



SE53-14
TENNANT CREEK 1:250 000
5758
TENNANT CREEK 1:100 000

EXPLORATION LICENCE 7985
GIGANTIC SOUTH
THIRD ANNUAL REPORT
10 June 1995 - 9 June 1996

LICENSEES:
WESTERN MINING CORPORATION LIMITED
A.C.N. 004 184 598

GIANTS REEF EXPLORATION PTY LTD
A.C.N. 009 200 346

OPERATORS:
GIANTS REEF EXPLORATION PTY LTD

OPEN FILE

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Department of Mines & Energy
Western Mining Corporation Limited
Giants Reef Exploration Pty Ltd
Giants Reef Mining N.L.

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P. G. SIMPSON
TENNANT CREEK, N.T.
JULY, 1996

CR1996-0521

SUMMARY

Exploration Licence 7985, *Gigantic South*, located approximately 30 kilometres east of Tennant Creek, was granted on 10 June 1993 for 6 years and became part of the Tennant Creek Joint Venture between Western Mining Corporation (WMC) and Giants Reef Exploration Pty Ltd (Giants Reef).

In March 1995, Giants Reef assumed management of the Joint Venture through an agreement to purchase WMC's interest in the Joint Venture.

This report covers the work carried out on the 14 blocks held during its third year of tenure.

Targets are gold and copper orebodies.

Work during the year involved data review and interpretation, gridding, and soil sampling.

CONTENTS

	PAGE
SUMMARY	i.
CONTENTS	ii.
1. INTRODUCTION.....	1.
2. LOCATION	1.
3. TENURE	1.
4. GEOLOGY	1.
4.1 Regional	1.
4.2 Local	2.
5. WORK DONE DURING THE YEAR.....	2.
5.1 Data review and interpretation.....	2.
5.2 Gridding	2.
5.3 Soil sampling	2.
5.4 Magnetism	3.
6. CONCLUSIONS	3.
7. EXPENDITURE.....	4.
8. PROGRAMME FOR NEXT YEAR AND PROPOSED EXPENDITURE	4.

FIGURES

1. EL 7985 and Surrounding Tenements
2. EL 7985 Year 3 Licence Area
3. EL 7985 Controlled Grid Lines
4. EL 7985 Soil Sample Locations

APPENDIX

1. SOIL SAMPLE ASSAY RESULTS
Australian Laboratory Services Pty Ltd ST14368

1. INTRODUCTION

From September 1992, under the management of Western Mining Corporation Limited (WMC), EL 7985, together with contiguous Exploration Licences 7636, 7712 and ERL 85, was explored as part of a Project Area with a single common annual reporting date of 13 April.

Since Giants Reef Exploration Pty Ltd (Giants Reef) took over as manager of the Tennant Creek Joint Venture on 1 March 1995, each Licence area has been explored individually.

This report records the exploration work done on EL 7985 during the third year of tenure from 10 June 1995 to 9 June 1996.

2. LOCATION

EL 7985, *Gigantic South*, is approximately 30 kilometres east of Tennant Creek. It is located on the Tennant Creek 1:100 000 scale map sheet.

Access is via a four-wheel drive track originating near the Tennant Creek microwave repeater tower and following the "Lone Star" trend of workings to the Gigantic mine where the track splits to the south, and eventually to Nobles Nob, and to the east to the Gum Ridge trig point and beyond.

Figure 1 shows the EL and surrounding tenements.

3. TENURE

EL 7985 was granted to WMC (80%) and Giants Reef (20%) on 10 June 1993 for a period of 6 years. Originally covering 28 blocks the EL had been reduced to 14 blocks for its third year.

The Licence is within Perpetual Pastoral Lease 1142, Tennant Creek Station.

Figure 2 shows the Licence area held in Year 3.

4. GEOLOGY

4.1 Regional

The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp 829-861, to gain a good introduction to the regional geology and styles of gold-copper mineralisation of the area.

4.2 Local

Recent geological mapping carried out by the Northern Territory Geological Survey has shown that the bedrock in this area consists of the Warramunga Formation of Palaeoproterozoic age. This formation hosts all of the gold and copper mineralisation on the Tennant Creek field.

