



Tasmania



EL49/2007 York Plains Annual Report

4th September 2010 – 3rd September 2011

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Annual Report 2010-2011
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Introduction

This report summarises the activities carried out by New Hope Exploration Pty Ltd on the currently held Exploration Licence EL 49/2007, York Plains for the twelve month period 4th September 2010 to 3rd September 2011.

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

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

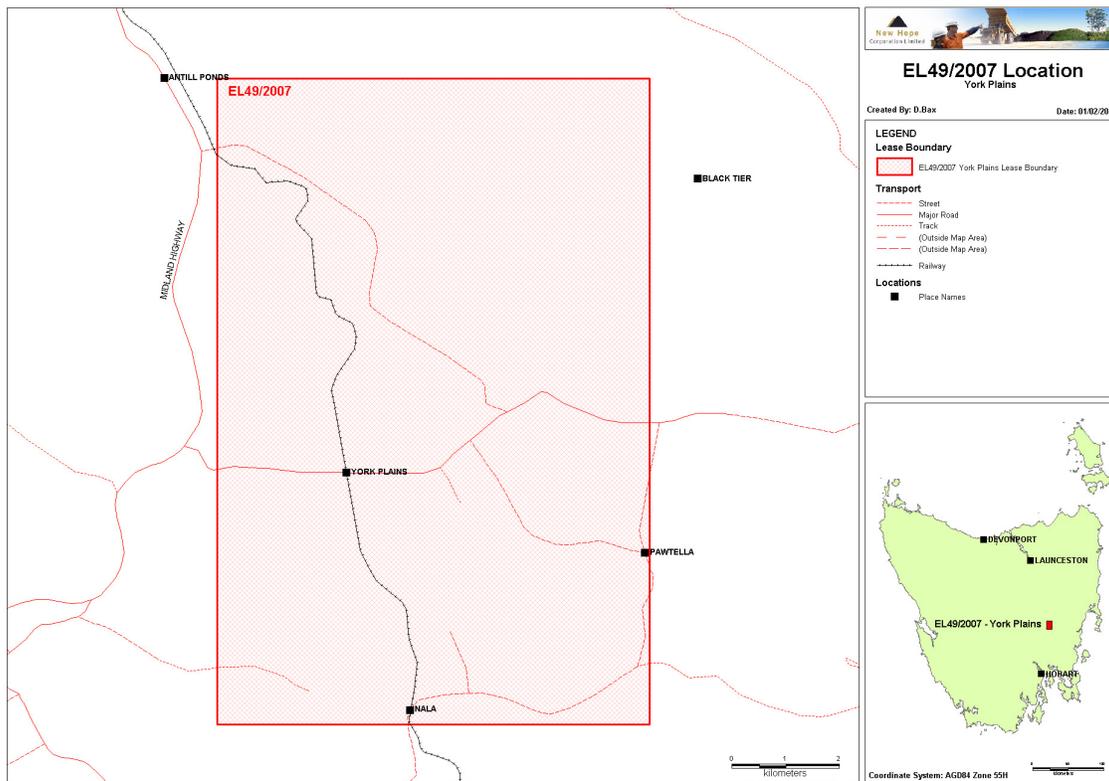


FIGURE 1 LOCATION OF EL 49/2007 YORK PLAINS

Exploration Rationale

New Hope Exploration 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.

