

EMMERSON RESOURCES PTY LTD
A.C.N. 117 086 745
LEVEL 1, 65 HAY ST, SUBIACO, W.A., 6008
PO BOX 1573, WEST PERTH, W.A., 6872
Telephone 08 89489 7086 Facsimile 08 89489 7080

COMBINED ANNUAL REPORT FOR THE SOUTHERN PROJECT AREA

16 FEBRUARY 2006 – 15 FEBRUARY 2007

LICENCEES:

GIANTS REEF EXPLORATION PTY LTD

A.C.N. 009 200 346

SANTEXCO PTY LTD

A.B.N. 002 910 296

AUTHORS:

ADAM WALTERS

15 MARCH 2007

DISTRIBUTION:

Department of Primary Industry, Fisheries & Mining
Central Land Council
Emmerson Resources Pty Ltd

MAP SHEETS:

<input type="checkbox"/>	TENNANT CREEK	SE53-14
<input type="checkbox"/>		1:250 000
<input type="checkbox"/>	KELLY	5658
<input type="checkbox"/>	TENNANT CREEK	5758
<input type="checkbox"/>		1:100 000

Table of Contents

FIGURES	4
1. SUMMARY	1
2. INTRODUCTION	2
3. LOCATION	2
3.1 EL8882 Greenbush	2
3.2 EL8883 Bluebush	3
3.3 EL9309 Skipper Hill West	3
3.4 EL9915 Chinchilla	3
3.5 EL9935 Manx	4
3.6 EL9988 No.1 Bore	4
3.7 EL10199 Lynx	4
3.8 EL10402 Amadeus	4
3.9 EL22240 Morgan	5
3.10 A23236 Udall Road	5
3.11 EL23284 Corridor 1	5
3.12 EL23286 Corridor 3	6
4. TENURE	6
4.1 EL8882 Greenbush	7
4.2 EL8883 Bluebush	7
4.3 EL9309 Skipper Hill West	8
4.4 EL9915 Chinchilla	9
4.5 EL9935 Manx	9
4.6 EL9988 No.1 Bore	10
4.7 EL10199 Lynx	10
4.8 EL10402 Amadeus	11
4.9 EL22240 Morgan	11
4.10 A23236 Udall Road	12
4.11 EL23284 Corridor 1	12
4.12 EL23286 Corridor 3	12
5. GEOLOGY	13
5.1 Regional Geology	13
5.2 Geology of the Northern Project Area	13
5.1 EL8882 Greenbush	14
5.2 EL8883 Bluebush	14
5.3 EL9309 Skipper Hill West	15
5.4 EL9915 Chinchilla	15
5.5 EL9935 Manx	16

5.6	EL9988 No.1 Bore	16
5.7	EL10199 Lynx	17
5.8	EL10402 Amadeus	17
5.9	EL22240 Morgan	18
5.10	A23236 Udall Road	18
5.11	EL23284 Corridor 1	18
5.12	EL23286 Corridor 3	19
6.	PREVIOUS EXPLORATION	20
6.1	Targets and Concepts	20
6.2	EL8882 Greenbush	20
6.3	EL8883 Bluebush	25
6.4	EL9309 Skipper Hill West	41
6.5	EL9915 Chinchilla	46
6.6	EL9935 Manx	50
6.7	EL9988 No.1 Bore	57
6.8	EL10199 Lynx	59
6.9	EL10402 Amadeus	68
6.10	EL22240 Morgan	75
6.11	A23236 Udall Road	81
6.12	EL23284 Corridor 1	82
6.13	EL23286 Corridor 3	87
7.	WORK DONE DURING THE REPORT PERIOD	90
7.1	EL8882 Greenbush	91
7.2	EL8883 Bluebush	91
7.3	EL9309 Skipper Hill West	91
7.4	EL9915 Chinchilla	92
7.5	EL9935 Manx	92
7.6	EL9988 No.1 Bore	92
7.7	EL10199 Lynx	92
7.8	EL10402 Amadeus	93
7.9	EL22240 Morgan	93
7.10	A23236 Udall Road	93
7.11	EL23284 Corridor 1	94
7.12	EL23286 Corridor 3	94
8.	REHABILITATION	95
9.	CONCLUSIONS	96
9.1	EL8882 Greenbush	96
9.2	EL8883 Bluebush	96
9.3	EL9309 Skipper Hill West	96
9.4	EL9915 Chinchilla	97

9.5	EL9935 Manx	97
9.6	EL9988 No.1 Bore	98
9.7	EL10199 Lynx	98
9.8	EL10402 Amadeus	99
9.9	EL22240 Morgan	99
9.10	A23236 Udall Road	100
9.11	EL23284 Corridor 1	101
9.12	EL23286 Corridor 3	101

FIGURES

Figure 1.	SOUTHERN PROJECT AREA LOCATON MAP
Figure 2.	EL 8882 GREENBUSH
Figure 3.	EL 8883 BLUEBUSH
Figure 4.	EL 9309 SKIPPER HILL WEST
Figure 5.	EL 9915 CHINCHILLA
Figure 6.	EL 9935 MANX
Figure 7.	EL 9988 NO.1 BORE
Figure 8.	EL 10199 LYNX
Figure 9.	EL 10402 AMADEUS
Figure 10.	EL 22240 MORGAN
Figure 11.	A 23236 UDALL ROAD
Figure 12.	EL 23284 CORRIDOR 1
Figure 13.	EL 23286 CORRIDOR 3

1. SUMMARY

Exploration Licences ("ELs"), Substitute Exploration Licences (SEL's) and Authorisations (A's) in the SPA, were acquired by Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco Pty Ltd to search for Tennant Creek style iron oxide copper-gold deposits. Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco Pty Ltd are wholly owned subsidiaries of Emmerson Resources Pty Ltd.

This combined report records the exploration work completed on these ELs during the SPA Combined Reporting period from 16 February 2006 to the 15 February 2007.

Total expenditure on the ELs during their anniversary dates was \$55,525.05 versus covenant of \$65,750.

2. INTRODUCTION

Exploration Licences (“ELs”), Substitute Exploration Licences (SEL’s) and Authorisations (A’s) in the Southern Project Area (SPA), were acquired by Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco to search for Tennant Creek style iron oxide copper-gold deposits (IOCG deposits). Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco Pty Ltd are wholly owned subsidiaries of Emmerson Resources Pty Ltd.

This combined report records the exploration work completed on these ELs during the SPA Combined Reporting period from 16 February 2006 to the 15 February 2007.

On the 6 August 2005 the Manager of Customer Services – Minerals & Energy Titles (DPIFM) approved the Company’s request to combine the it’s Exploration Licences into four (4) project areas for purposes of combined annual reporting. Details of the EL’s, SEL’s and A’s under the 4 proposed groups are outlined in Section 4, Tenure.

The aim of creating the 4 tenement groups is to simplify tenement statutory reporting and project management, and also more clearly convey exploration expenditure aligned to the Company’s project work areas, which are not restricted to individual tenements.

3. LOCATION

Exploration Licences, Substitute Exploration Licences and Authorisations covered by the SPA covers an area of some 365.2 km² south and west south west of the Tennant Creek Township.

The principal access to ELs, SEL’s and A’s in the SPA from Tennant Creek is west via the Chariot Mine Rd and south via the Stuart Highway, then by various unsealed roads, tracks and fence line tracks. However, much of the Project area is rocky, without tracks and difficult to reach, even in a 4x4 vehicle. The unsealed tracks become impassable during the wet season.

Figure 1 shows the location of the Licences within the SPA and with respect to the town of Tennant Creek.

3.1 EL8882 GREENBUSH

Exploration Licence 8882, GREENBUSH is located approximately 34km west of the Tennant Creek Township.

Access to the Licence area is via the Chariot Mine Access Road to its western most point, from here EL 8882 is reached by via a series of unsealed, 4x4 and fence line tracks for approximately 27kms. During and immediately after rain the area is generally inaccessible.

Figure 2 shows the location of EL 8882 and surrounding tenure.

3.2 EL8883 BLUEBUSH

Exploration Licence 8883 BLUEBUSH is broken into two distinct areas, with one being a long thin tract of land located approximately 9km west of the Tennant Creek Township and a second, the larger bulk of the licence, is located approximately 30km west of Tennant Creek town. The Licence falls on the Kelly 1:100,000 scale map sheet (5658).

There are several access routes into the large area covered by EL 8883, but the principal one at present is the dirt road that leaves the Stuart Highway about 6km south of Tennant Creek Town and heads west, passing through EL 10402 and EL 8883, to the Kunayungku community. From along this road, a number of station tracks and the service route along the Amadeus Basin to Darwin gas pipeline, can be followed to most parts of the area.

Figure 3 shows the location of EL 8883 and surrounding tenure.

3.3 EL9309 SKIPPER HILL WEST

Exploration Licence 9309 SKIPPER HILL WEST is located approximately 18km west of Tennant Creek town. The Licence falls on both the Tennant Creek (5758) and Kelly (5658) 1:100,000 scale map sheets.

Access to the Licence area is via the Chariot Mine Access Road to its western most point, from here EL 9309 is reached by via a series of unsealed, 4x4 and fence line tracks for approximately 7kms. During and immediately after rain the area is generally inaccessible.

Figure 4 shows the location of EL 9309 and surrounding tenure.

3.4 EL9915 CHINCHILLA

Exploration Licence 9915 CHINCHILLA is an irregular shaped tract of land located approximately 15km west of the township of Tennant Creek. The Licence falls on both the Tennant Creek (5758) and Kelly (5658) 1:100,000 scale map sheets.

Access to the Licence area is via the Chariot Mine Access Road to its western most point, from here EL 9915 is reached by via a series of unsealed, 4x4 and fence line tracks for approximately 3kms. During and immediately after rain the area is generally inaccessible.

Figure 5 shows the location of EL 9915 and surrounding tenure.

3.5 EL9935 MANX

Exploration Licence 9935 MANX is an irregular shaped tract of land located approximately 8km west of the township of Tennant Creek. The Licence falls on the Tennant Creek (5758) 1:100,000 scale map sheet.

Access to the Licence area is via the Chariot Mine Access Road to its western most point, from here EL 9935 is reached either north or west via a series of unsealed, 4x4 and fence line tracks for approximately 1km. During and immediately after rain the area is generally inaccessible.

Figure 6 shows the location of EL 9935 and surrounding tenure.

3.6 EL9988 NO.1 BORE

Exploration Licence 9988 NO.1 BORE is located approximately 14km southwest of the township of Tennant Creek. The Licence falls on the Tennant Creek (5758) 1:100,000 scale map sheet.

Access to the Licence area is via the Chariot Mine Access Road to its western most point, from here EL 9988 is reached by via a series of south to southwest unsealed, 4x4 and fence line tracks for approximately 6kms. During and immediately after rain the area is generally inaccessible.

Figure 7 shows the location of EL 9988 and surrounding tenure.

3.7 EL10199 LYNX

Exploration Licence 10199 LYNX is located approximately 8km west of the Tennant Creek Township. The licence falls on the Tennant Creek 1:100 000 scale map sheet (5758).

Access to the Licence area is via the Chariot Mine Access Road which runs through EL 10199. Access to other areas of the licence is reached via a series of unsealed, 4x4 and fence line tracks. During and immediately after rain the area is generally inaccessible.

Figure 8 shows the Location of EL10199 and surrounding tenure.

3.8 EL10402 AMADEUS

Exploration Licence 10402 AMADEUS, is located approximately 22km west southwest of the Tennant Creek Township. The licence falls on the Kelly 1:100 000 scale map sheet (5658).

There are several access routes into the large area covered by EL 10402, but the principal one at present is the dirt road that leaves the Stuart Highway about 6km south of Tennant Creek Town and heads west, passing through EL 10402 and EL 8883, to the Kunayungku

community. From along this road, a number of station tracks and the service route along the Amadeus Basin to Darwin gas pipeline, can be followed to most parts of the area.

Figure 9 shows the location of EL 10402 and surrounding tenure.

3.9 EL22240 MORGAN

Exploration Licence 22240 MORGAN, is located approximately 10km west of the Tennant Creek Township. The licence falls on the Tennant Creek 1:100 000 scale map sheet (5758).

Access to the Licence area is via the Chariot Mine Access Road, from here EL 22240 is reached via a series of north or west trending unsealed, 4x4 and fence line tracks for approximately 1kms. During and immediately after rain the area is generally inaccessible.

Figure 10 shows the location of EL 22240 and surrounding tenure.

3.10 A23236 UDALL ROAD

Authorisation 23236 UDALL ROAD, is located approximately 2km west of the Tennant Creek Township. The Authorisation falls on the Tennant Creek 1:100 000 scale map sheet (5758).

Access to the Licence area is west via the Chariot Mine Access Road, from here Authorisation 23236 is reached via a series of north trending unsealed 4x4 and fence line tracks. During and immediately after rain the area is generally inaccessible.

Figure 11 shows the location of A23236 and surrounding tenure.

3.11 EL23284 CORRIDOR 1

Exploration Licence 23284 CORRIDOR 1, is located approximately 4km west of the Tennant Creek Township. The licence falls on the Tennant Creek 1:100 000 scale map sheet (5758).

Access to the Licence area is via the Chariot Mine Access Road, which runs through the southern part of the licence. From here EL 23284 is reached via a series of north trending unsealed, 4x4 and fence line tracks. During and immediately after rain the area is generally inaccessible.

Figure 12 shows the location of EL 23284 and surrounding tenure.

3.12 EL23286 CORRIDOR 3

Exploration Licence 23286 CORRIDOR 3, is located approximately 2km west of the Tennant Creek Township. The licence falls on the Tennant Creek 1:100 000 scale map sheet (5758).

Access to the Licence area is via the Chariot Mine Access Road, which runs just to the north of the EL. From here EL 23286 is reached via a series of south trending unsealed, 4x4 and fence line tracks. During and immediately after rain the area is generally inaccessible.

Figure 13 shows the location of EL 23286 and surrounding tenure.

4. TENURE

Tenure details for the 12 Titles within the SPA are as follows:

Table 1: SPA Tenure details.

Exploration Licence	Licence Holder	Blocks & part-blocks	Area (km ²)	Date of Grant/ <i>Renewal</i>	Period of Grant/ <i>Renewal</i>
EL8882 GREENBUSH	GIANTS REEF EXPLORATION PTY LTD *	38	108.9	29 August 2001	6
EL8883 BLUEBUSH	GIANTS REEF EXPLORATION PTY LTD *	28	75.52	20 March 2001	6
EL9309 SKIPPER HILL WEST	GIANTS REEF EXPLORATION PTY LTD *	10	32.5	Expired 28 April 2006	
EL9915 CHINCHILLA	GIANTS REEF EXPLORATION PTY LTD	15	48.52	Expired 28 April 2006	
EL9935 MANX	GIANTS REEF EXPLORATION PTY LTD	6	19.41	Expired 28 April 2006	
EL9988 NO.1 BORE	GIANTS REEF EXPLORATION PTY LTD	17	54.96	Expired 28 April 2006	
EL10199 LYNX	GIANTS REEF EXPLORATION PTY LTD	2	4.64	7 April 2006	2
EL10402 AMADEUS	GIANTS REEF EXPLORATION PTY LTD *	3	9.7	20 March 2001	6
EL22240 MORGAN	SANTEXCO PTY LTD *	1	0.993	24 July 2001	6
A23236 UDALL ROAD	GIANTS REEF EXPLORATION PTY LTD *	4		1 December 2004	6

EL23284 CORRIDOR 1	GIANTS REEF EXPLORATION PTY LTD *	6	6.51	16 July 2003	6
EL23286 CORRIDOR 3	GIANTS REEF EXPLORATION PTY LTD *	2	2.402	30 September 2002	6

Exploration Licences and Authorisations in the SPA lie within NT Portion 408, Phillip Creek, Perpetual Pastoral Lease 946 and on Inalienable Aboriginal Freehold lands held by the Warumungu Land Trust and by the Karlanttijpa Land Trust.

Exploration Licence 8882 is within Aboriginal Freehold Land (Karlantijpa South Aboriginal Land) and therefore is subject to a Deed for Exploration signed on 10 August 2001, between the Native Title holders of the region, represented by the Central Land Council (CLC), and Giants Reef Exploration Pty Ltd (Giants Reef). Exploration Licence 10199 lies within Aboriginal Freehold Land held by the Warumungu Aboriginal Land Trust, NT Portion 4115. All exploration activities within the Licence area are governed by the Deed of Terms and Conditions for Exploration as described in the "Lynx Agreement" signed between the Central Land Council (CLC), on behalf of Warumungu Traditional Owners, Anthappi Pty Ltd and NTC on the 29th March 2000.

4.1 EL8882 GREENBUSH

EL 8882 was first granted to Giants Reef Exploration Pty Ltd on 29 August 2001, for a period of 6 years. The Licence covers an area of thirty eight graticular blocks (105 km²).

Exploration Licence 8882 is within Aboriginal Freehold Land (Karlantijpa South Aboriginal Land) and therefore is subject to a Deed for Exploration signed on 10 August 2001, between the Native Title holders of the region, represented by the Central Land Council (CLC), and Giants Reef Exploration Pty Ltd (Giants Reef).

On grant, EL8882 (and a number of others) came under an Alliance signed between Billiton Exploration Australia Pty Ltd (Billiton) and Giants Reef, whereby Billiton acquired approximately 7% equity in Giants Reef, in return for providing funding for the exploration, by Giants Reef, of four project areas in the Tennant Creek region. On the 25 July 2003, the Bluebush Alliance Agreement (JV) between BHP Billiton and Giants Reef was dissolved and the latter regained full control over EL 8882.

4.2 EL8883 BLUEBUSH

EL 8883 was first granted to Giants Reef Exploration Pty Ltd on 20 March 2001, for a period of 6 years. The Licence initialled covered an area of two hundred and twenty four graticular blocks (598.4 km²) and now covers 28 graticular blocks (75.52km²).

The tenure was reduced from two hundred and twenty four graticular blocks to one hundred and twelve graticular blocks at the end of the third year of tenure, and a further

reduction to fifty six graticular blocks (149.60 km²) occurred at the end of the fourth year of tenure.

EL8883 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL8883 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

4.3 EL9309 SKIPPER HILL WEST

EL 9309 was first granted to Carpentaria Gold Pty Limited (70%) and Giants Reef Exploration Pty Ltd (30%) on 29th November 1995 for a period of 6 years. The Licence initialled covered an area of 40 graticular blocks (129km²).

In October 1996, Carpentaria withdrew from the Joint Venture and the registration of the transfer of Carpentaria's 70% equity to Giants Reef was affected on 13th March 1997.

A waiver of the reduction required at the end of Year 2 was granted enabling the retention of 40 blocks for the term of Year 3 to 28th November 1998. A reduction on the 28th February 1999, halved the EL from forty graticular blocks (130km²) to twenty graticular blocks (65km²).

On 12th November 1999, Billiton Exploration Australia Pty Ltd (Billiton) entered into an Agreement with Giants Reef whereby Billiton acquired approximately 7% equity in Giants Reef, in return for providing funding for the exploration, by Giants Reef, of four project areas in the Tennant Creek region. Exploration Licence 9309 is included, along with adjacent EL's 8882, 8883 & 10402.

During 2001, Billiton's parent company merged with BHP to form BHP Billiton.

On the 25th July 2003, BHP Billiton indicated to Giants Reef that they did not wish to enter into the Bluebush Joint Venture. This effectively terminated the Bluebush Alliance Agreement, and consequently EL 9309 (and respective Joint Venture tenements) is now being solely explored by Centralian Minerals Limited (formerly Giants Reef Mining Limited).

A further reduction of 50% to ten graticular blocks (32.5km²) occurred with the renewal of the EL in its eighth year of tenure.

EL9309 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL9309 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

EL 9309 SKIPPER HILL WEST, compulsorily expired on 28 April 2006 with the granting of SEL 24980 KESTELL, SEL24980 now covers all the area previously covered by EL9309.

4.4 EL9915 CHINCHILLA

EL 9915 was first granted to Anthappi Pty Ltd on 31 March 2003, for a period of 6 years. The Licence covers an area of fifteen graticular blocks (48.52 km²).

Transfer of EL 9915 from Anthappi Pty Ltd to Santexco Pty Ltd was registered on 9th April 2003. Santexco is a 100% owned subsidiary of Emmerson Resources Pty Ltd.

In accordance with section 174(5) of the Mining Act, the ANZ Banking Group Limited, of Level 17, 530 Collins Street Melbourne, lodged a caveat, D 91773, claiming an interest in Exploration Licence 9915.

An additional transfer was executed over the two Exploration Licences from Santexco Pty Ltd to Giants Reef Exploration Pty Ltd, also a 100% owned subsidiary of Emmerson Resources Pty Ltd. This dealing was registered on 15th September 2003.

Exploration Licence 9915 falls on both Tennant Creek and Phillip Creek Stations, NT Portions 494 and 408 respectively.

EL 9915 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

EL 9915 CHINCHILLA, compulsorily expired on 28 April 2006 with the granting of SEL 24980 KESTELL, SEL24980 now covers all the area previously covered by EL9915.

4.5 EL9935 MANX

EL 9935 was first granted to Anthappi Pty Ltd on 31 March 2003, for a period of 6 years. The Licence covers an area of six graticular blocks (19.41km²).

Transfer of EL 9935 from Anthappi Pty Ltd to Santexco Pty Ltd was registered on 9th April 2003. Santexco is a 100% owned subsidiary of Emmerson Resources Pty Ltd.

In accordance with section 174(5) of the Mining Act, the ANZ Banking Group Limited, of Level 17, 530 Collins Street Melbourne, lodged a caveat, D 91773, claiming an interest in Exploration Licence 9935.

An additional transfer was executed over the two Exploration Licences from Santexco Pty Ltd to Giants Reef Exploration Pty Ltd, also a 100% owned subsidiary of Emmerson Resources Pty Ltd. This dealing was registered on 15th September 2003.

EL9935 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL 9935 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

EL 9935 MANX, compulsorily expired on 28 April 2006 with the granting of SEL 24980 KESTELL, SEL24980 now covers all the area previously covered by EL9935.

4.6 EL9988 NO.1 BORE

Exploration Licence 9988 NO. 1 BORE, was granted to Giants Reef Exploration Pty Ltd (Giants Reef) on the 3rd October 2004 for a period of six years. The EL covers an area of 17 graticular blocks (54.96 km²).

EL9988 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL 9988 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

EL 9988 NO.1 BORE, compulsorily expired on 28 April 2006 with the granting of SEL 24980 KESTELL, SEL24980 now covers all the area previously covered by EL9988.

4.7 EL10199 LYNX

Exploration Licence 10199 Lynx, was granted to Anthappi Pty Ltd on the 7th April 2000 for a period of six years. The EL covers an area of 2 graticular blocks (4.968 km²). Soon after the grant, the Licence was transferred to Normandy Tennant Creek Pty Ltd (NTC). This transfer was registered on the 13th April 2000.

The interests of NTC in the Tennant Creek region were acquired by Giants Reef Mining Limited in mid-June 2001, and soon afterwards the title was transferred to Giants Reef Exploration Pty Ltd (now a 100% owned subsidiary of Emmerson Resources Pty Ltd). This transfer was registered on the 26th June 2001.

Until January 2003, EL 10199 was part of the Central Joint Venture 2 (CJV2), which covered the Chariot gold deposit and a number of other tenements in the Tennant Creek goldfield. The Joint Venture was between Giants Reef, (managers, holding 57% equity), Sons of Gwalia (replacing PacMin; 33%) and Newmont NFM (formerly Normandy NFM; 10%). Giants Reef purchased Sons of Gwalia's Joint Venture assets (43%) and became the sole owner of the CJV2 project, including EL 10199.

A waiver of reduction was granted at the end of Years 2, 3, 4 and 5 enabling the retention of 2 blocks.

The Licence is within Aboriginal Freehold Land held by the Warumungu Aboriginal Land Trust, NT Portion 4115. All exploration activities within the Licence area are governed by the Deed of Terms and Conditions for Exploration as described in the "Lynx Agreement"

signed between the Central Land Council (CLC), on behalf of Warumungu Traditional Owners, Anthappi Pty Ltd and NTC on the 29th March 2000.

4.8 EL10402 AMADEUS

EL 10402 was first granted to Giants Reef Exploration Pty Ltd on 20 March 2001, for a period of 6 years. The Licence initialled covered an area of twenty graticular blocks (16.17 km²).

The tenure has been reduced from twenty graticular blocks to ten graticular blocks at the end of the third year of tenure, and a further reduction to five graticular blocks (16.17 km²) occurred at the end of the fourth year of tenure. The licence now consists of 3 graticular blocks (9.7km²) following a further required reduction.

EL10402 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL10402 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

4.9 EL22240 MORGAN

Exploration Licence 22240 Morgan, was granted to Normandy Tennant Creek Pty Ltd (NTC) on the 24th July 2001 for a period of six years. The Licence covers an area of 1 part graticular block (3.22km²).

In June 2001, Giants Reef Mining Limited purchased NTC and all its assets, including EL 22240. After the purchase, NTC was re-named Santexco Pty Ltd (Santexco), and is now a wholly-owned subsidiary of Emmerson Resources Pty Ltd.

Until January 2003, EL 22240 formed part of the Central Joint Venture 2 (CJV2), which covered the Chariot gold deposit and a number of other tenements in the Tennant Creek goldfield. The Joint Venture was between Giants Reef, (managers, holding 57% equity), Sons of Gwalia (replacing PacMin; 33%) and Newmont NFM (formerly Normandy NFM; 10%). Giants Reef purchased Sons of Gwalia's Joint Venture assets (43%) and became the sole owner of the CJV2 project, including EL 22240. On the eastern margin on the EL lies part of the Chariot Mine Lease ML C176, which also came under the CJV2.

EL22240 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL22240 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef.

4.10 A23236 UDALL ROAD

Authorisation 23236 Udall Road, was granted to Giants Reef Exploration Pty Ltd on the 1 December 2004 for a period of six years. The Authorisation covers an area of 4 graticular blocks.

A23236 lies within NT Portion 02079, Crown Land, Location 730, Tennant Creek Township.

4.11 EL23284 CORRIDOR 1

Exploration Licence 23284 Corridor 1, was granted to Giants Reef Exploration Pty Ltd on the 16 July 2003 for a period of six years. The EL covers an area of 6 graticular blocks (6.51 km²).

EL23284 lies within NT Portion 494, Perpetual Pastoral Lease 1142, Tennant Creek station.

EL23284 is subject to an Indigenous Land Use Agreement (ILUA) signed in September 2000 between the Native Title holders of the Tennant Creek region, represented by the Central Land Council (CLC), and Giants Reef. Article 3.1c of the ILUA provides that the ILUA covers the application for any future exploration tenure within the above mentioned Perpetual Pastoral Lease.

4.12 EL23286 CORRIDOR 3

Exploration Licence 23286 Corridor 3, was granted to Giants Reef Exploration Pty Ltd on the 29th October 2002 for a period of six years. The EL covers an area of 2 graticular blocks (2.4 km²).

A waiver of reduction was granted at the end of the second and third years of tenure, enabling the retention of 2 blocks.

The Licence is within NT Portions 2079 and 4436, being vacant Crown Land.

5. GEOLOGY

5.1 Regional Geology

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.

In 1995 the Northern Territory Geological Survey released a geological map and explanatory notes for the Kelly (5658) and Tennant Creek (5758) 1:100,000 sheets, which covers the area of the Licences.

The rocks of the Warramunga Formation host most of the orebodies in the region and underlie most of the Exploration Licences.

5.2 Geology of the Southern Project Area

The SPA covers a region of the Tennant Creek Province and includes deformed lower-greenschist facies flysch sequence (Warramunga Formation) intruded by syn-orogenic granite and granodiorite as well as stratabound felsic porphyry. This sequence is overlain by silicic volcanics and volcanoclastics (Flynn Subgroup) and intruded by late orogenic granite, porphyry and lamprophyre. The Warramunga Formation comprises greywacke, siltstone, shale with interbedded felsic volcanics. Crustal melting resulted in the formation of dry, I-type granodiorite melts and granitic differentiates (Tennant Creek Supersuite), which intruded the Warramunga Formation and lower parts of the Flynn Subgroup during and subsequent to the Barramundi Orogeny. Deformation of the Warramunga Formation produced tight upright folds with a pervasive sub-vertical east west slaty cleavage accompanied by lower greenschist facies metamorphism. Deposition of the volcanosedimentary Flynn Subgroup more or less coincided with the plutonic events.

Progressive dextral shearing resulted in large-scale east trending open folds, as defined by the stratabound porphyries. Disharmonic folds, angular folds and plunging doubly peaking anticlines with a weak sub-vertical crenulation cleavage developed within the Warramunga Formation. North west trending open folds of disharmonic style were generated within the Flynn Subgroup.

The youngest igneous events in the Tennant Creek Province were intrusion of the Warrego and Gosse River East granites, as well as lamprophyre dykes and sills.

The SPA is largely covered by Quaternary sands and gravels in relict fluvial systems, active channels, floodplains and quartz-rich dissected colluvial fan deposits.

Outcrop within the SPA is limited to ridges and these comprise scattered outcrops of Palaeoproterozoic Warramunga Formation and Flynn Sub-group/ Tomkinson Creek Sub-group (Ooradidgee Group).

The SPA includes a number of significant gold-copper-bismuth deposits, including Chariot, TC8 and Malbec.

5.3 EL8882 GREENBUSH

The Licence is located in the south western region of the Tennant Creek Province. The Licence is dominated by Quaternary sediments which includes sheet and dune sands, alluvial deposits in active and relict fluvial systems and floodplains, colluvium and scree, red soil plains and minor calcrete. Minor isolated basement exposures have been reported. In the central and southern areas of the Licence, Cambrian and later sediments of the western fringe of the Wiso Basin form a concealed layer up to several tens of metres thick, lying on the older basement. Aquifers in this sequence are the source of the Tennant Creek town water supply.

Geological interpretation and mapping indicates that there are no Warramunga Formation units in EL 8882. There are however a number of lower Palaeoproterozoic inliers, which include volcano-sedimentary units of the Ooradidge Group. The remaining 80% of the EL includes granitic rocks of the Tennant Creek Granite, Cabbage Gum Granite or the Devil Suite granites. A number of prominent NW trending lineaments transgress all of these units. The basement geology for most of the area is poorly understood. The drilling to date, including numerous Government test water bores and previous company exploration holes, revealed a variety of amphibolite-grade metamorphics, granites, intermediate, mafic intrusions and volcanics, throughout the area. In the northern part of neighbouring EL 8883, dating of igneous and metamorphic drill cores has given early or lower Proterozoic ages. Many linear magnetic structures, which in some cases appear to be fault boundaries of identifiable lithological blocks, can be seen in the 1999 AGSO 200m line-spaced aeromagnetics over the region.

The eastern area of EL 8882 lies over a prominent and extensive regional gravity anomaly, which rises to a 19-milligal peak in this area. This is referred to as the "Bluebush gravity anomaly" and has been the key focus of Giants Reef's exploration in the Bluebush Project Area. The Quaternary deposits are dominated by alluvial red soil plains, sand covered relict fluvial systems, colluvium scree and less extensive sheet and dune sandy soils, dissected colluvial fan deposits and red soil plains. The Quaternary deposits are assumed to cover Warramunga Formation, including the low magnetic sandstone units in the northern and high magnetic siltstone dominant units in the southern half of the Licence.

5.4 EL8883 BLUEBUSH

EL 8883 includes a number of lower Palaeoproterozoic inliers, which include both the Warramunga Formation (<2%) and the Junalki Formation (<5%), however these comprise less than 7% of the total geology of the EL. There are also a number of younger Palaeoproterozoic inliers and these include volcano-sedimentary units of the Ooradidge Group. More than 70% of the EL includes granitic rocks of the Tennant Creek Granite, Cabbage Gum Granite or the Devil Suite granites. A number of prominent NW trending lineaments transgress all of these units.

Virtually all of the Exploration Licence is colluvium-covered, with a few minor areas of calcrete and some very isolated basement exposures. Using the regional magnetics it can

be interpreted that rocks of the Palaeoproterozoic Warramunga Formation may underlie some of the northern portion of the EL.

In the central and southern areas, Cambrian and later sediments of the western fringe of the Wiso Basin form a concealed layer up to several tens of metres thick, lying on the older basement. Aquifers in this sequence are the source of the Tennant Creek town water supply.

The basement geology of the bulk of the area is barely known although the sparse drilling to date, including many Government test water bores and a number of previous company exploration holes, have revealed a variety of amphibolite-grade metamorphics, plus granites, intermediate and mafic intrusions and volcanics, throughout the area. In the northern part of EL 8883, dating of igneous and metamorphic drill cores has given early or lower Proterozoic ages. Many linear magnetic structures, which in some cases appear to be fault boundaries of identifiable lithological blocks, can be seen in the 1999 AGSO 200m line-spaced aeromagnetics over the region.

The west-central area of EL 8883 lies over a prominent and extensive regional gravity anomaly, which rises to a 19 milligal peak in this area. This is referred to as the “Bluebush gravity anomaly” and is the focus of exploration in the area.

5.5 EL9309 SKIPPER HILL WEST

Most of Exploration Licence 9309 is colluvium-covered and interspersed with areas of calcrete. The geology of north eastern region of the EL is interpreted as the Palaeoproterozoic Warramunga Formation, which hosts most orebodies in the Tennant Creek region, whilst the south west region includes volcanics and sediments of the Ooradidge Group. The southern block of the Licence (Area 2) has little outcrop, however is situated on a steep regional gravity gradient which rises to a 19 milligal peak centred approximately 10km to the southwest of Area 2. The geological source for this gravity feature remains unknown.

5.6 EL9915 CHINCHILLA

Exploration Licence 9915 is underlain by a thick sedimentary sequence of silt and sandstones of the Proterozoic Warramunga Formation. The Warramunga Formation is host to all the magnetite-haematite (ironstone-hosted) gold-copper-bismuth ore bodies in the Tennant Creek goldfield. The area is blanketed by a layer of colluvium and aeolian sand up to seven metres thick.

A well defined structural corridor transects the Licence area. This structural corridor is best defined as an east-west trending shear zone, and will be the focus for exploration in the future years. Historical surface gold and copper anomalism has been recorded within this shear zone.

The Chariot gold deposit which is located approximately 5km east from the centre of the Licence is hosted by a buried haematite > magnetite dominated ironstone. Limited outcrop and subcrop in the Licence suggests the presence of haematitic shale, siltstone, sandstone, ironstone and porphyry bodies.

The Malbec gold deposit (20.,585 oz Au) which is located 4km east from the centre of the Licence is hosted by a buried haematite-quartz-magnetite ironstone. Mineralisation is confined to the sheared footwall contact of a larger competent ironstone. Mineralisation is contained both within sheared chloritic footwall sediments and ironstone. Mining of the Malbec West mineralisation was completed in December 2004.

