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EL 27/79 (HAMILTON) QUARTERLY REPORT

17/4/1983 to 16/7/1983

1st QUARTER PERMIT YEAR 4.

OPEN FILE

554002

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# EL 27/79 (HAMILTON) QUARTERLY REPORT

## 17/4/1983 to 16/7/1983

## 1st QUARTER PERMIT YEAR 4

## INTRODUCTION

This report covers all exploration pertaining to EL 27/79 (Hamilton) for the three monthly period, 17/4/1983 to 16/7/1983, and follows the six monthly report for the period to end permit year three (17/10/1982 - 16/4/1983). EL 27/79 was granted to Capricorn Mining Ltd. as a coal licence on the 17/4/1980. The licence area (Fig. 1) originally covered 870km$^2$ over the middle reaches of the Derwent Valley, and to date 240km$^2$ have been relinquished, leaving 630km$^2$.

During the quarter ending 16/7/1983 exploration work has been entirely devoted to the Langloh prospect. The exploration phase of the potentially open cut component of the project is now complete and a final set of structure and grade maps and tabulated data are included in this report.

A statement of expenses for the previous quarter and a work program for the next quarter are also submitted.

## THE LANGLOH PROSPECT

### 1/. Surveying

The collar co-ordinates and reduced levels of the Jan-Feb 1983 drilling (refer six monthly report ending 16/4/1983) were surveyed. These data are shown on Table 1 and the hole locations appear on all of the structure and grade maps.

### 2/. Written Logs and Graphic Logs.

Appendix 1 contains a set of written logs for the 1983 drilling with depths corrected against wireline density logs which were submitted in the last report. Graphic logs at 1:100 scale were added to Dwg. 82/6, completing a set of graphic logs covering all holes drilled to date.

The coal measure intervals from the five holes (H-20, H-22, H-23, H-24 and H-28) which intersected the Langloh coal series have been drawn at 1:10 scale (Dwg. 83/2) These graphic logs represent the actual core recovered from the ground and were used to define sample intervals for assaying. All graphic logs are included in Appendix 2. and a cross section composed of the 1:100 graphic logs (see Dwg. 83/5 for trace of Cross Section) is included in Appendix 3.

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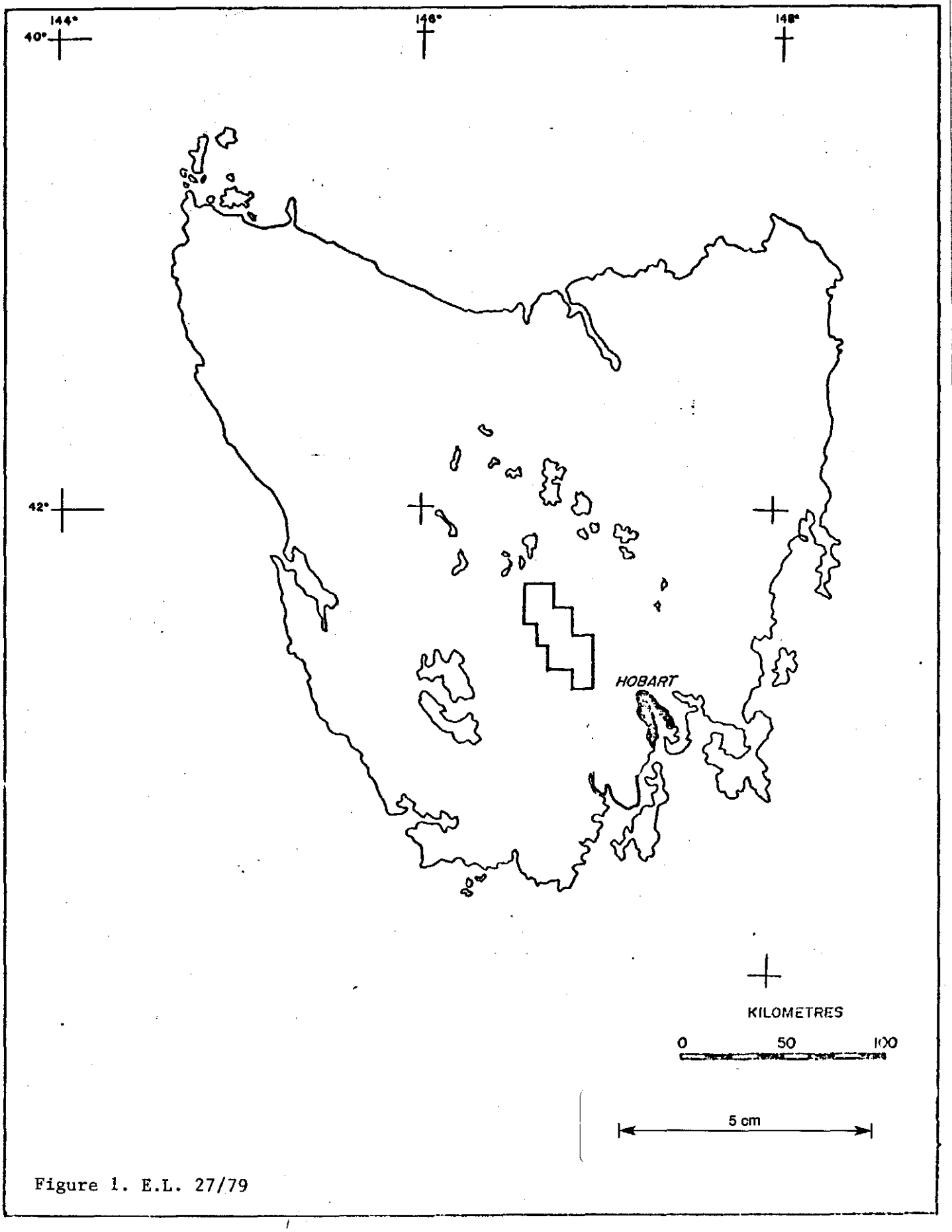



Figure 1. E.L. 27/79

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Table 1.

E. Barrie Valentine

AUTHORISED SURVEYOR
AND
TOWN PLANNER

E. BARRIE VALENTINE
F.I.S. Aust., Dip. T. & C.P.

183 MACQUARIE STREET
HOBART 7000
PHONE: (002) 34 9288

50 MAIN ROAD,
HUONVILLE 7109
PHONE HUONVILLE (002) 64 1255

REF. No. 83003

## CAPRICORN MINING LTD.

## BOREHOLE LOCATION - APRIL, 1983

| EAST | NORTH | R.L. | DRILL HOLE |
|---|---|---|---|
| 482728.68 | 5290907.20 | 192.30 | H26 |
| 483101.18 | 5290297.05 | 180.34 | H24 |
| 483775.82 | 5290914.00 | 195.38 | H25 |
| 483449.45 | 5290169.05 | 200.11 | H28 |
| 483401.72 | 5289912.69 | 210.36 | H23 |
| 482312.46 | 5289852.98 | 139.12 | H22 |
| 482046.36 | 5290277.61 | 141.73 | H27 |
| 482187.66 | 5290329.69 | 151.42 | H20 |
| 481989.74 | 5290450.59 | 150.90 | H21 |
| 481777.90 | 5290073.26 | 138.80 | H19 |

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3/. Assay Results

Full seam proximate analyses plus Relative Density, Specific Energy and % Sulfur were performed by S.G.S. Sydney. Photographs of the core sent for assay, together with the S.G.S. report and a table of core lengths for each of the 25 plies assayed, are included in Appendicies 4 and 5. Ply no's. 14,20,23 are mudstone samples in all cases the mudstone unit separating coal seams A and B. For the purpose of assay caluculations, mudstone units with a "true" thickness of 15cms or less are treated as contaminants to a combined seam A and seam B, whereas if the thickness is greater than 15cms, the unit is treated as interburden which could be mined as a discrete unit. The "true" thickness measurements are taken from Bed Resolution Density logs.

A summary of the analytical data, combined with that from the 1983 drilling is shown on Table 2. The table shows that total coal thickness (seams A+B+C) for the Langloh series ranges from 3.44 metres to 4.97 metres. For individual seams the raw coal (air dried) % ash ranges from 14.1% (1.60 metres, seam B, H-10) to 41.1% (1.07 metres, seam A, H-24). On the same basis, full seam volatiles range from 9.3% to 27.8% and Specific Energy ranges from 18.40 Mj/Kj to 26.48Mj/Kj. The maximum sulfur content recorded was 0.41%.

General trends in coal grade across both East Hill and West Hill are shown on the set of grade maps (Dwgs. 83/11-83/14 in Appendix 6)

Using the raw coal ash% as the measure of "coal grade" it is apparent that seam A is inferior to the other two seams. It is also apparent that the main reason for West Hill having higher overall grade than East Hill is the fact that on East Hill the mudstone unit separating seams A and B (ie., Shale I) is $<$15cms in thickness and this is included in the ash calculation for seams A and B, significantly increasing their ash content. If seam C is considered alone the ash content is uniformly quite low, with only one value (H-14 on West Hill) exceeding 25%.

4/. Structure

The final interpretation of the geometry of the coal seams, overburden and interburden thickness plus the fault pattern through the area of interest is presented as a set of maps, Dwgs. 83/3 to 83/10, Three categories of faults are recognised -

i/. Proven faults. These can be mapped from air photos and have been proven by field mapping and be drilling.

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Table 2

## LANGLOH COAL SERIES CALCULATED SEAM ASSAY RESULTS (RAW COAL, AIR DRIED)

### COMPOSITES CALCULATED FROM WEIGHTED AVERAGES OF PLIES

### (WHERE A-B INTERBURDEN (Sh 1) ≤ 15cm. SEAMS A, B+Sh1 ARE COMBINED)

| HOLE | SEAM | THICKNESS (M) (DENSITY LOG) | RELATIVE DENSITY | % MOISTURE | % ASH | % VOLATILES | % FIXED CARBON | SPECIFIC ENERGY Mj/Kg | % SULPHUR |
|---|---|---|---|---|---|---|---|---|---|
| H-9* | A+Sh1+B | 2.26 | 1.73 | 3.4 | 38.2 | 9.3 | 49.1 | 18.40 | 0.23 coal only |
| | C | 1.16 | 1.55 | 2.7 | 22.5 | 13.7 | 61.1 | 26.28 | 0.29 |
| | TOTAL | 3.52 | | | | | | | |
| | MEAN | | 1.62 | 3.2 | 33.2 | 10.7 | 52.9 | 20.90 | 0.25 |
| H-10 | A | 1.52 | 1.60 | 4.4 | 25.5 | 21.3 | 48.8 | 21.72 | 0.26 |
| | B | 1.60 | 1.48 | 4.0 | 14.1 | 24.5 | 57.4 | 25.86 | 0.26 |
| | C | 1.85 | 1.53 | 3.8 | 20.8 | 26.0 | 49.4 | 23.82 | 0.32 |
| | TOTAL | 4.97 | | | | | | | |
| | MEAN | | 1.53 | 4.0 | 20.2 | 24.0 | 51.8 | 23.80 | 0.28 |
| H-14 | A | 1.30 | 1.61 | 3.7 | 29.8 | 16.0 | 50.5 | 21.04 | 0.22 |
| | B | 1.15 | 1.53 | 2.8 | 19.9 | 17.2 | 60.1 | 25.62 | 0.33 |
| | C | 1.30 | 1.58 | 3.4 | 25.3 | 18.2 | 53.1 | 23.74 | 0.34 |
| | TOTAL | 3.75 | | | | | | | |
| | MEAN | | 1.57 | 3.3 | 25.3 | 17.1 | 54.3 | 23.38 | 0.29 |
| H-16 | A | 1.42 | 1.65 | 4.3 | 33.0 | 15.9 | 46.8 | 19.76 | 0.22 |
| | B | 1.25 | 1.55 | 2.5 | 21.5 | 19.2 | 56.8 | 25.62 | 0.41 |
| | C | 0.94 | 1.50 | 1.7 | 18.4 | 21.2 | 58.8 | 25.68 | 0.37 |
| | TOTAL | 3.61 | | | | | | | |
| | MEAN | | 1.58 | 3.0 | 25.4 | 18.3 | 53.3 | 23.23 | 0.32 |
| H-17 | A+Sh1+B | 2.74 | 1.72 | 2.6 | 34.9 | 10.9 | 51.6 | 20.5 | 0.21 coal only |
| | C | 1.32 | 1.55 | 2.0 | 23.3 | 18.2 | 56.5 | 24.68 | 0.32 |
| | TOTAL | 4.06 | | | | | | | |
| | MEAN | | 1.66 | 2.4 | 31.4 | 13.1 | 53.1 | 21.76 | 0.24 |
| H-20 | A | 1.56 | 1.58 | 5.0 | 31.7 | 18.6 | 44.7 | 20.50 | 0.25 |
| | B | 1.20 | 1.48 | 3.4 | 21.1 | 22.0 | 53.4 | 24.32 | 0.36 |
| | C | 1.30 | 1.50 | 3.6 | 23.3 | 22.0 | 51.0 | 24.08 | 0.36 |
| | TOTAL | 4.06 | | | | | | | |
| | MEAN | | 1.52 | 4.1 | 26.1 | 20.6 | 49.3 | 22.77 | 0.32 |

* A-B Mudstone (Sh1) = 16cm not recovered in core, assumed at RD-2.5, % Ash=90, % Volatile, SE=zero. In H-17, H-23, H-28 % Vol., S.E. in Sh1 assumed zero, % Moisture assumed equal to coal.

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Table 2 cont.