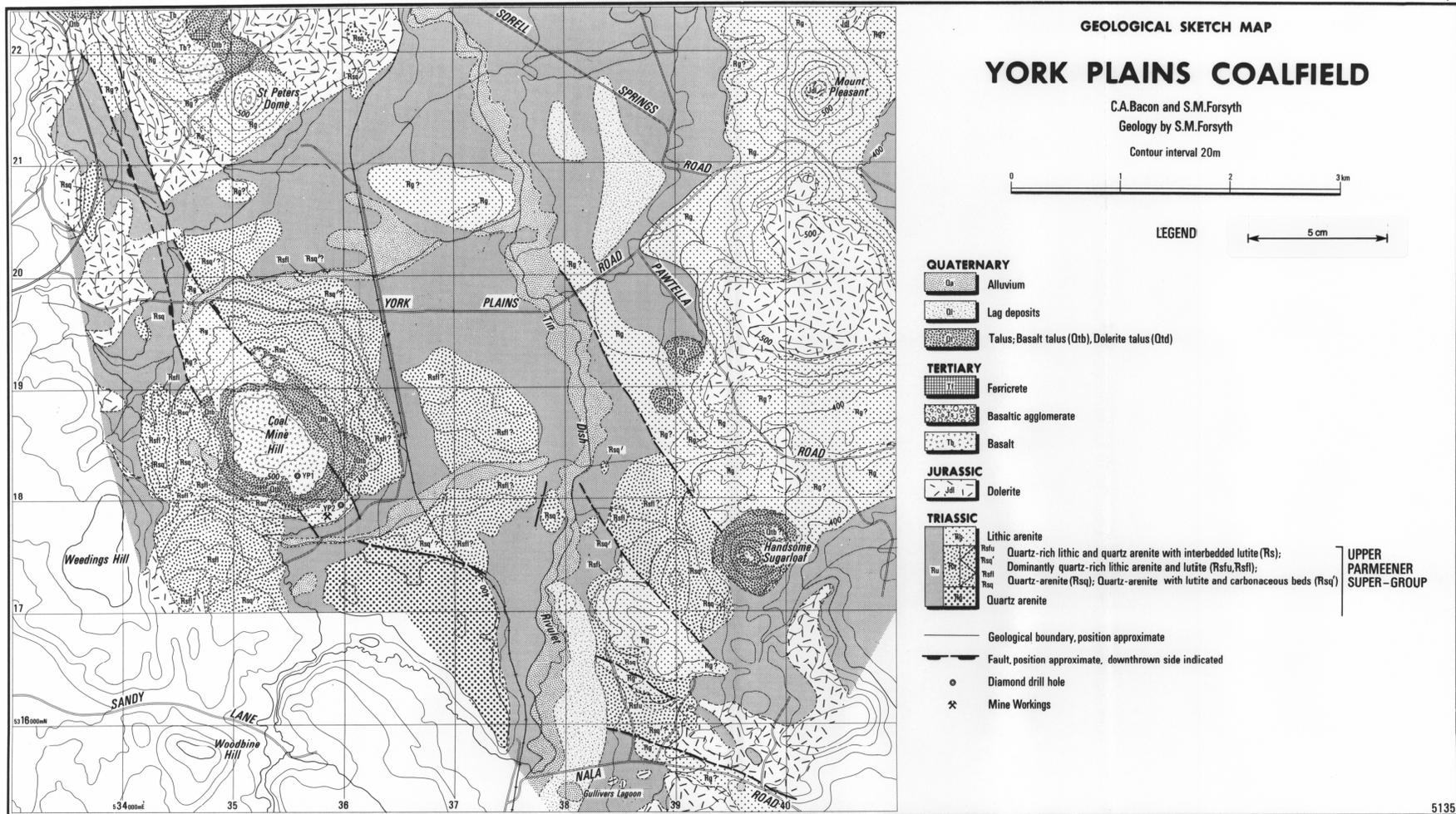


FIGURE 2 GEOLOGICAL MAP OF THE YORK PLAINS COALFIELD

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 2009-2010

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 landowners
- 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)

Exploration Completed 2010-2011

During the reporting period the following was undertaken:

- Ground-based field inspections and weather monitoring
- Ongoing discussions with selected service providers
- Continued negotiations with landowners
- Exploration drilling – stratigraphic confirmation of historical drillholes
- 8-inch coring for a bulk sample for Coal to Liquids analysis

GROUND-BASED FIELD INSPECTIONS AND WEATHER MONITORING

Due to unseasonal rain in Tasmania during 2010, the drilling programs were postponed until such time where it was agreed between the landowner, Spaulding Drillers and New Hope Exploration, that access to the drill site would not hinder ground conditions, and cause unnecessary damage to the landowners' property. Several trips to visit landowners were

made by representatives of New Hope Exploration or by an appointed Tasmania-based delegate.