5.7 EL9935 MANX

Exploration Licence 9935 is underlain by a thick sedimentary sequence of siltstones and sandstones of the Proterozoic Warramunga Formation. The area is blanketed by a layer of colluvium and aeolian sand up to seven metres thick. The Warramunga Formation is host to all the magnetite-haematite (ironstone-hosted) gold-copper-bismuth ore bodies in the Tennant Creek goldfield.

A well defined structural corridor transects the Licence area. This east-west shear zone will be the focus for exploration in the future years. Historical surface gold and copper anomalism has been recorded within this shear zone.

The Chariot gold deposit which is located approximately 1km south west from the centre of the Licence is hosted by a buried haematite dominated ironstone. Limited outcrop and subcrop in the Licence suggests the presence of haematitic shale, siltstone, sandstone, ironstone and porphyry bodies.

The Malbec gold deposit (20.,585 oz Au) which is located 1.5 km south west from the centre of the Licence is hosted by a buried haematite-quartz-magnetite ironstone. Mineralisation is confined to the sheared footwall contact of a larger competent ironstone. Mineralisation is contained both within sheared chloritic footwall sediments and ironstone. Mining of the Malbec West mineralisation completed in December 2004.

5.8 EL9988 NO.1 BORE

The licence area is located in the south western region of the Tennant Creek Province.

Outcrop only occurs in a small area in the central region of the lease and this includes Palaeoproterozoic units of what has been interpreted as the Flynn Group (Churchills Head Group). These units comprise undivided, felsic ignimbrite, tuff, lapilli tuff, and lava; chert (silicified tuff?); lithic and sub-lithic arenite, lithic wacke, shale and mudstone; minor pebble beds, conglomerate and breccia. The remaining 99% of the licence is covered by Cainozoic sediments, which include alluvial/red soil plains, sheet and dune sand, sandy soil and minor calcrete.

The basement geology of the area is poorly known, although available drilling data, including previous company exploration holes (vacuum, RAB and DDH), have provided some insight in this respect. The N.T. Geological Survey's interpretation of regional magnetic and gravity data suggests that the Licence is underlain by Palaeoproterozoic Ooradidgee Group (Po) (Flynn Group) sediments, which include undifferentiated felsic tuff, tuff, lapilli tuff, lava, chert; lithic and sublithic arenite and wacke; shale and mudstone; minor pebble beds; conglomerate and breccia. Subgroup Yungkulungu Formation also is interpreted within the Licence and includes quartz-magnetite-bearing lithic to sub-lithic arenite; siltstone and shale; medium to coarse sandstone; coarse pebble beds; conglomerate and felsic tuff (Po-s). A number of major north west trending structures occur within the Licence. Areas of low magnetic and gravity responses have been interpreted as Tennant Creek Supergroup undifferentiated Granite (Pg). Prominent magnetic linear highs are interpreted as intrusive dolerite dykes and sills(PdI).

Reconnaissance mapping by ADL (1993) showed the Nail 33 anomaly to be associated with narrow west northwest trending banded iron formation and pods of quartz feldspar porphyry parallel to the BIF-metasediment contact. Prospect mapping and drill hole logging by PosGold (Normandy Tennant Creek Pty Ltd) suggests that the sediments could in fact represent Palaeoproterozoic units of the prospective Warramunga Formation as opposed to younger and less prospective Flynn Group units.

Although the Licence does not include any known deposits, several magnetic targets including Nail 19, Nail 20 and Nail 33 have received only preliminary testing by previous explorers.

5.9 EL10199 LYNX

There are no outcrops of Proterozoic basement rocks in EL 10199, which is blanketed by a layer of colluvium and aeolian sand up to seven metres thick.

The Palaeoproterozoic Warramunga Formation is assumed to underlie all of the Licence area. This formation is key host to all the magnetite-haematite (ironstone-hosted) gold-copper-bismuth mineralisation and ore bodies in the Tennant Creek goldfield. The Chariot gold deposit is hosted by haematite > magnetite dominated ironstone and differ somewhat to the more magnetite dominated ironstones in the Tennant Creek goldfield.

5.10 EL10402 AMADEUS

Virtually all of the Exploration Licence is sand-covered, with a few minor areas of calcrete and some very isolated basement exposures. Using the regional magnetics it can be interpreted that rocks of the Palaeoproterozoic Warramunga Formation may underlie some of the northern portion of EL 10402.

In the central and southern areas, Cambrian and later sediments of the western fringe of the Wiso Basin form a concealed layer up to several tens of metres thick, lying on the

older basement. Aquifers in this sequence are the source of the Tennant Creek town water supply.

The basement geology of the bulk of the area is barely known although the sparse drilling to date, including many Government test water bores and a number of previous company exploration holes, have revealed a variety of amphibolite-grade metamorphics, plus granites, intermediate and mafic intrusions and volcanics, throughout the area. Many linear magnetic structures, which in some cases appear to be fault boundaries of identifiable lithological blocks, can be seen in the 1999 AGSO 200m line-spaced aeromagnetics over the region.

5.11 EL22240 MORGAN

There are no outcrops of Proterozoic basement rocks in EL 22240, which is blanketed by a layer of colluvium, outwash and aeolian sand up to seven metres thick.

The Palaeoproterozoic Warramunga Formation is assumed to underlie all of the Licence area. This formation is host to virtually all the magnetite-haematite (ironstone-hosted) gold-copper-bismuth mineralisation and ore bodies in the Tennant Creek goldfield. The Chariot and TC8 deposits are typical occurrences of this type in the area. The Chariot gold deposit is hosted by haematite > magnetite dominated ironstone and differ somewhat to the more magnetite dominated ironstones in the Tennant Creek goldfield.

In January 2004 Giants Reef announced the discovery of economic gold mineralisation within Malbec Mineral Claims C527-C528. Subsequent exploration and definition drilling delineated a shallow oxide gold resource containing 15-20,000 oz Au. Gold mineralisation occurs within a haematite dominant ironstone and proximal altered Warramunga Formation sediments, not dissimilar to the Chariot style of mineralisation. This orebody is referred to as the Malbec West deposit. Giants Reef commenced mining of the Malbec West gold mineralisation in September 2004 with completion in late December 2004. The deposit produced 38,890 tonnes at 18.1 g/t Au for 20,584 oz Au.

5.12 A23236 UDALL ROAD

The licence area is located in the central region of the Tennant Creek Province. Outcrop within the tenements is limited to ridges comprising scattered outcrops in the southern region of the lease. Outcrop includes weathered siltstone and greywacke of the Palaeoproterozoic Warramunga Formation.

More than 80% of the region is covered by Quaternary sands and gravels in relict fluvial systems, active channels, floodplains and quartz-rich dissected colluvial fan deposits.

The licence covers part of the east end of the Chariot mineralised corridor.

5.13 EL23284 CORRIDOR 1

There are no outcrops of Proterozoic basement rocks in EL 23284, which is blanketed by a layer of colluvium, outwash and aeolian sand up to seven metres thick. In the north of the Licence area, numerous coarse grained quartz-feldspar porphyry outcrops are present.

The Palaeoproterozoic Warramunga Formation is assumed to underlie the southern portion of the Licence area. This formation is host to virtually all the magnetite-haematite (ironstone-hosted) gold-copper-bismuth mineralisation and ore bodies in the Tennant Creek goldfield. The Chariot and TC8 deposits are typical occurrences of this type in the area. The Chariot gold deposit is hosted by haematite dominated ironstone which is quite unique to the Tennant Creek goldfield.

In January 2004 Giants Reef announced the discovery of economic gold mineralisation within Malbec Mineral Claims C527-C528. Subsequent exploration and definition drilling delineated a shallow oxide gold resource containing 15-20,000 oz Au. Gold mineralisation occurs within a haematite dominant ironstone and proximal altered Warramunga Formation sediments, not dissimilar to the Chariot style of mineralisation. This orebody is referred to as the Malbec West deposit. Giants Reef commenced mining of the Malbec West gold mineralisation in September 2004 with completion in late December 2004. The deposit produced 38,890 tonnes at 18.1 g/t Au for 20,584 oz Au.

5.14 EL23286 CORRIDOR 3

The licence area is located in the central region of the Tennant Creek Province. Outcrop within the tenements is limited to ridges comprising scattered outcrops in the northern region of the lease. Outcrop includes weathered siltstone and greywacke of the Palaeoproterozoic Warramunga Formation.

More than 70% of the region is covered by Quaternary sands and gravels in relict fluvial systems, active channels, floodplains and quartz-rich dissected colluvial fan deposits.

Known mineralisation is located within MCC 46, which falls within the lease and includes the Maxwell prospect (no recorded production). The licence covers part of the east end of the Chariot mineralised corridor.

6. PREVIOUS EXPLORATION

6.1 Targets and Concepts

Exploration within the SPA has been aimed at discovering Tennant Creek style iron oxide copper-gold (IOCG) deposits within the Warramunga Formation.

This type of deposit is well documented. Better known examples of the primary copper-gold type in the region include Peko and Argo. These deposits are all hosted in ironstone (magnetite +/- haematite) masses with associated chloritic, dolomitic and silicic alteration. An example of the primary gold type is the Juno deposit. A local example of the oxide gold type is the Chariot deposit.

There are numerous old mines and prospects within the SPA, held under Mineral Leases and Claims by Centralian Minerals Limited, Santexco Pty Ltd and Giants Reef Exploration Pty Ltd. Some of the more significant deposits included in these are Chariot (94,410 oz Au), TC8 (45,679 oz Au), Gibbet (?oz Au) and The Extension (188.1 oz Au). There are numerous mines in areas under application in the SPA, with some of the more significant deposits including Skipper (530.5 oz Au), Skipper Extension (6,472 oz Au), Mt Samuel (4,469 oz Au), Hammerjack (7,086.4 oz Au), Westward Ho (922.7 oz Au), Southern Cross (803.8 oz Au) and Red Ned (557.7 oz Au).

There are numerous ironstone outcrops and magnetic anomalies that represent non-outcropping ironstone masses, scattered throughout most of the SPA.

The discovery of the haematite-magnetite Chariot deposit in 1998 has shown the potential for variations on the classic magnetite ironstone hosted gold +/- copper deposits, where lower order magnetic anomalies, plus gravity methods can define new targets. Discoveries by Giants Reef of mineralisation such as at Malbec West, Marathon and Billy Boy further support this. Giants Reef considers the potential for the discovery of mineralisation in hematite dominant ironstones in this group of tenements is excellent.

Segments of the SPA are explored under a number statutory exploration Mining Management Plans (MMP's).

6.2 EL 8882 GREENBUSH

Peko-Wallsend held the area of this lease between 1984 and 1987 under EL4536 (432 graticular blocks). A number of prospects were discovered in EL 4536 including Metallic Hill.

Metana Minerals explored the area between 1988 and 1990, however no reports are available for any of the work undertaken.

The Exploration Licence was originally applied for in May 1993 by Poseidon Gold Limited to cover a regionally interesting geological and geophysical area. Poseidon's exploration

model was based on locating a non-magnetic gold or gold-copper deposit by geochemistry, rather than by the more established method of drilling magnetic anomalies.

Since the acquisition of the Licence by Giants Reef in 2001, exploration has been aimed at the discovery of IOCG deposits hosted in Warramunga Formation units within the Lonestar trend and re-modelling of magnetic data.

During Giants Reef first year of tenure, Greenbush, was in the Bluebush Project Area, one of a number of areas flanking the Tennant Creek mineral field which was explored under the terms of Giant Reef's Alliance with Billiton Exploration Australia Pty Ltd. During 2001, Billiton's parent company merged with BHP to form BHP Billiton. The exploration work conducted during this first year of tenure included:

- Magnetic Interpretation - Giants Reef's consultant Lindeman Geophysics Pty Ltd, carried out an interpretation of the 1999 AGSO aeromagnetic data covering the regional Bluebush gravity anomaly. He produced magnetic models of numerous magnetic sources in the area and defined many magnetic structures visible in the data. Later, this work contributed to the process of drill site selection after the gravity survey was completed.
- Clearances from Native Title holders - Under the terms of Giants Reef's Deed for Exploration with the Native Titleholders of the region, it was necessary to obtain site clearances from the Native Title holders before the field party for the planned gravity survey could enter the area. Assisted by the CLC, field visits were made to the survey area, and the necessary clearances were given. One proviso was that the survey field party would stay away from salt lakes, clay pans and other natural depressions, which have special significance for the local people. Once the results of the gravity survey had been received and drill targets were chosen, a further site clearance was obtained in the same manner for the construction of tracks and drill pads.
- Gravity Survey - A detailed helicopter-borne gravity survey was carried out in late 2001 over the Bluebush gravity anomaly. The survey collected data over several EL's including EL 8882. The whole survey, on a nominal grid spacing of 1km x 1km, totalled 648 stations. The gravity survey was carried out by Daishsat Pty Ltd of Murray Bridge, South Australia, using a Bell 47 G5 helicopter (VH-TZW) hired from Heli-Muster Pty Ltd at Victoria River Downs, NT. Two Scintrex CG-3 gravity meters were used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station. Four GPS receivers (two Leica GPS's and two Ashtech Z12's) were used for horizontal and vertical GPS control. One point (station 1) was set up on top of one of the Giants Reef transportable office buildings in Tennant Creek, and the other point (station 2) was a short star picket in the paddock between Giants Reef's yard and the Tennant Creek airport. Navigation in the field between stations was done using Garmin GPS II instruments. Generally, the reading points were within 100m of their planned round-number co-ordinates, although inevitably some stations had to be read further away from the intended locations due to ground features such as mulga thickets preventing

helicopter landings at the optimal positions. Within EL 8882, there were 318 helicopter-reading stations, plus approximately 70 ground stations that were read later using a Toyota 4WD truck. The ground stations were read at 200m intervals along three north-south profile traverses over three selected residual anomalies. Giants Reef's geophysical consultant Lindeman Geophysics Pty Ltd was on hand in Tennant Creek to supervise the survey on a day-by-day basis.

The high resolution gravity survey over the Bluebush gravity anomaly re-shaped the anomaly. A decision was made to drill several shallow reverse circulation holes (less than 100m) based largely on residual anomalies derived by Lindeman Geophysics Pty Ltd from the new information. This data used in conjunction with the aeromagnetic data, assisted in fifteen (15) initial sites selected for drill testing. The information gained from the gravity survey over EL 8882 and adjacent EL's has been put into the public domain, as part of the NTGS/AGSO gravity database covering all of the Tennant Creek 1:250,000 sheet and parts of some of the adjoining 1:250,000 sheets that was released in late 2001.

- Drilling - Fifteen (15) sites were selected for shallow vertical drill holes in EL 8882. Six (6) repeat or re-drill holes were necessary due to difficult drilling conditions resulting in 21 holes drilled for the first year. The total amount of reverse circulation drilling, including the repeat drill holes at several sites came to 1,595 metres. Two drilling contractors were used throughout the program. Johannsen Drilling Pty Ltd, Port Lincoln, South Australia drilled holes BBRC004-BBRC009 and BBRC011-BBRC018 for 551 metres. Gomex Drilling, Dry Creek, South Australia completed holes BBRC020-BBRC029 for 1,044 metres and completing the program. Samples collected during the drilling were riffle split in metre intervals. A total of 273 1-metre split and 221 3-metre speared composite samples were collected and sent to AMDEL for analysis. All samples were assayed for Au by AMDEL method FA3, and for Cu, Bi, Fe, Ag, As, Cd, Co, Mn, Mo, Ni, Pb, Zn, Cr, P, Sb, and V, by AMDEL method IC2E. No significant geochemical anomalies were observed in the results however low order base metal anomalism was present in a couple of the holes.

Although most of the drill holes were targeting residual gravity anomalies, several had coincident magnetic anomalies. Consultant Lindeman Geophysics Pty Ltd, recommended measuring the magnetic susceptibility of all drill chips, which subsequently has been carried out and recorded on all drill chip logs using a Kappameter KT-5 Magnetic Susceptibility Meter. Geological logging was completed on site, using a Hewlett Packard 200LX palmtop computer and downloaded in the evenings. Downloaded geology data was then validated and printed out as separate log sheets and then loaded into a Micromine database, along with collar, survey and assay data.

Drilling statistics were as follows:

Hole ID	Drill Date	Easting	Northing	Tenement	Azimuth	Depth	Drill Co
BBRC-004	23/07/02	377501	7820101	EL 8882	Vertical	53	Johannsen
BBRC-005	26/07/02	368002	7820008	EL 8882	Vertical	40	Johannsen

BBRC-006	27/07/02	368001	7819004	EL 8882	Vertical	76	Johannsen
BBRC-007	29/07/02	372198	7824503	EL 8882	Vertical	60	Johannsen
BBRC-008	29/07/02	372197	7825002	EL 8882	Vertical	39	Johannsen
BBRC-009	29/07/02	370896	7824905	EL 8882	Vertical	17	Johannsen
BBRC-011	1/08/02	378505	7812501	EL 8882	Vertical	38	Johannsen
BBRC-012	2/08/02	377000	7805500	EL 8882	Vertical	66	Johannsen
BBRC-013	3/08/02	378150	7805506	EL 8882	Vertical	67	Johannsen
BBRC-014	4/08/02	378995	7805159	EL 8882	Vertical	60	Johannsen
BBRC-018	7/08/02	379821	7805107	EL 8882	Vertical	35	Johannsen
BBRC-020	7/09/02	367996	7819001	EL 8882	Vertical	160	GOMEX
BBRC-021	8/09/02	367987	7820018	EL 8882	Vertical	112	GOMEX
BBRC-022	9/09/02	372190	7825012	EL 8882	Vertical	64	GOMEX
BBRC-023	9/09/02	370899	7824900	EL 8882	Vertical	90	GOMEX
BBRC-024	10/09/02	367000	7825004	EL 8882	Vertical	94	GOMEX
BBRC-025	10/09/02	366579	7825203	EL 8882	Vertical	112	GOMEX
BBRC-026	11/09/02	378521	7812495	EL 8882	Vertical	88	GOMEX
BBRC-027	11/09/02	378510	7811850	EL 8882	Vertical	94	GOMEX
BBRC-028	12/09/02	378511	7810402	EL 8882	Vertical	82	GOMEX
BBRC-029	13/09/02	379832	7805096	EL 8882	Vertical	148	GOMEX

Copper - BBRC006

Two 3-metre speared composite samples from the bottom six metres of BBRC006 (Figure 1) from 70-76m showed anomalous copper (800 and 410 ppm Cu respectively) and phosphorus (1.54% and 0.805%). A second set of 1-metre assay samples were collected from the bags in the field, and this time the bottom seven metres (69m to 76m EOH) averaged 923 ppm Cu with a maximum of 2000 ppm Cu in the last metre. A second RC hole was drilled on the same pad as BBRC006 (BBRC020), however this hole showed only two metres from 67m @ 1025 ppm Cu. Again this was accompanied by anomalous phosphorus (64-68m averaging 3% P) in pale brown fine grained limonitic and dolomitic sediments. No elevated copper assays were returned from below this zone.

- Petrography - During and after the drilling described above, several RC chip basement samples were sent for petrographic study to Ian Pontifex and Associates Pty Ltd, Adelaide, for rock identification and description. Lithologies identified by Pontifex and Associates are typical of intraplate, extensional environments consisting of felsic volcanic and mafic lava flows with interbedded sediments and numerous coarse heterogeneous granodiorite-monzogranite.
- Groundwater Geochemistry - Groundwater samples were collected from eleven (11) exploration RC drill holes that were drilled during the reporting period within EL 8882. Other samples were collected at the same time (August 2002) from adjoining Exploration Licence 8883. The sampling was aimed at finding indications of mineralisation in and around the regional Bluebush gravity anomaly as well as the two discrete magnetic features in the north of the EL known as Explorer's 15 and 81. The sampling and analytical techniques used have been developed over many years by CSIRO, in particular by Senior Principal Research Scientist Angela Giblin, who visited Giants Reef's Tennant Creek offices to discuss the project in 2000. Giants Reef's fieldwork was conducted under her guidance. Sampling involved collection of readings at each sample site for ambient and sample temperature, acidity, conductivity, water depth, sample depth, GPS location and remarks on water quality. Cyanide and activated carbon satchels were added to each sample bottle and the bottles were sent to the CSIRO's laboratory at North Ryde, NSW for sensitive analytical work.

In the second and third tenure years groundwater geochemistry and analysis was conducted on the RC drill holes, a CLC liaison committee meeting, a tenement review and assessment of target concepts was conducted on the EL. This led to the relinquishment of 50% of the less prospective area of EL 8882. No significant results were obtained from this work.

Exploration work conducted during the fourth year of tenure included:

- Retrieval and inspection of diamond drill core from holes ADL405 and BBRD002 and reconnaissance field trips to inspect each of the drill sites. This work was undertaken to ascertain the extent of alteration and to determine whether additional sampling is warranted. Field trips were also undertaken to investigate the Explorer 81 and 15 targets which correspond to prominent magnetic anomalies.

Work on EL 8882 was limited during the year due to the Company's commitments on higher priority exploration and drilling programs in the Eldorado-Comstock, Chariot, Peko and Northern Star mineralised corridors. Extensive development drilling was also carried out at the Malbec, Chariot and Cat's Whiskers mines.

- Geological re-assessment - During the year a geological re-assessment was conducted and resulted in a 50% reduction of the tenement. The assessment demonstrated the area proposed for reduction contained no Warramunga Formation units and less than 30% contained Proterozoic units of the Ooradidgee Group and volcanic-sedimentary sequences of the Junalki Formation, which have

not been found to host significant mineralisation in the region. The remaining 70% of the area proposed for reduction includes granites of the Tennant Creek Supersuite. The area proposed for reduction was further down-graded by the fact that drill testing of the Bluebush gravity anomalies in the first two tenure years of the Licence (BHP Billiton Alliance) failed to produce encouraging results and geophysical modelling suggests that the source to the gravity anomalies are either intrusive complexes, considerably higher in density than the surrounding host rocks or that the deeper source has not been intersected by drilling to date, but is likely to be at depths between 1000 to > 2000m. The area proposed for relinquishment does include a sizable block of the Junalki Formation and whilst this is considered to be a time equivalent of the Warramunga Formation it differs from the latter in that it comprises rhyodacite rhyolite crystal-lithic tuff and minor andesite-dacite flows and changes upward from interbedded tuffaceous volcanic and volcanoclastic rocks at the base to predominantly volcanolithic sandstone and siltstone. No significant mineralisation has been found to occur within this unit and whilst there exists some potential for mineralisation to occur in this Formation, it is considered to be a high risk target host.

During the fifth year of tenure Centralian Minerals Limited continued their detailed geological review of all the data generated over the Licence area. This review required completion of the collation of historical geochemical and drilling data which was then added to the company's GIS and Micromine databases.

The detailed review conducted by Centralian minerals defined a significant geophysical anomaly which coincides with the Explorer 15 prospect. Further refinement of previous geophysical assessments of the defined magnetic anomaly was conducted and continues, with the view to generating shallow RAB targets within the prospect area.

6.3 EL 8883 BLUEBUSH

Exploration work completed during Giants Reef's first tenure year was composed of:

- Reconnaissance rock sampling – this included a number of rock chip samples which were collected from the few basement outcrops in EL 8883 during reconnaissance trips at various times prior to the grant of the Licence. The rock chip samples were mostly from along an east-west ridge of silicified quartz-veined sediments centred at approximately 387000E 7807800N, but include some samples found around the collars of old drillholes, and two from an old bulldozer costean dug into a low banded iron formation outcrop in the northern (BMR3 Area) part of EL 8883. Sample numbers 450001 to 450007, 422190 to 422198, and 450057 to 450066 (total 26) were assigned to the rock chips collected. The samples were analysed for Au, Ag, As, Bi, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Pb, P, Sb, Zn, Ca and Mg. No outstanding anomalous results were noted in these batches, apart from some low ppb-level gold readings.
- Sampling of BMR3 Area old drill cores. In the 1960's and 1970's, a number of diamond holes were drilled in what was referred to as the "BMR3 Area", in the

northern part of what is now EL 8883. This drilling is recorded in Northern Territory Geological Survey report GS79/32 "Results of diamond drilling in the vicinity of BMR 3 Area, southwest of Tennant Creek, NT" by J P Howard, 1979. The cores sampled were from the following holes:

Hole No.	Drilling information	Approximate AGD84 co-ordinates		Angle, azimuth and depth
DDH 158	Drilled by Australian Development NL, 1961. Core size AX.	385090E	7817260N	-65° to south, 1305.5 feet (397.92m)
DDH 169	Drilled by Northern Territory Mines Branch, probably in 1962.	381163E	7822300N.	-50° to south, 780.0 feet (237.75m)

DDH 158 intersected various metamorphic rocks, including biotite-feldspar-garnet gneisses, feldspar-chlorite porphyry, quartz-actinolite-magnetite-(garnet-chlorite) gneiss, biotite schist and amphibolite schist, and dolerite in the last 24m of the hole. The core from DDH 158 was located at Normandy's Warrego yard, and is now stored at Giants Reef's TC8 mine. The upper and lower sections are missing. The section recovered consisted of 34 trays, from 315 feet to 1137 feet (the hole ended at 1305.5 feet). Minor disseminated sulphides, mostly pyrite, were visible in places, and very little sampling had been done. Twenty-four samples (422646-422669) were cut for gold assays and for Fe, Mn, Cr, Ca, K, Mg, Na, Ag, As, Bi, Cd, Ce, Co, Cs, Cu, Ga, In, La, Mo, Nb, Ni, Pb, Rb, Se, Sr, Te, Th, Ti, V, and P, by ALS method MS587. Zinc was accidentally omitted from the list and not assayed.

The highest assay results included 237 ppm Cu, 841 ppm Pb, and 0.17 g/t Au. The second highest Au result was 6.1 ppb. This low order anomalism may just possibly suggest other, perhaps more intense, mineralisation somewhere in the general vicinity.

DDH 169 had been stored by the Government, and Giants Reef was able to inspect and sample it at the DBIRD core library in Alice Springs. This hole had also drilled through a range of predominantly metamorphic rocks, including mafic biotite gneiss, hornblende feldspar gneiss, leucocratic biotite gneiss, chlorite schist, quartz-feldspar-hornblende-biotite schist, hornblende amphibolite, and muscovite-biotite-quartz-feldspar gneiss, and a 4m-interval of hornblende diorite. Giants Reef photographed the core trays and cut 20 core samples (74563 to 74382) from DDH 169. The sampling was biased towards intervals carrying minor sulphides. None of the core had been cut and sampled before, apart for some short lengths for age-

dating. The hole is marked out in feet and inches, and all the assay samples were three feet long half-core. They were analysed for gold and the same elements as for DDH 158, with the addition of zinc and uranium. The first sample in the batch assayed 5.5 ppm silver, but this may have been contamination. There were no other obvious anomalous values in the rest of the results.

- Groundwater geochemistry - Groundwater samples were taken from fourteen old exploration drillholes and Government test water bores in EL 8883, other samples were taken at the same time (mid-2000) from adjoining EL's 8882 and 9309. This work was carried out prior to the granting of the two Licences, but is included in this report to complete the record of the exploration work done. The sampling was aimed at finding indications of mineralisation in the and around the regional Bluebush gravity anomaly. The sampling and analytical techniques used have been developed over many years by the CSIRO, in particular by Senior Principal Research Scientist Angela Giblin, who visited Giants Reef's Tennant Creek offices to discuss the project. Giants Reef's field work was conducted under her guidance.

An initial step was to find out the locations of all old bores and drillholes in the Bluebush area. This was done by visits to the Water Resources Section of the NT Government Department of Lands, Planning and Environment in Alice Springs, where a database on disk was obtained, and photocopies made of a large number of geological logs of all the relevant drillholes and bores. Locating the old bores and drillholes in the field proved difficult, as many were overgrown and virtually invisible, while others were dry or had caved in and could not be sampled. However, in the end a reasonably even distribution of sample points over the Bluebush gravity anomaly was achieved.

Sampling involved making readings at each site for ambient and sample temperature, acidity, conductivity, water depth, sample depth, GPS location and remarks on the water quality. The sample bottles were sent to the CSIRO's laboratory at North Ryde, NSW for the sensitive analysis work. Results indicated that several of the sample sites, in the central part of the Bluebush gravity anomaly, were anomalous for one or other of the base metals or for gold, and the chemistry for some of them suggested the presence of magnetite-chlorite in the sources of their waters.

The fact that the ground waters of the gravity anomaly area carried anomalous metals contents gave (as hoped) added encouragement for the drilling in EL 8883 (Section 5.7), although geophysics and geological considerations were the prime factors in deciding where the drilling would be done.

- Magnetism interpretation - Giants Reef's consultant geophysicist Frank Lindeman, of Lindeman Geophysics Pty Ltd, Melbourne, carried out an interpretation of the 1999 AGSO aeromagnetic data covering the regional Bluebush gravity anomaly. He produced models of a large number of magnetic sources in the area and defined many magnetic structures visible in the data. Later, this work contributed to the process of drill site selection after the gravity survey (Section 5.5) was completed.

- Clearances from Native Title holders - Under the terms of Giants Reef's Indigenous Land Use Agreement with the Native Titleholders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned gravity survey could enter the area. Assisted by the CLC, field visits were made to the survey area, and the necessary clearances were given. One proviso was that the survey field party would stay away from salt lakes, clay pans and other natural depressions, which have special significance for the local people. In the event, this condition did not present any real difficulties for the field operations. A later clearance was obtained in the same manner for the construction of tracks and drill sites, once the results of the gravity survey had been received and target spots chosen.

At the end of the year a work program had been submitted to the CLC for clearances to permit the drilling of 7 drillholes within EL 8883.

- Gravity survey - A detailed helicopter-borne gravity survey was carried out in June 2001 over the Bluebush gravity anomaly. The whole survey, on a nominal grid spacing of 1km x 1km, totalled 648 stations. The survey commenced on 2nd June and finished on 6th June, 2001.

The gravity survey was carried out by Daishsat Pty Ltd of Murray Bridge, South Australia, using a Bell 47 G5 helicopter (VH-TZW) hired from Heli-Muster Pty Ltd at Victoria River Downs, NT. Two Scintrex CG-3 gravity meters were used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station. For horizontal and vertical GPS control, four GPS receivers (two Leica GPS and two Ashtech Z12's) were used. One point (station 1) was set up on top of one of the Giants Reef transportable office buildings in Tennant Creek, and the other (station 2) was a short star picket in the paddock between Giants Reef's yard and the Tennant Creek airport.

Navigation in the field between stations was done using Garmin GPS II+ instruments. Generally, the reading points were within 100m of their planned round-number co-ordinates, although inevitably some stations had to be read further away from the intended locations because of ground features such as mulga thickets preventing helicopter landings at the optimal positions. Within EL 8883, there were 243 helicopter reading points, plus approximately 80 ground stations that were read later using a Toyota 4WD truck. The ground stations were read at 200m intervals along two 8km-long north-south profile traverses over two selected residual anomalies.

Giants Reef's consultant geophysicist Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.

The detailed survey over the Bluebush gravity anomaly re-shaped the anomaly, and decisions on where to conduct the deep drilling were largely based on residual anomalies derived by Lindeman Geophysics Pty Ltd from the new information.

Used in conjunction with the aeromagnetic data, an initial five sites were selected for drillholes in EL 8883.

All the information gained from the gravity survey over EL 8883 and adjacent EL's has been put into the public domain, as part of the NTGS/AGSO gravity database covering all of the Tennant Creek 1:250,000 sheet and parts of some the adjoining 1:250,000 sheets that was released in late 2001.

- Drilling - Five sites were selected for deep vertical drillholes in EL 8883. Only three of the five were completed in the first year of EL 8883. Drilling statistics are as follows:

Hole	Easting (AGD84)	Northing (AGD84)	Azimuth	RC Pre-collar	NQ2 core to end of hole	Notes
BBRD-001	382000E	7810500 N	vertical	0-233m	233m-606m	Also a water bore (RC) to 29m. Adequate water supply.
BBRD-002	380025E	7805105 N	vertical	0-300m	300m-564.4m	Also a water bore (RC) to 24m, and a false start (abandoned) RC pre-collar to 42m. Adequate water supply.
BBRD-003	382000E	7822000 N	vertical	0-370m	370m-561.7m	Also an attempted water bore (RC) to 29m. No water flow.

Total NQ2 core drilling was 1,732.1 metres. The total amount of reverse circulation drilling, including the water bores at each site and the failed first attempt at the RC pre-collar of BBRD-002, came to 1,027 metres. The drilling contractor was Stanley Drilling Co, of Wanneroo, WA, using a newly-built convertible reverse circulation and diamond Hydco 1500 rig mounted on a ten-wheel drive Oshkosh (ex-US military rocket launcher) truck. The two support trucks (booster compressor truck and rod truck/water tanker) were eight-wheel drive Oshkosh platforms. The rig was equipped with hydraulic rod handling operated by a manual remote control.

During the drilling of BBRD-001 and BBRD-002, there were problems with water flows from the overburden, leading to the RC pre-collars being stopped at depths well before the hoped-for 400 metres. In-flow of overburden sands into the holes from under the HW casing also caused problems. The high water table at these sites, at around 12m to 15m, contributed to the troubles, despite the powerful air supply on the rig. The drilling program turned out to be greatly more expensive than anticipated. Core recovery was very good throughout. All three holes were vertical, and down-hole camera surveys indicated that there was very little deviation.

Hole BBRD-001 was sited on a residual gravity anomaly. Apart from the top 46m, which may have been Cambrian Wiso Basin sediments but possibly much younger, the hole drilled a long sequence of non-foliated of diorite-gabbro-norite intrusives.

Summary Log of BBRD-001		
From (m)	To (m)	Lithology
0	46	Sand, silcrete, sandstone, gravel, clays (overburden)
46	51	(top of basement): Very weathered. Igneous? and/or metamorphic?
51	233.00	(RC pre-collar) All microgabbro, gabbro, norite or and/or diorite
233.00	241.27	(start of coring) Norite
241.27	245.90	Microgabbro
245.90	280.05	Mafic quartz diorite
280.05	280.40	Microgabbro
280.40	283.18	Diorite
283.18	331.50	Mafic quartz diorite with short intervals of microdiorite and microgabbro
331.50	341.20	Norite, minor diorite
341.20	375.90	Mafic quartz diorite
375.90	384.22	Quartz gabbro
384.22	416.60	Mafic quartz diorite
416.60	460.30	Microgabbro
460.30	472.97	Mafic quartz diorite
472.97	484.50	Microgabbro
484.50	606.00	Mafic quartz diorite. (End of hole)

The core showed very variable orange to red haematite alteration as haloes to quartz-carbonate veins. The quartz-carbonate veining usually included epidote, minor chlorite and occasional pyrite. Thin section descriptions were made of a number of core samples, as recorded in Petrology section. The RC pre-collar was sampled for geochemical analysis in 6-metre 'speared' composite samples. Half-metre samples were cut at regular 5-metre intervals for the cored section of the hole. The samples were assayed for Au by AMDEL method FA3, and for Cu, Bi, Fe, Ag, As, Cd, Co, Mn, Mo, Ni, Pb, Zn, Cr, P, Sb, and V, by AMDEL method IC2E. No obvious anomalies were observed in the results.