## LANGLOH COAL SERIES CALCULATED SEAM ASSAY RESULTS (RAW COAL, AIR DRIED)

### COMPOSITES CALCULATED FROM WEIGHTED AVERAGES OF PLIES

### (WHERE A-B INTERBURDEN (Sh 1) ≤ 15cm SEAMS A, B+Sh1 ARE COMBINED)

| HOLE | SEAM | THICKNESS (M) (DENSITY LOG) | RELATIVE DENSITY | % MOISTURE | % ASH | % VOLATILES | % FIXED CARBON | SPECIFIC ENERGY Mj/Kg | % SULPHUR |
|---|---|---|---|---|---|---|---|---|---|
| H-22 | A | 1.60 | 1.54 | 5.5 | 26.4 | 21.9 | 46.7 | 20.94 | 0.21 |
| | B | 1.47 | 1.48 | 4.9 | 17.2 | 26.2 | 51.7 | 24.44 | 0.33 |
| | C | 1.35 | 1.51 | 4.6 | 18.5 | 27.8 | 49.1 | 24.24 | 0.33 |
| | TOTAL | 4.42 | | | | | | | |
| | MEAN | | 1.51 | 5.0 | 21.0 | 25.1 | 48.9 | 23.11 | 0.29 |
| H-23 | A+Sh1+B | 2.35 | 1.60 | 3.5 | 31.5 | 16.2 | 48.8 | 20.14 | 0.28 |
| | C | 1.21 | 1.52 | 2.8 | 18.3 | 19.2 | 59.7 | 26.38 | 0.38 |
| | TOTAL | 3.56 | | | | | | | |
| | MEAN | | 1.57 | 3.3 | 27.1 | 17.2 | 52.4 | 22.20 | 0.31 |
| H-24 | A | 1.07 | 1.93 | 3.0 | 41.1 | 9.8 | 46.1 | 19.38 | 0.33 |
| | B | 0.92 | 1.68 | 2.6 | 25.4 | 9.3 | 62.7 | | |
| | C** | | | | | | | | |
| H-28 | A+Sh1+B | 2.08 | 1.56 | 3.1 | 25.5 | 19.0 | 52.4 | 23.58 | 0.36 |
| | C | 1.36 | 1.50 | 2.7 | 19.2 | 20.6 | 57.5 | 26.42 | 0.36 |
| | TOTAL | 3.44 | | | | | | | |
| | MEAN | | 1.53 | 2.9 | 23.1 | 19.6 | 54.4 | 24.68 | 0.36 |

** Seam C broken, incomplete

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ii/. Probable faults. These are located by constructing a number of cross sections between various pairs of holes and recognising that a small scale vertical displacement exists. An alternative interpretation would be to absorb the displacement in folds but it is considered that the coal and sandstone would be compentant and would prefer to break rather than fold when subject to stress. The regional tectonic setting is one of graben faulting and small faults would be expected within every major fault block.

iii/. Inferred Faults. These are abrupt lateral discontinuties in the coal measures which are considered to be faults rather than local sedimentological variation. The vertical displacement on this category of faults is much greater than on category ii.

The isopach maps for both the coal and the overburden have not changed in essence since the last revision (see six monthly report 17/10/1982 - 16/4/1983). The total coal thickness is greatest on the southern part of West Hill and along the northern edge of East Hill. In the latter area four seams are present, seam D occurring below seam C. This fourth seam, which has been recorded in holes B1 (1944), B6 (1944), and H -20, accounts for the relatively high gross coal thickness. However, as Dwg. 83/5 shows, if the three seam set only is considered, the minimum coal thickness occurs in the area of the old underground workings, on the eastern side of East Hill, and the maximum thickness is at the southern end of West Hill. The shape of the isopach contours implies a more or less concentric arrangement with a relatively thin core area and a thickneing of the coal seams towards the S.W. The pattern has been distorted by post depositional faulting and erosion.

The isopach maps for Shale I and II and III, ie., the mudstone units separating the coal seams within the Langloh series (Dwgs. 83/9 and 83/10) are important for the purpose of mapping total overburden plus interburden in the context of assessing the economic feasilbility of the prospect. In addition, the 15cm isopach contour for Shale I defines the boundary between Shale I being classed as interburden ( 15cm) or classed as a "dirt band" within a combined seam A and seam B (ShI $<$ 15cm).

The Overburden Isopach Map Dwg. 83/4 shows that on West Hill the limit to any mining operation would be due to faulting and the presence of the H.E.C. transmission lines along the northern boundary. The maximum overburden plus interburden to total coal ratio is of the order of 5:1 on a thickness basis. On

East Hill however overburden thickness increases abruptly to the north and northwest and considering that the N-S fault along the western edge of East Hill involves very small vertical displacement, the main limiting factor to the extent of this deposit would be overburden.

5/. Costing Study

As a means of assessing whether the Langloh coal deposits "East Hill" and "West Hill" would be conducive to viable mining operations, the Adelaide based engineering company Kinhill Stearns have been employed to conduct a costing study on an open cut mine and treatment plant at West Hill. West Hill is clearly the better of the two prospects in terms of overburden to coal ratio and ease of mining. This study will produce a cost per tonne which includes; mine establishment costs, running costs over the life of the mine and rehabilitation costs. To this cost must be added the cost of compensation to the landowners and the total will represent the cost of coal production at the mine gate. As transport costs to various potential customers can easily be obtained it will than be a simple matter to determine whether the West Hill prospect represents a viable deposit.

The results of this costing study, together with the limit to the East Hill reserves, based on the cost of overburden stripping, will be available in the next quarter.

STATEMENT OF EXPENSE FOR THE QUARTER

Total expenditure for the quarter ending 16/7/1983 was $21,511.10.

WORK PROGRAM FOR THE QUARTER ENDING 16/10/1983

The emphasis will continue on assessing the viability of the Langloh prospect. Some field reconnaissance work will be conducted to select areas of the EL for relinquishment. An outline of the major work components anticipated at Langloh follows:-

1/. Cost assessment of West Hill by Kinhill Stearns.
2/. Determine proven reserves for East Hill
3/. Negotiate with landowners at Langloh
4/. Apply for Mining Leases on relevant areas
5/. On-going discussions with potential coal buyers
6/. Commence environmental impact study.

APPENDIX 2

GRAPHIC LOGS.

SEE FICHE NUMBER TWO
OR.
SEE FOLDER MARKED
APP. 2.

APPENDIX 3

CROSS SECTION

SEE FICHE NUMBER THREE
OR
SEE FOLDER MARKED
APP. 3.

# APPENDIX 4

## PHOTOGRAPHS OF CORE

REFER FOLDER
MARKED APP. 4.

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01

PETRECON AUSTRALIA PTY LTD

# COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL 27/79

RIG/METHOD: Fox B80, Core

TOTAL DEPTH: 39.0m

HOLE NO.: H-28

CORE SIZE: NQ (15.0-39.0m)

DRILLER/ASSISTANT: WB PD

LOCATION: 483,449mE, 5290,169mN

COMMENCED: 1.2.83

CORE LOGGED: TGS

COLLAR ELEVATION: 200.11m

FINISHED: 9.2.83

GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-1.0 | Open Hole | Soil | Sandy, minor clay | |
| 1.0-3.9 | " " | Sandstone | Lithic, medium grained | |
| 3.9-4.2 | " " | Sandstone | " " " | |
| 4.2-4.8 | " " | Sandstone | " fine medium grained; very hard fine grained and siliceous dips | |
| | | | (not tuffaceous) | |
| 4.8-5.9 | " " | Sandstone | Lithic, medium/course grained | |
| 5.9-7.9 | " " | Sandstone | " " " " , minor clay pellet conglomerate (CPC) | |
| 7.9-9.9 | " " | Sandstone | " " " " " CPC and possibly some mudstone | |
| | | | beds; grey/green colour, minor coaly debris at 8.9m | |
| 9.9-11.9 | " " | Siltstone | Gradational from 10.2-11.9m into finegraded lithic sandstone, variable | |
| | | | carbonaceous laminae | |
| 11.9-15.0 | " " | Sandstone | Lithic, medium/course grained; very hard ? carbonate concretion from | |
| | | | 11.9-12.1m. | |
| 15.0-28.4 | 100 | Sandstone | Lithic, medium grained, minor coaly and carbonaceous laminae, v. minor | |
| | | | CPC, single 15mm coal fragment at 28.35m | |
| 28.4-28.80 | 100 | Mudstone | Grey, weakly banded bioturbated, △ contact = 85° calcite filled joints | |
| | | | (◇ approx 45-60°) | |

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02

...ON AUSTRALIA PTY LTD — COAL DRILLING LOG SHEET

...JECT/E.L.: | RIG/METHOD: | TOTAL DEPTH:

HOLE NO.: H-28 | CORE SIZE: | DRILLER/ASSISTANT:

LOCATION: | COMMENCED: | CORE LOGGED:

COLLAR ELEVATION: | FINISHED: | GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 29.8-29.95 | 100 | Siltstone | Grey, colour, transitional to fine/grained lithic Sst. | |
| 29.95-30.05 | 100 | Sandstone | Lithic, grey, fine grained | |
| 30.05-31.0 | 100 | Sst./Slst. | Interbedded finegrained lithic sandstone/siltstone/mudstone, variably | |
| | | | grey to green coloured. | |
| 31.0-31.9 | 100 | Mudstone | Grey coloured, broken and soft | |
| 31.9-31.92 | 100 | Coal | Dull, 2% bright bands, trace -2% carbonate | |
| 31.92-31.96 | 100 | Shale | Carbonaceous and dark brown | |
| 31.96-31.99 | 100 | Coal | Dull, $<$1% bright bands | |
| 31.99-32.0 | 100 | Shale | Dark brown colour | |
| 32.0-32.39 | 100 | Coal | Dull, approx 5% bright bands; carbonate in cleats | |
| 32.39-32.41 | 100 | Shale | Dark brown colour | |
| 32.41-32.80 | 100 | Coal | Dull, $>$5% carbonate in cleats | |
| 32.80-32.85 | 100 | Mudstone | Dark brown to carbonaceous shaley. | |
| 32.85-33.98 | 100 | Coal | Dull, average 3-5% bright bands, slight increase to 10-15% bright coal | |
| | | | over lower 0.18m, calcite in cleats in lower 0.18m also. | |
| 33.98-34.64 | 100 | Mudstone | Grey colour, very soft and broken along So. | |
| 34.64-34.74 | 100 | Coal | Dull, 2% bright bands | |

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03

...ON AUSTRALIA PTY LTD

COAL DRILLING LOG SHEET

...OJECT/E.L.:

RIG/METHOD:

TOTAL DEPTH:

HOLE NO.: H-28

CORE SIZE:

DRILLER/ASSISTANT:

LOCATION:

COMMENCED:

CORE LOGGED:

COLLAR ELEVATION:

FINISHED:

GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 34.74-34.745 | 100 | Shale | Brown coloured (5mm) | |
| 34.745-35.05 | 100 | Coal | Dull 2% bright bands | |
| 35.05-35.07 | 100 | Shale | Medium brown coloured (20mm) | |
| 35.07-35.70 | 100 | Coal | Dull $\geqslant$ 5% bright bands, calcite mainly in cleats | |
| 35.70-35.75 | 100 | Shale/coal | Heavy dull, 1% bright approx. 2x3mm dirt bands in the interval. | |
| 35.75-35.79 | 100 | Coal | Dull, $\geqslant$ 10% bright coal broken. | |
| 35.79-36.00 | 100 | Coal | Dull, 2-3% bright coal, calcite laminae approx 1mm wide on So. | |
| 36.00-36.05 | 100 | Sandstone | Lithic, fine grained. | |
| 36.05-36.25 | 100 | Mudstone | Dark grey, shaley. | |
| 36.25-37.2 | 100 | Siltstone | Grey ± mudstone laminae | |
| 37.2-37.6 | 100 | Mudstone | Grey coloured | |
| 37.6-37.9 | 100 | Siltstone | Grey, variably muddy | |
| 37.9-38.5 | 100 | Mudstone | Grey coloured | |
| 38.5-39.00 | 100 | Mdst/Slst. | Interbedded, grey coloured. | |
| | | | | |
| | | | E.O.H. - 39.0m | |

PETRECON AUSTRALIA PTY LTD 554017 COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79 RIG/METHOD: Fox B80, Tricone Roller & Blade TOTAL DEPTH: 25.0m

HOLE NO.: H-27 CORE SIZE: N/A Open Hole DRILLER/ASSISTANT: W.B. P.D.

LOCATION: 482,046mE,5,290m278mN COMMENCED: 21/1/83 CORE LOGGED: TGS

COLLAR ELEVATION: 141.73 FINISHED: 26/1/83 GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-2.9 | N/A | Clay | Pale brown coloured | |
| 2.9-5.1 | " | Sandstone | Lithic, medium grained | MW |
| 5.1-6.0 | " | Sandstone | " " " | SW |
| 6.0-6.8 | " | Sandstone | " fine medium grained | Base of oxidation |
| 6.8-7.5 | " | Conglomerate | Mud/clay pellet, grey and carbonaceous, lithic arenite matrix | =6.0m |
| 7.5-8.8 | " | Sandstone | Lithic medium grained | |
| 8.8-9.04 | " | Mudstone | Grey and carbonaceous | |
| 9.04-9.64 | " | Coal | Dull, 1-2% bright coal | Seam A |
| 9.64-9.66 | " | Shales | ? Brown coloured; (from BRD log) | |
| 9.66-10.40 | " | Coal | Dull, 1-2% bright bands | |
| 10.40-10.99 | " | Mudstone | Grey colour | |
| 10.99-12.36 | " | Coal | Dull, 1-3% bright bands | Seam B |
| 12.36-13,92 | " | Mudstone | Grey colour | |
| 13.92-14.36 | " | Coal | Dull, 2% bright coal | |
| 14.36-14.39 | " | Shale | ? Brown colour; (from BRD and caliper log) | |
| 14.39-14.49 | " | Coal | Dull < 1% bright coal | Seam C |
| 14.49-14.52 | " | Shale | ? Brown colour (BRD and caliper log) | |

PETRECON AUSTRALIA PTY LTD 554018 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-27 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 14.42-15.00 | N/A | Coal | Dull, approx 2% bright bands | Seam C |
| 15.00-15.02 | N/A | Shale | ? Brown ; (BRD log interpretation) | |
| 15.02-15.26 | N/A | Coal | Dull, 2-3% bright bands | |
| 15.26-21.70 | N/A | Mudstone | Grey coloured | |
| 21.70-25.00 | | Sandstone | Lithic, grey, course grained. | |
| | | | E.O.H. 25.0m | |

PETRECON AUSTRALIA PTY LTD 554019 COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79 RIG/METHOD: FoxB80 Tricone Roller/blade/ Stratapack TOTAL DEPTH: 89.0m