EXPLORATION DRILLING – STRATIGRAPHIC CONFIRMATION OF HISTORICAL DRILLING

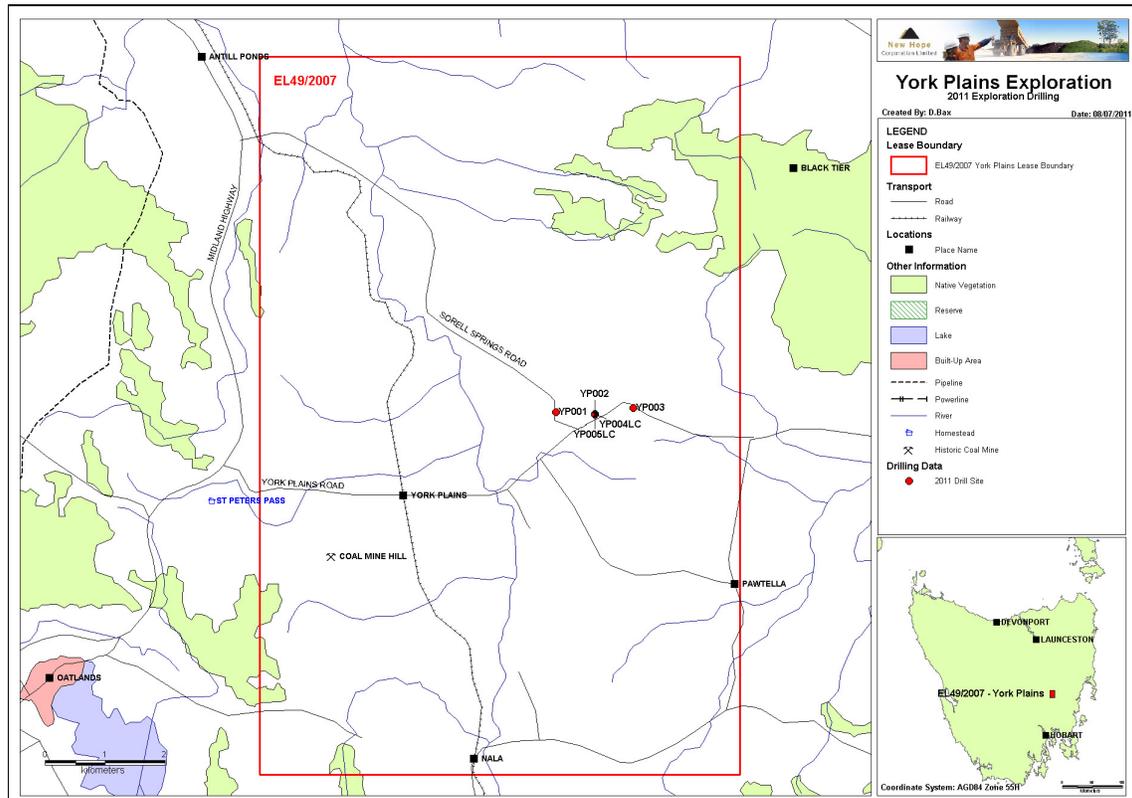


FIGURE 3: LOCATION OF 2011 DRILLHOLES AT YORK PLAINS

Drilling

All drillholes drilled at York Plains were completed by Spaulding Drillers, based in Devonport, Tasmania. Table 2 below shows a summary of the drilling and geophysical information for the York Plains holes. All lithology logs and geophysical logs are attached as appendices in this report.

TABLE 1: SUMMARY OF DRILLHOLE LOCATIONS FOR YORK PLAINS

Hole Name	Historical Hole Name	Easting GDA94 – Zone 55H	Northing	Elevation (m) AHD	Total Depth (m)
YP001	038	539049.08	5321241.11	382.70	150.00
YP002	037	539699.51	5321208.33	400.86	72.00
YP003	012	540337.80	5321309.19	444.58	150.00
YP004LC	037	539698.52	5321211.51	400.85	29.75
YP005LC	037	539698.52	5321205.93	400.86	33.00

NOTE: Coordinates for drillholes were provided in AGD84, as this is New Hope's standard for exploration and resource modelling. To report the coordinates in GDA94, they were generated using the Coordinate Extractor tool in MapInfo. All holes have been surveyed by Survey Resources of Launceston, Tasmania.

