



## **EL 30/2003 Nine Mile Creek**

### **Annual Report**

**19 June 2010**

**to**

**18 June 2011**

Roger Hill  
June 2011

copies: (1) MRT  
(1) Grange Savage River

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## **1 INTRODUCTION**

Exploration Lease EL 30/2003 “Nine Mile Creek” was transferred to Goldamere Pty Ltd on 6<sup>th</sup> February 2008. Australian Bulk Minerals (ABM) was a wholly owned subsidiary of Goldamere and managed and conducted all exploration activities on this lease. ABM merged with Grange Resources Ltd (Grange) on the 1<sup>st</sup> January 2009 resulting in a name change for Goldamere to Grange Resources (Tasmania) Pty Ltd. Grange also manages the operation of the magnetite mine and concentrator at Savage River, and the pelletising plant and ship loading facilities at Port Latta on the North West coast.

Grange’s interest is focussed on the Long Plains magnetic anomaly for a potential future source of magnetite ore as a feed material for its Savage River concentrator. EL30/2003 contains the far southern end of the magnetic anomaly and lies immediately adjacent to the east of the remainder. Exploration activities centred on the magnetic anomaly will extend on to this lease. Future mining activities will certainly encroach on this lease and substantial exploration work will eventually be undertaken to “sterilise” the areas currently recognised as anomalous for gold which will be affected by proposed mining infrastructure, including haul roads, waste dumps and tailings storage.

The following report summarises exploration activities completed at Nine Mile Creek during the sixth year (2010/11) of tenure.

This document will report all activities using the MGA94 datum.

## 2 TENURE

Grange's Long Plains Prospect is held under a collection of three exploration leases, EL19/2005, EL46/2007 and EL30/2003 as shown in figure 1 below.

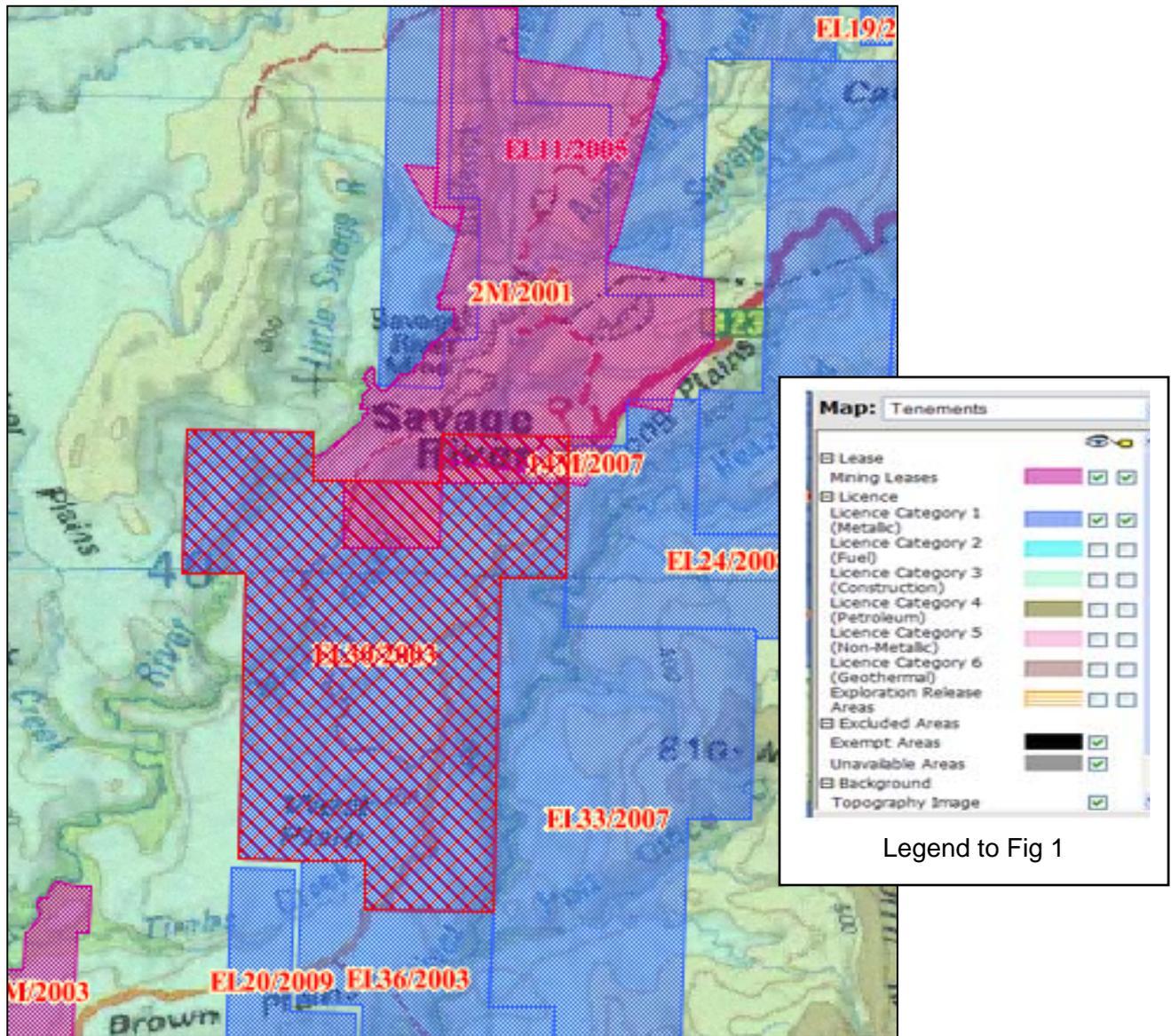
EL19/2005 comprises an area of 10km<sup>2</sup>. The lease comprises three parts located around what was formerly a collection of mine leases and a retention lease formerly held by another party. Two of the parts are peripheral to the Long Plains magnetic anomaly, but the third is centred on the North Zone of the anomaly. All activities to date have been conducted on this part.

Grange was granted EL46/2007 on the 26<sup>th</sup> November 2007. This lease comprises two parts covering the former mine and retention leases. The two leases (EL19/2005, EL46/2007) encompass the majority of the Long Plains magnetic anomaly and provide continuous leasehold connecting all parts of EL19/2005 and the Savage River Mine Lease 2M/2001.

Grange successfully applied to transfer EL30/2003 to Goldamere after negotiating with the holders, Gregory and Thorne. This transfer was granted on the 6<sup>th</sup> February 2008. It completes the coverage of the anomaly and incorporates ground adjacent to the anomaly necessary for extended exploration activities and potential mine infrastructure.

