

1 July 2015

### 2014/15 Drilling Program Final Report confirms significant hydrocarbon potential of the Arckaringa Basin

- **The Stuart Range Formation shows potential yields of up to 54 litres of oil per tonne**
- **The Boorthanna Formation shows potential yields of up to 70 litres of oil per tonne**
- **Potential discovery of a new hydrocarbon system within the Boorthanna Formation**
- **Next stage of development to reprocess existing seismic data and acquire new seismic to identify next drilling targets**

Linc Energy Ltd (SGX:TI6) (OTCQX: LNCGY) has recently received the laboratory results of its Arckaringa Basin 2014/15 drilling program and is pleased announce the program's successful completion.

Mr Craig Ricato, Linc Energy's CEO & Managing Director said "The laboratory test results from the 2014/15 drilling program are very encouraging. The additional information gathered on the Formations within the Arckaringa Basin has added significantly to our understanding of the petroleum systems within the basin and will inform our development plan for the asset. Both target Formations indicate significant potential hydrocarbon yields. As such, the Company will continue to explore areas where we expect to encounter the Formations at greater depths to achieve greater thermal maturity".

Mr Ricato went on to say "Linc Energy is committed to further developing the Company's understanding of the Arckaringa Basin and is focused on delivering the most cost effective development plan to ensure shareholder value is maximised. The Company recognises the need to attract strong strategic partners to the basin and is focused on delivering a commercial transaction that supports an accelerated exploration and development program. Based upon the results from the 2014/15 program, we remain very confident that the Arckaringa Basin contains significant hydrocarbon potential and we remain committed to its development".

A program summary and technical update on the analysis and interpretation completed on the Pata 1 (located in PEL121) and Eba 1 (located in PEL121) cuttings and rotary side wall cores (RSWC) is provided below.

#### Program Summary

The drilling program for 2014/15 was designed to assess the potential of the Arckaringa Basin for unconventional hydrocarbon production from the Permian and pre-Permian Formations. The results of the laboratory testing of recovered samples mark the successful completion of the 2014 and 2015 drilling program. The program achieved its goal of adding significant new information to the existing data collected by the Company on the basin. The program consisted of two wells, Pata 1 and Eba 1.

Total expenditure for this program is currently being reconciled and finalised. Once completed, total expenditure will be reported in the 2015 Annual Report.

The Pata 1 well targeted the Boorthanna Trough where the Stuart Range was interpreted to be of sufficient depth to be within the oil generation window, based on current seismic data. A thick section of organic rich shale was intersected in both the Stuart Range and Boorthanna Formations exhibiting potential for hydrocarbon generation if it can be found at greater depths (higher maturity) in the basin. Linc Energy will continue to review the current seismic data to define areas where the Stuart Range and Boorthanna Formation is at greater depth and has been exposed to higher heat flow. Additional seismic data will be required as previous programs have traditionally focused on delineating stratigraphic highs and conventional targets within the basin rather than the troughs.

The Eba 1 well targeted a thick package of pre-Permian sediments interpreted to be up to 2km thick and believed to be the source of the Maglia 1 oil show (previous drilling program). In this well, the intersected pre-Permian sediments contained lower Total Organic Carbon content than was expected however testing results indicated that they were mature enough to have produced hydrocarbons in the past. Drilling results also place the Formations at much greater depth than originally anticipated. The pre-Permian Formations will be remapped within the regional seismic model in an attempt to better understand the organic areas that could constitute potential source rocks for hydrocarbon generation.

Measurement	Pata 1		Eba 1		Comments
Total Depth	1828m		2959m		Pata 1 intersected the thickest section of Permian sediments ever drilled in the Arkaroola Basin. Eba 1 is the deepest well ever drilled in the Arkaroola.
Sample Type	Rotary Side Wall Core 2 Cuttings		Cuttings only		
Formation Target	Stuart Range Formation	Boorthanna Formation	Boorthanna Formation	Pre-Permian Formation*	
Total Organic Carbon (TOC)	Average 8.26% Maximum 11.6%	Average 6.15% Maximum 10.1%	Average 3.13% Maximum 4.03%	Average 0.63% Maximum 2.82%	A TOC greater than 2% is considered excellent when describing source rock generative potential – Figure 2
Hydrogen Indices (HI)	Average 288 Maximum 540	Average 344 Maximum 594	Average 160 Maximum 199	Average 4 Maximum 37	Prospective Source Rocks with a HI greater than 300 prone to oil generation A HI of 150 – 300 are considered Oil & Gas Prone
Kerogen	Predominantly (>80%) type 1 and 2 Kerogens	Predominantly (>80%) type 1 and 2 Kerogens	n/a	n/a	Type 1 and 2 Kerogens are prone to oil generation
Vitrinite Reflectance (Ro)	0.6 to 0.62	0.66	n/a	n/a	Within oil 'window' of 0.6 – 1.4% Peak oil generation occurs at approximately 0.65% – 1.00% (Figure 3)
TMAX (Celsius)	433 - 438	428 - 430	428 - 437	313 – 399	Oil window of 430 - 460

