

**EL 26/2008 Lake Tiberias**

**ANNUAL REPORT**

**Tiger Coal Pty Ltd**

September 2011 to September 2012

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## **Abstract**

Previous exploration data was reviewed.

A drilling program was planned to test the shallow Triassic coal measures on the adjoining licences EL25/2008 and EL26/2008 in the Jericho – Oatlands area.

Three diamond drill holes of this program were within EL 26/2008. These holes intersected a number of coal seams.

Provisional assay results were received and confirm the detailed core log observation that there are seams of coal with relatively low ash values and high calorific values.

A percussion drilling program was planned to follow up the diamond holes. This program was approved by Mineral Resources Tasmania and has recently commenced. It is planned to follow up this program with down hole geophysics, geological mapping, a review of the regional magnetic and further drilling.

All diamond drill holes have been grouted to near surface and back filled with soil. All sumps have been backfilled. The percussion holes have been cased off and securely capped with PVC. They will be grouted and backfilled on completion of the down hole geophysics.

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1. DDH OJ001 Graphic log, detailed seam log, photographs of core and drill log.
2. DDH OJ003 Graphic log, detailed seam log, photographs of core and drill log.
3. DDH OJ004 Graphic log, detailed seam log, photographs of core and drill log.
4. Provisional Raw Coal Assays for OJ001, OJ002, OJ003 and OJ004.

# 1 Introduction

## 1.1.1 Exploration philosophy and geological setting

EL26/2008, Lake Tiberias, is in the Southern Midlands and covers 220 square kilometres (see Figure 1 for locality map). Tiger Coal Pty Ltd currently holds the area for Category 2 minerals (Coal). The operator is Midlands Energy Ltd.

The objective of the exploration in this area is to discover coal resources within the near surface Triassic coal measures (see Figure 2 for regional geology). The Jericho trough has a north to north-northwest trend and is disrupted by numerous northeast trending cross faults. The trough is a graben structure that extends for a minimum of 50 kilometres and varies from 1 to 5 kilometres wide.

The geology is dominated by Jurassic dolerite as sills and dykes forming the tiers and hills. Dolerite intrudes the Triassic Upper Parmeener fresh water sequence of interbedded mudstone, siltstone and sandstone. The upper part of this sequence is lithic sandstone with interbeds of mudstone and coal measures. Tertiary Basalt flows are seen on a number of high areas and valley sides and floors are generally covered by Quaternary alluvium and slope deposits.

The structural history of the area is reflected in the north-northwest trend of valleys related to Tertiary tensional faulting which reactivated Triassic basin growth faults with north east trending cross faults forming numerous small graben structures.

## 1.1.2 Licence details

Tenement number:	EL 26/2008
Tenement name:	Lake Tiberias
Tenement location:	Oatlands/Jericho/Colebrook
Reporting period:	18 September 2011 – 18 September 2012
Tenement holder:	Tiger Coal Pty Ltd
Tenement operator	Midlands Energy Ltd
Tenement area	220 sq km
Project supervision	Ron Gregory Prospecting

