NEW HOPE COAL
AUSTRALIA

# Tasmania

# EL 49/2007 York Plains Annual Report

4th September 2009 – 3rd September 2010

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Annual Report 00/2010
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# Introduction

This report summarises the activities carried out by New Hope Coal Pty Ltd on the currently held Exploration Licence EL 49/2007, York Plains for the twelve month period 4th September 2009 to 3rd September 2010.

| | |
|---|---|
| Tenement: | EL49/2007 |
| Date Granted: | 4th May 2008 |
| Location: | **York Plains** (7 km NE of Oatlands) |
| Holder: | New Hope Coal Pty Ltd<br>3/22 Magnolia Drive<br>Brookwater QLD 4300. |

Exploration Licence 49/2007 was granted to New Hope Coal Pty Ltd on 4th September 2008 to explore for coal over 96 square kilometres of land in the vicinity of York Plains (Figure 1)

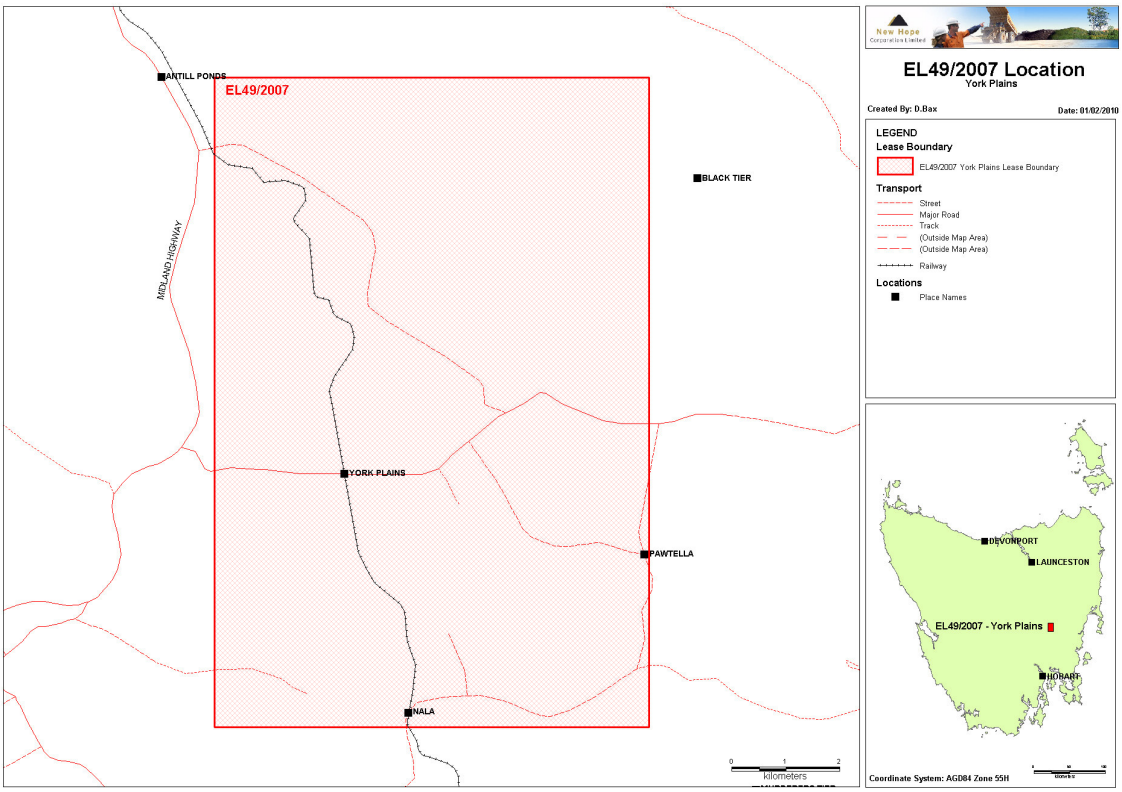


**FIGURE 1 LOCATION OF EL 49/2007 YORK PLAINS**

# Exploration Rationale

New Hope Coal Pty Ltd is focusing on over looked Australian coal prospects. By reviewing existing open file historical data and securing prospective tenure we can re-model deposits, and explore areas that have the potential to contain sufficient resources of appropriate qualities to warrant further work. NHE then applies modern end use technologies to establish feasibility.