In May 2010 Grange successfully applied for a 12 month extension upon the expiry of the last extension of one year term.

In September of 2010 Grange requested an amalgamation of leases EL19/2005, EL46/2007 and EL 30/2003. This request was granted in February 2011. ( see appendix 1)



**Figure 1: Land Tenure as at June 2011 : EL 30/2003 and ML 2M/2001**

Figure 1 displays the recently amalgamated Exploration licence EL / 2003 (the result of combining EL 46/ 2007, EL19/ 2005 and EL 30/2003 in Oct of 2010) adjoining the Savage River mining lease ( 2M/ 2001). Source> <http://www.mrt.tas.gov.au/Viewer>

ID	Ten. Ref.	Area	Holder	Product
23550	EL30/2003	38 sq km/blocks	Grange Resources (Tasmania) Proprietary Limited,	Category 1 - Metallic Minerals, Atomic Substances, Category 5 - Industrial Minerals, Semi/Precious Stone

Table 1 Current Tenure Details

### 3 LOCATION

The Long Plains Prospect is located approximately 10km south by road of the Savage River Mine and concentrator. Savage River is located approximately 100km south west by sealed road from Burnie (Figure 2). The lease is accessed by the all-weather gravel road between Savage River and Corinna, and then by a bush track of approximately 2km.

Local topography surrounding the lease is rugged, with incised valleys and steep hills. The North Zone of the anomaly is located on top of a prominent north-south trending ridge. The west flowing Bowry Creek is the main drainage in the area and runs past the northern boundary of the lease area before joining with Main Creek which drains much of the northern portion of the lease.

Regional vegetation includes undisturbed rain forest, wet eucalypt, acacia and open heath land. The immediate area of the prospect has previously been logged extensively approximately 20 years ago, with almost no mature trees present in the working area. A bush fire not long after this time devastated the remaining vegetation, leaving the present vegetation as thick regrowth dominated by eucalypts with several rainforest species. Climate is wet temperate with an average annual rainfall of 1,950mm and mean monthly temperatures ranging from 3-19°C.



Figure 2: Savage River Project Location

#### 4 PROJECT HISTORY

Ironstone outcrops on the Savage River were first discovered by State Government surveyor C.P. Sprent in early 1877 during one of his exploration journeys through western Tasmania. The deposits were first reported as a possible source of iron ore in 1919. Modern, systematic exploration techniques were employed by the Australian Bureau of Mineral Resources during 1956 that included ground and airborne magnetic surveys. The largest magnetic anomaly was detected at Savage River with two smaller anomalies being detected at Long Plains and Rocky River further to the south.

In 1965, Savage River Mines Ltd, a joint venture of Australian, Japanese and American interests was formed to develop the Savage River Project. This Project was operated for the full term of a thirty-year lease by PMI (Pickands Mather International – managers of the joint venture). At the end of March 1997, ABM purchased the assets of the Savage River Project from the Tasmanian Government. ABM has continued mining since 1997 with a series of cut-backs on existing pits and has developed the South Deposit.

A 15 year mine life extension project was approved during 2007. This is based on a further cutback on North Pit. Further studies on mine life extensions and production expansions are evaluating the potential of additional ore sources including redeveloping South Deposit and Centre Pit. Long Plains was identified as having potential to yield ore quickly with mineralisation practically outcropping at surface. However the long haul to the Savage River site for processing has restricted the development of the prospect. It was recognised that significant information needs to be obtained from Long Plains before a meaningful evaluation can be carried out and the potential for supplying ore to the mill determined.

Grange refocussed much of its exploration/development activities in Long plains based on the Board of Granges resources committing to spend \$2,000,000 in 2011 to develop a JORC resource estimate on as much of Long Plains as possible. Internal funding release (approved AFE) was effected 17<sup>th</sup> June 2011.

## 5 GEOLOGY

The Long Plains magnetite deposit lies within and near the eastern margin of the Proterozoic Arthur Metamorphic Complex in north-western Tasmania. The complex is exposed along a northeast-southwest trending structural corridor, the Arthur Lineament, which separates Proterozoic sedimentary rocks to the northwest from a variety of Palaeozoic rocks to the southeast (Figure 3).

The magnetite deposits at Long Plains represent a series of elongate, discontinuous magnetite lenses that extend over a three kilometre strike length (Figure 4). The deposit has been separated into three distinct zones on the basis of total magnetic intensity termed the Northern, Central and Southern Zones. The oblique view of the total magnetic intensity in Figure 4 illustrates the broad geometry of the Zones.

The magnetite zones are sub-vertical to strongly east dipping and hosted within ultramafic and mafic schists. A suite of late metabasalt and metadolerite intrusive dykes occur sub-parallel to the ore zones. Vein magnesite is developed at the western magnetite boundary with the contact marked by the strong weathering and the development of surface clays (Griffith, 2000, Internal memorandum).