TABLE 2: SUMMARY OF DRILLING AND GEOPHYSICAL DETAILS FOR YORK PLAINS DRILLHOLES

Drilling Details							Geophysics	
Hole Name	Start Date	End Date	Hole Type	Company	Rig No.	Orientation	Logged	Company
YP001	8/02/2011	9/02/2011	7" Chip	Spaulding Drillers	Rig 6	Vertical	Yes	GDS
YP002	9/02/2011	10/02/2011	7" Chip	Spaulding Drillers	Rig 6	Vertical	Yes	GDS
YP003	14/02/2011	15/02/2011	7" Chip	Spaulding Drillers	Rig 6	Vertical	Yes	GDS
YP004LC	16/02/2011	17/02/2011	8" Core	Spaulding Drillers	Rig 6	Vertical	Yes	GDS
YP005LC	17/02/2011	18/02/2011	8" Core	Spaulding Drillers	Rig 6	Vertical	Yes	GDS

YP001

No clearing was required on the site, and the rig moved onto the site on 8 February 2011.

Drilling was carried out by Spaulding Drillers, with a dual rotary rig. Adequate amounts of cuttings were returned in most sections, after being diverted into a cyclone which stood in a large skip bin. The cuttings were then laid out on a sheet of black plastic for the geologist to log.

This was the first hole for the Tasmania project, and the drilling crew took only a short amount of time to become orientated with the ground conditions. Four aquifers were struck in the hole, and according to the drillers estimates, the water would be suitable for a bore. All of this water was contained in the large skip bins, and vacuum-sucked out of the bins by Veolia Environmental Contractors and transported off site. The target depth of the hole was 150m, and this was reached in 2 days. The rig was moved off the hole on 9 February 2011.

Geophysical logging achieved total depth without problems. The data was sufficient for correcting the coal seams to an accurate depth.

All drill cuttings from YP001 were disposed of at one of Tasmania's register disposal sites by Veolia Environmental Contractors.

Geological Evaluation

As seen in Figure 4, the correlations between the original hole (without geophysics) 038 is possible to the new drill hole YP001. The seams appeared at similar levels in the drill hole, and because of the depth of the new drilling, there were extra seams intersected at the base of the hole. Due to the lack of data, these have not been correlated as yet to anything else in the area.