HOLE NO.: H-26 CORE SIZE: N/A Open Hole DRILLER/ASSISTANT: WB PD

LOCATION: 482,729mE, 5290,907mN COMMENCED: 27/1/83 CORE LOGGED: TGS

COLLAR ELEVATION: 192.30 FINISHED: 28/1/83 GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0.0-2.0 | N/A | Clay | Red/brown colour sandy | |
| 2.0-5.2 | " | Mudstone | Grey to pale brown coloured | |
| 5.2-5.7 | " | Sandstone | Lithic, fine grained, minor clay pellet conglomerate | |
| 5.7-6.2 | " | Conglomerate | Mud/clay pellet in hard lithic arenite matrix | |
| 6.2-8.0 | " | Sandstone | Lithic fine to medium grained | |
| 8.0-20.0 | " | Sandstone | " medium to course grained, minor clay pellet, conglomerate, with | |
| | | | carbonaceous mudstone 12-14m, and from 18-20m with minor coaly debris. | |
| 20.0-20.8 | " | Mudstone | Dark coloured, cherty and hard (? baked) | |
| 20.8-23.5 | " | Sandstone | Lithic, grey coloured, medium grained | |
| 23.5-23.9 | " | ? Mudstone | Dark grey and carbonaceous, hard and cherty (? Baked) | |
| 23.9-43.0 | " | Sandstone | Lithic grey coloured, medium/course grained | |
| 43.0-44.0 | " | Mudstone | Dark brown coloured. | |
| 44.0-72.0 | " | Sandstone | Lithic, grey coloured, medium grained, minor grey mudstone (possibly as | |
| | | | CPC horizons) uphole contamination increasing from 44m on. | |
| 72.0-72.2 | " | Coal | Dull, badley contaminated by mudstone (UHC) | |
| 72.2-75.6 | " | Sandstone | Lithic, grey, medium grained | |
| 75.6-75.79 | " | Coal | Dull (bad UHC) | |

.cCON AUSTRALIA PTY LTD 554020 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-26 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 75.79-75.85 | N/A | Shale | Zone of coal and shale bands (from BRD log) | |
| 75.85-76.26 | " | Coal | Dull (bad UHC) | |
| 76.26-76.28 | " | Shale | ? Brown colour (From BRD log) | |
| 76.28-76.81 | " | Coal | Dull (bad UHC) | |
| 76.81-77.55 | " | Mudstone | Grey colour | |
| 77.55-78.62 | " | Coal | Dull, (bad UHC; possible stone band 77.9-80m) | |
| 78.62-80.82 | " | Mudstone | Grey coloured (- very poor sample return) | |
| 80.82-81.2 | " | Coal | Dull (UHC) | |
| 81.2-81.22 | " | Shale | ? Brown colour; (from BRD log) | |
| 81.22-81.73 | " | Coal | Dull (UHC) | |
| 81.73-81.74 | " | Shale | ? Brown colour; (from BRD log) | |
| 81.74-82.03 | " | Coal | Dull (UHC) | |
| 82.03-83.58 | " | ? Mudstone | ? poor sample return | |
| 83.58-83.80 | " | Coal | Dull (UHC) | |
| 83.80-83.82 | " | Shale | ? Brown colour ; (from BRD log) | |
| 83.82-84.2 | " | Coal | Dull (UHC) | |
| | " | Mudstone | Grey coloured (-some cuttings returned) | |

CON AUSTRALIA PTY LTD 554021 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-26 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 85.8-89.0 | N/A | Sandstone | Lithic (based on penetration rate, and natural gamma log). | |
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| | | | E.O.H. 89.0m. | |
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PETRECON AUSTRALIA PTY LTD 554022 COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79 RIG/METHOD: Fox B80, Core TOTAL DEPTH: 45.0m

HOLE NO.: H-25 CORE SIZE: NQ(15.0-45.0m) DRILLER/ASSISTANT: W.B. P.D.

LOCATION: 483,776mE, 5,290,914mN COMMENCED: 25/1/83 CORE LOGGED: TGS

COLLAR ELEVATION: 195.38 FINISHED: 26/1/83 GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-0.5 | Open Hole | Soil | Alluvium etc. | |
| 0.5-7.0 | " " | Sandstone | Lithic, fine/medium grained | Mod. Weatherd M.W. |
| 7.0-7.5 | " " | Sandstone | " " " " | Fresh F |
| 7.5-8.2 | " " | Sandstone | " " " " | M.W. |
| 8.2-8.8 | " " | Mudstone | Grey/brown/khaki coloured; transitional to CPC | Slightly Weath. SW |
| 8.8-12.0 | " " | Sandstone | Lithic, medium grained, minor clay pellets conglomerate | SW - F |
| 12.0-15.0 | " " | Sandstone | " " " " " " " | " |
| 15.0-18.81 | 100 | Sandstone | Lithic, fine-medium-course grained toward base of interval; closely | Oxidation ranges |
| | | | spaced fractures on SO from 18.30-18.38; minor CPC and coaly debris | 7-15m |
| 18.81-20.28 | 100 | Sandstone | Lithic, fine/medium grained weakly banded and fissile along close | |
| | | | closed spaced So (5-8mm) | |
| 20.28-20.30 | 100 | Coal | Dull, (? heavy), <1% bright bands; approx 20% carbonate | |
| 20.30-20.38 | 100 | Mudstone | Carbonaceous to dark grey; 20% carbonate parallel So. | |
| 20.38-20.75 | 100 | Sandstone | Lithic, "dirty", choked with carbonaceous mudstone and coaly debris (eg | ? sub grey wacke |
| | | | dull coal 20.52-20.53) | |
| 20.75-20.77 | 100 | Coal | Dull, approx 15% bright bands fissile | |
| 20.77-22.02 | 100 | Sandstone | Lithic, "dirty" etc, as for 20.38-20.75m, also fissile and with minor | ? sub grey wacke |

AUSTRALIA PTY LTD 554023 COAL DRILLING LOG SHEET

CT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-25 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| | | | CPC ; medium grained | |
| 22.02-24.85 | 100 | Sandstone | Lithic, medium to course grained, minor CPC | |
| 24.85-26.32 | 100 | Sandstone | Lithic "dirty" etc, as for 20.38-20.75m ; also fissile along carbon- | ? sub grey wacke |
| | | | aceous mudstone laminae | |
| 26.32-26.75 | 100 | Sandstone | Lithic, medium/course grained, fairly banded So approx 60° | |
| 26.75-27.80 | 100 | ? Tuff | ? Tuffaceous sandstone, carbonaceous debris | |
| 27.80-31.84 | 100 | Sandstone | Lithic, medium/course grained, faintly banded; (△So = 75°) | |
| 31.84-38.75 | 100 | Conglomerate | Mud/clay pellet, green coloured sandstone matrix, grey and carbonaceous | |
| | | | clasts; approx 50% by volume is cpc from 34.9-35.65. | |
| 38.75-38.82 | 100 | ? Tuff | ? Tuffaceous sandstone/? carbonate concretion | |
| 38.82- 45.00 | 100 | Sandstone | Lithic, grey/green colour; ? heavy dull coal clast 30mm diameter - | |
| | | | 41.6cm; trace pyrite and calcite minor CPC pellets, and variably | |
| | | | banded (△So = 85°). | |
| | | | E.O.H. 45.0m. | |
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PETRECON AUSTRALIA PTY LTD 554024 COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79 RIG/METHOD: Fox B80, Core TOTAL DEPTH: 27.0m

HOLE NO.: H-24 CORE SIZE: NQ (15.0-27.om) DRILLER/ASSISTANT: W.B. P.D.

LOCATION: 483,101mE;5,290,297mN COMMENCED: 21/1/83 CORE LOGGED: TGS

COLLAR ELEVATION: 180.34 FINISHED: 24/1/83 GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0.-1.0 | Open Hole | Clay | Derived from EW lithic arenite | |
| 1.0-8.0' | Open Hole | Sandstone | Lithic, medium to course grained | MW. |
| 8.0-15.0 | " " | Sandstone | Lithic, medium to course grained, grey coloured | F. |
| 15.0-18.56 | 100 | Sandstone | Lithic, graded fine to medium and medium to course grained, minor mud | |
| | | | pellets and carbonaceous. | |
| 18.56-18.61 | 100 | Coal | Dull, < 1% bright bands | |
| 18.61-19.20 | 100 | Sandstone | Lithic, medium to course grained, variable carbonaceous and coaly debris | |
| 19.20-19.47 | 100 | Coal | Dull, average 3% bright bands | |
| 19.47-19.50 | 100 | Shale.Coal | Intermixed coal and shale, densely veined with carbonate and So | |
| 19.50-19.91 | 100 | Coal | Dull, average 2% bright bands | Seam A |
| 19.91-19.93 | 100 | Coal | Heavy dull, ± carbonaceous mudstone | |
| 19.93-20.27 | 100 | Coal | Dull, average 5% bright, but approx. 40% bright from 20.26-20.27cm; | |
| | | | the entire seam is broken/brecciated with calcite matrix, also calcite | |
| | | | in joints, microfaults etc. | |
| 20.27-20.44 | 100% to 21.0m | Mudstone | Grey coloured fissile | |
| 20.44-21.36 | | Coal | Dull, average 3-5% bright bands, but increasing to 50% bright coal from | Seam B |
| | | | 21.17-21.36m (some KL) | |

PETRECON AUSTRALIA PTY LTD

554025

COAL DRILLING LOG SHEET

PROJECT/E.L.:

RIG/METHOD:

TOTAL DEPTH:

HOLE NO.: H-24

CORE SIZE:

DRILLER/ASSISTANT:

LOCATION:

COMMENCED:

CORE LOGGED:

COLLAR ELEVATION:

FINISHED:

GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 21.79-22.16 | | Mdst/Slst. | Interbedded, grey colour (some KL) | |
| 22.16-22.51 | | Sandstone | Lithic, and "dirty" with abundant carbonaceous laminae and fragments; | |
| | | | finegrained. | |
| 22.51-22.71 | | Siltstone | Grey coloured (KL at top) | |
| 22.71-23.76 | | Mudstone | Grey coloured (very bad KL) | |
| 23.76-24.41 | | Coal | Dull, average 10% bright bands (5-10mm wide) | Seam C. |
| 24.41-24.56 | | Mudstone | Grey broken (inner tube blocked off in this unit) | |
| 24.56-25.8 | | Breccia/Mdst. | Grey mudstone fragments forming crushed zone (CZ) KL mainly at | |
| | | | (ie., 24.0m); △ CZ 24.8m=25° and △CZ 25.3 = 55° | |
| 25.8-26.7 | | Mudstone | Grey, broken, but no obvious porphyroclasts | |
| 26.7-27.0 | | ? | ? No recovery, presumably mudstone. | |
| | | | E.O.H. 27.0m | |
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PETRECON AUSTRALIA PTY LTD

554026

COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79

RIG/METHOD: Fox B80, Core

TOTAL DEPTH: 36.0m

HOLE NO.: H-23

CORE SIZE: NQ (12.0-36.0)

DRILLER/ASSISTANT: W.B. P.D.

LOCATION: 483,402mE, 5,289,913mN

COMMENCED: 24-1-83

CORE LOGGED: TGS

COLLAR ELEVATION: 210.36

FINISHED: 25-1-83

GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-7.0 | Open Hole | Sandstone | Lithic, medium grained, minor CPC | Highly weathered |
| 7.0-12.0 | Open Hole | Sandstone | Lithic, medium grained, minor CPC | Mod. weathered |
| 12.0-13.70 | 100 | Sandstone | Lithic medium grained, grey coloured | Fresh to slightly weathered. |
| 13.70-14.10 | 100 | Mudstone | Oxidized and ferringinized, goethite replaced bedding | Mod. weathered |
| 14.10-14.75 | 100 | Sandstone | Lithic buff/grey colour, medium grained; oxidation on joints | Fresh to slightly weathered. |
| 14.75-16.80 | 100 | Sandstone | " " " " " " " " " | Fresh |
| 16.80-17.60 | 100 | Sandstone | Lithic, buff/grey colour, medium/coarse grained, minor CPC | slightly weathered mod. weathered. |
| 17.60-18.00 | 100 | Conglomerate | Mud/clay pellet in medium grained lithic arenit matrix traces of carbon- | " " |
| | | | aceous mudstone, and coaly debris | " " |
| 18.00-18.50 | 100 | Sandstone | Lithic, medium grained | " " |
| 18.50-18.90 | 100 | Sandstone | Lithic medium grained, strongly carouded on joints with goethite | " " |
| 18.90-19.00 | 100 | Sandstone | Lithic, grey medium grained | fresh |
| 19.00-22.85 | 100 | Sandstone | Lithic, medium grained, soft. | mod. weathered |
| 22.85-25.15 | 100 | Sandstone | Lithic, medium to course grained toward base ; minor carbonaceous debris | fresh |
| | | | faint banding on So ($\Delta$=80°) | " |
| 25.15-25.28 | 100 | Conglomerate | Mud pellet (grey and carbonaceous), in course grained lithic arenite | " |
| | | | matrix. | " |

AUSTRALIA PTY LTD 554027 COAL DRILLING LOG SHEET

CT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-23 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 25.28-25.33 | 100 | Mudstone | Carbonaceous (possibly a large clast/pellet) | Fresh/Slightly weathered. |
| 25.33-25.45 | 100 | Sandstone | Lithic, medium/course grained | slightly weathered |
| 25.45-26.00 | 100 | Sandstone | Lithic, grey colour, medium grained | fresh |
| 26.00-26.56 | 100 | Sandstone | Lithic, medium increasing to course grained at base approx. vertical | " and Mod. |
| | | | joints over lower section | weathered |
| 26.56-26.69 | 100 | Mudstone | grey colour | fresh |
| 26.69-26.73 | 100 | Coal | Dull, average 30% bright bands ; upper 30mm has approx. 50% bright coal | " |
| | | | and is extensively veined with calcite parallel to bedding (So) | " |
| 26.73-26.93 | 100 | Mudstone | Grey colour | |
| 26.93-27.50 | | Coal | Dull 1% bright (< 1mm wide) ; approx 10 vol % angular grey mudstone | |
| | | | clasts (? incipient pellets) for the upper 100mm slight increase in | |
| | | | bright coal toward base averaging 2% bright bands (2mm thick) including | |
| | | | a 40mm band from 27.46-27.50m ; trace calcite on So. | |
| 27.50-27.53 | | Shale | Brown colour fissile | Seam A |
| 27.53-27.54 | | Shale | Carbonaceous. | |
| 27.54-27.59 | | Coal | Heavy dull soft (not on BRD log) | |
| 27.59-27.92 | | Coal | Dull, average 2% bright bands (2mm thick), but including approx. 50% | |

