OORAMINNA-2

WELL COMPLETION REPORT

Interpretive Data

EP 82

Northern Territory.

Table of Contents

Tables

Figures

Appendices

1. Daily Drilling Reports.
2. Daily Geological Reports.
3. Cuttings Descriptions.
4. Geochemistry, Rockeval results and Analysis Residual Oil Shows.
5. Survey data listing.
6. Bit records.
7. Wireline logs, Weatherford
8. MWD logs, Weatherford.
9. Vertical Seismic Profile – Results.
10. Drilling Fluid Recap, RMS Pty Ltd.
11. Mud-logging data.
12. Rig Specifications.

Enclosures

1. Mud Log.

1 Introduction and Summary

Ooraminna-2 was drilled by Central Petroleum Limited in Exploration Permit EP 82 in the Amadeus Basin, Northern Territory. The well was spudded on 11th June 2010 and reached TD of 1821m at 1830hrs on the 24th July 2010 in the Bitter Springs Formation, Love's Creek Member.

The objective of Ooraminna-2 was to determine if commercial flow rates of gas were possible form the primary target reservoir, the Late Proterozoic Pioneer Sandstone. This formation recovered uncommercial quantities of gas in Ooraminna-1 which was drilled in 1963 by Exoil and lies approximately 1.8 Km to the NE. The aim for the well (Ooraminna-2) was to drill a deviated hole section through the Pioneer Sandstone to attempt to intersect a vertical fracture system.

Secondary objectives were thin sands at the base of the underlying Aralka and Areyonga Formations, as well as "hot" sands in the Johnny's Creek Member of the Upper Bitter Springs Formation.

Prior to the 2007 Amadeus seismic survey acquired by Central Petroleum, the existing 1960's seismic coverage was sparse and of poor quality (1962 single fold coverage). Seismic acquired over the structure in 2007 has resulted in a more robust understanding of structural configuration at depth.

The drilling of the Ooraminna Structure fulfilled the minimum guaranteed commitment programme for permit year four. In August 2009 the DRDPIFR granted a suspension and extension of one year in permit year four, thus allowing the well to be drilled later than originally planned. The seismic acquisition obligation was also reduced by 30km and a well due in permit year five was removed.

The Ooraminna structure is anticlinal with four way dip closure. Top seal is provided by shales of the Pertatataka Formation, which together with the Aralka Formation constitutes potential source rocks. Ooraminna-2 was drilled to a total depth of 1821m in 46 days. It was partially air and air mist drilled to minimize reservoir damage and maximize potential flow.

Minor Gas flows were observed from the Arumbera Formation during air drilling. Gas was also encountered in the Pioneer Sandstone Formation which was fully logged and ultimately flow tested. A gas flow test was conducted in the Pioneer Sandstone over the interval 1259-1293m and, after acidizing, flowed at a stabilized flow rate of 152 Mscf/d.

The well was plugged and abandoned, the rig released on 7th August 2010.