It is not clear if drillhole BBRD-001 explained the target gravity anomaly, as there is no information available on the density of the surrounding rocks to indicate whether there is a sufficient density contrast to provide an explanation.

Hole BBRD-002 was also sited on a residual gravity anomaly, approximately 5.4km SSW of BBRD-001. As with BBRD-001, the material overlying the basement may have been Cambrian, but alternatively could have been much younger sediments. The basement consisted mostly of amphibolitised metabasalts, interspersed with felsic porphyries and sediments.

Summary Log of BBRD-002		
From (m)	To (m)	Lithological Interpretation
0	34	Sands, minor calcrete, gravel, clay (overburden)
34	46	Altered ?rhyolite (top of basement)
46	56	Amphibolitised mafic volcanics
56	58	?Rhyolite
58	88	Amphibolitised mafic to ultramafic volcanics, incl former ankaramite or picrite
88	92	Black fine-grained sediments
92	115	Amphibolitised mafic (basaltic) volcanics
115	120	?Hornfels
120	144	Amphibolitised mafic volcanics
144	178	Amphibolitised mafic tuff
178	208	Amphibolitised mafic (basaltic)volcanics
208	217	?Dacite tuff
217	333.30	Amphibolitised mafic (basaltic) volcanics (coring starts at 300m)
333.30	343.00	Graphite-chlorite matrix fault breccia with dissem pyrite; chert, shale & igneous clasts.
343.00	355.00	Amphibolitised mafic volcanics with quartz-carbonate and haematite veins
355.00	401.40	Altered, fractured, banded, dark fine-gr metapelite. Graphite, chlorite,

		dissem pyrite.
401.40	425.10	Altered porphyritic dacite
425.10	467.50	Amphibolitised mafic vitric tuff
467.50	479.60	Altered porphyritic dacite
479.60	488.20	Altered porphyritic rhyolite or rhyodacite.
488.20	535.20	Altered porphyritic dacite
535.20	564.40	Alternating greywacke and fine to cherty siltstone beds

The former mafic volcanics are generally strongly altered to amphibolitic assemblages including tremolite, clinozoisite, albite, chlorite, epidote and sphene. The graphitic fault zone separates an upper sequence almost entirely consisting of mafic and some ultramafic volcanics from a lower zone containing some of the same rocks but also a variety of porphyritic rhyolite to dacite and sediments. Disseminated pyrite with lesser chalcopyrite and arsenopyrite occurs in the graphitic fault zone and in the rocks below it. The graphite-chlorite fault zone matrix may be of hydrothermal origin. The RC pre-collar was sampled in 6-metre 'speared' composite samples, and almost all of the cored section was cut for assay. Analytical methods and the elements chosen were the same as for BBRD-001. Assay results of BBRD-002 core samples show anomalous gold in two intervals of the hole. The upper interval has relatively high assays of gold and arsenic at the top, with a long interval of weak but anomalous levels of these elements extending below it:

Sample Nos.	From (m)	To (m)	Au	As	Geology
424764	378	380	0.077 g/t	1950 ppm	Brecciated graphitic & chloritic siltstone with quartz & carbonate veins
424765	380	382	0.51 g/t Au	1.22% As	
424766	382	384	0.105 g/t	3600 ppm	
424767 to 424788	384	428	Av 16ppb Au over 42m	Av 96 ppm over 42m	Siltstone, dacite, mafic tuff

The upper gold mineralisation occurs in brecciated and altered sediments between volcanic units. Disseminated arsenopyrite was noted at this location. A second, weaker gold-arsenic anomalous interval occurs from 470m to 488m:

Sample Nos.	From (m)	To (m)	Au	As	Geology
424810 to 424819	470	488	Av 14ppb Au over 18m	Av 84ppm As over 18m	Altered porphyritic dacite and rhyodacite

The anomalism in the above table is confined to gold and arsenic. Other metal levels were not elevated in these zones. Elsewhere in the hole there were a few individual samples or pairs of samples with low-ppb gold levels, e.g., 6m composite samples 80550 and 80551, over the interval 246m to 258m. These assayed 2 and 4 ppb Au, and 76 and 100 ppm As respectively. Using 6m composite samples may have suppressed some of these very low grade anomalies. The intersections in BBRD-002 of visible mineralisation and strong alteration were viewed as very encouraging, and further holes in this locality are planned for the second year of the licence.

BBRD-003 was drilled 11.5km north of BBRD-001, in the northern part of EL referred to as the "BMR3 Area". Like the other two, it was positioned to test a residual gravity anomaly. Basement was reached at 4m depth, after which metamorphics were drilled to the end of the hole.

Summary Log of BBRD-003		
From (m)	To (m)	Lithological Interpretation
0	4	Sand, gravel and silcrete. (overburden)
4	15	Very weathered, probably amphibolite. (basement)
15	94	Amphibolite, green.
94	99	Aplite dyke.
99	155	Amphibolite: dark green-grey, with possible gneissic textures (percussion chips).
155	158	Aplite or granite dyke.
158	295	Amphibolite: dark amphibole-feldspar-quartz-phlogopite rock.
295	378	Amphibolite: dark colours, frequent carbonate alteration. (end of RC pre-collar)
378	474.6	Amphibolite: strong compositional banding, mostly near-vertical. (cored section)
474.6	561.7	Amphibolite: less banding; annealed breccia textures, some mineral alignment.

A 29m water bore (not logged or sampled) was drilled before BBRD-003 was commenced, but was found to be dry. Drilling water was therefore pumped from an old abandoned station bore (Registered No. 10760) near the Kunayungku road, about 4km SE from BBRD-003, using a submersible electric pump with a generator, and a plastic tank. The water was carted to the drill site in the rod and fuel truck, and this arrangement proved satisfactory. The lack of water-bearing overburden, in contrast to the situations at BBRD-001 and BBRD-002, was the main reason that the RC pre-collar of BBRD-003 was able to reach 378m, the deepest of the three pre-collars, before coring began.

There were two main lithological divisions apparent in the cored section, from 378m to 561.7m. The upper section was a banded or streaked amphibolite, with the lineations mostly in steep to vertical orientations. Below 475m, the rock has a less lineated appearance. Mineralogical Report 8158 (refer section 5.8) suggests different origins for the two amphibolites. In brief, the interpretation was that the upper streaky amphibolites are possibly derived from sediments, while the lower samples may be of "mafic igneous origin". The different styles of metamorphism (pro-grade above, retrograde below) suggest that the overall sequence may represent an older igneous basement sitting (unconformably) beneath a younger sedimentary cover sequence. Minor pyrite and chalcopyrite could be seen in places, and the petrological work also identified pyrrhotite, but there was no sulphide mineralisation of any significance. This was confirmed by the geochemical assay samples, which were collected in 6m 'speared' composites for all of the RC pre-collar to 378m, and one-metre split core samples at regular 5m intervals through the cored section. No outstanding results were noted. Sample 424877 (501-502m) assayed 850 ppm Cu, with the next highest result of 230 ppm Cu. Au was mostly between <1 and 2 ppb, with a highest of 7 ppb Au.

The geological logs, density measurements, magnetic susceptibility readings and analytical results are attached in Appendix 2.

- Petrography - During and after the drilling described above, three batches of half-core samples were sent for petrographic study to Ian Pontifex and Associates Pty Ltd, Adelaide, for rock identification and description. Nine specimens were examined from BBRD-001, 15 from BBRD-002 and 6 from BBRD-003.

From the petrography and the overall geochemistry, it was interpreted that the rocks examined in BBRD-001 and BBRD-002 are from an in-plate, extensional environment, with the BBRD-001 samples having a relatively more tholeiitic character, and those from BBRD tending to be more alkaline.

Exploration work completed during the second year of tenure by Giants Reef included the following:

- Assessment of Drilling at Bluebush in 2001 - A great deal of exploration was carried out on EL 8883 leading up to and during the first year. Three deep vertical

RC/diamond holes (total depths 606m, 564.4m and 561.7m) were drilled in EL 8883 (BBRD-001, BBRD-002 and BBRD-003). BBRD-001 intersected diorite-gabbro-norite intrusives, and BBRD-003 intersected amphibolite grade metamorphics. The most interesting findings were from BBRD-002, in the southern part of the Bluebush gravity anomaly, which drilled a sequence of mafic and ultramafic volcanics, interspersed with rhyolitic to dacitic porphyries and sediments, and showing amphibolitic, chloritic and carbonate alteration and disseminated pyrite over considerable intervals. This was accompanied in some sections by low order gold anomalism and arsenopyrite mineralisation. The highest individual gold and arsenic assays were 2m @ 0.51 g/t Au and 1.22% As, from 380m depth in brecciated graphitic and chloritic siltstone with quartz and carbonate veins.

- **Drill Target Selection** - At the end of the first year of tenure a work program had been submitted to the Central Land Council (CLC) for clearances to permit the drilling of 7 Reverse Circulation (RC) drillholes within EL 8883. Due to the great expense of the three diamond drill holes drilled in the first year of tenure Giants Reef decided to drill more, shallower reverse circulation holes in 2002 to identify and geochemically sample the bedrock at the chosen targets. The alteration, mineralisation and lithologies found in BBRD-002 were considered very encouraging. Follow up reverse circulation holes were planned with 4 holes at 200m distance to the north (BB), south (DD), east (CC) and west of BBRD-002. The proposed western most hole targeting BBRD-002 was collared in Giants Reef's EL 8882 that directly adjoins EL8883. Assessment of the AGSO aeromagnetics revealed a sharp-looking anomaly approximately 700m east north-east of BBRD-002. This magnetic anomaly appeared to be of shallow origin and was suspected to relate geologically to the ultramafic rocks in BBRD-002. A reverse circulation drill hole was proposed at this location to test this anomaly (EE), and another drill hole along the gravity/magnetic structure from it (FF). A drill hole close to Lake Surprise (AA) was proposed where there is a cluster of gravity highs. This site was pegged and given CLC clearance in the previous tenure year, however it was not drilled due to early rains. The seventh proposed hole in EL 8883 near the Kunayungku road (D) was proposed in the first tenure year but did not get drilled.
- **Clearances from Native Title holders** - Under the terms of Giants Reef's Indigenous Land Use Agreement (ILUA) with the Native Titleholders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RC drilling could enter the area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 8883 at the end of the first tenure year. The Central Land Council representing the Traditional Aboriginal owners of the land approved the proposed drilling activities in May 2002. One proviso was that access tracks must be constructed so as to avoid exclusion zones. The approvals were given by the CLC on the basis of the results of site clearances carried out last year in response to work programs for EL 8883.
- **NT Geological Survey Visit** - Two geologists from the NT Geological Survey (NTGS), Mr Nigel Donnelland and Mr Mike Green, arrived on the 14th May to take

petrography and possible age-dating samples from the cores of the three Bluebush diamond holes (BBRD-001, 002 & 003) that were drilled in 2001. They collected about 15 core specimens for further work, and were given all relevant data, including drill logs, assays and the petrology reports with the thin sections. It appears that the NTGS regards the intrusives and volcanics in these holes as belonging to the Flynn Sub-group. The NTGS have since indicated that they will not do age-dating on the samples, which is disappointing considering that the samples are from the deepest holes drilled to date in the area. Mr Michael Green from the NTGS informally commented on the rocks intersected in BBRD-002 and recommended further exploration at this target.

- Clearing of Tracks and Drill Pads - The clearing of tracks and 8 drill pads was completed in June 2002. In EL 8883 the existing track running south east from the Kunayungku road was diverted to the east around the 2km x 2km CLC exclusion zone centred around Lake Surprise. Tracks used last year to access BBRD-001 and BBRD-002 were re-cleared and smoothed over.
- Petrography - In order to understand the original constituents and alteration assemblages of the metamorphosed basement rocks in the Bluebush gravity anomaly seven samples were sent to Ian Pontifex and Associates Pty Ltd, Adelaide, for rock identification and description in July 2002. Five of the specimens were from an old BMR or Australian Development Limited diamond drill hole called DDH169, located in the same general area of Proterozoic rocks southwest of Tennant Creek. The other two samples are chips from around the collars of old exploration holes in the same district.

Appendix 3 contains the Mineralogical Report (MR 8246) by Pontifex and Associates containing thin section descriptions and interpretations.

- Reverse Circulation Drilling - The drilling contractor was Johannsen Drilling, of Port Lincoln, South Australia. The total amount of reverse circulation drilling by Johannsen Drilling in EL 8883 was 245m. Of the 7 planned holes, 5 were attempted but only 3 reached basement. Running sands propelled by lots of shallow groundwater meant that 2 holes in EL 8883 were abandoned (BBRC-017 and BBRC-019), as the rods got bogged and there was a real risk of losing the hammer and rod string. Loose sand formation was much more widespread than anticipated, occurring from the Explorer 15 area in the north west of the project area (EL 8882) down to the projects southern limit around BBRD-002. The rig used was an Edson 2000HD. The rig's air compressor (quoted at 1,000 cfm @ 360 psi and therefore theoretically adequate for the projects relatively shallow holes) had a major failure. Giants Reef then decided to seek out a larger rig to complete the drilling program. For the second phase of the drilling program, the drilling contractor was Gomex Drilling, of Dry Creek, South Australia using a larger rig and compressor. Gomex Drilling completed the drilling program. The total amount of reverse circulation drilling by Gomex Drilling in EL 8883 was 460m. Abandoned holes BBRC-017 and BBRC-019 were redrilled by Gomex Drilling (BBRC-031 and BBRC-032 respectively), reaching basement rock with no further problems.

Samples collected during the drilling were riffle split in metre intervals. A total of 278 1-metre split and 92 3-metre speared composite samples were collected and sent to AMDEL for analysis. All samples were assayed for Au by AMDEL method FA3, and for Cu, Bi, Fe, Ag, As, Cd, Co, Mn, Mo, Ni, Pb, Zn, Cr, P, Sb, and V, by AMDEL method IC2E. No significant geochemical anomalies were observed in the results however low order base metal anomalism was present in a couple of the holes.

Although most of the drill holes were targeting residual gravity anomalies, several had coincident magnetic anomalies. Consultant Geophysicist Frank Lindeman of Lindeman Geophysics Pty Ltd, Melbourne recommended measuring the magnetic susceptibility of all drill chips, which subsequently has been carried out and recorded on all drill chip logs using a Kappameter KT-5 Magnetic Susceptibility Meter.

Geological logging was completed on site, using a Hewlett Packard 200LX palmtop computer and downloaded in the evenings. Downloaded geology data was then validated and printed out as separate log sheets and then loaded into a Micromine database, along with collar, survey and assay data.

Detailed drilling statistics are summarised in Table 1:

Drilling statistics for EL 8883 are as follows:

Hole ID	Drill Date	Pre drill name	Easting	Northing	Azimuth	Depth (m)	Drill Company
BBRC-010	30/07/02	D	380959	7819061	Vertical	60	Johannsen
BBRC-015	4/08/02	BB	380025	7805309	Vertical	72	Johannsen
BBRC-016	5/08/02	CC	380228	7805108	Vertical	54	Johannsen
BBRC-017	5/08/02	DD	380023	7804904	Vertical	48	Johannsen
BBRC-019	7/08/02	FF	383999	7805999	Vertical	11	Johannsen
BBRC-030	14/09/02	DD	380028	7804897	Vertical	94	GOMEX
BBRC-031	15/09/02	FF	383996	7806022	Vertical	124	GOMEX
BBRC-032	16/09/02	EE	382901	7806004	Vertical	124	GOMEX
BBRC-033	17/09/02	AA	391005	7807915	Vertical	118	GOMEX

No substantial mineralisation was found in the drilling, but there were several areas where geochemically anomalous results were found. These are described below.

Nickel Anomaly: Hole BBRC-033, near Lake Surprise - This single hole on a gravity residual intersected a nickel-bearing interval in the weathered top zone of the

basement, which starts 11m below surface. The overlying material is recent clays and gravels, and the basement is mafic or ultramafic volcanic, but not recognisable until approximately 30m. From 16m to 26m the samples are red clays for about 4m (possibly a laterite) then very weathered, saprolitic mafic or ultramafic. This 10m interval averages 0.186% Ni (max 0.32%), 900 ppm Cr and 200 ppm Co. Less anomalous levels of these elements extend for several metres below 26m. The interval from 16m to 26m was chosen because all the Ni values here were >1,000 ppm Ni. This anomaly may indicate the fringe of a buried laterite nickel occurrence, however the site requires further drilling to confirm and delineate. To be of real interest to Giants Reef, the Ni occurrence would need to come shallower to the surface and have a substantial increase in the grade. These requirements are possible, but at this stage Giants Reef do view this anomaly as an attractive or high priority target.

BBRD-002 Area - None of the assay results in the holes along this trend (BBRC-015, 016, 019, 019, 030 and 031) suggested that the gold-arsenic mineralisation comes to shallow depths. High phosphorus assays (max 3.25% P) were found in the Cambrian upper parts of many holes but were assumed to represent sedimentary basal phosphate occurrences which are common in the Georgina Basin, and possibly also the Wiso Basin (Bluebush).

- Petrography - During and after the drilling described above, several RC chip basement samples were sent for petrographic study to Ian Pontifex and Associates Pty Ltd, Adelaide, for rock identification and description. At least one thin section specimen had been taken from all the holes drilled in EL 8883, except for the two abandoned holes. Rocks from around the BBRD-002 area were identified as dacite porphyry, tonalite and porphyritic basalts that "may relate to the more pyroxene-rich picrites and ankaramites" described in thin sections of cores in BBRD-002 (Report MR 8256). From the petrography and the overall geochemistry, it is interpreted that the basement rocks examined in EL 8883 are from an intraplate, extensional environment.
- Groundwater Geochemistry - Groundwater samples were collected from five (5) exploration RC drill holes that were drilled during the reporting period within EL 8883. Other samples were collected at the same time (August 2002) from adjoining Exploration Licence 8882. The sampling was aimed at finding indications of mineralisation in the and around the regional Bluebush gravity anomaly as well as the two discrete magnetic features in the north of EL 8882 known as Explorer's 15 and 81. The sampling and analytical techniques used have been developed over many years by CSIRO, in particular by Senior Principal Research Scientist Angela Giblin, who visited Giants Reef's Tennant Creek offices to discuss the project in 2000. Giants Reef's fieldwork was conducted under her guidance. Sampling involved collection of readings at each sample site for ambient and sample temperature, acidity, conductivity, water depth, sample depth, GPS location and remarks on water quality. Cyanide and activated carbon satchels were added to each sample bottle and the bottles were sent to the CSIRO's laboratory at North Ryde, NSW for sensitive analytical work.

Groundwater chemistry analysis supported the results of the groundwater geochemistry undertaken last year on samples from government test water bores. The ground waters of the gravity anomaly area carried anomalous metal contents, and discrete zones coinciding with the zone of high residual gravity was able to be delineated. The coincident geochemical and gravity anomaly may constitute a groundwater geochemical signature for the source of the gravity anomaly in the Bluebush project region.

- Potable Water - A number of the holes drilled in EL 8883 found shallow (9m to 15m depth) drinkable water over wide areas. This information was provided to local Aboriginal people and also the pastoral lease holders.
- CLC Liaison Committee Meeting - A liaison committee meeting was held at Alekerenge Community in October 2002. The purpose of the meeting was to inform the Traditional Owners of the status of exploration in the Bluebush Project area including EL 8883. This included the main areas of interest for Giants Reef, drilling results, and expected future exploration over the project area. The CLC representatives, 17 Aboriginal Owners, and Giants Reef representatives were present. Giants Reef's Exploration Manager, Mr Peter Simpson gave a presentation about the exploration activities that had been carried out on the Land. The minor copper occurrence in BBRC-006 (EL 8882), the minor nickel show in BBRC-033 (EL 8883) and the drinkable water that was found in many of the holes was reported. The Traditional Owners showed considerable interest in the prospect of drinkable water and expressed interest in the possibly of setting up a water bore near the Kunayungku Community.
- Tenement Review - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential of EL 8883 and the prospects within the Licence. Assessment of the EL recognised that the Licence contains magnetic anomalies which are indicative of Tennant Creek style gold-copper occurrences (but which are not BHP Billiton targets). The review recommended that Giants Reef substantially reduce the tenement holding of EL 8883 to retain only the areas covering the targets which may still hold potential for Tennant Creek style shallow or substantial gold mineralisation. At the end of the second tenure year Giants Reef reduced EL 8883 from 224 to 112 graticular blocks. The northern portion of the tenement was retained, being the location of the traditional Tennant Creek style gold-copper anomalies that have been identified within the Licences.
- Alliance Meeting - A technical meeting was held between Giants Reef and BHP Billiton in Melbourne on the 2nd December 2002. The meeting focussed on recent drilling results from the Bluebush Project Area. Information was presented to BHP Billiton representatives. The results from the Bluebush exploration program conducted over the last two years was assessed. It was concluded that no significant geochemical intersections were identified in the drilling and no substantial mineralisation had been found in the Bluebush project area. In summary the findings from the drilling were disappointing and not of sufficient

interest to the Alliance to consider any follow up exploration. Recommendations were made by BHP Billiton and Mr Frank Lindeman that the Falcon airborne gradiometer may be a useful application in the Bluebush area by identifying structures not already identified. There was no suggestion however, that any airborne gravity survey would be conducted under the Alliance. The minutes from the meeting were accepted as accurate, and were signed on the 16th December 2002 by Giants Reef and BHP Billiton.

During the third year of tenure no on-ground exploration was conducted over the Licence area.

During Giants Reef's fourth tenure year EL 8883 was included within a package of tenements which were subject to a combined quantitative/qualitative ranking, based on geological, geophysical & geophysical characteristics and other parameters covering work status, target type, land status and economics. The tenement was down graded to "Non-Core B" which includes areas comprising only limited Warramunga Formation, weak or no magnetic anomalies and no proven corridors of mineralisation. Although the review identified a number of magnetic anomalies within the EL which are indicative of Tennant Creek style gold-copper occurrences, the prospectivity of the EL to host economic gold/copper mineralisation was downgraded for the following reasons;

- Geological re-assessment of the EL demonstrates that less than 5 km² of the 325.2 km² contains the prospective Warramunga Formation, with the remainder including geology which has not been found to host significant mineralisation in the region. These include granites of the Tennant Creek Super suite, volcanic-sedimentary successions of the Ooradidge Group and volcanic-sedimentary sequences of the Junalki Formation. The area proposed for reduction is believed to contain no Warramunga Formation.
- Drill testing of the Bluebush gravity anomalies in the first two tenure years of the Licence (BHP Billiton Alliance) downgraded the potential of the gravity anomaly. A review of the drilling and geophysical data suggests that the source to the gravity anomalies is either: i) Intrusive complexes, considerably higher in density than the surrounding host rocks, or ii) Deeper source that has not been intersected by drilling to date, however likely to be at depths between 1000 to > 2000m (refer to attached memorandum M. Cooper, 2005).

Work during the fifth tenure year included a literature search and review of all previous exploration undertaken in the Licence area. As part of this review all available exploration data was documented, in preparation for validation and integration in the Company's database and GIS.

The detailed review conducted by Centralian minerals defined a significant geophysical anomaly in the southern part of the licence. Further refinement of previous geophysical assessments and reviews of all historical drilling conducted over the defined magnetic anomaly was conducted and continues, with the view to generating shallow RAB targets within the prospect area.

6.4 EL9309 SKIPPER HILL WEST

A low level survey was flown by Australian Development Limited in 1969, and highlighted a magnetic feature at approximately 396200E 7821550 N latitude within a pre-existing EL 145. From this survey 1:12 000 detailed photogeological maps were produced.

In 1984 a low level high resolution airborne geophysical survey was flown by Austirex International Limited under the specifications of a 200m flight line spacing, 30m magnetic sample interval, 60m radiometric sample interval, 80m sensor height using a proton precession magnetometer and a 5 channel spectrometer with 50.341t crystal.

In a joint venture between Newmont Australia Limited (Newmont) and Australian Development Limited (ADL) a group of tenements under the group title of the 'Pipeline Project' commenced in November 1987, of this group EL 5074 covers some of the current EL 9309. Exploration work undertaken by the joint venture partners included:

- Newmont acquired the detailed Photogeological maps produced by ADL from the 1969 low level aero survey and photographically converted them to 1:10 000 scale.
- During December 1987, the low level high resolution airborne geophysical data from the survey flown in 1984 was purchased.
- Preliminary contour maps and digital data were supplied during January 1988. The digital data has been processed on Newmont's in-house computer imaging system.
- Satellite Imagery – Digital data for Landsat Thematic Mapper scenes covering the four project areas has been acquired. Data was processed by Newmont's in-house imaging system.
- Orientation Geochemistry – A total of 96 soil and drainage samples were taken at various localities in the Tennant Creek district to provide orientation for the Bulk Cyanide Leach method in this environment. The data demonstrated a background value of 0.2ppb Au to below detection for samples taken in residual soils over granitic basement. Anomalous values ranging up to 22.3ppb Au were returned from samples taken adjacent to known mineralised zones and anomalous drainage trains of greater than 1km downstream were detected.

PosGold conducted exploration work within EL 9309, under EL 7691 (Moscow) and MCC 140 located in eastern region of EL 9309. The dominant exploration by PosGold was in MCC 140. MCC 140 was originally pegged by Australian Development Limited (who inturn became PosGold) for Nobelex NL in April 1976 and later granted in July, 1976. In 1984 MCC 140 was renewed by ADL until 2 January 1994. The exploration work conducted by these various entities included:

- Photogeological mapping – Carried out by Australian Photogeological Consultants was conducted throughout the Tennant Creek area and inferred Warramunga Group rocks were concealed beneath shallow cover at MCC 140.

- Low level aeromagnetic survey – The survey was flown in 1992 using a proton precession 30m SI Scintrex Cs vapour V201 magnetometer, with a sensor height of 60m along north – south lines spaced at 200m. Data was processed by P Smith, Normandy Poseidon Limited Geophysicist, who removed the regional effect of the area from the observed data. The resulting magnetic contour plan further enhanced the magnetic features within MCC 140 trending WNW to NW, which are intersected by a prominent set of WNW trending lineaments and a second set of E to ENE trending lineaments. The contour map was used to design and implement further exploration evaluation.
- Ground Magnetism Survey – The survey data was collected in 1993 using a Posmag 2 magnetometer and a Geometrics G856 base station by P Walton and J Barnett. The survey area included the very southern most region of the current EL and data was collected at one metre spacings along gridded north – south lines spaced 50m apart and totalled 176.3 line kms (over an area of 8.6 km²). Data was processed by P Smith, Normandy Poseidon Limited geophysicist, to produce total magnetic field contour plans.
- Vacuum Drilling – The northern portion of the Moscow Licence, hence the southern portion of the current EL 9309, displays north-west trending magnetic lineaments, interpreted to be extensional splays of the Navigator Fault Zone (NFZ), which deforms the Warrego orebody, post-mineralisation. The magnetic lineaments contain several magnetic dipole features, including N14 and N15. The area covers broad flat-lying sandy plains with no outcrop. A vacuum drilling programme consisting of seven north – south traverses across magnetic dipole features in the NFZ tested the geology and geochemistry of the area. Tracey's Drilling was contracted to complete the drilling programme using a tractor mounted rig. A total of 131 vertical holes (MWV-2001 to MWV-2131) were drilled for 890m (@ ~ 6.8m/per hole). The holes were spaced at 100m intervals for granite and porphyry, which were the only rocks intersected. The porphyry forms minor lenses coincident with the north-west trending magnetic lineaments, as seen elsewhere in the Tennant Creek Field. From each drillhole three samples were collected: two palaeosol and one bedrock. The first palaeosol sample was analysed by Amdel using ICP-MS for Au, Cu, Bi, Pb, Zn, Ag, Cd, Mo, As and U. The second palaeosol sample was despatched to be analysed by Analabs following heavy mineral concentration (HMC) for Au, Cu, Bi, Fe, Mn, Pb, Zn, Ag, Mo and Cd. The bedrock samples were kept for further analysis of encouraging results, but due to the dominance of the granite and porphyry it was not considered worthwhile. Best assay results are available through the information button in the MapInfo Workspace.

Exploration work carried out during the first year of tenure, from 29th November 1995 to 28th November 1996 included:

- A regional geological and aeromagnetic interpretation – This interpretation was conducted to the detail of distribution of granite.

- Open file study was completed.

Exploration work carried out during the second year of Giants Reefs tenure, from 29th November 1996 to 28th November 1997 included:

- Geology and geological reconnaissance - A total of 36 line kilometres of geological reconnaissance traversing was carried out. Satellite imagery in digital was purchased to assist with structural interpretation.
- Sampling - During the geological reconnaissance, four rock chips and one soil sample were collected. Assay results are tabled below:

Sample	Au (ppb)	Au (R) (ppb)	Ag (ppm)	Co (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Ni (ppm)
136291	1	2	1	<2	7	2.31	182	2
136292	1		7	8	23	17.0	400	13
136293	21	24	1	2	52	1.96	390	14
136294	2		1	3	17	1.93	153	8
136295	11	12	2	11	59	4.3	1110	20
Method	FALL	FALL	G300I	G300I	G300I	G300I	G300I	G300I

- Geophysical open file research - Open file gravity data was collected and bouguer values produced. This showed a steep gradient between the granite, which is expressed as a gravity low, and the interpreted Warramunga Formation.

Exploration work carried out during Giants Reefs third year of tenure, from 29th November 1997 to 28th November 1998 and included:

- Geology and geological reconnaissance - A reconnaissance trip to look for basement outcrops was made in August 1998. All major tracks, as shown on the available geological, topographic and tenement maps, were followed. As with a shorter trip made last year, this more extensive coverage produced no new outcrops. In the north western three blocks of the Licence, Warramunga Formation siltstones and shales were found to have been dug up during the laying of the Amadeus Basin to Darwin gas pipeline, and these occur nearby in a few places nearby as small ground-level outcrops. No other Warramunga Formation or outcrops were seen anywhere else in the EL, nor any granite, although the presence of thinly-covered granite in the central part of the EL is suggested in current geological maps and in the available aeromagnetics data. Hard limestone outcrops were noted in the southeast and south of the Licence area.
- Rock chip sampling - Three rock samples (numbers 59578, 59579 and 59580) were collected just to the west of the current north-western two blocks of the EL. Assaying returned nothing anomalous, and the results are tabled below:

<i>Sample</i>	<i>Description</i>	<i>Au</i>	<i>Cu</i>	<i>Bi</i>	<i>Fe</i>
59578	Ironstone or ferricrete.	<1 ppb	8 ppm	<5 ppm	25.4%
59579	Possibly a sheared rhyolite. Same site as 578.	<1 ppb	5 ppm	<5 ppm	5.95%
59580	Blackish-brown iron-rich rock: ?ferricrete	<1 ppb	3 ppm	<5 ppm	21.6%

- Magnetic target identification - During a study of the aeromagnetics data flown by Geopeko in the mid-1980s (which only covers a small northern portion of the EL), three magnetic anomalies were observed which are seen as targets for future ground investigation. These targets are located in a group, less than 2 kilometres apart from each other, as follows:

	<i>AMG Easting</i>	<i>AMG Northing</i>
<i>Anomaly P</i>	394500E	7828300N
<i>Anomaly Q</i>	394900E	7827400N
<i>Anomaly R</i>	395200E	7828000N

Anomaly Q has the highest magnetic amplitude of the three.

- Detailed aeromagnetic survey - In October 1998, a detailed aeromagnetic survey was flown over the northern part of EL 9309 and extensive surrounding areas. Key specifications of the survey, which was flown by Kevron Geophysics Pty Ltd, were north-south flight lines 50 metres apart, at a height of 40 metres above ground.

Exploration work carried out during Giants Reefs fourth year of tenure, from 29th November 1998 to 29th November 1999 included:

- Literature search - Mineral Claim C140 was located in the eastern part of Area 1 of the Licence. The claim was surrendered by Normandy Gold Pty Ltd on 25 November 1998, and thus fell into EL 9309.
- Magnetic target modelling - In October 1998, a detailed aeromagnetic survey was flown by Kevron Geophysics Pty Ltd for Normandy Tennant Creek Pty Ltd, over an extensive east-west belt at least 70 kilometres long covering the southern part of the established Tennant Creek goldfield. The northern section of EL 9309 lies within the western end of the survey area. Key survey specifications were north-south flight lines 50 metres apart, at a flying height of 40 metres. Normandy kindly presented Giants Reef with aeromagnetic survey data covering the various Giants Reef tenements within the survey area, including Area 1 of EL 9309. Barrett Geophysical Exploration Consultants Pty Ltd, of Perth, WA, was contracted to

review the survey data and to note and model any magnetic anomalies which could be ironstones or other magnetic features of exploration interest. Eleven magnetic anomalies were identified, named Anomaly A to Anomaly K. Note that three anomalies previously identified from the older, broader-spaced mid-1980s aeromagnetic survey, are included in the new list of targets. These are Anomalies P, Q and R, now re-named as Anomalies A, C and B respectively. Anomalies A, B, C, D, and F were rated as high priority. These are all at depths which could be tested by RC percussion drilling. The anomalies are in the area where two long-recognised regional mineralised trends converge. One of these trends includes Wheal Doria, TC8, Gibbet, Chariot and The Extension. The other line includes Nobles Nob, Juno, Eldorado and Mt Samuel.

