
33		30				
34						
35				Weathered micaceous schist - pale yellow br.		
36						
37						
38		40				
39						
40						
41						
42						
43	All Samples assayed for	50				
44	Cu Pb, Zn Co Ni					
45	Ag Bi, Sb, Au As					
46	+ Mo					
47	- all results v. low	60				
48	+ 4 Multi-elem					
49	Results - Analabs					
50	Rpt No. A00 124 A2					
51						
52		70				
53						
54						
55				Bi, musc, garnet, staurolite schist		
56						
57						
58		80				
59						
60						
61						
62		90		As above with ~ 30% garnet + staurolite.		
63						
64						
65						
66						
67		100		- trace po, cp		
68				- 2 to 5% py, trace cp.		
69				- 2 to 5% py, green spr. graphitic	↓ damp samples.	
70						
71						
72				- ~ 5 to 8% py		
73		110		Bi, musc schist with trace py		
74						
75						
76						
892077		120				

EOH 120m

REASON FOR HOLE :
OTHER DETAILS :

DRILL TYPE : Warman 1000 | LOGGED BY : DB
DRILL CO. : Silver City | DATE DRILLED : Nov. 94.
SCALE : 1 : 500 | PAGE : 1 of 1

PROJECT Cutana - Day Hill
PROSPECT "Ballara"
HOLE CO-ORD Line 101 3350 N

M.I.M. EXPLORATION PTY.LTD.
ROTARY PERCUSSION DRILL LOG
open hole / reverse circulation
ROTARY : from ____ to ____
HAMMER : from 0 to 120m

MCRC-2/94
RL. COLLAR ____ m
INCLINATION 60° •
DIRECTION 290° M •

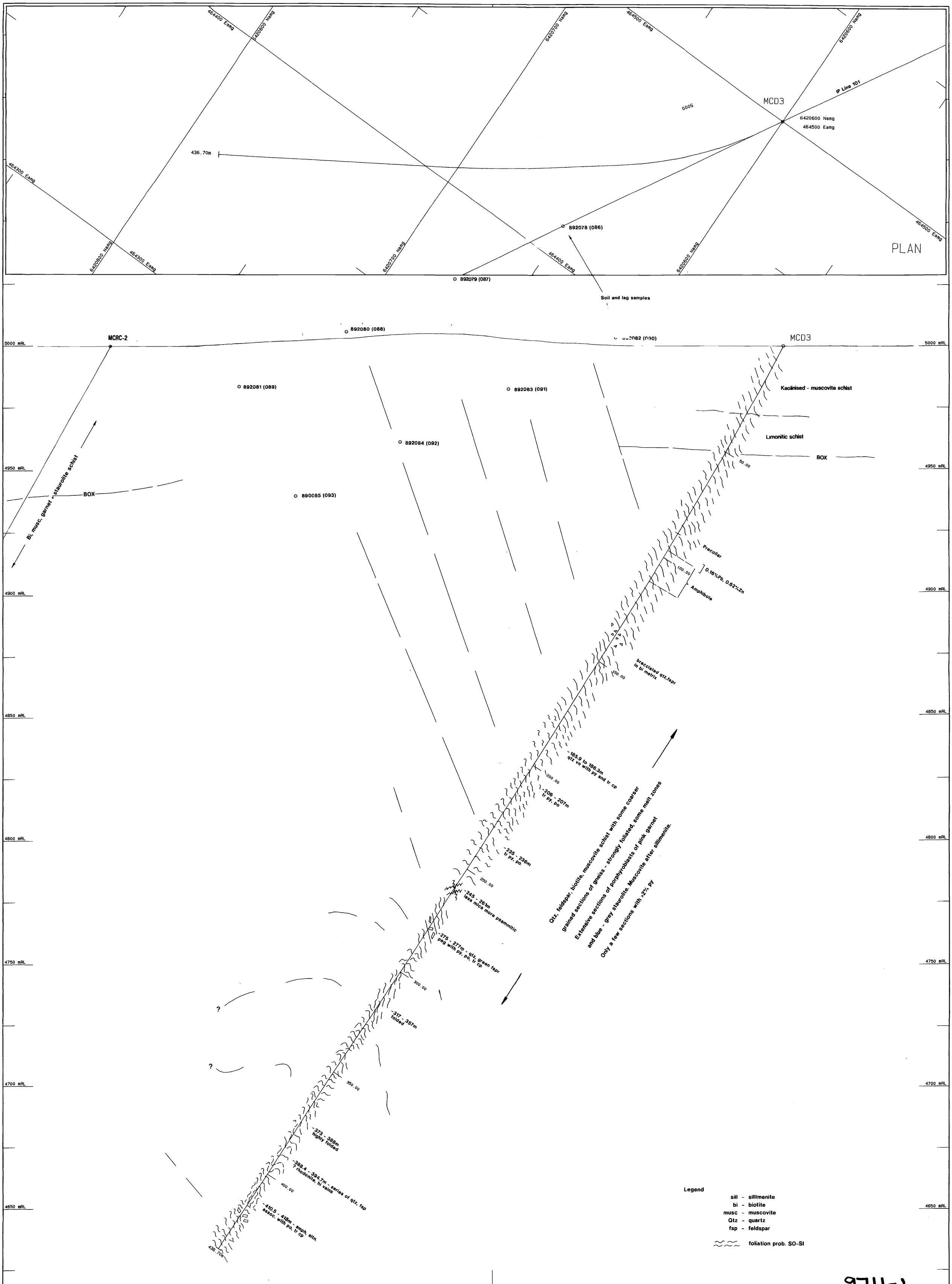
SAMPLE No.	ANALYSES ppm / %	DEPTH metres	LOG	DESCRIPTION	REMARKS	WATER
892018				Red br soil with frags weathered schist		
19					Gamma - 110 to 120 cps	
20				Weathered micaceous schist - pale red br.		
21						
22						
23		10			Mag Susc $\times 10^{-3}$ cgs 0-2m-250 2 to 120m-0 to 200.	
24						
25						
26						
27						
28		20				
29						
30						
31						
32						
33		30				
34						
35				Weathered micaceous schist - pale yellow br.		
36						
37						
38		40				
39						
40						
41						
42						
43	All Samples assayed for	50				
44	Cu Pb, Zn Co Ni					
45	Ag Bi, Sb, Au As					
46	+ Mo					
47	- all results v. low	60				
48	+ ppm/ppm					
49	Results Analabs					
50	Rpt No. A00 124 42					
51						
52						
53		70				
54						
55				Bi, musc, garnet, staurolite schist		
56						
57						
58		80				
59						
60						
61						
62		90		As above with ~ 30% garnet + staurolite.		
63						
64						
65						
66						
67						
68		100		trace po, cp		
69				2 to 5% py, trace cp.		
70				2 to 5% py, green spr. } graphitic	↓ damp samples.	
71						
72				~ 5 to 8% py		
73		110		Bi, musc schist with trace py		
74						
75						
76						
892077		120		EOH 120m		

REASON FOR HOLE :
OTHER DETAILS :

DRILL TYPE : Warman 1000 | LOGGED BY : PB
DRILL CO. : Silver City | DATE DRILLED : Nov. 94.
SCALE : 1 : 500 | PAGE : 1 of 1

AD012442	192	146												
891886	Au	Au:R	Sb	Cu	Pb	Zn	Co	Ag	Ni	Mo	Mg	Mg1	As	Bi
METHOD	GG329	GG329	GA115	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101
LDETECTI	0.02	0.02	2	4	5	4	5	2	5	10	10	10	100	20
UDETECT	99999	99999	100	10000	5000	10000	5000	50	10000	1000	1000	100000	10000	1000
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
892018	<	-	<	32	12	53	10	<	19	<	>1000	8197	<	<
892019	<	-	<	16	7	22	<	<	11	17	>1000	2424	<	<
892020	<	-	<	14	13	33	<	<	6	15	>1000	1354	<	<
892021	<	-	<	10	8	21	<	<	6	14	>1000	1523	<	<
892022	<	-	<	13	<	23	<	<	<	13	>1000	1073	<	<
892023	<	-	<	14	<	29	<	<	<	14	870	-	<	<
892024	<	-	<	19	9	44	<	<	8	16	767	-	<	<
892025	<	-	<	19	11	55	<	<	<	13	718	-	<	<
892026	<	-	<	18	7	54	<	<	6	17	959	-	<	<
892027	<	-	<	27	<	80	<	<	11	14	714	-	<	<
892028	<	-	<	36	7	97	<	<	9	<	712	-	<	<
892029	<	-	<	60	5	133	<	<	8	12	752	-	<	<
892030	<	-	<	27	<	44	<	<	9	19	805	-	<	<
892031	<	-	<	43	8	44	<	<	7	17	880	-	<	<
892032	<	-	<	45	27	62	<	<	8	19	804	-	<	<
892033	<	-	<	40	13	52	<	<	12	20	784	-	<	<
892034	<	-	<	37	8	44	<	<	12	20	847	-	<	<
892035	<	-	<	42	8	54	<	<	10	19	846	-	<	<
892036	<	-	<	80	16	150	7	<	14	19	>1000	3296	<	<
892037	<	-	<	78	37	153	<	<	17	21	>1000	4172	<	<
892038	<	-	<	73	23	120	<	<	14	21	>1000	4658	<	<
892039	<	-	<	77	20	105	<	<	10	14	>1000	2716	<	<
892040	<	-	<	78	23	107	<	<	11	19	>1000	2964	<	<
892041	<	-	<	84	29	175	<	<	12	24	>1000	10000	<	<
892042	<	-	<	45	25	156	<	<	13	24	>1000	8522	<	<
892043	<	-	<	36	16	130	<	<	10	14	>1000	7620	<	<
892044	<	-	<	50	17	127	<	<	8	17	>1000	5064	<	<
892045	<	-	<	65	25	200	6	<	12	18	>1000	4918	<	<
892046	<	-	<	71	44	178	<	<	14	12	>1000	2426	<	<
892047	<	-	<	57	35	170	6	<	15	10	>1000	2647	<	<
892048	<	-	<	29	26	81	<	<	17	12	>1000	2514	<	<
892049	<	-	<	31	19	58	<	<	7	14	>1000	4778	<	<
892050	<	<	<	171	13	64	8	<	15	18	>1000	7011	<	<
892051	<	-	<	58	12	49	7	<	14	12	>1000	7617	<	<

AD012442	192	146												
891886	Au	Au:R	Sb	Cu	Pb	Zn	Co	Ag	Ni	Mo	Mg	Mg1	As	Bi
METHOD	GG329	GG329	GA115	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101	GA101
LDETECTI	0.02	0.02	2	4	5	4	5	2	5	10	10	10	100	20
UDETECTI	99999	99999	100	10000	5000	10000	5000	50	10000	1000	1000	100000	10000	1000
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
892052	<	-	<	57	12	40	7	<	17	14	>1000	8595	<	<
892053	<	-	<	22	11	50	8	<	17	15	>1000	8177	<	<
892054	<	-	<	41	11	58	6	<	19	14	>1000	6229	<	<
892055	<	-	<	27	9	56	17	<	33	12	>1000	6581	<	<
892056	<	-	<	22	12	43	16	<	36	<	>1000	6702	<	<
892057	<	-	<	623	11	215	22	<	38	<	>1000	7759	<	<
892058	<	-	<	31	8	24	11	<	36	<	>1000	8947	<	<
892059	<	-	<	11	10	23	14	<	37	<	>1000	6939	<	<
892060	<	-	<	12	7	25	16	<	39	20	>1000	6444	<	<
892061	<	-	<	7	9	17	10	<	33	11	>1000	6399	<	<
892062	<	-	<	8	10	24	12	<	36	11	>1000	6479	<	<
892063	<	-	<	11	9	22	16	<	45	10	>1000	7442	<	<
892064	<	-	<	8	8	16	13	<	36	11	>1000	5992	<	<
892065	<	-	<	7	11	19	12	<	32	13	>1000	6696	<	<
892066	<	-	<	10	11	23	16	<	39	14	>1000	10200	<	<
892067	<	-	<	23	10	44	14	<	37	18	>1000	10000	<	<
892068	<	<	<	50	13	127	15	<	35	20	>1000	17000	<	<
892069	<	-	<	54	11	200	11	<	26	32	>1000	10100	<	<
892070	<	-	<	29	6	174	9	<	26	24	>1000	15800	<	<
892071	<	-	<	28	21	103	8	<	26	22	>1000	14200	<	<
892072	<	-	<	59	11	111	18	<	36	27	>1000	12100	<	<
892073	<	-	<	31	8	99	10	<	25	21	>1000	9810	<	<
892074	<	-	<	23	12	89	8	<	21	20	>1000	6981	<	<
892075	<	-	<	23	8	101	8	<	23	20	>1000	5477	<	<
892076	<	-	<	18	11	104	10	<	20	17	>1000	5964	<	<
892077	<	-	<	20	16	114	9	<	22	18	>1000	9232	<	<



9711-1

Plotted with MICROMINE Resources Software Perth, Australia Tel +61 9 389 8722 Fax +61 9 386 7462	NOTES :	NOTES : Geological + Assay Logs shown on Drg Nos. 47803 & 47804	Scale 1:500	DATE 15/12/94	SHEET 1 of 1	MIM EXPLORATION PTY LTD CUTANA - DAY HILL EL1976 SOUTH AUSTRALIA
				REF No. 47844.PGL		DDH MCD3/94 CROSS SECTION Drg. No. 47844

PROJECT : "Cuttaway - Dorothy Hill"
PROSPECT : "Mystique"
CO ORDINATES : 464300 E 8421600 N AMG
LEVEL : Line 6 101 3058 m

M.I.M. EXPLORATION PTY. LTD.
LOG OF DIAMOND DRILL HOLE

ANGLE FROM HORIZONTAL : -60° DIRECTION : 294° M
FINAL DEPTH : 436.7 m

HOLE No. MCD-3/92
R.L. SURFACE : 514.4 m
R.L. COLLAR : m
DATUM : m

DEPTH	Lithology Code	Core Loss	HQ/NQ	Mass Strength	SAMPLE No.	FROM m	TO m	Sample Length m	ASSAYS for Cu %	Pb %	Zn %	Ag g/t	CORE SIZE / DEPTH m	LOG	DESCRIPTION	Mag Sus SI x 10⁻³	Density t/m³
m													m				
					89886	0	2	2	.06	.35	.122	0.02			Brown clast-supported scree/soil.	3	2.0 to 2.5
					87	2	4	2	.30	.30	.365	"			Soil with frags minor calcrete	100	
					88	4	6	2	.20	.40	.24	"			Red br. weathered mica schist	40	
					89	6	8	2	.38	.65	.18	0.02			Weathered mica schist	0	
					90	8	10	2	.40	.60	.30	0.02			Weathered mica schist with frags of lam.	40	
					91	10	12	2	.46	.80	.46	"				9	
					92	12	14	2	.38	.25	.28	"					
					93	14	16	2	.42	.40	.26	"				9	
					94	16	18	2	.42	.25	.38	"					
					95	18	20	2	.44	.25	.38	"					
					96	20	22	2	.54	.35	.42	"					
					97	22	24	2	.44	.60	.38	"				9	
					98	24	26	2	.54	.20	.22	"					
					99	26	28	2	.44	.25	.30	"					
					900	28	30	2	.60	.25	.50	"					
					1	30	32	2	.82	.30	.132	"			Lost br ferruginous material + qtz frags.	11	
					2	32	34	2	.70	.25	.118	"					
					3	34	36	2	.62	.30	.72	.006					
					4	36	38	2	.52	.30	.62	.002				11	
					5	38	40	2	.86	.35	.98	.004					
					6	40	42	2	.94	.35	.96	.004				9	
					7	42	44	2	.98	.30	.80	.004					
					8	44	46	2	.116	.35	.140	"			↓ less limonite	40	
					9	46	48	2	.146	.10	.218	"				50	
					10	48	50	2	.94	.15	.164	"				11	
					11	50	52	2	.136	.20	.152	"			Qtz, fgr mica, garnet schist with trace py.		
					12	52	54	2	.58	.20	.96	"					
					13	54	56	2	.124	.35	.156	"					
					14	56	58	2	.82	.10	.52	"				9	
					15	58	60	2	.18	.10	.58	"				70	
					16	60	62	2	.20	.5	.32	"			↓ as above with 1 to 5% sphene	200	
					17	62	64	2	.40	.10	.72	"				200	
					18	64	66	2	.16	.10	.248	"				200	
					19	66	68	2	.46	.5	.52	"				200	
					20	68	70	2	.46	.10	.28	"				200	
					21	70	72	2	.24	.10	.38	"				200	
					22	72	74	2	.22	.10	.22	"				200	
					23	74	76	2	.12	.5	.20	"				50	
					24	76	78	2	.14	.5	.16	"				200	
					25	78	80	2	.10	.5	.16	"				200	
					26	80	82	2	.10	.5	.26	"				200	
					27	82	84	2	.6	.5	.14	"				200	
					28	84	86	2	.10	.5	.16	"				200	
					29	86	88	2	.12	.5	.44	"				200	
					89920	88	90	2	.78	.10	.40	"			Pre-collar to 90m	200	
	2	0	1	7	82	M	31	90	93	3	.20	.5	.38	"		Qtz, fgr, bi, musc, schist with some coarser gr sections of gneiss. Grey, strongly foliated, fine matrix gneiss - grade into less than 20% foliation sections of class of plasts of garnet & staurolite. Sil generally interpreted to be sericite & musc. Only a few sections with > 2% fgr py.	0
	3	6	3	4	80	M											
	1	2	1	2	50	M	32	93	97	4	.204	.166	.084	"			
	2	1	2	1	74	M											
	2	3	2	2	88	M	33	101	4	38	.40	.90	"		Amphibolite - amphibole, bi, parabolite + green fgr. - also plasts garnet & staurolite as		
	6	0	6	0	99	M	34	105	4	.60	.20	.166	"				
							35	109	4	.114	.5	.400	"				
	6	0	6	0	95	M	36	113	4	.22	.5	.90	"		Qtz, fgr, sil, bi, musc schist with some coarser gr sections of gneiss. Grey, strongly foliated, fine matrix gneiss - grade into less than 20% foliation sections of class of plasts of garnet & staurolite. Sil generally interpreted to be sericite & musc. Only a few sections with > 2% fgr py.		
	6	0	5	8	98	M	37	117	4	8	.45	.70	"				
							38	121	4	.112	"	.92	"				
	6	0	6	0	100	M	39	125	4	.58	"	.86	"				
							40	129	4	.30	"	.50	.004				
	6	0	6	0	97	M	41	133	4	.110	.15	.92	.008				
	5	8	5	8	98	M	42	137	4	.188	.10	.116	.010				
	5	4	5	6	89	M	43	141	4	.526	.35	.600	.010				
							44	145	4	.60	.10	.32	.002				
	4	1	4	1	93	M	45	149	4	.56	.5	.22	"				
	5	0	4	9	91	M	46	153	4	.10	.5	.16	"				
	6	0	6	0	100	M	47	157	4	.24	.5	.12	"				
	5	7	5	7	99	M	48	161	4	.8	.5	.10	"				
							49	165	4	.12	.5	.20	"				
	6	2	6	2	93	M	50	169	4	.66	.5	.16	"				
							51	173	4	.56	.5	.18	"				
	6	1	6	1	96	M	52	177	4	.92	.5	.58	"				
	6	0	6	0	97	M	53	181	4	.86	"	.130	"				
							54	185	4	.350	"	.466	.082				
	6	0	6	0	99	M	55	189	4	.66	"	.206	.012				
							56	193	4	.48	.5	.98	"				
	6	0	6	0	92	M	57	197	4	.52	.15	.206	"				
	6	0	6	0	99	M	58	201	4	.62	.5	.172	"				
	4	4	4	5	97	M	59	205	4	.42	.5	.56	.002				
	2	1	2	1	98	M	60	209	4	.50	.20	.52	.012				
	4	6	4	6	97	M	61	213	4	.30	.10	.58	"				
	3	9	3	8	97	M	62	217	4	.30	.10	.32	"				
	6	0	6	0	98	M	63	221	4	.58	.10	.96	"				
							64	225	4	.28	.5	.166	"				
	6	0	5	9	96	M	65	229	4	.60	.5	.152	"				
	6	0	6	0	89	M	66	233	4	.10	.5	.84	"				
							67	237	4	.18	"	.100	"				
	6	0	5	9	81	M	68	241	4	.18	.5	.58	"				
	6	0	6	0	92	M	69	245	4	.42	.5	.30	"				
	3	5	2	2	52	M	70	249	4	.30	"	.58	"				
	1	4	1	25	89	M											
	2	7	2	8	82	M	71	253	4	.12	"	.42	"				
	2	4	2	5	61	M											
	1	2	1	1	0	M	72	257	4	.22	.15	.56	.004				
	3	0	3	0	101	M											
							73	261	4	.26	.5	.28	.002				

Pre-collar to 90m

- Fine A 61
- Fine CA 61
- Fine CA 65
- Fine CA 66
- Fine CA 50
- Fine CA 45
- Fine CA 61
- Fine CA 50
- Fine CA variable
- Fine CA 90
- Fine CA 45
- Fine CA 50

cont. sh. 2

NOTES

Hole drilled by Silver City Drilling using a Warman 1000 rig in Nov 1992.

The hole was drilled to test an IP anomaly and gravity anomaly flanking the Peak Hill Fault Zone.

Samples from the pre-collar are 2m "grab" samples from the RC cuttings. Samples from the core are rock chips taken at approx 50cm centres over 4m intervals. Samples were assayed for Cu Pb Zn Co Ag Ni Au Assays for Cu Pb Zn Co Ag Ni As Bi + Mg of Fe values kept Mn Sb Mo As Bi + Mg of Fe values kept Mn Sb Mo Ag Ni Au results are in PPB. Ag Ni Au results are in PPB.

Cu Pb Zn Co + Au results ABO 12442. Cu Pb Zn Co + Au results ABO 12442.

Refer to the log - other Refer to the log - other elements shown on the log - elements shown on the log - other elements are all goats low + uniform. Ag increases over the interval 95 ft to 110.0 m. Ag increases over the interval 95 ft to 110.0 m.

DOWN HOLE SURVEYS

SURVEY DEPTH METRES	DIP DEGREES	ESTIMATED MAGNETIC BEARING DEGREES	GRID (UTM) BEARING DEGREES
138	57	315	
183	57	315	
321	56	320	
4367	56	320	

SURVEY METHOD

EASTMAN UNIT No.

MAGNETIC NORTH

LEGEND

Sil - sillimanite
bi - biotite
musc - muscovite
F - foliation - grade 50-51
F to CA - foliation to core axis
pblasts - porphyroblasts
fspr - feldspar

REVISION	ISSUED	CHECKED	DES.	DRAWN

PROJECT
PROSPECT
CO-ORDINATES
LEVEL

M.I.M. EXPLORATION PTY. LTD.

LOG OF DIAMOND DRILL HOLE

ANGLE FROM HORIZONTAL ..... DIRECTION .....
FINAL DEPTH .....

HOLE No. MC D-5/84
R.L. SURFACE ..... Sh. 2 of 2 m
R.L. COLLAR ..... m
DATUM ..... m

DEPTH	Azimuth Apparent Dip	Azimuth Core Orientation	Dip	Hole Diameter	Azimuth Corrected	SAMPLE No.	FROM m	TO m	Sample Interval	ASSAYS g/t Au	Ag	Cu %	Pb %	Zn %	CORE SIZE DEPTH	LOG	DESCRIPTION	Fe %	S %
m															m				
	50	039	60	M		991974	261	265	4	40	45	7648		10			Sil. bi. massive schist as before	0	tr
																	265.9m - 15cm qtz. ±py vein	tr	tr
	60	060	85	M				269	4	82	10	32	"	10			265 to 272m - Fine CA variable	20	tr
															270			"	"
						76	273	4	286	15	52	"	110					"	"
	60	060	81	M											4/m		273.7 to 273.1m - carbonate shear zone	"	"
																	273.1 to 277m - qtz. ±py ±gn fragmental qtz. prph. lens of from 273 to 276	"	"
	60	060	95	M		77	277	4	232	15	44	"	160		280		277 to 286m extensive ? multi Zone: Fine CA variable	"	"
						78	281	4	16	20	16	"	90		280			"	"
						79	285	4	8	15	10	"	15					"	"
	60	060	96	M		80	289	4	8	15	12	"	15				285 to 306m dissem'd blebby garnet ± staurolite	"	"
						81	293	4	8	15	12	"	10		290			"	"
	60	059	99	M														"	"
						82	297	4	8	10	8	"	5				298m orientated vein Variable F but overall dip of ±75° to 115°	"	"
	60	060	100	M		83	301	4	332	10	88	"	50		300			"	"
	60	059	96	M		84	305	4	54	10	116	"	15					"	"
						85	309	4	14	15	468	"	5				306 to 367m trace py, py	"	"
	60	060	96	M													Fine CA 25°	"	"
						86	313	4	52	10	92	"	10		310		312m orientated vein discolloyed green mark	"	"
	60	060	100	M		87	317	4	60	10	96	"	10					"	"
						88	321	4	56	15	76	"	10		320		317 to 367m - variable dip of foliation - folded	"	"
	60	060	100	M		89	325	4	24	35	118	"	5					"	"
	60	060	100	M		90	329	4	38	20	96	"	5					"	"
						91	333	4	56	10	80	"	10		330			"	"
	60	058	95	M		92	337	4	60	15	52	"	10				335m mSTZ py-py, trace cp	"	"
						93	341	4	10	15	96	"	25		340		336m orientated vein F dip variable	"	"
	60	060	100	M		94	345	4	112	15	224	"	50				340m to 348m dissem'd garnet ± staurolite from 347 to 348m	"	"
						95	349	4	14	10	48	"	5					"	"
	60	060	99	M		96	353	4	40	5	58	"	10		350			"	"
						97	357	4	84	15	56	"	20				352m orientated vein F dip variable	"	"
	60	060	97	M		98	361	4	42	5	58	"	10				355m to 367m dissem'd blebby garnet ± staurolite	"	"
															360			"	"
	60	060	98	M		99	365	4	164	10	20	"	20				Fine CA 45°	"	"
	52	052	100	M	992000		369	4	92	15	64	"	20				368.9 to 369.6m qtz ±py vein	"	"
						1	373	4	56	15	58	"	10		370			"	"
	58	058	100	M													373 to 388m - highly folded w/ circulation cleavage	"	"
						2	377	4	76	10	64	904	35				375m orientated vein F dip variable	"	"
	60	059	98	M		3	381	4	226	10	80	cal	85		380			"	"
	60	061	100	M		4	385	4	124	15	80	"	35				383 to 387.6m dissem'd garnet	"	"
						5	389	4	136	15	62	"	20				388.4m to 406.7m - series of qtz. ±py ±chalcopyrite bi veins upto 12cm length	"	"
	60	060	99	M		6	393	4	214	10	86	"	35		390			"	"
						7	397	4	58	30	44	"	60					"	"
	60	060	96	M		8	401	4	116	10	156	"	15		400		398.65 to 399.75m - amph/felsic qtz. all" with py, cp. Qtz with py seams Hairline amph.	"	"
	60	060	96	M		9	405	4	96	10	76	"	20				399m orientated vein - variable dip.	"	"
	60	060	98	M		10	409	4	176	10	152	"	20					"	"
						11	413	4	320	50	230	"	50		410		414.8 to 418.9m - amph all" assem" with py, trace cp	"	"
	60	060	96	M		12	417	4	488	10	388	"	95				417.1m - dissem'd py, trace cp - 20cm sections upto 10% py	"	"
	50	048	90	M		13	421	4	62	25	152	"	10		420		417m orientated vein - variable dip 418 to 419.5m - qtz. ±py vein 420 to 421m - trace py, cp	"	"
	60	061	100	M		14	425	4	464	10	312	"	25				Fine CA 25°	"	"
						15	429	4	592	45	152	"	10				422 to 426.7m - dissem'd garnet ± staurolite 422 to 426.5m - dissem'd py, trace cp.	"	"
	60	060	99	M													Fine CA 65°	"	"
						16	433	4	124	5	228	"	20		430			"	"
	47	046	92	M		992017	433	436.7	3.7	574	10	52	"	15			Fine CA 70° - 85° to CA	"	"

EOH 436.7

NOTES

DOWN HOLE SURVEYS

DOWN HOLE DEPTH METRES	DIP DEGREES	EASTMAN COMPASS READING DEGREES	GRID AZIMUTH DEGREES

SURVEY METHOD

EASTMAN UNIT No.

MAGNETIC NORTH

LEGEND

REVISION	DATE	DRAWN	TRACED	CHECKED	APPROVED

SCALE 1:250

GEO: JS
DATE: Nov 84
DRAFT: JS
DATE: Nov 84
CHECKED:
DATE:
APPROVED:
DATE:

1:1000 SCALE

MINING FIELD OR DISTRICT: Cloncurry

M.I.M. EXPLORATION PTY. LTD.

Geological sections Log Mc 5-1/84

EL 1926 "Canteen - Dry Hill" Ballera Prospect

DWG No.: A7264

Sht 2 of 2

9711-3

M.I.M. Exploration Pty. Ltd.
A.B.N. 53 009 681 118
A member of the M.I.M. Group of companies

MIM EXPLORATION

Level 2, Boundary Court
55 Little Edward Street
Spring Hill . Qld. 4000
Australia

Postal Address :
G.P.O. Box 1042
Brisbane . Qld. 4001
Australia

Telephone : +61 7 3214 9125
Facsimile : +61 7 3831 7497
e-mail :kkrudzin@mim.com.au

April 24, 2001

The CEO
PIRSA – Mineral Resources
GPO Box 1671
ADELAIDE SA 5001

Attn: Mr George Kwitko

Dear George,

RE: Exploration Licence EL 2635 "Cutana"
Partial Surrender Report No 2782 – Technical Data

In response to a request from J. Valentine. To facilitate the release of technical data summarised in Report No 2782 (relinquishment of Dey Hill area) MIMEX gives permission for the release to open file of all reports relating to EL1363, EL1752 and EL1772.

Included also are two re-issued copies of report No 2782 which contain appendices with drill logs from the Dey Hill area. The logs are from a 1995 report (EL1976). Reports on EL1976 are to remain confidential.

Would you please acknowledge receipt of this report by signing the release below and either fax or return post a copy to MIM Exploration Pty Ltd.

Yours sincerely,

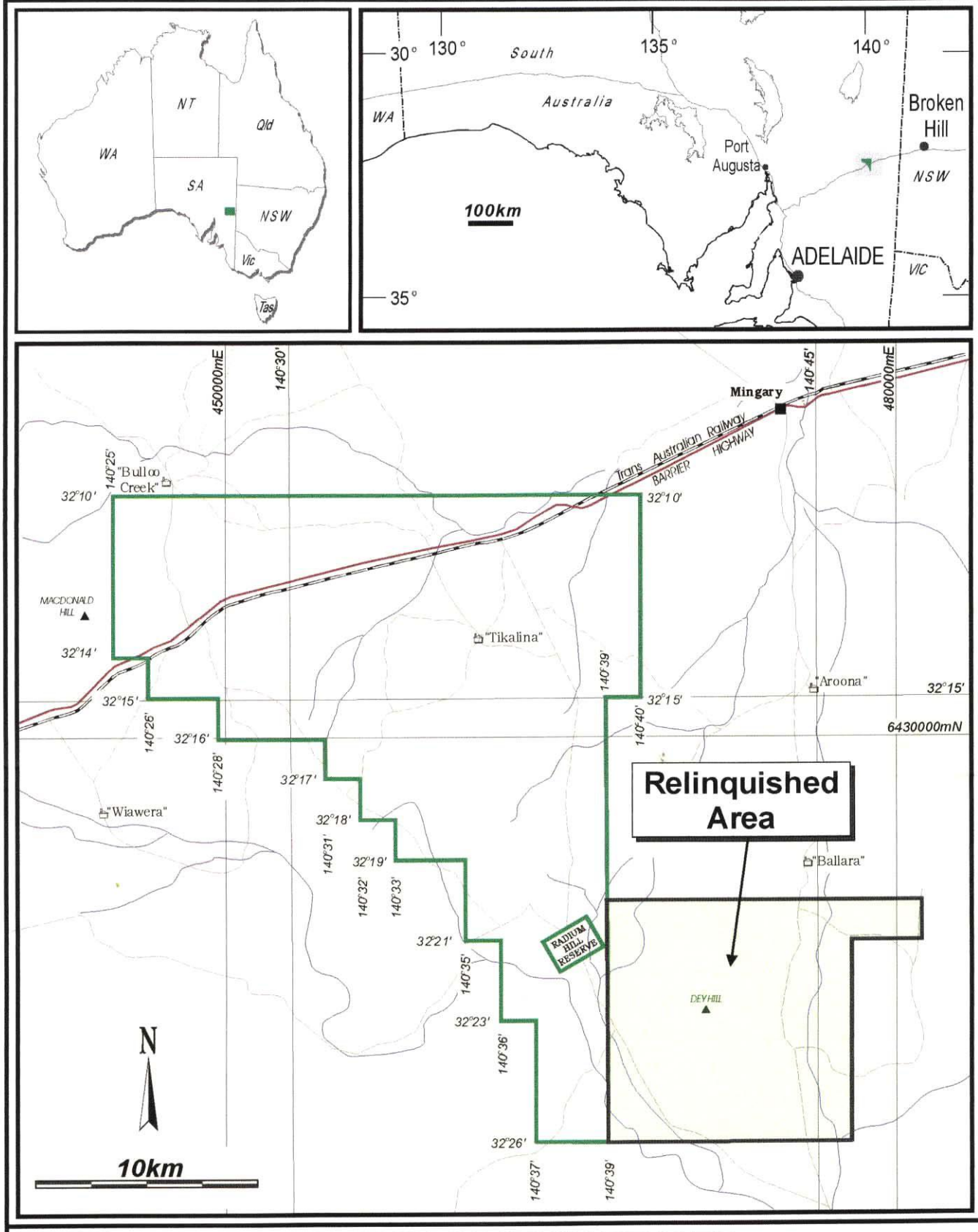
Steve Law
for

Klevas Rudzinskas
Tenement Administrator - Australia

PRIMARY INDUSTRIES & RESOURCES
30 APR 2001

signed | position | dated

C.F. → EL2635 – Adelaide/Brisbane\\Expad11\Data\DATA\Olary\Admin\EL1976_2635 Cutana\REPORTS\Cutana Dey Hill Report Letter Apr2001.doc



MIM EXPLORATION

M.I.M. EXPLORATION PTY LTD

A.C.N. 009 681 118

PROJECT / TITLE :

EL2635 "CUTANA"
showing Area Relinquished

Mining District or Region: OLARY			Compiled by : SRL	Scale : 1:250,000
Revised by :	Date :	1 : 250 000 Ref : SI54-2	Drawn by : remc	Date : 18dec00
		1 : 100 000 Ref : 6933/7033	Drwg No : 52082	REPORT 2782 : **Figure 1.**

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JANUARY 27, 1987

1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50 000. Exploration is carried out by Carpentaria Exploration Company Pty. Ltd. on behalf of Mount Isa Mines Limited. The Licence is located approximately 30 km east of Olary and covers an area of 769 km^2.

2. EXPLORATION

A total of 50, 5 to 10 kg drainage samples has been collected along the McDonald Fault Zone and assayed for gold by the "bulk cyanide leach" method. Results of this sampling have only recently been received and will be submitted with the next Quarterly Report.

A start has been made on geological mapping of the Luxembourg Mine area at a scale of 1:10 000. Mapping is being carried out on a black and white photo enlargement of a Lands Department colour air photograph.

Samples of drill core have been collected from holes drilled by Sundowner Minerals in the Luxembourg Mine area and submitted for fire assay for gold. One-quarter core was collected by SADME staff on drill core from holes L2, L3, L4, L12, L13, L18, L19 and L21. All the diamond holes drilled around the Luxembourg Mine are held by SADME. A total of 110 samples was taken. Assays will be submitted with the next Quarterly Report when all results are available.

RECEIVED
2 0 FEB 1987
DEPT. OF MINES AND ENERGY SECURITY
6782

3. EXPENDITURE

A Statement of Expenditure is attached.

.....

for P.J. Binks

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JANUARY 27, 1987

	$	$
Administration	1981	
Assaying	4881	
Aerial Surveys	262	
Consultant Fees	1627	
Field Base Operations	6619	
Freight	57	
Outside Services	156	
Operating Labour	6528	
Rents - Mining Tenements	1538	
Stores	64	
Transport	353	
Travelling Expenses	71	$24 137
TOTAL - THIS PERIOD		$24 137
Previously Reported		-
Total Project Expenditure to Date		$24 137

A.E. Covacich
Administration Superintendent

DATA TRANSMISSION SHEET

NATURE OF DATA	*Report/~~Drilling~~/Plan/Map/~~Theses~~
AUTHOR(S)	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
TITLE	EXPLORATION LICENCE NO.1363 "CUTANA" - PROGRESS REPORT FOR QUARTER ENDED JANUARY 27, 1987
	Pages 2 .Illus.etc.
COMPANY/ ORGANISATION(S)	MOUNT ISA MINES LIMITED
DOCUMENT/FILE NUMBER(S)	.Date:
	.Date:
KEYWORDS Concepts	STREAM SEDIMENT SAMPLING
[Please prefix stratigraphic names with (S)]	GEOLOGICAL MAPPING
	ROCK CHIP SAMPLING
Mineral Commodities	GOLD
	BASE METALS
State (S.A.) Geographic location	CUTANA SI/54-02 .1:250,000 sheet ref. 1:100,000 sheet ref 6933,7033
SUBMITTED BY	.(Co./Orgn)
HELD BY (if different from submitting authority)	.(Co./Orgn) .(Address/es)
FURTHER REFERENCE TO	.(Designation of officer)
STATUS OF DATA	SIGHTING - *Yes / Subject to negotiation COPYING - *Yes / Subject to negotiation INTENDED FOR PUBLICATION - *Yes / No
OTHER INFO. (if any)	

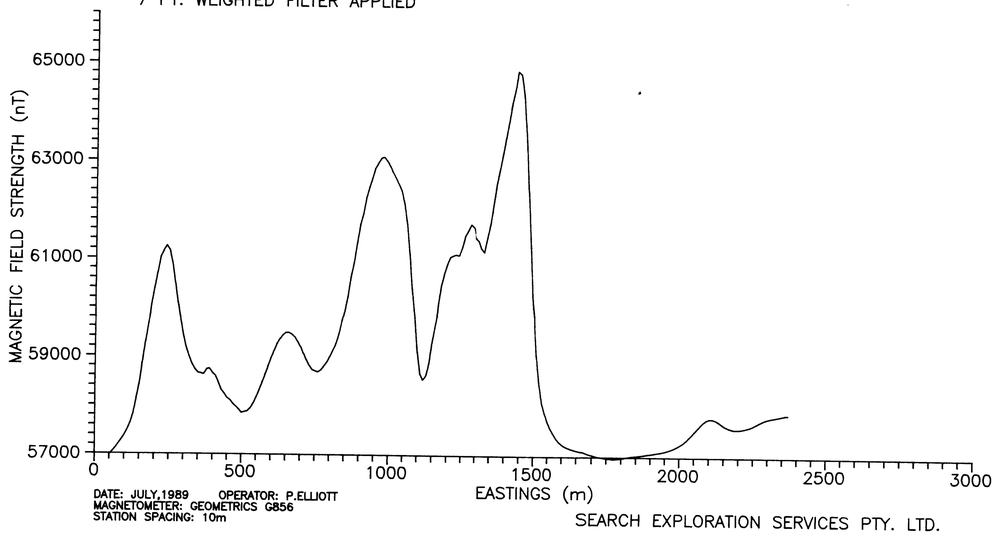
DATE: SIGNATURE:

*Delete whichever not applicable

Please send completed form to:

THE DIRECTOR-GENERAL,
DEPARTMENT OF MINES AND ENERGY,
P.O. BOX 151 EASTWOOD
SOUTH AUSTRALIA 5063

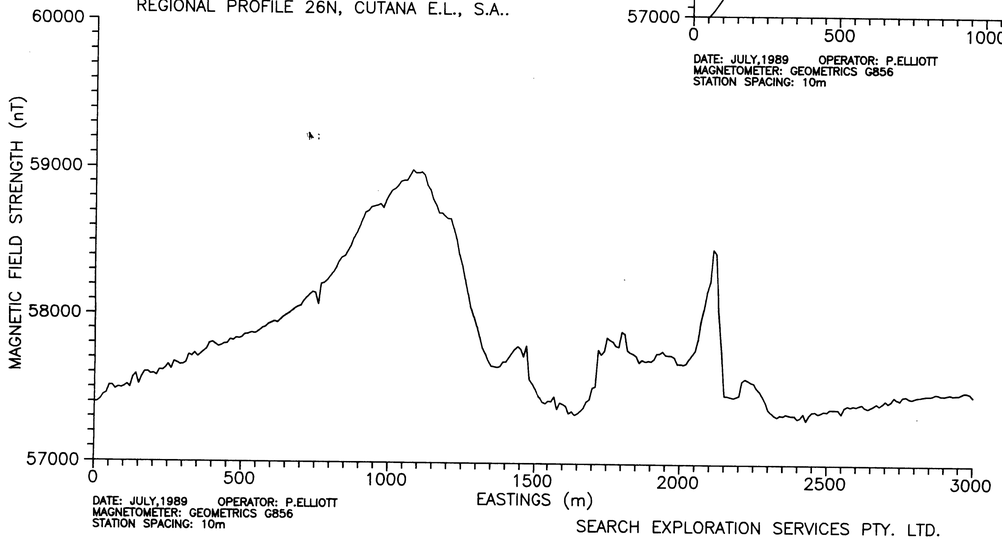
REGIONAL PROFILE 27N, CUTANA E.L., S.A..
7 PT. WEIGHTED FILTER APPLIED



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

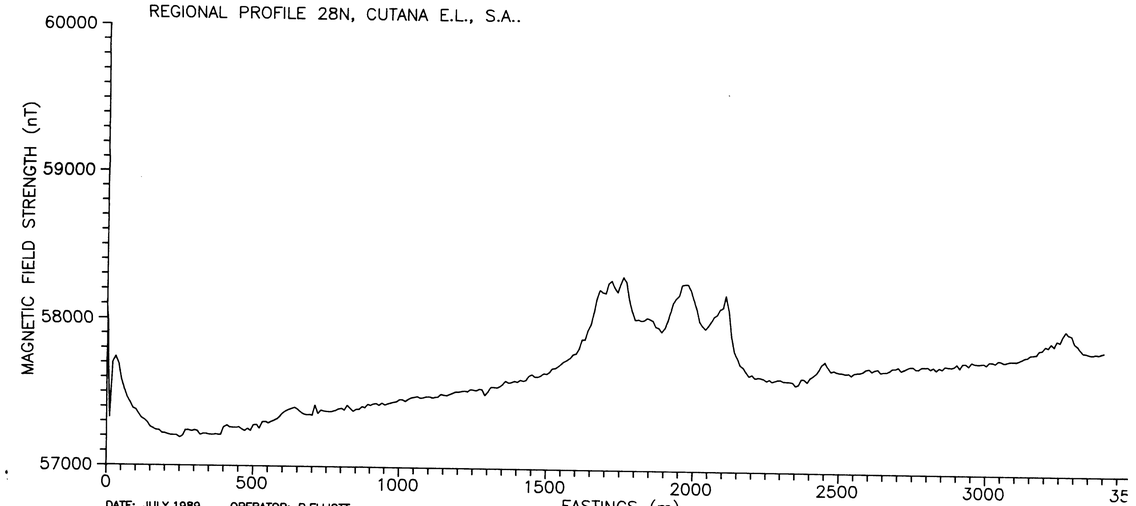
REGIONAL PROFILE 26N, CUTANA E.L., S.A..



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

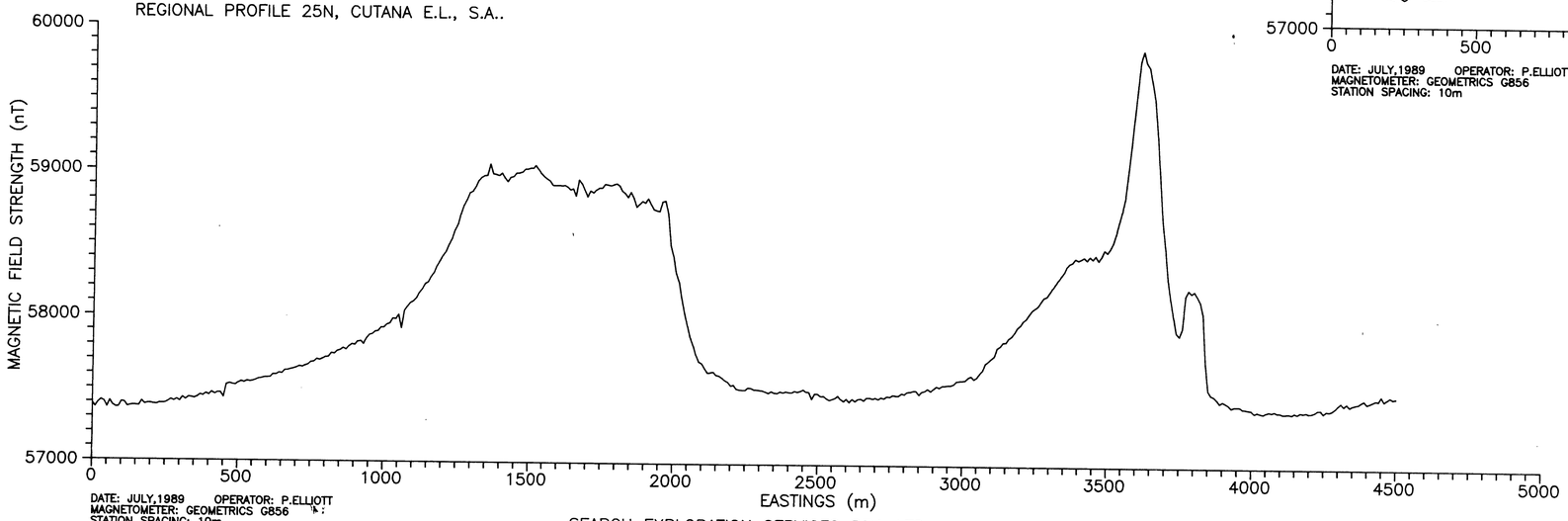
REGIONAL PROFILE 28N, CUTANA E.L., S.A..



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

REGIONAL PROFILE 25N, CUTANA E.L., S.A..



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

Drg No. 35539

470,000 mE

480,000 mE

6,420,000 mN

6,410,000 mN

140°35'

140° 50'

32°25'

△ BRISTOWE HILL

Watkins Shaft

Yard

Nilpena Well

△ SOUTH HILL

Dam

"Nilpena" (ruins)

Nilpena Dam (old)

Loading Ground

Dam

Watercourse Dam

Second Watercourse Dam

Yard

Muggs Dam

Bore

Outfield Bore

Moldorky Dams

IRON ROCK

Radium Dam

DEY HILL

Roundhill Dam

Open Dam

Diversion Dam

Paradise Dam

Surrender Dam

Dinnertime Dam

Sheds

Four Corners Dam

Yard

Reeds Dam

LINE 26

LINE 27

LINE 28

Line 30

Line 29

FM-M1302 FM-M1303 FM-M1304 FM-M1305 FM-M1306 FM-M1307 FM-M1308 FM-M1309 FM-M1310 FM-M1311 FM-M1312 FM-M1313 FM-M1314 FM-M1315 FM-M1316

FM-M1300 FM-M1301 FS-M1302 FS-M1303 FS-M1304 FS-M1305 FS-M1306 FS-M1307 FS-M1308 FS-M1309 FS-M1310

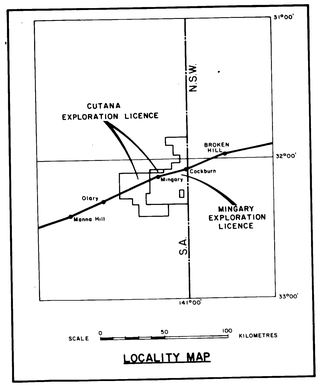
FM-M1288 FM-M1289 FM-M1290 FM-M1291 FM-M1292 FM-M1293 FM-M1294 FM-M1295 FM-M1296 FM-M1297 FM-M1298 FM-M1299

FM-M1277 FM-M1278 FM-M1279 FM-M1280 FM-M1281 FM-M1282 FM-M1283 FM-M1284 FM-M1285 FM-M1286 FM-M1287

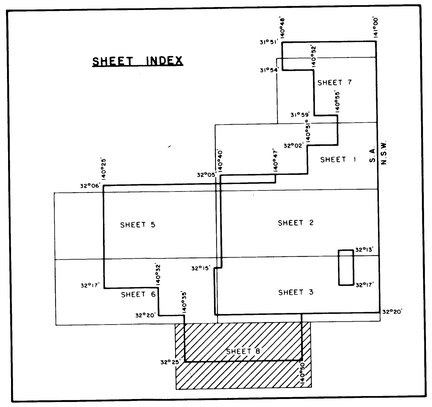
FM-M1272 FM-M1273 FM-M1274 FM-M1275 FM-M1276 FE-M1277 FE-M1278 FE-M1279 FE-M1280 FE-M1281 FE-M1282

LEGEND

FM	Quartz feldspar biotite gneiss psammopelite - Composite (>50% melted metasediment)
FS	Quartz feldspar biotite psammite - Composite (>50% melted metasediment)
FE	Quartz feldspar biotite sillimanite gneiss pelite - Composite (>50% melted metasediment)
BM	Quartz feldspar biotite gneiss
Pl	Plagioclase quartz rock
Peg	Pegmatite
r	Retrograded
M1305	RAB Drill Hole location and number



LOCALITY MAP



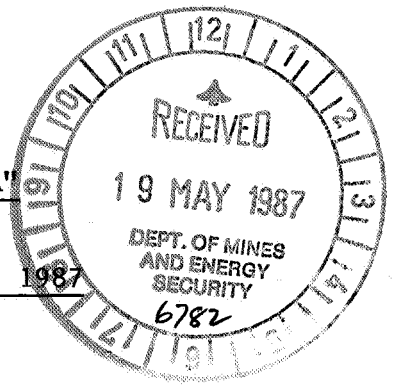
SCALE 0 500 1000 2000 3000 METRES

REVISION		SCALE 1:25 000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO P.B.	CUTANA EXPLORATION LICENCE SOUTH AUSTRALIA
		DRAFT G.J.G	RAB LINE LOCATIONS
		CHECKED	SHEET 8
		DATE Jan. 1990	
		1:250 000	
		1:100 000	
		MINING FIELD OR DISTRICT: Olary	DRG No. 3556

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED APRIL 27, 1987



1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50 000. The Licence is subject to a joint venture agreement with Tarcoola Gold Ltd. Exploration is carried out by Carpentaria Exploration Company Pty. Ltd. on behalf of Mount Isa Mines Limited and Tarcoola Gold Ltd. The Licence is located approximately 30 km east of Olary and covers an area of 769 km^2.

2. EXPLORATION

A further 12 drainage samples have been collected from the northern part of the Licence, giving a total of 62 sediment samples collected from this Licence. All these samples have been assayed for gold by the "bulk cyanide leach" method and results reveal an anomalous zone along the Macdonald Fault zone centred on the Luxembourg Mine area. Sample locations are shown on Drawings Nos.30 749 and 30 750 and assay results are given in the Appendix.

Geological mapping of the Luxembourg Mine district at a scale of 1:10 000 has been completed (see Drawing No.30 743). This mapping has revealed a complex structural zone in the Premier Mine area where a fault bounded, elongate block of sheared tillite transects Willyama Supergroup rocks. Locations of dump and rock chip samples and bulk cyanide leach soil samples are shown on Drawing No.30 743 and assay results of the samples are presented in the Appendix. Sample locations and gold assays at several prospects are shown on Drawings Nos.1/5186 to 1/5189.

Locations of rock chip and dump samples and gold assays at the Luxembourg-Queen Bee Mines are given on Drawing No.30 748. The base for this plan was photo-enlarged from a plan in Bulletin 34 of the Geological Survey of South Australia.

Assay results of one-quarter drill core from Sundowner diamond holes L4, L12, L13, L18, L19 and L21 are shown plotted with geology on Drawings Nos.30 734 to 30736. One-quarter core samples were also collected from diamond holes L2 and L3 and assayed for gold. Results are present in the Appendix.

A grid has been laid out over several kilometres around the Premier Mine and a ground magnetic survey carried out. Results have not yet been plotted and these data will be presented with the next quarterly report.

3. EXPENDITURE

A Statement of Expenditure is attached.

.....
for P.J. Binks

APPENDIX

ASSAY RESULTS

Geochem

ANALYSIS
g/tonne

SAMPLE MARK	GOLD Au
18172	<0.05
18173	0.05
18174	0.10
18175	<0.05
QS18175A	0.60 Std 19
18176	0.65
18177	0.05
18178	<0.05
17179	1.65
18180	0.05
18201	0.05
18202	0.10
18203	0.05
18204	0.10
18205	0.60
18206	0.05
18207	0.10
18208	0.10
18209	0.05
18210	<0.05
18211	0.05
18212	0.20
18213	0.15
18214	<0.05
18215	<0.05
QS1815A	<0.05 Std 1
18216	<0.05
18217	0.05
18218	<0.05
18219	<0.05
18220	<0.05
18221	<0.05
18222	0.20
18223	<0.05
18224	1.30
18225	0.90
18226	0.10
18227	0.05
18228	<0.05
18229	0.05
18230	0.05
18231	0.20
18232	0.10
18233	0.15
18234	<0.05
18235	<0.05
18236	0.05
18237	0.05
18238	<0.05
18239	0.05
18240	0.05
QS18240A	0.05 1
18241	<0.05
18242	0.10
18243	<0.05
18244	<0.05
18245	<0.05
18246	<0.05
18247	<0.05
18248	<0.05

Method: PM3/2

Luxemburg Mine area – rock chip samples
see Dry No. 30748 for locations

ANALYSIS

ng/kg

SAMPLE MARK	GOLD Au	SAMPLE MARK	GOLD Au	SAMPLE MARK	GOLD Au
724338	3700	724358	1200	724383	2500
724339	7700	724359	800	724384	1200
724340	4900	724360	450	724385	1050
724341	5400	724361	900	724386	550
724342	1400	724362	500	724387	400
724343	1400	724363	750	724388	2700
724344	2500	724364	750	724389	300
724345	2300	724365	400	724390	300
724346	2150	724366	800	724391	150
724347	700	724368	450	724392	850
724348	750	724370	100	724393	2100
724349	2800	724372	50	724394	550
724350	8000	724374	50	724396	100
724351	13700	724376	250	724398	100
724352	3900	724377	200	724400	50
724353	11600	724378	1000	724402	100
724354	1400	724379	650	724404	50
724355	1200	724380	2800	724406	50
724356	850	724381	11400	724408	50
724357	1150	724382	9400	724410	150
				724412	50

BCL Soils Luxembourg area

Drainage BCL

BCL Soils Luxembourg area

Drainage BCL

Method: PM6

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ANALYTICAL REPORT — JOB COM870527 — O/N : QS 18080

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd	Ag	Mo	V	Au	As	Sb	Sn	W	
QS 18080	26	46	105	32	20	24	1	1	8	80	<0.01	44	12	8	<10	Mindi Mindi EL 2550
QS 18081	28	42	95	22	12	22	2	1	6	90	<0.01	20	<4	<4	15	New road cutting
QS 18082	44	24	32	20	12	16	1	1	6	80	<0.01	34	6	<4	<10	near Thackaringa Mines
QS 18083	36	20	34	24	14	16	1	1	8	80	<0.01	60	4	4	<10	
QS 18084	260	2.95%	4700	55	38	40	16	125	8	90	<0.01	30	32	<4	10	Thackaringa Mine
QS 18085	3950	4.50%	7.15%	48	44	50	410	120	8	30	0.12	320	250	<4	<10	dump.
QS 18086	590	9.90%	5700	55	85	60	46	46	14	50	0.07	80	80	<4	<10	
QS 18087	44	600	840	22	12	34	6	2	6	80	<0.01	7	12	<4	<10	Mingary EL 1258.
QS 18088	20	2100	230	18	12	14	3	2	10	90	<0.01	<2	4	8	<10	Sn rock chip calc-silicate
QS 18089	26	75	270	22	16	14	2	1	8	110	<0.01	16	10	<4	10	at 487300E, 6441500N AMG.
QS 18090	2500	640	85	32	80	16	3	2	8	130	0.15	42	22	<4	15	↓ Cutana EL 1363
QS 18091	1.00%	18	55	36	140	44	3	2	10	40	0.90	16	4	6	<10	
QS 18092	1.35%	165	50	36	195	55	3	2	8	30	0.90	26	10	<4	20	
QS 18093	1600	18	42	38	75	42	3	1	8	90	0.20	16	4	4	<10	Green ad Gold Mine
QS 18094	1050	95	36	32	46	26	1	1	8	140	0.05	14	<4	<4	15	
QS 18095	4650	18	105	90	340	36	3	4	44	50	3.4	42	8	<4	20	
QS 18096	2.05%	24	24	48	125	30	1	5	20	70	0.73	10	4	<4	<10	
QS 18097	2.05%	10	26	42	130	10	1	7	14	50	0.54	18	<4	6	<10	
QS 18098	1.96%	28	16	26	110	16	1	5	18	50	0.24	18	<4	8	20	Cutana Copper Mine
QS 18099	2.70%	8	22	38	140	20	1	3	8	30	0.21	12	<4	<4	<10	
QS 18100	440	14	32	18	18	16	1	1	10	110	<0.01	18	4	4	<10	
QS 18100 a	38	14	44	14	8	14	1	<1	4	40	1.33	980	6	4	20	Std 19
QS 18101	185	22	65	22	14	18	1	1	10	110	<0.01	8	8	<4	<10	Yankee Shaft.
QS 18102	800	14	60	16	12	16	1	1	6	110	<0.01	12	6	6	30	
QS 18103	80	28	75	22	14	16	1	1	10	120	<0.01	8	4	<4	<10	
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
SCHEME	AAS1 AAS1A	AAS1 AAS1A	AAS1 AAS1A	AAS1	AAS1	AAS1	AAS1	AAS3	AAS3	AAS3	FAS1	XRF1	XRF1	XRF1	XRF1	

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SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd	Ag	Mo	V	Au	As	Sb	Sn	W	
QS 18104	210	6	10	16	6	8	1	<1	12	90	<0.01	6	22	<4	20	
QS 18105	46	55	18	14	4	10	1	<1	20	120	0.09	60	4	6	<10	
QS 18106	590	10	10	34	20	14	1	1	20	70	<0.01	48	12	<4	15	
QS 18107	90	12	130	20	22	40	2	1	8	120	<0.01	7	<4	<4	<10	
QS 18108	210	6	115	24	55	22	1	<1	<4	30	<0.01	8	<4	8	280	
QS 18109	4100	10	70	24	24	20	2	1	8	120	0.07	6	6	<4	15	Prospect dumps + mk chip Premier Mine area.
QS 18110	4300	12	65	22	24	24	2	<1	6	100	0.06	7	4	4	30	
QS 18111	2.10%	28	140	20	18	16	2	4	6	160	0.33	38	8	<4	20	
QS 18112	115	20	250	24	12	16	2	1	6	90	<0.01	7	6	6	15	
QS 18113	240	1950	900	20	14	18	2	1	6	110	<0.01	42	4	14	20	
QS 18114	16	6	10	10	6	12	1	<1	8	50	<0.01	5	4	<4	<10	
QS 18115	110	24	20	14	4	14	<1	<1	18	70	<0.01	40	8	4	10	Coo-ee Mine
QS 18116	20	460	390	18	4	6	9	1	12	60	<0.01	940	8	<4	<10	Boomerang Mine ~3½km SW Outalpa Siding
QS 18117	32	30	300	20	10	18	2	1	6	40	<0.01	46	4	8	<10	
QS 18118	145	18	110	38	170	55	4	2	16	240	<0.01	20	<4	12	<10	
QS 18119	1600	75	220	28	24	48	3	2	8	170	<0.01	12	6	<4	15	
QS 18120	1400	70	280	26	20	42	3	2	10	430	<0.01	80	4	<4	<10	Prospect dumps W. Premier Mine area
QS 18121	7700	280	145	26	55	28	2	2	10	140	<0.01	44	8	<4	<10	
QS 18122	3800	55	330	85	115	26	50	2	10	160	<0.01	42	6	<4	<10	
QS 18123	350	11.8%	7250	65	48	28	32	32	70	140	<0.01	9450	100	<4	20	
QS 18124	70	350	680	18	16	20	20	1	10	80	<0.01	42	4	4	10	
QS 18125	80	5250	1700	42	34	26	20	2	22	160	<0.01	400	6	<4	15	
QS 18125 a	140	1600	3600	32	20	24	24	8	6	120	1.48	380	36	<4	15	Std 9.
QS 18126	70	4200	2450	48	28	26	5	2	12	170	<0.01	340	14	4	<10	
QS 18127	270	7.45%	6400	55	38	20	22	30	110	120	<0.01	4600	55	<4	20	Winklers Lead - dumps.
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
SCHEME	AAS1 AAS1A	AAS1 AAS1A	AAS1	AAS1	AAS1	AAS1	AAS1	AAS3	AAS3	AAS3	FAS1	XRF1	XRF1	XRF1	XRF1	

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SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd	Ag	Mo	V	Au	As	Sb	Sn	W	
QS 18128	290	2300	1950	65	55	24	18	2	12	130	<0.01	790	6	4	<10	Winklers Lead - dumps.
QS 18129	180	1450	800	75	46	22	12	2	10	270	<0.01	770	<4	<4	<10	
QS 18130	195	730	130	20	14	24	6	2	12	300	<0.01	1200	10	<4	<10	
QS 18131	85	6100	520	26	14	12	3	1	6	80	<0.01	70	10	4	<10	Small pit U Premier Mine
QS 18132	34	580	320	42	55	14	2	1	8	150	<0.01	55	<4	14	<10	
QS 18133	1500	340	175	36	28	34	2	2	8	100	0.02	30	<4	8	15	
QS 18134	1.75%	42	80	55	55	95	2	6	16	90	0.21	10	6	<4	10	
QS 18135	1900	130	165	38	95	70	2	2	10	90	<0.01	20	<4	<4	10	
QS 18136	9200	32	170	70	80	26	2	2	10	120	0.05	16	<4	<4	<10	
QS 18137	2600	36	210	38	50	24	2	3	12	100	0.12	20	<4	<4	20	
QS 18138	1.65%	22	200	75	55	26	2	12	12	100	0.84	14	4	6	<10	
QS 18139	2300	24	75	32	32	48	3	9	18	50	0.26	14	<4	<4	<10	
QS 18140	2.85%	75	330	85	70	38	4	8	8	120	0.45	24	6	<4	10	
QS 18141	3300	40	95	46	28	42	2	1	10	90	0.03	14	<4	<4	65	
QS 18142	1.56%	20	95	38	60	32	3	4	10	100	0.62	70	<4	8	<10	
QS 18143	3.75%	195	120	70	80	105	3	9	16	110	1.39	340	6	<4	<10	Dumps + rock chip Premier Min.
QS 18144	2.35%	160	80	60	65	105	2	6	16	100	0.67	320	<4	<4	<10	
QS 18145	1.61%	130	160	55	60	80	3	5	14	90	0.48	115	<4	6	10	
QS 18145 a	490	40	105	50	26	36	2	1	4	70	0.03	38	4	6	<10	Std 18
QS 18146	1.81%	38	185	75	85	36	5	10	18	90	0.52	60	<4	<4	<10	
QS 18147	1200	18	36	26	20	16	1	1	10	150	0.04	7	6	<4	10	
QS 18148	2600	12	165	36	26	22	1	2	4	140	0.03	8	<4	6	20	
QS 18149	2.05%	24	80	85	42	20	2	9	6	80	0.36	18	4	<4	10	
QS 18150	3700	120	70	40	28	20	2	1	8	100	0.38	12	4	<4	15	
QS 18151	720	16	18	20	6	28	1	1	16	60	<0.01	12	4	<4	15	
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
SCHEME	AAS1 AAS1A	AAS1	AAS1	AAS1	AAS1	AAS1	AAS1	AAS3	AAS3	AAS3	FAS1	XRF1	XRF1	XRF1	XRF1	

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JOB COM87C
O/N : QS 18

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd	Ag	Mo	V	Au	As	Sb	Sn	W
QS 18152	3800	8	60	26	26	16	1	3	8	150	<0.01	7	<4	6	20
QS 18153	8200	16	26	70	105	110	3	20	24	160	0.31	38	6	<4	<10
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	AAS1	AAS1	AAS1	AAS1	AAS1	AAS1	AAS1	AAS3	AAS3	AAS3	FAS1	XRF1	XRF1	XRF1	XRF1

ANALYTICAL REPORT

JOB COM870527
O/N : QS 18080

ANALYSIS

ng/kg

SAMPLE MARK	GOLD Au	SAMPLE MARK	GOLD Au
724181	<50	724271	1000
724232	<50	724272	1200
724234	200	724273	800
724236	100	724274	350
724254	250	724275	600
724255	400	724276	1200
724256	200	724277	1000
724257	800	724278	450
724258	250	724279	2100
724259	200	724280	2000
724260	250	724281	1300
724261	200	724282	1300
724262	250	724283	950
724263	600	724284	2500
724264	150	724285	4800
724265	150	724286	2100
724266	1200	724287	1200
724267	700	724288	2300
724268	250	724289	1200
724269	500	724290	2300
724270	500	724291	1900
		724292	1200

Drainage NW Cutline

BCL Soils Pinnacle West Mining

BCL Soils Luxembourg area. Cutline

Method: PM6

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JOB COM870225
O/N : QS 17983

Au	SAMPLE	Cu	Pb	Zn	Bi	Co	Cd	
								DDH L2
<0.01	QS 17983	290	24	240	<4	6	<1	442'8" 445'8"
0.02	QS 17985	3200	14	155	<4	10	<1	448'8" - 451'8"
<0.01	QS 17987	310	12	60	<4	34	<1	542' - 545'
0.04	QS 17988	1150	<4	115	<4	16	<1	568' - 571'
								DDH L3
0.03	QS 18069	55	<4	85	<4	12	<1	478'6" - 481'6"
0.03	QS 18071	65	<4	180	<4	10	<1	523 - 526'
0.01	QS 18073	75	<4	150	<4	8	<1	529 - 532'
0.05	QS 18075	75	<4	220	32	20	<1	561 - 564'
0.03	QS 18077	40	<4	115	10	4	<1	567 - 570'
	UNITS	ppm	ppm	ppm	ppm	ppm	ppm	
	SCHEME	AAS1	AAS1	AAS1	AAS1	AAS1	AAS1	

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ANALYTICAL REPORT

JOB COM862326
O/N : QS 17983

	SAMPLE	Au	
DDH L2.	QS 17983	<0.01	442'8" - 445'8"
	QS 17984	<0.01	- 448'8"
	QS 17985	0.02	- 451'8"
	QS 17986	0.02	469'6" - 472'6"
	QS 17987	<0.01	542' - 545'
	QS 17988	0.04	568' - 571'
DDH L4	QS 17989	<0.01	252'6" - 255'6"
	QS 17990	<0.01	- 258'6"
	QS 17991	<0.01	- 261'6"
	QS 17992	<0.01	- 264'6"
	QS 17993	0.01	- 267'6"
	QS 17994	<0.01	598 - 601'
	QS 17995	0.01	- 604'
	QS 17996	0.01	- 607'
	QS 17997	[redacted]	- 610'
	QS 17998	[redacted]	- 613'
	QS 17999	<0.01	- 616'
	QS 18000	<0.01	680'9" - 683'9"
	QS 18000a	<0.01	Std
DDL2.	QS 18059	0.03	436'8" - 439'8"
	QS 18060	0.01	- 442'8"
DDH L4	QS 18061	0.01	683'9" - 686'9"
	QS 18062	0.02	- 689'9"
	QS 18063	[redacted]	- 692'9"
	QS 18063a	0.09	
	UNITS	ppm	
	SCHEME	FAS1	

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ANALYTICAL REPORT

JOB COM862326
O/N : QS 17983

	SAMPLE	Au	
	QS 18064	0.05	712'6" - 715'6"
	QS 18065	0.05	- 718'6"
	QS 18066	0.04	- 721'6"
L3	QS 18067	<0.01	472'6" - 475'6"
	QS 18068	0.01	- 478'6"
	QS 18069	0.03	- 481'6"
	QS 18070	0.01	520' - 523'
	QS 18071	0.03	- 526'
	QS 18072	0.05	- 529'
	QS 18073	0.01	- 532'
	QS 18074	0.01	558' - 561'
	QS 18075	0.05	- 564'
	QS 18076	0.02	- 567'
	QS 18077	0.03	- 570'
	QS 18078	0.02	- 573'
	UNITS	ppm	
	SCHEME	FAS1	

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ANALYTICAL REPORT

JOB COM862263
O/N : QS 17587

	SAMPLE	Au	
DDH L12.	QS 17587	0.02	356'6" - 359'6"
	QS 17588	0.03	- 360'9"
	QS 17589	0.10	365'9" - 368'0"
	QS 17590	1.10	- 371'0"
	QS 17591	0.16	- 374'6"
	QS 17592	<0.01	- 377'6"
DDH L13	QS 17593	<0.01	314'9" - 317'9"
	QS 17594	<0.01	- 320'9"
	QS 17595	1.67	- 323'10"
	QS 17596	0.04	- 326'10"
	QS 17597	0.02	- 329'10"
	QS 17598	<0.01	462'11" - 465'11"
	QS 17599	<0.01	- 468'11"
	QS 17600	0.03	- 471'0"
DDH L18	QS 18007	0.01	674'10" - 677'10"
	QS 18008	0.01	- 680'10"
	QS 18009	<0.01	773'4" - 776'4"
	QS 18010	0.01	- 779'4"
	QS 18011	0.02	- 785'4"
	QS 18012	0.04	791'4" - 797'4"
	QS 18013	0.24	785'4" - 791'4"
	QS 18014	0.34	797'4" - 803'4"
	QS 18015	0.08	- 809'4"
	QS 18016	0.06	- 815'4"
	QS 18017	<0.01	- 821'4"
	UNITS	ppm	
	SCHEME	FAS1	

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ANALYTICAL REPORT

JOB COM862263
O/N : QS 17587

	SAMPLE	Au	
	QS 18018	<0.01	821'4" - 827'4"
	QS 18019	0.01	- 831'4"
	QS 18020	<0.01	- 834'4"
	QS 18021	0.01	- 837'4"
DDH L19	QS 18022	0.01	549'1" - 552'0"
	QS 18023	0.03	- 555'0"
	QS 18024	0.03	572'7" - 575'7"
	QS 18025	0.01	- 578'4"
	QS 18026	0.01	673'0" - 676'6"
	QS 18027	0.02	- 679'2"
	QS 18028	0.02	710'10" - 713'10"
	QS 18029	0.04	- 716'10"
	QS 18030	0.04	783'2" - 786'2"
	QS 18031	0.48	- 791'8"
	QS 18032	0.07	- 794'8"
DDH L21	QS 18037	0.06	207'10" - 210'10"
	QS 18038	0.07	702' - 705'
	QS 18039	0.07	- 708'
	QS 18040	0.15	- 710'
	QS 18041	0.06	- 713'
	QS 18042	0.08	- 716'
	QS 18043	0.03	837'10" - 840'10"
	QS 18044	0.03	- 844'10"
	QS 18045	0.01	- 848'0"
	QS 18046	<0.01	- 851'0"
	UNITS	ppm	
	SCHEME	FAS1	

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ANALYTICAL REPORT

JOB COM862263
O/N : QS 17587

SAMPLE	Au	
QS 18047	<0.01	851'0" - 855'6"
QS 18048	<0.01	996'7" - 999'7"
QS 18049	<0.01	- 1002'7"
QS 18050	0.74	- 1005'7"
QS 18051	1.22	- 1008'7"
QS 18052	0.18	- 1011'7"
QS 18053	0.07	- 1014'7"
QS 18054	<0.01	- 1020'7"
QS 18055	<0.01	- 1026'7"
QS 18056	<0.01	- 1029'4"
QS 18057	0.03	- 1032'4"
QS 18058	<0.01	- 1035'0"
QS 17590a	<0.01	Std 18
QS 18020a	0.54	Std 24
QS 18045a	1.41	Std 19
UNITS	ppm	
SCHEME	FAS1	

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ANALYTICAL REPORT

JOB COM862263
O/N : QS 17587

	SAMPLE	Au	Pt	Pd	
DDH L21	QS 18033	<0.01	<5	<1	196-198 m
	QS 18034	<0.01	<5	<1	-200
	QS 18035	<0.01	<5	<1	-204'10"
	QS 18036	<0.01	<5	<1	-207'10"
	UNITS	ppm	ppb	ppb	
	SCHEME	FAS1	FAS2	FAS2	

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ANALYTICAL REPORT

JOB COM862263 O/N : Additional Assay

Results in ppm

	SAMPLE	Au	
DDH L13.	QS 18001	0.02	471'0" - 474'0"
	QS 18002	0.01	- 477'0"
DDH L18	QS 18003	<0.01	662'10" - 665'10"
	QS 18004	<0.01	- 668'10"
	QS 18005	<0.01	- 671'10"
	QS 18006	0.02	- 674'10"

Method of Analysis : FAS1

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ANALYTICAL REPORT

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JOB COM862
O/N : QS 17!

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd	Ag	Mo	V	Au	Pt	Pd	As	Sb	Sn	W
QS 17559	830	8	5	12	12	<4	1	1	16	40	3.2	10 ppb	<1	9	4	8	<10
QS 17560	3150	22	130	32	34	6	3	5	12	95	0.22	<5	<1	3	8	<4	50
QS 17561	320	16	40	260	44	<4	3	1	4	330	0.01	<5	<1	9	<4	34	10
QS 17562	530	16	8	12	14	<4	1	1	8	30	<0.01	<5	<1	4	6	8	<10
QS 17563	230	10	7	10	16	<4	<1	1	12	25	<0.01	<5	<1	<2	4	4	<10
QS 17564	42	8	6	4	10	<4	1	1	16	35	<0.01	<5	<1	7	<4	4	20
QS 17565	20	10	3	10	28	<4	1	<1	16	30	<0.01	<5	<1	6	6	4	10
QS 17566	16	10	4	6	46	<4	<1	1	10	20	<0.01	<5	<1	5	8	8	20
QS 17567	14	8	2	8	28	<4	1	1	14	40	<0.01	<5	<1	4	<4	6	10
QS 17568	90	6	3	6	12	<4	1	1	8	15	1.75	<5	<1	5	8	14	10
QS 17569	800	12	18	95	32	<4	3	1	8	195	0.03	<5	<1	7	<4	6	35
QS 17570	38	4	4	8	4	<4	<1	<1	6	15	0.07	<5	<1	3	4	<4	<10
QS 17571	90	14	50	90	22	<4	1	1	6	110	<0.01	<5	<1	<2	10	<4	15
QS 17572	940	10	8	16	18	<4	2	5	24	90	5.6	<5	<1	12	4	<4	<10
QS 17573	240	16	190	165	42	<4	3	2	6	240	<0.01	<5	<1	2	8	<4	<10
QS 17574	290	12	32	24	40	<4	2	2	8	95	0.03	<5	<1	4	8	4	10
QS 17575	6000	14	70	40	180	<4	2	2	14	155	0.04	<5	<1	12	<4	<4	20
QS 17576	390	48	50	32	50	<4	2	1	20	130	<0.01	<5	<1	46	4	6	30
QS 17577	210	28	18	26	50	4	1	1	26	85	<0.01	<5	<1	50	<4	<4	20
QS 17578	920	12	10	14	12	<4	1	2	8	35	1.80	<5	<1	12	<4	<4	<10
QS 17579	470	8	4	6	8	<4	1	1	14	40	0.76	<5	<1	5	8	<4	<10
QS 17580	8.00%	20	85	38	145	<4	3	4	6	110	0.52	<5	<1	8	10	18	210
QS 17581	620	10	26	14	10	<4	1	1	12	60	0.01	<5	<1	12	4	8	<10
QS 17582	340	14	50	22	14	<4	1	1	6	75	<0.01	<5	<1	4	<4	<4	15
QS 17583	6600	22	65	32	38	<4	5	4	8	70	0.01	<5	<1	<2	<4	<4	100
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppm	ppm	ppm	ppm
SCHEME	AAS1 AAS1A	AAS1	AAS1	AAS1	AAS1	AAS1	AAS1	AAS3	AAS3	AAS3	FAS1	FAS2	FAS2	XRF1	XRF1	XRF1	XRF1

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JOB COM862
O/N : QS 17

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd	Ag
QS 17584	4000	24	60	32	40	6	5	3
QS 17585	1150	14	12	60	30	<4	2	1
QS 17586	2.95%	42	60	28	46	1850	4	64
UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SCHEME	AAS1 AAS1A	AAS1	AAS1	AAS1	AAS1	AAS1	AAS1	AAS3

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ANALYTICAL REPORT

JOB C(
O/N : (

Mo	V	Au	Pt	Pd	As	Sb	Sn	W
6	85	0.02	<5	<1	4	6	34	45
16	50	0.01	<5	<1	8	6	<4	20
18	100	0.01	<5	<1	18	<4	16	75
ppm	ppm	ppm	ppb	ppb	ppm	ppm	ppm	ppm
AAS3	AAS3	FAS1	FAS2	FAS2	XRF1	XRF1	XRF1	XRF1

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O/N : QS

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ANALYTICAL REPORT

JOB COM862082
O/N : QS 17523

SAMPLE	Au	Pt	Pd	
QS 17523	<0.01	<5	<1	Mundi Mundi NSW EL 2534 — qtz vein Line 5's
QS 17524	<0.01	<5	<1	
QS 17525	<0.01	<5	<1	Cobar EL 1363 — McDonald Hill railway cutting
QS 17526	<0.01	<5	<1	
QS 17527	0.09	<5	<1	
QS 17528	<0.01	<5	<1	
QS 17529	0.04	<5	<1	
QS 17530	0.40	<5	<1	McDonald Hill Mine
QS 17530 a	1.00	<5	<1	Std 19
QS 17531	1.40	<5	<1	McDonald Hill Mine area
QS 17532	0.95	<5	<1	Green & A. Main
QS 17533	0.01	<5	<1	QM 4K 5 McDonald Hill siding.
QS 17534	<0.01	<5	<1	
QS 17535	<0.01	<5	<1	
QS 17536	0.03	<5	<1	
QS 17537	0.04	<5	<1	Peak NSW EL 2612
QS 17538	0.01	<5	<1	
QS 17539	<0.01	<5	<1	
QS 17540	<0.01	<5	<1	
QS 17541	<0.01	<5	<1	
QS 17542	<0.01	<5	<1	
QS 17543	<0.01	<5	<1	
QS 17544	<0.01	<5	<1	
QS 17545	<0.01	<5	<1	
QS 17546	0.03	<5	<1	
UNITS	ppm	ppb	ppb	
SCHEME	FAS1	FAS2	FAS2	

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ANALYTICAL REPORT

JOB COM862082
O/N : QS 17523

SAMPLE	Au	Pt	Pd	
QS 17547	<0.01	<5	<1	
QS 17548	<0.01	<5	<1	
QS 17549	<0.01	<5	<1	
QS 17550	<0.01	<5	<1	
QS 17550 a	<0.01	<5	<1	Std 18
QS 17551	<0.01	<5	<1	
QS 17552	0.01	<5	<1	
QS 17553	<0.01	<5	<1	
QS 17554	<0.01	<5	<1	
QS 17555	<0.01	<5	<1	Cu stain hillside 2.6km W Lux
QS 17556	0.01	<5	<1	" " 2.6 " "
QS 17557	0.02	<5	<1	" " 2.0 " "
QS 17558	<0.01	<5	<1	" " 900m SE Queen Bee Mine
UNITS	ppm	ppb	ppb	
SCHEME	FAS1	FAS2	FAS2	

Culvert EL1363

ANALYSIS

ng/kg
(ppb) ppt

SAMPLE MARK	GOLD Au
724157	100
59	1300
61	500
63	1000
65	1500
67	100
69	400
71	400
73	100
75	1100
77	650
79	150

Method: A3

Cutana - Drainage samples.

amdel

Analysis code A2/3 Report AC 2151/87 Page G1

NATA Certificate Results in ppm

Sample	Au
724158	<0.01
724160	<0.01
724162	<0.01
724164	<0.01
724166	<0.01
724168	<0.01
724170	<0.01
724172	<0.01
724174	<0.01
724176	<0.01
724178	<0.01
724180	<0.01
Detn limit	(0.01)

amdel

Analysis code I | Report AC 2151/87 | Page I1

NATA Certificate | Order No. 724157 | Results in ppm

Sample	Cu	Pb	Zn	Ag	Sn	Fe	Mn
724158	55	35	35	<1	20	5.45%	240
724160	35	15	35	<1	15	2.20%	230
724162	50	10	15	<1	15	4.44%	150
724164	95	25	35	<1	20	5.30%	270
724166	35	15	40	<1	15	2.40%	260
724168	90	15	20	<1	20	15.9%	220
724170	35	15	35	<1	15	2.98%	210
724172	75	15	40	<1	20	14.0%	260
724174	55	15	40	<1	20	5.10%	260
724176	40	25	45	<1	15	3.90%	260
724178	40	10	30	<1	15	4.26%	230
724180	65	10	45	<1	20	7.10%	300
Detn limit	(5)	(5)	(5)	(1)	(5)	(50)	(5)

amdel

Analysis code I | Report AC 2151/87 | Page I2

NATA Certificate | Order No. 724157 | Results in ppm

Sample	As	Ni	Mo	Cr	Co	W
724158	60	15	5	45	10	10
724160	5	15	<5	30	10	5
724162	5	10	<5	40	15	<5
724164	10	20	<5	35	15	5
724166	5	15	<5	30	10	5
724168	5	25	<5	130	30	<5
724170	5	15	<5	30	10	<5
724172	5	35	<5	160	25	<5
724174	5	20	<5	70	15	5
724176	10	15	<5	50	10	10
724178	5	15	<5	50	10	<5
724180	<5	25	<5	90	25	<5
Detn limit	(5)	(5)	(5)	(5)	(5)	(5)

ANALYSIS

ng/kg
(ppt)

SAMPLE MARK	GOLD Au	SAMPLE MARK	GOLD Au
724079	<50	724117	2300
80	<50	19	1800
81	4000	21	1200
83	1900	23	2500
85	1300	25	2100
87	300	27	2100
89	500	29	2600
91	200	31	17000
93	<50	33	8900
95	200	35	2300
97	200	37	300
99	<50	39	11000
724101	400	41	5400
03	150	43	3600
05	1600	45	4300
07	1700	47	900
09	3300	49	2300
11	3200	51	1000
13	2800	53	5800
15	400	55	4200

Method: A3

Stream Sed Cudem

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Analysis code I A2/3 Report AC 1929/87 Page I1

NATA Certificate Order No. 724079 Results in ppm

Analysis code I A2/3 Report AC 1929/87 Page I3

NATA Certificate Order No. 724079 Results in ppm

Sample	Cu	Pb	Zn	Ag	Sb	Sn	Fe	Mn	As	Ni	Mo	Cr	Co	W	Au	Bulk cyanide Leach - ppb
724058	230	120	490	<1	10	10	45.3%	640	25	130	5	140	40	<5	<0.01	
724059	440	75	170	<1	5	<5	47.3%	580	25	760	5	95	90	<5	<0.01	
724060	220	130	760	<1	5	<5	57.1%	360	20	60	<5	50	20	<5	<0.01	
724061	320	85	340	<1	<5	5	52.1%	1500	30	290	5	65	90	<5	<0.01	
724062	980	220	370	<1	15	10	43.2%	500	140	85	5	130	40	<5	<0.01	
724063	580	130	640	<1	10	10	37.6%	920	40	95	5	140	45	<5	<0.01	
724064	310	110	460	<1	<5	<5	53.3%	1300	30	140	<5	75	55	<5	<0.01	
724065	370	120	580	<1	5	10	50.3%	1200	25	160	5	140	85	<5	<0.01	
724066	240	120	620	<1	10	10	51.8%	350	55	70	5	90	10	<5	<0.01	
724067	270	90	110	<1	5	10	47.4%	600	110	60	<5	140	90	<5	<0.01	
724068	130	35	110	<1	10	15	19.6%	330	~~420~~	95	<5	90	45	<5	<0.01	
724069	640	95	140	<1	10	5	48.2%	470	~~290~~	~~820~~	<5	200	200	<5	<0.01	
724070	190	55	95	<1	5	<5	38.4%	230	95	90	<5	95	280	<5	<0.01	
724071	100	25	70	<1	<5	<5	21.5%	170	15	40	<5	45	10	<5	<0.01	
724072	220	90	940	<1	15	10	32.5%	260	110	150	5	100	25	<5	<0.01	
724073	410	70	130	<1	10	5	40.6%	370	85	45	<5	300	45	<5	<0.01	
724074	680	120	340	<1	15	5	50.1%	300	130	340	5	380	100	<5	<0.01	
724075	410	80	150	<1	<5	<5	39.3%	170	220	~~740~~	5	270	110	<5	<0.01	
724076	740	70	85	<1	15	<5	53.2%	230	~~330~~	~~1050~~	5	~~740~~	~~600~~	<5	~~8.50~~	
724077	360	65	240	<1	10	10	35.1%	1150	160	220	5	250	230	<5	~~0.20~~	
724078	680	110	310	<1	10	10	45.3%	1200	75	150	<5	95	95	<5	<0.01	
724082	45	35	55	<1	25	20	3.68%	360	15	20	5	35	10	10	<0.01	4.0
724084	35	30	55	<1	20	20	2.90%	330	10	15	<5	35	10	5	<0.01	1.9
724086	20	20	25	<1	20	20	2.18%	310	5	10	<5	25	5	5	<0.01	1.3
724088	45	50	70	<1	20	20	4.78%	410	15	20	<5	45	15	5	<0.01	0.3
724090	25	20	35	<1	15	15	2.36%	300	10	10	<5	25	5	5	<0.01	0.5
724092	35	25	40	<1	20	20	4.68%	460	10	20	<5	35	10	5	<0.01	0.2
724094	20	25	40	<1	30	20	2.22%	360	45	15	5	35	10	10	<0.01	<0.05
724096	40	40	65	<1	30	25	4.02%	560	15	25	5	40	15	15	<0.01	0.2
724098	40	35	85	<1	30	25	4.26%	460	15	25	5	45	15	10	<0.01	0.2
724100	25	20	40	<1	30	25	3.14%	320	10	15	<5	45	10	10	<0.01	<0.05
724102	35	20	55	<1	25	20	4.58%	320	10	15	5	60	15	10	<0.01	0.4
724104	55	20	30	<1	30	20	10.7%	230	5	25	5	130	25	<5	<0.01	0.15
724106	65	25	25	<1	25	20	14.7%	520	10	20	<5	120	20	<5	<0.01	1.6
724108	35	20	40	<1	25	20	3.14%	370	10	20	5	35	10	10	<0.01	1.5
724110	75	25	25	<1	25	20	16.8%	370	10	25	<5	140	20	<5	<0.01	3.3
724112	35	15	30	<1	25	20	4.82%	420	5	15	<5	50	15	10	<0.01	3.2
724114	45	30	35	<1	25	20	3.74%	350	15	15	<5	30	10	10	<0.01	2.8
724116	85	25	25	<1	25	20	23.3%	290	5	40	<5	230	20	<5	<0.01	0.4
724118	35	100	55	<1	20	20	3.88%	230	40	15	<5	40	10	5	<0.01	2.3
Detn limit	(5)	(5)	(5)	(1)	(5)	(5)	(50)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(0.01)	

Fe St 5km E Cockburn

Fe St Line 53 check

Stream sed

Cutanana EL 1385 → Mundi Mdi EL 2514

amdel

Analysis code I A2/3

NATA Certificate

Report AC 1929/87

Order No. 724079

Page I2

e I A2/3

Results in ppm

cate

Report AC 1929/87

Order No. 724079

Page I4

Results in ppm

Sample	Cu	Pb	Zn	Ag	Sb	Sn	Fe	Mn	As	Ni	Mo	Cr	Co	W	Au	BCL ppb.
724120	20	25	45	<1	15	15	2.60%	270	10	15	<5	50	10	5	<0.01	1.8
724122	25	15	30	<1	15	10	3.22%	290	10	20	<5	30	10	5	<0.01	1.2
724124	55	30	40	<1	20	15	9.80%	580	15	35	<5	110	20	5	<0.01	2.5
724126	45	20	25	<1	25	20	7.50%	230	5	20	<5	90	10	5	<0.01	2.1
724128	15	15	15	<1	25	20	1.72%	170	5	5	<5	25	5	5	<0.01	2.1
724130	45	25	35	<1	30	25	6.00%	220	15	20	5	70	10	5	<0.01	2.6
724132	60	~~150~~	~~200~~	<1	20	20	3.10%	350	50	25	5	40	15	10	<0.01	17.0
724134	45	55	90	<1	25	20	3.06%	540	20	30	5	55	15	10	<0.01	8.9
724136	25	20	30	<1	15	20	3.30%	210	10	10	<5	45	5	5	<0.01	2.3
724138	25	15	20	<1	30	25	3.16%	210	5	10	<5	80	5	5	<0.01	0.3
724140	40	15	45	<1	25	20	3.56%	300	5	20	5	65	10	10	<0.01	11.0
724142	50	15	35	<1	35	20	6.70%	470	5	85	<5	~~580~~	20	5	<0.01	5.4
724144	45	25	50	<1	30	20	4.54%	560	10	60	<5	~~300~~	20	10	<0.01	3.6
724146	95	20	25	<1	25	20	12.5%	250	10	20	<5	100	15	<5	<0.01	4.3
724148	35	15	15	<1	25	20	4.34%	140	5	10	<5	65	10	10	<0.01	0.9
724150	80	15	40	<1	25	20	4.08%	270	10	15	5	30	10	10	<0.01	2.3
724152	60	15	30	<1	25	20	6.65%	310	5	25	5	100	15	10	<0.01	1.0
724154	90	80	65	<1	25	15	3.94%	270	20	15	5	30	15	10	<0.01	5.8
724156	35	95	70	<1	20	20	2.90%	490	25	25	<5	50	15	5	<0.01	4.2
Detn limit	(5)	(5)	(5)	(1)	(5)	(5)	(50)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(0.01)	

Culture ← Stream Sed

amdel

Analysis code I | Report AC 2151/87 | Page I1

NATA Certificate | Order No. 724157 | Results in ppm

Sample	Cu	Pb	Zn	Ag	Sn	Fe	Mn	As	Ni	Mo	Cr	Co	W
724158	55	35	35	<1	20	5.45%	240	60	15	5	45	10	10
724160	35	15	35	<1	15	2.20%	230	5	15	<5	30	10	5
724162	50	10	15	<1	15	4.44%	150	5	10	<5	40	15	<5
724164	95	25	35	<1	20	5.30%	270	10	20	<5	35	15	5
724166	35	15	40	<1	15	2.40%	260	5	15	<5	30	10	5
724168	90	15	20	<1	20	15.9%	220	5	25	<5	130	30	<5
724170	35	15	35	<1	15	2.98%	210	5	15	<5	30	10	<5
724172	75	15	40	<1	20	14.0%	260	5	35	<5	160	25	<5
724174	55	15	40	<1	20	5.10%	260	5	20	<5	70	15	5
724176	40	25	45	<1	15	3.90%	260	10	15	<5	50	10	10
724178	40	10	30	<1	15	4.26%	230	5	15	<5	50	10	<5
724180	65	10	45	<1	20	7.10%	300	<5	25	<5	90	25	<5
Detn limit	(5)	(5)	(5)	(1)	(5)	(50)	(5)	(5)	(5)	(5)	(5)	(5)	(5)

Cyprus Stream Sed →

Report AC 2151/87 Page I2
Order No. 724157 Results in ppm

COMLABS SERVICES PTY. LTD.

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ANALYTICAL REPORT

JOB COM861427
O/N : QS 17488

SAMPLE	Au	Pt	Pd
QS 17488	1.15	<5	<1
QS 17489	2.2	<5	<1
QS 17490	4.2	<5	<1
QS 17491	7.1	<5	<1
QS 17492	0.20	<5	2
QS 17493	<0.01	<5	<1
QS 17494	2.4	<5	<1
QS 17495	0.07	<5	5
QS 17496	2.7	<5	<1
UNITS	ppm	ppb	ppb
SCHEME	FAS1	FAS3	FAS3

Luxemburg Mine

QS 17488 – pyritic qtz vein dump approx 60m SW of Main Water Tank - Queen Bee.

17489 – py. qtz vein dump approx 40m S track at Queen Bee.

17490. – oxidised py. qtz vein dump 10m S main shaft at Queen Bee.

17491 – Cpy, py qtz vein dump near leaching tanks Queen Bee.

17492 – Amphibolite from main dump Queen Bee.

17493. – felsic rock from dump approx 150m N Queen Bee.

17494 – Py. qtz vein from dump approx 20m N main shaft at Luxemburg Mine.

17495 – Amphib. from main shaft at Luxemburg Mine.

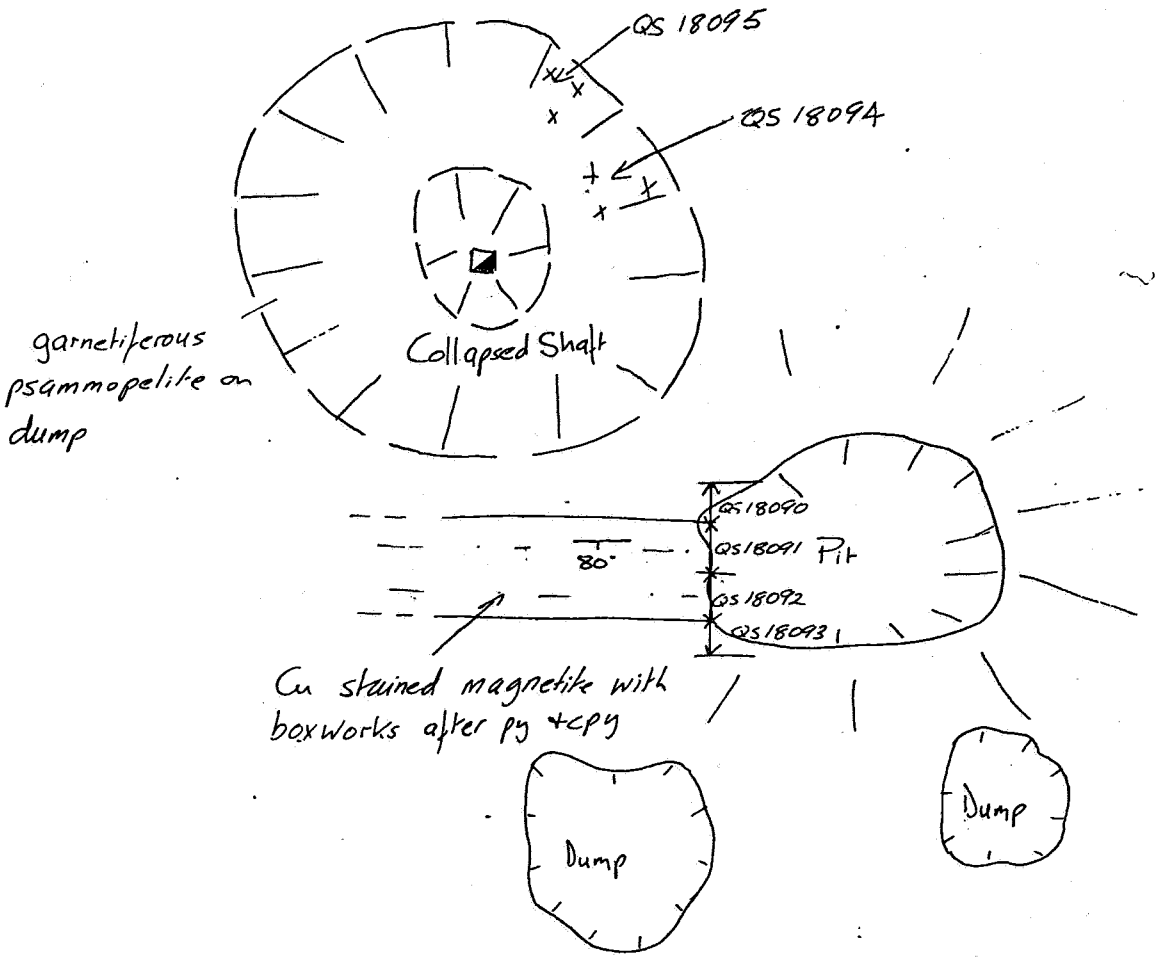
17496 – Fe rich qtz vein from pit ~800m SSW Queen Bee Mine.