Figure 1: Ooraminna-2 Regional location Map

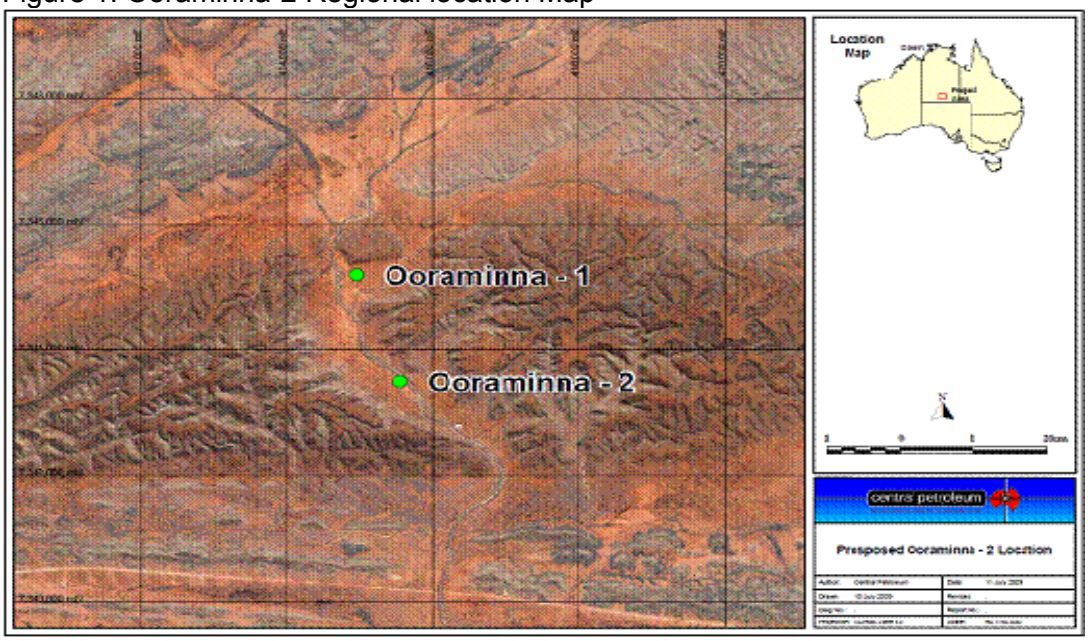


Figure 2: Ooraminna-2 Well location Map

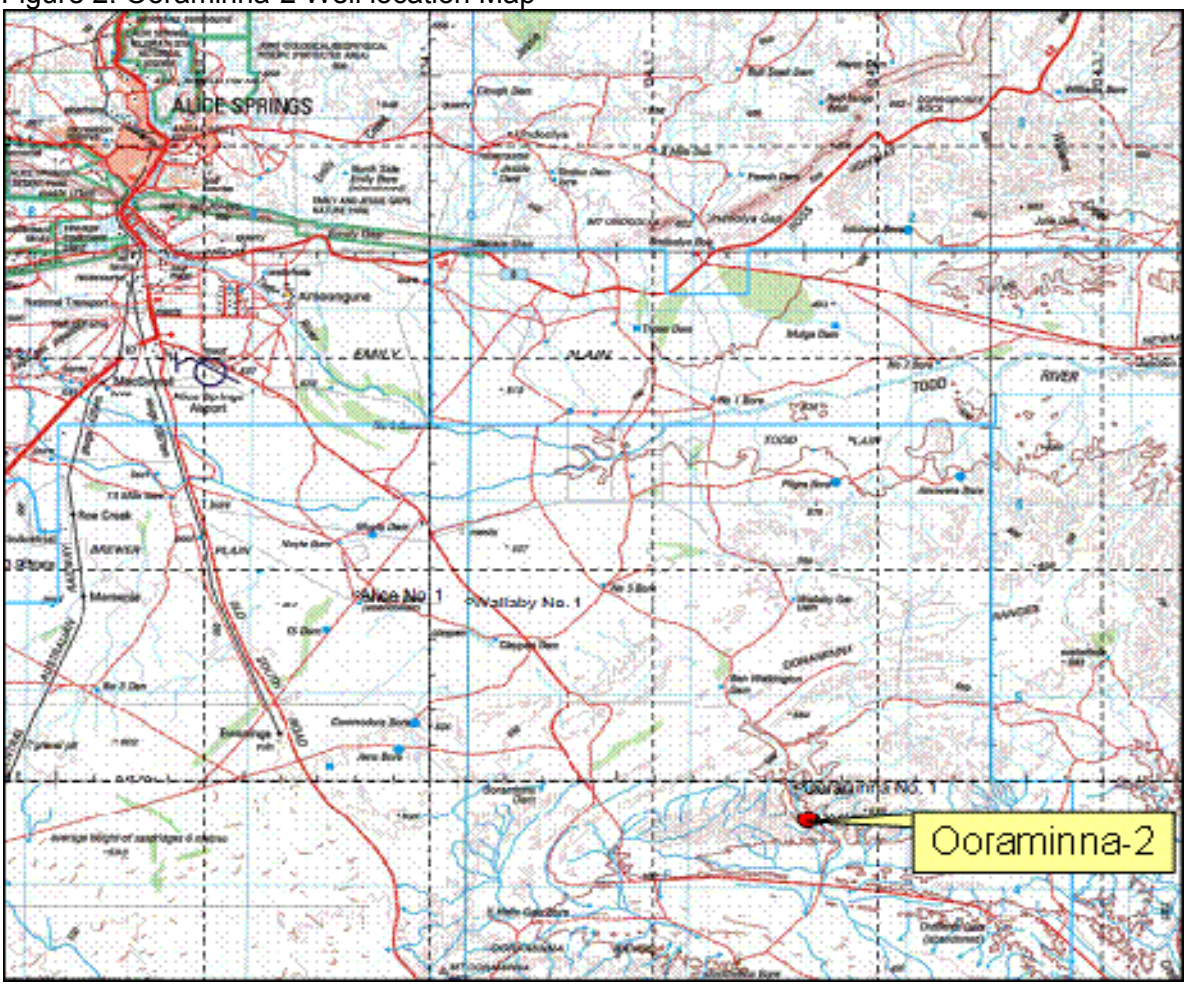


Table 1: Ooraminna-1 Well Index Sheet

Well Name: Ooraminna-2 **Operator:** Central Petroleum Limited		**Classification**: Exploration / Wildcat
Location: Latitude: 24° 01' 5.83" S Longitude: 134° 10' 10.95" E GDA 94 Zone 53	**Rig Details** Rig Name: MB Century Rig 7 Contractor: Century Drilling Rig Type: Land	**Dates** Spud Date: 11th June 2010 TD Date: 24th July 2010 Rig Released: 7th Aug 2010
Basin: Amadeus **Field:** Ooraminna **Permit:** EP 82, Northern Territory.	**Depths** Surface Elevation (AHD): 483m Rig Datum, KB (AHD): 488.2m Total Depth: 1821m	**Status** Plugged and Abandoned.
Casing/Liner Details Size / Depth 13⅜" Conductor 23.3m 9⅝" 484m 7" 104.4m	**Mud Details** Mud Type Air/mist: 23-486m Gel/caustic mud: 486-1085m	**Trajectory:** Initially vertical and then deviated to 40 deg @ 320N deg azimuth after ~505m.

Coring Details	**Sidewall Cores**	**Cuttings Interval**	**Sample Rate**
No coring was conducted.	No side wall coring was conducted.	23m to 1080m 1080m to 1115m 1115m to 1821m	10m 5m 3m

FORMATION	**MD (m)**	**TVD (m)**	**Isopach TVD (m)**	**SubSea TVD (m)**	**TWT msec**	**Comments**
Arumbera Sandstone	0.0	0.0	440.0	+488.2	-285.3	NEO-PROTEROZOIC:
Julie Formation	454	454	149.5	+34.2	-19.99	Ediacran
Pertatataka Formation	590	589.50	582.5	-101.3	41.33	Marinoan
Pioneer Sandstone	1259	1172.0	26.0	-683.8	326	Marinoan
Aralka Formation	1285	1198.0	132.0	-709.80	350.73	Lwr. Marinoan
Areyonga Formation	1425	1330.0	70.0	-841.80	385.27	Sturtian
Bitter Sp. Johnny's Ck Member	1487	1400.0	291.0	-911.80	385.27	Sturtian
Bitter Sp. Love's Ck Member						
Total Depth	1778	1691.0	43.0	-1202.8	407.64	Willouran
	1821	1734.0		-1245.8	504.38	Willouran

LOGGING

Date	**Depth (m)**		**Description**
	From	**To**	
25-07-2010	10	1821	GR-Res-Sonic
27-07-2010	1084	1821	GR Neutron-Density
27-07-2010	1093	1818	CMI-GR
28-07-2010	50	1810	Velocity survey (SGS), 40 levels.

Also MWD-GR-ROP with continuous inclination and azimuth and gamma ray in Ooraminna-2 from 500m to 1085m MD

Well Track

Depth at TD	**Latitude**	**Longitude**	**Deviated Well**
1821mRT 1622.2mTVDRT	24° 00' 52.13" S	134° 09' 56.11" E	Max 40 deg

Well Testing: Gas flow tests were executed over the intervals 1261-1265m (110-104mcfd), 1302m (110-194mcfd), 1259-1293m (acidized, 152mcfd).

2 General Data

Well Name:	Ooraminna-2
Well Classification:	Exploration
Interest Holders:	Central Petroleum Limited (Operator, 100%)
Petroleum License:	EP 82, Northern Territory
Location:	Latitude: 24° 01' 05.83" South Longitude: 134° 10' 10.95" East Australian Map Grid Zone: GDA 94, Zone 53
Ground Level (GL):	483.0m asl
Kelly Bushing (KB):	488.2m asl - Datum
Total Depth (KB):	1821m
Drilling Contractor:	Century Drilling, Rig # 7
Drilling Rig:	Century Drilling Rig 7 (See Rig Specifications in Appendix 12)
Contractors:	
Drilling Fluids:	Australian Mud Company
Mud Logging:	Weatherford
Wireline Logging:	Weatherford
Cementing:	Viking Energy
Earth Works:	R&M Dehne
Spud Date:	11th June 2010
Total Depth Reached:	24th July 2010
Rig Released:	7th August 2010
Well Status:	Plugged and Abandoned.

3 Drilling

3.1 Summary of Drilling and Related Operations

Drilling 17 ½" Conductor Hole

Pre-spud

The MB Century Rig 7 was rigged up on the 10th of June 2010 and the 17 ½" conductor hole was drilled to 14.5m MDRT. Repairs were carried on the leaking Kelly spinner prior to continuation of the pre-spud activities. The 17 ½" drill bit was broke off and laid out for a 12 ¼" drill bit. The mouse hole and rat hole was then drilled with scabbards installed.

Ooraminna-2 was spudded at 0430 hours on the 11th June 2010. The 17 ½" drill bit was then picked up again with one 8" drill collar and the conductor hole was drilled to 23.3m MDRT.

13 $^{3}/_{8}$" Casing

The 13 $^{3}/_{8}$" conductor casing was ran on 11th June 2010. Approximately 30.52m of 13 $^{3}/_{8}$" 54.5 ppf K-55 BTC casing was landed on bottom. A ready mix cementing unit was then spotted and 12.58 bbls of ready mix cement was poured to cement the casing in place.

The 13 $^{3}/_{8}$" conductor casing was slacked off after waiting on cement and no movement was observed. 13.81m of excess casing was cut and laid out.

Drilling 12 ¼" Surface Hole

The blooie line and the RBOP's were rigged up prior to drilling out the cement track. The 12.4" Patriot 125 air hammer assembly was picked up with an 8" drill collar, 12 ¼" near bit and 12 ¼" string stabilizer.

Drilling proceeded to 121.9m MDRT prior to tripping out to change the BHA. While tripping in, sudden pressure increase was observed and there was no success in unloading the well. The BHA was tripped out and drill cuttings were found in the air hammer assembly. The hammer assembly was cleaned and tripped in.

The well was drilled ahead to 227.4m MDRT at which point the rate of penetration slowed down. The BHA was tripped out to check the air hammer assembly. Minimal contamination was found within the air hammer though pieces from the TDC rubber hose was found within the near bit stabilizer and Totco survey ring. The air hammer assembly was function tested but it was not working.