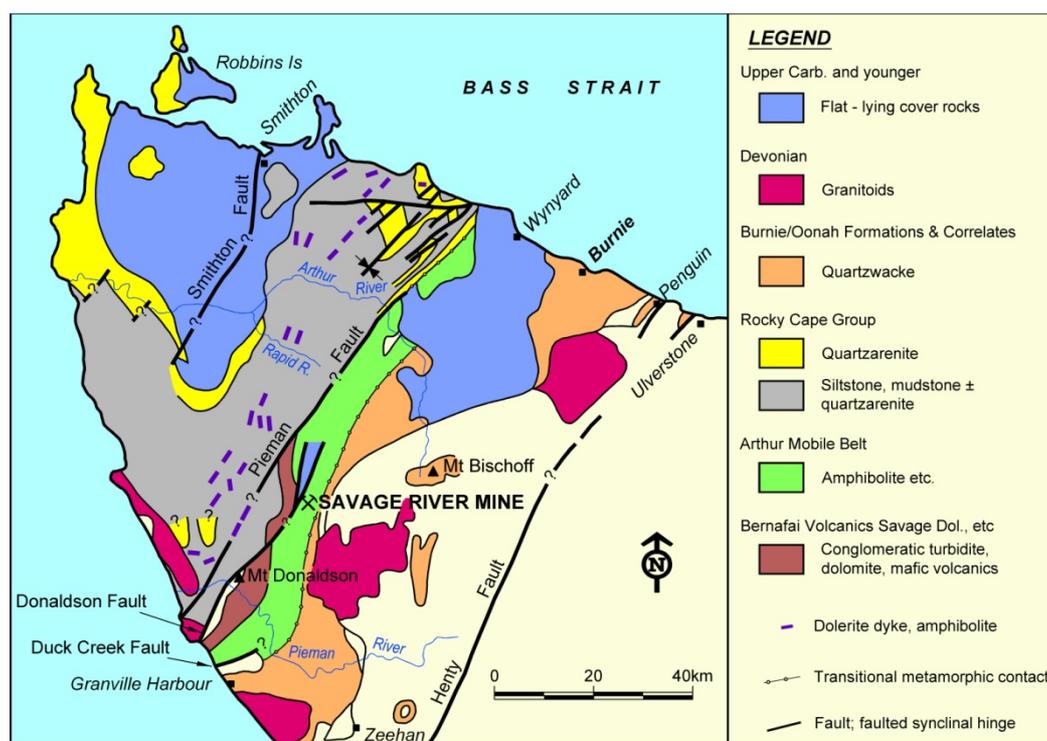


Figure 3: Regional Geology

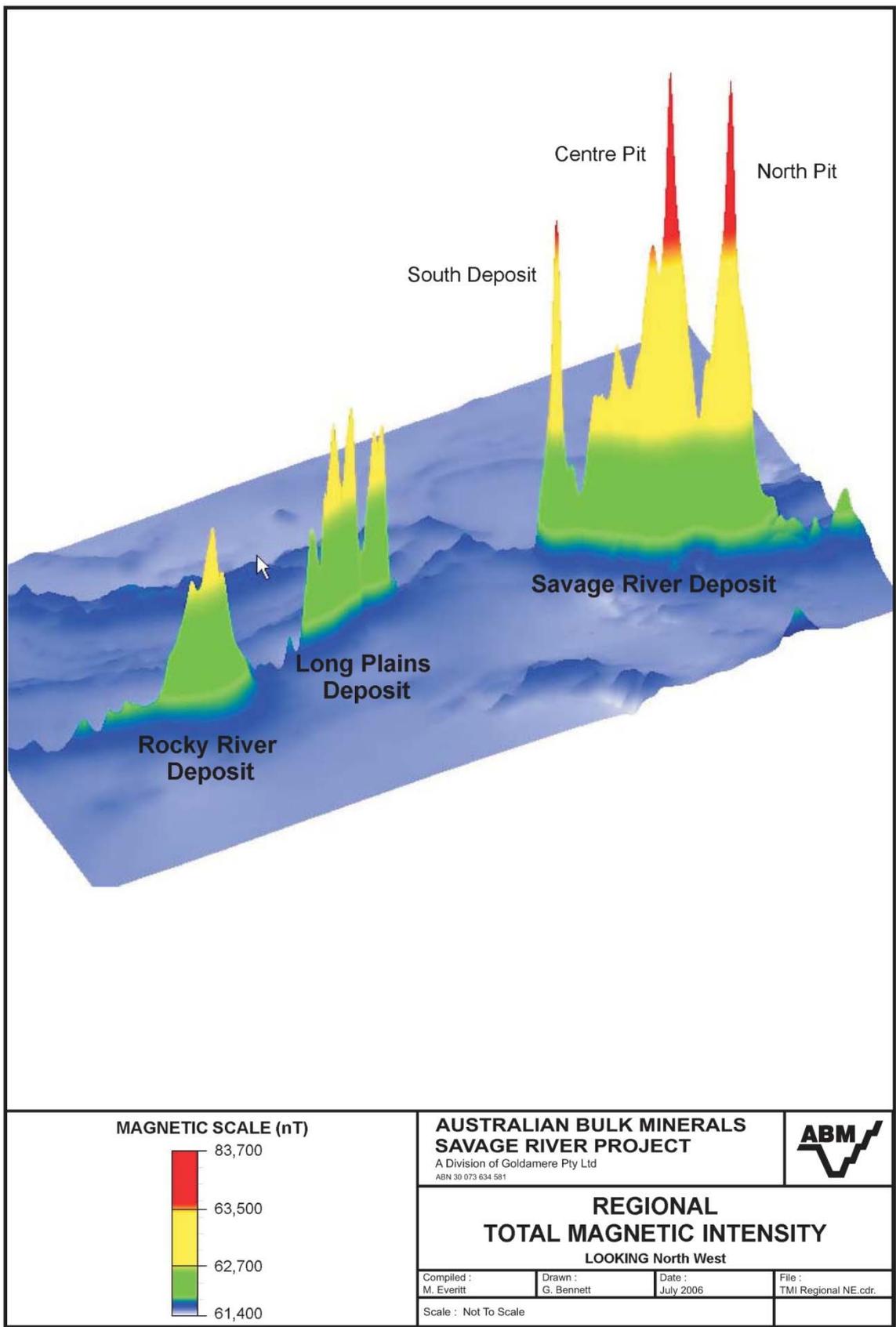


Figure 4

## 6 EXPLORATION HISTORY

The Long Plains magnetite deposit was first investigated during the late 1950's by the Bureau of Mineral Resources (BMR), as part of a regional magnetic study of the Savage River area. A ground magnetics survey was completed in 1962 across the area (Eadie, 1962). The contour map produced for that report has been digitised and converted into AMG66 co-ordinates to be combined with other data.

Diamond drilling and ground magnetic surveys were undertaken by Rio Tinto Australia Exploration (RTAE) Pty Ltd during the early 1960's. One diamond drill hole RTAE-1 totalling 195.0 metres was drilled in the northern end of the deposit.

Ownership of the deposit was transferred to Industrial and Mining Investigations (IMI) Pty Ltd during the 1960's, who completed broadly spaced diamond drilling at Long Plains. A total of seven diamond drill holes (IMI28-30; IMI33-35 and IMI46) totalling 1,135.07 metres were drilled in the northern and southern areas of the deposit.

No further significant exploration was completed at the deposit until 1994 when Savage Resources Pty Ltd completed four diamond drill holes (LPDDH100-103) in the north of the deposit. The program totalling 525 metres was designed to provide a complete cross section through the deposit in an area of moderate grade magnetite development lying between drill holes RTAE 1 and IMI 29.

Some weak gold anomalies were identified on the lease by the Goldstream Mining/ Titan Resources JV during 1996/97. No further work was undertaken on these anomalies. Extensive historic gold workings are located in the north of the lease in the Golden Ridge area and on the adjacent mine lease 2M/2001.

