SANTOS

WEST MEREENIE 24 & 24ST1

WELL COMPLETION REPORT

COMPILED FOR

SANTOS LIMITED

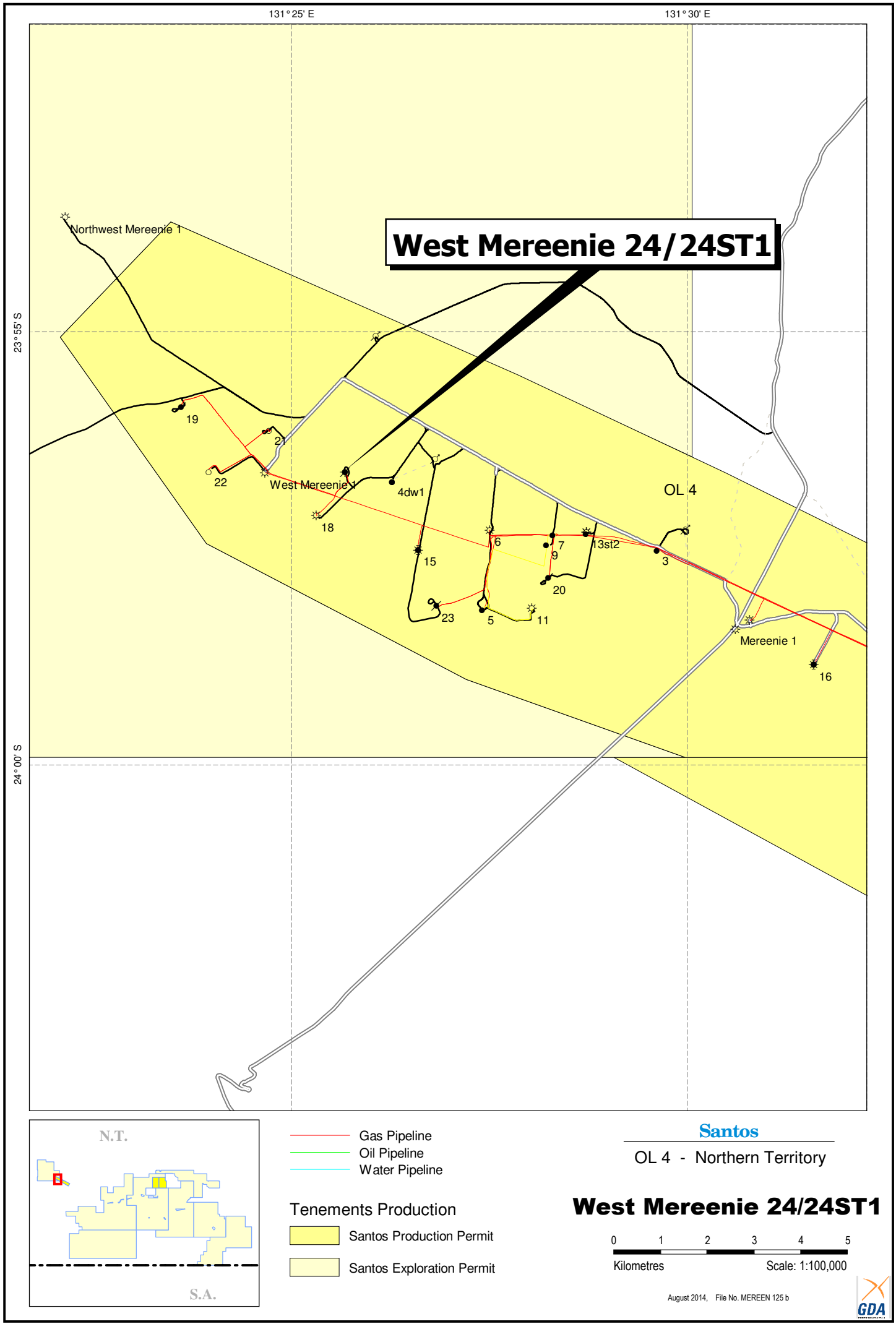
(A.B.N. 80 007 550 923)

Prepared By:
D. ADDERLEY
(Consultant)
August, 2014

WEST MEREENIE 24 & 24ST1

TABLE OF CONTENTS

LOCATION MAP


131° 25' E
131° 30' E
23° 55' S
24° 00' S
West Mereenie 24/24ST1
Northwest Mereenie 1
West Mereenie 1
4dw1
Mereenie 1
OL 4
19
21
22
18
15
6
7
9
13st2
3
20
23
5
11
16
N.T.
S.A.
Gas Pipeline
Oil Pipeline
Water Pipeline
Tenements Production
Santos Production Permit
Santos Exploration Permit
Santos
OL 4 - Northern Territory
West Mereenie 24/24ST1
0 1 2 3 4 5
Kilometres
Scale: 1:100,000
August 2014, File No. MEREEN 125 b
GDA

WELL CARD

WELL:	WELL CATEGORY: Appraisal
WEST MEREENIE 24 / 24ST1	WELL INTENT: Oil
LAT: 23° 56' 37.31" S LONG: 131° 25' 40.72" E (GDA 94)	
SEISMIC STATION: 220 m NW of M83-05, SP 2187	
ELEVATION GND: 749.28 m RT: 754.43 m	
BLOCK / LICENCE: Mereenie Block / OL 4, Northern Territory	
TD: 1540.0 m (Logger Extrap.), 1540.0 m (Driller)	
PBTD: 1526.9 m (Driller) TOP HOLE TD: 530.0 m (Driller)	
TYPE STRUCTURE: Anticline	
TYPE COMPLETION: Conventional 2 3/8" 4.7 lb/ft J55 EUE tubing	
ZONE(S): Pacoota P3-90, P3-120/130, P3-190 & P3-230/250 (Oil)	

SPUD: 06:00 26/07/2013 with rig Boart Longyear WW07
RIG RELEASE TOP HOLE: 18:00 01/08/2013
RE-ENTRY: 21:30 16/02/2014 with rig Ensign 918
TD: 08:30 11/03/2014
RIG RELEASED: 24:00 16/03/2014 CMPLT: 14/04/2014
RIG: Top Hole: Boart Longyear WW07 Bottom Hole: Ensign 918
STATUS: Single Completion Oil Well (SCO)
REMARKS: Top hole drilled with Boart Longyear WW07, production hole drilled with Ensign 918. West Mereenie 24ST1 sidetracked at 1218.5m on 04/03/2014. Cased and completed Pacoota P3 oil well. Pay identified in the Stairway (gas) and Pacoota (oil & gas).

HOLE O.D.	CSG SIZE	SHOE DEPTH	TYPE
12 ¼"	9 ⅝"	527.6 m (D&L)	36.0 lb/ft
8 ½"	5 ½"	1538.2 m (D)	15.5 lb/ft
	2 ⅜"	1426.9 m (D)	4.7 lb/ft

AGE	FORMATION OR ZONE TOPS	DEPTH (m)		THICKNESS TVD (m)	HIGH (H) LOW (L)
		LOGGERS	TVD SS		
L. SILURIAN TO M. DEVONIAN	MEREENIE SANDSTONE	5.2	+749.3	420.7	-
LATE ORDOVICIAN	CARMICHAEL SANDSTONE	426.0	+328.6	90.9	18.4 m L
MID TO LATE ORDOVICIAN	UPPER STOKES SILTSTONE	517.0	+237.7	272.4	1.3 m L
MID ORDOVICIAN	LOWER STOKES SILTSTONE	790.0	-34.7	76.7	4.7 m L
MID ORDOVICIAN	UPPER STAIRWAY	867.0	-111.4	62.9	4.4 m L
MID ORDOVICIAN	MIDDLE STAIRWAY	930.2	-174.3	115.8	0.7 m H
MID ORDOVICIAN	LOWER STAIRWAY 2	1046.2	-290.1	62.0	7.9 m H
MID ORDOVICIAN	LOWER STAIRWAY 1	1108.2	-352.1	31.2	9.9 m H
EARLY ORDOVICIAN	HORN VALLEY SILTSTONE	1139.4	-383.3	83.2	13.7 m H
EARLY ORDOVICIAN	PACOOTA P1	1222.8	-466.5	102.4	17.5 m H
EARLY ORDOVICIAN	PACOOTA P2	1329.6	-569.0	63.2	15.0 m H
EARLY ORDOVICIAN	PACOOTA P3	1400.6	-632.1	72.5	13.9 m H
EARLY ORDOVICIAN	PACOOTA P3-120	1437.0	-661.3	-	12.7 m H
EARLY ORDOVICIAN	PACOOTA P3-190	1463.7	-681.2	-	14.8 m H
EARLY ORDOVICIAN	PACOOTA P4	1496.5	-704.6	30.7+	13.4 m H
	TOTAL DEPTH (LOGGER EXT.)	**1540.0**	**-735.3**		

LOG INTERPRETATION (Category 1 – Proved Producibility)

FORMATION / SAND	INTERVAL (m)	NET PAY (m)	$Ø_T$ %	SW_T %
GAS	**MD**			
Pacoota P1-280	1304.7 – 1310.7	3.30	6.7	14.8
Pacoota P1-310	1310.7 – 1324.1	2.57	7.1	19.4
Pacoota P1-350	1324.1 – 1329.6	2.39	5.8	18.8
Pacoota P3-10	1400.6 – 1421.4	2.01	6.3	32.9
TOTAL		**10.27**		
OIL	**MD**			
Pacoota P3-120/130	1437.0 – 1452.2	1.85	10.0	24.2
Pacoota P3-230	1481.6 – 1496.5	2.67	8.4	49.6
TOTAL		**4.52**		

PERFORATIONS (6 shots/ft, 60° phase)

FORMATION	INTERVAL (m)
PACOOTA P3-90	1432.0 – 1433.0
PACOOTA P3-120/130	1445.0 - 1446.4
PACOOTA P3-120/130	1446.4 – 1452.0
PACOOTA P3-190	1455.2 - 1457.7
PACOOTA P3-190	1457.7 - 1463.8
PACOOTA P3-230/250	1465.8 - 1496.2

CORES CUT

FORM.	NO.	INTERVAL (m)	CUT	REC.
		No Cores Cut		

LOG	SUITE / RUN	INTERVAL (m)	BHT / TIME / REMARKS
PEX-HNGS-SP	1 / 1		59.0°C @ 1506.2m
GR		1514 – 10	19 hrs 15 min
HNGS		1515 – 515	
HRLA		1533 – 527.6	
MCFL		1522 – 527.6	
CNL		1527 – 520	
TLD1		1529 – 520	
TLD2		1520 – 520	
SP		1511 – 520	
FMI-Sonic Scan	1 / 2	1539 – 840	60.0°C @ 1513.1m
			25 hrs 45 min

LOG	SUITE / RUN	INTERVAL (m)	BHT / TIME / REMARKS
ECS-CMR	1 / 3	1539 – 840	65.0°C @ 1522.9m
			36 hrs 45 min
MDT-GR	1 / 4	-	POOH - tool failure
MDT-GR	1 / 5	911.6 – 1249.5	POOH – change
			packer rubber
MDT-GR	1 / 6	917 – 1491.8	61.1°C @ 1481.5m
			54 hrs 30 min
	92 points: 15 valid, 15 curtailed, 62 seal failures		

OPEN HOLE FLOW TESTS										
NO.	**INTERVAL (m)**	**FORMATION**	**FLOW (mins)**	**SHUT IN (mins)**	**DIGITAL GAUGE IP / FP (psig)**	**SIP (psig)**	**MAX SURF PRESS (psig)**	**GAS TO SURF (mins)**	**TC / BC**	**REMARKS**
1	1444.1 – 1463.0	P3-120/130	240	269	142 / 197	>1037.1	0.8	-	½"	Rec: 1.2 bbl OCM

SUMMARY:

Location

West Mereenie 24 is an Oil Appraisal Well located approximately 1.05 km west of West Mereenie 4DW1 and 1.1 km north-east of West Mereenie 18. This is on the western north flank within an appraisal step-out location west of West Mereenie 4, in licence area OL4. The well is approximately 290 km west of Alice Springs, the closest facility being the Mereenie Central Treatment Plant 14 km to the south-east, (OL 4, south-west Northern Territory).

