

Annual Report

EL 17/2010 Fingal



For the period 8/11/2011 to 8/11/2012

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Appendix A Literature Review – EL 17/2010 Fingal by J. Pemberton.

Cover photograph of Fingal from the top of Bare Rock

Introduction

Exploration Licence 17/2010 was granted to Hardrock Investments Pty Ltd on the 8th November 2010. The licence conditions required the holder to complete the following in the first two years;

1. Data review.
2. Drill two HQ diamond holes drill holes.
3. Log and assay the core and metallurgical laboratory testing of the coal.

The minimum expenditure was \$66 000.

The intensive exploration effort on the adjacent EL 16/2010 has delayed the exploration of this licence. A detailed literature review has been completed and is attached as Appendix A. Two drill holes have been planned in the Mt Slaughter area and are currently having the earthworks completed for drilling to start in the near future.

Location

Exploration Licence 17/2010 Fingal is located 2km south of the township of Fingal (see locality map Figure 1 below).

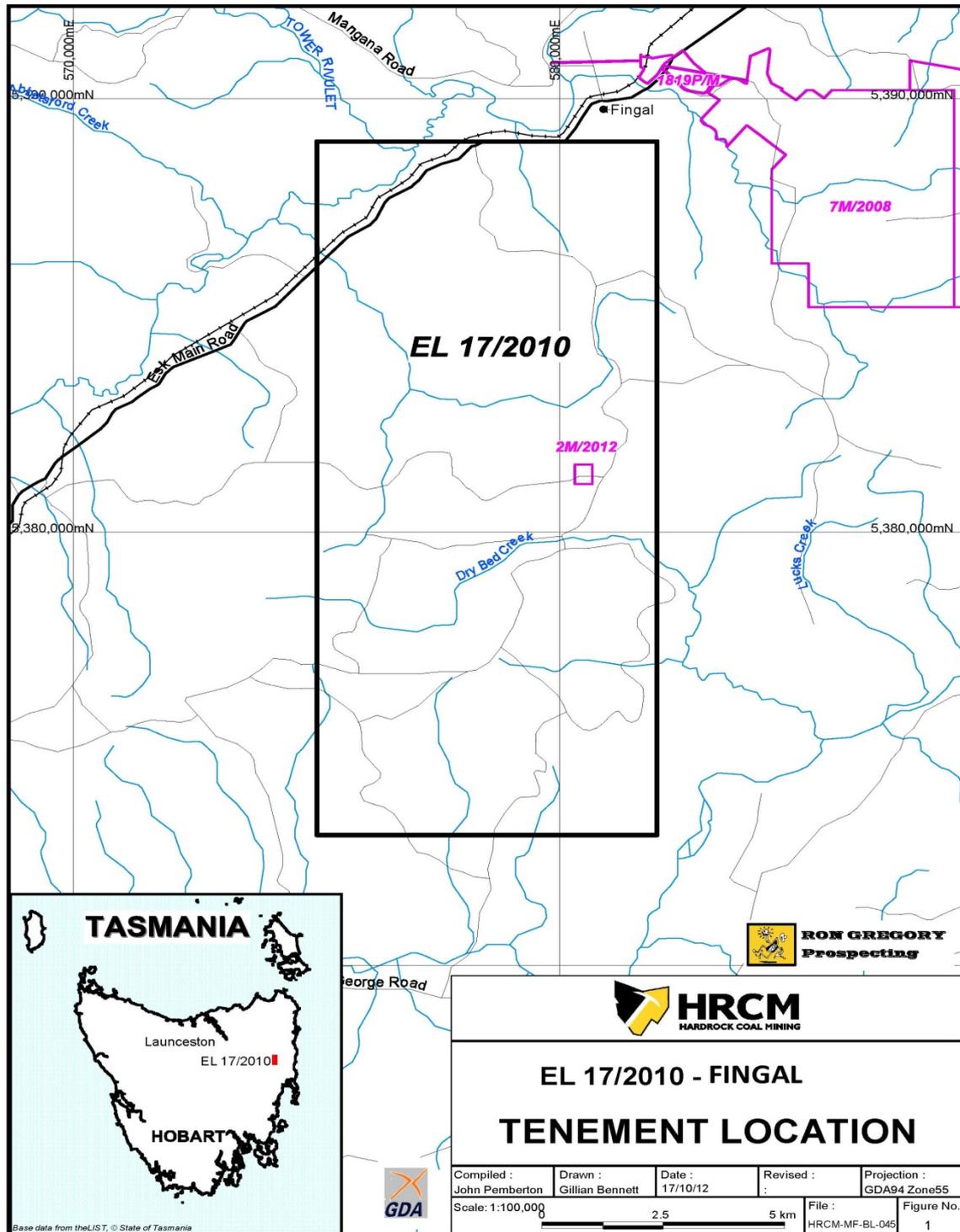


Figure 1 Locality map for EL 17/2010.

Land Tenure

EL 17/2010 is mostly State Forest with a narrow band of private property along the northern and southern boundary (see Figure 2 below).