### 1.1.3 Location

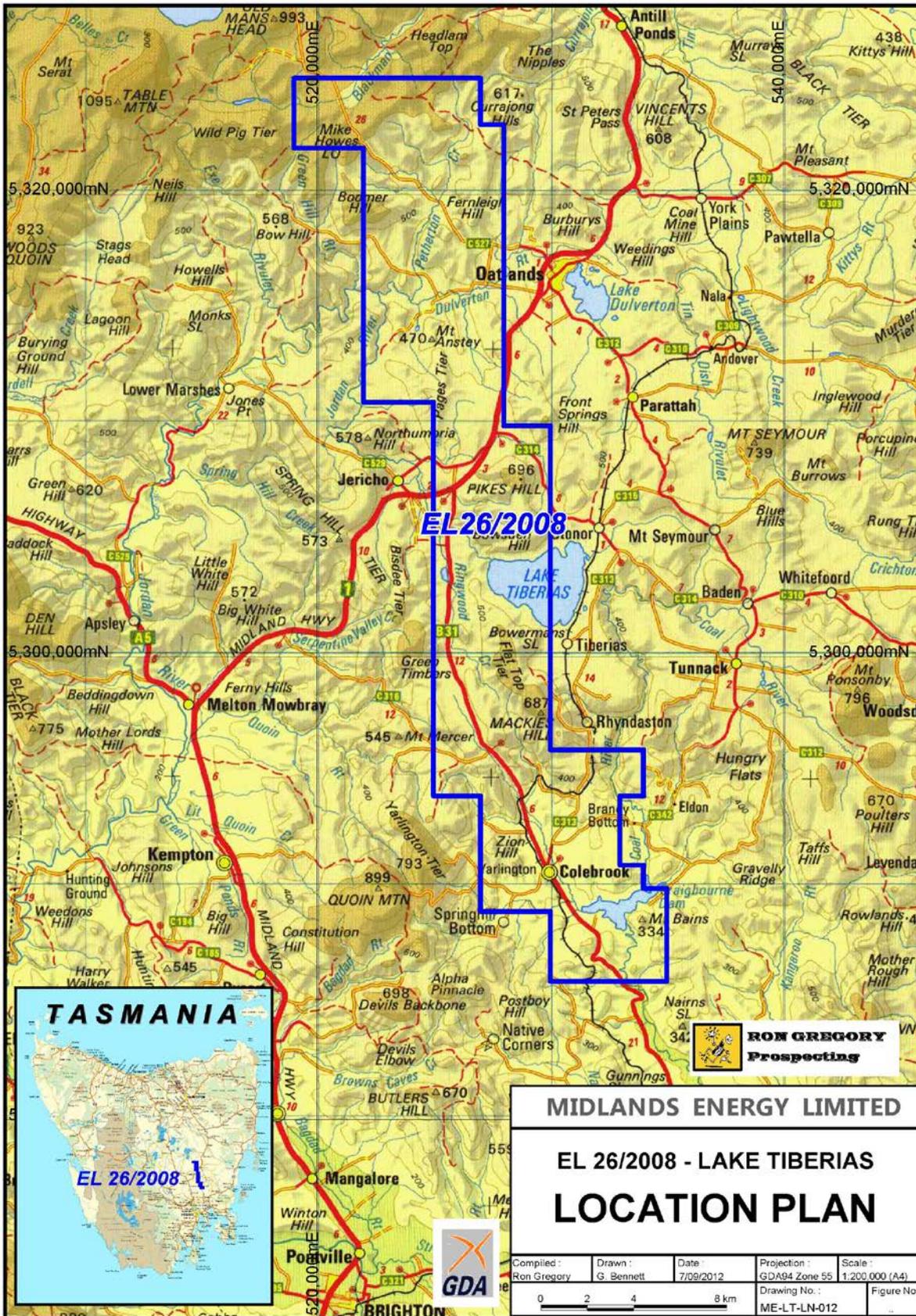


Figure 1. Location Map

## **1.1.4 Tenure**

Five years from 18 September 2008 to 18 September 2013

## **2 Review of previous work**

### **2.1.1 Prior to current tenement**

Capricorn Mining Ltd (EL 28/79) drilled one percussion hole (O-05) to the east of Jericho in 1981 but failed to intersect any coal (see Capricorn Mining Limited, 1982).

CRA Exploration Pty Ltd conducted a widespread exploration program over three licences in the Jericho-Oatlands-Kempton area (EL 18/1982, EL 19/1982 and EL 20/1982) (see Summons, 1984). The use of LANDSAT imagery allowed the identification of the structural trends that define the coal bearing graben.

The CRA Exploration percussion drilling program was successful in that it confirmed that there was coal present but it also identified the difficulties of exploring in an area that is highly faulted and intruded by dolerite. Eight percussion holes were drilled around Jericho and to the south adjacent to Mudwalls Road to an average depth of 50m. No assays were reported for these drill holes but CRA Exploration did define an upper "Sequence 1" which had up to six seams greater than 0.5m in thickness in the Jericho holes. Down hole geophysics was used extensively in this exploration program and allowed some degree of confidence to be gained from the reported coal intersection.