Objectives

The 2013-14 Mereenie drilling campaign was designed to target the oil and gas sands within the P1, P3 and P4 of the Pacoota Sandstone, as well as gas within the Lower Stairway Sandstone. The West Mereenie 19 to 24 and East Mereenie 44 to 45 well program's primary targets is oil within the Pacoota P3 and P1 with oil secondary targets within the P4. Gas secondary targets are within the P1 and Lower Stairway Sandstone. The field is defined by four-way dip closure for the Pacoota Sandstone and Stairway Sandstone. The anticline is an elongated north-west to south-east structure on the western side of the West MacDonnell Ranges within the Amadeus Basin. Prior to this campaign, 18 wells had been drilled at West Mereenie.

The primary objective of this campaign is to appraise reservoir extent and fluid limits within the central and western areas of the Pacoota oil reservoirs and bring oil onto production to develop the 2P undeveloped oil reserve. The second objective is to undertake data gathering and other key evaluations of a variety of tight sandstones and organic shales throughout the Ordovician Stairway, Horn Valley and Pacoota sequences. Volumes of contingent gas and tight oil resources have also been identified within the Stairway and Pacoota.

Within the Mereenie Field, oil is produced from the Pacoota P3 reservoir and gas from the Pacoota P1 reservoir, where gas condensate liquid is then separated at surface. The oil and condensate is then mixed and transported by truck. Gas is transported by the NT Gas Pipeline. Any surplus gas is reinjected into the Pacoota P3 reservoir to enhance oil recovery.

West Mereenie 24 is the fourth well in this drilling program, and is located on the western north flank in an appraisal step-out location west of West Mereenie 4 well. The primary targets were the P3-120/130 as well as the P3-190/230/250 within the oil column. The well was designed with a wellbore inclination of 45° and hold 45° lateral to TD at an updip azimuth. This design allows for a more reasonable standoff from both the gas oil contact (GOC) and oil water contact (OWC), allowing for depth prognosis and fluid contact uncertainty.

The greatest risks associated with the West Mereenie 24 well were reservoir quality within the Pacoota P3-190/230 sands, and mechanical risk (frac). In the mean prognosed outcome, one follow-up producer will be required to develop the area tested by West Mereenie 24.

A total of 8.0 m of net oil pay was predicted for the Pacoota P3 Sandstone. The P3-120/130 and the P3-190/230/250 were the primary objectives (oil) of West Mereenie 24, with the secondary target being the Pacoota P4 (oil).

Results Of Drilling

West Mereenie 24 was spudded at 06:00 hours on 26th July, 2013 with the drilling rig Boart Longyear WW07. Surface holes for all wells in this campaign were batch drilled. The 12 ⅜" surface hole for this well was drilled to 376.0 m with an air hammer bit, at which point 12 ¼" Dual Tube Flooded Reverse Circulation (DTFRC) drilling proceeded to 530 m. 9 ⅝" surface casing was set at 527.6 m (D&L). Operations were suspended at 18:00 hours on 1st August, 2013 and the Boart Longyear WW07 rig was released.

At 21:30 hours on 16th February, 2014, West Mereenie 24 was re-entered with the drilling rig Ensign 918. The 9 ⅝" casing shoe was drilled out and 8 ¾" hole was then drilled to 533 m, and a Formation Integrity Test (FIT) attempted, unsuccessfully. A subsequent cement plug was pumped and squeeze job performed. The cement plug was then drilled out and 3 m of new hole was drilled to 536 m at which point a Formation Integrity Test (FIT) was performed to 15.0 ppg EMW. The 8 ¾" production hole was then air hammer drilled ahead to 950 m. A tricone 8 ½" bit and directional assembly was picked up and ran in hole, air drilling continued from 950 m to 1329 m. At this point the well was displaced to mud and the drill string pulled out of hole for a bit trip. At surface it was discovered that the bit and dog-sub had been left in hole due to a down-hole fire. Numerous attempts were made to fish the bit out of hole but were unsuccessful. West Mereenie 24 was plugged back to 1207.5 m. Time drilling commenced from 1207.5 m and continued to 1220 m.

West Mereenie 24 was side tracked to West Mereenie 24ST1 from 1218.5 m at 14:45 hours 4th March, 2014 when 100% formation was observed in the cuttings. After pulling out of hole to change the bit and BHA, 8 ½" directional production hole was then drilled ahead from 1220 m to 1409.7 m, at which point a bit trip was performed. Drilling then resumed from 1409.7 m to 1463 m. At this time DST 1 was performed. Inflate on bottom DST 1: 1444.1 m to 1463.0 m was performed in the Pacoota P3-120/130, recovering 1.2 bbls (48 m) of oil cut mud (0.80 SG, 45°API @ 60°F). Drilling continued from 1463 m to a total depth of 1540.0 m (both Driller and Logger Extrapolated), 43.5 mMD into the Pacoota P4. Total depth was reached at 08:30 hours on 11th March, 2014.

While drilling both West Mereenie 24 and 24ST1, Measurement While Drilling (MWD) surveys were taken at regular intervals to ensure that the well intersected the Pacoota P3-120/130 primary objective within the specified 35 m lateral tolerance in structural dip direction and 70 m lateral tolerance orthogonal to planned well azimuth, at an inclination of 45°. At total depth, it is estimated that the well was displaced 202.7 m at an azimuth of 231.8° from the surface location.

Regular gas flow tests were performed at formation boundaries while drilling and whenever the blooie line gas flare noticeably increased in size. A total of eight flow tests were performed while air drilling in West Mereenie 24. A maximum flow rate of 8.9 MMcfd was observed at 1329 m at the top of the Pacoota P2.

After pulling out of hole to surface, the following suite of Schlumberger wireline logs were performed, Run: 1) PEX-HNGS-HRLA-SP, Run 2) FMI-Sonic Scanner, Run 3) ECS-CMR-GR, Run 4) MDT-GR (Tool failure), Run 5) MDT-GR (POOH to change packer rubber), Run 6: MDT-GR (92 points: 15 valid, 15 curtailed, 62 seal failures). Based on wireline log analysis and hydrocarbon shows while drilling, West Mereenie 24ST1 was cased and suspended.

Formation tops in West Mereenie 24 and 24ST1 ranged from 18.4 m low (Carmichael Sandstone) to 17.5 m high (Pacoota P1) to prognosis. The primary objectives Pacoota P3-120/130 and P3-190/230/250 were 12.7 m high and 14.8 m high to prognosis respectively.

Oil fluorescence shows were encountered as follows in West Mereenie 24: 898.5 m to 908 m (Upper Stairway Sandstone) trace oil fluorescence, 1 unit (77/15/6/2 %); 1126 m to 1130 m (Lower Stairway 1) trace oil fluorescence, 9 units (72/16/5/4/3 %).

Oil fluorescence shows were encountered as follows in West Mereenie 24ST1: 1248.5 m to 1252 m (Pacoota P1-80) trace oil fluorescence, 220 units (66/17/9/5/3 %); 1282.5 m to 1285 m (Pacoota P1-210) trace oil fluorescence, 74 units (57/20/12/7/4 %); 1325 m to 1328 m (Pacoota P1-350) trace oil fluorescence, 93 units (74/14/6/3/2 %); 1345 m to 1349.5 m (Pacoota P2) trace oil fluorescence, 150 units (53/24/13/6/4 %); 1400.5 m to 1417 m (Pacoota P3-10) 5% to trace oil fluorescence, 160 units (69/15/8/5/3 %); 1432 m to 1435 m (Pacoota P3-90) trace to 10% oil fluorescence, 107 units (41/21/16/13/9 %); 1448 m to 1452 m (Pacoota P3-120/130) 60-80% oil fluorescence, 2517 units (40/22/18/12/8 %); 1455.5 m to 1458 m (Pacoota P3-150) 10% oil fluorescence, 376 units (37/21/18/14/10 %); 1463 m to 1464 m (Pacoota P3-190) 10% oil fluorescence, 160 units (34/20/18/15/13 %); 1472.5 m to 1476 m (Pacoota P3-190) trace oil fluorescence, 260 units (40/21/18/13/8 %); 1485 m to 1493.5 m (Pacoota P3-230) trace to 10% oil fluorescence, 496 units (35/19/17/17/12 %).

Log analysis (combined with hydrocarbon shows recorded while drilling) indicates 10.27 mMD (9.41 mTVD) of Category 1 net gas pay (total porosity 5.8 to 7.1%, Sw 14.8 to 32.9%) within the Pacoota Sandstone and 4.52 mMD (3.28 mTVD) of Category 1 net oil pay (total porosity 8.4 to 10.0%, Sw 24.2 to 49.6%) within the Pacoota Sandstone for West Mereenie 24ST1. Unconventional pay was not defined for West Mereenie 24ST1.

Changes to Current Reservoir Model and Implications for Future Field Management

The key geological outcomes from the West Mereenie 24ST1 well, namely structural position and sand development, were generally near to pre-drill expectations. Consequently, the impact on pool area and HIP will be relatively immaterial. The degree of reservoir pressure depletion in the P3-120/130 was close to the pre-drill expectations. The reservoir pressure in the lower P3 (230/250 sands) was however, lower than predicted, suggesting greater-than-predicted influence from the West Mereenie 1 gas production well 2km to the east. The evidence of reservoir pressure depletion confirms that the primary P3 oil reservoir target sands are laterally extensive around WM24ST1 which should support a strong reserve recovery.