It was decided to change out the hydraulic drive shaft for the chain drive vertical frame. A 12 ¼" Reed insert bit was made up and tripped in.

Drilling continued to the section TD at 486m MDRT without much incident, though an obstruction was encountered at 287.4m MDRT and it was reamed.

The well was unloaded as a gas flow was observed. The decision was made to conduct a wiper trip and cancel logging the surface hole. The drill string was tripped out after the well was filled with an 8.4ppg basic gel to run casing.

9 5/8" Casing

The 9 5/8" surface casing was ran on the 18th June 2010. The 9 5/8" 36 ppf K-55 BTC casing was run with a shoe joint and float collar to 38m MDRT where an obstruction was encountered. Attempts were made to clear the obstruction but it was unsuccessful.

The 9 5/8" casing was laid out and 12 ¼" drill bit assembly was picked up and tripped in to ream the obstruction at 38m MDRT. Further obstruction was tagged at 65m MDRT, 118m MDRT, 421m MDRT and 429m MDRT. The hole was washed and reamed up to section TD. The drill string was then tripped out and the 9 5/8" casing running gear was rigged up again.

The 9 5/8" casing was run to 483m MDRT where 3m of fill was tagged. The casing was then washed down to 486m MDRT. The surface casing was cemented in place with 79bbls of 13.576ppg lead cement with 50% excess and 52bbls of 15.573ppg tail cement with 50% excess. No cement returns to surface when the plug was bumped at 1,527.25psi. As pressure bled off, there were 0.755bbl returns that were recorded.

A top up job was conducted with 8bbls of 15.577ppg cement which fell away with no signs of cement returns. A second top up job was conducted with 25bbls of 15.577ppg cement which also gradually fell away.

The 'A' section was installed on top of the casing collar and BOPs nippled up though some problems were encountered with the rotating BOP studs beings too long to allow installation of the annular BOP and double flanged spool.

A Ready Mix truck arrived on site to pour 18.87bbl cement grouting down the annulus. An additional 6.29bbl of cement grouting was poured on top and the cement was left to cure. The BOPs were pressure tested at 250psi for the low test and 1,500psi for the high test.

Drilling 8 ½" Intermediate Hole

An 8 ½" Reed insert bit was made up and tripped in on 22nd June 2010. The cement track and 3m of new hole was drilled out whereby a formation integrity test was performed. With 8.4ppg of water in the hole, a maximum pressure of 2,053psi was recorded which gives an equivalent mud weight of 33ppg with no leak off.

The BHA was tripped out and changed to an 8 ¾" Reed insert bit with a Weatherford MWD directional BHA. It was originally planned to build the angle to a maximum of 42° to 749m MDRT and this angle held to section TD.

The well was directionally drilled to 601m MDRT however the predicted build rates were not achieved so the BHA was tripped out. The drill bit was changed out for another 8 ¾" Reed insert bit, extra 6 ¼" drill collars added and the motor bend angle changed to 1.66°.

Directional drilling proceeded to 666.3m MDRT and the decision was made to trip out as poor build rates were observed and the inclination was being reduced by the BHA. The drill bit was changed out to a different 8 ¾" Reed insert bit and the motor bend setting changed to 2°.

The hole was directionally drilled through sliding to 771.8m MDRT where the inclination increased to 38.65°. It was decided to trip out to change the bit and set the motor bend setting to 1.41°.

The drill bit was changed out to an 8 ½" Reed insert bit. The hole was directionally drilled through rotary and sliding to 820.1m MDRT. However the inclination reduced from 42.24° to 35.24°. This prompted the decision to trip out and change the drill bit and change the motor bend setting to 1.66°.

The BHA was directionally slid to 906.4m MDRT and the inclination had increased to 36.55°. It was decided to trip out to change the bit. The programmed section TD was 1,172m MDRT however after discussion with the wellsite geologist, the new section TD was at 1,085m MDRT to ensure that the casing is set in the Pertatataka Formation.

The last directional BHA was tripped into the hole and it was directionally slid and rotated to the new section TD of 1,085m MDRT. The final survey measured the hole inclination at 41.8°. The BHA was tripped out and laid out.

7" Casing

The 7" casing running gear was rigged up on 1st July 2010. However the rig spent some time waiting for the Weatherford downhole deployment valve technician who missed his flight. Some of the 7" 26 ppf L80 BTC intermediate casing was tripped in on 2nd July 2010 and the DDV technician had also arrived on site.

The downhole deployment valve tool assembly was rigged up and made up to the 7" intermediate casing which was subsequently ran into the hole on 3rd July 2010. The downhole deployment valve was function tested prior to cementing the casing in place.

The 7" intermediate casing was cemented in place with 71.1bbls of 13.2ppg lead cement with 30% excess and 29.1bbls of 15.6ppg tail cement with 30% excess. The cement was displaced with 135.1bbls of water and plug bumped to 1,300psi. Pressure was held with 0.1bbls returns.

The BOPs above the 'A' section were nippled down and the prepared 'B' section was nippled up above the 'A' section. The 7 $^{1}/_{16}$" BOP stack with flow tee was nippled up above the 'B' section and connected to the blooie line flange.

Drilling 6 $^{1}/_{8}$" Production Hole

The 3 ½" slim hole drill pipe was unloaded and positioned on the pipe racks. A BOP pressure test was carried out; however, the pressure did not hold. The BOP stack was nippled down to determine the problem with the x-bushing and slip & seal assembly. The pressure test was repeated after the BOP stack was nippled up again.

A 6 $^{1}/_{8}$" Reed insert bit was made up and tripped in while the 3 ½" slim hole drill pipe was serviced and broke in as per API procedures. When cement was tagged, the BOP pressure test continued but gas leaks were noticed at the 'B' section tie down bolts which was bled from the 'A' section.

The shoe track and 3m of new formation was drilled out on 8th July 2010 and a formation integrity test was performed on 9th July 2010. With 8.5ppg mud in the hole, a maximum pressure of 2,252psi was recorded which give equivalent mud weight of 21.7ppg.

Drilling proceeded to 1,260.85m MDRT whereby a drilling break was encountered and another drilling break was encountered at 1,261.45m MDRT with gas exiting the blooie line. A flow test was carried out with a ¼" orifice plate. The drill bit was tripped out and changed out for a 6 $^{1}/_{8}$" hammer assembly.

At bottom the well was unloaded, lost circulation pressure and stand pipe pressure increased which held. The 6 $^{1}/_{8}$" air hammer assembly was tripped out and serviced but failed the function test. A spare air hammer was used and tripped in. The hole was drilled to 1,302m MDRT whereby another flow test was conducted with a ½" orifice plate.

The well was drilled ahead to 1,332m MDRT whereby a tight spot was encountered and pressure quickly built up and decision was made to trip out. The air hammer assembly contained fine scale and rust which was cleaned out and the assembly tripped in.

While tripping in, it was found that the rotating head rubber had parted and the well unloaded itself. The BHA was tripped out to retrieve the other part of the rubber which fell into the wellhead/BOP stack. The assembly was tripped in after the rubber was drilled up.

Whilst running in the air hammer got blocked and had to be tripped out. A 6 $^{1}/_{8}$" Reed insert bit was made up and tripped in. Drilling proceeded to 1,455m MDRT and bit trip was conducted. The air hammer assembly was made up and a BOP pressure test was conducted. The air hammer was tripped in and drilled to 1,466m MDRT where it became blocked.