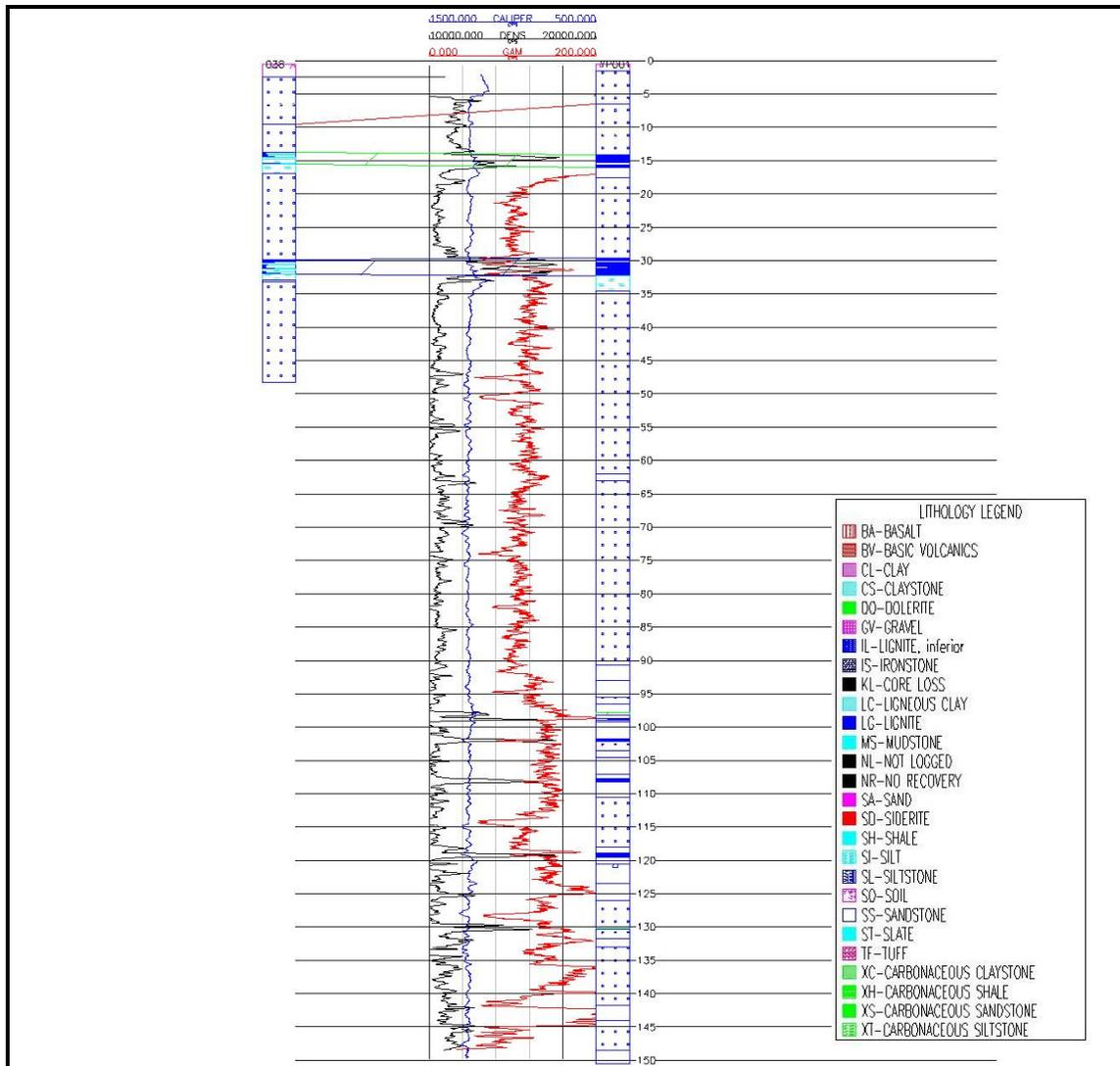


FIGURE 4: 038 TO YP001 HOLE COMPARISON

YP002

The original site for YP002 was further to the east, and would have been drilled on a dam bank, which brought about unnecessary risks of unstable ground. The rig moved onto the site on 9 February 2011 at the completion of YP001.

Drilling was carried out by Spaulding Drillers, with a dual rotary rig. Adequate amounts of cuttings were returned in most sections, after being diverted into a cyclone which stood in a large skip bin. The cuttings were then laid out on a sheet of black plastic for the geologist to log. In high clay areas, the samples tended to wash away, rather than return as cuttings. Minimal sample was returned in these instances.

No aquifers were intersected in this hole; it was a dry hole. This hole was also selected as the site for the core holes, which can also be seen in Figure 5, as the site was the most suitable in terms of lignite thickness, and drilling conditions.

The target depth of the hole was 150m, however, at approximately 60m, dolerite was intersected and drilled through for 12m without penetration through into sediments again. It was inferred due to surrounding topography that this was basement material, and the hole was completed at 72m.

Geophysical logging achieved total depth without problems. The data was sufficient for correcting the coal seams to an accurate depth.

All drill cuttings from YP002 were disposed of at one of Tasmania's register disposal sites by Veolia Environmental Contractors. The rig moved off borehole YP002 on 10 February 2011, however, would return to carry out core hole drilling later in the month.

Geological Evaluation

As seen in Figure 5, the correlations between the original hole (without geophysics) 037 is possible to the new drill holes YP002, YP004LC & YP005LC. The seams appeared at similar levels in the drill hole