The WM24ST1 result will lend impetus to a range of further development opportunities in the vicinity, including further drilling locations stepping out along the flank, plus the re-entry and re-stimulation of the existing WM4DW well.

Status

Completion of West Mereenie 24ST1 as a single oil producer was undertaken in mid-April, 2014. Two fracture stimulation stages were conducted within the Pacoota-3 oil reservoir interval. 2 3/8" production tubing was run to 1426.9 m, including two side pocket mandrels for gas-lift.

AUTHOR: D. ADDERLEY | **DATE:** August, 2014

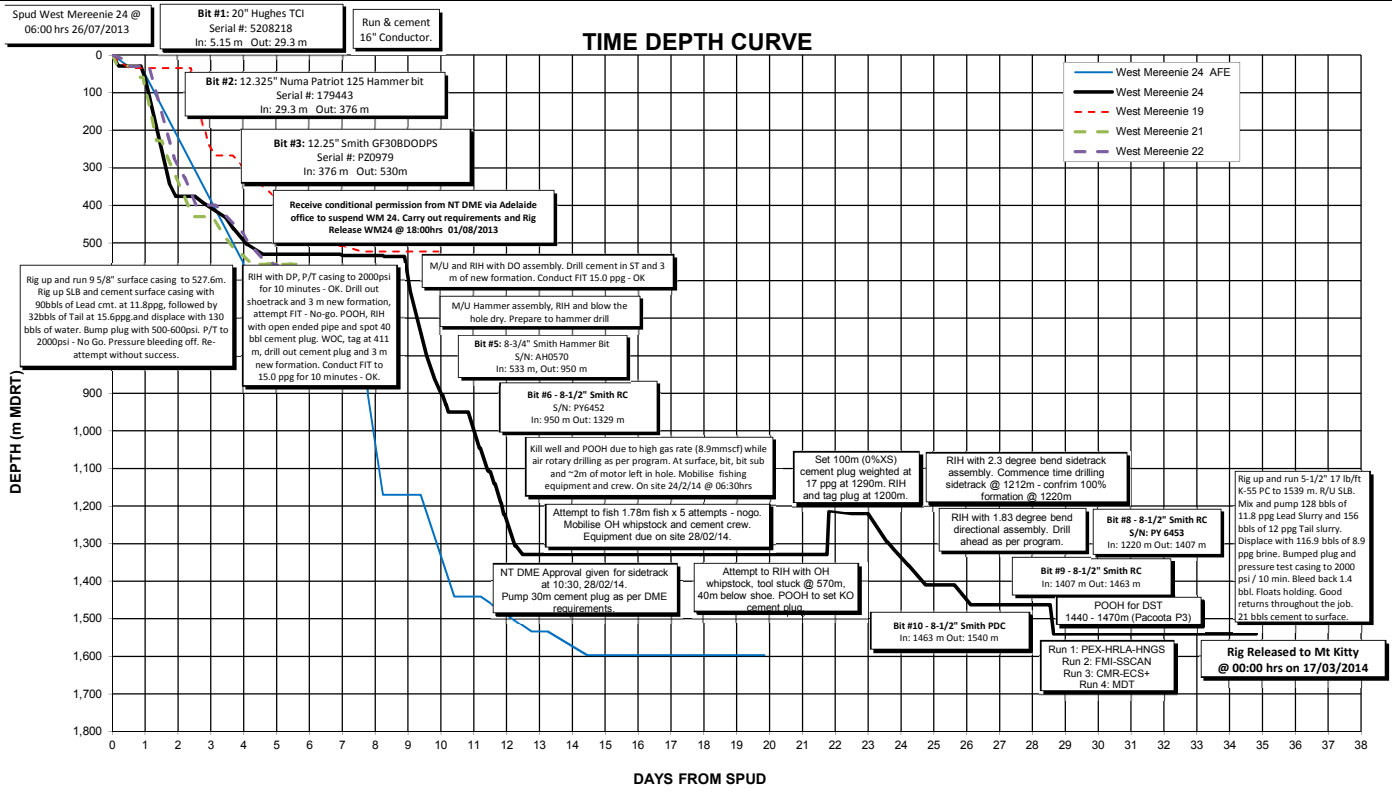
TIME vs DEPTH CURVE

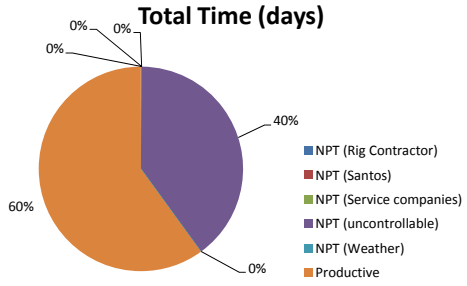
Well:	**West Mereenie 24**
Date:	17/03/2014 Day 35
Operator:	Santos
Rig:	BLY WW07
Location:	Amadeus Basin
AFE:	5601062

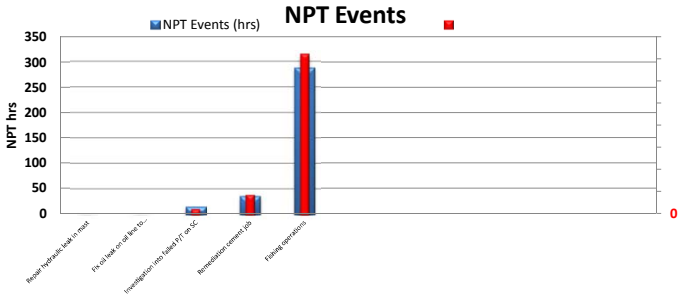
Operations Summary (24 hours through midnight):
Continue to RIH with 5 1/2" casing, circulate casing, cement casing, set casing slips,
Lift BOP and cut casing, dress stump and nipple down BOP
Nipple up well head pressure test, rig down top drive.
Rig Released to Mt Kitty 00:00 hrs 17/03/14.

06:00 Update:
RDMO to Mt Kitty

Forecast:
RDMO to Mt Kitty







Drilling Performance

	AFE	Daily Actual	Cum Actual	Estimated Final
Surface Hole Days	8.0		35.4	7.1
Total Well Days	24.8		35.4	36.8
Total Well Spud to TD (Days)	14.5			21.5
Total Well Spud to Rig Release (Days)	19.8			31.8
Measured Depth (m)	1,597		1,540	
Drilled Interval (m) Last 30Hrs		N/A		
AVG ROP (m/hr) - Last 30Hrs		N/A		

	Target	Actual
LTI	0	0
ADI	0	0
MTI	0	0
FAC	0	0
NMI	0	0

	Target	Actual
Contained Spills	0	0
Uncontained Spills	0	0

Happy Hour Targets Summary

High Return Targets	Time (days) AFE	Pacesetter	Actual	Efficiency (days) Potential	Actual
1. Surface Hole	3.6	3.4	4.0	-0.5	-0.4
2. Surface Casing	1.7	1.6	1.9	-0.3	-0.2
3. Production Hole	8.5	8.1	N/A	-0.2	N/A

Happy Hour Performance Summary

AFE	24.8 days
Happy Hour Target	23.8 days
Actual	
Happy Hour Variance	

WELL HISTORY

1. GENERAL DATA

Well Name:	West Mereenie 24 & West Mereenie 24ST1
Well Classification:	Northern Territory Oil Appraisal Well
Interest Holders:	Santos QNT 93.7500% Santos Ltd 6.2500%
Participating Interests:	Santos QNT 93.7500% Santos Ltd 6.2500%
Operator:	SANTOS
Block / Licence:	OL 4, Northern Territory
Surveyed Location:	Latitude: 23° 56' 37.31" South (GDA 94) Longitude: 131° 25' 40.72" East (GDA 94)
Surveyed Elevation:	Ground Level: 749.28 m Rotary Level: 754.43 m
Seismic Location:	220 m north-west of M83-05, SP 2187
Total Depth West Mereenie 24:	Driller: 1329.0 m Logger: N/A
Total Depth West Mereenie 24ST1:	Driller: 1540.0 m Logger: 1540.0 m (Extrapolated)
Completion:	**Surface Casing:** 45 joints of 9 ⅝", 36 lb/ft, K55, BTC casing set at 527.6 m (Driller & Logger) **Production Casing:** 125 joints of 5 ½", 15.5 lb/ft, K55, BTC casing set at 1538.2 m (Driller) **Production Tubing:** 147 joints of 2 3/8", 4.7 lb/ft, J55, EUE tubing set at 1426.9 m (Driller) **PBTD:** 1526.9 m
Status:	Single Completion Oil Well (SCO)

2. DRILLING DATA

Date Drilling Commenced:	06:00 hours, 26th July, 2013
Date Drilling Suspended:	18:00 hours, 01st August, 2013
Date Well Re-entered:	21:30 hours, 16th February, 2014
Date Drilling Completed:	08:30 hours, 11th March, 2014
Date Rig Released:	24:00 hours, 16th March, 2014
Contractor:	Boart Longyear / Ensign International Energy Services
Rig:	Boart Longyear WW07 / Ensign 918
Rig Specifications:	Refer to Appendix XII

3. DRILLING SUMMARY

(a) Drilling Summary (All Depths Driller's RT unless otherwise stated)

West Mereenie 24 was spudded at 06:00 hours on 26th July, 2013 with the drilling rig Boart Longyear WW07. Surface holes for all wells in this campaign were batch drilled. The 12 ⅜" surface hole for this well was drilled to 376.0 m with an air hammer bit, at which point 12 ¼" Dual Tube Flooded Reverse Circulation (DTFRC) drilling proceeded to 530 m. 9 ⅝" surface casing was set at 527.6 m (D&L). Operations were suspended at 18:00 hours on 1st August, 2013 and the Boart Longyear WW07 rig was released.

At 21:30 hours on 16th February, 2014, West Mereenie 24 was re-entered with the drilling rig Ensign 918. The 9 ⅝" casing shoe was drilled out and 8 ¾" hole was then drilled to 533 m, and a Formation Integrity Test (FIT) attempted, unsuccessfully. A subsequent cement plug was pumped and squeeze job performed. The cement plug was then drilled out and 3 m of new hole was drilled to 536 m at which point a Formation Integrity Test (FIT) was performed to 15.0 ppg EMW. The 8 ¾" production hole was then air hammer drilled ahead to 950 m. A tricone 8 ½" bit and directional assembly was picked up and ran in hole, air drilling continued from 950 m to 1329 m. At this point the well was displaced to mud and the drill string pulled out of hole for a bit trip. At surface it was discovered that the bit and dog-sub had been left in hole due to a down-hole fire. Numerous attempts were made to fish the bit out of hole but were unsuccessful. West Mereenie 24 was plugged back to 1207.5 m. Time drilling commenced from 1207.5 m and continued to 1220 m.