An initial program in 2006 was devised to develop a geological model. This involved

- relogging historic core,
- costeaning across the mineralisation (1505 meters),
- logging the costeans,
- establishing survey control points

A follow-up program in 2007 completed 6 RC drill holes and 1 diamond hole, and completed a ground magnetic survey over part of the Northern Zone.

In 08/09, the following work was completed on this lease EL 30/2003:

- review of historic data
- review of Goldstream helimag data
- a preliminary mining infrastructure plan
- inspection of overgrown access tracks

The program in 09/10 included a financial model or the potential impact of the deposit and detailed planning to develop a 5 year plan.

The program in 10/11 changed when the Board committed to an exploration and drill program in Long Plains totaling \$2,000,000 in 2011. Preparation for that program in Apr, May and June of 2011 included the track cutting of proposed new track alignments, a follow-up fauna survey and cutting of gridlines in preparation for ground geophysics. (Table 1).

## **7 2010/11 EXPLORATION PROGRAM**

On Feb 14<sup>th</sup> the Board of Granges resources committed to spend \$2,000,000 in 2011 to develop a JORC resource estimate on as much of Long Plains as possible. Internal funding release ( approved AFE) was effected 17<sup>th</sup> June 2011.

In May-June of 2011, an exploration contractor hand cut 3.2 line km of proposed new track alignments (Fig 5) and an additional 7.2 line km of 100m spaced grid lines (Fig7) in preparation for ground magnetic surveys planned for July 2011. These two jobs were completed prior to 7<sup>th</sup> June 2011 cost \$10,800 and \$21,488 excl GST respectively.

A field geologist was assigned to supervise and map the lines ( cost \$3,500) cut by the grid cutting contractor this work is in progress and will be used initially to guide the planned track and road works for the 2011-12 work plan ( subject to MRT approvals).

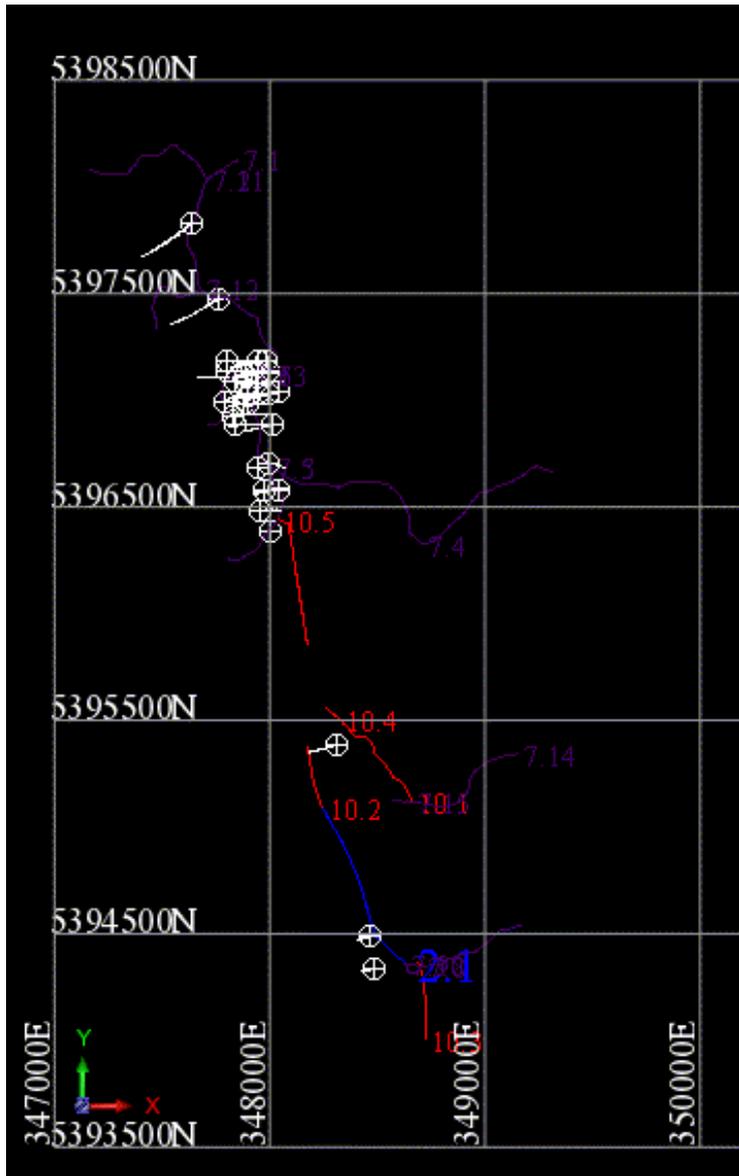
A work plan for the coming year has been submitted to MRT (Mr. David Gatehouse) after Grange's internal approvals were completed on June 17<sup>th</sup> 2011.

Accordingly, an extension is sought to develop Long Plains into a resource by Dec 2011.

## 7.1 2011 Devil Den Survey

North Barker were again appointed in May 2011 to undertake a follow-up devil den survey of the proposed new routes for the access to the anomaly. North Barker environmental consultants were engaged for a 2 day fauna survey to confirm the existence of active dens as postulated in the 2010 report and to survey the 3.2km of proposed track alignments. ( cost \$9,000)

North Barker undertook the survey from the 6<sup>th</sup> to the 7<sup>th</sup> June 2011. The new report has not yet been delivered as at 17<sup>th</sup> June 2011.( time of writing)



**Figure 5** Long Plains roads to be used in planned drilling campaign GDA94.

Note that after North Barker had surveyed the central track, Grange had decided to use only the Southern Access Track ( ref 2.1, 10.2 and 10.3 fig 5 ) and a previously surveyed alignment ( ref 10.5 \_fig5 ) for planned diamond drill work, thus Grange does not intend to use central track (ref segments 7.14, 10.1 and 10.4) for drilling access this year.