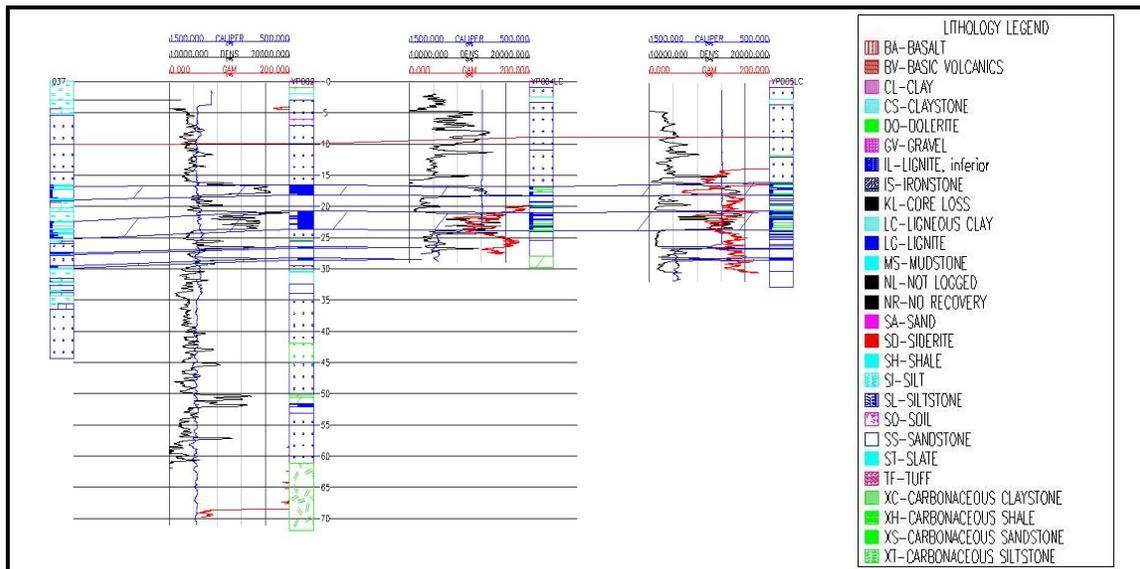


FIGURE 5: 037 TO YP002, YP004LC & YP005LC HOLE COMPARISON

YP003

This drill site required a degree of site preparation, but mostly the access to the site was the area which required the most clearing. The original site for YP003 was to the northern side of the road, and would have been drilled in a paddock which was hindered by unstable ground conditions, moderately dense vegetation and power lines. Because of the problems with the location of the site, New Hope Exploration decided to move the hole to the southern side of the road where it was eventually drilled.