...USTRALIA PTY LTD 554028 COAL DRILLING LOG SHEET

...JECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-23 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| | | | bright bands (3-10mm thick) from 27.80-27.92m. | Seam A. |
| 27.92-28.06 | | Mudstone | Grey colour, broken (? ) | |
| 28.06-29.28 | | Coal | Dull, average 3-5% bright bands (5mm wide), and including 30% bright | Seam B |
| | | | bands (10-30mm wide) from 29.09-29.28 ; trace calcite in cleats and So. | |
| 29.28-29.38 | | Mudstone | Carbonaceous | |
| 29.38-29.82 | | Mudstone | Grey colour fissile | |
| 29.82-30.32 | | Coal | Dull, average 2% bright bands (2-3mm wide) [NB. discrepancy between core | |
| | | | and BRD log suggests a 13cm KL ; ie., the core appears to start at approx. | |
| | | | 29.95m. | |
| 30.32-30.34 | | Shale | Pale brown colour (mostly disintegrated in bottom of core box) | Seam C |
| 30.34-30.77 | | Coal | Dull, average 3% bright abnds (2-5mm wide), | |
| 30.-7-30.79 | | Shale | ? brown colour (only on BRD log - ie., core loss) | |
| 30.79-31.03 | | Coal | Dull, average 3% bright band, but with only a slight increase in bright | |
| | | | coal content toward the base, (eg., 30.88-30.93m, and 30.98-31.03m). | |
| 31.03-31.10 | | Shale | Carbonaceous to dark brown colour, fissile | |
| 31.10-33.00 | | Mudstone | Grey colour, weakly banded (alternating dark/light grey and brown colours) | |
| | | | ; minor green eclipses (? reduction centres) ; becoming more silty toward base. | |

...STRALIA PTY LTD 554029 COAL DRILLING LOG SHEET

...T/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-23 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 33.00-33.74 | | Mdst.Slst. | Interbedded, grey colour. | |
| 33.74-34.12 | | Mudstone | Grey colour. | |
| 34.12-34.55 | | Mdst.Slst. | Interbedded, grey/coloured | |
| 34.55-34.66 | | Sandstone | Lithic fine grained | |
| 34.66-35.27 | | Siltstone | Grey coloured, muddy, current bedding | |
| 35.27-26.00 | | Sandstone | Lithic, fine grained increasing to medium grained toward 36.0m. | |
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| | | | EOH 36.0m. | |
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PETRECON AUSTRALIA PTY LTD

554030

COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79

RIG/METHOD: FoxB80, Core

TOTAL DEPTH: 20.90m

HOLE NO.: H-22

CORE SIZE: NQ (3.0-20.9m)

DRILLER/ASSISTANT: WB PD

LOCATION: 481,312mE, 5289,853mN

COMMENCED: 20.1.83

CORE LOGGED: TGS

COLLAR ELEVATION: 139.12

FINISHED: 20.1.83

GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-3.0 | Open Hole | Sandstone | Lithic, medium grained clayey | HW |
| 3.0-4.81 | | Sandstone | " " " , minor silicified wood @ 3.25m | MW |
| 4.81-4.89 | | Conglomerate | Clay/mud pellet, in lithic arenite matrix | " |
| 4.89-4.98 | | Siltstone | Khaki colour | " |
| 4.98-5.20 | | Conglomerate | Clay/mud pellet, in medium/course grained lithic arenite | " |
| 5.20-5.70 | | Sandstone | Lithic, medium course grained | Slightly W. |
| 5.70-8.96 | | Sandstone | Lithic, grey course grained, minor grey CPC and v. minor coaly frags. | Base of oxidation = 5.70m |
| | | | slightly weathered 6.05-6.40m. | |
| 8.96-9.22 | | Coal | Dull, $<$ % bright bands | Seam A. |
| 9.22-9.225 | | Shale | Cream colour (5mm); (Not on BRD log) | |
| 9.225-9.52 | | Coal | Dull approx. 1% bright bands; very minor pale shale pellets | |
| 9.52-9.66 | | Coal/shale | Zone of pelleted dirt bands (2-3 mm thick); the bands are discontinuous | |
| | | | over the core diameter ( approx 50mm) | |
| 0.66-9.99 | | Coal | Dull, approx. 1-2% bright bands | |
| 9.99-10.00 | | Shale | Pale/medium brown colour (10mm) | |
| 10.00-10.56 | | Coal | Dull, 1-3% bright bands | |
| 10.56-10.90 | | Mudstone | Grey, badley broken, probably smectitic | |

PETRECON AUSTRALIA PTY LTD 554031 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-22 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 10.90-11.75 | | Coal | Dull, 2% bright bands; upper 80mm containing cream coloured mudstone | |
| | | | pellets + minor claystone laminea | |
| 11.75-12.10 | | Coal/Shale | Zone of brown kaolinite/claystone laminae/bands (1-3mm) in part pelletal | Seam B. |
| | | | (similar to 9.52-9.66m in seam A) in none of these stone bands give | |
| | | | a clear response on the BRD log, and all are discontinuous. | |
| 12.10-12.37 | | Coal | Dull average 5% bright bands, increasing to 20% over basal 0.16m | |
| 12.37-14.21 | | Mudstone | Grey, puggy (? smectitic); D Joints 30°-65° | |
| 14.21-14.68 | | Coal | Dull, 3% bright bands, minor calcite in cleats (NB core starts at 14.51) | |
| 14.68-14.72 | | Shale | ? Brown colour (KL) | |
| 14.72-14.83 | | Coal | Dull, average 1% bright bands | |
| 14.83-14.84 | | Shale | ? Brown colour (KL) | Seam C. |
| 14.84-15.34 | | Coal | Dull, 3-5% bright bands | |
| 15.34-15.36 | | Shale | Medium brown colour, fissile (10mm) | |
| 15.36-15.56 | | Coal | Dull, 5% bright bands (2-5mm thick), calcite in cleats; minor dirt | |
| | | | bands (< 1mm) a 15.4m | |
| 15.56-15.8 | | Mudstone | Grey colour | |
| 15.8-16.40 | | Siltstone | " " , muddy | |

PETRECON AUSTRALIA PTY LTD 554032 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-22 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 16.40-17.50 | | Slst./Mdst. | Interbedded, grey colour | |
| 17.50-18.97 | | Mudstone | Grey colour | |
| 18.97-19.98 | | Mdst./Slst. | Interbedded, becoming sandier toward base very fine laminae of carbon- | |
| | | | aceous material, grouped into bands (≤10mm thick) from 19.0-19.98m. | |
| 19.98-20.9 | | Sandstone | Lithic, grey, fine grained, increasing toward 20.9m; similar bands of | |
| | | | carbonaceous laminae to those described from 19.0-19.98m. | |
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| | | | E.O.H. - 20.90m. | |
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PETRECON AUSTRALIA PTY LTD

554033

COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79

RIG/METHOD: Fox B80 Tricone roller blade

TOTAL DEPTH: 27.0m

HOLE NO.: H-21

CORE SIZE: N/A Open Hole

DRILLER/ASSISTANT: WB PD

LOCATION: 481,989mE, 5290,451mN

COMMENCED: 20.1.83

CORE LOGGED: TGS

COLLAR ELEVATION: 150.90

FINISHED: 21.1.83

GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-0.5 | N/A | Soil | Alluvium | |
| 0.5-4.0 | " | Sandstone | Lithic, medium grained/course grained; containing abundant mudstone | |
| | | | pellets (effectively a CPC) | |
| 4.0-6.0 | " | Sandstone | Lithic, medium grained, minor CPC and coaly debris | |
| 6.0-7.0 | " | Sandstone | " " " khaki coloured, with carbonated CPC | |
| 7.0-8.1 | " | Sandstone | " grey medium grained | |
| 8.1-8.5 | " | Mudstone | Carbonaceous, with approx. 0.4, coal seam | |
| 8.5-9.5 | " | Mudstone | Grey colour | |
| 9.5-13.0 | " | Sandstone | Lithic, grey, medium grained | |
| 13.0-13.33 | " | Mudstone | Carbonaceous | |
| 13.33-14.89 | " | Coal | Dull, approx 3% bright bands, (? possibly some stone bands) | |
| 14.89-15.56 | " | Mudstone | Grey colour | |
| 15.56-16.82 | " | Coal | Dull, approx 3% bright bands | |
| 16.82- 17.95 | " | Mudstone | Grey, colour | |
| 17.95-18.47 | " | Coal | Dull, 2-3% bright bands | |
| 18.47-18.49 | " | Shale | ? Brown colour, (BRD only) | |
| 18.49-18.96 | " | Coal | Dull, 2-3% bright bands | |

PETRECON AUSTRALIA PTY LTD

554034

COAL DRILLING LOG SHEET

PROJECT/E.L.:

RIG/METHOD:

TOTAL DEPTH:

HOLE NO.: H-21

CORE SIZE:

DRILLER/ASSISTANT:

LOCATION:

COMMENCED:

CORE LOGGED:

COLLAR ELEVATION:

FINISHED:

GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 18.96-18.99 | N/A | Coal | Dull, 2-3% bright bands | |
| 18.99-19.19 | " | Shale | ? Brown colour (BRD log only) | |
| 19.19-25.8 | " | Mudstone | Grey, (? ), and becoming silty toward base of unit | |
| 25.8-27.00 | " | Sandstone | Lithic, fine/medium grained. | |
| | | | | |
| | | | E.O.H. - 27.00m. | |
| | | | | |
| | | | | |
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PETRECON AUSTRALIA PTY LTD 554035 COAL DRILLING LOG SHEET

PROJECT/E.L.: Langloh EL27/79 RIG/METHOD: Fox B80, Core TOTAL DEPTH: 30.0m

HOLE NO.: H-20 CORE SIZE: NQ(12.0-30.0m) DRILLER/ASSISTANT: W.B. P.D.

LOCATION: 482,188mE,5,290,330mN COMMENCED: 19.1.83 CORE LOGGED: TGS

COLLAR ELEVATION: 151.42 FINISHED: 19.1.83 GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-8.0 | Open Hole | Sandstone | Lithic, medium grained, oxidized | |
| 8.0-12.0. | " " | Sandstone | " " " fresh (grey colour) | |
| 12.0-13.71 | | Sandstone | " " " grey | |
| 13.71-14.02 | | Conglomerate | Carbonaceous mudstone laminae set in green coloured lithic sandstone | |
| | | | matrix; green colour due to ferous iron or ? uranium mineral. | |
| 14.02-16.92 | | Sandstone | Lithic, grey, medium grained, increasing to course at the base, minor | |
| | | | mudstone pellets. | |
| 16.92-17.19 | | Coal | Dull, $\ll$1% bright bands | |
| 17.19-17.205 | | Shale | Dark brown colour (15mm) | |
| 17.205-17.33 | | Coal | Dull, approx 1% bright bands, minor calcite in cleats (? Heavy dull coal) | |
| 17.33-17.34 | | Shale | Dark brown colour, fissile (10mm) | |
| 17.34-17.67 | | Coal | Dull, approx. 3% bright bands (1-5mm thick), calcite in cleats | |
| 17.67-17.685 | | Shale | Dark brown colour, fissile (15mm) | |
| 17.685-18.48 | | Coal | Dull, approx 3% bright bands overall, but with 30% bright bands (2-10 | |
| | | | mm thick) from 18.38-18.48m; calcite in cleats from 17.71-18.38m. | |
| 18.48-18.99 | | Mudstone | Grey colour, fissile | |
| 18.99-20.19 | | Coal | Dull, 1-2% bright bands overall, but increase over the base 180mm, no | |

PETRECON AUSTRALIA PTY LTD 554036 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-20 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| | | | obvious stone bands, calcite matrix to minor breccia zone from 19.71- | |
| | | | 20.19m | |
| 22.13--22.26 | | Coal | Dull, approx 3-5% bright bands minor calcite in cleats. | |
| 22.26-22.27 | | Shale | Carbonaceous (10mm) (not on BRD log) | |
| 22.27-22.56 | | Coal | Dull, approx 3% bright bands | |
| 22.56-22.58 | | Shale | Dark brown colour (20mm) | |
| 22.58-23.18 | | Coal | Dull, approx 3-5% bright bands, calcite in cleats | |
| 23.18-23.21 | | Shale | Dark brown colour | |
| 23.21-23.43 | | Coal | Dull, approx 10% bright bands, mainly due to a single 30mm thick bright | |
| | | | band. | |
| 23.43-27.00 | | Mudstone | Grey colour, fissile | |
| 27.00-28.25 | | Mdst./Slst. | Interbedded, grey colour. | |
| 28.25-30.00 | 100 | Sandstone | Lithic, grey, ranging from very fine to fine to fine/medium grained | |
| | | | toward 30.00m. | |
| | | | | |
| | | | E.O.H. 30.00m. | |
| | | | | |

PETRECO AUSTRALIA PTY LTD

554037

COAL DRILLING LOG SHEET

PROJECT/E.I.: 27/79 | RIG/METHOD: Fox B80, Core | TOTAL DEPTH: 60.0m

HOLE NO.: H-19 | CORE SIZE: NQ(6.0-60.0m) | DRILLER/ASSISTANT: WB., PD.