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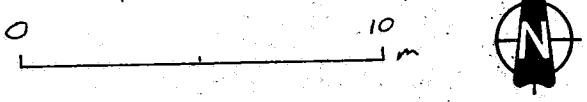
ANALYTICAL REPORT

JOB COM861427
O/N : QS 17488

SAMPLE	As	Sb	Mo	Sn	W
QS 17488	8	<4	8	<4	10
QS 17489	6	<4	3	<4	<10
QS 17490	4	4	8	8	<10
QS 17491	2	4	7	<4	<10
QS 17492	<2	4	<2	<4	<10
QS 17493	<2	<4	2	<4	<10
QS 17494	2	<4	12	10	10
QS 17495	20	8	2	<4	<10
QS 17496	75	4	36	<4	60
UNITS	ppm	ppm	ppm	ppm	ppm
SCHEME	XRF1	XRF1	XRF1	XRF1	XRF1

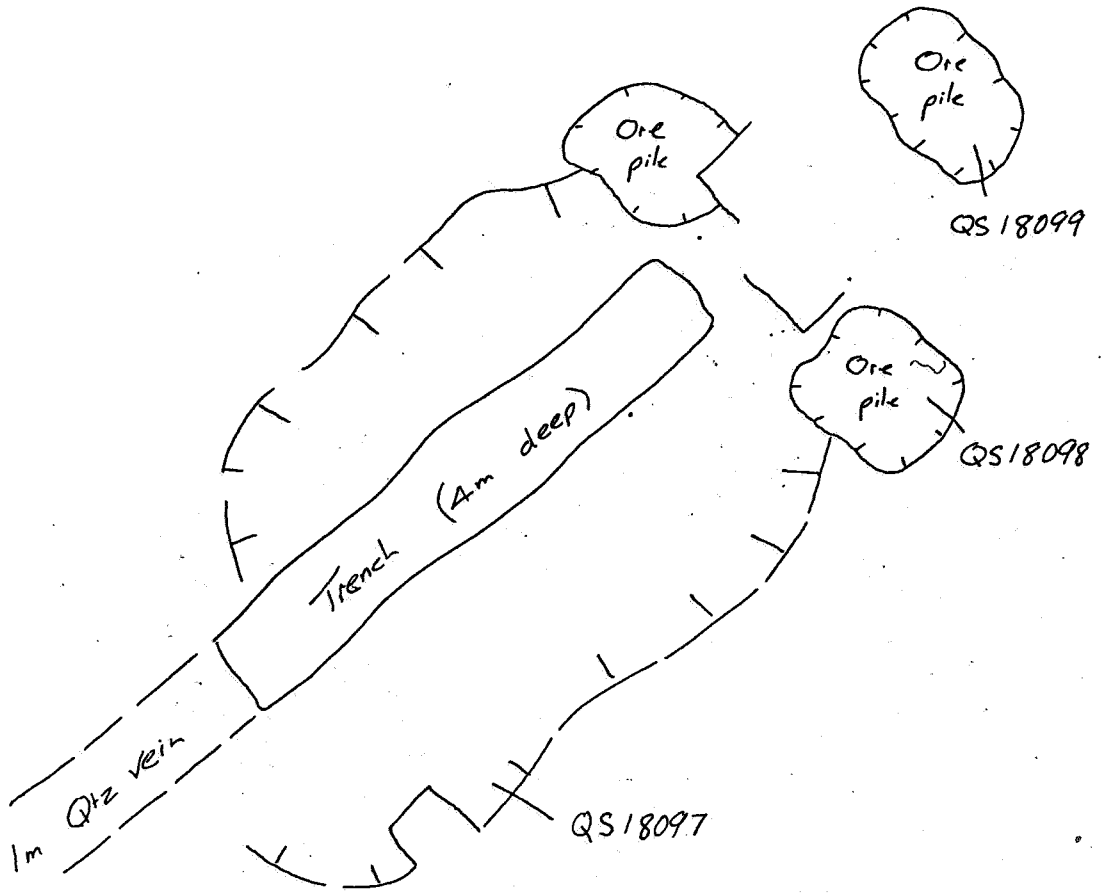


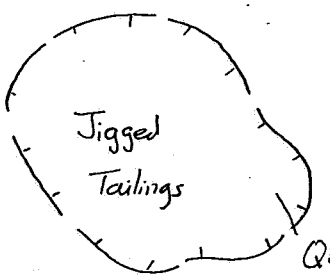
QS 18090 – 1m weathered gneiss (0.15 g/t Au)
" 91 – 1m magnetite (0.94 g/t Au)
" 92 – 1m " (0.99 g/t Au)
" 93 – 1m weathered gneiss (0.20 g/t Au)
" 94 – gneiss from dump (0.05 g/t Au)
" 95 – magnetite from dump (3.38 g/t Au)



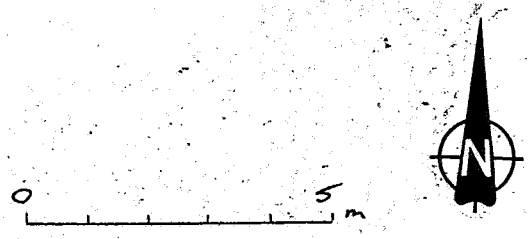
450400E 6437200N AMG

REVISION		SCALE: ~1:250	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO MB	CUTANA EL 1363 S.A. Green and Gold Mine Sketch map showing sample locations
		DRAFT: MB	
		CHECKED: MB	
		DATE: March 1987	
		1:250 000 SI54-2	
		1:100 000 6933	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 1/5186



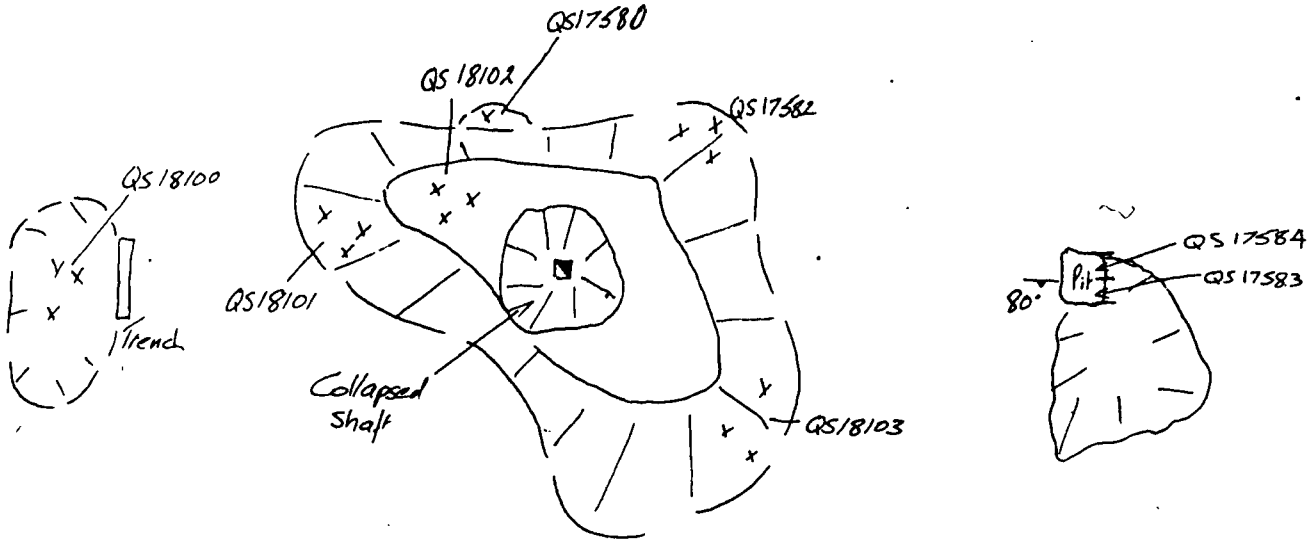


QS 18096 – jigged tailings (0.73 g/t Au).
" 97 – qtz vein fragments from dump (0.54 g/t Au)
" 98 – qtz vein fragments with oxidised Cu ore (0.24 g/t Au).
" 99 – as for 18098 (0.21 g/t Au).



459200E 6431900N AMG

REVISION		SCALE: 1:125	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO MB	CUTANA EL 1363 S.A. Cutana Copper Mine. Sketch Map Showing Sample Locations
		DRAFT: MB	
		CHECKED: MB	
		DATE: March 87	
		1:250 000 SI54 2	
		1:100 000 6933	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 1/5187

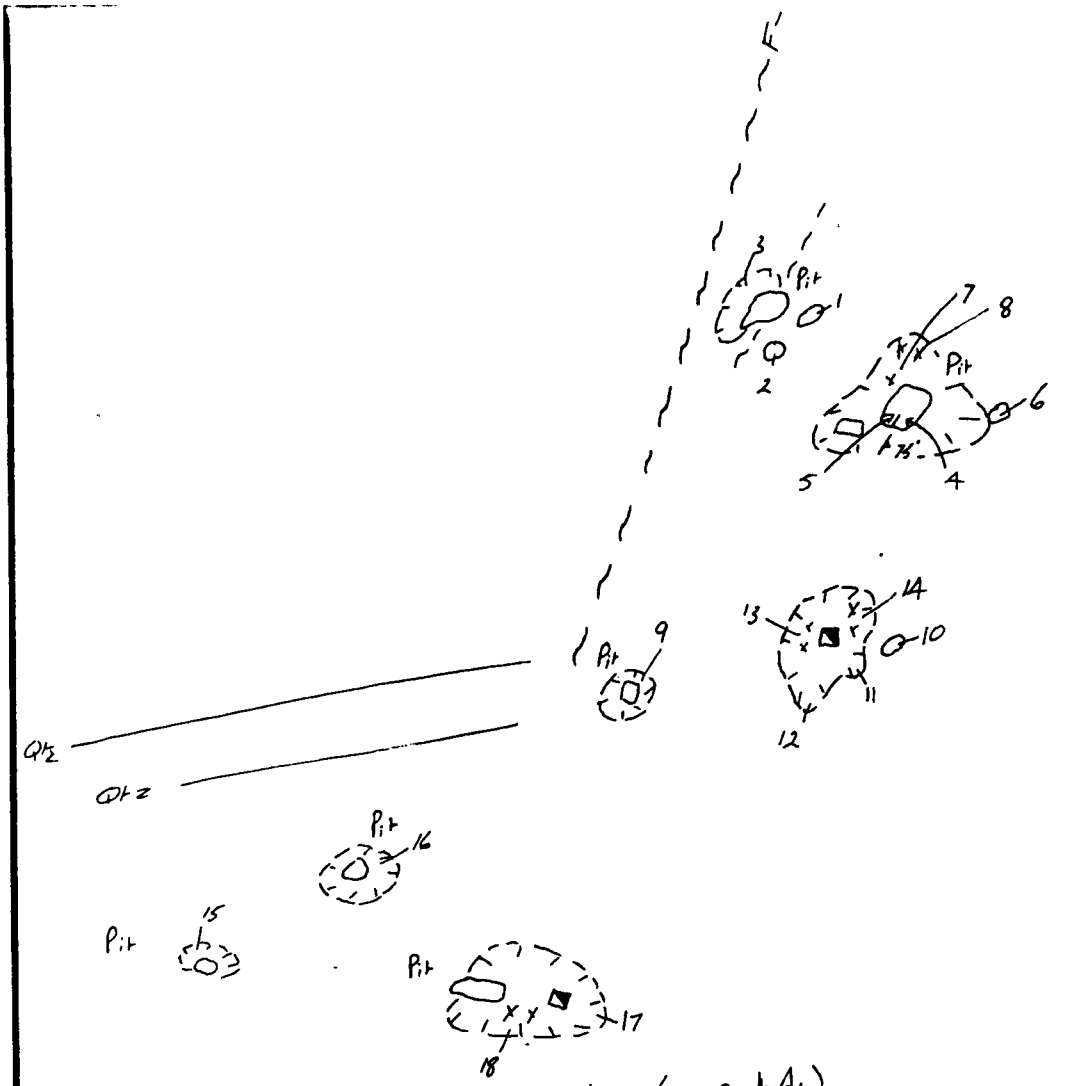


QS 17580 – cu stained sheared tillite from ore pile (0.52 g/t Au)
QS 17581 – fractured tillite with qtz veining and copper staining (0.01 g/t Au)
" 82 – pyritic tillite (<0.01 g/t Au)
" 83 – 1m chip sample highly sheared chloritic tillite with magnetite (0.01 g/t Au)
" 84 – " " " (0.02 g/t Au)
QS 18100 – fractured tillite with qtz veining (<0.01 g/t Au).
" 01 – pyritic tillite (<0.01 g/t Au)
" 02 – " " (<0.01 g/t Au)
" 03 – " " (<0.01 g/t Au).

459300 E 6428400 N AMG.

0 5 10 m

REVISION		SCALE: ~1:250	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO MB	
		DRAFT: MB	CUTANA EL 1363 S.A. Yankee Shaft. Sketch Map Showing Sample Locations
		CHECKED: MB	
		DATE: March 87	
		1:250 000 SI 54 2	
		1:100 000 6933	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 15488



1 - QS 18133 - tillitic wall rock from dump (0.02 g/t Au)
2 - QS 18134 - qtz + oxidised sulphides from dump (0.21 g/t Au)
3 - " 35 - amphibolitized tillite wall rock from dump (<0.01 g/t Au).
4 - " 36 - chip sample Cu stained weathered tillite - 1.5m (0.05 g/t Au)
5 - " 37 - " " - 1.5m (0.12 g/t Au).
6 - " 38 - crushed ore dump (0.84 g/t Au)
7 - " 39 - Fe rich wall rock on dump (0.26 g/t Au)
8 - " 40 - Weathered tillitic wall rock (0.45 g/t Au)
9 - " 41 - " " (0.03 g/t Au).
10 - " 42 - ore pile (0.62 g/t Au).
11 - " 43 - " (1.39 g/t Au)
12 - " 44 - " (0.67 g/t Au)
13 - " 45 - Weathered tillitic wall rock from dump (0.48 g/t Au)
14 - " 46 - " " (0.52 g/t Au)
15 - " 47 - " " (0.04 g/t Au).
16 - " 48 - " " (0.03 g/t Au)
17 - " 49 - ore pile (0.36 g/t Au)
18 - " 50 - Weathered tillitic wall rock from dump (0.38 g/t Au)

0 50 m

458600E 6428400N AMG

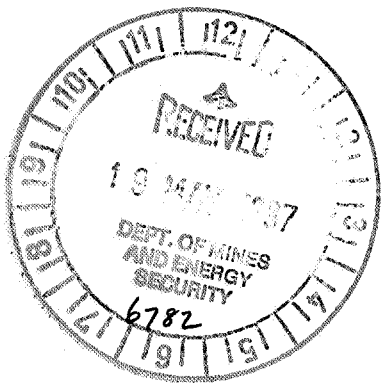
REVISION		SCALE: 1:1000~	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO MR	CUTANA EL 1363 S.A. Premier Mine. Sketch Map Showing Sample Locations
		DRAFT: MB	
		CHECKED: MB	
		DATE: March 87	
		1:250 000 SI 54 2	
		1:100 000 6933	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 1/5189

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED APRIL 27, 1987

	$	$
Administration	1903	
Assaying	4763	
Consultant Fees	47	
Field Base Operations	3750	
Outside Services	3031	
Operating Labour	6146	
Stores	594	
Transport	253	
Travelling Expenses	797	$21 284
TOTAL - THIS PERIOD		$21 284
Previously Reported - Current Term		
Quarter ended January 27, 1987		$24 137
Total Project Expenditure to Date		$45 421



A.E. Covacich
Administration Superintendent

DATA TRANSMISSION SHEET

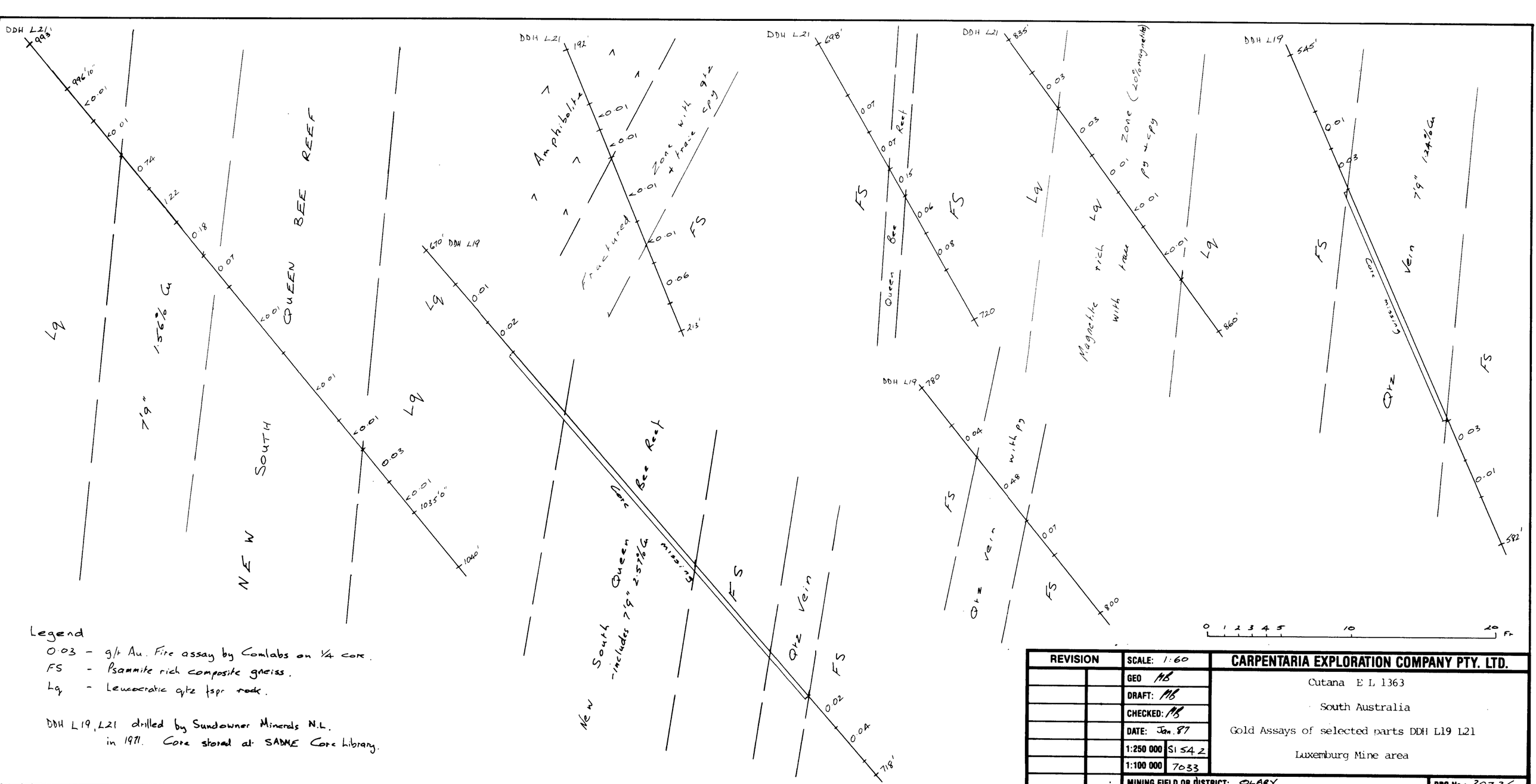
NATURE OF DATA	:*Report/~~Drilling~~/Plan/Map/~~Thesis~~
AUTHOR(S)	: CARPENTARIA EXPLORATION COMPANY PTY. LTD.
TITLE	: EXPLORATION LICENCE NO.1363 "CUTANA - PROGRESS REPORT FOR QUARTER ENDED APRIL 27, 1987.
	Pages 2 .Illus.etc. 6 PLANS
COMPANY/ ORGANISATION(S)	: MOUNT ISA MINES LIMITED 1 APPENDIX
DOCUMENT/FILE NUMBER(S)	: .Date:
	.Date:
KEYWORDS Concepts [Please prefix stratigraphic names with (S)]	: STREAM SEDIMENT SAMPLING GEOLOGICAL MAPPING ROCK CHIP SAMPLING
Mineral Commodities	: GOLD BASE METALS
State (S.A.) Geographic location	: CUTANA SI/54-02 .1:250,000 sheet ref. 1:100,000 sheet ref 6933,7033
SUBMITTED BY	: .(Co./Orgn)
HELD BY (if different from submitting authority)	: .(Co./Orgn) .(Address/es)
FURTHER REFERENCE TO	: .(Designation of officer)
STATUS OF DATA	: SIGHTING - *Yes / Subject to negotiation COPYING - *Yes / Subject to negotiation INTENDED FOR PUBLICATION - *Yes / No
OTHER INFO. (if any)	:

DATE: SIGNATURE:

*Delete whichever not applicable

Please send completed form to:

THE DIRECTOR-GENERAL,
DEPARTMENT OF MINES AND ENERGY,
P.O. BOX 151 EASTWOOD
SOUTH AUSTRALIA 5063

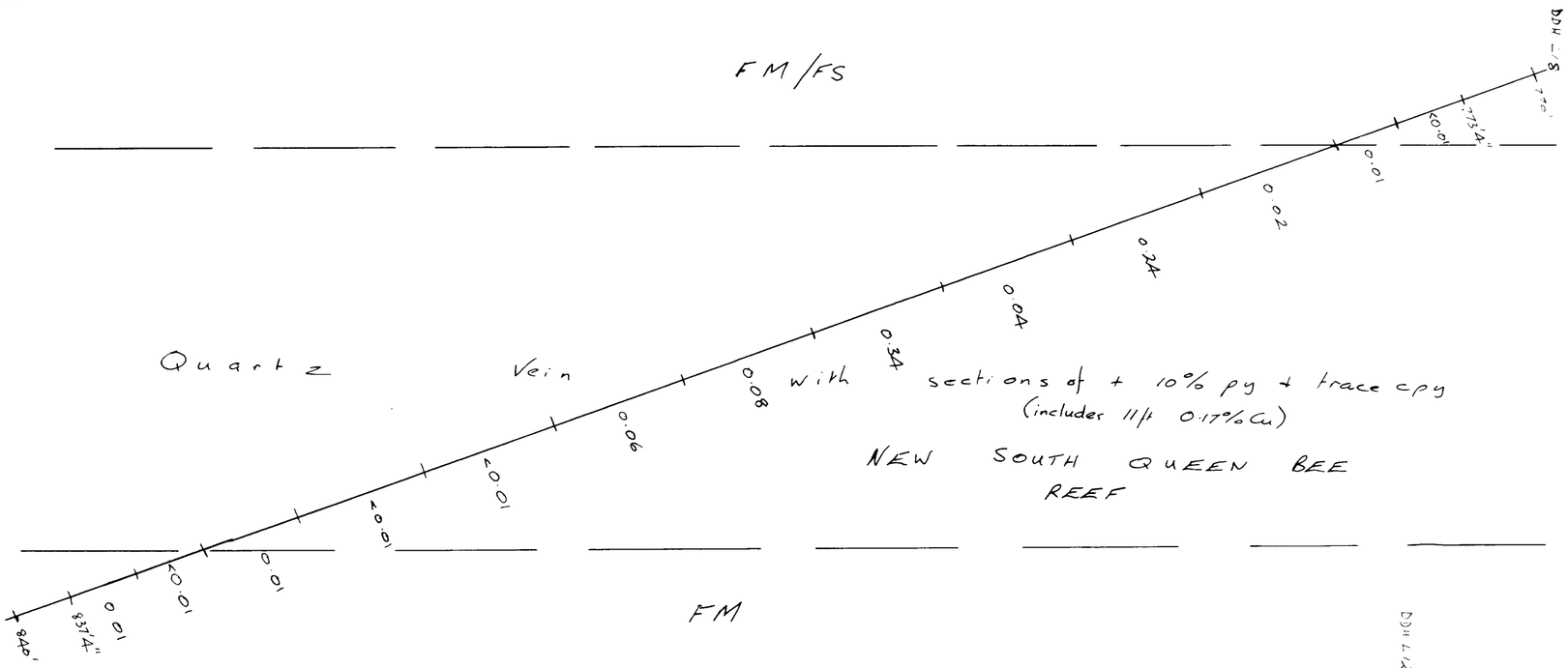


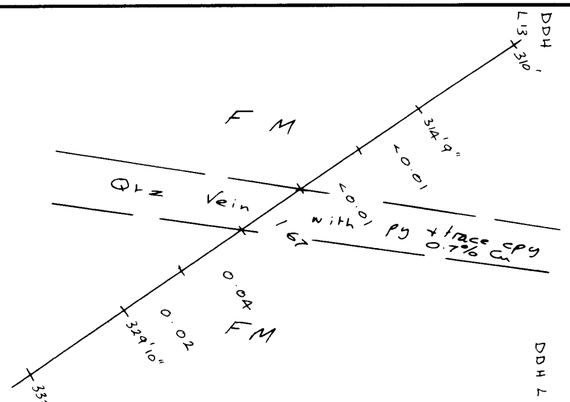
Legend

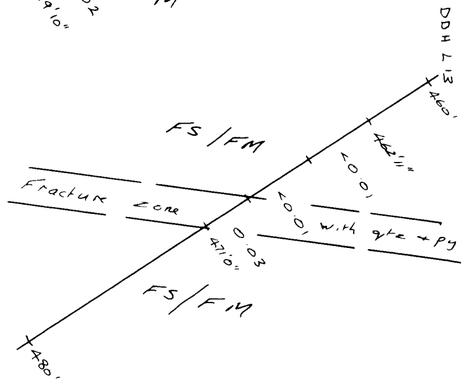
0.03 - g/t Au. Fire assay by Comlabs on ¼ core.
FS - Psammite rich composite gneiss.
Lq - Leucocratic qtze fspr rock.

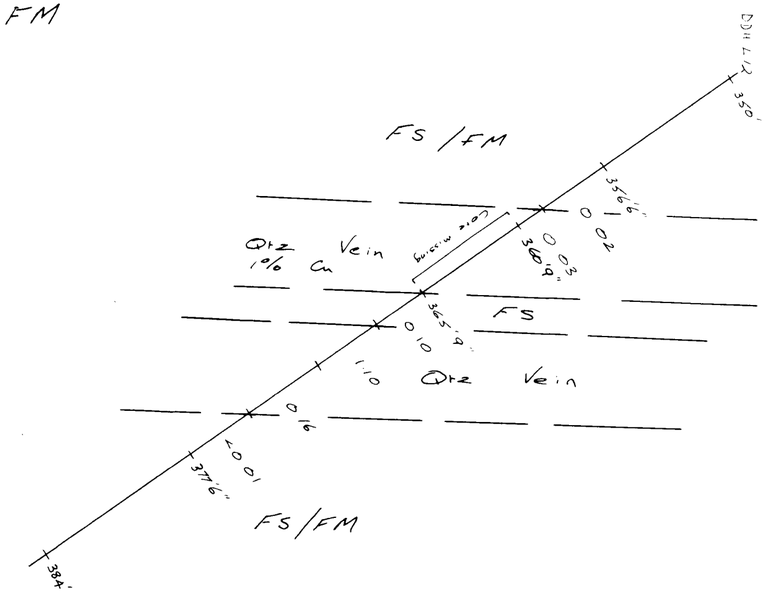
DDH L19, L21 drilled by Sundowner Minerals N.L. in 1971. Core stored at SADME Core Library.

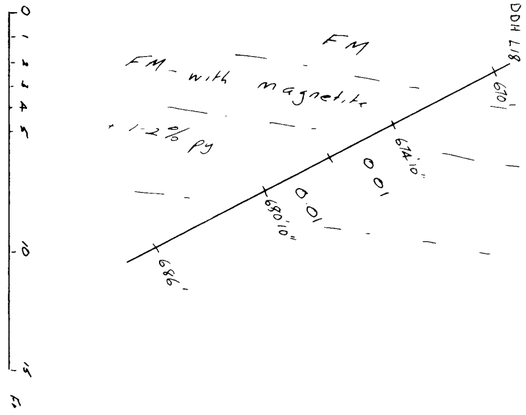
REVISION			
		SCALE: 1:60	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO MB	Cutana E L 1363
		DRAFT: MB	South Australia
		CHECKED: MB	Gold Assays of selected parts DDH L19 L21
		DATE: Jan. 87	Luxemburg Mine area
		1:250 000 SI 54 2	
		1:100 000 7033	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 30736











Legend

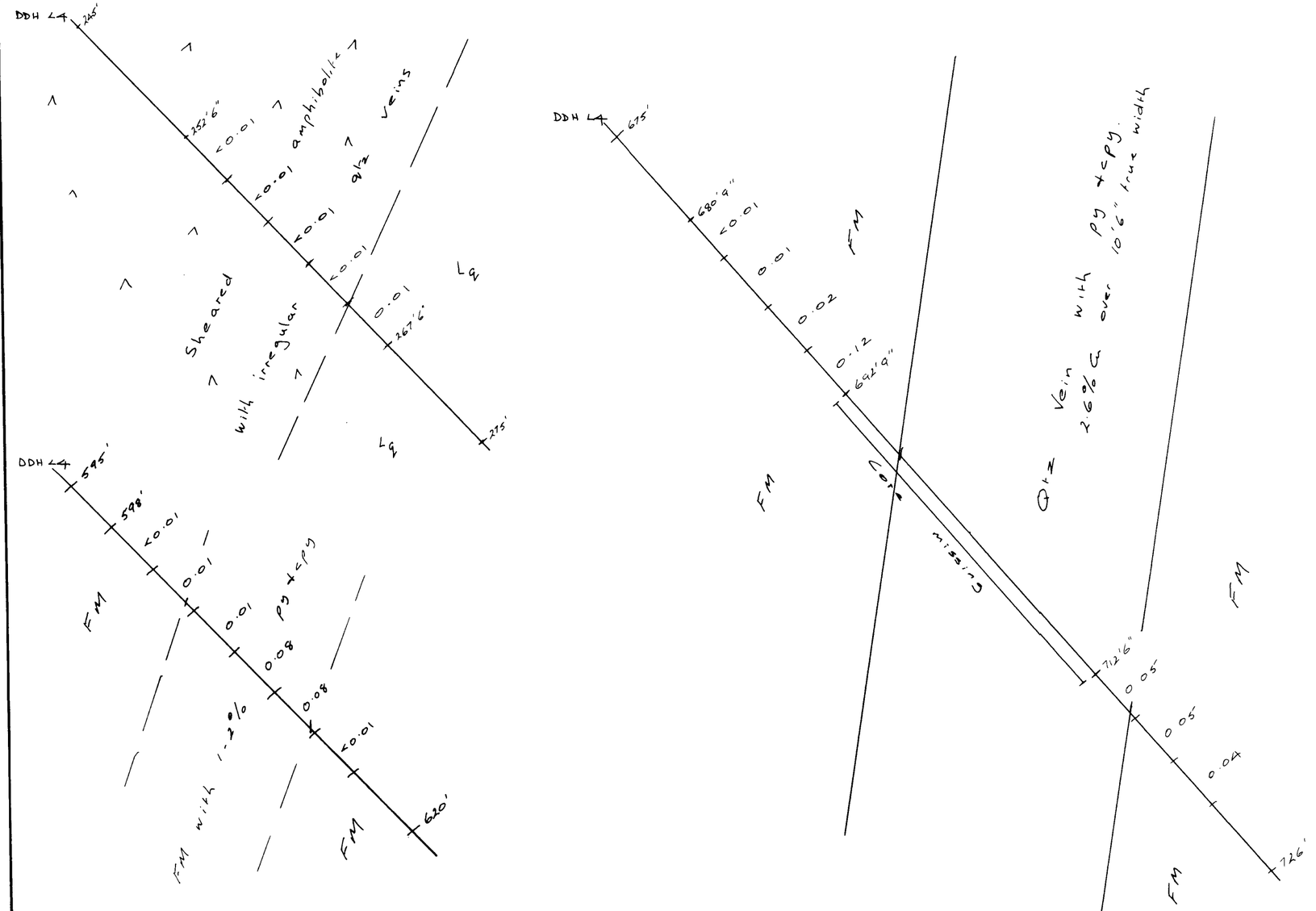
0.04 - g/t Au. Fire assay by Comlabs on ¼ core.

FM - Composite gneiss - qtz ± py ± biotite psammopelite

FS - psammite rich composite gneiss

DDH L12, L13, L18 drilled by Sundowner Minerals NL in 1971. Core held at SADME Core Library.

REVISION		SCALE: 1:60	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO MB	Cutana E L 1363
		DRAFT: MB	South Australia
		CHECKED: MB	Gold Assays of selected parts DDH L 12 L13 L18
		DATE: Jan 87	Luxemburg Mine area
		1:250 000 SI 54-2	
		1:100 000 7033	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 30735



Legend.

0.08 – g/t Au. Fire assay by Comlabs on ¼ core.

FM – Composite gneiss - qtz, fspr, biotite psammopelite

Lq – Leucocratic qtz fspr rock.

DDH L4 – drilled by Australian Gold and Uranium Pty. Ltd in 1969-1970. Core held at SADME core library.

0 1 2 3 4 5 10 15 ft.

REVISION			
		SCALE: 1:60	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO PB	Cutana E.L. 1368
		DRAFT: PB	South Australia
		CHECKED: PB	Gold assays of selected parts DDH L4
		DATE: Jan. 87.	Luxemburg Mine area
		1:250 000 SI 54 2	
		1:100 000 7033	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 30734

32000

31000

30000

29000

28000

(64) 27000 AMG N

(45) 6000 E AMG

7000

8000

9000

(46) 0000

(46) 1000

(46) 2000

Qra

Qrs

FS

FS/FM

fg

Fm

G

Cutana Copper Mine
QS18096 - 18099

Stream Bed Soil

East Bed Soil

Stream Sediment

Rock Chip

Soil

Trench

Quartz Vein

Quartz Float

Caravan Camp

Old Mine Workings

Shaft

Adit

Strike and Dip of Foliation

Strike and Dip of Bedding

Strike and Dip of Bedding and Foliation

Strike and Dip of Vertical Foliation

Strike and Dip of Vertical Bedding

Strike and Dip of Vertical Bedding and Foliation

Strike and Dip of Foliation and Lineation

Strike and Dip of Bedding and Lineation

Strike and Dip of Vertical Foliation and Lineation

Strike and Dip of Vertical Bedding and Lineation

Strike and Dip of Overturned Bedding

Strike and Dip of Overturned Bedding and Foliation

Strike and Dip of Overturned Bedding and Lineation

Strike and Dip of Overturned Bedding, Foliation and Lineation

Strike and Dip of Foliation and Cleavage

Strike and Dip of Bedding and Cleavage

Strike and Dip of Bedding, Foliation and Cleavage

Strike and Dip of Foliation, Cleavage and Lineation

Strike and Dip of Bedding, Foliation, Cleavage and Lineation

Strike and Dip of Overturned Bedding, Foliation, Cleavage and Lineation

Strike and Dip of Cleavage

Strike and Dip of Cleavage and Lineation

Strike and Dip of Lineation

Strike and Dip of Vertical Lineation

Strike and Dip of Overturned Lineation

Strike and Dip of Vertical Overturned Lineation

Strike and Dip of Vertical Cleavage

Strike and Dip of Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Cleavage

Strike and Dip of Vertical Overturned Cleavage and Lineation

Strike and Dip of Vertical Overturned Bedding

Strike and Dip of Vertical Overturned Bedding and Foliation

Strike and Dip of Vertical Overturned Bedding and Lineation

Strike and Dip of Vertical Overturned Bedding, Foliation and Lineation

Strike and Dip of Vertical Overturned Foliation

Strike and Dip of Vertical Overturned Foliation and Lineation

Strike and Dip of Vertical Overturned Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Bedding, Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Cleavage

Strike and Dip of Vertical Overturned Cleavage and Lineation

Strike and Dip of Vertical Overturned Lineation

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Strike and Dip of Vertical Overturned Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Bedding

Strike and Dip of Vertical Overturned Vertical Bedding and Foliation

Strike and Dip of Vertical Overturned Vertical Bedding and Lineation

Strike and Dip of Vertical Overturned Vertical Bedding, Foliation and Lineation

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Strike and Dip of Vertical Overturned Vertical Foliation and Lineation

Strike and Dip of Vertical Overturned Vertical Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Bedding, Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Bedding

Strike and Dip of Vertical Overturned Vertical Vertical Bedding and Foliation

Strike and Dip of Vertical Overturned Vertical Vertical Bedding and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Bedding, Foliation and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Foliation

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Strike and Dip of Vertical Overturned Vertical Vertical Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Bedding, Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Vertical Cleavage and Lineation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Bedding

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Bedding and Foliation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Bedding and Lineation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Bedding

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Bedding and Foliation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Bedding and Lineation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Foliation and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Bedding, Foliation, Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Cleavage

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Bedding

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Bedding and Foliation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Bedding and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Bedding, Foliation and Lineation

Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Foliation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Foliation, Cleavage and Lineation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Vertical Lineation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Vertical Cleavage and Lineation

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Strike and Dip of Vertical Overturned Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Vertical Cleavage and Lineation

Strike and Dip of Vertical Overturned Vertical

QS 17488 (1·15 g/t Au) pyritic qtz dump.
— 89 pyritic qtz dump
— 90 oxidised pyritic qtz
— 91 qtz with cpy + py.
— 92 amphibolite
— 93 felsic host rock
— 94 pyritic qtz dump.
— 95 amphibolitic
QS 18172 5m qtz reef
— 73 4½m qtz reef.
— 74 2m granitic host rock
— 75 3m sheared granitic host rock
— 76 3m qtz reef
— 77 3m granitic host rock
— 78 3m " "
— 79 1½m qtz vein + gneiss
— 80 2m gneissic host rock
QS 18201 " "
— 02 weathered gneiss
— 03 amphibolite
— 04 qtz + gneiss
— 05 qtz from ore pile
— 06 weathered gneiss
— 07 3m granitic host rock
— 08 60cm qtz reef
— 09 3m granitic host rock
— 10 5m "
— 11 5m "
— 12 60cm qtz reef
— 13 3m granitic host rock
— 14 5m "
— 15 1·5m qtz reef
— 16 7m granitic host rock
— 17 7m "
— 18 60cm qtz reef
— 19 5m granitic host rock
— 20 10m "
— 21 5m "
— 22 2m qtz reef
— 23 5m granitic host rock
— 24 pyritic qtz
— 25 " "
— 26 weathered felsic
— 27 " "
— 28 2m amphibolite
— 29 " "
— 30 " "
— 31 2m felsic rock
— 32 "
— 33 "
— 34 2m amphibolite
— 35 "
— 36 "
— 37 2m felsic
— 38 "
— 39 10m felsic host rock
— 40 "
— 41 "
— 42 "
— 43 "
— 44 "
— 45 "
— 46 "
— 47 "
— 48 "

QS 18172 (<0·05)

QS 18201 (0·05)
- 18180 (0·05)
- 18179 (1·65)
Bayes Reef
QS 17494 (2·4)
QS 18202 (0·10)
Luxemburg Mine
QS 18203 (0·05)
Bismarck
(<0·05)
QS 18178
QS 18177 (0·05)
Qtz Reef QS 18176 (0·65)
QS 18204 (0·10)
QS 17495 (0·07)
Adit
Reef
(6A) 29900 N
L13
Stone Tank
Costean
QS 18175 (<0·05)
Pothole
QS 18174 (0·10)
Qtz Reef QS 18173 (0·05)

Trench
Pothole
QS 18205 (0·60)
Costean
Pothole
QS 18206 (0·05)
John Brown Mine
QS 18238 (<0·05)
— 237 (0·05)
— 236 (")
— 235 (")
— 234 (<0·05)
QS 17493 (<0·01)
John Brown
QS 18239 (0·05)
77°
Pothole
Bryan
QS 18207 (0·10)
Qtz reef QS 18208 (0·10)
QS 18240 (0·05)
QS 18209 (0·05)
QS 18210 (<0·05)
QS 18241 (<0·05)
QS 18211 (0·05)
Costean
QS 18213 (0·15)
QS 18242 (0·10)
Qtz Reef QS 18212 (0·20)
80°
Reef
QS 18243 (<0·05)
QS 18244 (<0·05)
QS 18245 (<0·05)
QS 18246 (<0·05)
QS 18247 (<0·05)
QS 18248 (<0·05)
QS 18233 (0·15)
— 232 (0·10)
— 231 (0·20)
— 230 (0·05)
— 229 (0·05)
— 228 (<0·05)
70°
Trench
70°
70°
70°
L6

L4
L21
L19
23
Queen Bee Mine
Stone tank
Queen Bee
QS 18214 (<0·05)
Pothole
330° Reef
Pothole
QS 18221 (<0·05)
QS 18223 (<0·05)
Qtz vein QS 18222 (0·20)
QS 18225 (0·90)
QS 17490 (4·2)
QS 18216 (<0·05)
Qtz reef QS 18215 (<0·05)
QS 18217 (0·05)
QS 18219 (<0·05)
QS 18220 (<0·05)
QS 18224 (1·30)
Qtz reef QS 18218 (<0·05)
QS 17492 (0·2)
QS 18227 (0·05)
QS 18226 (0·10)
QS 17491 (7·1)
QS 17488 (1·15)
L18
L17
QS 17489 (2·2)

N

Scale 0 10 20 30 40 50 m

(45) 9000 E AMG

Base Map enlarged from Fig 84 GSSA Bull 34 1958

REVISION			
		SCALE: 1:1000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO: MB	Cutana EL 1363
		DRAFT: MB	South Australia
		CHECKED: MR	Luxemburg Mine Area. Sample
		DATE: April 87	Locations
		1:250 000 SI/54-2	
		1:100 000 7033	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 30748

440,000 m E

450,000 m E

460,000 m E

644,000 m N

Soak Dam

Bore, well

Station Dam

Bore

"Bulloo Creek"

Cuffer Dam

Dam

White Dam

Dam

Cutana Dams

Bulloo

Ck

Walkers Dam

Lucky Bore (Old)

Lucky Dam

Cartwrights Dam

CUTANA

New Scrubby Dam

Green B Gold Mine, Cu

Creek

Cutana Dam

Mac Donald Hill Bore (Old)

Cutana

Ck.

Robbys Dam

Mac Donald Hill Dam (Disused)

Mac Donald Hill

White Dam

"Cutana"

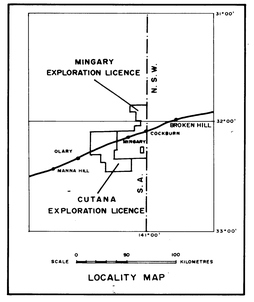
Deedmans Dam

Little White Dam

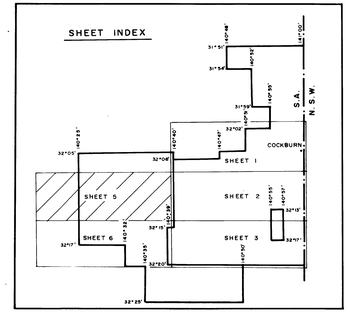
Mac Donald Hill Well & Dam

Dam

LOCALITY MAP



SHEET INDEX



SCALE 0 500 1000 2000 3000 METRES

REVISION		SCALE: 1:25 000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		DES: MK	
		DRAFT: MK	CUTANA EXPLORATION LICENCE
		CHECKED: MK	SOUTH AUSTRALIA
		DATE: March 87	Locations of "bulk cyanide leach" drainage samples
		1:250 000 SI-54-A	
		1:100 000 Mt Sir	
		DRAWING FILED ON DISTRICT: Broken Hill, Olary	DRG No.: 307049

440,000 m E

450,000 m E

460,000 m E

6431,000 m N

32°12'

142°25'

Macdonald's fault

Dam

Dam

Dam

Master Bore

No. 3 Bore

Well Well Well Tank

Hurd Hill

Lucenburg Well

New Lucenburg Reservoir (1951)

Lucenburg Mine

Queen Bee Mine

Premier Mine

Yankee Shaft

Pb Winklers Mine

New Lucenburg Goldfield

Block Hill Dam

Dam

Ky Galls Well Kyanite Prospect

Mulga Hill Mine

Cemetery Prospect

Kings Dam

Galls Bore

Cu

Cutana Tank

Galls Well

Galls Well East Mine

Galls Well

SECOND

Nilpena Bore (old)

Tombstone Tank

32°10'

142°32'

Mitcattie—Dalkey Diggings

Cu

Michels Hill Mine

Cu

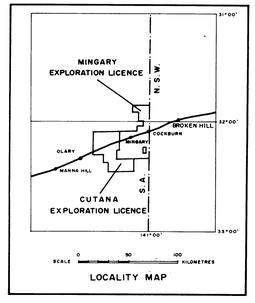
Radium Hill Township

Teasdale Dam

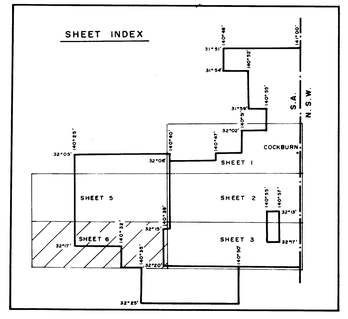
Radium Hill

U

Bristowe Hill



LOCALITY MAP



SCALE 0 500 1000 2000 3000 METRES

REVISION			
		DES	
		DRAFT: TS	
		CHECKED: TS	
		DATE: March 69	
		1:250 000 Sheets	
		1:100 000 70-15	
		DRAWING FILED IN DISTRICT: Broken Hill - Olary	

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA EXPLORATION LICENCE
SOUTH AUSTRALIA
Locations of "bulk cyanide leach"
Drainage samples

DRG No.: 2074-B

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JULY 27, 1987

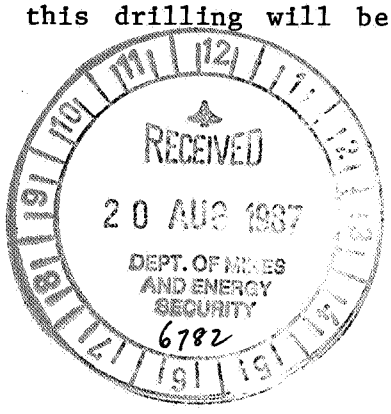
1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50 000. The Licence is subject to a joint venture agreement with Tarcoola Gold Ltd. Exploration is carried out by Carpentaria Exploration Company Pty. Ltd. on behalf of Mount Isa Mines Limited and Tarcoola Gold Ltd. The Licence is located approximately 30 km east of Olary and covers an area of 769 km^2.

2. EXPLORATION

A ground magnetic survey has been carried out over an airborne magnetic anomaly which is centred approximately 1 km west of the Premier Mine. This survey was also extended to the east to cover the fault block of Adelaidean tillite to the east of the Premier Mine. Locations of the ground magnetic lines are shown on Drawing No.30 759 and results are presented on Drawings Nos.30 755, 30756 and 30 757.

Percussion drilling is currently being carried out to test for gold mineralization at the Premier Mine and in the fault block of tillite to the east and south-east of the Premier Mine. RAB drilling will also be undertaken to test a low order bulk cyanide leach anomaly approximately 1 km west of the Premier Mine. Results of this drilling will be reported in the next Quarterly Report.



TRS2

3. EXPENDITURE

A Statement of Expenditure is attached.

.....

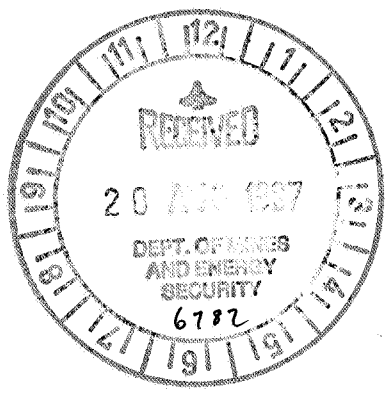
for P.J. Binks

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR THREE MONTHS ENDED JULY 27, 1987

	$	$
Administration	533	
Assaying	113	
Consultant Fees	338	
Field Base Operations	1796	
Operating Labour	1643	
Transport	37	$ 4 460
TOTAL - THIS PERIOD		$ 4 460
Previously Reported - Current Term		
Quarter ended January 27, 1987	24 137	
Quarter ended April 27, 1987	21 284	$45 421
Total Project Expenditure to Date		$49 881



A.E. Covacich
Administration Superintendent

CORRECTED DATA

LOT: Line Name =)7000E

FOM: Rec # =) 51

TO: Rec # =) 9251

REGIONAL REMOVAL EXTRA =)N

7000E

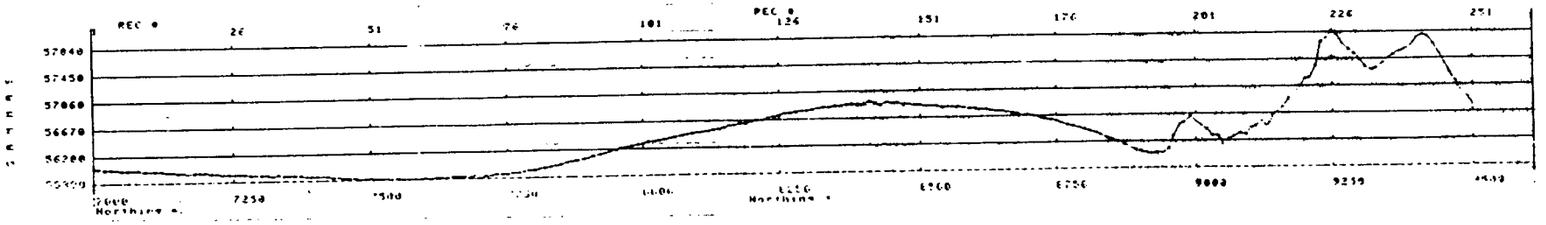
SCALE:

AUTOMATIC

BASE READING (Gammas) =) 55830

READING SCALE (mm =) 390

X-AXIS SCALE (mm =) 50



LEGEND

LINE 7000E

FROM 7000 N

TO 9500 N

STATION SPACING 10 mts

MIN READING =) 55830

MAX READING =)

AVG READING =)

CORRECTED DATA

LOT: Line Name =)7500E

FOM: Rec # =) 502

TO: Rec # =) 7252

REGIONAL REMOVAL EXTRA =)N

7500E

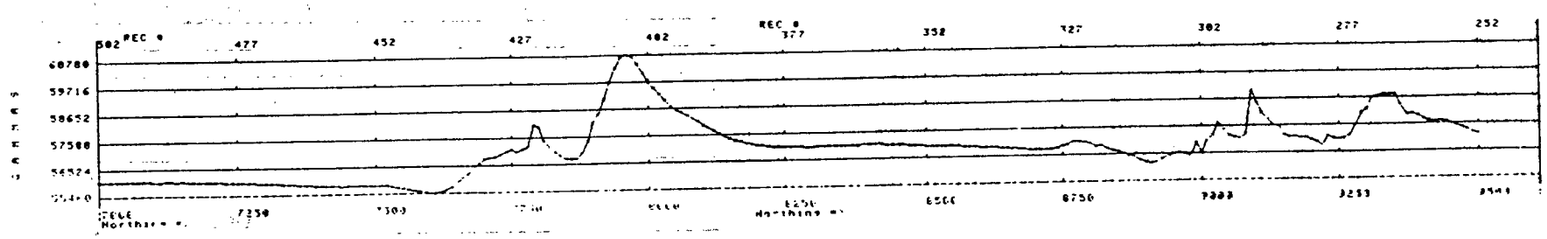
SCALE:

AUTOMATIC

BASE READING (Gammas) =) 55460

READING SCALE (mm =) 1864

X-AXIS SCALE (mm =) 50



LEGEND

LINE 7500E

FROM 7000 N

TO 9500 N

STATION SPACING 10 mts

MIN READING =) 55460

MAX READING =)

AVG READING =)

CORRECTED DATA

LOT: Line Name =)8000E

FOM: Rec # =) 753

TO: Rec # =) 7503

REGIONAL REMOVAL EXTRA =)N

8000E

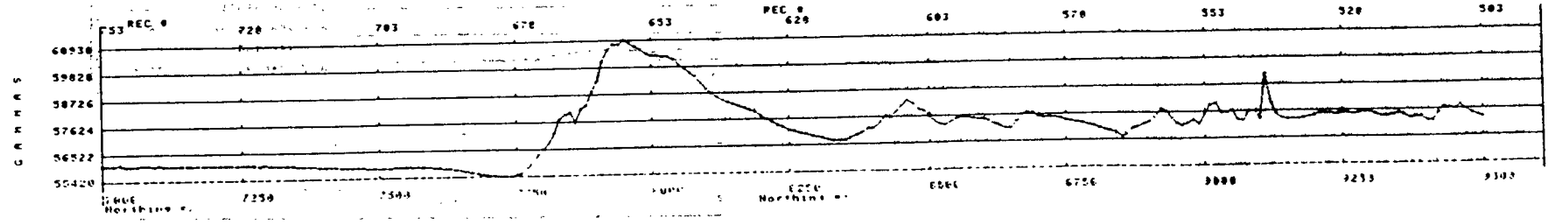
SCALE

AUTOMATIC

BASE READING (Gammas) =) 55420

READING SCALE (mm =) 1102

X-AXIS SCALE (mm =) 50



LEGEND

LINE 8000E

FROM 7000 N

TO 9500 N

STATION SPACING 10 mts

MIN READING =) 55420

MAX READING =)

AVG READING =)

NOTE 1. VERTICAL SCALES ARE DIFFERENT

2. FOR LOCATION SEE DRG 30759

CUTANDA S. A.

GROUND MAGNETIC PROFILES

AUG. '87

S.N.S.

DRG Nº 30755

8000N

CORRECTED DATA

PLOT Line Numb =8000N

FROM Rec 8 = 71

TO Rec 8 = 8381

REGIONAL REMOVAL (EX/N) =N

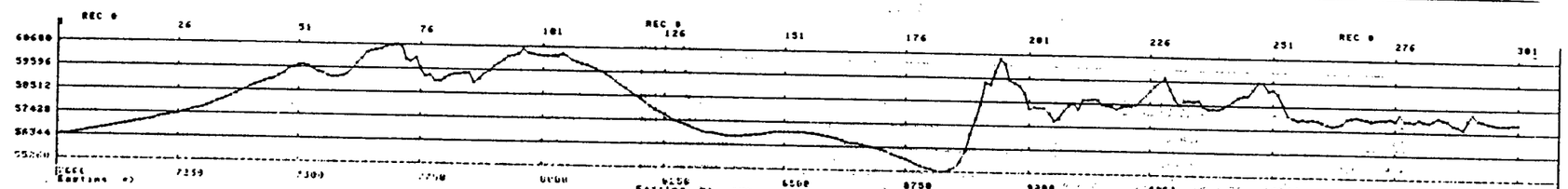
SCALE:

AUTOMATIC

BASE READING (Gammas) = 55260

READING SCALE (mm = Gammas) = 1004

X-AXIS SCALE (mm = Y) = 50



LEGEND

LINE 8000N

FROM 7000 E

TO 10000 E

STATION SPACING 10 mts

MIN READING = 55260

MAX READING = 60676

AVG READING = 58182

NOTE 1. FOR LOCATION SEE DRG 30759

CUTANA S.A.

GROUND MAGNETIC PROFILE

AUG '87 DRG N° 30758

S.N.S.

CORRECTED DATA

PLOT Line Name =>8700E

FROM Rec # => 7754

TO Rec # => 7854

REGIONAL REMOVAL EY/N? =>N

8700E

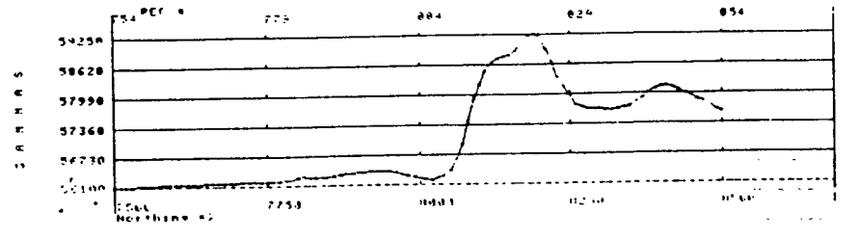
SCALE

AUTOMATIC

BASE READING (gammas) => 56100

READING SCALE (gms/) => 630

X-AXIS SCALE (mts) => 50



LEGEND

LINE	8700E	
FROM	7500	N
TO	8500	N
STATION SPACING	10 mts	
MIN READING =>	56100	
MAX READING =>	57143	
AVG READING =>	57093	

CORRECTED DATA

PLOT Line Name =>9000E

FROM Rec # => 2423

TO Rec # => 2583

REGIONAL REMOVAL EY/N? =>N

9000E

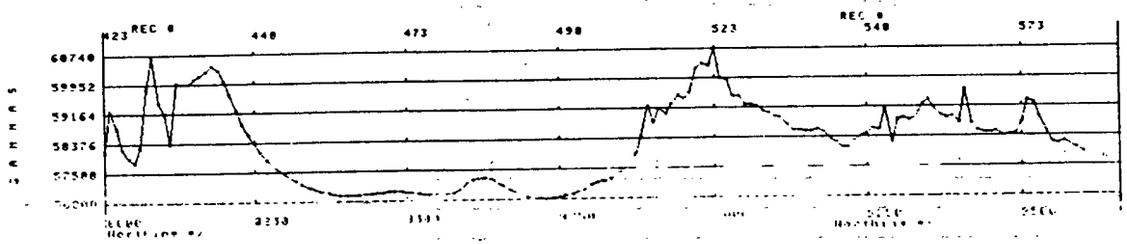
SCALE

AUTOMATIC

BASE READING (gammas) => 56800

READING SCALE (gms/) => 788

X-AXIS SCALE (mts) => 50



LEGEND

LINE	9000E	
FROM	8000	N
TO	9600	N
STATION SPACING	10 mts	
MIN READING =>	56803	
MAX READING =>	60775	
AVG READING =>	58254	

CORRECTED DATA

PLOT Line Name =>9200E

FROM Rec # => 7955

TO Rec # => 7855

REGIONAL REMOVAL EY/N? =>N

9200E

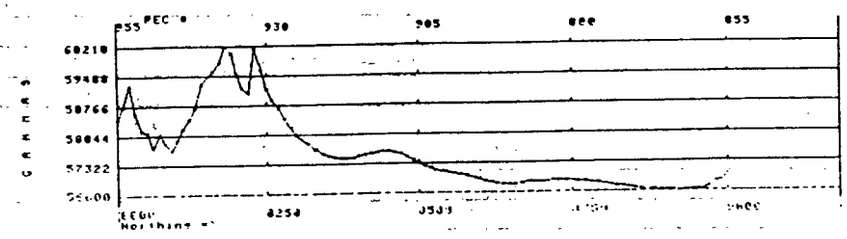
SCALE

AUTOMATIC

BASE READING (gammas) => 56600

READING SCALE (gms/) => 722

X-AXIS SCALE (mts) => 50



LEGEND

LINE	9200E	
FROM	8000	N
TO	9400	N
STATION SPACING	10 mts	
MIN READING =>	56682	
MAX READING =>	59203	
AVG READING =>	57594	

CORRECTED DATA

PLOT Line Name =>9500E

FROM Rec # => 7302

TO Rec # => 7422

REGIONAL REMOVAL EY/N? => N

9500E

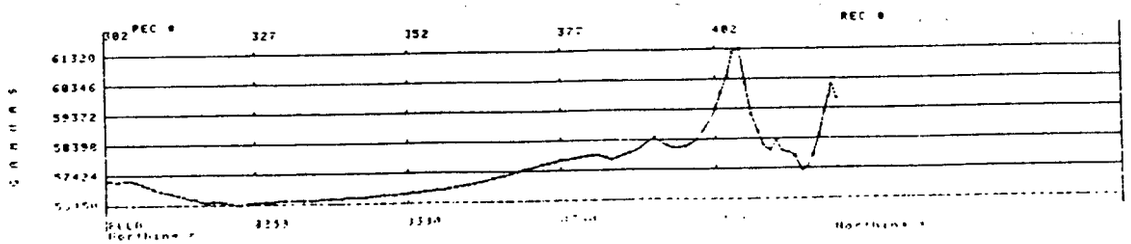
SCALE

AUTOMATIC

BASE READING (gammas) => 56450

READING SCALE (gms/) => 974

X-AXIS SCALE (mts) => 50



LEGEND

LINE	9500E	
FROM	8000	N
TO	9200	N
STATION SPACING	10 mts	
MIN READING =>	56451	
MAX READING =>	61515	
AVG READING =>	57483	

NOTE 1. VERTICAL SCALES ARE DIFFERENT

2. FOR LOCATION SEE DRG 30759

CUTANA S. A.

GROUND MAGNETIC PROFILES

AUG. '87 DRG N° 30756

S.N.S.

(642) 9000N

(642) 8000 N

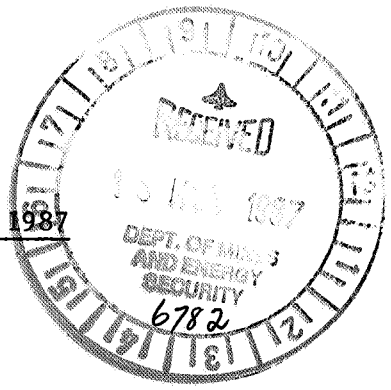
(642) 7000N

REVISION		SCALE: 1:10000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO:	
		DRAFT: S.N.S.	
		CHECKED:	
		DATE: AUG '87	GEOPH. 4. DALE KHAN
		1:250 000 SF 54	
		1:100 000 7722	
		MINING FIELD OR DISTRICT: O-AKA	DRG No.: 3C4/1

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED OCTOBER 27, 1987



1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50 000. It has recently been extended for a further year under the same terms and conditions. The Licence is subject to a joint venture agreement with Tarcoola Gold Ltd. Exploration is carried out by Carpentaria Exploration Company Pty. Ltd. on behalf of Mount Isa Mines Limited and Tarcoola Gold Ltd. The Licence is located approximately 30 km east of Olary and covers an area of 769 km^2.

2. EXPLORATION

A total of 387 m of RAB (rotary air blast) drilling was completed in 58 holes in August 1987. Drilling was carried out to check anomalous gold values in BCL (bulk cyanide leach) soil samples. The best assay from this drilling was 0.12 g/t gold over 4 m. Geological/assay logs of these RAB holes are presented in Appendix 1 and locations of the holes are shown on Drawing Nos 30 761 and 30 763. A brief description of the rock types intersected in this drilling is given in Appendix 1.

Seventeen percussion holes were drilled in the vicinity of the Premier Mine for a total of 826 m in late August and early September 1987. Eight of these holes were drilled around the Premier Mine itself and the other nine holes were drilled at 50 m centres on a line extending to the south-east from the Premier Mine over sheared and partly granitized tillite. Composite 6 m samples were collected and assayed for gold but all values were less than the detection limit of 0.01 g/t.

Geological/assay logs are given in Appendix 1 with a summary of rock types intersected in these holes in Appendix 2. Locations and sections of the holes are given on Drawing Nos 30 761 and 30 762.

A total of 213 m of percussion drilling was completed in five holes in September 1987 at the Green and Gold Prospect. Composite 6 m samples were collected and assayed for gold. The best value was 0.84 g/t Au over 6 m (15-21 m) in DDH PC 20 in garnetiferous gneiss and quartz-magnetite rock. Anomalous gold occurs in other parts of this hole and in PC 19 :

PC 20	9 - 15 m	0.26 g/t Au
	15 - 21 m	0.84 g/t Au
	33 - 39 m	0.22 g/t Au
	39 - 45 m	0.16 g/t Au
PC 19	21 - 27 m	0.32 g/t Au
	33 - 39 m	0.12 g/t Au
	39 - 45 m	0.26 g/t Au

Geological/assay logs are presented in Appendix 1 and locations of the holes and sections are given on Drawing No.30 769. A description of rock types intersected in these holes is given in Appendix 2.

3. EXPENDITURE

A Statement of Expenditure is attached.

J. Richardson

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for P.J. Binks

APPENDIX 1

GEOLOGICAL/ASSAY LOGS RAB & PDH HOLES

PROJECT GUYANA

CARPENTARIA EXPLORATION COMPANY PTY. LTD.
ROTARY AIR BLAST DRILL HOLE LOG

LOCATION PREMIER RABS.

9-8-87

SAMPLE N°	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION		WATER
720892	.01		1		S — Tr haematite	RAB C001	
893	<.01		6		green v.hard TILLITE Tr sericite		
894	<.01		2		S —	C 002	
895	<.01		8		green v.hard TILLITE sericitic Tr blue qtz		
896	.02		1		S —	C 003	
897	<.01		7		Fawn green		
898	<.01		9		green v. hard TILLITE Tr sericite		
899	.01		1		S —	C 004	
900	<.01		8		Fawn		
901	<.01		12		— — green v. hard. TILLITE Tr blush qtz		
902	.01		1		S —	C 005	
903	.01		8		greenish Fawn ± purple		
904	.02		13		— — Fawn green + green v hard. TILLITE Tr sericite 1/2 l. blush qtz		
905	.04		1		S —	C 006	
906	<.01		6		purple & Fawn		
907	.01		9		— — Fawn green ± purple v. hard TILLITE Tr sericite Tr blush qtz		
908	.04		2		S —	C 007 (@ BCL peg 724280)	
909	.01		10		Fawn green Tr blush qtz		
910	.01		13		± purple v. hard Sericitic TILLITE		
911	.02		2		S —	C 008	
912	<.01		8		purple & Fawn Sericitic TILLITE		
913	.02		10		pale grey green v. hard Tr blush qtz		
914	.03		2		S —	C 009	
915	<.01		10		greenish white Sericitic TILLITE		
916	<.01		14		pale fawn ± purple v. hard Tr blush qtz Tr malachite		
917	.02		2		S —	C 010	
918	.01		10		greenish white clayey Tr sericite 1/2 l. blush qtz		
919	.01		16				
920	.01		18		pale green v.hard. TILLITE		

RAB on BCL Line extending SE from Peg 724283, Hole 1 is 240m SE of this peg. Holes @ 10m centres -60/NW

OTHER DETAILS: page total 112m

DRILL TYPE: INVESTIGATOR | LOGGED BY: IDK

DRILLER: WILSONS | DATE DRILLED: 9-8-87

SCALE: 1:500 | DRG/CODE No.:

PROJECT CUTANA — CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION PREMIER RAB

9.8.87

SAMPLE N°	ANALYSES ppm/% Au	g/t				DEPTH METRES	LOG	DESCRIPTION		WATER
720921	.03					2		S		
922	.02					10		clayey fawn ± greenish white	RAB C 011	
923	.02					12		fawnish white	2% blush qtz	
924	.02					16 / 19		fawn v. hard Sericitic TILLITE		
925	.05					2		S		
926	.03					10		clayey greenish white ± purple	Tr sericite Tr blush qtz	
927	.03					16		pale green	C 012	
928	.12					20		& fawn green v. hard TILLITE		
929	.04					2		S		
930	.02					8		greenish white & fawn	C 013	
931	.03					12				
932	.05					17		grey green TILLITE		
933	.04					2		S		
934	.01					8		greenish white	C 014	
935	.01					14				
936	.08					20		grey green Sericitic TILLITE	(more quartzose)	
937	.04					2		S		
938	.01					6		pale green	½% blush qtz	
939	.07					10		grey green Sericitic TILLITE	C 015	
940	.06					2		S		
941	.03					6		pale fawn		
942	.01					12		fawn ± purple	C 016	
943	.03					17		green TILLITE	1½ blush qtz	
944	.02					2		S		
945	.01					8		fawn	C 017	
946	.05					14		grey green TILLITE	2% blush qtz	

On BCL line from peg 724283. Holes 10m centres −60/NW

OTHER DETAILS: Page total 117m

DRILL TYPE: INVESTIGATOR | LOGGED BY: IDIK

DRILLER: WILSON'S | DATE DRILLED: 9-8-87

SCALE: 1:500 | DRG/CODE No.:

PROJECT CUTANA — CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION PREMIER RAB

9.8.87

SAMPLE NO	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION		WATER
720947	.02		2		S — fawn ± green fawn	RAB C 018	
948	.02		6				
949	<.01		12		grey green TILLITE 1/2 blush qtz		
950	.03		2		S —	C 019	
951	<.01		10		greenish fawn		
952	.01		14		grey green TILLITE Tr blush qtz		
953	.02		2		S —	C 020	
954	<.01		8		fawn green		
955	<.01		14		grey green TILLITE Tr blush qtz		
956	<.01		2		S —	C 021	
957	.02		6		greenish fawn		
958	.03		10		grey green TILLITE Tr sericite Tr blush qtz		
					SCALE 1:250		
720959	.01		1		S —	C 022	
960	<.01		2		green v. hard TILLITE		
NIS			0.5		S —	C023	
961	<.01		2		green v. hard TILLITE Tr sericite		
NIS			0.5		S —	C 024	
962	<.01		2		grey green v. hard TILLITE Tr blush qtz		
963	<.01		1		S —	C 025	
964	<.01		2		green v. hard TILLITE Tr sericite		
NIS			0.5		S —	C 026	
965	<.01		2		pale green v. hard Sericitic TILLITE Tr haematite		
966	.01		1		S —	C 027	
967	.01		3		grey green v. hard TILLITE Tr sericite Tr blush qtz Tr haematite		
968	.01		1		S —	C 028	
969	.02		2		grey green v. hard TILLITE Tr sericite Tr haematite		
NIS			0.5		S —	C 029	
970	.01		2		grey green v. hard Sericitic TILLITE Tr haematite Tr blush qtz		
971	<.01		0.5		S —	C 030	
			1.0		grey green v. hard. TILLITE Tr sericite		
972	<.01		1		S —	C 031	
973	<.01		2		grey green v. hard TILLITE Tr Sericite		
NIS			0.5		S —	C 032	
974	<.01		2		grey green v. hard TILLITE Tr haematite Tr sericite		
975	<.01		1		S —	C 033	
976	.01		2		grey green v. hard TILLITE		
977	<.01		1		S + fawn —	C 034	
978	<.01		2		grey green v. hard TILLITE		
979	<.01		1		S + fawn —	C 035	
980	<.01		2		grey green v. hard TILLITE Tr sericite Tr blush qtz		
981	.01		1		S + fawn —	C 036	
982	.01		2		grey green v. hard TILLITE Tr blush qtz		

RAB C022 - C042 on WNW BCL line starting 200m W along line from peg 724282 + drilling W for 200m @ 10m centres. C022 @ peg 724356. -60/E

OTHER DETAILS: page total 80m

DRILL TYPE: INVESTIGATOR | LOGGED BY: IDK

DRILLER: WILSONS | DATE DRILLED: 9.8.87

SCALE: 1:500 ◻ 1:250 | DRG/CODE NO:

PROJECT CUTANA — CARPENTARIA EXPLORATION COMPANY PTY. LTD.

LOCATION PREMIER RAB — ROTARY AIR BLAST DRILL HOLE LOG

9.8.87

SAMPLE No	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	26.8.87	WATER
720983	.01		1		S + fawn grey green v. hard TILLITE Tr sericite Tr slush qtz	RAB C 037	
984	<.01		2				
985	.02		1		S + fawn grey green v. hard TILLITE	C 038	
986	.02		2				
987	<.01		1		S + fawn grey green v. hard TILLITE Tr haematite Tr sericite Tr slush qtz	C 039	
988	<.01		2				
989	<.01		1		S + fawn grey green v. hard TILLITE Tr sericite	C 040	
990	<.01		2				
991	.01		1		S + fawn grey green v. hard TILLITE Tr slush qtz	C 041	
992	<.01		2				
993	<.01		1		S + fawn grey green v. hard Sericitic TILLITE Tr haematite Tr slush qtz	C 042	
994	<.01		2				
N/S			.5		S Fawn v hard FS	8000E 8500N C 043	
723060	<.01		2				
N/S			.5		S Fawn v hard FS	8490N C 044	
061	<.01		4				
062	<.01		2		Fawn v hard FS + Scree	8480N C 045	
063	<.01		2		Fawn v hard FS + scree	8470N C 046	
N/S			.5		S Fawn v hard FS + scree	8010E 8460N C 047	
064	<.01		2				
065	<.01		2		Fawn v hard FS + scree	8015E 8450N C 048	
066	<.01		2		brown v hard Scree + FS	7995E 8440N C 049	
067	<.01		2		S	8000E 8430N	
068	<.01		7		Fawn ? FS	C 050	
069	<.01		2		S	8420N	
070	<.01		4		Fawn v hard FS	C 051	
071	<.01		2		S	8410N	
072	<.01		3		Fawn + brown v hard FS + Scree	C 052	
073	<.01		2		S	8400N	
074	<.01		3		Fawn + purple v hard TILLITE	C 053	
075	<.01		2		S	8390N	
076	<.01		4		Fawn green TILLITE	C 054	
077	<.01		2		S	8380N	
078	<.01		3		Fawn v hard TILLITE	C 055	
079	<.01		2		S	8370N	
080	<.01		3		purple fawn v hard TILLITE	C 056	

C043 – C058. mag line 8000E 10m centres -60/N

OTHER DETAILS: page - TOT 55m

DRILL TYPE: INVESTIGATOR | LOGGED BY: IDK

DRILLER: WILSONS | DATE DRILLED: 9+26.8.87

SCALE: 1:250 | DRG/CODE No:

PROJECT CUTANA

LOCATION PREMIER RAB

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

26.8.87

SAMPLE N°	ANALYSES ppm/% Au	g/t				DEPTH METRES	LOG	DESCRIPTION		WATER
723081	<.01					2		S	8000E 8360N	
082	<.01					6		fawn green	C.057	
083	<.01					10		fawn + white qtz		
						12		pale green TILLITE		
084	<.01					3		S	8350N	
085	<.01					8		fawn	C.058	
						11		greenish fawn v hard TILLITE		

OTHER DETAILS:

DRILL TYPE: INVESTIGATOR | LOGGED BY: DJL

DRILLER: WILSONS | DATE DRILLED: 26.8.87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Premier/Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 1

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ..50.....

RL. COLLAR: ..... m

INCLINATION: ..-60.....

DIRECTION: ..310 mag. °

SAMPLE N°	Au (g/t)	DEPTH METRES	LOG	DESCRIPTION	Biotite	Sericite	Pale grn	Pyrite	mT
		0–1	S	0.5 Red brown soil					
723086	–	2	T	Weathered TILLITE	✓				
		3			✓				
		4			✓		10		
		5		BOX	✓	T	5		
087	–	6			✓	T	5		
		7			✓	T	5		
		8			✓		2		
		9			✓		5	T	
		10	T	Biotite quartz ± pyrite ± sericite ± magnetite	✓		5	T	
		11			✓		5	½	
088	–	12			✓		5	T	
		13			✓		5	T	2
		14		TILLITE	✓		5	T	T
		15		15	✓		5	½	1-2
		16			✓			2	½
		17			✓			2	½
089	–	18	QBT	QUARTZ-BIOTITE	✓			2	½
		19		19 TILLITE	✓			T	½
		20	T		✓			T	T
		21		21 TILLITE	✓			1	½
		22			✓		10	1	T
		23	QBT	QUARTZ-BIOTITE	✓				½
090	–	24		24 TILLITE	✓			T	1
		25			10		10	T	½
		26			10			T	
		27	FS		10			½	
		28			10			T	
		29		28.5 GNEISS				T	1
091	–	30			50			T	1
		31			50			T	2
		32			50			½	2
		33	?		40			T	2
		34	T/FE		60			T	5
		35			40				5
092	–	36		? TILLITE/GNEISS	60				5
		37			60				5
		38			60			T	5
		39		39	40				5
		40	QBT	QUARTZ-BIOTITE	30				1
		41		41 ? TILLITE	40				5
093	–	42	?T/FE	42 ? TILLITE/GNEISS	60			T	5
		43	?		30			2	2
		44	QBT/FM	? QUARTZ BIOTITE	30			½	2
		45		45 TILLITE/GNEISS	20		10	½	2
		46			10				2
094	–	47	?		20			T	2
		48	FM		40		10	½	2
		49			20			T	2
		49-50		50 ? GNEISS	15			T	2

(– = <.01 g/t.)

0–0.5 Red brown
0.5–4 grey green
4–15 grey black
15–19 brown
19–28.5 grey green
28.5–39 dark green
39–50 grey green

REASON FOR HOLE: Line 1, 25m SE of BCL peg 724284 which is

OTHER DETAILS: 100m SE of 'Start BCL' peg

DRILL TYPE: INVESTIGATION | LOGGED BY: IDR

DRILLER: WILSONS | DATE DRILLED: 27, 28.8.87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Premier / Gutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 2

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ...50....

RL. COLLAR: .....

INCLINATION: ...-60....

DIRECTION: ...305 mag°.

SAMPLE N°	ANALYSES p.p.m / % Au g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite	Sericite	Pale grn	Pyrite	mT
723095	—	0–1	S	0.5 Red Brown Soil					
		2	ST	Weathered Sericitic TILLITE					
		3			✓	VV			
		4			✓	VV			
096	—	5			✓	VV	5		
		6			✓	VV	5		
		7			✓	VV			
		8		8 ? BOX	✓	VV			
		9			-	VV	5	T	
		10			✓	VV			
097	—	11			✓	VV		T	
		12			✓	VV	T	T	
		13			✓	VV	5	T	
		14			✓	VV	10	T	
		15	ST		-	VV			
		16			✓	VV	10		
098	—	17		Sericitic TILLITE	✓	VV	20		T
		18			✓	VV	10		T
		19			✓	VV	5		
		20			✓	VV	5	T	
		21			✓	VV	T		
		22			✓	VV	5	1/2	
099	—	23			✓	VV		T	
		24			✓	VV		T	
		25			✓	VV		T	
		26		26	✓	VV			
		27			✓	✓		T	
		28			✓	✓	10	1/2	T
100	—	29	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓	30	1	
		30			✓	✓		1	
		31		31	✓	✓		1/2	
		32	GT	GRANITIZED TILLITE	T	T		1/2	
		33		33	T	T		1/2	
		34			✓	✓		1/2	
101	—	35			✓	✓		2	
		36	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓	T	1	
		37			✓	✓		T	
		38		38	✓	✓		1/2	
		39			✓	W		1/2	
		40			✓	W		1/2	
102	—	41	ST	SERICITIC TILLITE	✓	W		1/2	
		42		42	✓	W		2	
		43			✓	✓		1/2	T
		44			✓	✓		1/2	
		45			✓	✓		2	T
		46			✓	✓		2	
103	—	47	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓		1/2	T
		48			✓	✓		1	
		49			✓	✓		2	T
		49-50		50	✓	✓		1	

(— = < 0.01 g/t)

0–0.5 red brown
0.5–12 grey black
12–13 green black
13–26 grey black
26–31 dk green
31–33 grey
33–50 grey black

DAMP @ 47m

REASON FOR HOLE:

OTHER DETAILS: 25m SE PC 1

DRILL TYPE: INVESTIGATOR | LOGGED BY: DJC

DRILLER: WILSONS | DATE DRILLED: 28,29-8-87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Premier/Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 3

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ... 0 ... TO ... 50 ....

RL. COLLAR: .....

INCLINATION: ... -60 ....

DIRECTION: ... 300 Mag. °

SAMPLE N°	Au	g/t				DEPTH METRES	LOG	DESCRIPTION	Sulphide	Sericite	Pyrite grn	Pyrite	Au
723104	—					0–1	S	0.5 Red Brown soil					
						2	ST	Weathered Sericitic Tillite	✓	✓			
						3			✓	✓✓	10		
						4			✓	✓✓			
105	.06					5			✓	✓✓			
						6			✓	✓✓			
						7			✓	✓✓	10		
						8		8 — — — — — — — — — — ? Box —	✓	✓✓	10		
						9			✓	✓✓	10	T	
						10	ST		✓	✓✓			
106	—					11		Sericitic Tillite	✓	✓✓	10		
						12			✓	✓✓			
						13			✓	✓✓			
						14			✓	✓✓		T	
						15			✓	✓✓	5	T	
						16		16	✓	✓✓	10		
107	—					17			✓	✓		15	2
						18			✓	✓		35	2-5
						19			✓	✓	5	15	2-5
						20		Quartz Biotite	✓	✓	5	10	1-5
						21	QBST	Sericite Tillite	✓	✓	5	2	1
						22			✓	✓	30	1	T
108	—					23		23	✓	✓	30	½	
						24	ST	24 Sericitic Tillite	✓	✓✓	5	T	
						25			✓	✓		5	T
						26			✓	✓		T	
						27	QSBT	Quartz Sericite	✓	✓		T	
						28		28 Biotite Tillite	✓	✓		T	
109	—					29		Interbedded	✓	✓		T	
						30	QSBT	Quartz Sericite	✓	✓✓		T	
						31	+ ST	31 Biotite Tillite & Sericitic Tillite	✓	✓		T	
						32			✓	✓✓		T	
						33			✓	✓✓		T	
						34			✓	✓✓		T	
110	—					35			✓	✓✓	10	T	
						36			✓	✓✓	20	½	
						37			✓	✓✓		½	
						38			✓	✓✓		T	
						39			✓	✓✓		2-5	1-2
						40			✓	✓✓		2	1-1
111	—					41			✓	✓✓		T-½	
						42			✓	✓✓		T	
						43	ST.	Sericitic Tillite	✓	✓		T	
						44			✓	✓		T	
						45			✓	✓		1	
						46			✓	✓✓		½	
112	—					47			✓	✓✓		T	
						48			✓	✓✓		T	
						49			✓	✓✓		T	
						49–50		50	✓	✓✓		½	

(— = < 0.01 g/t)

0–0.5 Red Brown

0.5–16 Grey Black

16–23 Green Black

23–28 Grey

28–50 Grey Black

REASON FOR HOLE:

OTHER DETAILS: 25m SE PC 2

DRILL TYPE: INVESTIGATION — LOGGED BY: PD/C

DRILLER: WILSON S — DATE DRILLED: 29, 30·8·87

SCALE: 1:250 — DRG/CODE No:

PROSPECT Premier / Gutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC4

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ...50....

RL. COLLAR: ..... m.

INCLINATION: ...-60... °

DIRECTION: ..300 mag.. °

SAMPLE N°	ANALYSES p.p.m/% Au	g/t.				DEPTH METRES	LOG	DESCRIPTION	biotite	sericite	pale qtz	pyrite	mT	green qtz
723113	—					0–1	S	0.5 Red brown soil						
						2			✓	✓				
						3			✓	✓				
						4			✓	✓				
114	—					5			✓	✓				
						6		Weathered	✓	✓				
						7	ST	SERICITIC	✓	✓				
						8		TILLITE	✓	✓				
						9		9m — — — — — BOX	✓	✓				
						10			✓	✓		T		
115	—					11			✓	✓		T		
						12			✓	✓		T		
						13			✓	✓			T	
						14			✓	✓				
						15			✓	✓		T		
						16			✓	✓		T		
116	—					17			✓	✓		T		
						18			✓	✓	10			
						19			✓	✓	10	T		
						20			✓	✓	10			
						21			✓	✓	5	T		
						22			✓	✓	30	T		
117	—					23			✓	✓	10			
						24			✓	✓	10			
						25			✓	✓	10			
						26			✓	✓	10			
						27		SERICITIC	✓	✓	10	T		
						28	ST	TILLITE	✓	✓		T		
118	—					29			✓	✓		T		
						30			✓	✓	10	T	T	
						31			✓	✓	5			
						32			✓	✓		T		
						33			✓	✓		T		
						34			✓	✓	10			
119	—					35			✓	✓				
						36			✓	✓				
						37			✓	✓		T		
						38			✓	✓		1/2		
						39			✓	✓		½		
						40		40	✓	✓		2		
120	—					41			✓	✓		1½		
						42	QSBT	QUARTZ SERICITE	✓	✓		5	1	
						43		BIOTITE TILLITE 43	✓	✓	20	1	2	
						44			✓	T	5	20	2-5	
						45	QBT	QUARTZ 45 BIOTITE TILLITE	✓	T	5	10	2-5	
						46			✓	✓		5	2-5	
121	·08					47			✓	✓		5	2	
						48	ST	SERICITIC 49 TILLITE	✓	✓		2	2-5	
						49			✓	✓		5	2-5	10
						49-50	QSBT	QUARTZ SERICITE 50 BIOTITE TILLITE	✓	✓		10	2	

(— = <0.01 g/t)

0–0.5 Red brown
0.5–40 grey black
40–43 grey
43–50 green black

REASON FOR HOLE:

OTHER DETAILS: 25 m SE PC 3

DRILL TYPE: INVESTIGATOR — LOGGED BY: DDK

DRILLER: WILSONS — DATE DRILLED: 30·8·87

SCALE: 1:250 — DRG/CODE No:

PROSPECT Premier / Gutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 5

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ...D... TO ..50.....

RL. COLLAR: .....

INCLINATION: ..-60.....

DIRECTION: ..305 Mag°.

SAMPLE N°	ANALYSES p.p.m/% Au g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite	Sericite	Pale grn	Pyrite	Mt
123122	—	0-1	S	0.5 Red brown soil					
		2	ST	Weathered SERICITIC TILLITE	✓	✓✓			
		3			✓	✓✓			
		4			✓	✓✓			
123	—	5			✓	✓✓			
		6			-	✓✓			
		7		7m ? BOX	-	✓✓			
		8			✓	✓✓			
		9			✓	✓✓			
		10			✓	✓✓			
124	—	11			✓	✓✓			
		12	ST	SERICITIC TILLITE	✓	✓✓			T
		13			✓	✓✓		T	
		14			✓	✓✓			
		15		15	✓	✓✓			
		16	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓	5		
125	—	17		17	✓	✓	5		
		18	ST	SERICITIC TILLITE	✓	✓✓			
		19		19	✓	✓✓	15	T	
		20			-	✓✓	5		
		21	ST	SERICITIC TILLITE + BT2-FELDS ERRATICS	✓	✓✓	10		
		22			✓	✓✓	10		
126	—	23	+ Err.		✓	✓✓			
		24		24	✓	✓✓	10		
		25	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓		T	
		26			✓	✓		T	
		27		27	✓	✓		T	
		28	ST	SERICITIC TILLITE	✓	✓✓	5	T	T
127	—	29		29	✓	✓✓	30	1/2	T
		30	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓		T	
		31			✓	✓		T	
		32			✓	✓	10	T	
		33			✓	✓		T	
		34			✓	✓		T	
128	—	35			✓	✓		T	T
		36		36	-	✓		T	T
		37	ST	SERICITIC TILLITE	✓	✓✓			
		38		38	-	✓✓		T	
		39	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓		T	
		40		40	-	✓		T	
129	—	41	ST	SERICITIC TILLITE	✓	✓✓			
		42			✓	✓✓		1/2	
		43		43	✓	✓✓			
		44	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓		T	
		45			✓	✓		T	
		46			-	✓	10	1/2	
130	—	47			✓	✓		T	
		48			✓	✓		T	
		49			✓	✓		T	
		49-50		50	-	✓		T	

(— = <0.01 g/t)

0-0.5 red brown
0.5-7 dk grey
7-15 grey black
15-19 dk grey
19-29 grey black
29-50 grey

DAMP @ 43m

REASON FOR HOLE:

OTHER DETAILS: 50m SE AC 4

DRILL TYPE: INVESTIGATOR — LOGGED BY: BDK

DRILLER: WILSONS — DATE DRILLED: 30.31.8.87

SCALE: 1:250 — DRG/CODE No:

PROSPECT Premier / Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 6

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ...31.....

RL. COLLAR: ..... m

INCLINATION: ...-60.....°

DIRECTION: ...310 mag.°

SAMPLE N°	Au ppm/%	Au g/t	DEPTH METRES	LOG	DESCRIPTION	Visible	Sericite	Pyrite qtz	Pyrite	mT
723131	—		0-1	S	0.5 Red brown soil					
			2	QSBT	Weathered QUARTZ SERICITE BIOTITE TILLITE	✓	✓			
			3			✓	✓			
			4			✓	✓			
132	—		5			✓	✓			
			6			✓	✓			
			7			✓	✓	10		
			8		8 Box	✓	✓	5		
			9	QBST	QUARTZ BIOTITE SERICITE TILLITE	✓	✓	20		
			10			✓	✓			
133	—		11			✓	✓			
			12			✓	✓			
			13		13	✓	✓	5		
			14	QSBT + QBST	Interbedded QUARTZ SERICITE BIOTITE TILLITE & QUARTZ BIOTITE SERICITE TILLITE	✓	✓	5		
			15			✓	✓	5		
			16			✓	✓	5		
134	—		17		17	✓	✓	5		
			18	QBST	QUARTZ BIOTITE SERICITE TILLITE	✓	✓	10		
			19			✓	✓	5		
			20		20	✓	✓	20		
			21	QSBT	QUARTZ SERICITE BIOTITE TILLITE	✓	✓	30		
			22			✓	✓	5		
135	—		23		23	✓	✓	5		
			24	QBST	QUARTZ BIOTITE SERICITE TILLITE	✓	✓	5		
			25		25	✓	✓	10		
			26	ST	SERICITIC TILLITE	✓	✓✓	10		
			27			✓	✓✓	5		
			28			✓	✓✓	5		
136	—		29			✓	✓✓	5		
			30			✓	✓✓	5		
			30-31		31	✓	✓✓	T		

(— = <0.01 g/t)

0 - 0.5 Red br
0.5 - 8 Fawn brown
8 - 17 grey
17 - 20 grey/black
20 - 31 dk grey & Fawn

REASON FOR HOLE: 50m SE PC 5

OTHER DETAILS: Abandoned 31m; Rods Jamming

DRILL TYPE: INVESTIGATOR | LOGGED BY: RD/L

DRILLER: WILSONS | DATE DRILLED: 31.8.87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Hepmier / Gutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE No TC 11

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER FROM 0 TO 50

RL. COLLAR: ..... m

INCLINATION: -60° °

DIRECTION: 315 mag °

SAMPLE Nº	ANALYSES ppm/% Au	g/t				DEPTH METRES	LOG	DESCRIPTION	Biotite	Sericite	Pale qtz	Pyrite	Mt
723137	—					0-1	S	0-5 Red brown soil					
						2			✓	//			
						3			✓	//			
						4	QBST/ST	Weathered QUARTZ BIOTITE SERICITE TILLITE	✓	//			
138	—					5			✓	//	5		
						6		Tending SERICITIC	v	//			T
						7		TILLITE Box	v	//			
						8			✓	//	5		
						9			✓	//	5		T
						10	QBST/ST	QUARTZ BIOTITE	✓	//			T
139	—					11		SERICITE TILLITE	v	//	10		
						12		Tending SERICITIC	✓	//	10		
						13		13 TILLITE	✓	//	5		5
						14	GT/?DM	14 GRANITIZED TILLITE ? → QUARTZ MAGNETITE ROCK	?	T			?15
						15	QBST	15 QUARTZ BIOTITE SERICITE TILLITE	30	T			2
						16			20				?30
						17	QBST/?DM	QUARTZ BIOTITE	15	10			5
140	—					18		18 SERICITE TILLITE ? → QUARTZ MAGNETITE ROCK			5	5	15
						19			5				?30
						20	GT/?DM	20 GRANITIZED TILLITE ? → QUARTZ MAGNETITE ROCK					25
						21			50				2
						22	QBT/T	QUARTZ	30				2
141	—					23		23 BIOTITE TILLITE → TILLITE	20				2
						24			10				20
						25			T				30
						26	GT/?DM	GRANITIZED	5				15
						27		TILLITE ? → QUARTZ MAGNETITE ROCK	5				15
						28		28	5				20
142	—					29			40		5		15
						30			50		5		10
						31	QBT/T	QUARTZ	50				10
						32		BIOTITE	50		5		10
						33		33 TILLITE → TILLITE	40				10
						34			10	✓			5
143	—					35	QBST + GT	Interbedded	30	✓			5
						36		QUARTZ BIOTITE GRANITIZED	20	✓		1/2	5
						37		SERICITE TILLITE & TILLITE	30	✓			5
						38		38	15	✓			2
						39			30	✓	5	T	2
						40			✓	40		T	2
144	—					41	QSBT	QUARTZ SERICITE	✓	40	5		5
						42		BIOTITE TILLITE	✓	40	5		2
						43			✓	30	5		T
						44		44	30	✓			
						45	GT	45 GRANITIZED TILLITE	20	✓			T
						46			40	✓			25
145	—					47	QBST	QUARTZ BIOTITE 47 SERICITE TILLITE	40	✓			5
						48			5	✓		T	5-8
						49	GT/?DM	GRANITIZED	2	✓			5
						49-50		50 TILLITE ? → QUARTZ MAGNETITE ROCK	5	✓		T	5

(— = <0.01 g/t)

0-0.5 Red brown

0.5-7 Fawn grey

7-23 grey black & green black

23-28 grey

28-33 grey black

33-50 grey

REASON FOR HOLE:

OTHER DETAILS: SOM SEPC 6

DRILL TYPE: INVESTIGATOR — LOGGED BY: ADK

DRILLER: WILSONS — DATE DRILLED: 1.9.87

SCALE: 1:250 — DRG/CODE No:

PROSPECT Premier / Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 8

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0.... TO .. 50 .....

RL. COLLAR: ..... m

INCLINATION: -60 °

DIRECTION: 340 mag °

SAMPLE N°	Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite Sericite	Sericite Biotite	Pale qtz	Pyrite	mT
723146	—		0-1	S	0.5 Red brown soil					
			2	QBST	Weathered QUARTZ BIOTITE SERICITE TILLITE					
			3			20		5		2
			4		4 ——— Box	20		5		1
147	—		5			40		5		1/2
			6			60				
			7	QBST	QUARTZ BIOTITE SERICITE TILLITE	30				T
			8			20				T
			9			20		5		T
			10		10	80				
148	—		11	GT	11 GRANITIZED TILLITE	10				T
			12	QBST	QUARTZ BIOTITE SERICITE TILLITE	30				5
			13			30				2
			14			40				2
			15		14.5	20				!40
				? Bm/GT	IS ? QTZ-MT ROCK / GRANITIZED TILLITE					
			16	QBST/ ST	QUARTZ BIOTITE SERICITE TILLITE → SERICITIC TILLITE		50			10
149	—		17				40	5		10
			18			40		5		10
			19			50		5		2
			20			40		5		1
			21			40		5		1/2
			22		22	50				2
150	—		23	QBST/ GT	QUARTZ BIOTITE SERICITE TILLITE → GRANITIZED TILLITE	20				2
			24			30				1
			25		25	30		5		T
			26	GT ± QBST	GRANITIZED TILLITE I interbedded QUARTZ BIOTITE SERICITE TILLITE	10				T
			27			10			T	T
			28			10			T	T
151	—		29			10				T
			30			25			T	1
			31			15				1/2
			32			30		10	T	2-5
			33			30				5
			34			20		5		5
152	—		35		35		15			2-5
			36	QSBT /ST	QUARTZ SERICITE BIOTITE TILLITE → SERICITIC TILLITE		50	5		5
			37				50	20		2-5
			38				50	20		5
			39				50	10		2-5
			40		40		35	5		2-5
153	—		41	QSBT /GT	QUARTZ SERICITE BIOTITE TILLITE → GRANITIZED TILLITE	20		5		T
			42				10	10		T
			43				30			2
			44				30			2
			45				30	10		1
			46				10	5		1
154	—		47				25	5		1
			48				10			2-5
			49				20	5		2-5
			49-50		50		40	5		2-5

(— = <0.01 g/t)

0 - 0.5 Red Brown
0.5 - 4 Brown
4 - 10 dk grey
10 - 11 grey white
11 - 14.5 grey
14.5 - 15 red black
15 - 22 grey
22 - 35 fawn grey
35 - 40 fawn & green grey
40-45 grey
45-50 fawn grey

REASON FOR HOLE:

OTHER DETAILS: 50m SE PC 7

DRILL TYPE: INVESTIGATOR | LOGGED BY: DDK

DRILLER: WILSONS | DATE DRILLED: 1.9.87

SCALE: 1:250 | ORG/CODE No:

PROSPECT Premier / Otana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 9

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER FROM ... 0 ... TO .. 50 .....

RL. COLLAR: .....

INCLINATION: -60°

DIRECTION: 335 mag

SAMPLE N°	ANALYSES p.p.m/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite Sericite	Sericite Biotite	Pale grn	Pyrite	mt
723155	—		0-1		5 0.5 Red brown soil					
			2							
			3				40			1
			4		Weathered		40	5		T
156	—		5	QSBT	QUARTZ SERICITE		60	5		1
			6		BIOTITE TILLITE		30			1
			7		7 ——— Box		60			1/2
			8			50		5		T
			9	QSBT	QUARTZ SERICITE		40		1/2	10
			10		BIOTITE TILLITE		20			1
157	—		11		11		30			T
			12			10				1/2
			13			5				10
			14	GT/?QM	GRANITIZED TILLITE	5				15
			15		? -> QUARTZ MAGNETITE ROCK		10			15
			16		16		5			30
158	—		17			60				5
			18	QBT/T	QUARTZ BIOTITE	40			T	5
			19		19 TILLITE -> TILLITE	40				5
			20				15			10
			21				15			15
			22	GT/?QM	GRANITIZED		15			15
159	—		23		23 TILLITE ? -> QUARTZ MAGNETITE ROCK		15		T	10
			24				30		T	2
			25				40			2
			26				20			5
			27				15			5
			28				30			2
160	—		29		Interbedded		10			5
			30	QSBT	QUARTZ SERICITE		30			2
			31	+	BIOTITE TILLITE	40				5
			32		&		30			T
			33	GT			30			T
			34		GRANITIZED		40			2
161	—		35		TILLITE		15			2
			36		36	40				10
			37			10				15
			38	GT/?QM	GRANITIZED	30				15
			39		39 TILLITE ? -> QUARTZ MAGNETITE ROCK	20				15
			40			40				2
162	—		41	QBST	QUARTZ BIOTITE	30				1
			42		42 SERICITE TILLITE	30				10
			43				20			5
			44				30			10
			45	QSBT	QUARTZ SERICITE		40			2
			46		46 BIOTITE TILLITE		40	5		5
163	—		47				10			T
			48				30			2
			49	GT	GRANITIZED		10			T
			49-50		50 TILLITE		10			T

(— = <0.01 g/t)

0-0.5 Red brown

0.5-11 grey ± fawn

11-19 grey ± grey black

19-36 grey

36-39 grey black

39-42 grey

42-46 grey black

46-50 grey

REASON FOR HOLE:

OTHER DETAILS: 50m SE PC 8

DRILL TYPE: INVESTIGATIVE — LOGGED BY: BDK

DRILLER: WILSONS — DATE DRILLED: 7.9.87

SCALE: 1:250 — DRG/CODE No:

PROSPECT Stemler / Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE No PC 10

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER: FROM 0 TO 50

RL. COLLAR: ..... m

INCLINATION: -60 °

DIRECTION: 330 Mag °

SAMPLE No	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite Sericite	Sericite Biotite	Pale grn	Pyrite	mt
723164	—		0-1	S	0-0.5 Red brown soil					
			2	QBST/GT	2 Weathered ? Box					
			3	QBST/GT	QUARTZ BIOTITE	30		5		T
			4		4 SERICITE TILLITE → GRANITIZED TILLITE	20				15
165	—		5			10				10
			6			10		5		2
			7			20				2
			8	GT	GRANITIZED TILLITE	5		5		1
			9				30			5
			10		10.5	2				T
166	—		11	T	11 TILLITE	40		10		5
			12			10				2
			13	GT	GRANITIZED TILLITE	15		5		2
			14		13.2	50		5		2
			15			60		5		5
			16	T	TILLITE	50		5		10
167	—		17	I GT	Minor interbedded	50				2
			18		18.5 GRANITIZED TILLITE	10				
			19			50		5		2
			20			30		5		2
			21	QSBT/GT	QUARTZ SERICITE	30		5		2
			22		BIOTITE TILLITE		10	2		10
168	—		23		→ GRANITIZED		20	2		2
			24		TILLITE 24		30	2		2
			25	T	25 TILLITE	60				5
			26				30			5
			27				30			5
			28	QSBT	QUARTZ SERICITE	40				15
169	—		29		BIOTITE TILLITE		10			1
			30		29.7	40		5		1
			31	T	31.5 TILLITE	50		5		1
			32			30		5		1
			33			10				2
			34				40			2
170	—		35			10		5		2
			36	QSBT	Interbedded	30		10		5
			37	+	QUARTZ SERICITE		10			2
			38	GT	BIOTITE TILLITE		20		T	2
			39		&		10			2
			40		GRANITIZED TILLITE 40	10				1/2
171	—		41				30			2
			42	QSBT	QUARTZ SERICITE		40	5		1/2
			43		BIOTITE TILLITE		30	2		2
			44		44		30		T	2
			45				20	5		2
			46	GT	GRANITIZED		10			1/2
172	—		47		TILLITE 47		10			1/2
			48			30		5		1
			49	QBST	QUARTZ BIOTITE	30		5		15
			49-50		SERICITE TILLITE 50	40				15

(— = <0.01 g/t)

0 - 0.5 Red Brown
0.5 - 10.5 Fawn grey
10.5 - 11 green black
11 - 13.2 grey
13.2 - 18.5 green black
18.5 - 24 grey
24 - 25 green black
25 - 31.5 grey + grey black

31.5-50 grey white & grey

REASON FOR HOLE:

OTHER DETAILS: 50m SE PC 9

DRILL TYPE: INVESTIGATOR | LOGGED BY: RDK

DRILLER: WILSONS | DATE DRILLED: 2,3-9-87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Premier / Gitana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 11

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER FROM ...0... TO ..50.....

RL. COLLAR: ..... m.

INCLINATION: ...-60.... °

DIRECTION: 335 mag °

SAMPLE N°	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite Sericite	Sericite Biotite	Pale qtz	Pyrite	Int.
723173	—		0-1	S	0.5 Red brown soil					
			2							
			3	QBST	Weathered QUARTZ BIOTITE SERICITE TILLITE	30		5		5
			4			30		5		2
174	—		5				30	20		T
			6		6 Box	30		20		5
			7	GT	7.8 GRANITIZED TILLITE	10		10		2
			8			10		10		2
			9	QSBT	QUARTZ SERICITE BIOTITE TILLITE	40		15		2
			10				30	10		2
175	—		11				30	5		T
			12		12		40	10		1
			13	QSBT + GT	Interbedded QUARTZ SERICITE BIOTITE TILLITE + GRANITIZED TILLITE		20	5		2
			14				20		2	2
			15				20		T	2
			16			30				T
176	—		17			20		10		2
			18				30	10		T
			19				10	10		T
			20				30			2
			21		21.5		15			1
			22			30				2
177	—		23	QBST + GT	Interbedded QUARTZ BIOTITE SERICITE TILLITE + GRANITIZED TILLITE	10				2
			24			15		5		1
			25			20				1
			26		26	40			T	2
			27	QSBT/GT + QSBT	Interbedded QUARTZ SERICITE BIOTITE TILLITE tending GRANITIZED TILLITE + QUARTZ SERICITE BIOTITE TILLITE		20		T	1
			28				30	5		5
178	—		29				20	5		2
			30				40	5		T
			31				40	2		2
			32			30		5		5
			33				20	5		1
			34			30				1
179	—		35				30			T
			36				40			T
			37				40			2
			38		38		40		T	2
			39	GT + QSBT	Interbedded GRANITIZED TILLITE + QUARTZ SERICITE BIOTITE TILLITE	40		2		T
			40				20	2	T	T
180	—		41				20	2	T	T
			42				20			T
			43				20		T	T
			44			30		2	T	T
			45			20			T	T
			46				40		T	T
181	—		47				5	2	1/2	T
			48				10	2	T	T
			49				20	2	T	T
			49-50		50	30		5	2	T

(— = <0.01 g/t)

0 - 0.5 Red brown

0.5 - 6 Fawn

6 - 50 grey & Fawn

REASON FOR HOLE:

OTHER DETAILS: 50m SE PC 10

DRILL TYPE: INVESTIGATOR

DRILLER: WILSONS

SCALE: 1:250

LOGGED BY: TDK

DATE DRILLED: 3.9.87

ORG/CODE No:

PROSPECT Premier/Kitana CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° PC 12

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER: FROM 0 TO 50

RL. COLLAR: ..... m.