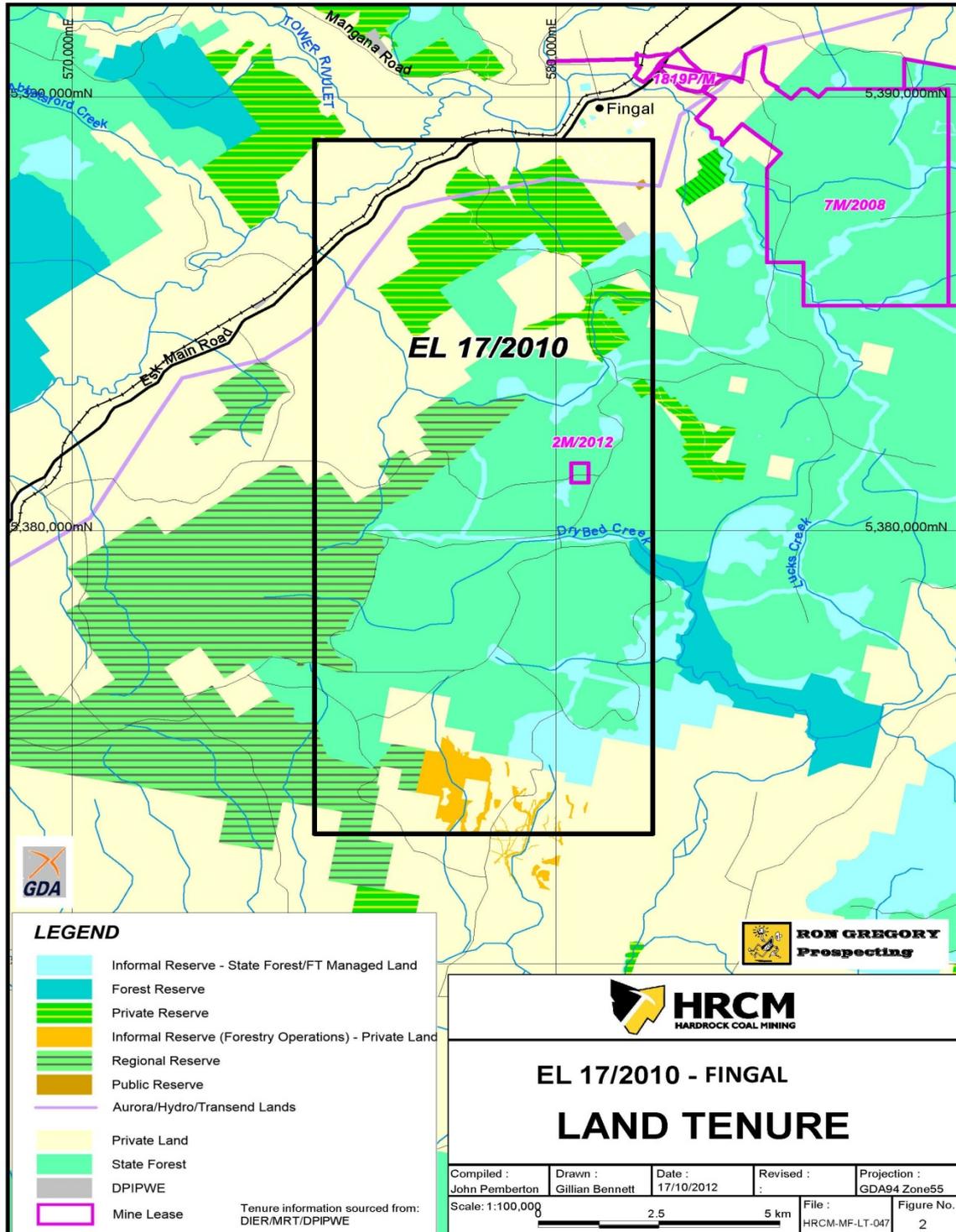


Figure 2 Land Tenure.

The three divisions of State Forest (State Forest, Informal Reserve and Forest Reserve) are all available for exploration and mining as are the areas of private property and the Private Reserves. Mining Lease 2M/2012 held by Tasmanian Pulp and Forest Holdings Pty Ltd is excluded from the licence.

Licence Details

Tenement number:	EL 17/2010
Tenement name:	Fingal
Tenement location:	South of Fingal
Reporting period:	8 November 2011 – 8 November 2012
Tenement holder:	Hardrock Investments Pty Ltd
Tenement operator:	Hardrock Investments Pty Ltd
Tenement area:	112 sq km
Exploration logistics:	Ron Gregory Prospecting

Previous Work

A detailed review of the literature describing the exploration and Department of Mines (DOM) work in this area is attached as Appendix A.

Modern exploration in the area currently covered by EL17/2010 has concentrated on the Merrywood seam around the old underground and subsequent open cut mine. See Figure 4 below for the localities of the drill holes discussed in this section.

Bacon (1983) tentatively correlates the Merrywood seam with either seam B or C from the Fingal Tier. The seam is relatively thick at around 4m with 2m free of dirt bands.

16 holes have been drilled, with limited success, immediately to the east, south and west of the open cut. The Avoca Transport Company (see Anon., 1987) drilled two holes to the east and intersected the down faulted Merrywood seam. Unfortunately its shallow nature has resulted in weathering and oxidation. The holes to the south (see Morrison, 1992) were below the seam and one of those to the west did not penetrate through the dolerite scree and the other was stopped at 17.5m in sandstone.