A new hammer bit and hammer assembly was tripped in and became plugged as the well could not be unloaded. Decision was made to trip out and change the bit to a 6 $^{1}/_{8}$" Reed insert bit. The hole was drilled ahead to 1,752m MDRT without incident. A torque spike was experienced which prompted a bit trip. For exploration purposes, it was decided to deepen the well to 1,821m MDRT as the original TD was 1,777m MDRT.

A 6 $^{1}/_{8}$" Stealth insert bit was tripped in and drilled to the well TD of 1,821m MDRT at 1830hrs on 24th July 2010. A wiper trip was conducted to the 7" casing shoe. A flow test was also conducted with a ½" orifice plate which was subsequently changed to a ¼" orifice plate. The well was unloaded and displaced with KCl fluid for wireline logging.

The first logging suite to be run was the supercombo with the log being obtained on 26th July 2010. The second logging suit was the compact gamma ray, compact dual neutron and compact photodensity which had to be re-run as the tool was too light to navigate through the deviated section of the well. The log was obtained on 27th July 2010. The third logging suit was a compact micro imager and gamma ray with the log also being obtained on 27th July 2010.

The checkshot tool was ran next but had trouble getting to the well TD. A weighting sinker bar was made up but there was gas with a 20% lower explosive limit being released from the well. The gas was circulated out and the checkshot survey was completed on 28th July 2010.

A change to the drilling programme was made whereby the Pioneer Sandstone was to be acidized to encourage flow and improve the flow rates. Two cement plugs were set, one at TD from 1,790m MDRT – 1,821m MDRT and one below the Pioneer Sandstone from 1,300m MDRT – 1,350m MDRT. The second plug failed to set and a few attempts were made to set it. The acid was spotted across the Pioneer on 31st July 2010 and squeezed with the Arrowset packer.

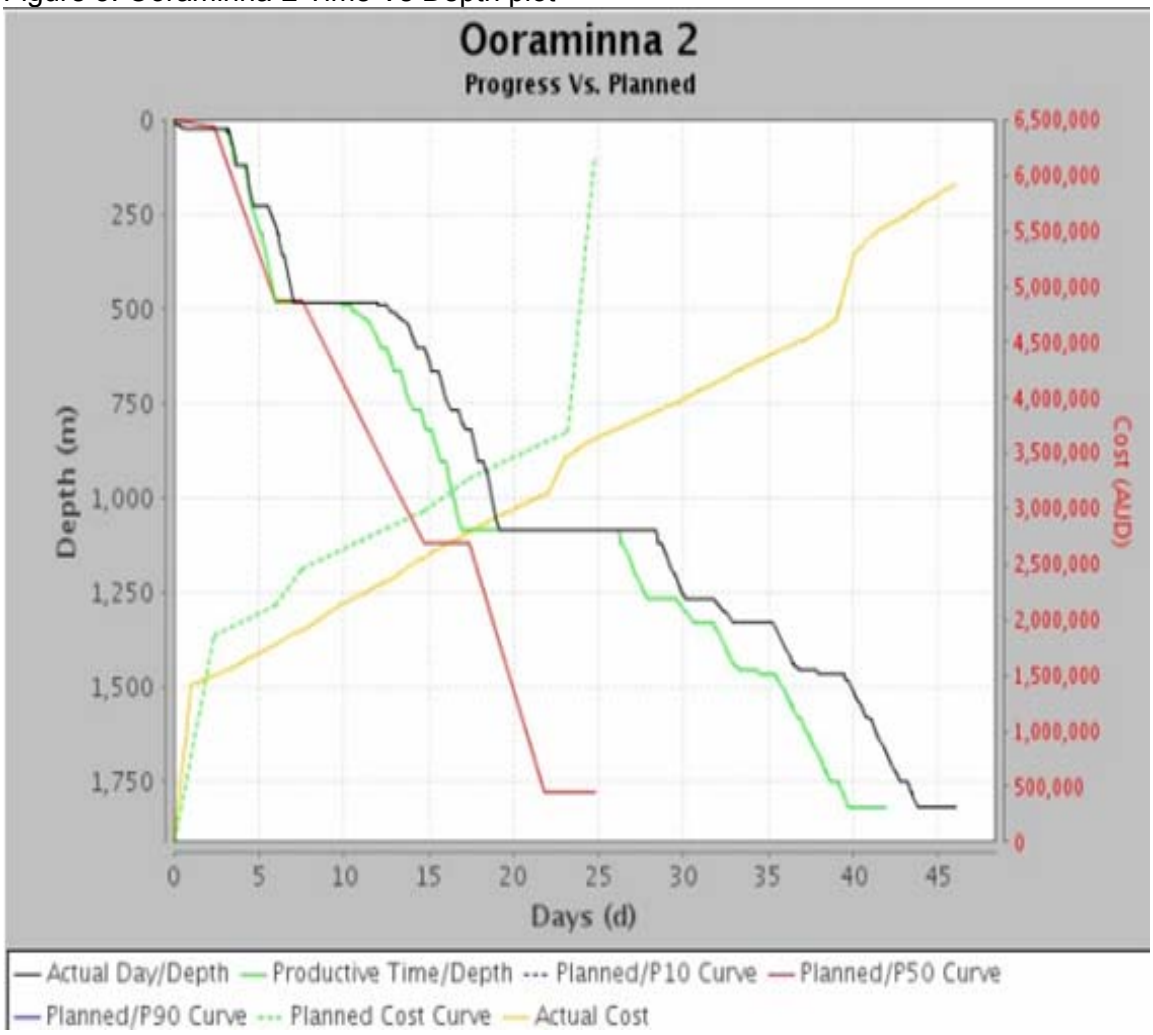
The acid was reverse circulated out and the well unloaded. A flow test was conducted on 1st August 2010 with minimal improvement to the gas flow rate. The Expro slickline unit was rigged up and downhole slickline gauges were hung in the well while the well was shut in for 12 hours. When the gauges were retrieved, it was found that no data was recorded. It was later found that the gauges had old batteries. The slickline job was conducted again.

Commercial flow rates of gas were not attained in the well and consequently it was decided to plug and abandon Ooraminna-2.

Additional abandonment plugs were set from 1,055m MDRT - 1,300m MDRT over the 7" casing shoe and from 0m MDRT to 30m MDRT at surface on 7th August 2010. The surface plug had to be reset as gas was still migrating out of the well and cement was absent at surface. This was achieved through the use of a bridge plug and 24.5bbls of 15.6ppg cement to surface. The rig was released at 0430 hrs on 7th August 2010.

Ooraminna-2 was the first of the three wells drilled in the Central Petroleum Limited 2010 Conventional Drilling Campaign.

Figure 3: Ooraminna-2 Time Vs Depth plot



3.2 Particulars of Drilling

3.2.1 Particulars of the equipment installed in or on the well

Other than casing, there is a 7" Weatherford downhole deployment valve at 441.76m MDRT.