Measurement	Pata 1		Eba 1		Comments
Production Indices (PI)	Average 0.03 Maximum 0.04	Average 0.06 Maximum 0.08	Average 0.025 Maximum 0.03	Average 0.36 Maximum 0.43	The PI is indicative of the conversion of kerogen into free hydrocarbons. A PI of 0.08 – 0.5 is considered within the oil window.
Oil Saturation Index (mg HC / g) (S1 / TOC)	7 - 24	15 - 28	4	1 – 19	In order for a prospective Shale Resource to be classified as a Reservoir, the Oil Saturation Index must exceed 100mg HC / g.
Potential Yields (S2)	Up to 54 litres of oil / tonne (47.98mgHC/g rock)	Up to 70 litres of oil / tonne (62.9mgHC/g rock)	Up to 9.02 litres of oil / tonne (8.02mgHC/g rock)	Low	A rock with a S2 greater than 10 mgHC / g is considered to have very good source rock generation potential.
Porosity	13.1%	n/a	n/a	n/a	Porosity is consistent with other producing oil fields such as the Eagleford and Bakken Shales.
Permeability	13.7nD	n/a	n/a	n/a	Permeability of the Pata 1 samples is considered low. Untested sandy bands within the Stuart Range Formation are expected to exhibit higher permeability measurements similar to that seen in other wells within basin. (Figure 4)

\*The Eba 1 results indicated the Formation has previously produced and the remaining organic content is inert.

All Rotary Side Wall Core and cuttings analysis was completed by the accredited Weatherford Laboratories (<http://www.weatherfordlabs.com>). Due to the large file size of the supporting documentation, copies of the accreditations and analytical methods can be viewed upon request at Linc Energy's registered office. Weatherford is paid a service fee based on its standard professional fee structure, the payment of the fee is not contingent on the outcomes of the analysis.

## Pata 1

Linc Energy completed the Pata 1 well at 1828m on 8<sup>th</sup> December 2014. The well was designed to target potential unconventional reservoirs within the Stuart Range and Boorthanna Formations (Figure 1).

Hydrocarbon shows were recorded in both the cuttings and rotary side wall cores between 1137m to 1194m, with a dull pale brown even fluorescence found in a siliceous siltstone with minor fine grained sandstone. The distribution of the fluorescence increased with depth from approximately 10% at the top of the unit to 90% at the base. Since completion of the Pata 1 well, an extensive analysis and log interpretation program has been completed in order to improve the understanding of the Permian sediments and their hydrocarbon generation potential.

## Pata 1 - Stuart Range Formation

Measured Total Organic Carbon (TOC) content from samples taken within the Stuart Range Formation averaged 8.26% over the interval with a maximum of 11.6%. The laboratory measured TOC data was used to calibrate the FLeX™ logging tool (Direct spectroscopic measurement) run by Baker Hughes over a 250m interval between 1000m to 1250m. The result clearly identifies a 63m thick sweet spot characterised by high TOC corresponding to the Stuart Range Formation.

Calibrated TOC measurements of the FLeX™ data averaged 7.5% over the 63m interval with values as high as 14% (Figure 2).

Source rock maturity of tested samples indicates the Stuart Range Formation is within the oil 'window'. Vitrinite Reflectance (Ro) measurements range between 0.6 - 0.62 and are further supported by pyrolysis with TMAX ranging from 433 to 438 (reflecting a Ro of 0.6 - 0.70). TMAX calculated Ro correlates well with received measurements across the Stuart Range Formation with readings ranging from 0.62 – 0.72 (Figure 3).

Kerogen typing indicates the samples are predominantly Type I and Type II (~82%) source rock with minor Type III (~11%) and Type IV (~7%) kerogens. The abundance of Alginite and Lamalginite in the sample supports the oil prone nature of the organic matter and represents a lacustrine depositional environment with marine influences. A Production Index (PI) ranging from 0.03 – 0.08 is consistent with the onset of oil generation. In addition, the Oil Saturation Index (OSI) ranges from 7 - 24 across the organic rich zone. Source rock analysis of the Stuart Range Formation shows potential yields ranging from 20 – 54 litres of oil per tonne (18.15 – 47.98mgHC/g rock).

Sample mineralogy is organic rich with dominant Clay, Quartz, Pyrite and Feldspar. Initial rock mechanics testing indicates good brittleness which is favourable for production. Measured porosity averaged 13.1% over the tested carbonaceous siltstone samples. Permeability was measured at 13.7 nD, this was expected given the tight nature of the interlaminated siltstones and mudstones intersected. Log interpretation along with the lithological descriptions have identified numerous silty sand and sandstone bands throughout the Stuart Range which correlate well with zones of low TOC (Figure 2, Figure 4). While these zones have not been analysed, they are expected to exhibit higher porosity and permeability measurements similar to that seen in other wells within the basin.

Mr Ricato said "Pata 1 has been successful in its main objective, improving our understanding of the Stuart Range Formation's source rock potential and moving the Company another step closer to defining a commercial resource. There are still vast areas that are under explored within the Boorthanna Trough including south of Pata 1 where the Stuart Range Formation could potentially be deeper and the geothermal gradient is expected to be higher due to the proximity to the Gawler Craton to the south of PEL123". (Figure 6).

### Pata 1 - Boorthanna Formation

TOC measurements in the Boorthanna Formation range between 4.2% to 10.10% and correlate well with a glacial lake facies dominated by well laminated mudstones (interpreted from the image logs). The samples tested exhibit source rock yields of up to 70 litres per tonne (62.9mgHC/g rock). The measured Ro of the only rotary side wall core cut within the Boorthanna Formation is 0.66 indicating the organic rich intervals are within the oil window.