Approximately 3.5km west of Merrywood Investigator Coal Exploration Pty Ltd (see Sangster, 1978) drilled DDH 78 RG 3 to 199.5m and intersected a number of seams that could be correlated with Merrywood.

The DOM (see Threader and Bacon, 1983) drilled three holes in this area with DOM DDH 18 Merrywood approximately 1.5km north of the Merrywood Mine. This hole drilled through 371.5m of dolerite and into the lower coal measures with no seams present. DOM DDH 29 on the northern end of the Fingal Tier intersected 346.10m of dolerite and it was interpreted to have intruded at the level of the East Fingal seam (lower part of the coal measures). DOM 28 was just to the south of Fingal below Bare Rock. It intersected the lower part of the

coal measures with some thin seams or bands of “coaly” material before the hole was stopped in the Permian at 160.45m.

Cornwall Coal Company NL (see Bryan, 1984) briefly explored the area and provided very little information in their few reports. Three short open holes on the northern and western slopes of Mt Foster were reported to have intersected the Permian. One diamond hole on the Fingal Tier (Mt Foster DDH 1) was stopped at 255m in dolerite.

Regional Geology

Late Triassic coal measures in the Fingal Tier region comprise the uppermost sub division of the Late Carboniferous - Late Triassic Parmeener Supergroup (Tasmanian Geological Survey St Marys, Ben Lomond and Snow Hill 1:50,000 Sheets).