INCLINATION: -60 °

DIRECTION: 330 mag °

SAMPLE N°	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	biotite + sericite	sericite + biotite pale gn	pyrite	MT
723182	—		0-1	S	0.5 Red brown soil				
			2	QSBT/GT	Weathered QUARTZ SERICITE GRANITIZED				
			3		BIOTITE TILLITE → TILLITE		20	2	T
			4				20	5	T
183	—		5				10	5	2
			6	GT	Weathered		10		2
			7		GRANITIZED TILLITE BDX		5	5	2
			8				30	2	T
			9		Interbedded		30	2	T
			10				40		5
184	—		11	QSBT/GT	QUARTZ SERICITE		20	2	2
			12		BIOTITE TILLITE		20	5	2
			13		→ GRANITIZED TILLITE		30		1
			14		+		15	5	2
			15	GT	15 GRANITIZED TILLITE		30	5	2
			16				40	2	5
185	—		17		QUARTZ SERICITE		40		2
			18	QSBT			40	2	1
			19		BIOTITE TILLITE 19	40		10	1/2 5
			20				20	10	1 5
			21	QSBT/GT	QUARTZ SERICITE		20	2	T 1
			22		BIOTITE TILLITE → GRANITIZED	40		5	1 2
186	—		23		22.5 TILLITE	5			1/2 T
			24	GT	GRANITIZED		15		T
			25		24.7 TILLITE	30			1 2
			26	QBST	26 QUARTZ BIOTITE SERICITE TILLITE	40		20	1/2 1
			27			40			1/2 1
			28	QBT	QUARTZ	40			T T
187	—		29		BIOTITE TILLITE	40			1/2 1/2
			30		30	40		5	1 1
			31			50			1 1
			32			40			1/2 1/2
			33			30		10	T 2
			34			30			T
188	—		35	QBST	QUARTZ BIOTITE		40		1 2
			36		SERICITE TILLITE	50			1/2 1
			37			40		5	T 1
			38			40		20	T 2
			39		39	20		5	T 15
			40				40		1/2 5
189	—		41		QUARTZ SERICITE		30	5	1/2 5
			42				30	10	1/2 2
			43	QSBT	BIOTITE TILLITE		30	10	1/2 1
			44		44		30	5	T 2
			45				20	2	T 2
			46				20	2	T 2
190	.02		47	GT	GRANITIZED		15	10	2
			48		TILLITE 48		15	10	T 15
			49	QSBT/GT	QUARTZ SERICITE GRANITIZED		30	5	T 8
			49-50		50 BIOTITE TILLITE → TILLITE		20	5	T 5

(— = <0.01 g/t)

0 - 0.5 Red brown
0.5 - 7 fawn grey
7 - 15 grey & fawn
15 - 26 grey & fawn
26 - 30 dk grey
30 - 48 grey
48 - 50 dk grey

REASON FOR HOLE:

OTHER DETAILS: 50 m SE PC 11

DRILL TYPE: INVESTIGATOR | LOGGED BY: DDL

DRILLER: WILSONS | DATE DRILLED: 3, 4-9-87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Premier/Wtana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 13

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:.....

ROTARY: FROM.....TO.....

HAMMER: FROM...0...TO..45...

RL. COLLAR:.....m.

INCLINATION: -60°

DIRECTION: 335 mag°

SAMPLE N°	ANALYSES p.p.m/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite Sericite	Sericite Biotite	Pale qtz	Pyrite	mt	"Cooper"
723191	—		0–1	S	0.5 Red brown soil						
			2	ST + QV	weathered SERICITIC TILLITE + QTZ VEINS	✓	✓				
			3			✓	✓			T	
			4		4 ——— BOX	✓	✓				
192	—		5			✓	✓✓	5			
			6			✓	✓✓	5			
			7			✓	✓	70			
			8			✓	✓	60			
			9			✓	✓	90			
			10	ST + QV		✓	✓	60			
193	—		11		SERICITIC TILLITE + QUARTZ VEINS	✓	✓	60	T		
			12			✓	✓	40	T		
			13			✓	✓	60	T		
			14			✓	✓	60	T		
			15			✓	✓✓	10	T		
			16		16	✓	✓✓	2			
194	.01		17	VST	Very SERICITIC TILLITE	✓	✓✓	5			
			18			✓	✓✓	2		½	
			19			✓	✓✓			T	
			20		20	✓	✓✓	2		T	
			21			✓	✓	90		T	T
			22			✓	✓	60		T	
195	.01		23	ST +QV	SERICITIC TILLITE ± QUARTZ VEINS	✓	✓	60	½		T
			24		24	✓	✓	80	T		
			25					100	T		
			26	QV ±ST	QUARTZ VEINS ± SERICITIC TILLITE			100	T		
			27			✓	✓	95			
			28		28	✓	✓	95	½		
196	—		29	QBST	QUARTZ BIOTITE SERICITE TILLITE		40		½		
			30			50			T	T	
			31		31	20			T	T	T
			32	QV ±ST	QUARTZ VEINS ± SERICITIC TILLITE			100			
			33					95	T		
			34					100	½		
			35		34.5		50		1	T	T
197	—		36	QSBT/GT	QUARTZ SERICITE BIOTITE TILLITE → GRANITIZED TILLITE		30		1½	T	
			37		37		30		½	T	
			38	QBST/ST	QUARTZ BIOTITE SERICITE TILLITE → SERICITIC TILLITE	50		10	T		
			39		39	50		10			
			40	ST	SERICITIC TILLITE	✓	✓	5	T		
198	—		41			✓	✓	10	T		
			42			✓	✓	10	T		
			43		43	✓	✓	5	T		
			44	T ±ST	TILLITE ± SERICITIC TILLITE	✓	✓	5	T		
			44–45		45	✓	✓	15	½		

(— = <0.01 g/t)

0–0.5 Red brown
0.5–4 Pale green
4–16 Fawn + grey
16–20 green black
20–24 grey
24–28 Fawn
28–31 grey
31–34.5 Fawn white

34.5–39 grey
39–45 dk grey ± green

REASON FOR HOLE:
Line 2, 100m SW of PC 1.
OTHER DETAILS: No sample return, Jaming 45m

DRILL TYPE: INVESTIGATOR | LOGGED BY: JDK
DRILLER: WILSONS | DATE DRILLED: 4·9·87
SCALE: 1:250 | DRG/CODE No:

PROSPECT Hemler/Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 13T

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ...50....

RL. COLLAR: ..... m.

INCLINATION: ...-60... °

DIRECTION: 335 Mag °

SAMPLE N°	ANALYSES p.p.m/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Sulphide + Sericite	Sericite + Silicate	Pale grn	Pyrite	mT	Green mica
723199	—		0-1	S	0.5 Red brown soil						
			2	VST	Weathered VERY SERICITIC TILLITE	✓	✓				
			3			—	✓	20			
			4			✓	✓	10			
200	—		5		Box	✓	//	5			
			6			✓	//	5			
			7			✓	//				
			8			✓	//	60			
			9			✓	//	10			
			10			✓	//	10			
201	—		11			✓	//	5			
			12	VST	VERY SERICITIC TILLITE	✓	//	5			
			13			✓	//	10			
			14			✓	//				
			15			✓	//				
			16			✓	//	10			
202	—		17		17	✓	//	10			
			18			✓	//	20	T		
			19			✓	//		T		
			20			✓	//	2	½		
			21			✓	//				80
			22	ST	SERICITIC TILLITE	✓	//	5	2		5
203	—		23			✓	//		½		15
			24		24	✓	//	2	2	10	5
			25	QV +ST					½		
			26		26 QUARTZ VEINS + SERICITIC TILLITE	✓	✓			T	
			27			✓	//	20	2	T	
			28			✓	//	60	5	T	
204	—		29	ST	SERICITIC TILLITE	✓	//	10	1	T	
			30			✓	//	10	2	T	
			31		31	✓	//	15	5		
			32			✓	✓		T		
			33	QV IST	QUARTZ VEINS ± SERICITIC TILLITE	✓	✓		T		
			34		34	✓	✓		T		
205	—		35			✓	//	5	2	½	
			36			✓	//	5	1	T	5
			37			✓	//	5	2	10	
			38			✓	//	20	1	5	
			39	ST	SERICITIC TILLITE	✓	✓	10	2	5	
			40			✓	//	10	5	5	
206	—		41			✓	//	5	2	5	
			42		42	✓	//	15	2	2	
			43			✓	✓	70	1	T	
			44	QV +ST	QUARTZ VEINS + SERICITIC TILLITE	✓	✓	70	½	T	
			45		45	✓	✓	80	½		
			46	ST	46 SERICITIC TILLITE	✓	//	15	2	T	
207	•01		47			✓	✓	10	T		
			48	QV +ST	QUARTZ VEINS + SERICITIC TILLITE	—	✓	85	½		
			49			✓	✓	85	1		
			49-50		50	✓	✓	50	T		

(— = <0.01 g/t)

0-0.5 Red Brown
0.5-4 Fawn
4-17 grey ± Fawn
17-24 dk grey green
24-26 Fawn white
26-31 dk grey
31-34 Fawn white
34-42 dk grey green ± black
42-50 grey + white

REASON FOR HOLE:

OTHER DETAILS: 25m SE PC 13

DRILL TYPE: INVESTIGATOR

DRILLER: WILSONS

SCALE: 1:250

LOGGED BY: DDK

DATE DRILLED: 5-9-87

DRG/CODE No:

PROSPECT Premier/Cutana CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE No PC 14

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER FROM ... 0 ... TO .. 50 .....

RL. COLLAR: ..... m.

INCLINATION: -60 °

DIRECTION: 335 mag °

SAMPLE No	ANALYSES ppm/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Pyrite	Pyrite	mst	green
723208	—		0-1	S	0-0.5 Red brown 0.5-1				
			2						
			3	VST/ST	Weathered VERY SERICITIC TILLITE → SERICITIC TILLITE	10			
			4			5			
209	—		5						
			6			5			
			7		7 ? Box				
			8	VST	VERY SERICITIC TILLITE	5			
			9						
			10			2			
210	—		11			15			
			12			10			
			13		13	10			1
			14	VST/ST	VERY SERICITIC TILLITE → SERICITIC TILLITE	70			
			15			5			
			16						
211	—		17			5			
			18			10			
			19			15			
			20		20	20			
			21	QV+ST	21 QUARTZ VEIN + SERICITIC TILLITE	70			
			22						
212	—		23						
			24			5			
			25						
			26			5			
			27			5			
			28			5			
213	—		29			15			
			30			5			
			31	VST/ST	VERY SERICITIC TILLITE → SERICITIC TILLITE	20			
			32			10			
			33			2			
			34						
214	—		35			5			
			36		36	5			
			37	QSBT	QUARTZ SERICITE BIOTITE TILLITE	10			
			38			5	1/2		
			39				1/2		
			40			5	2		
215	—		41		41		1		
			42				1/2		
			43	QSBT/ST	QUARTZ SERICITE BIOTITE TILLITE → SERICITIC TILLITE	5	1/2		
			44		44		1/2		
			45				T		
			46			20	2		20
216	—		47	ST + QV	SERICITIC TILLITE + QUARTZ VEINS	40	1/2		10
			48			30	2		5
			49			30	2		2
			49-50		50	40	2		2

(— = <0.01 g/t)

0-0.5 red brown
0.5-7 fawn grey
7-8 fawn
8-19 fawn grey
19-20 grey
20-24 fawn grey
24-25 fawn
25-36 fawn grey 36-50 grey

REASON FOR HOLE:

OTHER DETAILS: 25m SE PC 14

DRILL TYPE: INVESTIGATORL | LOGGED BY: BDK

DRILLER: WILSONS | DATE DRILLED: 5,6,9-87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Hemler | Cutana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE No PC 10

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER FROM ...0... TO ...50...

RL. COLLAR: ..... m

INCLINATION: -60°

DIRECTION: 330° Mag

SAMPLE N°	ANALYSES ppm/% Au	g/t				DEPTH METRES	LOG	DESCRIPTION	Sulphur Specialty	Separate Sulphide	Pale grn	Lt grn	WT	Grade
723217	—					0-1	S	0-5 Red brown soil						
						2								
						3								
						4		Weathered						
218	—					5	VST	VERY SERICITIC TILLITE			60			
						6		6 — — — — — — Box			20			
						7					30			
						8					5			
						9	VST	VERY SERICITIC TILLITE			10			
						10		10			10		-	7
219	—					11					5			1
						12					5			5
						13	ST	SERICITIC TILLITE						2
						14								5
						15		15					5	7
						16					5			
220	—					17	ST/VST	SERICITIC TILLITE → VERY SERICITIC TILLITE			2		-2	
						18		18			2		10	
						19	QV+ST	19 QUARTZ VEIN + SERICITIC TILLITE					2	
						20							1	
						21	VST	VERY					2	15
						22		22 SERICITIC TILLITE					2	2
221	—					23							2	3
						24							5	
						25					✓		2	2
						26					✓		1	
						27							T	
						28		QUARTZ SERICITE					2	
222	—					29	QSBT	BIOTITE TILLITE			10		T	
						30	+	+			10		-	
						31	ST	SERICITIC			50			
						32		TILLITE			20		-	
						33							-	
						34							-	
223	—					35							-	
						36		36			20		2	
						37					5	1/2	2	
						38		QUARTZ SERICITE			20	T	10	5
						39	QSBT/	BIOTITE TILLITE			5	T	10	2
						40	ST	→ SERICITIC TILLITE					2	
224	—					41		41				T	5	
						42							-	
						43							-	
						44							-	
						45								
						46								
225	—					47	QSBT	QUARTZ SERICITE					2	
						49		BIOTITE TILLITE				1/2		
						49						1/2		
						49-50		60				1		

(- = <0.01 g/t)

0 – 0.5 Red Brown
0.5 – 6 pale grey
6 – 10 grey
10 – 15 green grey
15 – 20 grey & fawn
20 – 29 grey
29 – 36 pale grey
36 – 41 grey
41 – 43 grey white
43 – 47 grey
47 – 50 grey white

REASON FOR HOLE:

OTHER DETAILS: 25m SE PC 15

DRILL TYPE: INVESTIGATOR | LOGGED BY: JDK

DRILLER: WILSONS | DATE DRILLED: 6-9-87

SCALE: 1:250 | DRG/CODE No:

PROSPECT Atemier/Wtana — CARPENTARIA EXPLORATION COMPANY PTY. LTD. — HOLE N° PC 17

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION:

CO-ORDS:

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ..50.....

RL. COLLAR: .....m

INCLINATION: -60°

DIRECTION: 335 mag °

SAMPLE N°	ANALYSES p.p.m/% Au	g/t	DEPTH METRES	LOG	DESCRIPTION	Biotite Sericite	Sericite Quartz	Pale Grey	Mn %	MT
723226	—		0-1	S	0-5 Red brown soil					
			2							
			3				60			5
			4				60			10
227	.06		5	VST	Weathered very SERICITIC TILLITE + ? QUARTZ MAGNETITE ROCK		60			30
			6	+7.0m			60			40
			7		7 BOX		60			20
			8				60			10
			9				60			5
			10	VST	VERY SERICITIC TILLITE + ? QUARTZ MAGNETITE ROCK		60			25
228	—		11	+7.0m	11		60			5
			12	ST	SERICITIC TILLITE		50			1
			13		13		50			T
			14				40	5		T
			15				40	40		2
			16				20	10		2
229	—		17		QUARTZ SERICITE BIOTITE TILLITE → GRANITIZED TILLITE		30			2
			18				30			1
			19	QSBT/GT			20	5		T
			20				40			T
			21				30			T
			22		22		15	5		T
230	—		23				50			T
			24				50			T
			25	QSBT/ST	QUARTZ SERICITE BIOTITE TILLITE → SERICITIC TILLITE		50	30		T
			26				50	10		T
			27		27		50	10		2
			28				40	5		T
231	—		29				40	5		T
			30				40	5	1/2	2
			31	QSBT	QUARTZ SERICITE BIOTITE TILLITE		30		T	1
			32				20		T	T
			33		33		30	20	T	1/2
			34	QBST	QUARTZ BIOTITE	30			1/2	1
232	—		35		35 SERICITE TILLITE	40			T	1/2
			36				60		1/2	1/2
			37				10			T
			38	QSBT/GT	QUARTZ SERICITE BIOTITE TILLITE → GRANITIZED TILLITE		40		1/2	2
			39				40		1/2	1
			40		40		20		T	1
233	—		41	QBST	QUARTZ BIOTITE	40			T	2
			42		42 SERICITE TILLITE	40			T	5
			43			10			T	1
			44	GT	GRANITIZED	10				T
			45		45 TILLITE	30			1	T
			46	QBST	QUARTZ BIOTITE	40			T	T
234	—		47		47 SERICITE TILLITE	40			1/2	1
			48			10		10	T	1/2
			49	QBST/GT	QUARTZ BIOTITE SERICITE TILLITE → GRANITIZED TILLITE	30		20	T	2
			49-50	ST	50 SERICITIC TILLITE		50	10	2	1

(— = <0.01 g/t)

0-0.5 Red brown
0.5-7 Fawn green + purple
7-13 Fawn green
13-22 Fawn grey
22-33 Fawn + grey
33-40 grey ± fawn
40-49 grey
49-50 dk grey

REASON FOR HOLE:

OTHER DETAILS: Line 1 25m SE PC 12

DRILL TYPE: INVESTIGATOR | LOGGED BY: RDH

DRILLER: WILSONS | DATE DRILLED: 6, 7·9·87

SCALE: 1:250 | DRG/CODE No:

APPENDIX 2

GEOLOGICAL DESCRIPTION OF ROCK TYPES INTERSECTED IN RAB & PDH DRILLING

dajem
exploration
pty ltd
(inc. in Qld)

contract
geological
services

14 SEPTEMBER 1987

Mr. P Binks,
Carpentaria Exploration Company Pty. Ltd.,
PO Box 3,
GOODWOOD SA 5034.

PREMIER/CUTANA RAB DRILLING

A total of 387m of RAB was drilled in 58 holes on the 9th and 26th August, 1987. Drilling was undertaken along two BCL traverse lines (200 line m each) and one ground magnetic traverse line (150 line m).

Details are given below:

RAB C 001-021 BCL line 724282 Samples 720892 - 958

RAB C 022-042 BCL line 724356 Samples 720959 - 994

RAB C 043-058 G Mag line 8000E Samples 723060 - 085

Drill logs and sketch maps are attached.

Drilling on BCL line 724282 encountered quartz biotite Tillite and sericitic Tillite (?sheared) with rare copper at surface. Bluish (?)vein quartz was recorded in all holes.

Depth to hard rock on BCL line 724356 (along a ridge crest) was much shallower than expected (2-3m). Tillite was recorded in all holes with minor sericitic Tillite. Trace bluish (?)vein quartz and trace haematite are common.

Drilling of a ground magnetic feature on line 8000E recorded shallow holes over hars, composite psammite (FS) with slightly deeper holes south of grid 8400N encountering quartzose Tillite (?granitized) with minor (?)vein quartz. No magnetic material was identified in the field.

Note that, as requested, all samples have not been panned and observed in detail.

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xploration
pty ltd
(inc. in Qld)

contract
geological
services

27 SEPTEMBER 1987

Mr. P Binks,
Carpentaria Exploration Company Pty. Ltd.,
PO Box 3,
GOODWOOD SA 5034.

PREMIER/CUTANA PERCUSSION DRILLING

A total of 826m of percussion drilling was completed in 17 holes between 27 August and 7 September, 1987. Drilling was undertaken along two NW-SE traverses around the Premier Mine. Holes PC1 - 4 were drilled on line 1 at 25m centeres and holes PC13 - 16 at 25m centeres on line 2, approx 100m SW of line 1. Holes PC5-12 & 17 were drilled on the extension of line 1 at 50m centeres across a sheared zone.

Pyrite and magnetite were recorded in all holes except PC6 (no py, mt) and PC15 (no mt). Trace copper was recorded in holes around the Premier Mine. No visible gold was recorded. Pale green quartz was recorded in many of the more pyritic bands.

The rocks intersected are interpreted to predominantly represent a variable degree of sericitization and granitization of Tillite. Rock types used are listed below.

T	Tillite	QSBT	Quartz,sericite,biotite T
ST	Sericitic Tillite	QBST	Quartz,biotite,sericite T
VST	Very sericitic Tillite	GT	Granitized Tillite
QBT	Quartz biotite Tillite	QM	Quartz magnetite Rock
QV	Quartz veins		

Approximate biotite/sericite % cutoffs were:

VST >60% s+b, ST >50% s+b, QBST/QSBT 20 - 50% b+s, s+b
GT <20% s+b

At surface, Quartz veins are common, particularly in the vicinity of the Premier Mine. Quartzo feldspathic erratics, 5 to 30mm up to 40cm, are scattered over the surface. It was often difficult to interpret these features at depth in percussion chips. For example, the zones logged as QBST in PC3 & 4 may in fact be ST + QV. Due to the variability of granitization, few hole to hole correlations were possible. Ground magnetic traversing and susceptibility readings may provide correlations.

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DJE

CEC 27/09/87

Hole PC1 is thought to have intersected gneissic meta-sediments, FS/FM/FE, at the northern boundary of the Tillite zone. In general, the degree of granitization increases from NW to SE. Magnetite rich bands were encountered in holes PC7,8,9&17. It was not possible to determine from percussion chips if the magnetite zone in PC1 was a sediment or an intrusive.

Full assays are awaited. Drill logs and sections are attached

I.D.KERR
DAJEM EXPLORATION

dajem
exploration
pty ltd
(inc. in Qld)

contract
geological
services

17 SEPTEMBER 1987

Mr. P Binks,
Carpentaria Exploration Company Pty. Ltd.,
PO Box 3,
GOODWOOD SA 5034.

"GREEN & GOLD" PERCUSSION DRILLING

A total of 213m of percussion drilling was completed in 5 holes on the "Green & Gold" Prospect during September, 1987. The aim of the programme was to test a quartz - magnetite unit (with visible copper) in an area of old pits and shafts.

Limited geological information was available. Outcrop is sparse and no ground magnetic data or susceptibility meter were available. Initial indications were that the target unit (at the main workings) dipped steeply south with another parallel iron rich unit exposed in a pit to the SE.

Hole PC 18 (drilled north) was collared some 50m E of the main workings. This hole was abandoned at 18m when water washed out the surface casing. Hole PC 18A was collared some 3m S of PC 18. PC 18A encountered a sequence of metasedimentary gneisses (FS, FM, FE), partly retrogressed (sericitic) and partly garnetiferous. Pyrite, usually trace to 1% and up to 2-5%, was encountered from 9 to 50m. Two zones containing pale greenish quartz were intersected (35-38m, 47-50m).

The target zone was interpreted to intersect the drill section on surface some 12-15m N of the collar. The magnetite bearing unit (only tr-2%) from 38-47m may represent the down dip position of the target QM. This would indicate a dip of approx 80° N. Hole PC 19 was thus collared between PC 18 and the main workings and drilled S.

PC 19 encountered a quartz magnetite unit, gneiss, garnet gneiss and garnet magnetite gneiss. The rocks were pyritic from 20m. Correlations were difficult with a possible dip of 60-70° N from the projected surface position of the QM to the QM at 21-24m downhole. Another magnetite rich unit was intersected from 42 to 45m.

PC 20 was collared some 35m W of the main workings (or 75m W of PC 19) and drilled S. QM occurs on surface dumps just W of the collar. This was correlated with the QM at 5-6.8m downhole. The QM at 16-18m has no apparent surface expression PC 20 was garnetiferous (2-5%, zones 20-30%) with 5-10% magnetite from 11-16m and 1-2% magnetite 18-50m. Trace-1% pyrite was present from 18 to 28m with 2-5% from 28 to 50m.

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CEC 17/09/97

PC 21 wascollared 70m E of PC 19 along the interpreted strike direction. No garnet, pyrite or QM was recorded in a sequence of FS, FM and FE. Magnetite (1-2%) was present from 11 to 50m. It is possible that the QM at the main workings and the QM exposed in the pit some 50m S of the PC 21 collar are the same unit, displaced by folding or faulting. Rare subcropping quartzose psammite (FS) between PC 19 and 21 showed a possible small strike swing south. Ground magnetic traversing is neccessary to locate the extension of the main QM.

Should assays of drilling done to date prove favourable, it is recommended that the following be undertaken prior to further drilling:

- Limited gridding. Note that the magnetite near surface hampers compass traversing.

- Ground magnetic traversing of the drilled sections plus traversing E & W along strike to determine target zone extent.

- Magnetic susceptibility readings of samples drilled to date for correlation with surface magnetics.



I.D.KERR
DAJEM EXPLORATION

PROSPECT "Steer's Gold" CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° PC 18

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER FROM ...0... TO .. 18 .....

RL COLLAR ..... m

INCLINATION -60 °

DIRECTION 320 mag. °

SAMPLE N°	ANALYSES ppm/%	DEPTH METRES	LOG	DESCRIPTION	biotite	sericite	garnet	pyrite	heavy mt	green qtz
		S		Red brown soil + calcrete pebbles						
		0-1								
		2								
		3	FMq	Weathered GNEISS	5	15	5			
		4			5	20	T		T	
		5			20	40			T	
		6	rFE	6m ? BOX	20	40			T	
		7			10	20				
		8	rFm		20	20				
		9			20	40				
		10			20	40			T	
		11			20	30			T	
		12			20	30			T	
		13	rFE	GNEISS Sericite biotite quartz Feldspar ± magnetite ± Pyrite	20	40			T	
		14			20	40			T	
		15			30	40			T	
		16			30	30		T		
		17	FE		60	10		T	I	
		18		18m	40	20		T	T	

NOT SAMPLED

0 - 1/2 red brown

1/2 - 4 fawn

4 - 6 fawn green

6 - 18 green grey.

Damp @ 60 Hom

REASON FOR HOLE: TEST qtz mt unit

OTHER DETAILS: Abandoned 18m, casing washout

DRILL TYPE: INJECTION AIR

DRILLER: WILSONS

SCALE: 1:250

LOGGED BY: IDK

DATE DRILLED: 8.9.87

DRG/CODE NO:

PROSPECT "Green & Gold" CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° PC 18A

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ...50.....

RL. COLLAR: .....

INCLINATION: -60°

DIRECTION: 320 mag°

SAMPLE N°	ANALYSES p.p.m/% Au (g/t)	DEPTH METRES	LOG	DESCRIPTION	bistite	sericite	garnet	pyrite	haem mt	"green qtz"
			S	Red brown soil + calcrete pebbles						
123235	<.01	0–1								
		2								
		3		Weathered						
		4	FS	GNEISS						
		5				T				
236	<.01	6		5.5 BOX	50	10	2			10
		7	FE		50	10				
		8			30	10			T	
		9			5	15			T	
		10	rFm	retrogressed	30	10		1		
237	<.01	11		GNEISS quartz feldspar sericite biotite ± garnet ± pyrite	30	10	T	1/2		
		12			30	10	2	T		
		13			20	50	T	2		
		14			20	40		1		
		15	rFE		20	40	3	2		
		16			20	40	T	3		
238	-02	17		17m	20	20		1		
		18			50		1/2	1		
		19			50		T	1		
		20			50		1/2	1/2		
		21			50		1	1		
		22			40		T	2		
239	-02	23	FE		60		1	2		
		24			40			1		
		25			40			T		
		26		GNEISS pyritic ± garnet	40		2	T		
		27			40		2	2		
		28			40		T	5		
240	<.01	29			40			5		
		30	Fm		40		T	2		
		31			40			1		
		32			40			1		
		33			30			1/2		
		34			40			1		
241	-02	35			40			5		
		36		— — —	30		1	5		20
		37		+ "green qtz" Tr cpy	30		T	1		5
		38	FS	Tr cpy	10			1		2
		39		— — —	30		T	T	1	T
		40			30			T	1	
242	<.01	41			15	5			T	
		42		+ Sericite	15	15			T	
		43		+ magnetite	20	10		1/2	2	
		44	Fm		10	5			1	
		45	→ rFm		20	10		T	2	
		46			20	10		1/2	2	
243	<.01	47			40	10			T	
		48		— — —	50		2			25
		49	FEg	+ "green qtz"	50		2	1/2		30
		49-50		50m	50		10	1		20

0 – 0.5 red brown
0.5 – 5.5 fawn white
5.5 – 14 grey green
14 – 16 green
16 – 50 grey.

REASON FOR HOLE: Test qtz mt unit

OTHER DETAILS:

DRILL TYPE: INVESTIGATOR | LOGGED BY: SDC

DRILLER: WILSONS | DATE DRILLED: 8.9.87

SCALE: 1:250 | DRG/CODE No:

PROSPECT "Green + Gold" CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° PC 19

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ...0... TO ..45....

RL. COLLAR: .....m

INCLINATION: ...-60....

DIRECTION: ...150 Mag°.

SAMPLE N°	ANALYSES p.p.m/% Au (g/t)	DEPTH METRES	LOG	DESCRIPTION	biotite	sericite	garnet	pyrite	Haem mt	"green qtz"
		0-1	S	Red brown soil + calcrete pebbles						
723244	<.01	2								
		3	FE	3m Weathered GNEISS ?Box						
		4			50	10			1	
		5			50	5		T	1	
245	<.01	6	FE		60	5		T	1/2	
		7			50	T			1/2	
		8			35	15			1/2	
		9			30	5			T	
		10	FM		30	10			1	
246	<.01	11			20	15			1/2	
		12	rFM		15	30			T	
		13			15	20			T	
		14		GNEISS biotite quartz feldspar sericite magnetite ± pyrite	30	10			1/2	
		15			30	10			T	
		16	FM	± retrogressed	30	10			T	
247	<.01	17			20	5			T	
		18			15	15		T	1	
		19	FS		5	5		T	1	
		20	rFM		15	20			1/2	
		21		21m	15	20		1	1	
		22		Quartz-Magnetite-garnet	?		15	5	20	
248	.32	23	QMg	Rock ; Pyritic	?		10	2	30	
		24		24m	?		10	1	.25	
		25			20		5	2	2	
		26			20	5	15	1	2	
		27	FMg	Garnetiferous quartz Feldspar biotite sericite garnet pyrite magnetite + "green qtz" Tr cpy	20	5	20	5	1	
		28		GNEISS	40		10	2	1	20
249	.05	29			40		5	1	T	20
		30	rFM		15	30	2	1	1	5
		31			15	10	2	1/2	1/2	
		32	Fm	32m	25	5	1	1/2	1/2	
		33			5	5		T	T	
		34			2	2		T	T	
?? 12.50? 723245	.12	35	FS	GNEISS quartz Feldspar ± biotite, sericite ± Pyrite, magnetite	2	2		T	T	
		36		36.5	2	2		T	T	
		37								
		38			30		15	1/2	5	2
		39	FMg	Garnetiferous GNEISS + magnetite	15		25		1	
		40			15		25		2	T
730001	.26	41			30		15	1/2	2	
		42		42m Tr cpy	40		10	1	2	
		43			?40		15	2	20	
		44	FMg +mt	Garnetiferous Magnetite ? → QMg. ? Tr cpy	?40		10	1	10	
		44-45		45m GNEISS pyritic	?40		5	1	5	

0-2 red brown
2-13 fawn grey
13-21 grey
21-24 grey black

24-32 grey green
32-36.5 white grey
36.5-42 grey green
42-45 grey black

Water @ 10'm
>2000 g.p.k. salty

REASON FOR HOLE: Test qtz mt Unit

OTHER DETAILS: EOH 45, loss of sample return

DRILL TYPE: INVESTIGATOR

DRILLER: WILSONS

SCALE: 1:250

LOGGED BY: DDK

DATE DRILLED: 9-9-87

DRG/CODE No:

PROSPECT "Greer Gold" CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° PC 20

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: .....

ROTARY: FROM ..... TO .....

HAMMER: FROM ... 0 ... TO ... 50 m.

RL. COLLAR: .....

INCLINATION: -60

DIRECTION: 155 Mago.

SAMPLE N°	Au (g/t)	DEPTH METRES	LOG	DESCRIPTION	Biotite	Sericite	garnet	Pyrite	Hæmy mt	"green qtz"
		0-1	S	Red brown soil ± calcrete pebbles						
730002	.04	2								
		3	Fm	Weathered GNEISS						
		4								
		5		5	10	30				
003	<.01	6	Qm	6.8 Weathered qtz-mt Rock ? Box		10			60	
		7								
		8	fmg		15	5	20	T	T	40
		9			50	5	10	T	T	5
		10	FEg	Garnetiferous GNEISS — biotite quartz feldspar sericite garnet magnetite ± pyrite.	50	5	15	T	T	
004	.26	11			50		20			
		12			50		5		10	
		13	rFMg		10	20	5		10	
		14			10	20	10	T	5	
		15			10	20	5		2	
		16	FEg	16	50		10		10	T
005	.84	17	QMg	Quartz-magnetite-garnet Rock	?		15		30	T
		18		18 Pyritic			5	20	25	
		19	rFMg		5	10	5	1	1	
		20	rFm	Retrogressed GNEISS — Sericite quartz felds biotite garnet ± pyrite, mt	5	40	2	½	½	
		21			5	40	1	T	T	
		22	rFEg		10	50	5	1	1	
006	.09	23			10	40	5	1	1	
		24			20	20	5	½	1	
		25	FMg	Garnetiferous GNEISS ... + magnetite pyrite	30	10	5	1	1	
		26			30	10	20	1	2	
		27			30	10	25	1	2	
		28			40	10	15	1	1	
007	.03	29			30	15	25	2	1	
		30			20	10	30	2	1	
		31			15	÷	15	10	2	
		32	rFMg	Retrogressed Garnetiferous GNEISS + magnetite pyrite	20	25	10	2	2	
		33			20	25	15	2	2	
		34			30	15	20	5	2	
008	.22	35			20	10	35	2	2	
		36	FMg	Garnetiferous GNEISS + magnetite pyrite	15	5	20	5	2	
		37			30	5	25	2	2	
		38			25	5	10	2	5	
		39			15	5	5	5	2	
		40			10	5	5	2	2	
009	.16	41	rFm		15	20	2	2	2	
		42			40	10	2	5	2	
		43	FMg	Retrogressed GNEISS ± garnetiferous + magnetite pyrite	20	5	25	2	2	
		44			30	5	2	5	2	
		45	rFm		20	20	1	2	2	
		46			20	20	5	2	2	
010	.05	47			20	20	2	2	2	
		48			30	20	5	1	1	
		49			20	10	1	2	1	
		49-50			20	10	1	2	1	

0 - 0.5 red brown
0.5 - 5 grey green
5 - 6.8 brown
6.8 - 12 fawn green
12 - 15 brown
15 - 16 green
16 - 18 grey green
18 - 24 grey
24 - 31 dark green grey
31 - 50 dark grey

Damp to base

REASON FOR HOLE: Test qtz mt unit

OTHER DETAILS:

DRILL TYPE: INVESTIGATION

DRILLER: WILSONS

SCALE: 1:250

LOGGED BY: BDK

DATE DRILLED: 10/11-9-87

DRG/CODE No:

PROSPECT "Green Gold" CARPENTARIA EXPLORATION COMPANY PTY. LTD. HOLE N° PC 21

ROTARY PERCUSSION DRILL HOLE LOG

LOCATION: ....

CO-ORDS: ....

ROTARY: FROM ..... TO .....

HAMMER: FROM ..0.... TO ..50 m..

RL. COLLAR: ..... m.

INCLINATION: ..-60.... °

DIRECTION: ..150 Mag. °

SAMPLE N°	ANALYSES p.p.m/% Au (g/t)	DEPTH METRES	LOG	DESCRIPTION	kaolin	sericite	garnet	pyrite	kaol/ant	"green qtz"
		0-1	S	Red brown soil						
730011	<.01	2								
		3								
		4	FE							
		5		Weathered GNEISS quartz feldspar biotite sericite ± haematite	30				½	
012	<.01	6			50				½	
		7			5	5			½	
		8	FS		5	5			T	
		9			10	T				
		10			5	5				
		10.5		? BOX	2	10				
013	<.01	11								
		12			40				1	
		13			50	10			1	
		14			40	5			2	
		15	Fm/FE		50	5			½	
		16		GNEISS biotite quartz feldspar sericite magnetite	30	5			2	
014	·01	17			30	5			T	
		18			50	5			1	
		19			40	10			1	
		20	FS	20	10				½	
		21			40	20			1	
		22			40	20			1	
015	<.01	23	rFE		40	20			1	
		24			40	20			1	
		25		Retrogressed GNEISS biotite sericite quartz feldspar ± magnetite	40	20			½	
		26	rFM		10	10			1	
		27			20	10			2	
		28		28	20	20			1	
016	<.01	29			40				1	
		30	Fm		50				5	
		31			30	5			2	
		32			30				1	
		33	Fm+Fs		20				1	
		34			50				5	
017	<.01	35	Fm		40				2	
		36			40				1	
		37			40	10			1	
		38	Fm+Fs		20				2	
		39	Fm		40				1	
		40	Fs		10				T	
018	<.01	41			40				½	
		42			40	5			½	
		43			40				1	
		44			30				2	
		45	Fm	GNEISS quartz feldspar biotite magnetite ± sericite	30	5			1	
		46			30				1	
019	<.01	47			30				1	
		48			30	5			1	
		49			30				1	
		49.50		50 m	30				1	

0-0.5 red brown
0.5-5 fawn grey
5-10.5 fawn white
10.5-15 grey green
15-19 grey brown
19-20 fawn grey
20-25 grey green
25-28 grey brown
28-39 grey
39-40 grey white
40-50 grey

DRY

REASON FOR HOLE: Test qtz mt unit

OTHER DETAILS:

DRILL TYPE: INJECTION

DRILLER: WILSONS

SCALE: 1:250

LOGGED BY: IDK

DATE DRILLED: 11·9·87

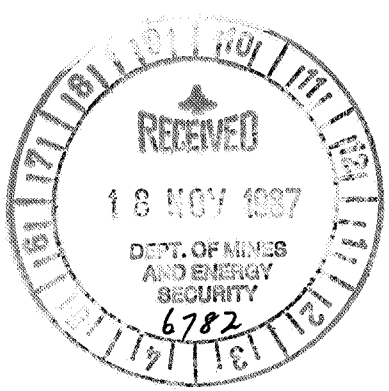
DRG/CODE No:

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED OCTOBER 27, 1987

	$	$
Administration	878	
Assaying	3 742	
Consultant Fees	945	
Drilling	31 651	
Field Base Operations	5 937	
Outside Services	4 045	
Operating Labour	2 845	
Stores	180	
Transport	479	$ 51 233
TOTAL - THIS PERIOD		$ 51 233
Previously Reported - Current Term		
Quarter ended January 27, 1987	24 137	
Quarter ended April 27, 1987	21 284	
Quarter ended July 27, 1987	4 460	$ 49 881
Total Project Expenditure to Date		$101 114



A.E. Covacich
Administration Superintendent

DATA TRANSMISSION SHEET

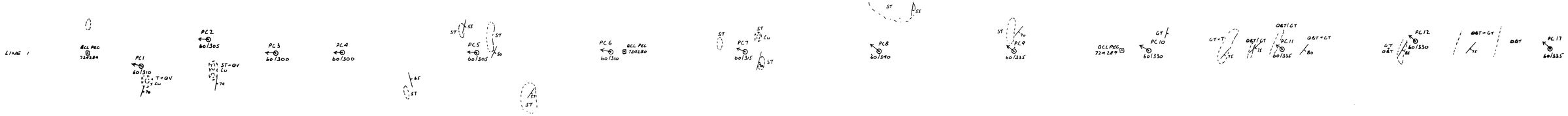
NATURE OF DATA	:*Report/Drill log/Plan/Map/~~Theses~~
AUTHOR(S)	: CARPENTARIA EXPLORATION COMPANY PTY. LTD.
TITLE	: EXPLORATION LICENCE NO.1363 "CUTANA" PROGRESS REPORT FOR QUARTER ENDED OCTOBER 27, 1987
	Pages 2 Illus.etc. 4 PLANS 2 APPENDICES
COMPANY/ ORGANISATION(S)	: MOUNT ISA MINES LIMITED
DOCUMENT/FILE NUMBER(S)	: .Date:
	.Date:
KEYWORDS Concepts [Please prefix stratigraphic names with (S)]	: ROTARY AIR BLAST DRILLING PERCUSSION DRILLING
Mineral Commodities	: GOLD BASE METALS
State (S.A.) Geographic location	: CUTANA SI/54-02 OLARY, MINGARY 1:250,000 sheet ref. 1:100,000 sheet ref 6933,7033
SUBMITTED BY	: (Co./Orgn)
HELD BY (if different from submitting authority)	: (Co./Orgn) (Address/es)
FURTHER REFERENCE TO	: (Designation of officer)
STATUS OF DATA	: SIGHTING - *Yes / Subject to negotiation COPYING - *Yes / Subject to negotiation INTENDED FOR PUBLICATION - *Yes / No
OTHER INFO. (if any)	:

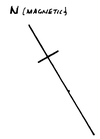
DATE: SIGNATURE:

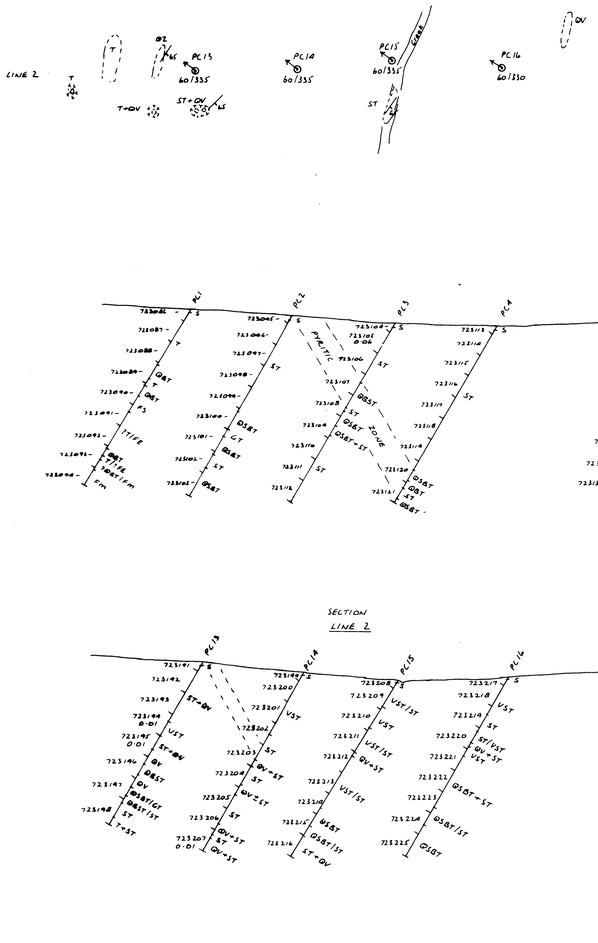
*Delete whichever not applicable

Please send completed form to:

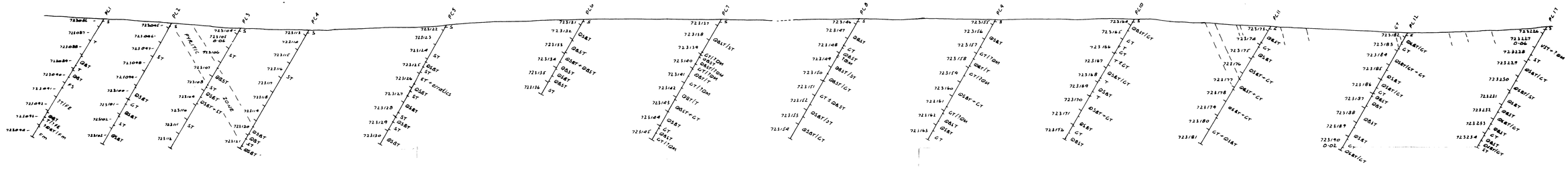
THE DIRECTOR-GENERAL,
DEPARTMENT OF MINES AND ENERGY,
P.O. BOX 151 EASTWOOD
SOUTH AUSTRALIA 5063







SECTION - LINE 1



SECTION LINE 2

LEGEND

PC13	HOLE NUMBER
60/335	ANGLE / MAGNETIC BEARING
	OUTCROP
	PIT
721/90 0·02	SAMPLE NUMBER GOLD: P.P.M. (SHOWN ONLY WHEN > 0·01 PPM)
T	TILLITE
ST	SERICITIC TILLITE
VST	VERY SERICITIC TILLITE
QBT	QUARTZ BIOTITE TILLITE
QBST	QUARTZ BIOTITE SERICITE TILLITE
QSBT	QUARTZ SERICITE BIOTITE TILLITE
QV	QUARTZ VEINS
QM	QUARTZ MAGNETITE ROCK
GT	GRANITOID TILLITE
FS, FM	GNEISSIC METASEDIMENTS
FE	
Cu	COPPER
60	STRIKE AND DIP OF BEDDING

FOR LOCALITY SEE DRAWING No. 30761

SCALE

0 10 20 30 40

METRES

REVISION			
		SCALE: 1:500	CANBERRA EXPLORATION COMPANY PTY. LTD.
		DRN: I. KEAR	
		DESIGN: I.G.C.P.	CUTANA E.L 1363
			SOUTH AUSTRALIA
		DATE: 7 OCT 87	PERCUSSION DRILLING. PLAN & SECTIONS
			Premier Mine AREA.
		DRAWING FILED ON DISTRICT:	DRG No.: 30762

N

LEGEND

STh ● CO02/2	MATERIAL @ HOLE NUMBER / SURVEY NO.
T	TILLITE
ST	SILTSTONE TILLITE
FS	PLAGIOSITE
h	TILLITE HORNFELS
s	TILLITE SILICIFIED
b	TILLITE BLUE QUARTZ
Qu	QUARTZITE

SCALE

0 50 100 150 200

METRES

CULTANA EL 1363

SOUTH AUSTRALIA

LOCATION OF DRILL LINES

Primary Work Area

Legend

Qra — Recent alluvial deposits

Qrs — Recent slope deposits

G — Intrusive amphibolite and gabbro (P-t)

P_g — Yudnamutana Sub-group - [illegible] (Pt)
greywacke, siltstone, [illegible] - Adelaide

+ + — Archaean Granite

[illegible] — [illegible]

[illegible] — [illegible]

[illegible] — Rectangle on [illegible]

[illegible] — [illegible]

QR 1710G, 7941N2 — Sample numbers

——·—·—— — Building or [illegible] trends

——— — — ——— — Fault.

(44) 27000 AMG N

(46) 2000

29000

31000

32000

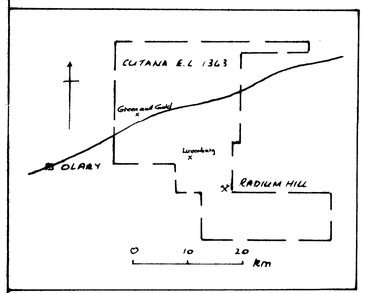
0 500 1000

REVISION	SCALE: 1:10,000
	DRAWN: J.A.C.P

CUTANA E.L. 1363

SOUTH AUSTRALIA

[illegible]



N

6 437 300 N AMG

QM & FE on dump

PC20 60/155

QM float

FE & TFE on dump

FE on dump

FE in shaft

QM outcrop and float

PC19 60/150

FS

QM float

LO & FS

FS

PC 21 60/150

FS & FE on dump

PC18 60/320

PC18A 60/320

PLAN
1:500
0 10 20 30 40
METRES

LOCATIONS APPROXIMATE IN RELATION TO AMC

450 300 E AMG

quartz vein

FM & FS g with coarse magnetite

QM on dump

LEGEND

PC19 60/150 — HOLE No. / DECLINATION / MAGNETIC BEARING

S — RED-BROWN CLAYEY SILT AND SAND
FM — QUARTZ FELSPAR BIOTITE GNEISS - COMPOSITE
FE — QUARTZ BIOTITE SILLIMANITE GNEISS - PELITIC
FS — QUARTZ FELSPAR BIOTITE GNEISS - PSAMMITIC
QM — QUARTZ MAGNETITE ROCK
LO — COARSE GRAINED QUARTZ FELSPAR GNEISS
r — RETROGRESSED
g — GARNETIFEROUS
mt — MAGNETITE
PIT
SHAFT
SUBCROP

S PC 20 N

ASSAYS - Au mg/t

S FM 0.04 | <0.01 QM | FMg 0.24 | FEg | rFMg | FEg | QMg | rFMg | 0.84 rFM | rFEg 0.09 | FMg 0.03 | rFMg 0.22 | FMg 0.14 | rFM | FMg | rFM 0.05 | 50m

projected from 29 m east

S PC18A PC18 PC19 N

S <0.01 FS | <0.01 FE | rFM | rFE 0.01 | rFE 0.02 | FE | FM <0.01 | FMg | FE | rFM | rFE 18m

S <0.01 FM | <0.01 FE | rFM | FM <0.01 | FS | rFM 0.32 | QMg | 0.05 FMg | rFM | FM | 0.12 FS | 0.24 FMg | FMg mt 45m

S <0.01 FM | <0.01 FE | rFM | FM <0.01 | FS | rFM 0.02 | FE 49.5m

S PC 21 N

S <0.01 FE | <0.01 FS | <0.01 FM/FE | FS | <0.01 TFE | rFM | <0.01 FM | FM/FS | <0.01 FM | FM/FS | <0.01 FS | <0.01 FM | 50m

SECTIONS
1:200
0 5 10 15 20
METRES

REVISION			SCALE: AS SHOWN	CAMPENARIA EXPLORATION COMPANY PTY. LTD.
			DRN: I. KEAR	CUTANA E.L 1363
			DRAFT: JACP	SOUTH AUSTRALIA
			CHECKED:	GREEN & GOLD PROSPECT
			DATE: OCT '87	PERCUSSION DRILLING
			1:200 000 SS 54-2	
			1:100 000 6955	
			MINING FIELD OR DISTRICT: OLARY	DRG No.: 30769

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JANUARY 27, 1988

1. TERMS AND CONDITIONS

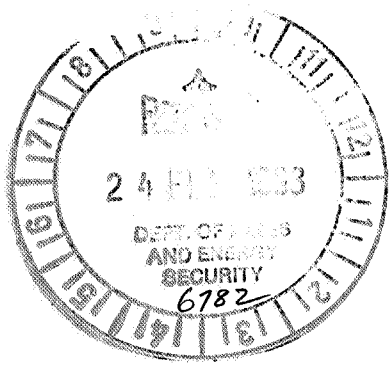
Exploration Licence No.1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50 000. It has recently been extended for a further year under the same terms and conditions. The Licence is subject to a joint venture agreement with Tarcoola Gold Ltd. Exploration is carried out by Carpentaria Exploration Company Pty. Ltd. on behalf of Mount Isa Mines Limited and Tarcoola Gold Ltd. The Licence is located approximately 30 km east of Olary and covers an area of 769 km^2.

2. EXPLORATION

2.1. Premier Prospect

Four percussion drill holes (PC 3, 4, 14, 15), which had been drilled close to the old Premier Mine, were re-sampled in part in 1 m intervals. Original sampling had been in 6 m intervals, and assay results had reported less than 0.01 p.p.m. Au in all samples. In view of the proximity of an old gold-producing mine, it was thought that these results were anomalously low. However assaying of the 1 m sample confirmed the low gold values, with the best result being 0.32 p.p.m. Au, and most other results being less than 0.1 p.p.m. Au.

Assay results are included in Appendix 1. Re-assayed sections are shown on Drawing No.30 762.



TRS2

2.2. Green and Gold Prospect

Two percussion drill holes were in part re-sampled in 1 m intervals to confirm elevated gold values reported in assays of the original 6 m interval samples. Elevated gold was confirmed, with best results being 1.50 p.p.m. Au at 20-21 m and 1.30 p.p.m. Au at 24-25 m in PC 19, and 1.15 p.p.m. Au at 13-14 m and 1.25 p.p.m. Au at 17-18 m in PC 20.

Results are shown on Drawing No.30 769 and included in Appendix 1.

3. EXPENDITURE

A Statement of Expenditure is attached.



for J.A.C. Painter

APPENDIX 1

ASSAY RESULTS

NAIA Certificate Results in ppm

	Sample	Au		From	To
	730061	0.06	↑	16	17
	730062	0.12		18	19
PC3	730063	0.02		20	21
	730064	0.07		22	23
	730065	0.14		24	25
	730066	0.10	PREMIER	41	42
	730067	0.10		43	44
PC4	730068	0.03		45	46
	730069	0.07		47	48
	730070	0.32		49	50
	730071	0.02		21	22
	730072	0.12		23	24
PC14	730073	<0.01		25	26
	730074	0.10		27	28
	730075	0.12		29	30
	730077	0.04		43	44
	730077A Std 2a	0.54		0-53	
PC15	730078	0.04		45	46
	730079	0.07		47	48
	730080	0.03	↓	49	50
	730081	1.50		20	21
	730082	0.38		21	22
PC19	730083	0.24		22	23
	730084	0.28		23	24
	730085	1.30		24	25
	730086	0.07		25	26
	730087	0.10		26	27
	730088	0.16		27	28
	730089	0.18		28	29
	730090	0.22		29	30
	730091	0.07		30	31
	730092	0.07		31	32
	730093	0.50		32	33
	730094	0.05		33	34
	730095	0.07		34	35
	730096	<0.01		35	36
	730097	0.06		36	37
	730098	0.22		37	38
	730099	0.14		38	39
	730100	0.16		39	40
	Detn limit	(0.01)			

GREEN & GOLD

NATA Certificate Results in ppm

Sample	Au	F	To M
730101	0.20	40	41
730102	0.16	41	42
730103	0.56	42	43
730104	0.32	43	44
730105	0.24	44	45
730106	0.05	8	9
730107	<0.01	9	10
730108	<0.01	10	11
730109	<0.01	11	12
730110	0.07	12	13
730111	1.15	13	14
730112	0.82	14	15
730113	0.12	15	16
730114	0.52	16	17
Pc 20 730115	1.25	17	18
730116	0.56	18	19
730117	0.78	19	20
730118	0.18	20	21
730119	0.16	21	22
730120	0.08	22	23
730121	0.10	23	24
730122	0.10	24	25
730123	0.06	25	26
730124	0.07	26	27
730125	0.12	27	28
730126	0.14	28	29
730127	0.09	29	30
730127A STD	0.14	0.06	
730128	0.14	30	31
730129	0.07	31	32
730130	0.14	32	33
730131	0.34	33	34
730132	0.20	34	35
730133	0.22	35	36
730134	0.42	36	37
730135	0.18	37	38
730136	0.20	38	39
730137	0.22	39	40
730138	0.32	40	41
730139	0.14	41	42
Detn limit	(0.01)		

QUEEN & GOLD

NATA Certificate Results in ppm

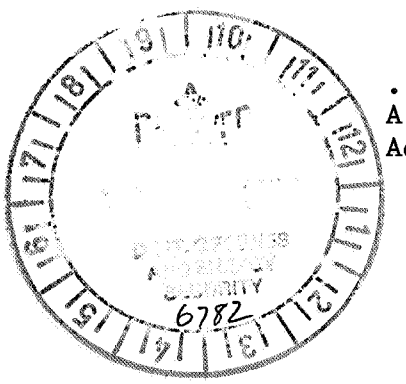
Sample	Au	From	To
730140	0.16	42	43
730141	0.09	43	44
730142	0.10	44	45
730143	0.16	45	46
730144	0.22	46	47
730145	0.09	47	48
730146	0.08	48	49
730147	0.18	49	50
Detn limit	(0.01)		

MOUNT ISA MINES LIMITED

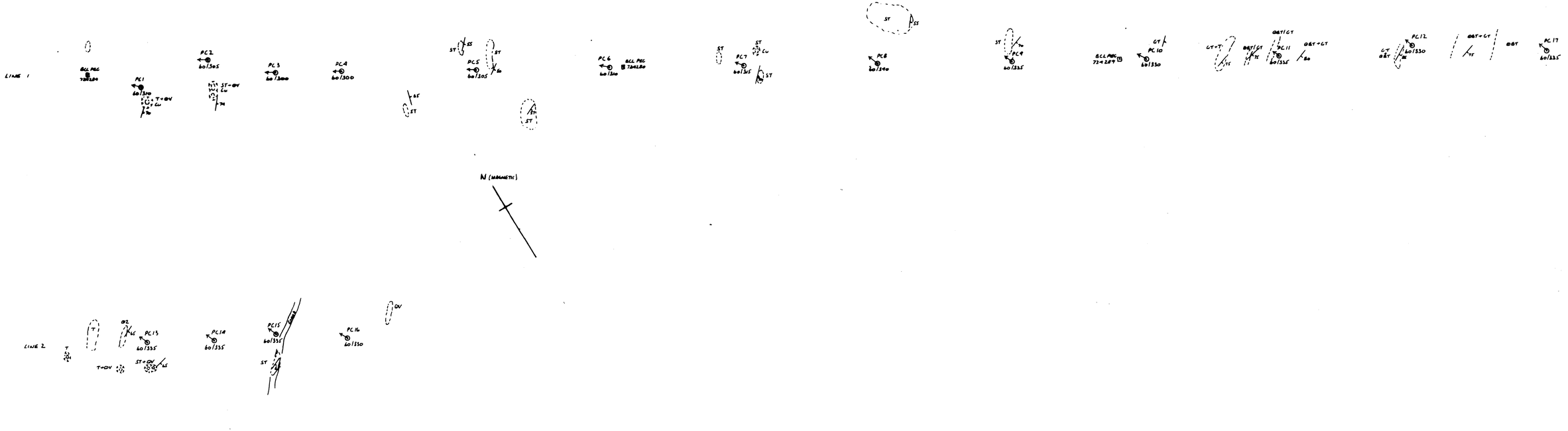
EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR THREE MONTHS ENDED JANUARY 27, 1988

	$	$
Administration	207	
Assaying	1087	
Field Base Operations	1923	
Freight	207	
Outside Services	510	
Operating Labour	513	
Rents - Mining Tenements	1698	
Transport	238	6 383
TOTAL - THIS PERIOD		$ 6 383
Previously Reported		$101 114
Total Project Expenditure to Date		$107 497



A.E. Covacich
Administration Superintendent


LINE 1
ALL PEG
720/280
PC1
60/320
PC2
60/305
PC3
60/300
PC4
60/300
PC5
60/305
PC6
60/330
ALL PEG
B 720/280
PC7
60/335
PC8
60/340
PC9
60/335
ALL PEG
724/284
PC10
60/330
PC11
60/335
PC12
60/330
PC17
60/335
N (MAGNETIC)
LINE 2
PC13
60/335
PC14
60/335
PC15
60/335
PC16
60/330
ST+QV
T+QV
ST+QV
QV+ST
QV+ST
ST+QV
QV+ST
QV+ST
ST+QV
QV+ST
QV+ST
QV+ST

PLAN
1' 500

0 10 20 30 40
METRES

N

6437 300 N AMG

LOCATIONS APPROXIMATE IN RELATION TO AMG

410 300 E AMG

QM & FE on dump

QM float

PC20 60/155

FE & rFE on dump

FE on dump

FE in chaft

QM outcrop and float

PC19 60/150

QM float

LQ & FS

FS

PC21 60/150

FS

FS & FE on dump

PC18 60/320

PC18A 60/320

quartz vein → FM & FS.g with coarse magnetite

QM on dump

LEGEND

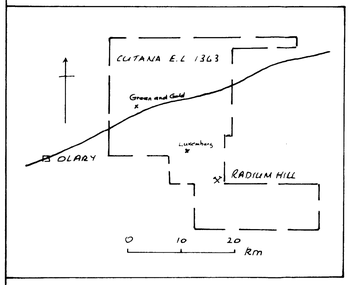
PC19 60/150 — HOLE No / DECLINATION MAGNETIC BEARING

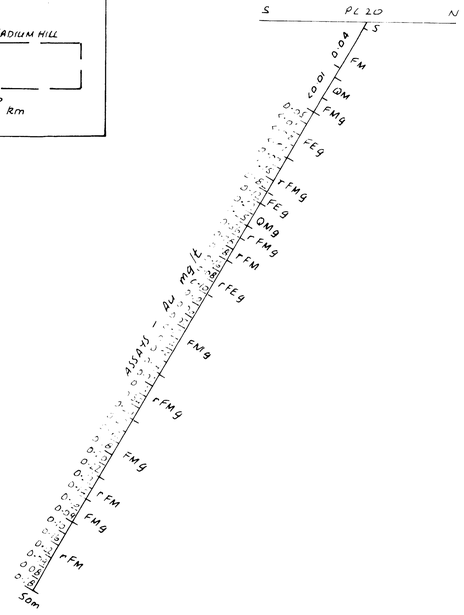
S	RED-BROWN CLAYEY SILT AND SAND
FM	QUARTZ FELSPAR BIOTITE GNEISS COMPOSITE
FE	QUARTZ BIOTITE SILLIMANITE GNEISS - PELITIC
FS	QUARTZ FELSPAR BIOTITE GNEISS - PSAMMITIC
QM	QUARTZ MAGNETITE ROCK
LQ	COARSE GRAINED QUARTZ FELSPAR GNEISS
r	RETROGRESSED
g	GARNETIFEROUS
mt	MAGNETITE

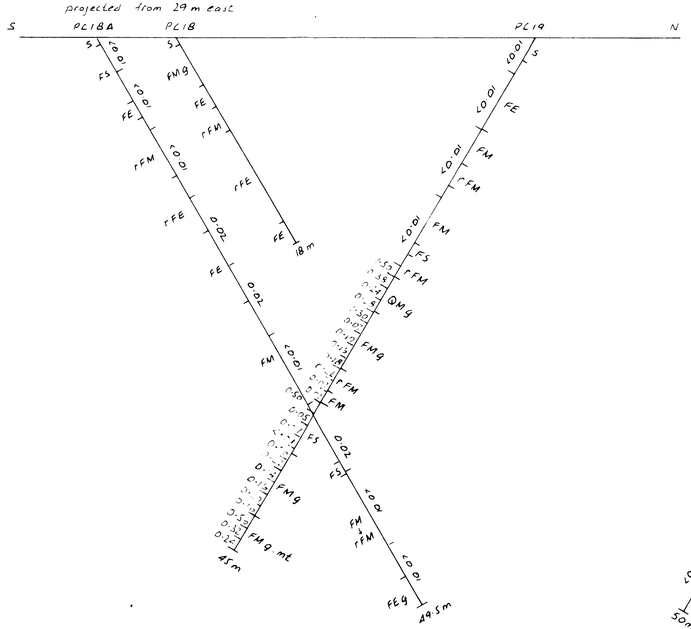
PIT

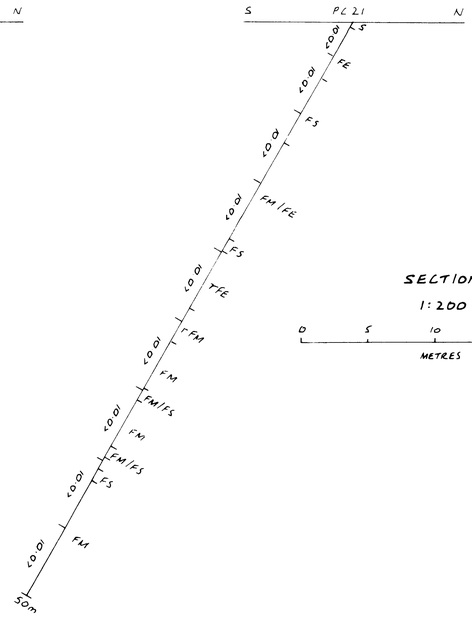
SHAFT

SUBCROP









SECTIONS
1:200

0 5 10 15 20
METRES

REVISION		SCALE: AS SHOWN	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
OCT 87		GEO I.KERR	CUTANA E L 1363
		DRAFT: JACP	SOUTH AUSTRALIA
		CHECKED:	GREEN & GOLD PROSPECT
		DATE: OCT '87	PERCUSSION DRILLING
		1:250 000 SI 54-2	
		1:100 000 6953	
		MINING FIELD OR DISTRICT: OLARY	DRG No.: 30769

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 'CUTANA'

PROGRESS REPORT FOR QUARTER ENDED APRIL 27, 1988

1. Terms and Conditions

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50, 000. It has subsequently been extended for a further year under the same terms and conditions. The Licence is subject to a joint venture agreement with Tarcoola Gold Ltd. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited and Tarcoola Gold Ltd. The Licence is located approximately 30km east of Olary and covers an area of 769km².

2. Exploration

No field work has been carried out on the "Cutana" Licence during the last quarter. A review of the enhanced airborne magnetics has been undertaken.

3. Expenditure

A Statement of Expenditure is appended.

P J BINKS

RECEIVED
16 MAY 1988
DEPT. OF MINES
AND ENERGY
SECURITY

MOUNT ISA MINES LIMITED

EL 1363 "CUTANA"

STATEMENT OF EXPENDITURE

Covering the period **Quarter ending 27 April, 1988**

	$
Administration	731
Assaying	---
Aerial Surveys	---
Aircraft Support	---
Consultant Fees	---
Drilling	---
Equipment Charges	---
Field Base Operations	266
Freight	77
Outside Services	---
Operating Labour	471
Rents - Mining Tenements	---
Stores	---
Transport	---
Travelling Expenses	---
TOTAL - THIS PERIOD	1545

S. Lander

for P. J. BANKS

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JULY 27, 1988

1. Terms and Conditions

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year under the same terms and conditions. The Licence is subject to a joint venture agreement with Tarcoola Gold Ltd. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited and Tarcoola Gold Ltd. The Licence is located approximately 30km east of Olary and covers an area of 769km^2.

2. Exploration

No field work has been carried out on the "Cutana" Licence during the last quarter. It is planned to carry out ground magnetics and further percussion drilling at the Green and Gold Mine in the next quarter.

3. Expenditure

A Statement of Expenditure is appended.

P J BINKS

RECEIVED
19 AUG 1988
DEPT. OF MINES AND ENERGY SECURITY

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JULY 27, 1988

	$	$
Administration	119	
Field Base Operations	229	
Operating Labour	299	
Stores	3	$ 650
TOTAL - THIS PERIOD		$ 650
Previously Reported - Current Term		
3 Months ended January 27, 1988	$6383	
3 Months ended April 27, 1988	$1545	$ 7 928
TOTAL - CURRENT TERM		$ 8 578
Previously Reported		$101 114
Total Project Expenditure to Date		$109 692

A.E. Covacich
Administration Superintendent

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED OCTOBER 27, 1988

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year on two occasions. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited. The Licence is located approximately 30km east of Olary and covers an area of 769km^2.

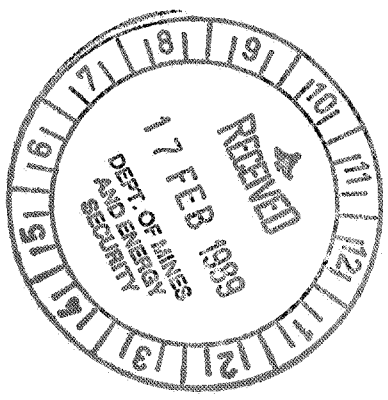
2. EXPLORATION

A contract to drill six 80m percussion holes at the Green and Gold Mine has been awarded to Silver City Drilling of Broken Hill. Drilling carried out last year intersected low grade gold mineralisation in garnet gneisses adjacent to a magnetite rich unit. The next drilling programme is aimed at testing this mineralisation along strike and at depth.

3. EXPENDITURE

A statement of expenditure for the last quarter will be forwarded from our Head Office within the next few weeks.

PJB/scl



MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED OCTOBER 27, 1988

	$	$
Administration	350	
Field Base Operations	75	
Operating Labour	299	
Rents - Mining Tenements	1776	
Travelling Expenses	145	$ 2 645
TOTAL - THIS PERIOD		$ 2 645
Previously Reported - Current Term		
3 Months ended January 27, 1988	$6383	
3 Months ended April 27, 1988	$1545	
3 Months ended July 27, 1988	$ 650	$ 8 578
TOTAL - CURRENT TERM		$ 11 223
Previously Reported		$101 114
Total Project Expenditure to Date		$112 337

A.E. Covacich
Administration Superintendent

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 'CUTANA'

PROGRESS REPORT FOR QUARTER ENDED JANUARY 27, 1989

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year on two occasions. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited. The Licence is located approximately 30 km east of Olary and covers an area of 769 km².

2. EXPLORATION

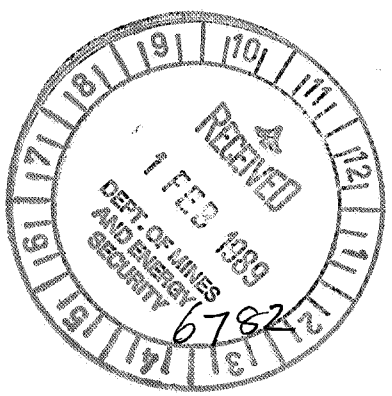
A planned programme of ground magnetics and RC drilling over the Green and Gold mine, which was scheduled for October, was postponed until later this year.

Tarcoola Gold Ltd have withdrawn from the joint venture over this Licence. They do not have any remaining equity in the project.

3. EXPENDITURE

A statement of expenditure for the last quarter will be forwarded from our Head Office within the next few weeks.

PJB/scl



MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JANUARY 27, 1989

	$	$
Administration	565	
Field Base Operations	76	
Operating Labour	599	
Travelling Expenses	172	$ 1 412
TOTAL - THIS PERIOD		$ 1 412
TOTAL - CURRENT TERM		$ 1 412
Previously Reported		$112 337
Total Project Expenditure to Date		$113 749

A.E. Covacich
Administration Superintendent

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 'CUTANA'

PROGRESS REPORT FOR QUARTER ENDED APRIL 27, 1989

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year on two occasions. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited. The Licence is located approximately 30km east of Olary and covers an area of 769km².

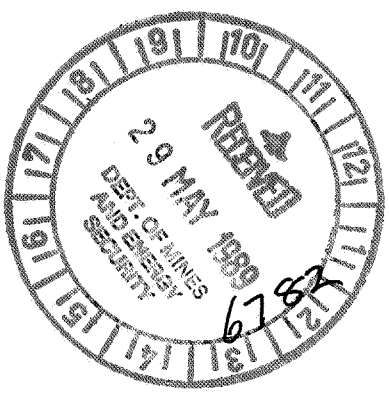
2. EXPLORATION

Responsibility for exploration of this Licence area has been transferred to our Brisbane office, where a new base metal division has been established. Currently, they are evaluating the area and will be formulating exploration programmes within the next month or so.

3. EXPENDITURE

A statement of expenditure will be forwarded from our Head Office within the next few weeks.

PJB/sc1



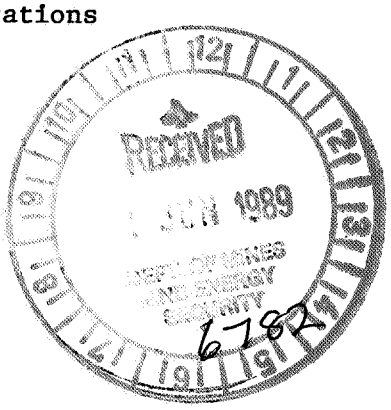
MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED APRIL 27, 1989

	$	$
Administration	1338	
Operating Labour	599	
Travelling Expenses	881	$ 2 818
TOTAL - THIS PERIOD		$ 2 818
Previously Reported - Current Term		
Quarter ended January 27, 1989		$ 1 412
TOTAL - CURRENT TERM		$ 4 230
Previously Reported		$112 337
Total Project Expenditure to Date		$116 567

A.E. Covacich
Manager - Accounting
Exploration & Gold Operations



6782

Carpentaria Exploration Company Pty. Ltd.
INCORPORATED IN QUEENSLAND
(A MEMBER OF THE M.I.M. HOLDINGS LIMITED GROUP OF COMPANIES)
REGISTERED OFFICE: M.I.M. PLAZA, 410 ANN STREET, BRISBANE, Q. 4000.
POSTAL ADDRESS: G.P.O. BOX 1042, BRISBANE, Q. 4001.

WESTERN AUSTRALIAN OFFICE
140 COLIN STREET,
WEST PERTH. W.A. 6005
TELEPHONE: (09) 321 4888
FACSIMILE: (09) 321 2866

7 August, 1989

South Australian Department of Mines & Energy
191 Greenhill Road
Parkside SA 5063

Dear Sirs

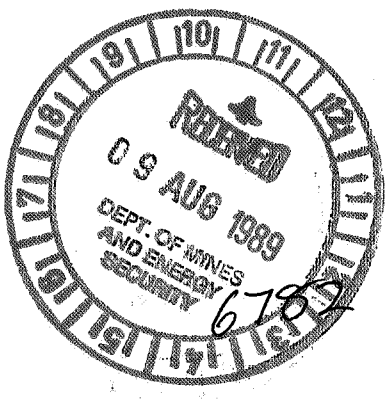
re: **EXPLORATION LICENCE NO. 1363 "CUTANA"**

Please find enclosed the Progress Report on EL No. 1363 "Cutana", for the quarter ended July 27, 1989. A statement of expenditure for this quarter will be forwarded from our Head Office within the next few weeks.

Yours faithfully
CARPENTARIA EXPLORATION COMPANY PTY LTD

P J BINKS
Manager Regional Exploration - WA & SA

Enc:



MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JULY 27, 1989

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year on two occasions. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited. The Licence is located approximately 30km east of Olary and covers an area of 769km^2.

2. EXPLORATION

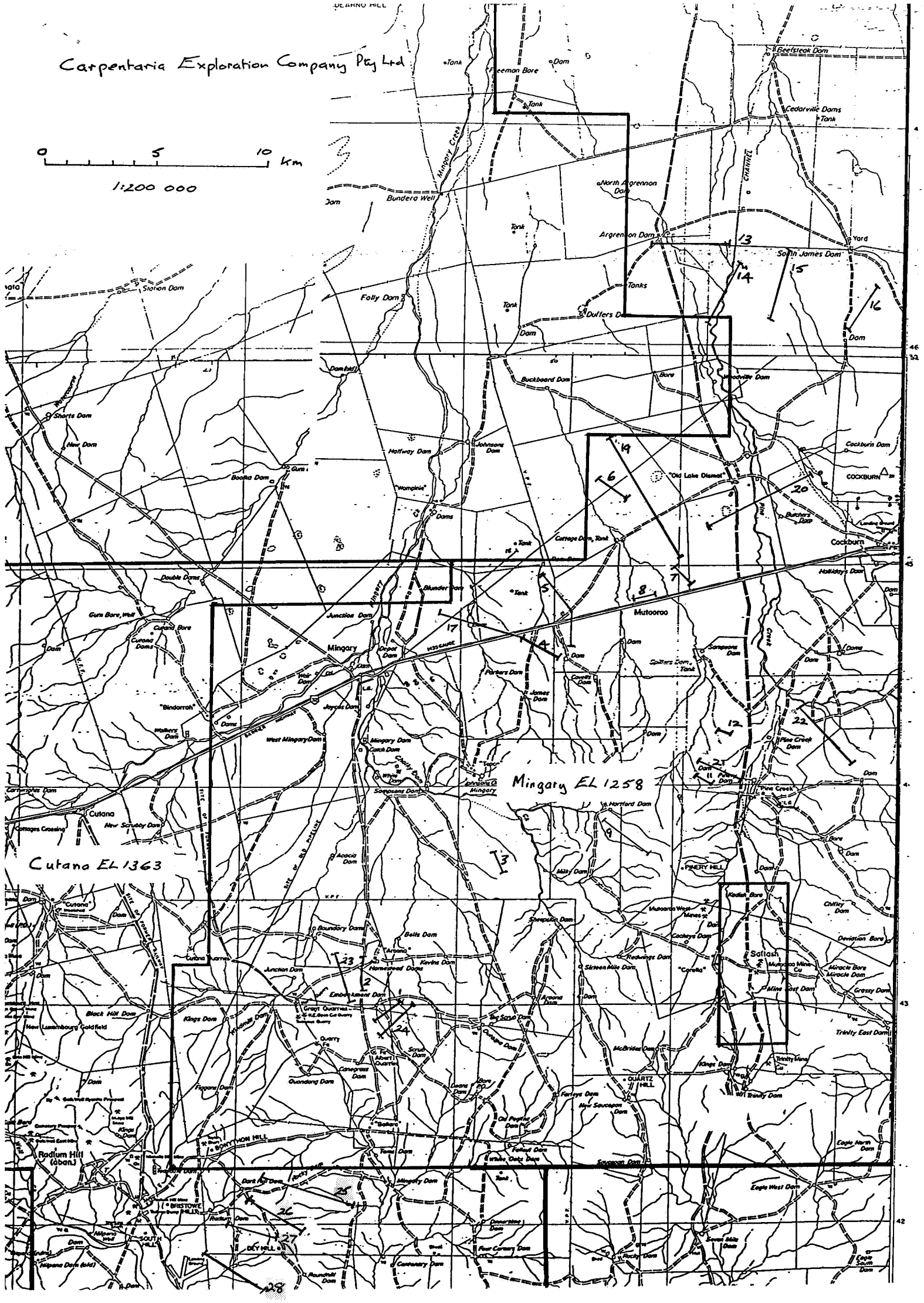
A total of 10.9km of gridding and ground magnetics have been carried out on four lines in the south-east of the Licence. A programme of RAB drilling will be carried out within the next few months to check for anomalous lead and zinc in the Bimba Formation.

The interpreted Bimba Formation occurs at the same location as the sphalerite mineralisation found by Seltrust at the Ballara Prospect.

3. Expenditure

A statement of expenditure will be forwarded from our Brisbane Office within the next few weeks.

PJB/scl


Carpentaria Exploration Company Pty Ltd
0 5 10 km
1:200 000
Mingary EL 1258
Cutana EL 1363
Mingary
Cutana
Mutooroo
Cockburn
Radium Hill (aban.)
Junction Dam
Mingary Creek
Bundera Well
Freeman Bore
Cedarville Dams
North Argennon Dam
Argennon Dam
South James Dam
Folly Dam
Duffers Dam
Buckboard Dam
Halfway Dam
Johnsons Dam
"Womgine"
"Old Lake Dismal"
Cockburn Dam
Double Dams
Blunder Dam
Gum Bore, Well
Cutana Bore
Cutana Dams
"Bindarroh"
West Mingary Dam
Mingary Dam
Sampsons Dam
Parkers Dam
James Dam
Spillers Dam
Pine Creek Dam
Harford Dam
Pinery Hill
Kadina Bore
Mutooroo West Mines
Deviation Bore
Safiash
Miracle Bore
Miracle Dam
Grassy Dam
Trinity East Dam
Trinity Dam
Quartz Hill
Mt Sauerpen Dam
Eagle North Dam
Eagle West Dam
Eagle South Dam
Bonython Hill
Bristowe Hill
South Hill
Dry Hill
Boundary Dams
Belts Dam
Kevins Dam
Embankment Dam
Black Hill Dam
Kings Dam
Scrub Dam
Quandong Dam
Canegrass Dam
Figgins Dam
Roundhill Dam
Mingary Dam
Four Corners Dam
Old Pugilist Dam
Fallout Dam
Yeeno Dam
Redwings Dam
Skreen Hills Dam
McBrides Dam
Forleys Dam
Sheepskin Dam
Chitty Dam
Stonewall Dam
Loona Dam
Acacia Dam
Corkscrew Dam
Roundhill Dam
Hillpans Dam (old)
Hillpans Dam
Station Dam
Folly Dam
Shorts Dam
New Dam
Booths Dam
Dam
Tank
Bore
Yard
Tanks
Cottage Dam, Tank
Spillers Dam, Tank
Mingary Creek
Whitecliffe
Cockburn
Mutooroo
Mingary
Cutana
Radium Hill (aban.)
Bonython Hill
Bristowe Hill
South Hill
Dry Hill
Mingary EL 1258
Cutana EL 1363

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JULY 27, 1989

	$	$
Administration	1580	
Field Base Operations	80	
Operating Labour	1603	
Travelling Expenses	184	$ 3 447
TOTAL - THIS PERIOD		$ 3 447
Previously Reported - Current Term		
Quarter ended January 27, 1989	1412	
Quarter ended April 27, 1989	2818	$ 4 230
TOTAL - CURRENT TERM		$ 7 677
Previously Reported		$112 337
Total Project Expenditure to Date		$120 014

A.E. Covacich
Manager - Accounting
Exploration & Gold Operations

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED OCTOBER 27, 1989

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" was granted to Mount Isa Mines Limited on October 28, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year on three occasions. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited. The Licence is located approximately 30km east of Olary and covers an area of 769km².

2. EXPLORATION

A total of 96 RAB holes for a total of 1051m were drilled on lines 25 to 28 east of Radium Hill in September 1989 (see attached plan). Holes were drilled across contact zones on the flanks of linear magnetic anomalies. These anomalies are thought to be caused by the Upper Albite Formation of the Curnamona Group and the target is stratabound base metal mineralisation in the overlying Bimba Formation. The Dey Hill zinc mineralisation found by Seltrust in this area is located at this interpreted horizon.

Drilling was carried out by Silver City Drilling of Broken Hill, and geological logging was undertaken by contractor I Kerr. Drill logs are currently being prepared by Kerr and plans showing drill sites are being drafted. These data will be provided with the next quarterly report.

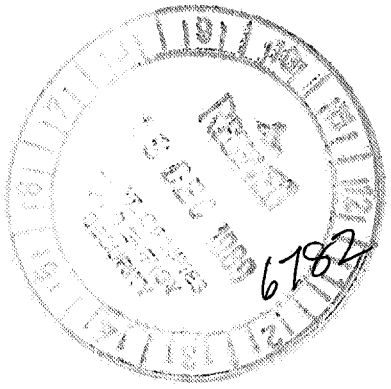
Profiles of ground magnetic data for lines 25 to 28 are presented on Drawing No 35539. The magnetics data were acquired by Search Exploration Services of Adelaide. These ground magnetic lines do not coincide with the published 1:100 000 Mingary airborne magnetic map. They indicate a major plotting error in the south of the sheet. To the north on our adjacent Licence (EL 1624) the ground magnetics correspond quite well with the airborne data.

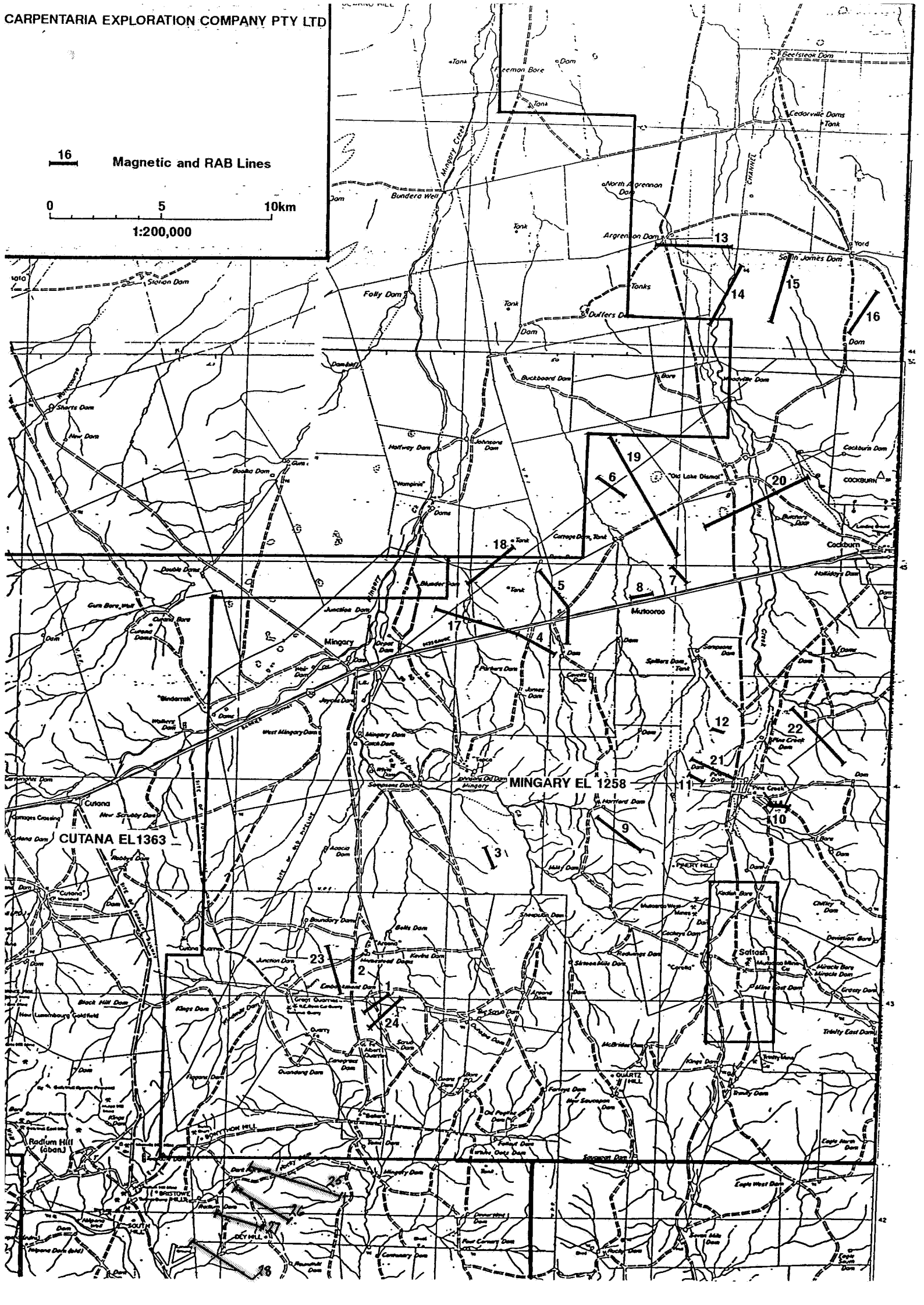
3. EXPENDITURE

A statement of expenditure will be forwarded from our Brisbane Office in the next few weeks.

P J BINKS

Enc:




CARPENTARIA EXPLORATION COMPANY PTY LTD
16
Magnetic and RAB Lines
0
5
10km
1:200,000
MINGARY EL 1258
CUTANA EL1363
Mingary
Cutana
Cockburn
Saltash
Radium Hill (abanl
Mutooroo
Argrennon Dam
Folly Dam
Bundera Well
Freeman Bore
Cedarville Dams
South James Dam
Buckboard Dam
Johnsons Dam
Halfway Dam
"Old Lake Dismal"
Junction Dam
Blunder Dam
Carnegie Dam, Tank
Spillers Dam, Tank
Pine Creek
Pine Creek Dam
Hartford Dam
Mingary Dam
West Mingary Dam
Kings Dam
Black Hill Dam
Eagle West Dam
Eagle North Dam
Trinity East Dam
Trinity Dam
Miracle Dam
Miracle Bore
Division Bore
Chitter Dam
Kadlan Bore
Cockburn Dam
Holidays Dam
Sheepskin Dam
Redwings Dam
Bolts Dam
Kevins Dam
Junction Dam
Boundary Dam
Old Peg Dam
Old Peg Bore
Old Peg Quarries
Quarry
Quandong Dam
Pigeons Dam
Fairleys Dam
Old Sawpit Dam
Sawpit Dam
Quartz Hill
Mine Dam
Mine East Dam
Grassy Dam
Mingary Creek
Junction Creek
Pine Creek
Wild Dog Creek
Cockburn Creek
Bore
Tank
Dam
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
42
43

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED OCTOBER 27, 1989

	$	$
Administration	2094	
Assaying	841	
Drilling	9567	
Field Base Operations	83	
Freight	176	
Outside Services	816	
Operating Labour	3050	
Rents - Mining Tenements	1853	
Stores	506	
Transport	373	
Travelling Expenses	418	$ 19 777
TOTAL - THIS PERIOD		$ 19 777
Previously Reported - Current Term		
Quarter ended January 27, 1989	1412	
Quarter ended April 27, 1989	2818	
Quarter ended July 27, 1989	3447	$ 7 677
TOTAL - CURRENT TERM		$ 27 454
Previously Reported		$112 337
Total Project Expenditure to Date		$139 791

A.E. Covacich
Manager - Accounting
Exploration & Gold Operations

6182

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 'CUTANA'

PROGRESS REPORT FOR QUARTER ENDED 27 JANUARY, 1990

1. TERMS AND CONDITIONS

Exploration Licence No 1363 "Cutana" was granted to Mount Isa Mines Limited on 28 October, 1986, for a period of one year with an expenditure commitment of $50,000. It has subsequently been extended for a further year on three occasions. Exploration is carried out by Carpentaria Exploration Company Pty Ltd on behalf of Mount Isa Mines Limited. The Licence is located approximately 30km east of Olary and covers an area of 769km².

2. EXPLORATION

Locations of RAB holes drilled on lines 26, 27 and 28, to test for stratabound Pb, Zn, Ag mineralisation in the Dey Hill area, east of Radium Hill, are shown on Drawing No 35565. Locations of holes drilled on line 25 are on the next base map to the north and will be included in the next quarterly report.

Slightly anomalous zinc occurs in schists on the flank of a linear magnetic anomaly trending north-east through Dey Hill. This magnetic anomaly is thought to be caused by the Upper Albite equivalent, and the schists are believed to be equivalent to the Bimba Formation. The anomalous zinc on lines 25, 26 and 28 is a strike continuation of the mineralisation found by Broken Hill South and Seltrust at the Ballara Prospect.

Most RAB holes on line 27 failed to penetrate the flat lying Cutana Beds, and the contact zones of the magnetic units remain untested. Geological and assay logs of the RAB holes are presented in the Appendix.

Another two ground magnetic lines over linear magnetic features east of Dey Hill have recently been completed. These lines (29 and 30) were gridded and magnetically surveyed by Search Exploration Services of Adelaide in January. Results have not yet been received. Contact zones will be RAB drilled later in the year.

3. EXPENDITURE

A statement of expenditure will be forwarded from our Brisbane office in the next few weeks.

P J BINKS
Principal Geologist

Enc:

6782
Vol 2.

APPENDIX

GEOLOGICAL AND ASSAY LOGS OF RAB HOLES

Symbols used on logs:-

FM	Quartz feldspar biotite gneiss psammopelite - composite (>50% melted metasediment)
FS	Quartz feldspar biotite psammite - composite (>50% melted metasediment)
FE	Quartz feldspar biotite sillimanite gneiss pelite - composite (>50% melted metasediment)
BM	Quartz feldspar biotite gneiss
Pl	Plagioclase quartz rock
Peg	Pegmatite
r	Retrograded

PROJECT CUTANA CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 9Km SW (28) BALLARA, 7Km SW (27) BALLARA 22, 24/9/89

SAMPLE N°	ANALYSES ppm Cu	Pb	Zn	Mn	Ag.	DEPTH METRES	LOG	DESCRIPTION		WATER
						2		clayey sand pale green	FE	LINE 28 3380 E M1262	3 1.4 0.4
730921	30	12	14	195	<1	9					
922	230	28	76	730	<1	1 3		clayey sand grey green	? Fm	3340 E M1263	1.3 0.8
						2		clayey sand		3300 E	2.4
923	70	12	30	120	<1	5		grey green	FE	M1264	0.5
						2		clayey sand fawn & purple		3260 E	2.1 0.3
						8				M1265	
924	125	10	155	190	<1	12		fawn green	Bm		4.3
						2		clayey sand		3220 E	1.8
925	98	10	66	175	<1	6		grey green	Bm/FE	M1266	0.8
						2		clayey sand		3180 E	2.1
926	28	<4	16	56	<1	4		fawn white	PEG + fm	M1267	1.1
						2		clayey sand		3140 E	2.2
927	25	12	54	62	<1	8		fawn & pink	Fm / Bm	M1268	0.5
						1		clayey sand		3100 E	1.6
928	38	4	16	24	<1	4		fawn & pink	Fm ?5% GRAPHITE	M1269	0.4
						2		clayey sand		3060 E	2.1
						8		brown green		M1270	0.4
929	115	20	1550	1080	<1	10		grey green	Fm		0.5
430	16	<4	15	155	<1	2		clayey sand grey	? PEG	1500E M1271	1.7 1.5
931	20	12	26	75	<1	2 3		clayey sand white	? PEG + FM	1540E M1272	3.0 0.6
932	30	18	62	125	<1	2 3		clayey sand grey brown	rFm	1580E M1273	2.1 1.2
933	14	22	60	260	<1	2 3		clayey sand grey green	FE	1620E M1274	2.1 2.5
934	8	16	24	66	<1	1 2		clayey sand white	? PEG	1660E M1275	3.4 1.2
935	18	14	94	270	<1	1 3		clayey sand fawn green	Fm	2100E M1276	1.4 0.8
936	82	22	92	200	"	1 3		clayey sand fawn green	Fm	2140E M1277	2.1 0.9
937	40	12	80	195	"	1 3		clayey sand grey green	Fm	2180E M1278	2.0 0.9
938	50	12	300	195	"	1 4		clayey sand grey green	?FS TR GRAPHITE	2220E M1279	1.2 0.9
939	220	15	410	350	"	2 4		clayey sand grey green	Fm 2% GRAPHITE	2260E M1280	1.6 0.5
940	16	10	68	150	"	1 3		clayey sand fawn green	PEG + Fm	000E M1281	2.2 0.6
941	22	5	72	175	"	1 3		clayey sand grey green	Fm	040E M1282	2.1 2.3
942	30	12	22	145	"	1 3		clayey sand grey green	Fm	080E M1283	2.1 1.1
943	18	14	44	135	"	1 2		clayey sand grey & green	PEG + Fm TR MT	120E M1284	3.4 1.2
944	16	80	72	310	"	1 3		clayey sand grey green	FE	160E M1285	2.2 1.1
						2		clayey sand + gravel		LINE 27	4.1
						10		fawn green		000E M1286	0.5
						(15)		fawn			0.4

DRILL TYPE:

DRILLER: SILVER CITY

LOGGED BY: FDK

DATE DRILLED: 22, 24/9/89

SCALE: 1:500

DRG/CODE No:

OTHER DETAILS: TOT 112m

PROJECT CUTANA — CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 7Km SW BALLARA — 24, 25/9/89

SAMPLE N°	ANALYSES ppm Cu	Pb	Zn	Mn	Ag	DEPTH METRES	LOG	DESCRIPTION		WATER
						18			LINE 27 000E	S
730945	82	165	138	180	<1	22		fawn & purple rFM	M1286	0.2
						2		clayey sand	040E	2.5
946	6	20	38	230	"	7		green ?FS	M1287	0.5
						2		clayey sand	120E	2.6
947	2	5	14	210	"	4		fawn PL	M1288	0.6
						2		clayey sand		3.1
								fawn	160E	1.1
								green	M1289	
						14				
948	4	12	95	770	"	18		dk grey green v fine ?FE/SLST		1.2
						1		clayey sand	200E	4.2
949	<2	<4	32	200	"	4		dk green ?FE/SLST	M1290	6.1
						1		clayey sand		2.3
						4		fawn	700E	4.9
								dk green	M1291	
								grey ?FM/SLST		1.2
950	<2	4	50	270	"	13				
						1		clayey sand		1.3
						5		fawn green	740E	6.1
									M1292	
								green SLST		1.5
951	8	6	45	150	"	11				
						1		clayey sand		3.7
								fawn	780E	1.4
								green	M1293	
						10				3.0 ↓ 11.0
952	2	12	56	220	"	14		dk green SLST 5% mt		
						2		clayey sand		5.1
									820E	6.2 ↓ 9.5
								dk green	M1294	
953	4	10	75	160	"	12		v fine SLST 5% mt		
						2		clayey sand	860E	4.2
954	12	5	46	120	"	6		dk green v fine SLST 2% mt	M1295	3.5 ↓ 6.5
						1		clayey sand	900E	4.4
955	4	10	44	120	"	4		dk green (near o/c) SLST 2% mt	M1296	3.8
956	24	8	36	250	"	.5		cl.s/fawn ?QUARTZITE 1% mt	1080E M1297	6.3 3.1
957	4	4	46	430	"	2		cl.s./grey green (near o/c) SLST 5% mt	1120E M1298	10.1 17.0
						1		clayey sand 15% mt		8.1
958	10	6	40	340	"	4		dk grey green ?QUARTZITE → QUARTZ MAGNETITE	1160E M1299	17.8
959	36	12	14	66	"	2		cl.s/green fawn QUARTZITE	1460E M1300	13.3 3.6
960	16	6	32	65	"	3		clayey sand grey green FM	1500E M1301	2.9 3.6
961	24	8	52	240	"	1		fawn white PEG + FM	1540E ± M1302	10.2
962	11	8	35	155	"	3		clayey sand fawn green FM	1580E M1303	2.1 1.9
963	19	10	38	100	"	3		clayey sand fawn green FM	1620E M1304	3.3 2.8

27/080E PL o/c. NOT DRILLED due outcrop
SLST = SILTSTONE

OTHER DETAILS: TOT 120m

DRILL TYPE:

DRILLER: SILVER CITY

SCALE: 1:500

LOGGED BY: IDK

DATE DRILLED: 24,25/9/89

DRG/CODE NO:

PROJECT CUTANA — CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION

5.5 Km SW NALLARA — 25/9/89.

SAMPLE N°	ANALYSES ppm / % Cu	Pb	Zn	Mn	Ag	DEPTH METRES	LOG	DESCRIPTION		WATER
						3		clayey sand	LINE 26	S 2.7
								fawn	2340 E	
								I pink	M 1305	0.2
						15				
								fawn green	Fm ½% GRAPHITE	0.3
730964	92	20	135	180	<1	21				
						2		clayey sand purple & fawn		1.8
						7				0.4
								fawn	2300 E M 1306	0.4
						22				
								green fawn		0.5
						28				
965	100	6	440	6000	1	31		fawn green	FE TR MT	0.8
						2		clayey sand		2.5
								purple fawn		0.3
						12			2260 E	0.4 ↓
								pale fawn green	M 1307	1.9
						21				
								purple fawn green	fm ½% MT	1.5 ↓ 4.5
966	280	14	115	150	<1	28				
						2		clayey sand fawn purple		1.3
						6			2220 E	1.8
								pale green I purple	M 1308	1.6 ↓ 0.6
967	210	<4	90	185	"	12			FE	
						1		clayey sand		1.8
						3		fawn		0.5
								pale green	2180 E M 1309	0.3
						12				
968	110	"	195	135	"	14		fawn green I purple	PEG + fm	0.5
						1		clayey sand	2140 E	1.6
969	42	"	54	70	"	4		brown green	PEG + fm M 1310	0.8
						1		clayey sand	2100 E	1.4
						3		fawn		0.7
970	62	22	260	230	"	6		fawn green	fm M 1311	0.5
						1		clayey sand	1720 E	3.2
971	320	12	260	230	"	3		grey green	fm M 1312	1.2

DRILL TYPE:

DRILLER: SILVER CITY

LOGGED BY: IDIL

DATE DRILLED: 25/9/89

SCALE:

DRG / CODE No:

OTHER DETAILS: TOT 11.9 m

PROJECT CUTANA — CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 5.5Km SW BALLARA — 25/9/89

SAMPLE N°	Cu	Pb	Zn	Mn	As	DEPTH METRES	LOG	DESCRIPTION	S.		WATER
730972	210	56	185	145	<1	1–3		clayey sand fawn green & purple	FE	1.0 / 0.6	LINE 26 1680E M1313	S
973	56	6	110	280	"	1–4		clayey sand fawn green	FE		1640E M1314	1.3 / 0.7
974	36	20	125	175	"	2–6		clayey sand grey green & purple	Fm		1600E M1315	1.7 / 0.8
975	30	12	115	115	"	2–14		clayey sand grey green — fawn green	Fm		1560E M1316	2.4 / 0.6 / 1.4
976	42	28	44	36	"	1–6		clayey sand green fawn	PEG + Fm		1520E M1317	1.6 / 0.9
977	25	24	35	94	"	1–14 / 17		clayey sand fawn & purple — — — green fawn	Fm		1480E M1318	1.7 / 0.9 ↓ 1.8 / 1.0
978	74	15	75	96	"	1–6 / 16–24		clayey sand fawn — — — grey fawn — — — fawn green & purple	Fm		1440E M1319	1.8 / 0.9 / 1.5 / 1.2
979	30	80	165	220	<1	2–12 / 18–21		clayey sand fawn & grey — — — fawn — — — fawn green	Fm		1400E M1320	2.2 / 0.2 / 0.3 / 0.4
980	110	22	155	140	4	1–11 / 16–18		clayey sand fawn & white — purple fawn — fawn green	FE		1360E M1321	1.6 / 0.4 / 0.4 / 0.4

OTHER DETAILS: TOT 113m

DRILL TYPE: — LOGGED BY: ZDK

DRILLER: SILVER CITY — DATE DRILLED: 25/9/89

SCALE: 1:500 — DRG / CODE No:

PROJECT CUTANA

CARPENTARIA EXPLORATION COMPANY PTY. LTD.
ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 5.5 Km SW BALLARA

25, 26/9/89

SAMPLE N°	ANALYSES ppm / % Cu	Pb	Zn	Mn	Ag	DEPTH METRES	LOG	DESCRIPTION		WATER
						1		clayey sand	LINE 26	S 1.5
								purple & fawn	1320E	0.3
						14			M1322	
								fawn green & purple	Fm	0.3
730981	150	16	110	180	<1	25				
						1		clayey sand green fawn	1280E	2.2
						6			M1323	0.4
								fawn green & purple	fm	0.8
982	80	8	66	110	"	12				
						2		clayey sand	1240E	2.6
983	84	6	110	90	"	8		fawn	r fm	M1324 0.8
						1		clayey sand green fawn	1200E	1.9
984	45	4	90	155	"	7			FE ½% mt	M1325 0.8 ↓ 2.3
						2		clayey sand fawn	940E	2.5
						5			M1326	1.9
								green fawn	FE	0.4
985	145	22	52	76	"	13				
						3		clayey sand fawn clayey	900E	2.4
						8			M1327	0.5
								fawn green	Fm	0.4
986	46	16	58	54	"	14				
						4		clayey sand fawn	860E	2.3
									M1328	0.2
						10				0.7
987	115	<4	80	78	"	13		fawn green	Fm	
						2		clayey sand fawn & purple	820E	2.2
						10				0.2
								fawn	M1329	0.1
988	58	10	48	94	"	18 19		fawn green	Fm 10% blue qtz	0.5

DRILL TYPE:

DRILLER: SILVER CITY

LOGGED BY: ZINK

DATE DRILLED: 25-26/9/89

SCALE: 1:500

DRG/CODE No:

OTHER DETAILS: ToT 111 m

PROJECT CUTANA CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION (26) (25)
5.5 Km SW BALLARA, 3.5 Km SW BALLARA

26/9/89

SAMPLE N°	ANALYSES ppm Cu	Pb	Zn	Mn	Ag	DEPTH METRES	LOG	DESCRIPTION		WATER
								clayey sand	LINE 26	S 2.2
						4		fawn	780E	2.2
									M1330	
						10		green fawn FE		0.4
730989	68	8	170	300	<1	12				
						2		clayey sand		2.1
								fawn		0.3
								+ purple	760E	
						9			M1331	
								fawn		0.2
990	72	14	50	80	"	18 19		fawn grey green : FM		0.8
						2		clayey sand	LINE 25	1.4
								grey + purple clayey		0.2
						8			3940E	
								fawn + purple	M1332	0.1
991	15	12	36	10	"	15 16		purple fawn pl (m) 10% Haem		0.4
						2		clayey sand		2.1
								grey + purple		0.3
						12			3900E	
									M1333	
								brown fawn + purple		0.3
992	155	50	140	98	"	42 44		green fm		0.5
						1		clayey sand		2.5
								fawn + purple clayey		0.4
						6			3860E	
								purple + fawn	M1334	0.3
						18				
								green fawn		0.4
993	82	6	185	180	"	25 27		fawn green fm		0.6

DRILL TYPE:
DRILLER: SILVER CITY
SCALE:

LOGGED BY: IDK
DATE DRILLED: 26/9/89
DRG/CODE No:

OTHER DETAILS: TOT 118 m

PROJECT CUTANA

CARPENTARIA EXPLORATION COMPANY PTY. LTD.
ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 3.5 Km SW BALLARA

26, 27/9/89

SAMPLE N°	ANALYSES ppm Cu	Pb	Zn	Mn	Ag	DEPTH METRES	LOG	DESCRIPTION			WATER
								clayey sand	10% mT	LINE 25 3820E M1335	3 4.1 ↓ 1.9 20+
730994	200	8	210	4650	1	6 8		dk green	? AMPHIBOLE		
995	34	12	40	170	<1	1 2		c.s./fawn	PEG(m) 1% mT	3780E M1336	2.1 3.4
						2		clayey sand		3740E M1337	2.1
996	90	5	58	160	"	6		green fawn	Fm		0.5
						2		clayey sand fawn		3700E M1338	2.1 2.3
997	42	10	60	105	"	5 9		green fawn	Fm		0.7 ↓ 1.2
						3		clayey sand purple, grey & fawn		3100E M1339	1.6 0.2
998	10	12	14	10	"	11 13		purple fawn	Fm		0.2
						2		clayey sand purple grey		3060E M1340	2.2
999	9	8	16	48	"	7			Fm		0.8
						2		clayey sand fawn ± pink fawn		3020E M1341	2.2 0.3
731000	38	32	72	32	"	6 8			PEG + Fm		0.4
						2		clayey sand fawn		2980E M1342	1.7
001	16	5	52	45	"	5			? Fs		0.3
						2		clayey sand purple grey		2940E M1343	1.2 0.2
002	25	16	20	40	"	6 12		purple green	Fm		0.4
						2		clayey sand purple & grey			1.0 0.2
						12				2900E M1344	0.4
								fawn & purple			
						23		pale fawn green	Fm		0.7
003	70	20	55	82	"	27					
						2		clayey sand purple & fawn		2200E M1345	1.4 0.3
004	9	8	13	18	"	8 10		green & white	FM + PEG		0.3
						2		clayey sand purple & fawn		2160E M1346	1.7 0.2
						10 (13)					

DRILL TYPE:

DRILLER: SILVER CITY

LOGGED BY: DOK

DATE DRILLED: 26, 27/9/89

SCALE:

OTHER DETAILS: TOT 13m

PROJECT CUTANA

CARPENTARIA EXPLORATION COMPANY PTY. LTD.
ROTARY AIR BLAST DRILL HOLE LOG

LOCATION

3.5 Km SW BALAMA

27/9/89.