5. WORK DONE DURING THE YEAR

5.1 Data review and interpretation

Examination of WMC's gravity data shows that the western blocks EL 7985 lie at the southern edge of a wide belt of relatively high gravity readings which becomes apparent after a regional gradient is subtracted from the data. By analogy with other similar gravity features in the Tennant Creek goldfield, the edge of this "gravity ridge" is seen as a favourable zone for the occurrence of gold-copper mineralisation. For this reason, and because these southern blocks contain more exposed Warramunga Formation than the eastern blocks, future work will tend to concentrate (although not exclusively) in the southern part of the EL.

A short soil sampling exercise in adjoining EL 7636, showed that the extensive bismuth geochemical anomaly found from lag sampling by WMC in 1993 is probably a surficial phenomenon, not detectable in the soil below the surface lag material. The lag anomaly is probably caused by the spread of bismuth contamination from the old workings at Metallic Hill. This interpretation only has relevance to the area around Metallic Hill, in the westernmost part of EL 7985.

5.2 Gridding

A total of 1.7 line kilometres of surveyed grid line was marked out by contractor, Mr P W Youngs, along AMG 438700E, from 7830800N and 7829100N (see Figure 3). The 100 metre intervals were marked with white-topped wooden dumpy pegs with their AMG co-ordinates on stapled aluminium tags, and the 25 metre intervals were marked with plastic-topped wire pin markers. The grid line was tied in to the Gum Ridge trig point.

This grid line serves the dual purpose of providing a surveyed AMG grid over the area and a controlled base line for gravity and other exploration over the Licence.

5.3 Soil sampling

A 3.5 kilometre long line of soil sampling was carried out, extending south from EL 7636 into EL 7985. Within EL 7985, a total of 68 samples was taken. These were along AMG line 438700E, from 7830800N on the boundary of the two ELs (sample 126115), south to 7829100N (sample 126182). Samples were at 25 metre

intervals, taken from depths of 5 cm to 20 cm, after first skimming off the top soil. Stones were screened out using a 4 mm mesh sieve.

The samples were analysed by Australian Laboratory Services Pty Ltd at their Brisbane laboratory, using method PE010. Elements assayed were copper, lead, silver, arsenic, bismuth and cobalt. Gold is not assayed for in this programme as regional experience has shown that the elements, bismuth, copper and silver, are better indicators of possible gold occurrences when using this particular analytical method.

Figure 4 shows the locations of these soil samples, while the analytical results are contained in the Appendix.

Although some anomalous results have been noted for various individual elements in the results, no obvious multi-element anomalies requiring immediate follow up have been recognised.

5.4 Magnetism

Work carried out by Giants Reef on other areas in the Tennant Creek Goldfield has shown that subtle magnetic anomalies, previously considered to be unprospective, can in fact indicate the presence of a substantial ironstone warranting further exploration. Consequently, data from an airborne magnetic survey carried out previously by the Joint Venture is being re-interpreted by consulting geophysicist, Mr. Doug Barrett. Results of this work are expected to produce future exploration targets.

6. CONCLUSIONS

The extensive bismuth geochemical anomaly found from lag sampling by WMC is probably a surficial phenomenon, caused by the spread of bismuth contamination from the old workings at Metallic Hill. This interpretation only has relevance to the area around Metallic Hill, in the westernmost part of EL 7985.

The southern blocks of the EL cover the margin of a "gravity ridge" which is seen as a favourable setting for the location of mineralisation.

Although some anomalous results have been noted for various individual elements in the soil sample results, no obvious multi-element anomalies requiring immediate follow up have been recognised.