3.2.2 Casing and equipment installed in or on the well.

Conductor Casing - 13 $^{3}/_{8}$" conductor casing was set at 23.3m MDRT

Surface Casing - 9 $^{5}/_{8}$" surface casing was set at 486m MDRT

Intermediate Casing - 7" intermediate casing was set at 1,085m MDRT

3.2.3 Cementing operations carried out, including details of abandonment

The following cementing operations were performed:

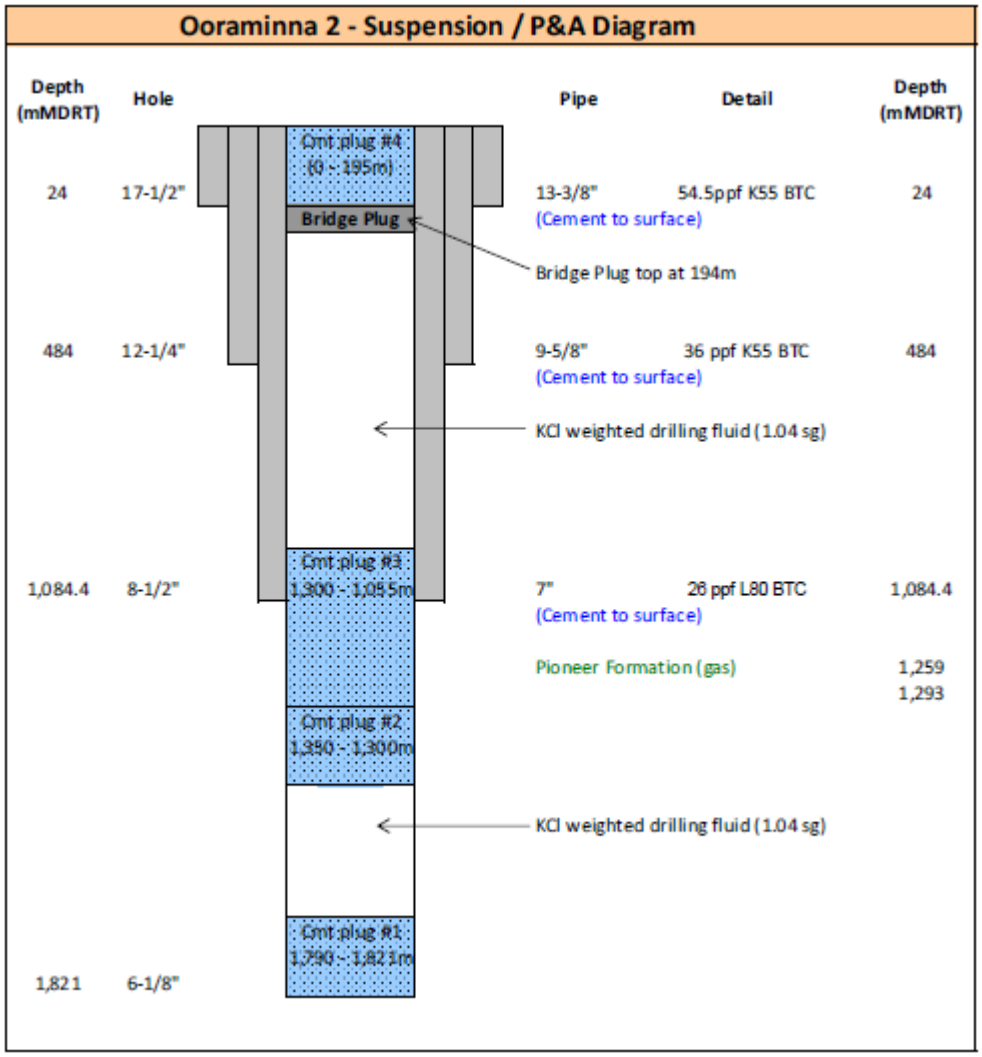
Conductor Casing – A 17 ½" hole was drilled to 23.3m MDRT. The 13 $^{3}/_{8}$" 54.5 ppf K-55 BTC conductor casing was cemented in place with 12.58bbls of ready mix Class A cement on 11th June 2010.

Surface Casing – A 12 ¼" hole was drilled to 486m MDRT. On 20th June 2010, the 9 $^{5}/_{8}$" 36 ppf K-55 BTC surface casing was cemented in place with 13.576ppg lead cement consisting of 79bbls of Class G cement. This was followed by 52bbls of 15.573ppg tail cement consisting of Class G cement. 124.5bbls of water was used as the displacement fluid. The plug was bumped at 1,527.25psi and casing pressure tested to 2,000psi. 0.8bbls were returned when the pressure was bled off. Three top up jobs were carried out, first being carried out with 8bbls of 15.577ppg Class G cement. Second job was carried out with 25bbls of 15.577ppg Class G cement and the third job was carried out with 18.87bbls plus and 6.29bbls for grouting with Class A cement.

Intermediate Casing – An 8 ½" hole was drilled to 1,085m MDRT. On 3rd July 2010, the 7" 26 ppf L80 BTC intermediate casing was cemented in place with 13.2ppg lead cement consisting of 71.1bbls of Class G cement. This was followed by 15.6ppg tail cement consisting of 29.1bbls of Class G cement. 135.1bbls of water was used as the displacement fluid. The plug was bumped at 1,300psi and casing pressure tested to 2,500psi with 0.1bbls returns.

Ooraminna-2 was plugged and abandoned on 7th August, 2010. An open hole cement plug was set at 1790m to total depth of 1821m. Two further plugs were set at 1300 to 1350m, followed by 1029 to 1300m, from the casing shoe to the Aralka Formation, isolating the Pioneer Sandstone. A 30m surface plug was set from surface to 30m. A wellbore schematic of the wellbore in its current state is included as Figure 4.

Figure 4: Ooraminna-2 P&A diagram



3.2.4 Bit Records

A total of 16 bits were used in the drilling of Ooraminna-2, refer to Appendix 6 for details.

3.2.5 Deviation Surveys

Weatherford conducted MWD-GR-ROP with continuous inclination and azimuth in Ooraminna -2 from 500m to1085m MD. Surveys were then conducted using an MSS tool at 1332m, 1453m and 1806m.

The hole inclination was 0 to 2.13 deg from the surface to 517m, after which time angle was built to 10.11 deg by 575m MD.

From 575m to 773.97m inclination was increased to 42.24m, and then varied from 32.18 to 44.23 deg until total depth. At total depth hole angle was 41.90 deg.

Tabulated results are presented in Appendix 5.

3.2.6 Drilling Fluids

17 ½" Conductor Hole (0m – 23.3m MDRT)

The conductor hole was drilled with air to section TD.

12 ¼" Surface hole (23.3m – 486m MDRT)

Air Foam

From 23.3m – 486m MDRT, air was used with an injection of 7.5bbls/hr of 0.6L Super Foam Xtra while the hole was drilled with an air hammer and an insert bit.

8 ½" Intermediate hole (486m – 1,085m MDRT)

KCl Polymer Mud (Water Based)

Mud weight was kept between 8.5ppg and 9.1ppg throughout the deviated section in the intermediate hole. Further detail on Drilling Fluid composition, performance and usage can be found in the Drilling Fluid Recap located in Appendix 10. A detailed daily record of drilling fluid properties is found in the daily reports supplied by RMN Pty Ltd within this document.

6 $^{1}/_{8}$" Production Hole 1,085m – 1,821m MDRT

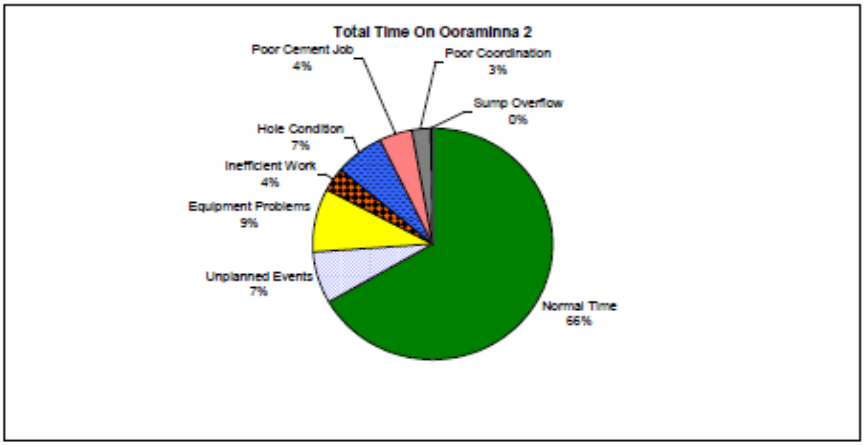
Air Mist

The production hole was drilled using air mist which kept the injection rate of 0.6L Super Foam Xtra between 7.5 - 8bbls/hr and Clear Edge 880 corrosion inhibitor at 1L/hr. When the air hammer was used, 5 – 6.6L/hr of hammer oil was also injected for lubrication.