LOCATION: 481 778 mE, 5290 073 mN | COMMENCED: 18.1.83 | CORE LOGGED: TGS

COLLAR ELEVATION: 138.80 | FINISHED: 19.1.83 | GEOLOGIST: TGS

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 0-3.5 | Open Hole | Sandstone | Sandy clay, minor silicified wood, minor geothite all derived from | |
| | | | lithic sandstone | |
| 3.5-6.0 | Open Hole | Mudstone | Pink.red coloured to 4.0cm, then buff coloured and soft to brown; upper | |
| | | | section apparently ferruginized by weathering of adjacent mafic rocks. | |
| 6.0-6.3 | | Mudstone | Buff coloured, very broken | |
| 6.3-7.0 | | KL | Core loss | |
| 7.0-7.5 | | Mudstone | Red/pink coloured, variably silty (similar to outcrop) | |
| 7.5-7.8 | 6.0-9.0m=73 | Coal | Oxidized, dull, broken and with 3, 5mm wide dirt bands ; some core loss | |
| | | | at top of seam. | |
| 7.8-8.2 | | Mudstone | Grey/green/khaki ; silty ; geothite on joints | |
| 8.2-9.05 | | Siltstone | Pale brown coloured | |
| 9.05-13.00 | | Mudstone | Khaki coloured to 12.25, then grey coloured 13.0m ; bioturbated and | Base of oxidation |
| | 9.0-12.0m=90 | | banded (light/dark green) 11.4 - 12.25m ; minor silty to 12.25 ; | approx 9.0m |
| | | | basal grey unit is massive. | |
| 13.00-13.80 | 100 | Mudstone/Slst. | Interbedded, grey/brown/khaki : coloured | |
| 13.80-14.00 | 100 | Mudstone | Grey coloured | |
| 14.00-14. 0 | 100 | Siltstone | Grey coloured, muddy at top, minor ? flasca bedding | |

...ON AUSTRALIA PTY LTD 554038 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-19 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 14.30-14.45 | 100 | Sandstone | Lithic, grey, fine grained | |
| 14.45-14.60 | 100 | Siltstone | Grey coloured | |
| 14.60-26.25 | 100 | Sandstone | Lithic, grey fine grained, increasing to medium grained towards base ; | |
| | | | carbonate cement 20.8 - 21.30m ; minor carbonaceous laminae to 25.05m ; | |
| | | | abundant mudstone bands and laminea 25.05 - 26.25m and very minor coaly | |
| | | | debris. | |
| 26.25-26.65 | 100 | Mudstone | Grey, massive. | |
| 26.65-28.83 | 100 | Sandstone | Lithic, grey, medium grained, minor coaly laminea (1-3mm thick) | |
| 28.83-29.55 | 100 | Mudstone | Grey, fine banded, with interval micro faulting giving a pseudo chevron | △ top = 80° |
| | | | appearance ; bedding also defined by lithic sandstone bands (5-15mm) | |
| | | | hosting grey mudstone pellets. | △ bands = 45° |
| 29.55-29.70 | 100 | Siltstone | Grey banded similarly to mudstone from 28.83-29.55m unit is capped and | △ bands + 50° |
| | | | underlain by grey mudstone pellets. | △ base = 80° |
| 29.70-41.70 | 100 | Sandstone | Lithic grey, medium grined ; carbonate cement 33.25 - 33.50m, including | |
| | | | calcite vein ; variably spotted due to carbonaceous debris (0.5mm) which | |
| | | | are rimmed with green mineral ; vague banding due to alternation of quartz | |
| | | | and heavy minerals/carbonaceous rich zones. | |

JN AUSTRALIA PTY LTD 554039 COAL DRILLING LOG SHEET

PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-19 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 41.70-42.08 | 100 | Conglomerate | Clay/mud pellets, grey, with lithic sandstone matrix. | |
| 42.08-42,36 | 100 | Coal | Bright and dull ( ), brecciated with calcite matrix noticeably | |
| | | | banded, upper half has approc. 20% bright, which increases to 40-50% | |
| | | | bright in lower section. | |
| 42.36-42.8 | 100 | Mudstone | Carbonaceous with coaly bands | Calcite in cleats |
| 42.8-43.60 | 100 | Mudstone | Dark grey minor coaly bands | " " |
| 43.60-44.0 | 100 | Siltstone | Dark grey silty mudstone and siltstone | |
| 44.0-45.12 | 100 | Mudstone | Medium grey, minor dark bands | |
| 45.12-45.49 | 100 | Coal | Dull (? cindered); approx 5% bright bands ( 1mm) | |
| 45.49-45.64 | 100 | Mudstone | Carbonaceous | |
| 45.64-47.18 | 100 | Mudstone | Grey/brown, laminated. | |
| 47.18-47.38 | 100 | Coal | Dull, approx 10% bright bands to 47.34m, basal section contains approx | |
| | | | 90% bright coal. | |
| 47.18-48.35 | 100 | Mudstone | Grey, very minor coal laminae | |
| 48.35-48.6 | 100 | Sandstone | Lithic, grey, medium grained, minor siltstone interbeds | |
| 48.6-49.6 | 100 | Siltstone | Grey banded | |
| 4 -49.9 | 100 | Sandstone | fine grained, grey, carbonaceous bedding | |

...N AUSTRALIA PTY LTD 554040 COAL DRILLING LOG SHEET

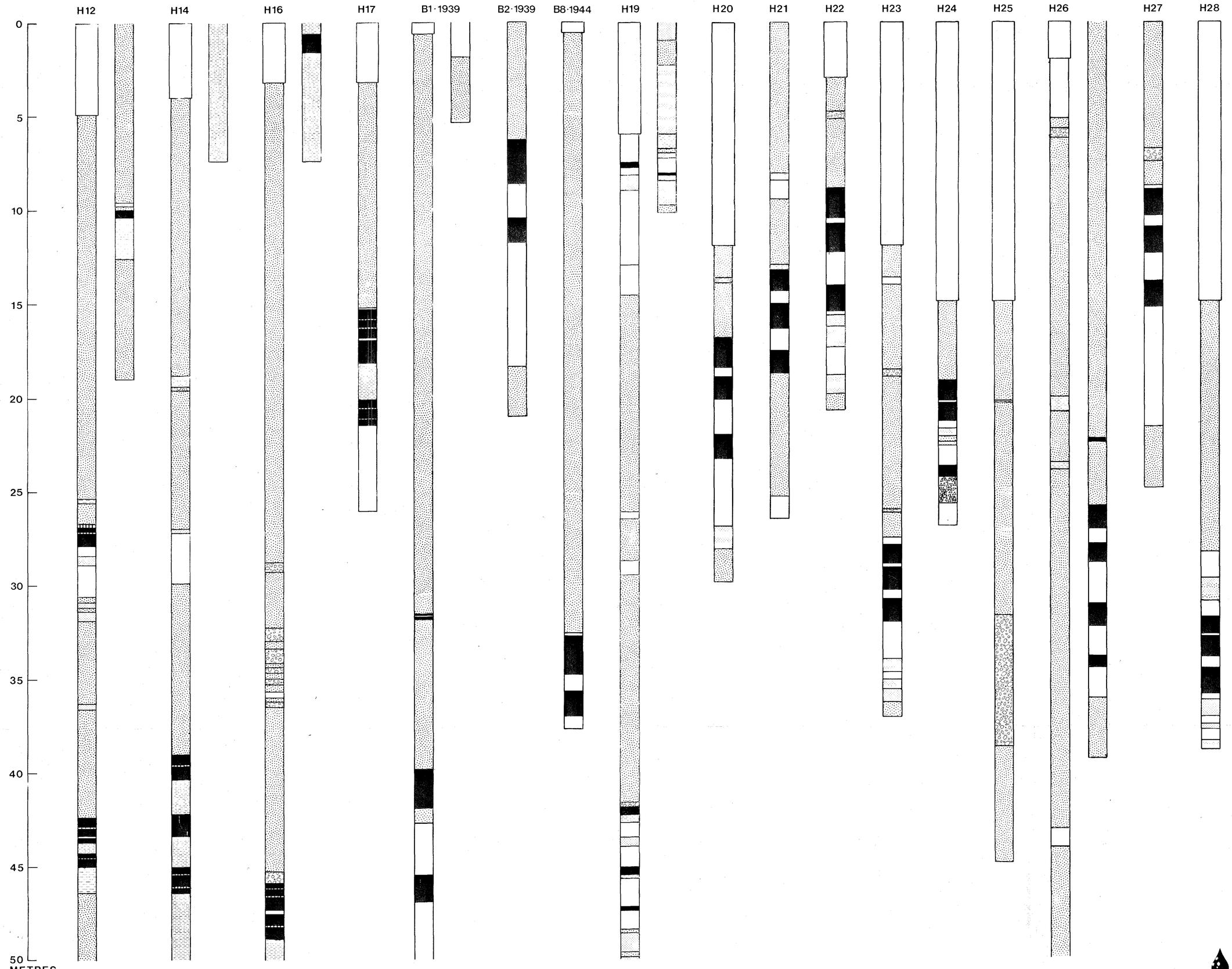
PROJECT/E.L.: RIG/METHOD: TOTAL DEPTH:

HOLE NO.: H-19 CORE SIZE: DRILLER/ASSISTANT:

LOCATION: COMMENCED: CORE LOGGED:

COLLAR ELEVATION: FINISHED: GEOLOGIST:

| METRES DRILLED | % RECOVERY | LITHOLOGY | ROCK DESCRIPTION | REMARKS |
|---|---|---|---|---|
| 49.9-51.0 | 100 | Siltstone | Grey/brown, banded; current bedded. | |
| 51.0-52.3 | 100 | Sandstone | Lithic, medium grained, grey with a large (350mm) carbonate concretion | |
| | | | and an 80mm mudstone clast | |
| 52.3-58.05 | 100 | Slst./Mdst. | Interbeeded, grey/brown, variably banded, siltstone and mudstone | |
| 58.05-56.65 | 100 | Mudstone | Carbonaceous, minor silty interbeds | |
| 56.65-56.91 | 100 | Sandstone | Lithic, medium grained, grey, cjoked with carbonaceous mudstone | |
| | | | laminea, minor coaly laminae and mudstone pellets. | |
| 56.91-57.20 | 100 | Siltstone | Grey, muddy | |
| 57.20-57.80 | 100 | Mudstone | Grey | |
| 57.80-57.92 | 100 | Mudstone | Carbonaceous | |
| 57.92-57.99 | 100 | Coal | Dull (? cindered, approx 15% bright bands | |
| 57.99-58.30 | 100 | Mudstone | Dark brown, grading to carbonaceous, fissile | |
| 58.30-59.60 | 100 | Slst. Sandst. | Interbedded siltstone and finw grained lithic sandstone | |
| 59.60-60.00 | 100 | Sandstone | Lithic, fine grained minor siltstone interbeds. | |
| | | | | |
| | | | E.O.H. 60.00m. | |
| | | | | |




554041

5 cm

001

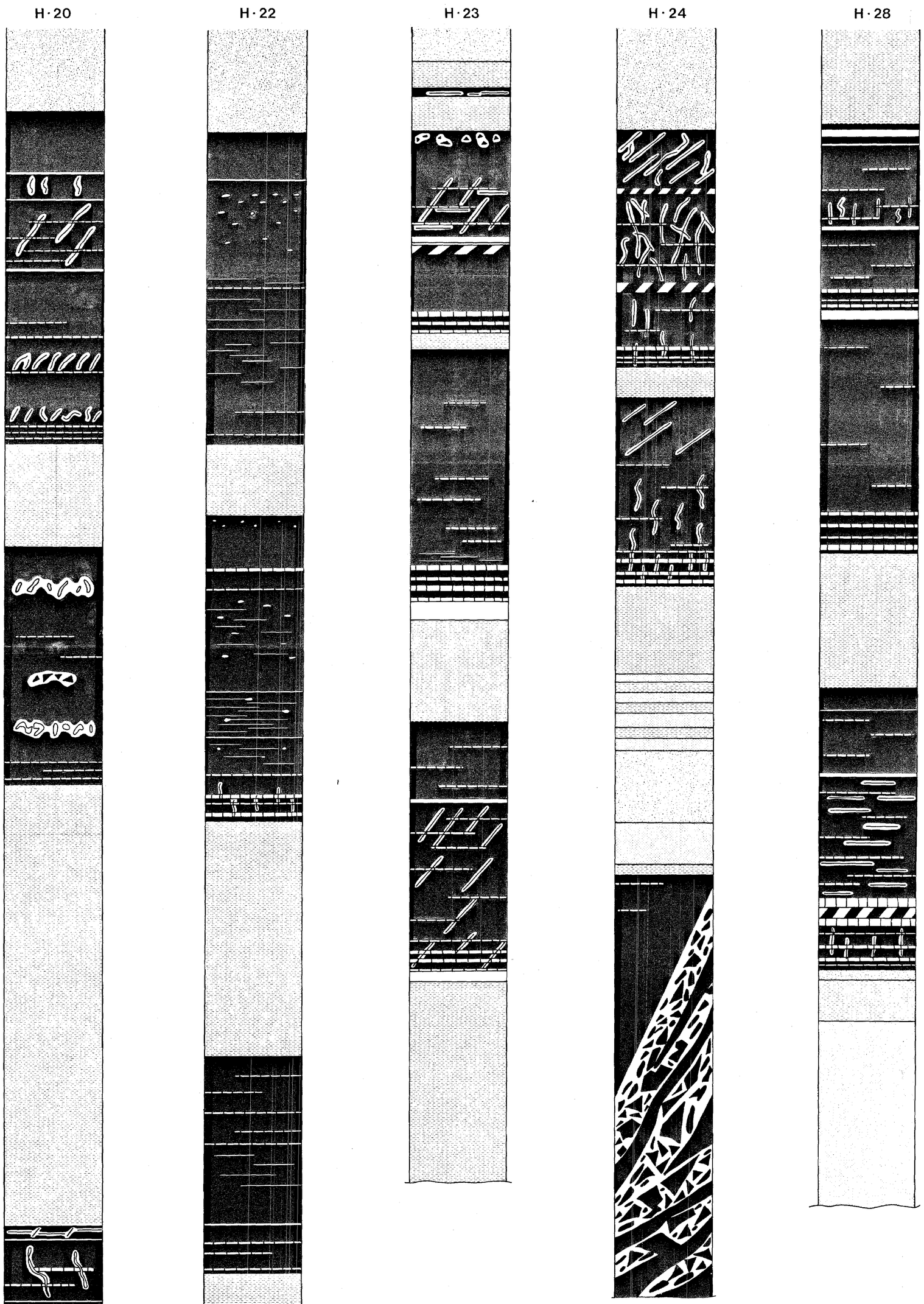
PETRECON AUSTRALIA PTY LTD

TASMANIA BASIN
(CAPRICORN MINING)