The Parmeener Supergroup unconformably overlies a basement comprising folded Silurian-Devonian meta turbidites of the Mathinna Supergroup, which are locally intruded by Devonian granites (Figure 3, Tasmanian Geological Survey Bulletin 72). These basement rocks and the Permo - Triassic stratigraphy underlying the coal measures crop out around the Fingal Valley but, with the exception of Triassic quartz sandstones which form the economic basement to the coal measures, are not encountered during coal exploration drilling. At the regional scale the coal measures show a south easterly dip of 1-2°.

Large volumes of Jurassic dolerite have intruded the Parmeener Supergroup stratigraphy, and in the project area dolerite covers most of the coal measures.

Cainozoic tectonic rifting and periglacial landscape development processes through the Fingal and Royal George Valleys have produced the escarpment and benched dolerite talus slope morphology which characterizes the landscape of the project area. The dolerite and derived talus deposits impose significant costs for coal exploration drilling. Dolerite dykes, often infilling faults, are occasionally encountered in the Duncan underground coal mine immediately east of the project area, and probably exist within EL17/2010.

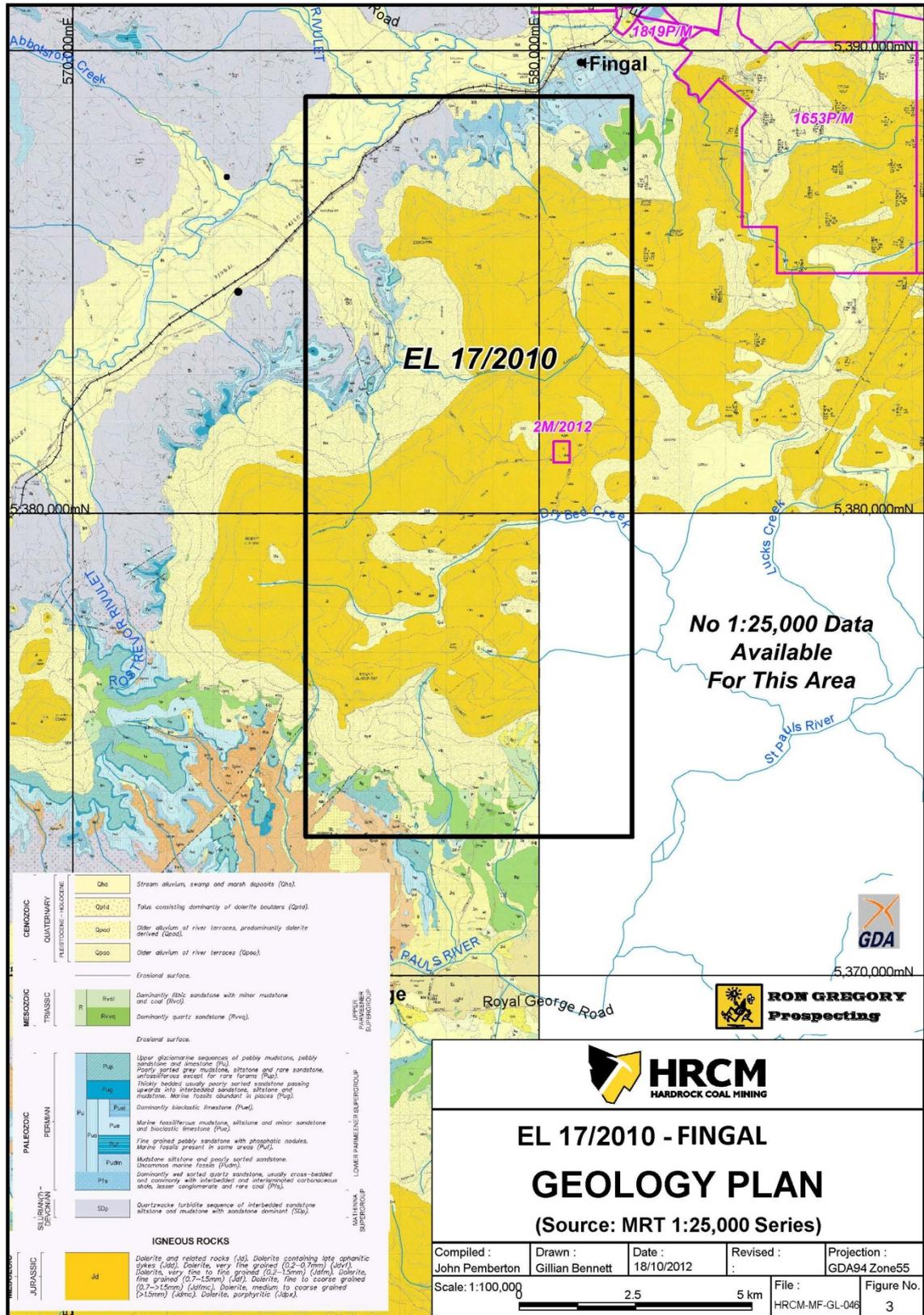


Figure 3 Geology Plan from MRT 1:25,000 map series.

Coal Measures Geology

Correlation of drill core intersections in the Fingal Tier area by the DOM in the 1980s generated a series of 8 seams, labelled A to H from youngest to oldest (see Bacon, 1991). The coal seams are hosted within an approximate thickness of 250m of fluvial lithic sandstones and minor siltstones, argillic and carbonaceous mudstones, and minor airfall volcanoclastics. The lithic sandstones are in part sourced from a felsic volcanic province and the coal measures are dated at 214Ma via a rhyolitic volcanoclastic unit (Bacon and Everard, 1981).

All known coal mined and drilled in the Fingal Tier area (apart from minor occurrences of thermally altered coal near dolerite contacts) would be classed as dull with minor bright bands, inertinite-rich, medium rank, low sulphur, sub bituminous steaming coal.

Exploration Completed in 2011 - 2012

The literature review identified the areas of the licence where further work would and would not be warranted (see Appendix A).

