PR 1998-0005

Northern Territory Government

InfoCentre

NT Minerals and Energy

Petroleum Exploration Reports

This file contains scanned images of hardcopy reports/data submitted to the Northern Territory Government under Petroleum Legislation.

Bringing Forward Discovery

This information is made available to assist future petroleum explorers and may be distributed freely.

Scanning information

The quality of the scan reflects the condition of the original hardcopy report/data.

CLOSED
ONSHORE

InfoCentre

Call: +61 8 8999 6443

Click: geoscience.info@nt.gov.au
www.minerals.nt.gov.au

Visit: 3rd floor
Centrepoint Building
Smith Street Mall
Darwin
Northern Territory 0800

SANTOS GROUP - MAGELLAN PETROLEUM NT PTY - UNITED OIL AND GAS NT PTY

COMPILED FOR

SANTOS LIMITED
(A.C.N. 007 550 923)

WEST MEREENIE - 12

RAW DATA REPORT

ONSHORE

PREPARED BY:
L.E.L. BURGESS
(CONSULTANT)
SEPTEMBER, 1997

WEST MEREENIE-12

CONTENTS

LOCATION MAP

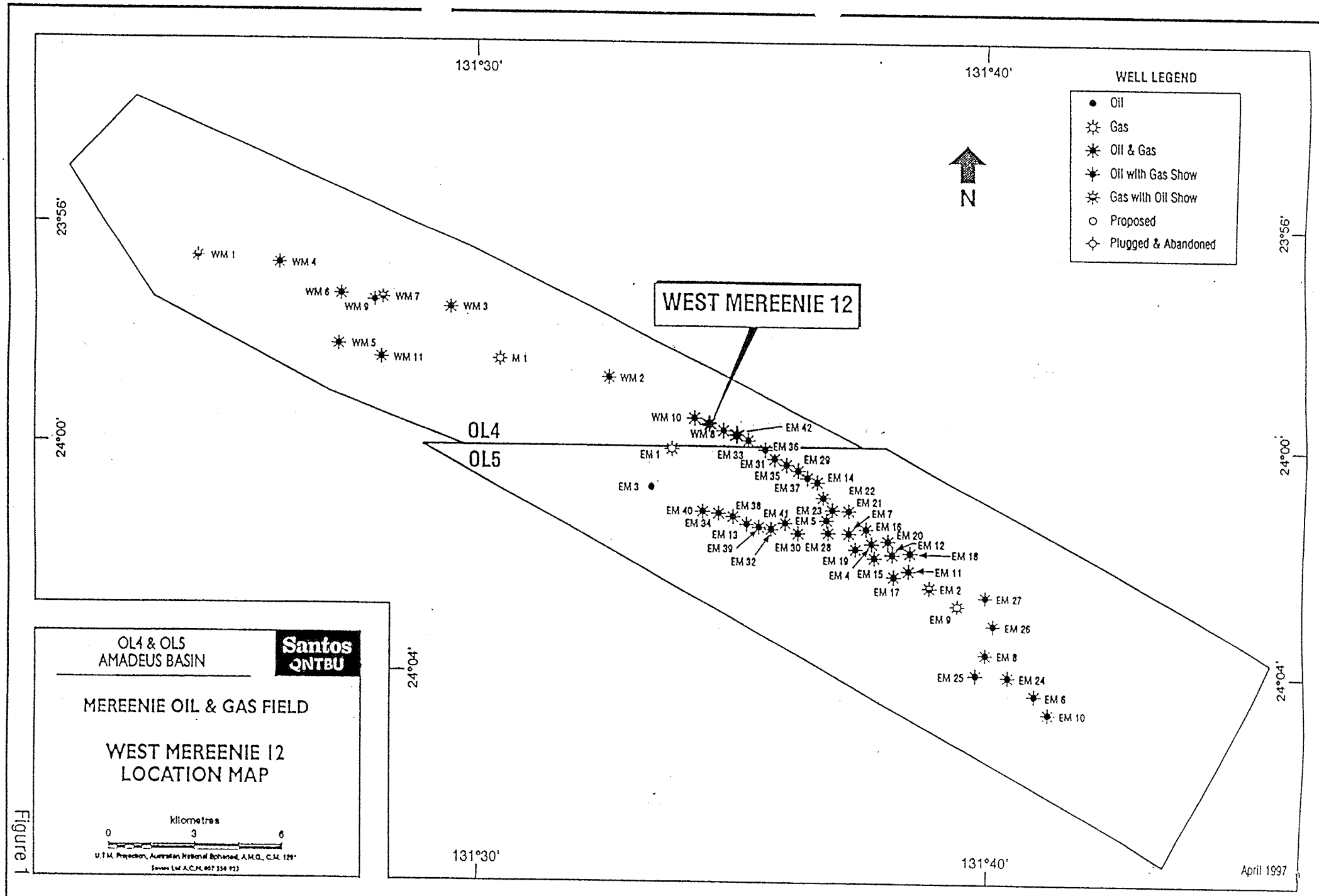

131°30'
131°40'
23°56'
24°00'
24°04'
WELL LEGEND
Oil
Gas
Oil & Gas
Oil with Gas Show
Gas with Oil Show
Proposed
Plugged & Abandoned
N
WEST MEREENIE 12
OL4
OL5
WM 1
WM 4
WM 6
WM 9
WM 7
WM 3
WM 5
WM 11
M 1
WM 2
WM 10
WM 8
EM 42
EM 1
EM 33
EM 36
EM 31
EM 29
EM 35
EM 14
EM 3
EM 37