SAMPLE Nº	ANALYSES ppm					DEPTH METRES	LOG	DESCRIPTION			WATER
	Cu	Pb	Zn	Mn	Ag						
								grey & pale green		LINE 25 2160E M1346	S 0.2
						21					
731005	30	6	48	92	<1	24		fawn green	Fm		0.5
						2		clayey sand fawn		2120E M1347	1.5 0.7
						5		green brown	Fm TR MT		1.2
006	94	<4	34	60	"	7					
						2		clayey sand fawn		2080E M1348	1.1 0.7
						10					
007	19	5	82	135	"	12		fawn green	Fm		0.7
008	20	4	70	120	"	1 3		clayey sand pale green	Fm TR MT	2040E M1349	1.3 1.0
						2		clayey sand fawn green		2000E M1350	1.4
009	50	8	44	68	"	6			Fm ½ l. MT		1.1
						2		clayey sand purple & fawn		1040E M1351	1.3 0.3
						14					0.4
						21		fawn green			
010	62	10	36	90	"	24		green	Fm		0.5
						2		clayey sand purple & fawn		1080E M1352	1.6 0.3
						11					
011	60	20	22	22	"	14		grey fawn	PEG		0.5
						2		clayey sand fawn & purple		1120E M1353	0.9 0.4
						26					
								fawn			0.6
						34					
012	210	8	62	130	"	39		green fawn	Fm		0.8

DRILL TYPE:

DRILLER: SILVER CITY

SCALE: 1:50

LOGGED BY: DDK

DATE DRILLED: 27/9/89

DRG/CODE No:

OTHER DETAILS: TOT 116m

PROJECT CUTANA

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

ROTARY AIR BLAST DRILL HOLE LOG

LOCATION 3.5 Km SW BALLARA

27/9/89

SAMPLE N°	ANALYSES ppm %					DEPTH METRES	LOG	DESCRIPTION		WATER
	Cu	Pb	Zn	Mn	Ag					
						2		clayey sand	LINE 25	S 1.2
								fawn & purple	1160E M1354	0.4
						18				0.5
						26		fawn		0.6
731013	260	16	52	75	<1	32		fawn green FE		
						2		clayey sand		1.9
								purple & fawn	1200E M1355	0.4
						18				
014	135	54	26	32	<1	22		yellow fawn PEG		0.5
						2		clayey sand		1.3
								grey		0.3
						10			1240E	
								fawn & purple	M1356	0.5
						26				
015	120	14	48	92	1	33		fawn green FM		0.7
						2		clayey sand		1.8
								grey & purple		0.2
						14			1280E	
								fawn & purple	M1357	0.3
						22				
016	92	4	42	100	1	27		fawn green FM		0.4

DRILL TYPE:

DRILLER: SILVER CITY

SCALE: 1:500

LOGGED BY: EQK

DATE DRILLED: 27/9/89

DRG/CODE No:

OTHER DETAILS: TOT 114 m

MOUNT ISA MINES LIMITED

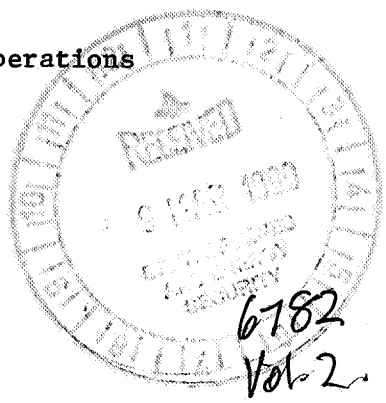
EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JANUARY 27, 1990

	$	$
Administration	1234	
Field Base Operations	69	
Freight	17	
Outside Services	1461	
Operating Labour	1630	
Stores	190	
Transport	228	
Travelling Expenses	1746	$ 6 575
TOTAL - THIS PERIOD		$ 6 575
TOTAL - CURRENT TERM		$ 6 575
Previously Reported		$139 791
Total Project Expenditure to Date		$146 366

.....

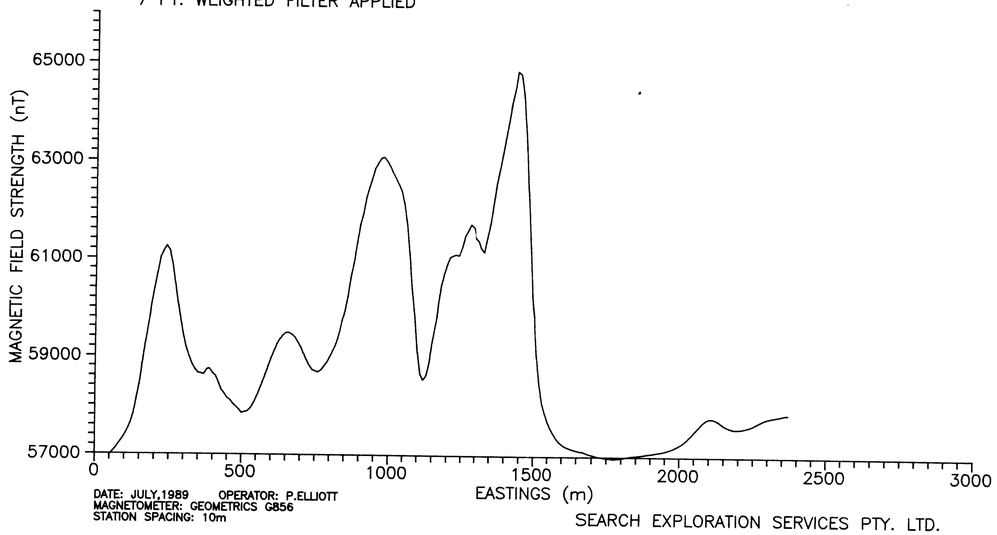
for A.E. Covacich
Manager - Accounting
Exploration & Gold Operations



EXPENDITURE/GEN1/1

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Vol. 2

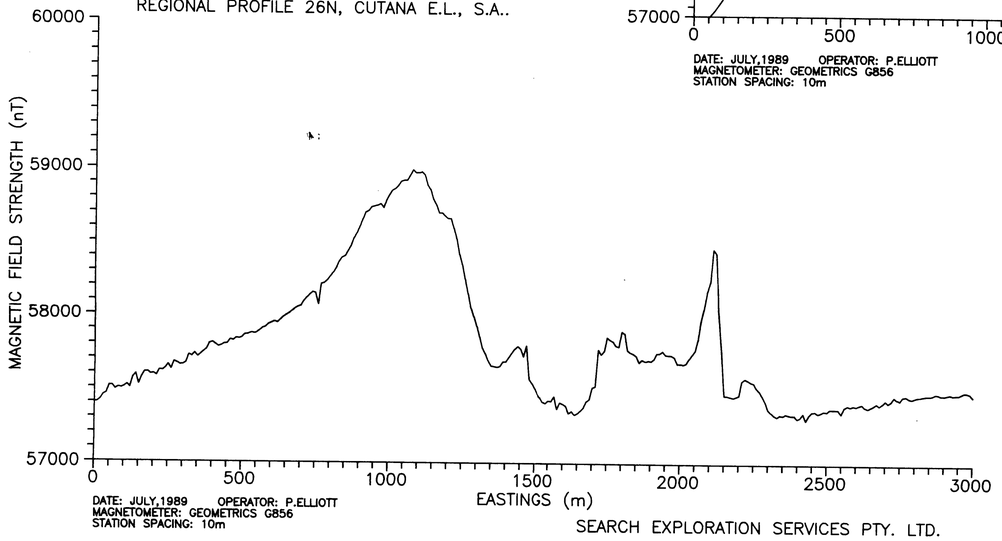
REGIONAL PROFILE 27N, CUTANA E.L., S.A..
7 PT. WEIGHTED FILTER APPLIED



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

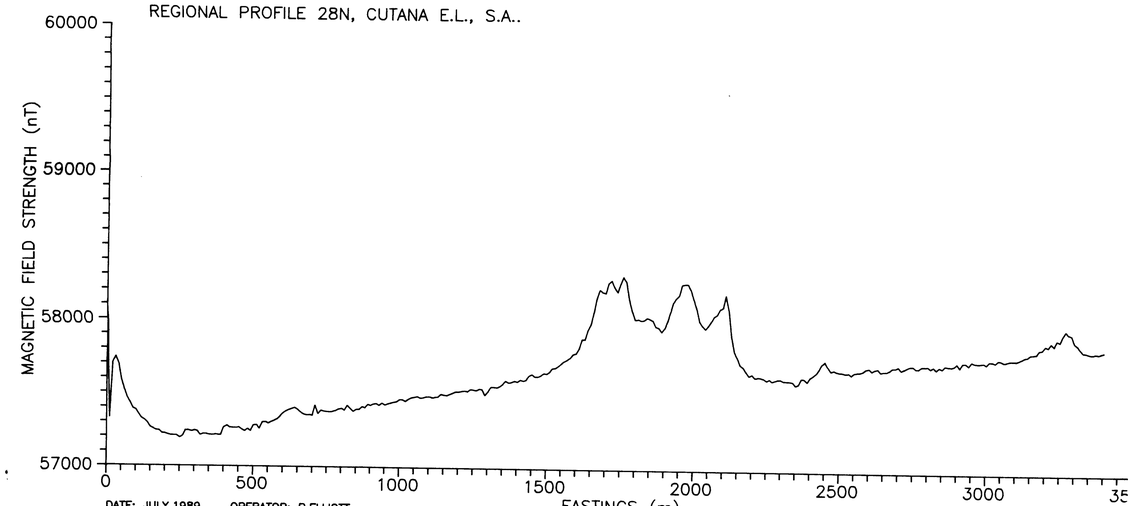
REGIONAL PROFILE 26N, CUTANA E.L., S.A..



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

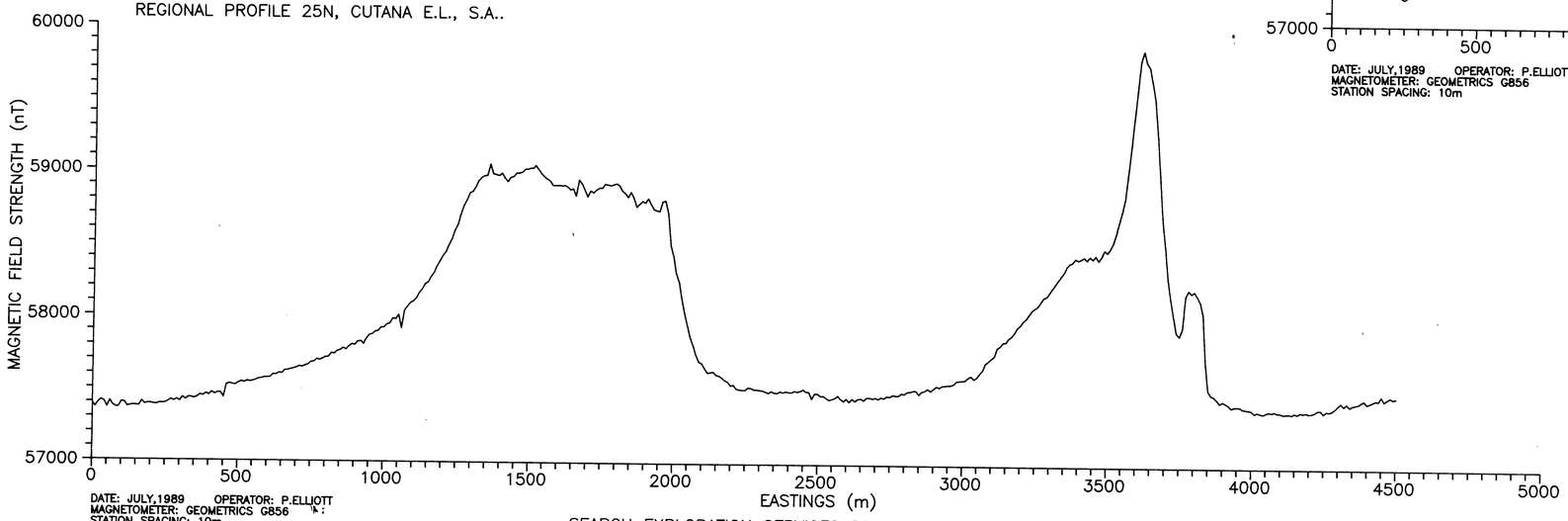
REGIONAL PROFILE 28N, CUTANA E.L., S.A..



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

REGIONAL PROFILE 25N, CUTANA E.L., S.A..



DATE: JULY,1989 OPERATOR: P.ELLIOTT
MAGNETOMETER: GEOMETRICS G856
STATION SPACING: 10m

SEARCH EXPLORATION SERVICES PTY. LTD.

Drg No. 35539

470,000 mE

480,000 mE

6,420,000 mN

6,410,000 mN

140°35'

140° 50'

32°25'

△ BRISTOWE HILL

Watkins Shaft

Yard

Nilpena Well

△ SOUTH HILL

Dam

"Nilpena" (ruins)

Nilpena Dam (old)

Loading Ground

Dam

Watercourse Dam

Second Watercourse Dam

Yard

Muggs Dam

Bore

Outfield Bore

Moldorky Dams

IRON ROCK

Radium Dam

DEY HILL

Roundhill Dam

Open Dam

Diversion Dam

Paradise Dam

Surrender Dam

Dinnertime Dam

Sheds

Four Corners Dam

Yard

Reeds Dam

LINE 26

LINE 27

LINE 28

Line 30

Line 29

FM-M1302 FM-M1303 FM-M1304 FM-M1305 FM-M1306 FM-M1307 FM-M1308 FM-M1309 FM-M1310 FM-M1311 FM-M1312 FM-M1313 FM-M1314 FM-M1315 FM-M1316

FM-M1300 FM-M1301 FS-M1302 FS-M1303 FS-M1304 FS-M1305 FS-M1306 FS-M1307 FS-M1308 FS-M1309 FS-M1310

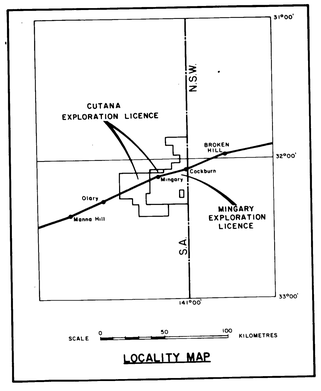
FM-M1288 FM-M1289 FM-M1290 FM-M1291 FM-M1292 FM-M1293 FM-M1294 FM-M1295 FM-M1296 FM-M1297 FM-M1298 FM-M1299

FM-M1277 FM-M1278 FM-M1279 FM-M1280 FM-M1281 FM-M1282 FM-M1283 FM-M1284 FM-M1285 FM-M1286 FM-M1287

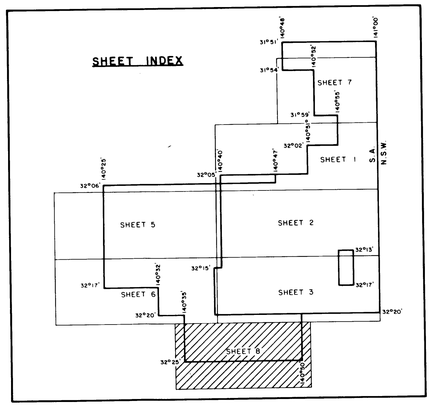
FM-M1272 FM-M1273 FM-M1274 FM-M1275 FM-M1276 FE-M1277 FE-M1278 FE-M1279 FE-M1280 FE-M1281 FE-M1282

LEGEND

FM	Quartz feldspar biotite gneiss psammopelite - Composite (>50% melted metasediment)
FS	Quartz feldspar biotite psammite - Composite (>50% melted metasediment)
FE	Quartz feldspar biotite sillimanite gneiss pelite - Composite (>50% melted metasediment)
BM	Quartz feldspar biotite gneiss
Pl	Plagioclase quartz rock
Peg	Pegmatite
r	Retrograded
M1305	RAB Drill Hole location and number



LOCALITY MAP



SCALE 0 500 1000 2000 3000 METRES

REVISION		SCALE 1:25 000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO P.B.	CUTANA EXPLORATION LICENCE SOUTH AUSTRALIA
		DRAFT G.J.G	RAB LINE LOCATIONS
		CHECKED	SHEET 8
		DATE Jan. 1990	
		1:250 000	
		1:100 000	
		MINING FIELD OR DISTRICT: Olary	DRG No. 3556

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED APRIL 27, 1990

1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" of 769 km², located approximately 30 km east of Olary (Fig.1) was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period, with an expenditure commitment of $50 000. It has subsequently been extended for a further year on three occasions.

Work on the licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm, Carpentaria Exploration Company Pty. Ltd.

The principal target is stratiform/stratabound Pb-Zn mineralization within the Bimba Formation, which is concealed throughout the area by an extensive cover of Tertiary sands and clays.

2. EXPLORATION

No field work was undertaken in the quarter ended 27/4/90. Activity was limited to :

* plotting of the RAB hole locations on line 25, which are shown on Figures 2 and 3. Assay results for these holes were included in the previous quarterly report.

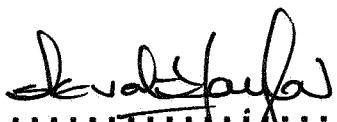
* plotting of the ground magnetic readings on the traverses of lines 29 and 30, conducted by Search Exploration Services of Adelaide. The results are presented as Figure 4.

cutana.st

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Vol-2.

3. EXPENDITURE

An expenditure statement is attached.



.....

Stewart Taylor
Principal Geologist - Base Metals

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED APRIL 27, 1990

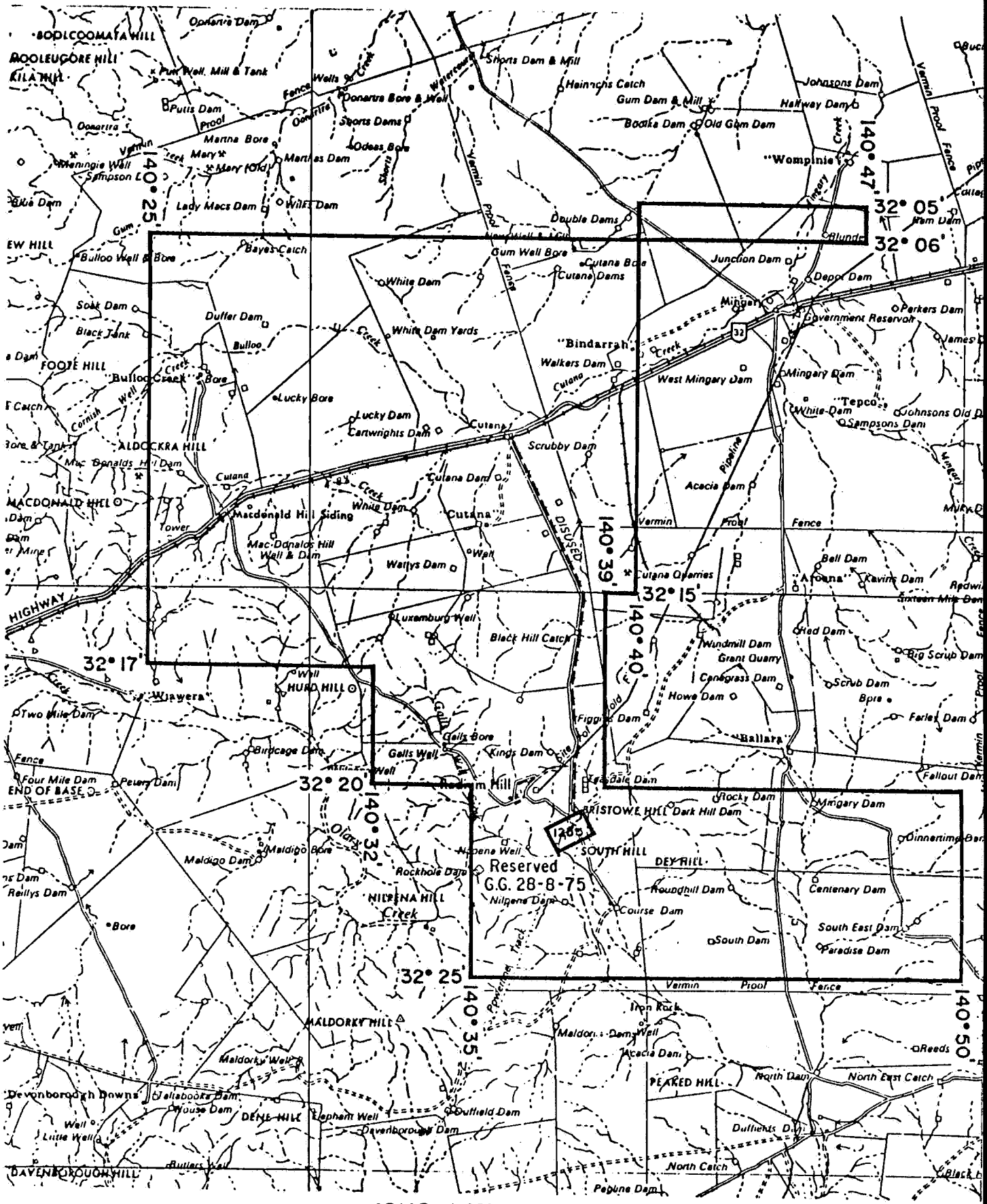
	$	$
Administration	1427	
Field Base Operations	34	
Outside Services	3193	
Operating Labour	1631	6 285
TOTAL - THIS PERIOD		$ 6 285
Previously Reported - Current Term		
Quarter ended January 27, 1990		$ 6 575
TOTAL - CURRENT TERM		$ 12 860
Previously Reported		$139 791
Total Project Expenditure to Date		$152 651

.....

A.E. Covacich
Manager - Accounting
Exploration & Gold Operations

expend.ten

SCHEDULE A



SCALE 1:250,000

KILOMETRES 5 0 5 10 15 20 25 KILOMETRES

NOTE: There is no warranty that the boundary of this Exploration Licence is correct in relation to other features on the map. The boundary is to be ascertained by reference to the Australian Geodetic Datum.

Fig 1

MINGARY

AUSTRALIA 1:100000

SHEET 7033 ZONE 54

140° 30'

141° 00'

32° 00'

32° 30'

46

47

48

49

50

45

44

43

42

41

460000 mE

6410000 mN

Conartra Ck
Conartra
Whites Wells
W.H.
Conartra Bore, Well
Shorts
Shorts Dams
Odeas Bore
Watercourse
Shorts Dam
New Dam
Dam (old)
Buckboard Dam
Bore
Woodville Dam
Halfway Dam
Johnsons Dam
Boolka Dam
Gum Dam
"Wompinie"
Dams
Ck
V.P.F.
"Old Lake Dismal"
Cockburn Dam
COCKBURN
Pine
Butchers Dam
Landing Ground
Cockburn
Cottage Dam, Tank
Tank
Ram Dam
Hallidays Dam
Dam
Double Dams
Gum Bore, Well
Cutana Bore
Cutana Dams
Junction Dam
Mingary
Blunder Dam
Bore (P.D.)
Mutooroo
White Dam
Dam
Depot Dam
1435 GAUGE
Government Reservoir
Parkers Dam
Covells Dam
Spillers Dam, Tank
Sampsons Dam
Creek
Dams
Bulloo
White Dam Yards
Weir Dam
Ch.
L.G.
"Bindarrah"
Joyces Dam
James Dam
Walkers Dam
Dams
BARRIER HIGHWAY
West Mingary Dam
Mingary Dam
Catch Dam
Chalky Dam
White Dam
"Tepco"
Johnsons Old Dams
Mingary
Sampsons Dam
Pine Creek Dam
Dam
Pinery Dam
Pine Creek
Lucky Dam
Cartwrights Dam
Cutana
Cottages Crossing
New Scrubby Dam
SITE OF FORMER RAILWAY
SITE OF OLD PIPELINE
Harrford Dam
Cutana Dam
Wilkins Prospect (P.D.)
Cutana
Ck
White Dam
Robbys Dam
Acacia Dam
Milky Dam
PINERY HILL
Bore
Dam
Little White Dam
Deadmans Dam
"Cutana"
Woolshed
Dam
Well (P.D.)
Wattys Dam
Boundary Dams
Bells Dam
Sheepskin Dam
Kadish Bore
Chifley Dam
Mutooroo West Mines
Dam
Cockeys Dam
Deviation Bore
Cutana Mine (P.D.) Cu
Cutana Quarries
"Aroona"
Homestead Dams
Kevins Dam
Junction Dam
Redwings Dam
Sixteen Mile Dam
"Corella"
Saltash
Mutooroo Mine Cu
Miracle Bore
Miracle Dam
Luxembourg Well
Luxembourg Mine
John Brown Mine
Queen Bee Mine
Embankment Dam
North Quarry
Grant Quarries
N.E. Open Cut Quarry
Terminus Quarry
Aroona Dam
Dam
Mine East Dam
Grassy Dam
New Luxembourg Reservoir
Black Hill Dam
Luxembourg West Mine (P.D.)
New Luxembourg Goldfield
Premier Mine Cu
Kings Dam
Windmill Dam
Big Scrub Dam
Outalpa Dam
Trinity East Dam
Winklers Mine Pb
Yankee Shaft
Bells Hill Mine
Quarry Fe
Fe Albert Quarries
Scrub Dam
McBrides Dam
330
HURD HILL
Uncle Tom Mine Ag Pb
Dam
Canegrass Dam
Quondong Dam
Figgans Dam
Deans Dam
Bore P.D.
Farleys Dam
QUARTZ HILL
Kings Dam
Trinity Mine Cu
Trinity Dam
Ky Galls Well Kyanite Prospect
Galls
Galls Bore
Cemetery Prospect
Mulga Hill Mine
Kings Dam
Cutana Tank
Galls Well
Cu
Galls Well East Mine
Well
Taylor Shaft
BONYTHON HILL
"Ballara"
New Saucepan Dam
Old Pegline Dam
Radium Hill (aban.)
Nilpena Bore (old)
Michelle Hill Mine
Toms Dam
Fallout Dam
White Oaks Dam
Eagle North Dam
Tombstone Tank P.D.
Teasdale Dam
Saucepan Dam
Mildaltie-Dalkey
Diggings
Cu
Ck
Dark Hill Dam
Rocky Dam
Mingary Dam
Tank
Radium Hill Mine
Tailings Dump
BRISTOWE HILL
Eagle West Dam
Radium Dam
Watkins Shaft
Nilpena Well
SOUTH HILL
Dinnertime Dam
Four Corners Dam
Seven Mile Dam
"Nilpena" (ruins)
Dam
Nilpena Dam (old)
DEY HILL
Sheds
Centenary Dam
Rocky Dam
Hut
Eagle South Dam
Landing Ground
Roundhill Dam
Dingo Dam
NILPENA HILL
Maldigo Well P.D.
Creek
Watercourse Dam
Diversion Dam
Surrender Dam
Butterfly Dam
Junction Bore P.D.
Second Watercourse Dam
Open Dam
Paradise Dam
Farleys Catch
Dam
Muggs Dam
Record Dam
Katie Dam
Rockhole Dam
Black Yellow Creek
V.P.F.
Bore
Duffield Bore P.D.
MALDORKY HILL
IRON ROCK
W.H.
Muster Catch
White Dam
Maldorky Dams
Reeds Dam
Mutooroo Dam
Bullock Dam
Acacia Dam
"Mutooroo"
North Dam
North East Catch
Mutooroo
Burta Dam
PEAKED HILL
Black Hill Catch
Little Borehole Dam
Ck
Elephant Well
Duffield Dams
Dam (old)
Borehole West Dam
Dam
Davenborough Dam
Duffields Well
Hut
Tank I.D.
Bore P.D.
Two Mile Dam
North Catch
Lyndon Catch

Fig 2

470,000 m E

480,000 m E

490,000 m E

6,430,000 m N

32°15'

32°20'

32°17'

140°40'

140°45'

140°50'

140°55'

Cutana Quarry

Boundary Dams

Bells Dam

"Aroona"

Homestead Dam

Kevins Dam

Junction Dam

LINE 23

LINE 2

LINE 1

LINE 24

LINE 25

Windmill Dam

Grant Quarries

N.E. Open Cut Quarry

Terminus Quarry

Kings Dam

Quarry Fe

Fe Albert Quarries

Canegrass Dam

Scrub Dam

Quandong Dam

Figgons Dam

Bore P.D.

Deons Dam

Corleys Dam

"Ballara"

Taylor Shaft

Bonymon Hill

Tonis Dam

Fallout Dam

Old Pegline Dam

White Oaks Dam

Tank

Mingary Dam

Dark Hill Dam

Aroona Dam

Outalpa Dam

Big Scrub Dam

Sheeppasin Dam

Redwings Dam

Sixteen Mile Dam

Dam

Cockeys Dam

Dam

Corella

Mutooroo Mine Cu

Miracle Bore

Miracle Dam

Mine East Dam

Grassy Dam

Deviation Dam

Yd.

Trinity East Dam

McBrides Dam

Quartz Hill

Yd.

New Saucepan Dam

Saucepan Dam

Kings Dam

Cu Trinity Mine

Trinity Dam

Eagle West Dam

Mingary Exploration Licence

Mingary Exploration Licence

Mingary Exploration Licence

LINE 30N, CUTANA, S.A..

GROUND MAGNETIC PROFILE

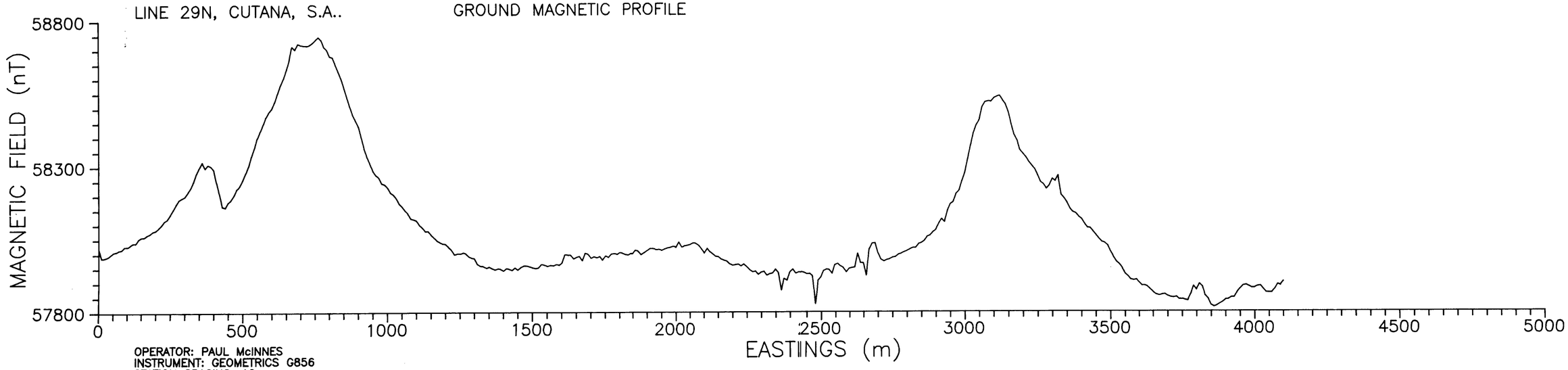


OPERATOR: PAUL McINNES
INSTRUMENT: GEOMETRICS G856
STATION SPACING: 10m
SENSOR HEIGHT: 3m
DATE: JANUARY,1990

SEARCH EXPLORATION SERVICES PTY. LTD.

LINE 29N, CUTANA, S.A..

GROUND MAGNETIC PROFILE



OPERATOR: PAUL McINNES
INSTRUMENT: GEOMETRICS G856
STATION SPACING: 10m
SENSOR HEIGHT: 3m
DATE: JANUARY,1990

SEARCH EXPLORATION SERVICES PTY. LTD.

Fig 4

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JULY 27, 1990

1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" of 769 km², located approximately 30 km east of Olary (Fig.1), was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period, and has subsequently been extended for a further year on three occasions.

Work on the licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm, Carpentaria Exploration Company Pty. Ltd.

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2. EXPLORATION

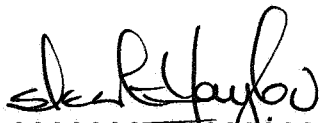
Field work undertaken in the quarter ended July 27, 1990, comprised ground magnetics traverses of two lines (64 and 65) in the southern part of the tenement (Fig.2), in order to detect the magnetic Upper Albite Formation and hence the location of the prospective Bimba Formation.

The results (Figs 3 and 4) will be followed up by a RAB drilling programme in the next quarter.



3. EXPENDITURE

An expenditure statement is attached.



Stewart Taylor
Principal Geologist - Base Metals

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JULY 27, 1990

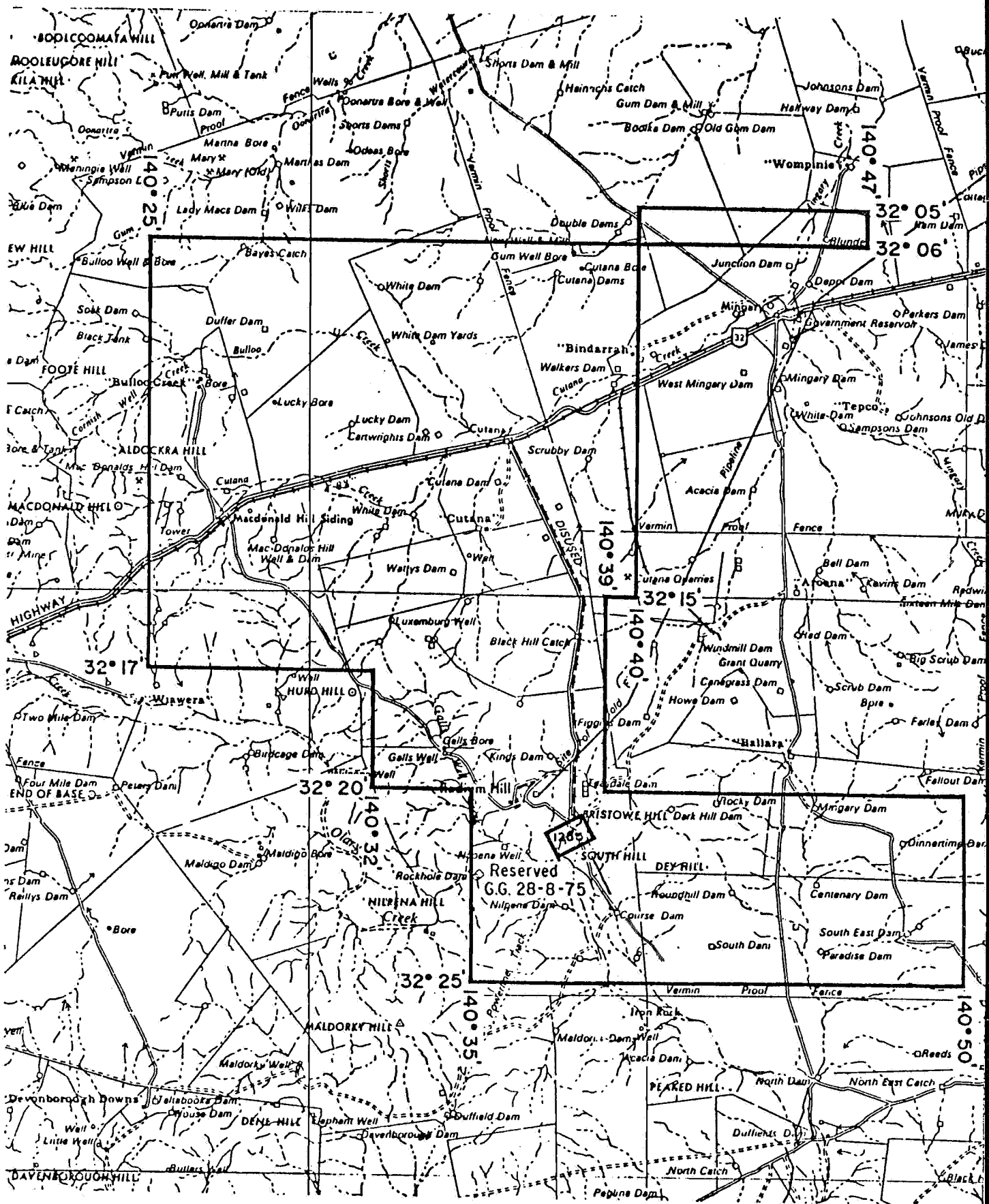
	$	$
Administration	343	
Consultants Fees	1360	
Outside Services	20	
Operating Labour	1347	
Transport	150	
Travelling Expenses	749	3 969
TOTAL - THIS PERIOD		$ 3 969
Previously Reported - Current Term		
Quarter ended January 27, 1990	$6575	
Quarter ended April 27, 1990	$6285	$ 12 860
TOTAL - CURRENT TERM		$ 16 829
Previously Reported		$139 791
Total Project Expenditure to Date		$156 620

.....Karen A Bad.....

For A.E. Covacich
Manager - Accounting
Exploration & Gold Operations

expend.ten

SCHEDULE A


140° 25'
140° 39'
140° 40'
140° 32'
140° 35'
140° 47'
140° 50'
32° 05'
32° 06'
32° 15'
32° 17'
32° 20'
32° 25'
Reserved
G.G. 28-8-75
Wompinie
Mingary
Bindarrah
Tepco
Wiawera
Hallara
Maldorky Hill
Nilpena Hill
Bristowe Hill
Foote Hill
Aldockra Hill
Macdonald Hill
Hurd Hill
Peaked Hill
Dey Hill
South Hill
Devonborough Hill
Highway
Vermin Proof Fence
Pipeline
Disused
Creek
Bulloo Creek
Mac Donalds Hill Siding
Mac Donalds Hill Well & Dam
Bulloo Bore
Lucky Bore
Lucky Dam
Cantwrights Dam
Scrubby Dam
Cutana Dam
Cutana Bore
Cutana Dams
Cutana Opemies
Gum Well Bore
White Dam
White Dam Yards
Duffer Dam
Soak Dam
Bayes Catch
Bulloo Well & Bore
Walkers Dam
West Mingary Dam
Mingary Dam
Government Reservoir
Junction Dam
Depot Dam
Parkers Dam
Johnsons Old D
Sampsons Dam
Acacia Dam
Wellys Dam
Luxemburg Well
Black Hill Catch
Windmill Dam
Grant Quarry
Canegrass Dam
Howe Dam
Scrub Dam
Big Scrub Dam
Farlet Dam
Fallout Dam
Kings Dam
Gells Bore
Gells Well
Nilpena Well
Nilpena Dam
Rockhole Dam
Maldigo Bore
Maldigo Dam
Reillys Dam
Course Dam
Roundhill Dam
Centenary Dam
South East Dam
Paradise Dam
South Dam
Dark Hill Dam
Dinnertime Dam
Iron Rock
Maldorky Well
Acacia Dam
North Dam
North East Catch
North Catch
Reeds
Duffield Dam
Elephant Well
Devonborough Dam
Yellabooka Dam
House Dam
Little Well
Pegune Dam
Black Hill
Four Mile Dam
Two Mile Dam
Birdcage Dam
Olarn
Fence
Proof
Vermin
Creek
Tower
Bore
Well
Dam
Tank
Mine
Yard
Catch
Sampson Well
Marina Bore
Mary Bore
Marinas Dam
Lady Macs Dam
Willis Dam
Double Dams
Shorts Dam & Mill
Donarra Bore & Well
Donarra Dam
Shorts Dams
Odeas Bore
Hainrichs Catch
Gum Dam & Mill
Bootka Dam
Old Gum Dam
Halfway Dam
Johnsons Dam
Bell Dam
Kavina Dam
Sixteen Mile Dam
Head Dam
Figgis Dam
Eagle Dale Dam
Flocky Dam
Mingary Dam
Dinnertime Dam
Pure Well, Mill & Tank
Putts Dam
Weeningie Well
Blue Dam
Gum
Soak
Black Tank
Cornish Well
Mac Donalds Hill Dam
Reillys Dam
Maldigo Dam
Maldorky Well
Little Well
Butlers Well
Bore & Tank
Dam
Mine
Yard
Catch
Tower
Well
Creek
Fence
Proof
Vermin
Pipeline
Disused
Track
Old
Bore
Well
Dam
Tank
Mine
Yard
Catch
Tower

AUSTRALIA 1:100000

SHEET 7033 ZONE 54

140° 30'

141° 00'

32° 00'

32° 30'

46

47

48

49

50

45

44

43

42

41

460000 mE

6410000 mN

Onartra Ck
Onartra
White Wells
W.H.
Onartra Bore, Well
Shorts
Shorts Dams
Odeas Bore
Watercourse
Shorts Dam
New Dam
Yd
V.P.F.
Dam (old)
Boolka Dam
Gum Dam
Halfway Dam
Johnsons Dam
"Wompinie"
Ck
Dams
Buckboard Dam
Bore
Woodville Dam
"Old Lake Dismal"
Cockburn Dam
COCKBURN
211
B
Pine
Butchers Dam
Landing Ground
Cockburn
Cottage Dam, Tank
Tank
Ram Dam
Halliday Dam
Dam
Double Dams
Blunder Dam
Hungary Ck
Gum Bore, Well
Cutana Bore
Cutana Dams
Junction Dam
Mingary
Depot Dam
1435 GAUGE
Bore (P.D.)
Mutooroo
Creek
Dam
Dams
Sampsons Dam
Spillers Dam, Tank
Covells Dam
Parkers Dam
Government Reservoir
James Dam
White Dam
Bullloo Ck
White Dam Yards
"Bindarrah"
Weir Dam
Ctn.
L.G.
Joyces Dam
Walkers Dam
BARRIER HIGHWAY
West Mingary Dam
Mingary Dam
Catch Dam
Chalky Dam
"Tepco"
Johnsons Old Dams
Mingary
Sampsons Dam
Pine Creek Dam
Pinery Dam
Pine Creek
L.G.
Lucky Dam
Cartwrights Dam
Cutana
Cottages Crossing
New Scrubby Dam
SITE OF FORMER RAILWAY
SITE OF OLD PIPELINE
Acacia Dam
Hartford Dam
Milky Dam
PINERY HILL
Bore
Wilkins Prospect (P.D.)
Cutana
Ck
White Dam
Little White Dam
Deadmans Dam
"Cutana"
Woolshed
Robbys Dam
Cutana Dam
Kadish Bore
Chifley Dam
Deviation Bore
Mutooroo West Mines
Cockeys Dam
Well (P.D.)
Wattys Dam
Cutana Mine (P.D.) Cu
Boundary Dams
Bells Dam
Sheepskin Dam
"Aroona"
Homestead Dams
Kevins Dam
Redwings Dam
Sixteen Mile Dam
"Corella"
Saltash
Mutooroo Mine Cu
Miracle Bore
Miracle Dam
Mine East Dam
Grassy Dam
Cutana Quarries
Junction Dam
Luxembourg Well
Luxembourg Mine
Queen Bee Mine
New Luxembourg Reservoir
Black Hill Dam
Embankment Dam
North Quarry
Grant Quarries
N.E. Open Cut Quarry
Terminus Quarry
Aroona Dam
Big Scrub Dam
Curalpa Dam
Trinity East Dam
New Luxembourg Goldfield
Premier Mine Cu
Yankee Shaft
Kings Dam
Windmill Dam
Quarry Fe
Scrub Dam
Fe
Albert Quarries
Canegrass Dam
Quondong Dam
McBrides Dam
Trinity Mine Cu
Trinity Dam
Figgans Dam
Deans Dam
Bore P.D.
Farleys Dam
QUARTZ HILL
New Saucepan Dam
Old Pegline Dam
"Ballara"
Toms Dam
Fallout Dam
White Oaks Dam
Saucepan Dam
Eagle North Dam
Eagle West Dam
Seven Mile Dam
Rocky Dam
Hut
Shed
Eagle South Dam
Dingo Dam
Butterfly Dam
Katie Dam
White Dam
Muster Catch
Mutooroo Dam
Bullock Dam
Reeds Dam
"Mutooroo"
Mutooroo
Burta Dam
Little Borehole Dam
Borehole West Dam
Two Mile Dam
Dam
HURD HILL
330
Uncle Tom Mine Ag Pb
Ellis Hill Mine
Ellis
Winklers Mine Pb
Gallswell Kyanite Prospect
Gallswell East Mine
Gallswell Bore
Cemetery Prospect
Cutana Tank
Gallswell
Well
Mulga Hill Mine
Kings Dam
Radium Hill (aban.)
Michelle Hill Mine
Toyder Shaft
BONYTHON HILL
Teasbore Dam
Nilpena Bore (old)
Tombstone Tank P.D.
Mildaltie-Dalkey Diggings
Cu
Radium Hill Mine
BRISTOWE HILL
Tailings Dump
Workings
Shaft
Radium Dam
Dark Hill Dam
Rocky Dam
Mingary Dam
Tank
Dinnertime Dam
Four Corners Dam
Centenary Dam
Nilpena Well
SOUTH HILL
DEY HILL
Nilpena (ruins)
Nilpena Dam (old)
Landing Ground
Roundhill Dam
Water Course Dam
Second Watercourse Dam
Open Dam
Diversion Dam
Surrender Dam
Paradise Dam
Farleys Catch
Record Dam
Muggs Dam
Rockhole Dam
NILPENA HILL
Maldigo Well P.D.
Junction Bore P.D.
Creek
Black Fellow Creek
Duffield Bore P.D.
Bore
MALDORKY HILL
Maldorky Dams
IRON ROCK
Acacia Dam
PEAKED HILL
North Dam
North East Catch
Black Hill Catch
Dam (old)
Duffields Well
Tank I.D.
North Catch
Lyndon Catch
Elephant Well
Duffield Dams
Davenborough Dam
Bore P.D.
V.P.F.
W.H.

REVISION		SCALE: 1:100000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO	
		DRAFT:	EL 1363 "CUTANA"
		CHECKED:	SOUTH AUSTRALIA
		DATE:	
		1:250 000 SI 54-2	
		1:100 000 7033	
		MINING FIELD OR DISTRICT:	DRG No.: FIG 2.

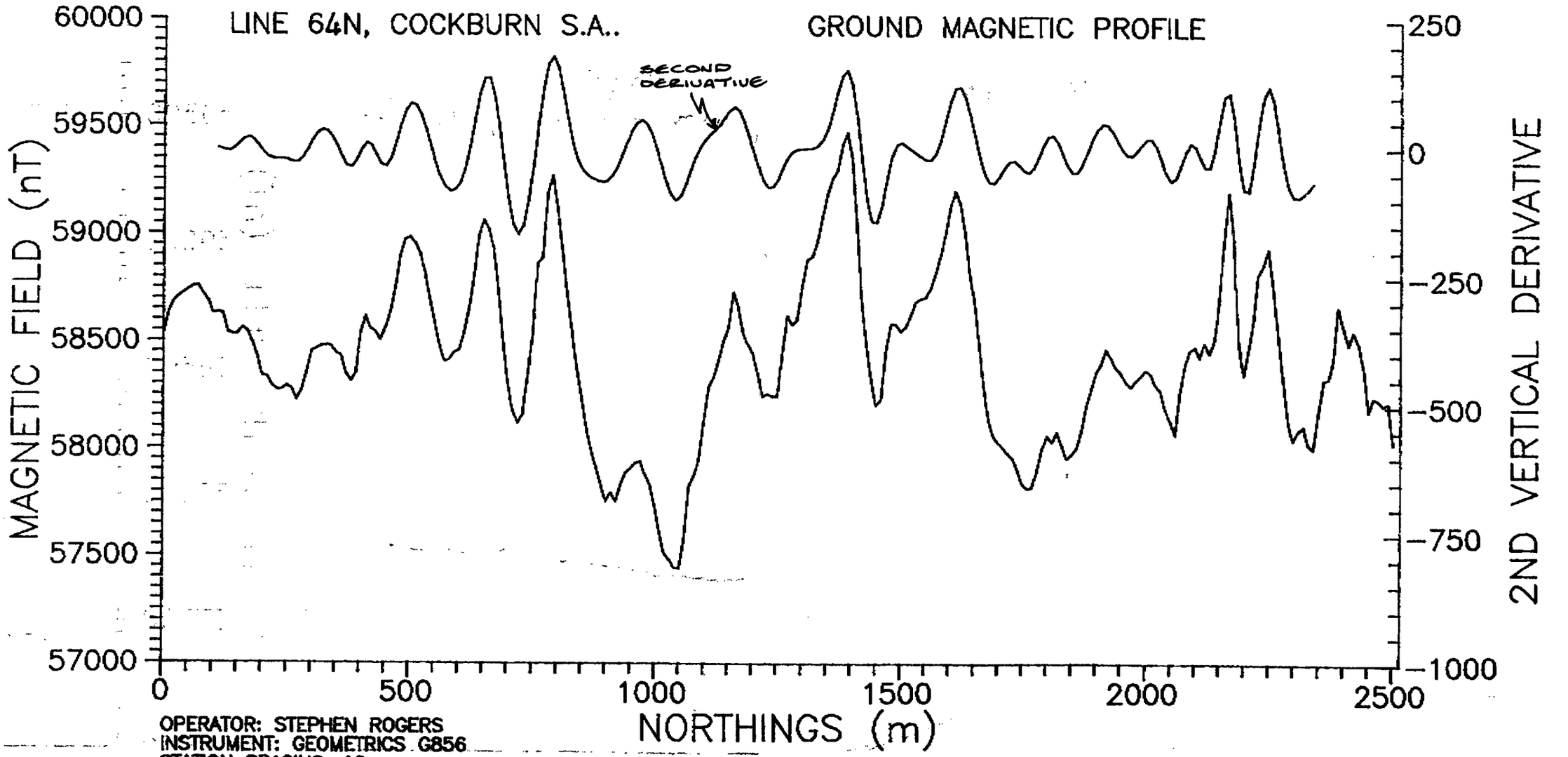
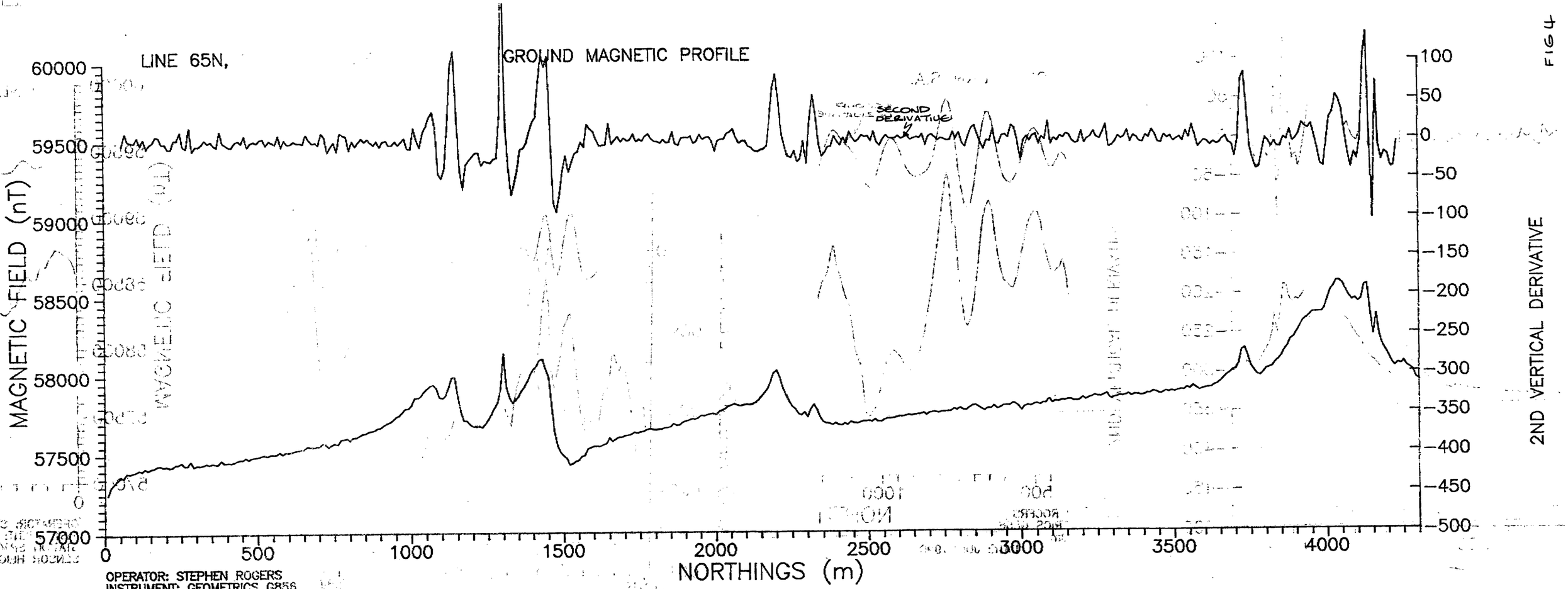

LINE 64N, COCKBURN S.A..
GROUND MAGNETIC PROFILE
SECOND DERIVATIVE
MAGNETIC FIELD (nT)
60000
59500
59000
58500
58000
57500
57000
2ND VERTICAL DERIVATIVE
250
0
-250
-500
-750
-1000
0
500
1000
1500
2000
2500
NORTHINGS (m)
OPERATOR: STEPHEN ROGERS
INSTRUMENT: GEOMETRICS G856
STATION SPACING: 10m
SENSOR HEIGHT: 2m
DATE: JULY,1990
SEARCH EXPLORATION SERVICES PTY. LTD.

FIG3

FIG 4

LINE 65N, GROUND MAGNETIC PROFILE



OPERATOR: STEPHEN ROGERS
INSTRUMENT: GEOMETRICS G856
STATION SPACING: 10m
SENSOR HEIGHT: 2m
DATE: JULY,1990

SEARCH EXPLORATION SERVICES PTY. LTD.

ENV.6782

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED OCTOBER 27, 1990

1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" of 769 km^2, located approximately 30 km east of Olary (Fig.1), was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period, and has subsequently been extended for a further year on three occasions.

Work on the licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm, Carpentaria Exploration Company Pty. Ltd.

The principal target is stratiform/stratabound Pb-Zn mineralization within the Bimba Formation, which is concealed throughout the area by an extensive cover of Tertiary sands and clays.

2. EXPLORATION

Exploration work in the quarter ended October 27, 1990, comprised RAB drilling on regional traverse lines across the interpreted position of the Bimba Formation, as shown in Figs 2 and 3. A total of 4246 m of drilling was done in 241 holes on lines 28, 29, 30, 37, 64 and 65. Drilling was carried out by Silver City Drilling of Broken Hill using an Investigator MK1 rig. Supervision of the drilling and logging of the drill cuttings were performed by geological consultant Ian Kerr of Broken Hill. Analyses of the chips for Cu, Pb, Zn, Mn and Ag were undertaken by Analabs of Adelaide.

3. RESULTS

Geological logs and assay results for the holes drilled during the quarter are tabulated in Appendix 1. Elevated Pb and Zn values were detected on lines 28, 29, 30 and 65 as listed below.

Line	Hole	Location	p.p.m.
28	2042 2051 2055 2062	3460E 2740E 2580E 2300E	465 Zn 250 Zn 610 Zn 335 Zn
30	2193	360E	190 Zn
65	2075 2089	1160E 1960E	205 Zn 205 Zn
29	2142	600E	710 Pb

Holes drilled on lines 37 and 64 contained maximum values of only 115 p.p.m. Zn and 20 p.p.m. Pb.

4. EXPENDITURE

An expenditure statement is attached.

.....
Stewart Taylor
Principal Geologist - Base Metals

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED OCTOBER 27, 1990

	$	$
Administration	198	
Assaying	2 726	
Consultants Fees	4 694	
Drilling	40 015	
Operating Labour	361	
Stores	5 651	
Transport	762	
Travelling Expenses	1 046	$ 55 453
TOTAL - THIS PERIOD		$ 55 453
Previously Reported - Current Term		
Quarter ended January 27, 1990	$6575	
Quarter ended April 27, 1990	$6285	
Quarter ended July 27, 1990	$3969	$ 16 829
TOTAL - CURRENT TERM		$ 72 282
Previously Reported		$139 791
Total Project Expenditure to Date		$212 073

.....

A.E. Covacich
Manager - Accounting
Exploration & Gold Operations

expend.ten

APPENDIX

GEOLOGICAL AND ASSAY LOGS OF RAB HOLES

Symbols used on logs :

FM Quartz feldspar biotite gneiss psammopelite - composite (>50% melted metasediment)

FS Quartz feldspar biotite psammite - composite (>50% melted metasediment)

FE Quartz feldspar biotite sillimanite gneiss pelite - composite (>50% melted metasediment)

BM Quartz feldspar biotite sillimanite gneiss

Pl Plagioclase quartz rock ± biotite

Peg Pegmatite

r Retrograded

Lq Coarse quartz feldspar gneiss and granitoid

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L64

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
1991	2400 N	00-03	Clayey sand + ironstone	700							
	L 64	03-06	Grey green	450							
			FM 2% mt		742846	4 - 6	135	25	25	1.0	<5
1992	2360 N	00-03	Clayey sand + ironstone	600							
	L 64	03-07	Green grey	2-3500							
			FM 5% mt, 5% blue qtz		742847	6 - 7	135	50	15	0.5	<5
1993	2320 N	00-02	Clayey sand + ironstone	800							
		02-04	Purple clayey + ironstone	500							
	L 64										
		04-10	Fawn green	40							
		10-13	Dark green	50-150							
			PEG + FM ?20% blue qtz		742848	12 -13	205	80	45	<0.5	<5
1994	2280 N	00-02	Clayey sand + ironstone	900							
		02-04	Fawn clayey + ironstone	350							
	L 64										
		04-10	Green fawn	50							
			PEG + FM 0.5% mt		742849	8 -10	115	80	45	<0.5	<5
1995	2240 N	00-02	Clayey sand + ironstone	600							
		02-05	Fawn clayey + ironstone & gravel	700							
	L 64										
		05-09	Green fawn	30-70							
			FM / BM 0.5% mt		742850	8 - 9	275	30	35	<0.5	<5
1996	2200 N	00-02	Clayey sand + ironstone	600							
		02-05	Fawn clayey + ironstone & gravel	400							
	L 64										
		05-07	Grey green	70-150							
			rBM 0.5% mt		742851	6 - 7	120	35	20	0.5	<5
1997	2160 N	00-02	Clayey sand + ironstone	600							
	L 64	02-07	Green fawn	40-350							
			BM + PEG 1% mt		742852	6 - 7	160	25	35	0.5	<5
1998	2120 N	00-02	Clayey sand + ironstone	2000							
		02-05	Fawn clayey + gravel	150							
	L 64										
		05-08	Green fawn	60							
			PEG 0.5% mt		742853	6 - 8	180	30	35	0.5	<5
1999	2080 N	00-02	Clayey sand + ironstone	600							
		02-06	Fawn clayey + gravel	220							
	L 64										
		06-07	Grey BM 5% mt		742854	6 - 7	100	30	25	<0.5	<5

OTHER DETAILS

TOTAL 74M RAB IN 9 HOLES, LINE 64

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 02/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L64

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2000	2040 N	00-02	Clayey sand + ironstone	700							
		02-04	Fawn clayey + gravel	450							
	L 64										
		04-15	Fawn green	30							
			FM		742855	14 -15	170	20	20	0.5	<5
2001	2000 N	00-02	Clayey sand + ironstone	400							
		02-05	Fawn clayey + ironstone & gravel	200							
	L 64										
		05-15	Green fawn	30-50							
			FM / BM 0.5% mt		742856	14 -15	80	25	10	0.5	<5
2002	1960 N	00-02	Clayey sand + ironstone	500							
		02-04	Fawn clayey + Silcrete	120							
	L 64										
		04-14	Green fawn	30							
		14-20	Fawn green	30							
			FM 0.5% mt		742857	18 -20	105	25	10	<0.5	<5
2003	1920 N	00-02	Clayey sand + ironstone	600							
		02-04	Fawn clayey + ironstone & gravel	220							
	L 64										
		04-12	Green fawn	30-60							
		12-18	Grey green	50-200							
			BM 5% mt		742858	16 -18	115	60	10	0.5	<5
2004	1880 N	00-02	Clayey sand + ironstone	600							
		02-04	Fawn clayey + ironstone & gravel	250							
	L 64										
		04-18	Fawn green	20							
		18-21	Green	30-300							
			rBM 1% mt		742859	20 -21	175	40	25	0.5	<5
2005	1840 N	00-02	Clayey sand + ironstone	350							
		02-04	Fawn clayey + gravel	120							
	L 64										
		04-10	Fawn green	20							
		10-21	Green +/- grey	30							
			rFM / rBM		742860	20 -21	140	45	15	<0.5	<5
2006	1800 N	00-02	Clayey sand + ironstone & gravel	450							
		02-04	Fawn clayey + ironstone & gravel	300							
	L 64										
		04-10	Fawn green	20							
		10-18	Grey green	40							
			rBM 0.5% mt		742861	16 -18	100	30	20	<0.5	<5

OTHER DETAILS

TOTAL 128M RAB IN 7 HOLES, LINE 64

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 02-03/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L64

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2007	1760 N	00-02	Clayey sand + ironstone & gravel	600							
	L 64	02-12	Grey fawn	40							
		12-21	Grey green	50							
			BM 0.5% mt		742862	20 -21	65	65	10	0.5	<5
2008	1720 N	00-02	Clayey sand + ironstone & gravel	500							
	L 64	02-10	Fawn green	40							
		10-12	Grey green	40							
			BM / FM		742863	10 -12	125	25	15	<0.5	<5
2009	1680 N	00-02	Clayey sand + ironstone & gravel	250							
	L 64	02-08	Fawn green	30							
			PEG + FM		742864	6 - 8	45	5	5	<0.5	<5
2010	1640 N	00-03	Clayey sand + ironstone & gravel	1500							
	L 64	03-08	Grey green	20-50							
			PEG + FM		742865	6 - 8	100	5	20	<0.5	<5
2011	1480 N	00-02	Clayey sand + ironstone	450							
	L 64	02-11	Green fawn	30-70							
			FM 0.5% mt		742866	10 -11	240	15	50	<0.5	5
2012	1440 N	00-02	Clayey sand + ironstone	500							
	L 64	02-04	Fawn clayey + ironstone	350							
		04-09	Grey green	40							
			? FM		742867	8 - 9	245	<5	40	<0.5	<5
2013	1400 N	00-02	Clayey sand + ironstone	1500							
	L 64	02-04	Fawn clayey + ironstone	1500							
		04-09	Green grey	650							
			PEG + BM 5% mt		742868	8 - 9	160	50	40	<0.5	<5
2014	1280 N	00-03	Clayey sand + ironstone	450							
	L 64	03-07	Grey fawn	90							
			PEG + FM 0.5% mt		742869	6 - 7	130	20	15	0.5	<5
2015	1240 N	00-02	Clayey sand + ironstone	450							
	L 64	02-03	Fawn clayey + ironstone	250							
		03-05	Green	70							
			FM + PEG		742870	4 - 5	240	20	40	<0.5	<5

OTHER DETAILS

TOTAL 90M RAB IN 9 HOLES, LINE 64

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 03&06/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L64

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2016	1200 N	00-03	Clayey sand + ironstone & gravel	500-1000							
	L 64	03-06	Grey green	1200							
			FM 5% mt		742871	4 - 6	140	20	30	<0.5	<5
2017	1160 N	00-02	Clayey sand + ironstone	400							
		02-04	Fawn clayey + ironstone & gravel	900							
	L 64										
		04-06	Fawn green	1600							
			PEG + FM 5% mt		742872	4 - 6	160	20	35	<0.5	<5
2018	1120 N	00-01	Clayey sand + ironstone	500							
		01-04	Fawn clayey + ironstone & gravel	400							
	L 64										
		04-09	Fawn green	50-400							
			FM 1% mt		742873	8 - 9	200	25	30	<0.5	<5
2019	1080 N	00-02	Clayey sand + ironstone	450							
		02-05	Fawn clayey + ironstone	400							
	L 64										
		05-09	Green	400-1500							
			FM 2% mt		742874	8 - 9	235	80	40	<0.5	<5
2020	1040 N	00-01	Clayey sand + ironstone	500							
		01-05	Fawn clayey + ironstone & gravel	600							
	L 64										
		05-14	Green	60-150							
			FM 0.5% mt, 15% blue qtz		742875	12 -14	200	15	35	<0.5	<5
2021	1000 N	00-02	Clayey sand + ironstone	400							
		02-05	Fawn clayey + ironstone & gravel	350							
	L 64										
		05-16	Green	40-2400							
			? AMPHIBOLITE 2% mt		742876	14 -16	355	180	70	<0.5	<5
2022	960 N	00-04	Clayey sand + ironstone	650							
		04-06	Fawn clayey + ironstone & gravel	250							
	L 64										
		06-21	Green	600-2100							
			? AMPHIBOLITE 2% mt		742877	20 -21	295	250	80	0.5	<5
2023	920 N	00-06	Clayey sand + ironstone & gravel	600							
	L 64	06-12	Fawn green	30							
			PEG + FM		742878	10 -12	165	35	40	0.5	<5
2024	880 N	00-04	Clayey sand + ironstone	600							
		04-06	Fawn clayey + ironstone	350							
	L 64										
		06-14	Fawn green FM 0.5% mt	50	742879	12 -14	220	65	50	0.5	<5

OTHER DETAILS

TOTAL 107M RAB IN 9 HOLES, LINE 64

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 06-07/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L64

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2025	840 N	00-02	Clayey sand + ironstone	600							
		02-06	Fawn clayey + ironstone & gravel	600							
	L 64										
		06-13	Green	20							
			PEG / FS		742880	12 -13	160	15	35	0.5	<5
2026	800 N	00-02	Clayey sand + ironstone	550							
		02-06	Fawn clayey + ironstone & gravel	250							
	L 64										
		06-12	Fawn green	50							
			BM + PEG 0.5% mt		742881	10 -12	90	35	20	0.5	<5
2027	720 N	00-07	Clayey sand + ironstone & gravel	400							
	L 64	07-12	Dark green	30							
			? FM + PEG		742882	10 -12	205	30	50	0.5	<5
2028	680 N	00-04	Clayey sand + ironstone	500							
		04-08	Fawn clayey + ironstone & gravel	450							
	L 64										
		08-14	Fawn green	50							
			FM / BM		742883	12 -14	275	40	50	<0.5	10
2029	600 N	00-02	Clayey sand + ironstone	400							
		02-09	Fawn clayey + ironstone & gravel	400							
	L 64	09-11	Silcrete HAMMER 9-13m	-							
			WATER 11m, SAMPLE CONTAMINATED								
		11-13	Fawn green	-							
			?? FM		742884	12 -13	115	15	5	0.5	<5
2030	560 N	00-04	Clayey sand + ironstone	350							
		04-11	Fawn clayey + ironstone & gravel	200							
	L 64										
			DAMP, LOST RETURN, SAND		NS	11					
2031	440 N	00-02	Clayey sand + ironstone	450							
		02-07	Fawn clayey + ironstone & gravel	500							
	L 64										
		07-11	Green	50							
			FM		742885	10 -11	185	15	30	1.0	<5
2032	400 N	00-04	Clayey sand + ironstone	450							
		04-07	Fawn clayey + ironstone & gravel	850							
	L 64										
		07-09	Grey green	650							
			BM 2% mt		742886	8 - 9	160	45	15	0.5	<5

OTHER DETAILS

TOTAL 91M RAB, 4M HAMMER IN 8 HOLES, LINE 64

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 08/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 — LOCATION: 9 Km SW BALLARA, L28 / 11 Km SW BALLARA, L64

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2033	360 N	00-02	Clayey sand + ironstone	350							
		02-08	Fawn clayey + ironstone & gravel	250							
	L 64										
		08-12	Fawn green	50-80							
			? rFM		742887	10 -12	135	125	45	<0.5	20
2034	320 N	00-02	Clayey sand + ironstone	400							
		02-08	Fawn clayey + ironstone & gravel	300							
	L 64										
		08-09	Green	50							
			FM		742888	8 - 9	195	40	30	0.5	<5
2035	280 N	00-02	Clayey sand + ironstone	400							
		02-06	Fawn clayey + ironstone & gravel	600							
	L 64	06-08	Fawn green clayey	200							
			DAMP, LOST RETURN, CLAYEY SAND		NS	8					
2036	240 N	00-02	Clayey sand + ironstone	600							
		02-08	Fawn clayey + ironstone & gravel	500							
	L 64										
			DAMP, LOST RETURN, SAND		NS	8					
2037	200 N	00-04	Clayey sand + ironstone	600							
		04-10	Green fawn clayey + ironstone & gravel	200							
	L 64										
			DAMP, LOST RETURN, SAND		NS	10					
2038	160 N	00-02	Clayey sand + ironstone	600							
		02-08	Fawn clayey + ironstone & gravel	250							
	L 64										
			DAMP, LOST RETURN, SAND		NS	8					
2039	3580 E	00-02	Clayey sand	150							
	L 28	02-12	Green fawn	30							
			rBM		742889	10 -12	160	30	75	1.0	<5
2040	3540 E	00-02	Clayey sand	180							
	L 28	02-11	Green fawn	20							
			rBM 0.5% mt		742890	10 -11	130	60	25	<0.5	<5
2041	3500 E	00-02	Clayey sand	90							
	L 28	02-18	Green fawn	20							
			BM tr mt		742891	16 -18	155	50	75	<0.5	<5

OTHER DETAILS
TOTAL 41M RAB IN 3 HOLES, LINE 28
TOTAL 55M RAB IN 6 HOLES, LINE 64

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 08-09/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km SW BALLARA, L28

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2042	3460 E	00-02	Clayey sand + ironstone	250							
		02-06	Fawn clayey	40							
	L 28										
		06-14	Fawn +/- purple	20							
		14-17	Purple fawn	20							
			BM 1% Graphite		742892	16 -17	225	30	465	<0.5	<5
2043	3420 E	00-02	Clayey sand	90							
	L 28	02-12	Green fawn	30							
			FM		742893	10 -12	145	10	30	<0.5	5
2044	3020 E	00-02	Clayey sand	150							
	L 28	02-06	Purple fawn	30							
			FM / BM		742894	4 - 6	105	30	160	0.5	<5
2045	2980 E	00-01	Clayey sand	80							
	L 28	01-06	Fawn purple	30							
			FM / BM		742895	4 - 6	175	20	100	0.5	<5
2046	2940 E	00-02	Clayey sand	120							
	L 28	02-06	Purple fawn	30							
			BM tr mt		742896	4 - 6	105	20	90	<0.5	<5
2047	2900 E	00-02	Clayey sand	150							
	L 28	02-10	Grey fawn	20							
			rBM 1% Graphite		742897	8 -10	75	10	35	<0.5	<5
2048	2860 E	00-01	Clayey sand	90							
	L 28	01-08	Green grey	30							
			FM 2% Graphite		742898	6 - 8	190	20	5	0.5	<5
2049	2820 E	00-02	Clayey sand	70							
	L 28	02-06	White	20							
			Pl / FS		742899	4 - 6	70	5	20	0.5	<5
2050	2780 E	00-01	Clayey sand	80							
	L 28	01-03	Fawn grey	30							
			FM		742900	2 - 3	500	15	110	0.5	<5
2051	2740 E	00-01	Clayey sand	150							
	L 28	01-02	Grey white ?PEG + Pl (s/crop Pl)	-	742901	1 - 2	400	10	250	0.5	<5

OTHER DETAILS

TOTAL 76M RAB IN 10 HOLES, LINE 28

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 09/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km SW BALLARA, L28

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn PPM	Cu PPM	Zn PPM	Ag PPM	Pb PPM
2052	2700 E	00-01	Clayey sand	70							
	L 28	01-02	Grey fawn	-							
			PEG + FM tr mt		742902	1 - 2	375	25	155	<0.5	10
2053	2660 E	00-01	Clayey sand	80							
	L 28	01-02	Grey fawn	-							
			FM		742903	1 - 2	240	55	55	0.5	5
2054	2620 E	00-01	Clayey sand	60							
	L 28	01-02	Fawn grey	-							
			Pl / FS (s/crop Pl + PEG)		742904	1 - 2	295	15	80	0.5	<5
2055	2580 E	00-01	Clayey sand	150							
	L 28	01-02	Green grey	50							
			FM (s/crop Pl + PEG)		742905	1 - 2	675	40	610	1.0	<5
2056	2540 E	00-01	Clayey sand	150							
	L 28	01-04	Grey	40							
			FE 0.5% mt		742906	2 - 4	160	30	5	0.5	<5
2057	2500 E	00-01	Clayey sand	150							
	L 28	01-04	Dark grey green	70							
			AMPHIBOLITE		742907	2 - 4	810	65	160	0.5	<5
2058	2460 E	00-02	Clayey sand	80							
	L 28	02-06	Dark grey green	80							
			AMPHIBOLITE		742908	4 - 6	1070	20	125	0.5	<5
2059	2420 E	00-02	Clayey sand	50							
	L 28	02-06	Grey fawn	30							
			FM / BM 2% Graphite		742909	4 - 6	155	70	55	0.5	<5
2060	2380 E	00-02	Clayey sand	120							
	L 28	02-04	Grey fawn	60							
			PEG + FM 0.5% mt		742910	2 - 4	500	5	70	<0.5	<5
2061	2340 E	00-02	Clayey sand + ironstone	350							
	L 28	02-16	Purple grey fawn	30							
			rBM tr mt, 1% Graphite		742911	14 -16	130	25	90	0.5	5

OTHER DETAILS

TOTAL 48M RAB IN 10 HOLES, LINE 28

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 09/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km SW BALLARA, L28 / 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2062	2300 E	00-02	Clayey sand	150							
	L 28	02-09	Grey fawn	30							
			PEG + BM 2% Graphite		742912	8 - 9	425	85	335	0.5	<5
2063	1460 E	00-02	Clayey sand	150							
	L 28	02-04	Fawn grey	220							
			FM		742913	2 - 4	150	10	45	0.5	<5
2064	1420 E	00-02	Clayey sand + ironstone	250							
	L 28	02-04	Fawn grey	120							
			FM / BM 0.5% mt		742914	2 - 4	205	20	60	<0.5	<5
2065	1380 E	00-02	Clayey sand	160							
	L 28	02-04	Green grey	60							
			FM tr mt		742915	2 - 4	130	35	15	0.5	<5
2066	1340 E	00-02	Clayey sand	180							
	L 28	02-06	Fawn grey	50							
			rBM		742916	4 - 6	190	45	110	0.5	<5
2067	1300 E	00-02	Clayey sand	120							
	L 28	02-04	Fawn grey	50							
			rBM 0.5% mt		742917	2 - 4	290	70	110	0.5	<5
2068	880 E	00-01	Clayey sand	60							
	L 65	01-03	Grey fawn	40							
			rFM		742918	2 - 3	230	80	45	<0.5	<5
2069	920 E	00-01	Clayey sand	150							
	L 65	01-02	Grey	60							
			BM / FE		742919	1 - 2	175	10	20	<0.5	<5
2070	960 E	00-0.5	Clayey sand + ironstone	250							
	L 65	0.5-01	Fawn	-							
			PEG		742920	0 - 1	155	20	30	0.5	5
2071	1000 E	00-01	Clayey sand + ironstone	350							
	L 65	01-02	Dark grey green	80							
			AMPHIBOLITE		742921	1 - 2	795	70	75	<0.5	<5

OTHER DETAILS
TOTAL 31M RAB IN 6 HOLES, LINE 28
TOTAL 8M RAB IN 4 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 09/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2072	1040 E	00-01	Clayey sand + ironstone	250							
	L 65	01-02	Fawn	80							
			PEG / ?LF 0.5% mt (S/Crop)		742922	1 - 2	130	5	20	<0.5	<5
2073	1080 E	00-02	Clayey sand	140							
	L 65	02-04	Green fawn	60							
			FM / BM		742923	2 - 4	195	40	50	<0.5	<5
2074	1120 E	00-02	Clayey sand	120							
	L 65	02-04	Green grey	80							
			FE / BM 0.5% mt		742924	2 - 4	230	30	20	<0.5	<5
2075	1160 E	00-02	Clayey sand	180							
	L 65	02-04	Fawn green	120							
			AMPHIBOLITE		742925	2 - 4	785	145	205	<0.5	<5
2076	1200 E	00-02	Clayey sand + ironstone	350							
	L 65	02-06	Grey green	50							
			FM 5% blue qtz		742926	4 - 6	370	5	115	<0.5	<5
2077	1240 E	00-01	Clayey sand	180							
	L 65	01-02	Fawn	-							
			FS / ?PEG		742927	1 - 2	145	15	35	0.5	<5
2078	1280 E	00-01	Clayey sand	100							
	L 65	01-03	Green grey	70							
			FM		742928	2 - 3	155	70	55	0.5	<5
2079	1320 E	00-01	Clayey sand + ironstone	200							
	L 65	01-03	Grey green	60							
			? FM / BM		742929	2 - 3	585	155	85	0.5	<5
2080	1360 E	00-02	Clayey sand	80							
	L 65	02-06	Green grey	30							
			FM		742930	4 - 6	205	70	80	<0.5	<5
2081	1400 E	00-01	Clayey sand + ironstone	300							
	L 65	01-02	Grey green	100							
			AMPHIBOLITE		742931	1 - 2	980	75	115	<0.5	<5

OTHER DETAILS

TOTAL 36M RAB IN 10 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 09-10/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2082	1440 E	00-01	Clayey sand + ironstone	300							
	L 65	01-02	White	-							
			PEG		742932	1 - 2	130	295	20	<0.5	<5
2083	1480 E	00-01	Clayey sand + ironstone	250							
	L 65	01-02	Green grey	50							
			FM		742933	1 - 2	240	10	55	0.5	<5
2084	1520 E	00-02	Clayey sand + ironstone	350							
	L 65	02-08	Grey fawn green	50							
			FE		742934	6 - 8	110	60	35	<0.5	15
2085	1560 E	00-02	Clayey sand	180							
	L 65	02-06	Grey	30							
			rBM 2% Graphite		742935	4 - 6	355	30	125	<0.5	<5
2086	1840 E	00-02	Clayey sand	80							
	L 65	02-04	Fawn grey	40							
			? rBM 0.5% mt, 1% Graphite		742936	2 - 4	100	55	5	<0.5	<5
2087	1880 E	00-01	Clayey sand	80							
	L 65	01-03	Fawn grey	50							
			FM / BM 2% Graphite		742937	2 - 3	505	90	185	<0.5	5
2088	1920 E	00-02	Clayey sand + ironstone	260							
	L 65	02-04	Grey	60							
			FM tr mt, 2% Graphite		742938	2 - 4	265	35	105	0.5	5
2089	1960 E	00-01	Clayey sand + ironstone	240							
	L 65	01-04	Green grey	180							
			FM 1% mt, 2% Graphite		742939	2 - 4	380	40	205	0.5	5
2090	2000 E	00-02	Clayey sand + ironstone	220							
	L 65	02-12	Fawn grey	30							
			FM 2% Graphite, 5% blue qtz		742940	10 -12	120	60	125	<0.5	5
2091	2040 E	00-01	Clayey sand	90							
	L 65	01-06	Grey fawn	50							
			FM / BM		742941	4 - 6	325	20	195	<0.5	5

OTHER DETAILS

TOTAL 51M RAB IN 10 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 10/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2092	2080 E	00-01	Clayey sand	150							
	L 65	01-04	Grey	50							
			AMPHIBOLITE		742942	2 - 4	1000	50	175	0.5	<5
2093	2120 E	00-01	Clayey sand	100							
	L 65	01-04	Green grey	50							
			FM 0.5% mt		742943	2 - 4	285	55	145	<0.5	<5
2094	2160 E	00-01	Clayey sand	70							
	L 65	01-04	Fawn grey	30							
			BM 0.5% mt		742944	2 - 4	160	20	5	<0.5	<5
2095	2200 E	00-01	Clayey sand	120							
	L 65	01-06	Grey	50							
			FM / BM 0.5% mt		742945	4 - 6	205	65	20	0.5	5
2096	2240 E	00-01	Clayey sand	80							
	L 65	01-03	Green grey	180							
			FM 2% mt		742946	2 - 3	195	50	15	<0.5	<5
2097	2280 E	00-01	Clayey sand	70							
	L 65	01-03	Green fawn	40							
			BM		742947	2 - 3	270	75	15	0.5	<5
2098	2320 E	00-01	Clayey sand	160							
	L 65	01-02	Green grey	-							
			AMPHIBOLITE		742948	1 - 2	780	90	100	0.5	<5
2099	2360 E	00-01	Clayey sand	60							
	L 65	01-04	Grey	40							
			BM tr mt		742949	2 - 4	525	45	20	<0.5	<5
2100	2400 E	00-02	Clayey sand	160							
	L 65	02-06	Grey fawn	50							
			FM / BM tr mt		742950	4 - 6	435	20	15	<0.5	<5
2101	2440 E	00-01	Clayey sand	80							
	L 65	01-08	Grey fawn	30							
			BM 5% Graphite		742951	6 - 8	80	100	15	<0.5	<5

OTHER DETAILS

TOTAL 44M RAB IN 10 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 10/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2102	2480 E	00-01	Clayey sand + ironstone	220							
	L 65	01-04	Fawn green	70							
			AMPHIBOLITE		742952	2 - 4	1055	1070	130	0.5	<5
2103	2520 E	00-02	Clayey sand	150							
	L 65	02-06	Fawn	40							
		06-08	Green grey	40							
			FM 0.5% mt		742953	6 - 8	165	10	25	0.5	5
2104	2560 E	00-02	Clayey sand	140							
	L 65	02-04	Grey green	80							
			FM / FE 0.5% mt		742954	2 - 4	425	35	115	<0.5	5
2105	2600 E	00-01	Clayey sand	70							
	L 65	01-03	Green grey	40							
			FM 0.5% mt		742955	2 - 3	220	30	15	0.5	<5
2106	2640 E	00-02	Clayey sand	90							
	L 65	02-04	Grey	40							
			BM tr mt		742956	2 - 4	210	25	20	0.5	5
2107	2680 E	00-02	Clayey sand	150							
	L 65	02-08	Fawn green	30							
			rFM tr mt		742957	6 - 8	155	110	85	0.5	10
2108	3360 E	00-04	Clayey sand + ironstone	300							
	L 65	04-12	Fawn green	30							
			FM tr mt		742958	10 -12	90	30	50	<0.5	5
2109	3400 E	00-02	Clayey sand + ironstone	350							
		02-04	Clayey sand	150							
	L 65	04-21	Fawn green	30							
			FM		742959	20 -21	220	30	20	0.5	<5
2110	3440 E	00-04	Clayey sand + ironstone	350							
	L 65	04-16	Fawn green	30							
		16-24	Green grey	30							
			FM		742960	22 -24	120	40	55	<0.5	25

OTHER DETAILS

TOTAL 88M RAB IN 9 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 10/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2111	3480 E	00-06	Clayey sand + ironstone	200-450							
	L 65	06-16	Fawn green	20							
		16-21	Pale green	30							
			FM tr mt		742961	20 -21	255	40	105	0.5	5
2112	3520 E	00-06	Clayey sand + ironstone	100-400							
	L 65	06-16	Fawn	20							
		16-24	Grey fawn green	30							
			BM tr mt		742962	22 -24	105	35	10	0.5	<5
2113	3560 E	00-04	Clayey sand + ironstone	300							
	L 65	04-10	Grey fawn	20							
		10-15	Fawn	20							
			FM / rFM tr mt		742963	14 -15	130	65	35	0.5	<5
2114	3600 E	00-04	Clayey sand + ironstone	100-350							
	L 65	04-22	Fawn	20							
		22-24	Grey green	30							
			FM / rFM		742964	22 -24	175	25	70	1.0	5
2115	3640 E	00-03	Clayey sand + ironstone	350							
	L 65	03-12	Grey fawn green	40							
			FM 0.5% mt		742965	10 -12	230	25	100	0.5	<5
2116	3680 E	00-02	Clayey sand + ironstone	250							
	L 65	02-12	Grey fawn	40							
			FM 0.5% mt		742966	10 -12	145	45	15	0.5	<5
2117	3720 E	00-02	Clayey sand + ironstone	300							
	L 65	02-06	Green grey	60							
			FM / BM 0.5% mt		742967	4 - 6	105	10	45	0.5	<5
2118	3760 E	00-02	Clayey sand + ironstone	200							
	L 65	02-06	Green grey	40							
			FM 0.5% mt		742968	4 - 6	130	30	85	<0.5	5
2119	3800 E	00-02	Clayey sand + ironstone	300							
	L 65	02-06	Fawn grey	40							
			FM 0.5% mt		742969	4 - 6	155	55	140	0.5	<5

OTHER DETAILS

TOTAL 126M RAB IN 9 HOLES, LINE 65

RIG TYPE N 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 10-12/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2120	3840 E	00-02	Clayey sand + ironstone	250							
	L 65	02-06	Grey fawn	50							
			FM 0.5% mt		742970	4 - 6	150	55	60	0.5	10
2121	3880 E	00-02	Clayey sand + ironstone	300							
	L 65	02-04	Fawn	40							
		04-12	Fawn grey	30							
			BM tr mt		742971	10 -12	180	75	60	<0.5	<5
2122	3920 E	00-02	Clayey sand + ironstone	300							
	L 65	02-04	Fawn	30							
		04-12	Green grey	40							
			BM tr mt		742972	10 -12	180	35	35	0.5	<5
2123	3960 E	00-02	Clayey sand	150							
	L 65	02-12	Fawn grey	20-40							
			FM / rFM tr mt		742973	10 -12	240	60	85	<0.5	<5
2124	4000 E	00-02	Clayey sand + ironstone	300							
	L 65	02-08	White grey	20							
		08-12	Green grey	20							
			PEG + rFM		742974	10 -12	110	15	35	0.5	<5
2125	4040 E	00-08	Clayey sand + ironstone	100-350							
	L 65	08-18	White grey	20							
		18-21	Fawn	30							
			PEG		742975	20 -21	220	25	45	0.5	<5
2126	4080 E	00-04	Clayey sand + ironstone	200-400							
		04-06	Fawn clayey	70							
	L 65										
		06-18	Fawn	50							
		18-27	Fawn green	40-140							
			rFM 1% mt		742976	26 -27	165	40	55	<0.5	<5
2127	4120 E	00-06	Clayey sand + ironstone	300-2000							
	L 65	06-12	White	20							
		12-20	Fawn	40							
		20-27	Green fawn	40							
			PEG + FM 0.5% mt		742977	26 -27	140	30	85	0.5	<5

OTHER DETAILS

TOTAL 129M RAB IN 8 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 12-13/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD — 16

ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 — LOCATION: 10 Km SSW BALLARA, L29; 11 Km SW BALLARA, L65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2128	4160 E	00-02	Clayey sand + ironstone	300							
		02-08	Fawn clayey + ironstone	200							
	L 65										
		08-18	White	15							
		18-23	Fawn	20							
		23-32	Grey green	20							
			? P1 / FS		742978	30 -32	130	15	55	0.5	5
2129	4200 E	00-02	Clayey sand + ironstone	400							
		02-16	Fawn clayey + ironstone	50-650							
	L 65										
		16-18	Fawn	30							
		18-28	Green grey	40							
			FS / P1		742979	26 -28	85	15	40	<0.5	5
2130	4240 E	00-06	Clayey sand + ironstone	200-400							
		06-16	Fawn clayey + ironstone	100-2000							
	L 65										
		16-31	Fawn	30-80							
			? rFM 0.5% mt		742980	30 -31	80	90	70	0.5	5
2131	4280 E	00-02	Clayey sand + ironstone	400							
		02-14	Fawn clayey + ironstone	100-2200							
	L 65										
		14-22	Purple & fawn	20							
		22-34	Fawn green	30							
			FS 0.5% mt		742981	32 -34	110	25	60	<0.5	5
2132	200 E	00-02	Clayey sand	160							
	L 29	02-04	Grey	30							
			FM / BM tr mt		742982	2 - 4	115	30	55	<0.5	<5
2133	240 E	00-02	Clayey sand	160							
	L 29	02-06	Grey	40-60							
			rFM / rBM tr mt		742983	4 - 6	110	55	15	0.5	<5
2134	280 E	00-02	Clayey sand	150							
	L 29	02-04	Grey	40							
			BM tr mt		742984	2 - 4	201	25	75	0.5	15
2135	320 E	00-02	Clayey sand	100							
	L 29	02-04	Grey	80							
			FM tr mt		742985	2 - 4	205	80	35	<0.5	<5

OTHER DETAILS

TOTAL 18M RAB IN 4 HOLES, LINE 29

TOTAL 125M RAB IN 4 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK

DRILLER SILVER CITY DRILLERS DATE 13/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 10 Km SSW BALLARA, L29

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn PPM / %	Cu PPM / %	Zn PPM / %	Ag PPM / %	Pb PPM / %
2136	360 E	00-02	Clayey sand + ironstone	300							
	L 29	02-08	Green grey	40-70							
			rFM 1% mt		742986	6 - 8	85	95	15	<0.5	<5
2137	400 E	00-02	Clayey sand	180							
	L 29	02-04	Grey fawn	140							
			BM 2% mt		742987	2 - 4	185	20	15	<0.5	<5
2138	440 E	00-02	Clayey sand	160							
	L 29	02-06	Green grey	30							
			FM		742988	4 - 6	170	15	20	<0.5	<5
2139	480 E	00-02	Clayey sand + ironstone	220							
	L 29	02-08	Grey fawn	30							
			rFM		742989	6 - 8	50	10	30	<0.5	<5
2140	520 E	00-02	Clayey sand + ironstone	400							
	L 29	02-08	Purple fawn	30							
		08-12	Green grey	30							
			FM tr mt		742990	10 -12	340	50	40	0.5	<5
2141	560 E	00-02	Clayey sand + ironstone	350							
	L 29	02-10	Green fawn	20							
			rFM		742991	8 -10	95	35	40	0.5	<5
2142	600 E	00-02	Clayey sand + ironstone	300							
	L 29	02-14	Fawn	30							
			rFM tr mt		742992	12 -14	140	255	70	1.0	710
2143	860 E	00-02	Clayey sand	150							
	L 29	02-04	Grey	50							
			rFM tr mt		742993	2 - 4	180	45	55	<0.5	<5
2144	900 E	00-01	Clayey sand + ironstone	240							
	L 29	01-04	Green grey	40							
			rFM		742994	2 - 4	105	50	25	<0.5	<5
2145	940 E	00-01	Clayey sand	120							
	L 29	01-03	Grey	30							
			? rFM		742995	2 - 3	50	10	5	<0.5	<5

OTHER DETAILS

TOTAL 73M RAB IN 10 HOLES, LINE 29

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 13-14/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 10 Km SSW BALLARA, L29

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2146	980 E	00-01	Clayey sand	70							
	L 29	01-04	Fawn	20							
			FS / Pl		742996	2 - 4	35	10	5	<0.5	<5
2147	1020 E	00-02	Clayey sand	160							
	L 29	02-06	Grey	40							
			FM 0.5% mt		742997	4 - 6	100	25	25	<0.5	<5
2148	2620 E	00-02	Clayey sand + ironstone	400							
	L 29	02-16	Fawn	20							
		16-21	Green fawn	30							
			rFM tr mt		742998	20 -21	70	80	50	0.5	<5
2149	2660 E	00-04	Clayey sand + ironstone	100-220							
	L 29	04-18	Fawn	20							
		18-24	Green fawn	20							
			FM		742999	22 -24	105	95	85	<0.5	<5
2150	2700 E	00-04	Clayey sand + ironstone	80-200							
	L 29	04-15	Fawn	20							
			PEG + rFM		743000	14 -15	100	70	105	0.5	5
2151	2740 E	00-02	Clayey sand	150							
	L 29	02-12	Fawn	20							
		12-25	Green fawn	30							
			rFM		743001	24 -25	155	110	265	<0.5	<5
2152	2780 E	00-02	Clayey sand + ironstone	200							
	L 29	02-18	Fawn	20							
		18-36	Green fawn	30							
			FM		743002	34 -36	105	30	105	<0.5	<5
2153	2820 E	00-02	Clayey sand + ironstone	220							
	L 29	02-07	Fawn	20							
		07-15	Green grey	30							
			FM / BM tr mt		743003	14 -15	140	35	95	0.5	<5
2154	2860 E	00-02	Clayey sand + ironstone	220							
	L 29	02-10	Fawn	20							
		10-18	Fawn green	20							
			FM		743004	16 -18	125	25	60	0.5	<5

OTHER DETAILS

TOTAL 164M RAB IN 9 HOLES, LINE 29

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 14/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 10 Km SSW BALLARA, L29

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2155	2900 E	00-02	Clayey sand + gravel	180							
	L 29	02-04	Fawn	50							
		04-06	Dark green	50							
			AMPHIBOLITE 2% mt		743005	4 - 6	505	140	115	0.5	<5
2156	2940 E	00-02	Clayey sand + ironstone	250							
	L 29	02-10	Fawn	20							
		10-21	Fawn green	40							
			FM 0.5% mt		743006	20 -21	75	40	70	0.5	5
2157	2980 E	00-04	Clayey sand + ironstone	250							
	L 29	04-16	Fawn	20							
		16-21	Green	50							
			AMPHIBOLITE 2% mt		743007	20 -21	1720	90	100	0.5	<5
2158	3020 E	00-04	Clayey sand	180							
	L 29	04-14	Fawn +/- white	20							
		14-26	Green fawn	40							
			FS / FM 0.5% mt		743008	24 -26	65	20	45	0.5	<5
2159	3140 E	00-02	Clayey sand	160							
		02-04	Purple clay	70							
	L 29										
		04-12	White	15							
		12-18	Purple & fawn	20							
		18-26	Green fawn	40-80							
			FS / FM 2% mt		743009	24 -26	60	30	50	0.5	<5
2160	3180 E	00-02	Purple clay	200							
	L 29	02-08	Fawn	30							
		08-18	White	15							
		18-33	Green fawn	30							
			FS / P1 0.5% mt		743010	32 -33	50	30	60	<0.5	<5
2161	3220 E	00-02	Clayey sand	140							
	L 29	02-12	Purple & fawn	20							
		12-20	Fawn	20							
		20-25	Green fawn	40							
			FS / P1 0.5% mt		743011	24 -25	35	10	20	<0.5	<5
2162	3260 E	00-04	Clayey sand	150							
	L 29	04-21	Green fawn	20							
			FM		743012	20 -21	115	25	65	0.5	5

OTHER DETAILS

TOTAL 179M RAB IN 8 HOLES, LINE 29

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 14-15/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 — LOCATION: 10 Km SSW BALLARA, L29 / 5 Km S BALLARA, L30

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2163	3300 E	00-02	Clayey sand + ironstone	200-500							
	L 29	02-08	White	20							
		08-20	Fawn	30							
		20-27	Green fawn	30-60							
			Pl / FS 0.5% mt		743013	26 -27	25	10	10	0.5	<5
2164	3380 E	00-02	Clayey sand + ironstone	250							
	L 29	02-14	Fawn	30							
			FM 0.5% mt		743014	12 -14	90	75	110	<0.5	<5
2165	3420 E	00-02	Clayey sand	180							
	L 29	02-10	Grey	40							
			BM tr mt		743015	8 -10	310	65	160	<0.5	5
2166	3460 E	00-02	Clayey sand	180							
	L 29	02-06	Fawn	40							
		06-12	Grey fawn	20							
			rBM		743016	10 -12	390	70	185	<0.5	<5
2167	3500 E	00-02	Clayey sand + ironstone	300							
	L 29	02-08	Fawn	20							
		08-16	Green fawn	30							
			BM / FM		743017	14 -16	460	30	135	<0.5	<5
2168	3540 E	00-02	Clayey sand + ironstone	250							
	L 29	02-12	Fawn	20							
		12-15	Grey fawn	30							
			FM tr mt		743018	14 -15	255	30	135	0.5	<5
2169	3580 E	00-04	Clayey sand + ironstone	300							
	L 29	04-16	Fawn +/- white	20							
		16-24	Green fawn	40							
			rBM tr mt		743019	22 -24	360	30	255	<0.5	5
2170	1900 E	00-04	Clayey sand + ironstone	200-550							
	L 30	04-20	Fawn	20							
		20-30	Green fawn	40-80							
			FM + PEG 1% mt		743020	28 -30	75	35	45	<0.5	<5