The aim of the program is to:

- To test coal (sub-bituminous) seam qualities and their applicability to Coal to Liquids (CTL) technology
- To confirm the extent of the known resource in the lease area.
- And assess if an economic resource exists

# Geological Setting

The target coal resource at York Plains Coalfield occurs within the Upper Parmeener Supergroup. The Supergroup has been disrupted by large scale Jurassic dolerite intrusions, faulting and to a lesser extent by Tertiary volcanic complexes (Figure 2).

Excluding Permian horizons, most of the Upper Parmeener Supergroup stratigraphic units identified by Forsyth (1984) occur in the York Plains district. These stratigraphic units are:

Rg - Volcanic lithic arenite with subordinate lutite and coal seams

Rsf - Lutite and dominantly quartz-rich lithic arenite with minor coal seams

Rsq - Quartz arenite and lutite with carbonaceous beds and subordinate lithic arenite and coal seams

Rs - Lutite with quartz rich lithic arenite

Rsq - Quartz arenite and lutite, occasionally with quartz sandstone

Rm - Micaceous lutite and micaceous quartz sandstone frequently with other silicified, bioturbated and mottled purple lutite

Rp - Quartz arenite with subordinate lithic rich horizons

The target coal seams are recorded within the upper most Rg unit of the Carnian age (late Triassic). However thinner coal seams have been recorded elsewhere in the two underlying stratigraphic units (Rsf and Rs).

The depositional environment of the York Plains coalfield is considered to have been fluvialatile, with single channel rivers depositing sand in the channels, silt in overbank regions and mud in the back swamps.

The coal appears to have originated in peat swamps formed over the back swamp muds. These back swamps were subject to regular flooding and burial of thick transgressive bodies of sand.