EM 22
EM 40
EM 38
EM 41
EM 23
EM 21
EM 34
EM 5
EM 7
EM 16
EM 13
EM 20
EM 39
EM 30
EM 28
EM 12
EM 32
EM 19
EM 18
EM 4
EM 15
EM 11
EM 17
EM 2
EM 27
EM 9
EM 26
EM 8
EM 25
EM 24
EM 6
EM 10
OL4 & OL5
AMADEUS BASIN
Santos
QNTBU
MEREENIE OIL & GAS FIELD
WEST MEREENIE 12
LOCATION MAP
kilometres
0
3
6
April 1997

Figure 1

SECTION 1: PRELIMINARY WELL CARD

WELL: WEST MEREENIE -12	**WELL CATEGORY** : DEV/APP **INTENT:** OIL	**SPUD:** 14 / 8/ 97	**TD REACHED:** 3/ 9/ 97 **RIG RELEASED**: 6/ 9/ 97
LAT: 23° 59' 32.21' SOUTH, **LONG:** 131° 34' 15.58" EAST (PRELIMINARY)		**RIG:**	MEREENIE RIG 1
SEISMIC STATION: 475m on bearing 299° to SP 2202, LINE M83-18		**STATUS:**	CASED AND SUSPENDED OIL AND GAS WELL (SUOG)
ELEVATION GND: 740.8m **RT:** 746.6m (PRELIMINARY)		**REMARKS:** PRIMARY TARGETS- PACOOTA P3-120 OIL DEVELOPMENT AND P3-190 OIL APPRAISAL. SECONDARY TARGETS- LWR STAIRWAY GAS, PACOOTA P1-280 GAS, PACOOTA P4 OIL	
BLOCK/LICENCE: MEREENIE / OL4 (SUBSURFACE TARGETS)			
TOTAL DEPTH: 1658.3 m, 1491.9m TVD LOGGER (EXTRAPOLATED), 1657.0 m, 1490.9m TVD DRILLER			
PBTD			
TYPE STRUCTURE: ANTICLINE		**CASING SIZE**	**SHOE DEPTH** / **TYPE**
TYPE COMPLETION: PENDING		10.75" 7"	745.3m D, 744.5m L / 40.5 LB/FT, K55, STC 1655m D,1656.3m L (extrap) / 23 , 26 & 28 # K55, LTC