Petrophysical analysis completed by Baker Hughes has identified three organic rich layers (1 – 2.5m thick) within the Boorthanna Formation at depths 1426m, 1488m and 1513m (Figure 5). The layers have been interpreted to be coal due to the sharp decrease in the bulk density. While coaly fragments were noted throughout the cuttings at these depths, there is not enough sample available to undergo further analysis to evaluate coal quality, maturity and potential to produce hydrocarbons. It is noted a crush cut oil show (fluorescence) was logged in disseminated coals seen in the cuttings between 1629m – 1649m. It is likely additional coal seams were intersected at these depths however cannot be verified due to insufficient data. The blockage caused by the twist off of the bottomhole assembly did not allow the wireline logs to penetrate deeper than 1,606m (drilled depth 1,828m).

Mr Ricato further said "This is the first time organic rich mudstones and coals have been intersected within the Boorthanna Formation. Ongoing studies will look to further understand the Total Organic Content and coal accumulations within the Formation as these may constitute a previously unknown hydrocarbon system within the basin and a significant additional opportunity for the Company. While the organic intervals within the Boorthanna Formation at Pata 1 are comparatively thin, a number of additional targets have been identified in the southern portion of the Boorthanna Trough within PEL123 that may have similar source characteristics".

An example of this can be seen in Figure 7, the seismic section of the proposed Fox 1 well.

### Eba 1

Linc Energy completed the Eba 1 well on 25<sup>th</sup> March 2015. The well was designed to target the high amplitude reflectors within the poorly understood pre-Permian Formation. The well was completed at 2959m within what is interpreted to be the Cambrian Relief Sandstone.

The Stuart Range and Boorthanna Formations (Permian) were intersected and analysed for TOC but due to the shallow depth (immature) of the Formations at this location the hydrocarbon generation potential is low.

Acoustic log interpretation of the pre-Permian intersections has identified sediments consistent with deposition within a coastal sabhka / coastal plain to shoreface environment. Such depositional environments are consistent with the interpretation that the well intersected the Officer Basin lateral equivalent of the Ouldburra Formation and the Relief Sandstone.

Petrophysical analysis completed by Baker Hughes has identified a number of small hydrocarbon saturations at 2095m, 2100m, 2275m, 2297.5m and 2538m. While it is possible the saturations could be a calculation artefact, the mudlogs reported background gas over the intervals 2130m – 2145m and 2287m – 2317m with gas distributions showing a fraction of C2 and C3+. This indicates small amounts of organic matter occur and are mature enough to have generated hydrocarbons.

A preliminary investigation into the burial history of the pre-Permian sediments indicates the current depth may not correspond with maximum burial depth. An estimated thickness of the missing series was calculated using the variation in compressional slowness with depth. The analysis indicates a thick section of sedimentary series was removed in the phase of uplift and erosion that predated the deposition of the Permian Formations (The Alice Springs Orogenic event). Initial interpretation suggests the range of depth is compatible with the level of organic maturity required to generate hydrocarbons. Therefore, it is likely sections of the pre-Permian Formation are mature enough to have produced hydrocarbons in the past and may still be generating.

Mr Ricato said "The data recovered at Eba 1 will enable the Company to remap both the Ouldburra Formation and the Relief Sandstone within the regional seismic model to better understand the hydrocarbon generation history and potential of the pre-Permian Formation. Further investigations will focus on identifying areas that may be organically rich and constitute potential source rocks".