82/6

E.L. 27/79
LANGLOH EXPLORATION DRILLING
GRAPHIC LOGS

COMPILED K.M.
DRAWN J.P.
DATE 9·9·82
SCALE 1:100
FIGURE 2




LEGEND

- GREY MUDSTONE
- BROWN SHALE/MUDSTONE
- CARBONACEOUS MUDSTONE
- LITHIC SANDSTONE
- SILTSTONE
- HEAVY DULL COAL
- DULL COAL WITH BRIGHT COAL BANDS
- IRREGULAR CARBONATE VEINING
- CARBONATE INFILLING JOINTS
- BROKEN, INCOMPLETE COAL

554042

5 cm

002

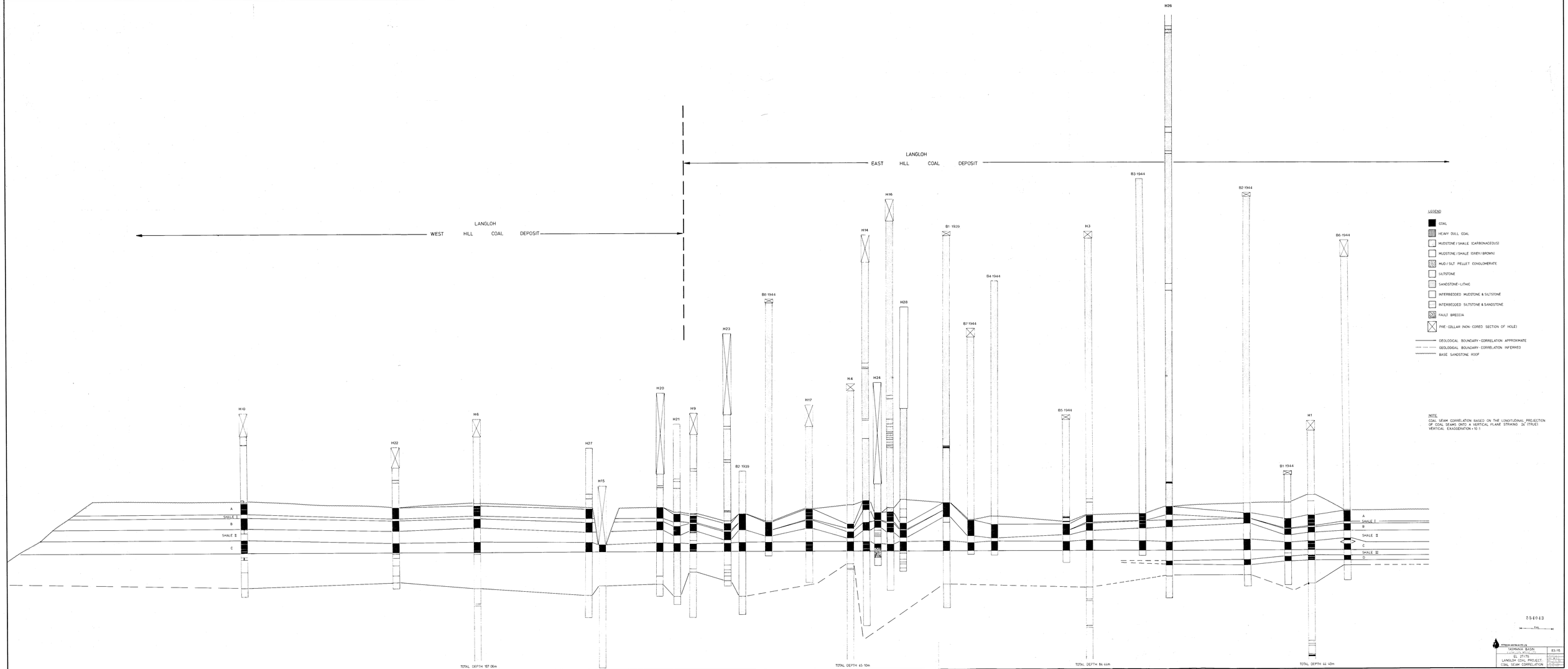
**PETRECON AUSTRALIA PTY LTD**

TASMANIA BASIN
(CAPRICORN MINING)

LANGLOH COAL SECTIONS
JAN-FEB '83 DRILLING
GRAPHIC LOGS

83/2

| | |
|---|---|
| COMPILED: | T.G.S. |
| DRAWN: | M.R.D |
| DATE: | 21-4-'83 |
| SCALE: | 1:1 1:10 |
| FIGURE: | 3 |


LANGLOH
WEST HILL COAL DEPOSIT
LANGLOH
EAST HILL COAL DEPOSIT
H10
H22
H6
H27
H15
H20
H21
H9
H23
B2 1939
B8 1944
H17
H4
H14
H24
H16
H28
B1 1939
B7 1944
B4 1944
B5 1944
H3
H26
B3 1944
B2 1944
B6 1944
H1
B1 1944
A
SHALE I
B
SHALE II
C
SHALE III
D
TOTAL DEPTH 157.06m
TOTAL DEPTH 45.10m
TOTAL DEPTH 84.44m
TOTAL DEPTH 44.40m
LEGEND
COAL
HEAVY DULL COAL
MUDSTONE / SHALE (CARBONACEOUS)
MUDSTONE / SHALE (GREY / BROWN)
MUD / SLT PELLET CONGLOMERATE
SILTSTONE
SANDSTONE - LITHIC
INTERBEDDED MUDSTONE & SILTSTONE
INTERBEDDED SILTSTONE & SANDSTONE
FAULT BRECCIA
PRE-COLLAR (NON-CORED SECTION OF HOLE)
GEOLOGICAL BOUNDARY - CORRELATION APPROXIMATE
GEOLOGICAL BOUNDARY - CORRELATION INFERRED
BASE SANDSTONE ROOF
NOTE
COAL SEAM CORRELATION BASED ON THE LONGITUDINAL PROJECTION OF COAL SEAMS ONTO A VERTICAL PLANE STRIKING 20° (TRUE)
VERTICAL EXAGGERATION = 10 : 1
5540A3
Kms
TASMANIA BASIN
83/15
EL 27/79
LANGLOH COAL PROJECT
COAL SEAM CORRELATION

003



H-20 Box 2 16.62-21.00 mts.



H-20 Box 3 21.00-25.50 mts.




H-22 Box 2 7.60-12.09 mts.




H-22 Box 3 12.09-17.60 mts.




H-23 Box 4 25.30-29.76 mts




H-23 Box 5 29.76-34.09 mts.




H-24 Box 1 14.88-19.38 mts.



H-24 Box 2 19.38-23.66 mts.




H-28 Box 4 28.06-32.55 mts.




H-28 Box 5 32.55-36.83 mts.

# APPENDIX 5

# ANALYTICAL DATA

554050

LANGLOH DRILLING JAN.-FEB. 1983

CORE LENGTH OF ASSAY SAMPLES SUBMITTED TO S.G.S.

| HOLE | PLY NO. | THICKNESS |
|---|---|---|
| | (refer report No.SL 2346) | |
| H-20 | 1 | 85 |
| | 2 | 76 |
| | 3 | 60 |
| | 4 | 55 |
| | 5 | 58 |
| | 6 | 64 |
| H-22 | 7 | 76 |
| | 8 | 75 |
| | 9 | 72 |
| | 10 | 75 |
| | 11 | 45 |
| | 12 | 60 |
| H-23 | 13 | 98 |
| | 14 | 08 |
| | 15 | 54 |
| | 16 | 68 |
| | 17 | 60 |
| | 18 | 60 |
| H-24 | 19 | 115 |
| | 20 | 15 |
| | 21 | 91 |
| H-28 | 22 | 90 |
| | 23 | 05 |
| | 24 | 113 |
| | 25 | 136 |

**SGS Australia Pty. Ltd.**
(Incorporated in N.S.W.)

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Telex 22395
NATA Reg. No. 1062.



PETRECON AUSTRALIA PTY LTD
192 MACQUARIE STREET
HOBART 7000 TASMANIA

ATTN : MR. K. MORRISON

REPORT NO SL 2346 CLIENT REF. NO 21/4/83 TLX 213

DATE SAMPLES IN 28/4/83 DATE REPORT OUT 31/5/83

REPORT TITLE: ANALYSIS OF HOLES H-20, H-22, H-23, H-24, H-28

The tests contained in this report have been carried out in accordance with the Australian Standards or other NATA approved methods listed below:-

| | |
|---|---|
| AS 1038 Pt. 1 | Total Moisture |
| AS 1038 Pt. 3 | Proximate Analysis |
| AS 1038 Pt. 5 | Specific Energy |
| AS 1038 Pt. 6 | Ultimate Analysis |
| AS 1038 Pt. 8 | Chlorine |
| AS 1038 Pt.11 | Forms of Sulphur |
| AS 1038 Pt.12.1 | Crucible Swelling Number |
| AS 1038 Pt.12.2 | Gray King Coke Type |
| AS 1038 Pt.14.1 | Ash Analysis |
| AS 1038 Pt.15 | Fusibility of Ash |
| AS 1038 Pt.20 | Hardgrove Grindability Index |
| AS 1038 Pt.21 | Relative Density |
| AS 1661 | Float/Sink Testing |
| AS 1676 | Sampling |
| AS 2137 | Gieseler Plastometer (Discontinuous stirring method) |
| AS 2486 | Reflectance of Vitrinite |
| AS 2515 | Maceral Analysis |
| ISO 349 | Audibert Arnu Dilatometer |
| ISO 1018 | Moisture Holding Capacity |
| BS 1016 Pt.17 | Size Analysis |
| LECO Method | Total Sulphur |



Member of the SGS Group (Société Générale de Surveillance)

**SGS Australia Pty. Ltd.**

REPORT No: SL 2346



| Analysis \ Sample Ref. | H-20 1 | H-20 2 | H-20 3 | H-20 4 | H-20 5 | H-20 6 |
|---|---|---|---|---|---|---|
| Total Moisture % | | | | | | |
| Moisture % | 5.7 | 4.2 | 3.8 | 3.0 | 3.6 | 3.6 |
| Ash % | 36.3 | 26.6 | 24.3 | 17.6 | 22.5 | 24.1 |
| Volatile Matter % | 17.4 | 20.0 | 19.9 | 24.3 | 22.5 | 21.6 |
| Fixed Carbon % | 40.6 | 49.2 | 52.0 | 55.1 | 51.4 | 50.7 |
| Crucible Swelling No. | | | | | | |
| Total Sulphur % | | | | | | |
| Specific Energy Mj/kg | | | | | | |
| Relative density | 1.62 | 1.53 | 1.52 | 1.44 | 1.49 | 1.50 |
| Mass as received(g) | 2047.2 | 1614.8 | 1283.0 | 1184.2 | 1222.0 | 1316.0 |

| Analysis \ Sample Ref. | H-22 7 | H-22 8 | H-22 9 | H-22 10 | H-22 11 | H-22 12 |
|---|---|---|---|---|---|---|
| Total Moisture % | | | | | | |
| Moisture % | 5.7 | 5.4 | 5.0 | 4.9 | 4.7 | 4.6 |
| Ash % | 28.8 | 24.0 | 20.0 | 14.4 | 13.4 | 21.9 |
| Volatile Matter % | 21.0 | 22.8 | 23.9 | 28.5 | 29.3 | 26.8 |
| Fixed Carbon % | 44.5 | 47.8 | 51.1 | 52.2 | 52.6 | 46.7 |
| Crucible Swelling No. | | | | | | |
| Total Sulphur % | | | | | | |
| Specific Energy Mj/kg | | | | | | |
| Relative density | 1.56 | 1.53 | 1.53 | 1.44 | 1.41 | 1.59 |
| Mass as received(g) | 1679.3 | 1677.5 | 1541.1 | 1449.2 | 907.3 | 1301.6 |

BASIS RESULTS REPORTED ON AIR DRIED

COLIN MEADS
MANAGER - LABORATORIES

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# SGS Australia Pty. Ltd.

REPORT No: SL 2346



| Analysis \ Sample Ref. | H-23 13 | H-23 14 | H-23 15 | H-23 16 | H-23 17 | H-23 18 |
|---|---|---|---|---|---|---|
| Total Moisture % | | | | | | |
| Moisture % | 4.2 | - | 3.3 | 2.7 | 2.6 | 3.0 |
| Ash % | 32.5 | 82.2 | 26.0 | 17.4 | 14.2 | 22.4 |
| Volatile Matter % | 16.8 | - | 17.4 | 19.8 | 19.3 | 19.1 |
| Fixed Carbon % | 46.5 | - | 53.3 | 60.1 | 63.9 | 55.5 |
| Crucible Swelling No. | | | | | | |
| Total Sulphur % | | | | | | |
| Specific Energy Mj/kg | | | | | | |
| Relative density | 1.60 | 2.39 | 1.55 | 1.47 | 1.52 | 1.55 |
| Mass as received(g) | 2433.6 | 222.1 | 1334.1 | 1564.8 | 1292.2 | 1437.9 |

| Analysis \ Sample Ref. | H-24 19 | H-24 20 | H-24 21 | | | |
|---|---|---|---|---|---|---|
| Total Moisture % | | | | | | |
| Moisture % | 3.0 | - | 2.6 | | | |
| Ash % | 41.1 | 89.5 | 25.4 | | | |
| Volatile Matter % | 9.8 | - | 9.3 | | | |
| Fixed Carbon % | 46.1 | - | 62.7 | | | |
| Crucible Swelling No. | | | | | | |
| Total Sulphur % | | | | | | |
| Specific Energy Mj/kg | | | | | | |
| Relative density | 1.93 | 2.56 | 1.68 | | | |
| Mass as received(g) | 2330.9 | 342.8 | 2009.6 | | | |

BASIS RESULTS REPORTED ON AIR DRIED

COLIN MEADS
MANAGER - LABORATORIES

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# SGS Australia Pty. Ltd.