OTHER DETAILS
TOTAL 118M RAB IN 7 HOLES, LINE 29
TOTAL 30M RAB IN 1 HOLE, LINE 30

RIG TYPE W 600 — LOGGED BY IDK
DRILLER SILVER CITY DRILLERS — DATE 15-16/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 5 Km S BALLARA, L30

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2171	1860 E	00-04	Clayey sand + ironstone	280							
	L 30	04-12	Fawn & purple	20							
		12-26	Fawn	20							
		26-32	Green fawn	40-80							
			rBM 1% mt		743021	30 -32	75	25	35	<0.5	<5
2172	1740 E	00-02	Clayey sand + ironstone	220							
	L 30	02-14	White	10							
		14-22	Fawn	40							
		22-36	Green fawn	40-120							
		36-39	Purple grey	80-120							
			BM 1% mt		743022	38 -39	50	70	25	<0.5	<5
2173	1700 E	00-02	Clayey sand	180							
	L 30	02-16	White	20							
		16-28	Green fawn	30							
			? PEG + FM tr mt		743023	26 -28	65	20	40	<0.5	<5
2174	1660 E	00-02	Clayey sand + ironstone	200							
	L 30	02-10	Fawn white	20							
		10-24	Pale green fawn	20							
			FS / Pl		743024	22 -24	55	5	25	<0.5	<5
2175	1620 E	00-02	Clayey sand + ironstone	240							
	L 30	02-14	White fawn	20							
		14-18	White green	30							
			Pl / FS		743025	16 -18	15	5	5	<0.5	5
2176	1580 E	00-02	Clayey sand + ironstone	800							
	L 30	02-12	White fawn	40							
		12-24	Green fawn	40							
			FS / FM 0.5% mt		743026	22 -24	45	10	30	<0.5	<5
2177	1540 E	00-02	Clayey sand + ironstone	4000							
	L 30	02-14	White fawn	20							
		14-26	Green fawn +/- purple	40-80							
			rBM 1% mt		743027	24 -26	65	20	40	<0.5	<5
2178	1500 E	00-04	Clayey sand	140							
	L 30	04-18	Green fawn +/- purple	60							
			BM 1% mt		743028	16 -18	80	20	45	<0.5	<5

OTHER DETAILS

TOTAL 209M RAB IN 8 HOLES, LINE 30

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 16/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 5 Km S BALLARA, L30

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2179	1460 E	00-02	Clayey sand + ironstone	400							
	L 30	02-08	Green grey	30							
			? FS / FM 5% blue qtz		743029	6 - 8	50	5	20	<0.5	<5
2180	1420 E	00-02	Clayey sand	120							
	L 30	02-12	Grey fawn white	50							
			PEG / Pl 2% mt, pink felds		743030	10 -12	20	<5	5	<0.5	<5
2181	1380 E	00-02	Clayey sand + ironstone	350							
	L 30	02-08	White fawn	20							
		08-22	White green	40							
			FS / Pl 1% mt		743031	20 -22	40	<5	15	<0.5	<5
2182	1340 E	00-02	Clayey sand + ironstone	200							
	L 30	02-04	Grey fawn	30							
			PEG + FM 0.5% mt		743032	2 - 4	65	5	20	<0.5	<5
2183	1300 E	00-02	Clayey sand + ironstone	250							
	L 30	02-06	Fawn	80							
		06-21	Green fawn & purple	50-180							
			? PEG + rFM 2% mt		743033	20 -21	30	5	10	<0.5	<5
2184	1080 E	00-04	Clayey sand	150							
	L 30	04-22	White fawn	20							
		22-34	Fawn	30							
		34-45	Green fawn	40							
			rBM 1% mt		743034	44 -45	95	35	60	<0.5	10
2185	1040 E	00-04	Clayey sand + ironstone	400							
	L 30	04-20	Fawn white	20							
		20-34	Fawn	20							
		34-44	Green fawn	50							
			FM / BM 1% mt		743035	42 -44	85	10	45	0.5	5
2186	1000 E	00-04	Clayey sand + ironstone	300							
	L 30	04-26	White fawn	30							
		26-44	Fawn	30							
		44-48	Green fawn	40							
			BM / rBM 0.5% mt		743036	46 -48	120	10	80	<0.5	5

OTHER DETAILS

TOTAL 204M RAB IN 8 HOLES, LINE 30

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 16-17/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 5 Km S BALLARA, L30

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2187	960 E	00-04	Clayey sand + ironstone	250-1000							
	L 30	04-32	Fawn white	20							
		32-46	Fawn	40							
			FM 0.5% mt		743037	44 -46	70	10	35	<0.5	<5
2188	920 E	00-02	Clayey sand + ironstone	300							
		02-08	Grey clayey	60							
	L 30										
		08-26	White fawn	20							
		26-34	Fawn	20							
		34-44	Green fawn	40							
			FS 1% mt		743038	42 -44	95	10	60	<0.5	<5
2189	520 E	00-02	Clayey sand + ironstone	300							
		02-16	Fawn grey clayey	15							
	L 30										
		16-28	Grey fawn	15-40							
			FS		743039	26 -28	40	25	10	0.5	10
2190	480 E	00-04	Clayey sand + ironstone	100-800							
		04-10	Grey clayey	20							
	L 30										
		10-24	Fawn grey	20							
		24-32	Grey fawn	30							
			FS		743040	30 -32	20	35	25	<0.5	10
2191	440 E	00-02	Clayey sand + ironstone	700							
		02-12	Grey clayey	20							
	L 30										
		12-32	Fawn grey	20							
		32-48	Green fawn	30							
			FM 0.5% mt		743041	46 -48	140	30	55	0.5	<5
2192	400 E	00-02	Clayey sand + ironstone	650							
		02-10	Grey clayey	20							
	L 30										
		10-28	Fawn grey	40							
		28-38	Grey fawn	30							
		38-42	Fawn	50							
		42-50	Grey green	30-60							
			FM 1% mt		743042	48 -50	125	40	65	<0.5	<5
2193	360 E	00-02	Clayey sand + ironstone	2500							
		02-14	Grey clayey	30							
	L 30										
		14-30	Fawn grey	30							
		30-48	Fawn	30-60							
		48-52	Dark green	40-150							
			AMPHIBOLITE 2% mt		743043	50 -52	500	175	190	0.5	<5

OTHER DETAILS

TOTAL 300M RAB IN 7 HOLES, LINE 30

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 17&19/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 5 Km S BALLARA, L30

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2194	260 E	00-04	Clayey sand + ironstone	450							
		04-14	Grey clayey	20							
	L 30										
		14-34	Grey	30							
		34-46	Fawn green	40							
		46-50	Grey green	60							
			FM 0.5% mt		743044	48 -50	145	25	70	<0.5	<5
2195	220 E	00-04	Clayey sand + ironstone	650							
		04-20	Fawn grey clayey	20							
	L 30										
		20-36	Fawn white	10							
		36-54	Grey green	30							
			FS ?1% Garnet		743045	52 -54	205	20	50	0.5	5
2196	180 E	00-04	Clayey sand + ironstone	900							
		04-14	Fawn sandy	20							
	L 30										
		14-36	Grey white	15							
		36-46	Grey green	20							
			FS / FM		743046	44 -46	135	40	55	0.5	5
2197	140 E	00-02	Clayey sand + ironstone	500							
		02-14	Fawn sandy	20							
	L 30										
		14-40	Grey white	20							
		40-54	Grey green	30							
			FS / FM		743047	52 -54	175	35	50	0.5	5
2198	100 E	00-02	Clayey sand + ironstone	700							
		02-14	Fawn sandy	20							
	L 30										
		14-38	Grey white	20							
		38-54	Grey green	30							
			FS		743048	52 -54	195	45	45	<0.5	5
2199	60 E	00-02	Clayey sand + ironstone	400							
		02-12	Fawn snady	20							
	L 30										
		12-34	White	10							
		34-45	Grey green	20							
			FM		743049	44 -45	175	20	40	0.5	<5

OTHER DETAILS

TOTAL 303M RAB IN 6 HOLES, LINE 30

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 19-20/08/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 — LOCATION: 10 Km SSW BALLARA, L29 / 9 Km NNE TEPCO, L37

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2329	3340 E	00-02	Clayey sand + ironstone	240							
	L 29	02-08	Fawn	20							
		08-12	Grey fawn	20							
			FS / Pl		743167	10 -12	90	20	45	<0.5	<5
2330	640 E	00-02	Clayey sand + ironstone	250							
	L 29	02-08	Fawn grey	20							
			rFM		743168	6 - 8	75	45	45	<0.5	10
2331	680 E	00-02	Clayey sand + ironstone	450							
	L 29	02-09	Grey fawn	20-60							
			FM / BM 0.5% mt		743169	8 - 9	125	30	50	0.5	<5
2332	720 E	00-03	Clayey sand + ironstone	450							
	L 29	03-06	Grey	20							
			FM / rFM, pink felds		743170	4 - 6	105	<5	30	<0.5	<5
2333	760 E	00-02	Clayey sand + ironstone	400							
	L 29	02-10	Green grey	50							
			FM / BM 0.5% mt		743171	8 -10	130	30	60	0.5	5
2334	800 E	00-02	Clayey sand + ironstone	250							
	L 29	02-10	Green grey	60							
			rFM 0.5% mt		743172	8 -10	160	20	45	<0.5	<5
2335	1140 N	00-04	Clayey sand + ironstone	50-250							
		04-14	Fawn clayey + ironstone	200-1800							
	L 37										
		14-18	Grey	10							
		18-26	Fawn & white	10							
		26-48	Purple fawn	10							
		48-63	Fawn green	30							
			FM 0.5% mt		743173	62 -63	135	70	40	0.5	10
2336	1100 N	00-04	Clayey sand + ironstone	150-300							
		04-12	Fawn clayey + ironstone	200-1600							
	L 37										
		12-16	Grey	20							
		16-30	Purple fawn	20							
		30-42	Grey fawn	20							
		42-54	Green fawn	40							
			FM 0.5% mt		743174	52 -54	130	20	50	0.5	<5

OTHER DETAILS
TOTAL 55M RAB IN 6 HOLES, LINE 29
TOTAL 117M RAB IN 2 HOLES, LINE 37

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 06-07/09/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km NNE TEPCO, L37

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2337	1060 N	00-04	Clayey sand + ironstone	250							
		04-16	Fawn clayey + ironstone	100-4000							
	L 37										
		16-24	White	20							
		24-30	Purple	20							
		30-54	Green fawn	60							
			FM 1% mt		743175	52 -54	115	15	55	<0.5	5
2338	1020 N	00-04	Clayey sand	150							
		04-10	Fawn clayey + ironstone	100-3000							
	L 37										
		10-24	Grey white	20							
		24-48	Green fawn	50							
			FM 1% mt		743176	46 -48	120	25	50	<0.5	<5
2339	980 N	00-04	Clayey sand + ironstone	200							
		04-08	Fawn clayey + ironstone	200-650							
	L 37	08-10	Grey sand / SST	30							
		10-30	Grey fawn	20							
		30-39	Grey green	40							
			FS / FM 1% mt		743177	38 -39	80	5	25	<0.5	<5
2340	940 N	00-02	Clayey sand	180							
		02-08	Fawn clayey + ironstone	200-1500							
	L 37	08-10	Grey fawn sand / SST	30							
		10-22	Grey	60							
		22-30	Green fawn	80-350							
			FM 2% mt		743178	28 -30	165	15	65	<0.5	5
2341	900 N	00-02	Clayey sand	150							
		02-08	Fawn clayey + ironstone	100-900							
	L 37	08-12	Fawn sand / SST	40							
		12-16	Purple	60							
		16-30	Fawn	80							
		30-36	Fawn green	50-250							
			FM 1% mt		743179	34 -36	250	5	55	<0.5	<5
2342	860 N	00-04	Clayey sand + ironstone	200							
		04-12	Fawn clayey + ironstone	100-600							
	L 37										
		12-18	Purple fawn	200-400							
		18-24	Fawn	350							
		24-39	Green	2000							
			BIOTITITE, 10% mt, ?Amphib or Dolerite		743180	38 -39	520	15	115	<0.5	5

OTHER DETAILS

TOTAL 246M RAB IN 6 HOLES, LINE 37

RIG TYPE W 600
DRILLER SILVER CITY DRILLERS
LOGGED BY IDK
DATE 07/09/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km NNE TEPCO, L 37

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2343	820 N	00-06	Clayey sand	150							
		06-12	Fawn clayey + ironstone	60-180							
	L 37										
		12-30	Fawn	150							
		30-33	Fawn green	500							
			?? PEG + AMPHIBOLITE, 5% mt		743181	32 -33	2100	35	95	<0.5	<5
2344	780 N	00-04	Clayey sand	160							
		04-10	Fawn clayey + ironstone	350-900							
	L 37										
		10-22	Purple & fawn	30							
		22-32	White	20							
		32-42	Grey fawn	30							
			FM 1% mt		743182	40 -42	65	5	15	<0.5	<5
2345	740 N	00-06	Clayey sand + ironstone	200-700							
		06-12	Fawn clayey + ironstone	200-3000							
	L 37										
		12-34	Purple & fawn	20							
		34-48	Green grey	40							
			FM 0.5% mt		743183	46 -48	10	15	25	<0.5	<5
2346	700 N	00-04	Clayey sand + ironstone	200							
		04-14	Fawn clayey + ironstone	200-900							
	L 37	14-18	Purple clayey	50							
		18-36	Purple & fawn	20							
		36-46	Green grey	30							
			FS / FM 0.5% mt		743184	44 -46	50	5	15	<0.5	10
2347	660 N	00-06	Clayey sand + ironstone	200							
		06-18	Fawn & purple clay	60							
	L 37	18-20	Grey sandy	20							
		20-28	White	20							
		28-48	Fawn purple	20							
		48-60	Green grey	40							
			FM 1% mt		743185	58 -60	55	5	15	<0.5	<5
2348	620 N	00-06	Clayey sand	160							
		06-18	Purple & fawn clay	20							
	L 37	18-22	Fawn sandy	20							
		22-48	Purple & fawn	20							
		48-66	Green grey	30							
			FM 0.5% mt		743186	64 -66	60	5	15	<0.5	5

OTHER DETAILS

TOTAL 295M RAB IN 6 HOLES, LINE 37

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 09-10/09/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km NNE TEPCO, L 37

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2349	580 N	00-04	Clayey sand	150							
		04-20	Purple & fawn clay	20-80							
	L 37										
		20-28	White	20							
		28-44	Purple & fawn	20							
		44-48	Green fawn	40							
			FM 1% mt		743187	46 -48	50	55	25	<0.5	5
2350	540 N	00-06	Clayey sand + ironstone	150-700							
		06-20	Fawn clayey	40-70							
	L 37										
		20-42	Purple & grey	20							
		42-57	Fawn grey	20							
			FM 0.5% mt		743188	56 -57	45	5	15	<0.5	10
2351	500 N	00-06	Clayey sand	150							
		06-18	Fawn clayey	40-150							
	L 37										
		18-42	Fawn & white	20							
		42-48	Green grey	40							
			FM 0.5% mt		743189	46 -48	45	10	20	<0.5	10
2352	460 N	00-10	Clayey sand + ironstone	100-1500							
	L 37		LOST RETURN, SAND		NS	10					
2353	420 N	00-06	Clayey sand	150							
		06-16	Fawn clayey	40							
	L 37										
		16-38	White +/- fawn	20							
		38-48	Green grey	20							
			FS / FM 0.5% mt		743190	46 -48	50	15	15	<0.5	5
2354	380 N	00-06	Clayey sand	140							
		06-16	Fawn & purple sandy clay	40							
	L 37										
		16-40	Purple & white	20							
		40-48	Green grey	40-150							
			FM 1% mt		743191	46 -48	55	20	25	<0.5	<5
2355	340 N	00-06	Clayey sand + ironstone	150-550							
		06-14	Fawn clayey	20							
	L 37	14-22	Grey clayey	20							
		22-38	Purple & white	30							
		38-48	Grey green	40-120							
			FM 1% mt		743192	46 -48	65	40	25	<0.5	<5

OTHER DETAILS

TOTAL 307M RAB IN 7 HOLES, LINE 37

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 10-11/09/90

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km NNE TEPCO, L 37

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
2356	160 N	00-04	Clayey sand + ironstone	150-450							
		04-08	Fawn clayey	20							
	L 37	08-18	Fawn sand / SST	30							
		18-36	Fawn +/- purple	20							
		36-60	Green grey	20							
			PEG + BM 0.5% Graphite		743193	58 -60	325	65	25	<0.5	5
2357	120 N	00-04	Clayey sand + ironstone	240							
		04-10	Fawn clayey	20							
	L 37	10-20	Fawn sandy	20							
		20-32	Fawn	20							
		32-51	Fawn grey	20							
			BM 1% Graphite		743194	50 -51	1700	40	110	<0.5	5
2358	80 N	00-04	Clayey sand	150							
		04-06	Fawn clayey + ironstone	500							
	L 37	06-24	Purple & fawn	20							
		24-34	Fawn	20							
		34-54	Green grey	20							
			BM 0.5% Graphite, 0.5% Garnet		743195	52 -54	1400	230	90	<0.5	5
2359	40 N	00-04	Clayey sand	120							
		04-06	Fawn clayey + ironstone	650							
	L 37	06-26	Purple & fawn	20							
		26-44	Fawn	20							
		44-60	Grey green	20							
			BM + PEG 0.5% Graphite, 0.5% Garnet		743196	58 -60	1050	70	95	<0.5	5
2360	0 N	00-04	Clayey sand	150							
	L 37	04-16	Purple & white	20							
		16-32	Fawn	20							
		32-51	Fawn grey	20							
			BM + PEG 1% Graphite		743197	50 -51	230	85	75	<0.5	15

OTHER DETAILS

TOTAL 276M RAB IN 5 HOLES, LINE 37

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 11/09/90

470,000 mE

480,000 mE

6,420,000 mN

6,410,000 mN

140°35'

140°50'

32°25'

△ BRISTOWE HILL

Watkins Shaft

Yard

Nilpena Well

Dam

"Nilpena" (ruins)

Nilpena Dam (old)

Dam

Loading Ground

Watercourse Dam

Second Watercourse Dam

Yard

Muggs Dam

Bore

Duffield Bore

Maldorby Dams

IRON ROCK

Radium Dam

△ SOUTH HILL

LINE 64

LINE 26

LINE 27

LINE 28

LINE 65

LINE 29

LINE 30

DEY HILL

Roundhill Dam

Sheds

Dinnertime Dam

Four Corners Dam

Yard

Diversion Dam

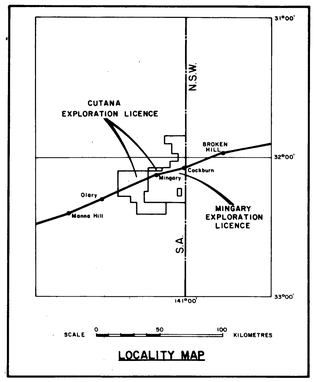
Surrender Dam

Paradise Dam

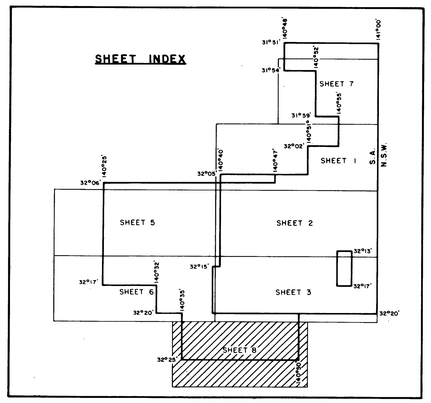
Reeds Dam

LEGEND

FM	Quartz feldspar biotite gneiss psammopelite - Composite (>50% melted metasediment)
FS	Quartz feldspar biotite psammite - Composite (>50% melted metasediment)
FE	Quartz feldspar biotite sillimanite gneiss pelite - Composite (>50% melted metasediment)
BM	Quartz feldspar biotite gneiss, sillimanite gneiss
Pl	Plagioclase quartz rock
Peg	Pegmatite
r	Retrograded
M1305	RAB Drill Hole location and number
bq	Blue Quartz
gr	Graphite
gar	Garnet



LOCALITY MAP



SCALE 0 500 1000 2000 3000 METRES

REVISION			CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		SCALE 1:25,000	CUTANA EXPLORATION LICENCE
		GEO P.B.	SOUTH AUSTRALIA
		DRAFT G.J.G.	RAB LINE LOCATIONS
		CHECKED	SHEET 8 Fig 2
		DATE Jan. 1990	
		1:250 000	
		1:100 000	
		MINING FIELD OR DISTRICT: Olary	DRG No.: 3535-65

AUSTRALIA 1:100000

SHEET 7033 ZONE 54

140° 30'

141° 00'

32° 00'

32° 30'

46

47

48

49

50

45

44

43

42

41

460000 mE

6410000 mN

Conartra Ck
Watercourse
Whites Wells
W.H.
Conartra Bore, Well
Shorts Dams
Shorts
Odeas Bore
Shorts Dam
New Dam
Dam (old)
Bookla Dam
Gum Dam
Halfway Dam
Johnsons Dam
Buckboard Dam
Bore
Woodville Dam
"Wompinie"
Dams
Ck
Tank
Cottage Dam, Tank
Ram Dam
Tank
Bore (P.D.)
"Old Lake Dismal"
Cockburn Dam
COCKBURN
Butchers Dam
Landing Ground
Cockburn
Pine
Hallidays Dam
Dam
Double Dams
Gum Bore, Well
Cutana Bore
Cutana Dams
White Dam
Dam
Dam
Bullloo
White Dam Yards
Ck
Lucky Dam
Carterlights Dam
Junction Dam
Mingary
Depot Dam
1435 GAUGE
Weir Dam
Gth.
Dam
L.G.
Government Reservoir
Parkers Dam
Dam
Corellis Dam
Spillers Dam, Tank
Sampsons Dam
Dams
Mutooroo
Dam
James Dam
Joyces Dam
"Bindarrah"
Walkers Dam
Dams
BARRIER HIGHWAY
West Mingary Dam
Mingary Dam
Catch Dam
Chalky Dam
"Tepco"
White Dam
Johnsons Old Dams
Mingary
Sampsons Dam
Pine Creek Dam
Pinery Dam
Dam
Pine Creek
L.G.
Hartford Dam
Ck
Cutana
Cottages Crossing
New Scrubby Dam
Cutana Dam
Wilkins Prospect (P.D.)
Cutana Ck
White Dam
Little White Dam
Deadmans Dam
"Cutana"
Woolshed
Well (P.D.)
Wattys Dam
Cutana Mine (P.D.) Cu
Dam
Robbys Dam
SITE OF FORMER RAILWAY
SITE OF OLD PIPELINE
Acacia Dam
Milky Dam
"PINERY HILL"
Dam
Bore
Dam
Kadish Bore
Chifley Dam
Mutoordo West Mines
Dam
Cockeys Dam
Deviation Bore
Saltash
Mutooroo Mine Cu
Miracle Bore
Miracle Dam
Mine East Dam
Grassy Dam
Trinity East Dam
Redwings Dam
"Corella"
Sixteen Mile Dam
Sheepskin Dam
Boundary Dams
Bells Dam
"Aroona"
Homestead Dams
Kevins Dam
Junction Dam
Cutana Quarries
Luxembourg Well
Luxembourg Mine
John Brown Mine
Queen Bee Mine
Luxembourg West Mine (P.D.)
New Luxembourg Reservoir
New Luxembourg Goldfield
Premier Mine Cu
Yankee Shaft
Whiskers Mine Pb
Ellis Hill Mine
Cu
Black Hill Dam
Embankment Dam
North Quarry
Grant Quarries
N.E. Open Cut Quarry
Terminus Quarry
Kings Dam
Windmill Dam
Aroona Dam
Big Scrub Dam
Ourotjoa Dam
Quarry Fe
Scrub Dam
Fe Albert Quarries
Canegrass Dam
Quondong Dam
Figgans Dam
Deans Dam
Bore P.D.
Farleys Dam
New Saucepan Dam
Old Pegline Dam
Toms Dam
Fallout Dam
White Oaks Dam
Saucepan Dam
Eagle North Dam
Eagle West Dam
Seven Mile Dam
Eagle South Dam
Dingo Dam
Butterfly Dam
Katie Dam
White Dam
Trinity Mine Cu
Kings Dam
Trinity Dam
McBrides Dam
Muster Catch
Mutooroo Dam
Bullock Dam
Burta Dam
Little Borehole Dam
Borehole West Dam
Two Mile Dam
Lyndon Catch
Mutooroo
"Mutooroo"
Mutooroo
Reeds Dam
North Dam
North East Catch
Black Hill Catch
Dam (old)
Tank I.D.
Duffields Well
Hut
North Catch
Acacia Dam
PEAKED HILL
Duffield Bore P.D.
Bore
Maldorky Dams
IRON ROCK
W.H.
MALDORKY HILL
Elephant Well
Duffield Dams
Davenborough Dam
Bore P.D.
Rockhole Dam
Muggs Dam
Second Watercourse Dam
Open Dam
Paradise Dam
Surrender Dam
Farleys Catch
Record Dam
Diversion Dam
Watercourse Dam
Maldigo Well P.D.
Junction Bore P.D.
Creek
NILPENA HILL
Nilpena Dam (old)
Nilpena (ruins)
Nilpena Well
Dam
SOUTH HILL
Landing Ground
DEY HILL
Radium Dam
Roundhill Dam
Dark Hill Dam
Rocky Dam
Mingary Dam
Tank
Dinnertime Dam
Four Corners Dam
Centenary Dam
Sheds
Hut
Rocky Dam
Radium Hill (aban.)
Radium Hill Mine
Tailings Dump
BRISTOWE HILL
Working Shaft
Tank
Michelle Hill Mine
Taylor Shaft
BONYTHON HILL
Teacosey Dam
Nilpena Bore (old)
Tombstone Tank P.D.
Mildaltie-Dalkey Diggings
Cutana Tank
Galls Well
Galls Bore
Cemetery Prospect
Galls Well East Mine
Mulga Hill Mine
Kings Dam
Galls Well Kyanite Prospect
Ky
Cu
Pb
Fe
Ag
Au
W
Sn
Mo
Ta
Ni
Co
Zn
Mn
Ba
Sb
Bi
U
Th
Rb
Sr
Y
Zr
Nb
Cs
La
Ce
Nd
Hf
Ta
W
Pb
Th
U
Au
Ag
Cu
Fe
Ky
Mo
Ni
Co
Zn
Mn
Ba
Sb
Bi

470,000m E

480,000m E

490,000m E

Dam (old)

Gum Dam

Boorko Dam

Yd.

Johnsons Dam

Halfway Dam

Womania

Dams

CREEK

Buckboard Dam

Bore

Woodville Dam

LINE 40

Cockburn Dam

COCKBURN

LINE 19

LINE 53

LINE 54

LINE 55

LINE 6

L54a

"Old Lake Dismal"

LINE 20

LINE 56

LINE 57

LINE 58

LINE 59

LINE 60

LINE 63

LINE 18

LINE 37

LINE 5

LINE 61

LINE 62

LINE 17

LINE 39

LINE 7

LINE 8

Butchers Dam

Landing Ground

Tank

Corrobee Dam, Tank

Ram Dam

Bore (P.D.)

Double Dams

Blunder Dam

Junction Dam

Holidays Dam

6,450,000m N

32°02'

32°05'

32°06'

140°40'

140°42'

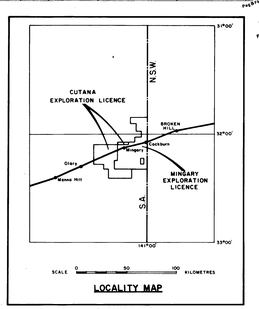
OLD

MINGARY

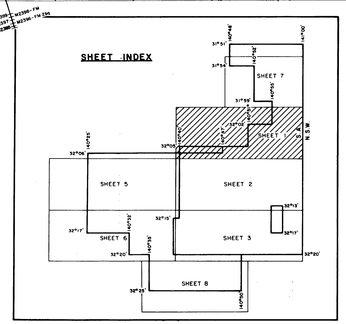
V.R.S.

LEGEND

- FM — Quartz feldspar biotite gneiss psammopelite - Composite (>50% melted metasediment)
- FS — Quartz feldspar biotite psammite - Composite (>50% melted metasediment)
- FE — Quartz feldspar biotite sillimanite gneiss pelite - Composite (>50% melted metasediment)
- BM — Quartz feldspar biotite gneiss, sillimanite gneiss
- Pl — Plagioclase quartz rock
- Peg — Pegmatite
- r — Retrograded
- MD88 — RAB Drill Hole location and number
- bq — Blue quartz
- gr — Graphite
- gar — Garnet



LOCALITY MAP



SCALE 0 500 1000 2000 3000 METRES

REVISION			
		SCALE: 1:25000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		DES P.B.	
		DRAFT: G.J.G	MINGARY/CUTANA EXPLORATION LICENCE SOUTH AUSTRALIA
		CHECKED:	
		DATE: Jan.1990	RAB HOLE LOCATIONS
		1:250 000	
		1:100 000	SHEET 1 Fig3
		DRAWING FILED ON DISTRICT: Olary	DRG No. 3535Z

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO.1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JANUARY 27, 1991

1. TERMS AND CONDITIONS

Exploration Licence No.1363 "Cutana" of 769 km^2, located approximately 30 km east of Olary (Fig.1), was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period, and has subsequently been extended for a further year on four occasions.

Work on the licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm, Carpentaria Exploration Company Pty. Ltd.

The principal target is stratiform/stratabound Pb-Zn mineralization within the Bimba Formation, which is concealed throughout the area by an extensive cover of Tertiary sands and clays.

2. EXPLORATION

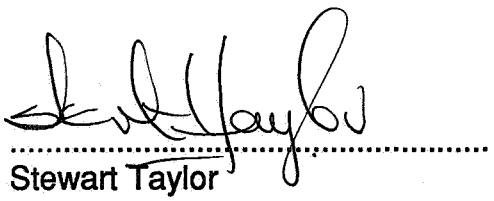
No field work was undertaken. Exploration activities were limited to gold analyses from 27 previously collected RAB samples, which contain amphibolite and/or >200 p.p.m. Cu, on lines 25, 26, 28, 29, 30, 37, 64 and 65.

3. RESULTS

The 27 gold assays are listed in the attached tabulation. Only 4 samples returned >0.02 p.p.m. Au, the maximum value being 0.07 p.p.m. Au in an amphibolite on line 65.

4. EXPENDITURE

An expenditure statement is attached.



Stewart Taylor
Principal Geologist - Base Metals

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO.1363 "CUTANA"

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JANUARY 27, 1991

	$	$
Assaying	970	
Consultants Fees	2663	
Stores	228	
Tenement Rentals	8	
Travelling Expenses	1169	$ 5 038
TOTAL - THIS PERIOD		$ 5 038
TOTAL - CURRENT TERM		$ 5 038
Previously Reported		$212 073
Total Project Expenditure to Date		$217 111

.....

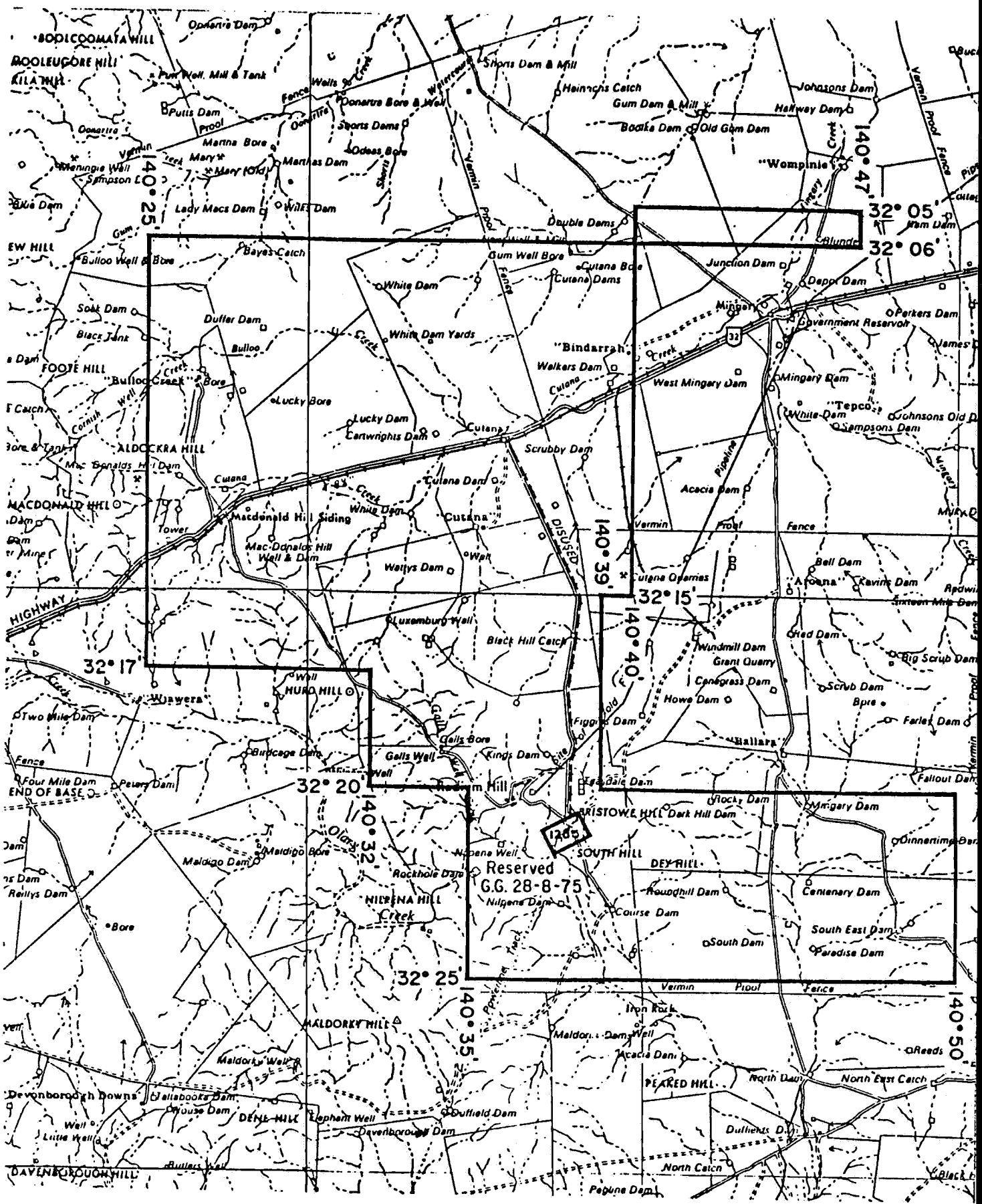
A.E. Covacich
Manager - Accounting
Exploration & Gold Operations

expend.ten

GOLD ASSAYS - CUTANA RAB

SAMPLE	LINE	HOLE NO	GRID	DEPTH	ROCK TYPE	Au
730922	28	1263	3340 E	3	?FM	<0.02
730939	28	1280	2260 E	4	FM graph	<0.02
730966	26	1307	2260 E	28	FM .5% mt	<0.02
730967	26	1308	2220 E	12	FE	<0.02
730971	26	1312	1720 E	3	FM	<0.02
730972	26	1313	1680 E	3	rFE	0.03
730994	25	1335	3820 E	8	?AMPHIB	<0.02
731012	25	1353	1120 E	39	FM	0.02
731013	25	1354	1160 E	32	FE	0.02
742876	64	2021	1000 N	16	?APHIB2mt	<0.02
742877	64	2022	960 N	21	?APHIB2mt	<0.02
742907	28	2057	2500 E	4	? AMPHIB	<0.02
742908	28	2058	2460 E	6	? AMPHIB	<0.02
742921	65	2071	1000 E	2	AMPHIB	0.02
742925	65	2075	1160 E	4	AMPHIB	<0.02
742931	65	2081	1400 E	2	AMPHIB	<0.02
742932	65	2082	1440 E	2	PEG	<0.02
742942	65	2092	2080 E	4	AMPHIB	0.07
742948	65	2098	2320 E	2	AMPHIB	0.02
742952	65	2102	2480 E	4	AMPHIB	0.03
742992	29	2142	600 E	14	rFM tr mt	0.03
743005	29	2155	2900 E	6	AMPHIB2mt	<0.02
743007	29	2157	2980 E	21	?APHIB2mt	<0.02
743043	30	2193	360 E	52	APHIB 2mt	0.02
743180	37	2342	860 N	39	BIOTITITE	<0.02
743181	37	2343	820 N	33	??P+APHIB	<0.02
743195	37	2358	80 N	54	BM.5GRAPH	<0.02

SCHEDULE A



NOTE: There is no warranty that the boundary of this Exploration Licence is correct in relation to other features on the map. The boundary is to be ascertained by reference to the Australian Geodetic Datum.

Fig 1

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED APRIL 26, 1991

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" of 769 km^2, located approximately 30km east of Olary (Fig. 1), was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period. The Licence has subsequently been extended for a further year on four occasions.

Work on the Licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm, Carpentaria Exploration Company Pty Ltd.

The principal target is stratiform / stratabound Pb-Zn mineralisation within the Bimba Formation, which is concealed throughout the area by extensive cover of Tertiary sands and clays.

2. EXPLORATION

No field work was undertaken. Exploration activities comprised the commencement of a review of previous exploration data, the merging of this data with the results of CEC work and the commencement of a detailed aeromagnetic interpretation.

3. RESULTS

The available Open File data, principally Seltrust (geology, drilling and geophysics), is being reviewed. Results to date in the Ballara - Dey Hill area indicate that some Seltrust RAB holes may not have reached Proterozoic basement. This prospect has been partly covered by CEC RAB lines 25 to 29 inclusive. A Contract Geophysicist has been engaged to review the Seltrust EM/IP data in this area.

The production of an aeromagnetic interpretation at 1:100 000 and 1:25 000 has commenced. This is an extension of the interpretation currently under way in CEC's adjacent Mingary Licence.

Further work on the Ballara - Dey Hill area will be planned on the basis of this current work and will be outlined in the next Quarterly Report.

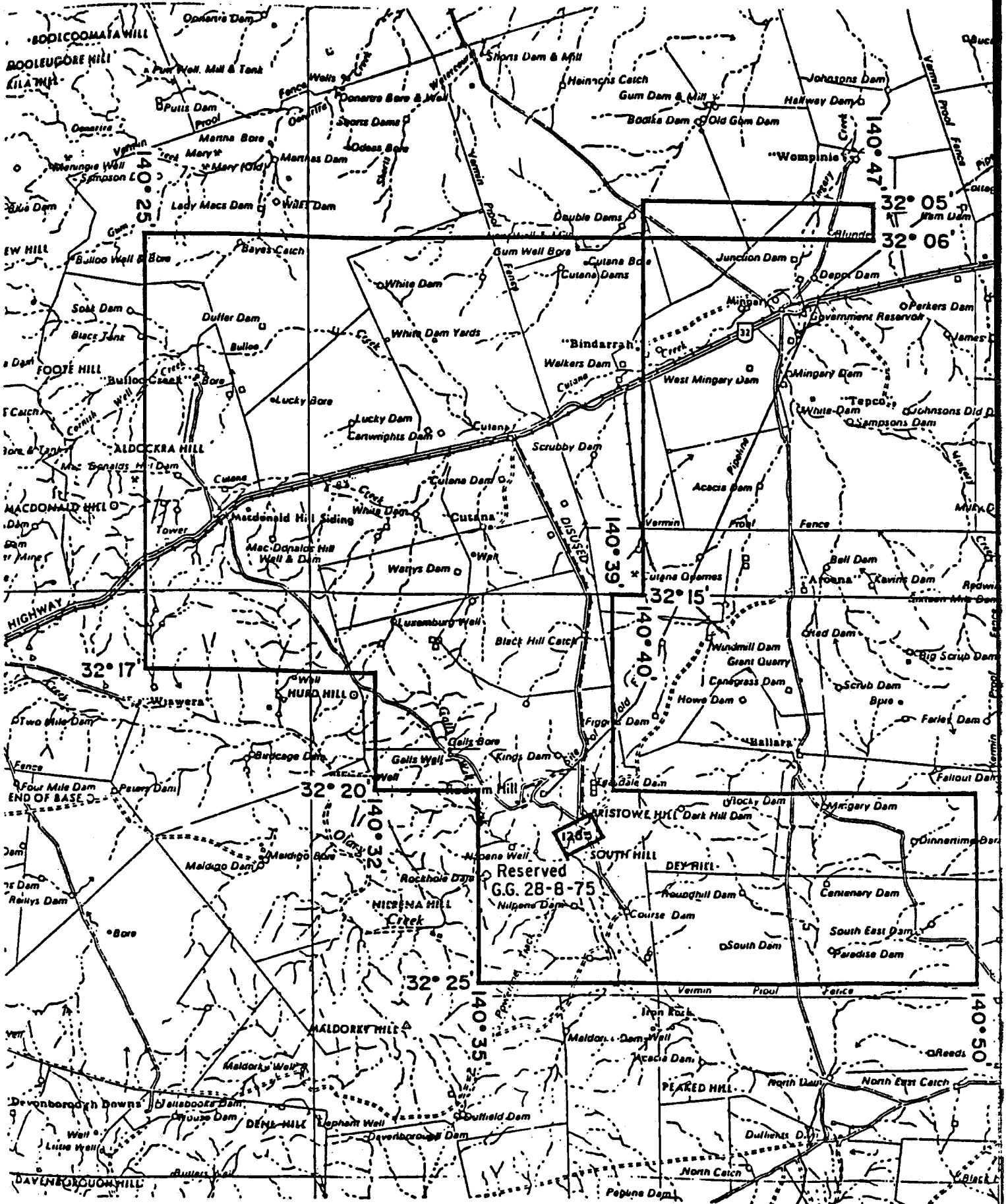
Work undertaken by CEC on the "Luxembourg" and "Green & Gold" gold prospects is also under review. Further work planned will be outlined in the next Quarterly Report.

4. **EXPENDITURE**

An expenditure statement will be forwarded in a few weeks from our Head Office.

I D KERR

SCHEDULE A



EL 1363 "CUTANA"

NOTE: There is no warranty that the boundary of this Exploration Licence is correct in relation to other features on the map. The boundary is to be ascertained by reference to the Australian Geodetic Datum

CARPENTARIA EXPLORATION COMPANY PTY LTD

EL 1363 CUTANA

STATEMENT OF EXPENDITURE FOR QUARTER ENDED APRIL 26, 1991

Administration			3888	
Technical Consultants			372	
Outside Services			8213	
Operating Labour			1618	
Stores			−5451	
Tenement Rentals			1960	
Transport			75	
TOTAL – THIS PERIOD				10675
PREVIOUSLY REPORTED CURRENT TERM				
Quarter	ended	January 27	5038	
	ended			
	ended			
				5038
TOTAL – CURRENT TERM				15713
PREVIOUSLY REPORTED				212073
TOTAL PROJECT EXPENDITURE TO DATE				$227,786

A.E. Covacich
Manager Accounting –
Exploration and Gold Operations

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE No. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED JULY 27, 1991

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" of 769 km^2, located approximately 30 km east of Olary (Fig. 1), was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period. The Licence has subsequently been extended for a further year on four occasions.

Work on the Licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm MIM Exploration Pty Ltd.

The principal target is stratiform / stratabound Pb-Zn mineralisation within the Bimba Formation, which is concealed throughout the area by extensive cover of Tertiary sands and clays.

2. EXPLORATION

No field work has been undertaken during the last quarter. Exploration activities comprised the continuing of the review of previous exploration data, merging of this data with more recent MIM Ex work and the continuation of the detailed aeromagnetic interpretation.

3. RESULTS

The available Open File data, principally Seltrust (geology, drilling and geophysics) is being reviewed. Results to date in the Ballara - Dey Hill area indicate that some Seltrust RAB holes may not have reached Proterozoic basement. This prospect has been partly covered by CEC RAB lines 25 to 29 inclusive.

Results are awaited from the Contract Geophysicist engaged to review the Seltrust EM/ IP data in this area.

The production of an aeromagnetic interpretation at 1:100 000 and 1:25 000 was completed to first draft stage. Final compilation of this study is awaited as are the results of the associated review currently underway in the adjacent CEC/MIM Ex Mingary Licence.

Further work on the Ballara - Dey Hill area will be planned on the basis of these awaited data reviews and compilations.

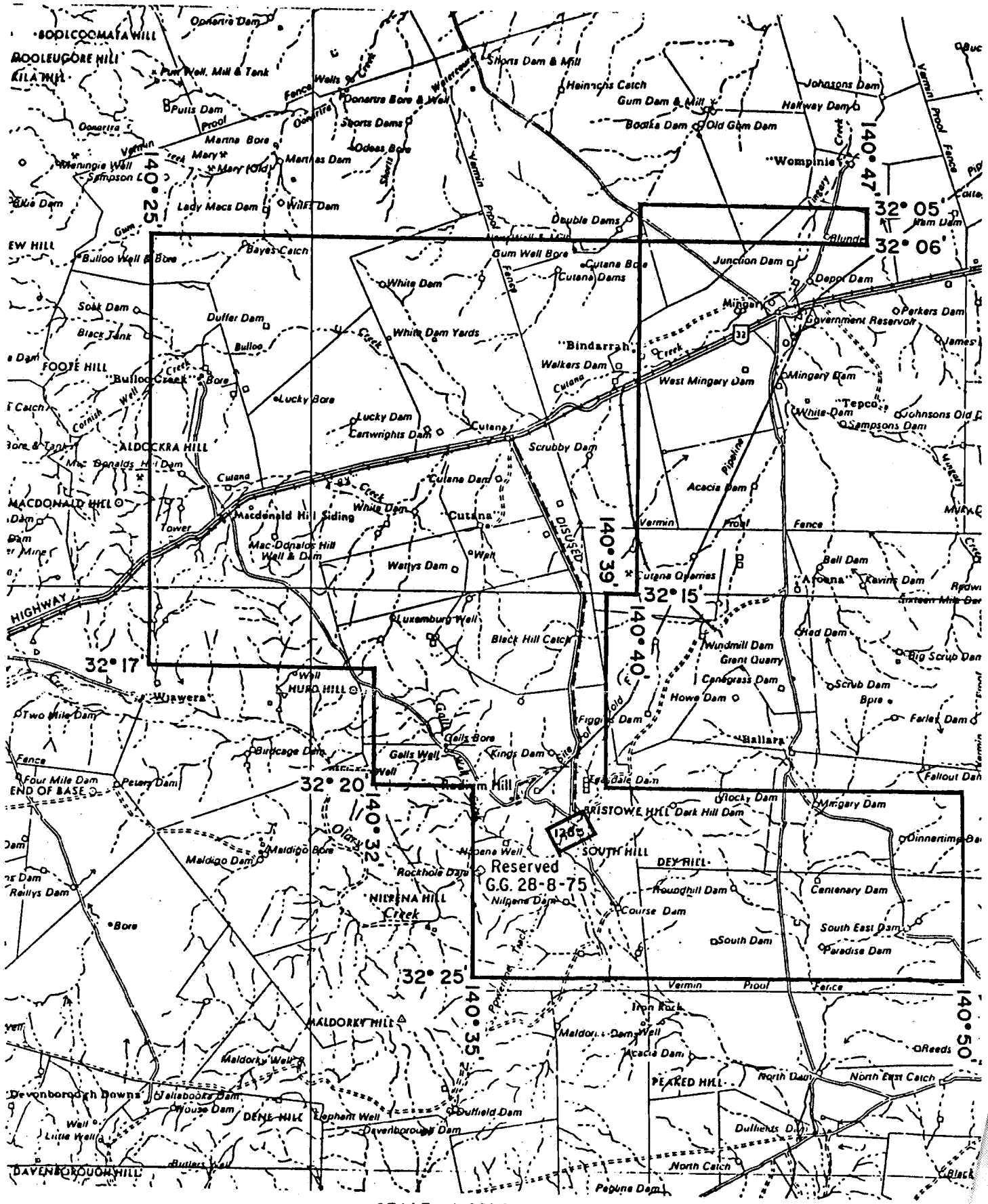
Work undertaken by CEC/MIM Ex on the "Luxembourg" and "Green & Gold" gold prospects is also under review.

4. EXPENDITURE

A statement of expenditure will be forwarded from our Head Office in Brisbane within the next month.

I D KERR

SCHEDULE A


140° 25'
140° 47'
32° 05'
32° 06'
140° 39'
32° 15'
140° 40'
32° 17'
32° 20'
140° 32'
32° 25'
140° 35'
140° 50'
Reserved G.G. 28-8-75
Bindarrah
Wompinie
Mingary
Tepco
Cutana
Hallara
Gells Well
Kings Dam
Nilpena Well
Nilpena Dam
Rockhole Dam
Maldigo Dam
Maldigo Bore
Maldorky Well
Maldorky Dam
Devonborough Downs
Devonborough Dam
Elephant Well
Duffield Dam
Yellabooka Dam
Iron Rock
Acacia Dam
Reeds
Dulliehts Dam
Peguine Dam
Macdonald Hill Siding
Mac Donalds Hill Dam
Mac Donalds Hill Well & Dam
Wellys Dam
Luxemburg Well
Black Hill Catch
Windmill Dam
Grant Quarry
Howe Dam
Scrub Dam
Farlet Dam
Fallout Dam
Rocky Dam
Mingary Dam
Dinnerimp Dam
Centenary Dam
Roundhill Dam
Course Dam
South Dam
South East Dam
Paradise Dam
North Dam
North East Catch
North Catch
Junction Dam
Depot Dam
Government Reservoir
Parkers Dam
James
Johnsons Dam
Halfway Dam
Gum Dam & Mill
Booka Dam
Old Gum Dam
Shorts Dam & Mill
Heinrichs Catch
Double Dams
Gum Well Bore
Cutana Bore
Cutana Dams
White Dam
White Dam Yards
Walkers Dam
West Mingary Dam
Scrubby Dam
Acacia Dam
Cutana Quarries
Cutana Dam
Lucky Dam
Cartwrights Dam
Lucky Bore
Bayes Catch
Bulloo Well & Bore
Bulloo Dam
Bulloo Creek Bore
Duffer Dam
Soak Dam
Black Tank
Cornish Well
Marina Bore
Marinas Dam
Odoes Bore
Lady Macs Dam
Wills Dam
Mary
Mary (Old)
Meningie Well
Simpson Well
Ponta Well, Mill & Tank
Putts Dam
Donerra Bore & Well
Donerra Dams
Wells Creek
Waterwell Creek
Yermin Proof Fence
Vermin Proof Fence
Pipeline
Tower
Two Mile Dam
Four Mile Dam
Petery Dam
Burdcage Dam
Reillys Dam
Olary
Creek
Hill
Bore
Well
Dam
Tank
Fence
Siding
Mine
Yard
Catch
Siding
Hill
Creek
Dam
Bore
Well

M.I.M. EXPLORATION PTY LTD

E.L. 1363 CUTANA

STATEMENT OF EXPENDITURE FOR QUARTER ENDED JULY 26, 1991

Administration			337	
Technical Consultants			2180	
Drilling			2500	
Freight			192	
Outside Services			1237	
Operating Labour			1303	
Tenement Rentals			1	
Transport			−192	
Travelling Expenses			2762	
TOTAL – THIS PERIOD				10320
PREVIOUSLY REPORTED CURRENT TERM				
Quarter	ended	January 27, 1991	5038	
Quarter	ended	April 27, 1991	10675	
	ended			
				15713
TOTAL – CURRENT TERM				26033
PREVIOUSLY REPORTED				212073
TOTAL PROJECT EXPENDITURE TO DATE				$238,106

A.E. Covacich
Manager Accounting –
Exploration and Gold Operations

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO. 1363 "CUTANA"

PROGRESS REPORT FOR QUARTER ENDED OCTOBER 27, 1991

1. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" of 769 km2, located approximately 30 km east of Olary (Fig. 1), was granted to Mount Isa Mines Limited on October 28, 1986, for a one year period. The Licence has subsequently been extended for a further year on four occasions. An application for renewal was recently submitted.

Work on the Licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm M.I.M. Exploration Pty. Ltd.

The principal target is stratiform / stratabound Pb-Zn mineralisation within the Bimba Formation, which is concealed throughout the area by extensive cover of Tertiary sands and clays.

2. EXPLORATION

2.1 Ground Magnetics

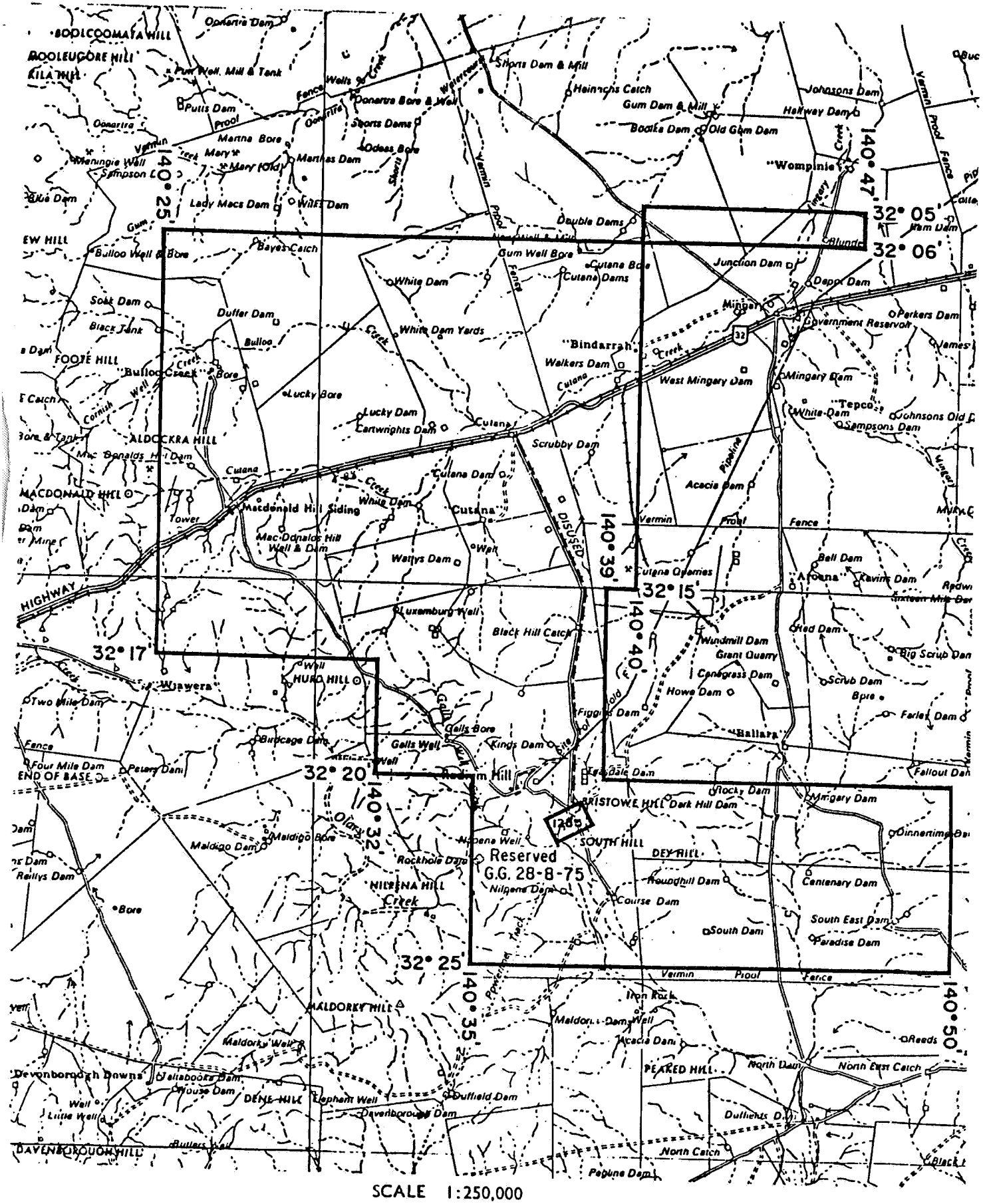
Extensions to Grid Lines 25, 26 and 28 were pegged and read with ground magnetics. These extensions considerably improve the coverage of a prospective zone some 2km wide and 12km long. This data has yet to be merged with the original survey. Profiles will be presented in the next Quarterly Report.

2.2 Aeromagnetic Interpretation

Copies of the completed aeromagnetic interpretation maps (Sheets 5, 6 & 8) are attached as Plans 36601, 36602 & 36603. Assessment of this data in conjunction with the similar study completed to the north in the adjacent MIM "Mingary" Licence is continuing.

2.3 Data Reviews

The Open File data review, principally Seltrust (geology, drilling and geophysics), is continuing. Results are still awaited from the Contract Geophysicist engaged to review the Seltrust EM / IP data in this area.


BODICOOMATA HILL
ROOLEUGORE HILL
KILA HILL
Donarra Dam
Pull Well, Mill & Tank
Putts Dam
Donarra
Donarra Bore & Well
Sports Dams
Sports Dam & Mill
Heinrichs Catch
Gum Dam & Mill
Johnsons Dam
Halfway Dam
Boolka Dam
Old Gum Dam
"Wompinie"
Marina Bore
Mary
Mary (Old)
Marinas Dam
Odeas Bore
Sampson Dam
Lady Macs Dam
Wilks Dam
Double Dams
Bayes Catch
Bulloo Well & Bore
Gum Well Bore
Cutana Bore
Cutana Dams
Junction Dam
Depot Dam
White Dam
Mingary
Government Reservoir
Perkers Dam
Soak Dam
Duffer Dam
Black Tank
White Dam Yards
"Bindarrah"
FOOTE HILL
Bulloo Creek
Bore
Walkers Dam
West Mingary Dam
Mingary Dam
Lucky Bore
Lucky Dam
Cartwrights Dam
Tepco
White Dam
Johnsons Old
Sampsons Dam
Scrubby Dam
ALDOCKRA HILL
Mac Donalds Hill Dam
Acacia Dam
MACDONALD HILL
Macdonald Hill Siding
Cutana
Cutana Dam
White Dam
Mac Donalds Hill Well & Dam
Wattys Dam
Well
DISUSED
Vermin Proof Fence
Cutana Quarries
Bell Dam
Kevins Dam
HIGHWAY
Luxemburg Well
Black Hill Catch
Windmill Dam
Grant Quarry
Red Dam
Big Scrub Dam
Canegrass Dam
Scrub Dam
Howe Dam
Bore
Farlet Dam
Figgis Dam
Hallara
Wayera
HURD HILL
Two Mile Dam
Gells Bore
Gells Well
Kings Dam
Four Mile Dam
END OF BASE
Peters Dam
Redcum Hill
Eastdale Dam
Fallout Dam
Rocky Dam
Mingary Dam
BRISTOWE HILL
Dark Hill Dam
1268
SOUTH HILL
Maldigo Bore
Maldigo Dam
Nilpena Well
Reserved
G.G. 28-8-75
DEY HILL
Reillys Dam
Rockhole Dam
Roundhill Dam
Centenary Dam
NILPENA HILL
Creek
Nilpena Dam
Course Dam
South East Dam
South Dam
Paradise Dam
Bore
MALDORKY HILL
Iron Rock
Maldorky Well
Maldorky Dam
Acacia Dam
Reeds
Devonborough Downs
Wallabooka Dam
North Dam
North East Catch
PEARED HILL
House Dam
DENE HILL
Elephant Well
Duffield Dam
Little Well
Davenborough Dam
Duffields Dam
DAVENBOROUGH HILL
Butlers Well
North Catch
Pegune Dam
Vermin Proof Fence
Pipeline
Fence
Creek
Gum
Bore & Tank
Dam
Tower
Mine
Cornish Well
Yard
Bore
Tank
Well
Dam
Catch
Yard
Mine
Bore
Tank
Dam
Dam
Dam

3. RESULTS

The aeromagnetic interpretation (and subsequent extension ground magnetics) has defined a North-east, South-west zone some 2km by 12km in the southern part of the EL, east of Dey Hill (Sheet 8 = Plan 36603).

This area comprises interpreted Suites 13, 14, 15 and 16 (MIM Ex local names) in a synformal structure with sheared/faulted margins and some cross shears/faults. Suite 13 is currently equated with the "Upper Albite" Suite.

RAB to date by MIM Exploration in this zone has outlined areas of anomalous Pb and Zn. Hole locations are shown on the attached Plan No 35565 (Sheet 8 RAB Line Locations) and Plan No 35354 (Sheet 3 RAB Line Locations). Best results from this previous work are repeated below:

Line 65	Suite 13 - 205 Zn, Suite 14 - 140 Zn.
Line 29	Suite 14 - 710 Pb.
Line 28	? Suite 16 - 610 & 1550 Zn.
Line 26	Suite 15 - 440 Zn.
Line 25	Suite 15 - 210 Zn, Suite 16 - 50 Pb.

Initial reviews of Seltrust data for their Ballara Prospect shows much of their effort was in the area interpreted by MIM as Suites Upper 13 to Lower 16 on the west side of the MIM interpreted structure. Data review and assessment is continuing.

4. FUTURE WORK PROGRAMME

The following RAB drilling is scheduled to commence in late November, 1991. The aim of the programme is to complete or improve the coverage of the outlined 2 x 12km structure. A total of 121 holes are planned for an estimated 3870m of RAB.

Line 65	16 holes @ est 20m	= 320m.
Line 28	24 holes @ est 20m	= 480m.
Line 26	10 holes @ est 30m	= 300m.
	32 holes @ est 50m	= 1600m.
Line 25	39 holes @ est 30m	= 1170m.
TOTAL RAB	121 holes	= 3870m.

5. EXPENDITURE

An expenditure statement is attached.

I D KERR

MIM EXPLORATION PTY LTD

EL 1363 CUTANA

STATEMENT FOR EXPENDITURE FOR QUARTER ENDED OCTOBER 26, 1991.

Administration	332
Operating Labour	880
Consultant Fees	1500
Drafting	1020
Tenement Fees	143
Outside Contractors	1169
TOTAL THIS QUARTER	$ 5044
Previously Reported this Term	$ 26033
TOTAL CURRENT TERM	$ 31077
Expenditure Previous Terms	$212073
TOTAL PROJECT EXPENDITURE	**$243150**

470,000 m E

480,000 m E

490,000 m E

6,430,000m N

32°20'

32°15'

32°17'

140°40'

140°55'

140°57'

Cutana Quarry

Boundary Dams

Junction Dam

Windmill Dam

Kings Dam

Grant Quarries

Terminus Quarry

Quarry Fs

Fs Albert Quarries

Quondong Dam

Conegross Dam

Figgons Dam

Taylor Shaft

Bonyman Hill

Dark Hill Dam

Bells Dam

Aroona

Homestead Dams

Srub Dam

Bore P.D.

Deons Dam

"Ballara"

Tanis Dam

Mingary Dam

Tank

Kevins Dam

Outalpa Dam

Big Scrub Dam

Aroona Dam

Old Perpine Dam

Fallout Dam

White Oaks Dam

Sheepskin Dam

Forleys Dam

Redwings Dam

Sixteen Mile Dam

Dam

Quartz Hill

Yd

New Soucepan Dam

Soucepan Dam

Cockeys Dam

Dam

"Coretta"

Mutooroo Mine

Cu

Mine East Dam

Miracle Bore

Miracle Dam

Grasser Dam

Yd

Trinity East Dam

McBrides Dam

Cu Trinity Mine

Kings Dam

Trinity Dam

Deviation Dam

Cape West Dam

LINE 23

LINE 2

LINE 1

LINE 24

LINE 31

LINE 25

LEGEND

- FM Quartz feldspar biotite gneiss psammopelite - Composite (<50% melted metasediment)
- FS Quartz feldspar biotite psammite - Composite (<50% melted metasediment)
- FE Quartz feldspar biotite sillimanite gneiss pelite - Composite (<50% melted metasediment)
- BM Quartz feldspar biotite gneiss, sillimanite gneiss
- Pl Plagioclase quartz rock
- Peg Pegmatite
- r Retrograded
- MD86 RAB Drill Hole location and number
- bq Blue Quartz
- gr Graphite
- gar Garnet

LOCALITY MAP

CUTANA EXPLORATION LICENCE

MINGARY EXPLORATION LICENCE

BROKEN HILL

Olary

Mingary

Mt Victor

Mt Arden

Mt Gee

Mt Hack

Mt Lyndhurst

Mt Victoria

Mt Serle

Mt Freeling

Mt Bryan

Mt Pleasant

Mt Barker

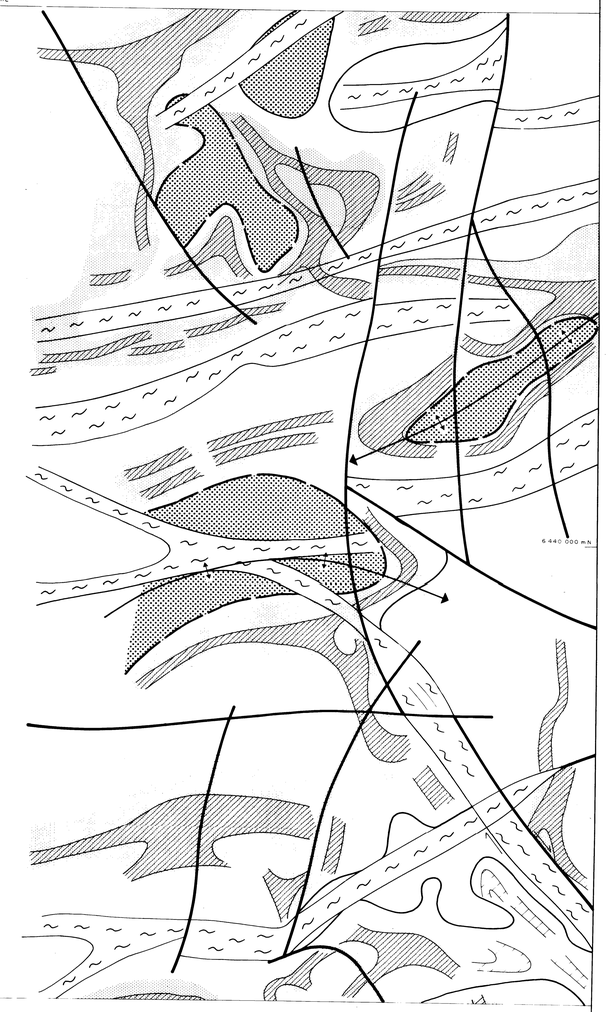
Mt Lofty

Mt Crawford

440 000mE

450 000mE

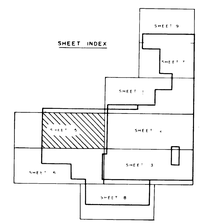
460 000mE



LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite 11 and 12
- Highly magnetic zones
- Moderate to highly magnetic units. Probable upper dolerite unit
- Possible Suite 14 /15 boundary
- Possible Suite 11 /16 boundary
- Boundary to low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Synform
- Antiform
- Anticlinal system
- Probable fault
- Inferred major shear
- 59 — Rock unit, giving % magnetic index
- No. of readings — MB-20 — Input E.M. anomalies

SHEET INDEX



0 1 2 3 km

SCALE 1:25 000

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 5

Dwg No. 36601

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

440 000mE

450 000mE

460 000mE

6 430 000 mN

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite II and I2
- Highly magnetic zones
- Moderate to highly magnetic units Probable Upper Albite unit
- Possible Suite I4, I5 boundary
- Possible Suite I5, I6 boundary
- Boundary for new magnetic units
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Synform
- Antiform
- Vertical to overturned synform
- Structural trend
- Interpreted magnetic strike
- 59 — Rock unit granite magnetic index
- No. of readings — mg.pt. EM anomalies
- MB-20

SHEET INDEX

SCALE 1:25 000

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 6

Dwg. No. 36602

470 000mE

480 000mE

6420 000mN

6410 000mN

Ea

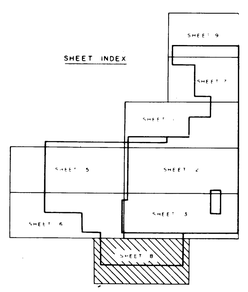
APPROXIMATE LIMIT OF ADELAIDEAN

COVER

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite 11 and 12
- Highly magnetic zones
- Moderate to highly magnetic units Probable upper Albite unit
- Possible Suite 14/15 boundary
- Possible Suite 15/16 boundary
- Boundary for low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Synform
- Antiform
- Overturned synform
- Probable fault
- Inferred major shear
- 59 RAb grid ground magnetic lines
- No. of channels MB-20 Input EM anomalies

SHEET INDEX



0 1 2 3 KM

SCALE 1:25 000

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 8

Dwg No. 36603

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

470,000 mE

480,000 mE

6,420,000 mN

6,410,000 mN

32°25'

140°35'

140°50'

LINE 64

LINE 65

LINE 26

LINE 27

LINE 28

LINE 29

LINE 30

BRISTOWE HILL

SOUTH HILL

DEY HILL

Watkins Shaft

Yard

Nilpena Well

Dam

"Nilpena" (ruins)

Nilpena Dam (old)

Loading Ground

Watercourse Dam

Second Watercourse Dam

Yard

Muggs Dam

Bore

Outfield Bore

IRON ROCK

Moldorky Dams

Hadium Dam

Roundhill Dam

Diversion Dam

Sheds

Dinnertime Dam

Four Corners Dam

Yard

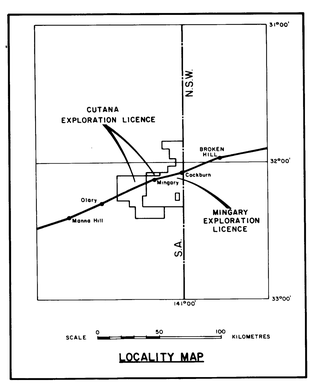
Surrender Dam

Paradise Dam

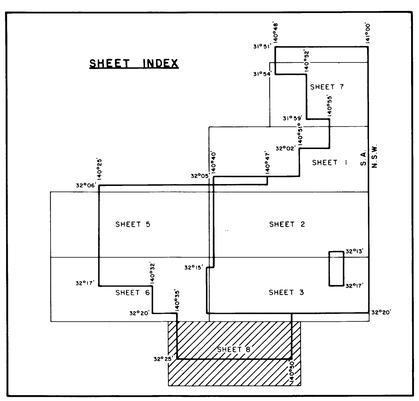
Reeds Dam

LEGEND

FM	Quartz feldspar biotite gneiss psammopelite - Composite (>50% melted metasediment)
FS	Quartz feldspar biotite psammite - Composite (>50% melted metasediment)
FE	Quartz feldspar biotite sillimanite gneiss pelite - Composite (>50% melted metasediment)
BM	Quartz feldspar biotite gneiss, sillimanite gneiss
Pl	Plagioclase quartz rock
Peg	Pegmatite
r	Retrograded
M1305	RAB Drill Hole location and number
bq	Blue Quartz
gr	Graphite
gar	Garnet



LOCALITY MAP



SCALE 0 500 1000 2000 3000 METRES

REVISION		SCALE 1:25,000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEO P.B.	CUTANA EXPLORATION LICENCE SOUTH AUSTRALIA
		DRAFT G.J.G.	
		CHECKED	RAB LINE LOCATIONS
		DATE Jan. 1990	
		1:250 000	SHEET 8
		1:100 000	
		MINING FIELD OR DISTRICT: Olary	DRG No. 3556

M.I.M. Exploration Pty. Ltd.
A.C.N. 009 661 118
A member of the M.I.M. Group of Companies

MIM EXPLORATION

Telephone: (09) 321 4888
Facsimile: (09) 321 2866

140 Colin Street,
West Perth W.A. 6005

FAX TRANSMISSION

to : MESA

location :

att : JEFF VALENTINE

fax no. : 08 274 1239

from: BRAD GEORGE

re : BALLARA GRAVITY (EL1772) - 92A1

no. pages,incl this sheet :

date : 14/12/94

message/comments :

As per your request additional details of this survey.

GPS - Sercel NR101 receivers x2
operating in differential mode

Gravity mete - Lacoste & Romberg Model G
N° G416

Gravity base, as on attached map.
value 979452.69

Cheers

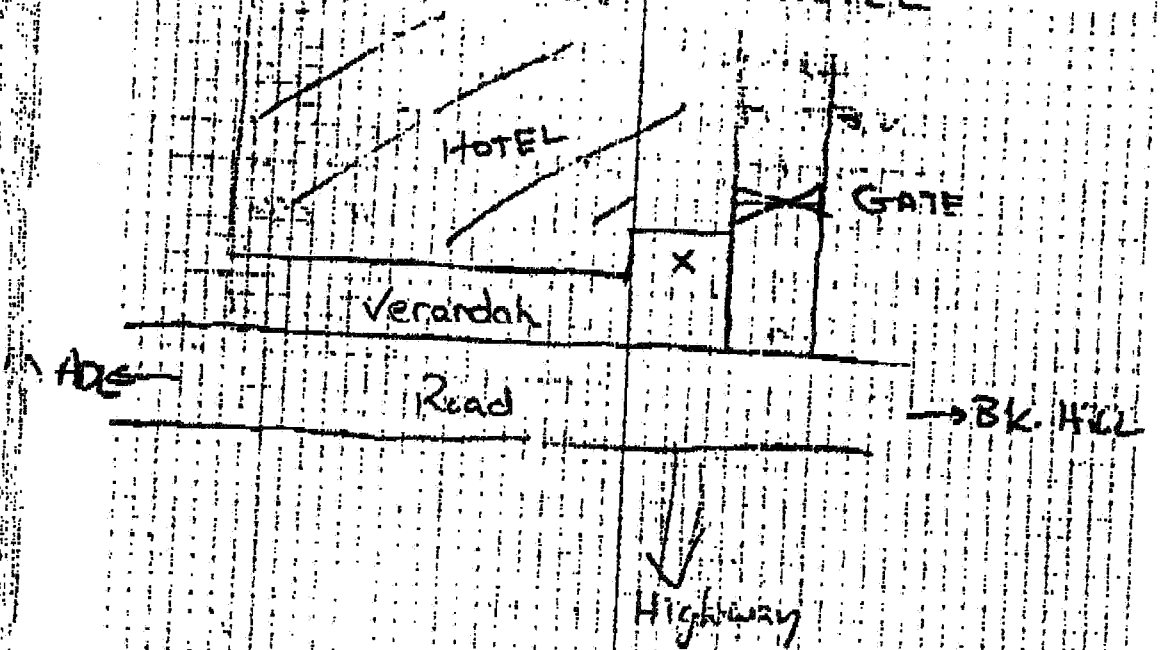
ENV. 6782

if you do not receive all pages, please advise immediately

COCKBURN GRAVITY

COCKBURN BASE:

LOCATED AT COBURN HOTEL



Just around corner, 1 foot back from door in centre.

meter number - G416

Unit FACTOR - 1.05603

-32°, 141°

MOUNT ISA MINES LIMITED

EL 1363 CUTANA

STATEMENT OF EXPENDITURE FOR THE PERIOD ENDED APRIL 27, 1992

Labour			719	
Materials			116	
Travel			360	
Miscellaneous			31	
Assaying			3,074	
Technical Consultants			2,952	
Geological & Geophysical			1,512	
Administration			296	
TOTAL – THIS PERIOD				9,060
PREVIOUSLY REPORTED CURRENT TERM				
Quarter	ended	22/01/92	19,668	
	ended			
	ended			
				19,668
TOTAL – CURRENT TERM				28,728
PREVIOUSLY REPORTED				244,093
TOTAL PROJECT EXPENDITURE TO DATE				**272,821**

A.E. Covacich
Manager Accounting – Exploration

CUTANA : EL 1772

REPORTING NO : 202BS

GEOLOGIST :

REPORTING PD : 28/10/91-22/6/92 (P6/92-P1/93)

	EXPENDITURE SUMMARY	P6/92-P8/92	P9/92-11/92	P12/92-P1/93	TOTAL
1.	LABOUR	1315	719	2415	4449
2.	MATERIALS	0	116	-40	76
3.	TRAVEL	461	360	1558	2379
4.	FREIGHT	282	0	0	282
5.	VEHICLE EXPENSES	0	0	213	213
6.	MAINTENANCE	100	0	0	100
7.	FUEL & OIL	0	0	0	0
8.	MISCELLANEOUS	159	31	4	194
9.	DRILLING & COSTEANING	4340	0	0	4340
10.	ASSAYING	269	3074	0	3343
11.	CONSULTANTS	7100	2952	6215	16267
12.	AERIAL & SURVEYS	0	0	0	0
13.	GEOLOGICAL & GEOPHYSICAL	0	1512	1000	2512
14.	EQUIPMENT HIRE	0	0	0	0
15.	DRAFTING	754	0	58	812
16.	TENEMENT COSTS	4298	0	-1211	3087
17.	DEPRECIATION	0	0	0	0
18.	LEGAL	0	0	0	0
19.	INSURANCE	0	0	0	0
20.	ADMINISTRATION	590	296	805	1691
	TOTAL	19668	9060	11017	39745

MOUNT ISA MINES LIMITED

EXPLORATION LICENCE NO 1772 "CUTANA"

PROGRESS REPORT
FOR PERIOD OCTOBER 27, 1991 TO JULY 22, 1992

1. TERMS AND CONDITIONS

Exploration Licence No 1363 "Cutana" of 769 km^2 located approximately 30 km east of Olary (Fig 1) was granted to Mount Isa Mines Limited on October 28, 1986 and expired on October 28, 1991. EL 1752 was granted to MIM Exploration Pty Ltd on November 18, 1991 and surrendered on January 17, 1992 on notification that EL 1772 was to be granted. EL 1772 was granted to Mount Isa Mines Limited on April 22, 1992.

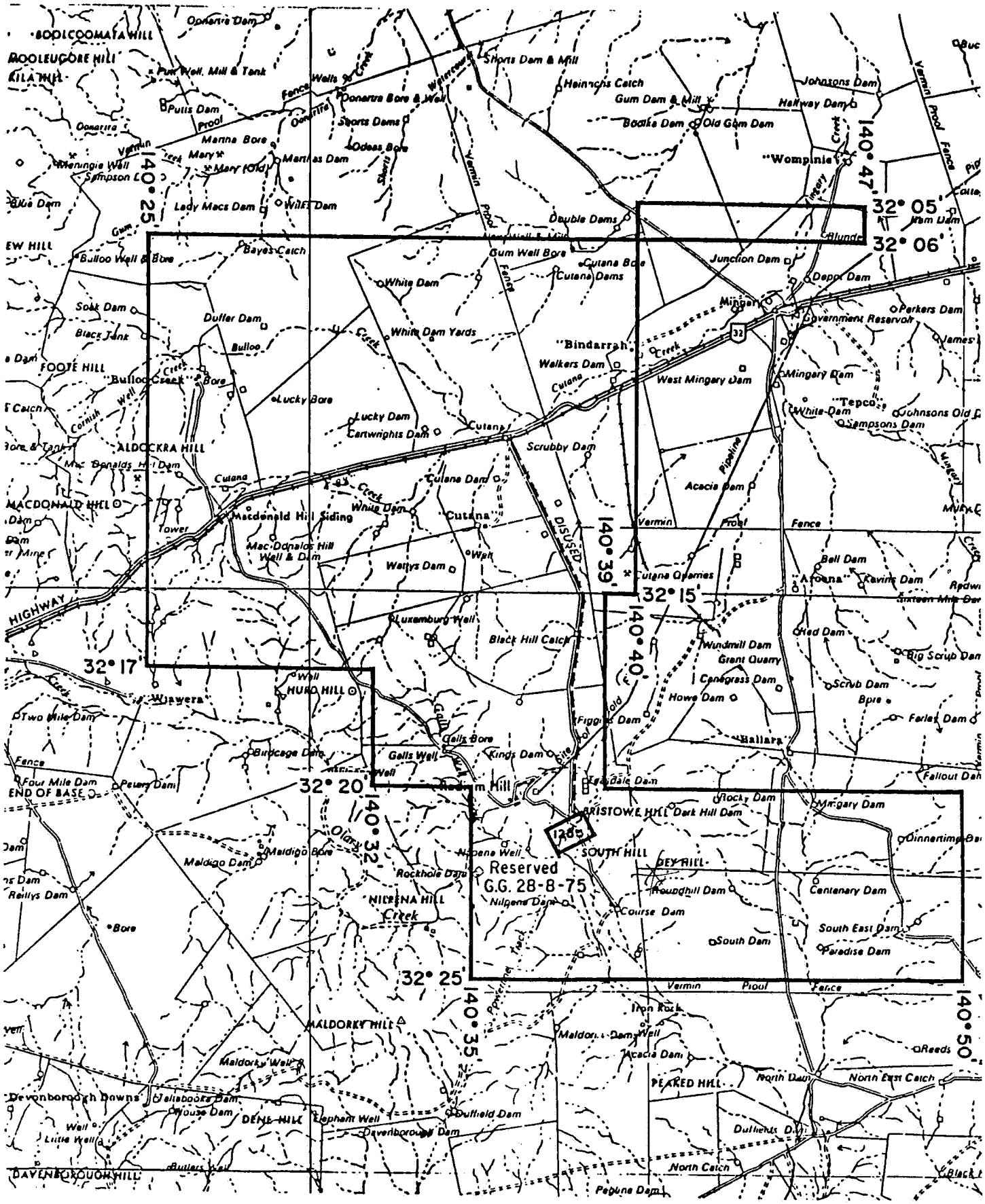
Work on the Licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration subsidiary MIM Exploration Pty Ltd.

The principal target is stratiform/ stratabound Pb-Zn mineralisation within the Bimba Formation, which is concealed throughout the area by extensive cover of Tertiary sands and clays.

2. EXPLORATION

The following activities were undertaken within EL's 1752 and 1772 in the period 17/10/91 to 22/7/92. No separate reporting has been undertaken for the surrendered EL 1752.

- RAB drilling on Lines 28 and 65 (Total 40 holes/ 650m).
- Lead Isotope Determination of a RAB sample by CSIRO.
- Detailed assaying of 271 RAB samples (Fe, Ba, Co, Na, As).
- 6 samples re-assayed for gold.
- Continuing review of MIMEX and Open File data.



E.L. 1772 "CUTANA"

FIG 1

3. RESULTS OF WORK UNDERTAKEN

3.1 RAB Drilling

The planned infill RAB drilling of the "Ballara Basin", a 2 x 12 km possible basin structure outlined on the aeromagnetics, commenced in November, 1991. The programme was temporarily suspended after drilling Lines 28 and 65 to allow further review of past and current results. Totals drilled were:

LINE 28	24 Holes	Total 438m
LINE 65	16 Holes	Total 212m

The Line 28 samples returned non coincident maxima of 430 ppm Pb and 290 ppm Zn. The Line 65 samples returned non coincident maxima of 15 ppm Pb and 105 ppm Zn.

Drill logs and an assay ledger are contained in Appendix A.

3.2 Lead Isotope Determinations

A RAB sample from Line 29 was sent to Analabs for Lead Isotope determination and the results sent to CSIRO for interpretation.

Sample	PB Assay	Rock Type	Location	Suite
742992	710 ppm	rFM tr mt	L29/ 600E	S 13/14

The CSIRO report stated that the results were not considered similar to those obtained from Broken Hill mineralisation. It was stated however that more detailed assaying was necessary for firmer conclusions.

Assessment of this result leads to the interpretation that the sample may contain remobilised lead, given it's position adjacent to a probable fault.

3.3 Reassaying

Useful correlations are often difficult in the fairly monotonous, poorly outcropping sequence encountered in RAB drilling. Experience in adjacent MIM licences has shown that the following extra assays show some correlation with stratigraphy (Na, Fe and ?Ba) and elevated Pb/Zn (Ba, Co and As).

A total of 271 samples were selected and reassayed. Results are presented in Appendix "A". Assessment is continuing.

2.4 Gold Reassaying

As a result of the reassaying and as part of the ongoing monitoring of samples with either high As, Cu or of amphibolite, the following 6 RAB samples were reassayed for gold.

Sample	Location	As	Cu	Au
730921	L28/3380E	59		<0.02
730929	L28/3060E	120		0.02
742893	L28/3420E	140		0.02
742950	L65/2400E	200		0.03
742952	L65/2480E	54		0.04
845545	L28/4020E		230	0.04

4. FUTURE WORK PROGRAMME

4.1 TEM Surveying

Two prospects previously investigated by Seltrust are considered to be worth further exploration.

Seltrust drilling at Ballara / Dey Hill probably did not completely test the outlined PEM anomalies. A programme of 7.7 line km of TEM is planned for the area. The other incompletely tested Seltrust area covers an old BH South IP anomaly north east of Toms Dam where 1.5 line km of TEM is planned.

4.2 Multivariate Statistical Analyses

The RAB data set, comprising 377 samples with up to 12 elements per sample, has been loaded onto Micromine at Perth Office. Detailed statistical treatment based on assays, rock type, accessory minerals and interpreted stratigraphic position is underway.

It is hoped that more subtle trends and tighter stratigraphic controls can be determined.

4.3 Data Review

The plotting and assessment of previous work continues. The SADME compilation of the BH South data has been purchased. It is hoped to obtain more "geological" information from this data - eg. possible IP response of the Suite 16 graphitic metasediments in covered areas.

A separate review of all copper / gold data is underway. The previous completed aeromagnetic interpretation is to be extended west beyond the Adelaidean unconformity.

4.4 Gravity Traverses

Three regional magnetic / gravity traverses are proposed across the "Ballara Basin". The three 10km traverses are planned for BH South lines 2660, 2700 and 2740S. These are designed to provide more detailed structural information on the possible basin structure as well as outlining possible mineralisation, amphibolites, BIF's and or garnet accumulations.

4.5 Regional Mapping

The Peak Hill fault is seen to separate Olary Domain rocks to the west from Broken Hill Domain rocks to the east. A programme of semi detailed mapping at 1:15,000 is proposed for the Broken Hill rocks east of the fault. This is an ongoing programme to be conducted over the next 6 months.

4.6 Drilling

Further drilling is awaiting the planned TEM surveying. Targets for deeper percussion/diamond drilling may be outlined. The continuation of the RAB drilling in the Ballara area is also awaiting the TEM and possible gravity traversing planned.

5. EXPENDITURE

An expenditure statement is attached.



I D KERR

APPENDIX A

DRILL LOGS AND ASSAY LEDGER

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km SW BALLARA, L 28

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							Fe	Ba	Co	Na	As
3075	4340 E	00-02	Clayey sand + ironstone	250							
	L 28	02-12	Fawn	40							
		12-24	Fawn green	50			270	85	120	0.5	20
			FM tr mt		845537	22 -24	5.11	464	26	1.110	4
3076	4300 E	00-02	Clayey sand + ironstone	300							
	L 28	02-10	Fawn	40							
		10-17	Fawn green	50			245	45	85	0.5	10
			rFM tr mt		845538	16 -17	4.42	646	20	1.910	2
3077	4260 E	00-02	Clayey sand + ironstone	350							
	L 28	02-06	Fawn +/- purple	40							
		06-22	Grey green	40			355	35	55	0.5	5
			FM / FE tr mt		845539	20 -22	4.64	619	19	1.930	1
3078	4220 E	00-02	Clayey sand + ironstone	300							
	L 28	02-08	Fawn green	40							
		08-18	Grey green	60			275	25	35	0.5	5
			BM 0.5% mt		845540	16 -18	4.89	512	18	1.060	1
3079	4180 E	00-02	Clayey sand + ironstone & gravel	300							
	L 28	02-10	Fawn +/- purple	40							
		10-24	Grey green	60			290	60	40	0.5	5
			BM tr mt		845541	22 -24	5.84	504	19	1.110	1
3080	4140 E	00-02	Clayey sand + ironstone	350							
	L 28	02-18	Grey green	60			395	15	35	1.0	10
			PEG (? Lf) tr mt		845542	16 -18	2.89	261	10	3.170	3
3081	4100 E	00-02	Clayey sand + ironstone	500							
	L 28	02-08	Fawn green	40							
		08-21	Grey green	50			385	45	80	0.5	10
			BM tr mt		845543	20 -21	5.06	546	16	1.130	2
3082	4060 E	00-02	Clayey sand + ironstone & gravel	400							
	L 28	02-10	Fawn green	30							
		10-18	Grey green	40			290	40	55	<0.5	10
			BM tr mt		845544	16 -18	5.07	466	14	1.130	1

OTHER DETAILS

TOTAL 162M RAB IN 8 HOLES, LINE 28

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 03/12/91

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 9 Km SW BALLARA, L 28

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
3083	4020 E	00-02	Clayey sand + ironstone & gravel	400							
	L 28	02-08	Fawn	40							
		08-21	Grey green	50			130	230	30	0.5	10
			BM 0.5% mt		845545	20 -21	4.66	485	13	0.749	14
3084	3980 E	00-02	Clayey sand + ironstone & gravel	300							
	L 28	02-08	Fawn	30							
		08-24	Grey green	40			260	95	35	0.5	5
			BM tr mt		845546	22 -24	5.70	565	15	1.150	2
3085	3940 E	00-02	Clayey sand + ironstone	300							
	L 28	02-12	Fawn	40							
		12-20	Grey green	60			215	60	45	0.5	5
			BM tr mt		845547	18 -20	5.27	544	18	0.951	1
3086	3900 E	00-02	Clayey sand + ironstone	380							
	L 28	02-12	Fawn	40							
		12-24	Grey green	60			140	35	45	<0.5	10
			BM tr mt		845548	22 -24	4.59	532	12	1.040	2
3087	3860 E	00-02	Clayey sand + ironstone	250							
	L 28	02-10	Fawn	40							
		10-27	Green fawn	40			40	25	75	1.0	430
			PEG		845549	26 -27	1.53	398	<10	2.270	26
3088	3820 E	00-01	Clayey sand + ironstone	250							
	L 28	01-06	Fawn	40							
		06-15	Fawn green	30			170	45	30	0.5	5
			BM tr mt		845550	14 -15	5.31	471	18	0.743	2
3089	3780 E	00-02	Clayey sand + ironstone	300							
	L 28	02-08	Fawn	40							
		08-21	Grey green	50			160	35	75	0.5	5
			BM tr mt		845551	20 -21	5.19	502	26	1.270	1
3090	3740 E	00-01	Clayey sand + ironstone	200							
	L 28	01-06	Fawn	40							
		06-18	Fawn green	30			175	50	60	0.5	5
			BM tr mt		845552	16 -18	4.91	528	24	1.270	1

OTHER DETAILS

TOTAL 170M RAB IN 8 HOLES, LINE 28

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 03&04/12/91

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 — LOCATION: 9 Km SW BALLARA, L 28 / 10 Km SSW BALLARA, L 65

HOLE NO "RAB N°	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
3091	3700 E	00-02	Clayey sand + ironstone	300							
	L 28	02-12	Fawn	40							
		12-33	Grey green	30			205	35	65	<0.5	5
			rBM tr mt		845553	32 -33	5.06	447	20	0.933	2
3092	3660 E	00-02	Clayey sand + ironstone	220							
	L 28	02-06	Fawn	40							
		06-21	Grey green	40			240	30	50	0.5	10
			BM tr mt		845554	20 -21	4.71	447	26	1.040	4
3093	3620 E	00-01	Clayey sand + ironstone	200							
	L 28	01-14	Fawn green	60			140	35	55	0.5	15
			PEG + BM tr mt		845555	12 -14	3.67	219	18	0.528	2
3094	2060 E	00-01	Clayey sand + ironstone	200							
	L 28	01-04	Grey	150			370	150	105	0.5	45
			PEG + FM		845556	2 - 4	3.41	471	15	2.130	6
3095	2020 E	00-01	Clayey sand	150							
	L 28	01-09	Fawn grey	40-70			325	30	195	0.5	10
			BM 0.5% mt		845557	8 - 9	6.24	340	30	1.150	7
3096	1980 E	00-01	Clayey sand + ironstone	300							
	L 28	01-04	Grey	200			290	55	80	<0.5	10
			FM 0.5% mt		845558	2 - 4	6.47	749	30	1.000	3
3097	1940 E	00-01	Clayey sand + ironstone	300							
	L 28	01-11	Grey green	50-150			360	30	290	0.5	10
			FM / BM 0.5% mt		845559	10 -11	8.90	366	52	1.730	3
3098	1900 E	00-02	Clayey sand + ironstone	320							
	L 28	02-10	Fawn green	50			235	30	135	<0.5	5
			FM / rFM 0.5% mt		845560	8 -10	4.42	439	20	0.644	1
3099	2720 E	00-02	Clayey sand + ironstone	220							
	L 65	02-06	Grey	50							
			FM / BM tr mt				255	20	35	<0.5	5
					845561	4 - 6	5.76	529	15	1.000	2

OTHER DETAILS
TOTAL 106M RAB IN 8 HOLES, LINE 28
TOTAL 6M RAB IN 1 HOLE , LINE 65

RIG TYPE W 600 — LOGGED BY IDK
DRILLER SILVER CITY DRILLERS — DATE 04/12/91

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 10 Km SSW BALLARA, L 65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
3100	2760 E	00-02	Clayey sand + ironstone	220							
	L 65	02-12	Fawn green	40			175	50	70	0.5	15
			FM / rFM tr mt		845562	10 -12	4.80	492	20	1.100	7
3101	2800 E	00-02	Clayey sand + ironstone	300							
	L 65	02-08	Fawn green	50			205	45	25	0.5	5
			BM		845563	6 - 8	5.74	402	20	1.100	2
3102	2840 E	00-02	Clayey sand + ironstone	220							
	L 65	02-08	Green grey	50			310	20	40	0.5	5
			FM		845564	6 - 8	4.78	549	19	1.600	1
3103	2880 E	00-02	Clayey sand + ironstone	400							
	L 65	02-04	Fawn	80							
		04-08	Green grey	90			170	35	25	<0.5	5
			FM tr mt		845565	6 - 8	5.08	500	18	1.190	3
3104	2920 E	00-02	Clayey sand + ironstone	350							
	L 65	02-09	Fawn grey	60			200	50	75	0.5	5
			FM / BM 0.5% mt		845566	8 - 9	4.82	481	19	1.260	2
3105	2960 E	00-04	Clayey sand + ironstone	150-400							
	L 65	04-12	Fawn green	40			440	80	100	0.5	10
			rFM tr mt		845567	10 -12	5.24	564	42	1.360	6
3106	3000 E	00-04	Clayey sand + ironstone	200-400							
	L 65	04-18	Fawn green	40			175	40	60	<0.5	5
			rBM tr mt		845568	16 -18	5.39	488	16	0.742	2
3107	3040 E	00-04	Clayey sand + ironstone	150-300							
	L 65	04-17	Fawn green	40			280	65	30	<0.5	5
			rFM / rBM tr mt		845569	16 -17	5.60	450	19	1.380	3
3108	3080 E	00-04	Clayey sand + ironstone	200-400							
	L 65	04-12	Fawn green	40			130	60	70	<0.5	5
			BM 0.5% mt		845570	10 -12	4.72	472	21	0.539	3
3109	3120 E	00-04	Clayey sand + ironstone	350							
	L 65	04-15	Fawn green	30			400	25	90	0.5	5
			FM / BM tr mt		845571	14 -15	5.49	349	27	1.630	3

OTHER DETAILS

TOTAL 119M RAB IN 10 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 04&05/12/91

CARPENTARIA EXPLORATION COMPANY PTY LTD
ROTARY AIR BLAST DRILL HOLE LOG

PROSPECT: CUTANA EL 1363 LOCATION: 10 Km SSW BALLARA, L 65

HOLE NO "RAB M"	GRID & LINE NO	DEPTH FROM-TO	DESCRIPTION	MAG SUS	SAMPLE NUMBER	DEPTH FROM-TO	Mn	Cu	Zn	Ag	Pb
							PPM / %				
3110	3160 E	00-05	Clayey sand + ironstone & gravel	350							
	L 65	05-18	Fawn green	40			295	25	100	0.5	10
			FM tr mt		845572	16 -18	4.53	416	22	1.080	7
3111	3200 E	00-05	Clayey sand + ironstone	350							
	L 65	05-13	Fawn green	40			270	40	55	0.5	15
			FM (?+/- CS) tr mt		845573	12 -13	3.46	368	16	0.272	7
3112	3240 E	00-04	Clayey sand + ironstone	300							
	L 65	04-14	Fawn green	40			120	20	105	0.5	10
			FM tr mt		845574	12 -14	4.14	454	15	0.686	6
3113	3280 E	00-04	Clayey sand + ironstone	300							
		04-10	Fawn clayey	60							
	L 65										
		10-21	Fawn green	40			140	35	45	<0.5	10
			FM tr mt		845575	20 -21	4.27	472	18	1.040	6
3114	3320 E	00-06	Clayey sand + ironstone	200-400							
	L 65	06-21	Fawn green	40			650	30	60	0.5	10
			FM tr mt		845576	20 -21	5.84	357	28	1.170	7

OTHER DETAILS

TOTAL 87M RAB IN 5 HOLES, LINE 65

RIG TYPE W 600 LOGGED BY IDK
DRILLER SILVER CITY DRILLERS DATE 05/12/91

MOUNT ISA MINES LIMITED

EL 1772 CUTANA

STATEMENT OF EXPENDITURE FOR THE QUARTER ENDED JULY 22, 1992

Labour	2,415	
Materials	(40)	
Travel	1,558	
Vehicle Expenses	213	
Miscellaneous	4	
Technical Consultants	6,215	
Geological & Geophysical	1,000	
Drafting	58	
Tenement Costs	−1211	
Administration	805	
TOTAL – THIS PERIOD		11,017
PREVIOUSLY REPORTED CURRENT TERM		
ended		
ended		
ended		
		0
TOTAL – CURRENT TERM		11,017
PREVIOUSLY REPORTED		272,821
TOTAL PROJECT EXPENDITURE TO DATE		**283,838**

A.E. Covacich
Manager Accounting – Exploration

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TECHNICAL REPORT

No. 2024

TITLE

ANNUAL REPORT
FOR EXPLORATION LICENCE 1772 "CUTANA"
FOR THE TWELVE MONTH PERIOD
APRIL 22, 1992 TO APRIL 21, 1993

AUTHOR ID KERR

DATE MAY 1993

COPY No. 5

M.I.M. EXPLORATION PTY LTD

TECHNICAL REPORT

No. 2024

TITLE:	**ANNUAL REPORT FOR EL 1772 "CUTANA" FOR THE TWELVE MONTH PERIOD APRIL 22, 1992 TO APRIL 21, 1993**
ISSUING DEPARTMENT:	**EXPLORATION**
AUTHOR:	**ID KERR**
INVESTIGATIONS CONDUCTED BY:	**ID KERR**
SUBMITTED BY:	**SH ROBINSON**
DATE:	**MAY 1993**



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Approved for Distribution:

.....

S.H. Robinson
Regional Manager - WA & SA

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M.I.M. EXPLORATION PTY LTD

TECHNICAL REPORT NO. 2024

EL 1772 "CUTANA" ANNUAL REPORT FOR THE TWELVE MONTH PERIOD APRIL 22, 1992 TO APRIL 21, 1993

1. SUMMARY

Exploration in EL 1772 Cutana in the 12 months to 21 April 1993 has outlined a number of high priority gravity, IP and magnetic targets for Pb/Zn and Cu/Au deposits.

Interpretation work undertaken involved the ongoing review of previous exploration by Seltrust (mapping & sampling) and Mines Exploration / BH South / SADME (IP surveys and reprocessing, aeromagnetics).

Previously collected RAB samples were reassayed for a suite of trace elements to refine stratigraphic subdivisions based on magnetics.

Field work comprised gravity surveying, a TEM survey, 1:15000 mapping and ground magnetics plus ground checking of high priority geophysical targets. Mapping outlined further tourmaline occurrences at Ballara and, just north in Mingary EL, a quartz gahnite outcrop was located associated with the Peak Hill Fault.

SADME sponsored Soil Gas Surveying was conducted at four sites with inconclusive results. It is hoped that SADME can arrange resurveying under more favorable, dryer conditions.

A Land Management Consultant inspected the area to advise on how to minimize disturbance during operations and also provide information for later rehabilitation.

Recommended further work includes repeat IP traversing of "Priority One" Pb/Zn and Cu/Au anomalies, further mapping and sampling. Diamond drilling of the Ballara Syncline prospect is recommended. An incompletely tested Seltrust PEM anomaly at the Mingary Copper Mine requires further ground magnetics and EM (note: this anomaly extends into the Mingary EL).

2. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" of 769 km^2, located approximately 30 km east of Olary (Fig. 1), was granted to Mount Isa Mines Limited on October 28, 1986 and expired on October 28, 1991. EL 1752 was granted to M.I.M. Exploration Pty. Ltd. on November 18, 1991 and surrendered on January 17, 1992 on notification that EL 1772 was to be granted. EL 1772 was granted to Mount Isa Mines Limited on April 22, 1992. No separate report was submitted for EL 1752 which was "incorrectly" applied for and granted in the name of MIM Exploration Pty. Ltd..

The Licence was renewed on 11 March 1993 and is current to 21 October 1993.
Work on the Licence is being undertaken on behalf of Mount Isa Mines Limited by its exploration arm M.I.M. Exploration Pty. Ltd.

The principal targets are

- Stratiform / stratabound Pb-Zn mineralization within the Bimba Formation and Broken Hill Group, which are concealed throughout the area by extensive cover of Tertiary sands and clays.

- Cu-Au-magnetite deposits of the Copper Blow style in Willyama/Thackaringa Group equivalents.

- Epigenetic Au-Cu deposits in the Premier - Luxembourg area.

3. CURRENT LAND ACCESS

Access to the southern half of the Licence on the Tepco / Ballara Pastoral Licence will, at the strong request of the Pastoralist, be severely restricted during the period June to August, 1993. This was requested to minimize any accidental loss of newborn lambs. The exploration of the highly prospective Ballara structure will thus be delayed.

4. RESULTS OF WORK UNDERTAKEN

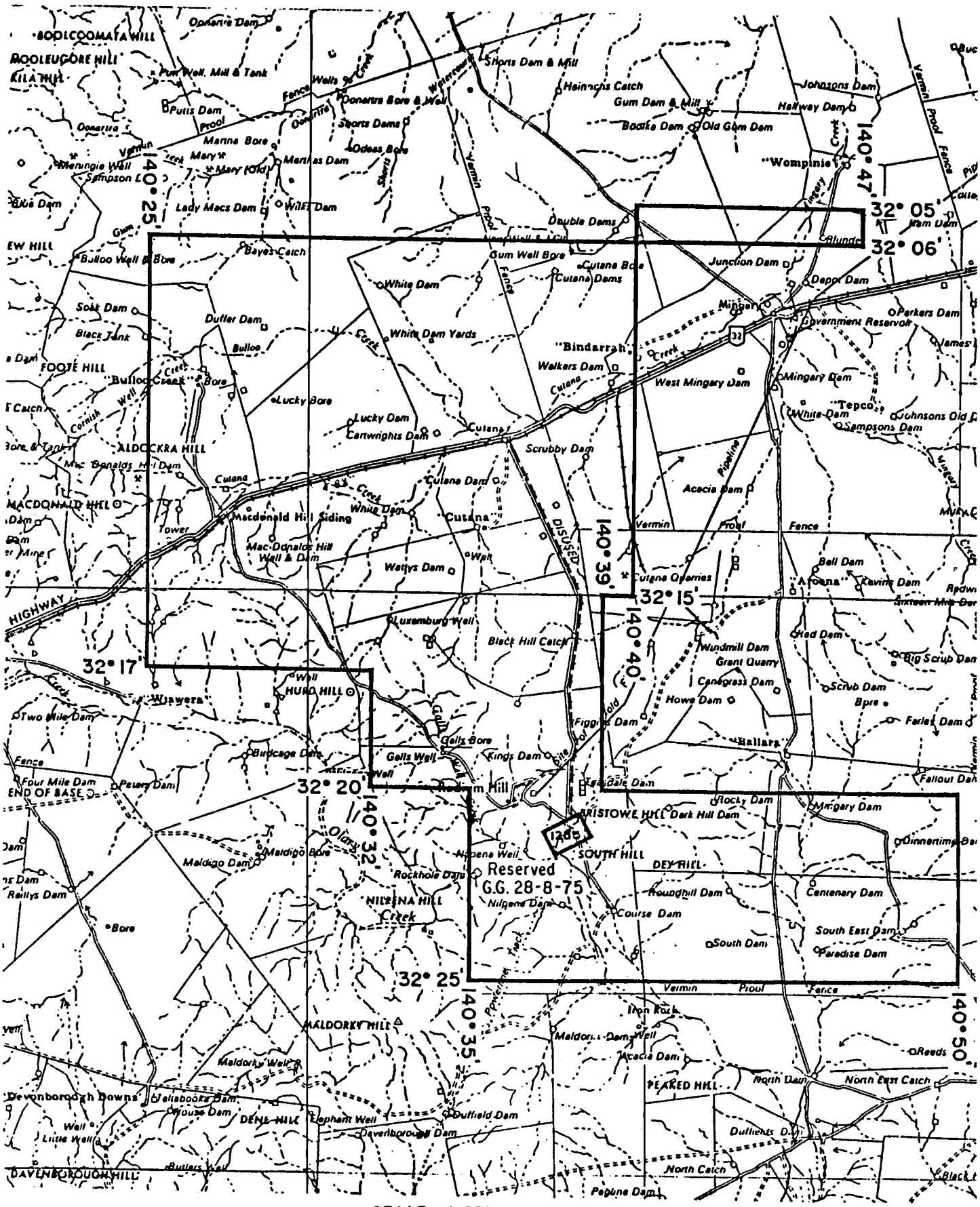
The following activities were undertaken within EL 1772 in the 12 month period 22/04/92 to 21/04/93. This is the first report under the new SADME annual system. The last formal report submitted to the Department was for the period to 22 July 1992.

- 7.7 km of TEM at Ballara / Dey Hill.

- A Land Management study outlining rehabilitation methods.

- Data Review & Compilation plus 1:15000 Mapping.

- Interpretation of aeromagnetic and IP data.


Reserved
G.G. 28-8-75
"Wompinie"
"Bindarrah"
Tepco
Mingary
Cutana
Macdonald Hill Siding
Wawera
Nilpena Hill
Maldorry Hill
Devonborough Downs
Davenborough Hill
Foote Hill
Aldockra Hill
Macdonald Hill
Bristowe Hill
South Hill
Dey Hill
Peaked Hill
Hallara
Vermin Proof Fence
Pipeline Track
Old Gum Dam
Junction Dam
Parkers Dam
Government Reservoir
West Mingary Dam
Mingary Dam
Scrubby Dam
Acacia Dam
Windmill Dam
Grant Quarry
Howe Dam
Scrub Dam
Farlet Dam
Fallout Dam
Dark Hill Dam
Roundhill Dam
Centenary Dam
Course Dam
South Dam
South East Dam
Paradise Dam
Nilpena Dam
Rockhole Dam
Maldigo Dam
Maldigo Bore
Reillys Dam
Four Mile Dam
Two Mile Dam
Petery Dam
Burtcage Dam
Kings Dam
Eggdale Dam
Figgis Dam
Dutfield Dam
Elephant Well
Devenborough Dam
Neptune Dam
Iron Rock
Reeds
North Dam
North East Catch
North Catch
Black Hill Catch
Luxemburg Well
Wellys Dam
Cutana Dam
Cutana Bore
Cutana Dams
Cutana Quarries
Lucky Dam
Lucky Bore
Cartwrights Dam
White Dam
White Dam Yards
Walkers Dam
Double Dams
Gum Well Bore
Bayes Catch
Duffer Dam
Bulloo Creek Bore
Bulloo Well & Bore
Lady Macs Dam
Marina Bore
Marinas Dam
Odessa Bore
Shorts Dams
Shorts Dam & Mill
Heinrichs Catch
Gum Dam & Mill
Boatke Dam
Johnsons Dam
Halfway Dam
Donarra Bore & Well
Donarra Dam
Pulls Dam
Wells Dam
Waterhouse Creek
Bulloo Creek
Cornish Well
Black Tank
Salt Dam
Meringie Well
Simpson Dam
Mary
Mary (Old)
Wiltee Dam
Mac Donalds Hill Dam
Mac Donalds Hill Well & Dam
Tower
Gells Bore
Gells Well
Nilpena Well
Rockhole Well
Maldigo Well
Maldorry Well
Little Well
Butlers Well
Mouse Dam
Wallabooka Dam
Dene Hill
Bore
Well
Creek
Fence
Pipeline
Disused
Vermin Proof Fence
Gum
Yard
Sampsons Dam
Johnsons Old
Bell Dam
Arcoona
Ravine Dam
Red Dam
Big Scrub Dam
Scrub Dam
Fallout Dam
Dinnertime Dam
Mingary Dam
Clocky Dam
Eggdale Dam
Figgis Dam
Kings Dam
Howe Dam
Canegrass Dam
Windmill Dam
Grant Quarry
Black Hill Catch
Luxemburg Well
Wellys Dam
Cutana Dam
Cutana Bore
Cutana Dams
Cutana Quarries
Scrubby Dam
Acacia Dam

- 71.8 km of gravity and 80.0 km of ground magnetics.
- Initial field checking of gravity, IP and magnetic anomalies.
- Soil gas surveys.
- Re-Assaying of RAB samples.

4.1 TEM Surveying

A review of Seltrust's exploration indicated that firstly, their Dey Hill drilling may not have totally tested their outlined PEM anomalies and, secondly, the anomalies were open ended.

The area was retested with a total of 7.7 km of TEM, run as 11 x 700m lines, 200m apart. An extract from the contractor's report giving survey details and results is attached as Appendix "D". TEM profiles are attached.

An anomaly occurring at 6550N, 4975E was field checked and covered by soil gas readings. Anomalies located at the northern and southern ends of the survey are ascribed to contact effects related to the Peak Hill Fault.

An incompletely tested Seltrust PEM anomaly at the Mingary Copper Mine has yet to be followed up with TEM and ground magnetics.

Note that the proposed TEM survey at Toms Dam mentioned in the previous report is in fact in the adjacent Mingary EL.

4.2 Land Management Study

As the general area was and is still under severe drought conditions, a Land Management Consultant was engaged to provide a preliminary report on the impact of MIM Exploration's work and suggest possible practices to minimize these effects plus give an indication of what rehabilitation could be effectively used during the exploration programme. The report is attached as Appendix "C"

Note however that the drought has been partly broken since these inspections and many previously obvious grid / drill lines are now largely overgrown. The lines should, however, re-emerge when these annual grasses die off next summer.

4.3 Data Compilation and Mapping

Data compilation undertaken has included a review of all mapping, sampling, geophysics and drilling undertaken by Seltrust in the area east of the Peak Hill Fault. In addition, a consultant geophysicist undertook a complete review of the Mines Exploration Ltd. / BH South IP data that had been recently recompiled by SADME.

This review indicated that the Ballara - Dey Hill area had been incompletely explored. The Seltrust PEM survey was open at both ends. This area was resurveyed with TEM, as detailed in Section 4.1. The extra percussion holes drilled by Seltrust in the vicinity of their PTM 19 (+ 1% Zn) are thought to have intersected mineralization related to the Peak Hill Fault. This fault bounds the interpreted Ballara Syncline. The review of IP data (Section 4.4) outlined a 6km long anomalous zone along the fault. The area was subsequently surveyed by regional gravity traverses (Section 4.5).

There is only scattered outcrop of Willyama rocks to the south east of the Peak Hill Fault. Whilst Seltrust mapping and sampling had outlined a number of smaller outcrops not located by initial SADME mapping, there were a number of "blank" areas and there was no apparent attempt to provide a stratigraphic framework.

Some 2 months has been spent in regional 1:15000 mapping of this area as part of a larger 5 month project covering the Cutana and Mingary EL's of MIM Exploration. This data is still being compiled and will be presented in the next report.

The most interesting discovery of this project was a previously unmapped tourmalinite adjacent to the Peak Hill Fault, south west of Dey Hill, in an area of quartzo-feldspathic rocks and thin amphibolites. Note also that fine tourmaline was noted in pelitic metasediments east of Dey Hill and was also recorded, along with gahnite, in Seltrust's hole PTM 19. Along strike from this zone, just inside the adjoining Mingary EL, a previously unmapped quartz gahnite and calc silicate belt was outlined.

4.4 Aeromagnetic and IP Interpretation

The Consultant geophysicist extended the aeromagnetic interpretation westwards to complete the coverage on sheets 5 & 6. This study (Appendix "A") has outlined 12 iron formation related Cu/Au targets both in Willyama (Copper Blow type) and in the Adelaidean (Luxembourg type). Details of initial follow up are given in Section 4.5.2.

Previous selection of IP "anomalies" from the Mines Exploration survey was done on the basis of data presented as Apparent Resistivity and Metal Factor. Selection of anomalies for this current study was made on the basis of the SADME reprocessed data presented as apparent resistivity and percentage frequency effect. The number and priority of targets outlined are summarized below and shown on the enclosed plans at 1:25000 and 1:100000.

Priority 1	Pb/Zn	One	Cu/Au	Three
Priority 2	"	Four	"	Three
Priority 3	"	Four	"	One
Priority 4	"	One	"	One

4.5 Gravity and Ground Magnetic Surveying

4.5.1 *Ballara Area*

It was initially planned to conduct 3 x 10 km regional gravity traverses across the interpreted Ballara structure. Recent advances in GPS positioning have considerably increased the number of stations that can be read per day. The Ballara structure was thus able to be covered by 11 regional grid lines (numbers A (75) to K (85)) at approximately 1.2km spacing. A total of 71.8km of this grid is in Cutana with the remaining 9.8km being parts of lines in the adjacent Duffield EL.

The grid was covered by 200m spaced gravity traverses and ground magnetics were read at 10m spacing. All profiles are attached.

Two Priority One and two Priority Two gravity anomalies were selected by the consultant geophysicist, as detailed in Appendix A.

The "Priority One" Ballara Syncline anomaly (Lines 81 & 83) occurs to the north of a Seltrust PEM anomaly that was rechecked by MIMEX. TEM surveying. The gravity anomaly, plus an as yet untested IP anomaly, occurs "basinward" of the + 1 % zinc mineralization outlined by Seltrust that is now considered associated with the Peak Hill Fault. Whilst mapping has outlined some thin, weakly to moderately, magnetic amphibolites in the area, ground magnetics revealed no significant anomalies and the amphibolites are not considered a significant gravity source. Depth to top estimates for this 1.0 mgal anomaly are 400-500m for line 81 and 250m for line 83.

The priority one Ballara Anticline anomaly (Line 82) mirrors the Ballara Syncline anomaly. There is an associated weak untested IP anomaly and the ground magnetics do not indicate any amphibolite or ironstone source. The depth to top estimate for this 1.0 mgal anomaly is 400m.

The "Priority Two" Diversion Dam anomaly (Line 78, 1.4 mgal) lies to the south west on the east flank of the Ballara anticline. Once again there is an associated weak, untested IP anomaly and no indication of amphibolite or ironstone source. Estimated depth to top is 200m.

The "Priority Two" Black Fellow Creek anomaly (Line 84, 1.4 mgal) is associated with two BHS IP anomalies and a Seltrust PEM anomaly considered incompletely tested by Seltrust. The zone is also a possible extension of the Mingary Copper Mine area. Estimated depth to top is no more than 200m.

An additional reconnaissance ground magnetic line (Line 86) of 2.2 km was read across a magnetic feature beneath Adelaidean cover south of Ballara. The profile is interpreted to represent a Suite 13 unit (Willyama equivalent) beneath thin Adeladean cover.

4.5.2 *North Cutana Area*

During the extension of the aeromagnetic interpretation (Section 4.4), twelve magnetic features were identified as copper-gold targets and one as a lead zinc target (Appendix A).

Three reconnaissance lines (tot 7.0 km) of ground magnetics were read (Lines 95, 96 & 97) over three of the Cu/Au targets - M4, M8 (Green & Gold mine) and M7.The prospective strongly magnetic feature was located in each case. Further follow up is planned.

4.6 Soil Gas Surveys

A series of soil air CO_2/O_2 measurements were conducted on MIM tenements during September and December 1992 by a SADME supported consultant. It was proposed that oxidizing sulphide mineralization would produce a recognizable anomaly in surface soils (readings taken at 75 cm below surface). Some success had been obtained with this technique elsewhere in South Australia. In the Cutana EL, four areas in the general Ballara area were tested - Seltrust PDH, Ballara TEM anom, Line 28 and Line 29.

As much of the area to be tested in MIM licences has 2 to 40m of younger clayey cover (? impermeable to gas), additional tests proposed by MIM Ex were undertaken ie. readings were taken at 150 cm depth in backfilled RAB holes. The premise was that these holes had penetrated the clay cover and, as they had been backfilled for at least 12 months, gas contained in the holes should be equilibrated with gas released from the Willyama basement rocks intersected.

The results are to be presented in a SADME Report Book whose number is as yet unknown as only a draft report has been received to date. The draft results are not included here. The proposed title of the Report Book is "Soil Air CO_2/O_2 Project Progress Report VI Olary Area - I.G. Watmuff & B.J. Morris".

Readings were taken adjacent to 5 Seltrust percussion drill holes - 19, 21, 22, 34 & 35. Hole 19 recorded 1.03% Zn over 2m and up to 5% sulphide per 2m interval. The old holes could not be directly accessed for measurements of possibly equilibrated gas present in the hole. Readings had to be taken immediately adjacent to the collar pipes at depths of 90 to 150 cm. The lack of any anomalous response was attributed to site contamination and uncertainty of gas pathways. Resampling using gas inside theholes was recommended.

A traverse was run across the TEM anomaly located at 6500N (Section 4.1) with measurements at 75 cm depth. Whilst a slight peak was obtained, a vegetation source cannot be discounted.

Samples were taken from 150 cm depth in backfilled RAB holes over a 1650 ppm Zn anomaly on Line 28 and a 710 ppm Pb anomaly on Line 29. No anomalous response was obtained but, as for all measurements taken in MIM tenements in the Olary area, "unseasonal" rain had increased vegetation and caused some rain ponding. This can significantly affect any soil gas readings.

No clear anomalies attributable to sulphides were recorded. It was recommended that readings be redone when the country dried out and that the Seltrust PDH area be resampled for in hole gas. SADME has been requested to arrange and fund this additional testing of the method.

4.7 Re-Assaying

As previously reported, a suite of extra elements (Fe, Ba, Co, Na, As) was selected for reassaying the majority of existing RAB samples in an effort to provide stratigraphic correlations in what are often fairly monotonous sequences. Since that initial reassay, work elsewhere has shown that K assays are also helpful in this regard. Appendix "B" lists the updated total assay data now held on RAB drill samples. Plotting and assessment is continuing.

5. FUTURE WORK PROGRAMME

5.1 IP Surveying

A line of dipole-dipole IP (100m spacing) is planned over the IP / Gravity Ballara Syncline anomaly (priority 1 Pb/Zn) and IP anomalies outlined at Radium Hill West, Galls Well and Luxembourg (all priority 1 Cu/Au).

The programme will have sufficient flexibility to allow further lines at any prospect and the surveying of associated priority 2 anomalies in the Radium Hill - Luxembourg area. Further surveying is dependant on ongoing results.

5.2 Ground Magnetic and TEM Surveying

Further ground magnetic surveys will be undertaken to define the magnetic Cu/Au targets outlined in the northern and central parts of the licence.

Further ground magnetics and TEM are recommended for the incompletely tested Mingary Cu Mine area.

5.3 Mapping and Sampling

Further 1:15000 mapping is to be undertaken along the Peak Hill Fault at Ballara in an attempt to trace the outlined tourmalinite and, just north in Mingary EL, gahnite. The area will be traced south towards the Adeladean cover and into the adjacent Duffield EL.

Mapped "epidote rocks" on the northern boundary of the EL are to be located and sampled.

A line of reconnaissance soil sampling will be undertaken on each anomaly to be IP surveyed.

5.4 Drilling

A 300m diamond drill hole is planned to test the Ballara Syncline anomaly. Targeting will be made on the basis of the planned IP surveying.

Percussion &/or diamond drilling is planned for the best Cu/Au anomalies outlined in the Radium Hill - Luxembourg area.

6. EXPENDITURE

An expenditure statement is attached.

APPENDIX A

SUMMARY REPORT ON GEOPHYSICAL SURVEYS AND INTERPRETATION COMPLETED IN THE SIX MONTHS FROM JULY TO DECEMBER 1992 FOR THE MINGARY, CUTANA AND DUFFIELD EXPLORATION LICENCES, SOUTH AUSTRALIA

Author: P. Elliott
Elliott Geophysics Pty Ltd

Date: January 1993

SEPARATE VOLUME

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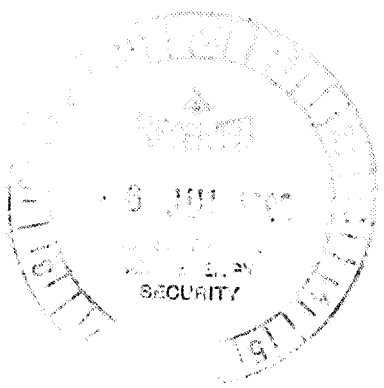
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Fax: (08) 379 3305
Telex: AA88713

Summary report on geophysical surveys and interpretation completed in the six months from July to December, 1992, for the Mingary, Cutana, and Duffield Exploration Licenses, South Australia.

Author: P J Elliott, B. Sc. (Hons), M.Sc.

Client: Mt Isa Mines Exploration Pty Ltd

Date: January 1993



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SUMMARY

The aeromagnetic interpretation for the Mingary, Cutana, and Duffield E.L.'s has been extended, and some highly prospective exploration targets defined.

A detailed study of the Mines Exploration Ltd. (BHS) data has been made and targets defined on the basis of location and PFE (Percent Frequency Effect). The reprocessed BHS data has provided new information on much of the southern part of the licensed area. Previous targets had been defined on the basis of Metal Factor which led to some high quality targets being ignored.

A semi-regional gravity survey was completed in November, 1992. This has defined four high priority targets east of the Peak Hill Fault, within the Broken Hill Block. These are all lead - zinc - silver targets and include the Ballara Syncline which has an associated 1% zinc anomaly along the Peak Hill Fault.

A well defined belt of magnetic rocks, referred to here as the "Copper Belt" and encompassing the Mutooroo Copper Mine, has been upgraded as a prospective zone for locating further copper-gold deposits. These are best located using a combination of TEM, ground magnetics, and shallow target drilling.

There are a number of "Green and Gold" type magnetic features which require follow-up for further gold deposits. The Luxembourg Goldfield also rates highly on the basis of previous mining, magnetic signature, structural setting, and IP response. It is likely that deeper mineralisation has been missed in this region because much of the early mining was shallow.

1.0 INTRODUCTION

The following report summarises geophysical interpretation and survey work which was completed in the second half of 1992, and in January, 1993. The reported work was performed on three Exploration Licences currently held by Mt Isa Mines Exploration Ltd. These being: Mingary (EL 1624), Cutana (EL 1772), and Duffield (EL 1810) which are located some 50 to 100 km SW of Broken Hill and immediately west of the S.A./N.S.W. border, in S.A. (figures 1 & 2).

The work completed includes:

- A revised detailed aeromagnetic interpretation
- A detailed study of previously surveyed regional IP data
- Prospect based TEM/magnetic surveys and interpretation
- Regional grid based gravity traverses and interpretation
- Regional grid based and independent magnetic traverses

Where information has been recorded in previous interim reports it is not repeated here but instead the reader is referred to the relevant reports. These reports include:

- Aeromagnetic interpretation (Elliott 1992a)
- TEM/magnetic surveys (1992) (Elliott 1992b)
- Regional IP surveys (1960's) (Tucker 1992)
- Notes on stratigraphy, structure, and metallogenesis of the Willyama Super Group, Broken Hill–Olary Region (Archibald 1992)

2.0 AEROMAGNETIC INTERPRETATION (EXTENSIONS)

An interpretation report on detailed aeromagnetic survey data over the Mingary, Cutana, and Mundi–Mundi licence areas, was presented by Elliott, 1992. The report (Elliott, 1992a) described the method by which the various magnetic patterns and units are classified and ascribed to different rock types. Also presented in the report were interpretation plans covering many of the sheet areas included in this report. The current description will only cover extensions to the earlier interpretation and should be read in conjunction with the previous report.

2.1 Survey Description

A plan showing the boundaries of the different aeromagnetic surveys used to assist the revised interpretation is presented as figure 3. The western areas are covered by three different surveys which are juxtaposed. The two main surveys were flown by Geoex in 1976 and 1977. The eastern area was flown in 1976 at a height of 110m, and a flight line spacing of 250m. The western area was flown at a height of 100m and a flight line spacing of 300m. The slight difference in height is noticeable by the difference in amplitude and anomaly width across the joint boundary. There is also an apparent N–S shift between the two surveys. No attempt has been made at this stage to adjust the two surveys relative to each other.

The data was obtained as gridded data on a 75m cell pattern. It was image processed to provide enhancements to the data and contoured.

The western half of the southern area was covered by a detailed survey made for Dominion Mining Ltd. The eastern half of the southern area was only covered by an older analog survey flown from Longreach in 1969. The Longreach survey was flown by Geophysical Resources Development Co. for Longreach Group Management Pty Ltd. It was flown at a 90m MTC and 400m line space (E–W). Information was collected as analog data.

2.2 Sheet 2

The updated interpretation plan for sheet 2 is presented as figure 4. The eastern edge of this sheet has been filled in to highlight the position of the Suite 13 and 14 rocks relative to adjacent sheet areas. It shows the Suite 13 units as a more magnetic package extending up from the south and referred to as the "Copper Belt" (see section 3).

Features of interest include an isolated "bullseye" anomaly referred to as the Pipe Anomaly (section 3.2.9) which may be a kimberlite; and an anticlinal structure trending SW–NE consisting of suite 13 units. There may be a mafic intrusive central to this structure which may be of interest for platinoid minerals. The suite 14, 15 and 16 units in the SE corner are still subject to interpretation and may turn out to be older rock units. A few dolerite dykes cutting across strike have also been added to this part of the sheet.

2.3 Sheet 3

The updated interpretation plan for sheet 3 is included as figure 5. Only the NE corner of this sheet has been modified. The dominantly suite 13 units have been extended to the north to meet sheet 2. The presence of generally more continuous magnetic units, their higher magnetic amplitude, and the occurrence of a number of small copper deposits adjacent to these units have suggested that the package is equivalent to the Thackeringa Group of the Broken Hill area. They have therefore been retained as a suite 13 package.

2.4 Sheet 5

The updated interpretation plan for sheet 5 is included as figure 6. There is only minor geological control on this interpretation. Hence there is a fair amount of ambiguity into which suites the various magnetic units are placed. Detailed prospect maps would help to refine the interpretation. However, the same criteria has been used for dividing the suites as was used for the areas to the east (Elliott, 1992a).

The dominant magnetic features occur near MacDonald Hill. There have been some quartz–magnetite units mapped in this area which have been placed in the middle of the Thackeringa Group of rocks by the geological survey. All the magnetic units in this area have therefore been interpreted as suite 13 of which the more magnetic units are probably BIF's or quartz–magnetite units. Their group signature seems to be reflected (like a mirror image) by the ironstone units in the Adelaidian to the west. There has obviously been a large source of iron in this region, over a long period of time. It is possible that the ironstone units within suite 13 may be at any level within the Thackeringa Group and may even be diachronous. The area as a whole may be good location for Copper Blow style, copper – gold – magnetite deposits.

Also within the MacDonald Hill area, are good prospects for epigenetic style gold (copper) deposits. This can be followed using an Archaean BIF/greenstone model for epigenetic gold deposits. The area has been under a great deal of tension during the formation of the Adelaidian basin to the west. This is signified by the block faulting parallel to and including the MacDonald Fault. There are a number of conjugate fault sets related to this event which have prepared the ground for invasion by gold bearing solutions emanating from the basin and nearby areas. These solutions would be oxidised within fractures through the more magnetic units, resulting in deposition of gold. Occasionally this will have occurred where fracturing has been extensive and the supply of gold has been sufficient to produce a sizeable deposit. The original supply of gold would be difficult to define so the main exploration guide would be anomalous gold in areas of intense fracturing within the dominant magnetic units. The MacDonald Hill Fault itself and its intersections with various magnetic units provides a number of targets (eg. MacDonald Hill Mines). There is also a major cross–cutting WNW–ESE fault which transects the area and passes through the Cutana Homestead. The Green and Gold copper mine and the Wilkins Prospect are located near this fault.

Also on sheet 5 is a small "bullseye" anomaly associated with the Green and Gold deposit. Similar anomalies numbered 11, 6 and 7, occur within this region and

provide ready targets for immediate follow-up. The anomalies may be due to localised enrichment of magnetite which may also host copper and gold.

Another copper-gold prospect is nominated as target area 4. This is in the north-west quadrant of sheet 5, and is an unusually intense magnetic zone compared to the surrounding areas. Obvious discrete target areas are the dislocations caused by faulting, but the main body of the magnetic unit would be prospective for a Copper Blow style target.

Target area 2 on sheet 5, extends onto sheet 6 and has the same prospectivity, especially adjacent to the MacDonald Hill Fault.

2.5 Sheet 6

The updated interpretation plan for sheet 6 is presented as figure 7. The original interpretation for this sheet has been carried further to the west. This has helped define the western edge of the Willyama Complex such that the SW half of the sheet is dominated by Adelaidian meta-sediments. The western edge of the Willyama is marked by complex arrangements of normal block faulting and cross-cutting transverse faults, making the boundary irregular.

Central to the sheet is the Luxembourg Goldfield. This is nominated as target area M1. This appears to be a focal point for the major synclinal axes within the Adelaidian basin to the west. Extrapolation of these axes provide a locus centred on the Luxembourg Goldfield. Being adjacent to a regional hinge zone plus the addition of block faulting would have placed this area under a great deal of strain. Fracturing is therefore intense and has provided good ground preparation for invasion by mineralised fluids. The developing synclines to the west would have provided a pathway up their axes for basinal fluids to migrate. Thus we have a regional focus for the migration of mineralising fluids into a highly fractured repository. Prospective areas within this zone would again be iron rich units such as amphibolites (eg. Luxembourg and Queen Bee Mines) and BIF and quartz-magnetite units (but not exclusively).

The basin model draws attention to a basin margin fault running parallel to the MacDonald Fault. This is named here as the Plumb Fault. It may have acted as both a collector and conduit for mineralised fluids from the Adelaidian basin flowing up slope until reaching the fault along which they have migrated closer to the existing surface. Winkler's Lead Mine may be a small example of such mineralisation. The lead-zinc from Lower Proterozoic rocks beneath the Adelaidian basin may have acted as a source in this case. The Plumb Fault and adjacent areas have therefore been nominated as target zone M3.

The distribution of Middle Proterozoic granites along the MacDonald Fault is difficult to discern from the magnetic pattern, so the published geology has been used as a guide. These granites may have played a role remobilising gold and copper within the adjacent Lower Proterozoic rocks.

2.6 Sheet 8

The revised interpretation plan for sheet 8 is included in figure 8. Most changes have been made to the southern half of sheet 8 extending down into the Duffield E.L. The shape and position of the boundary between the Upper and Lower Proterozoic has been altered and plotted in more detail.

The Adelaidian units generally have an E–W to WSW–ENE trend compared to a more SW–NE trend for the Lower Proterozoic units. Due to this difference in strike orientation, it appears that one of the suite 13 units may be traceable beneath the Adelaidian units immediately to the south of the unconformity. This would make it fairly shallow where it can be traced. Ground magnetic profiles were run across this feature and other selected features to help determine depth beneath Adelaidian cover. These are reported in section 5.

There are some interesting structures within the Upper Proterozoic which may provide gold targets for later exploration. However, at this stage it can be seen that the Lower Proterozoic can be traced into the Duffield E.L. and should be followed-up for zinc-lead targets.

2.7 Summary

A 1:100,000 composite Aeromagnetic interpretation plan covering the entire licence areas is presented as figure 9. The target areas referred to in this report on sheets 5 and 6 are included as table 2, with priorities.

The most prospective target area encompasses the Luxembourg Goldfield which also hosts some prominent IP anomalies. The Shallow potential has been well tested but there are good prospects for deeper mineralisation.

The Green and Gold style magnetic features also represent good targets which can easily be tested.

Copper Blow style targets are also represented by strongly magnetic zones cut by major faults.

3.0 INTERPRETATION OF BHS–IP DATA

3.1 Survey Description

Extensive regional IP (Induced Polarisation) traverses were surveyed by Mines Exploration Ltd between 1962 and 1966. These were reported in the various quarterly reports by Mines Exploration, a subsidiary of Broken Hill South Pty Ltd (BHS). A report summarising the results of these surveys is presented by Tucker (1992), for SADME (South Australian Department of Mines and Energy). This report also describes the reprocessing of these data by SADME.

The extent of the regional traverses are recorded in figure 10. Along with some of the anomalies followed up by BHS. The surveys are distributed over the 2 main grids which are of different orientation: Olary–Broken Hill Grid; and Radium Hill Grid. A number of small grids were emplaced for follow–up of anomalies.

Most of the regional traverses were surveyed with a dipole–dipole array using a 500 foot dipole length (152m) and an n–spacing of 1 to 4. The lines were generally 4,000 feet apart (1219m). Other dipole sizes were used for follow–up work. Approximately 2000km of surveying were completed with the 500 foot dipole size.

The original data were presented as Apparent Resistivity and Metal Factor. These were reprocessed by SADME to Apparent Resistivity and Percent Frequency Effect (PFE). Fraser Filters and Mixed Plot Filters were also applied.

The advantage of looking at PFE is that it represents the raw data and can be directly related to the chargeability of the half–space independent of resistivity. Whereas Metal Factor is a multiple of the ratio between PFE and resistivity. It is therefore strongly influenced by resistivity and can lead to false anomalies or the disappearance of significant PFE anomalies. It is obvious this has happened in a number of cases where good PFE anomalies associated with high apparent resistivities have been overlooked.

3.2 IP Interpretation Sheet 2

The IP interpretation for sheet 2 is summarised on figure 11.

3.2.1 Pinery Hill Anomaly (Pb–Zn–Ag) P2

The PH (Pinery Hill) Anomaly is situated over the Peak Hill Fault similar to the Ballara (17% PFE), and Ballara North (12% PFE) features. It faithfully follows the shape of the PHF (Peak Hill Fault), and an inferred shear further to the east. It is located between two E–W faults which may be old growth faults, thus isolating sulphide deposition. The anomaly is strongest on line 1900S (11% PFE) near an E–W fault which has altered the shape of the anomaly. Although parallel lines have been gridded over the anomaly there is no record of drilling on the BHS 1:100,000 summary plan.

The prospect data should be examined to see if the anomaly has been adequately tested.

3.2.2 Pine Creek Anomaly (Pb–Zn–Ag) P2

The PC (Pine Creek) Anomaly was detected on only one reconnaissance line (1700S). It has an obvious deep source with a surface response of 8 – 10% PFE. It may have been tested by DDH PC–1. The prospect data should be examined to see if the anomaly has been adequately tested.

3.2.3 Mutooroo West Anomaly (Pb–Zn–Ag) P3

The MW (Mutooroo West) Anomaly on line 1860S, shows a broad symmetric response of about 7% PFE. This may be a response from the main anomaly to the SW. The prospect data over the Mutooroo West Mines should be examined to see if the anomaly has been adequately tested.

3.2.4 Hartford Dam North Anomaly (Pb–Zn–Ag) P3

A complex IP response on line 1860S approximately 1.5 km north of Hartford Dam sits over a major E–W fault. There does not appear to be any previous follow–up on this anomaly. It should be investigated as a discrete target. A short RAB drill

traverse should be run to check for geochemical expression.

3.2.5 Dams South Anomaly (Pb–Zn–Ag) P4

This anomaly is an isolated high located at 5700W on line 1860S. It has a deep source associated with an S15/16 contact. However, the highest value of 9.6% may be due to noise in the data which would reduce the anomaly to 5% or 6%. A section of the line should be repeated to see if the anomaly is valid.

3.2.6 Pine Creek East Anomaly (Cu–Au) P2

A pronounced 8% to 10% PFE IP anomaly is located at 4500W on line 1620S over an internal contact in S13. The anomaly should be re–defined for later drill tests.

3.2.7 Pine Creek SE Anomaly (Pb–Zn–Ag) P3

The PCSE (Pine Creek SE) Anomaly is well defined by a weak 7% PFE anomaly located at 40250W on line 1620S over a fold hinge within S14. A RAB traverse is recommended to check for a geochemical signature.

3.2.8 Pipe Anomaly (Diamonds) P4

The Pipe Anomaly is a high resistivity zone associated with a discrete magnetic feature which may indicate a kimberlite pipe. The anomaly should be located on the ground with ground magnetics and its detailed signature checked.

3.2.9 Milky Dam Anomaly (Pb–Zn–Ag) P3

This anomaly was picked previously but does not appear to have been tested. It has a 9% PFE, and is located about 700m NW of Milky Dam. Prospect data should be checked for adequate coverage.

3.2.10 Formational Responses, SE corner of Sheet 2 (Pb–Zn–Ag) P4

The dominantly suite 13 package in the SE corner of the sheet is more active with respect to IP responses (eg. background of 3% to 4% c.f. 1% to 2% elsewhere). This may indicate a change from dominantly granite gneisses (or psammites) to more iron rich sediments (psammo pelites, pelites).

3.3 IP Interpretation Sheet 3

There are a few weak anomalies (5% to 10% PFE) which are located on the interpretation plan (figure 12) but these will not be discussed here. However, there are 9 zones of anomalous PFE which are worth nothing.

3.3.1 Copper Belt (Cu–Au)

This belt encompasses a package of dominately Suite 13 rocks which run from the NE corner of Sheet 3 (figure 12) to the central SE corner. The belt contains:

- Mutooroo Copper Mine
- Trinity Copper Mine
- Trinity Anomaly P2
- Trinity Dam South Anomaly P2
- Miracle Dam Anomaly P3
- Miracle Dam South Anomaly P3
- Kings Dam Anomaly P2

The magnetic units are probably a collection of amphibolites and magnetic psammo pelites, representing the equivalents of the Upper Thackeringa Group. The anomalies listed above should be relocated and traced out along strike, accompanied by bedrock sampling.

3.3.2 McBride's Syncline (Pb–Zn–Ag) P2

There are a number of weak to moderate IP anomalies in and around this open fold structure consisting of Suite 14 and 15 units. The strongest known response being McBride's Dam Anomaly (11% PFE).

Drilling testing has already shown these units to contain anomalous levels of zinc, to about 1%. The structure should be treated as a whole. Previous IP and geochemical results highlight it as a regional anomaly of some 6.5km by some 4km. Most of the anomalous results occur north of a major E–W shear (Coultra Shear Ext. ?). This may have acted as a growth fault in the past.

Existing IP anomalies should be followed–up with in–fill IP and bedrock sampling. McBride's Dam Prospect data should also be reviewed.

3.3.3 Peak Hill Fault (Pb–Zn–Ag) P2

The Ballara North Anomaly sits over the Peak Hill Fault which appears to be weakly mineralised at many sites along its length. Although some follow–up of the Ballara North Anomaly has been completed. There are no obvious drillhole test results. The strongest end of the anomaly (north–12% PFE) has not been detailed. The anomaly can be traced discontinuously down to the Ballara Anomaly. This zone should be viewed as a regional anomaly and investigated with deeper detection methods.

The BNA (Ballara North Anomaly), Peak Hill Fault, and Ballara Anticline should be covered by a more detailed grid. The gridded area should be explored using gravity, ground magnetics, and large loop TEM. The IP lines to the NE of BNA should be extended over the fault.

3.3.4 Ballara Anticline (Pb–Zn–Ag) P1

There are a number of weak to moderate IP responses on both the western and eastern sides of the BA (Ballara Anticline). The core itself does not appear to be anomalous. Some discrete anomalies along line 2340S over S14, S15, and S16 units should be traced along strike. Gravity, magnetics, deep EM, and bedrock sampling would be the best way to investigate this structure.

3.3.5 Aroona Dam Anomaly (Pb–Zn–Ag) P1

A doubtful 33% PFE anomaly at the end of the line (figure 12), if real, represents a top priority target. The original data should be checked for validity. If the anomaly is valid then detailed IP and drilling as follow–up are recommended.

3.3.6 Grassy Dam Anticline (Pb–Zn–Ag) P2

A structure within Suite 14 and 15 units has a few weak to moderate anomalies on its limbs (NE corner of sheet 3, figure 12). Particular anomalies on line 1780S should be covered by in–fill IP, especially on each side of the regional line to close off anomalies.

3.3.7 Formational Responses SE Corner of Sheet 3 (Pb–Zn–Ag) P4

The best lines across this zone of higher IP responses should be RAB drilled or covered with bedrock sampling (eg. line 1940S).

3.3.8 Bonython Syncline (Pb–Zn–Ag) P3

A syncline in the SW corner of the sheet and the contact between S13 and S14 units has two well defined anomalies. A new grid with better orientation to the syncline should be established and a more detailed IP survey carried out. The new grid should be located between Dark Hill Dam and Figgins Dam. RAB drilling across this contact may help to assess its prospectivity.

3.3.9 Dark Hill Dam East Anomaly (Pb–Zn–Ag) P3

A prominent anomaly at the end of line 240N (8% PFE) has a deep source near a major faulted contact. A small IP grid may help to define this feature.

3.4 IP Interpretation, Sheet 6

The IP interpretation for sheet 6 is summarised on figure 13.

Previous work on this trend should be checked and if inadequate, then better coverage of the northern anomaly on line 320N should be made and the source tested.

3.4.5 Mulga Hill Corridor (Cu–Au) P3

There is a general E–W trending corridor of weak IP anomalies 5–9% passing through the Mulga Hill Mines and Cemetery Prospect. These may either represent small zones of mineralisation or off–line sources. This corridor is low priority at this stage unless later work upgrades some anomalies. A few anomalies appear to be shear related.

3.5 IP Interpretation Sheet 8

The IP interpretation for sheet 8 is summarised on figure 14.

3.5.1 Ballara Anomaly (Pb–Zn–Ag) P1

The BA (Ballara Anomaly) represents mineralised sections of the Peak Hill Fault and Ballara Syncline to the east. Intersections of over 1% zinc (in marmatite) indicate this is a regional geochemical anomaly as well. The PHF fault has been gridded and covered with more detailed IP, EM, and ground magnetics. This work plus drilling information reveal this as a mineralised section of the PHF. However, there are IP anomalies further to the north and east that have not been tested within the Ballara Syncline itself. Also two anomalies on line 2700S show anomalous responses on each limb of the Ballara Anticline.

A recent MIM Exploration gravity and magnetic survey has been completed along reconnaissance lines some 1.2 km apart. This has revealed a gravity anomaly located over the Ballara Syncline to the east and associated with an obvious IP response. This is discussed in more detail in section 4.

3.5.2 Paradise Dam South (Pb–Zn–Ag) P3

The PDS (Paradise Dam South) Anomaly has a deep source located on the southern edge of the E.L. (line 2660S) and occurs near the Willyama/Adelaidian contact.

Possibly over an Adelaidian unit. A small IP grid would help to define this anomaly.

3.5.3 Black Fellow Creek Anomaly (Pb–Zn–Ag) P3

This anomaly is best defined on line 2460S as a 7% PFE anomaly with a deep source. The prospect data should be checked for adequate follow–up during previous work programs.

3.5.4 Black Fellow Creek South Anomaly (Pb–Zn–Ag) P3

The BFCS (Black Fellow Creek South) Anomaly has a deep source with surface response of 5% to 7% in a suite 16 package. A small IP grid would better define this feature.

3.5.5 Farley Catch Anomaly (Pb–Zn–Ag) P4

The FC (Farley Catch) Anomaly cuts across the stratigraphy and may represent a mineralised fault structure. The best lines should be RAB drilled to check for anomalous geochemistry.

3.5.6 Dey Hill West Anomalies (Pb–Zn–Ag) P3

Two anomalies to the NW of Dey Hill need to be checked. Bedrock sampling may be adequate.

3.5.7 Watkins Anomaly (Cu–Au) P2

There is a well formed weak to moderate anomaly through an area of mine workings. This should be better defined in case a prime mineralised zone has been missed. A small IP grid would aid definition.

3.5.8 Watercourse Dam Anomaly (Pb–Zn–Ag) P2

The WCD (Watercourse Dam) Anomaly is a moderate 11% PFE anomaly at the end of a line and coincides with a fence, but the latter is an unlikely cause in this case. It could be an extension of the Ballara Anomaly. Line 000N on the Radium Hill Grid should be extended to the SE.

3.6 Target Summary

There are many IP responses of different amplitudes described in the previous sections which require follow–up. However, due to constraints on resources, it is necessary to place priorities on them. A list of joint IP/magnetic targets in order of priority is included as table 1.

The copper–gold targets exist in two major zones:

- The most impressive is the Radium Hill to Luxembourg area along the MacDonald Fault. This hosts 3 priority 1 targets and 5 priority 2 targets.

- The other area is a little more difficult and is referred to as the Copper Belt. This appears to mainly coincide with suite 13 magnetic units. It encompasses the Mutooroo Copper Mine. Many of the targets in this belt have been classified as priority 2 and 3 targets.

The lead – zinc – silver targets are mainly focussed between the Peak Hill Fault and the Copper Belt. The most important of these currently being the Ballara Syncline/Anticline as a Priority 1 target. Secondary target areas include the McBride's Syncline (sheet 3) and Grassy Dam Anticline (?) (sheet 3). Other targets along the Peak Hill Fault have been classified as priority 2 and 3 (table 1).

There are a number of moderate IP responses along the PHF (Peak Hill Fault) including (sheets 2, 3 and 8):

- Ballara (27% PFE) P1
- Ballara North (12% PFE) P2
- Pinery Hill (11% PFE) P2

The strongest of these is the Ballara Anomaly at the southern end of the Fault (sheet 8).

In addition to the stronger responses there are a number of weaker responses which

In addition to the stronger responses there are a number of weaker responses which probably indicate where there is weak mineralisation associated with the fault or in some cases may indicate short strike length (<1km) zones of mineralisation which are off line.

As well as the anomalies directly associated with the fault there is often enhanced IP responses east of the fault. (basinward?). This is particularly noticeable for the Ballara anomaly.

It is likely that the Peak Hill Fault may have been active during deposition of sediments to the east. Long strike length anomalies (>1km) may indicate restricted zones between E–W growth faults (similar to Broken Hill). There are many similarities between the Peak Hill Fault and the Globe Vauxhall Shear, including orientation, age, mineralisation etc.

There are two types of target along the PHF.

(a) The most important targets are located basinward to the main anomalies. Assuming the main anomalies have been adequately tested. Investigation of the basinward targets will require deep sensing techniques. For example:

- Gravity and Magnetics
- Deep IP (large dipoles)
- Deep Em (large loops)

followed by the deep drilling:

- Deep percussion holes (early stages)
- Diamond holes (follow–up to mineralisation)

The targets should be classified in order of encouragement. Ballara is first priority and is currently being investigated.

(b) The second type of target along the fault consists of short strike length targets (<1km) but which may have considerable depth extent. To locate these, some of the weaker anomalies along the fault should be traced off–

line by running short IP lines either side of the reconnaissance lines on which the anomalies are seen. A few of these anomalies may improve off-line and generate good drill targets (eg. line 1540S, 49250W, deep source with about 8% PFE).

The targets listed in table 1 only pertain to the area covered by the regional IP surveys. Targets in other areas selected on the basis of magnetics are mentioned in sections 2, 4 and 5 and summarised in Table 2.

4.0 INTERPRETATION OF BALLARA GRAVITY SURVEY RESULTS

4.1 Survey Description

A grid based semi-regional gravity survey was carried out in November, 1992, by Geoterrex Pty Ltd. A summary plan of the line positions is presented as figure 16. A line spacing of 1.2km was used and 11 lines surveyed. Stations were read every 200m.

The lines were levelled using a differential GPS arrangement which enabled lines to be covered rapidly with sufficient accuracy for this type of survey. The aim was to have sufficient line density to enable large targets at depth to be detected which could then be covered in more detail by in-fill lines.

4.2 Survey Results

The gravity results are presented as Bouguer Gravity profiles for three different densities, along with elevation, and free air corrections. The lines are labelled A to K and presented as figures 18 to 28. A contour plan for Bouguer Density 2.67 g/cc is also presented as figure 17.

Ground magnetic profiles were also completed along the gravity lines using a 10m station spacing. These are presented as figures 29 to 39. The magnetic profiles are presented for comparison with the gravity profiles and are not discussed in detail in this report except where there is an important correlation with a specific gravity anomaly.

4.2.1 Ballara Syncline (Pb-Zn-Ag) P1 (Sheet 8)

An IP anomaly was located near Dey Hill by BHS. The average PFE is 15% to 17% and is strongest on line 2700S (see section 3.3.1 and figure 12). There is a second anomaly on line 2660S which has not been followed up.

The main IP anomaly near Dey Hill was followed-up by BHS and Seltrust, and more recently MIM Exploration (Elliott, 1992b). This appears to be due to weak

sulphide mineralisation in a fault zone (1% zinc). It gave a negative TEM response for a recent in-loop survey (Elliott, 1992b).

The gravity anomaly located by the latest survey occurs to the north of the area tested. It appears to be away from the fault and more over the Ballara Syncline. This is a magnetically low area, so the gravity source is unlikely to be amphibolites or ironstone units. It correlates well with an IP trend of 14% to 15% PFE. The latter may indicate a sulphide halo above a massive sulphide deposit.

The gravity anomaly was modelled for lines G & I. The model for line G gave a depth of 400-500 m to the top of the sources. The Line I model gave a depth of 250m. This would indicate a southerly plunge. An estimated tonnage for the source assuming dimensions of 400m x 400m x 200m and a density of 4 kg/cu.m. would be: 128 Mt.

4.2.2 Ballara Anticline (Pb-Zn-Ag) P1 (Sheet 8)

A gravity anomaly of 1.0 mgal is located on the eastern flank of the Ballara Anticline. It correlates well with the magnetic structure and may be located between two growth faults. It mirrors the Ballara Anomaly on the western flank of the anticline (Line H).

There is only a weak IP anomaly associated with the anomaly of about 5% PFE (2580S).

The modelled depth of the anomaly is 400m, and it has a half width of 450m, assuming a 1.3 kg/cu.m. density contrast.

As there is no direct correlation with magnetic anomalies, the source is unlikely to be an amphibolite or ironstone unit. The estimated tonnage for the source, assuming dimensions: 350m x 120m x 350m and a density of 4 kg/cu.m., is 59 Mt.

4.2.3 Diversion Dam Prospect (Pb–Zn–Ag) P2 (Sheet 8)

A gravity anomaly on line D is located on the western flank of the Ballara Anticline, south of Diversion Dam. It is a 1.4 mgal anomaly with a half–width of 300 m. The modelled depth is 200m assuming a 1.3 kg/cu.m. density contrast. Estimated tonnage for a source of dimensions 200m x 300m x 300m and density contrast 4 kg/cu.m. is 72 Mt.

There is an associated weak IP response of about 5% PFE (2700S) located to the west. Line 2700S should be extended over the anomaly.

As there is no direct correlation with magnetic anomalies, an amphibolite or BIF source is unlikely.

A more detailed gravity survey followed by 3D modelling would provide a good DDH target.

4.2.4 Black Fellow Creek Prospect (Pb–Zn–Ag) P2 (Sheet 3 and 8)

The Black Fellow Creek Prospect sits over the boundary between Sheets 3 and 8. Centred on about 479500E, 6421000N. It encompasses at least two IP anomalies which have been covered by a small grid (BHS?). The anomalies have recorded amplitudes of approximately 7% PFE which may explain why BHS did not test the anomalies with percussion of diamond drill holes. The sources to these anomalies are deep (220m to 300m?) and therefore may not have any associated geochemical signature at the surface. Another possible reason for the lack of drilling.

The IP anomalies are recorded on BHS regional IP lines 2500S and 2460S (figure). On 2460S the eastern anomaly sits near the boundary between S14 and S13. The S13 package here appears as a parasitic fold at the edge of a large structure which is an interesting structural/stratigraphic setting.

The gravity anomaly on line J is well defined. It has a peak amplitude of 1.4 mgal at about 4000E. Half width estimates place the source at about 250m depth. A model places the top of the source at 200m depth but it may be shallower.

The estimated tonnage for the modelled source, assuming dimensions 140m x 250m x 250m and a density of 4 kg/cu.m., is 35Mt. At 250 m depth a diamond or deep percussion hole would be required to test the target.

4.2.5 Ballara North Prospect (Pb–Zn–Ag) P3 (Sheet 3)

The gravity anomaly on line K, centred on 400E is located on the eastern side of the Peak Hill Fault, offset from the IP anomaly. There is a strong correlation with topography and the anomaly is fairly sharp. It is likely this feature may be a topographic effect.

The Ballara North Prospect should be assessed on the basis of magnetics and IP alone, at this stage. The gravity anomaly was not modelled.

5.0 THICKNESS OF ADELAIDIAN COVER

The magnetic traverse discussed here are in relation to the thickness of Adelaidian cover near the unconformity. The location of these traverses is shown on sheet 8 (figure 14). Other regional traverses will be discussed in a later report.

5.1 Magnetic Profile 86

Profile 86 is along a SE oriented track immediately north of the new position for the unconformity. It is centred on a suite 13 folded unit. A sharp anomaly peaks at 1350E (figure 40). It has a maximum half width of 75m but the source is probably much shallower (ie. near surface source). The anomaly from the ground is offset by 200 – 250m to SE of the aeromagnetic feature. The offset is probably due to a location error in the airborne survey. This cover is very thin within the Cutana E.L. The source in this case is a possible BIF or magnetite quartzite.

5.2 Magnetic Profile 87

Profile 87 is located about 400m south of Line A of the gravity survey. It crosses two magnetic trends within the Duffield E.L. The main magnetic response (figure 41) appears to come from the western trend. Source depths are estimated at less than 40m. Cover is thin in this part of the licence.

5.3 Magnetic Profile 88

The field notes indicate that this traverse went to the north of iron rock, therefore the location of the latter must be incorrectly marked on the 1:25,000 topographic base plan. A strong 5500 nT anomaly measured over the inferred southern extension of a suite 13 anomaly is typical of Adelaidian ironstones (figure 42). However, the trend direction indicated an extension of a magnetic trend from profile 86 which is identified as Lower Proterozoic.

The maximum half width is 200m. The source is therefore less than 200m depth and probably less than 100m. Ironstone outcrops at the surface. Although there is a strong likelihood that the anomaly represents folded Adelaidian ironstone units, it fits in well with the trend direction of the Willyama to the north.

Should the Ballara Syncline prove to be highly prospective, then this package should be tested by stratigraphic drilling. If it is Lower Proterozoic at depth then the Willyama basement will be at less than 200m depth elsewhere in this vicinity.

5.4 Magnetic Profile 89

Profile 89 is 2km NE of Duffield bore. A number of magnetic packages which give sharp responses (figure 43) indicate shallow sources. There is poor correlation between the signatures on the ground profile and the airborne magnetic pattern.

The magnetic trend in the airborne survey is an average of many smaller trends. The general SW trend may be misleading. However, should it correlate with the SW Willyama trend to the north, then it is likely that the Willyama basement is shallow (ie. less than 200m).

5.5 Gravity Lines BGA and BGB

The gravity profiles along these lines demonstrate a regional increase from near the centre of the Ballara Anticline towards the SW (figures 18 and 19). A flattening of the profile occurs as a plateau over the SE magnetic trends. There is no sudden change at the inferred Willyama/Adelaidian unconformity which would indicate substantial block faulting. This raises hopes of thin Adelaidian cover south of the unconformity.

6.0 CONCLUSIONS

Survey work and studies completed over the last six months have enabled the licence area to be divided into zones prospective for lead – zinc – silver or copper – gold. Prospective areas are highlighted on the basis of aeromagnetics, IP/magnetics, or IP/gravity, thus providing three target classifications. The existence of previous mine workings and geochemical anomalies are taken into account where possible.

The initial detailed aeromagnetic interpretation is virtually complete. However, magnetic boundaries can be located more precisely as further ground profiles are completed. Some of the magnetic units may be reclassified as more information is collected.

Exploration targets highlighted by the more recent aeromagnetic interpretation (Table 2) include "Green and Gold" type targets on sheet 5. An Archaean BIF/greenstone model also applies to the BIF units overlapping both sheets 5 and 6. The MacDonald Hill Fault is still a valid target area for gold mineralisation, on both sheets 5 and 6. A parallel fault to this, the Plumb Fault, may have acted as a conduit for remobilised lead – zinc mineralising fluids. The Luxembourg Goldfield is probably the most prospective area selected from the aeromagnetics because of its structural setting.

A study of the aeromagnetics over the southern sheet area (sheet 8) indicates that the Willyama/Adelaidian unconformity, on sheet 8, may not have suffered from severe block faulting. A few Willyama magnetic units appear to be traceable beneath Adelaidian for some distance form the unconformity.

The region covered by early regional IP traverses is correlated with the aeromagnetic interpretation. This correlation has yielded a number of prime targets that demand to be tested. These are listed in table 1. High priority copper – gold targets occur adjacent to the MacDonald Hill Fault and also within the Copper Belt which encompasses the Mutooroo Copper Mine. High priority lead – zinc – silver

targets occur with the Broken Hill Group equivalents east of the Peak Hill Fault. The Ballara Syncline and Ballara Anticline are of particular interest.

The gravity survey completed in November, 1992 has revealed four anomalies which can be correlated with IP anomalies. These all occur within the Pb–Zn belt encompassing the Ballara Syncline and Ballara Anticline. These targets range in depth from 200m to about 500m and, although they are therefore unlikely to have a specific geochemical signature at the surface, the associated IP anomalies and elevated zinc values within the region indicate possible mineralisation. As there are no obvious magnetic anomalies directly related to theses targets, amphibolites are an unlikely source.

7.0 RECOMMENDATIONS

New information has been provided by the recent gravity survey, therefore targets arising from this survey should be given top priority. These target areas should be covered by in-fill gravity and preferably IP as well. Soil sampling and RAB may be attempted but these are unlikely to yield satisfactory results due to the depth of the targets. Deep percussion or diamond drilling are the preferred method of testing the refined targets.

There are some strong IP anomalies that have had little follow-up in the past. The main ones being Radium Hill West Prospect (50 - 60% PFE), Aroona Dam Anomaly (33% PFE), Galls Well Prospect (15 - 20% PFE), and Luxembourg Prospect (14 - 16% PFE). These should be relocated on the ground by visual inspection and a small detailed IP grid. Percussion drilling for geochemical response is unlikely to yield enough specific information.

Follow-up and testing of priority 1 targets is likely to be expensive and therefore a drain on project resources. It is recommended that follow-up of lower priority targets be left until testing of priority 1 targets has been completed. However, testing of priority 2, 3 and 4 targets is detailed in the relevant sections of the report. In the case of IP targets this will generally involve small grid based IP surveys to check for improvement of responses away from the regional lines which are currently 1.2km apart. Aeromagnetic targets can be investigated further by ground checks and geochemical sampling.

8.0 REFERENCES

Archibald, N.J. **1992** Notes on stratigraphy, structure, and metallogenesis of the Willyama Supergroup, Broken Hill – Olary Region. (Rept. to MIM, May 1992).

Beeson, R. **1990** Broken Hill type lead – zinc deposits an overview of their occurrence and geological setting. Trans. Inst. Min. Metall. 99 September – December 1990.

Elliott, P.J. **1992a** An interpretation of detailed aeromagnetic survey data over Mingary, Cutana, and Mundi–Mundi licence areas of S.A. and N.S.W. Rept. to MIM, February 1992.

Elliott, P.J. **1992b** Interpretation report on TEM and magnetic surveys over four prospects in the Cutana and Mingary licences, S.A. Rept. to MIM, August 1992.

Tucker, D.H. **1992** A digital database and preliminary processing of the Mines Exploration Pty Ltd. Induced Polarisation surveys, Mingary 1:100,000 map, West Willyama Block, S.A. SADME Rept. Bk. 92/93.

TABLE 1
LIST OF IP/MAGNETIC TARGETS

		PFE	SHEET
PRIORITY 1			
Pb–Zn–Ag	†Ballara Syncline/Anticline	6 – 17%	8 & 3
	†Aroona Dam Anomaly	33%	3
Cu–Au	Radium Hill West Anomalies	50 – 60%	6
	Galls Well Anomalies	15 – 20%	6
	Luxembourg Anomalies	14 – 16%	6
PRIORITY 2			
Pb–Zn–Ag	Pinery Hill Anomaly	11%	2
	Pine Creek Anomaly	8 – 10%	2
	Grassy Dam Anticline	7 – 11%	3
	Watercourse Dam Anomaly	11%	8
	McBrides Syncline	5 – 11%	3
	Peak Hill Fault Anomalies	10 – 12%	3
	Ballara North Anomaly	12%	3
Cu–Au	Pine Creek East Anomaly	8 – 10%	2
	Black Hill Anomaly	17%	6
	Trinity Anomaly	7 – 11%	3
	Trinity Dam South Anomaly	9%	3
	Luxembourg Corridor	10 – 12%	6
	Watkins Anomaly	10%	8
PRIORITY 3			
Pb–Zn–Ag	Mutooroo West Anomaly	7%	2
	Peak Hill Fault Anomalies	6 – 8%	2
	Hartford Dam North Anomaly	10%	2
	Pine Creek SE Anomaly	7%	2
	Milky Dam Anomaly	9%	2
	Ballara Anticline	5 – 8%	3
	Bonython Syncline	7 – 8%	3
	Dark Hill Dam East Anomaly	7 – 8%	3
	Paradise Dam South Anomaly	7%	8
	Black Fellow Creek Anomaly	7%	8&3
	Black Fellow Creek South	5 – 7%	8
	Dey Hill West Anomalies	7%	8
Cu–Au	Miracle Dam Anomaly	6%	3
	Miracle Dam South Anomaly	5 – 6%	3
	Eagle West Anomaly	7%	3
	Mulga Hill Corridor	5 – 9%	6
	Kings Dam Anomaly	7%	3

TABLE 2

LIST OF MAGNETIC TARGETS (SHEETS 5 & 6)

PRIORITY 1		SHEET
M1	Luxembourg Goldfield, Area of high strain	6
PRIORITY 2		
M6	Bullseye Magnetic Anomaly Green & Gold Style	5
M7	Bullseye Magnetic Anomaly Green & Gold Style	5
M8	Bullseye Magnetic Anomaly Green & Gold Mine	5
M11	Bullseye Magnetic Anomaly Green & Gold Style	5
M4	Intense Magnetic Zone Copper Blow Style	5
M5	Intense Magnetic Zone Copper Blow Style	5
M2	Copper Blow or Archaean BIF Model	6
PRIORITY 3		
M3	Plumb Fault (Pb–Zn–Ag Fault)	6
M9	MacDonald Fault intersecting Magnetic Unit	5
M10	MacDonald Fault intersecting Magnetic Unit	5
M12	Archaean BIF/Fault Model	5
M13	Archaean BIF/Fault Model	6

Note: These are all Copper–gold targets except for M3.

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 11 December, 1992
Client : MIM Ltd.

GROUND MAGNETIC PROFILE, LINE 75, GRAVITY LINE A, BALLARA, S.A.

ELLIOTT GEOPHYSICS LTD.

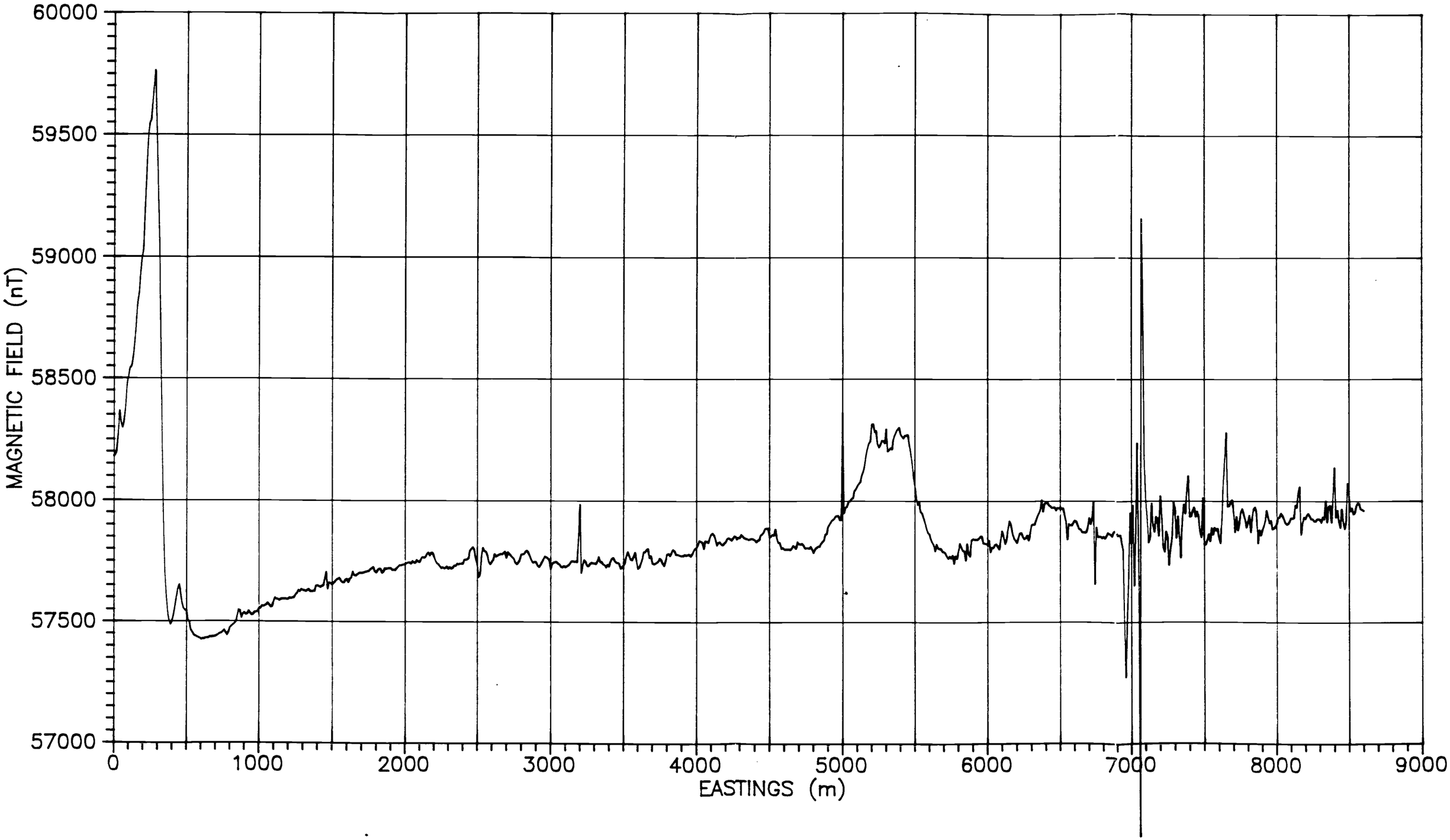


FIG. 29

Station spacing : 10 metres
Date : 13 December, 1992
Client : MIM Ltd.

GROUND MAGNETIC PROFILE, LINE 76, GRAVITY LINE B, BALLARA, S.A.

ELLIOTT GEOPHYSICS LTD.

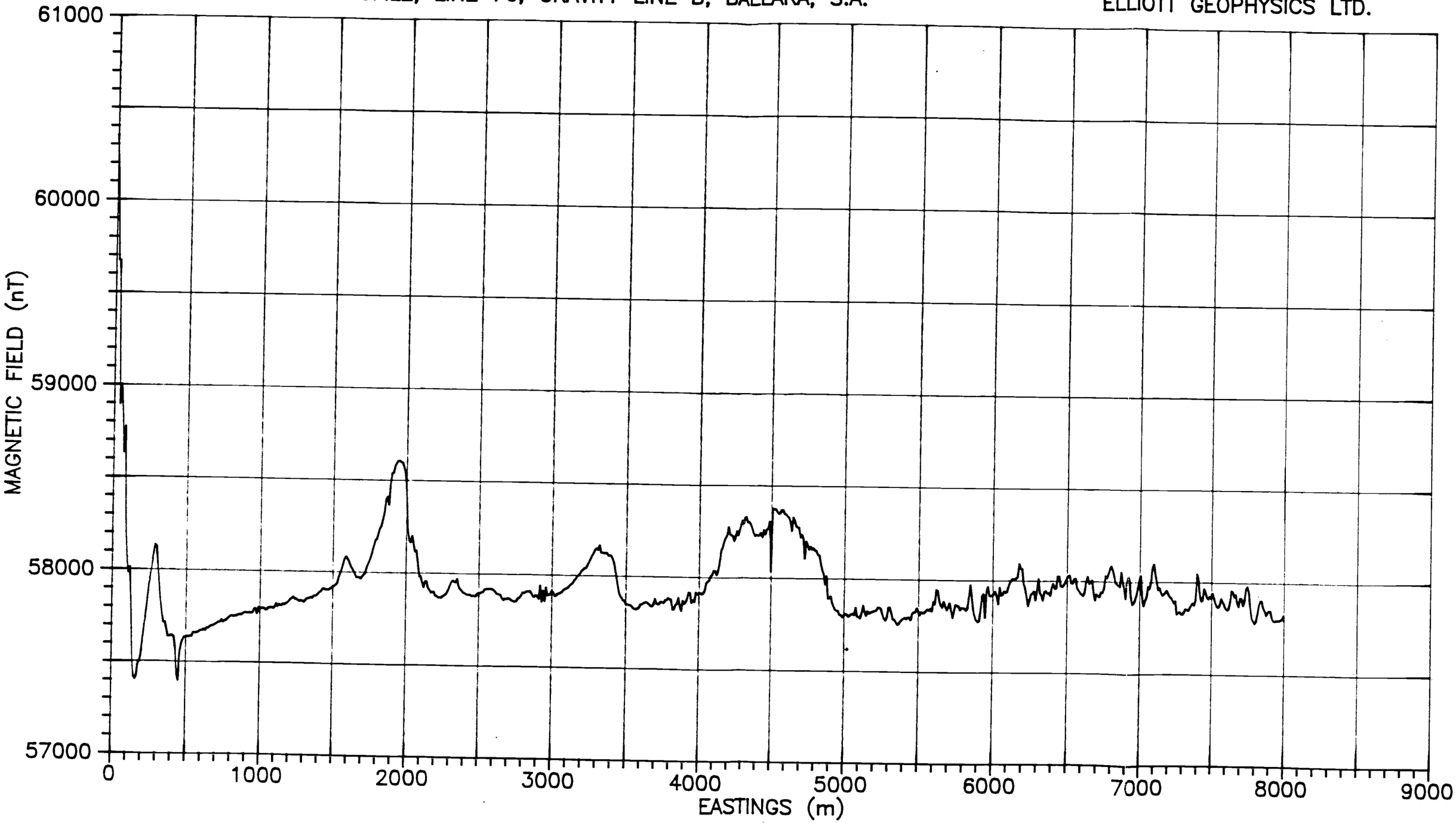


FIG. 30

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 13 December, 1992
Client : MIM Ltd.

GROUND MAGNETIC PROFILE, LINE 77, GRAVITY LINE C, BALLARA, S.A.

ELLIOTT GEOPHYSICS LTD.

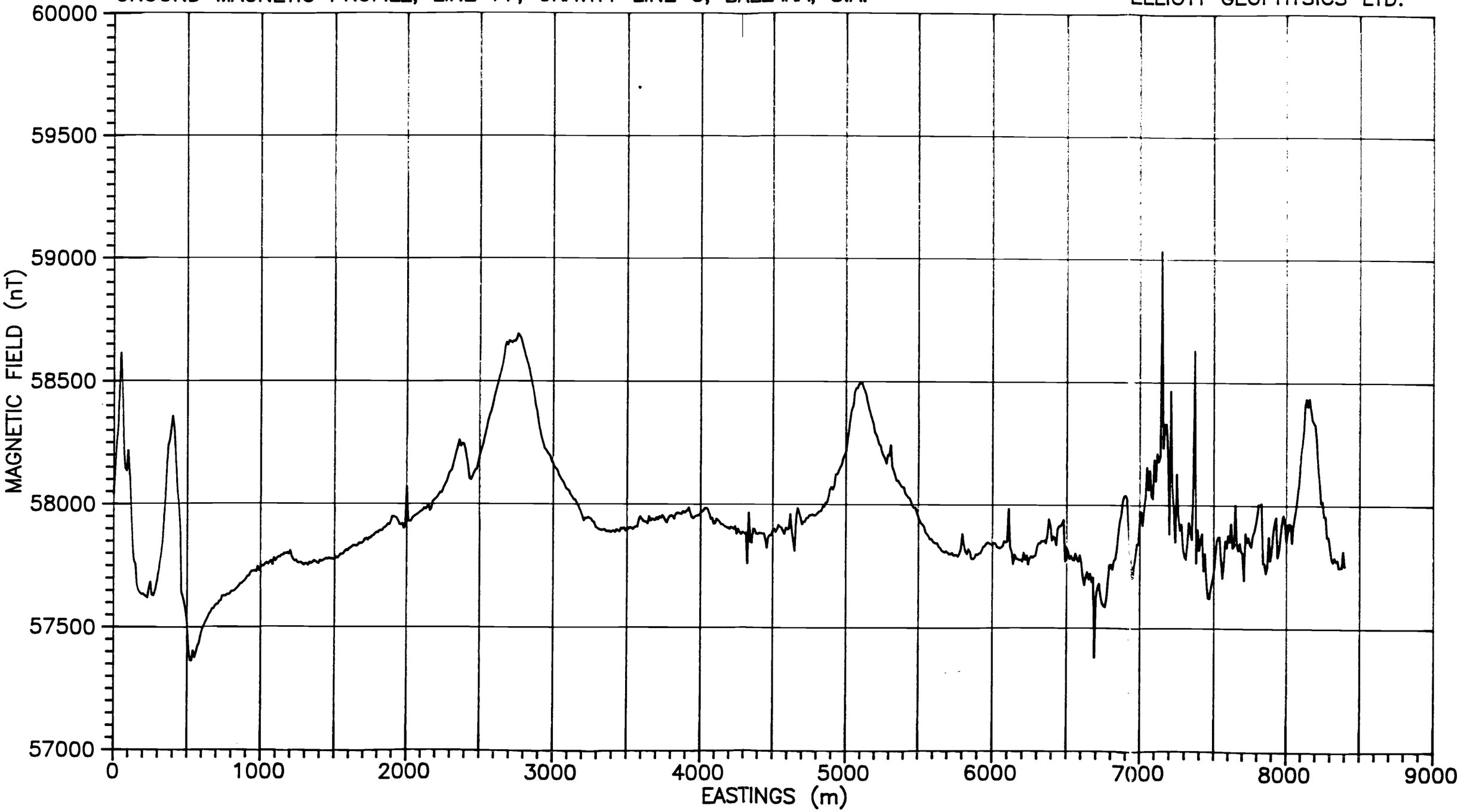


FIG. 31

SURVEY SPECIFICATION

Operator:	Ian Kerr
Instrument:	Geometrics G856
Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	22 Feb. 1993

PROCESSING BY:
ELLIOTT GEOPHYSICS LTD.
FOR: MIM EXPLORATION LTD.

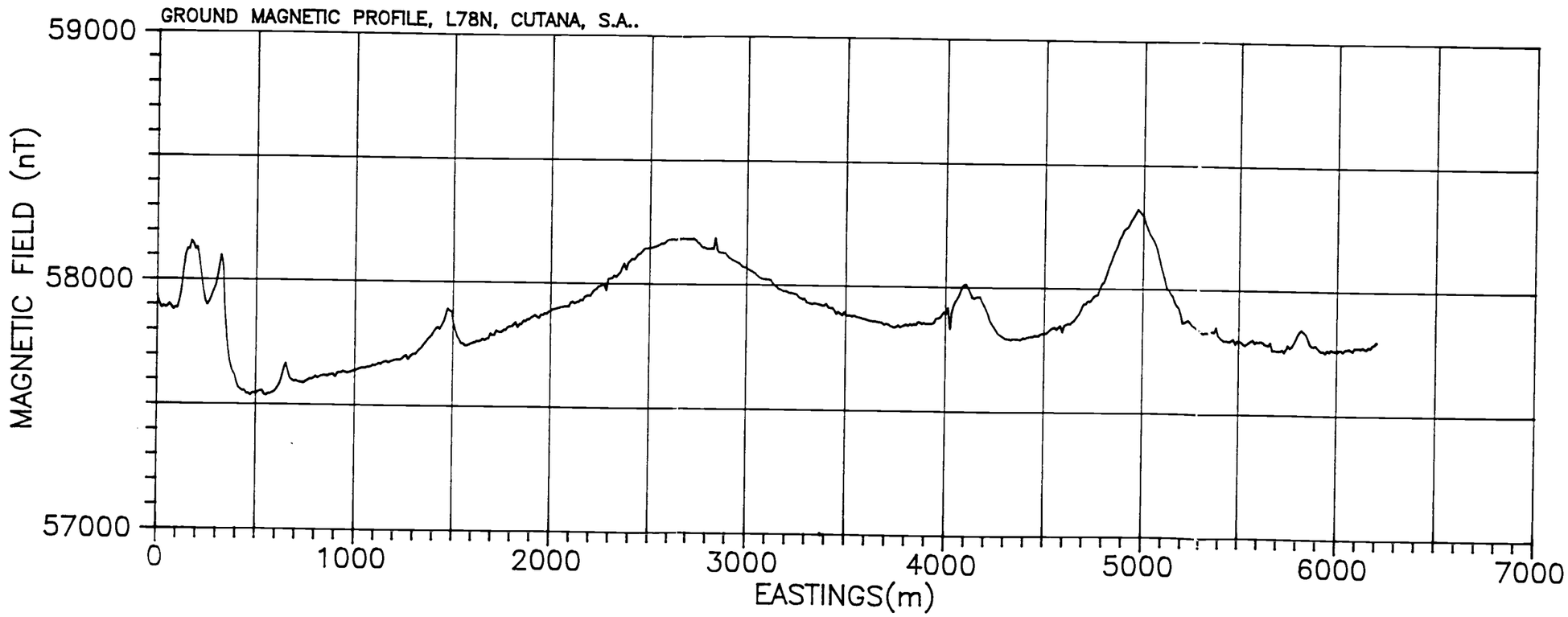


FIG.32

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 15 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 78, GRAVITY LINE D, BALLARA, S.A.

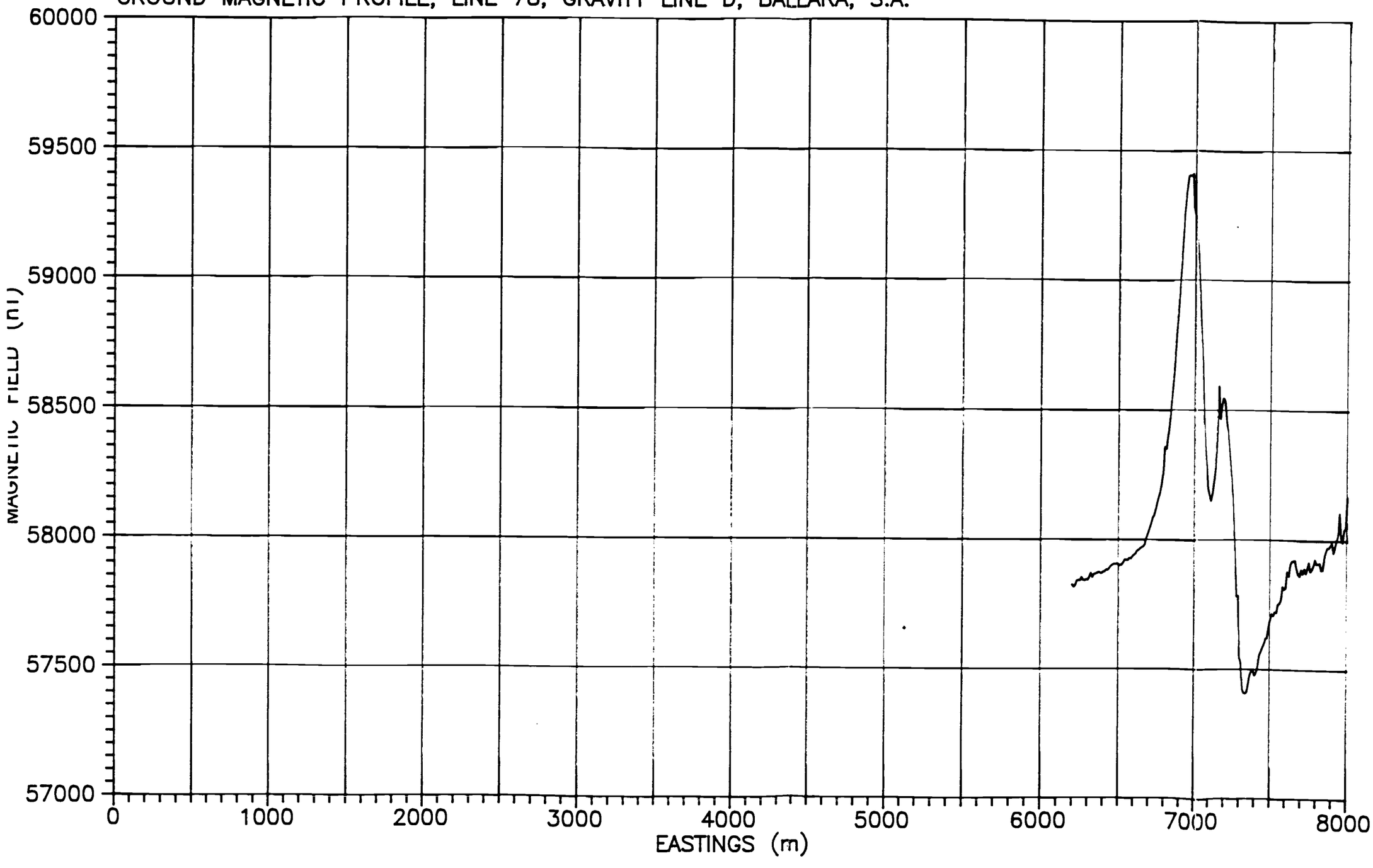


FIG. 32

SURVEY SPECIFICATION

Operator:	Ian Kerr
Instrument:	Geometrics G856
Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	22 Feb. 1993

PROCESSING BY:
ELLIOTT GEOPHYSICS LTD.
FOR: MIM EXPLORATION LTD.

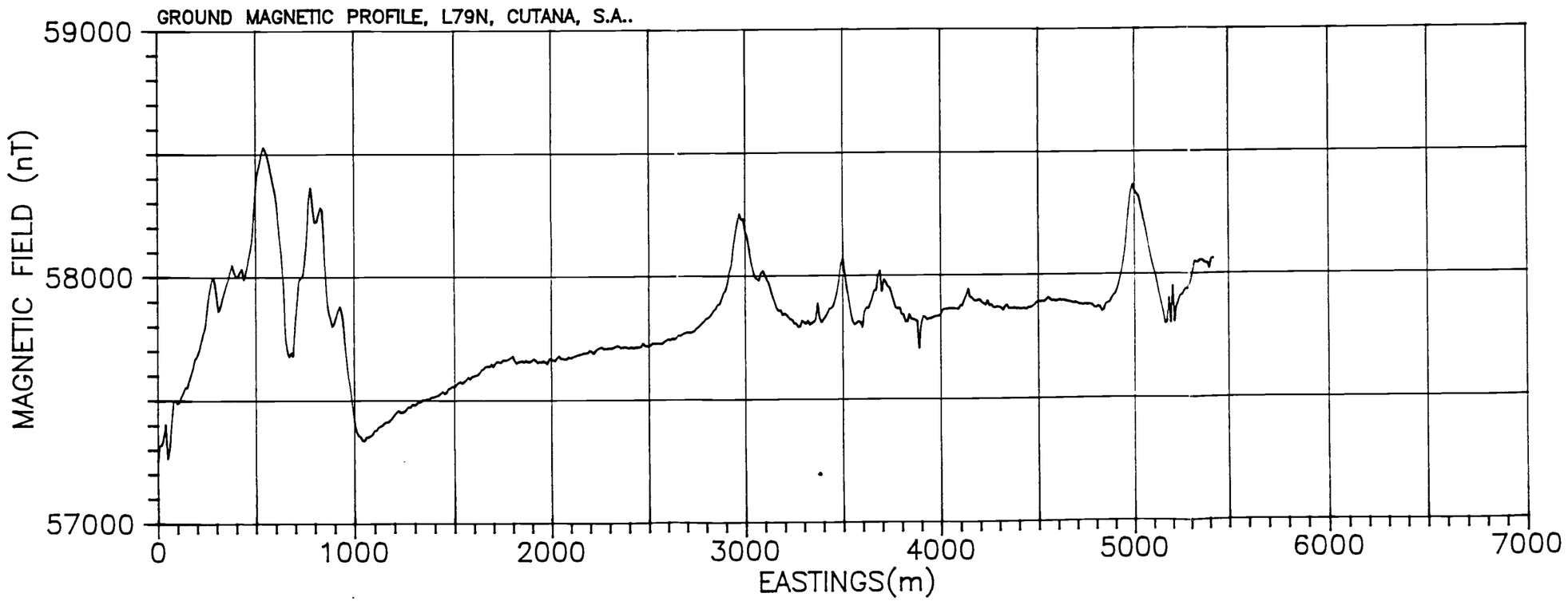


FIG. 33

SURVEY SPECIFICATION

Operator:	Ian Kerr
Instrument:	Geometrics G856
Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	23 Feb. 1993

PROCESSING BY:
ELLIOTT GEOPHYSICS LTD.
FOR: MIM EXPLORATION LTD.

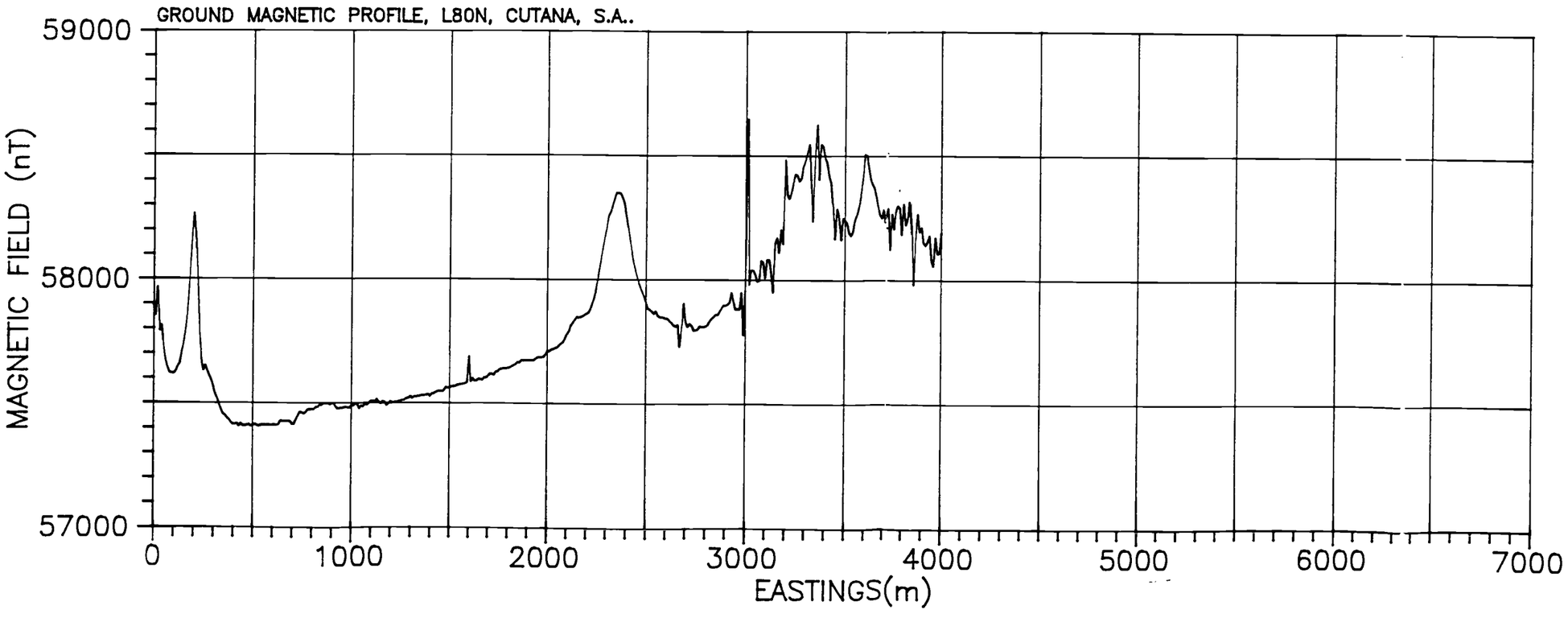


FIG. 34

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 9 December, 1992
Client : MIM Ltd.

GROUND MAGNETIC PROFILE, LINE 81, GRAVITY LINE G, BALLARA, S.A.

ELLIOTT GEOPHYSICS LTD.

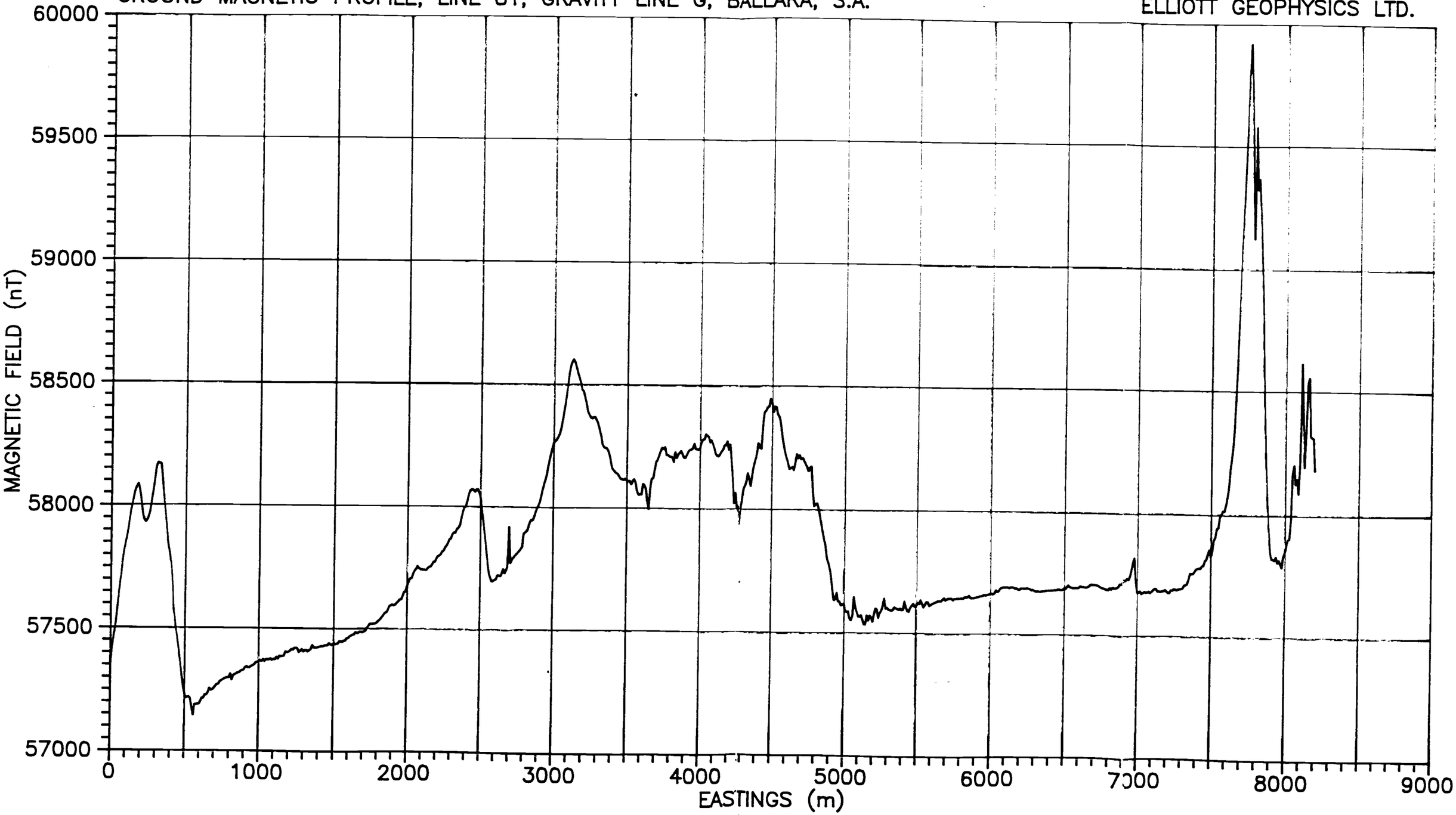


FIG. 35

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 4 December, 1992
Client : MIM Ltd.

GROUND MAGNETIC PROFILE, LINE 82, GRAVITY LINE H, BALLARA, S.A.

ELLIOTT GEOPHYSICS LTD.

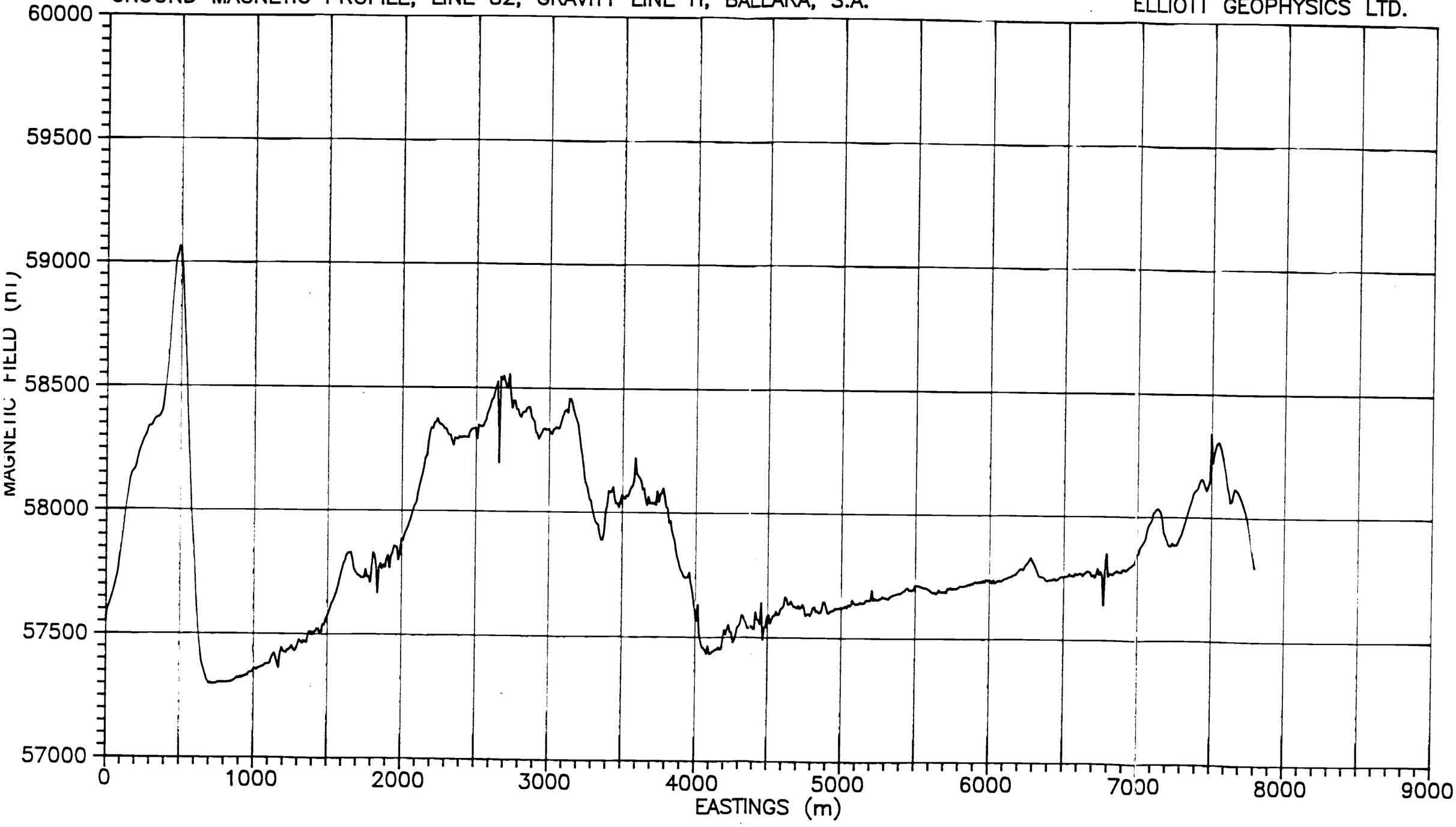


FIG. 36

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 9 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 83, GRAVITY LINE I, BALLARA, S.A.

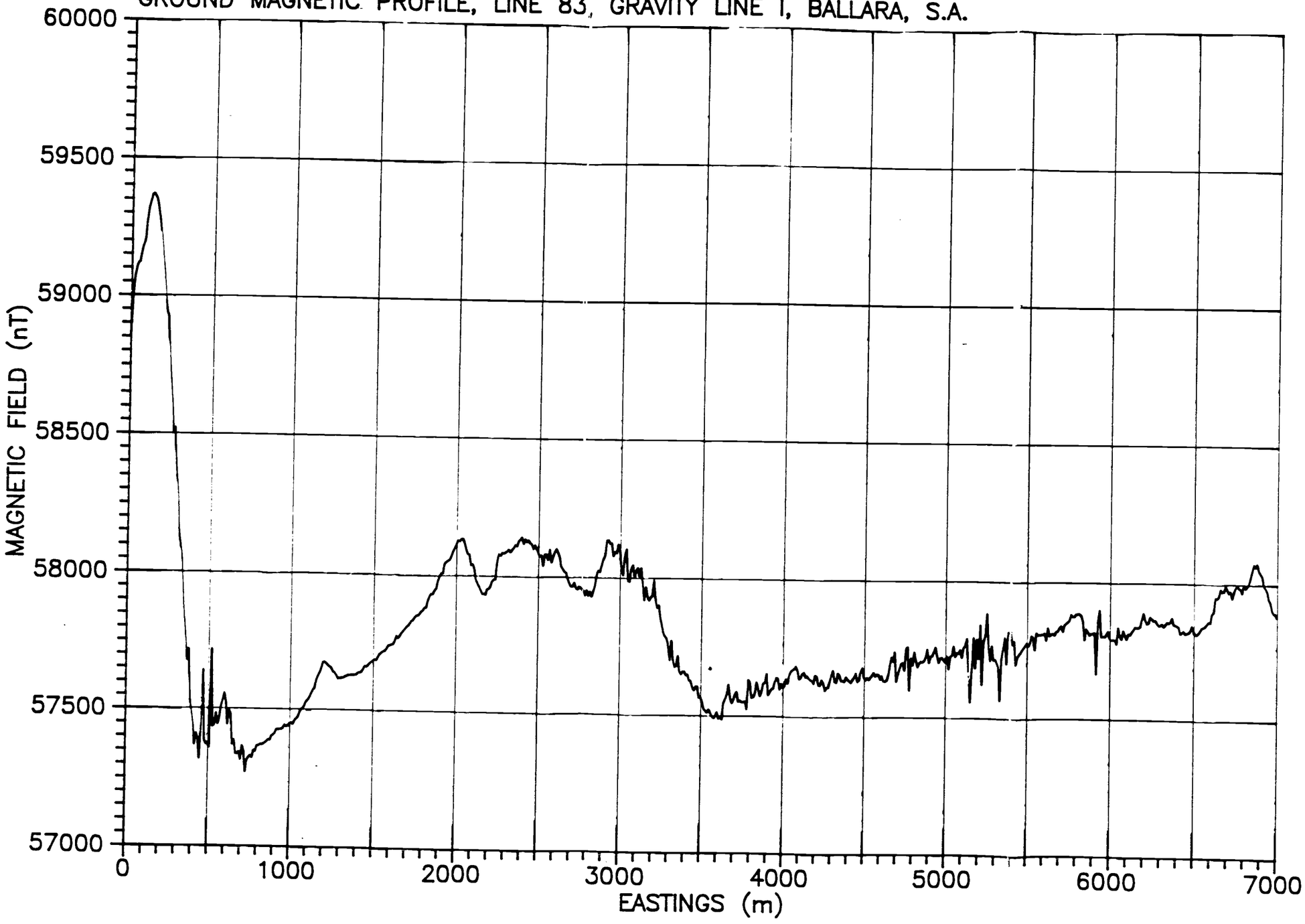


FIG. 37

SURVEY SPECIFICATION

Operator:	Ian Kerr
Instrument:	Geometrics G856
Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	23 Feb. 1993

PROCESSING BY:
ELLIOTT GEOPHYSICS LTD.
FOR: MIM EXPLORATION LTD.