West Mereenie 24 was side tracked to West Mereenie 24ST1 from 1218.5 m at 14:45 hours 4th March, 2014 when 100% formation was observed in the cuttings. After pulling out of hole to change the bit and BHA, 8 ½" directional production hole was then drilled ahead from 1220 m to 1409.7 m, at which point a bit trip was performed. Drilling then resumed from 1409.7 m to 1463 m. At this time DST 1 was performed. Inflate on bottom DST 1: 1444.1 m to 1463.0 m was performed in the Pacoota P3-120/130, recovering 1.2 bbls (48 m) of oil cut mud (0.80 SG, 45°API @ 60°F). Drilling continued from 1463 m to a total depth of 1540.0 m (both Driller and Logger Extrapolated), 43.5 mMD into the Pacoota P4. Total depth was reached at 08:30 hours on 11th March, 2014.

While drilling both West Mereenie 24 and 24ST1, Measurement While Drilling (MWD) surveys were taken at regular intervals to ensure that the well intersected the Pacoota P3-120/130 primary objective within the specified 35 m lateral tolerance in structural dip direction and 70 m lateral tolerance orthogonal to planned well azimuth, at an inclination of 45°. At total depth, it is estimated that the well was displaced 202.7 m at an azimuth of 231.8° from the surface location.

Regular gas flow tests were performed at formation boundaries while drilling and whenever the blooie line gas flare noticeably increased in size. A total of eight flow tests were performed while air drilling in West Mereenie 24. A maximum flow rate of 8.9 MMcfd was observed at 1329 m at the top of the Pacoota P2.

After pulling out of hole to surface, the following suite of Schlumberger wireline logs were performed, Run: 1) PEX-HNGS-HRLA-SP, Run 2) FMI-Sonic Scanner, Run 3) ECS-CMR-GR, Run 4) MDT-GR (Tool failure), Run 5) MDT-GR (POOH to change packer rubber), Run 6: MDT-GR (92 points: 15 valid, 15 curtailed, 62 seal failures). Based on wireline log analysis and hydrocarbon shows while drilling, West Mereenie 24ST1 was cased and suspended.

Tables I and II summarise the major drilling operations in this hole. More comprehensive summaries are appended to this report (Appendix XI: Drilling: Final Well Report).

TABLE I: CASING, HOLE, AND CEMENT DETAILS

BIT SIZE	DEPTH	CASING SIZE	CASING DEPTH	JNTS	CASING TYPE	CEMENT
12 ⅜" / 12 ¼"	530 m	9 5/8"	527.6 m	45	36 lb/ft K55 BTC	122 barrels (364 sacks) of 11.8-15.6ppg Class 'A' plus additives.
8 ¾" / 8 ½"	1540 m	5 1/2"	1538.2 m	125	15.5 lb/ft K55 BTC	284 barrels of 11.8-12.0ppg cement plus additives.

TABLE II: SUMMARY OF MUD SYSTEMS

HOLE SECTION	12 ⅜" WM 24	12 ¼"	8 ¾" / 8 ½"	8 ½" WM 24ST1
Interval	Spud to 376 m	376 m to 536 m	536 m to 1329 m	1218.5 m to 1540 m
Mud Type	Air Drilled	Water	Air Drilled	NaCl-Polymer
Mud Weight (ppg)	-	8.33	-	8.8 – 9.0
Funnel Viscosity	-	-	-	31 - 36
(sec/qt)	-	-	-	2 - 9
PV (cps)	-	-	-	5 - 13
YP (lb/100ft^2)	-	-	-	9.0 – 11.5
pH	-	-	-	6.5 - 18
API Fluid Loss	-	-	-	34000 - 43000
Chlorides (ppm)	-	-	-	5.8 – 6.2
NaCL (%)				

(b) Trouble Time

A total of 345 hours of Trouble Time were recorded during the drilling of West Mereenie 24 & 24ST1. The well duration was 843.0 hours (spud to rig release); 40.9% of this total operational time was attributed to non-productive time. A comprehensive time breakdown is available in Appendix XI (Drilling: Final Well Report).

TABLE III: SUMMARY OF NON-PRODUCTIVE TIME

OPERATION	HOURS LOST	% OF LOST TIME
Investigation, Failed P/T on SC	15	4.3
Remediation Cement Job	40	11.6
Fishing Operations	290	84.1
TOTAL	**345**	**100.0**

(c) Water Supply

Make up water was trucked from the West Mereenie 15 Bore, and analysed on site with the following results:

TABLE IV: WATER SUPPLY ANALYSIS

SOURCE	West Mereenie 15 Bore
DEPTHS USED	Spud to TD
Chlorides	150mg/l
pH	7.0
Hardness	8mg/l
Pf / Mf	- / -

(d) Mudlogging

Mudlogging services were provided by Geoservices (Unit 015). Samples were collected, washed and described at 15 m intervals from Surface to 855 m, 3 m intervals from 855 m to 1540 m Total Depth (not all samples were able to be collected due to high ROP).

All samples were checked for oil shows using ultraviolet fluorescence from 530 m to TD. Gas levels were monitored from 530 m to TD, using an FID total gas detector and FID chromatograph (GeoFast). Total gas was monitored in gas units (1 unit = 200 ppm methane equivalent in air) and the chromatograph was calibrated to measure ppm (parts per million) concentrations of the alkane gasses methane, ethane, propane, butane and pentane. Other parameters monitored included rate of penetration, weight on hook, stand pipe pressure, RPM, torque and mud pit levels.

(e) Testing

One Drill Stem Test was run in West Mereenie 24ST1. Test reports and charts are presented in Appendix VII: Drill Stem Test Data.

DST #1, 1444.1 m – 1463.0 m (Pacoota P3-120/130); open 240 mins / closed 269 mins NFTS, NGTS. Reverse circulated 1.2 bbl (48 m) of 0.8 SG, 45°API oil.

(f) Coring

No Cores were cut in West Mereenie 24 or 24ST1.

(g) Electric Logging

One suite of electric logs was run in West Mereenie 24ST1:

TABLE V: ELECTRIC LOGGING SUMMARY

TYPE OF LOG	SUITE / RUN	INTERVAL (m)	BHT / TIME / REMARKS
PEX-HNGS-SP	1 / 1		59.0°C @ 1506.2 m
GR		1514 – 10	19 Hours 15 Min
HNGS		1515 – 515	
HRLA		1533 – 527.6	
MCFL		1522 – 527.6	
CNL		1527 – 520	
TLD1		1529 – 520	
TLD2		1520 – 520	
SP		1511 – 520	
FMI-Sonic Scan	1 / 2	1539 – 840	60.0°C @ 1513.1 m
			25 Hours 45 Min
ECS-CMR-GR	1 / 3	1539 – 840	65.0°C @ 1522.9 m
			36 Hours 45 Min
MDT-GR	1 / 4	-	Tool Failure - POOH
MDT-GR	1 / 5	911.6 – 1249.5	-
MDT-GR	1 / 6	917 – 1491.8	61.1°C @ 1481.5 m
			54 Hours 30 Min
			92 Points: 15 Valid, 15 Curtailed, 62 Seal Failures.

(h) Geothermal Gradient

An extrapolated bottom hole temperature of 62.6°C at 1540.0 m (Logger Extrapolated) was calculated. This gives a geothermal gradient of 27.08°C/km. Data used for calculations is as follows:

TABLE VI: TEMPERATURE SUMMARY

	MAX RECORDED TEMP (°C)	DEPTH RECORDED (m)	TIME SINCE CIRCULATION (hours)
Run 1	59.0	1506.2	19.25
Run 2	60.0	1513.1	25.75
Run 3	65.0	1522.9	36.75
Run 6	61.1	1481.5	54.50

(i) Hole Deviation

West Mereenie 24 was designed as a deviated well to intersect the primary objectives Pacoota P3-120/130 and P3-190/230/250. Maximum recorded deviation was 45.7° from 1524.1 m. The well bore deviation was monitored utilising a gyro in the surface hole and Measurement While Drilling (MWD) surveys from the surface casing shoe to TD. Maximum well displacement was 205.0 m at 232.2° (Grid North) at 1540 m (TD).

Deviation survey results are summarised in Appendix VI (Deviation Data) and on the Composite Log (Enclosure I) and Mudlog (Enclosure II).

(j) Velocity Survey

No Velocity Survey was run in West Mereenie 24 or 24ST1.

(k) Completion Summary

West Mereenie 24ST1 has been completed with 2 ⅜" production tubing as an oil producer. Four zones were perforated in mid April 2014, Pacoota P3-90 (1432.0 m to 1433.0 m), Pacoota P3-120/130 (1445.0 m to 1452.0 m), Pacoota P3-190 (1455.2 m to 1463.8 m) and the Pacoota P3-230/250 (1465.8 m to 1496.2 m).

GEOLOGY

1. PRE-DRILLING SUMMARY (after Well Proposal)

West Mereenie 24 is an Oil Appraisal Well located approximately 1.05 km west of West Mereenie 4DW1 and 1.1 km north-east of West Mereenie 18. This is on the western north flank within an appraisal step-out location west of West Mereenie 4, in licence area OL4. The well is approximately 290 km west of Alice Springs, the closest facility being the Mereenie Central Treatment Plant 14 km to the south-east, (OL 4, south-west Northern Territory).

The 2013-14 Mereenie drilling campaign was designed to target the oil and gas sands within the P1, P3 and P4 of the Pacoota Sandstone, as well as gas within the Lower Stairway Sandstone. The West Mereenie 19 to 24 and East Mereenie 44 to 45 well program's primary targets is oil within the Pacoota P3 and P1 with oil secondary targets within the P4. Gas secondary targets are within the P1 and Lower Stairway Sandstone. The field is defined by four-way dip closure for the Pacoota Sandstone and Stairway Sandstone. The anticline is an elongated north-west to south-east structure on the western side of the West MacDonnell Ranges within the Amadeus Basin. Prior to this campaign, 18 wells had been drilled at West Mereenie.

A total of 8.0 m of net oil pay was predicted for the Pacoota P3 Sandstone. The P3-120/130 and the P3-190/230/250 were the primary objectives (oil) of West Mereenie 24, while the secondary target was the Pacoota P4 (oil).

2. DRILLING RATIONALE (after Well Proposal)

The primary objective of this campaign is to appraise reservoir extent and fluid limits in the central and western areas of the Pacoota oil reservoirs and bring oil on production to develop the 2P undeveloped oil reserve. The second objective is to undertake data gathering and other key evaluation of a variety of tight sandstones and organic shales throughout the Ordovician Stairway, Horn Valley and Pacoota sequences. Volumes of contingent gas and tight oil resources have also been identified within the Stairway and Pacoota.

The Mereenie Field was discovered in 1963 and commenced production in 1984, delivering hydrocarbon liquids to South Australia and gas to Northern Territory. The field is ± 290 km west of the town of Alice Springs, within the Amadeus Basin in the southern region of the Northern Territory.