Figure 1 Arckaringa Basin Stratigraphy with Pata 1 Oil Shows

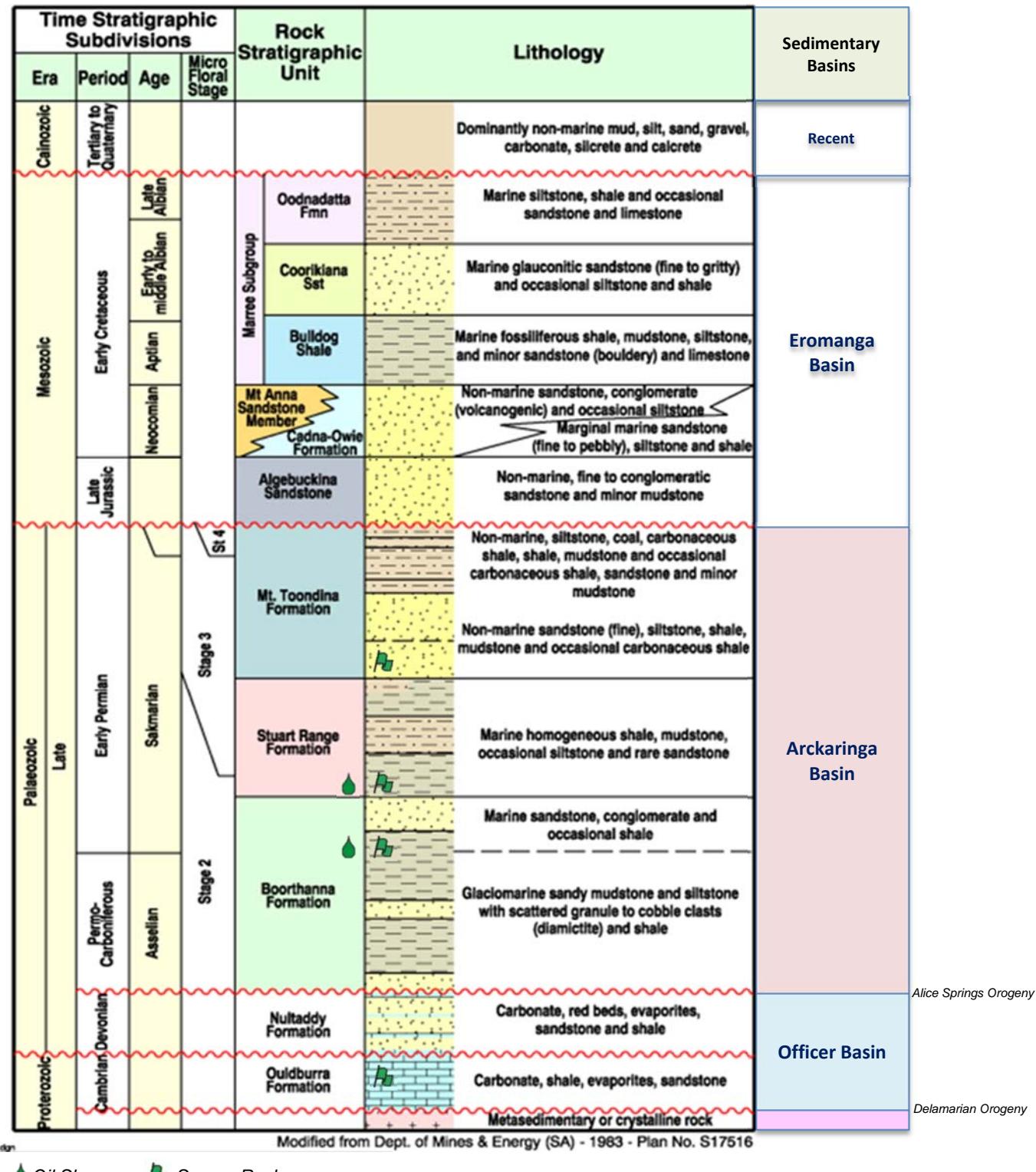
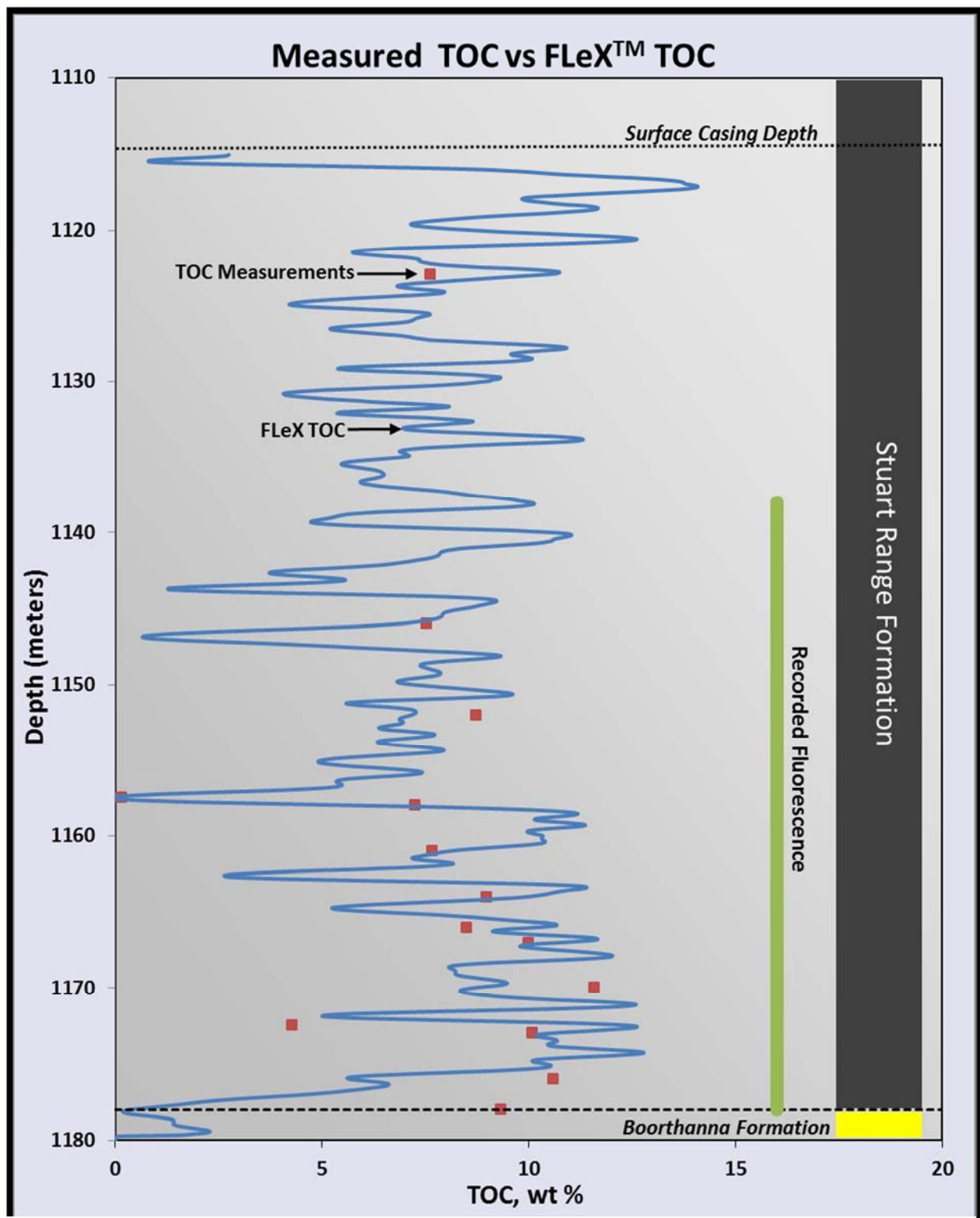