Summons (1982) reports "in situ inferred reserves" for all seams in "Sequence 1" in the Jericho area as 56 Mt. It was recommended that cored holes should be drilled to permit calibration with the geophysical responses.

### **2.1.2 During current tenement**

An evaluation of the regional geology was not able to confirm the extent of the Jericho Trough through the licence. Most of the licence is dominated by Jurassic dolerite and basalt which obscures the older underlying sedimentary sequence. In some areas the dolerite is intrusive and contact metamorphism is recorded in the Permo-Triassic sediments.

A regional stratigraphic drilling programme of 18 holes was prepared to test the quality and extent of shallow coal measures within the Jericho graben. The holes were designed to intersect the "Sequence 1" strata of CRA Exploration. This is the uppermost member of the Triassic and has been recognised as the most prospective for shallow economic coal seams. Up to six seams were thought to be present.

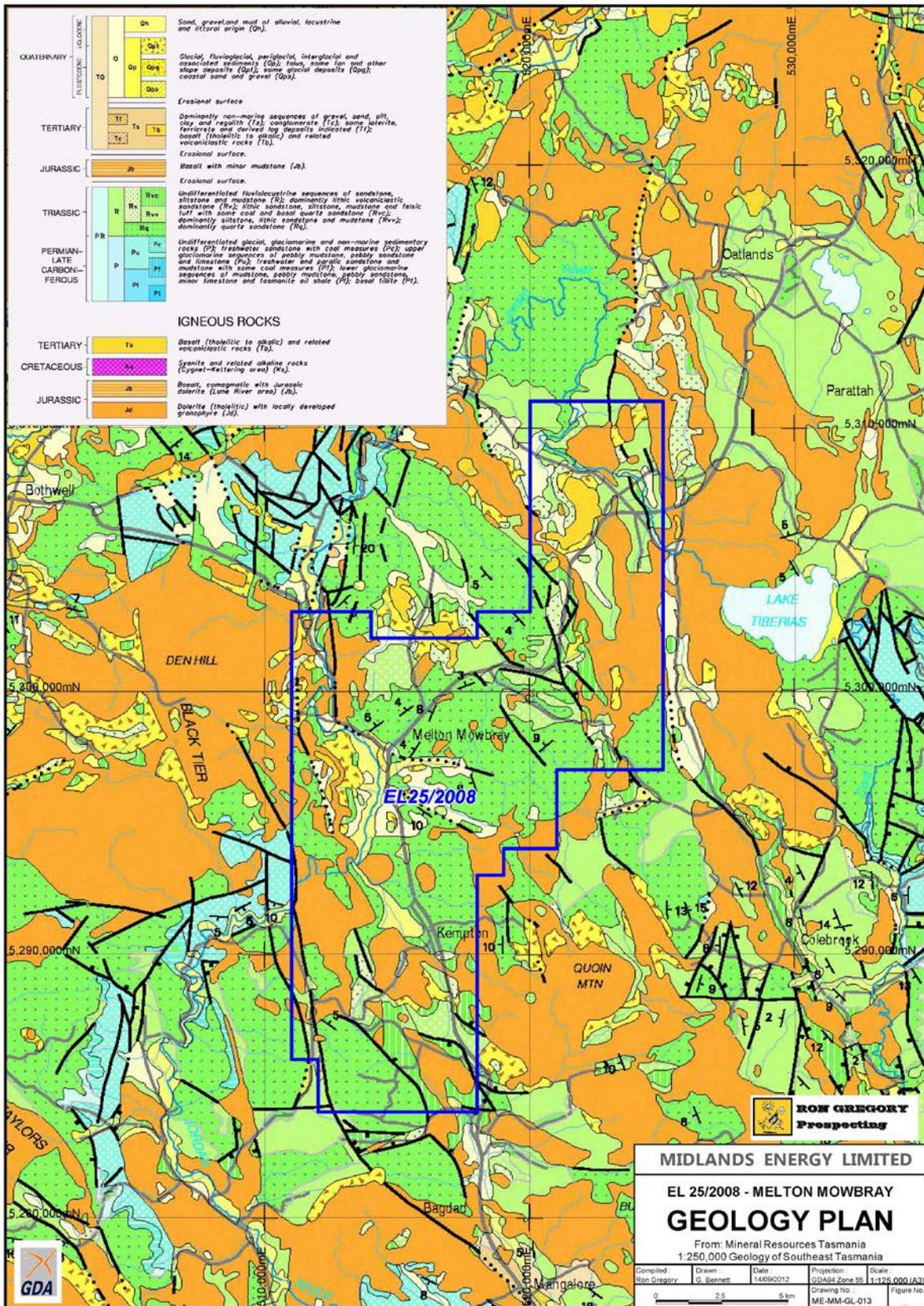


Figure 2. Regional Geology.

### 3 Exploration completed during the reporting period

#### 3.1.1 Exploration activities

A diamond drilling program was designed to test the prospective areas and assist to calibrate the CRA Exploration work and the current percussion drilling program over the two adjoining licences (EL25/2008 and EL26/2008). The diamond holes were drilled over the period of one month (14/3/2012 to 17/4/2012) by KMR Drilling. The program consisted of four holes (OJ001 to OJ004). Three of the holes were located on EL26/2008 (OJ001, OJ003 and OJ004) with the fourth being located on EL25/2008 (OJ002) (see drill locality map Figure 3 and 4).