The conclusion included the following observations and recommendations:

- The drilling in the north of the licence and to the north west (DOM DDH 28 and DDH 29 and Cornwall Coal Company hole Mt Foster DDH 1 and RDH 1 to 3) strongly indicate that the dolerite sill has intruded into the lower part of the coal measures and the rafted coal bearing section has subsequently been eroded away.
- The drilling in the south has sterilised the area to the immediate north and east of the Merrywood Mine. DOM Merrywood 18 intersected 371m of dolerite and was stopped at 405m in the lower section of the coal measures. As the dolerite base was at RL 293 it was interpreted that the coal bearing sequence had been rafted up and eroded.
- The area to the north of drill hole 78 RG 3 and Hockeys Creek around Mt Slaughter has good prospectivity as the coal measures are present immediately to the south and the base of the dolerite is high up in the sequence.

Following on from this work two drill holes (see Figure 4 and Figure 5 below for locality) have been proposed in the Mt Slaughter area to test the interpretation that the coal measures have not been lost due to the dolerite intruding low in the sequence. The work program for these two holes has recently (14th October) received approval from Mineral Resources Tasmania (MRT) and the earthworks are planned to commence in late October with drilling to start in mid November. It is estimated that these holes will be at least 300m deep with a combination of HQ and NQ rods depending on the drilling conditions.

A Dexon survey was promoted to the company as having the ability to identify and correlate coal seams beneath thick cover such as the dolerite which reaches over 400m on Fingal Tier. Few method specifications were provided other than the technology being labelled by Dexon as "Resonance Frequency Geological Technology". The program consisted of a

gridded helicopter airborne survey and “Vertical Sounding Confirmation Scans” at five sites which were at the time proposed drill sites on EL16/2010. Two of these sites were subsequently drilled and the seam intersections bore no correlation to those predicted by the Dexon survey.

It was concluded that this geophysical method is not effective for generating drill targets in the Valley Road area.