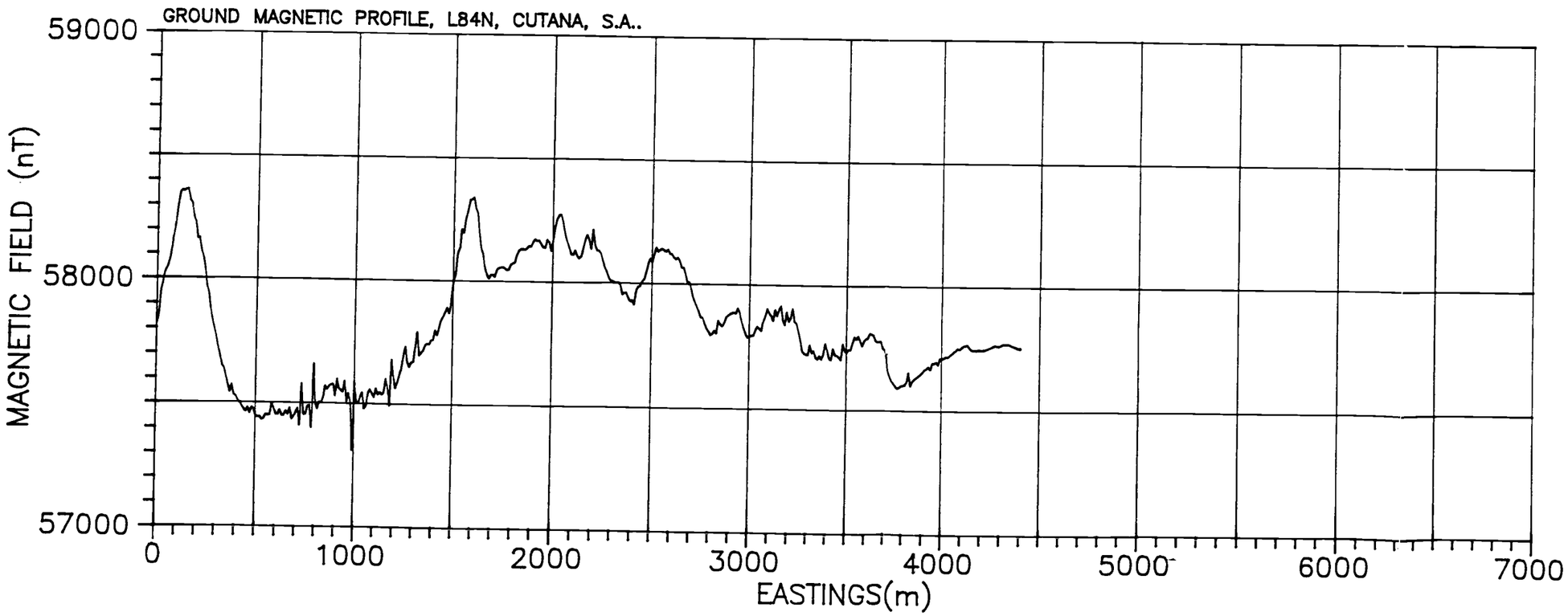


FIG. 38

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 1 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 85, GRAVITY LINE K, BALLARA, S.A.

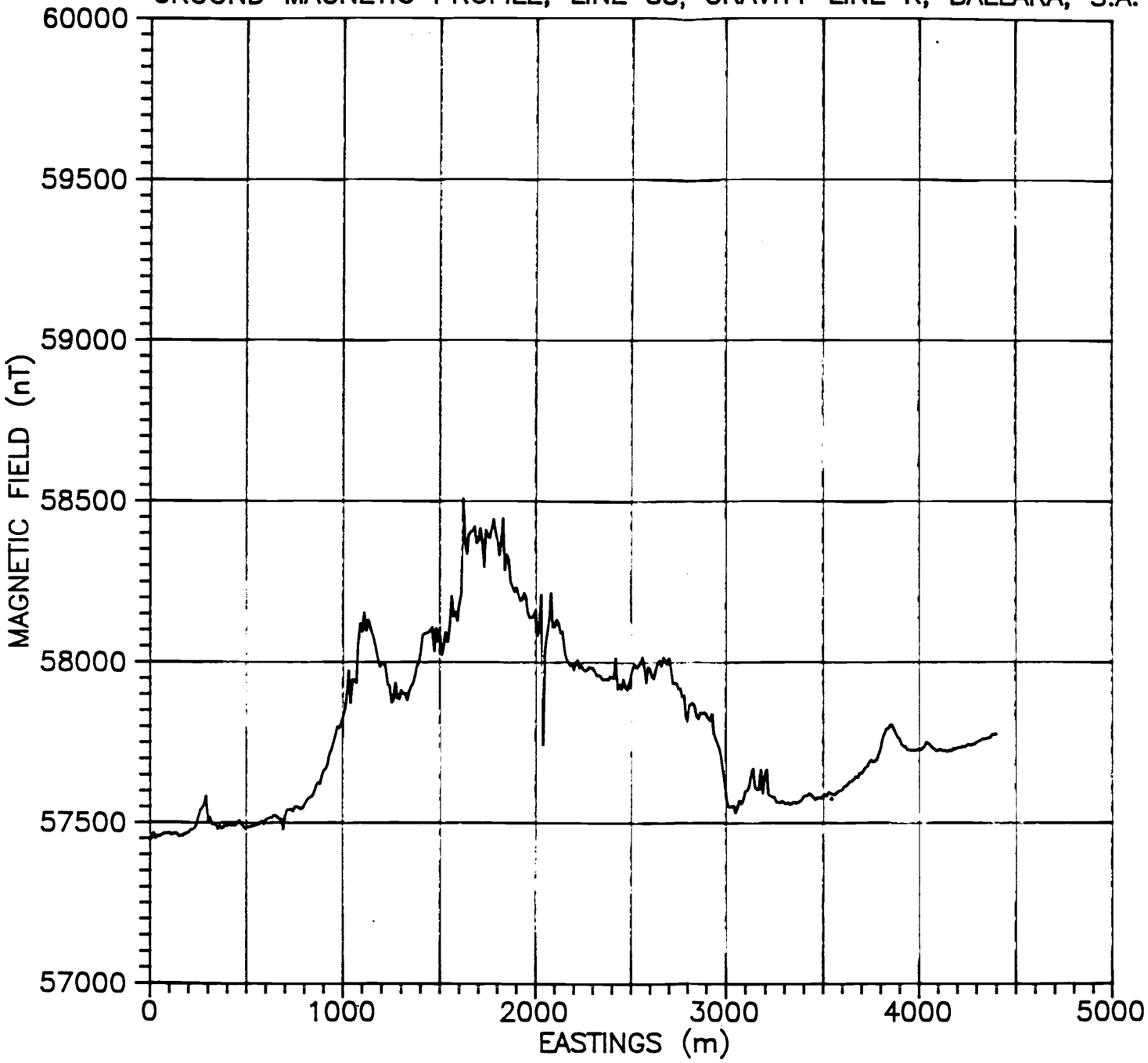


FIG. 39

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 10 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 86, BALLARA, S.A.

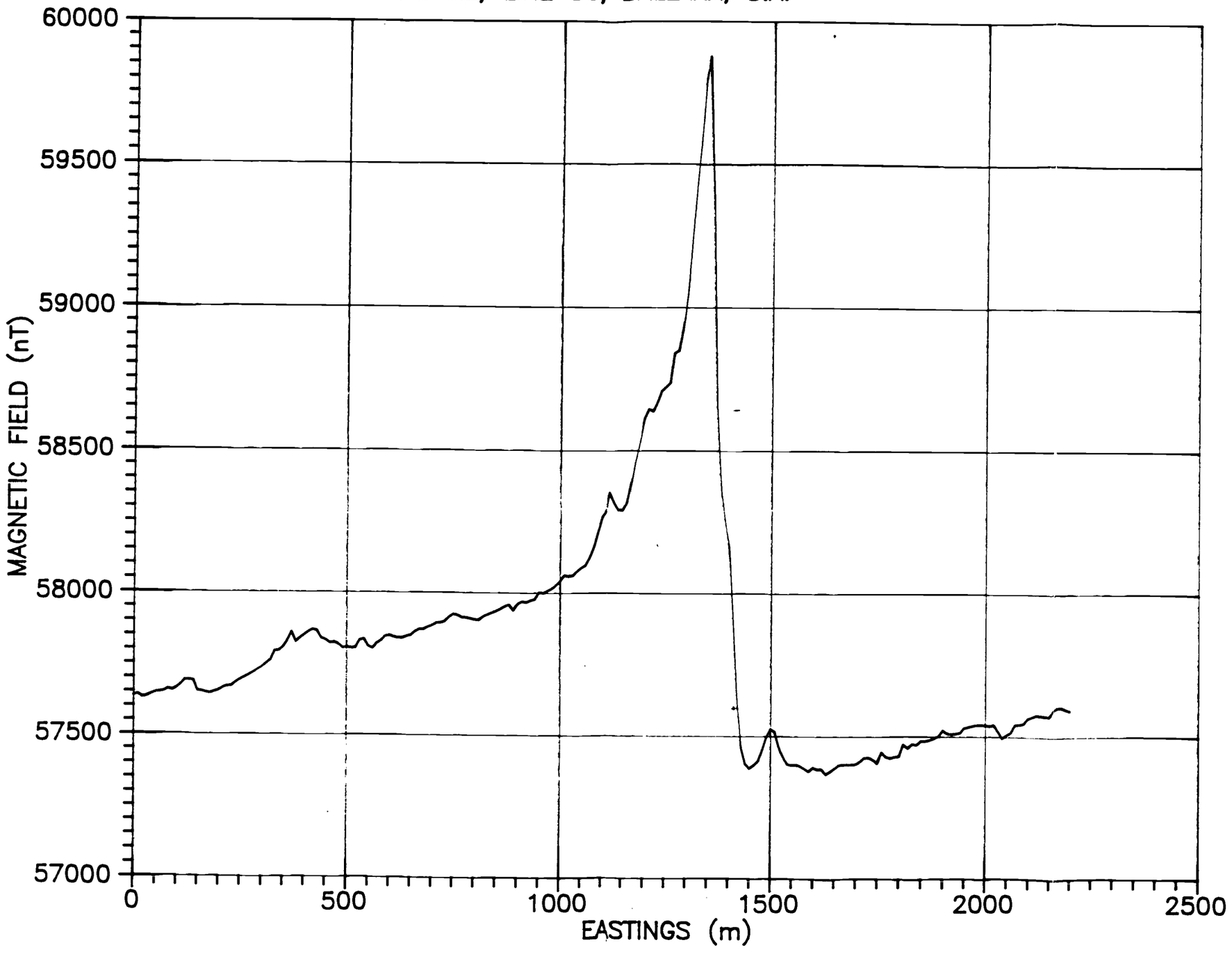


FIG. 40

Station spacing : 10 metres
Date : 10 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 87, DUFFIELD, S.A.

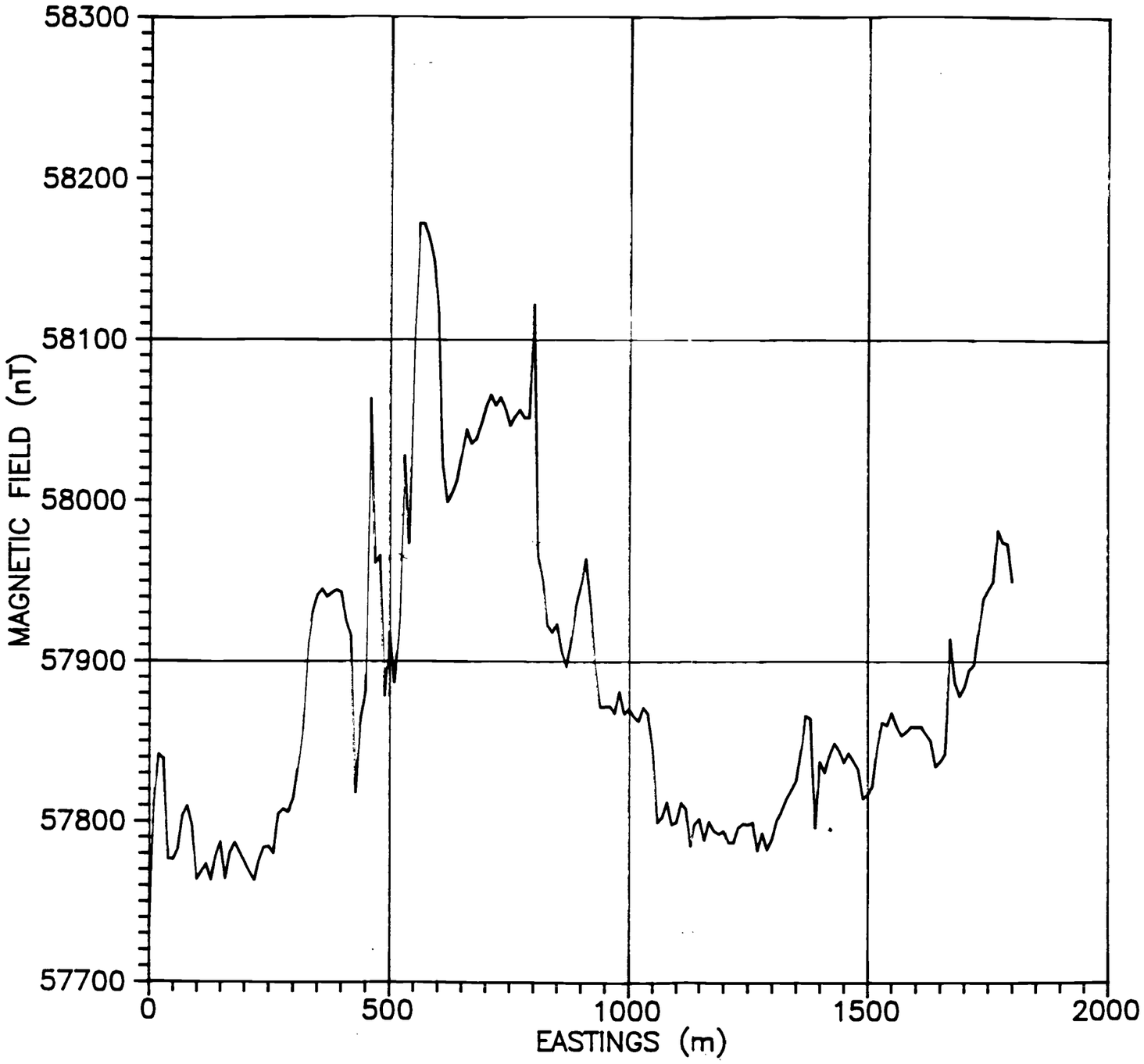


FIG. 41

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 10 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 88, DUFFIELD, S.A.

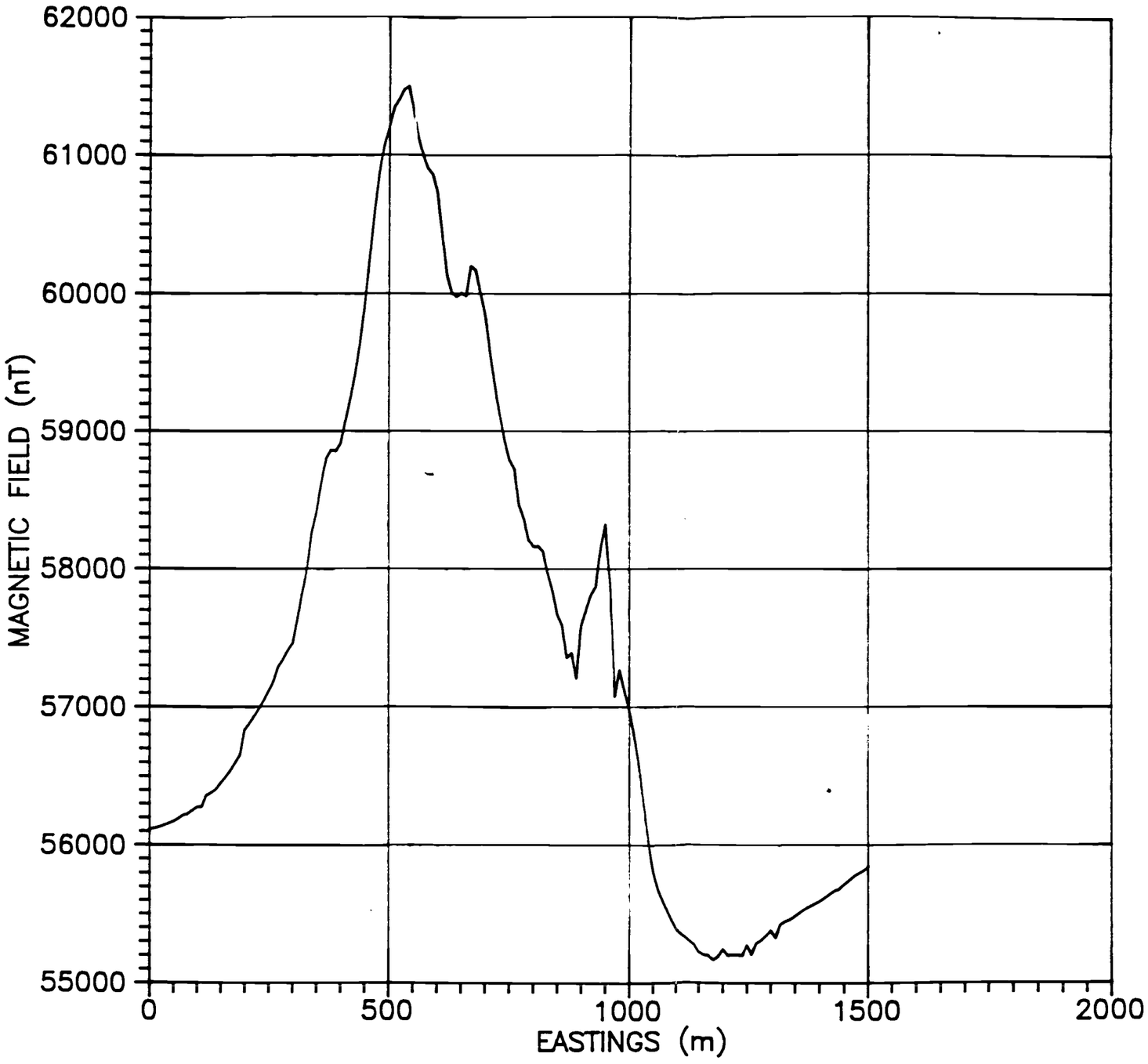


FIG. 42

Magnetometers : Geometrics G856
Sensor height : 2 metres
Station spacing : 10 metres
Date : 10 December, 1992
Client : MIM Ltd.

ELLIOTT GEOPHYSICS LTD.

GROUND MAGNETIC PROFILE, LINE 89, DUFFIELD, S.A.

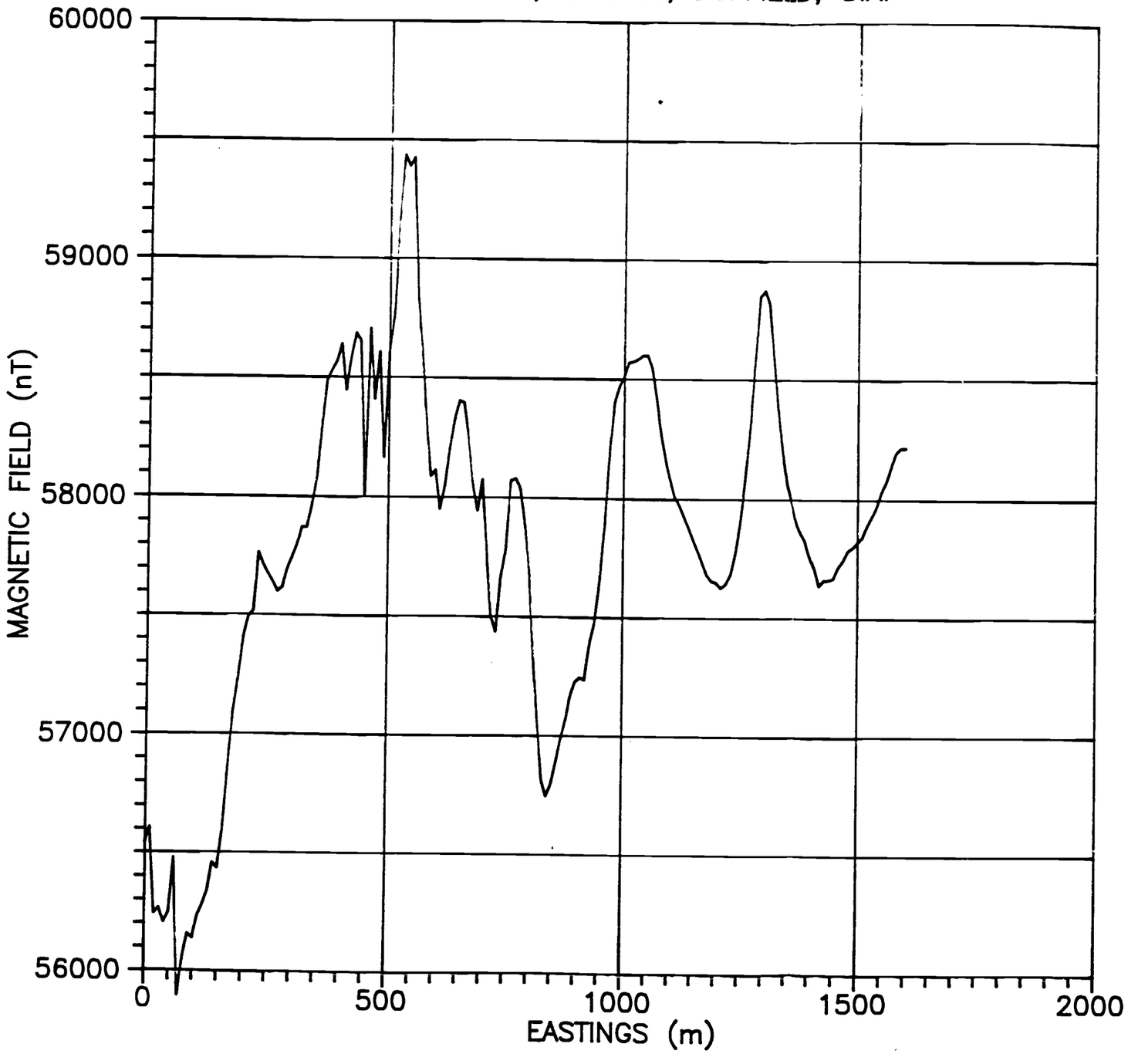


FIG. 43

470 000mE

480 000mE

490 000mE

6 440 000mN

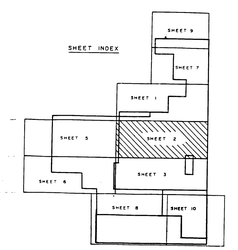
HILL FAULT

PEAK

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite I1 and I2
- Iron filled fault
- Metamorphic boundary
- Highly magnetic zones
- Moderate to highly magnetic units Probable Upper Albrie Unit (Suite I3)
- Possible Suite I4/I5 boundary
- Possible Suite I5/I6 boundary
- Boundary to low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Synform
- Antiform
- Overturned synform
- Probable fault
- Inferred major shear
- RAB and ground magnetic lines
- Input EM anomalies
- MB-20 (No. of interpex)
- Mafic intrusive

SHEET INDEX



SCALE 1:25000

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

MINGARY EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 2

REVISION	
Jan 1993	P.J.E

FIG 4

D.o.N. 20567

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

470 000mE

480 000mE

490 000mE

6 430 000mN

PROSPECTIVE Cu & Au ZONE ?

PEAK HILL FAULT

Taylor Shaft

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite 11 and 12
- Highly magnetic zones
- Moderate to highly magnetic units Probable Upper Alsite Unit
- Possible Suite 14/15 boundary
- Possible Suite 15/16 boundary
- General magnetic boundary – minor
- Boundary to low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Dolerite dyke
- Synform
- Antiform
- Overturned synform
- Probable fault
- Inferred major shear
- RAB and ground magnetic lines
- Input EM anomalies
- MB-20
- Prospective Cu and Au Zone

SHEET INDEX

SHEET 9
SHEET 7
SHEET 1
SHEET 5
SHEET 2
SHEET 3
SHEET 4
SHEET 8
SHEET 10

SCALE 1:25 000

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MINGARY EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 3

FIG. 5

Drg No. 45/43

REVISIONS

Author: P.J.ELLIOTT, ELLIOTT GEOPHYSICS PTY. LTD.

440 000mE

450 000mE

460 000mE

6 440 000 mN

M5 M6 M7 M8 M9 M10 M11 M12

Green & Gold Mine

Wilkins Prospect

By

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite 11 and 12
- Highly magnetic zones
- Moderate to highly magnetic units Probable Upper Albite Unit (Suite 13)
- Possible Suite 14/15 boundary
- Possible Suite 15/16 boundary
- Boundary to low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Synform
- Antiform
- Overturned synform
- Workings
- M8 Exploration target area
- Probable fault
- Inferred major shear
- 59 RAB and ground magnetic lines
- No. of channels MB-20 Input EM anomalies
- By Upper Proterozoic

ABOVE TOPSHE

SHEET INDEX

SHEET 9 SHEET 7 SHEET 1 SHEET 5 SHEET 2 SHEET 3 SHEET 4 SHEET 8 SHEET 10

0 1 2 3 KM

SCALE 1:25000

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 5

REVISION	
P. Elliott	Jan 93

FIG.6

Dwg. No. 3659

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

440 000mE

450 000mE

460 000mE

6 430 000 mN

MACDONALD

FAULT

M2

M1

M3

Queen Bee Mine

Yankee Shaft

Pb Winklers Mine

MACDONALD

PLUMB

FAULT

Gallo Well Kyanite Prospect

Mulga Hill Mine

Cemetery Prospect

Cu Gallo Well East Mine

Michelle Hill Mine

Multiple shallow sources

Cu Mildottie - Dalkey Diggings

U Radium Hill

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Possible Suite II and I2
- Buried source (mineral sands ?)
- Buried drainage (Deep Lead) (mineral sands ?)
- Highly magnetic zones
- Moderate to highly magnetic units Probable Upper Albite Unit (Suite I3)
- Possible Suite I4/I5 boundary
- Possible Suite I5/I6 boundary
- Boundary to low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Synform
- Antiform
- Overturned synform
- Workings
- Exploration target area M2
- Probable fault
- Inferred major shear
- RAB and ground magnetic lines
- Input EM anomalies
- No. of channels MB-20

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SHEET 9, SHEET 7, SHEET 1, SHEET 5, SHEET 2, SHEET 3, SHEET 4, SHEET 8, SHEET 10

0 1 2 3 KM

SCALE 1:25000

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA EXPLORATION LICENCE S.A.

AEROMAGNETIC INTERPRETATION

Sheet 6

REVISION	DRN	CHD	APP
JAN 1983	P.J.E		

FIG. 7

Drg No. 382870

470 000mE

480 000mE

6420 000mN

6410 000mN

CUTANA E.L.

DINGO DAME E.L.

DUFFIELD E.L.

Pa

Pa ?

LEGEND

- Highly magnetic unit
- Moderately magnetic unit
- Weakly magnetic unit
- Highly magnetic zones
- Moderate to highly magnetic units Probable Upper Arcu.. unit
- Possible Suite 14/15 boundary
- Possible Suite 15/16 boundary
- Boundary to low magnetic areas
- Isolated weak magnetic zones
- Isolated magnetic anomalies
- Possible granite
- Possible mafic plug
- BIF's Adelaidean
- General boundary to magnetic suite in Adelaidean
- Extrapolation of S13 units under Adelaidean cover
- synform
- antiform
- Overturned synform
- Probable fault
- Inferred major shear
- 59 RAB and ground magnetic lines
- Input EM anomalies

No. of channels MB-20

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SHEET 10
SHEET 12
SHEET 5
SHEET 3
SHEET 4
SHEET 8
SHEET 10

0 1 2 3 KM

SCALE 1:25 000

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CUTANA/DUFFIELD EXPLORATION LICENCE S.A.

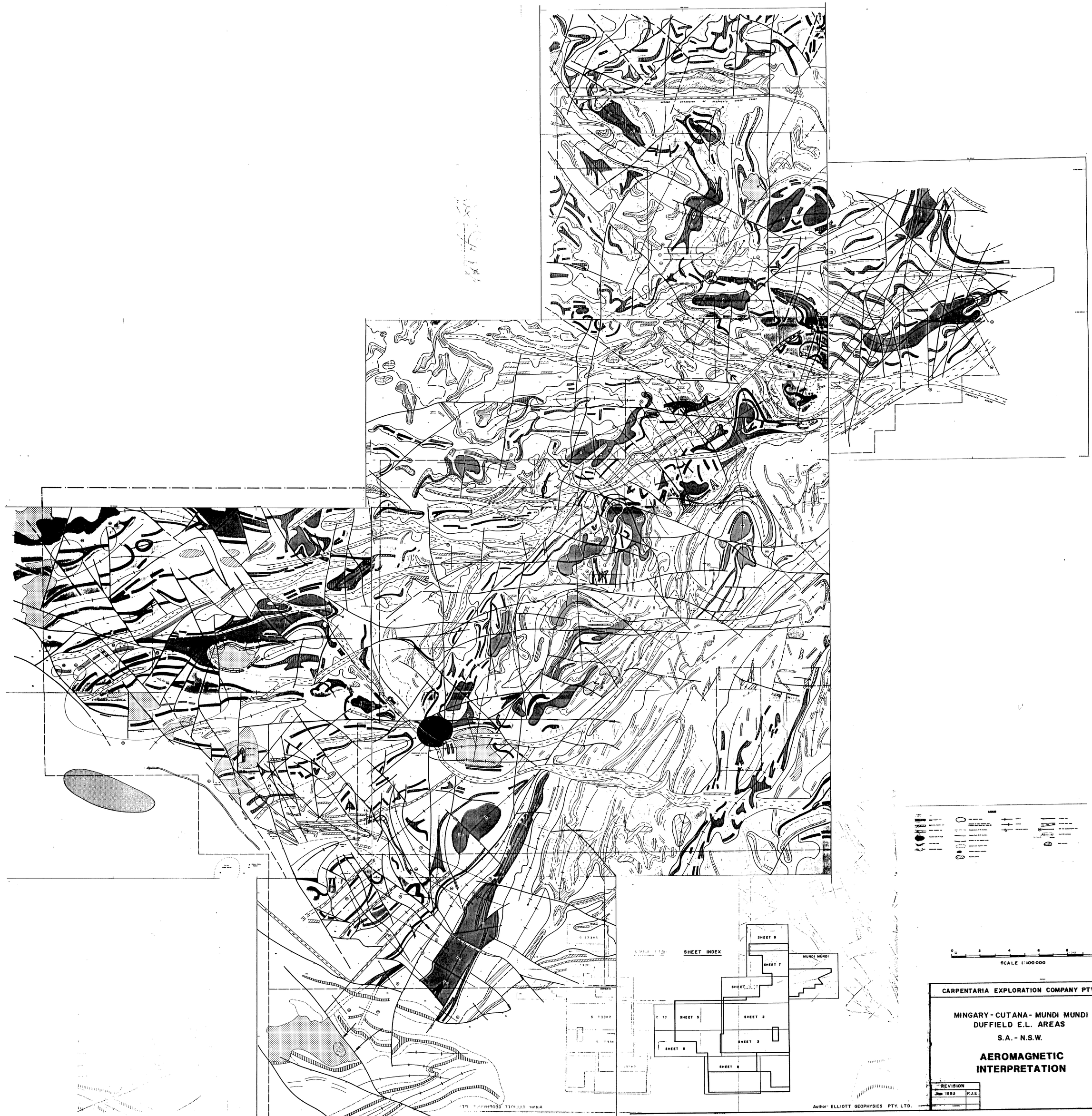
AEROMAGNETIC INTERPRETATION

Sheet 8

REVISION	
Jan. 1993	INIT.

Author:
P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

Drg. No. 1660/2


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SHEET 8
MUNDI MUNDI
SCALE 1:100000
CARPENTARIA EXPLORATION COMPANY PTY. LTD.
MINGARY - CUTANA - MUNDI MUNDI
DUFFIELD E.L. AREAS
S.A. - N.S.W.
AEROMAGNETIC
INTERPRETATION
REVISION
1993
P.J.E.
Author: ELLIOTT GEOPHYSICS PTY. LTD.
FIG. 9

470 000E

480 000E

490 000E

6 440 000N

1340S

5% DEEP OR OFF-LINE

1580S

10% Dams South Anomaly

MA-30

MB-24

MB-25

1700S

1820S

1680S

6-7% DEEP

HILL FAULT

5% DEEP

NO DATA

1740S

1780S

1860S

Harsford Dam North Anomaly

10% AT DEPTH

PEAK

8-10% DEEP

Pine Creek East Anomaly

7% DEEP

Pine Creek SE Anomaly

COPPER BELT

PINE CREEK ANOMALY

10% DEEP

2020S

8% DEEP

1900S

MA-20

7-8%

PINERY HILL ANOMALY

1940S

PAULL

1980S

Milky Dam Anomaly

9%

HILL

WEAK 4-5%

PEAK

5% OFF-LINE

2100S

LOW IP

1992S

MA-21

MA-23

5000N

MUTOOROO WEST ANOMALY

PIPE ANOMALY

LOW IP RESPONSE

1800S

FORMATIONAL RESPONSES

2180S

4-5% AT DEPTH

LEGEND

- Isolated resistivity high
- Envelope to higher resistivity zones
- Isolated low resistivity zone
- Moderate to high IP anomaly
- Weak IP anomaly
- Envelope to highly active IP zone
- Envelope to weak IP zone
- Broken Hill South regional IP traverses
- Isolated strong IP anomalies
- Well defined IP anomaly
- Poorly defined IP anomaly
- Envelope to gravity high
- Gravity high

SHEET INDEX

SHEET 9, SHEET 7, SHEET 1, SHEET 4, SHEET 3, SHEET 5, SHEET 6, SHEET 8, SHEET 10

SCALE 1:25 000

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S. A.

IP AND GRAVITY INTERPRETATION

Sheet 2

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Jan. 1993	P.J.E

FIG. 11

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

440 000mE

450 000mE

460 000mE

RADIUM HILL IP GRID

280N

320N

240N

200N

160N

120N

80N

40N

BLACK HILL
ANOMALY P2

LUXEMBOURG
CORRIDOR
P2

LUXEMBOURG
ANOMALIES P1

GENERALLY CHARGEABLE
ZONE AT DEPTH
7-8%

MULGA HILL
CORRIDOR
P3

GALLS WELL
ANOMALIES P1

RADIUM HILL
ANOMALIES P1

RADIUM HILL
TREND

6 430 000N

LEGEND

- Isolated resistivity high
- Extends to higher resistivity zones
- Isolated low resistivity zone
- Moderate to high IP anomaly
- Weak IP anomaly
- Envelope to highly active IP zone
- Envelope to weak IP zone
- Broken Hill South regional IP traverses
- Isolated strong IP anomalies
- Well defined IP anomaly
- Poorly defined IP anomaly
- Envelope to gravity high
- Gravity high

330N 733mE

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SHEET 1 · SHEET 2 · SHEET 3 · SHEET 4 · SHEET 5 · SHEET 6 · SHEET 7 · SHEET 8 · SHEET 9 · SHEET 10

0 1 2 3 KM

SCALE 1:25 000

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CUTANA EXPLORATION LICENCE
S. A.

IP AND GRAVITY INTERPRETATION

Sheet 6

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FIG. 13

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.

470 000mE

480 000mE

6 420 000mN

6 410 000mN

CUTANA E.L.

DUFFIELD E.L.

WATKINS ANOMALY P2

DunHill West Anomalies P3

BASE GDC

ANY P1

WEAK 6%

5-10%

160N

120N

80N

40N

0N

300N

FAULT

HILL

PEAK

WATERCOURSE DAM ANOMALY P2

BALLARA GRID

BALLARA ANOMALY P1

BALLARA SYNCLINE GRAVITY ANOMALY P1

NO DATA ON DISC

15% (TESTED)

15% (NOT TESTED)

Model depth 520m

BALLARA ANTICLINE

ANTI CLINE

BALLARA ANTICLINE GRAVITY ANOMALY P1

1·0 mgal HW=450m

0·9 mgal HW=300m

Model depth 400m

0·5mgal 150m

0·75mgal 700m

0·8mgal 300m

0·7mgal HW=250m

1·4 mgal HW=300m

DIVERSION DAM PROSPECT P2

Model depth 200m

1 mgal HW=300m

2700S

Paradise Dam South P3

NO DATA ON FILE

1·4mgal HW=200m

BLACKFELLOW CREEK ANOMALIES P2

DEEP ~7%

5-7% DEEP

Blackfellow Creek South Anomaly P3

1mgal HW=250m

(FENCE 7)

2340S

2320S

2420S

2460S

2500S

2540S

2590S

2620S

2660S

FARLEY CATCH ANOMALY

Extended grid not on disc.

FORMATIONAL IP ANOMALIES

Farley Catch Anomaly P4

WEAK 4-5%

WEAK HALO 4-5%

WEAK 3-4%

6-10%

6-9%

6-12%

~6%

~5%

~7%

~4%

6-8%

11%

L86

L87

L88

L89

BHS 25000W

BGA

BGB

BGC

BGD

BGE

BGF

BGG

BGH

BGI

BGJ

LEGEND

- Isolated resistivity high
- Envelope to higher resistivity zones
- Isolated low resistivity zone
- Moderate to high IP anomaly
- Weak IP anomaly
- Envelope to highly active IP zone
- Envelope to weak IP zone
- Broken Hill South regional IP traverses
- Isolated strong IP anomalies
- Well defined IP anomaly
- Poorly defined IP anomaly
- Envelope to gravity high
- Gravity high

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SHEET 1
SHEET 5
SHEET 2
SHEET 3
SHEET 6
SHEET 8
SHEET 10

0 1 2 3 KM.

SCALE 1:25 000

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY.LTD.

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

CUTANA/DUFFIELD EXPLORATION LICENCES S.A.

IP AND GRAVITY INTERPRETATION

Sheet 8

REVISION	
Jan. 1993	P.J.E.

FIG. 14

470 000mE

480 000mE

490 000mE

6 430 000mN

2000S

2080S

2100S

2140S

2180S

2220S

2260S

2300S

2340S

2380S

2420S

2460S

2500S

2540S

320N

280N

240N

200N

50 000mN

25 000mN

AROONA DAM ANOMALY P1

33% STRONG IP ANOMALY

Redwings Dam

McBRIDES SYNCLINE P2

McBRIDES PROSPECT

DDH MC1

PTM01

PTM02

PTM03

PTM04

MODERATE ANOMALY

100m in-100p traverse

AFFECTED BY FENCES ?

FENCE ANOMALY ?

DOUBTFUL SINGLE VALUE 5%

Mutooroo West Anomaly P3

MUTOOROO MINE ANOMALY Cu

Miracle Dam Anomaly P3

Miracle Dam South Anomaly P3

Kings Dam Anomaly P3

TRINITY MINE

TRINITY ANOMALY P2

TRINITY DAM SOUTH ANOMALY P2

1805S

1780S

1760S

1740S

1720S

1900S

1920S

1940S

1960S

1980S

NO DATA COMPILED

Grassy Dam North

GRASSY DAM ANTICLINE P2

Grassy Dam South

Formational responses

BELT

COPPER

EAGLE WEST ANOMALY P3

DOUBTFUL SINGLE VALUE ANOMALY

BALLARA NORTH ANOMALY P2

BALLARA NORTH GRID

BALLARA ANOMALY P1

ANTICLINE P1

FAULT

HILL

PEAK

BGK

BGI

BGII

Blackfellow Creek Anomalies P3

Southern Syncline P2

Sharp Hill Dam East P3

IRON

FENCE ?

DEEP

WEAK

MODERATE ANOMALY

DEEP SOURCE

NEAR SURFACE

OFFLINE

LEGEND

- Isolated resistivity high
- Envelope to higher resistivity zones
- Isolated low resistivity zone
- Moderate to high IP anomaly
- Weak IP anomaly
- Envelope to highly active IP zone
- Envelope to weak IP zone
- Broken Hill South regional IP traverses
- Isolated strong IP anomalies
- Well defined IP anomaly
- Poorly defined IP anomaly
- Envelope to gravity high
- Gravity high

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SCALE 1:25 000

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MINGARY EXPLORATION LICENCE S.A.

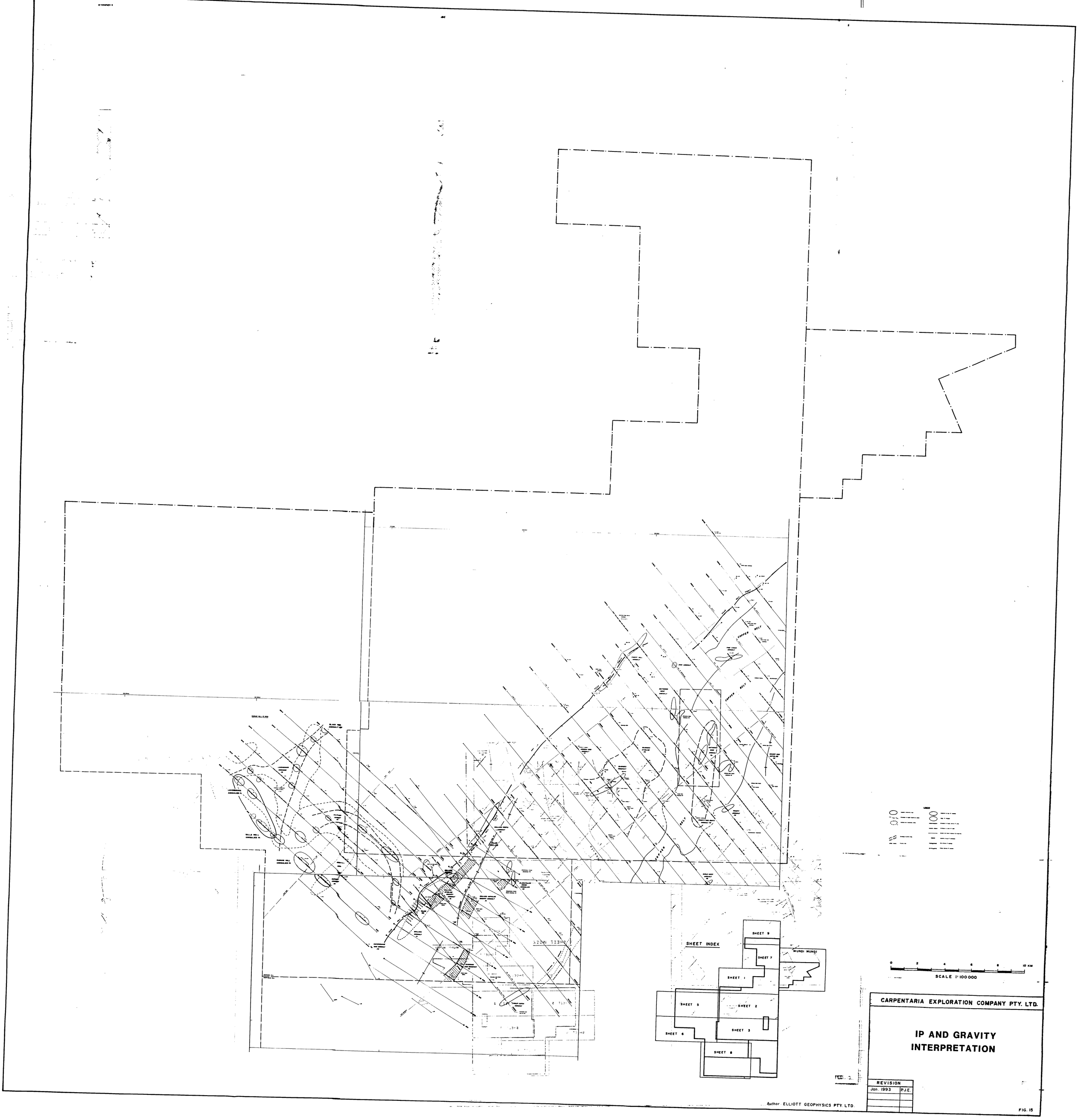
IP AND GRAVITY INTERPRETATION

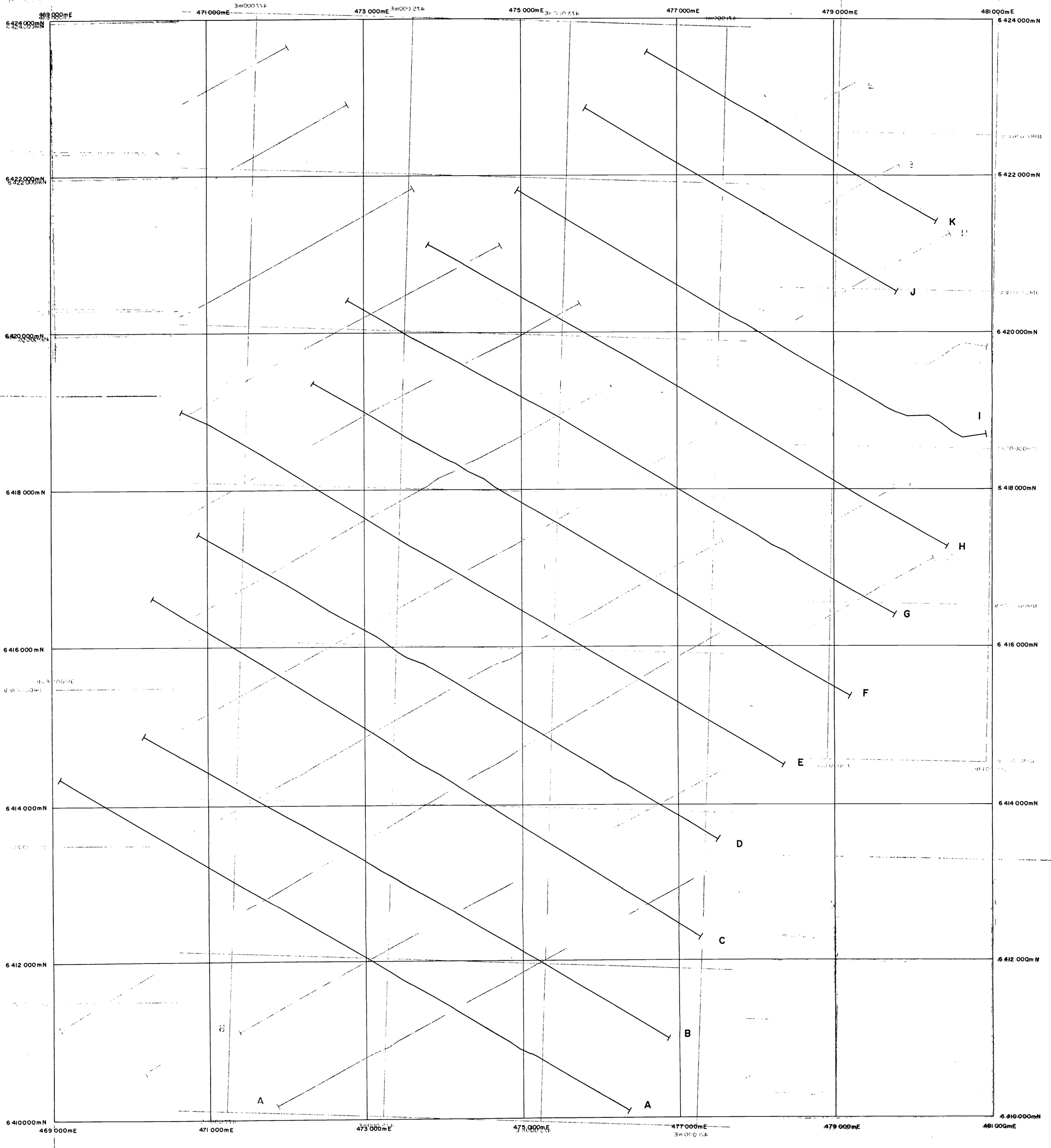
Sheet 3

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Jan. 1993	P.J.E.

FIG. 12

Author: P.J.Elliott, ELLIOTT GEOPHYSICS PTY. LTD.


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MUNDI MUNDI
SHEET 1
SHEET 5
SHEET 2
SHEET 3
SHEET 6
SHEET 8
COPPER BELT
0 2 4 6 8 10 KM
SCALE 1:100 000
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IP AND GRAVITY INTERPRETATION
REVISION
Jan. 1993 P.J.E.
Author ELLIOTT GEOPHYSICS PTY. LTD.
FIG. 15



BALLARA GRAVITY SURVEY

LOCALITY MAP

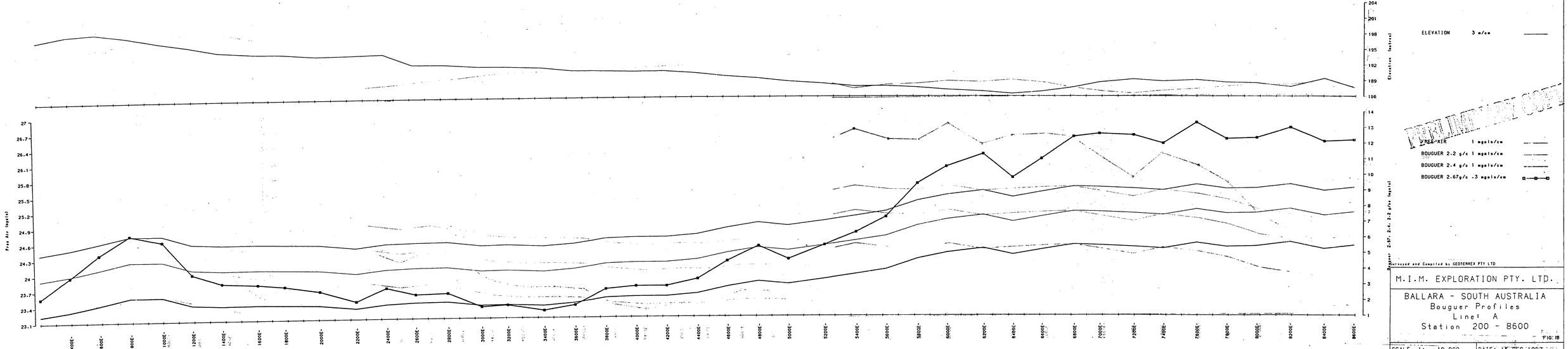
0 1 2 KM

SCALE 1:25 000

P.J. Eltham Jan. 1993

FIG. 16

BOUGUER PROFILE LINE A



ELEVATION 3 m/cm

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c .3 mgals/cm

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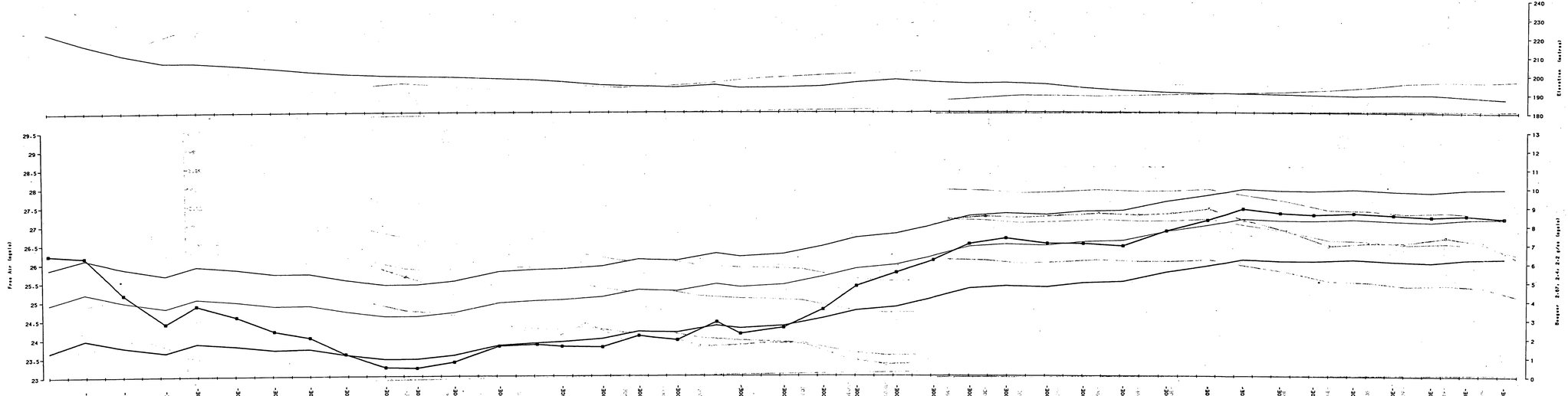
BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: A
Station 200 - 8600

FIG: 18

SCALE 1: 10.000

DATE: 15 DEC 1992

BOUGUER PROFILE LINE B



ELEVATION 10 m/cm

PRELIMINARY COPY

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c .5 mgals/cm

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BALLARA - SOUTH AUSTRALIA

Bouguer Profiles

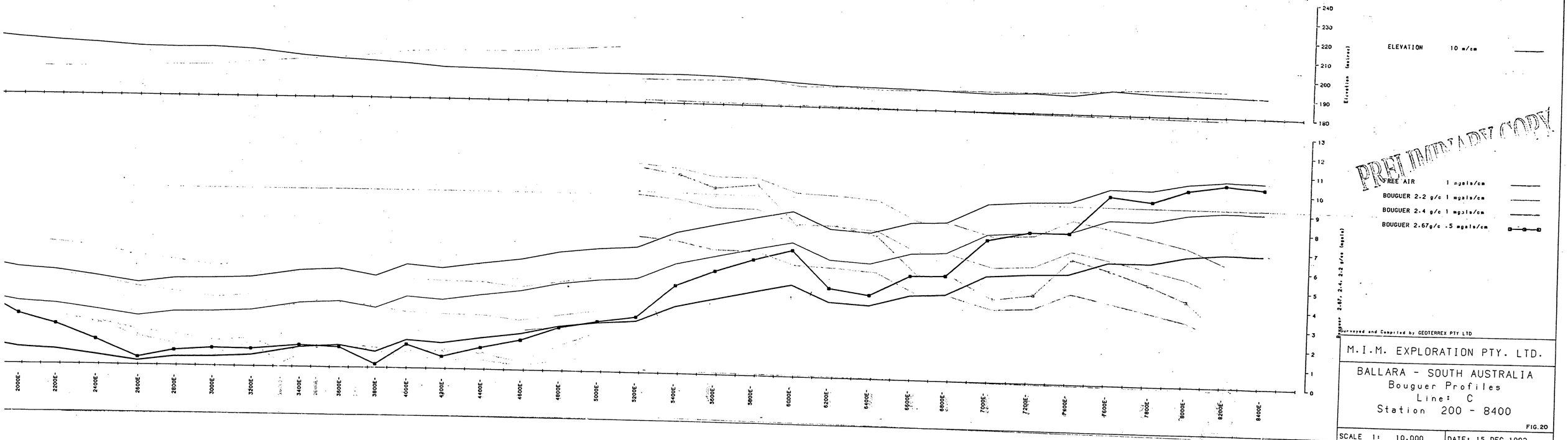
Line: B

Station 200 - 8000

FIG.19

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE C



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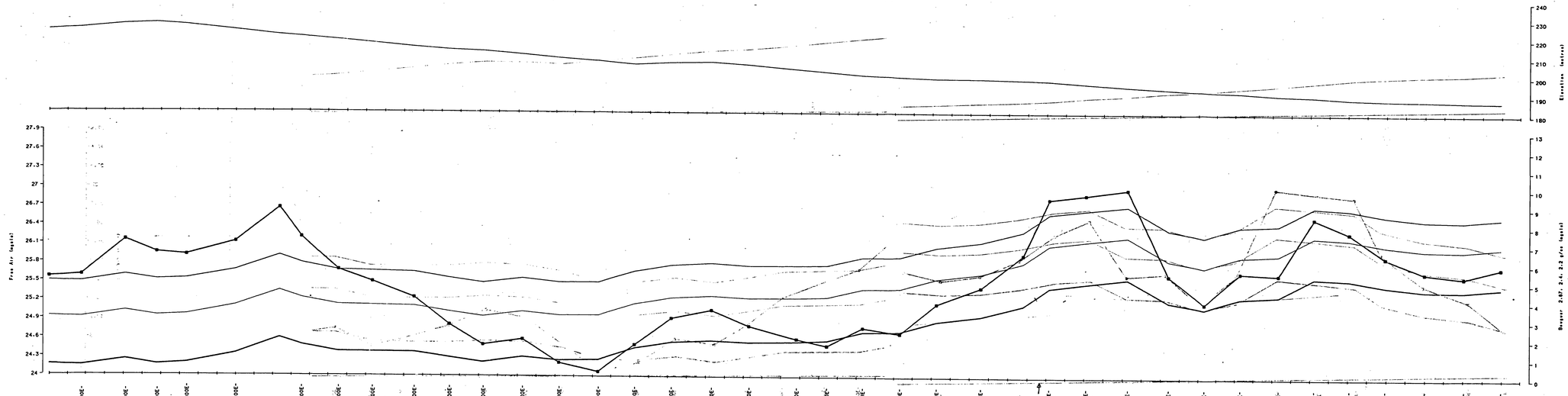
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: C
Station 200 - 8400

FIG.20

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE D



ELEVATION 10 m/cm

Free Air 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c .3 mgals/cm

PRELIMINARY COPY

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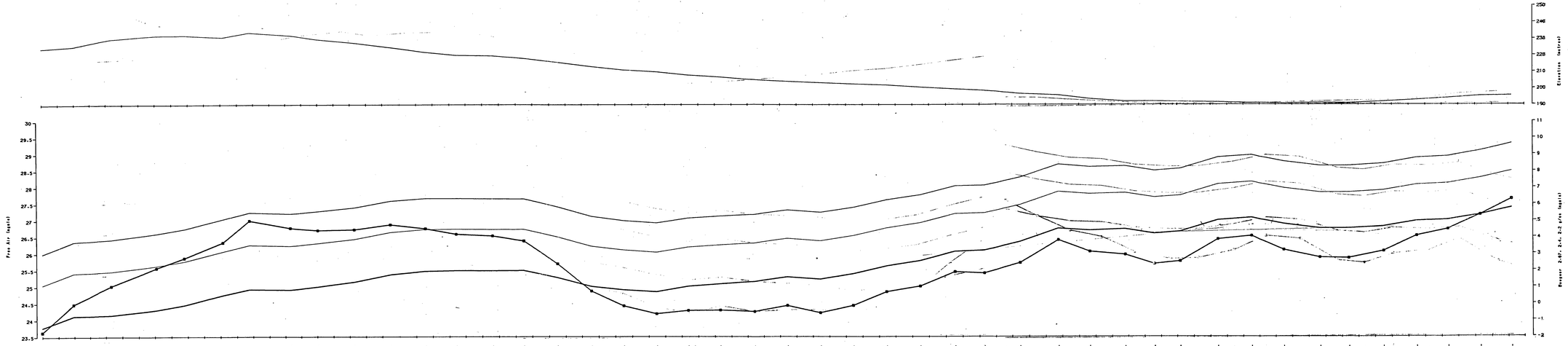
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: D
Station 200 - 8000

FIG. 21

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE E



ELEVATION 10 m/cm

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c .5 mgals/cm

PRELIMINARY COPY

Surveyed and Compiled by GEOTERREX PTY LTD

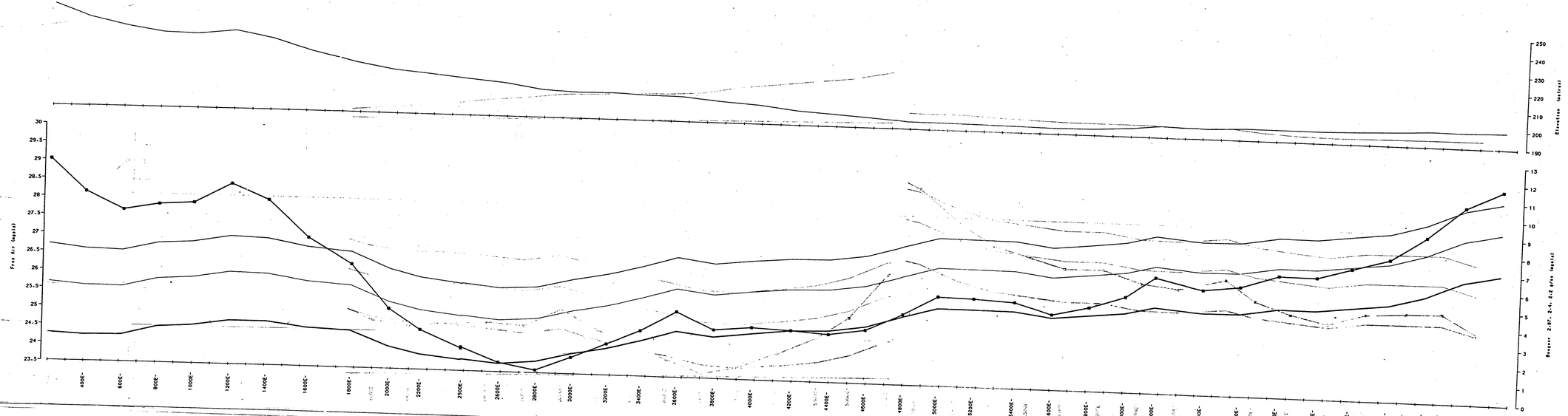
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: E
Station -400 - 8400

FIG.22

SCALE 1: 10,000 DATE: 15 DEC 1992

BOUGUER PROFILE LINE F



ELEVATION 10 m/cm

PRELIMINARY COPY

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c .5 mgals/cm

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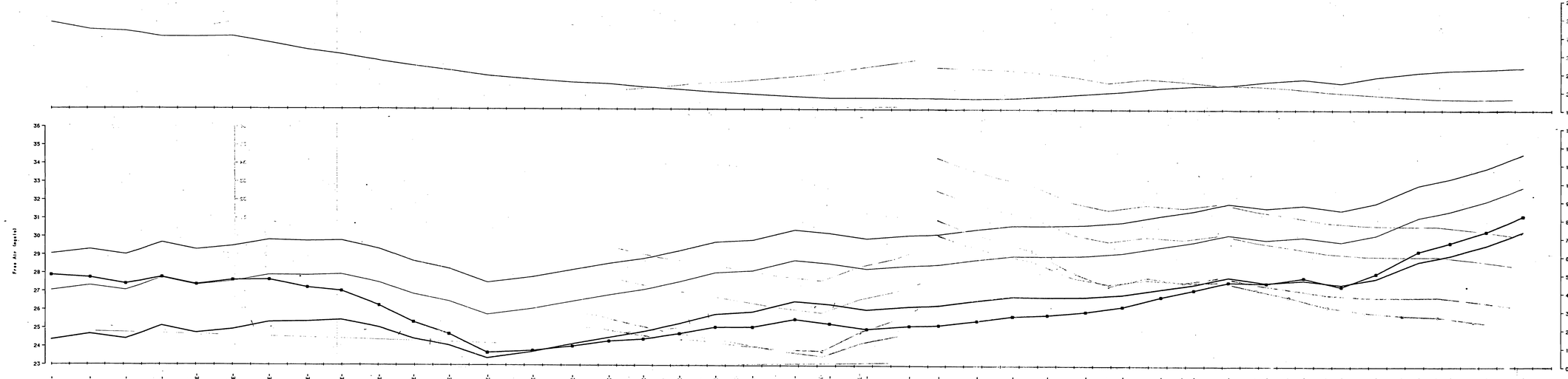
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: F
Station 200 - 8000

FIG. 23

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE G



ELEVATION 10 m/cm

PRELIMINARY COPY

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c 1 mgals/cm

Surveyed and Compiled by GEOTERREX PTY LTD

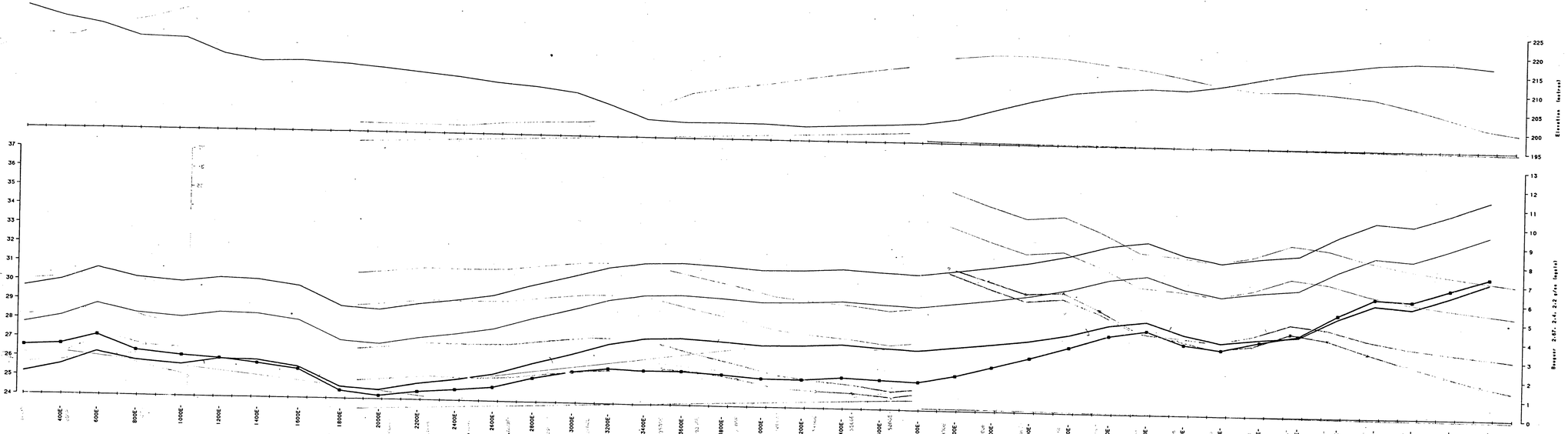
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: G
Station 200 - 8200

FIG.24

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE H



ELEVATION 5 m/cm

PRELIMINARY COPY

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c 1 mgals/cm

Surveyed and Compiled by GEOTERREX PTY LTD

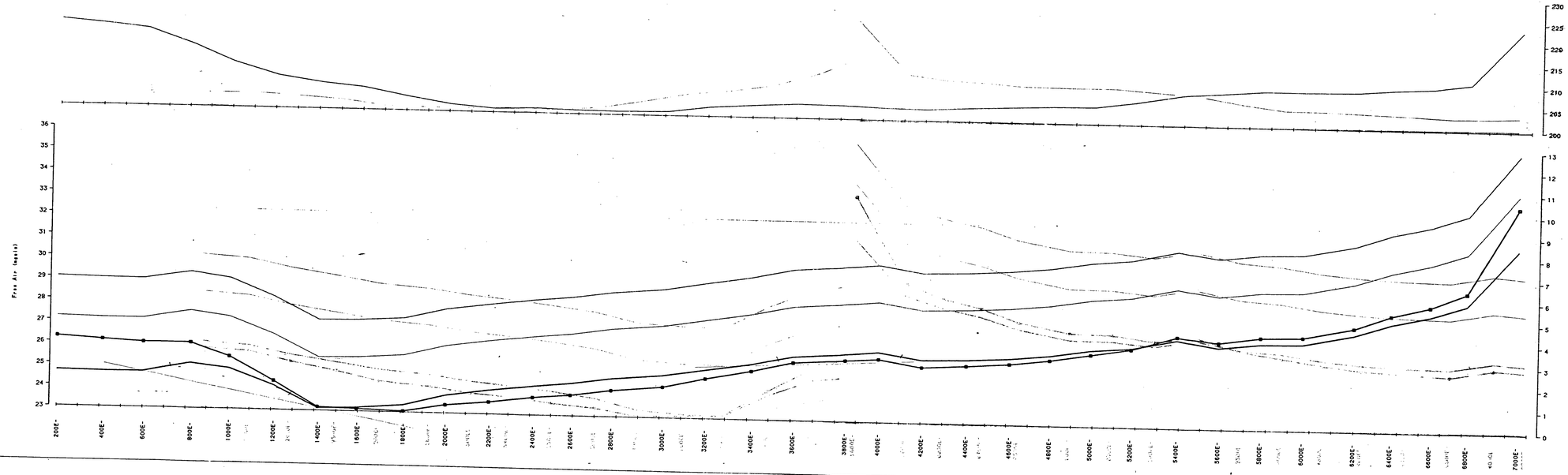
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: H
Station 200 - 7800

FIG.25

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE I



ELEVATION 5 m/cm

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c 1 mgals/cm

Surveyed and Compiled by GEOTERREX PTY LTD

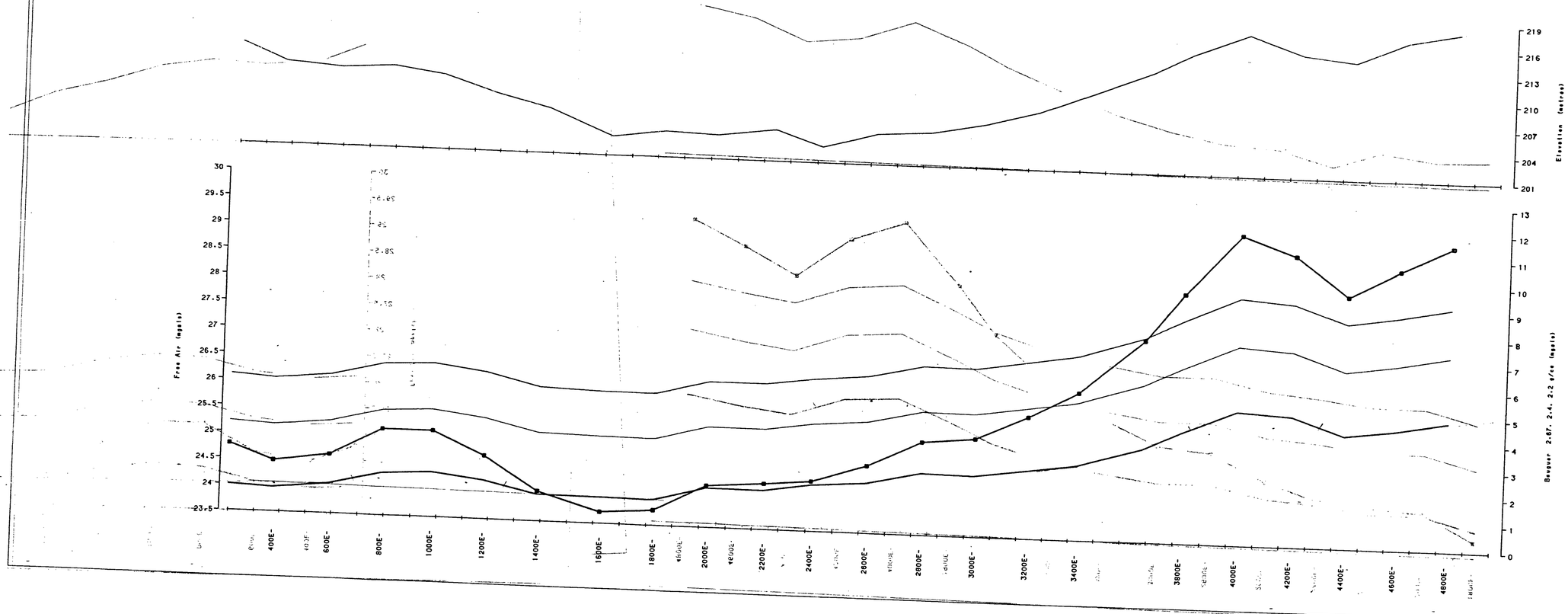
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BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: I
Station 200 - 7000

FIG.26

SCALE 1: 10.000 | DATE: 15 DEC 1992

BOUGUER PROFILE LINE J



ELEVATION 3 m/cm

FREE AIR 1 mgals/cm

BOUGUER 2.2 g/c 1 mgals/cm

BOUGUER 2.4 g/c 1 mgals/cm

BOUGUER 2.67g/c .5 mgals/cm

PRELIMINARY COPY

Surveyed and Compiled by GEOTERREX PTY LTD

M.I.M. EXPLORATION PTY. LTD.

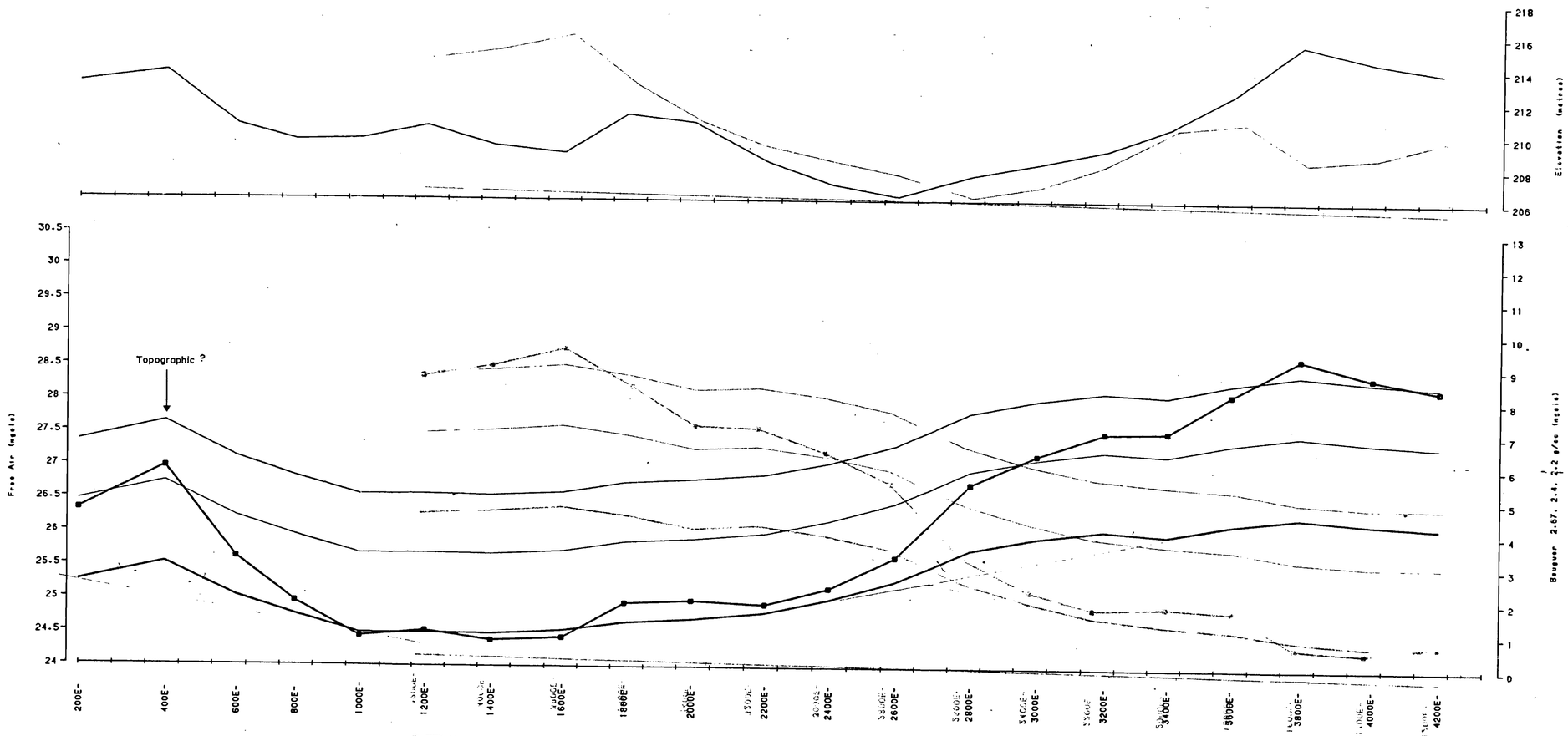
BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: J
Station 200 - 4800

FIG.27

SCALE 1: 10.000

DATE: 15 DEC 1992

BOUGUER PROFILE LINE K



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M.I.M. EXPLORATION PTY. LTD.

BALLARA - SOUTH AUSTRALIA
Bouguer Profiles
Line: K
Station 200 - 4200

FIG.28

SCALE 1: 10.000 | DATE: 15 DEC 1992

APPENDIX B

RAB ASSAY LEDGER

** FILE CTL-REAS **
LINE 26 INTERP ?POSN ERROR

COMPOSITE RAB SAMPLE LEDGER
CUTANA - BY LINE NUMBER

** SORTED BY LINE NUMBER **

SAMPLE NO	HOLE NO "RAB M"	GRID &LINE	ROCK TYPE	ACCESS MINs	SUITE NO	Pb	Zn	Mn	Cu	As	% Fe	Ba	Co	% Na	Ag	Au	% K
		L25(e)															
731010	1351	1040	FM		13	10	36	90	62						<1		
731011	1352	1080	PEG		13	20	22	22	60						<1		
731012	1353	1120	FM		13	8	62	130	210						<1	0.02	
731013	1354	1160	FE		13	16	52	75	260						<1	0.02	
731014	1355	1200	PEG		13	54	26	32	135						<1		
731015	1356	1240	FM		13	14	48	92	120						<1		
731016	1357	1280	FM		13	4	42	100	92						<1		
731009	1350	2000	FM	0.5% mt	13	8	44	68	50						<1		
731008	1349	2040	FM	tr mt	12	4	70	120	20						<1		
731007	1348	2080	FM		12	5	82	135	19						<1		
731006	1347	2120	FM	tr mt	12	4	34	60	94						<1		
731005	1346	2160	FM		12	6	48	92	30						<1		
731004	1345	2200	FM + PEG		12	8	13	18	9						<1		
731003	1344	2900	FM		12	20	55	82	70	<1	2.90	582	<10	0.235	<1		1.63
731002	1343	2940	FM		12	16	20	40	25	<1	6.25	546	<10	0.274	<1		1.21
731001	1342	2980	? FS		12	5	52	45	16	3	2.65	383	<10	0.305	<1		1.14
731000	1341	3020	PEG + FM		12	32	72	32	38	42	3.71	426	<10	0.233	<1		1.04
730999	1340	3060	FM		12	8	16	48	8	9	3.48	464	<10	0.220	<1		1.47
730998	1339	3100	FM		12	12	14	10	10	<1	1.16	263	<10	0.090	<1		0.8
730997	1338	3700	FM		14	10	60	105	42	1	5.97	826	18	0.490	<1		2.02
730996	1337	3740	FM		14	5	58	160	90	2	5.46	801	12	0 653	<1		2
730995	1336	3780	PI	1% mt	15	12	40	170	34	10	5.58	1040	20	1.010	<1		0.52
730994	1335	3820	?AMPHIB	10% mt	15	8	210	4650	200	6	13.60	281	593	1.970	1.0	<0.02	0.34
730993	1334	3860	FM		16	6	185	180	82	<1	5.47	552	15	0.397	<1		2.04
730992	1333	3900	FM		16	50	140	98	155	<1	5.74	494	24	0.117	<1		0.66
730991	1332	3940	PI	10% mt	16	12	36	10	15	4	2.80	76	<10	0.030	<1		0.91
		L26(e)															
730990	1331	740	FM		13	14	50	88	72						<1		
730989	1330	780	FE		13	8	170	300	68						<1		
730988	1329	820	FM	10% b qtz	13	10	48	94	58						<1		
730987	1328	860	FM		13	4	80	78	115						<1		
730986	1327	900	FM		13	16	58	54	46						<1		
730985	1326	940	FE		13	22	52	76	145						<1		
730984	1325	1200	FE	0.5% mt	13	4	90	155	45	2	8.14	720	48	0.385	<1		2.04
730983	1324	1240	rFM		13	6	110	80	84	2	4.77	656	21	1.220	<1		0.95

** FILE CTL-REAS **
LINE 26 INTERP ?POSN ERROR

COMPOSITE RAB SAMPLE LEDGER
CUTANA - BY LINE NUMBER

** SORTED BY LINE NUMBER **

SAMPLE NO	HOLE NO "RAB M"	GRID &LINE	ROCK TYPE	ACCESS MINs	SUITE NO	Pb	Zn	Mn	Cu	As	% Fe	Ba	Co	% Na	Ag	Au	% K
730982	1323	1280	FM		13	8	66	110	80	2	6.32	625	<10	0.423	<1		1.24
730981	1322	1320	FM		13	16	110	180	150	3	7.43	434	10	0.991	<1		1.9
730980	1321	1360	FE		13	22	155	140	110	2	6.27	691	23	0.285	<1		1.59
730979	1320	1400	FM		13	8	165	220	30	2	6.38	729	27	0.591	<1		2.17
730978	1319	1440	FM		13	15	75	96	74	2	5.91	435	<10	0.680	<1		1.21
730977	1318	1480	FM		13	24	35	94	25	3	4.82	840	11	0.459	<1		1.66
730976	1317	1520	PEG + FM		13	28	44	36	42	2	5.78	432	<10	0.257	<1		0.98
730975	1316	1560	FM		13	12	115	115	30	2	5.95	861	22	0.430	<1		1.83
730974	1315	1600	FM		13	20	125	175	36	1	6.56	841	26	1.140	<1		1.6
730973	1314	1640	FE		13	6	110	280	56	2	5.78	1020	17	0.948	<1		1.52
730972	1313	1680	rFE		13	56	185	145	210	20	4.78	1310	14	0.409	<1	0.03	1.27
730971	1312	1720	FM		13	12	260	230	320	4	5.45	861	34	3.000	<1	<0.02	1.7
730970	1311	2100	FM		13	22	200	170	62	2	6.42	646	30	0.750	<1		1.69
730969	1310	2140	PEG + FM		14	4	54	70	42	3	6.42	525	12	0.742	<1		1.48
730968	1309	2180	PEG + rFM		14	4	195	135	110	3	8.86	711	18	0.673	<1		1.28
730967	1308	2220	FE		15	4	90	185	210	1	7.53	1430	31	0.360	<1	<0.02	1.42
730966	1307	2260	FM	0.5% mt	15	14	115	150	280	3	9.66	1280	26	0.518	<1	<0.02	1.3
730965	1306	2300	FE	tr mt	16	6	440	6000	100	4	19.10	1190	78	0.242	1.0		0.89
730964	1305	2340	FM	0.5%grapl	16	20	135	180	92	3	3.41	735	<10	0.120	<1		0.8
		L27(e)															
730945	1286	0	rFM		13	165	135	180	82	13	5.65	327	20	0.186	<1		
730946	1287	40	? FS	2% b qtz	13	20	38	230	6	<1	2.79	662	12	0.244	<1		
		80	PI O/Crop		13												
730947	1288	120	PI		13	5	14	210	2	2	2.04	428	<10	0.373	<1		
730948	1289	160	?FE/SLST		13	12	95	770	4	<1	6.82	499	18	0.607	<1		
730949	1290	200	?FE/SLST		13	4	32	200	1	3	27.10	158	<10	0.608	1.0		
730950	1291	700	?FM/SLST		13	4	50	270	1						<1		
730951	1292	740	SLST		13	6	45	150	8						<1		
730952	1293	780	SLST	5% mt	13	12	56	220	2						<1		
730953	1294	820	SLST	5% mt	13	10	75	160	4						1.0		
730954	1295	860	SLST	2% mt	13	5	46	120	12						<1		
730955	1296	900	SLST	2% mt	13	10	44	120	4						<1		
730956	1297	1080	QTZITE	1% mt	13	8	36	250	24						<1		
730957	1298	1120	SLST	5% mt	13	4	46	430	4						<1		
730958	1299	1160	?QM	15% mt	13	6	40	390	10						<1		
730959	1300	1460	QTZITE		13	12	14	66	36						<1		

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COMPOSITE RAB SAMPLE LEDGER
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SAMPLE NO	HOLE NO "RAB M"	GRID &LINE	ROCK TYPE	ACCESS MINs	SUITE NO	Pb	Zn	Mn	Cu	As	% Fe	Ba	Co	% Na	Ag	Au	% K
730960	1301	1500	FM		14	6	32	65	16						<1		
730961	1302	1540	PEG + FM		14	5	52	240	24						<1		
730962	1303	1580	FM		14	8	35	155	11						<1		
730963	1304	1620	FM		14	10	38	100	19						<1		
		L28(e)															
730940	1281	0	PEG + FM		13	10	68	150	16						<1		
730941	1282	40	FM		13	5	72	175	22						<1		
730942	1283	80	FM		14	12	22	145	30						<1		
730943	1284	120	PEG + FM	tr mt	14	14	44	135	18						<1		
730944	1285	160	FE		14	80	72	310	16						<1		
742917	2067	1300	rBM	0.5% mt	14	5	110	290	70	3	4.94	645	20	0.677	0.5		1.36
742916	2066	1340	rBM		14	5	110	190	45	2	5.07	619	23	0.895	0.5		1.14
742915	2065	1380	FM	tr mt	14	5	15	130	35	3	3.42	439	11	1.530	0.5		1.54
742914	2064	1420	FM / BM	0.5% mt	14	5	60	205	20	2	3.61	691	12	0.882	<0.5		1.82
742913	2063	1460	FM		14	5	45	150	10	3	3.49	873	13	1.110	0.5		1.37
730930	1271	1500	?PEG		14	4	15	155	16	3	1.50	274	<10	2.990	<1		1.03
730931	1272	1540	?PEG + FM		14	12	26	75	20	3	1.79	327	<10	1.190	<1		0.93
730932	1273	1580	rFM		14	18	62	125	30	5	2.23	602	14	1.090	<1		1.09
730933	1274	1620	FE		14	22	60	260	14	2	4.98	700	12	0.594	<1		1.26
730934	1275	1660	?PEG		13	15	24	66	8	2	1.25	147	<10	1.320	<1		0.69
845560	3098	1900	FM / rFM	0.5% mt	13	5	135	235	30	1	4.42	439	20	0.644	<0.5		0.95
845559	3097	1940	FM / BM	0.5% mt	13	10	290	360	30	3	8.90	366	52	1.730	0.5		0.95
845558	3096	1980	FM	0.5% mt	13	10	80	290	55	3	6.47	749	30	1.000	<0.5		1.13
845557	3095	2020	BM	0.5% mt	13	10	195	325	30	7	6.24	340	30	1.150	0.5		1.2
845556	3094	2060	PEG + FM		13	45	105	370	150	6	3.41	471	15	2.130	0.5		1.37
730935	1276	2100	FM		13	14	94	270	18	4	5.09	543	30	1.230	<1		1.04
730936	1277	2140	FM		16	22	92	200	82	6	4.26	487	16	0.742	<1		1.01
730937	1278	2180	FM		16	12	80	195	40	3	6.48	765	39	0.429	<1		1.6
730938	1279	2220	?FS	tr graph	16	12	300	195	50	15	2.97	641	<10	0.770	<1		1.12
730939	1280	2260	FM	2% graph	16	15	410	350	220	28	3.97	741	11	0.501	<1	<0.02	1.09
742912	2062	2300	PEG + BM	2% graph	16	5	335	425	85	14	2.24	852	<10	0.177	0.5		1.5
742911	2061	2340	rBM	1grp trmt	16	5	90	130	25	1	2.95	1720	<10	0.527	0.5		1.15
742910	2060	2380	PEG + FM	0.5% mt	16	5	70	500	5	2	1.61	630	<10	2.790	<0.5		0.78
742909	2059	2420	FM / BM	2% graph	16	5	55	155	70	3	4.82	1230	13	0.866	0.5		1.18
742908	2058	2460	? AMPHIB		16	5	125	1070	20	2	11.00	173	40	1.670	0.5	<0.02	0.62
742907	2057	2500	? AMPHIB		16	5	160	810	65	2	9.41	504	51	1.410	0.5	<0.02	0.85

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742906	2056	2540	FE	0.5% mt	16	5	5	160	30	10	5.94	1200	15	0.434	0.5		1.34
742905	2055	2580	FM		16	5	610	675	40	7	3.13	992	<10	1.580	1.0		0.99
742904	2054	2620	PI / FS		16	5	80	295	15	3	1.73	352	<10	2.890	0.5		0.86
742903	2053	2660	FM		16	5	55	240	55	5	2.08	907	<10	1.920	0.5		1.25
742902	2052	2700	PEG + FM	tr mt	16	10	155	375	25	5	2.08	1010	<10	1.420	<0.5		1.13
742901	2051	2740	?PEG / PI		16	5	250	400	10	7	2.29	786	<10	2.220	0.5		1.09
742900	2050	2780	FM		16	5	110	500	15	3	2.27	958	<10	2.080	0.5		1.21
742899	2049	2820	PI / FS		16	5	20	70	5	4	1.05	601	<10	0.939	0.5		1.16
742898	2048	2860	FM	2% graph	16	5	5	190	20	1	2.85	1010	<10	1.080	0.5		1.41
742897	2047	2900	rBM	1% graph	16	5	35	75	10	9	2.95	948	<10	0.866	<0.5		1.48
742896	2046	2940	BM	tr mt	16	5	90	105	20	1	3.17	1090	<10	0.842	<0.5		1.29
742895	2045	2980	FM / BM		16	5	100	175	20	3	3.60	579	<10	1.800	0.5		1.49
742894	2044	3020	FM / BM		16	5	160	105	30	6	3.35	752	12	0.930	0.5		1.4
730929	1270	3060	FM		16	20	1550	1080	115	120	11.80	318	54	0.323	<1	0.02	0.89
730928	1269	3100	FM	5% graph	16	4	16	24	38	13	2.34	1240	<10	0.627	<1		1.53
730927	1268	3140	FM / BM		16	12	54	62	25	11	3.06	801	<10	1.340	<1		0.85
730926	1267	3180	PEG + FM		16	4	16	56	28	6	1.58	317	<10	0.171	<1		0.85
730925	1266	3220	BM / FE		16	10	66	175	98	2	6.39	2180	17	0.557	<1		1.13
730924	1265	3260	BM		16	10	155	190	125	4	7.36	720	23	0.436	<1		1.35
730923	1264	3300	FE		16	12	30	120	70	3	6.37	721	18	0.450	<1		1.39
730922	1263	3340	?FM		16	28	76	730	230	8	7.17	1590	24	2.790	<1	<0.02	0.89
730921	1262	3380	FE		16	12	14	195	30	59	6.40	633	21	0.342	<1	<0.02	1.22
742893	2043	3420	FM		16	5	30	145	10	140	3.93	346	13	0.365	<0.5	0.02	1.05
742892	2042	3460	BM	1% graph	16	5	465	225	30	17	2.55	679	<10	0.627	<0.5		1.49
742891	2041	3500	BM	tr mt	16	5	75	155	50	10	4.92	620	24	0.658	<0.5		1.68
742890	2040	3540	rBM	0.5% mt	16	5	25	130	60	1	4.95	478	17	0.951	<0.5		1.41
742889	2039	3580	rBM		16	5	75	160	30	<1	6.28	476	31	0.786	1.0		1.27
845555	3093	3620	PEG + BM	tr mt	16	15	55	140	35	2	3.67	219	18	0.528	0.5		0.87
845554	3092	3660	BM	tr mt	16	10	50	240	30	4	4.71	447	26	1.040	0.5		1.43
845553	3091	3700	rBM	tr mt	16	5	65	205	35	2	5.06	447	20	0.933	<0.5		1.41
845552	3090	3740	BM	tr mt	16	5	60	175	50	1	4.91	528	24	1.270	0.5		1.82
845551	3089	3780	BM	tr mt	16	5	75	160	35	1	5.19	502	26	1.270	0.5		1.21
845550	3088	3820	BM	tr mt	16	5	30	170	45	2	5.31	471	18	0.743	0.5		2.37
845549	3087	3860	PEG		16	430	75	40	25	26	1.53	398	<10	2.270	1.0		2.04
845548	3086	3900	BM	tr mt	16	10	45	140	35	2	4.59	532	12	1.040	<0.5		1.9
845547	3085	3940	BM	tr mt	16	5	45	215	60	1	5.27	544	18	0.951	0.5		1.17

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845546	3084	3980	BM	tr mt	16	5	35	260	95	2	5.70	565	15	1.150	0.5		1.76
845545	3083	4020	BM	0.5% mt	16	10	30	130	230	14	4.66	485	13	0.749	0.5	0.04	2.39
845544	3082	4060	BM	tr mt	16	10	55	290	40	1	5.07	466	14	1.130	<0.5		1.7
845543	3081	4100	BM	tr mt	16	10	80	385	45	2	5.06	546	16	1.130	0.5		2.18
845542	3080	4140	PEG (?Lf)	tr mt	13	10	35	395	15	3	2.89	261	10	3.170	1.0		1.1
845541	3079	4180	BM	tr mt	13	5	40	290	60	1	5.84	504	19	1.110	0.5		2.02
845540	3078	4220	BM	0.5% mt	13	5	35	275	25	1	4.89	512	18	1.060	0.5		2.01
845539	3077	4260	FM / FE	tr mt	13	5	55	355	35	1	4.64	619	19	1.930	0.5		1.94
845538	3076	4300	rFM	tr mt	13	10	85	245	45	2	4.42	646	20	1.910	0.5		1.59
845537	3075	4340	FM	tr mt	13	20	120	270	85	4	5.11	464	26	1.110	0.5		1.68
		L29(e)															1.26
742982	2132	200	FM / BM	tr mt	16	5	55	115	30	2	5.15	485	16	1.090	<0.5		1.2
742983	2133	240	rFM / rBM	tr mt	16	5	15	110	55	2	5.40	473	16	1.150	0.5		1.45
742984	2134	280	BM	tr mt	15	15	75	201	25	5	4.60	478	13	1.280	0.5		1.67
742985	2135	320	FM	tr mt	15	5	35	205	80	3	4.49	433	11	1.120	<0.5		1.45
742986	2136	360	rFM	1% mt	15	5	15	85	95	2	4.98	462	14	0.901	<0.5		2.2
742987	2137	400	BM	2% mt	15	5	15	185	20	3	5.26	547	14	1.130	<0.5		1.48
742988	2138	440	FM		14	5	20	170	15	3	5.00	575	15	1.130	<0.5		1.54
742989	2139	480	rFM		14	5	30	50	10	2	2.70	353	10	1.910	<0.5		0.98
742990	2140	520	FM	tr mt	14	5	40	340	50	2	5.38	586	23	1.010	0.5		1.22
742991	2141	560	rFM		14	5	40	95	35	3	4.67	515	16	1.200	0.5		1.18
742992	2142	600	rFM	tr mt	13	710	70	140	255	13	7.09	305	12	0.571	1.0	0.03	0.98
743168	2330	640	rFM		13	10	45	75	45	4	3.04	218	11	4.110	<0.5		0.92
743169	2331	680	FM / BM	0.5% mt	13	5	50	125	30	2	3.29	422	18	2.090	0.5		1.42
743170	2332	720	FM / rFM		13	5	30	105	5	1	2.05	376	<10	4.290	<0.5		1.04
743171	2333	760	FM / BM	0.5% mt	13	5	60	130	30	4	4.65	607	19	1.410	0.5		1.67
743172	2334	800	rFM	0.5% mt	13	5	45	160	20	2	5.38	661	19	1.090	<0.5		1.59
742993	2143	860	rFM	tr mt	13	5	55	180	45	2	4.96	398	16	1.500	<0.5		1.62
742994	2144	900	rFM		12	5	25	105	50	3	4.73	407	12	1.400	<0.5		1.24
742995	2145	940	? rFM		12	5	5	50	10	2	1.42	348	<10	4.100	<0.5		0.48
742996	2146	980	FS / PI		12	5	5	35	10	2	0.84	99	<10	7.080	<0.5		1.37
742997	2147	1020	FM	0.5% mt	12	5	25	100	25	1	2.48	289	13	4.130	<0.5		1.2
742998	2148	2620	rFM	tr mt	12	5	50	70	80	1	4.99	398	<10	0.973	0.5		1.58
742999	2149	2660	FM		12	5	85	105	95	3	5.18	377	15	1.400	<0.5		0.93
743000	2150	2700	PEG + rFM		12	5	105	100	70	10	2.80	183	<10	4.280	0.5		1.09
743001	2151	2740	rFM		12	5	265	155	110	4	5.48	428	24	1.300	<0.5		

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743002	2152	2780	FM		12	5	105	105	30	1	3.42	340	11	1.980	<0.5		2.07
743003	2153	2820	FM / BM	tr mt	12	5	95	140	35	<1	5.97	495	15	1.280	0.5		1.26
743004	2154	2860	FM		12	5	60	125	25	<1	4.64	452	16	1.020	0.5		1.74
743005	2155	2900	AMPHIB	2% mt	12	5	115	505	140	1	10.20	396	53	1.480	0.5	<0.02	0.41
743006	2156	2940	FM	0.5% mt	12	5	70	75	40	<1	3.39	411	17	2.540	0.5		1.68
743007	2157	2980	?APHIB	2% mt	12	5	100	1720	90	1	10.00	355	68	1.290	0.5	<0.02	0.53
743008	2158	3020	FS / FM	0.5% mt	12	5	45	65	20	1	3.28	341	11	1.640	0.5		1.45
743009	2159	3140	FS / FM	2% mt	13	5	50	60	30	1	4.85	485	11	1.510	0.5		1.41
743010	2160	3180	FS / PI	0.5% mt	14	5	60	50	30	1	3.58	275	12	2.930	<0.5		1.33
743011	2161	3220	FS / PI	0.5% mt	14	5	20	35	10	<1	2.18	301	<10	2.040	<0.5		1.12
743012	2162	3260	FM		14	5	65	115	25	1	3.31	322	<10	2.190	0.5		1.47
743013	2163	3300	PI / FS	0.5% mt	15	5	10	25	10	1	1.04	141	<10	2.800	0.5		0.79
743167	2329	3340	FS / PI		15	5	45	90	20	1	2.36	230	13	2.250	<0.5		0.88
743014	2164	3380	FM	0.5% mt	15	5	110	90	75	2	3.20	294	13	1.710	<0.5		1.17
743015	2165	3420	BM	tr mt	15	5	160	310	65	1	7.45	606	32	0.893	<0.5		1.21
743016	2166	3460	rBM		15	5	185	390	70	1	5.62	674	19	1.040	<0.5		0.94
743017	2167	3500	BM / FM		16	5	135	460	30	2	6.11	572	25	0.924	<0.5		1.17
743018	2168	3540	FM	tr mt	16	5	135	255	30	1	4.47	523	28	0.981	0.5		1.09
743019	2169	3580	rBM	tr mt	16	5	255	360	30	5	5.76	798	35	0.846	<0.5		0.75
		L30(e)			14	5	40	175	20	1	3.15	431	10	1.140	0.5		1.23
743049	2199	60	FM		14	5	45	195	45	1	2.65	442	<10	0.892	<0.5		1.21
743048	2198	100	FS		14	5	50	175	35	1	2.77	369	20	1.120	0.5		1.33
743047	2197	140	FS / FM		13	5	55	135	40	<1	2.81	446	10	0.158	0.5		0.79
743046	2196	180	FS / FM		13	5	50	205	20	<1	2.69	395	12	1.580	0.5		1.53
743045	2195	220	FS	?1%garne	13	5	70	145	25	<1	4.85	642	14	0.344	<0.5		2.03
743044	2194	260	FM	.5mt2gqtz	13	5	190	500	175	1	10.90	258	42	0.917	0.5	0.02	1.83
743043	2193	360	AMPHIB	2% mt	13	5	65	125	40	<1	4.25	695	14	0.824	<0.5		0.9
743042	2192	400	FM	1% mt	12	5	55	140	30	2	2.79	340	11	0.946	0.5		1.03
743041	2191	440	FM	0.5% mt	12	10	25	20	35	<1	1.34	309	<10	0.274	<0.5		0.57
743040	2190	480	FS		12	10	10	40	25	1	1.45	508	<10	0.458	0.5		0.99
743039	2189	520	FS		12	5	60	95	10						<0.5		
743038	2188	920	FS	1% mt	12	5	35	70	10						<0.5		
743037	2187	960	FM	0.5% mt	12	5	80	120	10						<0.5		
743036	2186	1000	BM / rBM	0.5% mt	13	5	45	85	10						0.5		
743035	2185	1040	FM / BM	1% mt	13	10	60	95	35						<0.5		
743034	2184	1080	rBM	1% mt													