AGE	FORMATION OR ZONE TOPS	DEPTH (m) LOGGER			THICKNESS. TRUE STRAT. m	TVDSS, m HIGH (H) LOW (L)
		MD	TVD	TVDSS		
MID TO LATE DEVONIAN	PARKE SILTSTONE	5.8	5.8	740.8	45.8	0
L. SILURIAN TO MID DEVONIAN	MEREENIE SANDSTONE	51.6	51.6	695	545.9	0
LATE ORDOVICIAN	CARMICHAEL SANDSTONE	595	594.8	151.8	78.5	0.2 H
MID TO LATE ORDOVICIAN	UPPER STOKES SILTSTONE	671	670.7	75.9	241.4	0.5 H
MID ORDOVICIAN	LOWER STOKES SILTSTONE	916.5	909.6	-163	75.2	5.4 L
MID ORDOVICIAN	UPPER STAIRWAY SANDSTONE	992.5	976.2	-229.6	61.4	5.1 L
MID ORDOVICIAN	MIDDLE STAIRWAY SANDSTONE	1056.2	1027.9	-281.3	106.2	3.6 L
MID ORDOVICIAN	LOWER STAIRWAY SANDSTONE (2)	1168.2	1116.9	-370.3	54.2	3.4 L
MID ORDOVICIAN	LOWER STAIRWAY SANDSTONE (1)	1225.3	1162.3	-415.7	30.2	3.5 L
EARLY ORDOVICIAN	HORN VALLEY SILTSTONE	1257.2	1187.4	-440.8	72.3	4.9 L
EARLY ORDOVICIAN	PACOOTA P1 UNIT	1333.8	1247.4	-500.8	105.2	3.8 L
EARLY ORDOVICIAN	P1-280 STRATIGRAPHIC	1421	1312.7	-566.1	-	NP
EARLY ORDOVICIAN	PACOOTA P2 UNIT	1448	1332.7	-586.1	67.9	2.1 L
EARLY ORDOVICIAN	PACOOTA P3 UNIT	1522.3	1387.7	-641.1	80.7	1.8 L
EARLY ORDOVICIAN	P3-120 STRATIGRAPHIC	1558.3	1414.8	-668.2	-	0.3 L
EARLY ORDOVICIAN	P3-150 STRATIGRAPHIC	1575.3	1427.7	-681.1	-	1.6 L
EARLY ORDOVICIAN	P3-190 STRATIGRAPHIC	1585	1435.1	-688.5	-	0.2 L
EARLY ORDOVICIAN	PACOOTA P4 UNIT	1609.8	1454.3	-707.7	45.4+	1.5 H
	TOTAL DEPTH	1658.3	1491.9	-745.3		0.5 L

PRELIMINARY LOG INTERPRETATION (Interval Averages)					
INTERVAL (m) Logger	Ø %	SW %	INTERVAL (ft)	Ø %	SW %
PACOOTA P1-280 Sand 1422.7-1426.6, 3.9m NGP	6.6	8.1	PACOOTA P3-190 Sand 1591.2-1609.7,10.5m NOP	9.5	36.6
PACOOTA P3-120 Sand 1559.7 -1573.7,12.4m NOP	10.1	13.3	PACOOTA P4 Sand 1610.4-1643.8,12.3m NOP	72	34.1

NGP = Net Gas Pay, NOP = Net Oil Pay

PERFORATIONS				
FORMATION			INTERVAL	
PENDING				
FORMATION	NO.	INTERVAL	CUT	REC
NO CORES WERE CUT				

LOG	SUITE/ RUN	INTERVAL m	BHT/TIME	LOG	SUITE/ RUN	INTERVAL m	BHT/TIME
PEX				**HGNS**			
SHDT	1 / 1	1141.6 - 821	114°F / 6 HRS	TNPH	1 / 2	1648.8 - 985	
GR	1 / 1	1134 - 821		HGR	1 / 2	1647 - 745	
SP	1 / 2	1637.9 - 745					
HALS							
HLLS-HLLD	1 / 2	1656 - 745	138°F / 6.25 HRS				
HRLS-HRLD	1 / 2	1656 - 985					
HRMS							
RHOZ	1 / 2	1652.9 - 985					
MCFL	1 / 2	1652.6 - 985					
HCAL	1 / 2	1652.8 - 745					