3.2.7 Lost Time

A total of 280.95 hrs were logged as actual lost time. This doesn't include the extra time that was needed for the deviated section of this well due to poor angle build rates as hole was still being made. The main items that contributed to the lost time were the air hammers getting plugged, inefficient work while nippling up the BOP's/well heads and setting the cement plugs due to failure in setting some of them.

Figure 5: Ooramina-2 Time breakdown chart



3.2.8 Water Supply

Water for drilling purposes was taken from the Ooraminna-1 water bore that was drilled when Ooraminna-1 was constructed and from the government road bore approximately 9km away from Ooraminna-2. The water was potable for human consumption and was carted to the site camp and the turkey's nest built at the well site where it was then pumped to the rig to be used as drill water.

4 Logging, Sampling and Testing

4.1 Cuttings Samples Collected

The following table summarizes the cuttings samples collected on Ooraminna-2

Table 2: Ooraminna-2 cuttings sample summary

Sample type	Interval RT	frequency
Washed and air dried	23-1080m	10m
Washed and air dried	1080-1115	5m
Washed and air dried	1115-1821	3m

4.2 Sidewall Cores

No sidewall core samples were obtained from Ooraminna-2.

4.3 Mudlogging

Mudlogging services were provided by Weatherford, which included monitoring of drilling parameters, continuous gas monitoring, pit level sensors and cuttings sampling and bagging. The mud-logs and data are provided in Appendix 11 and Enclosure 1.

4.4 Wireline Logging

Wire line logging services were provided by Weatherford. Logs provided are located in Appendix 7.

GR-Res-Sonic was run in combination with a Density-Neutron-Calliper.

The second tool run was the CMI-GR which was run in open hole.

Table 3: Ooraminna-2 wireline logging summary

Run No	Logs run	Date	Depth interval mRT	BHT ºC	remarks
1	GR-Res-Sonic-	25/7/10	10-1821	79	
2	GR-Density-Neutron-Caliper	27/7/10	1084-1821	79	Tool hung up 1t 703mm added wt and reran to bottom.
3	CMI-GR	27/7/10	1093-1818		
4	Velocity Survey	28/7/10	50-1810		SGS sonde on WFT wireline, 40 levels.

There were no sidewall cores taken in the well.

4.5 Vertical Seismic Profile

A Check shot Survey was run in Ooraminna-2 with equipment provided by SGS and run on the Weatherford wireline. A total of 40 levels were recorded between 50m and 1810m RT. A report and results of the survey is presented in Appendix 9.

4.6 Drill Stem Testing and other flow tests

Three flow tests were conducted when gas was encountered whilst drilling with air. The flow was diverted from the blooie line into a choke manifold and flared after the choke. Flowing well head pressure and shut-in pressures were recoded on a digital pressure gauge and various choke sizes applied. A flow test was conducted over the objective Pioneer Sandstone interval at the end of the well. The interval 1259-1293m was isolated and acidized. It flowed and stabilized 152Mcfd.

4.7 MWD

Weatherford conducted MWD-GR-ROP with continuous inclination and azimuth and gamma ray in Ooraminna -2 from 500m to 1085m MD. Refer to Appendix 8 for logs.

5 Geology and Formation Evaluation

5.1 Regional Geological Setting and Discussion of the Ooraminna Prospect

The Amadeus Basin lies in Central Australia, and covers an area of approximately 170,000 km2.

The age of sediments ranges from Devonian to Pre-Cambrian (Proterozoic). Petroleum exploration commenced in the basin in the 1960's, culminating in the discovery of the Ordovician Mereenie and Palm Valley oil and gas fields in the mid 1980's. Since then exploration has been sporadic with less than 15% of the Basin having any reasonable seismic coverage.

Central Petroleum has conducted three seismic programmes since 2007: 2007 (487km); 2008 (800km); 2009-2010 (1400km). The 2007 seismic resulted in the re-mapping of the Ooraminna structure, as well as other play types.

The Ooraminna structure located near the eastern boundary of EP-82 and is interpreted as a robust four way dip closed anticline. The Ooraminna structure can be viewed to be a small anticline incorporated into a much larger surface anticline up to 2000sqkm in area. It is possible the gas encountered in the Arumbera/Julie Formations and the Pioneer Sandstone in the Ooraminna structure could be reservoir throughout the full structure. Given the structural configuration at the surface and the presence of a series of northwest-southeast trending horsetail faults associated with a major north-south lineament, it is interpreted that this suite of faults define the eastern boundary of both the Arumbera and Pioneer gas accumulations.

5.2 Lithology and Formation Tops and Stratigraphic discussion

The following table shows Formation to depths and thickness and TWT.

Table 4: Ooraminna-2 Formation Tops

Elevations: GL 483.0m RT 488.2m					
Formation Top	**TOP Depth RT (m)**	**TOP Depth GL(m)**	**Isopach (m)**	**Sub-sea (m) RT (m)**	**Comment**
Arumbera Sandstone	5.2	0	448.8	+488.2	NEO-PROTEROZOIC Ediacran
Julie Formation	454	448.8	136	+34.2	Marinoan
Pertatataka Fm	582.1	584.8	669	-93.4	Marinoan
Pioneer Formation	1259	1253.8	26	-634.3.3	Lwr. Marinoan
Aralka Formation	1336.5	1279.8	132	-684.4	Sturtian
Areyonga Formation	1425	1411.8	70	-750.9	Sturtian
Bitter Sp. Johnny's Ck Mbr	1487	1481.8	291	-806.8	Willouran
Bitter Sp. Love's Ck Member	1778	1772.8	43+	-1091.7	Willouran
TOTAL DEPTH	1821	1815.8		-1245.8	

5.2.1 Arumbera Sandstone and Julie Formation

Ooraminna -2 was spudded in the Arumbera Sandstone, which outcrops at the surface, and is of Late Neo-Proterozoic, Pre-Cambrian age.

Surface to 582m

The Arumbera Formation consists of sandstone with minor interbedded siltstone, claystone and limestone. The sandstone is multicoloured and often conglomeratic in the upper part, with common broken grains and pebbles observed. The colours are generally white, brown ochre and dusky red with abundant clear to translucent white quartz grains, common iron staining and often with an argillaceous and silty matrix which is micaceous and pyritic in part. Siltstones are described as medium grey to greenish grey, with dusky red interbeds, with a blocky texture, and commonly micaceous. It grades to loose very fine sandstone. Claystones are light bluish grey, silty in part, firm with a fissile texture.

High gas units were recorded from 370m and this often flared during connections when air began pumping and prior to cuttings resuming to be expelled through the blooie line, whereupon the flame would be extinguished. No distinct lithology change marked the onset of gas, although the gamma log reveals that the gas is contained in a generally fining upwards arenaceous sequence. The gas continued to be recorded to the base of the 12¼" hole section at 486mRT. As the section was drilled with air/mist, it is not possible to determine if the entire interval contained gas or if it was bleeding from a relatively short interval. Logs were not run.