REPORT No: SL 2346



| Analysis \ Sample Ref. | H-28 22 | H-28 23 | H-28 24 | H-28 25 | | |
|---|---|---|---|---|---|---|
| Total Moisture % | | | | | | |
| Moisture % | 3.8 | - | 2.6 | 2.7 | | |
| Ash % | 28.6 | 76.5 | 19.6 | 19.2 | | |
| Volatile Matter % | 18.8 | - | 20.4 | 20.6 | | |
| Fixed Carbon % | 48.8 | - | 57.4 | 57.5 | | |
| Crucible Swelling No. | | | | | | |
| Total Sulphur % | | | | | | |
| Specific Energy Mj/kg | | | | | | |
| Relative density | 1.58 | 2.21 | 1.51 | 1.50 | | |
| Mass as received(g) | 2240.5 | 160.4 | 2691.3 | 3191.8 | | |

| Analysis \ Sample Ref. | | | | | | |
|---|---|---|---|---|---|---|
| Total Moisture % | | | | | | |
| Moisture % | | | | | | |
| Ash % | | | | | | |
| Volatile Matter % | | | | | | |
| Fixed Carbon % | | | | | | |
| Crucible Swelling No. | | | | | | |
| Total Sulphur % | | | | | | |
| Specific Energy Mj/kg | | | | | | |
| | | | | | | |
| | | | | | | |

BASIS RESULTS REPORTED ON AIR DRIED

COLIN MEADS
MANAGER - LABORATORIES

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# SGS Australia Pty. Ltd.

REPORT No: SL 2346



| Analysis / Sample Ref. | | H-20 S COMP * | 1 + 2 A ** | H-20 S COMP * | 3 + 4 B ** | H-20 S COMP * | 5 + 6 C ** |
|---|---|---|---|---|---|---|---|
| Total Moisture | % | | | | | | |
| Moisture | % | 5.4 | - | 3.7 | - | 3.9 | - |
| Ash | % | 30.3 | - | 20.4 | - | 22.2 | - |
| Volatile Matter | % | 17.8 | 27.7 | 21.6 | 28.5 | 21.5 | 29.1 |
| Fixed Carbon | % | 46.5 | - | 54.3 | - | 52.4 | - |
| Crucible Swelling No. | | | | | | | |
| Total Sulphur | % | 0.25 | | 0.36 | | 0.36 | |
| Specific Energy | Mj/kg | 20.50 | 31.88 | 24.32 | 32.04 | 24.08 | 32.58 |
| | | | | | | | |
| | | | | | | | |

| Analysis / Sample Ref. | | * H-22 S COMP | ** 7 + 8 D | * H-22 S COMP | ** 9 + 10 E | * H-22 S COMP | ** 11 + 12 F |
|---|---|---|---|---|---|---|---|
| Total Moisture | % | | | | | | |
| Moisture | % | 5.8 | - | 5.2 | - | 5.0 | - |
| Ash | % | 26.3 | - | 17.4 | - | 18.3 | - |
| Volatile Matter | % | 20.7 | 30.5 | 24.8 | 32.0 | 26.3 | 34.3 |
| Fixed Carbon | % | 47.2 | - | 52.6 | - | 50.4 | - |
| Crucible Swelling No. | | | | | | | |
| Total Sulphur | % | 0.21 | | 0.33 | | 0.33 | |
| Specific Energy | Mj/kg | 20.94 | 30.84 | 24.44 | 31.58 | 24.24 | 31.60 |
| | | | | | | | |
| | | | | | | | |

BASIS RESULTS REPORTED ON

* AIR DRIED

** DRY ASH FREE

COLIN MEADS
MANAGER - LABORATORIES

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# SGS Australia Pty. Ltd.

REPORT No: SL 2346



| Analysis \ Sample Ref. | | H-23 S COMP * | 13 - 16 G ** | H-23 S COMP * | 17 + 18 H ** | H-23 S COMP * | 19 - 21 I ** |
|---|---|---|---|---|---|---|---|
| Total Moisture | % | | | | | | |
| Moisture | % | 3.7 | - | 3.0 | - | 3.8 | - |
| Ash | % | 28.9 | - | 18.4 | - | 38.8 | - |
| Volatile Matter | % | 17.4 | 25.8 | 18.7 | 23.8 | 8.7 | 15.2 |
| Fixed Carbon | % | 50.0 | - | 59.9 | - | 48.7 | - |
| Crucible Swelling No. | | | | | | | |
| Total Sulphur | % | 0.28 | | 0.38 | | 0.33 | |
| Specific Energy | Mj/kg | 22.02 | 32.68 | 26.38 | 33.56 | 17.96 | 31.28 |
| | | | | | | | |
| | | | | | | | |

| Analysis \ Sample Ref. | | H-28 S COMP * | 22 - 24 J ** | H-28 S COMP * | 25 K ** | | |
|---|---|---|---|---|---|---|---|
| Total Moisture | % | | | | | | |
| Moisture | % | 3.5 | - | 2.8 | - | | |
| Ash | % | 24.9 | - | - | - | | |
| Volatile Matter | % | 18.9 | 26.4 | - | - | | |
| Fixed Carbon | % | 52.7 | - | - | - | | |
| Crucible Swelling No. | | | | | | | |
| Total Sulphur | % | 0.36 | | 0.36 | | | |
| Specific Energy | Mj/kg | 23.58 | 32.94 | 26.42 | 33.48 | | |
| | | | | | | | |
| | | | | | | | |

BASIS RESULTS REPORTED ON

* AIR DRIED

** DRY ASH FREE

COLIN MEADS
MANAGER - LABORATORIES

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H 14

| ASH% | VOL% | S.E. |
|---|---|---|
| 25·3 | 17·1 | 23·4 |

H 16

| ASH% | VOL% | S.E. |
|---|---|---|
| 25·4 | 18·3 | 23·2 |

H 20

| ASH% | VOL% | S.E. |
|---|---|---|
| 26·1 | 20·6 | 22·8 |

H 17

| ASH% | VOL% | S.E. |
|---|---|---|
| 31·4 | 13·4 | 22·0 |

H 24 INCOMPLETE

H 28

| ASH% | VOL% | S.E. |
|---|---|---|
| 23·1 | 19·6 | 24·7 |

H 09

| ASH% | VOL% | S.E. |
|---|---|---|
| 31·4 | 11·1 | 21·5 |

H 23

| ASH% | VOL% | S.E. |
|---|---|---|
| 27·1 | 17·2 | 22·0 |

EAST HILL

H 22

| ASH% | VOL% | S.E. |
|---|---|---|
| 21·0 | 25·1 | 23·1 |

H 10

| ASH% | VOL% | S.E. |
|---|---|---|
| 20·2 | 24·0 | 23·8 |

WEST HILL

OLD UNDERGROUND MINED AREA

15cm ISOPACH FROM SHALE 1

H 21 E 198 970 N 6156 68 RL 150·90

H 27 E 206·636 N 6277·51 RL 141·73

H 19 E 177730 N 6073·26 RL 138·80

H 25 E 377592 N 6914·00 RL 195·38

H 08 E 4214 N 6833 RL 185·48

1 (1939)

1 (1944)

2 (1944)

3 (1944)

5 (1944)

6 (1944)

7 (1944)

2 (1956)

3 (1956)

LEGEND

RAW ASH %

- < 20
- 20 - 25
- > 25

ASH = % ASH, RAW COAL AIR DRIED.
VOL. = % VOLATILE MATTER, RAW COAL AIR DRIED
S.E. = SPECIFIC ENERGY (MJ/kg), RAW COAL AIR DRIED

554057

5 cm

PETRECON AUSTRALIA PTY LTD

APPENDIX-C

TASMANIA BASIN
(CAPRICORN MINING LTD.)

83/11

E.L. 27/79
LANGLOH COAL PROJECT
TOTAL COAL (SEAMS A,B,C) GRADE MAP 004

| | |
|---|---|
| COMPILED: | K.C.M. |
| DRAWN: | M.R.D. |
| DATE: | 24-5-83 |
| SCALE: | 1:2 500 |
| FIGURE: | |

H 14
ASH% VOL% S.E.
29·8 16·0 21·0

H 16
ASH% VOL% S.E.
33·0 15·9 19·8

H 20
ASH% VOL% S.E.
31·7 18·6 20·5

H 17
ASH% VOL% S.E.
34·9 10·9 20·9

H 24
ASH% VOL% S.E.
41·1 9·8 19·4

H 28
ASH% VOL% S.E.
25·5 19·0 23·6

H 09
ASH% VOL% S.E.
38·2 9·3 18·4

H 23
ASH% VOL% S.E.
31·5 16·2 20·1

H 22
ASH% VOL% S.E.
26·4 21·9 20·9

WEST HILL

H 10
ASH% VOL% S.E.
25·5 21·3 21·7

EAST HILL

H 25
E 3775·82
N 0514·00
R.L 195·38

H 08
E 4214
N 0833
R.L 185·48

H21
E 1983·76
N 0433·68
R.L 150·90

H19
E 1777·30
N 0073·26
R.L 138·80

H 27
E 2063·36
N 0277·51
R.L 121·73

H 33
E 1778
N 0451·42
R.L 127·01

H 26
E 2738·68
N 0567·80
R.L 192·30

1 (1939)
2 (1956)
3 (1956)
1 (1944)
2 (1944)
3 (1944)
4 (1944)
5 (1944)
6 (1944)
7 (1944)
8 (1944)

OLD UNDERGROUND MINED AREA

15cm ISOPACH FROM SHALE 1

LEGEND

RAW ASH %
- < 20
- 20 - 25
- > 25

ASH = %ASH, RAW COAL AIR DRIED
VOL = %VOLATILE MATTER, RAW COAL AIR DRIED
S.E. = SPECIFIC ENERGY (MJ/kg), RAW COAL AIR DRIED.

554058

5 cm

PETRECON AUSTRALIA PTY LTD

APPENDIX 2

TASMANIA BASIN
(CAPRICORN MINING LTD.)

83/12

E.L. 27/79
LANGLOH COAL PROJECT
SEAM 'A' GRADE MAP

005

| | |
|---|---|
| COMPILED | K.C.M. |
| DRAWN | M.R.D. |
| DATE | 24-5-83 |
| SCALE | 1:2500 |
| FIGURE | |

H-14
ASH% VOL% S.E.
19·9 17·2 25·6

H-16
ASH% VOL% S.E.
21·5 19·2 25·6

H-20
ASH% VOL% S.E.
21·1 22·0 24·3

H-17
ASH% VOL% S.E.
34·9 10·9 20·5

H-24
ASH% VOL% S.E.
25·4 9·3 19·4

H-28
ASH% VOL% S.E.
25·5 19·0 23·6

H-09
ASH% VOL% S.E.
38·2 9·3 18·4

H-23
ASH% VOL% S.E.
21·5 16·2 20·1

H-22
ASH% VOL% S.E.
17·2 26·2 24·4

H-10
ASH% VOL% S.E.
14·1 24·5 25·9

WEST HILL

EAST HILL

OLD UNDERGROUND MINED AREA

15cm ISOPACH FROM SHALE 1

H-21 E 1985·74 N 0450·36 RL 150·90

H-27 E 2046·36 N 0277·61 RL 141·79

H-19 E 1779·30 N 0073·26 R.L 138·80

H-06 E 2 378·91 N 0 283·91 RL 141·91

H-26 E 273868 N 0907·30 R L 152·30

H-12 E 3 379·· N 3 347··· RL 216···

H-25 E 3775·92 N 0914·00 RL 195·38

H-08 E 4 214 N 0 833 R.L 185·48

6 (1944)

2 (1944)

1 (1944)

3 (1944)

1 (1939)

7 (1944)

4 (1944)

5 (1944)

8 (1944)

2 (1956)

3 (1956)

LEGEND

RAW ASH %

- <20
- 20 - 25
- >25

ASH = % ASH, RAW COAL AIR DRIED
VOL = % VOLATILE MATTER, RAW COAL AIR DRIED
S.E. = SPECIFIC ENERGY (MJ/kg), RAW COAL AIR DRIED

5 cm

PETRECON AUSTRALIA PTY LTD

APPENDIX 6

TASMANIA BASIN
(CAPRICORN MINING LTD.)

83/13

E.L. 27/79
LANGLOH COAL PROJECT
SEAM 'B' GRADE MAP

006

| | |
|---|---|
| COMPILED | K.C.M. |
| DRAWN | M.R.D. |
| DATE | 24-5-'83 |
| SCALE | 1:2500 |
| FIGURE | |

H-14
ASH% VOL% S.E.
25·3 18·2 23·7

H-16
ASH% VOL% S.E.
18·4 21·1 25·7

H-20
ASH% VOL% S.E.
23·3 22·0 24·1

H-17
ASH% VOL% S.E.
23·3 18·2 24·7

H-24
NO SEAM 'C'

OLD UNDERGROUND MINED AREA

15cm ISOPACH FROM SHALE 1

H-28
ASH% VOL% S.E.
19·2 20·6 26·4

H-09
ASH% VOL% S.E.
22·5 13·7 26·3

EAST HILL

H-23
ASH% VOL% S.E.
18·3 19·2 26·4

H-22
ASH% VOL% S.E.
18·5 27·8 24·2

WEST HILL

H-10
ASH% VOL% S.E.
20·8 26·0 23·8

LEGEND

RAW ASH %

- < 20
- 20 - 25
- > 25

ASH = % ASH, RAW COAL, AIR DRIED.
VOL. = % VOLATILE MATTER, RAW COAL AIR DRIED.
S.E. = SPECIFIC ENERGY (MJ/kg), RAW COAL AIR DRIED

554060

5 cm

PETRECON AUSTRALIA PTY LTD

APPENDIX 2

TASMANIA BASIN
(CAPRICORN MINING LTD.)