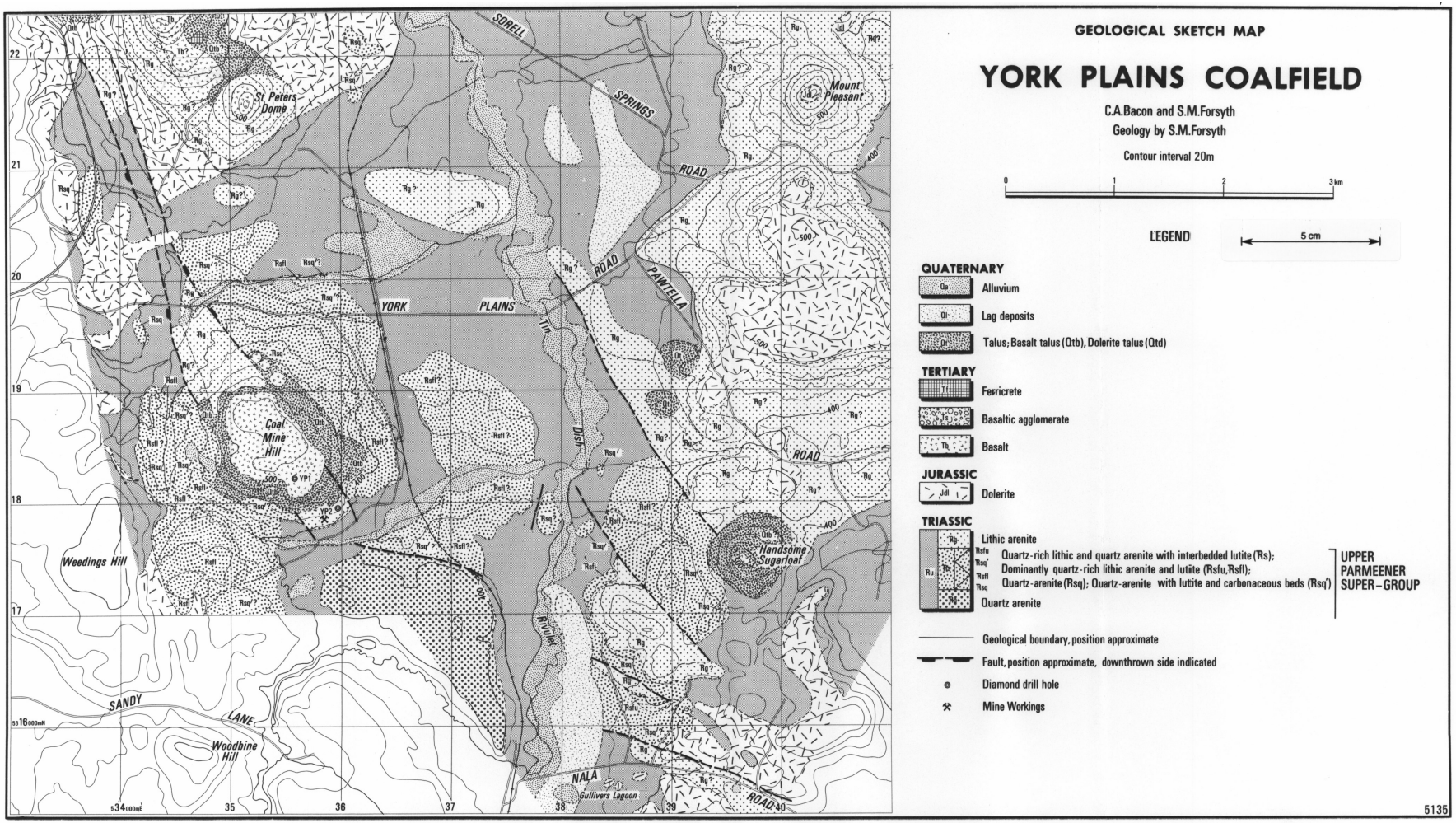


**FIGURE 2 GEOLOGICAL MAP OF THE YORK PLAINS COALFIELD**

# Review of Previous work

As per the supporting statements for the EL application, New Hope Coal has undertaken a review of the EL areas, historical data and constructed a geological database and model. This process is underway and the expenditure to date encompasses this work.

Documents reviewed:

EL 18/82 – Parattah 84-2294 Geological and Coal Resource Estimation - York Plains Area 15/12/1988 CRA Exploration PTY Limited

EL 18/82 – Parattah 85-2479 Large Core Drilling of the York Plains Coal Deposit 9/08/1985 CRA Exploration PTY Limited

EL 28/79 – Colebrook/York Plains Coalfields Tasmanian Coal Prospects Exploration Progress Report Six months ended 16/10/1981 Capricorn Mining Limited

Bacon C.A 1985 Petrographic and Proximate Analyses of Coal from the York Plains Coalfields

Additionally, The Coal Resources of Tasmania Bulletin 64, by C.A. Bacon 1991, was also a valuable reference for wider searches and understanding of the Tasmanian Coal fields.

# Exploration Completed during the period

During the reporting period the following was undertaken:

- Visited selected drill sites
- Ground-based field inspections and weather monitoring
- Interviews with potential service providers
- Drawing up contracts with selected service providers
- Negotiations with land owners/holders
- Visitation to Tasmanian Minerals Council
- Meetings with Michael Leonard, John Pemberton and other Mineral Resources of Tasmania personnel
- Regular communication with John Pemberton of MRT on progress with the exploration program (delayed due to extended wet season)

# Discussion of results

Further exploration drilling is required to confirm the resources in the York Plains coal field, and to conduct testing specifically in regard to Coal to liquids suitability.

Previous studies have indicated that a sub-bituminous resource exists, with 3 main seams identified. These are the W seam, V seam and U seam

**TABLE 1 INDICATIVE RANGE OF IN-SITU QUALITY**

| Seam | Inherent Moisture % ad | Ash % ad | Volatile Matter % ad | Fixed Carbon % ad | Sulphur % ad | Calorific Value MJ/kg ad |
|---|---|---|---|---|---|---|
| **W** | 5.0 | 54.4 | 10.1 | 30.6 | 0.2 | 11.81 |
| **V** | 3.4 | 50.8 | 10.0 | 35.8 | 0.30 | 14.42 |
| **U** | 3.7 | 39.2 | 11.2 | 35.1 | 0.26 | 14.54 |

Current modelling work is being undertaken to confirm the local stratigraphy (Figure 3).