Santos first acquired equity and then assumed Operatorship for the field in 1993, nine years after first production.

Prior to this campaign, a total of sixty-two wells had been drilled in the field since discovery. The majority of the historical wells have been drilled to intersect key target sands within the oil rim. Only eight of the sixty-two wells have been located on the structural crest, up-dip of the oil rims, specifically to produce from the gas cap.

In the Mereenie Field, oil is produced from the Pacoota P3 reservoir and gas from the Pacoota P1 reservoir, gas condensate liquid is then separated at surface. The oil and condensate is then mixed and transported by truck, gas is transported by the NT Gas Pipeline. Any surplus gas is reinjected into the Pacoota P3 reservoir to enhance oil recovery.

West Mereenie 24 is the fourth well in this drilling program, and is located on the western north flank in an appraisal step-out location west of West Mereenie 4 well. The primary targets were the P3-120/130 as well as the P3-190/230/250 within the oil column. The well was designed with a wellbore inclination of 45° and hold 45° lateral to TD, at an updip azimuth. This design allows for a more reasonable standoff from both the gas oil contact (GOC) and oil water contact (OWC), allowing for depth prognosis and fluid contact uncertainty.

The greatest risks associated with the West Mereenie 24 well were reservoir quality within the Pacoota P3-190/230 sands, and mechanical risk (frac). In the mean prognosed outcome, one follow-up producer will be required to develop the area tested by West Mereenie 24.

A total of 8.0 m of net oil pay was predicted for the Pacoota P3 Sandstone. The P3-120/130 and the P3-190/230/250 were the primary objectives (oil) of West Mereenie 24, with the secondary target being the Pacoota P4 (oil).

3. RESULTS OF DRILLING

(a) Stratigraphy (Logger's Depths)

The following table lists the formations intersected in West Mereenie 24 & 24ST1, together with subsea elevations and thicknesses. All depths are Logger's Depths.

TABLE VII: WEST MEREENIE 24 & 24ST1 STRATIGRAPHY

AGE	FORMATIONS	MDRT (m)	TVD SS (m)	THICKNESS TVD (m)
L. SILURIAN TO M. DEV.	MEREENIE SANDSTONE	5.2	+749.3	420.7
LATE ORDOVICIAN	CARMICHAEL SANDSTONE	426.0	+328.6	90.9
MID TO L. ORDOVICIAN	UPPER STOKES SILTSTONE	517.0	+237.7	272.4
MID ORDOVICIAN	LOWER STOKES SILTSTONE	790.0	-34.7	76.7
MID ORDOVICIAN	UPPER STAIRWAY	867.0	-111.4	62.9
MID ORDOVICIAN	MIDDLE STAIRWAY	930.2	-174.3	115.8
MID ORDOVICIAN	LOWER STAIRWAY 2	1046.2	-290.1	62.0
MID ORDOVICIAN	LOWER STAIRWAY 1	1108.2	-352.1	31.2
EARLY ORDOVICIAN	HORN VALLEY SILTSTONE	1139.4	-383.3	83.2
EARLY ORDOVICIAN	PACOOTA P1	1222.8	-466.5	102.4
EARLY ORDOVICIAN	PACOOTA P2	1329.6	-569.0	63.2
EARLY ORDOVICIAN	PACOOTA P3	1400.6	-632.1	72.5
EARLY ORDOVICIAN	PACOOTA P3-120	1437.0	-661.3	-
EARLY ORDOVICIAN	PACOOTA P3-190	1463.7	-681.2	-
EARLY ORDOVICIAN	PACOOTA P4	1496.5	-704.6	30.7+
	TOTAL DEPTH (LGR EXT.)	**1540.0**	**-735.1**	

Cuttings samples were collected, washed and described at 15 m intervals from Surface to 855 m, 3 m intervals from 855 m to 1540.0 m (Loggers extrapolated TD). Not all samples were able to be collected due to high ROP.

A brief summary of the section penetrated in West Mereenie 24 & 24ST1 (with associated depositional environments) is found below. For detailed lithological descriptions refer to Appendix Ia.

The stratigraphic sequence penetrated by West Mereenie 24 & 24ST1 consists of aeolian, fluvial, lacustrine, and shallow marine sediments comprising sandstones, siltstones, and minor carbonates of Late Silurian to Early Ordovician age.

Relatively restricted clastic deposits in the Ordovician of the Amadeus Basin include the marginal marine Pacoota Sandstone, the shallow marine Horn Valley Siltstone, and the tidally influenced Stairway Sandstone.

Total depth for West Mereenie 24ST1 was reached at 1540.0 m (-735.3m TVDSS), 30.7 m TVD into the P4 of the **PACOOTA SANDSTONE (Early Ordovician).** Geologically, the Pacoota Sandstone forms a thick unit of dominantly sandstones and siltstones, deposited in alluvial, coastal and marine shoreface settings. The Pacoota Sandstone has been subdivided into four sub-units from the P1 at the top to the P4 at the base. Of these the P1 and P3 units are the most commercially productive.

Conformably overlying the Pacoota Sandstone is the **HORN VALLEY SILTSTONE (Early Ordovician).** The formation is a massive dark grey brown siltstone sequence with occasional fossiliferous limestone interbeds. The Horn Valley Siltstone was deposited in a predominantly shallow marine environment.

The **STARIWAY SANDSTONE (Mid Ordovician)** conformably overlies the Horn Valley Siltstone. The formation is divided into an Upper dominantly sandstone unit, a Middle siltstone unit and Lower interbedded sandstone / siltstone unit. The sandstones were deposited in a predominantly tidally influenced marine depositional environment.

The **STOKES FORMATION (Mid to Late Ordovician)** conformably overlies the Stairway Sandstone and forms the seal for the hydrocarbon accumulations of the Mereenie Anticline. The formation consists of a massive siltstone sequence, interbedded with minor sandstones. The formation was deposited in a predominantly shallow marine environment.

Conformably overlying the Stokes Formation is the **CARMICHAEL SANDSTONE (Late Ordovician)**. The formation is a sandstone sequence with minor siltstone interbeds. The formation was deposited in an estuarine environment.

Unconformably overlying the Carmichael Sandstone is the **MEREENIE SANDSTONE (Late Silurian to Mid Devonian)**. The formation consists of a massive sandstone sequence that was deposited in a shallow marine and aeolian environment. The Mereenie Sandstone is a permeable groundwater aquifer in this area.

The Mereenie Sandstone is overlain by **UNDIFFERENTIATED SURFICIAL DEPOSITS (Quaternary)**. A thin veneer of iron stained quartz sand of aeolian origin is observed at surface.

For further details concerning the formations encountered in West Mereenie 24 & 24ST1, refer to Appendix I of this report.

(b) Stratigraphic Prognosis (after Well Proposal)

The stratigraphic sequence intersected in West Mereenie 24 & 24ST1 was as prognosed, as illustrated by the table below. Formation tops in West Mereenie 24 and 24ST1 ranged from 18.4 m low (Carmichael Sandstone) to 17.5 m high (Pacoota P1) to prognosis. The primary objectives Pacoota P3-120/130 and P3-190/230/250 were 12.7 m high and 14.8 m high to prognosis respectively. The Pacoota P3-120/130 was 10.3 m high to the correlation well West Mereenie 4DW1. Formation thicknesses were within ± 28.7 m of prognosis.

The depth prognosis (and actual well results) for West Mereenie 24 & 24ST1 are tabled below. All depths quoted in this table are Logger's Depths:

TABLE VIII: ACTUAL VERSUS PROGNOSED DEPTHS AND THICKNESSES IN WEST MEREENIE 24 & 24ST1

FORMATION	PROG TVD SS DEPTH (m)	ACT TVD SS DEPTH (m)	DEPTH DIFF (m)	PROG TVD THICK (m)	ACT TVD THICK (m)	THICK DIFF (m)
MEREENIE SANDSTONE	+749.3	+749.3	-	402.3	420.7	+18.4
CARMICHAEL SANDSTONE	+347.0	+328.6	18.4 L	108.0	90.9	-17.1
UPPER STOKES SILTSTONE	+239.0	+237.7	1.3 L	269.0	272.4	+3.4
LOWER STOKES SILTSTONE	-30.0	-34.7	4.7 L	77.0	76.7	+0.3
UPPER STAIRWAY	-107.0	-111.4	4.4 L	68.0	62.9	-5.1
MIDDLE STAIRWAY	-175.0	-174.3	0.7 H	123.0	115.8	-7.2
LOWER STAIRWAY 2	-298.0	-290.1	7.9 H	64.0	62.0	-2.0
LOWER STAIRWAY 1	-362.0	-352.1	9.9 H	35.0	31.2	-3.8
HORN VALLEY SILTSTONE	-397.0	-383.3	13.7 H	87.0	83.2	-3.8
PACOOTA P1	-484.0	-466.5	17.5 H	100.0	102.4	+2.4
PACOOTA P2	-584.0	-569.0	15.0 H	62.0	63.2	+1.2
PACOOTA P3	-646.0	-632.1	13.9 H	72.0	72.5	+0.5
PACOOTA P3-120	-674.0	-661.3	12.7 H	-	-	-
PACOOTA P3-190	-696.0	-681.2	14.8 H	-	-	-
PACOOTA P4	-718.0	-704.6	13.4 H	67.0+	30.7+	-
TOTAL DEPTH (LGR EXT.)	**-785.0**	**-735.3**				

(c) Hydrocarbon Summary (Logger's Depths)

Total gas was recorded from the start of the production hole at 530 m to total depth using an FID total gas detector. One unit of gas is equal to 200 ppm methane equivalent. Chromatographic analysis was determined using an FID chromatograph and these values are quoted as percentages (C1 to C5). Ditch cuttings were collected, washed and described at 15 m intervals from Surface to 855 m and 3 m intervals from 855 m to 1540.0 m Total Depth (Logger Extrapolated), not all samples were caught due to high ROP. All samples were checked for oil shows using ultraviolet fluorescence.

The following table summarises the gas readings and hydrocarbon fluorescence observed while drilling each formation in West Mereenie 24 & 24ST1.