7. EXPENDITURE

The minimum expenditure covenant for the fourth year of tenure was \$25,000. Actual expenditure was as follows:

	\$
Geology	874
Geophysics	445
Geochemistry	148
Surveying	854
Drafting	36
Analytical	1224
Tenure maintenance	718
Administration/Overheads	1063
TOTAL	\$5362

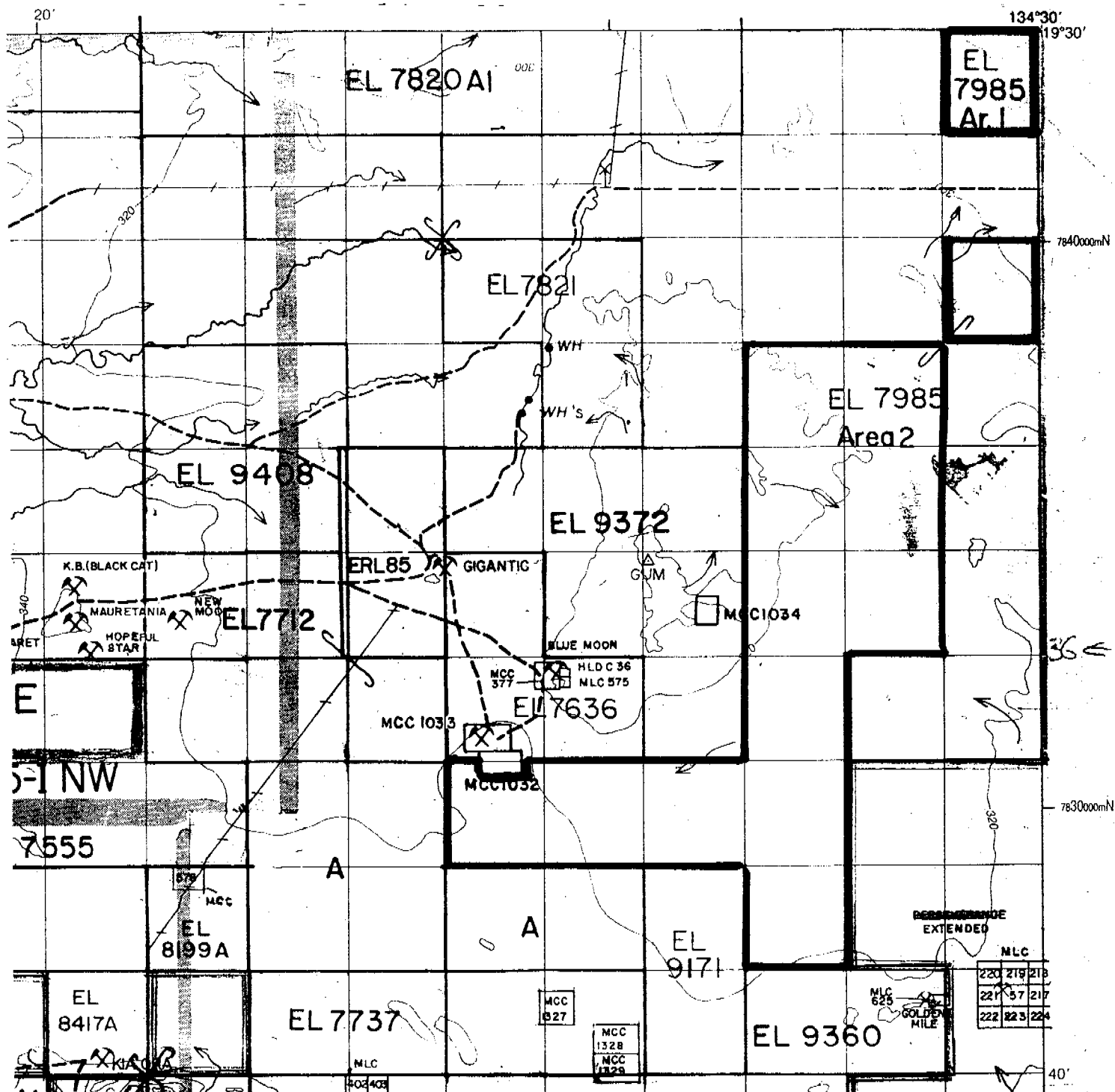
As the minimum expenditure for the year was not met, an application for variation of the minimum expenditure accompanies this report.