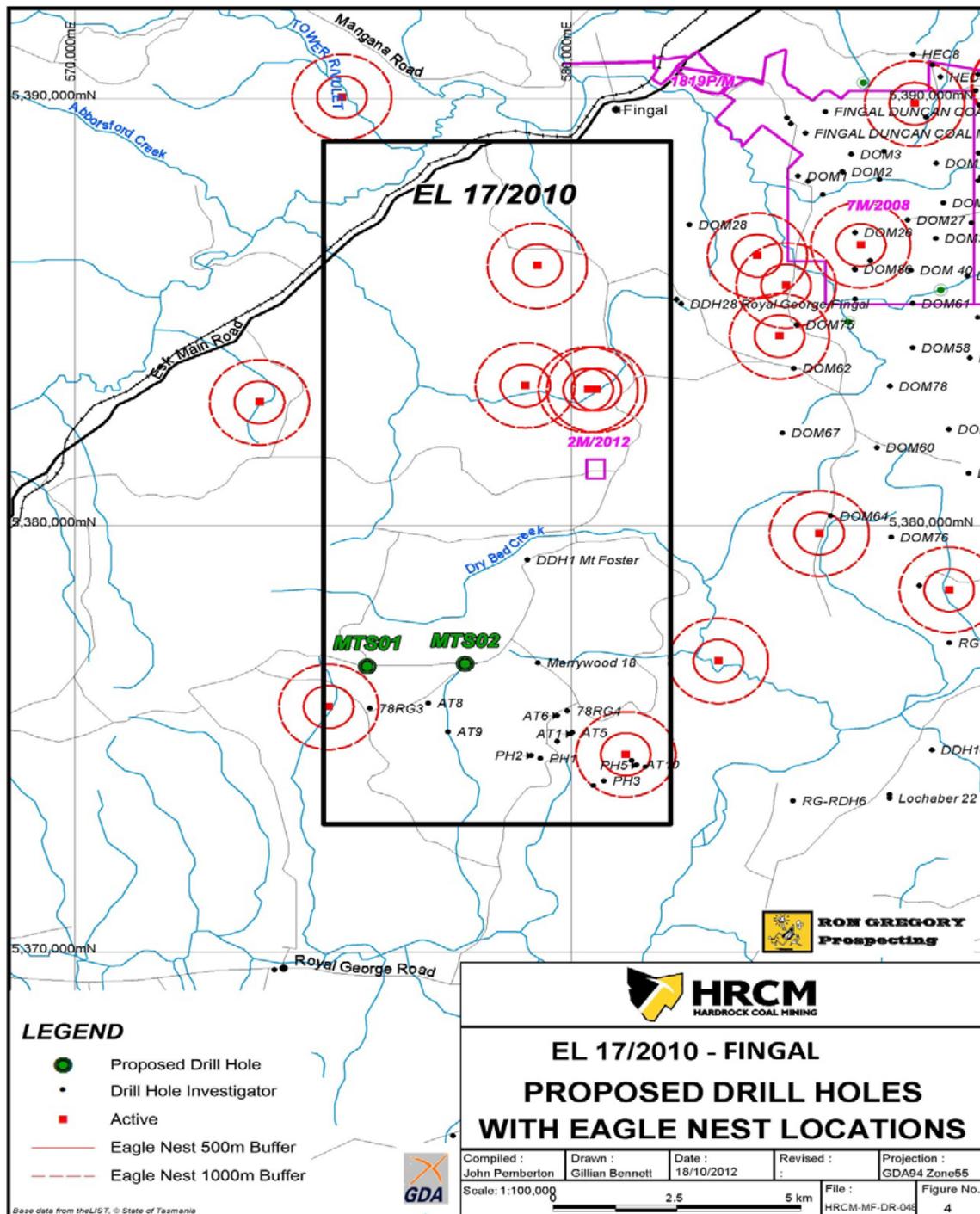


Figure 4 Drill hole locality map.