TABLE IX: HYDROCARBON SUMMARY FOR EACH FORMATION

FORMATION OR ZONE	LOGGERS DEPTH (m)		TOTAL GAS (Units)	GAS RATIO (%)	FLUORESCENCE / COMMENTS
	FROM	TO			
UPPER STOKES SLTST	517.0	790.0	0 - 0	-	
LOWER STOKES SLTST	790.0	867.0	0 - 0	-	
UPPER STAIRWAY	867.0	930.2	0 - 30	77/15/6/2	898.5m - 908m: Trace fluorescence.
MIDDLE STAIRWAY	930.2	1046.2	0 - 20	82/13/5	
LOWER STAIRWAY 2	1046.2	1108.2	0 - 5	86/12/0/2	
LOWER STAIRWAY 1	1108.2	1139.4	0 - 9	72/16/5/4/3	1126m - 1130m: Trace fluorescence.
HORN VALLEY SLTST	1139.4	1222.8	0 - 46	60/21/11/5/3	
PACOOTA P1	1222.8	1329.6	3 - 285	66/17/9/5/3	1248.5m - 1252m: Trace fluorescence; 1282.5m - 1285m: Trace fluorescence; 1325m - 1328m: Trace fluorescence.
PACOOTA P2	1329.6	1400.6	2 - 159	53/24/13/6/4	1345m - 1349.5m: Trace fluorescence.
PACOOTA P3	1400.6	1496.5	4 - 2519	40/22/18/12/8	1400.5m - 1417m: 5% to trace fluorescence; 1432m - 1435m: Trace to 10% fluorescence; 1448m - 1452m: 60% to 80% fluorescence; 1463m - 1464m: 10% fluorescence; 1472.5m - 1476m: Trace fluorescence; 1485m - 1493.5m: Trace to 10% fluorescence.
PACOOTA P4	1496.5	1540.0	31 - 113	41/15/15/19/20	

The table below summarises the hydrocarbon shows and associated gas readings, which were observed in cuttings while drilling West Mereenie 24 & 24ST1. These hydrocarbon shows were part of the Daily Geologic Reports sent from the field and which are summarised below. Sandstones in the intervals mentioned below are described in this section:

TABLE X: SUMMARY OF HYDROCARBON SHOWS AND ASSOCIATED GAS READINGS WHILE DRILLING WEST MEREENIE 24 & 24ST1

INTERVAL (Logger Extr.)	LITHOLOGY & HYDROCARBON FLUORESCENCE	GAS
WEST MEREENIE 24		
	UPPER STAIRWAY SANDSTONE	
898.5m – 908m ROP: 2.9 – 4.2 AVE: 3.7 min/m	SANDSTONE: very fine to fine, hard to very hard, tight visual porosity. **FLUORESCENCE: trace dull to moderately bright green white pinpoint fluorescence, trace diffuse crush cut, thin ring residue.**	BG 1 U 77/15/6/2 % (no significant gas peaks interpreted)
	LOWER STAIRWAY 1	
1126m – 1130m ROP: 2.3 – 7.5 AVE: 4.2 min/m	SANDSTONE: very fine, hard to very hard, very poor to tight visual porosity. **FLUORESCENCE: trace dull green yellow pinpoint fluorescence, trace diff crush cut, thin ring residue.**	9 U / 2 U 72/16/5/4/3 % (Maximum at 1125m)
	PACOOTA P1-280	
1306m – 1309m ROP: 5.3 – 17.9 AVE: 8.2 min/m	SANDSTONE: fine to medium, dominantly loose, occasionally hard to very hard, poor visual porosity, poor to fair inferred porosity, no fluorescence. **Maximum gas flare rate = 8.9 MMcfd (6-8m strong dark orange sustained flare).**	4990 U / 70 U 79/13/5/2/1 % (Maximum at 1306m)
WEST MEREENIE 24ST1		
	PACOOTA P1	
1248.5m – 1252m ROP: 7.0 – 13.0 AVE: 8.0 min/m	SANDSTONE: off-white, milky, translucent, very fine to fine, moderately well sorted, rounded to sub-angular, strong siliceous cement, rare argillaceous matrix, occasional lithics, rare pyrite, hard to very hard, rare loose, nil to tight visual porosity, poor inferred porosity. **FLUORESCENCE: Trace dull light green pinpoint fluorescence. Trace crush cut, trace ring residue.**	220 U / 22 U BG 66/17/9/5/3% Maximum at 1248m.
1282.5m – 1285m ROP: 7.5 – 17.0 AVE: 13.0 min/m	SANDSTONE: clear to translucent, opaque light grey, very fine to occasional medium grains, moderately sorted, strong siliceous cement, common light grey to off-white argillaceous matrix, predominantly loose, common hard aggregates, tight visual porosity, poor inferred porosity. **FLUORESCENCE: Trace dull light green/ white fluorescence. Pinpoint, trace diffuse crush cut, trace film residue.**	74 U / 15 U BG 57/20/12/7/4% Maximum at 1283.5m.
1325m – 1328m ROP: 12.0 – 14.0 AVE: 13.0 min/m	**INTERBEDDED SANDSTONE AND SILTSTONE:** SANDSTONE: light grey to very light brown, off-white, translucent in parts, very fine grading to arenaceous SILTSTONE, occasional fine, well sorted, sub-angular to angular, strong siliceous cement, occasional off-white argillaceous matrix, trace carbonaceous specks and lithics, friable to hard aggregates, rare loose, tight to very poor visual porosity, very poor inferred porosity. **FLUORESCENCE: Trace, dull, light green fluorescence. Pinpoint, trace diffuse crus cut, trace ring residue.**	93 U / 20 U BG 75/14/6/3/2% Maximum at 1326m.

	PACOOTA P2	
1345m – 1349.5m ROP: 7.0 – 12.0 AVE: 10.5 min/m	SANDSTONE: off-white to white, light grey, occasional clear to translucent, very fine to fine, moderately sorted, angular to sub-rounded, strong siliceous cement, rare localized off-white argillaceous matrix, rare siliceous overgrowths, moderately hard to hard, rare loose, tight visual porosity, tight to very poor inferred porosity. **FLUORESCENCE: Trace dull to moderately bright, light green/white fluorescence. Spotted, nil crush cut, nil residue.**	150 U / 10 U BG 53/24/13/6/4% Maximum at 1348.5m.
	PACOOTA P3 SANDSTONE	
1400.5m – 1417m ROP: 6.0 – 16.0 AVE: 9.0 min/m	SANDSTONE: clear to translucent, frosted, opaque white in parts, fine to medium, moderately sorted, angular to sub-angular, occasional sub-rounded, strong siliceous cement, rare off-white argillaceous matrix, loose, rare hard aggregates, tight visual porosity, poor inferred porosity. **FLUORESCENCE: 5% - Trace, very dull to dim light green-white fluorescence. Patchy, very slow diffuse crush cut, thin ring residue.**	160 U / 35 U BG 69/15/8/5/3% Maximum at 1402.5m.
1432m – 1435m ROP: 12.0 – 15.9 AVE: 14.0 min/m	SANDSTONE: clear to translucent, rare white, fine to medium, moderately sorted, angular to sub-rounded, strong siliceous cement, rare off-white argillaceous matrix, loose, rare moderately hard aggregates, tight to very poor visual porosity, very poor inferred porosity. **FLUORESCENCE: Trace – 10%, very dull to dull light green fluorescence. Spotted to patchy, very slow to moderate diffuse crush cut, thin ring residue.**	107 U / 5 U BG 41/21/16/13/9% Maximum at 1434m.
1448m – 1452m ROP: 9.2 – 12.9 AVE: 10.5 min/m	SANDSTONE: clear to translucent, rare off-white to white, translucent light pink in parts, fine to medium, moderately poorly sorted, sub-angular to sub-rounded, strong siliceous cement, rare off-white argillaceous matrix, generally loose, common hard aggregates, tight to very poor visual porosity, very poor to poor inferred porosity. **FLUORESCENCE: 60% - 80%, dull to moderately bright light green fluorescence. Patchy, streaked in parts, instant diffuse crush cut to slow blooming cut, thin film residue.**	2517 U / 8 U BG 40/22/18/12/8% Maximum at 1451m.
1455.5m – 1458m ROP: 6.0 – 10.0 AVE: 6.0 min/m	SANDSTONE: clear to translucent, rare off-white to white, translucent light pink in parts, fine to medium, moderately poorly sorted, sub-angular to sub-rounded, strong siliceous cement, nil visible matrix, generally loose, common hard aggregates, tight to very poor visual porosity, very poor to poor inferred porosity. **FLUORESCENCE: 10%, very dull light green-yellow fluorescence. Patchy, very slow diffuse crush cut, thin ring residue.**	365 U / 90 U BG 37/21/18/14/10 Maximum at 1457.5m.
1463m – 1464m ROP: 6.7 – 10.0 AVE: 9.0 min/m	SANDSTONE: clear to translucent, off-white, light pink, fine to medium, occasional very fine, moderately sorted, sub-angular to sub-rounded, strong siliceous cement, occasional off-white argillaceous matrix, generally loose, common hard aggregates, tight visual porosity, very poor to poor inferred porosity. **FLUORESCENCE: 10%, dull to dim light green fluorescence, patchy, streaked, slow diffuse cut, thin ring residue.**	160 U / 100 U BG 34/20/18/15/13% Maximum at 1463m.

1472.5m – 1476m ROP: 11.1 – 15.2 AVE: 12.8 min/m	SANDSTONE: clear to translucent, light pink, common white to off-white, very fine to fine in general, common medium, moderately sorted, angular to sub-rounded, moderate to strong siliceous cement, common off-white argillaceous matrix, dominantly loose, common friable to hard aggregates, tight visual porosity, very poor inferred porosity. **FLUORESCENCE: Trace, very dull to dull light green fluorescence, spotted, trace diffuse crush cut, trace ring residue.**	260 U / 300 U BG 40/21/18/13/8% Maximum at 1473m.
1485m – 1493.5m ROP: 4.3 – 19.5 AVE: 10.6 min/m	SANDSTONE: clear to translucent, rare very light pink, rare off-white to white, very fine to fine, occasional medium, moderately sorted, sub-angular to sub-rounded, weak to strong siliceous cement, rare off-white argillaceous matrix, loose, very poor to poor inferred porosity. **FLUORESCENCE: Trace – 10%, very dull to dull, pinpoint to spotted, instant diffuse cut, thin ring residue.**	496 U / 68 U BG 35/19/17/17/12% Maximum at 1492m.