8. PROGRAMME FOR NEXT YEAR AND PROPOSED EXPENDITURE

Proposed Work Programme:	Expenditure:
Geological mapping	2,000
Soil sampling and assaying	8,000
Gravity, including gridding and levelling	7,000
Percussion drilling	9,000
TOTAL	\$26,000

Exploration programmes can be affected by results, and while this is the proposed minimum expenditure, specific activities may vary according to the results achieved.

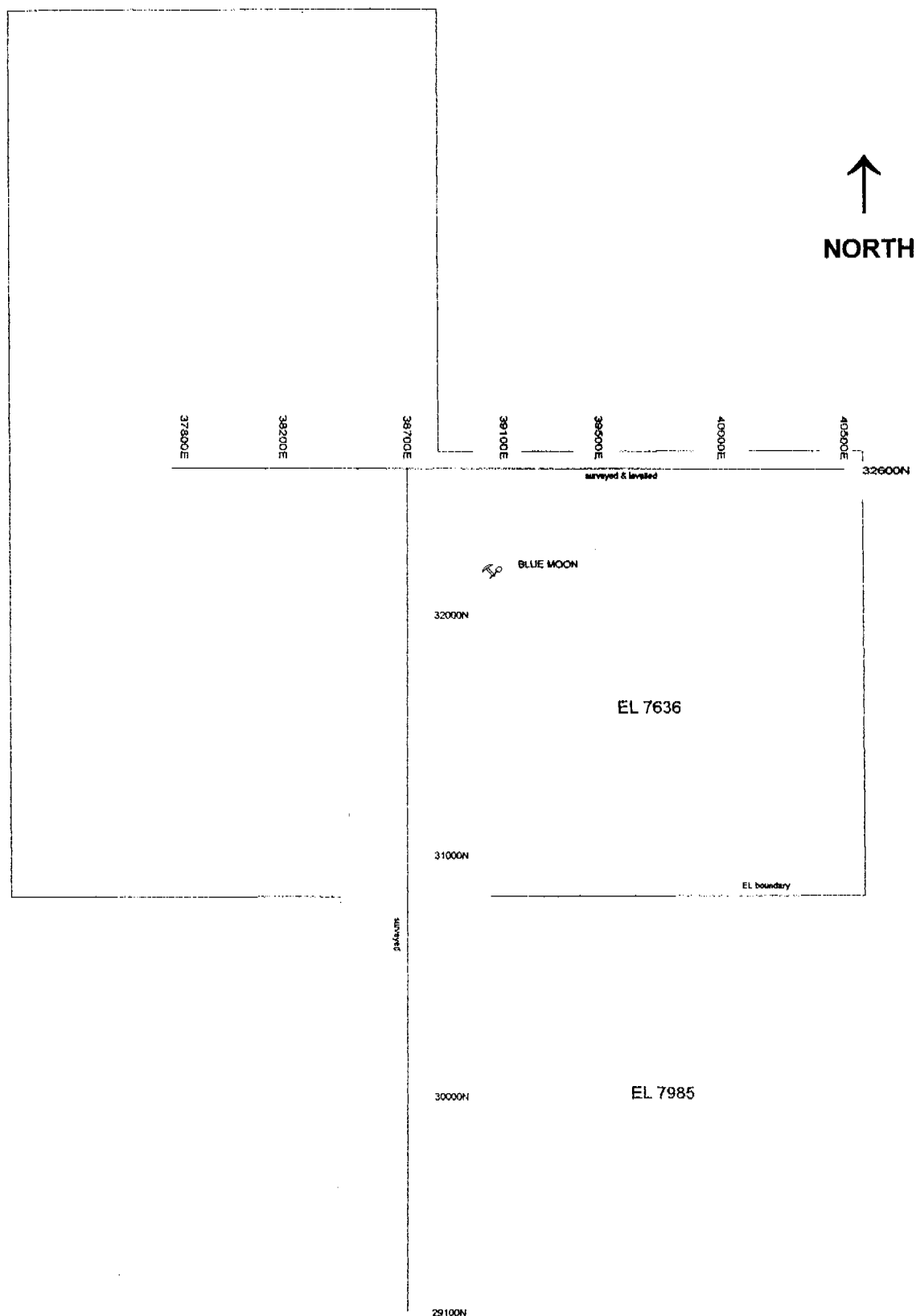
P. G. SIMPSON
EXPLORATION MANAGER



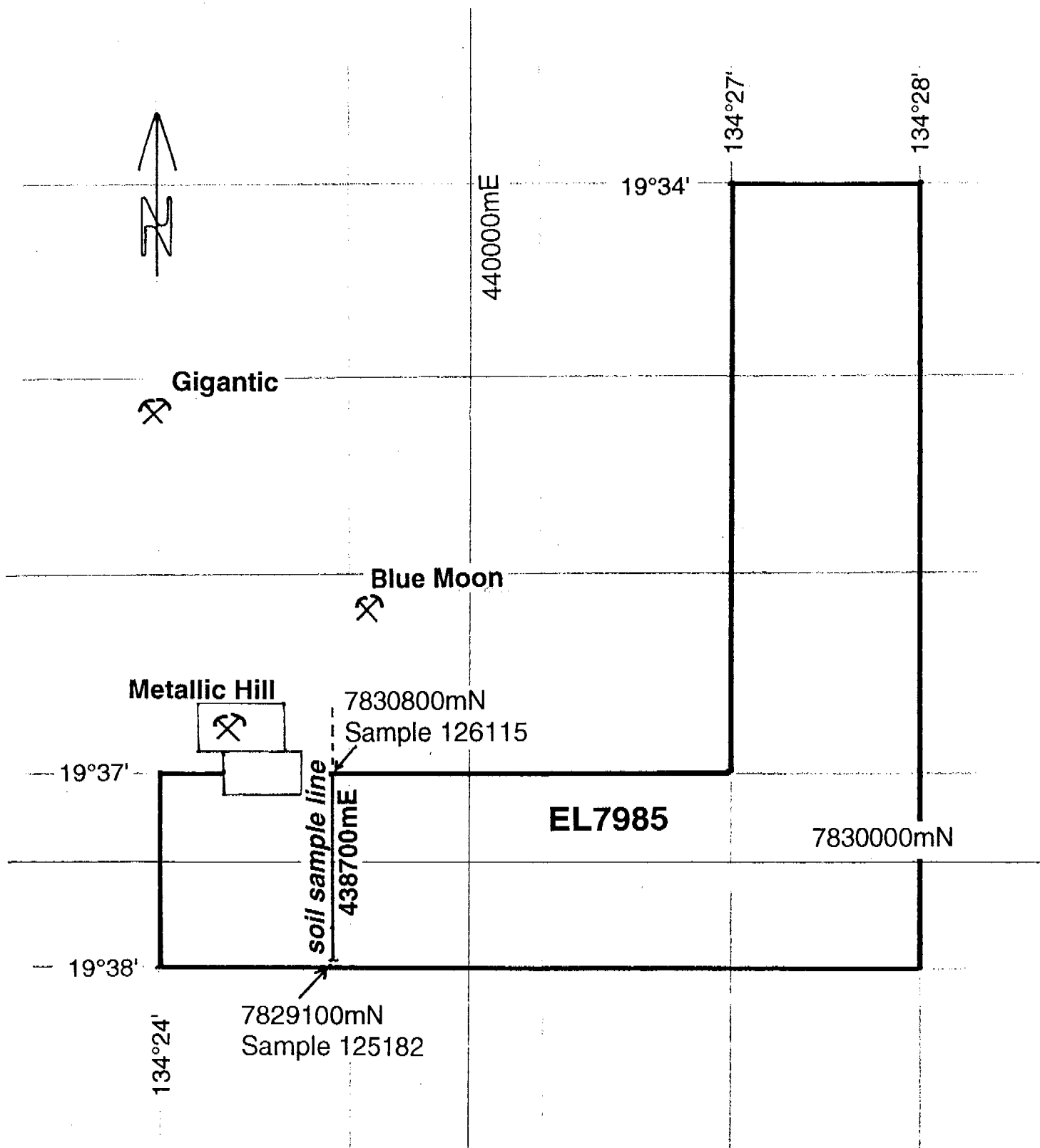
GIANTS REEF EXPLORATION PTY LTD			
TENNANT CREEK NORTHERN TERRITORY			
AREA	EL 7985 GIGANTIC SOUTH		
MAP REF.	5758 TENNANT CREEK 1:100 000		
SUBJECT	EL 7985 and Surrounding Tenements		
DATE	AUTHOR	SCALE	FIGURE
MAR 1996	DME		1