- Reconnaissance - A reconnaissance trip to the northern block of the Licence to see if Anomaly D, interpreted from the 1998 Normandy aeromagnetics, had a visible surface expression. This seemed possible, as it was the shallowest of the four anomalies modelled. Anomaly C was also visited on the ground. The area is flat and access was difficult, via an old overgrown track from The Extension workings. No outcrops or evidence of iron-rich material was seen at either anomaly. Several old grid pegs were noted at Anomaly D.
- Soil sampling - At Anomaly D, 11 soil samples (450032 to 450042) at 50m paced intervals along a north-south 500m traverse were collected. Wooden pegs were put in to mark the sample sites. Samples were dug from below 10cm depth, and sieved to -3mm in the field. They were all of a dark red fine sandy soil, and showed little variation. The position of this line was determined by GPS at AMG 396375E with its north end at 7827700N (sample 450032) and south end at 7827200N (450042). The samples were sent to Australian Laboratory Services Pty Ltd for analysis by the "Regoleach" partial extraction method PE010, and by method IC205 for a minus-80 mesh sieved sub-sample. Both sets of samples were analysed for Cu, Pb, Zn, Ag, Bi, Ni, Co, Cd, Mn and Fe. Results do not show any clear anomalies, although the Regoleach results reach a mild peak in the middle of the traverse for several elements, including Pb, Ag, Bi, Co, and Mn. This pattern is not reflected in the minus -80 mesh set of results.
- Agreement with Billiton Exploration Australia Pty Ltd - After many months of negotiation, an agreement was signed with Billiton Exploration Australia Pty Ltd. Under the agreement, Billiton will acquire approximately 7% equity in Giants Reef, in return for providing funding for the exploration, by Giants Reef, of four project areas in the Tennant Creek region. These project areas are located within the Tennant Creek 1:250 000 sheet area, but in little-explored areas outside the established goldfield. Targets are very large iron oxide-gold-copper and/or base metal occurrences which are expected to be substantially different in size and style from the "typical" Tennant Creek mines which have been discovered and worked up until now. EL 9309 is part of the "Bluebush" project area, which is centred about a 19-milligal regional gravity anomaly. Plans for exploring the Bluebush project area included airborne EM and additional gravity surveys, leading to target selection for more detailed geophysics and geochemistry on local grids, prior to deep drilling.

The main work completed during the fifth year of tenure included a combined quantitative/qualitative ranking, based on geological, geochemical & geophysical characteristics and other parameters covering work status, target type, land status and economics. As part of this work geochemical data sets, including all historical drilling data, were integrated into the Company's database and GIS for analysis.

An in-house detailed review of past exploration work and further refinement of geophysical assessments of the defined magnetic anomalies was conducted and continues. From this detailed review conducted by Centralian Minerals Limited a number of geophysical anomalies were identified, with the most prominent coinciding with the Explorer 72 anomaly. Consideration will be given to a more detailed geophysical survey over these defined anomalies, with the view to generating further shallow RAB targets within the prospect area.

6.5 EL9915 CHINCHILLA

EL 9915 was originally applied for by Anthappi in July 1997 to cover an area of structurally and magnetically prospective Warramunga Formation. Numerous companies including Roebuck Resources (Roebuck), North Flinders Mining (NFM) and PosGold previously held tenure and explored over this area. The area is mostly sand covered to depths of up to 7m. Minor exposures of porphyry, quartz-haematite ironstone, and sediments of the Warramunga Formation occur, however are not common. The Licence follows an east-west structural lineament which hosts the TC 8 mine, Chariot mine, the developing Malbec West mineralisation and the historic Extension mine (300t @ 19.5g/t Au).

Evidence of early prospecting can be seen in the Licence in the form of occasional shallow prospecting pits, and shallow shafts on ironstone exposures. The area now held under EL 9915 was partially held by Metana Minerals NL and in 1990 was included in a joint venture with Placer Exploration Pty Ltd. Placer drilled 126 bedrock geochemical RAB holes (NAB series) perpendicular to the structural trend. Au-Cu-Bi results of 16 ppb Au and 260 ppm Cu were returned which Placer deemed of no interest and they subsequently withdrew from the joint venture. These values were recognised by Roebuck Resources as being significant for the Tennant Creek mineral field and Roebuck secured the Placer Anomaly with two Mineral Claims (MC C1060-1061) and EL 7415 in 1991.

Roebuck commenced a fairly aggressive exploration program over what is now the area of the EL 9915 Licence area. Exploration included collection of previous geochemical data and compilation grid restoration, vacuum and RAB drilling. A ground magnetic survey was also conducted in 1994 over the Placer anomaly.

Exploration conducted during the first year of tenure included:

- A Literature Review - In 2003 a detailed assessment of the Exploration Licence was conducted including an assessment of the results of previous exploration conducted by Placer and Roebuck. This assessment highlighted the fact that previous exploration over the tenure had focussed on the targeting of magnetic anomalies to identify magnetic ironstone bodies. Giants Reef noted that limited gravity data

exists over the tenement and combined with the large geochemical data set (all in old paper reports) concluded that the potential for new discoveries within the Licence was highly likely.

- **Tenement Review Ranking** - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential for the Licence (at that stage the licence was still under application) and the prospect areas within it. The review was based on the potential to discover high-grade gold mineralisation in both magnetic and haematite-dominant ironstones. The location of the Chariot gold mine on adjacent EL 10199 made the tenement a highly prospective target area due to its structural significance and continuity. Additionally the highly developed understanding of the local geology as a consequence of the developing Chariot resource combined with the EL location to existing mine infrastructure ranked this Licence area as a first class exploration projects.
- **Geochemical Data Set Validation** - Several hundred vacuum and shallow vertical RAB drill holes were drilled by various companies during a period from 1988 to 1994 within the Licence. Several grids were constructed and these were subsequently refurbished after fires etc. Normandy attempted to collate all bedrock geochemical information into a GIS however with all the grids (local and AMG) a major data translation error occurred misplacing the drill collars to up to 300m in some cases. Giants Reef spent considerable time in the field, validating paper coordinates and converting into the one MGA 94 datum system. On completion, this data was imported into Giants Reef's GIS.
- **Reconnaissance and Rock Chip Collection** - Various reconnaissance trips were made to the Licence area. During these trips drill hole collars were "picked" up using hand held GPS. Areas of outcrop/subcrop were sampled and briefly mapped. Instruction was given to the field crews conducting the reconnaissance work to stay away from the prominent ironstone outcrop on which the Extension mine workings are situated. It is common knowledge to Giants Reef that this ironstone is culturally significant to the Local Indigenous people of Tennant Creek. A summary of rock chip results and positions is tabulated below:

SAMPLE NUMBER	AGD 84 EASTING	AGD 84 NORTHING	Au (ppm)	Cu (ppm)	Bi (ppm)	Fe (%)	DESCRIPTION
81801	402522	7826201	<0.01	19	<2	11.72	Silicified siltstone from 50cm deep burrow pit
81802	402482	7826226	0.01	21	<2	13.30	Ironstone-Qtz breccia
81803	402477	7826229	0.01	51	14	14.63	Laminated & silicified silt/sandstone in burrow pit
81804	402472	7826277	0.01	111	15	16.40	Haematite ironstone mullock from 1.5m deep pit
81805	402476	7826222	0.03	127	12	12.16	Siltstone mullock from shallow burrow pit.
81806	402369	7826239	0.11	44	102	13.00	Brecciated Qtz-Ironstone subcrop
81807	402330	7826230	<0.01	27	4	17.97	Sheared ferruginous ironstone
81808	402323	7826229	0.01	8	9	12.01	Massive Qtz-Ironstone
81809	402313	7826229	0.02	28	8	12.58	Siltstone & ironstone chips from shallow burrow pit
81810	402127	7826177	<0.01	255	15	15.19	Ironstone gravel and sand from shallow pit
81811	402125	7826177	0.03	297	<2	13.51	Ironstone & sandstone chips from outcrop
81812	402120	7826177	<0.01	87	11	18.90	Massive ironstone with Qtz veining, small vugs
81813	402117	7826174	<0.01	84	124	25.39	Massive ironstone and Qtz slight ferruginous
81814	402098	7826165	<0.01	191	9	17.93	Ironstone rubble western extent of outcrop
81720	402522	7826201	430	15	21	21.3	Woresly – Mullock dump 1
81721	402482	7826226	330	10	23	25.5	Woresly – Mullock dump 2
81722	402477	7826229	506	14	20	25.8	Woresly shaft/working

- Mining Management Plan_Authorisation_Audit - Giants Reef submitted a Mining Management Plan (MMP), detailing all aspects of Giants Reef's plans to drill test gravity anomalies identified within the West TC8 Project Area. The plan was subsequently approved in June 2003 by the Department of Business, Industry & Resource Development (DBIRD) under Authorisation 0148-01. Pursuant to condition 4 of the Authorisation, a security of \$6,000 was lodged with DBIRD. This security covered all the tenements included within the West TC8 Project Area, and

included EL 9915. On the 5th November 2003 an application for variation to the Authorisation was reviewed and accepted by DBIRD and Authorisation 0179-01 was issued. The security of \$6,000 remained against the new Authorisation. In November 2003 DBIRD conducted an MMP Compliance Assessment for the West TC8 Project Area. The audit reference number was GRE02-MR2002/0263. No issues were identified and it was decided that as the exploration was not complete, a full assessment sign off and security refund was not necessary. Release of the \$6,000 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-01).

Exploration work conducted during the second year of tenure included:

- Mining Management Plan – Change of Authorisation - Giants Reef submitted an updated Mining Management Plan (MMP) to DBIRD August 2004. The update detailed all aspects of Giants Reef's plans to extend the existing gravity survey within the TC mineralised corridor and to systematically drill test prospective gravity anomalies generated. The plan was subsequently approved in September 2004 by DBIRD under Authorisation 0148-02. Pursuant to condition 4 of the Authorisation, an additional security of \$1,250 was lodged with DBIRD. Bring the total security for the MMP to \$7,250. This security covered all the tenements included within the West TC8 Project Area, and included EL 9915.
- Gravity Survey - Daishsat Pty Ltd of Murray Bridge, South Australia were contracted to undertake a regional gravity survey west of the Malbec West Mining Area. The survey commenced on the 15th November 2004. One Scintrex CG-3 gravity meter was used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station (Gravity base 0034). For horizontal and vertical GPS control, two Leica System 500 dual frequency GPS receivers were used. The gravity base (GPS base 099) was set up at the Chariot mine opposite a fence and gate, which was marked with a short star picket. Gravity observations were made on the regular grids set out by real-time GPS. Two observations were made for each station and each observation consisted of a 20-second or greater stacking time. Two observations were made at each station so that any seismic or instrumental noise could be immediately detected. The accepted tolerance between readings was 0.02 milligals to ensure accuracy. At the survey station the Scintrex CG3 automatically recorded the station, time and readings, which were made digitally to allow for downloading into a computer. Raw data was processed daily to check for quality and integrity. This interim process produced a set of Bouguer Gravity values, which were contoured and imaged to provide a check for any anomalous reading that would require repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. At the conclusion of the job, the data was reprocessed using the standard AGSO formulae. In total 1,101 gravity stations were collected over EL 9915 and EL 9935. Geophysical interpretation of the survey data is progressing and initial geophysical processing has identified several high priority gravity anomalies which are supported by anomalous geochemistry.

- Traditional Land Owner Site Clearance - A site clearance for proposed exploration within EL 9915 was conducted on 1st October 2004. Approval to commence the extension of the Malbec West baseline was received from the Central Land Council in 2004. Routine precautions to protect mature trees were requested during clearing however no protected or sacred areas were identified within the two Licence areas.

Work during the third year of tenure included a literature search and review of all previous exploration undertaken in the Licence area. As part of this review all available exploration data was documented, in preparation for validation and integration in the Company's database and GIS.

The detailed review conducted by Centralian Minerals Limited has identified a number of possible targets that require further refinement and review. Consideration will be given to a more detailed geophysical survey over these defined anomalies, with the view to generating shallow RAB targets within the prospect area.

6.6 EL9935 MANX

EL 9935 was originally applied for by Anthappi in July 1997 to cover an area of structurally and magnetically prospective Warramunga Formation. Numerous companies including Roebuck Resources (Roebuck), North Flinders Mining (NFM) and PosGold previously held tenure and explored over this area.

The area is mostly sand covered to depths of up to 7m. Minor exposures of porphyry, quartz-haematite ironstone, and sediments of the Warramunga Formation occur, however are not common. The Licence follows an east-west structural lineament which hosts the TC 8 mine, Chariot mine, the developing Malbec West mineralisation and the historic Extension mine (300t @ 19.5g/t Au).

Evidence of early prospecting can be seen in the Licence in the form of occasional shallow prospecting pits, and shallow shafts on ironstone exposures.

Roebuck commenced a fairly aggressive exploration program over what is now the area of EL 9935 Licence area. Exploration included collection of previous geochemical data and compilation grid restoration, vacuum and RAB drilling. A ground magnetic survey was also conducted in 1994 over the Placer anomaly.

Exploration work conducted during the first year of tenure included:

- A Literature Review - In 2003 a detailed assessment of the Exploration Licence was conducted including an assessment of the results of previous exploration conducted by Roebuck. This assessment highlighted the fact that previous exploration over the tenure had focussed on the targeting of magnetic anomalies to identify magnetic ironstone bodies. Giants Reef noted that limited gravity data exists over the tenure and combined with the large geochemical data set (all in old paper reports)

concluded that the potential for new discoveries within both Licences were highly likely.

- **Tenement Review Ranking** - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential for the Licence (at that stage the licence was still under application) and the prospect areas within it. The review was based on the potential to discover high-grade gold mineralisation in both magnetic and haematite-dominant ironstones. The location of the Chariot gold mine on adjacent EL 10199 made the tenement a highly prospective target area due to its structural significance and continuity. Additionally the highly developed understanding of the local geology as a consequence of the developing Chariot resource combined with the EL location to existing mine infrastructure ranked the Licence area as a first class exploration projects.
- **Geochemical Data Set Validation** - Several hundred vacuum and shallow vertical RAB drill holes were drilled by various companies during a period from 1988 to 1994 within the Licence. Several grids were constructed and these were subsequently refurbished after fires etc. Normandy attempted to collate all bedrock geochemical information into a GIS however with all the grids (local and AMG) a major data translation error occurred misplacing the drill collars to up to 300m in some cases. Giants Reef spent considerable time in the field, validating paper coordinates and converting into the one MGA 94 datum system. On completion, this data was imported into Giants Reef's GIS.
- **Reconnaissance and Rock Chip Collection** - Various reconnaissance trips were made to the Licence area. During these trips drill hole collars were "picked" up using hand held GPS. Areas of outcrop/subcrop were sampled and briefly mapped. Instruction was given to the field crews conducting the reconnaissance work to stay away from the prominent ironstone outcrop on which the Extension mine workings are situated. It is common knowledge to Giants Reef that this ironstone is culturally significant to the Local Indigenous people of Tennant Creek. A summary of rock chip results and positions is tabulated below:

SAMPLE NUMBER	AGD 84 EASTING	AGD 84 NORTHING	Au (ppm)	Cu (ppm)	Bi (ppm)	Fe (%)	DESCRIPTION
81801	402522	7826201	<0.01	19	<2	11.72	Silicified siltstone from 50cm deep burrow pit
81802	402482	7826226	0.01	21	<2	13.30	Ironstone-Qtz breccia
81803	402477	7826229	0.01	51	14	14.63	Laminated & silicified silt/sandstone in burrow pit
81804	402472	7826277	0.01	111	15	16.40	Haematite ironstone mullock from 1.5m deep pit
81805	402476	7826222	0.03	127	12	12.16	Siltstone mullock from shallow burrow pit.
81806	402369	7826239	0.11	44	102	13.00	Brecciated Qtz-Ironstone subcrop
81807	402330	7826230	<0.01	27	4	17.97	Sheared ferruginous ironstone
81808	402323	7826229	0.01	8	9	12.01	Massive Qtz-Ironstone
81809	402313	7826229	0.02	28	8	12.58	Siltstone & ironstone chips from shallow burrow pit
81810	402127	7826177	<0.01	255	15	15.19	Ironstone gravel and sand from shallow pit
81811	402125	7826177	0.03	297	<2	13.51	Ironstone & sandstone chips from outcrop
81812	402120	7826177	<0.01	87	11	18.90	Massive ironstone with Qtz veining, small vugs
81813	402117	7826174	<0.01	84	124	25.39	Massive ironstone and Qtz slight ferruginous
81814	402098	7826165	<0.01	191	9	17.93	Ironstone rubble western extent of outcrop
81720	402522	7826201	430	15	21	21.3	Woresly – Mullock dump 1
81721	402482	7826226	330	10	23	25.5	Woresly – Mullock dump 2
81722	402477	7826229	506	14	20	25.8	Woresly shaft/working

- Mining Management Plan_Authorisation_Audit - Giants Reef submitted a Mining Management Plan (MMP), detailing all aspects of Giants Reef's plans to drill test gravity anomalies identified within the West TC8 Project Area, including the Troika Prospect located in EL 9935. The plan was subsequently approved in June 2003 by the Department of Business, Industry & Resource Development (DBIRD) under Authorisation 0148-01. Pursuant to condition 4 of the Authorisation, a security of \$6,000 was lodged with DBIRD. This security covered all the tenements included

within the West TC8 Project Area, and included EL 9935. On the 5th November 2003 an application for variation to the Authorisation was reviewed and accepted by DBIRD and Authorisation 0179-01 was issued. The security of \$6,000 remained against the new Authorisation. In November 2003 DBIRD conducted an MMP Compliance Assessment for the West TC8 Project Area which included the recently completed drilling of the Troika gravity anomaly. The audit reference number was GRE02-MR2002/0263. No issues were identified and it was decided that as the exploration was not complete, a full assessment sign off and security refund was not necessary. Release of the \$6,000 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-01).

- Gravity Survey - Daishsat Pty Ltd of Murray Bridge, South Australia were contracted to undertake a regional gravity survey over the Chariot orebody and surrounding tenure, including EL 9935. One Scintrex CG-3 gravity meter was used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station (Gravity base 0034). For horizontal and vertical GPS control, two Leica System 500 dual frequency GPS receivers were used. The gravity base (GPS base 099) was set up at the Chariot mine opposite a fence and gate, which was marked with a short star picket. Gravity observations were made on the regular grids set out by real-time GPS. Two observations were made for each station and each observation consisted of a 20-second or greater stacking time. Two observations were made at each station so that any seismic or instrumental noise could be immediately detected. The accepted tolerance between readings was 0.02 milligals to ensure accuracy. At the survey station the Scintrex CG3 automatically recorded the station, time and readings, which were made digitally to allow for downloading into a computer. Raw data was processed daily to check for quality and integrity. This interim process produced a set of Bouguer Gravity values, which were contoured and imaged to provide a check for any anomalous reading that would require repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. At the conclusion of the job, the data was reprocessed using the standard AGSO formulae. Giants Reef's consultant geophysicist Mr Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.
- Regional Gravity - The regional gravity survey working east and west of the known mineralisation at Chariot commenced immediately after the completion of a gravity orientation survey over the known mineralisation at Chariot. The regional survey was designed to provide: (a) information which could map iron-rich lithologies and assist in more focussed planning of major drilling campaigns (b) target definition and refinement. Away from the pit area and based on the gravity orientation survey results, the regional gravity survey used 80m line with 20m station intervals. The regional gravity survey, in total, collected 510 stations over Exploration Licence 9935. Giants Reef's consultant geophysicist Mr Frank Lindeman, of Lindeman Geophysics, Melbourne, was contracted to process, analyse and geophysically model the gravity survey data. Initial results were encouraging with several new target areas identified. The gravity survey appears to have added a new dimension

to Giants Reef's understanding of the non-outcropping geology and the distribution of non-magnetic ironstone bodies within the Licence area. In areas where magnetic ironstones have been defined and also within completely non-magnetic regions, the gravity data has predicted the existence of several, (mainly shallow) haematite-rich ironstones which could be host to gold mineralisation. The most interesting gravity anomaly with EL 9935 was termed Troika (Russian Chariot pulled by dogs or horses).

- Traditional Land Owner Drill Site Clearance - A site clearance for the proposed Troika target holes in EL 9935 was conducted in June 2003 with approval to commence earthworks received from the Central Land Council on 27 June 2003. Routine precautions to protect mature trees were requested when clearing the drill pads however no protected or sacred areas were identified within the two Licence areas. A permit to enter was issued as vehicles needed to travel through Aboriginal Freehold Land held under the Warrumungu Land Trust to gain access to the drill sites.
- RC Drill Testing of the Troika Gravity Anomaly - A pre-existing, east-west baseline that runs west of the Chariot mine area was upgraded and re-established to allow access into the Troika target area. Grid lines were lightly cleared to allow access to the various Troika drill sites. A small loader was used in the line clearing and preparation of the drill pads. Four RC holes were drilled into the Troika target for an advance of 519m within EL 9935. Hole TKRC 001 was the first exploration hole for the West TC8 Project gravity target program, and was collared on the most westerly gravity line of the gravity survey. Two holes were initially drilled to test a broad anomalous gravity response with no associated magnetic response on the western most gravity line of the survey area. The density contrast for this anomaly was modelled as 2.7 gm/cc (Chariot – 2.0 gm/cc) and modelled thickness was 20m. The drill contractor was Gomex Drilling, Dry Creek, South Australia using a RCD 150 drill rig. Samples collected during the drilling were riffle split in metre intervals. 3-metre speared, composite samples were collected and sent to North Australian Laboratories (NAL) Pine Creek for analysis. Samples were assayed for Au, Fe, Cu and Bi using FA50 and mixed-acid digest respectively. A low-grade standard was added at the end of each drill hole for analysis, to monitor quality control of laboratory results. Further 1-metre riffle split samples were collected for anomalous intervals (>0.1 ppm Au), and were sent to NAL Pine Creek for the same method of analysis. The four drill holes were targeting a residual gravity anomaly with no associated magnetic signature. Consultant Geophysicist Frank Lindeman of Lindeman Geophysics Pty Ltd, Melbourne recommended measuring the magnetic susceptibility of all drill chips, which was undertaken at the end of each drill hole, and noted on all drill chip logs using a Kappameter KT-5 magnetic susceptibility meter. Geological logging was completed on site, using a Hewlett Packard 200LX palmtop computer and downloaded in the evenings. Downloaded geology and magnetic susceptibility data was then validated and printed out as separate log sheets and then loaded into a Micromine database, along with collar, survey and assay data.

Hole Number	Easting (MGA)	Northing (MGA)	Dip (deg)	Azi (deg)	Depth (m)	Date Drilled	Tenure
TKRC 001	403228	7826520	-60	178	160	17-Aug-03	EL 9935
TKRC 002	403225	7826480	-60	178	124	18-Aug-03	EL 9935
TKRC 005	403190	7826500	-60	178	130	28-Aug-03	EL 9935
TKRC 006	403190	7826480	-60	178	105	30-Aug-03	EL 9935
TOTAL					519m		

Drill hole TKRC 001 intersected 3m of blocky, haematite ironstone and shale from 147m down hole. TKRC 002 was collared 40m south of TKRC 001 to intersect the ironstone up-dip confirming the northerly dipping attitude of the ironstone. Two metres of ironstone, from 72m was intersected in this hole. Anomalous Cu (to 0.8%) and weak gold mineralisation were encountered in TKRC 001 as tabulated below.

Hole Number	From (m)	To (m)	Interval (m)	Au (ppb)	Cu (ppm)	Bi (ppm)	Fe (%)
TKRC 001	144	145	1	190	1120	<20	5.9
TKRC 001	148	149	1	106	8490	<20	5.37

These intersections are narrow and not likely to give rise to any gravity response let alone the large gravity response seen at the western end of the survey area. It would be hoped that more data and geophysical re-interpretation could separate the probable deep regional response from other responses that could relate to shallower ironstones.

An additional two holes were drilled 40m west (TKRC 005 – 006) of the initial drill section which also intersected narrow zones of disseminated ironstone (haematite) and shale. No anomalous gold or base metal assays were returned from either of these holes. In an area of no outcrop, limited previous exploration and no magnetic response these results are seen to be very encouraging.

Exploration work conducted during the second year of tenure included:

- Mining Management Plan – Change of Authorisation - Giants Reef submitted an updated Mining Management Plan (MMP) to DBIRD August 2004. The update detailed all aspects of Giants Reef's plans to extend the existing gravity survey

within the TC mineralised corridor and to systematically drill test prospective gravity anomalies generated. The plan was subsequently approved in September 2004 by DBIRD under Authorisation 0148-02. Pursuant to condition 4 of the Authorisation, an additional security of \$1,250 was lodged with DBIRD. Bring the total security for the MMP to \$7,250. This security covered all the tenements included within the West TC8 Project Area, and included EL 9935.

- Gravity Survey - Daishsat Pty Ltd of Murray Bridge, South Australia were contracted to undertake a regional gravity survey west of the Malbec West Mining Area. The survey commenced on the 15th November 2004. One Scintrex CG-3 gravity meter was used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station (Gravity base 0034). For horizontal and vertical GPS control, two Leica System 500 dual frequency GPS receivers were used. The gravity base (GPS base 099) was set up at the Chariot mine opposite a fence and gate, which was marked with a short star picket. Gravity observations were made on the regular grids set out by real-time GPS. Two observations were made for each station and each observation consisted of a 20-second or greater stacking time. Two observations were made at each station so that any seismic or instrumental noise could be immediately detected. The accepted tolerance between readings was 0.02 milligals to ensure accuracy. At the survey station the Scintrex CG3 automatically recorded the station, time and readings, which were made digitally to allow for downloading into a computer. Raw data was processed daily to check for quality and integrity. This interim process produced a set of Bouguer Gravity values, which were contoured and imaged to provide a check for any anomalous reading that would require repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. At the conclusion of the job, the data was reprocessed using the standard AGSO formulae. In total 1,101 gravity stations were collected over EL 9935. Geophysical interpretation of the survey data is progressing and initial geophysical processing has identified several high priority gravity anomalies which are supported by anomalous geochemistry.
- Traditional Land Owner Site Clearance - A site clearance for proposed exploration within EL 9935 was conducted on 1st October 2004. Approval to commence the extension of the Malbec West baseline was received from the Central Land Council in 2004. Routine precautions to protect mature trees were requested during clearing however no protected or sacred areas were identified within the two Licence areas.

The main work completed during the third year of tenure included a combined quantitative/qualitative ranking, based on geological, geochemical & geophysical characteristics and other parameters covering work status, target type, land status and economics. As part of this work geochemical data sets, including all historical drilling data, were integrated into the Company's database and GIS for analysis.

An in-house detailed review of past exploration work and further refinement of geophysical assessments of the defined magnetic anomalies was conducted and continues. From this detailed review conducted by Centralian Minerals Limited a number of geophysical

anomalies were identified, including prospects in the north coinciding with explorer 83 and the Copper Skipper prospect in the south of the licence. Consideration will be given to a more detailed geophysical survey over these defined anomalies, with the view to generating shallow RAB targets within the prospect area.

6.7 EL9988 NO.1 BORE

The Licence was acquired to search for IOCG deposits and to evaluate a number of anomalies identified in aeromagnetic surveys.

The Nail 33 (N33) was one of several magnetic anomalies delineated by aeromagnetic surveys flown for Noblex NL in their 1969/70 exploration program. Subsequent exploration on this target included geological mapping, ground magnetics, auger drilling, geochemical rock chip sampling and diamond drilling (1970) (rep. ref 97230). Significant results from the rock chip sampling included 0.8 g/t Au, 70 ppm Cu and 1.2 g/t Au, 450 ppm Cu, 330 ppm Bi from diamond drilling. Results concluded by this exploration concluded that the N33 Prospect covers a magnetite bearing zone of chloritised metasediments, which carries anomalous values in Au, Cu and Bi. ADL diamond drill tested the N33 magnetic anomaly (amplitude of 320nT) with two holes (DDH367 and DDH373). The holes intersected large bodies of quartz-feldspar porphyry with high magnetic susceptibility and a thin (<5m) zone of banded, iron rich sediments. Geophysical modelling indicates that the quartz-feldspar porphyry is the major source of the magnetic anomaly, while the thin outcropping BIF, which continues at depth, has only a minor affect on the magnetic high.

Work by ADL (PosGold) on MCC141 to144 and EL 7691 (Moscow) included a low level aerial magnetic survey (1992) (60m height x 200m line spacing), field reconnaissance (1993), geochemical vacuum drilling (1993) and a ground magnetic survey.

PosGold undertook a vacuum geochemical drilling at two areas, referred to as the Westcow and Eastcow grids, however only the latter was located in what is now EL 9988 (formerly EL 7691). The Eastcow drilling tested a large magnetic high, which includes the N19, N20 and N33 prospects.

The vacuum geochemical drilling intercepted BIF, quartz feldspar porphyry and hematitic siltstone and shales belonging to what is interpreted to be Warramunga Formation units. The drilling was done on 50m hole centres, 250m line spacing and comprised 974 holes for a total of 6,074m. Sampling consisted of 4kg of overburden of AASS analysis of Au, Cu, Bi, Fe, Mn, Pb, Zn, Ag, Mo and Cd after heavy mineral concentrating, and 2kg of bedrock sample for Au, Cu, Bi, Fe and Mn analysis. Significant results from this work included:

N33 2 ppb Au, 56 ppm Cu & 3 ppb Bi (bedrock)

MW1 up to 22 ppb Au (bedrock)

MW2 up to 83 ppm Cu (bedrock)

MW3 up to 85 ppm Cu (bedrock)

N20 8 ppb Au , weak Cu & 36 ppb Bi (HMC)

A follow-up/infill program of 250 vacuum holes for a total of 1,756m were completed to further test these targets. Results from this work returned a strong Cu anomaly over the MW1 target (remains open) with peak assays of 33 ppb Au , 84 ppm Cu & 9 ppb Bi (bedrock), MW1 target closed off, MW3 target possibly open to north east and results for N20 were disappointing. The N33 anomaly was not in-filled, but was tested 250 m along strike.

PosGold carried out RAB drilling at the MW2, MW3 and N20 targets during 1994. A total of 9 angled (-60° - 180°) holes for 552 metres was completed. Although no significant results were returned from this drilling, all drill holes intercepted sericite-rich schist, typical of higher metamorphic grade Warramunga Group siltstones and sandstones than most of the field. Most of the schist is clay-rich and bleached, although several intersections of hematite-rich schist coincide with strong Cu anomalism.

Vacuum drilling (131 holes for 890 m) was undertaken in 1994 to test north west trending magnetic lineaments, which were interpreted to be extensional splays off the Navigator Fault Zone, which deforms the Warrego orebody, post-mineralisation. No significant results or anomalies were returned from this work.

In 1994 PosGold re-assayed segments of the two holes (DDH-367 and DDH0373) completed by ADL in 1970. Results were disappointing for both BIF and strong chlorite altered sediments intersections and subsequently the target was down-graded.

Upon surrendering EL 7691 (now EL 9988) PosGold stated that all potential targets had been tested and that this work did not indicate that the remaining area of the Licence held potential for significant economic mineralisation.

Other work completed included a combined quantitative/qualitative ranking, based on geological, geochemical & geophysical characteristics and other parameters covering work status, target type, land status and economics. As part of this work geochemical data sets, including all historical drilling data, were integrated into the Company's database and GIS for analysis.

An in-house detailed review of past exploration work and further refinement of geophysical assessments of the defined magnetic anomalies was conducted and continues. From this detailed review conducted by Centralian Minerals Limited a number of geophysical anomalies were identified. Consideration will be given to a more detailed geophysical survey over these defined anomalies, with the view to generating shallow RAB targets within the prospect area.

A number of reconnaissance field trips were undertaken to inspect target areas previously tested and survey control was undertaken in these areas in preparation for future work.

6.8 EL10199 LYNX

EL 10199 consisting of 2 blocks (4.64 km²) was originally applied for by NTC in October 1998 to cover a magnetic anomaly, which has since been developed into the Chariot Gold Mine by Giants Reef. The Chariot mine is situated in the northern portion of the EL and is fully covered by Giants Reef's Mineral Leases C176, C177 and ML 23216. Development of the Chariot open pit commenced in December 2002, and was completed in March 2003. Exploration conducted on the remaining area outside of the Chariot Leases in Exploration Licence 10199 is reported henceforth. Activities conducted within the Chariot Leases will be reported in the relevant Mineral Lease Annual Reports to the Department of Business, Industry and Resource Development.

Exploration work conducted during the first two years of tenure included:

- Drilling - Giants Reef undertook a drilling program in the second half of year 2001 with the aims of acquiring geotechnical information to assist the design of the planned decline access tunnel, and to firm up and possibly expand both the shallow and deeper gold resources, as they were then known. In the EL 10199 part of the chariot deposit, 9 holes were drilled. Four of these were RC holes, three were cored from the surface, and the other two were RC with HQ core 'tails'. Totals were 594m of RC drilling and 653.4m of HQ core. Hole locations and other information are as follows:

Hole	East (local)	North (local)	Dip	Azimuth (magnetic)	Total Depth (m)
CHRC095	5479.64	2938.97	-60°	356°	108
CHRC096	5480.13	2963.71	-60°	356°	42
CHRC097	5460.01	2926.72	-60°	358°	120
CHRC098	5440.11	2967.50	-60°	355°	48

Hole	East (local)	North (local)	Dip	Azim (mag)	RC Depth (m)	Diamond Depth (m)	Total Depth (m)
CHDD091	5479.57	2950.59	-60°	359°	0	77	77
CHDD092	5479.57	2950.59	-60°	347°	0	75	75

CHDD104	5475.88	2852.56	-67°	347°	102	236.7	338.7
CHDD107	5495.25	3111.39	-65°	152°	174	155.1	329.1
CHDD114	5499.75	2925.39	-70°	355°	0	109.6	109.6

CHDD107 and CHDD114 were drilled by Stanley Drilling Co., using a Hydco 1500 rig. All other holes were drilled by Major Ponthill Pty Ltd, using a Universal 650 rig.

Significant Drill Intersections - Several significant gold intersections were returned from drilling within the Licence area during the reporting period and are tabulated below:

Hole	From (m)	To (m)	Interval (m)	Au (ppm)	Bi (ppm)	Cu (ppm)	Fe (%)
CHDD091	46.85	47.60	0.75	2.50	20	230	4.62
CHDD092	39.50	40.95	1.45	1.02	360	1100	40.20
	45.4	46.4	1.0	33.67	85	450	13.1
CHRC095	73.0	75.0	2.0	10.06	320	1245	14.5
CHRC096	14.0	21.0	7	7.10	1148	280	44.31
CHDD104	139.0	140.0	1	1.90	65	140	26.50
	250.0	251.0	1	1.70	80	320	6.30
CHDD107	268.0	277.0	9	7.49	232	1093	7.45
	282.0	288.0	6	8.76	295	171	7.28

The intersections in CHDD107 demonstrate how the ore zone bifurcates in some areas. All assay samples were sent to AMDEL's preparation laboratory in Alice Springs. Standards were inserted at regular intervals as a quality control measure.

- **Geotechnical Assessment** - Under guidance from SRK Consulting in Brisbane, Giants Reef carried out a limited geotechnical drill program at Chariot which focussed on the planned open pit, and in particular the portal area and the section of the decline within the weathered near-surface zone. Four of the nine holes in the EL 10199 portion of the deposit were drilled as part of the geotechnical program. This work included detailed geotechnical logging of the core, core photography,

geomechanical testing, sampling and assaying. The holes were logged geotechnically on site by Giants Reef personnel using the RMR methodology. Fracture frequency, strength estimates and joint conditions were logged over identified geotechnical domains before the cores were removed from the field. Colour photographs were supplied to SRK and subsequently used to audit the logs and develop geotechnical classifications. A geotechnical testing program was conducted on 58 HQ3 core samples (from both EL10199 and from adjacent ML C176 and ML C177). The test work was done by Ullman and Nolan Geotechnic in Darwin. Some of the work was forwarded on to Ullman and Nolan's Mackay laboratory. SRK Consulting then interpreted the Ullman and Nolan data and made wide-ranging recommendations with respect to the open pit design, the portal support requirements for the proposed underground development, and the expected ground conditions at depth.