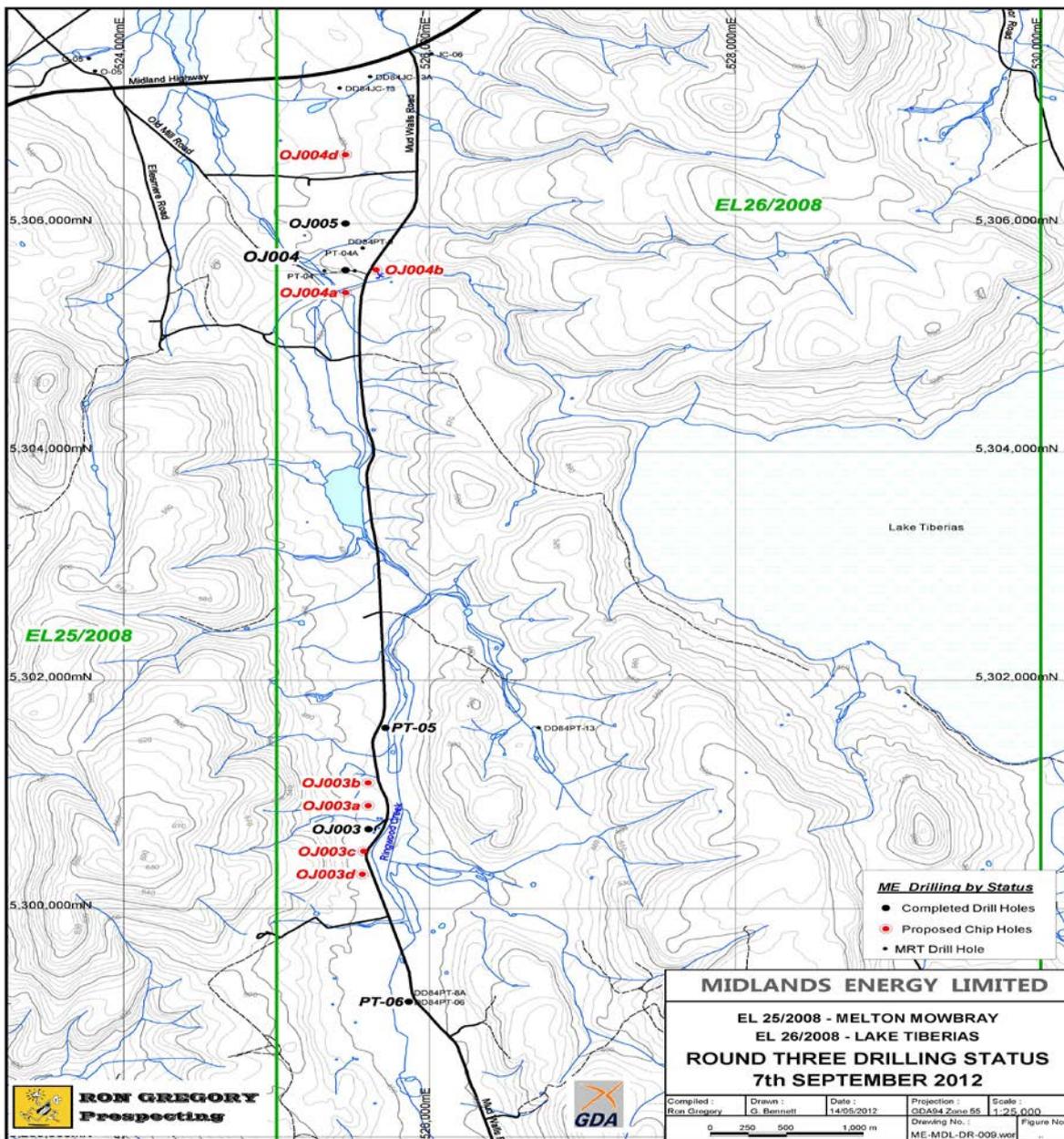


Figure 3. Drill hole locations south of the Midlands Highway.