EL7985
14 BLOCKS
45 sq kms

GIANTS REEF EXPLORATION PTY LTD			
TENNANT CREEK NORTHERN TERRITORY			
AREA	EL 7985 <i>GIGANTIC SOUTH</i>		
MAP REF.	DME 2ND ANNUAL REVIEW RETAINED AREA		
SUBJECT	EL 7985 Year 3 Licence Area		
DATE	AUTHOR	SCALE	FIGURE
JUN 1995	DME		2



GIANTS REEF EXPLORATION PTY LTD			
TENNANT CREEK NORTHERN TERRITORY			
AREA	EL 7985 <i>GIGANTIC SOUTH</i>		
MAP REF.	Tennant Creek 1:100 000 Sheet 5758		
SUBJECT	CONTROLLED GRID LINES		
DATE	AUTHOR	SCALE	FIGURE
OCT 1995	PWY	1:25 000	3



GIANTS REEF EXPLORATION PTY LTD			
TENNANT CREEK NORTHERN TERRITORY			
AREA	EL 7985 GIGANTIC SOUTH		
MAP REF.	Tennant Creek 1:100 000 Sheet 5758		
SUBJECT	LOCATION OF SURVEYED SOIL SAMPLE LINE		
DATE	AUTHOR	SCALE	FIGURE
JUL 1996	PGS	1:50 000	4

APPENDIX

SOIL SAMPLE ASSAY RESULTS

Australian Laboratory Services Pty Ltd ST14368
Sample Numbers 126115 - 126182

ANALYTICAL REPORT

PAGE 1 of 8

CONTACT: MR P SIMPSON
CLIENT: GIANTS REEF MINING N.L
ADDRESS:
P O BOX 1244
TENNANT CREEK NT 0861

LABORATORY: STAFFORD
BATCH NUMBER: ST14368
SUB BATCH: 0
No. OF SAMPLES: 211
DATE RECEIVED: 18/03/96
DATE COMPLETED: 29/03/96

APR 1

ORDER No.: GRM 2

SAMPLE TYPE: SOIL

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Cu ppm PE010 0.01	Pb ppm PE010 0.01	Ag ppb PE010 5	As ppb PE010 5	Bi ppb PE010 5	Co ppm PE010 0.01
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126115	3.62	5.49	11	86	157	3.57
126116	3.42	7.00	6	118	139	4.92
126117	2.68	5.34	5	93	96	5.88
126118	2.47	8.49	<5	150	108	10.2
126119	2.96	5.32	<5	301	118	4.12
126120	3.95	6.76	<5	247	136	3.75
126121	3.16	5.74	<5	213	120	4.04
126122	3.09	6.10	8	88	142	3.48
126123	2.63	6.00	<5	397	124	3.69
126124	2.24	5.11	<5	42	121	2.91
126125	2.10	4.86	<5	43	128	2.94
126126	2.38	5.12	<5	<5	153	3.07
126127	2.30	4.69	<5	24	118	2.48
126128	2.04	3.38	<5	119	102	2.20
126129	2.14	3.18	<5	171	79	1.70
126130	1.62	5.58	<5	559	86	3.16

COMMENTS:

Please note:- Results for Ag, As and Bi reported at lower than published detection limits to improve statistical treatment of data.

• This is the Final Report which supersedes any preliminary reports with this batch number.

• Results apply to sample(s) as submitted by client.