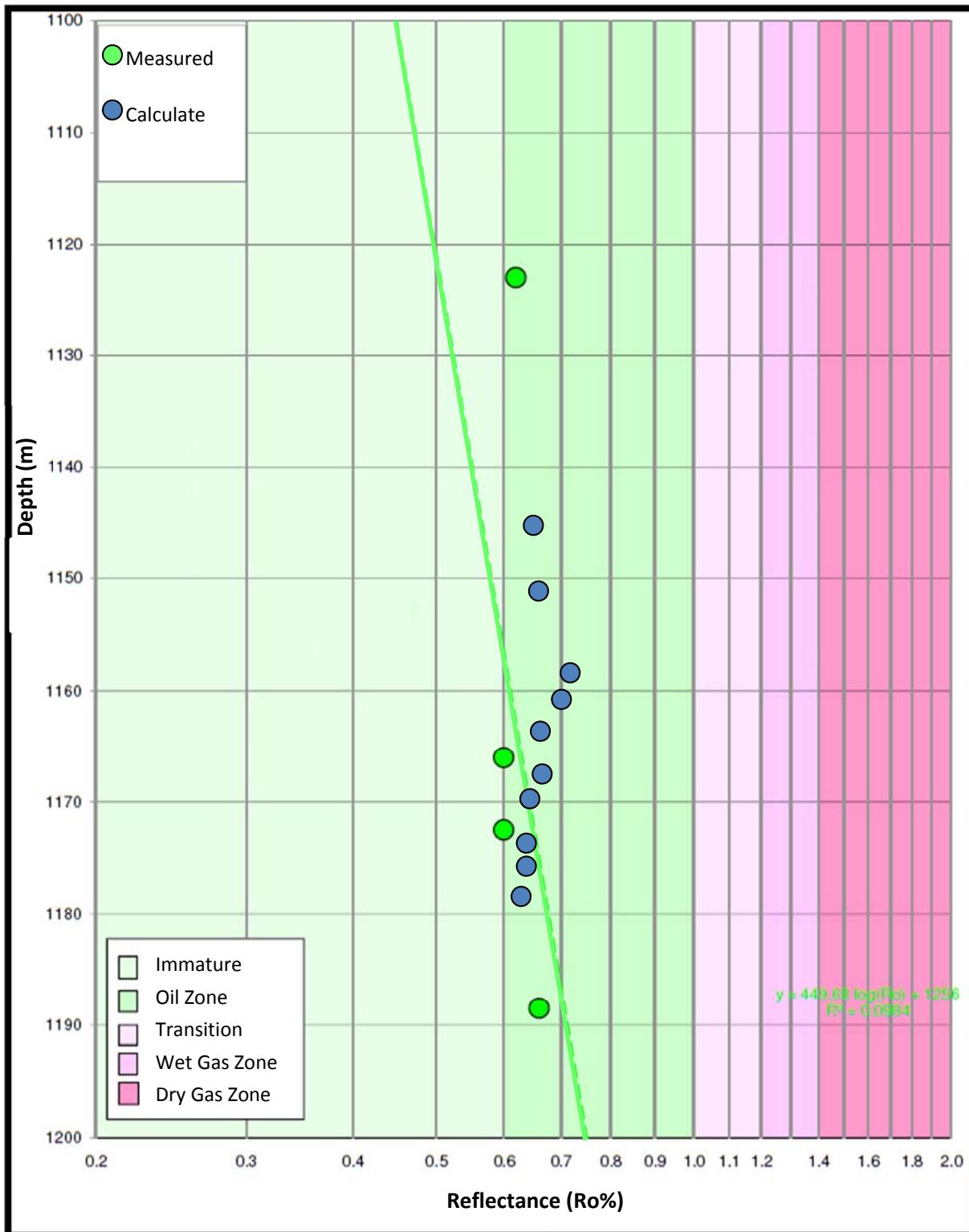
Figure 2: Pata 1 Total Organic Carbon Measurements

**Notes:**

TOC measurements completed by Weatherford Laboratories

FLeX™ Spectroscopic tool interpretation completed by Baker Hughes

Figure 3 Pata 1 Vitrinite Reflectance Depth Profile

**Notes:**

Measured Vitrinite Reflectance completed by Weatherford Laboratories

Calculated Vitrinite Reflectance completed by Linc Energy using formula  $0.0180 \times TMAX - 7.16$

Where a measured and calculated value exists for the same depth, only the measured results are shown