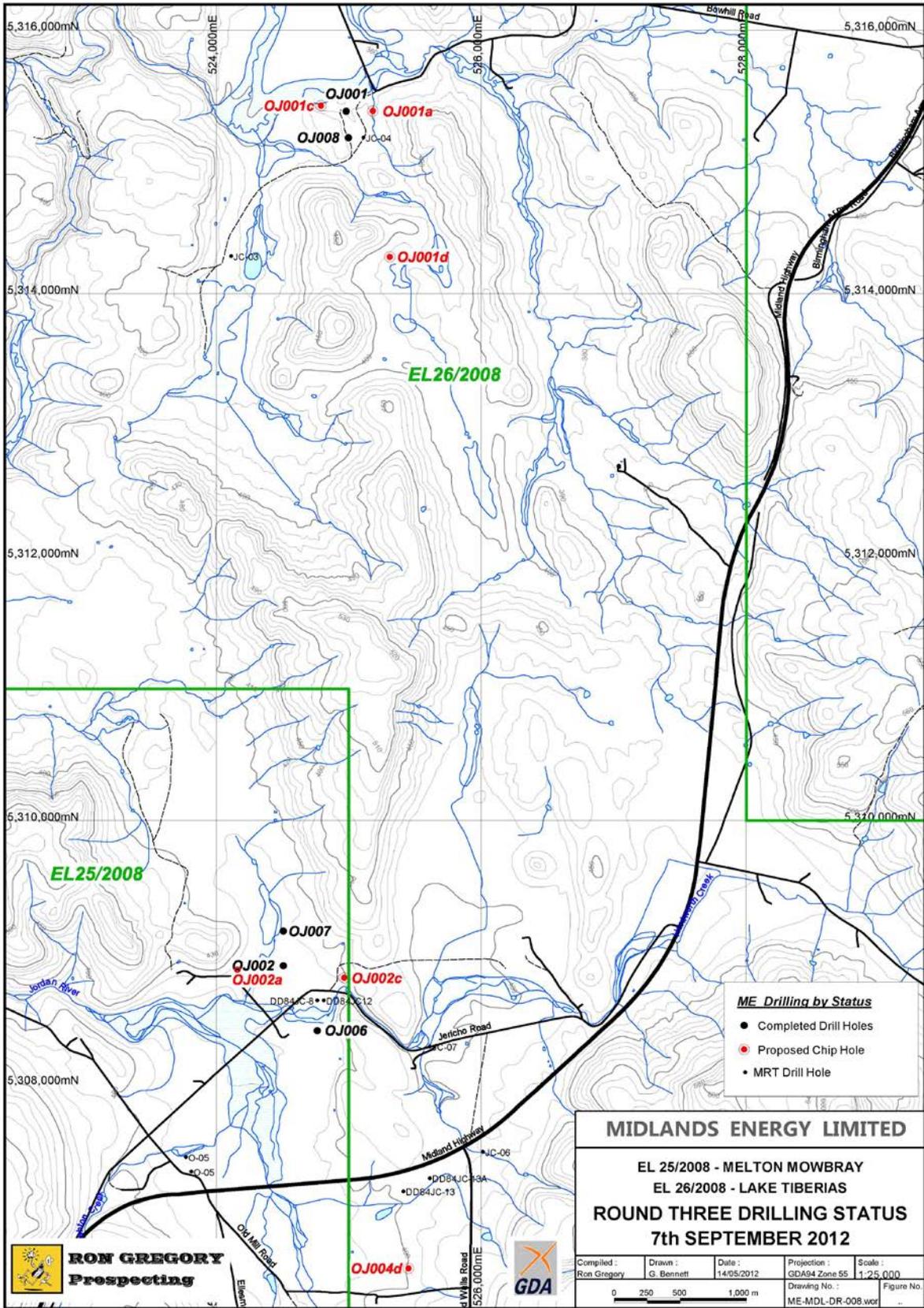


Figure 4. Drill hole locations north of the Midlands Highway.

OJ001 was drilled off Bowhill Road to the west of Oatlands and reached a depth of 102.25m in which three seams of coal and coal bearing carbonaceous mudstone were intercepted. OJ003 was drilled off Mudwalls Road and reached a depth of 45.65m after hitting dolerite at 40.37m. Three seams of coal and coal bearing carbonaceous mudstone were intercepted. OJ004 was drilled off Mudwalls Road on Old Mill Road to the north of OJ003, and reached a depth of 48.65m after hitting dolerite at 37.5m. Two seams of coal and coal bearing carbonaceous mudstone were intercepted.

A geological survey of road cuttings (on public roads) was carried out in June along the roads of EL26/2008 to aid in identification of prospective areas.

The next phase of drilling was due to start in mid June of this year but rig availability has led to delays. The next round of drilling is intended to test the extent of coal seams (and indirectly the extent of the dolerite) encountered in the first round of diamond drill holes (OJ001-OJ004) over the two licences (EL25/2008 and EL26/2008) with a program comprised of sixteen holes. Twelve of these holes are planned in the vicinity of the three previous holes drilled on EL26/2008 (OJ001, OJ003 and OJ004). This drilling program is currently underway with OJ005 and OJ008 on EL 26/2008 completed. It is intended to do down hole geophysics when all the planned percussion holes on EL 25/2008, EL 26/2008 and EL 65/2007 are completed.