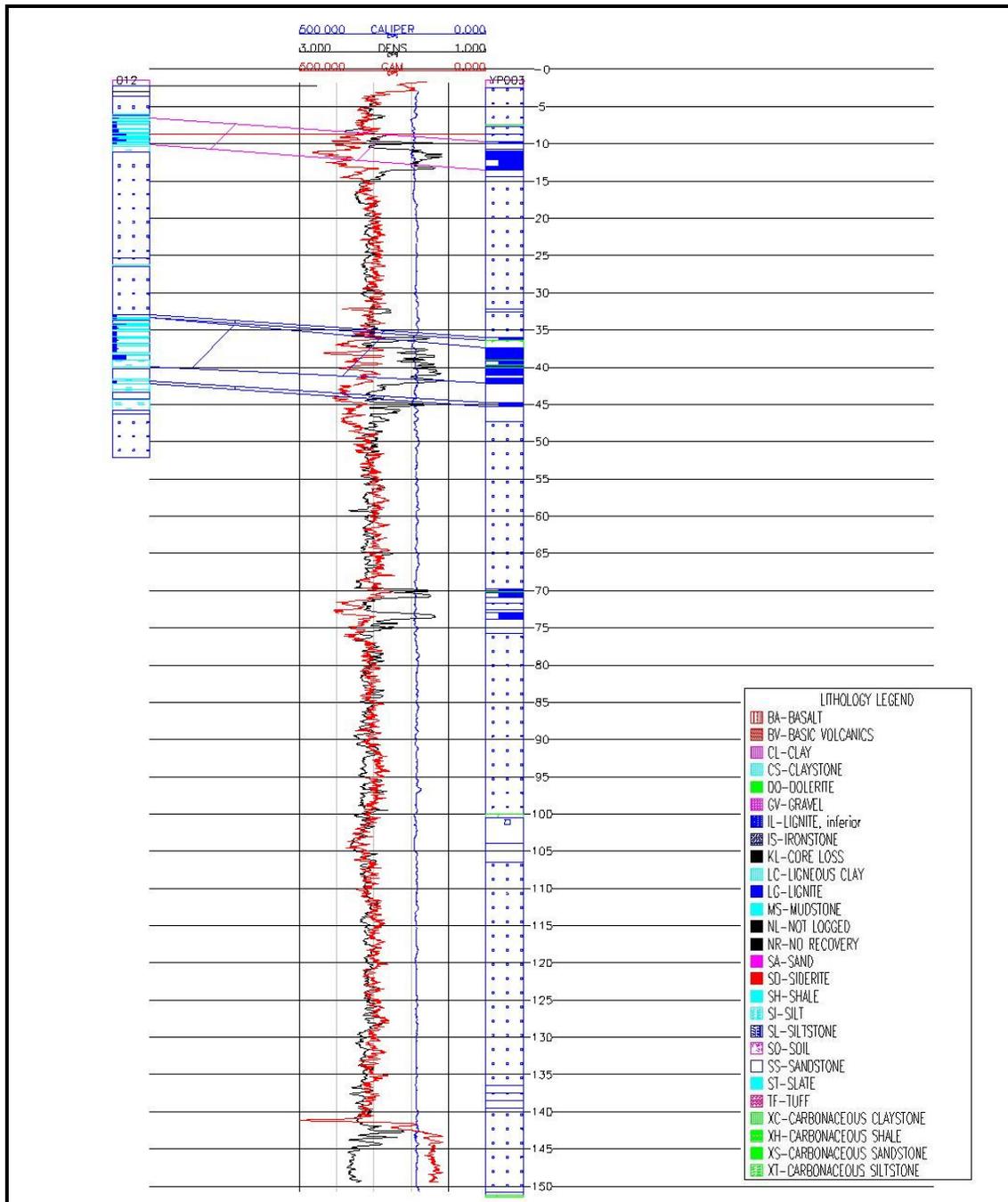


FIGURE 6: 012 TO YP003 HOLE COMPARISON

Drilling was carried out by Spaulding Drillers, with a dual rotary rig. Adequate amounts of cuttings were returned in most sections, after being diverted into a cyclone which stood in a large skip bin. The cuttings were then laid out on a sheet of black plastic for the geologist to log. In high clay areas, the samples tended to wash away, rather than return as cuttings. Minimal sample was returned in these instances.

No aquifers were intersected in this hole; it was a dry hole. The target depth of the hole was 150m, and this was achieved. Geophysical logging achieved total depth without problems. The data was sufficient for correcting the coal seams to an accurate depth.

All drill cuttings from YP003 were disposed of at one of Tasmania's register disposal sites by Veolia Environmental Contractors. The rig moved off borehole YP003 on 15 February 2011.

Geological Evaluation

As seen in Figure 6, the correlations between the original hole (without geophysics) 012 is possible to the new drill hole YP003. The seams appeared at similar levels in the drill hole, and the slight "dip" maybe due to the topographic changes. Because of the depth of the new drilling, there were extra seams intersected at the base of the hole, however, due to the lack of data, these have not been correlated as yet to anything else in the area.

8-INCH CORING FOR A BULK SAMPLE FOR COAL TO LIQUIDS ANALYSIS

Drilling

The 8-inch core hole was drilled by the same Spaulding's Drilling crew as the three chip holes drilled for stratigraphic validation. Table 2 shows a summary of the drilling and geophysical information for all York Plains holes. Two holes were drilled on the same site for the collection of enough sample for 150kg of lignite for Coal-to-Liquids (CTL) analysis.

All lithology logs and geophysical logs are attached as appendices in this report.

YP004LC

This drill site did not require any site preparation as it was the same site used for the drilling of YP002 (which also required no site preparation). The rig was setup over the hole on 16 February 2011.

Drilling was carried out by Spaulding Drillers, with a dual rotary rig. Chip drilling occurred on the top 15.75m of the hole, and adequate amounts of cuttings were returned, after being diverted into a cyclone which stood in a large skip bin. The cuttings were then laid out on a sheet of black plastic for the geologist to log.

Drilling conditions in this hole were much the same as YP002. The hole remained stable, and reached a total depth of 29.75m, which was the target depth decided after the completion of YP002 – the top of the hole was the only part of the hole where sampling was required, due to the thicker intersections in this part of the hole. When the hole was completed, it was geophysically logged. The geophysics tool reached total hole depth. All coal seams in the hole were sampled and sent to the ALS ACIRL laboratory at Riverview, Queensland, for Coal to Liquids testing. YP004LC was completed on 17 February 2011.