- Mining Management Plan - A draft Mining Management Plan, setting out all aspects of Giants Reef's plans for bringing the Chariot gold deposit into production, was prepared and submitted to the Department of Business, Industry and Resource Development for comment. A number of comments and requests for more information were returned, and the MMP is still being revised. A delay in finalising the MMP has been caused by the need to incorporate the results of current drilling at Chariot (in ML's C176 and C177).
- Review of other Exploration Targets in EL 10199 - A magnetic anomaly called Chariot East is located near the northern boundary of EL 10199, one kilometre east of the Chariot deposit. Previous drilling here, including two diamond holes drilled by NTC during the first year of the Licence, did not produce very encouraging results. It is now planned to test the upward shallower projection of the causative magnetic body, in the top 50 metres immediately below the colluvial cover, for gold in the oxide zone such as occurs at the main Chariot deposit. Soil sample data over the Chariot East magnetic anomaly shows weak gold assay figures, similar to those found above the oxide gold zone at Chariot. A number of low-amplitude aeromagnetic anomalies are located in the central and southern parts of EL 10199. These anomalies do not appear attractive targets on first appraisal, but a more thorough assessment of them is planned for next year.

Exploration work conducted during the third year of tenure included:

- A Literature Review - Exploration Licence 10199 totally encloses the non-magnetic haematite-rich Chariot gold deposit. The EL is centred on the magnetic structural ridge extending from the Extension mine (300t @ 19.5g/t Au) to TC8 mine (80,680t @ 18g/t Au and 1.2% Cu). Consequently the EL has been subject to much interest by Giants Reef for its potential to a host orebodies of a similar style of mineralisation as Chariot mine. In July 2002 a detailed literature assessment of the EL was conducted including an assessment of the results of previous exploration conducted by NTC in the first year of tenure of EL 10199. This assessment highlighted the fact that previous exploration over the tenure had focussed on the targeting of magnetic anomalies to identify magnetic ironstone bodies. Giants Reef

noted that limited gravity data exists over the tenure and concluded that the potential for new discoveries in EL 10199 are highly likely.

- **Tenement Review Ranking** - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential of EL 10199 and the prospect areas within the Licence. The review was based on the potential to discover high-grade gold mineralisation in both magnetic and haematite-dominant ironstones. The location of the Chariot gold mine on EL 10199 made this tenement a highly prospective target area due to its structural significance. Additionally the highly developed understanding of the local geology as a consequence of the developing Chariot resource combined with the EL's location to existing mine infrastructure ranked this Licence area as a first class project. At the time of the review two target areas were identified within EL 10199. Both were categorised as prospects that are considered to be high priority exploration targets with potential for the discovery of medium to large Au (+/-Cu) resources. The possibility of the discovery of shallow gold-alone resources within the two resources is considered very favourable.
- **Chariot East Prospect** - This is a non-outcropping ironstone associated with a deep magnetic anomaly located 800m east of Chariot. No exploration has been undertaken at this prospect since 2000. Previous drilling included 1RC and 1 HQ3 diamond hole drilled by NTC during the first year of the Licence, that intersected altered magnetic ironstone at vertical depths greater than 170m. Significant drill results include 1.1m @ 1.07g/t Au from 250m (vertical) in brecciated haematite-magnetite-chlorite ironstone. Assessment by Giants Reef has shown that the zone from 10m to 150m vertical depth remains untested. This is considered a highly prospective zone by Giants Reef considering that approximately 60% of the current Chariot resource exists within the equivalent 10m to 150m zone. Soil sample data over the Chariot East magnetic anomaly shows weak gold anomalism, similar the anomaly found above the oxide gold zone at Chariot. Review of the structural data from known ironstones on the Chariot Line indicates a trend of steep north-dipping bodies. Consequently the orientation (south to north) of the Chariot East drill holes are considered inappropriate as it is quite likely that both the drill holes intersected the ironstone parallel to the plunge direction.
- **Chariot West Prospect** - This is an ironstone associated with a shallow magnetic anomaly located 300m west of Chariot. No exploration has been undertaken at this prospect since 2000, and literature reviews by Giants Reef have shown it to have been poorly tested. NTC drilled 3 RC and 1 HQ3 diamond hole at the prospect with significant results including 3m @ 1.31g/t Au from 87m in sheared chloritic sediments. The drilling confirmed the presence of haematite-magnetite ironstone at depth, however a zone from 10m to 50m vertical depth appears to be completely untested. Geophysical evidence of this zone suggests that it is shallow haematite body. Down-hole magnetic probing by NTC inferred that the causative magnetic body is relatively small, with a limited strike that may only be up to 10m wide. This may potentially be associated with a significant tonnage of non-magnetic haematite ironstone in addition to the seemingly small magnetic ironstone present.

- End of Joint Venture with Sons Of Gwalia - Until January 2003, EL 10199 was part of the Central Joint Venture 2, which covered the Chariot gold deposit and a number of other tenements in the Tennant Creek goldfield. The Joint Venture was between Giants Reef, (managers, holding 57% equity), Sons of Gwalia (replacing PacMin; 33%) and Newmont NFM (formerly Normandy NFM; 10%). Giants Reef purchased Sons of Gwalia's Joint Venture assets (43%) and became the sole owner of the CJV2 project including EL 10199.
- Negotiations with the CLC - Under the terms of Giants Reef's Lynx Exploration Agreement with the Native Title holders of the Tennant Creek region, it is necessary to obtain clearances from the Native Title holders before field parties can enter onto the Aboriginal Freehold Land. An application was submitted to the CLC which outlined a gravity survey Giants Reef proposed to undertake over EL 10199 (and adjoining tenements) and permits to enter were received by Giants Reef at the end of January 2003.
- Gravity Survey - Daishsat Pty Ltd of Murray Bridge, South Australia were contracted to undertake a gravity orientation survey and broader regional gravity survey over the Chariot orebody and surrounding tenure, including EL 10199. One Scintrex CG-3 gravity meter was used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station (Gravity base 0034). For horizontal and vertical GPS control, two Leica System 500 dual frequency GPS receivers were used. The gravity base (GPS base 099) was set up at the Chariot mine opposite a fence and gate, which was marked with a short star picket. Gravity observations were made on the regular grids set out by real-time GPS. Two observations were made for each station and each observation consisted of a 20-second or greater stacking time. Two observations were made at each station so that any seismic or instrumental noise could be immediately detected. The accepted tolerance between readings was 0.02 milligals to ensure accuracy. At the survey station the Scintrex CG3 automatically recorded the station, time and readings, which were made digitally to allow for downloading into a computer. Raw data was processed daily to check for quality and integrity. This interim process produced a set of Bougar Gravity values, which were contoured and imaged to provide a check for any anomalous reading that would require repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. At the conclusion of the job, the data was reprocessed using the standard AGSO formulae. Giants Reef's consultant geophysicist Mr Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.
- Gravity Orientation Survey - Daishsat Geodetic Surveyors commenced the close spaced ground based gravity orientation survey on the 30th January 2003 over the known Chariot mineralisation in EL 10199, which is covered by the Mineral Leases C176 and C177 and ML 23216. The gravity orientation survey was designed to provide: (a) detailed gravity information on the near-surface mineralised section of the Chariot orebody prior to mining and major ground disturbance, (b) suitable parameters for the larger regional gravity survey away from known mineralisation, (c) sterilisation of the proposed Chariot waste dump area.

The orientation survey consisted of 162 stations, completed on north-south traverses. Orientation over the Chariot Pit used 40m line traverses and a 20m station interval. Two traverses were brought in even closer (20m lines x 10m station intervals) over the pit and waste dump area to provide more detailed information. The survey accurately mapped the haematite-dominant ironstone in the open cut area, discounted the probability of dense non-magnetic rocks (haematite rich) existing below the proposed waste dump area and provided information enabling line and station spacing decisions to be made for the rest of the regional survey. The survey highlighted an area of dense, non-magnetic material immediately south of the Chariot opencut (Chariot South, in ML 23216) that requires drill testing prior to development of major mine infrastructure.

- Regional Gravity Survey - The regional gravity survey working east and west of the known mineralisation at Chariot commenced immediately after the completion of the gravity orientation survey. The regional survey was designed to provide: (a) information which could map iron-rich lithologies and assist in more focussed planning of major drilling campaigns, (b) target definition and refinement. Away from the pit area and based on the gravity orientation survey results, the regional gravity survey used 80m line with 20m station intervals. The regional gravity survey, in total, collected 1,400 stations over 43 north-south traverses. Giants Reef's consultant geophysicist Mr Frank Lindeman, of Lindeman Geophysics, Melbourne, was contracted to process, analyse and geophysically model the gravity survey data. Initial results are encouraging with several new target areas identified. The quite limited but detailed gravity survey appears to have added a new dimension to Giants Reef's understanding of the non-outcropping geology and the distribution of non-magnetic ironstone bodies within the survey area. In prospects where magnetic ironstones have been defined and also within completely non-magnetic regions, the gravity data has predicted the existence of several, (mainly shallow) haematite-rich ironstones which could be host to gold mineralisation. Remembering that the recorded density contrasts between the haematite-rich ironstone and country rock at the Chariot Deposit range between 1.0 and 2.0 gm/cc, several new bodies with similar density contrasts have been defined at relatively shallow depths with EL 10199 and surrounding survey tenure. The fact that non-magnetic ironstones hosting gold mineralisation are known to exist, yet have not really been explored for previously in the Tennant Creek Goldfield, means that the potential for new discoveries are highly likely. The gravity method used over EL 10199 and surrounding tenure has given good encouragement and for the future it will, in some form, be a valuable exploration tool. At the time of writing of this report the geophysical modelling of the gravity survey data had not been finalised.

Exploration work conducted during the forth year of tenure included:

- Meeting of Traditional Land Owners - A meeting was held in the Tennant Creek CLC building on the 18th March to negotiate the EL Applications 10198 and 23285 adjoining the EL 10199 on Aboriginal Freehold land. Approximately 40 Traditional Owners were present along with CLC and Giants Reef representatives. Senior

Geologist, Mr Steve Russell made a presentation outlining Giants Reef's proposed exploration over the EL Applications 10198 and 23285 and EL 10199. Also outlined was the current progress of mining at the Chariot mine and its implications for exploration potential along the Malbec to TC8 line. Interest was expressed by the local people for Giants Reef to continue the exploration on the Aboriginal Land, including EL 10199, however prior to the consent several issues were requested to be settled.

- **CLC Work Proposal and Clearance** - Under the terms of Giants Reef's "Lynx" Agreement with the Native Title holders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RC drilling could enter the Licence area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 10199. A site clearance for the proposed drill holes within the West TC8 Project Area, including EL 10199 was conducted. This involved a half-day trip by 4x4 vehicles to examine the various proposed drill sites and tracks. A CLC representative and a number of Traditional Owners were directed to the sites by Giants Reef's Senior Geologist for inspection. The CLC under instruction from the Traditional Aboriginal Owners of the land approved the proposed drilling activities with the one proviso, that all mature trees of any species must be protected, and stands or groups of trees must not be disturbed.
- **Drill Site Preparation** - A small loader was used in the line clearing and preparation of the 4 RC drill pads. These pads were approximately 20m x 20m in dimension. Surface vegetation was lightly scraped with care taken not to destroy seed or root stock.
- **Reverse Circulation Drilling** - Six drill sites were chosen for RC drilling at the West Traminer prospect, within EL 10199. However 2 RC holes were not drilled, resulting in 4 RC holes for an advance of 448m within the EL 10199. The drill contractor was Gomex Drilling, Dry Creek, South Australia using a RCD 150 drill rig. Samples collected during the drilling were riffle split in metre intervals. 3-metre speared, composite samples were collected and sent to North Australian Laboratories (NAL) Pine Creek for analysis. Samples were assayed for Au, Fe, Cu and Bi using FA50 and mixed-acid digest respectively. A low-grade standard was added at the end of each drill hole for analysis, to monitor quality control of laboratory results. Two composite samples were further 1-metre riffle split over an anomalous intervals (>0.1 ppm Au), in TRRC026. These were sent to NAL Pine Creek for the same method of analysis. No significant results were returned. Consultant Geophysicist Frank Lindeman of Lindeman Geophysics Pty Ltd, Melbourne recommended measuring the magnetic susceptibility of all drill chips, which was undertaken at the end of each drill hole, and noted on all drill chip logs using a Kappameter KT-5 magnetic susceptibility meter. Geological logging was completed on site, using a Hewlett Packard 200LX palmtop computer and downloaded in the evenings. Downloaded geology and magnetic susceptibility data was then validated and printed out as separate log sheets and then loaded into a

Micromine database, along with collar, survey and assay data (Appendix 1). The drilling statistics for the West Traminer prospect are as follows:

Hole No	Easting (GDA)	Northing (GDA)	Dip (deg)	Azi (deg)	Depth (m)	Date Drilled	Tenure
TRRC026	406199.86	7826699.07	-60	178	94	27-Aug-03	EL 10199
TRRC027	406341.29	7826700.89	-60	178	94	28-Aug-03	EL 10199
TRRC028	406610.31	7826699.34	-60	178	130	28-Aug-03	EL 10199
TRRC029	406500.14	7826605.82	-60	178	130	29-Aug-03	EL 10199
TOTAL					448m		

Drilling intersected Warramunga Formation sediments, typically sandstone and siltstone. No alteration was seen and no ironstone was intersected. Results were considered disappointing.

- Geophysical Review of Drilling Results - At the completion of the drill program consultant geophysicist Mr Frank Lindeman spent two weeks on site, compiling geophysical data and assessing the effectiveness of gravity as an exploration tool. Additional geophysical modelling was undertaken over remaining prospects within the West TC8 Project Area. A second gravity survey was commissioned to extend the original survey over highly prospective ground to the east and the west (including the remaining eastern portion of EL 10199).
- Gravity Survey 2 - All details of the Gravity Survey 2 remain the same as Gravity Survey 1 (EL 10199 Year 3 Annual Report: Cahill & Russell). A total of 3,086 new stations were completed in September 2003, on north south lines spaced 80m apart with station spacing of 20m. The data collected from Gravity Survey 2 was merged with the data from the Gravity Survey 1 to provide an 8.7km east west coverage along the defined Chariot Mineralised Corridor.
- West Traminer Prospect - Renamed Trident late in Normandy's Tennant Creek life, the Traminer prospect, this magnetic complex is a combination of the historical Explorers 4 and 3 (Peko). Historical review of exploration over the complex shows that considerable drilling has been conducted on the prospect targeting interpreted magnetic bodies. Earlier assessments of the Traminer prospect by Giants Reef noted that the magnetic ironstones identified by previous explorers are steeply dipping, narrow and only weakly mineralised. 3D interpretation of the ironstone(s) was completed using magnetic and gravity data for the Traminer prospect by Lindeman Geophysics. The results from the Traminer modelling show that apart from the magnetic ironstone there is considerable haematite ironstone in the geological section. This would be the target of any further exploration for gold

mineralisation at Traminer, given all previous drilling at the prospect has been directed specifically at magnetic sources.

- South East Traminer Prospect - A small area of response exists just south east of the Traminer prospect. More detailed modelling of the data in this specific area, which produced slightly different results to that completed in the gross interpretation, has produced shallow gravity sources.

Exploration work conducted during the fifth year of tenure included:

- CLC Work Proposal and Clearance - Under the terms of Giants Reef's "Lynx" Agreement with the Native Title holders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned drilling could enter the Licence area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 10199. A site clearance for proposed exploration within EL 10199 was conducted on 1st October 2004. The CLC under instruction from the Traditional Aboriginal Owners of the land approved a proposed RAB drilling program. Routine precautions to protect mature trees were requested however no protected or sacred areas were identified within the Licence area.
- Drill Site Preparation - A small loader was used to lightly clear and prepare for the upcoming RAB program. Individual drill hole pads were not constructed. Surface vegetation was lightly scraped with care taken not to destroy seed or root stock.
- RAB Drilling - Thirty four RAB holes (TRRB031 to TRRB064) were drilled for 693 metres. All holes were drilled to the south to a nominal depth of 21 metres. This drilling pattern was designed to test shallow gravity anomalies previously identified during the 2002 ground gravity survey carried over the area. Drilling intersected Warramunga Formation sediments, typically sandstone and siltstone. No alteration was seen and no ironstone was intersected. The gravity anomalies may be explained by a pisolitic iron horizon intersected in many holes at a consistent depth of 6-9 metres. No significant assay results were returned and results were considered disappointing. The drill contractor was Bostech Drilling Pty Ltd, Midland West Australia using a RCD 150 drill rig. Samples collected during the drilling were 3-metre speared, composite samples which were sent to North Australian Laboratories (NAL) Pine Creek for analysis. Samples were assayed for Au, Fe, Cu and Bi using FA50 and mixed-acid digest respectively. A low-grade standard was added at the end of each drill hole for analysis, to monitor quality control of laboratory results. Magnetic susceptibility of all drill chips, was undertaken at the end of each drill hole, and noted on all drill chip logs using a Kappameter KT-5 magnetic susceptibility meter. Geological logging was completed on site, using a Hewlett Packard iPAQ palmtop computer and downloaded in the evenings. Downloaded geology and magnetic susceptibility data was then validated and printed out as separate log sheets and then loaded into a Micromine database, along with collar, survey and assay data (Appendix 1).

- **Geophysical Review of Drilling Results** - At the completion of the drill program consultant geophysicist Mr Mat Cooper (Resource Potentials) spent one week on site, compiling geophysical data and assessing the effectiveness of gravity as an exploration tool within the Chariot Mineralised Corridor (CMC) and numerous other prospects. Mat considered the gravity anomalies to have been sufficiently tested with this shallow drilling and agreed that the anomalous gravity signature targeted was most likely to be a result of iron rich concentrations at the base of transported material. Additional geophysical modelling was also undertaken over remaining prospects outside of EL 10199 but within the West TC8 Project Area.

A portion of the exploration work completed during the sixth year of tenure included a combined quantitative/qualitative ranking, based on geological, geochemical & geophysical characteristics and other parameters covering work status, target type, land status and economics. As part of this work geochemical data sets, including all historical drilling data, were integrated into the Company's database and GIS for analysis.

An in-house detailed review of past exploration work and further refinement of geophysical assessments of the defined magnetic anomalies was conducted and continues. From this detailed review conducted by Centralian Minerals Limited a number of geophysical anomalies were identified, including prospects in the north coinciding with explorer 83 and the Copper Skipper prospect in the south of the licence. Consideration will be given to a more detailed geophysical survey over these defined anomalies, with the view to generating shallow RAB targets within the prospect area.

Other exploration work completed was within the ML's held across the licence and included further follow-up drilling at Malbec North. A scissor hole was drilled to test the previous significant result from Malbec North, this follow up hole returned low values (<<1 g/t) downgrading this prospect.

Re-modelling of the magnetic data at Malbec group and Chariot was completed. No deep targets were revealed in the vicinity of the mineralised Chariot ironstone or at depth at Malbec West.

Work commenced to define new primary gold targets with re-processing of the 1998 airborne Kevron survey to highlight medium-deep source targets and spurs.

6.9 EL10402 AMADEUS

Exploration work conducted during the first tenure year included:

- **Groundwater geochemistry** - Groundwater samples were taken from fourteen old exploration drillholes and Government test water bores in EL 8883, and from one hole in EL 10402. Other samples were taken at the same time (mid-2000) from adjoining EL's 8882 and 9309. This work was carried out prior to the granting of the two Licences, but is included in this report to complete the record of the exploration work done. The sampling was aimed at finding indications of mineralisation in the and around the regional Bluebush gravity anomaly. The sampling and analytical

techniques used have been developed over many years by the CSIRO, in particular by Senior Principal Research Scientist Angela Giblin, who visited Giants Reef's Tennant Creek offices to discuss the project. Giants Reef's field work was conducted under her guidance. An initial step was to find out the locations of all old bores and drillholes in the Bluebush area. This was done by visits to the Water Resources Section of the NT Government Department of Lands, Planning and Environment in Alice Springs, where a database on disk was obtained, and photocopies made of a large number of geological logs of all the relevant drillholes and bores. Locating the old bores and drillholes in the field proved difficult, as many were overgrown and virtually invisible, while others were dry or had caved in and could not be sampled. However, in the end a reasonably even distribution of sample points over the Bluebush gravity anomaly was achieved. Sampling involved making readings at each site for ambient and sample temperature, acidity, conductivity, water depth, sample depth, GPS location and remarks on the water quality. The sample bottles were sent to the CSIRO's laboratory at North Ryde, NSW for the sensitive analysis work. Results indicated that several of the sample sites, in the central part of the Bluebush gravity anomaly, were anomalous for one or other of the base metals or for gold, and the chemistry for some of them suggested the presence of magnetite-chlorite in the sources of their waters. No anomalous indications came from the sample taken in EL 10402, which is on the outer margins of, or completely outside, the Bluebush gravity anomaly.

- Magnetics interpretation - Giants Reef's consultant geophysicist Frank Lindeman, of Lindeman Geophysics Pty Ltd, Melbourne, carried out an interpretation of the 1999 AGSO aeromagnetic data covering the regional Bluebush gravity anomaly. He produced models of a large number of magnetic sources in the area and defined many magnetic structures visible in the data. Later, this work contributed to the process of drill site selection after the gravity survey (Section 5.5) was completed.
- Clearances from Native Title holders - Under the terms of Giants Reef's Indigenous Land Use Agreement with the Native Titleholders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned gravity survey (Section 5.5) could enter the area. Assisted by the CLC, field visits were made to the survey area, and the necessary clearances were given. One proviso was that the survey field party would stay away from salt lakes, clay pans and other natural depressions, which have special significance for the local people. In the event, this condition did not present any real difficulties for the field operations. A later clearance was obtained in the same manner for the construction of tracks and drill sites, once the results of the gravity survey had been received and target spots chosen.
- Gravity survey - A detailed helicopter-borne gravity survey was carried out in June 2001 over the Bluebush gravity anomaly. The whole survey, on a nominal grid spacing of 1km x 1km, totalled 648 stations. The survey commenced on 2nd June and finished on 6th June, 2001. The gravity survey was carried out by Daishsat Pty Ltd of Murray Bridge, South Australia, using a Bell 47 G5 helicopter (VH-TZW) hired from Heli-Muster Pty Ltd at Victoria River Downs, NT. Two Scintrex CG-3 gravity

meters were used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station. For horizontal and vertical GPS control, four GPS receivers (two Leica GPS and two Ashtech Z12's) were used. One point (station 1) was set up on top of one of the Giants Reef transportable office buildings in Tennant Creek, and the other (station 2) was a short star picket in the paddock between Giants Reef's yard and the Tennant Creek airport. Navigation in the field between stations was done using Garmin GPS II+ instruments. Generally, the reading points were within 100m of their planned round-number co-ordinates, although inevitably some stations had to be read further away from the intended locations because of ground features such as mulga thickets preventing helicopter landings at the optimal positions. Only five stations of the gravity survey were within EL 10402, in its southwest corner. The ground stations were read at 200m intervals along two 8km-long north-south profile traverses over two selected residual anomalies. Giants Reef's consultant geophysicist Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.

The detailed survey over the Bluebush gravity anomaly re-shaped the anomaly, and decisions on where to conduct the deep drilling were largely based on residual anomalies derived by Lindeman Geophysics Pty Ltd from the new information. No drill sites were chosen in EL 10402. All the information gained from the gravity survey over EL 10402 and adjacent EL's has been put into the public domain, as part of the NTGS/AGSO gravity database covering all of the Tennant Creek 1:250,000 sheet and parts of some the adjoining 1:250,000 sheets that was released in late 2001.

Within the Moscow prospect (EL 10402), the Giants Reef gravity survey did not cover more than a small portion EL 10402 in its southwest corner, because it appeared to be on the very margins of the Bluebush regional anomaly. However, the new NTGS/AGSO gravity data released in 2001 shows a separate discrete residual Bouguer anomaly in the west-central part of EL 10402, which coincides with a very prominent aeromagnetic anomaly. These coincident anomalies are in an area of no outcrop. This target was explored on the surface by Poseidon Gold Limited under EL 7691 between 1992 and 1995, and was referred to as the "Moscow" or "Westcow" prospect. Giants Reef prefers the name Moscow. A grid was marked out over the anomaly area, from (AGD84) AMG co-ordinates 390500E to 392000E, and from 7820100N to 7821750N, and Poseidon carried out ground magnetics and shallow vacuum (geochemical) drilling to an average depth of 6.1 metres. To Giants Reef's knowledge, there has been no deep drilling here by Poseidon or other companies in the past, and the coincident anomalies remain unexplained.

The magnetic anomaly appears to have the characteristics of a possibly larger than normal Tennant Creek-type of ironstone mass, although it could also be caused by a magnetic igneous intrusion, or by some other geological feature, perhaps related to a non-Tennant Creek style of mineralisation. Giants Reef is at present working on modelling the causative magnetic source body using the Poseidon ground magnetics data, with a view to drilling the target if the modelling gives sufficient justification.

Exploration work conducted during the second year of tenure included:

- **Magnetic Modelling of the Moscow Anomaly** - The Moscow remanent magnetic anomaly is a prominent and discrete anomaly near the western boundary of EL 10402 Amadeus, at approximate co-ordinates 390500E 7820800N. It is outside the Bluebush gravity anomaly. No deep holes have ever been drilled there and its cause is unknown. The source may be a magnetic intrusion, a (large) Tennant Creek-style ironstone body, or something else. Consultant geophysicist Mr Frank Lindeman of Lindeman Geophysics Pty Ltd, Melbourne reviewed and assessed the Moscow geophysical data. Mr Lindeman was asked to comment on the relationship between the magnetic response and Bouguer gravity anomaly located quite close to the magnetic high within EL 10402. On analysis of the Bougar gravity data Mr Lindeman found there are no gravity stations within the project area; the closest station is approximately 500m to the east, but in all other directions the stations are considerably further away. The prospect is therefore poorly covered by the gravity stations and although the station to the east is a peak response there is no evidence to point to the magnetic anomaly having a coincident gravity response. Using the magnetic data, the position of the actual magnetic source was defined with the use of the analytic signal. Mr Lindeman modelled the data using the POTENT program and calculated the Moscow anomaly to have a depth to top of source of approximately 100m. One 150m reverse circulation hole was planned to test this anomaly (MORC-001).
- **Clearances from Native Title holders** - Under the terms of Giants Reef's Indigenous Land Use Agreement (ILUA) with the Native Titleholders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RC drilling could enter the area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 10402 at the end of the first tenure year. The Central Land Council representing the Traditional Aboriginal owners of the land approved the proposed drilling activities in May 2002. One proviso was that access tracks must be constructed so as to avoid exclusion zones. The approvals were given by the CLC on the basis of the results of site clearances carried out last year in response to work programs for EL 10402.
- **NT Geological Survey Visit** - Two geologists from the NT Geological Survey (NTGS), Mr Nigel Donnelland and Mr Mike Green, arrived on the 14th May to take petrography and possible age-dating samples from the cores of the three Bluebush diamond holes (BBRD-001, 002 & 003) that were drilled in 2001. They collected about 15 core specimens for further work, and were given all relevant data, including drill logs, assays and the petrology reports with the thin sections. It appears that the NTGS regards the intrusives and volcanics in these holes as belonging to the Flynn Sub-group. The NTGS have since indicated that they will not do age-dating on the samples, which is disappointing considering that the samples are from the deepest holes drilled to date in the area. Mr Michael Green from the NTGS informally commented on the rocks intersected in BBRD-002 and recommended further exploration at this target.

- Clearing of Tracks and Drill Pads - A new track 2km long heading north from the road to Kunayungku was constructed to access the Moscow prospect in EL 10402.
- Reverse Circulation Drilling - The drilling contractor was Gomex Drilling, of Dry Creek, South Australia. The total amount of reverse circulation drilling by Gomex Drilling in EL 10402 was 160m. Samples collected during the drilling were riffle split in metre intervals. A total of 278 1-metre split and 92 3-metre speared composite samples were collected and sent to AMDEL for analysis. All samples were assayed for Au by AMDEL method FA3, and for Cu, Bi, Fe, Ag, As, Cd, Co, Mn, Mo, Ni, Pb, Zn, Cr, P, Sb, and V, by AMDEL method IC2E. No significant geochemical anomalies were observed in the results however low order base metal anomalism was present in a couple of the holes. Although most of the drill holes were targeting residual gravity anomalies, several had coincident magnetic anomalies. Consultant Geophysicist Frank Lindeman of Lindeman Geophysics Pty Ltd, Melbourne recommended measuring the magnetic susceptibility of all drill chips, which subsequently has been carried out and recorded on all drill chip logs using a Kappameter KT-5 Magnetic Susceptibility Meter. Geological logging was completed on site, using a Hewlett Packard 200LX palmtop computer and downloaded in the evenings. Downloaded geology data was then validated and printed out as separate log sheets and then loaded into a Micromine database, along with collar, survey and assay data. Detailed drilling statistics are summarised in Table 1:

Drilling statistics for EL 10402 are as follows:

Hole ID	Drill Date	Pre drill name	Easting	Northing	Azimuth	Depth (m)	Drill Company
MORC-001	19/09/02	Moscow	391147	7820801	Vertical	160	GOMEX

No substantial mineralisation was found in the drilling.

Moscow - The holes into the basement of EL 10402 encountered a magnetic intrusion, which would account for the observed magnetic anomaly. The Moscow hole was drilled to test the remanently magnetised source. The hole made two intersections of weakly magnetic material which, given the strong remanence in the area is enough to explain the ground magnetic response. The background magnetic susceptibilities down to 60m down hole are $<0.4 \times 10^{-3}$ SI units. The first magnetic unit was intersected between 60 and 95m with magnetic susceptibility values in the same order of 2 to 4×10^{-3} SI units. The second magnetic response is recorded between 115m and the end of the hole, with magnetic susceptibility values in the range of <0.5 to 1.0×10^{-3} SI units.

- Petrography - Several RC chip basement samples were sent for petrographic study to Ian Pontifex and Associates Pty Ltd, Adelaide, for rock identification and description. At least one thin section specimen had been taken from all the holes

drilled in EL 10402. From the petrography and the overall geochemistry, it is interpreted that the basement rocks examined in EL 10402 are from an intraplate, extensional environment.

- **CLC Liaison Committee Meeting** - A liaison committee meeting was held at Alekerenge Community in October 2002. The purpose of the meeting was to inform the Traditional Owners of the status of exploration in the Bluebush Project area including EL 10402. This included the main areas of interest for Giants Reef, drilling results, and expected future exploration over the project area. The CLC representatives, 17 Aboriginal Owners, and Giants Reef representatives were present. Giants Reef's Exploration Manager, Mr Peter Simpson gave a presentation about the exploration activities that had been carried out on the Land. The drinkable water that was found in many of the holes was reported. The Traditional Owners showed considerable interest in the prospect of drinkable water and expressed interest in the possibility of setting up a water bore near the Kunayungku Community.
- **Tenement Review** - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential of EL 10402 and the prospects within the Licence. Assessment of the EL recognised that the Licence contains a magnetic anomaly which is indicative of Tennant Creek style gold-copper occurrences (but which are not BHP Billiton targets). The review recommended that Giants Reef substantially reduce the tenement holding of EL 10402 to retain only the areas covering the targets which may still hold potential for Tennant Creek style shallow or substantial gold mineralisation. At the end of the second tenure year Giants Reef reduced EL 10402 from 20 to 10 graticular blocks. The northern portion of the tenement was retained, being the location of the traditional Tennant Creek style gold-copper anomalies that have been identified within the Licences.
- **Alliance Meeting** - A technical meeting was held between Giants Reef and BHP Billiton in Melbourne on the 2nd December 2002. The meeting focussed on recent drilling results from the Bluebush Project Area. Information was presented to BHP Billiton representatives. The results from the Bluebush exploration program conducted over the last two years was assessed. It was concluded that no significant geochemical intersections were identified in the drilling and no substantial mineralisation had been found in the Bluebush project area. In summary the findings from the drilling were disappointing and not of sufficient interest to the Alliance to consider any follow up exploration. Recommendations were made by BHP Billiton and Mr Frank Lindeman that the Falcon airborne gradiometer may be a useful application in the Bluebush area by identifying structures not already identified. There was no suggestion however, that any airborne gravity survey would be conducted under the Alliance. The minutes from the meeting were accepted as accurate, and were signed on the 16th December 2002 by Giants Reef and BHP Billiton.

Exploration work conducted during the third year of tenure included:

- **Termination of Strategic Alliance** - In early 2003, BHP Billiton indicated to Giants Reef that they no longer wished to continue with the Strategic Alliance. Giants Reef prepared a summary report for BHP Billiton detailing all the exploration conducted over the joint venture tenements, including EL 10402 during the period of the Strategic Alliance between 1999 to 2003. Correspondence from BHP Billiton on the 25th July 2003, confirmed the termination of the Bluebush Joint Venture and hence the closure of the Strategic Alliance.
- **Strategic Planing** - No on-ground exploration was conducted over the Licence during the year. Giants Reef reviewed the geological targets and models for the exploration Licence to assess the likelihood of an immediate discovery. The review recognised a number of magnetic anomalies within EL 10402 which are indicative of Tennant Creek style gold-copper occurrences.

Exploration work conducted during the forth year of tenure included:

- **Tenement Ranking** - EL 10402 was included within a package of tenements which were subject to a combined quantitative/qualitative ranking, based on geological, geophysical & geophysical characteristics and other parameters covering work status, target type, land status and economics. The tenement was down graded to "Non-Core B" which includes areas comprising only limited Warramunga Formation, weak or no magnetic anomalies and no proven corridors of mineralisation. Although the review identified a number of weak magnetic anomalies within the EL which are indicative of Tennant Creek style gold-copper occurrences, the prospectivity of the EL to host economic gold/copper mineralisation was downgraded for the following reasons; a.) The EL contains no units of prospective Warramunga Formation and more than 98% of the geology is comprised of granites. The remainder of the EL includes younger Ooradidgee Group volcanics and minor dolerite and or lamprophyre dykes. b.) Drill testing of the Moscow magnetic anomaly (BHP Billiton Alliance) has downgraded the potential of the magnetic anomaly. However the area proposed for reduction does not contain the latter. c.) The area proposed for relinquishment comprises mostly granites and a very small portion of dolerite and or lamprophyre dykes. Whilst the area proposed for reduction is largely under explored it is considered to be a very low priority target area.