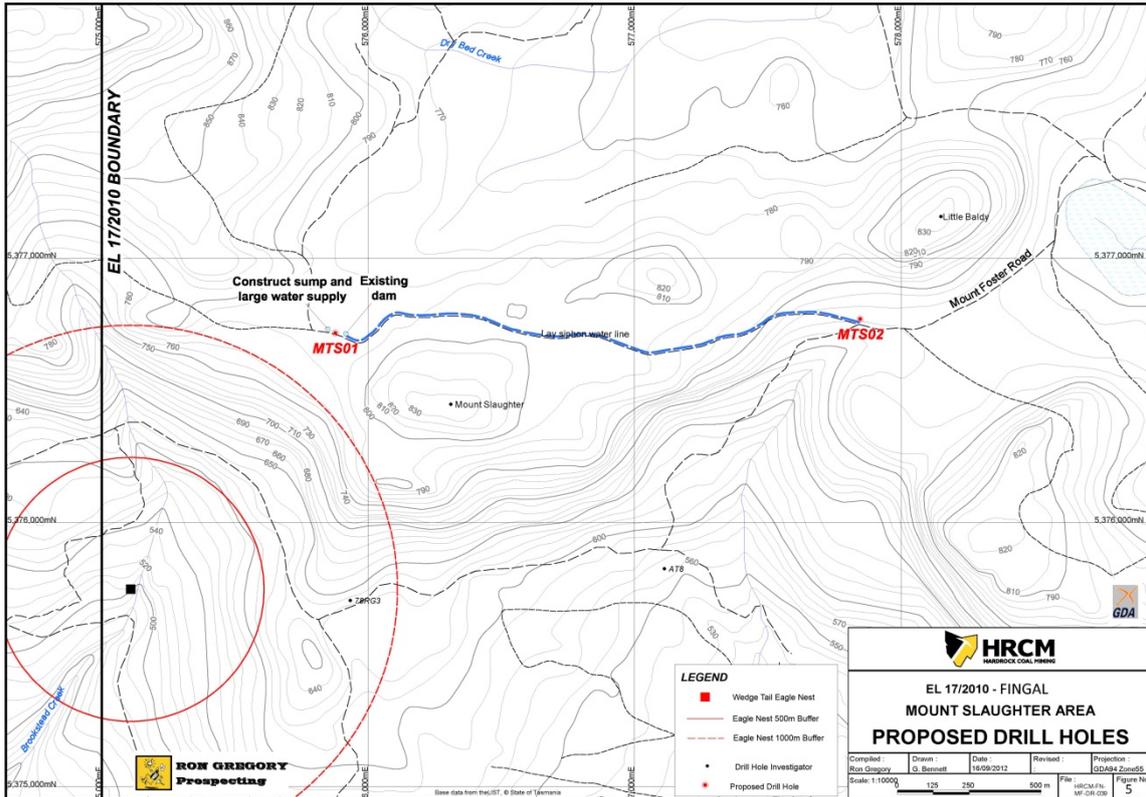


Figure 5 Proposed drill holes at Mt Slaughter.

Year 3 Exploration Program

Two planned drill holes will be completed before the end of 2012 and if the results are positive a further hole will be drilled in the 2012 – 2013 year. The approved expenditure is \$500 000 which includes the three holes, assays, float/sink testing and development of a geological model.

Environment

No on ground work was done during the past year. The two planned drill holes have been approved by MRT and will conform to the requirements of the 5th edition of the Mineral Exploration Code of Practice.

Expenditure

Cumulative total expenditure on EL 17/2010 at the 30th June 2012 was \$389 575. At the time of writing this report accounting figures are not available for the third quarter 2012 but for the three quarter period from the 1st October 2011 to the 30th June 2012 expenditure totalled \$271 255, comprising the following categories;

Geology and exploration support activities	\$ 162 000
Feasibility	\$ 10 000
Geophysics, surveying, remote sensing mapping	\$ 49 005
Administration	\$ 50 250
TOTAL	\$ 271 255

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Appendix A

Literature Review - EL 17/2010 Fingal – J. Pemberton