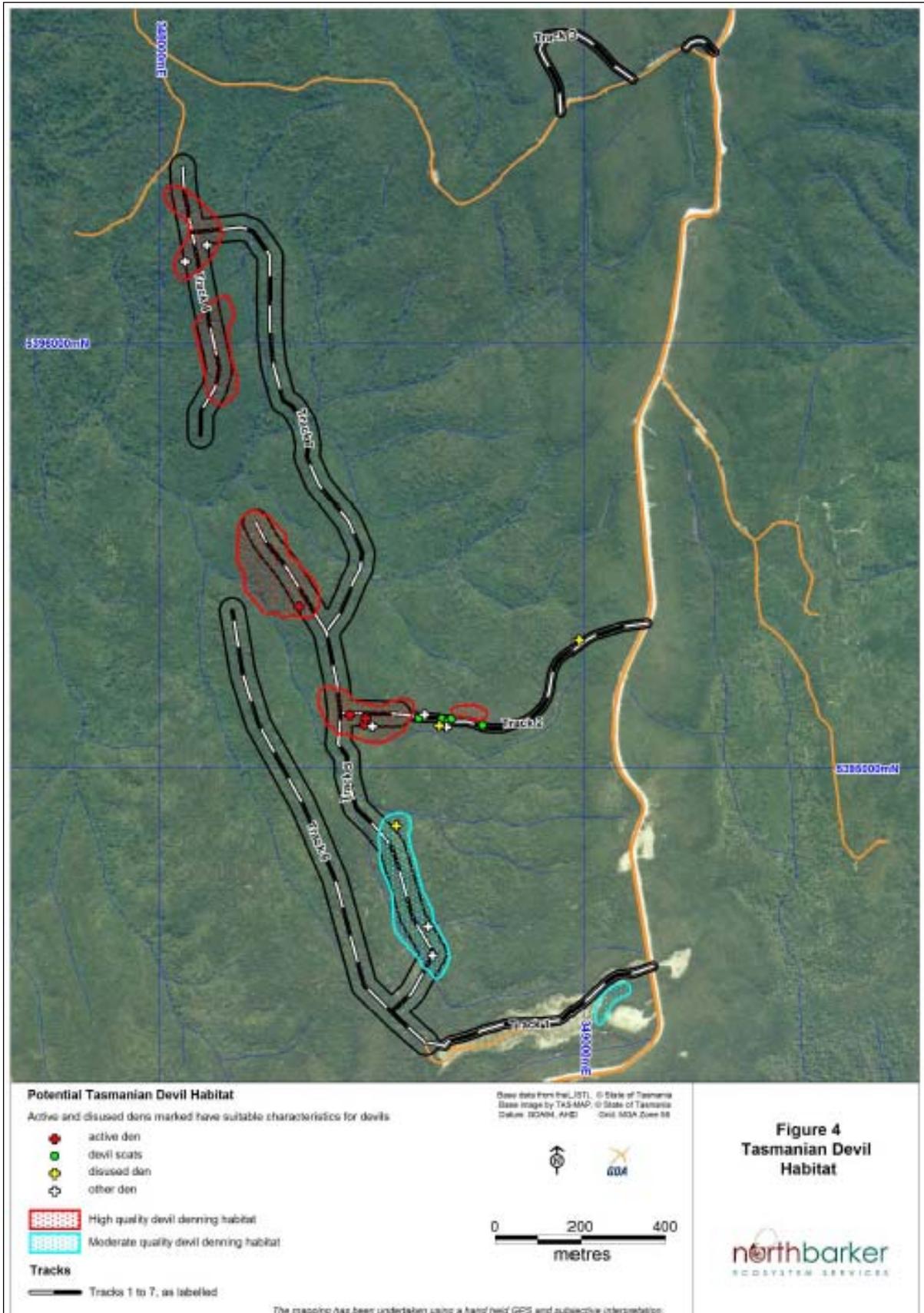


Figure 6: Tasmanian Devil Habitat 2010

- ....to be updated when new map of the 2011 survey is available from North Barker.

## 7.2 Grid Cutting

7.2 line km of access grids were cut over the 2005 ADGO mag survey area in preparation for a ground mag survey scheduled for July 2011. Grange surveyors are surveying the lines prior to the geophysical crew starting.

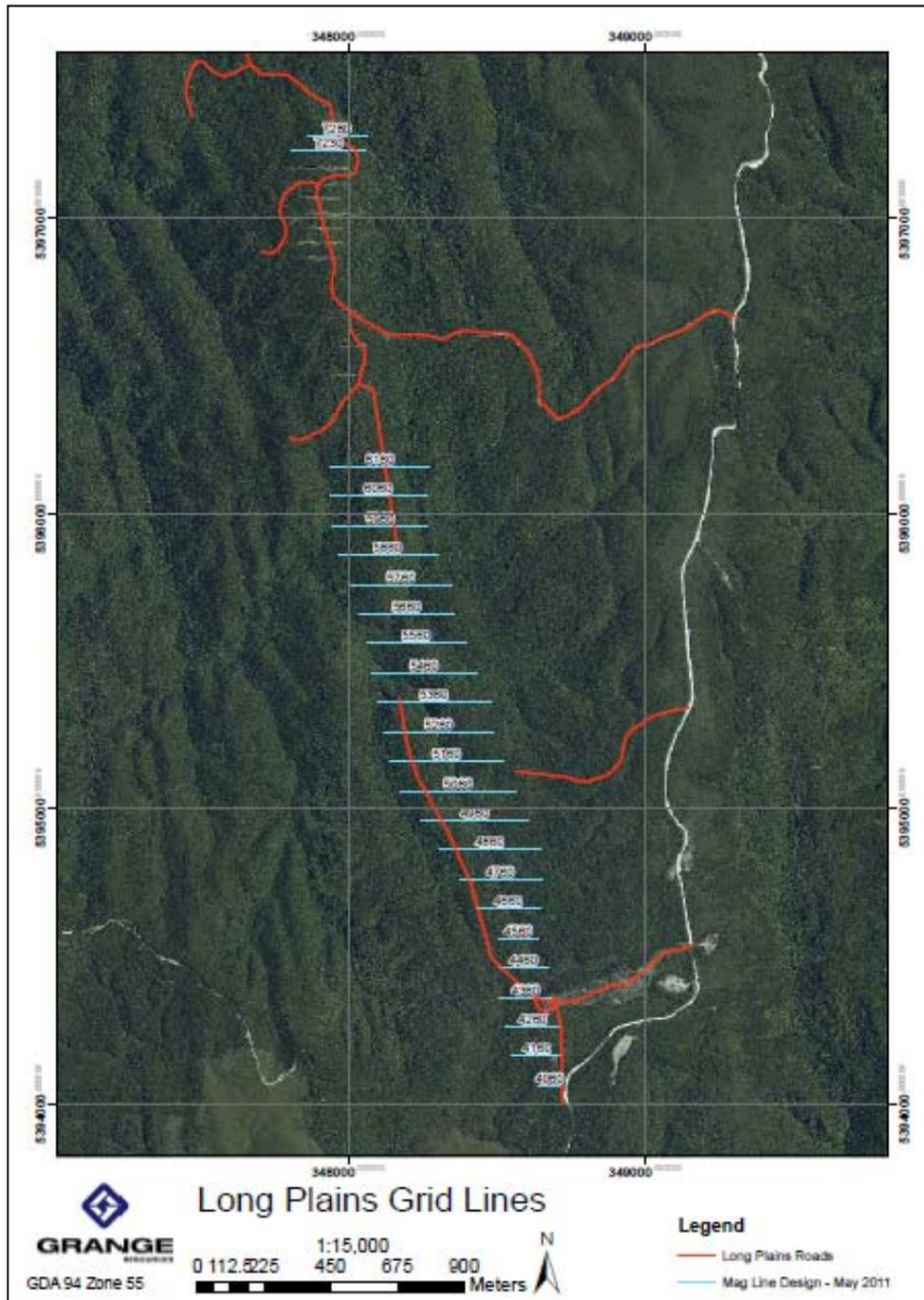


Figure 7: 100m spaced grid lines cut in May 2011

## 8 2010/11 EXPENDITURE

The following table details expenditure on the lease up to the 17th June 2010.