The Julie Formation top is picked at 454mRT. It comprises interbedded sandstone, siltstone and claystone with thin limestone interbeds. The sandstone is predominantly white to light grey with clear to translucent quartz grains. It is friable to hard, fine to coarse and poorly sorted comprising angular to subrounded grains often in a kaolinitic matrix with silt and clay. The sand is commonly interlaminated with the siltstone having a varved appearance. Siltstone is light to medium grey, hard and brittle, argillaceous, very siliceous with common fine to coarse rounded quartz grains suspended giving a greywacke texture. Mica, kaolin and pyrite are also present. The Limestone is white, pink, and olive grey in colour, hard and chalky and appears as rockflour in cuttings. It is probably recrystallised calcilutite and is dolomitic in part. It appears to be thinly interbedded with the siltstone and sandstone sequence.

5.2.2 Pertatataka Formation

582-1259m

582-620m (siltstone unit)

The top Pertatataka Formation was picked by a lithology change to siltstone at 582m, which also corresponds to a change in Gamma Ray response. This correlates with logs from Ooraminna -1 at the same level. It is predominantly a siltstone unit in the upper part with minor sandstone and shale interbeds.

The siltstone is medium to dark grey, hard, blocky to sub-fissile, micaceous and micromicaceous.

620m to 1259m (Shale Unit)

At 620m, the sequence becomes entirely shale and continues that way to the top of the Pioneer Sandstone at 1259mRT.

From 620m to 1050m, the shale becomes massive with depth. Minor siltstone and rare Sandstone inter beds were present at the top of the unit. The shale is light grey to medium and dark grey, hard with a blocky texture. Coloration changed to dark grey to dark greenish grey and black below 800m, with minor carbonaceous material present from 830-860m. Olive green dolomitic material was described at 940m.

Below 1050m, the shale became a dark greenish grey, to light grey, and varied from soft to hard with a blocky habit. From 1212 to 1261, the Shale took on a rusty brown to medium grey brown with green mottling.

5.2.3 Pioneer Sandstone NEOPROTEROZOIC / Lower Marinoan

1259m to 1336m
Despite the name, the Pioneer Sandstone is actually a carbonate sequence at the Ooraminna location. A pale grey to white Limestone was met at 1259m, corresponding with a strong log signature (low Gamma Ray and high resistivity deflections).

The Limestone is white to pale grey, very hard, blocky with a crystalline to sucrosic texture. It is dolomitic, with 20% cherty inclusions and common pyritisation. Visible porosity is although some microfractures were observed in cuttings.

A gas show (5000 units-C1-C5) accompanied this formation top, although no significant drill break was observed.

1265m to 1293m (Limestone Unit, with minor Bituminous Shale)
From 1265m to 1280m, minor bituminous shale was met, this was of dark grey to black coloration, and well laminated, with coal banding.

A dull orange fluorescence was also noted under U-V light with an instant bright white solvent cut and thick yellow ring residue.

Total gas of 600 units was recorded from 1265-1332m, consisting predominantly C1, with minor C2-C5.
Below 1280m, Limestone becomes interbedded with well laminated shale and siltstone with minor Sandstone. The sandstone was fine to pebbly, with dolomitic and calcareous cements, and low visual porosity. No Fluorescence was recorded

Gas shows of 250-500 units (C1-C5) were present over this interval.

5.2.4 Aralka Formation NEOPROTEROZOIC / Lower Marinoan

1336m to 1425m (siltstone and minor sandstone and limestone at base of interval)
This interval is predominantly siltstone, dark grey to grey black, moderately hard, blocky to fissile, slightly calcareous with some calcareous fracture filling. The sandstone is clear to translucent and light grey, hard, very fine to medium grained with calcareous cement and very poor visible porosity. The limestone is light to medium grey, firm to moderately hard, argillaceous and silty, recrystallised with no visible porosity.

5.2.5 Areyonga Formation NEOPROTEROZOIC / Lower Marinoan

1425m to 1487m (Siltstone with sandstone)
The basal Aralka argillaceous siltstone grades to sandstone which marks the top Areyonga Formation. The sandstone is white to light grey, very fine to fine grained at the top, well sorted, hard (slow ROP), with siliceous cement in the form of quartz overgrowths. It has low visual porosity and no shows. The sandstone unit is interbedded with a medium to dark grey, hard, well laminated claystone.

The sandstone unit coarsens to a fine to medium grained well sorted quartz sand below 1464m, but with no shows.

The lower Areyonga Formation is marked by the appearance of interbedded sandstone and siltstone with a trace limestone. The sandstones varied from dark greenish grey to greyish brown and reddish brown, and were in hard aggregates of a fine to predominantly very fine grain size. Porosity was inferred to be poor as a result of abundant siliceous cementation.

Background gas of 250-500 units (C1-C5) was present throughout the Areyonga Formation. These were accompanied by connection gas peaks.

5.2.6 Bitter Springs Formation – Johnny's Creek member NEOPROTEROZOIC / Wilouran

1489-1778m

1489m to 1590m (limestone with minor siltstone, claystone and dolomite)
The appearance of Limestone marks the top Johnny's Creek member of the Bitter Springs Formation. The limestone is white to light grey to medium grey, light grey brown with a fine to coarse texture, dolomitic and blocky. No shows were observed. A moderately hard greenish grey to brownish grey siltstone occurs with depth, with up to 25% sandstone and chert. The sandstone is white to light grey, grading to reddish brown, and fine to very fine grained grading to siltstone, no shows were observed. Limestone becomes interbedded with claystone, siltstone and dolomite with minor chert below 1533m.

1590m to 1620m (Volcanic sediments (Spilite) with Claystone and Limestone)
From 1590 to 1620m volcanic sediments were penetrated, consisting of a hard to moderately hard dark grey to dark greenish black Spilite. Feldspars and sphene were identified as well as metamorphic actinolite.

These sediments become interbedded with claystones and limestones with depth.

1620m to 1689m (claystone with minor siltstone, limestone, spilite and chert)
Claystone predominates from 1620m to 1689m in the Johnny's Creek member of the Bitter Springs Formation. This consists of dark reddish brown to moderate brown to grey colour, grading to an argillaceous siltstone. A moderately hard white to yellowish grey limestone was also present, although no shows were recorded. Less than 10% Spilite and 5% chert was present with both showing signs of metamorphic alteration.

A 100% claystone band was noted from 1683 to 1689m.

1689m to 1778m (dolomite and limestone with increasing claystone, trace chert)
Interbedded dolomites, limestones and claystones predominate the lower Johnny's Creek member, with claystones increasing to 100% below 1752m.

Limestone is white to light yellowish grey, light olive grey, moderately hard, microcrystalline to calcarenitic, cryptocrystalline in part, dolomitic in part, grading locally to dolomite. No Shows were recorded.

Dolomite is white to light yellowish grey, light olive grey to olive grey, moderately hard to hard. Claystone is dark reddish brown to moderate brown, rare to minor medium to dark grey, blocky to platy, slightly silty in part, grading locally to argillaceous siltstone.

5.2.7 Bitter Springs Formation – Love's Creek member NEOPROTEROZOIC / Wilouran

1778-1821m

Interbedded dolomites and claystones dominate the Love's Creek Member.

Dolomites are white to light yellowish grey, light olive grey to olive grey, moderately hard to hard, blocky-tabular, cryptocrystalline and with 2-3% chert. No shows were observed.

Claystone, dark reddish brown to moderate brown, 5% medium to dark grey, blocky to platy, locally 20% calcareous and grading to calcareous claystone, silty and grading locally to argillaceous siltstone.

5.3 Hydrocarbon Indications and Sample Analysis

5.3.1 Arumbera/Julie Formations

Gas shows were recorded in the Arumbera Sandstone over the interval 370m MD to 415m MD.