## 4 Discussion of results

The three diamond drill holes of the first phase of drilling had varying results. OJ001 was drilled off Bowhill Road and reached a depth of 102.25m. Three seams of coal and coal-bearing carbonaceous mudstone were intercepted. The relevant intervals are listed below and logs for OJ001 are in Appendix 1

### OJ001 Significant Intersections

From	To	Description
5.4	5.7	Moderately weathered dark grey to black dull coal and carbonaceous mudstone.
5.75	5.9	Dull coal with minor vitric banding.
6.2	6.8	Coal - some bright vitric banding and minor carbonate veining.
6.9	7.1	Broken, brittle, moderately bright coal with vitric bands.
12.98	13.64	Moderately heavy, zonally bright coal with vitric banding.
37.44	38.39	Heavy, dull coal with frequent carbonaceous mudstone and mudstone banding. Somewhat gradational down hole contact.
55.35	55.55	Bright vitric coal with some carbonaceous mudstone bands.
64.8	64.9	Bright broken coal.
64.9	64.97	Black carbonaceous mudstone and coal.

OJ003 was drilled off Mudwalls Road and reached a depth of 45.65m after hitting dolerite at 40.37m. Two to three seams of coal and coal bearing carbonaceous mudstone were intercepted. The relevant intervals are listed below and logs for OJ003 are in Appendix 2.

### OJ003 Significant Intersections

From	To	Description
0	4.75	Cutting bit - No core. Weathered coal intercepted from 3.3-3.75m & 4.2-4.6m.
4.75	4.86	Black clay.
11.66	12.32	Moderately bright, brittle coal with calcite veining. Somewhat dull and weathered up hole proximal to fault.
23.64	23.72	Coal and carbonaceous mudstone with calcite cleats.
23.72	23.85	Carbonaceous mudstone and coal mud.
27.18	27.25	Coal and carbonaceous mudstone.