The main work completed during the fifth year of tenure included a combined quantitative/qualitative ranking, based on geological, geochemical & geophysical characteristics and other parameters covering work status, target type, land status and economics. As part of this work geochemical data sets, including all historical drilling data, were integrated into the Company's database and GIS for analysis.

An in-house detailed review of past exploration work and further refinement of geophysical assessments of the defined magnetic anomalies was conducted and continues. From this detailed review conducted by Centralian Minerals Limited a number of geophysical anomalies were identified, including a subtle anomaly in the south central of the licence. Consideration will be given to a more detailed geophysical survey over these defined anomalies, with the view to generating shallow RAB targets within the prospect area.

6.10 EL22240 MORGAN

Exploration Licence 22240 was originally applied for by NTC to fill a narrow gap between the Malbec Claims (MCs C527, C528 and C528) and nearby EL's to the west and to the north also held by NTC. The Malbec Claims are partially located within the EL on the north western margin. Additionally, ML C176, part of the Chariot Mine Leases, partially lies over the western margin of EL 22240.

Exploration conducted on the remaining area outside of the Malbec Claims and the Chariot Lease, in Exploration Licence 22240 is reported henceforth. Activities conducted within the Malbec Claims and the Chariot Leases will be reported in the relevant Annual Reports to the Department of Business, Industry and Resource Development.

Exploration work conducted during the first year of tenure included:

- A desk-top data evaluation and brief geophysical review - The review found that no obvious magnetic targets exist within EL 22240, in contrast to the Malbec Claims, which enclose two very prominent magnetic anomalies. There appears to be little possibility of the Malbec ironstone masses, as presently defined by drilling and magnetics, extending north or south into EL 22240. A low possibility exists for the presence of non-magnetic (i.e., haematite-hosted) gold mineralisation within the EL. If so, extensions into EL 22240 of the interpreted north-south fault that separates the two Malbec ironstone bodies may be the controlling factor for mineralisation of this nature.

Santexco worked on a budget that included the provision for carrying out RC and diamond drilling at Malbec, within MCs C527, C528 and C528, to follow up several encouraging gold intersection in drillholes by Normandy several years ago. A number of collars were required to be drilled from outside these Claims, in EL 22240.

Exploration work conducted during the second year of tenure included:

- A Literature Review - Exploration Licence 22240 is located less than 1km west of the non-magnetic haematite-rich Chariot gold mine. The EL and the Chariot mine are positioned on the magnetic structural ridge extending from the Extension mine (300t @ 19.5g/t Au) to TC8 mine (80,680t @ 18g/t Au and 1.2% Cu). Consequently the EL and surrounding tenure has been subject to much interest by Giants Reef for its potential to a host orebodies of a similar style of mineralisation as Chariot mine. The review found that no obvious magnetic targets exist within the reporting area EL 22240, in contrast to the Malbec Claims, which enclose two very prominent magnetic anomalies. The review concluded that there appeared to be little possibility of the Malbec ironstone masses, as was defined by the current drilling and magnetics, of extending north or south into EL 22240. It was noted that a low possibility exists for the presence of non-magnetic (i.e., haematite-hosted) gold mineralisation within the EL. If so, extensions into EL 22240 of the interpreted north-south fault that separates the two Malbec ironstone bodies may be the

controlling factor for mineralisation of this nature. This assessment also highlighted the fact that previous exploration over the tenure had focussed on the targeting of magnetic anomalies to identify magnetic ironstone bodies. Giants Reef noted that limited gravity data exists over the tenure and concluded that the potential for new non magnetic haematite-hosted discoveries within EL 22240 are likely.

- **Tenement Review Ranking** - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in September 2002 assessed the future exploration potential of EL 22240 and the prospect areas within the Licence. EL 22240 was assessed together with MC C526-C528 (Malbec prospect). The review was based on the potential to discover high-grade gold mineralisation in both magnetic and haematite-dominant ironstones. The location of the Chariot gold mine west of EL 22240 made this tenement a highly prospective target area due to its structural significance. Additionally the highly developed understanding of the local geology as a consequence of the developing Chariot resource combined with the EL's location to existing mine infrastructure ranked this Licence area as a first class project. At the time of the review no target areas were identified within EL 22240, outside of the Malbec Claims. The large Malbec magnetic anomaly caused by the drilled ironstone within the Malbec Claims was viewed by Giants Reef as having the potential to host a large shallow gold deposit and the potential for a deposit the size of Chariot was considered very high. Although the reporting area of EL 22240 displays no magnetic targets, Giants Reef views the possibility for a non magnetic hematite deposit within the Licence area very probable. The prospect area was prioritised for immediate gravity based exploration to highlight new non-magnetic targets. Overall, the Malbec prospect (EL 22240, MC C526-528) was ranked by Giants Reef as a high priority exploration target with the potential for the discovery of medium to large Au (+/-Cu) resources. The possibility of the discovery of a shallow gold-alone resources within the area is considered very favourable.
- **End of Joint Venture with Sons of Gwalia** - Until January 2003, EL 22240 formed part of the Central Joint Venture 2, which covered the Chariot gold deposit and a number of other tenements in the Tennant Creek goldfield. The Joint Venture was between Giants Reef, (managers, holding 57% equity), Sons of Gwalia (replacing PacMin; 33%) and Newmont NFM (formerly Normandy NFM; 10%). Giants Reef purchased Sons of Gwalia's Joint Venture assets (43%) and became the sole owner of the CJV2 project including EL 22240.
- **Negotiations with the CLC** - Under the terms of Giants Reef's ILUA with the Native Title holders of the Tennant Creek region, it is necessary to obtain clearances from the Native Title holders before field parties can enter onto land covered under the ILUA. An application was submitted to the CLC which outlined a gravity survey Giants Reef proposed to undertake over EL 22240 (and adjoining tenements) and permits to enter were received by Giants Reef at the end of January 2003.
- **Gravity Survey** - Daishsat Pty Ltd of Murray Bridge, South Australia were contracted to undertake a gravity orientation survey and broader regional gravity

survey over the Chariot orebody and surrounding tenure, including EL 22240. One Scintrex CG-3 gravity meter was used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station (Gravity base 0034). For horizontal and vertical GPS control, two Leica System 500 dual frequency GPS receivers were used. The gravity base (GPS base 099) was set up at the Chariot mine opposite a fence and gate, which was marked with a short star picket. Gravity observations were made on the regular grids set out by real-time GPS. Two observations were made for each station and each observation consisted of a 20-second or greater stacking time. Two observations were made at each station so that any seismic or instrumental noise could be immediately detected. The accepted tolerance between readings was 0.02 milligals to ensure accuracy. At the survey station the Scintrex CG3 automatically recorded the station, time and readings, which were made digitally to allow for downloading into a computer. Raw data was processed daily to check for quality and integrity. This interim process produced a set of Bouguer Gravity values, which were contoured and imaged to provide a check for any anomalous reading that would require repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. At the conclusion of the job, the data was reprocessed using the standard AGSO formulae. Giants Reef's consultant geophysicist Mr Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.

- Gravity Orientation Survey - Daishsat Geodetic Surveyors commenced the close spaced ground based gravity orientation survey on the 30th January 2003 over the known Chariot mineralisation in EL 10199, which is covered by the Mineral Leases C176 and C177 and ML 23216. The gravity orientation survey was designed to provide: (a) detailed gravity information on the near-surface mineralised section of the Chariot orebody prior to mining and major ground disturbance, (b) suitable parameters for the larger regional gravity survey away from known mineralisation, (c) sterilisation of the proposed Chariot waste dump area. The survey accurately mapped the haematite-dominant ironstone in the open cut area and provided information enabling line and station spacing decisions to be made for the wider regional gravity survey.
- Regional Gravity Survey - The regional gravity survey working east and west of the known mineralisation at Chariot, commenced immediately after the completion of the gravity orientation survey. The survey coverage included EL 22240 and the Malbec Claims. The regional survey was designed to provide: (a) information which could map iron-rich lithologies and assist in more focused planning of major drilling campaigns, (b) target definition and refinement. Away from the pit area and based on the gravity orientation survey results, the regional gravity survey used 80m line with 20m station intervals. The regional gravity survey, in total, collected 1,400 stations over 43 north-south traverses. 52 stations were taken over 2 north-south traverses within the reporting area of EL 22240. Giants Reef's consultant geophysicist Mr Frank Lindeman, of Lindeman Geophysics Pty Ltd, Melbourne, was contracted to process, analyse and geophysically model the gravity survey data. Initial results were encouraging with several new target areas identified.

- **Geophysical Modelling** - Giants Reef's consultant geophysicist Mr Frank Lindeman assessed and geophysically modelled the collected data from the Chariot to Malbec gravity survey. This included the gravity data over EL 22240, which was referred to as the Malbec West prospect area by Giants Reef. Interpretation of the gravity data over the Malbec West prospect suggests the existence of a small body with a small density contrast within the reporting area of EL 22240, directly west of the Malbec prospect. There is no magnetic anomalism to support the gravity response. The modelled gravity response for the body (5) suggests a shallow depth to top (25m). The body however has a predicted density contrast of less than 0.2 gm/cc which possibly does not reflect buried haematite ironstone but rather sub-outcropping geology. Mr Lindeman proposed that this gravity anomaly may possibly be due to a weathering phenomenon.
- **Mine Management Plan** - Giants Reef submitted a Mining Management Plan, detailing all aspects of Giants Reef's plans to drill test the gravity anomaly identified within EL 22240. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) under Authorisation 0148-01. Pursuant to condition 4 of the Authorisation, a security of \$6,000 was lodged with DBIRD. This security covered all the tenements included within the West TC8 Project Area, of which includes EL 22240. Release of the \$6,000 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0148-01).
- **CLC Work Proposal and Clearance** - Under the terms of Giants Reef's ILUA Agreement with the Native Title holders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RC drilling could enter the area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 22240 (with EL 9935) in May 2003. A site clearance for the proposed drill holes within the West TC8 Project Area, including EL 22240 was conducted. This involved a day trip by 4x4 vehicles to the proposed drill sites and tracks. A CLC representative and a number of Traditional Owners were directed to the sites by Giants Reef's Senior Geologist for inspection. The CLC representing the Traditional Aboriginal Owners of the land approved the proposed drilling activities in June 2003. One proviso was that all mature trees of any species must be protected, and stands or groups of trees must be protected.
- **Drill Site Preparation** - In order to access the Malbec West drill holes, the existing baseline from Malbec Prospect west to the Amadeus Basin to Darwin Gas Pipeline – Tennant Creek Spur was re established and extended. A total of 1.6km was cleared, passing through EL 22240. The base line was marked every 40m with grid pegs. A gate was built within the north-south fence separating Aboriginal Freehold Land (EL 10199) and Tennant Creek Pastoral Land which enabled access into EL 22240. Grid lines were lightly cleared to allow access to the drill sites. A small loader was used in the line and the clearing preparation of the drill pads.

- Reverse Circulation Drilling - This program included two 100m holes to test the shallow gravity anomaly (Body 5), west of the Malbec ironstone within the reporting area of EL 22240. Details of the RC holes at the Malbec West prospect, in EL 22240 area as follows;

HOLE	TARGET	EASTING	NORTHING	DIP	AZI	DEPTH
A	Malbec West	403950	7826600	-60	180	100
B	Malbec West	403950	7826650	-60	180	100

Exploration work completed over remaining tenure years included:

- Mine Management Plan - Giants Reef submitted a Mining Management Plan, detailing all aspects of Giants Reef's plans to drill test the gravity anomaly identified within EL 22240. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) under Authorisation 0179-01. Pursuant to condition 4 of the Authorisation, a security of \$6,000 was lodged with DBIRD. This security covered all the tenements included within the West TC8 Project Area, of which includes EL 22240. Release of the \$6,000 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-01).
- CLC Work Proposal and Clearance - Under the terms of Giants Reef's ILUA Agreement with the Native Title holders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RC drilling could enter the area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 22240 in May 2003. A site clearance for the proposed drill holes within the West TC8 Project Area, including EL 22240 was conducted. This involved a day trip by 4x4 vehicles to the proposed drill sites and tracks. A CLC representative and a number of Traditional Owners were directed to the sites by Giants Reef's Senior Geologist for inspection. The CLC representing the Traditional Aboriginal Owners of the land approved the proposed drilling activities in June 2003. One proviso was that all mature trees of any species must be protected, and stands or groups of trees must be protected.
- Further evaluation of RC Drilling - TKRC003 – was drilled to 100m and intersected a sequence of monotonous sand and siltstone beds belonging to the Warramunga Formation. Small (1-3m) beds of graphitic shale and siltstone was noted at various depths. No ironstone was seen within the drill hole. No significant gold or base metal assays were returned from the this hole. Samples were analysed for Au (1ppb DL), Cu (0.01 ppm DL), Bi (20 ppm DL) and Fe (0.01% DL), by 50 gram fire assay and mixed acid digest. Northern Australia Laboratories, of Pine Creek completed the analytical test work.

TKRC004 – was drilled 50 metres to the North of TKRC003 and to a depth of 80m. As in the first hole the Warramunga Fm sediments were once again intersected. The graphitic beds identified in TKRC003 were not seen in this hole and no ironstone was intersected. No significant gold or base metal assays were returned from this hole. The gravity anomaly is explained by:

- Transported gravel consisting of pisolitic maghaemite and quartz pebbles intersected in both holes from 0 to 5 metres. This material is quite dense and weakly magnetic.
- Haematite stained, blocky quartz veining intersected in both holes from 19 to 22m in TKRC003 and 6 to 16m in TKRC004. A density contrast (anomaly) would easily be produced when considering the contrast between powdery kaolinised sediments and more competent massive vein quartz.
- Mine Management Plan - Giants Reef submitted an Updated Mining Management Plan in July 2004, detailing all aspects of Giants Reef's plans to explore along the Chariot Mineralised Corridor including areas within EL 22240. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) and re-issued under Authorisation 0179-02. Pursuant to condition 4 of the Authorisation, an additional security of \$1,250 was lodged with DBIRD increasing the security payment to \$7,250. This security covered all the tenements included within the West TC8 Project Area MMP, of which includes EL 22240. Release of the \$7,250 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-02).
- CLC Work Proposal and Clearance - Under the terms of Giants Reef's ILUA Agreement with the Native Title holders of the Tennant Creek region, it was necessary to obtain clearances from the Native Title holders before the field party for the planned RAB drilling could enter the area. A work program was submitted to the CLC which outlined the work Giants Reef proposed to undertake over EL 22240 in October 2004. A site clearance for the proposed drill holes within the West TC8 Project Area, including EL 22240 was conducted in September 2004. This involved a day trip by 4x4 vehicles to the proposed drill sites and tracks. A CLC representative and a number of Traditional Owners were directed to the sites by Giants Reef's Senior Geologist for inspection. The CLC representing the Traditional Aboriginal Owners of the land approved the proposed drilling activities on 28 September 2004. One proviso was that all mature trees of any species must be protected, and stands or groups of trees must be protected.
- RAB Drilling - Six Rotary Air Blast (RAB) holes were drilled within EL 22240 targeting weak, low-order gravity anomalies (MARB069 – MARB072) for a total of 126m. The drill contractor was Bostech Drilling Services of Western Australia. Samples collected were placed directly from the drill rig cyclone in metre intervals onto the ground. 3-metre speared, composite samples were collected and sent to North Australian Laboratories (NAL), Tennant Creek for analysis. Samples were assayed for Au, Fe, Cu and Bi using FA50 and mixed-acid digest respectively. A

low-grade standard was added at the end of each drill hole for analysis, to monitor quality control of laboratory results. No anomalous intervals (>0.1 ppm Au), were returned from this drilling. Geological logging was completed on site, using an IPaq palmtop computer and downloaded in the evenings. Downloaded geology data was then validated and printed out as separate log sheets and then loaded into a Micromine database, along with collar, survey and assay data. The drilling statistics for drilling completed within EL 22240 are as follows:

Hole No	Easting (GDA)	Northing (GDA)	Dip (deg)	Azi (deg)	Depth (m)	Date Drilled	Tenure
MARB067	404185.00	7826880.00	-60	178	21	9/11/2004	EL 22240
MARB068	404310.00	7826880.00	-60	178	21	12/09/2004	EL 22240
MARB069	404055.00	7826800.00	-60	178	21	12/09/2004	EL 22240
MARB070	404055.00	7826820.00	-60	178	21	12/09/2004	EL 22240
MARB071	404055.00	7826840.00	-60	178	21	12/09/2004	EL 22240
MARB072	404055.00	7826860.00	-60	178	21	12/09/2004	EL 22240
TOTAL					126m		

Drilling intersected Warramunga Formation sediments, typically sandstone and siltstone. No alteration was seen and no ironstone was intersected. Results were considered disappointing.

6.11 A23236 UDALL ROAD

A23236 was acquired by Giants Reef Exploration Pty Ltd to search for IOCG deposits hosted in Warramunga Formation units within the Chariot Mineralised Corridor. This was underpinned with the coverage of the area by the Kevron aeromagnetic survey carried out by Normandy in 1998, which had not been fully evaluated.

This survey highlighted two magnetic features located approximately 1 and 2 km east of the TC8 mine, referred to as the "Gibbet" and TC3 (Gibbet East) magnetic anomalies. These magnetic anomalies do not appear to have been tested as part of the regional vacuum geochemistry drilling campaigns undertaken by Normandy, and the TC3 has yet to be drill tested.

Exploration work during the first year of tenure included:

- A literature review – This review identified 3 target areas that required further investigation.

- A brief assessment of the prospectivity - This assessment highlighted the fact that previous exploration over the tenure had focussed on the targeting of magnetic anomalies to identify magnetic ironstone bodies. Giants Reef noted that limited gravity data exists over the tenure and concluded that the potential for new discoveries in A 23236 are highly likely.

Exploration work conducted during the second year of tenure included:

- Historical Data Compilation - During the second year of tenure Giants Reef employed a dedicated data administrator to assist with the compilation and validation of the extensive paper and digital database currently held by the Company. The CMC was prioritised as a key area and included EL 23284. This work indicates that there has been minimal historical or modern exploration conducted within the Licence area. The majority of work completed in the area has occurred within the various Mineral Leases and Claims in the southern portion of the Licence area and therefore not subject to this report.

6.12 EL23284 CORRIDOR 1

EL 23284 consisted of 6 blocks (6.51km²) when first applied for by Giants Reef, to cover an area of land proximal to the TC8 mine and the developing Chariot gold deposit (250K oz Au). Both of which occur within the same structural corridor (CMC). The land had been part of the Reservation from Occupation No. 22439, covering the Darwin to Alice Springs Railway Corridor. On the 25th July 2001 the Reservation was revoked as the Railway Corridor was reduced to 800m wide, and an additional portion of the land covered by EL 23284 became available on the 1st August 2001.

Several granted Mineral Claims and Leases are located within Exploration Licence 23284. These are located on the southern boundary of the Licence area and extend east and west. Exploration activities within these tenements are subject to individual tenement reports and will not be reported in this Annual Report.

TENEMENT	NAME	TITLE HOLDER
ML C66 – C67	TRAMINER	Santexco Pty Ltd (GRM)
ML C18	WEST GIBBET	Santexco Pty Ltd (GRM)
MC C55 & C57	MONDUESE	Santexco Pty Ltd (GRM)
MC C56	SHIRAZ	Santexco Pty Ltd (GRM)

Exploration conducted on the remaining area outside of the Mineral Claims and Leases in Exploration Licence 23284 are reported below.

Exploration work conducted during the first year of tenure included:

- Literature Review - Exploration Licence 23287 is located approximately 5km east of the non-magnetic haematite-rich Chariot Gold Mine, and less than 1km east of the TC8 mine. The Licence, TC8 and Chariot mine are positioned on the magnetic structural ridge (corridor) extending from the Extension mine (300t @ 19.5g/t Au) to TC8 mine (80,680t @ 18g/t Au and 1.2% Cu). Consequently the EL and surrounding tenure has been subject to much interest by Giants Reef for its potential to host orebodies of a similar size and style of mineralisation as the Chariot mine. Interest has further increased with the recently discovered Malbec West Gold Mine (900m west of Chariot) commencing production in September 2004. Geophysical data identified several, quality magnetic targets currently held under Mineral Claims and Leases in the southern part of the Licence. Three lower amplitude magnetic anomalies were identified within the Licence as described below:

Anomaly Name	GDA_East	GDA_North
Analytic - 1	408210	7827050
Analytic - 2	408450	7826120
Analytic - 3	409850	7826230

No other obvious magnetic targets exist within the reporting area EL 23286, in contrast to the Monduese, Traminer, Shiraz and West Gibbet Leases and Claims, which enclose the more prominent magnetic anomalies within the area.

- Tenement Review Ranking - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities assessed the exploration potential of EL 23284. The review was based on the potential to discover high-grade gold mineralisation in both magnetic and haematite-dominant ironstones at shallow (<100m depths). The location of the Chariot mine and TC8 gold mines to EL 23284 along the Chariot trend made this Exploration Licence a highly prospective target area due to its structural significance and probable complexity. Additionally the highly developed understanding of the local geology as a consequence of continued exploration on the Chariot resource, combined with the EL's location to existing mine infrastructure ranked this Licence area as a high priority exploration project area.
- Gravity Survey - A detailed ground gravity survey was conducted within EL 23284 as part of a broader, regional survey covering most of the Chariot Mineralised Corridor. Survey specifications are as follows:
 - Techniques Employed – GPS, Gravity

- Station Spacing – 20 metres
- Line Spacing – 80 metres
- Gravity Meter – Scintrex CG-3 SN 9408275, 970465
- GPS – Leica SR530
- Stations (EL23284) - 797

The survey was carried out during September 2003 and was completed by Daishsat Pty Ltd of Murray Bridge, South Australia. One Scintrex CG-3 gravity meter was used for the gravity data acquisition. Each loop started and ended at the Tennant Creek airport gravity base station (Gravity base 0034). For horizontal and vertical GPS control, two Leica System 530 dual frequency GPS receivers were used. The gravity base (GPS base 099) was set up at the Chariot mine opposite a fence and gate, which was marked with a short star picket. Gravity observations were made on the regular grids set out by real-time GPS. Two observations were made for each station and each observation consisted of a 20-second or greater stacking time. Two observations were made at each station so that any seismic or instrumental noise could be immediately detected. The accepted tolerance between readings was 0.02 milligals to ensure accuracy. At the survey station the Scintrex CG-3 automatically recorded the station, time and readings, which were made digitally to allow for downloading into a computer. Raw data was processed daily to check for quality and integrity. This interim process produced a set of Bouguer Gravity values, which were contoured and imaged to provide a check for any anomalous reading that would require repeating. Geosoft GRAVRED software was used for the gravity reduction in the field. At the conclusion of the job, the data was reprocessed using the standard AGSO formulae.

Giants Reef's consultant geophysicist Mr Frank Lindeman was on hand in Tennant Creek to supervise the survey on a day-by-day basis.

Several low order bouguer gravity anomalies were identified within the Licence area. These anomalies were ranked along with numerous others within the CMC by Lindeman, of Lindeman Geophysics. No high priority gravity anomalies were identified within EL 23284.

Due to Giants Reefs exploration commitments within the last tenure year being focussed on drill testing of the various gravity anomalies generated from the broader gravity survey, no other on-ground exploration was conducted over EL 23284. Further modelling and refinement of the gravity data with EL 23284 will continue next year.

- Mine Management Plan - Giants Reef submitted a Mining Management Plan, detailing all aspects of Giants Reef's plans to explore along the CMC. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) under Authorisation 0179-01. Pursuant to condition 4 of the Authorisation, a security of \$6,000 was lodged with DBIRD. This security covered

all the tenements included within the West TC8 Project Area, of which includes EL 23284. Release of the \$6,000 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-01).

Exploration work completed during the second year of tenure included:

- Gravity Modelling - A detailed ground gravity survey was conducted within EL 23284 as part of a broader regional survey in 2003 as detailed above. Further modelling and refinement of the gravity data collected within EL 23284 continued during the second year. Three low-order gravity anomalies have been identified for further investigation.

1. Grav 1 – 407800mE / 7827200mN

2. Grav 2 – 409200mE / 7827350mN

3. Grav 3 – 409670mE / 7827200mN

Although these bouguer gravity anomalies are considered low order, encouragement is provided that low-magnetic ironstones hosting gold mineralisation are known to exist within the corridor. These lower order anomalies with the Licence may represent potential for new, shallow gold mineralisation. These anomalies are ranked along with numerous others within the CMC.

- Reconnaissance - Three lower amplitude analytic signal magnetic anomalies were identified for further work. Two of the three anomaly sites were subsequently visited in May 2005. It was hoped that these anomalies may have a surface expression that may be geologically mapped and sampled. Both anomalies are located north of the Chariot Haul Rd. Exact locations are provided below;

Anomaly Name	GDA_East	GDA_North
Analytic - 1	408210	7827050
Analytic - 2	408450	7826120

Although no ironstone or sediment outcrop was located at either site, the area is suitable for a soil sampling program or preferably a vacuum drilling program. Gravity over the anomaly area has identified two weak low-order residual bouguer gravity anomalies which are coincident with the Analytic-1 and 2 analytic magnetic anomalies. A brief description of each area is below.

Analytic – 1 This is the western and weaker of the two anomalies. The area is typically flat-lying, covered with sand and fine silty soil. No outcrop was located

within a 200m radius of the projected surface position for the anomaly. Minor drilling rubbish including, 44 gallon drums, spanners and a drill steel were located in the area however no drill collars could be located. One piece of qtz-magnetite ironstone was noted however this may have been introduced to the area as no other ironstone float could be found.

Analytic – 2 This is the eastern and stronger of the two anomalies. The area again was flat-lying, covered with sand and fine silty soil. Several large mature snappy gum trees were identified in the general area. No outcrop was located within a 200m radius of the projected surface position for the anomaly and no drilling rubbish could be located. It appears that this area has not attracted any historical exploration activity.

- Mine Management Plan - Giants Reef submitted an Updated Mining Management Plan in July 2004, detailing all aspects of Giants Reef's plans to explore along the Chariot Mineralised Corridor including areas within EL 23284. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) and re-issued under Authorisation 0179-02. Pursuant to condition 4 of the Authorisation, an additional security of \$1,250 was lodged with DBIRD increasing the security payment to \$7,250. This security covered all the tenements included within the West TC8 Project Area MMP, of which includes EL 23284. Release of the \$7,250 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-02).
- Historical Data Compilation - During the second year of tenure Giants Reef employed a dedicated data administrator to assist with the compilation and validation of the extensive paper and digital database currently held by the Company. The CMC was prioritised as a key area and included EL 23284. This work indicates that there has been minimal historical or modern exploration conducted within the Licence area. The majority of work completed in the area has occurred within the various Mineral Leases and Claims in the southern portion of the Licence area and therefore not subject to this report.

6.13 EL23286 CORRIDOR 3

EL 23286 was acquired by Centralian Minerals (formerly Giants Reef) to search for IOCG deposits hosted in Warramunga Formation units within the Chariot Mineralised Corridor. This was underpinned with the coverage of the area by the Kevron aeromagnetic survey carried out by Normandy in 1998, which had not been fully evaluated.

This survey highlighted two magnetic features located approximately 1 and 2 km east of the TC8 mine, referred to as the "Gibbet" and TC3 (Gibbet East) magnetic anomalies.

These magnetic anomalies do not appear to have been tested as part of the regional vacuum geochemistry drilling campaigns undertaken by Normandy, and the TC3 has yet to be drill tested.

Exploration work during the first year of tenure included:

- A literature review – This review identified 3 target areas that required further investigation.
- A brief assessment of the prospectivity - This assessment highlighted the fact that previous exploration over the tenure had focussed on the targeting of magnetic anomalies to identify magnetic ironstone bodies. Giants Reef noted that limited gravity data exists over the tenure and concluded that the potential for new discoveries in EL 23286 are highly likely.
- Tenement Review Ranking - An internal review of the Giants Reef tenement portfolio and a classification of exploration opportunities in October 2002 assessed the future exploration potential of EL 23286. The review was based on the potential to discover high-grade gold mineralisation in both magnetic and haematite-dominant ironstones. The location of the Chariot mine and TC8 gold mines to EL 23286 along the Chariot trend made this Exploration Licence a highly prospective target area due to its structural significance. Additionally the highly developed understanding of the local geology as a consequence of the developing Chariot resource, combined with the EL's location to existing mine infrastructure ranked this Licence area as a high priority exploration project area.

Exploration work conducted during the second year of tenure included:

- Chariot Trend Line Exploration - Giants Reef continued their prioritised exploration along the Chariot Mineralised Corridor (CMC). This involved regional gravity surveys, geophysical modelling of gravity targets, diamond, RAB and Reverse Circulation drilling. At present, exploration within the CMC has extended to the western border of EL 23286, however not within. This includes the detailed ground gravity survey which borders EL 23286. The quite limited but detailed gravity survey appears to have added a new dimension to Giants Reef's understanding of the non-outcropping geology and the distribution of non-magnetic ironstone bodies within the survey area. In prospects where magnetic ironstones have been defined and also within completely non-magnetic regions, the gravity data has predicted the existence of several, (mainly shallow) haematite-rich ironstones which could be host to gold mineralisation. Remembering that the recorded density contrasts between the haematite-rich ironstone and country rock at the Chariot Deposit range between 1.0 and 2.0 gm/cc, several new bodies with similar density contrasts have been defined at relatively shallow depths within the survey tenure.

The fact that non-magnetic ironstones hosting gold mineralisation are known to exist, yet have not really been explored for previously in the Tennant Creek Goldfield, means that the potential for new discoveries are highly likely. The gravity method used over the CMC has given good encouragement and for the future it will,

in some form, be a valuable exploration tool. Recommendations were made to complete the gravity survey over the Chariot trend east and west which will include EL 23286.

- **Field Reconnaissance** - A number of field reconnaissance trips were made to the Licence area within the tenure year. Ground truthing was conducted within the Mineral Claims located in the north of the EL, and extended down into the reporting area of the Licence. No evidence of historical drilling was located on ground within the reporting area. This correlated with Giants Reef's GIS database which indicates no historical drilling has been conducted in the area.
- **Mine Management Plan** - Giants Reef submitted an updated Mining Management Plan, detailing all aspects of Giants Reef's plans to explore along the CMC. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) under Authorisation 0179-01. Pursuant to condition 4 of the Authorisation, a security of \$6,000 was lodged with DBIRD. This security covered all the tenements included within the West TC8 Project Area, of which includes EL 23286. Release of the \$6,000 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-01).

Exploration work completed during the third year of tenure included:

- **Gravity Modelling** - A detailed ground gravity survey was conducted within EL 23284 as part of a broader regional survey in 2003 as detailed above. Further modelling and refinement of the gravity data collected within EL 23284 continued during the second year. Three low-order gravity anomalies have been identified for further investigation.

1. Grav 1 – 407800mE / 7827200mN

2. Grav 2 – 409200mE / 7827350mN

3. Grav 3 – 409670mE / 7827200mN

Although these bouguer gravity anomalies are considered low order, encouragement is provided that low-magnetic ironstones hosting gold mineralisation are known to exist within the corridor. These lower order anomalies with the Licence may represent potential for new, shallow gold mineralisation. These anomalies are ranked along with numerous others within the CMC.

- **Reconnaissance** - Three lower amplitude analytic signal magnetic anomalies were identified for further work. Two of the three anomaly sites were subsequently visited in May 2005. It was hoped that these anomalies may have a surface expression that may be geologically mapped and sampled. Both anomalies are located north of the Chariot Haul Rd. Exact locations are provided below;

Anomaly Name	GDA_East	GDA_North
Analytic - 1	408210	7827050
Analytic - 2	408450	7826120

Although no ironstone or sediment outcrop was located at either site, the area is suitable for a soil sampling program or preferably a vacuum drilling program. Gravity over the anomaly area has identified two weak low-order residual bouguer gravity anomalies which are coincident with the Analytic-1 and 2 analytic magnetic anomalies. A brief description of each area is below.

Analytic – 1 This is the western and weaker of the two anomalies. The area is typically flat-lying, covered with sand and fine silty soil. No outcrop was located within a 200m radius of the projected surface position for the anomaly. Minor drilling rubbish including, 44 gallon drums, spanners and a drill steel were located in the area however no drill collars could be located. One piece of qtz-magnetite ironstone was noted however this may have been introduced to the area as no other ironstone float could be found.

Analytic – 2 This is the eastern and stronger of the two anomalies. The area again was flat-lying, covered with sand and fine silty soil. Several large mature snappy gum trees were identified in the general area. No outcrop was located within a 200m radius of the projected surface position for the anomaly and no drilling rubbish could be located. It appears that this area has not attracted any historical exploration activity.

- **Mine Management Plan - Giants Reef** submitted an Updated Mining Management Plan in July 2004, detailing all aspects of Giants Reef's plans to explore along the Chariot Mineralised Corridor including areas within EL 23284. The plan was subsequently approved by the Department of Business, Industry & Resource Development (DBIRD) and re-issued under Authorisation 0179-02. Pursuant to condition 4 of the Authorisation, an additional security of \$1,250 was lodged with DBIRD increasing the security payment to \$7,250. This security covered all the tenements included within the West TC8 Project Area MMP, of which includes EL 23284. Release of the \$7,250 security is conditional upon Giants Reef's compliance with the activities and commitments contained in the accepted plan (Authorisation 0179-02).
- **Historical Data Compilation -** During the second year of tenure Giants Reef employed a dedicated data administrator to assist with the compilation and validation of the extensive paper and digital database currently held by the Company. The CMC was prioritised as a key area and included EL 23284. This work indicates that there has been minimal historical or modern exploration conducted within the Licence area. The majority of work completed in the area has

occurred within the various Mineral Leases and Claims in the southern portion of the Licence area and therefore not subject to this report.

Exploration work conducted during the fourth year of tenure included:

Approximately one third of the Exploration Licence is covered by granted Mineral Claims located on the northern border extending east and west. The Mineral Claims are MC C522-C524 and C461 (Gibbet/TC3) owned by Santexco Pty Ltd (a fully owned subsidiary of Centralian Minerals Limited), and cover the TC12/Muddo and TC3/Gibbet magnetic anomalies. Exploration conducted on the remaining area outside of the Mineral Claims in Exploration Licence 23286 is reported henceforth.

In 2004 Giants Reef submitted a number of Mining Management Plans (MMP) for exploration programs within the Southern Project area. EL 23286 is included within the Mining Management Plan for Authorisation 0179-01, West TC8 Project Area.

The main work completed during the year comprised collection and entry of all available exploration data into Giant's Reefs GIS and Micromine databases. Work also included a number of field trips into the tenement to examine outcropping Warramunga Formation in the north east region of the tenement and the southern region of the TC3 magnetic anomaly.