<i>Exploration Quarterly Report</i>		<i>EL30/2003 Nine Mile Creek</i>	
<i>4th Quarter 2010</i>			
<b>1. Geoscientific Costs</b>	Geology		\$ 3,500.00
	Geochemistry		\$ -
	Geophysics		\$ -
	Remote Sensing		\$ -
<b>2. Drilling &amp; Gridding Costs</b>	Gridding	10.4	\$ 32,288.00
	Drilling	Diamond m	
		Reverse Circulation m	
	<b>Total</b>	<b>0</b>	<b>\$ 32,288.00</b>
<b>3. Land Access Costs</b>			\$ -
<b>4. Rehabilitation Costs</b>			\$ -
<b>5. Feasibility Study Costs</b>			\$ -
<b>6. Other Costs</b>	Tassie devil survey		\$ 9,000.00
<b>7. Administration Costs</b>			\$ 5,000.00
<b>8. TOTAL FOR THIS QUARTER</b>	(sum of 1-7)		<b>\$ 49,788.00</b>
<b>9. Cumulative Expenditure at time of last report</b>			<b>\$ 66,201.80</b>
<b>Total expenditure to date</b>	(sum of 8 and 9)		<b>\$ 115,989.80</b>

Table 2: 2010/11 Expenditure for EL30/2003

## 9 2011/12 WORK PLAN

Long Plains Exploration and Delineation Drilling										
Part 1	Zone	Activity	Type	Contractor	Line km	Est. Cost	Shifts	Months	From	To
	CZ-SZ	Ground Mag	Survey	GAP Geo	7.2	\$ 15,000	5	0.2	July'11	Aug'11
Part 2	Zone	Activity	Type	Contractor	Metres	Est. Cost	Shifts	Months		
	CZ-SZ	Road constr	Bush	Fagan	2,149	\$ 50,958	19	2	Sept'11	Oct'11
	includes drill moves									
Part 3	Zone	Level	Type	Holes	Metres	Est. Cost	Shifts	Months		
	CZ-SZ	Drilling	Inf-HQ3	7	1,816	\$ 726,400	120	3.75	Sept'11	Dec'11
	includes drilling, assays, 2 techs, 1 ute, gyro, ori, consumables, 1 geo, but no site prep or drill moves									
Part 4	Zone	Level	Type	Holes	Metres	Est. Cost	Shifts	Months		
	NZ	Drilling	Inf-HQ3	4	1,200	\$ 488,000	80	0.2	Sept'11	Dec'11
	NZ	Drilling	Inf-RC3	16	3,223	\$ 708,500	54	1.3	Sept'11	Dec'11
	<b>Total NZ Drilling</b>			<b>20</b>	<b>4,423</b>	<b>\$ 1,196,500</b>	<b>134</b>	<b>1.5</b>	<b>Sept'11</b>	<b>Dec'11</b>
	includes drilling, assays, 2 techs, 1 ute, gyro, ori, consumables, 1 geo, <i>drill pads and moves</i>									
<b>Total Long Plains 2011 Budget- Planned Expenditure</b>						<b>\$ 1,988,858</b>				
<b>Total Long Plains 2011 AFE Approved Board Funding</b>						<b>\$ 2,000,000</b>				