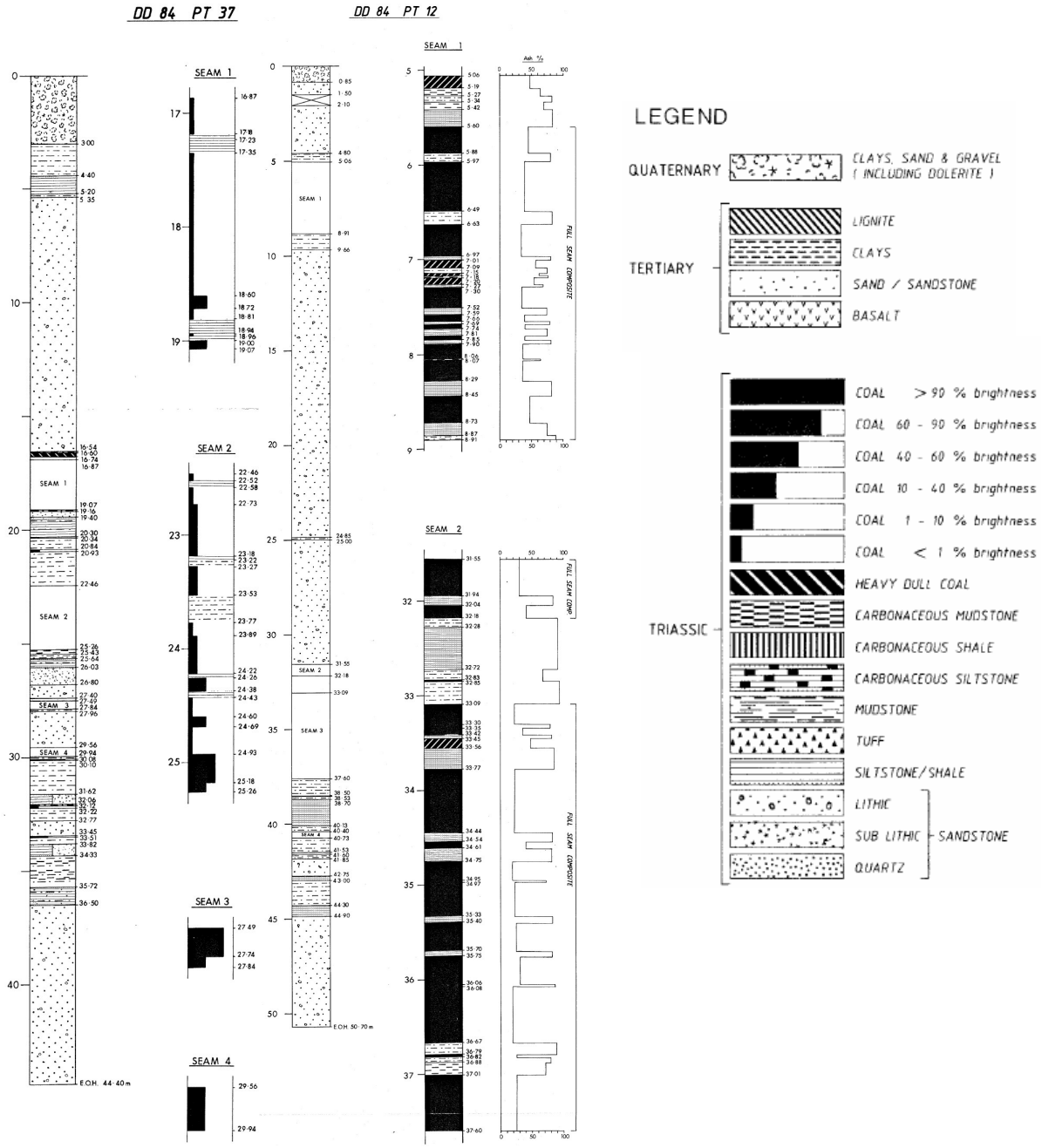


**FIGURE 3 REPRESENTATIVE STRATIGRAPHY OF THE YORK PLAINS COALFIELD**

There is some conjecture about the accuracy of the existing borehole locations. During a reconnaissance visit to York Plains in this reporting period, for the locations of several boreholes that were supposedly drilled beside public roads, no evidence of boreholes could be found. Further work is required to determine if there is any evidence of holes inside landholder properties. However, this will have to wait until landholder access agreements are in place.

# Exploration Progress

A geological database has been created in the Minescape GDB module incorporating 31 drill holes with lithological data.

Work is currently continuing on the Stratigraphic model to further define resource boundaries and additional targets.

Initial landholder access and agreements are in place for the upcoming exploration program intended to commence January 2011.

There are two purposes for this program:

a) to check the surveyed coordinates for the borehole collars are valid by drilling adjacent to the given borehole locations to check if the stratigraphy matches with what's in the borehole database; and
b) to obtain a bulk sample to undertake specific testing for applicability to the manufacture of petrochemical products.

Local suppliers have been contracted to provide drilling services and geological data acquisition.

# Environment

No field based activities occurred during the reporting period

## References

BACON, C.A. 1991. The coal resources of Tasmania. *Bull. geol. Surv. Tasm.64.*

FORSYTH, S.A 1984. New data on rock distribution, York Plains area, Unpubl.Rep.Dep.Mines Tasm. 1984/1986

## Keywords

Coal, Sub-bituminous coal, York Plains Coalfield, Coal to Liquids.