A detailed ground gravity survey was completed of the area immediately west of EL 2386 and extending over some 12kms, from the Extension to the TC8 deposit (including Malbec and Chariot deposits). Although EL 23286 was not included in these surveys, the encouraging results and the delineation of numerous promising anomalies has provided greater confidence for extending the gravity survey into the licence.

7. WORK DONE DURING THE REPORT PERIOD

Exploration Licences ("ELs") in the Southern Project Area (SPA) were explored by Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco for Tennant Creek style iron oxide copper-gold deposits (IOCG deposits). Giants Reef Exploration Pty Ltd (Giants Reef) and Santexco Pty Ltd are wholly owned subsidiaries of Emmerson Resources Pty Ltd.

The following sections records the exploration work completed on these ELs during the SPA Combined Reporting period from 16 February 2006 to the 15 February 2007.

7.1 EL 8882 GREENBUSH

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its

subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.2 EL 8883 BLUEBUSH

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.3 EL9309 SKIPPER HILL WEST

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.4 EL9915 CHINCHILLA

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.5 EL9935 MANX

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.6 EL9988 NO.1 BORE

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.7 EL10199 LYNX

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.8 EL10402 AMADEUS

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will

reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.9 EL22240 MORGAN

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.10 A23236 UDALL ROAD

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.11 EL23284 CORRIDOR 1

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

7.12 EL23286 CORRIDOR 3

As a result of the restructure for the sale of Centralian Minerals under administration, all former Centralian Minerals Limited (and its subsidiaries, including Giants Reef Exploration) tenements were void of in-ground exploration over the administration and Emmerson's

purchase period. Emmerson Resources purchased Centralian Minerals Limited and all its subsidiaries, including Giants Reef Exploration on 1st August 2006, and now with the employment of new administration and geological staff Emmerson Resources Pty Ltd will reassess all previous exploration work conducted over the licence area with the aim of generating geophysical/geological test targets, pending favourable results regolith drilling.

8. REHABILITATION

Exploration within the Licences and Authorisation was limited to non-invasive geophysical gravity surveys, detailed literature reviews and reconnaissance mapping programmes and as such no rehabilitation was required.

9. CONCLUSIONS

Further work is planned to refine gravity and geochemical anomalies for reconnaissance drilling. Several of these targets are located on poorly prospected west-northwest trending structures.

Review of historical exploration data and geophysical modelling of magnetic data during the year has highlighted deeper primary targets requiring further work. The size of the ironstone, and consequent target size may have previously been underestimated, and depths to target overestimated. This is interpreted to be due to higher haematite content, which typifies some of the known ironstones below the oxide zone in this area (e.g. Marathon). Further refinement of the target geological and geophysical models is planned preparatory to drilling in the next year.

9.1 EL8882 GREENBUSH

The previous exploration work completed has indicated the potential for the discovery of shallow concealed oxide (i.e. hematite) gold deposits. Geophysical modelling of magnetic data in the next tenure year will be aimed at modelling deeper primary targets for drill testing. The presence of prominent magnetic anomalies and a series of major north west trending fault places EL 8882 as a moderately ranked target area in terms of its prospectivity potential. Further refinement of the target geological and geophysical models is planned preparatory to drilling.

9.2 EL8883 BLUEBUSH

The quantitative/qualitative ranking, based on geological, geophysical & geophysical characteristics and other parameters covering work status, target type, land status and economics has down-graded EL 8883 as "Non-Core B".

Whilst the EL has been down graded a number of areas comprising Warramunga Formation units and moderate magnetic anomalies have been tagged for further work next year and are likely to include geochemical sampling and, pending results, follow-up Vacuum, RAB, or RC drilling.

9.3 EL9309 SKIPPER HILL WEST

Previous exploration work carried out included:

- Compilation and review of all available historical exploration data;
- Reconnaissance field trips, including the inspection of all previously explored targets and examination of Palaeoproterozoic outcrops;

- Preliminary structural interpretation of geophysics and likely controls on mineralisation.

The work completed has indicated the potential for the discovery of shallow concealed oxide (i.e. hematite) gold deposits. Geophysical modelling of magnetic data next year will be aimed at modelling deeper primary targets for drill testing. Further refinement of the target geological and geophysical models is planned preparatory to drilling.

Further exploration over this region will now be conducted under SEL 24980.

9.4 EL9915 CHINCHILLA

Exploration Licence 9915, cover an area to the west and north of the Malbec West open cut gold mine (19,740 oz Au) and producing Chariot gold deposit. A well defined east-west structural corridor passes through Chariot and Malbec West and continues west, into the Licence area. Consequently the EL has been subject to much interest by Centralian Minerals for their potential to a host orebodies of a similar style of mineralisation as the Chariot mine.

This east-west shear zone will continue to be the focus for Centralian Minerals exploration in the future years. Historical surface gold and copper anomalism has been recorded (by past explorers) from within this shear zone and data compilation, translation and validation will continue into the next year.

The recent gravity data collected over EL 9915 is very encouraging with several new target areas identified and confirmation of dense (ironstone) rocks existing within the survey area.

The detailed gravity survey appears to have added a new dimension to Centralian Minerals understanding of the non-outcropping geology and the distribution of non-magnetic ironstone bodies within the survey area. The fact that non-magnetic ironstones, hosting gold mineralisation are known to exist (Malbec West & Chariot deposits), yet have not really been searched for previously in the Tennant Creek Goldfield, means that the potential for new discoveries is highly likely.

Further exploration over this region will now be conducted under SEL 24980.

9.5 EL9935 MANX

Exploration Licence 9935, cover an area to the west and north of the Malbec West open cut gold mine (19,740 oz Au) and producing Chariot gold deposit. A well defined east-west structural corridor passes through Chariot and Malbec West and continues west, into the Licence area. Consequently the EL has been subject to much interest by Centralian Minerals for their potential to a host orebodies of a similar style of mineralisation as the Chariot mine.

This east-west shear zone will continue to be the focus for Centralian Minerals exploration in the future years. Historical surface gold and copper anomalism has been recorded (by past explorers) from within this shear zone and data compilation, translation and validation will continue into the next year.

The recent gravity data collected over EL 9935 is very encouraging with several new target areas identified and confirmation of dense (ironstone) rocks existing within the survey area.

The detailed gravity survey appears to have added a new dimension to Centralian Minerals understanding of the non-outcropping geology and the distribution of non-magnetic ironstone bodies within the survey area. The fact that non-magnetic ironstones, hosting gold mineralisation are known to exist (Malbec West & Chariot deposits), yet have not really been searched for previously in the Tennant Creek Goldfield, means that the potential for new discoveries is highly likely.

Further exploration over this region will now be conducted under SEL 24980.

9.6 EL9988 NO.1 BORE

Previous exploration work carried out included:

- Compilation and review of all available historical exploration data;
- Reconnaissance field trips, including the inspection of all previously explored targets and examination of Palaeoproterozoic outcrops;
- Preliminary structural interpretation of geophysics and likely controls on mineralisation.

The work completed has indicated the potential for the discovery of shallow concealed oxide (i.e. hematite) gold deposits. Geophysical modelling of magnetic data next year will be aimed at modelling deeper primary targets for drill testing. The size of the ironstone, and consequent target size may have previously been underestimated, and depths to target overestimated. This is interpreted to be due to higher haematite content. Further refinement of the target geological and geophysical models is planned preparatory to drilling.

Further exploration over this region will now be conducted under SEL 24980.

9.7 EL10199 LYNX

Exploration Licence 10199 Lynx, totally encloses the non-magnetic haematite-rich Chariot gold deposit. The Licence is centred on the magnetic structural ridge extending from the Extension mine (300t @ 19.5g/t Au) to TC8 mine (80,680t @ 18g/t Au and 1.2% Cu). Consequently the EL has been subject to much interest by Giants Reef for its potential to a host orebodies of a similar style of mineralisation as the Chariot mine. The Chariot deposit

and associated sub-economic mineralisation is held under granted Mineral Leases (Mineral Leases C176, C177 and ML 23216), all located within EL 10199.

In the third tenure year a regional gravity survey was conducted over EL 10199 and surrounding tenure, with several new target areas identified. A second gravity survey was undertaken in September 2003 completing the gravity section over the northern portion of EL 10199. The data generated several priority gravity anomalies and detailed modelling highlighted that apart from the magnetic ironstone there was considerable haematite ironstone proximal to the Traminer ironstone.

The West Traminer prospect was drill tested with 4 RC holes for an advance of 448m in Year 4. No alteration was seen and no ironstone was intersected. Given the strength of the West Traminer gravity response, the interpreted density contrast and the vicinity to the Traminer ironstone the Traminer West target remained of high interest and further work was recommended.

During Year 5 thirty four RAB holes (TRRB031 to TRRB064) were drilled for an advance of 693 metres. All holes were drilled to the south to a nominal depth of 21 metres. This drilling pattern was designed to further test shallow gravity anomalies previously identified during the September 2003 ground gravity survey carried over the area. Drilling intersected Warramunga Formation sediments however no alteration was seen and no ironstone was intersected. The gravity anomalies may be explained by a pisolitic iron horizon intersected in many holes at a consistent depth of 6-9 metres. No significant assay results were returned and results were considered disappointing.

Exploration will continue within EL 10199, primarily to identify strike extensions to the Chariot Line (i.e.: Chariot East) and to continue the testing of a number of shallow gravity targets with the Licence area. Geophysical remodelling of the historical NTC data will commence during the next reporting period and it is anticipated that additional drilling will be proposed targeting the Traminer ironstone at depth.

9.8 EL10402 AMADEUS

The quantitative/qualitative ranking, based on geological, geophysical & geophysical characteristics and other parameters covering work status, target type, land status and economics has down-graded ELs 8883 and 10402 as "Non-Core B".

Whilst the ELs have been down graded a number of areas comprising Warramunga Formation units and moderate magnetic anomalies have been tagged for further work next year and are likely to include geochemical sampling and, pending results, follow-up Vacuum, RAB, or RC drilling.

9.9 EL22240 MORGAN

The quite limited but detailed gravity survey appears to have added a new dimension to Giants Reef's understanding of the non-outcropping geology and the distribution of non-

magnetic ironstone bodies within the survey area. In prospects where magnetic ironstones have been defined and also within completely non-magnetic regions, the gravity data has predicted the existence of several, (mainly shallow) haematite-rich ironstones which potentially could be host to gold mineralisation.

Considering that the recorded density contrasts between the haematite-rich ironstone and country rock at the Chariot Deposit range between 1.0 and 2.0 gm/cc, a new body with a similar density contrast was defined at a relatively shallow depth within EL 22240 and surrounding survey tenure.

The fact that non-magnetic ironstones hosting gold mineralisation are known to exist, yet have not really been explored for previously in the Tennant Creek Goldfield, means that the potential for new discoveries are highly likely. The gravity method used over EL 22240 and surrounding tenure has provided encouragement, and for the future it will, in some form, be a valuable exploration tool.

A regional gravity survey was conducted over EL 22240 and surrounding tenure in 2003. Interpretation of the gravity data identified two low-order residual gravity anomalies that were tested this year by shallow RAB drilling. Results were disappointing with both the gravity anomalies potentially explained by denser pisolitic gravel located within the first 1-3m of the all drill holes. There was no magnetic anomalism to support the gravity response.

In terms of explaining the gravity anomaly (density contrast) it was a good result and adds to GRM's growing understanding and expertise in relation to interpretation and ranking of these often subtle and weak gravity anomalies.

Exploration will continue within EL 22240, primarily to identify strike extensions to the Malbec West mineralisation. Geophysical interpretation of the Year 3 gravity survey data by the Giants Reef's Geophysicist continues including refined and reprocessing of the original data. No shallow gravity targets remain to be drill tested.

9.10 A23236 UDALL ROAD

Authorisation 23236 is located approximately 6km east of the non-magnetic haematite-rich Chariot Gold Mine, and less than 500m south east of the TC8 mine. The Authorisation, TC8 and Chariot mine are positioned just north of the magnetic structural ridge (corridor) extending from the Extension mine (300t @ 19.5g/t Au) to TC8 mine (80,680t @ 18g/t Au and 1.2% Cu). Consequently the Authorisation and surrounding tenure has been subject to much interest by Centralian Minerals for its potential to host orebodies of a similar size and style of mineralisation as the Chariot mine. Interest has further increased with the recently discovered Malbec West Gold Mine (900m west of Chariot) commencing production in September 2004.

The apparent success of the gravity method in locating non-magnetic (haematite-rich) ironstone at the Malbec West Deposit carries serious implications for the exploration future

over A 23236 and all other Authorisations and Exploration Licences over Warramunga Formation sediments.

A third stage of ground gravity survey has been proposed for the CMC, to extend the survey coverage east and west, covering A 23236. Centralian Minerals Limited also intend to geologically map the Authorisation area and rock chip sample outcropping sites, to identify surface geochemical anomalies. Results of the gravity survey will be geophysical modelled and drill tested if warranted with the view to identifying shallow gold mineralisation.

As the Authorisation area is located within the Tennant Creek town boundary (on Vacant Crown land), Centralian Minerals Limited will have to conduct liaison meetings with the Community before on-ground exploration can proceed. Additionally, CLC liaison meetings in consultation with Traditional Owners will need to be conducted as Centralian Minerals Limited view the area as a potential sacred site area. This is due to the east west outcropping ironstone and Warramunga sediment ridge striking through the Authorisation area. At present there are no registered or recorded Aboriginal sacred sites within the Authorisation area, however this may be a function of the lack of historical exploration within the area.

Compilation of a detailed structural and geological basement map is in progress for land within the CMC and it is hoped that this work combined with an increasing understanding of the gravity method and ironstone signature anomalies will progress during the next reporting year.

9.11 EL23284 CORRIDOR 1

The apparent success of the gravity method in locating non-magnetic (haematite-rich) ironstone at the Malbec West Deposit carries serious implications for the exploration future over EL 23284 and all other Exploration Licences over Warramunga Formation sediments. Geophysical interpretation of the gravity survey data by Frank Lindeman of Lindeman Geophysics, Melbourne, continues to be refined and reprocessed. A number of shallow (second order) gravity targets have been identified drill testing.

Compilation of a detailed structural and geological basement map is in progress for land within the CMC and it is hoped that this work combined with an increasing understanding of the gravity method and ironstone signature anomalies will progress.

9.12 EL23286 CORRIDOR 3

Exploration Licence 23286 is located approximately 6km east of the non-magnetic haematite-rich Chariot Gold Mine, and less than 500m south east of the TC8 mine. The Licence, TC8 and Chariot mine are positioned on the magnetic structural ridge (corridor) extending from the Extension mine (300t @ 19.5g/t Au) to TC8 mine (80,680t @ 18g/t Au and 1.2% Cu). Consequently the EL and surrounding tenure has been subject to much interest by Centralian Minerals for its potential to host orebodies of a similar size and style

of mineralisation as the Chariot mine. Interest has further increased with the recently discovered Malbec West Gold Mine (900m west of Chariot) commencing production in September 2004.

The apparent success of the gravity method in locating non-magnetic (haematite-rich) ironstone at the Malbec West Deposit carries serious implications for the exploration future over EL 23286 and all other Exploration Licences over Warramunga Formation sediments.

A third stage of ground gravity survey has been proposed for the CMC, to extend the survey coverage east and west, covering EL 23286. Centralian Minerals Limited also intend to geologically map the Licence area and rock chip sample outcropping sites, to identify surface geochemical anomalies. Results of the gravity survey will be geophysically modelled and drill tested if warranted with the view to identifying shallow gold mineralisation.

As the Licence area is located within the Tennant Creek town boundary (on Vacant Crown land), Centralian Minerals Limited will have to conduct liaison meetings with the Community before on-ground exploration can proceed. Additionally, CLC liaison meetings in consultation with Traditional Owners will need to be conducted as Centralian Minerals Limited view the area as a potential sacred site area. This is due to the east west outcropping ironstone and Warramunga sediment ridge striking through the Licence area. At present there are no registered or recorded Aboriginal sacred sites within the Licence area, however this may be a function of the lack of historical exploration within the area.

Compilation of a detailed structural and geological basement map is in progress for land within the CMC and it is hoped that this work combined with an increasing understanding of the gravity method and ironstone signature anomalies will progress during the next reporting year.

CENTRALIAN MINERALS LIMITED***HARD COPY REPORT META DATA FORM***

REPORT NAME: COMBINED ANNUAL REPORT FOR THE SOUTHERN PROJECT AREA 16 FEBRUARY 2006 – 15 FEBRUARY 2007

PROSPECT NAMES(s): GREENBUSH, BLUEBUSH, SKIPPER HILL WEST, CHINCHILLA, MANX, NO.1 BORE, LYNX, AMADEUS, MORGAN, CORRIDOR 1, CORRIDOR 3, UDALL ROAD

GROUP PROSPECT NAME: SOUTHERN PROJECT AREA

TENEMENT NUMBERS(s): EL 8882, EL 8883, EL 9309, EL 9915, EL 9935, EL 9988, EL 10199, EL 10402, EL 22240, A 23236, EL 23284, EL 23286

ANNIVERSARY DATE: 15 FEBRUARY

OWNER/JV PARTNERS: EMMERSON RESOURCES PTY LTD, GIANTS REEF EXPLORATION PTY LTD, SANTEXCO PTY LTD

AUTHOR(s): A. WALTERS

COMMODITIES: GOLD, COPPER

MAPS 1:250 000: TENNANT CREEK SE53-14

MAPS 1:100 000: KELLY 5658, TENNANT CREEK 5758

MAPS 1:25 000

TECTONIC UNIT(s): TENNANT CREEK INLIER

STRATIGRAPHIC NAME(s)
AMF GENERAL TERMS: WARRAMUNGA FORMATION, CAMBRIAN WISO BASIN

AMF TARGET MINERALS: GOLD, COPPER, LEAD, ZINC

AMF GEOPHYSICAL: MAGNETIC INTERPRETATION, GRAVITY SURVEY

AMF GEOCHEMICAL:

AMF DRILL SAMPLING:

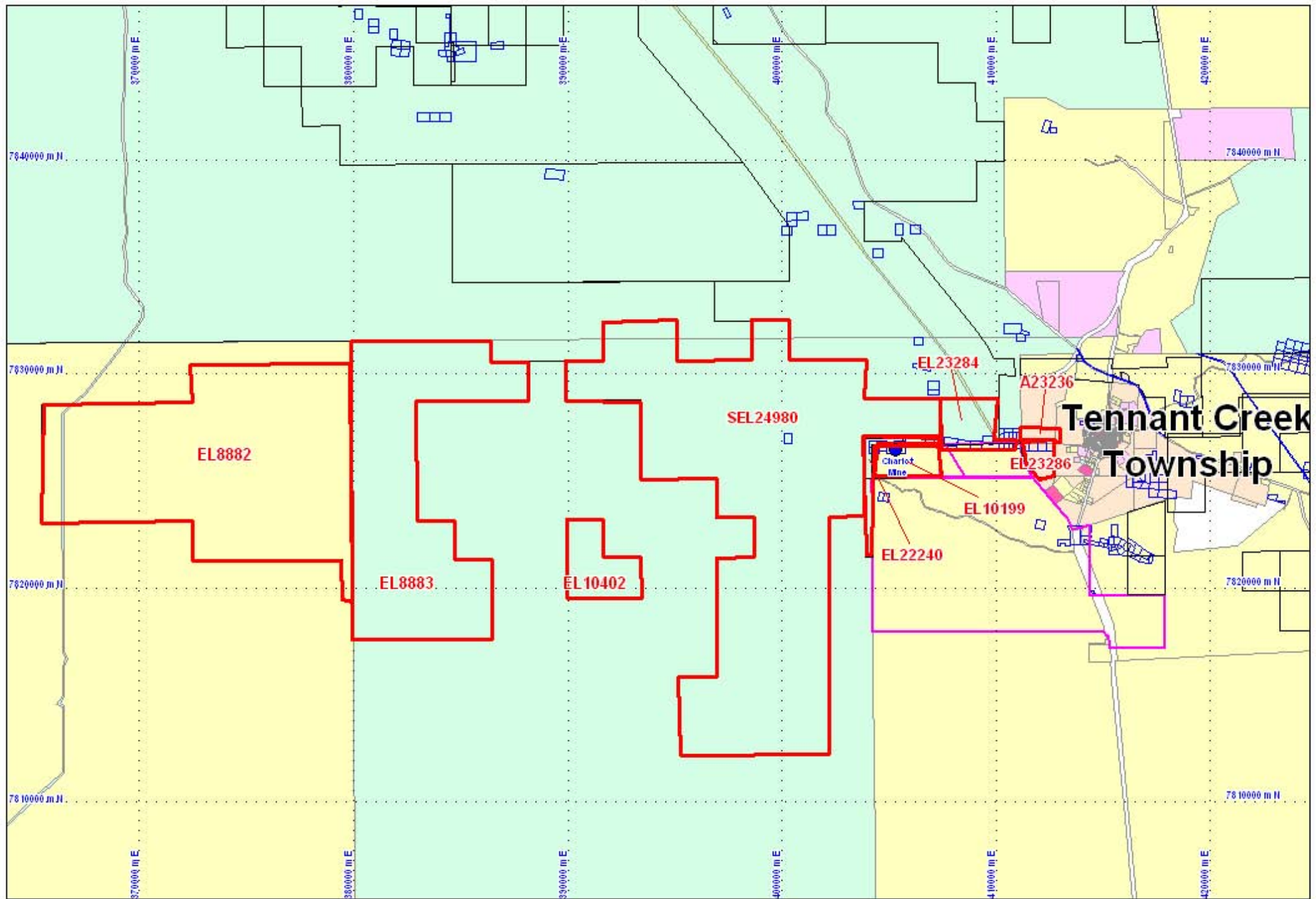
HISTORIC MINES: THE EXTENSION, WEST GIBBET, CHARIOT, TC8, GIBBET, SKIPPER EXTENSION, MT SAMUEL, HAMMERJACK, ESTRALITA, MIRIAM, RED NED, OUTLAW, SOUTHERN CROSS, SKIPPER, WESTWARD HO, MELBEC, TRAMINER

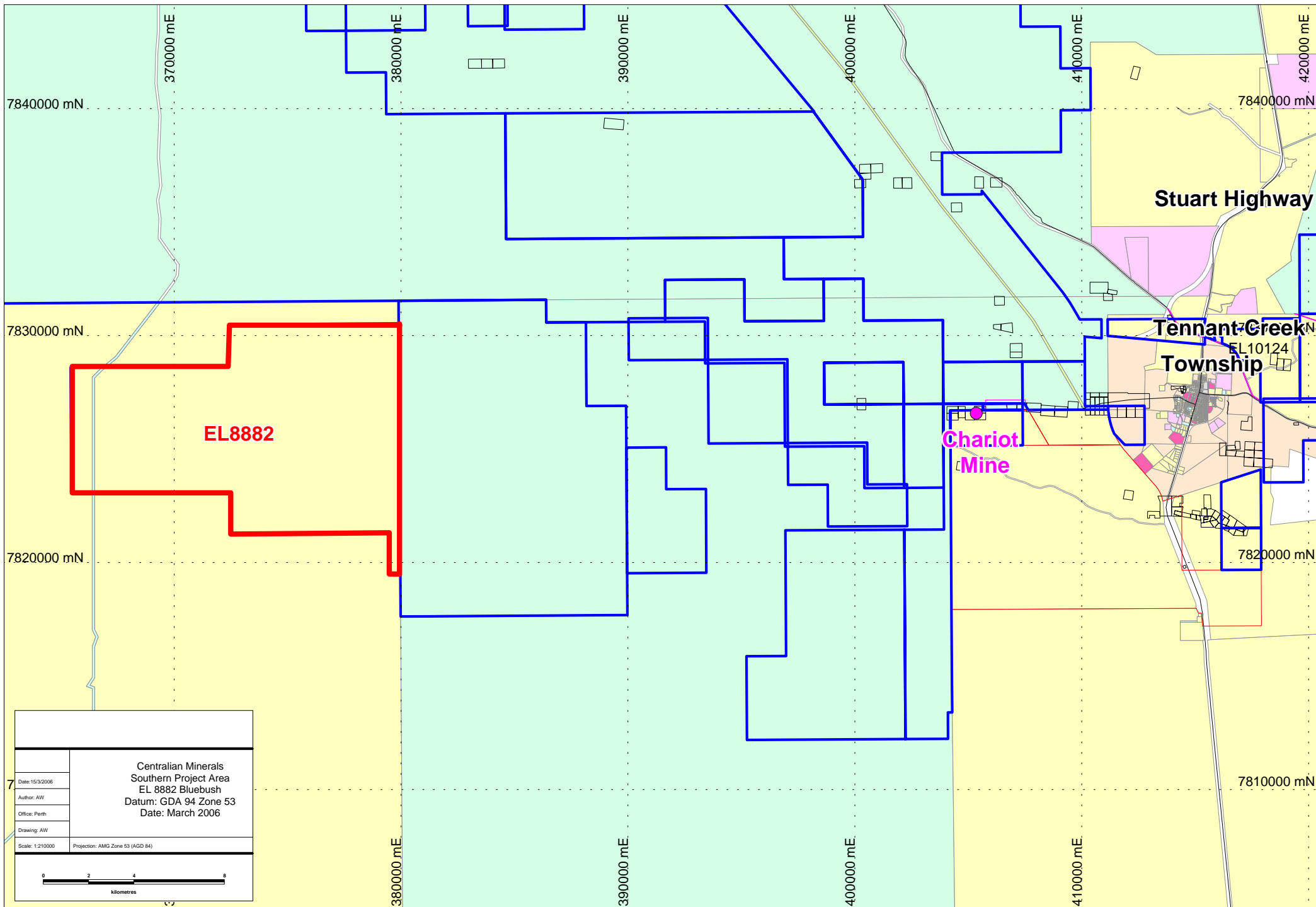
DEPOSITS: THE EXTENSION, WEST GIBBET, CHARIOT, TC8, GIBBET, SKIPPER EXTENSION, MT SAMUEL, HAMMERJACK, ESTRALITA, MIRIAM, RED NED, OUTLAW, SOUTHERN CROSS, SKIPPER, WESTWARD HO, MELBEC, TRAMINER

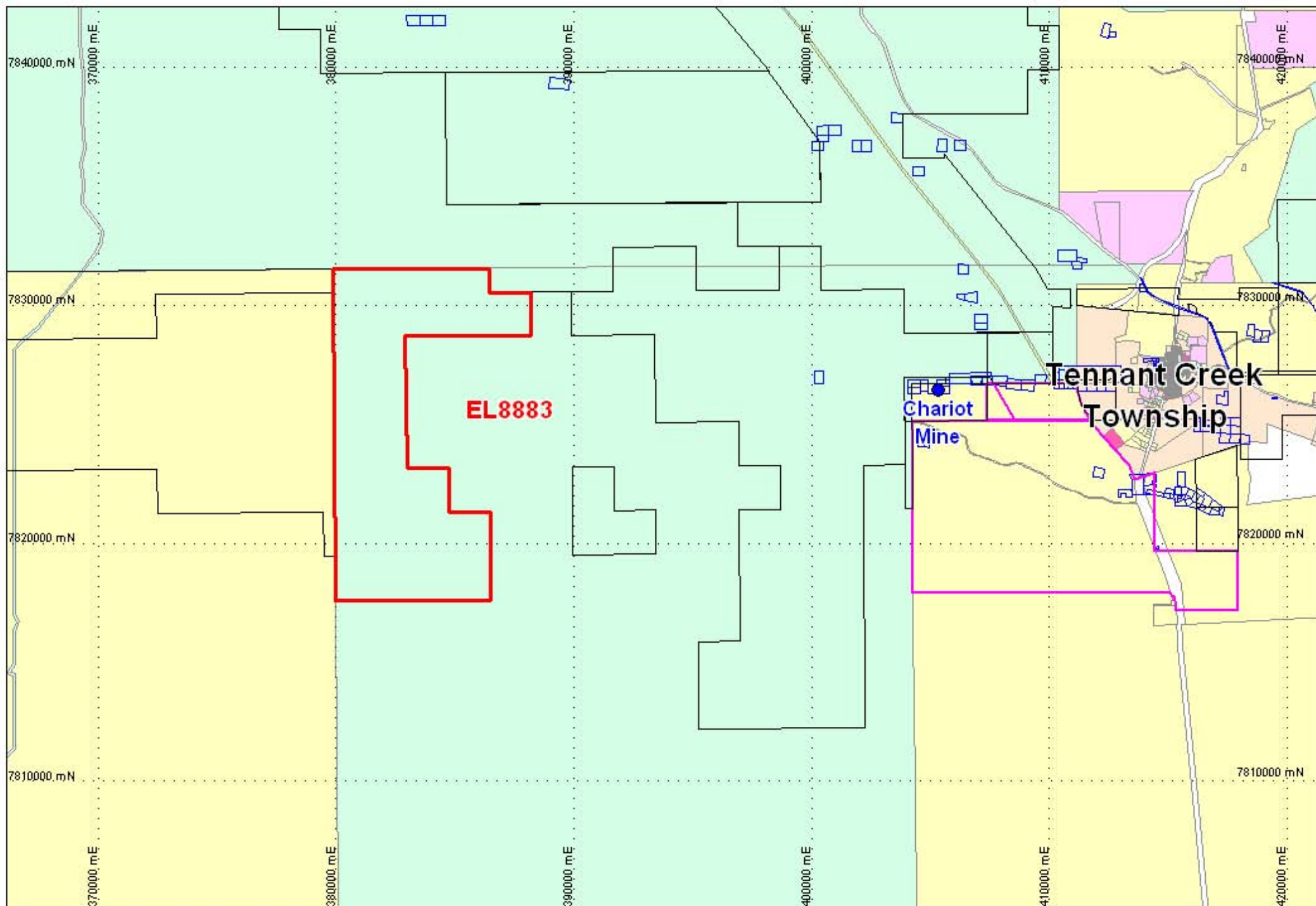
PROSPECTS: 1204, THE ANCHOR, HORNET, CHAMPION, TC3, GREAT HOPE, EXPLORER 51, NEW ENGLAND, TC2, MODERATION, NAIL 19, NAIL 20, NAIL 33, EXPLORER 83, 1264, COPPER SKIPPER, 1163, PINNACLES NORTH, BLUESPOT, BLACKSPOT, EXPLORER 43,

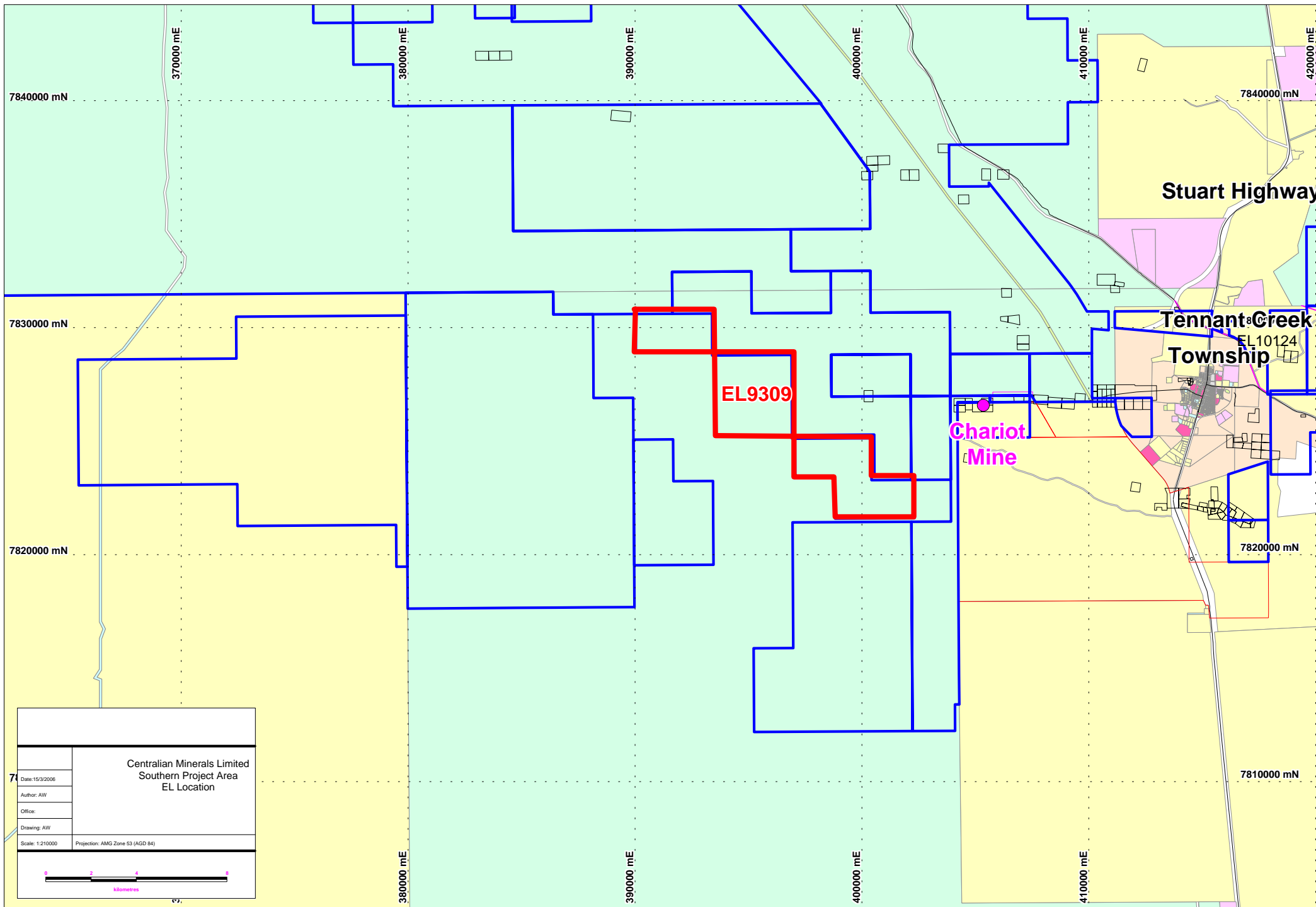
KEYWORDS:

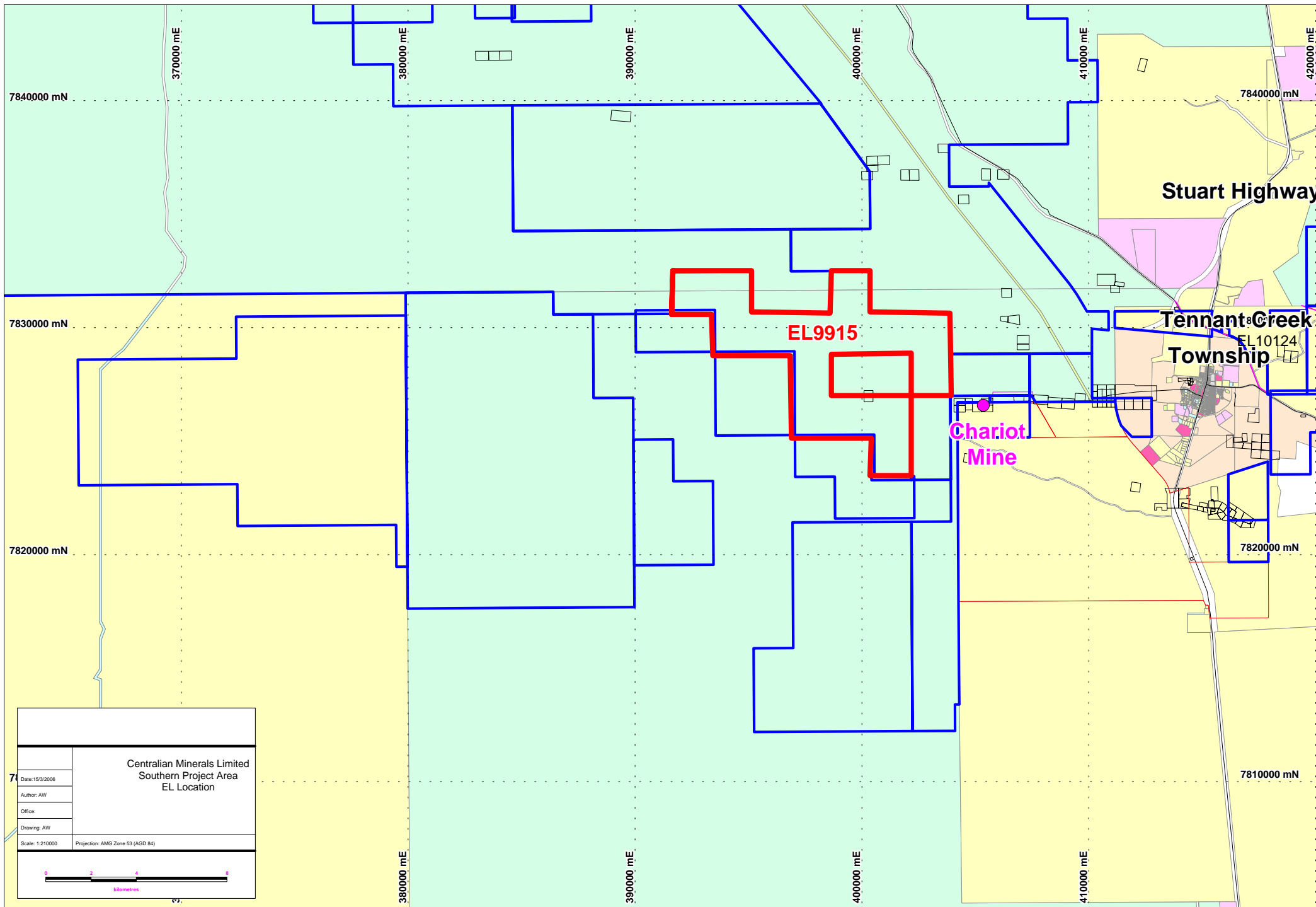
EXPLORER 40, EXPLORER 72, EXPLORER 40, NAIL 15, NAIL 14, SHRIKE, NAIL 21, NAIL 22, EXPLORER 15, EXPLORER 81 GREENBUSH, BLUEBUSH, SKIPPER HILL WEST, CHINCHILLA, MANX, NO.1 BORE, LYNX, AMADEUS, MORGAN, CORRIDOR 1, CORRIDOR 3, THE EXTENSION, WEST GIBBET, CHARIOT, TC8, GIBBET, SKIPPER EXTENSION, MT SAMUEL, HAMMERJACK, ESTRALITA, MIRIAM, RED NED, OUTLAW, SOUTHERN CROSS, SKIPPER, WESTWARD HO, MELBEC, TRAMINER, 1204, THE ANCHOR, HORNET, CHAMPION, TC3, GREAT HOPE, EXPLORER 51, NEW ENGLAND, TC2, MODERATION, NAIL 19, NAIL 20, NAIL 33, EXPLORER 83, 1264, COPPER SKIPPER, 1163, PINNACLES NORTH, BLUESPOT, BLACKSPOT, EXPLORER 43, EXPLORER 40, EXPLORER 72, EXPLORER 40, NAIL 15, NAIL 14, SHRIKE, NAIL 21, NAIL 22, EXPLORER 15, EXPLORER 81, UDALL ROAD

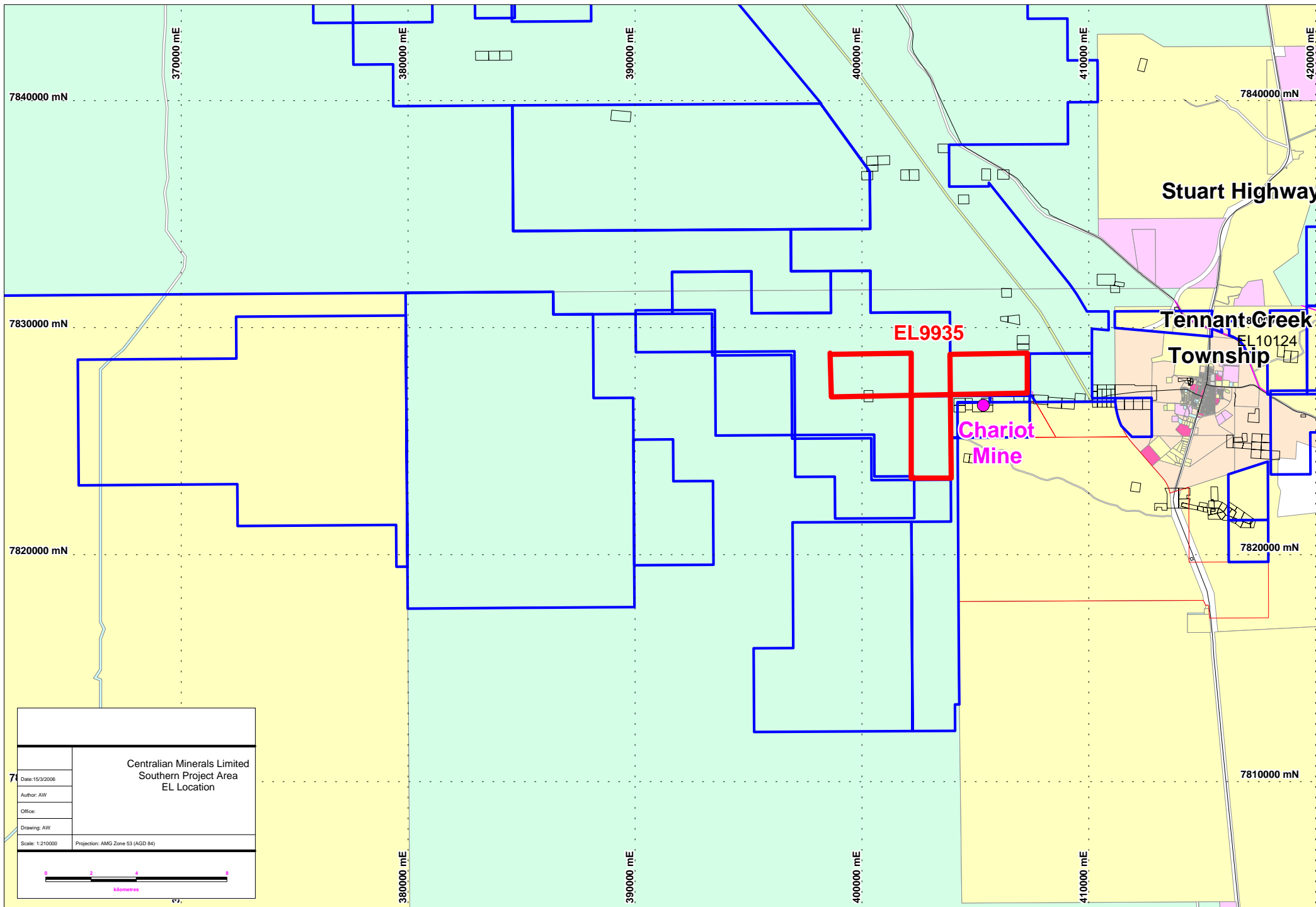


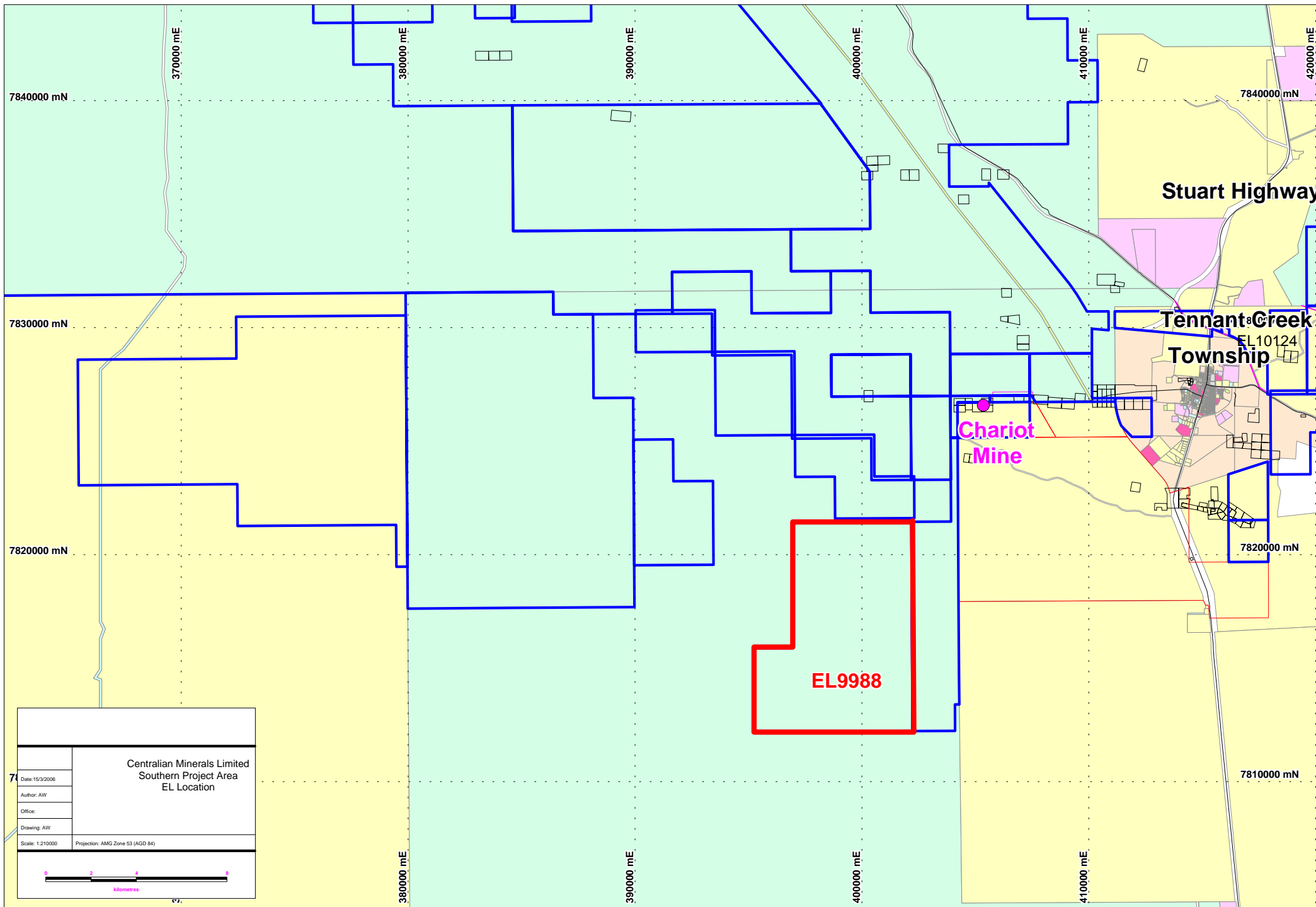


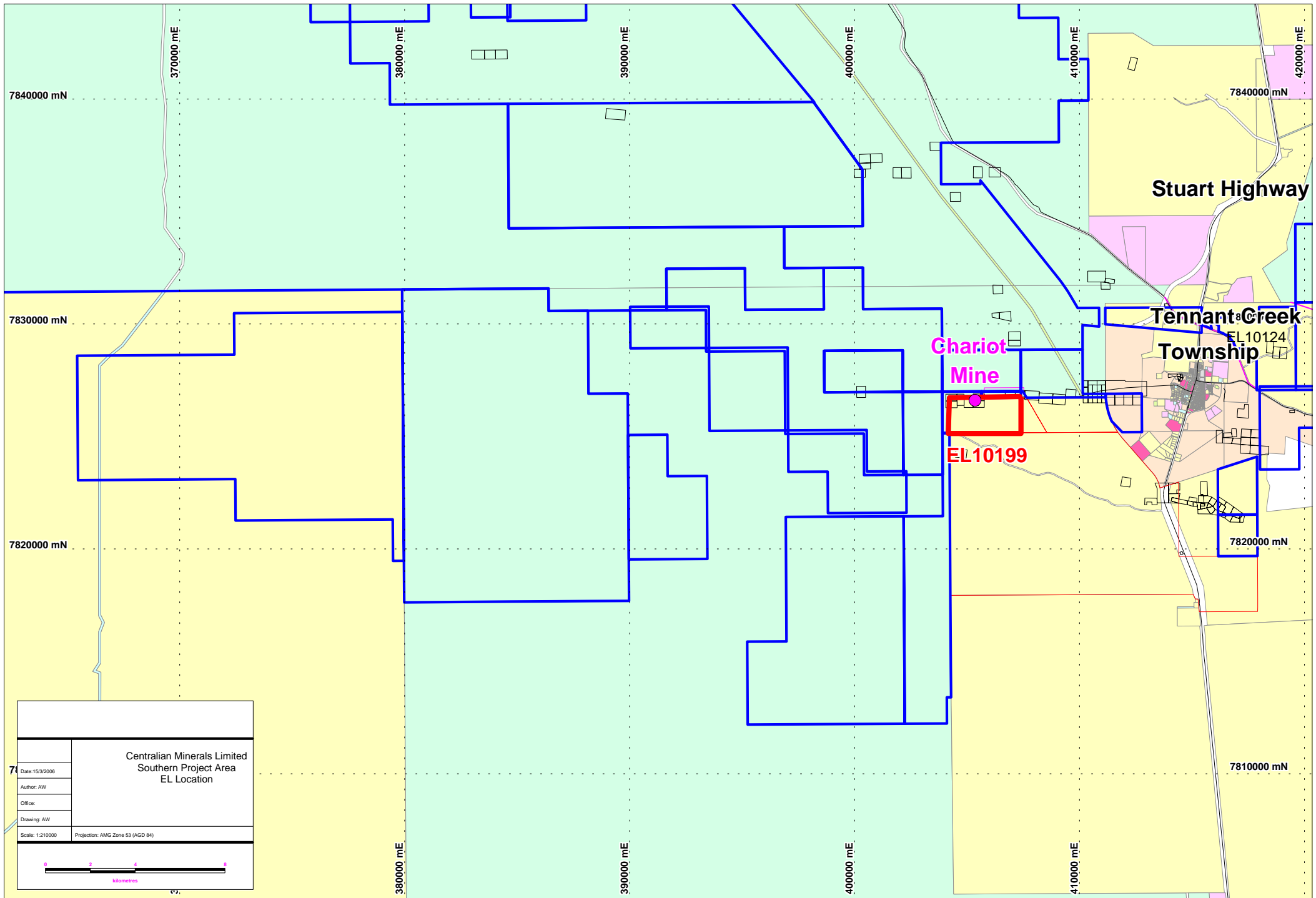


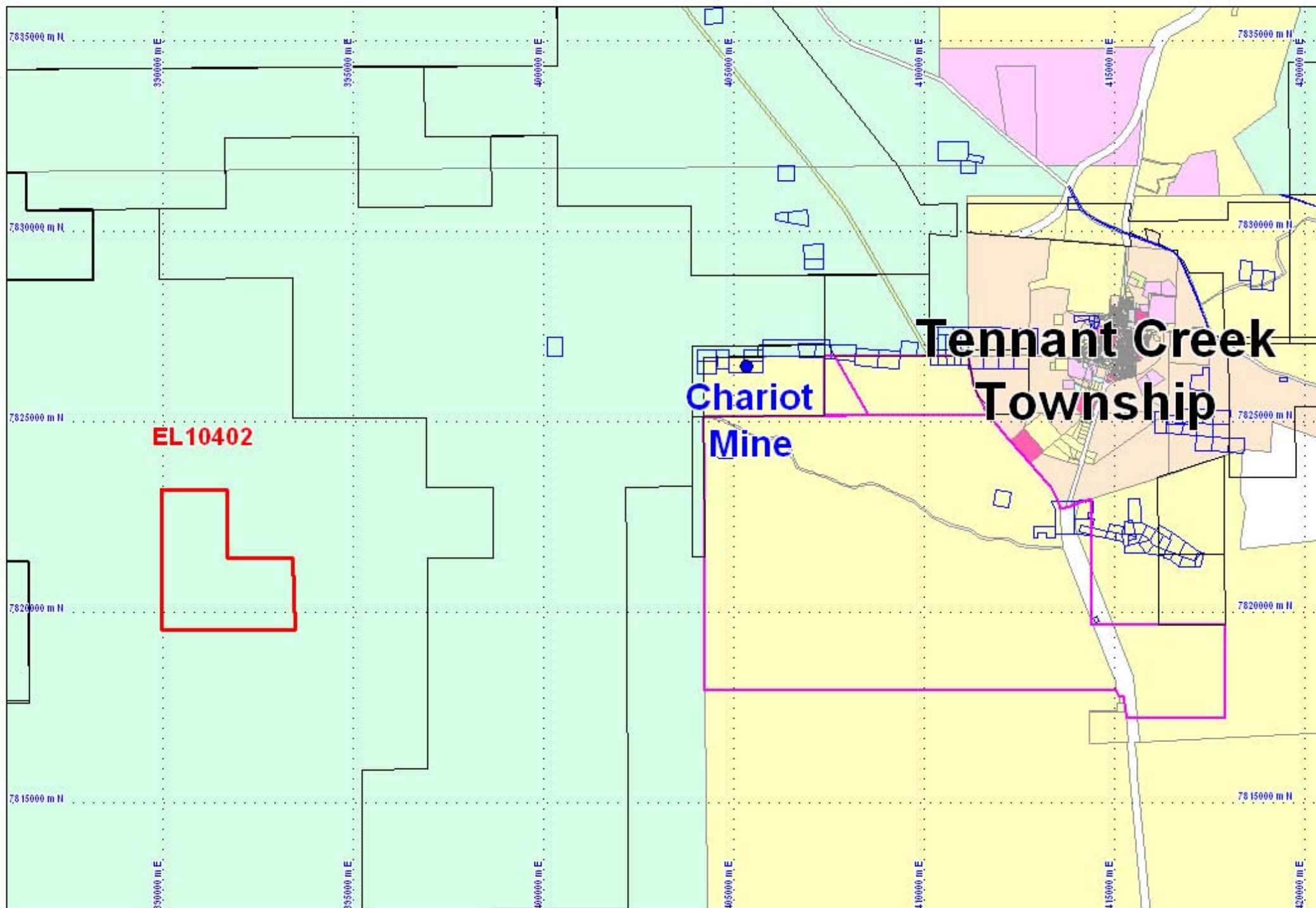


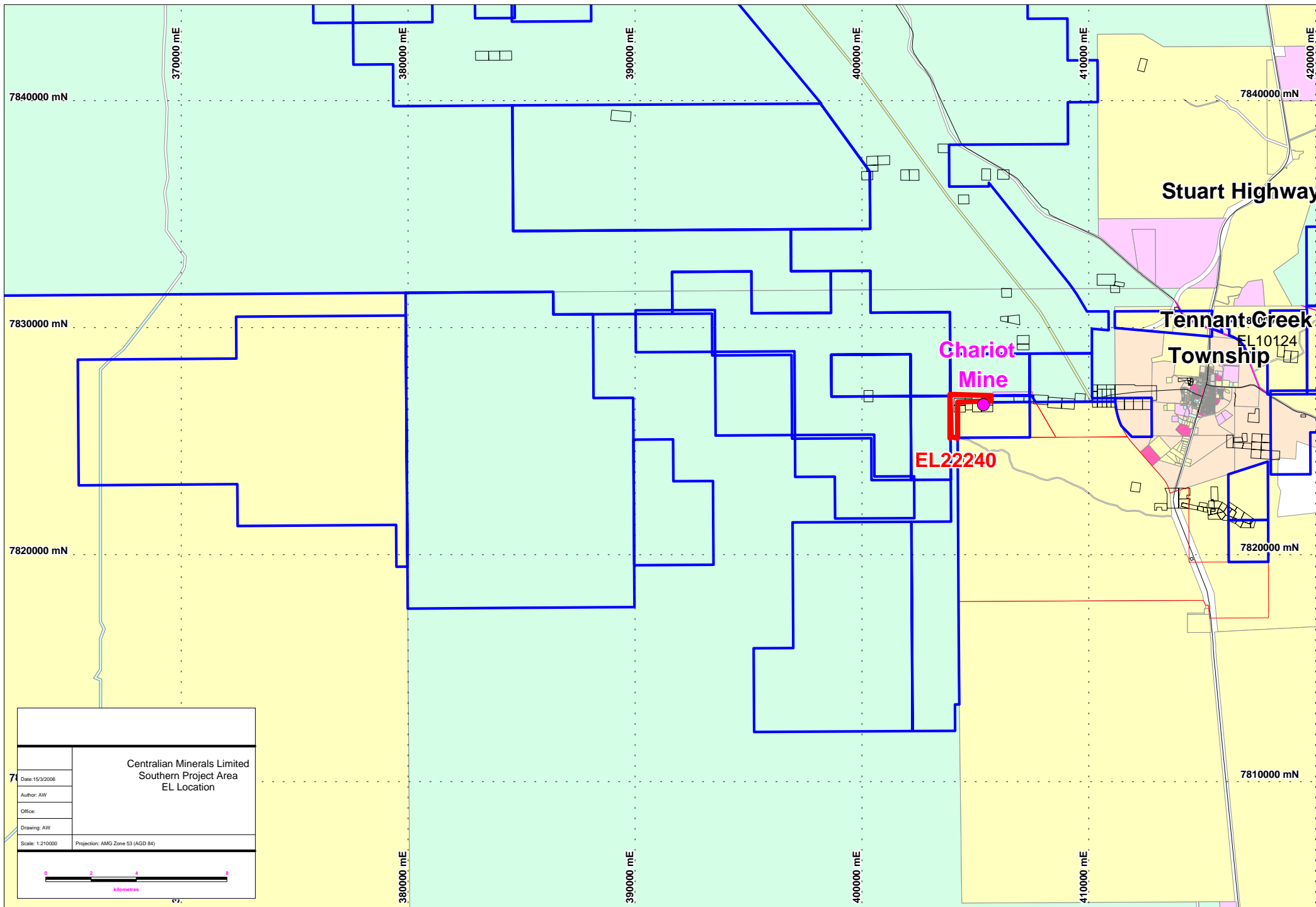


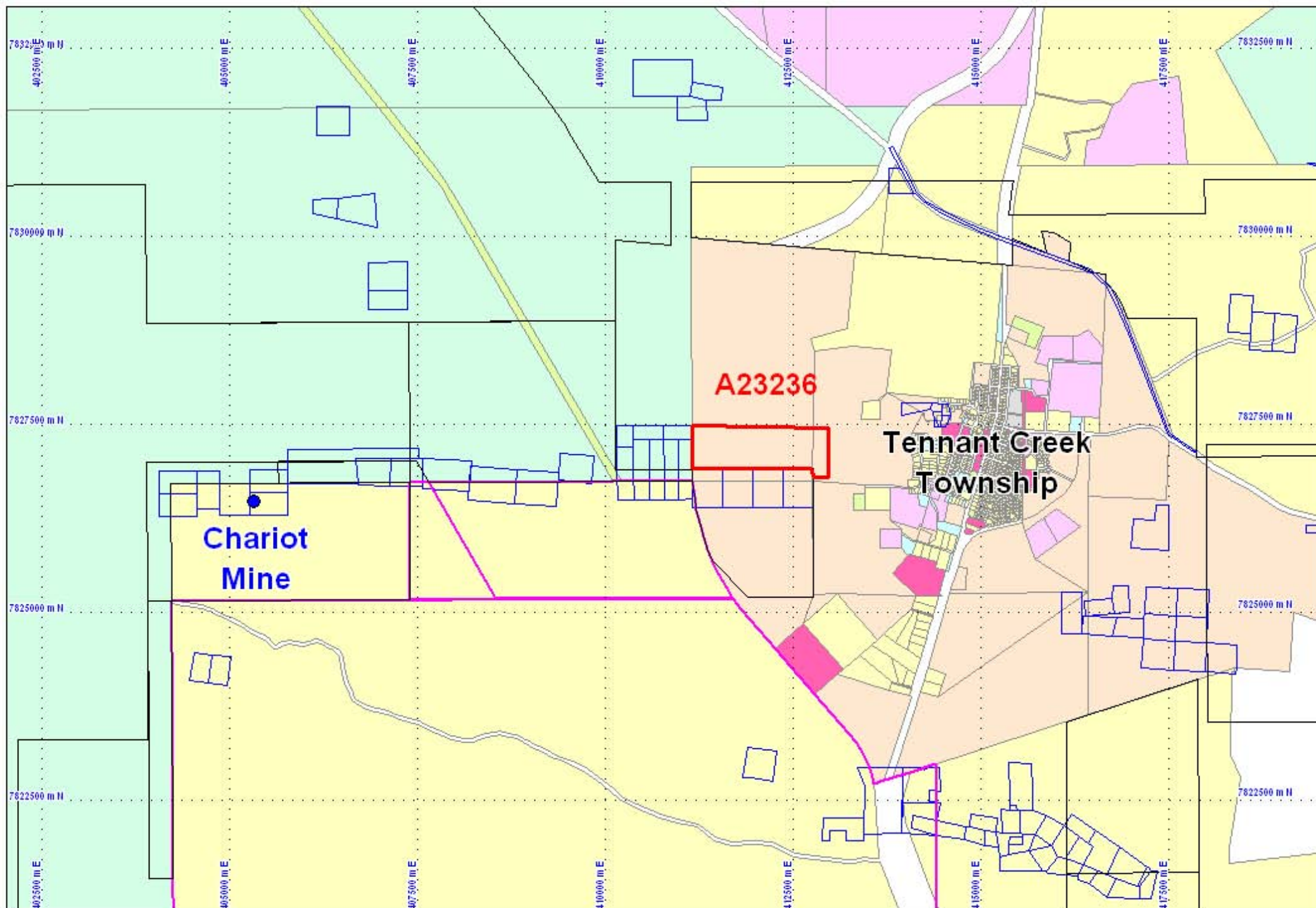


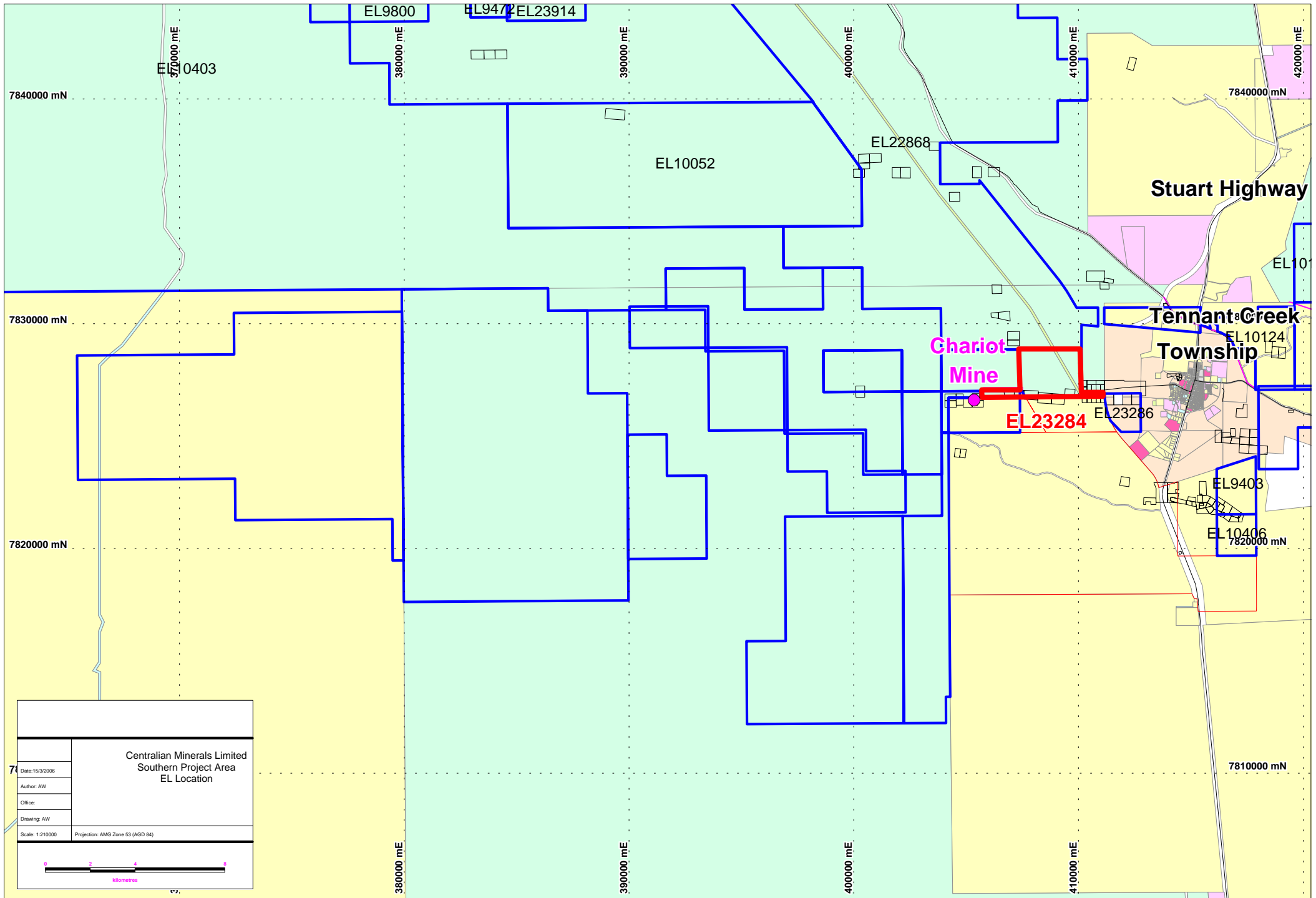


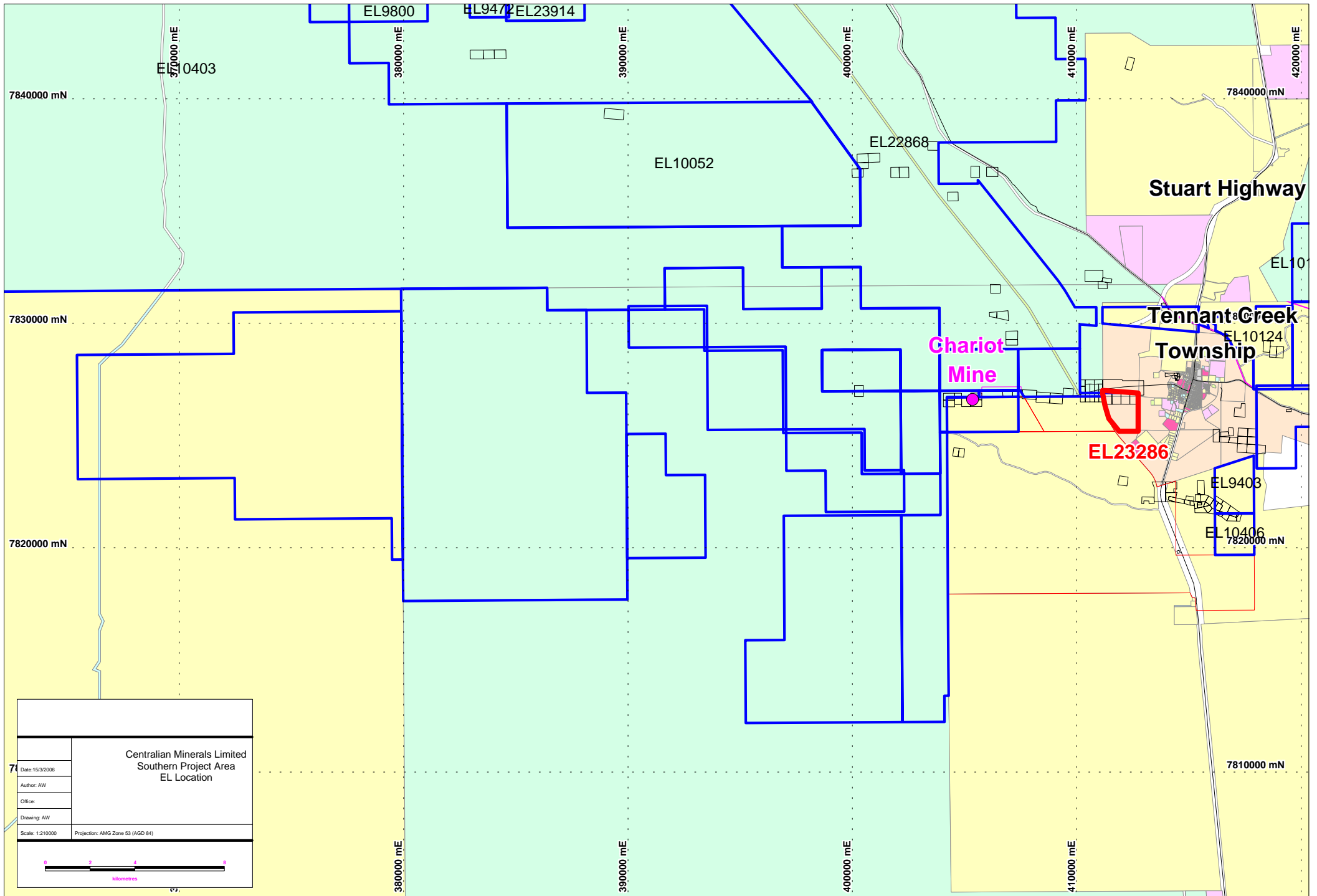












Centralian Minerals Limited Southern Project Area EL Location	
Date: 15/3/2006	
Author: AW	
Office:	
Drawing: AW	
Scale: 1:210000	Projection: AMG Zone 53 (AGD 84)

0 2 4 8
kilometres