83/14

E.L. 27/79
LANGLOH COAL PROJECT
SEAM 'C' GRADE MAP

007

| | |
|---|---|
| COMPILED | K.C.M. |
| DRAWN | M.R.D. |
| DATE | 24-5-83 |
| SCALE | 1:2500 |
| FIGURE | |

? COAL ERODED

OLD UNDERGROUND MINED AREA

EAST HILL

WEST HILL

H 25
E 3775·82
N 0914·00
RL 195·38

H 08
E 4214
N 0813
RL 185·48

H21
E 1989·74
N 0450·96
RL 150·90

H 27
E 2046·36
N 0277·81
RL 141·73

H19
E 1777·30
N 0073·26
RL 139·80

H 23
E 3401·72
N 9812·46
RL 216·36

6 (1944)

2 (1944)

1 (1944)

1 (1939)

7 (1944)

4 (1944)

5 (1944)

2 (1956)

3 (1956)

LEGEND

- 165 — TOP COAL LEVEL, 5 METRE CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM A
- BASALT PLUG (? TERTIARY AGE)

55406 1

5 cm

PETRECON AUSTRALIA PTY LTD

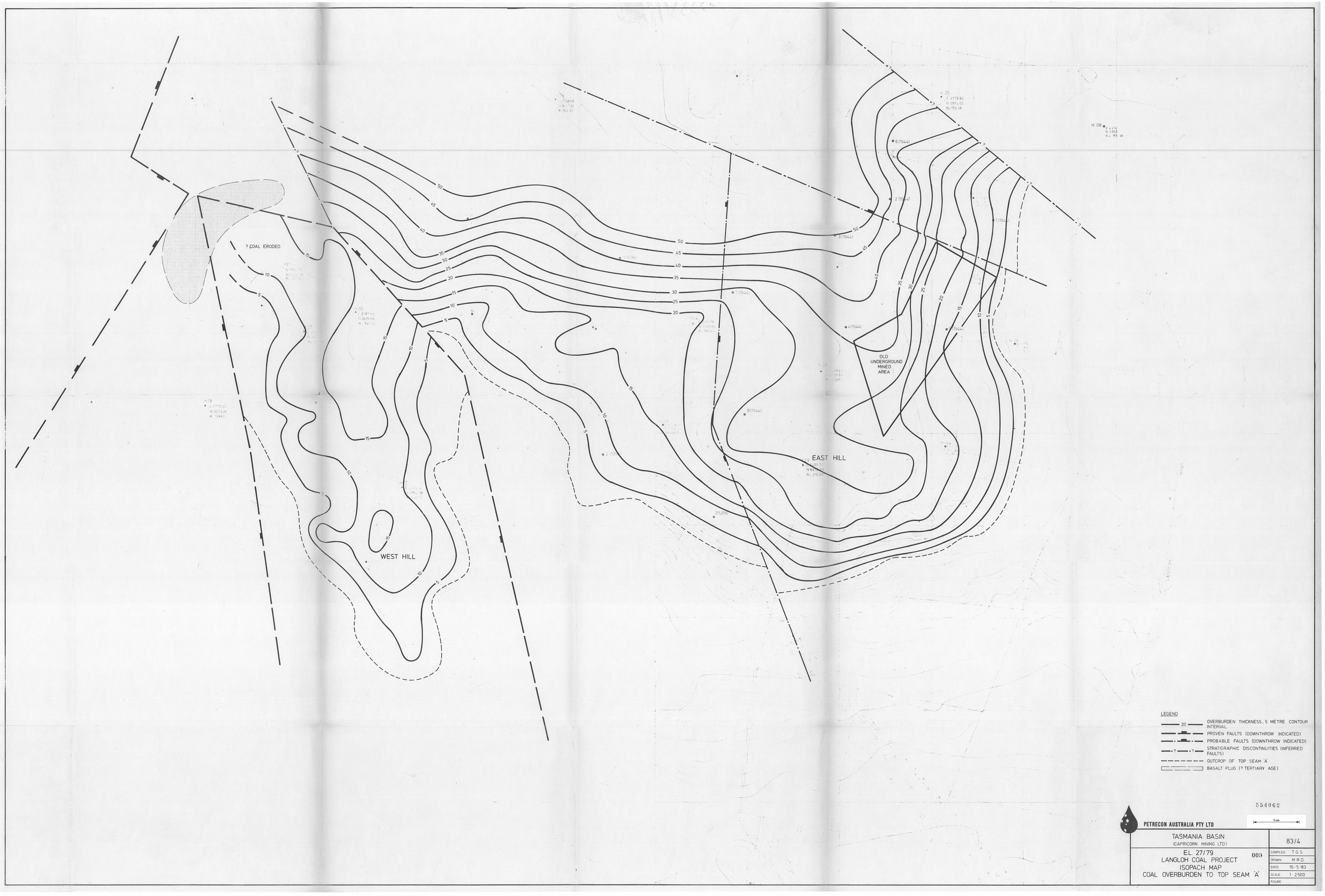
TASAMANIA BASIN
(CAPRICORN MINING LTD.)

EL 27/79
LANGLOH COAL PROJECT
TOP COAL STRUCTURE MAP

008

83/3

| | |
|---|---|
| COMPILED | T.G.S. |
| DRAWN | M.R.D. |
| DATE | 16·5·83 |
| SCALE | 1:2500 |
| FIGURE | |




LEGEND

- 20 — OVERBURDEN THICKNESS, 5 METRE CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- ?—?— STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

554062

5 cm

**PETRECON AUSTRALIA PTY LTD**

TASMANIA BASIN
(CAPRICORN MINING LTD.)

83/4

EL. 27/79
LANGLOH COAL PROJECT
ISOPACH MAP
COAL OVERBURDEN TO TOP SEAM 'A'

009

| | |
|---|---|
| COMPILED | T.G.S. |
| DRAWN | M.R.D. |
| DATE | 16·5·83 |
| SCALE | 1 : 2500 |
| FIGURE | |

? COAL ERODED

WEST HILL

EAST HILL

OLD UNDERGROUND MINED AREA

CROSS SECTION ON DRG 83/15

H 25
E 3775·82
N 0914·00
RL 195·38

H 08
E 4·24
N 0·83
RL 185·48

H 27
E 204·36
N 0227·61
RL 141·73

H 20
E 2187·66
N 0029·69
RL 161·22

H19
E 1777·30
N 0073·26
RL 138·80

H 22
E 2372·30
N 9852·90
RL 139·72

H 23
E 3401·72
N 9812·69
RL 210·38

H 28
E 3449·15
N 0169·50
RL 210·11

H 24
E 3101·98
N 0269·05
RL 184·34

H 32
E 1291·71
N 9977·45
RL 225·71

H 01
E 3136·14
N 0141·31
RL 169·33

H 16
E 3·24
N 0·44
RL 145·11

H 04
E 1·45·52
N 1·45·23
RL 193·33

6 (1944)
2 (1944)
1 (1944)
3 (1944)
7 (1944)
4 (1944)
5 (1944)
8 (1944)
1 (1939)
2 (1956)
3 (1956)

3·6
3·9
4·2
4·5
4·8
3·3
3·0

LEGEND

- 3·6 — TOTAL COAL THICKNESS (SEAMS A+B+C±D), 0·3 METRES CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- ·?·?· STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

554063

5 cm

PETRECON AUSTRALIA PTY LTD

| | |
|---|---|
| TASMANIA BASIN (CAPRICORN MINING LTD.) | 83/5 |
| EL. 27/79 LANGLOH COAL PROJECT TOTAL COAL ISOPACH MAP 010 | COMPILED: T.G.S. |
| | DRAWN: M.R.D. |
| | DATE: 16·5·83 |
| | SCALE: 1:2500 |
| | FIGURE: |

? COAL ERODED

WEST HILL

EAST HILL
H 23
E 3401·72
N 5912·69
RL 210·36

OLD UNDERGROUND MINED AREA

1·50
1·20
0·90
0·60

6 (1944)
2 (1943)
1 (1944)
3 (1944)
1 (1939)
7 (1944)
4 (1944)
5 (1944)
8 (1944)
2 (1956)
3 (1956)

H 25
E 3775·92
N 0974·00
RL 195·38

H 08
E 4214
N 0833
RL 165·48

H 20
E 2183·65
N 0329·65
RL 164·42

H 27
E 2046·36
N 0277·51
RL 171·73

H 19
E 1777·30
N 0073·26
RL 138·80

H 24
E 3101·18
N 0257·05
RL 180·14

H 28
E 3459·45
N 2156·21
RL 200·11

H 21
E 1987·74
N 0430·04
RL 150·90

H 22
E 3297·
N 97·
RL 227·71

H 09
E 3 308·71
N 0 307·
RL 170·93

H 26
E 1 374·
N 0 384·
RL 141·

H 04
E 1 720·
N 1 424·
RL 193·

H 18
E 1 374·
N 0 764·
RL 196·

H 06
E 2874·8
N 0677·36
RL 192·90

H 22
E 2372·6
N 1652·98
RL 139·72

LANGLOH ROAD

LEGEND

- 0·60 — SEAM 'A' THICKNESS, 0·30 METRE CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- ? — ? STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

554064

5 cm

PETRECON AUSTRALIA PTY LTD

TASMANIA BASIN
(CAPRICORN MINING LTD.)

83/6

EL 27/79 011
LANGLOH COAL PROJECT
SEAM 'A' ISOPACH MAP

| | |
|---|---|
| COMPILED: | T.G.S. |
| DRAWN: | M.R.D. |
| DATE: | 16-5-'83 |
| SCALE: | 1:2500 |
| FIGURE: | |

? COAL ERODED

H27
E 2046.36
N 0277.51
RL 141.73

H19
E 1777.30
N 0077.26
RL 139.80

H-06
E 2 174.81
N 0 193.17
RL 147.47

H-22
E 2372.26
N 0852.98
R 139.72

H-16
E 2728.68
N 0607.30
RL 192.30

H-12
E 3 278.71
N 0 970.45
RL 211.07

H 25
E 3775.82
N 0914.00
RL 195.38

H 08
E 4 214
N 0 833
R L 185.48

H-01
E 3 386.76
N 0 744.19
RL 174.59

H-03
E 3 287.44
N 0 827.53
RL 179.87

H-18
E 3 174.81
N 0 764.91

H24
E 3101.58
N 0 297.05
RL 180.34

H 28
E 3 149.45
N 0 159.05
RL 200.11

H-09
E 3 103.71
N 0 102.44
RL 194.23

H-04
E 3 179.52
N 0 193.36
RL 191.32

H 23
E 3 401.72
N 9 812.69
RL 216.35

1·20
1·50
0·90
1 (1939)
2 (1956)
3 (1956)
1 (1944)
2 (1944)
3 (1944)
4 (1944)
5 (1944)
6 (1944)
7 (1944)
8 (1944)
OLD UNDERGROUND MINED AREA
WEST HILL
EAST HILL
LANGLOH ROAD

LEGEND

- 0·90 — SEAM 'B' THICKNESS, 0·30 METRE CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS
- OUTCROP TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

554065

5 cm

PETRECON AUSTRALIA PTY LTD

| | |
|---|---|
| TASMANIA BASIN (CAPRICORN MINING LTD) | 83/7 |
| EL. 27/79 LANGLOH COAL PROJECT SEAM 'B' ISOPACH MAP 012 | COMPILED T.G.S. |
| | DRAWN M.R.D. |
| | DATE 16-5-83 |
| | SCALE 1:2500 |
| | FIGURE |

? COAL ERODED

WEST HILL

EAST HILL

OLD UNDERGROUND MINED AREA

1 (1939)

2 (1956)

1 (1944)

2 (1944)

3 (1944)

4 (1944)

5 (1944)

6 (1944)

7 (1944)

8 (1944)

1·20

1·50

1·80

0·60

0·70

0·65

LEGEND

- 1·20 — SEAM 'C' THICKNESS, 0·3 METRE CONTOUR INTERVAL
- 0·65 — SEAM 'D' THICKNESS, 0·05 METRE CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- ·?· STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

554066

5 cm

**PETRECON AUSTRALIA PTY LTD**

| | |
|---|---|
| TASMANIA BASIN (CAPRICORN MINING LTD) | 83/8 |
| EL. 27/79<br>LANGLOH COAL PROJECT 013<br>SEAMS 'C' & 'D' ISOPACH MAP | COMPILED: T.G.S.<br>DRAWN: M.R.D.<br>DATE: 16-5-83<br>SCALE: 1:2500<br>FIGURE: |

? COAL ERODED

WEST HILL

EAST HILL

OLD UNDERGROUND MINED AREA

LANGLOH

LEGEND

- 0.35 — SHALE I THICKNESS (BETWEEN SEAMS 'A' & 'B'), 0.05 METRE CONTOUR INTERVAL.
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED).
- ·?· STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

5 cm

PETRECON AUSTRALIA PTY LTD

| | |
|---|---|
| TASMANIA BASIN (CAPRICORN MINING LTD.) | 83/9 |
| E.L. 27/79 LANGLOH COAL PROJECT ISOPACH MAP SHALE I INTERBURDEN 014 | COMPILED: T.G.S. |
| | DRAWN: M.R.D. |
| | DATE: 16-5-'83 |
| | SCALE: 1:2500 |
| | FIGURE: |

? COAL ERODED

WEST HILL

OLD UNDERGROUND MINED AREA

EAST HILL

LEGEND

- 1·8 — SHALE II THICKNESS (BETWEEN SEAMS B & C), 0·3m CONTOUR INTERVAL
- 0·9 — SHALE III THICKNESS (BETWEEN SEAMS C & D), 0·3m CONTOUR INTERVAL
- PROVEN FAULTS (DOWNTHROW INDICATED)
- PROBABLE FAULTS (DOWNTHROW INDICATED)
- STRATIGRAPHIC DISCONTINUITIES (INFERRED FAULTS)
- OUTCROP OF TOP SEAM 'A'
- BASALT PLUG (? TERTIARY AGE)

554068

5 cm

PETRECON AUSTRALIA PTY LTD

TASMANIA BASIN
(CAPRICORN MINING LTD)

83/10

E.L. 27/79
LANGLOH COAL PROJECT
ISOPACH MAP
SHALES II & III INTERBURDEN

015

| | |
|---|---|
| COMPILED | T.G.S. |
| DRAWN | M.R.D. |
| DATE | 16-5-83 |
| SCALE | 1:2500 |
| FIGURE | |