No wireline logs were run over this interval thus preventing a comprehensive analysis of the zone. The conclusions drawn are not conclusive and more work is required to understand the gas shows. It is noted that the total gas readings recorded in Ooraminna-2 may not be accurate as problems were experienced with the gas chromatograph.

Below is the recorded part of the daily report submitted by the well site geologist during the drilling of Ooraminna-2.

"I*nterval: 370-460m*
Lithology: Sandstone with sandy Limestone interbeds and minor siltstone and claystone
Sandstone: multicoloured, translucent-white-lt grey-medium grey-m dark grey, ochre-bff, dsky rd, fe stn i/p, lse-hd, f-v crse, sa-rdd, poorly srted, calc i/p, tr mic, tr micmic, tr pyr, fair to good inferred por, no fluorescence.
Limestone: Ochre-buff, lt brnsh, occ wh, hd, blky-sbang, calcisil-lut, sandy i/p, p vis por, no flu

Max gas: 296 units (range over interval 30-296 units)
(1 unit =0.02% C1)
Gas composition: C1 peak 9815ppm tr C2,0 C3, 0- tr C4, tr C5+
Note: gas from chromatograph doesn't match quantity from Total gas... May be due to prescence of traces C5+

Gas was observed to flare after connections between 380 and 456m and increases of 200-300units in gas occur after each connection recorded on the gas detector

No hydrocarbon fluorescence observed. No flare at blooie line (foam being used)
A small flare has been observed momentarily after connections.

Water in the hole is probably effectively inhibiting any flow of gas".

In Ooraminna-2, the interval 360m-370m MD was described as mainly siltstone, thus it possibly forms a top seal to the underlying gas recorded in the Arumbera Sandstone which is comprised, in part, of dolomitic sandstone. A potential seal is recognised from logs acquired in Ooraminna-1 in the Arumbera Sandstone at 375m MD (note: gas detection equipment was operating during the drilling of this section in Ooraminna-1 and there is no record of reported gas shows).

The induction log for Ooraminna-1 shows no evidence of gas saturation in the Arumbera Sandstone at 375m MD, while evidence for a gas leg in the Julie Formation is equivocal. No gas detector or porosity log was run. The induction log shows no anomalous zones in the Arumbera Sandstone but is quite high in the top Julie Formation. Hydrocarbon saturations over this zone were calculated to be as high as 40%.

5.3.2 Pioneer Sandstone Formation

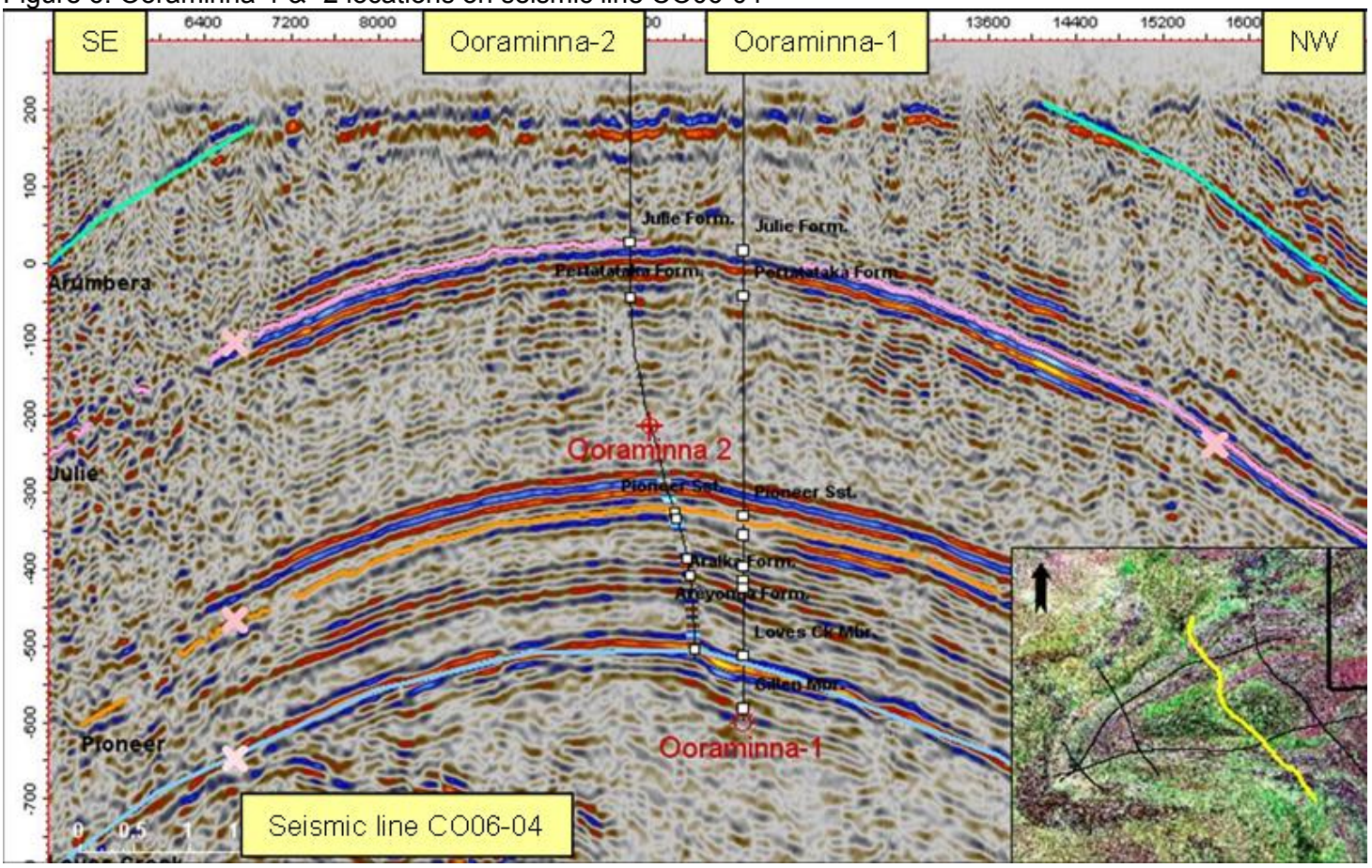
Ooraminna-2 also intersected gas in the Pioneer Formation Sandstones which was fully logged and ultimately drill stem tested. A drill stem test was conducted after acidizing and the Pioneer Sandstone flowed at a stabilised flow rate of 152 Mscf/d.

Ooraminna-2 has confirmed the presence and extension of gas as first discovered in Ooraminna-1 drilled in 1963.

5.4 Structural setting

Figure 6: Ooraminna-1 & -2 locations on seismic line CO06-04 illustrate the post drill interpretation of seismic line CO06-04. This 2D seismic line, acquired in 2008, is oriented in a northwest-southeast direction and intersects the location of Ooraminna-2 in a crestal position as interpreted on the Ooraminna structure. The exact location of Ooraminna-2 is known and is located on this line, however, it has not been possible to confirm the exact location of Ooraminna-1 which was drilled in 1963. Several reports exist which provide differing locations for this well. Analysis is ongoing to define a 'best fit' location for Ooraminna-1. Ooraminna-2 was drilled as a deviated well in a northwest direction to maximise intersection with the prognosed northeast-southwest vertical fracture configurations. This selected trajectory was planned to gain full exposure to all fractures with the intended objective of maximising gas deliverability.

Figure 6: Ooraminna-1 & -2 locations on seismic line CO06-04



5.5 Source Rock analysis

Samples from 600-1260m and 1285-1400m were submitted to laboratories for geochemical analysis. Results are included in Appendix 4.