Table 3: 2011/12 planned program for EL30/2003

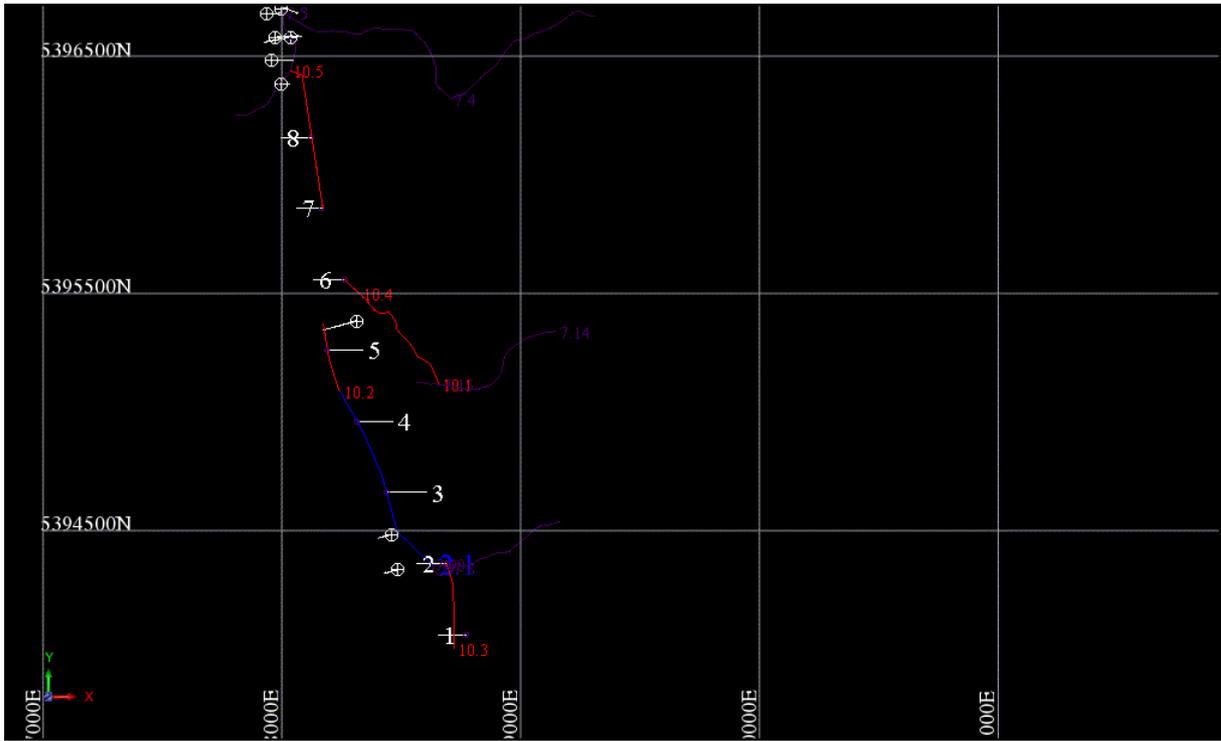


Fig 8. Planned 300m spaced exploration drilling Plan GDA94

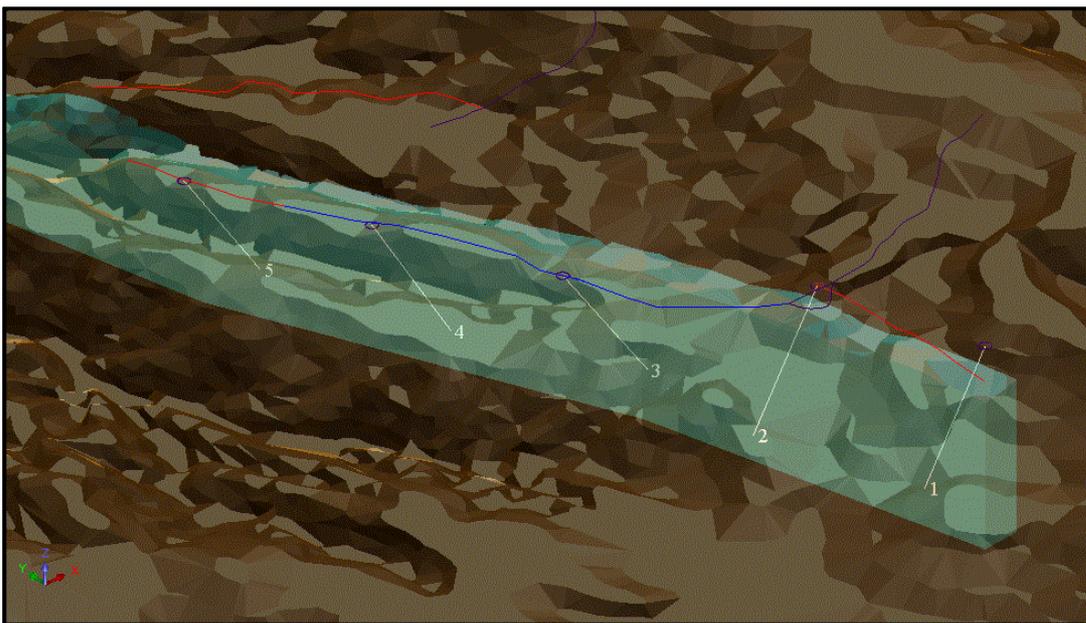


Fig 9. Planned 300m spaced exploration drilling South Central Zones Plan GDA94  
 Note blue shape is mag target ( to be refined with ground mag)

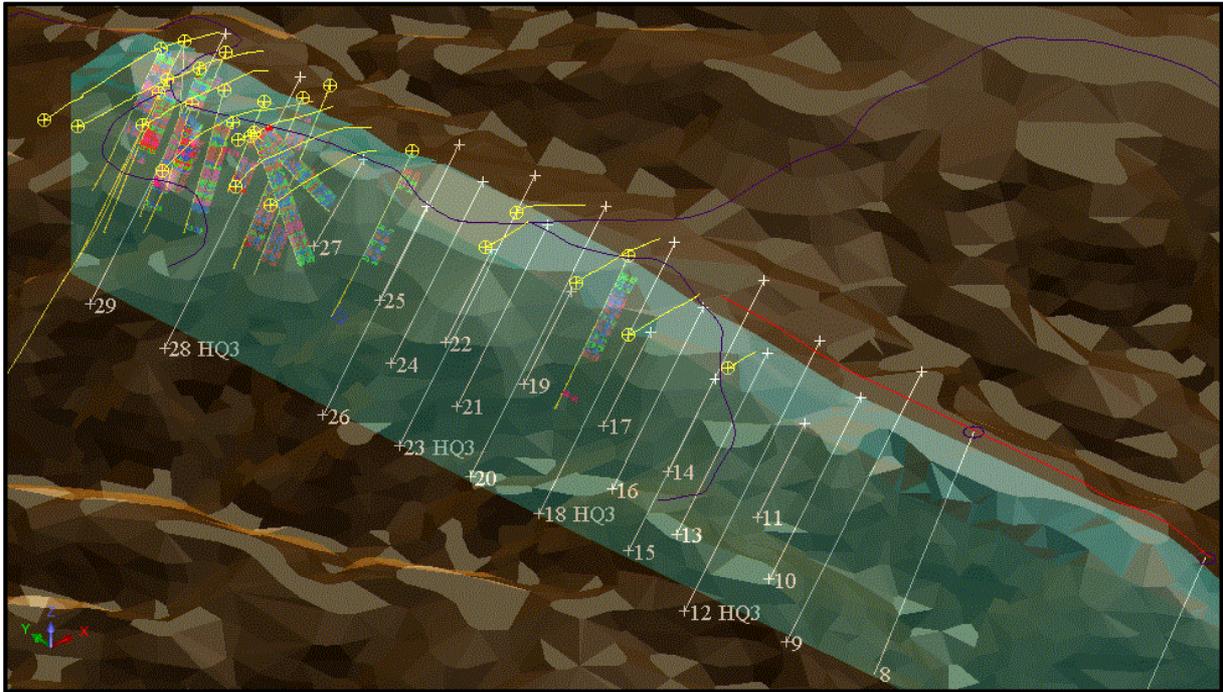


Fig 10. Planned 100m spaced definition drilling North Zone Plan GDA94

Exploration Objectives: 2011 / 12

North Zone:

Augment existing drill spacing to allow at least an inferred and possibly partly indicated resource to be estimated between 6380mN and 7250mN (1km strike length). 20 holes are planned, 16 RC and 4 diamond HQ3.

Central and South Zones:

- Complete ground mag to corroborate continuity and guide drill targeting.
- Complete very widely but regularly spaced drilling at 300m spacing, to test the entire strike length of the mag anomaly; so as to confirm source of magnetic anomaly and to infer geological continuity.