Media contact: FCR

James Strong 0423 338 005

Figure 4 Rotary Side Wall Core Photography and Lithology Descriptions

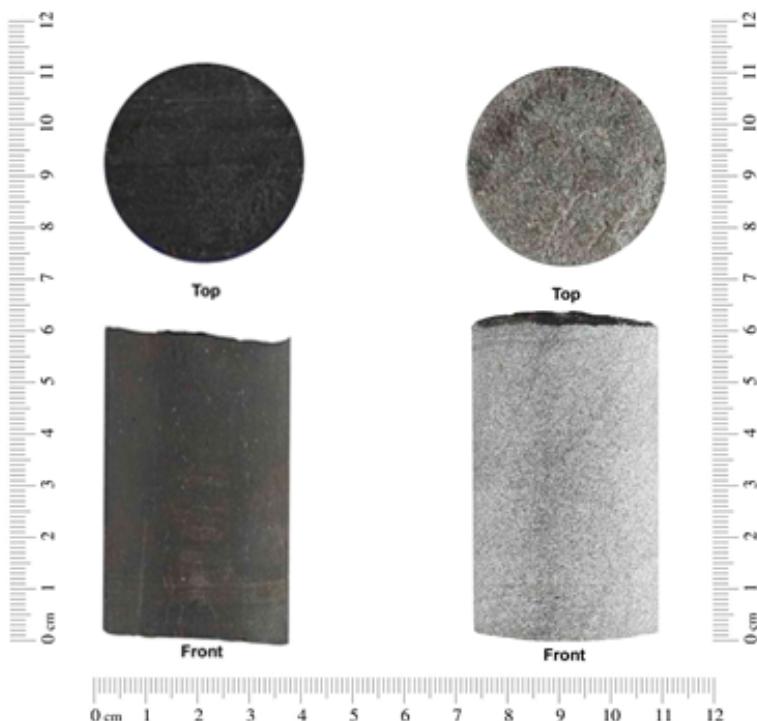
Core No.	Depth (m)	Recovery (mm)	Formation	Lithology and Fluorescence
Core 12	1157.5	60	Stuart Range	100% QUARTZOSE SANDSTONE: medium grey, very fine, dominantly sub angular.
Core 15	1166.0	60	Stuart Range	100% CARBONACEOUS SILTSTONE: black, massive to weakly laminated (sub mm), dominantly carbonaceous, 90% very pale, very dull brown laminated fluorescence, very slow very dull green bleeding cut, very dull green crush, moderately thick bright blue ring residue, no odour