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All pages of this report
have been checked and
approved for release.

Sharon Penney

ANALYTICAL REPORT

PAGE 2 of 8

CONTACT: MR P SIMPSON
CLIENT: GIANTS REEF MINING N.L.
ADDRESS:
P O BOX 1244
TENNANT CREEK NT 0861

LABORATORY: STAFFORD
BATCH NUMBER: ST14368
SUB BATCH: 0
No. OF SAMPLES: 211
DATE RECEIVED: 18/03/96
DATE COMPLETED: 29/03/96

ORDER No.: GRM 2

SAMPLE TYPE: SOIL

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Cu ppm PE010 0.01	Pb ppm PE010 0.01	Ag ppb PE010 5	As ppb PE010 5	Bi ppb PE010 5	Co ppm PE010 0.01
126131		2.28	3.75	<5	157	92	2.46
126132		1.77	4.78	<5	231	97	3.43
126133		2.82	6.88	<5	25	154	2.78
126134		2.31	4.40	<5	465	111	2.06
126135		2.67	4.57	<5	24	111	2.25
126136		2.39	5.37	<5	379	134	1.95
126137		2.49	7.17	<5	32	142	4.47
126138		2.63	8.19	<5	26	156	7.45
126139		2.61	6.58	<5	36	174	6.04
126140		2.63	4.73	<5	77	230	3.15
126141		1.70	5.38	<5	77	298	3.52
126142		2.18	6.98	<5	96	487	2.67
126143		1.37	5.35	<5	76	416	1.28
126144		3.18	13.5	5	55	398	4.99
126145		3.12	10.3	5	98	237	4.85
126146		2.84	11.9	<5	164	171	5.16
126147		2.50	8.83	<5	284	168	4.42
126148		2.05	7.32	<5	412	160	4.34
126149		2.41	8.37	<5	212	148	3.67
126150		1.63	4.20	<5	862	110	3.78
126151		2.34	9.31	<5	503	149	4.72
126152		2.62	6.72	<5	1090	150	4.26
126153		2.49	7.03	<5	371	158	4.92
126154		2.76	8.85	<5	239	142	6.21
126155		2.95	6.07	<5	451	158	7.92
126156		7.06	5.65	8	386	123	17.8
126157		3.50	9.09	<5	570	273	8.53
126158		3.08	7.91	<5	338	636	5.76
126159		4.51	7.35	<5	429	374	10.9
126160		3.20	7.38	<5	481	235	8.99

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DATE COMPLETED: 29/03/96

ORDER No.: GRM 2

SAMPLE TYPE: SOIL

PROJECT:

SAMPLE NUMBER	ELEMENT UNIT METHOD L.O.R.	Cu ppm PE010 0.01	Pb ppm PE010 0.01	Ag ppb PE010 5	As ppb PE010 5	Bi ppb PE010 5	Co ppm PE010 0.01
126161		3.21	6.55	<5	553	156	8.07
126162		3.28	8.54	5	141	136	4.24
126163		3.08	7.11	<5	226	119	4.84
126164		2.56	3.96	6	81	93	2.44
126165		2.74	5.06	<5	95	91	4.10
126166		1.72	4.83	<5	298	96	2.59
126167		2.32	6.50	<5	145	94	4.20
126168		1.61	4.24	<5	112	65	1.67
126169		2.81	5.90	<5	148	110	2.88
126170		2.48	6.58	6	157	89	3.37
126171		3.72	6.81	<5	435	162	6.85
126172		3.77	13.5	12	81	215	4.71
126173		3.52	13.2	6	59	205	4.26
126174		2.99	11.6	6	98	175	4.62
126175		3.04	11.8	5	46	181	5.92
126176		1.95	11.6	<5	50	172	4.17
126177		2.82	10.1	7	41	173	4.51
126178		2.43	7.82	<5	40	247	3.23
126179		1.99	12.3	<5	28	589	2.84
126180		3.32	12.1	<5	107	197	6.83
126181		3.13	9.13	5	38	146	20.0
126182		2.66	7.48	<5	51	143	5.10

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