OJ004 was drilled off Mudwalls Road and reached a depth of 48.65m after hitting dolerite at 37.5m. Two seams of coal and coal bearing carbonaceous mudstone were intercepted. The relevant intervals are listed below and logs for OJ004 are in Appendix 3.

### OJ004 Significant Intersections

From	To	Description
12.82	13.94	Dull, heavy coal with minor bright brittle bands and some mudstone banding.
19.9	19.97	Minor bright coal with vitrinite banding
28.35	29.12	Dull, moderately heavy coal with minor vitrinite
37.23	37.5	Black to green, highly altered coal(?) and medium to coarse-grained sandstone.

While these intervals indicate the presence of coal in the area and as such are somewhat encouraging, the current percussion drilling program will be important in determining if the seams display any continuity and/or if the dolerite in the area affects their lateral extent.

Provisional assay results were received at the time of final compilation of this report (13<sup>th</sup> September) (see Appendix 4). A cursory examination of these results confirms the detailed core log observation that there are seams of coal with relatively low ash values and high calorific values. Some of the better results are:

Drill hole	Interval thickness	Ash	Calorific Value
OJ001	6.20m-7.10m =0.90m	20.3%	6322 Kcal/kg
OJ003	11.66m-12.32m =0.66m	24.9%	5584 Kcal/kg
OJ004	28.35m-29.10m =0.75m	29.2%	5784 Kcal/kg

The geological survey of road-side outcrops covered the majority of public roads contained by the licence area. All outcrops observed were dolerite, sandstone or mudstone and sandstone. Very few of the outcropping rocks were even moderately fresh, however in one area on

Rhyndaston Road (approximately two kilometres north of the Coal Mine Bend turn off, to the north-east of Colebrook) some flacer banding and carbonaceous mudstone was still quite fresh.

### **Rhyndaston Road Carbonaceous Mudstone Outcrop**



## **5 Conclusions**

All three diamond drill holes intersected coal of varying quality. These encouraging coal intersections have resulted in the current follow up percussion drilling program which will be completed in October if the low areas are dry enough to allow access.

Down hole geophysics will be completed in the coming year in conjunction with that planned for EL 26/2008 and EL 65/2007. Following the encouraging provisional assay results geological mapping, a review of the regional magnetics and further drilling at Jericho will be planned after consideration of the full assay results, the current drilling results and associated geophysics.

## **6 Environment**

At all three diamond and the associated percussion drill sites access was negotiated with the land owners and all aspects of the 5<sup>th</sup> Edition of the Mineral Exploration Code of Practice were followed. The following section describes the abandonment procedure for these holes.

All three diamond drill holes were grouted to one metre below the surface and then backfilled with soil to allow ploughing to continue. The sumps were back filled with the extracted soil.

The percussion holes are being cased off with PVC and securely capped and protected with steel fencing stakes to allow the down hole geophysics to proceed during this summer. The land owners have agreed to this temporary measure. On completion of the geophysics the PVC will be removed and the holes will be grouted to near surface and backfilled with

soil.



*Sumps backfilled at OJ001*



*Collar at OJ 001*



*Sumps backfilled at OJ003*



*Sumps backfilled at OJ 004*

## 7 Expenditure

Expenditure in 2011/2012 has been calculated to be \$119,474.28.

Details are:

Drilling	\$51,443.38
Geology	\$57,169.60
Administration	\$10,861.30

## References

Capricorn Mining Limited, 1982. *Relinquishment report, Coal Exploration Licence No 28/79. Oatlands, Tasmania*. Report by Petrecon Australia Pty Ltd for Capricorn Mining. [TCR 82-1798].

Summons, T.G. 1984. *Parattah EL 18/82; Kempton EL 19/82; Jericho EL 20/82. Exploration report for the year ending 30 September 1984*. CRA Exploration Pty Ltd. Report 12862. [TCR 84-2213].