## SWC Photography

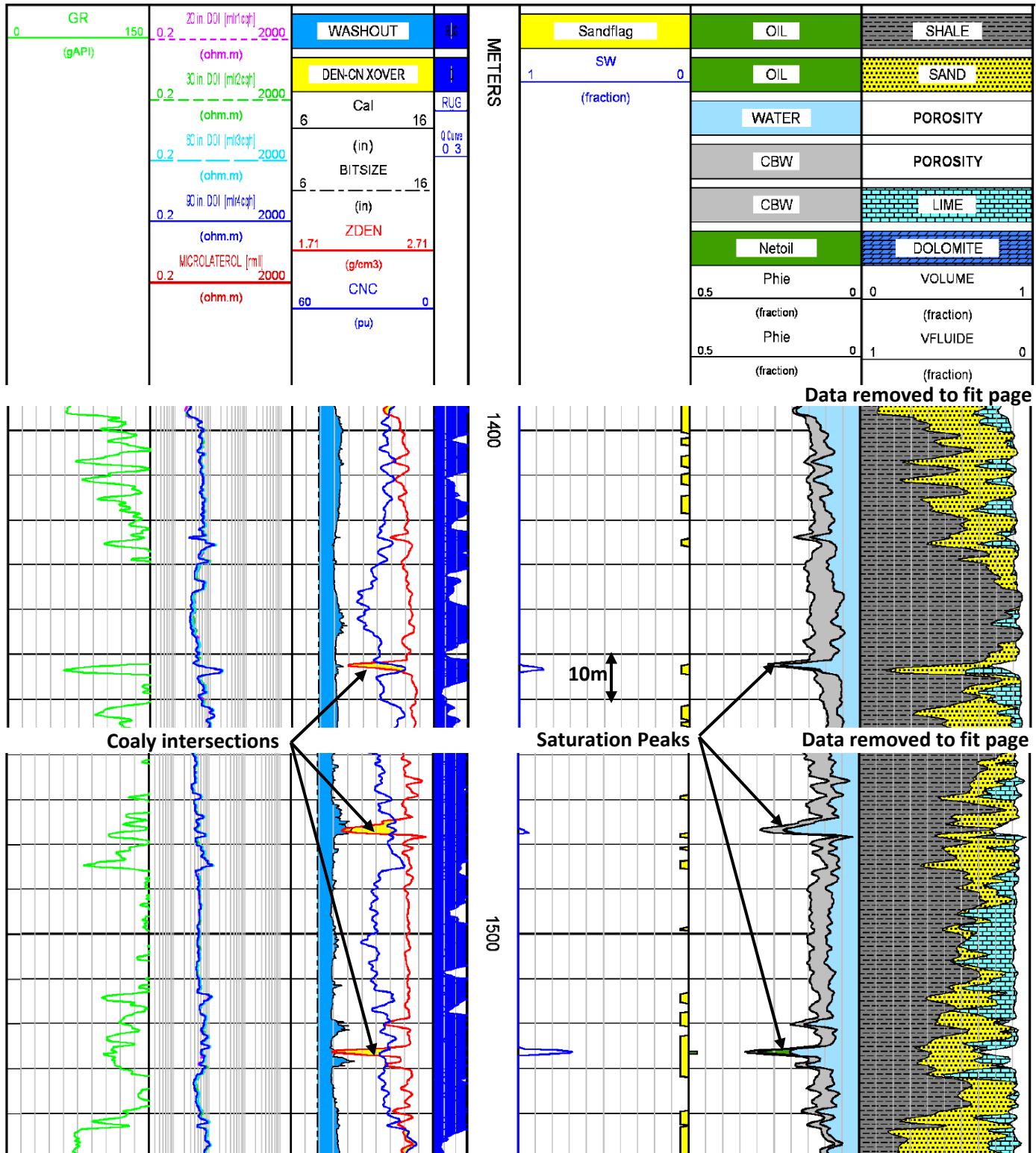
Pata-1

AB-74573


 Sample No: 2-15  
 Depth: 1166.5m

 Sample No: 2-12  
 Depth: 1157.5m


## Figure 5 Pata 1 Formation Evaluation Log (Sample Only)



**Note:** The saturation peaks could be artefacts due to local variations between the model and the actual formation resulting in the modelled resistivity to be calculated too low. They could also represent actual shows as small amounts of gas were observed in the mud log throughout Permian and cut fluorescence was noted within deeper coals.