At conclusion of the CZ-SZ drill program the data may not be of sufficient quality and quantity to estimate an inferred resource but will inform a decision to either: continue developing the CZ-SZ targets into an inferred resource in subsequent programs or discontinue exploration work

seg	Type	Northing	Easting	Elevation	Length
1	RC	5397180	347849.2		300
2	HQ3	5397080	347861		300
3	RC	5396880	347895.5		300
4	RC	5396880	347884		98.9
5	HQ3	5396780	347909.2		300
6	RC	5396780	347899.1		201
8	RC	5396680	347884		103.1
9	RC	5396680	347899.1		201
10	RC	5396680	347915.6		300
11	RC	5396580	347900.5		103.1
12	HQ3	5396580	347919.9		300
13	RC	5396480	347918.5		103.1
14	RC	5396480	347929.3		201
15	RC	5396480	347950.1		300
16	RC	5396380	347917.1		103.1
17	RC	5396380	347927.8		201
18	HQ3	5396380	347937.9		300
19	RC	5396280	347947.2		103.1
20	RC	5396280	347962.3		201
21	RC	5396280	347983.8		300
				Total HQ3	1200
				Total RC	3222.5

Table 4 Total North Zone Planned drilling 4323m

Hole #	Northing	Easting	Elevation	Length	Direction	Dip
1	4060mN	8772mE	289	241	West	-60
2	4360mN	8690mE	282.5	252	West	-60
3	4660mN	8437mE	256	293	East	-55
4	4960mN	8310mE	251	300	East	-58
5	5260mN	8189mE	231	267	East	-56
6	5560mN	8260mE	222	235	West	-57
7	5860mN	8165mE	234	200	West	-60
8	6160mN	8121mE	249	263	West	-61
				1816		

Table 5 Total Central Zone Planned drilling 1816m

Note > Planned hole # 6 cancelled (Central Access track)

Roger A. Hill | Senior Geology Manager

### Grange Resources Tasmania

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## 1 Appendix 1

7 September 2010

Director of Mines and Major Infrastructure Projects  
Michael Leonard  
PO Box 56  
Rosny Park  
Tasmania 7018

Dear Michael

### **RE: AMALGAMATION OF ELS 30/2003, 19/2005 AND 46/2007**

I am writing to request amalgamation of exploration licenses 30/2003, 19/2005 and 46/2007 which are held by Grange Resources. These licenses form a contiguous block of ground of some 39km<sup>2</sup> in the area known as Long Plains, south of the Savage River mine lease (2M/2001).

The shape of the license areas at present is due at least in part to historic license boundaries that relate to tenancy prior to that of Grange or its predecessor ABM, and were carried over as Grange/ABM acquired the licenses.

The boundaries of the licenses with respect to the position of the Long Plains magnetic anomaly (the main area of interest for Grange) makes it difficult to schedule works that meet the MRT expenditure requirements and fit in with a cohesive exploration plan. For this reason, we would seek to have the licenses amalgamated.

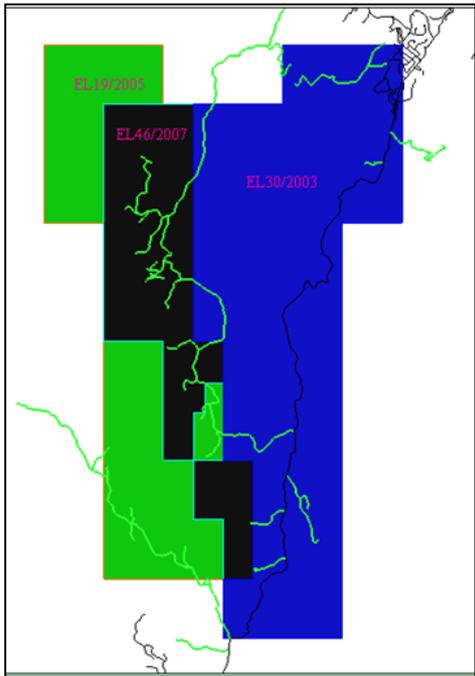
I understand the precedent in these matters is to set the expiry date of the new amalgamated license to that of the earliest expiry of the old licenses. In our case, this would set the expiry to January 2011, which is the expiry date of EL19/2005. The other two ELs expire in June 2011 and November 2012.

I would ask that consideration be given to setting the expiry date of the amalgamated license to June 2011 to coincide with the expiry of EL30/2003. The principle reason for this is that most works will occur during the summer months to coincide with favourable weather conditions. A January expiry would fall in the middle of this work season. This would require an annual report to be completed in December, probably less than half way through the field season. As the amalgamated license would be on annual renewal, it would be difficult for Grange to accurately capture costs and report on progress, which in turn would make it harder for MRT to assess Grange's progress in meeting its expenditure requirements. A mid-year expiry would alleviate this problem, and I request that consideration be given to a June 2011 expiry.

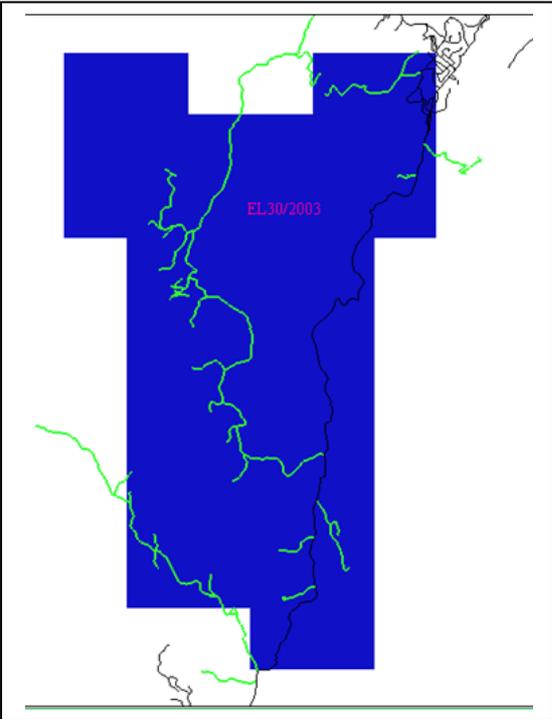
I also understand there is a \$136 application fee for license amalgamation. I have not enclosed that fee with this letter, but if your office can advise in-principle approval of the amalgamation request I will forward the fee ASAP.

Feel free to contact me if you require any further information.

Yours sincerely  
David Gibbons  
Geology Superintendent  
Grange Resources Tasmania  
Ph: 03 6446 3262  
Mob: 0429 314 844



"Old" tenure



"New" tenure