All drill cuttings and remaining core from YP004LC were disposed of at one of Tasmania's register disposal sites by Veolia Environmental Contractors.

Analysis Results

The 8-inch core was sampled as several subsamples, due to the weight of the core. All stone bands between the coal bands were included in the same for each seam. The results reported below are an average of those samples for each seam.

TABLE 3: AVERAGE COAL QUALITY FOR YP004LC SEAMS

Seam	Inherent Moisture % ad	Ash % ad	Volatile Matter % ad	Fixed Carbon % ad	Sulphur % ad	Calorific Value MJ/kg ad
UU1	4.2	33.0	11.6	51.2	0.28	21.18
UU2	5.5	48.9	8.0	37.6	0.22	14.59

YP005LC

This drill site did not require any site preparation as it was the same site used for the drilling of YP002 & YP004LC (which also required no site preparation). The rig was setup over the hole on 17 February 2011.

Drilling was carried out by Spaulding Drillers, with a dual rotary rig. Once again, chip drilling occurred on the top 15.75m of the hole, and adequate amounts of cuttings were returned, after being diverted into a cyclone which stood in a large skip bin. The cuttings were then laid out on a sheet of black plastic for the geologist to log.

Drilling conditions in this hole were much the same as YP002 & YP004LC. The hole remained stable, and reached a total depth of 33m, which was the target depth decided after the completion of YP004LC – the top of the hole was the only part of the hole where sampling was required, due to the thicker intersections in this part of the hole. The hole was drilled slightly deeper so as to allow the geophysics tool extra room at the bottom of the hole to detect the entire coal seam signature.

When the hole was completed, it was geophysically logged. The geophysics tool reached total hole depth. All coal seams in the hole were sampled and sent to the ALS ACIRL laboratory at Riverview, Queensland, for Coal to Liquids testing. YP005LC was completed on 18 February 2011.

All drill cuttings and remaining core from YP005LC were disposed of at one of Tasmania's register disposal sites by Veolia Environmental Contractors.

Analysis Results

The 8-inch core was sampled as several subsamples, due to the weight of the core. All stone bands between the coal bands were included in the same for each seam. The results reported below are an average of those samples for each seam.

TABLE 4: AVERAGE COAL QUALITY FOR YP005LC SEAMS

Seam	Inherent Moisture % ad	Ash % ad	Volatile Matter % ad	Fixed Carbon % ad	Sulphur % ad	Calorific Value MJ/kg ad
UU1	6.7	49.3	10.0	34.0	0.19	13.69
UU2	6.0	47.9	7.9	38.2	0.21	14.60

Geological Evaluation of the York Plains Deposit

A geological database has been created in the Minescape GDB module incorporating 36 drill holes with lithological data, and includes the drilling data from the 2011 exploration program.

Due to the nature of the deposit, correlations between all of the boreholes were not able to be produced, and therefore, a cross section across the region was not possible.

Further work is still required to complete the stratigraphic correlations at York Plains, however it is inferred that given the geological nature of the deposit, this will be a difficult task. Work will continue in the next reporting period to ensure a stratigraphic model is produced to further define resource boundaries and additional targets.

Environment

During the 2010-2011 reporting period, drilling operations have been carried out, which require cleared, stable ground. This section outlines the environmental disturbance areas for each site:

The York Plains rehabilitation was completed in May 2011, after more significant rain events postponed rehabilitation from occurring immediately following the drilling program.

TABLE 5: ENVIRONMENTAL DISTURBANCE AREAS FOR YORK PLAINS

Hole	Location	Approximate Size	Approximate Area	Comments
YP001	Drill pad	40m x 30m	1200m ²	No clearing required, however, heavy vehicles were on site
	Access Track	400m x 5m	2000m ²	
YP002	Drill pad	40m x 30m	1200m ²	No clearing required, however, heavy vehicles were on site
	Access Track	400m x 5m	2000m ²	
YP003	Drill pad	40m x 30m	1200m ²	Slashing on site and access track, removed scrub from track
	Access Track	700m x 5m	3500m ²	
YP004LC	Hole drilled on same site as YP002			
YP005LC	Hole drilled on same site as YP002 & YP004LC			
TOTAL			11100m²	

References

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Keywords

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