Figure 6 Boorthanna Trough Drillhole Coverage

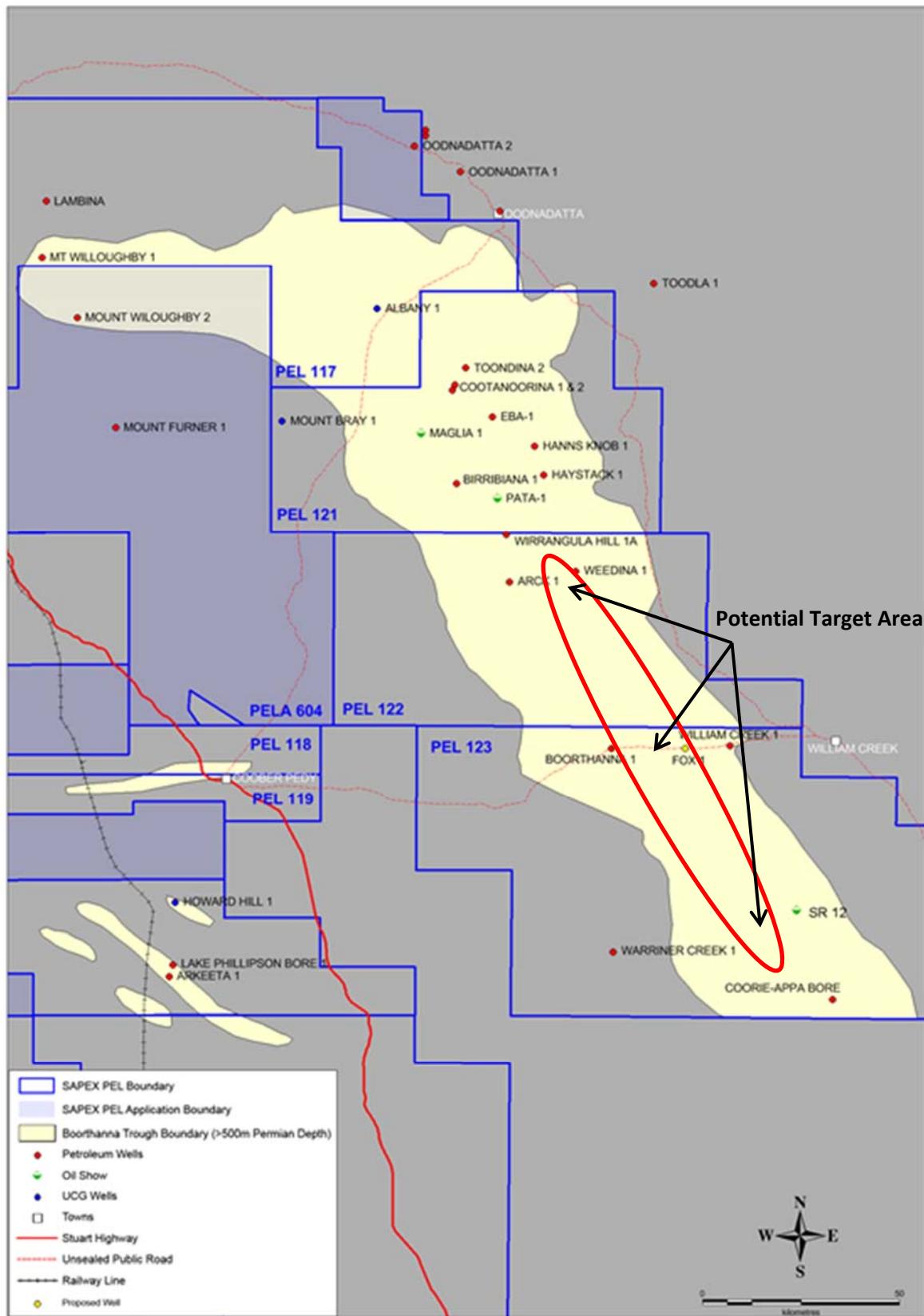
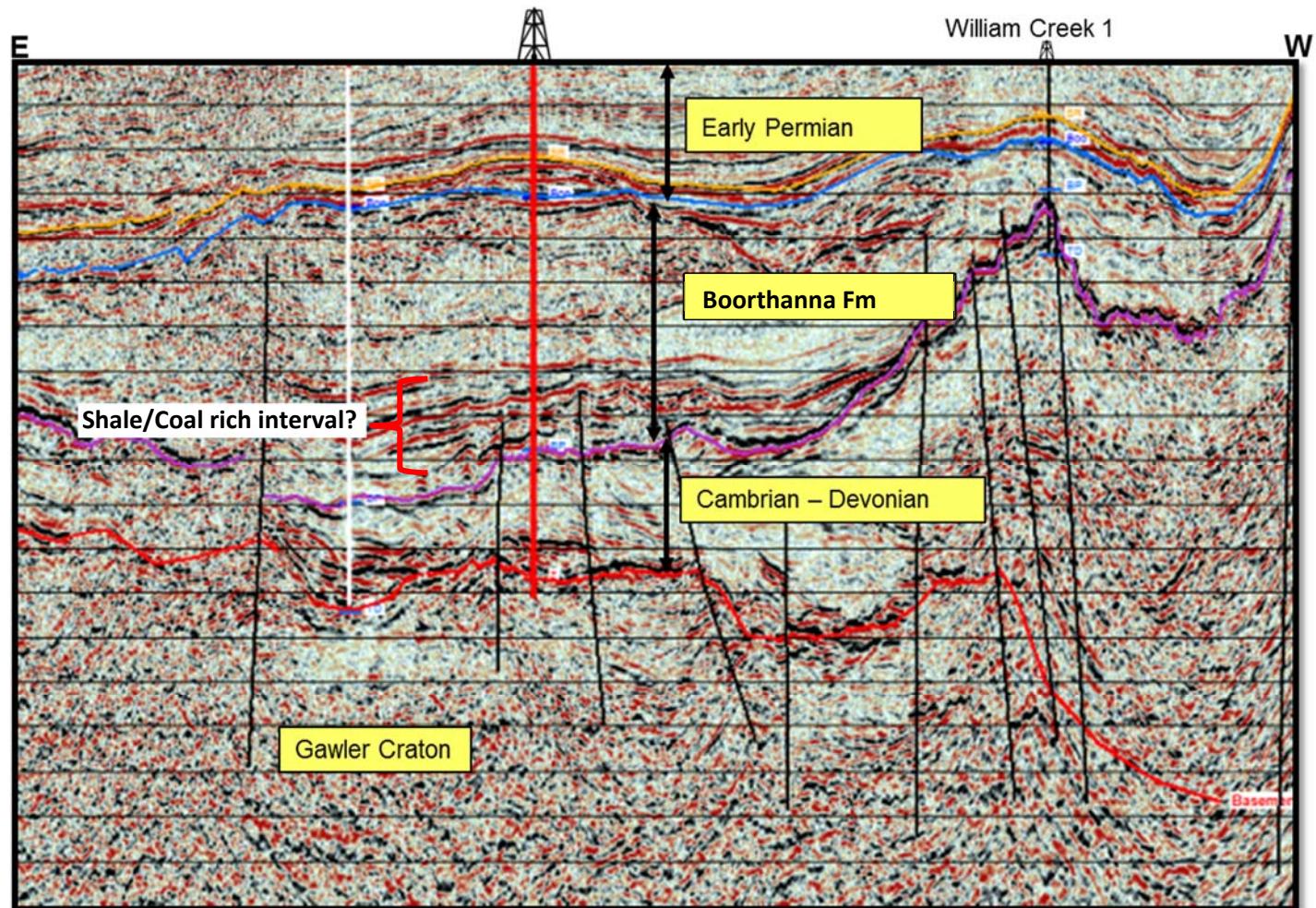


Figure 7 Proposed Fox 1 Seismic Section



## Company Profile

Linc Energy is an oil and gas company with a world-class commodity portfolio that includes oil, gas and coal resources. The Company applies conventional production techniques and its own advanced technologies to extract value from the development of these resources.

Linc Energy is a global business with Oil and Gas operations primarily onshore in the USA (Alaska, Texas, Louisiana & Wyoming); Exploration for Shale Oil & Gas in the Arkaroola Basin in South Australia; developing a proprietary technology for the efficient and cost effective extraction of Heavy Oil (Movable Injection Gravity Drainage – MIGD) and a significant number of opportunities to apply its proprietary Underground Coal Gasification (UCG) technology in Asia, Europe, Africa and the Americas.

The Company's proprietary UCG technology is a method of converting stranded coal resources into a valuable synthesis gas (Syngas) in situ. Linc Energy owns and operates the world's longest running commercial UCG operation in Uzbekistan (over 50 years in operation), which supplies Syngas to a nearby power station.

Linc Energy is listed on the Singapore Exchange Securities Trading Limited (SGX) (Singapore) and the OTCQX (USA).

The initial public offering of the Company was sponsored by DBS Bank Ltd., Credit Suisse (Singapore) Limited and J.P. Morgan (S.E.A) Limited.