TABLE XI: SUMMARY OF BLOOIE LINE GAS FLOW TESTS PERFORMED WHILE AIR DRILLING WEST MEREENIE 24

FLOW TEST DEPTH (Drillers)	GAS FLOW RATE * Minimum flow rate measurable is 0.5 MMcfd.	MUD LOG GAS PEAK (Composition)
905 m #1	**Upper Stairway Sandstone.** Maximum gas flare rate = 0.0 MMcfd. (No Gas Flare)	BG 1 U 55/19/13/10/3 % (no significant gas peaks interpreted)
930 m #2	**Middle Stairway Sandstone.** Maximum gas flare rate = 0.0 MMcfd. (No Gas Flare)	30 U / 1 U 79/13/5/2/1 % (Maximum at 916m)
1046 m #3	**Lower Stairway 2 Sandstone.** Maximum gas flare rate = 0.0 MMcfd. (No Gas Flare)	BG 1 U 80/14/4/2 % (no significant gas peaks interpreted)
1106 m #4	**Lower Stairway 1 Sandstone.** Maximum gas flare rate = 0.0 MMcfd. (No Gas Flare)	BG 1 U 85/12/0/2 % (no significant gas peaks interpreted)
1141 m #5	**Horn Valley Siltstone.** Maximum gas flare rate = 0.0 MMcfd. (No Gas Flare) Note: Produced gas flow rate spiked during test – suspected due to due water in the well trapping and releasing pressure possibly.	9 U / 1 U 72/16/5/4/3 % (Maximum at 1124m)
1222 m #6	**Pacoota P1.** Maximum gas flare rate = 0.0 MMcfd. (No Gas Flare)	10 U / 1 U 60/21/11/5/3 % (Maximum at 1187m)
1306 m #7	**Pacoota P1-280.** Maximum gas flare rate = 4.12 MMcfd (decreasing to 3.15 MMcfd after 15 minutes, 5-6m moderately strong dark orange sustained flare)	4990 U / 70 U 79/13/5/2/1 % (Maximum at 1306m)
1329 m #8	**Pacoota P2.** Maximum gas flare rate = 8.9 MMcfd (6-8m strong dark orange sustained flare)	BG 4990 U 77/14/5/1/2/1 % (continuous high gas levels)

The table below is a summary of conventional net pay encountered as well as any associated hydrocarbon fluorescence observed whilst drilling West Mereenie 24 & 24ST1.

TABLE XII: SUMMARY NET OIL PAY IN WEST MEREENIE 24 & 24ST1

INTERVAL (loggers depth) (mMD)		NET SAND (mMD)	NET PAY (mMD)	AVE ∅T (%)	AVE SWT (%)	AVE Kint (md)	NET PAY INTERVALS / REMARKS
Pacoota P3-70 (1421.4m-1428.9m)	Cat 1						OGOC intersected at the P3-70 top. No Fluorescence & low gas Readings.
	Cat 2						
	Cat 3						
Pacoota P3-90 (1428.9m-1437.0m)	Cat 1						Trace-10% v. dull to dull light green fluorescence with gas reading.
	Cat 2						
	Cat 3						
Pacoota P3-120/130 (1437.0m-1452.2m)	Cat 1	1.85	1.85	10.0	24.2	6.98	DST 1:Recovered 0.9bbls of oil cut mud 60%-80% dull to mod. bright light green fluorescence with significant gas peak. Some depletion indicated on DST chart.
	Cat 2	5.64	5.64	9.0	23.3	4.37	
	Cat 3	5.89	5.89	8.9	23.2	4.22	
Pacoota P3-150 (1452.5m-1463.7m)	Cat 1						Two zones,10% dull to light green-yellow fluorescence with gas readings. Low perm.
	Cat 2	1.58	1.58	8.5	39.9	2.38	
	Cat 3	2.64	2.64	8.1	42.4	1.73	
Pacoota P3-190 (1463.7m-1481.6m)	Cat 1						Two zones, Trace-10% v. dull to dull light green fluorescence with gas readings. Low perm.
	Cat 2						
	Cat 3						
Pacoota P3-230 (1481.6m-1496.5m)	Cat 1	2.67	2.67	8.4	49.6	4.05	Trace-10% v. dull to dull pinpoint to spted fluorescence with gas readings. Low K Some depletion indicated on MDT points.
	Cat 2	3.94	3.94	8.4	53.2	3.32	
	Cat 3	4.98	4.98	8.2	55.9	2.78	
Pacoota P4 (1496.5m-1540.0m)	Cat 1						No fluorescence & low gas readings.
	Cat 2	0.89	0.00	7.8	85.5	1.56	
	Cat 3	3.05	0.00	7.3	88.6	1.02	
TOTALS	**Cat 1**	**4.52**	**4.52**	**9.0**	**38.1**	**5.25**	
	Cat 2	**12.34**	**11.15**	**8.7**	**35.8**	**3.72**	
	Cat 3	**16.56**	**13.51**	**8.5**	**38.4**	**3.20**	

TABLE XIII: SUMMARY OF NET GAS PAY IN WEST MEREENIE 24 & 24ST1

INTERVAL (loggers depth) (mMD)		NET SAND (mMD)	NET PAY (mMD)	AVE ∅T (%)	AVE SWT (%)	AVE Kint (md)	NET PAY INTERVALS / REMARKS
Upper Stairway (top) (867.0m-902.6m)	Cat 1						Gas readings commenced below 881m MD. No recorded gas flows/flares.
	Cat 2						
	Cat 3	2.38	2.38	6.0	53.5	0.16	
Basal Upper STW (902.6m-930.2m)	Cat 1						Increased gas peaks, main gas peak @ 916m Tr dull to bright grn-white pin-point fluorescence. No recorded gas flows/flares.
	Cat 2	6.58	6.58	6.5	71.3	0.36	
	Cat 3	7.93	7.93	6.4	72.5	0.31	
Lower Stairway 2 (1046.2m-1108.2m)	Cat 1						No gas flows on western flank. Minor gas recorded. Sw calculations are anomalously high based on height above the FWL.
	Cat 2	4.32	4.32	7.2	93.1	0.34	
	Cat 3	6.96	6.96	7.2	94.5	0.24	

Lower Stairway 1 (1108.2m-1139.4m)	Cat 1						No gas flows on western flank. Minor gas peaks recorded on mudlog, peak @ 1124m. Tr dull green-white pin-point Fluorescence. No recorded gas flows/flares.
	Cat 2	2.97	2.97	8.2	67.2	0.99	
	Cat 3	4.27	4.27	7.9	70.9	0.71	
Pacoota P1-40 (1222.8m-1243.2m)	Cat 1						Gas flow recorded in crestal West Mereenie 18 well-bore. Gas peak recorded on mudlog.
	Cat 2						
	Cat 3	0.79	0.79	4.4	15.2	1.03	
Pacoota P1-60 (1243.2m-1248.0m)	Cat 1						No gas peak recorded. No recorded gas flows/flares.
	Cat 2						
	Cat 3	0.25	0.25	7.2	56.7	0.07	
Pacoota P1-80 (1248.0m-1254.9m)	Cat 1						Gas peaks recorded, max @ 1249m. Trace dull light green pin-point fluorescence. No recorded gas flows/flares.
	Cat 2						
	Cat 3	0.18	0.18	4.5	30.8	0.06	
Pacoota P1-110 (1254.9m-1263.9m)	Cat 1						Minor gas show.
	Cat 2						
	Cat 3						
Pacoota P1-200 (1274.6m-1282.1m)	Cat 1						Minor gas peaks recorded. No recorded gas flows/flares.
	Cat 2						
	Cat 3						
Pacoota P1-210 (1282.1m-1290.1m)	Cat 1						Gas peaks recorded, max. @ 1283.5m. Trace dull light green-white pin-point fluorescence. No recorded gas flows/flares.
	Cat 2						
	Cat 3	5.23	5.23	6.7	40.5	0.19	
Pacoota P1-240 (1290.1m-1304.7m)	Cat 1						Minor gas peaks recorded. No recorded gas flows/flares.
	Cat 2						
	Cat 3	1.47	1.47	7.3	39.4	0.16	
Pacoota P1-280 (1304.7m-1310.7m)	Cat 1	3.30	3.30	6.7	14.8	3.89	Zone severely depleted due to production and confirmed by MDT points. GTS @ 4.12MMCFD (5-6m moderately strong dark orange gas flare).
	Cat 2	3.53	3.53	6.6	15.2	3.66	
	Cat 3	3.58	3.58	6.5	15.3	3.61	
Pacoota P1-310 (1310.7m-1324.1m)	Cat 1	2.57	2.57	7.1	19.4	2.20	Zone depleted due to production and confirmed by MDT points. Gas peaks recorded.
	Cat 2	5.00	5.00	6.0	20.6	1.24	
	Cat 3	6.12	6.12	5.8	21.6	1.02	
Pacoota P1-350 (1324.1m-1329.6m)	Cat 1	2.39	2.39	5.8	18.8	1.41	Zone severely depleted due to production and confirmed by MDT points. GTS @ 8.9 MMCFD (6-8m strong dark orange gas flare).
	Cat 2	2.62	2.62	5.7	19.1	1.31	
	Cat 3	2.95	2.95	5.5	19.5	1.17	
Pacoota P2 # (1329.6m-1400.6m)	Cat 1						Gas peaks recorded, max @ 1348m, 1389m,1396m. Tr dull to bright light grn-white pin-point fluorescence.
	Cat 2						
	Cat 3	5.18	5.18	6.5	45.4	0.28	
Pacoota P3-10 (1400.6m-1421.4m)	Cat 1	2.01	2.01	6.3	32.9	0.60	Gas peaks recorded. Trace to 5% v. dull to dim light green fluorescence OGOC intersected @ base of this unit.
	Cat 2	5.06	5.06	5.9	33.8	0.39	
	Cat 3	9.09	9.09	5.5	33.8	0.31	
TOTALS	**Cat 1**	**10.26**	**10.26**	**6.5**	**20.3**	**2.25**	
	Cat 2	**30.07**	**30.07**	**6.5**	**50.2**	**1.04**	
	Cat 3	**56.39**	**56.39**	**6.4**	**50.7**	**0.65**	

4. SUMMARY

West Mereenie 24 is an Oil Appraisal Well located approximately 1.05 km west of West Mereenie 4DW1 and 1.1 km north-east of West Mereenie 18. This is on the western north flank within an appraisal step-out location west of West Mereenie 4, in licence area OL4. The well is approximately 290 km west of Alice Springs, the closest facility being the Mereenie Central Treatment Plant 14 km to the south-east, (OL 4, south-west Northern Territory).

The Mereenie Field was discovered in 1963 and commenced production in 1984, delivering hydrocarbon liquids to South Australia and gas to Northern Territory. Santos first acquired equity and then assumed Operatorship for the field in 1993, nine years after first production.

Prior to this campaign, a total of sixty-two wells had been drilled in the field since discovery. The majority of the historical wells have been drilled to intersect key target sands within the oil rim. Only eight of the sixty-two wells have been located on the structural crest, up-dip of the oil rims, specifically to produce from the gas cap.

The 2013-14 Mereenie drilling campaign was designed to target the oil and gas sands within the P1, P3 and P4 of the Pacoota Sandstone, as well as gas within the Lower Stairway Sandstone. The West Mereenie 19 to 24 and East Mereenie 44 to 45 well program's primary targets is oil within the Pacoota P3 and P1 with oil secondary targets within the P4. Gas secondary targets are within the P1 and Lower Stairway Sandstone. The field is defined by four-way dip closure for the Pacoota Sandstone and Stairway Sandstone. The anticline is an elongated north-west to south-east structure on the western side of the West MacDonnell Ranges within the Amadeus Basin. Prior to this campaign, 18 wells had been drilled at West Mereenie.