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SAMPLE NO	HOLE NO "RAB M"	GRID &LINE	ROCK TYPE	ACCESS MINs	SUITE NO	Pb	Zn	Mn	Cu	As	% Fe	Ba	Co	% Na	Ag	Au	% K
743033	2183	1300	?PEG + rFI	2% mt	13	5	10	30	5						<0.5		
743032	2182	1340	PEG + rFM	0.5% mt	12	5	20	65	5						<0.5		
743031	2181	1380	FS / PI	1% mt	12	5	15	40	5						<0.5		
743030	2180	1420	PEG / PI	2% mt	12	5	5	20	5						<0.5		
743029	2179	1460	?FS / FM	5% b qtz	12	5	20	50	20						<0.5		
743028	2178	1500	BM	1% mt	13	5	45	80	20						<0.5		
743027	2177	1540	rBM	1% mt	13	5	40	65	10						<0.5		
743026	2176	1580	FS / FM	0.5% mt	12	5	30	45	10						<0.5		
743025	2175	1620	PI / FS		12	5	5	15	5						<0.5		
743024	2174	1660	FS / PI		12	5	25	55	5						<0.5		
743023	2173	1700	?PEG + FN	tr mt	13	5	40	65	20						<0.5		
743022	2172	1740	BM	1% mt	13	5	25	50	70						<0.5		
743021	2171	1860	rBM	1% mt	13	5	35	75	25						<0.5		
743020	2170	1900	FM + PEG	1% mt	14	5	45	75	35						<0.5		
		L37(n)															
743197	2360	0	BM + PEG	1% graph	16	15	75	230	85	2	3.75	1090	10	0.658	<0.5		
743196	2359	40	BM + PEG	.5gp.5gar	16	5	95	1050	70	1	4.78	934	42	0.828	<0.5		
743195	2358	80	BM	.5gp.5gar	16	5	90	1400	230	1	5.21	1300	77	0.591	<0.5	<0.02	
743194	2357	120	BM	1% graph	16	5	110	1700	40	4	4.91	1320	41	0.263	<0.5		
743193	2356	160	PEG + BM	0.5%grapl	15	5	25	325	65	2	2.80	934	12	0.157	<0.5		
743192	2355	340	FM	1% mt	15	5	25	65	40	1	7.05	147	<10	4.480	<0.5		
743191	2354	380	FM	1% mt	14	5	25	55	20	2	6.15	141	<10	4.430	<0.5		
743190	2353	420	FS / FM	0.5% mt	14	5	15	50	15	1	3.33	359	11	4.580	<0.5		
NS	2352	460	SAND		14												
743189	2351	500	FM	0.5% mt	14	10	20	45	10	1	4.60	305	10	3.840	<0.5		
743188	2350	540	FM	0.5% mt	14	10	15	45	5	2	2.94	248	<10	4.140	<0.5		
743187	2349	580	FM	1% mt	14	5	25	50	55	2	7.63	126	87	0.095	<0.5		
743186	2348	620	FM	0.5% mt	14	5	15	60	5	1	4.30	321	12	4.580	<0.5		
743185	2347	660	FM	1% mt	14	5	15	55	5	1	5.54	179	12	4.570	<0.5		
743184	2346	700	FS / FM	0.5% mt	14	10	15	50	5	1	3.79	144	11	4.630	<0.5		
743183	2345	740	FM	0.5% mt	13	5	25	10	15	2	5.10	400	22	3.190	<0.5		
743182	2344	780	FM	1% mt	13	5	15	65	5	1	5.28	240	14	4.450	<0.5		
743181	2343	820	??P+APHI	5% mt	13	5	95	2100	35	1	10.70	351	299	1.590	<0.5	<0.02	
743180	2342	860	BIOTITITE	10% mt	13	5	115	520	15	2	13.10	339	37	0.597	<0.5	<0.02	
743179	2341	900	FM	1% mt	13	5	55	250	5	1	6.08	235	25	2.620	<0.5		
743178	2340	940	FM	2% mt	13	5	65	165	15	1	10.00	197	36	2.380	<0.5		

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743177	2339	980	FS / FM	1% mt	13	5	25	80	5	1	3.73	269	10	4.390	<0.5		
743176	2338	1020	FM	1% mt	13	5	50	120	25	1	4.82	356	24	2.880	<0.5		
743175	2337	1060	FM	1% mt	13	5	55	115	15	1	4.07	334	17	3.410	<0.5		
743174	2336	1100	FM	0.5% mt	13	5	50	130	20	2	4.07	363	14	2.860	0.5		
743173	2335	1140	FM	0.5% mt	13	10	40	135	70	2	3.88	305	10	3.210	0.5		
		L64(n)															
NS	2038	160	SAND		13												
NS	2037	200	SAND		13												
NS	2036	240	SAND		13												
NS	2035	280	CLAY/SAN		13												
742888	2034	320	FM		13	5	30	195	40						0.5		
742887	2033	360	? rFM		13	20	45	135	125						<0.5		
742886	2032	400	BM	2% mt	13	5	15	160	45						0.5		
742885	2031	440	FM		13	5	30	185	15						1.0		
NS	2030	560	SAND		13												
742884	2029	600	? FM		13	5	5	115	15						0.5		
742883	2028	680	FM / BM		13	10	50	275	40						<0.5		
742882	2027	720	?FM + PEG		13	5	50	205	30						0.5		
742881	2026	800	BM + PEG	0.5% mt	13	5	20	90	35						0.5		
742880	2025	840	PEG / FS		12	5	35	160	15						0.5		
742879	2024	880	FM	0.5% mt	12	5	50	220	65						0.5		
742878	2023	920	PEG + FM		12	5	40	165	35						0.5		
742877	2022	960	?APHIB	2% mt	12	5	80	295	250						0.5	<0.02	
742876	2021	1000	?APHIB	2% mt	12	5	70	355	180						<0.5	<0.02	
742875	2020	1040	FM	15bq0.5m	12	5	35	200	15						<0.5		
742874	2019	1080	FM	2% mt	12	5	40	235	80						<0.5		
742873	2018	1120	FM	1% mt	13	5	30	200	25						<0.5		
742872	2017	1160	PEG + FM	5% mt	13	5	35	160	20						<0.5		
742871	2016	1200	FM	5% mt	13	5	30	140	20						<0.5		
742870	2015	1240	FM + PEG		13	5	40	240	20						<0.5		
742869	2014	1280	PEG + FM	0.5% mt	13	5	15	130	20						0.5		
742868	2013	1400	PEG + BM	5% mt	13	5	40	160	50						<0.5		
742867	2012	1440	? FM		13	5	40	245	5						<0.5		
742866	2011	1480	FM	0.5% mt	13	5	50	240	15						<0.5		
742865	2010	1640	PEG + FM		13	5	20	100	5						<0.5		
742864	2009	1680	PEG + FM		14	5	5	45	5						<0.5		

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					14	5	15	125	25						<0.5		
742863	2008	1720	BM / FM		14	5	10	65	65						0.5		
742862	2007	1760	BM	0.5% mt	14	5	20	100	30						<0.5		
742861	2006	1800	rBM	0.5% mt	14	5	15	140	45						<0.5		
742860	2005	1840	rFM / rBM		15	5	25	175	40						0.5		
742859	2004	1880	rBM	1% mt	15	5	10	115	60						0.5		
742858	2003	1920	BM	5% mt	15	5	10	105	25						<0.5		
742857	2002	1960	FM	0.5% mt	15	5	10	80	25						0.5		
742856	2001	2000	FM / BM	0.5% mt	15	5	20	170	20						0.5		
742855	2000	2040	FM		15	5	25	100	30						<0.5		
742854	1999	2080	BM	5% mt	15	5	35	180	30						0.5		
742853	1998	2120	PEG	0.5% mt	15	5	35	160	25						0.5		
742852	1997	2160	BM + PEG	1% mt	15	5	20	120	35						0.5		
742851	1996	2200	rBM	0.5% mt	15	5	35	275	30						<0.5		
742850	1995	2240	FM / BM	0.5% mt	15	5	45	115	80						<0.5		
742849	1994	2280	PEG + FM	0.5% mt	15	5	45	205	80						<0.5		
742848	1993	2320	PEG + FM	20% b qtz	15	5	15	135	50						0.5		
742847	1992	2360	FM	5%bq 5%i	15	5	25	135	25						1.0		
742846	1991	2400	FM	2% mt													
		L65(e)			14	5	45	230	80	2	5.74	628	15	0.599	<0.5		1.63
742918	2068	880	rFM		13	5	20	175	10	2	4.60	832	20	0.808	<0.5		1.48
742919	2069	920	BM / FE		13	5	30	155	20	3	2.62	209	<10	2.430	0.5		0.79
742920	2070	960	PEG		13	5	75	795	70	2	7.21	274	23	1.200	<0.5	0.02	0.48
742921	2071	1000	AMPHIB		13	5	20	130	5	2	1.97	233	<10	3.600	<0.5		0.87
742922	2072	1040	PEG / ?Lf	0.5% mt	13	5	50	195	40	2	5.88	590	22	1.070	<0.5		1.43
742923	2073	1080	FM / BM		13	5	20	230	30	2	3.97	461	12	0.993	<0.5		1.84
742924	2074	1120	FE / BM	0.5% mt	13	5	205	785	145	3	9.22	343	41	0.768	<0.5	<0.02	2.19
742925	2075	1160	AMPHIB		13	5	115	370	5	2	3.73	336	<10	3.280	<0.5		1.41
742926	2076	1200	FM	5% b qtz	13	5	35	145	15	3	1.86	736	<10	1.610	0.5		1.99
742927	2077	1240	FS / PEG		13	5	55	155	70	7	5.99	700	12	0.722	0.5		2.68
742928	2078	1280	FM		13	5	85	585	155	5	6.17	439	32	2.010	0.5		1.3
742929	2079	1320	FM / BM		13	5	80	205	70	2	4.74	513	16	0.973	<0.5		2.26
742930	2080	1360	FM		13	5	115	980	75	2	10.30	141	35	1.320	<0.5	<0.02	0.56
742931	2081	1400	AMPHIB		13	5	20	130	295	6	2.99	499	24	2.170	<0.5	<0.02	1.05
742932	2082	1440	PEG		16	5	55	240	10	1	4.90	465	20	2.160	0.5		1.76
742933	2083	1480	FM		16	15	35	110	60	1	7.69	996	33	1.110	<0.5		2.31
742934	2084	1520	FE														

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742935	2085	1560	rBM	2% graph	16	5	125	355	30	2	3.07	756	<10	1.040	<0.5		1.59
742936	2086	1840	rBM	1grp0.5mt	16	5	5	100	55	<1	2.44	1310	23	0.955	<0.5		1.68
742937	2087	1880	FM / BM	2% graph	16	5	185	505	90	5	4.17	1530	25	0.812	<0.5		1.93
742938	2088	1920	FM	2grp trmt	16	5	105	265	35	2	3.13	550	<10	2.270	0.5		1.33
742939	2089	1960	FM	2grap 1mt	16	5	205	380	40	2	2.32	1140	11	1.560	0.5		1.14
742940	2090	2000	FM	5bq 2grap	16	5	125	120	60	3	3.50	1170	<10	0.376	<0.5		1.61
742941	2091	2040	FM / BM		16	5	195	325	20	28	6.10	824	14	0.434	<0.5		1.83
742942	2092	2080	AMPHIB		16	5	175	1000	50	16	4.96	801	21	0.311	0.5	0.07	1.65
742943	2093	2120	FM	0.5% mt	16	5	145	285	55	1	5.29	848	12	1.040	<0.5		1.75
742944	2094	2160	BM	0.5% mt	13	5	5	160	20	19	5.34	1220	17	0.341	<0.5		2.62
742945	2095	2200	FM / BM	0.5% mt	13	5	20	205	65	4	6.72	757	22	0.512	0.5		1.42
742946	2096	2240	FM	2% mt	14	5	15	195	50	2	5.86	609	19	0.722	<0.5		2.02
742947	2097	2280	BM		14	5	15	270	75	1	6.18	723	42	0.536	0.5		2.49
742948	2098	2320	AMPHIB		15	5	100	780	90	30	8.19	476	45	1.500	0.5	0.02	0.81
742949	2099	2360	BM	tr mt	15	5	20	525	45	24	5.34	776	21	0.618	<0.5		1.33
742950	2100	2400	FM / BM	tr mt	16	5	15	435	20	200	5.95	751	19	0.578	<0.5	0.03	1.2
742951	2101	2440	BM	5% graph	16	5	15	80	100	36	4.20	947	10	0.713	<0.5		0.91
742952	2102	2480	AMPHIB		16	5	130	1055	1070	54	14.20	151	132	1.020	0.5	0.04	0.64
742953	2103	2520	FM	0.5% mt	16	5	25	165	10	16	4.99	719	19	0.691	0.5		1.13
742954	2104	2560	FM / FE	0.5% mt	16	5	115	425	35	9	5.20	610	16	1.250	<0.5		1.38
742955	2105	2600	FM	0.5% mt	16	5	15	220	30	5	4.53	487	15	0.720	0.5		1.14
742956	2106	2640	BM	tr mt	16	5	20	210	25	4	5.54	744	13	0.739	0.5		0.88
742957	2107	2680	rFM	tr mt	16	10	85	155	110	6	7.43	463	28	1.540	0.5		1.16
845561	3099	2720	FM / BM	tr mt	16	5	35	255	20	2	5.76	529	15	1.000	<0.5		1.22
845562	3100	2760	FM / rFM	tr mt	16	15	70	175	50	7	4.80	492	20	1.100	0.5		0.83
845563	3101	2800	BM		16	5	25	205	45	2	5.74	402	20	1.100	0.5		1.15
845564	3102	2840	FM		16	5	40	310	20	1	4.78	549	19	1.600	0.5		0.96
845565	3103	2880	FM	tr mt	16	5	25	170	35	3	5.08	500	18	1.190	<0.5		1.13
845566	3104	2920	FM / BM	0.5% mt	16	5	75	200	50	2	4.82	481	19	1.260	0.5		1.08
845567	3105	2960	rFM	tr mt	16	10	100	440	80	6	5.24	564	42	1.360	0.5		1.08
845568	3106	3000	rBM	tr mt	16	5	60	175	40	2	5.39	488	16	0.742	<0.5		0.98
845569	3107	3040	rFM / rBM	tr mt	16	5	30	280	65	3	5.60	450	19	1.380	<0.5		1.14
845570	3108	3080	BM	0.5% mt	16	5	70	130	60	3	4.72	472	21	0.539	<0.5		0.97
845571	3109	3120	FM / BM	tr mt	16	5	90	400	25	3	5.49	349	27	1.630	0.5		1.02
845572	3110	3160	FM	tr mt	16	10	100	295	25	7	4.53	416	22	1.080	0.5		1.12
845573	3111	3200	FM (?+CS)	tr mt	16	15	55	270	40	7	3.46	368	16	0.272	0.5		1.22

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** SORTED BY LINE NUMBER **

SAMPLE NO	HOLE NO "RAB M"	GRID &LINE	ROCK TYPE	ACCESS MINs	SUITE NO	Pb	Zn	Mn	Cu	As	% Fe	Ba	Co	% Na	Ag	Au	% K
845574	3112	3240	FM	tr mt	16	10	105	120	20	6	4.14	454	15	0.686	0.5		1.15
845575	3113	3280	FM	tr mt	16	10	45	140	35	6	4.27	472	18	1.040	<0.5		0.8
845576	3114	3320	FM	tr mt	16	10	60	650	30	7	5.84	357	28	1.170	0.5		0.93
742958	2108	3360	FM	tr mt	16	5	50	90	30	7	4.91	654	22	0.663	<0.5		1.39
742959	2109	3400	FM		16	5	20	220	30	1	5.53	582	15	1.210	0.5		1.05
742960	2110	3440	FM		16	25	55	120	40	2	3.19	263	10	2.260	<0.5		1.06
742961	2111	3480	FM	tr mt	16	5	105	255	40	1	6.07	588	17	1.130	0.5		1.24
742962	2112	3520	BM	tr mt	16	5	10	105	35	<1	5.17	500	14	0.942	0.5		0.96
742963	2113	3560	FM / rFM	tr mt	16	5	35	130	65	3	4.68	450	18	0.589	0.5		1.01
742964	2114	3600	FM / rFM		16	5	70	175	25	6	4.83	535	20	0.813	1.0		1.46
742965	2115	3640	FM	0.5% mt	16	5	100	230	25	13	5.25	832	20	1.190	0.5		1.11
742966	2116	3680	FM	0.5% mt	15	5	15	145	45	16	5.49	1150	23	1.540	0.5		1.16
742967	2117	3720	FM / BM	0.5% mt	15	5	45	105	10	2	4.30	1880	12	1.360	0.5		0.89
742968	2118	3760	FM	0.5% mt	14	5	85	130	30	3	3.71	1510	<10	3.000	<0.5		1.56
742969	2119	3800	FM	0.5% mt	14	5	140	155	55	1	5.25	2320	10	1.680	0.5		0
742970	2120	3840	FM	0.5% mt	14	10	60	150	55	3	4.14	1920	12	1.260	0.5		1.26
742971	2121	3880	BM	tr mt	14	5	60	180	75	1	5.02	708	18	1.140	<0.5		1.1
742972	2122	3920	BM	tr mt	13	5	35	180	35	1	6.20	582	19	1.140	0.5		1.12
742973	2123	3960	FM / rFM	tr mt	13	5	85	240	60	2	5.44	1020	23	0.825	<0.5		1.36
742974	2124	4000	PEG + rFM		13	5	35	110	15	<1	2.09	1470	<10	4.090	0.5		1.61
742975	2125	4040	PEG		13	5	45	220	25	1	2.36	1480	14	3.220	0.5		1.61
742976	2126	4080	rFM	1% mt	13	5	55	165	40	3	5.36	756	31	1.190	<0.5		1.13
742977	2127	4120	PEG + FM	0.5% mt	13	5	85	140	30	1	5.09	975	16	1.270	0.5		0.98
742978	2128	4160	?PI / FS		13	5	55	130	15	1	2.47	2080	<10	3.000	0.5		1.4
742979	2129	4200	FS / PI		13	5	40	85	15	1	2.30	1870	<10	1.880	<0.5		0.82
742980	2130	4240	?rFM	0.5% mt	13	5	70	80	90	2	5.28	1010	18	0.827	0.5		0.92
742981	2131	4280	FS	0.5% mt	13	5	60	110	25	1	3.57	1320	11	2.100	<0.5		1.29

APPENDIX C

REPORT PERTAINING TO THE RE-VEGETATION OF DRILL SITES AND ASSOCIATED WORKS ON THE M.I.M. EXPLORATION LICENCE, MINGARY, SOUTH AUSTRALIA

Author: D. Cantle
Outback Land Management Services

Date: August 1992

REPORT PERTAINING TO THE REVEGETATION OF DRILL SITES AND ASSOCIATED WORKS ON THE MIM EXPLORATION LICENCE, MINGARY, S.A.

D. Cantle
Outback Land Management Services

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Appendix II - Map of Revegetation Sites Locations (attached)

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Appendix IV - Outback Land Management Services - Seed Price & Availability List

MIM's best strategy is to employ the best available techniques of cost effective revegetation works in a semi-arid environment as recommended by appropriate professional and/or government consultants. These techniques are constantly being refined and may involve soil rehabilitation and earthworks.

The following report recommends techniques for revegetation of disturbed sites on the MIM Lease.

Part 3. SITE EVALUATION & RECOMMENDATIONS

The following table summarises observations made on 17/8/92 on the MIM Mingary Lease:

N.B. Refer to the accompanying map (Appendix 2) to locate each site number in the first column.

Column 1 Site No.	Column 2 Dominant Species	Column 3 Associated Species	Column 4 Comments	Column 5 Impact Dates	Column 6 Level of Impact	Column 7 Recommendations	Column 8 Estimated Annual Rainfall
A	Bladder Saltbush Belah	Poison Rice Flower Pearl Bluebush Satiny Bluebush Eastern Flat-Top Saltbush	Drill line. Obscure track marks. Spoil mounds only obvious evidence.	20/9/88 --23/9/88	Very Light	Spoil mounds be covered or removed. Reseeding mix--1 part Bladder Saltbush: 1 part Belah.	220mm
B	Belah Black Bluebush Low Bluebush	Rosewood	Drill line. Minor impact. Occasional crushed Bluebush. Recovering well.	1/8/82 --30/8/82	Very light	Cease vehicular traffic.	220mm
C	Bladder Saltbush Low Bluebush	Prickly Wattle	Drill line. No appreciable difference in species variety and density between line and surrounding area.	16/8/80 --20/8/90	Very light	Cease vehicular traffic.	220mm
D	Bladder Saltbush Low Bluebush	Goathead Copperburr	Drill line. Perennial bushes in area appear degraded	13/8/90 --6/9/90	Light to medium	Cease vehicular traffic.	220mm
track between D & E	Low Bluebush	Black Bluebush Satiny Bluebush	Used as a cattle pad. Impossible to distinguish between impact from vehicles and impact from cattle.	8/9/90 --6/12/91	--	Cease vehicular traffic. Divert cattle away from area. Reseeding mix--Low Saltbush.	220mm
E	Low Bluebush	Satiny Bluebush	Drill line. Spoil mounds evident. Some compaction evident.	8/9/90 --6/12/91	Light to medium	Spoil mounds to be covered or removed. Rip wheel tracks and reseed. Reseeding mix--Bladder Saltbush	220mm

F	Black Bluebush	Goathead Copperburr	Skeletal soils. Drill line. Faint wheel tracks.	24/9/89 --25/9/89	Very light.	Cease vehicular traffic.	220mm
G	Bladder Saltbush	Copperburrs Poison Rice Flower	Drill line. Some compaction along wheel tracks.	26/9/88 --28/9/88	Light	Rip wheel tracks and reseed. Reseeding mix--Bladder Saltbush	220mm
H	Bladder Saltbush	Copperburrs	Drill line. Obvious spoil dumps every 40m on line.	22/8/89 -30/11/89	Light	Remove or cover spoil dumps. Cease vehicular traffic. Reseeding mix--Bladder Saltbush	195 mm
I	Bladder Saltbush	Cannonballs	Grid of drill lines. Some scalding in area. Heavy compaction on some lines. Obvious spoil dumps on some lines.	25/10/90 --17/8/92	Medium to heavy	Remove or cover spoil dumps. Rip wheel tracks where heavy compaction is apparent and reseed. Vehicular traffic should cease on all lines. Reseeding mix--Bladder Saltbush	195mm
J	Low Bluebush	Copperburrs	Percussion drill site. Spoil dump evident. No plant growth on dump.	during 1986	--	Remove or cover spoil dumps. Rip dump site and reseed. Reseeding mix--Low Bluebush	205mm
K	Copperburrs	--	Severely degraded paddock. No perennial shrubs within 50 m of drill line. Spoil dumps evident.	18/4/90 --1/11/91	Light	Remove or cover spoil dumps. Reseeding mix--Bladder Saltbush	205mm
L	Bladder Saltbush	Copperburrs	Site used as comparison site for site K	18/4/90 --1/11/91	None	None.	205mm

Column 7 of the preceding table describes the ratio of seed species for each site in a "shotgun" mix. The following recommendations apply to all of the above sites.

1. All sites should be single tine ripped to a depth of 3 - 5 cm at 1.5 -2 m spacings.

2. Rip lines should be parallel to the contour on each site to mitigate gully erosion and facilitate effective infiltration of surface runoff.

3. All prescribed mixes should be sown at a depth of 10 - 15 mm below the surface along rip.

4. As a rough rule of thumb all seed mixes should be sown at a rate of about 100g every 10m of rip line (10kg/km).

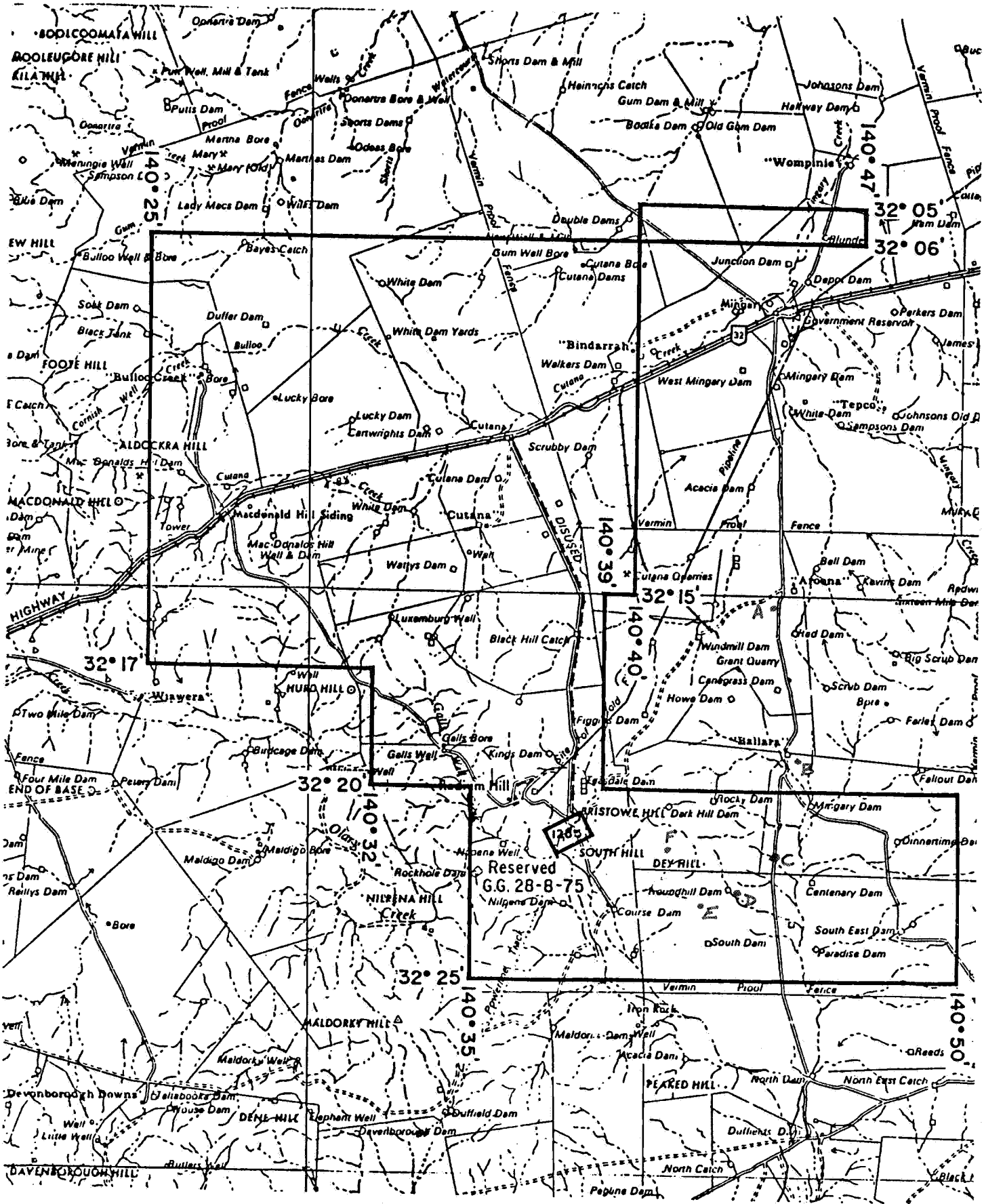
5. Vehicular and foot traffic should cease on the sites.

Part 4. CONCLUSION

Revegetation of disturbed sites on the MIM Exploration Lease can be achieved using the described revegetation techniques with quality seed and eliminating further impacts (especially those causing soil compaction).

Sites should be revegetated progressively as soon as possible after the cessation of their use for exploration. Where possible, negotiations should occur with the appropriate grazier to ensure that feral or domestic grazing pressure is reduced whilst plants are re-established on each site.

To calculate seed requirements for any site, the total length of all rip lines should be estimated and then multiplied by 0.01 to give the quantity of seed required (in kg.) for the site. Seed can then be purchased or gathered bearing in mind the ratios listed for each site on the site summary table.



E.L. 1772 "CUTANA" — Revegetion Sites

APPENDIX D

EXTRACT FROM A REPORT ON TEM SURVEYING AT "BALLARA PROSPECT"

Author; P. Elliott
Elliott Geophysics Pty Ltd

Date: August 1992

"SURVEY METHODS

The TEM (Transient Electro-Magnetic) Survey was achieved using a Zonge GGT-10 IP/EM (10 kW) transmitter and a Zonge GDP-16 multipurpose receiver. A 100m in-loop configuration was employed with a central Sirotem RVR-1E receiver coil. The loops were moved at 50m intervals for Surveys over Ballara..... The Z component only was measured in all cases.

The magnetic survey was achieved using Geometrics G856 Proton Precession Magnetometers. Readings were recorded along lines at 10m station spacing. Magnetic conditions were quiet during the survey period, thus allowing rapid coverage.

SURVEY RESULTS

Ballara Grid

This are was also referred to by Seltrust at the Dey Hill prospect., Dey Hill being covered by the western edge of the grid. The old Seltrust grid was re-established from 6000N to 8000N at a 200m line spacing and 50m peg spacing. A reconnaissance BHS (Broken Hill South) IP line, 2700S, also crosses the grid just south of Dey Hill.

A PEM survey completed over the grid located two anomalies, one at the southern end of the grid and one extending north of the grid. It was planned to trace these anomalies along strike to seek improvement in the associated mineralization.

A larger loop (100m vs.5 80m) was used to give better depth penetration and later delay times were employed to detect better conductors at late time. it was found however that the signal generally disappeared by 8ms which is the latest delay time measured by the PEM system.

The results from the recent TEM survey are presented as figures.... The profiles along line 6950N duplicate the PEM profiles along 6960N very closely, the dominating response being the negative anomaly centered on 5011E. The apparent positive peak on the western side is misleading due to the smaller response at early times. The anomaly signature is typical of a polarisable contact, the polarisation at the contact probably being due to disseminated and alteration products.

The negative anomaly persists on the line to the south and is centered on 5100E. The response on the eastern side of the contact is greater due to an increased thickness of colluvial and alluvial cover. The anomaly appears to disappear on the southernmost line surveyed, 6550N. An apparent peak at 4950-5000E is probably a contact effect, the contact being located at 5050E.
A sharp anomaly on line 7150N at 4700E is the tank on the top of Dey Hill.

A well defined negative anomaly reappears on line 7550N, centered on 4800E. The early time windows show this is clearly at a contact. The anomaly persists to the northern most line surveyed, 7950N where it is centered on 4650E.

Both the northern and southern anomalies are due to a polarisable contact between more resistive material to the west and more conductive material to the east. The contact correlates closely with the Peak Hill Fault extension as defined by the magnetics. The ground magnetic contours are presented. these agree well with the aeromagnetic pattern.

These results suggest that the Peak Hill fault has acted as a conduit for zinc rich mineralizing fluids. Therefore the fault itself may not be the prime target in the area. Exploration should be directed to a nearby basin where a large zinc deposit has had a better chance of forming. The large strike extensive synform to the south-east is a possible target area for deep mineralization. Both the geochemistry and IP response are enhanced in this part of the licence. A deep investigation tool such as gravity may assist the definition of a deeper sulphide body.

CONCLUSIONS

The PEM anomaly on the Ballara grid is probably due to a faulted contact (Peak Hill Fault) which is weakly mineralized. The fault may have acted as a conduit for mineralizing fluids to be exhumed onto a nearby basin to the east."

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REPORT FOR THE NINE MONTH PERIOD
APRIL 22, 1993 TO JANUARY 21, 1994

AUTHOR ID KERR

DATE FEBRUARY 1994

COPY No. 4

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TECHNICAL REPORT

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ISSUING DEPARTMENT:	**EXPLORATION**
AUTHOR:	**ID KERR**
INVESTIGATIONS CONDUCTED BY:	**ID KERR**
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47274	Geological Mapping Sheet 8	1:15,000

1. INTRODUCTION

This report covers work carried out on the Licence from April 22, 1993 to January 21, 1994. Exploration included IP and ground magnetic surveying, re-assaying previously drilled samples and geological mapping. Unsuccessful attempts were made to joint venture the tenement.

2. TERMS AND CONDITIONS

Exploration Licence No. 1363 "Cutana" of 769 km^2, located approximately 30 km east of Olary (Figure 1), was granted to Mount Isa Mines Limited on October 28, 1986 and expired on October 28, 1991. EL 1752 was granted to M.I.M. Exploration Pty Ltd on November 18, 1991 and surrendered on January 17, 1992 on notification that EL 1772 was to be granted. EL 1772 was granted to Mount Isa Mines Limited on April 22, 1992. No separate report was submitted for EL 1752 which was "incorrectly" applied for and granted in the name of M.I.M. Exploration Pty Ltd.

Exploration Licence 1772 "Cutana" was extended to January 21, 1994. An application for part of the Cutana area and an area to the south of the Licence was made to the Department on December 21, 1993 (Figure 2).

Work on the Licence is being undertaken on behalf of Mount Isa Mines limited by its exploration arm, M.I.M. Exploration Pty Ltd.

The principal targets are

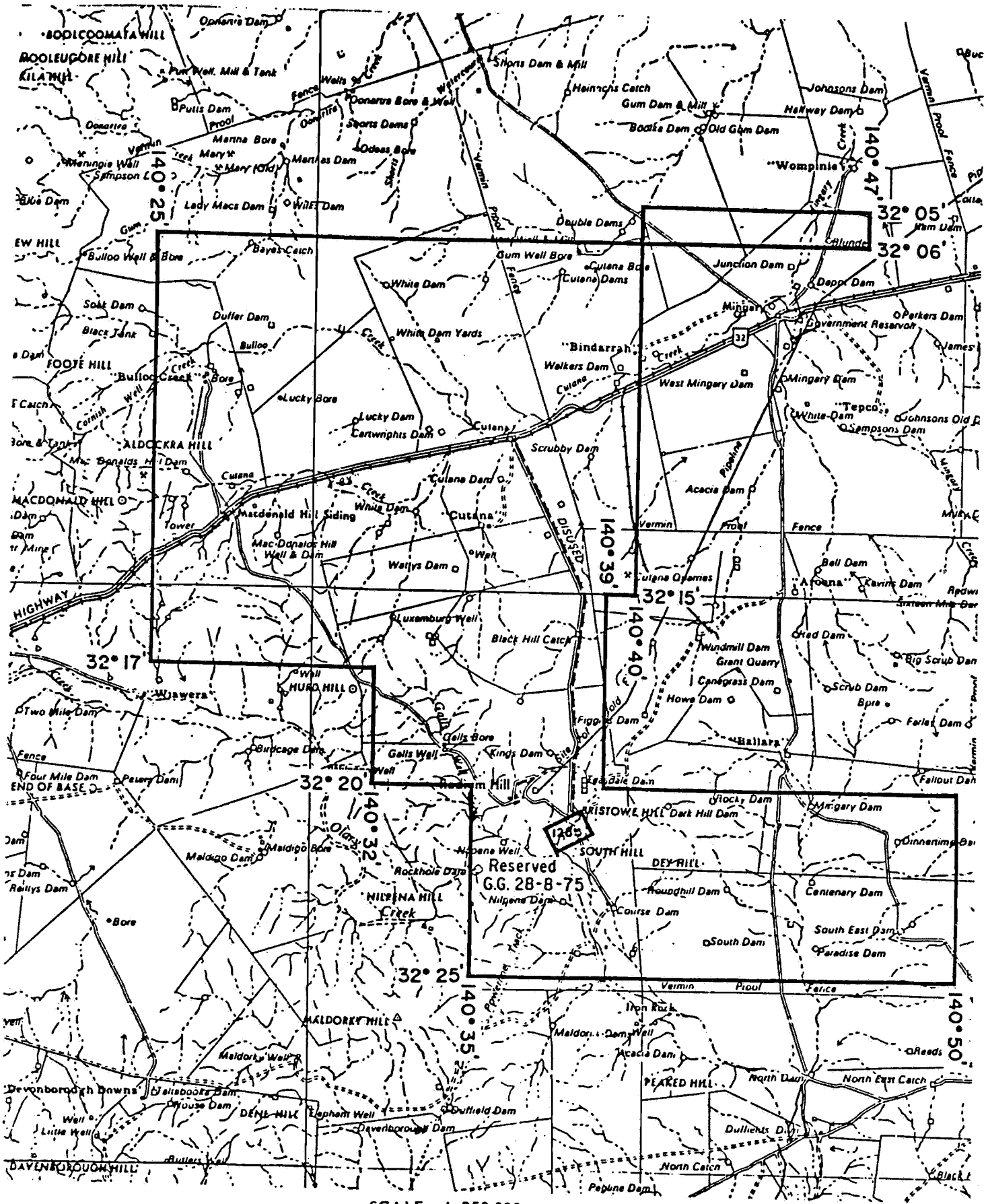
- ◊ Stratiform/stratabound Pb-Zn mineralisation within the Bimba Formation and Broken Hill Group, which are concealed throughout the area by extensive cover of Tertiary sands and clays.

- ◊ Cu-Au-magnetite deposits of the Copper Blow style in Willyama Thackaringa Group equivalents.

- ◊ Epigenetic Au-Cu deposits in the Premier-Luxembourg area.

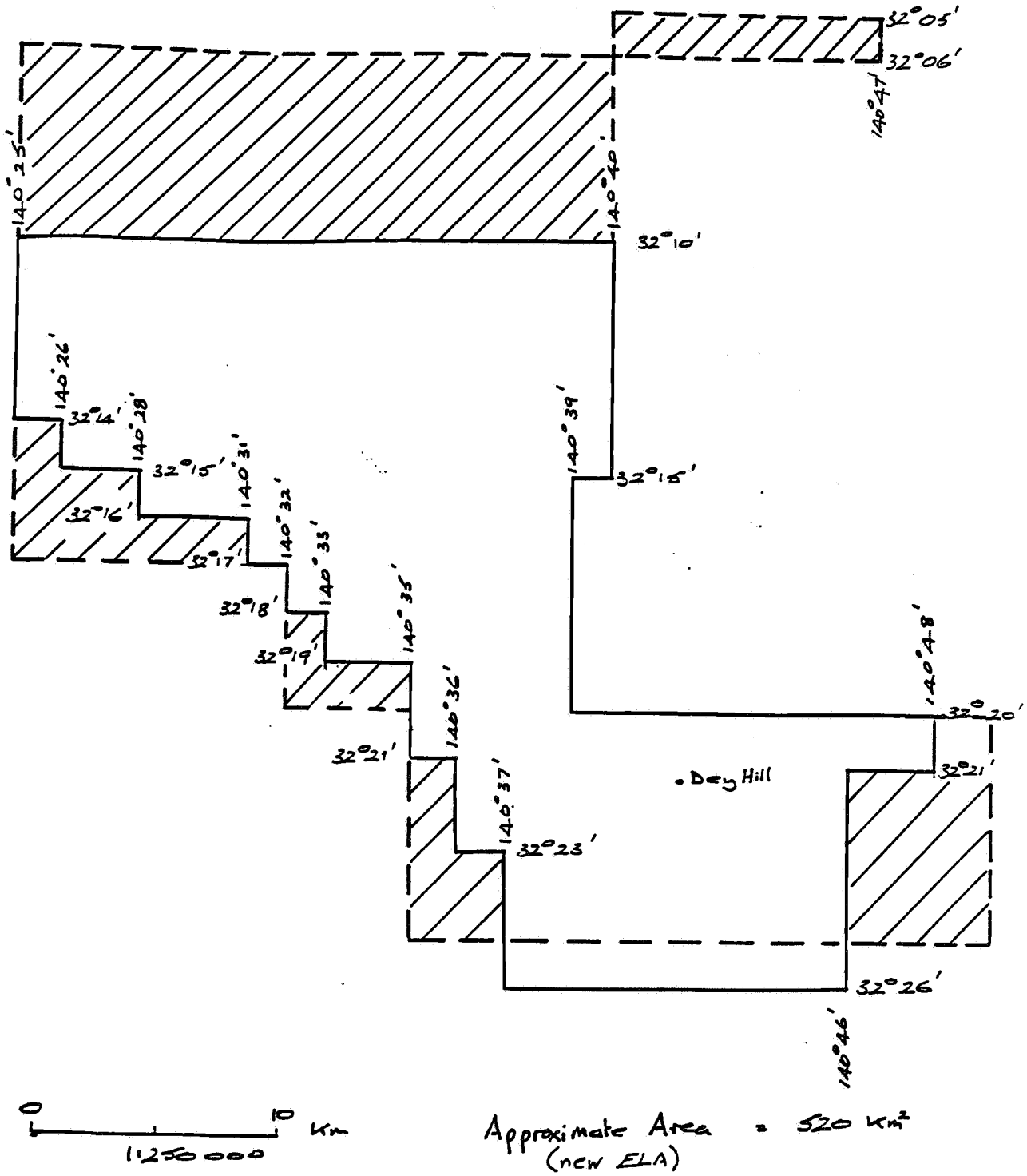
3. CURRENT LAND ACCESS

The Lessee of the Tepco/Ballara Pastoral Licence allowed field work to recommence in mid-August, 1993. Previously, a delay was requested to minimise any accidental loss of newborn lambs. The continuing exploration of the Ballara structure was thus significantly and unavoidably delayed.



E.L. 1772 "CUTANA"

Fig 1.



// – surrendered portions EL 1772

EL 1772 "Cutana" and new ELA.

Fig 2

4. RESULTS OF WORK UNDERTAKEN

The following activities were undertaken within EL 1772 in the nine month period April 22, 1993 to January 21, 1994.

◊ 13.2 km of IP surveying over reinterpreted Broken Hill South Pty Ltd anomalies.

◊ 11.4 km of ground magnetics and mapping on IP lines.

◊ Preliminary interpretation of IP and ground magnetic data.

◊ Compilation of 1:15,000 mapping completed.

◊ Detailed discussions with potential joint venture partners.

◊ Field inspection with a potential joint venture partner.

◊ Re-assaying of Seltrust PDH samples for gold.

4.1 IP Surveying

The review previously undertaken by the Consultant Geophysicist selected the following percentage frequency effect anomalies from the Mines Exploration Broken Hill South IP data:

Priority 1	Pb/Zn - 1	Cu/Au - 3
Priority 2	Pb/Zn - 4	Cu/Au - 3
Priority 3	Pb/Zn - 4	Cu/Au - 1
Priority 4	Pb/Zn - 1	Cu/Au - 1

The four Priority 1 (Pb/Zn and Cu/Au) and a Priority 3 (Pb/Zn) anomaly were selected for repeat surveying. The Priority 3 anomaly was selected along with the Priority 1 anomalies as it has an associated magnetic and gravity anomaly. The Pb/Zn Priority 1 anomaly also has an associated gravity anomaly. The areas were renamed and surveyed as the following Lines:

Line No.	*Priority*	*Area Name*	*% PFE*	*Grid Length*
98	1	Luxembourg	14-16%	3400 mm
99	1	Galls Well	15-20%	2100 m
100	1	Radium Hill West	50-60%	2200 m
101	1	Ballara Syncline	6-17%	3700 m
102	3	Blackfellow Creek	7%	1800 m

Note that following field inspection, the previously planned soil sampling of the IP anomalies was not undertaken as the areas are either covered by transported soil or Adelaidean cover rocks.

A preliminary interpretation report on the survey is appended (Appendix A) as is the contractor's report (Appendix B). Further following up is recommended (see Section 5). A brief summary of the IP results follows:

Anomaly	***Type***	***Comment***
Luxembourg	Cu/Au	2 anomalous zones, complex response, multiple shallow bodies, limited depth extent
Galls Well	Cu/Au	Broad formational response. Cause: probable surficial alluvium.
Radium Hill West	Cu/Au	Broad anomalous zone, lower, less discrete response than original. ?? cultural
Ballara Syncline	Pb/Zn	North anomaly (syncline). Strong IP source at 125-175m. South anomaly (anticline) probably surficial.
Blackfellow Creek	Pb/Zn	Moderately conductive IP source at 100m, associated mag and gravity.

4.2 Ground Magnetics

Ground magnetics were read at 10 metre station spacing over the IP grids with readings extended 100 metres either side of the pegged line.

Line No.	**Distance Surveyed**
L 98	3600 m
L 99	2300 m
L 100	2400 m
L 102	2000 m

IP grid line 101 was previously surveyed as part of Gravity Line 82.

A new 1100 metre line (106) was pegged and surveyed across the Luxembourg - Queen Bee Mine area in an attempt to locate the interpreted, soil covered contact of a gabbro body. Gold mineralisation is known along the (partly exposed) eastern contact. The west contact is as yet mostly untested. Line 106 partly coincides with a previously reported BCL soil sample line (No 724376) that returned Au values between 0.2 and 11.4 ppb. Two sharp magnetic contacts were outlined.

4.3 Data Compilation and Mapping

Data compilation continued, including a review of all mapping, sampling, geophysics and drilling undertaken by Seltrust in the area east of the Peak Hill Fault.

As previously reported, there is only scattered outcrop of Willyama rocks to the south east of the Peak Hill Fault. Whilst Seltrust mapping and sampling had outlined a number of smaller outcrops not located by initial SADME 1:100,000 mapping, there were a number of "blank" areas and there was no apparent attempt to provide a stratigraphic framework. Recent contact with SADME indicated that a remapping project is planned for the general Broken Hill/Olary area in the near future.

The results of regional 1:15,000 mapping in the general Ballara area are attached. Merging with aeromagnetic and other geophysical data is continuing with a view to outlining, if possible, a stratigraphic framework.

As noted, the most interesting discovery of this project was previously unmapped tourmalinite adjacent to the Peak Hill Fault, south west of Dey Hill, in an area of quartzo-feldspathic rocks and thin amphibolites. Note also that fine tourmaline was recorded in pelitic metasediments east of Dey Hill and was also recorded, along with gahnite, in Seltrust's hole PTM 19. Along strike from this zone, just inside the adjoining "Mingary" EL, a previously unmapped quartz gahnite and calc silicate belt was outlined.

The re-surveyed IP anomaly at the "Ballara Syncline" Prospect is interpreted to be "basinward" of this tourmalinite - gahnite zone along the Peak Hill fault at a depth of 125 to 175 metres. The "Ballara Syncline" gravity anomaly is interpreted to be further "basinward" (i.e. southeast) and at a depth of 400 metres.

4.4 Joint Venture Negotiations

The Cutana Licence was offered for joint venture in mid-1993. Data was sent to ten companies active in the Broken Hill/Olary region. Data presentation were made to two companies and, while initial reactions were positive, no joint venture was forthcoming.

4.5 Gold Re-Assaying

As a result of the review of Seltrust data, it was revealed that no gold assaying had been undertaken on their percussion drilling samples. These samples were relocated at the SADME Core Library and permission obtained to take a 50 gm split for assay.

Seltrust had drilled four holes (PTMY 1-4) on their Mingary Prospect, some 700 metres north along strike from the Mingary Cu Mine. Thirteen 2 metre splits from 40 to 66 metres downhole in PTMY 2 were re-sampled and assayed for gold. The sample that previously assayed the maximum copper (46-48), 0.3% was also re-assayed for this element. Rocks sampled were magnetite hornblende quartz gneiss, graphite quartz gneiss and garnet quartz gneiss.

Results for PTMY 2 are listed below. Note that further assays are required as the maximum value of 0.37 g/t occurs at the top of the intervals assayed, associated with neither maximum copper nor maximum magnetite but possibly at the base of oxidation.

MIM Sample No.	*Interval*	*Original Cu (ppm)*	*New Au (ppm)*	*New Cu (ppm)*
845785	40-42 m	1910	0.37	
845786	42-44 m	400	0.06	
845787	44-46 m	265	0.04	
845788	46-48 m	3020	0.06	2730
845789	48-50 m	1160	0.05	
845790	50-52 m	1670	0.11	
845791	52-54 m	2450	0.07	
845792	54-56 m	2710	0.13	
845793	56-58 m	1660	0.12	
845794	58-60 m	2680	0.11	
845795	60-62 m	2170	0.16	
845796	62-64 m	2180	0.10	
845797	64-66 m	570	0.17	

APPENDIX I

MINGARY IP INTERPRETATION

Author: P. Rowston
M.I.M. Exploration Pty Ltd

Date: September 27, 1993

MINGARY IP SURVEY 9/93 - PRELIMINARY REPORT

1. INTRODUCTION

During the period 10/8/93 to 21/8/93, Geoterrex conducted an IP survey on behalf of MIM Exploration Pty. Ltd. The purpose of the survey was to better define and "prove up" existing Induced Polarisation anomalies initially recognised in regional IP traverses surveyed by Mines Exploration, a subsidiary of Broken Hill South Pty. Ltd. between 1962 and 1966.

Within the field period of 12 days, 8 lines of 100m Dipole Dipole Induced Polarisation data were obtained using approx. 138 electrode positions thereby recording approximately 13.8 line km of resistivity and phase information at n = 6.

2. INSTRUMENTATION

A 30 kW Zonge GGT-30 transmitter in conjunction with a Zonge GDP-16 receiver was used for the duration of the survey with polarisation decays recorded in the frequency domain. The base transmitted frequency was 0.125 Hz with the first 3 odd harmonics used to produce a 3pt decoupled phase result.

3. SURVEY DESIGN

All surveying used a dipole-dipole configuration of electrodes, with a constant dipole spacing of 100m. Measurements were made in the frequency domain and recorded using a Zonge GDP 16 receiver. Transmitted power was provided by a 3-phase 110V 400Hz alternator powered by a trailer mounted VW petrol engine. Current was transmitted at a frequency of 0.125 HZ through pre-prepared foil lined and watered pits to enable good contact with the ground with potentials measured between a pair of non-polarisable porous pots. Data was recorded in the GDP-16's complex resistivity mode to enable correction for em coupling. Data is presented as apparent resistivity and 3-pt decoupled phase pseudosections. Standard error of the mean (SEM) and applied current values are also detailed in pseudosection form.

4. RESULTS

4.1 "Aroona Dam Anomaly" : Line 104 East - single 9 electrode spread

A nine electrode spread centred on a strong IP response of 33 PFE. on BHS line 2140 S. The original BHS anomaly had a peak response of 33PFE and was visible in the last few westernmost stations of the line. Approximate reoccupation of the site of the strongest response failed to locate any significant polarisation, indeed the 3pt decoupled phase results are uniformly low, consistent with the background results of the original survey.

It is concluded that the original anomalous zone was spurious, sourced from operator, instrumental error or incorrect reoccupation of the site.

4.2 "Radium Hill West Anomalies" : Line 100 East - single 15 electrode spread

A 15 electrode spread situated as to overly 2 moderate to strong IP anomalies delineated by BHS Line 40N, with responses centred on stations 500ft west and 3000ft west. The sources of these anomalies were previously interpreted to represent opposite limbs of a folded unit. (Elliot, 1993). The 1993 data displays much diminished anomalism and less discrete sourcing of the response. However a broad subtle zone of increased resistivity and low - moderate IP response is centred on 950m N at approx. 75-100m depth. This anomalous zone is juxtaposed with a "half pants leg" end of the line response at the roughly the same separation as the two anomalous zones in the original surveying. The significance of this in the context of the possible cultural effects from the remains of the mining community and the near surface effect at the end of the line is not at this stage known.

4.3 "Ballara Syncline / Anticline Anomalies" : Line 101 East - 2 X 11 electrode spreads + 7 electrode northern extension - spreads 1,2 & 6.

These spreads (spreads 2 & 6) were intended to test interpolated coincident IP and gravity anomalies (0.75 mgal) and were located along gravity line BGH. The northern spread + extension describe a moderately deep (125 -175m), strong, conductive IP source, down dip of the Peak Hill Fault and slightly to the north of the deeper source (400m depth) of the gravity response.The peak response occurs within a broader formational response also represented by a subtle apparent resistivity change north of 3000N.

The southern spread (spread 1) was intended to resolve a low-moderate interpolated IP low coincident with a 1.0 mgal gravity anomaly at depth on the eastern flank of the Ballara Anticline. The only feature visible on the pseudosection is a shallow response visible in the southern portion of the spread. This response coincides with a washout and would appear to be of little significance.

4.4 "Ballara North Anomaly" : Line 103 East- 1 11 electrode spread - spread 4

Designed to test for the presence of a moderate IP anomaly, the phase pseudosection is similar to the Ballara Syncline response to the south west. It once again describes a moderately deep (125 - 175m), strong IP source occurring within a broader formational response. An apparent resistivity variation is recorded north of 900N in a stronger fashion than the response on spreads 2 & 6 "Ballara Syncline".

4.5 "Galls Well Anomaly" : Line 99 East - 1 14? electrode spread - spread 9

The IP data details a broad, moderate, formational response for the entire line. The pants leg feature at 1150N in the resistivity response is a result of a shallow, surficial conductor. The diminished phase signal at this location indicates that this conductor has little IP response. The likely cause of the feature then is alluvium deposited from

the creek at 1200N. Likewise, a shallow phase high at 700 N would not appear to be significant.

4.6 "Blackfellow Creek Anomaly" : Line 102 East - 1 11 electrode spread - spread 3

Defined on BHS Line 2640S as a moderate, deep IP anomaly with a 7 PFE. Line 102 East was intended to confirm the anomalies presence. Recent gravity surveying delineated an anomalous gravity trend to the south east of the IP response. The anomaly is centred on 900N and is confirmed as a moderately conductive IP source at approx. 100m depth. The complex nature of the anomaly however, would give some reservations in attributing an exact spatial location to the source.

4.7 "Trinity Anomaly" : Line 105 East - 1 15 electrode spread - spread 11

Line 105 was designed to test for the presence of an 11 PFE. anomaly and was extended to include some known copper mineralisation (old workings) between 50 and 100N. Two moderately anomalous IP responses were defined within a broader formational response. The first zone is moderately deep (> 100m) and is centred on 250N and it is possible that this response could be a continuation of the mineralisation. Although the complex nature of the response is a cause of much ambiguity in the assignation of the position of the source. The source of these effects appears to be relatively conductive as indicated by the resistivity values diminishing with increased n spacing (above normal profiling contact responses). Likewise, the anomalous response centred on 1000N appears, although having surficial expression to have a relatively conductive source at depth > 150m. Caution is required when interpreting n=6 phase data in conductive regimes, however in this instance the anomaly does seem to hold up in that the Vp is of the order of 3.45mV (10A currents).

4.8 "Luxembourg Anomalies" : Line 98 East - 1 X 9 electrode spread 1 X 11 electrode spread - spreads 7 & 8.

The Luxembourg Line followed up on the definition of a 14 PFE. anomaly and a 16 PFE. anomaly within the "Luxembourg Corridor". Both anomalous zones have been established with the new survey. The northernmost zone centred on 2600N has a shallow source with limited depth extent and is hosted in quite strong formational responses to the south. The complex anomalous response visible in the southern spread appears to be sourced from multiple shallow bodies with limited depth extents. These responses are also hosted in quite strong formational responses. The coincident grounded fenceline does not appear to have affected the collected data as no spurious effects are visible in the resistivity data. The decoupled and raw phase data also does not suggest any increases in EM coupling in the vicinity of the fence.

5. SUMMARY AND RECOMMENDATIONS

The IP work at MIngary has established the presence of the majority of the anomalous zones previously identified by BHS. The areas which were reoccupied were identified to be of a high priority by previous reporting (Elliot, 1993).
At a preliminary stage, I offer these recommendations, in no order of priority.

Ballara Syncline - Ballara North

Pb-Ag-Zn : Anomalous IP responses at depth and down dip of the Peak Hill Fault (basinward), broadly coincident with an anomalous gravity response. Requires further Investigation not of a geophysical nature, deep percussion hole/s recommended at Ballara Syncline.

Trinity Anomaly

Cu - Au : deep anomalous IP and apparent resistivity. Geophysical work in the form of Fixed Loop EM to investigate the conductive response and the possibility of high grade mineralisation are recommended at both anomalous zones, 250 & 1000N. This information could more accurately spatially locate any conductive targets, if present, prior to testing.

BlackFellow Creek

Pb-Ag-Zn : A complex IP response associated with anomalous gravity. Testing is recommended after siting on further modelling of the data acquired to date.

LuxemBourg Anomalies

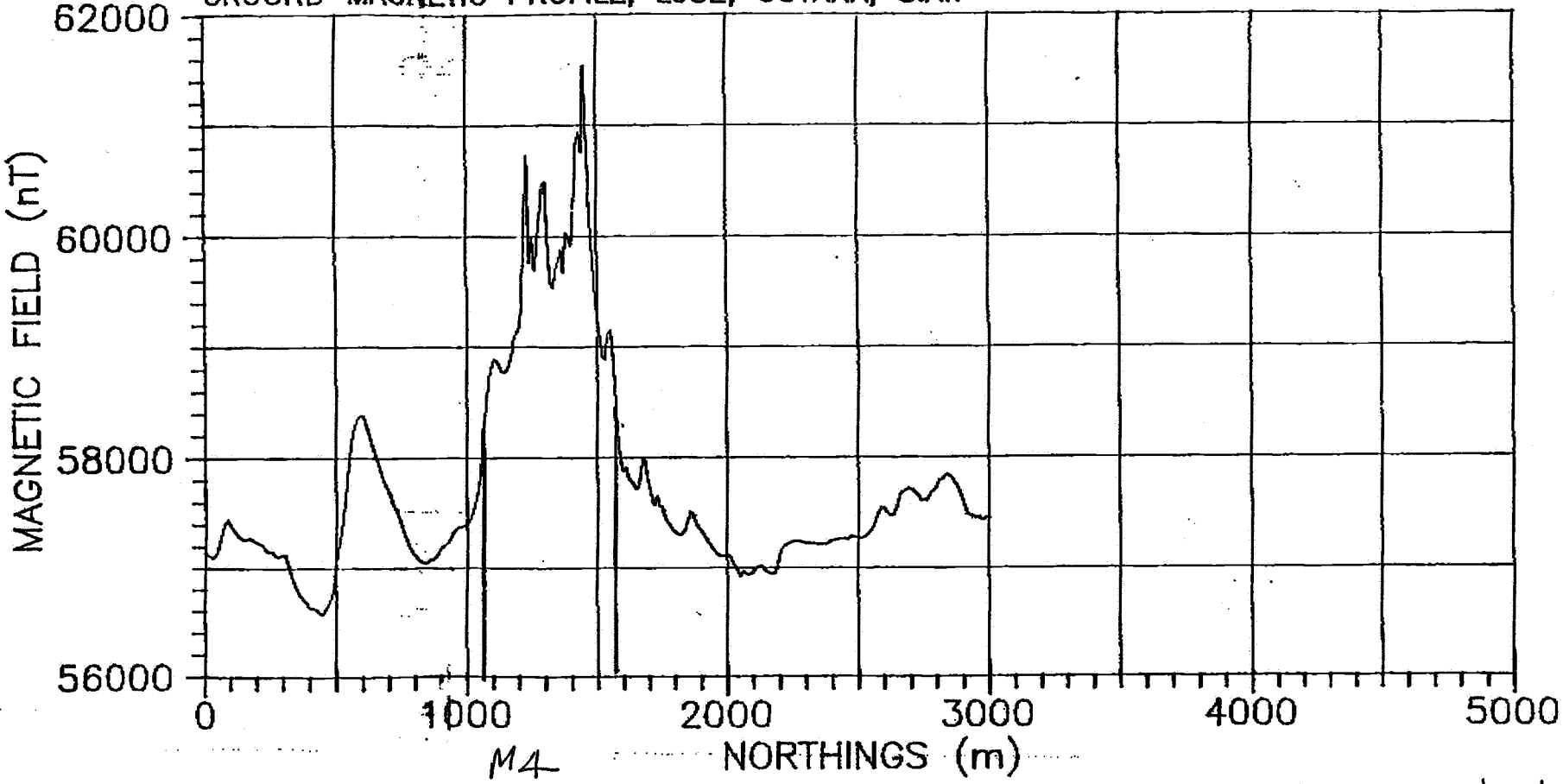
Cu - Au : With the confirmation of these anomalous zones in a priority area, the sources of these anomalies should be tested. The complex, shallow nature of these targets not withstanding. At this stage further modelling of the IP and magnetic responses will be required, prior to testing.

SURVEY SPECIFICATION

Operator:	Ian Kerr
Instrument:	Geometrics G856
Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	15 March 1993

PROCESSING BY:
ELLIOTT GEOPHYSICS LTD.
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GROUND MAGNETIC PROFILE, L95E, CUTANA, S.A..



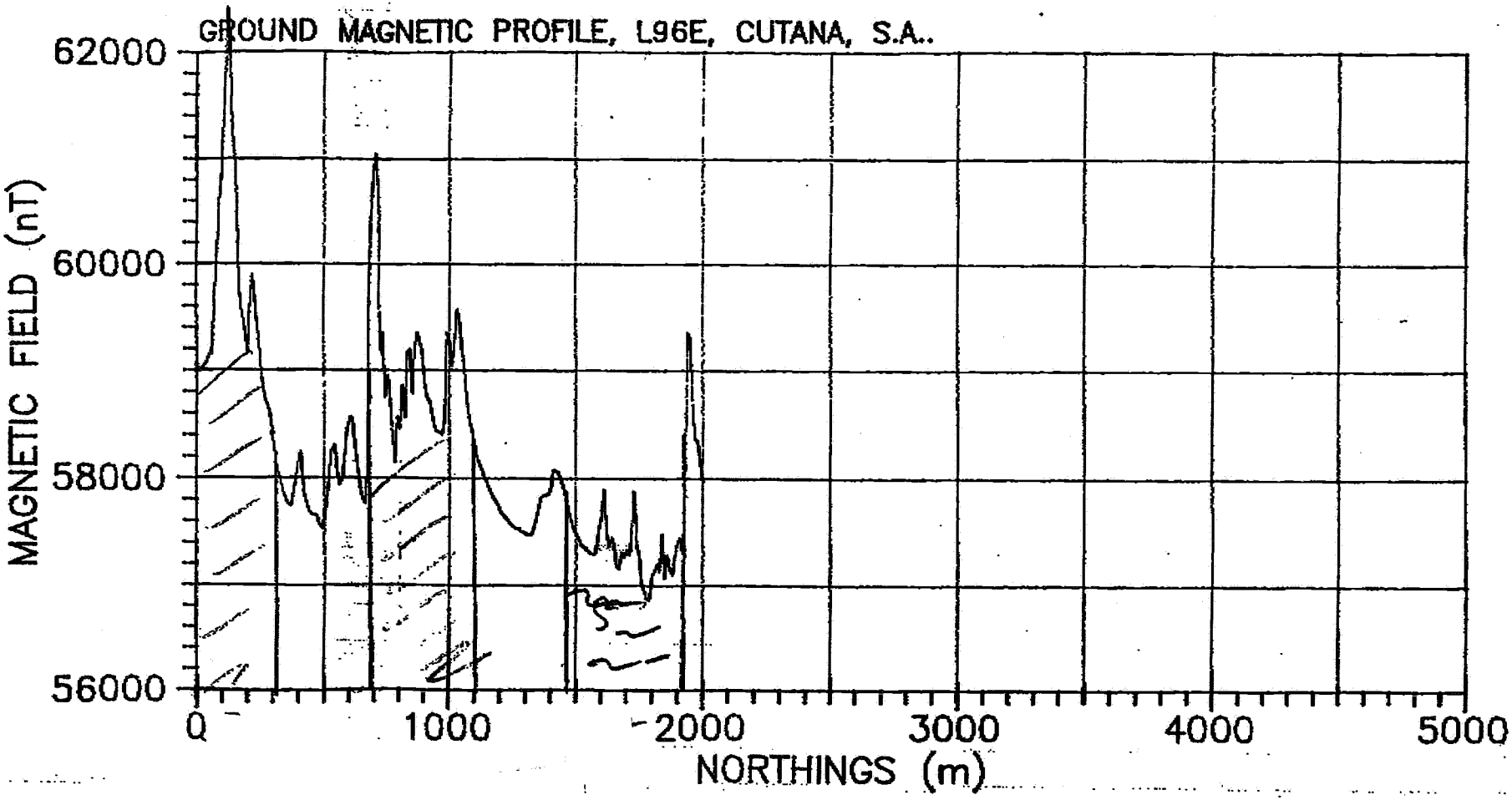
M4

See Drg No. 36875 for Location

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FOR: MIM EXPLORATION LTD.

Operator:	Ian Kerr
Instrument:	Geometrics G856
Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	15 March 1993



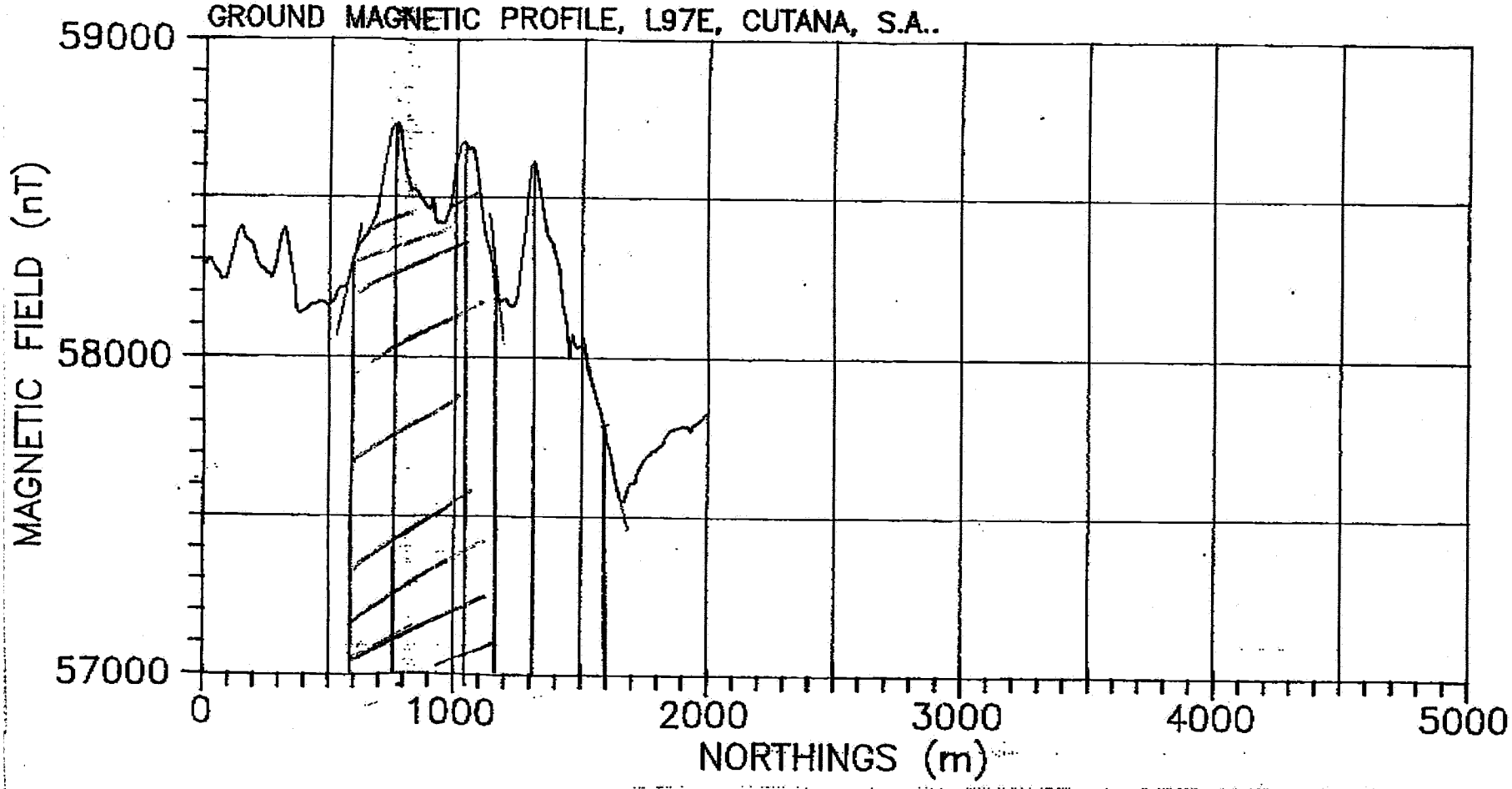
See Drg No 36875 for location

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Fig 5.

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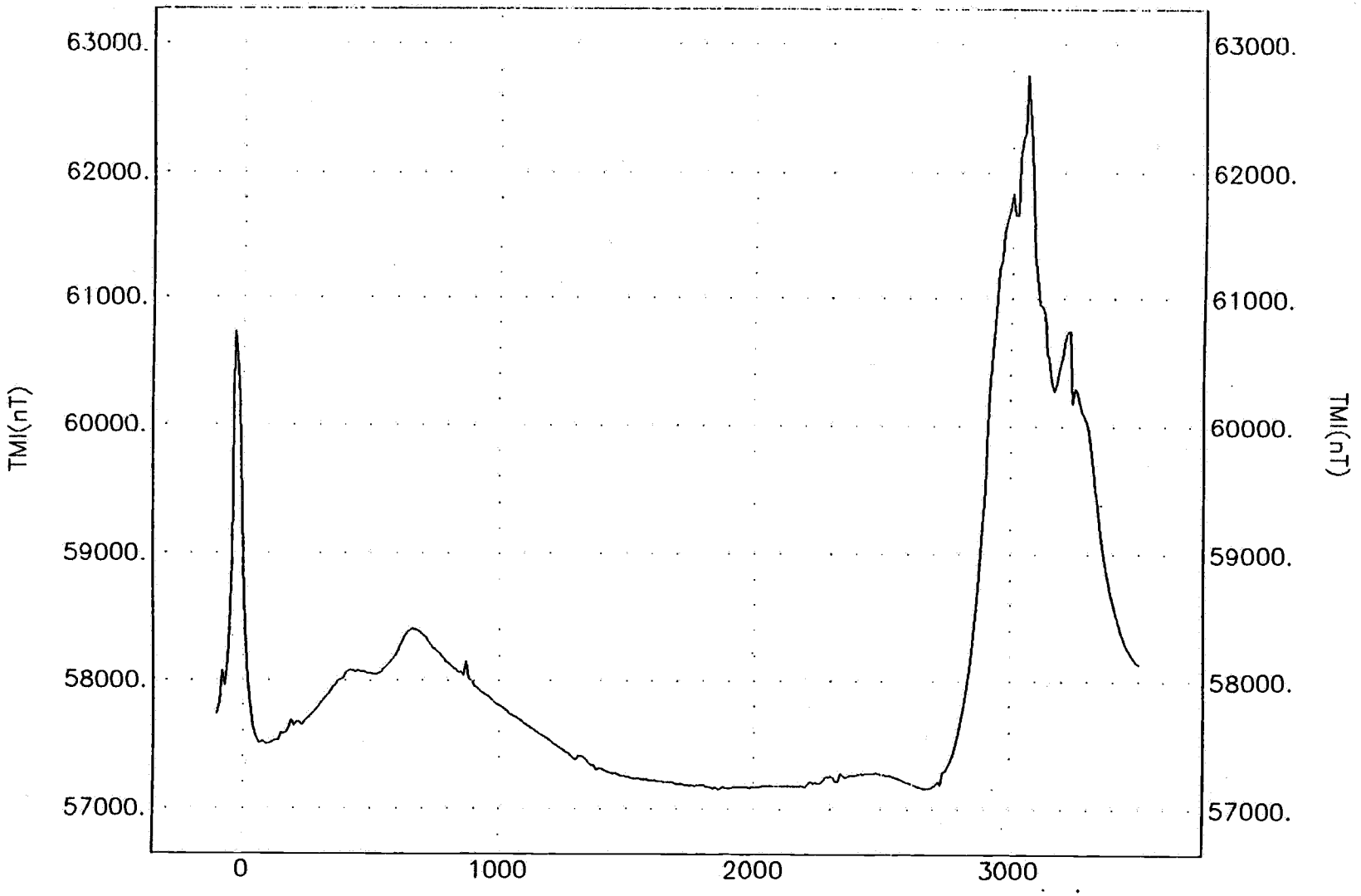
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Station Int.:	10 metres
Sensor height:	2.0 metres
Date:	15 March 1993



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See Drg No 36875 for location

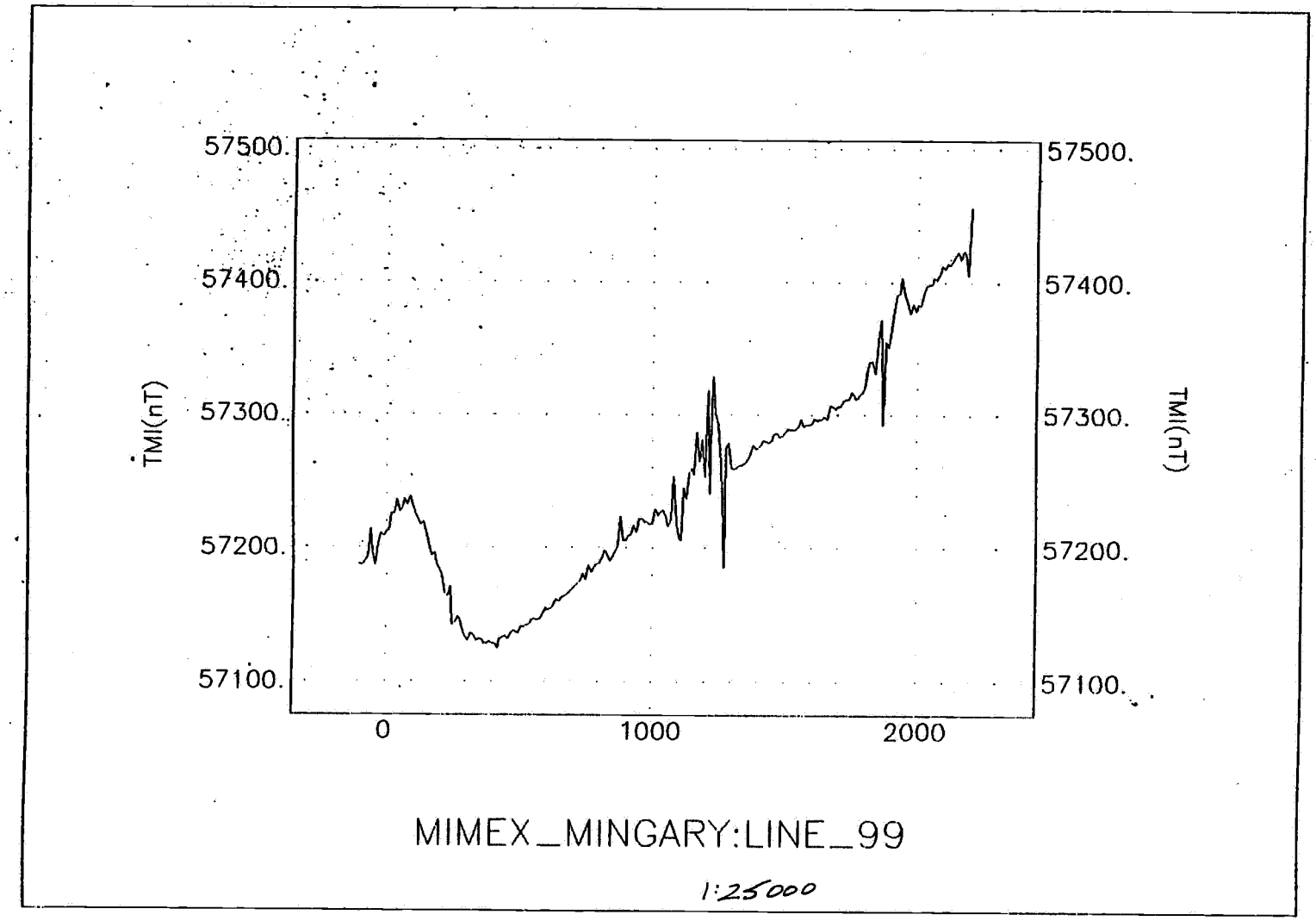
Fig 6



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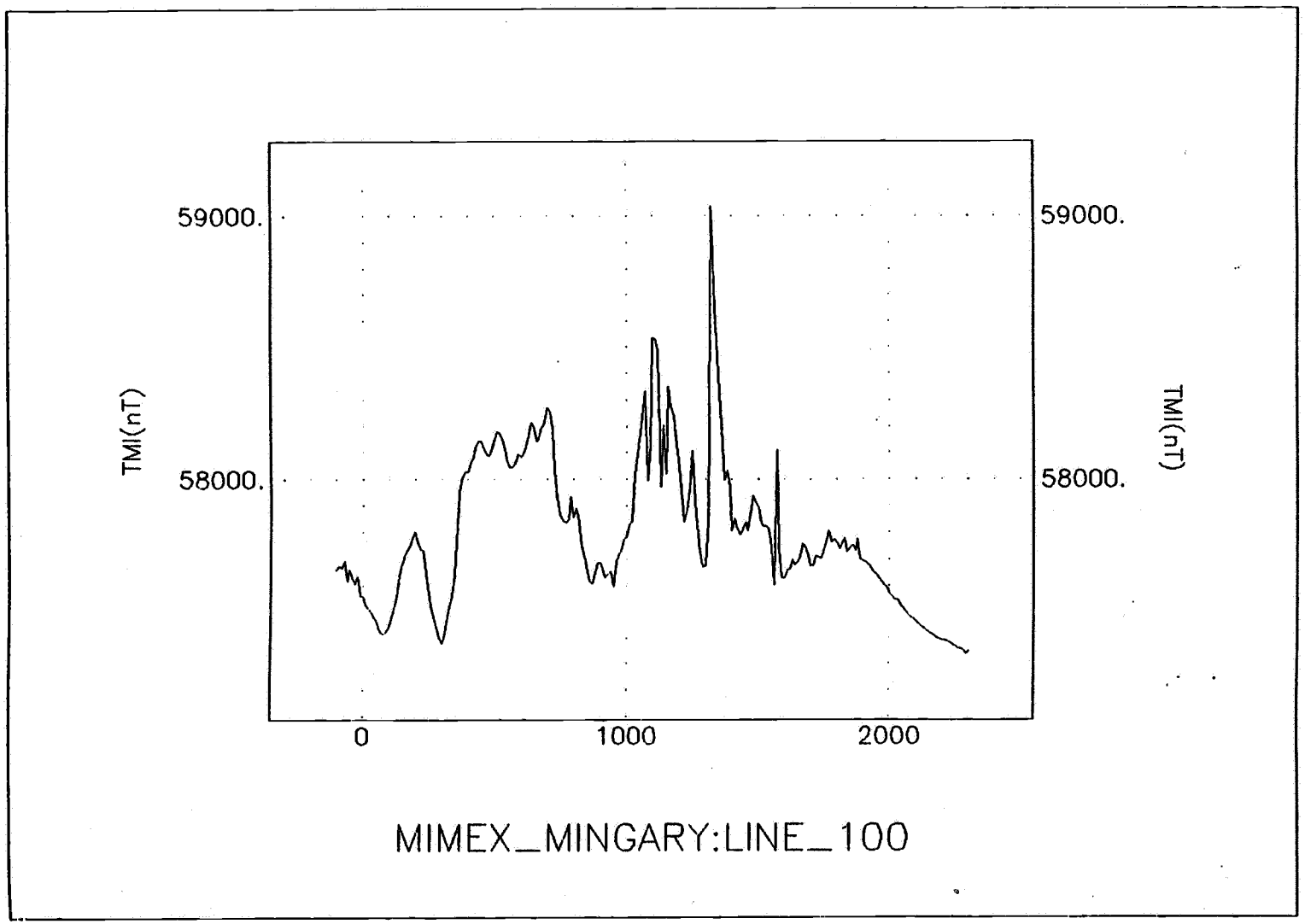
see Drg No 47076 for location

Fig 7.



See Drg No 47076 for location

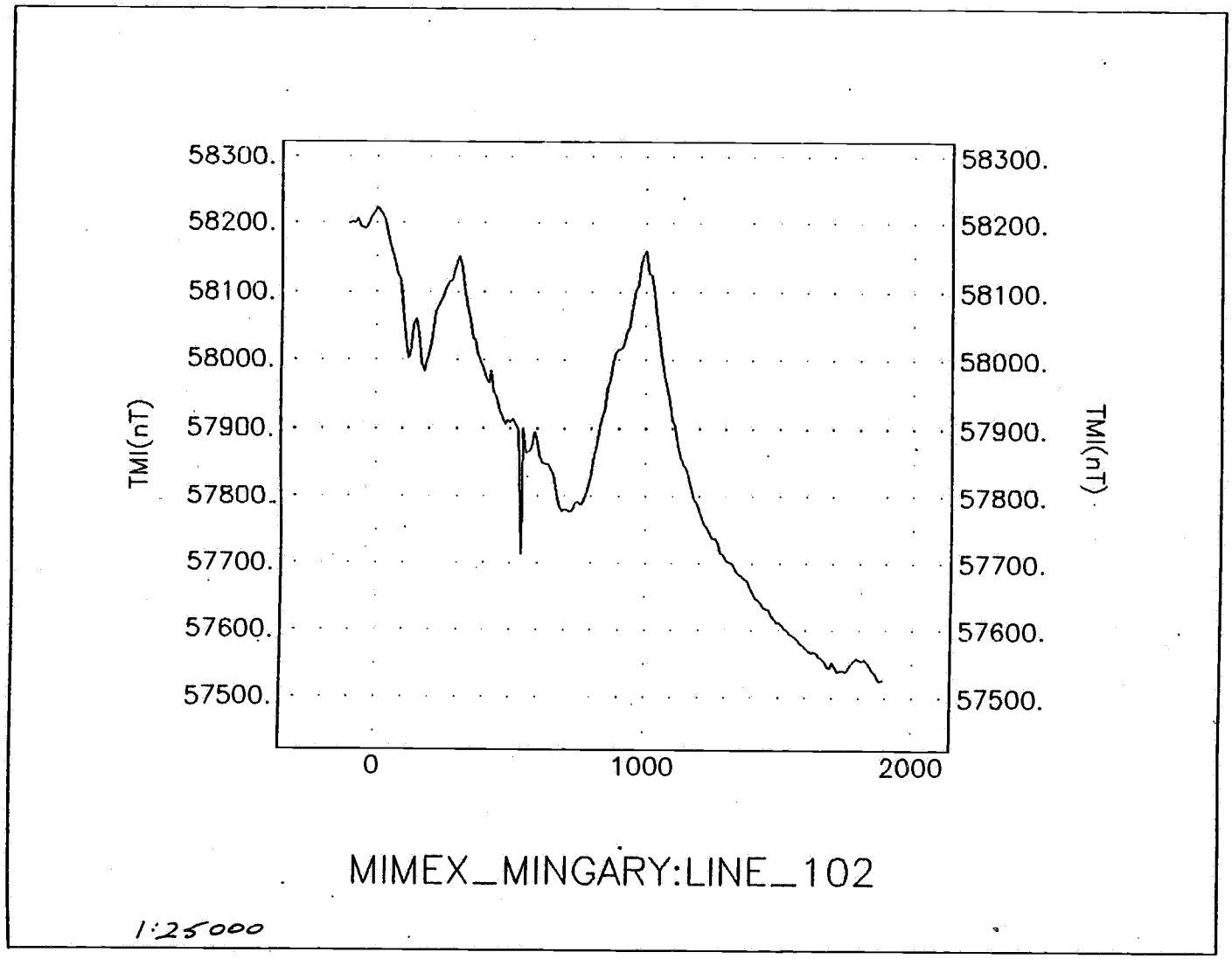
Fig 8



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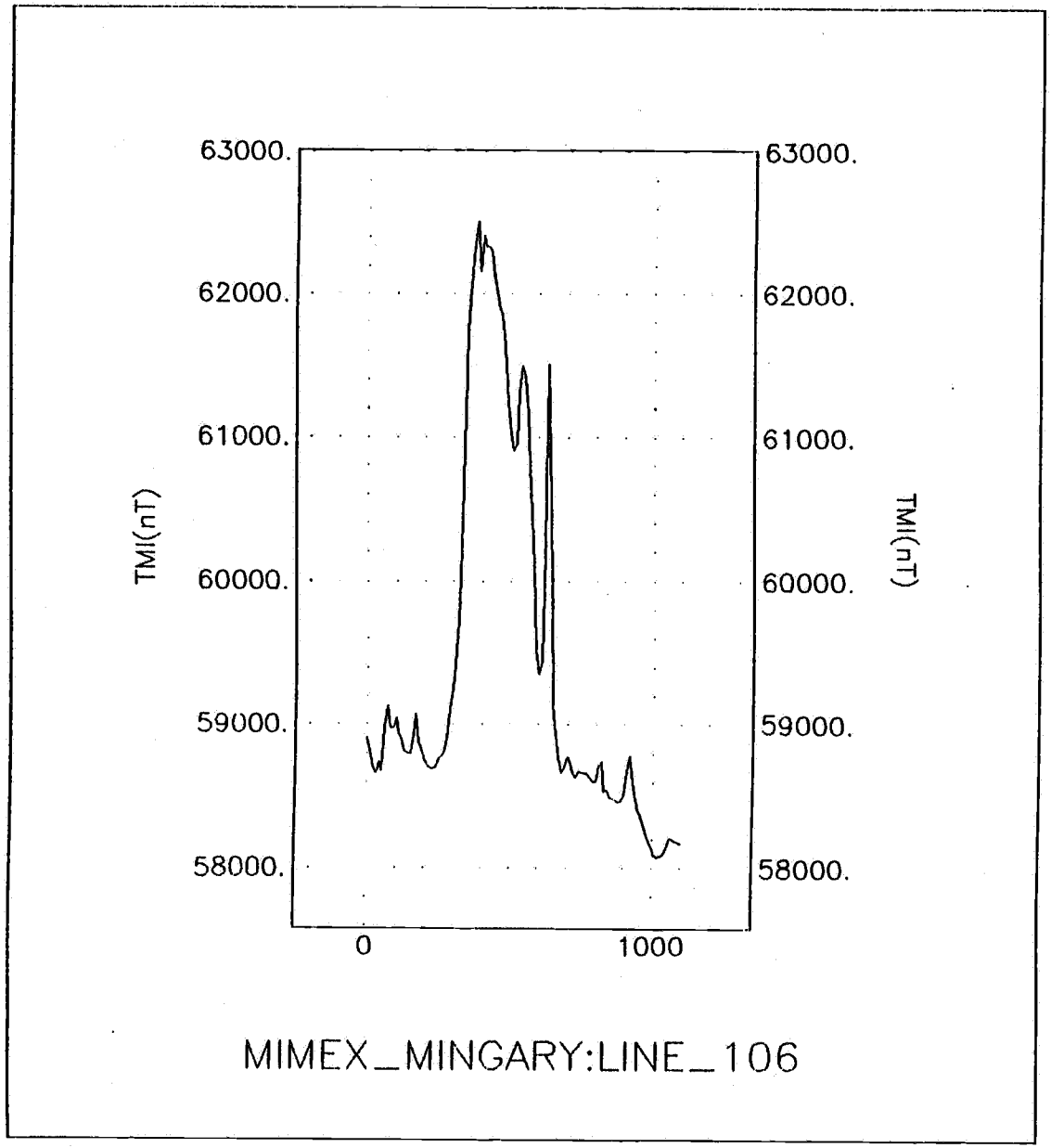
See Drg No 47076 for location.

Fig 9



See Dwg No 4707C for location.

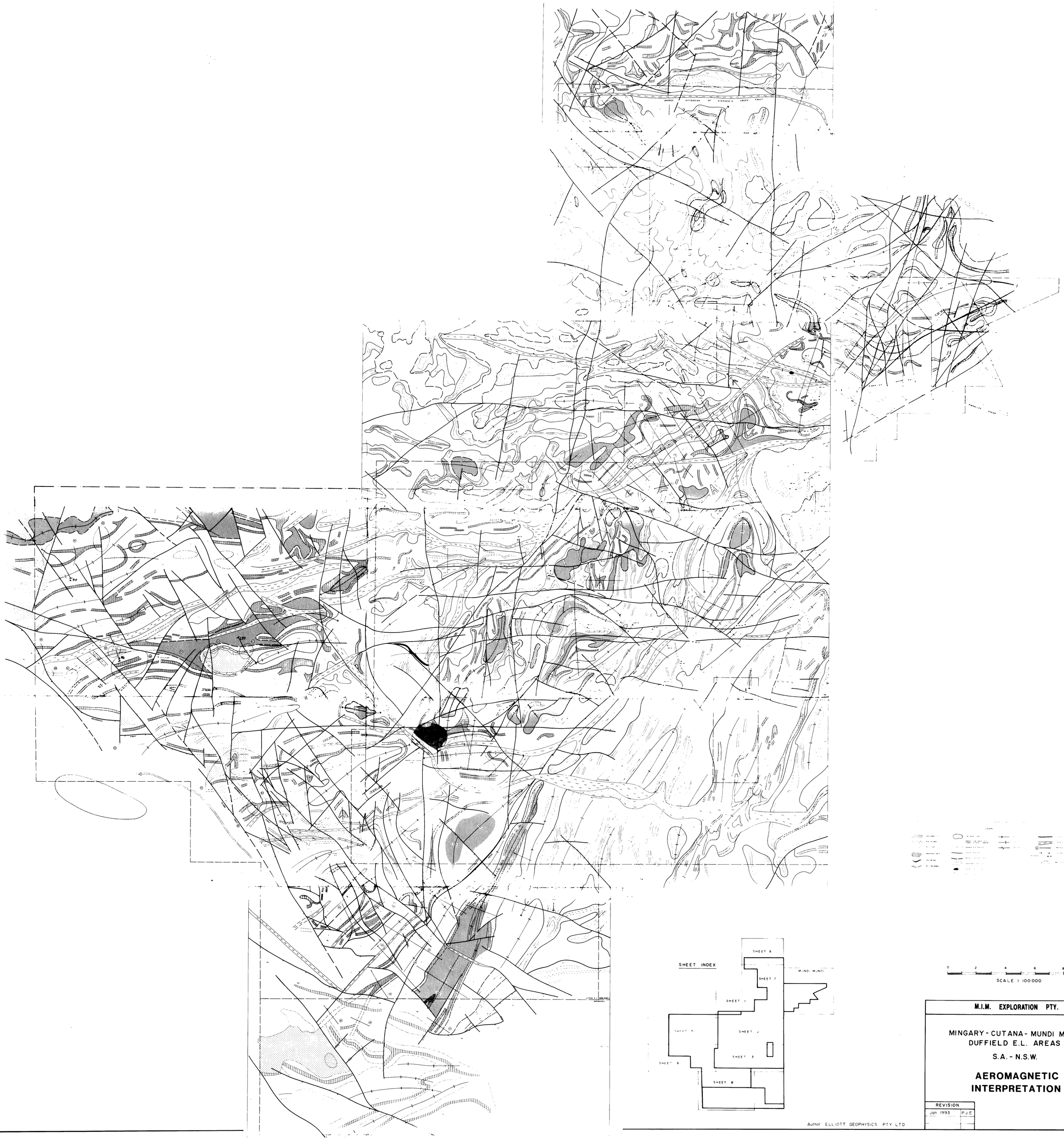
Fig 10



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Fig 11



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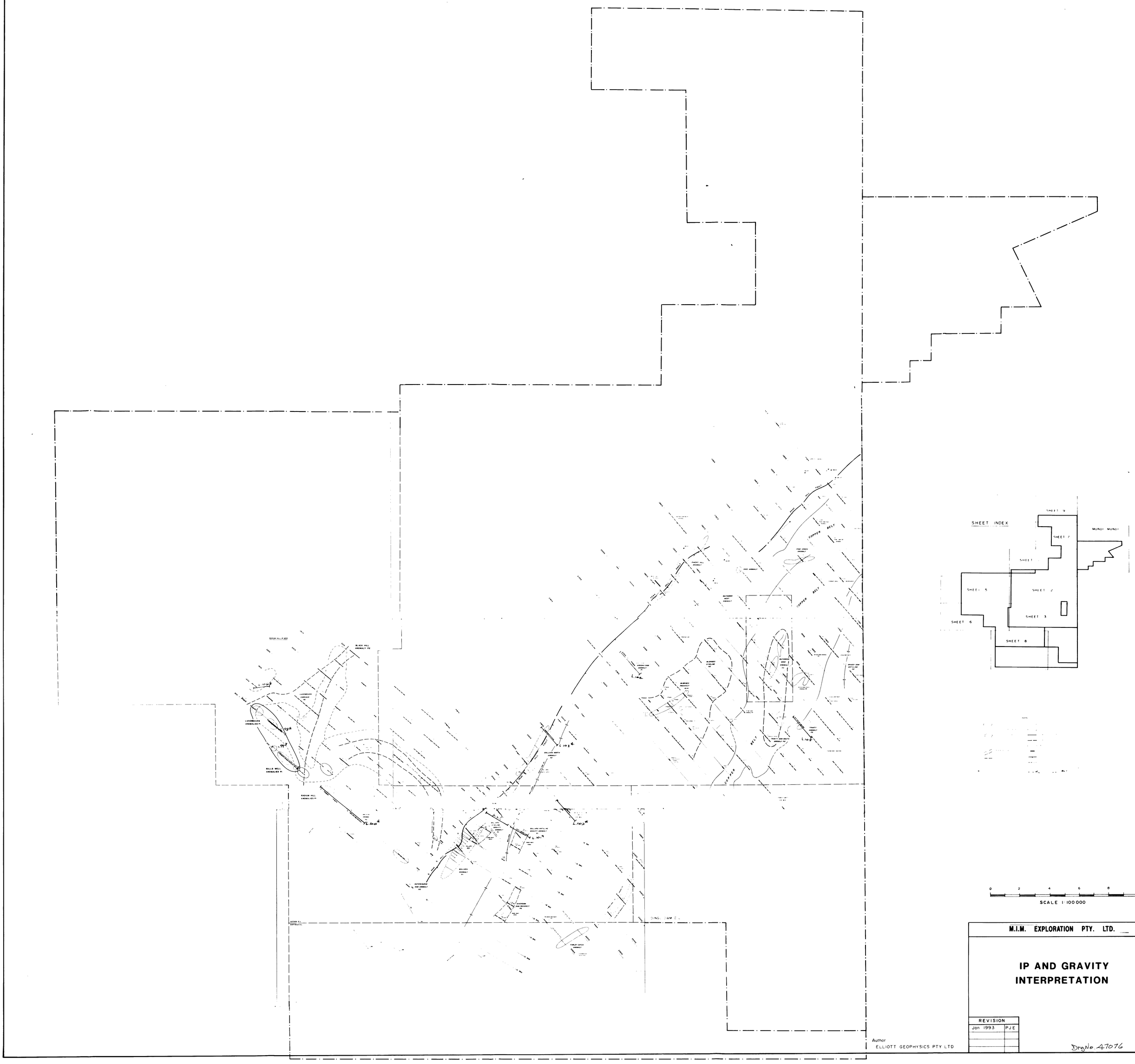
MINGARY - CUTANA - MUNDI MUNDI
DUFFIELD E.L. AREAS
S.A. - N.S.W.

AEROMAGNETIC INTERPRETATION

REVISION	
Jan 1993	P.J.E

Author ELLIOTT GEOPHYSICS PTY LTD

Dwg No 36875



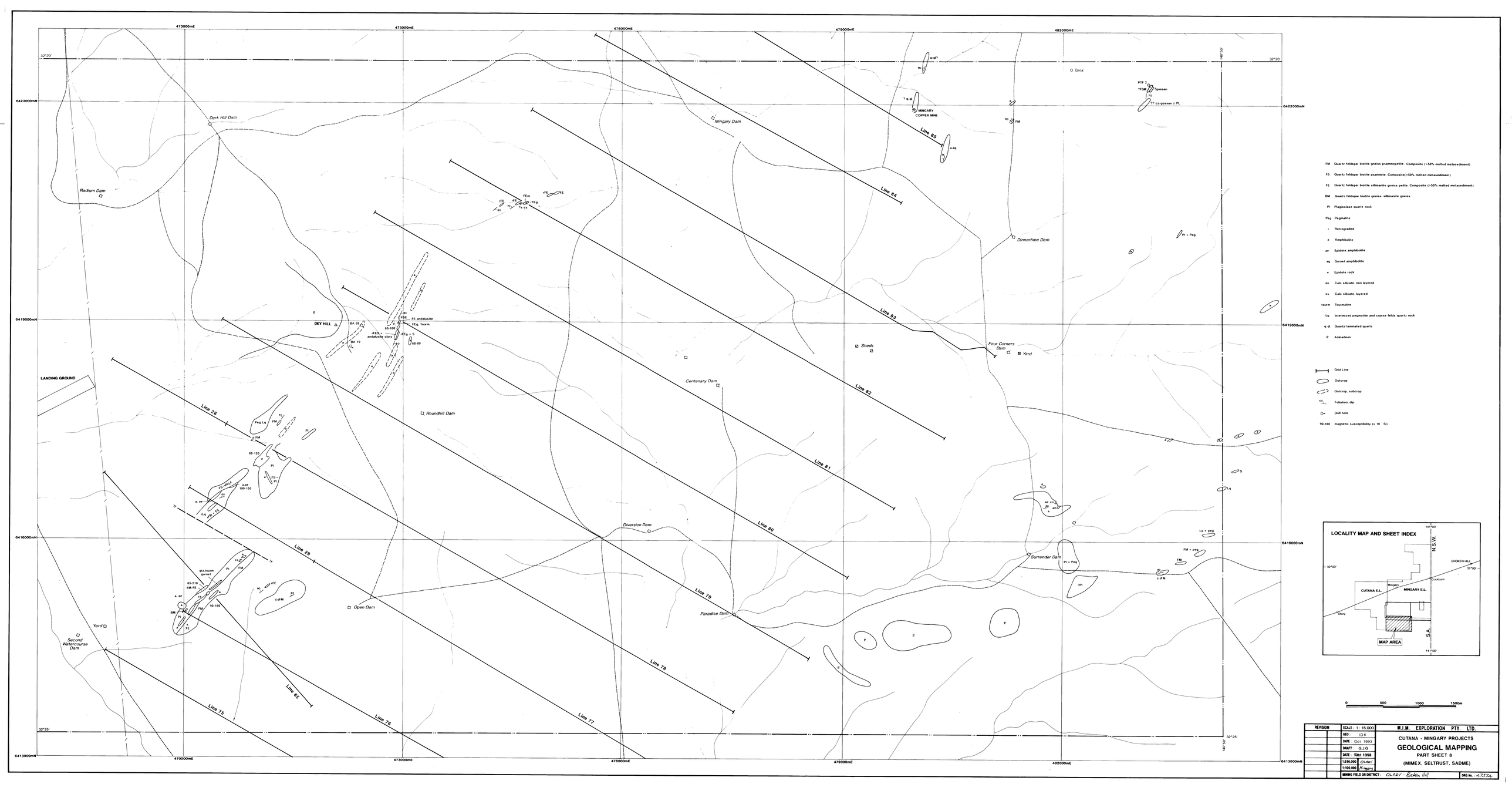
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IP AND GRAVITY INTERPRETATION

REVISION	
Jan 1993	PJE

Author
ELLIOTT GEOPHYSICS PTY LTD

Drg No 47076 FIG. 15


470000mE
473000mE
476000mE
479000mE
482000mE
6422000mN
6419000mN
6416000mN
6413000mN
32°20'
32°25'
140°50'
Dark Hill Dam
Radium Dam
Mingary Dam
Dinnertime Dam
Four Corners Dam
Centenary Dam
Roundhill Dam
Diversion Dam
Surrender Dam
Paradise Dam
Open Dam
Second Watercourse Dam
Yard
Tank
Sheds
MINGARY COPPER MINE
DEY HILL
LANDING GROUND
Line 28
Line 29
Line 65
Line 75
Line 76
Line 77
Line 78
Line 79
Line 80
Line 81
Line 82
Line 83
Line 84
Line 85
FM Quartz feldspar biotite gneiss psammopelite. Composite (>50% melted metasediment)
FS Quartz feldspar biotite psammite. Composite(>50% melted metasediment)
FE Quartz feldspar biotite sillimanite gneiss pelite. Composite (>50% melted metasediment)
BM Quartz feldspar biotite gneiss, sillimanite gneiss
Pl Plagioclase quartz rock
Peg Pegmatite
r Retrogaded
a Amphibolite
ae Epidote amphibolite
ag Garnet amphibolite
e Epidote rock
en Calc silicate, non layered
cs Calc silicate, layered
tourm Tourmaline
Lq Intermixed pegmatite and coarse felds quartz rock
q-qf Quartz laminated quartz
Ir Adelaidean
Grid Line
Outcrop
Outcrop, subcrop
Foliation, dip
Drill hole
90-160 magnetic susceptibility (x 10⁻³SI)
LOCALITY MAP AND SHEET INDEX
141°00'
32°00'
N.S.W.
S.A.
BROKEN HILL
Mingary
Cockburn
CUTANA E.L.
MINGARY E.L.
Olary
MAP AREA
0 500 1000 1500m
M.I.M. EXPLORATION PTY. LTD.
CUTANA - MINGARY PROJECTS
GEOLOGICAL MAPPING
PART SHEET 8
(MIMEX, SELTRUST, SADME)
REVISION
SCALE : 1 15,000
GEO : I.D.K
DATE : Oct 1993
DRAFT : G.J.G.
DATE : Oct 1993
1:250,000 CLARE
1:100,000 Mingary
MINING FIELD OR DISTRICT : CLARE - Broken Hill
DRG No. : 42274