The primary objective of this campaign is to appraise reservoir extent and fluid limits within the central and western areas of the Pacoota oil reservoirs and bring oil onto production to develop the 2P undeveloped oil reserve. The second objective is to undertake data gathering and other key evaluations of a variety of tight sandstones and organic shales throughout the Ordovician Stairway, Horn Valley and Pacoota sequences. Volumes of contingent gas and tight oil resources have also been identified within the Stairway and Pacoota.

Within the Mereenie Field, oil is produced from the Pacoota P3 reservoir and gas from the Pacoota P1 reservoir, where gas condensate liquid is then separated at surface. The oil and condensate is then mixed and transported by truck. Gas is transported by the NT Gas Pipeline. Any surplus gas is reinjected into the Pacoota P3 reservoir to enhance oil recovery.

West Mereenie 24 is the fourth well in this drilling program, and is located on the western north flank in an appraisal step-out location west of West Mereenie 4 well. The primary targets were the P3-120/130 as well as the P3-190/230/250 within the oil column. The well was designed with a wellbore inclination of 45° and hold 45° lateral to TD at an updip azimuth. This design allows for a more reasonable standoff from both the gas oil contact (GOC) and oil water contact (OWC), allowing for depth prognosis and fluid contact uncertainty.

The greatest risks associated with the West Mereenie 24 well were reservoir quality within the Pacoota P3-190/230 sands, and mechanical risk (frac). In the mean prognosed outcome, one follow-up producer will be required to develop the area tested by West Mereenie 24.

A total of 8.0 m of net oil pay was predicted for the Pacoota P3 Sandstone. The P3-120/130 and the P3-190/230/250 were the primary objectives (oil) of West Mereenie 24, with the secondary target being the Pacoota P4 (oil).

West Mereenie 24 was spudded at 06:00 hours on 26th July, 2013 with the drilling rig Boart Longyear WW07. Surface holes for all wells in this campaign were batch drilled. The 12 ⅜" surface hole for this well was drilled to 376.0 m with an air hammer bit, at which point 12 ¼" Dual Tube Flooded Reverse Circulation (DTFRC) drilling proceeded to 530 m. 9 ⅝" surface casing was set at 527.6 m (D&L). Operations were suspended at 18:00 hours on 1st August, 2013 and the Boart Longyear WW07 rig was released.

At 21:30 hours on 16th February, 2014, West Mereenie 24 was re-entered with the drilling rig Ensign 918. The 9 ⅝" casing shoe was drilled out and 8 ¾" hole was then drilled to 533 m, and a Formation Integrity Test (FIT) attempted, unsuccessfully. A subsequent cement plug was pumped and squeeze job performed. The cement plug was then drilled out and 3 m of new hole was drilled to 536 m at which point a Formation Integrity Test (FIT) was performed to 15.0 ppg EMW. The 8 ¾" production hole was then air hammer drilled ahead to 950 m. A tricone 8 ½" bit and directional assembly was picked up and ran in hole, air drilling continued from 950 m to 1329 m. At this point the well was displaced to mud and the drill string pulled out of hole for a bit trip. At surface it was discovered that the bit and dog-sub had been left in hole due to a down-hole fire. Numerous attempts were made to fish the bit out of hole but were unsuccessful. West Mereenie 24 was plugged back to 1207.5 m. Time drilling commenced from 1207.5 m and continued to 1220 m.

West Mereenie 24 was side tracked to West Mereenie 24ST1 from 1218.5 m at 14:45 hours 4th March, 2014 when 100% formation was observed in the cuttings. After pulling out of hole to change the bit and BHA, 8 ½" directional production hole was then drilled ahead from 1220 m to 1409.7 m, at which point a bit trip was performed. Drilling then resumed from 1409.7 m to 1463 m. At this time DST 1 was performed. Inflate on bottom DST 1: 1444.1 m to 1463.0 m was performed in the Pacoota P3-120/130, recovering 1.2 bbls (48 m) of oil cut mud (0.80 SG, 45°API @ 60°F). Drilling continued from 1463 m to a total depth of 1540.0 m (both Driller and Logger Extrapolated), 43.5 mMD into the Pacoota P4. Total depth was reached at 08:30 hours on 11th March, 2014.

While drilling both West Mereenie 24 and 24ST1, Measurement While Drilling (MWD) surveys were taken at regular intervals to ensure that the well intersected the Pacoota P3-120/130 primary objective within the specified 35 m lateral tolerance in structural dip direction and 70 m lateral tolerance orthogonal to planned well azimuth, at an inclination of 45°. At total depth, it is estimated that the well was displaced 202.7 m at an azimuth of 231.8° from the surface location.

Regular gas flow tests were performed at formation boundaries while drilling and whenever the blooie line gas flare noticeably increased in size. A total of eight flow tests were performed while air drilling in West Mereenie 24. A maximum flow rate of 8.9 MMcfd was observed at 1329 m at the top of the Pacoota P2.

After pulling out of hole to surface, the following suite of Schlumberger wireline logs were performed, Run: 1) PEX-HNGS-HRLA-SP, Run 2) FMI-Sonic Scanner, Run 3) ECS-CMR-GR, Run 4) MDT-GR (Tool failure), Run 5) MDT-GR (POOH to change packer rubber), Run 6: MDT-GR (92 points: 15 valid, 15 curtailed, 62 seal failures). Based on wireline log analysis and hydrocarbon shows while drilling, West Mereenie 24ST1 was cased and suspended.

The stratigraphic sequence intersected in West Mereenie 24 & 24ST1 was as prognosed. Formation tops in West Mereenie 24 and 24ST1 ranged from 18.4 m low (Carmichael Sandstone) to 17.5 m high (Pacoota P1) to prognosis. The primary objectives Pacoota P3-120/130 and P3-190/230/250 were 12.7 m high and 14.8 m high to prognosis respectively.

Oil fluorescence shows were encountered as follows in West Mereenie 24: 898.5 m to 908 m (Upper Stairway Sandstone) trace oil fluorescence, 1 unit (77/15/6/2 %); 1126 m to 1130 m (Lower Stairway 1) trace oil fluorescence, 9 units (72/16/5/4/3 %).

Oil fluorescence shows were encountered as follows in West Mereenie 24ST1: 1248.5 m to 1252 m (Pacoota P1-80) trace oil fluorescence, 220 units (66/17/9/5/3 %); 1282.5 m to 1285 m (Pacoota P1-210) trace oil fluorescence, 74 units (57/20/12/7/4 %); 1325 m to 1328 m (Pacoota P1-350) trace oil fluorescence, 93 units (74/14/6/3/2 %); 1345 m to 1349.5 m (Pacoota P2) trace oil fluorescence, 150 units (53/24/13/6/4 %); 1400.5 m to 1417 m (Pacoota P3-10) 5% to trace oil fluorescence, 160 units (69/15/8/5/3 %); 1432 m to 1435 m (Pacoota P3-90) trace to 10% oil fluorescence, 107 units (41/21/16/13/9 %); 1448 m to 1452 m (Pacoota P3-120/130) 60-80% oil fluorescence, 2517 units (40/22/18/12/8 %); 1455.5 m to 1458 m (Pacoota P3-150) 10% oil fluorescence, 376 units (37/21/18/14/10 %); 1463 m to 1464 m (Pacoota P3-190) 10% oil fluorescence, 160 units (34/20/18/15/13 %); 1472.5 m to 1476 m (Pacoota P3-190) trace oil fluorescence, 260 units (40/21/18/13/8 %); 1485 m to 1493.5 m (Pacoota P3-230) trace to 10% oil fluorescence, 496 units (35/19/17/17/12 %).

Log analysis (combined with hydrocarbon shows recorded while drilling) indicates 10.27 mMD (9.41 mTVD) of Category 1 net gas pay (total porosity 5.8 to 7.1%, Sw 14.8 to 32.9%) within the Pacoota Sandstone and 4.52 mMD (3.28 mTVD) of Category 1 net oil pay (total porosity 8.4 to 10.0%, Sw 24.2 to 49.6%) within the Pacoota Sandstone for West Mereenie 24ST1. Unconventional pay was not defined for West Mereenie 24ST1.

Completion of West Mereenie 24ST1 as a single oil producer was undertaken in mid-April, 2014. 2 3/8" production tubing was run to 1426.9 m, the well perforated and artificial lift installed. Four zones were perforated in mid April 2014, Pacoota P3-90 (1432.0m-1433.0m), Pacoota P3-120/130 (1445.0m-1452.0m), Pacoota P3-190 (1455.2m-1463.8m) and the Pacoota P3-230/250 (1465.8m-1496.2m).

5. REFERENCES

SANTOS, 2013 — West Mereenie 19 - 24 / East Mereenie 44 - 45 Well Proposal, Santos Ltd. (unpublished)

SANTOS, March 2014 — West Mereenie 24ST1 Preliminary Well Card, Santos Ltd (unpublished)

SANTOS, May 2005 — West Mereenie 18 Well Completion Report, Santos Ltd. (unpublished)

SANTOS, May 2013 — Mereenie Drilling Program 2013, Santos Ltd. (unpublished)

APPENDIX I: SAMPLE DESCRIPTIONS

APPENDIX I (a): CUTTINGS

APPENDIX I (b): HYDROCARBON SHOW REPORTS

APPENDIX I(c): SIDEWALL CORES

No Sidewall Coring was performed in West Mereenie 24 & 24ST1.

APPENDIX II: PALYNOLOGY REPORT

No Palynology Data is available for West Mereenie 24 & 24ST1.

APPENDIX III: CORE DATA

No Cores were cut in West Mereenie 24 & 24ST1.

APPENDIX IV: LOG INTERPRETATION

APPENDIX IV (a): LOG ANALYSIS

APPENDIX IV (b): MDT PRESSURE SURVEY DATA

APPENDIX IV(c): FIELD ELECTRIC LOG REPORT

APPENDIX V: GEOTHERMAL GRADIENT

An extrapolated static Bottom Hole Temperature of 62.6°C at 1540.0m (L) and a geothermal gradient of 27.1°C /km was calculated from the down hole temperatures recorded during logging operations on West Mereenie 24ST1.

APPENDIX VI: DEVIATION DATA

APPENDIX VII: DRILL STEM TEST DATA

APPENDIX VIII: HYDROCARBON ANALYSIS

No Hydrocarbon Analysis was undertaken for West Mereenie 24ST1

APPENDIX IX: WATER ANALYSIS

APPENDIX X: WELL LOCATION SURVEY

APPENDIX XI: DRILLING - FINAL WELL REPORT

APPENDIX XII: RIG SPECIFICATIONS

ENCLOSURE I: COMPOSITE LOG

ENCLOSURE II: MUDLOG

ENCLOSURE III: DEPTH STRUCTURE MAP

ENCLOSURE IV: WELL EVALUATION SUMMARY PLOT