FORMATION TESTS

NO.	INTERVAL	FORMATION	FLOW TIME (mins)	SHUT IN TIME (mins)	PANEX GAUGE FLOW (psig)	PANEX SIP psia	MAX SURF PRESS (psia)	FLUID TO SURF (mins)	TC/ BC (in)	REMARKS
1 FT	1431 m MD, 1320m TVD, DRILLER	Pacoota P1-280 Sand	161	NONE	N/A	N/A	609	N/A	0.5 / NONE	OPEN HOLE FLOW TEST. NO SHUT IN BUILD-UP. Q=3.35 MMSCFD NO SAMPLES REQUIRED.

SUMMARY:

The Mereenie Field is located approximately 270 km west of Alice Springs in the Northern Territory and is one of the world's geologically oldest reservoirs with gas and oil being produced from Ordovician sandstones.

Mereenie-12 is situated on the northern flank of the Mereenie anticline, 565m northwest of West Mereenie-8 and 490m southeast of West Mereenie-10. The well is within the OL4 oil licence zone and was drilled as a deviated well to optimise reservoir production.

The well was designed to develop oil reserves in the Pacoota P3-120 reservoir, primarily by gas re-injection, and in the Pacoota P3-190 reservoir which was not being effectively drained in this area. The well also evaluated the Pacoota P1-280 gas reservoir, currently being adequately produced in this part of the field.

The location and completion strategy for West Mereenie-12 was also important to the oil development plans for the field, which include both primary and secondary oil recovery from gas re-injection. A successful well would support further development along the eastern flank of the structure where a large volume of partly developed oil exists which requires gas re-injection to produce economically.

The highest risk for the well was the quality of the primary objective - the Pacoota P3-120 reservoir - which was poorly developed in the adjacent West Mereenie-10 well.

West Mereenie-12 was deviated to a maximum of 42.5°. The final position of the well at the logger's total depth of 1658.3m MD (1491.9m TVD and -745.3m TVDSS) was 271.31m west and 443.44m south of the rig location (519.86m on a bearing of 230°).

Well evaluation included a GR-SHDT (dipmeter tool processed on site) run from 1141.6 - 821m to calibrate well trajectory, and a Platform Express suite run from total depth to 985m (2" very high resolution pass) and to 745m (standard resolution).

One open hole flow test was conducted at 1431m MD (Driller) over a 161 minute period to evaluate the Pacoota P1-280 gas sand. This reservoir flowed at a stabilised rate of 3.35 MMSCFD. No shut-in build up and no samples were required. This flow rate was expected for this part of the field.

A mean net oil pay thickness of 4m (permeability, ka, greater than 1 md and porosity over 9%) and an additional low permeability thickness of 3.5m (ka between 0.1 and 1 md) was predicted for the primary objective, the P3-120 Sand. Preliminary log interpretation has calculated 12.4m for the P3-120 reservoir.
For the other primary target, the Pacoota P3-190 reservoir, 7.5m of net oil pay (ka 1 md or greater) and 8m of low permeability pay was prognosed. Log interpretation has estimated 10.5m net oil pay.

Minor gas shows only were recorded through the Stairway Sandstone and no net pay has been assigned.
For the secondary targets, the P1-280 gas reservoir (tested at 3.35 MMSCFD) has 3.9m net pay interpreted.
The P3-150 oil reservoir had 0.5m net pay prognosed but none was encountered.
The basal Pacoota P4 Unit had 10m oil pay prognosed and 12.3 interpreted.

There were no significant hydrocarbon shows in other formations

Formation tops were generally lower than prognosed with a maximum of 5.4m for the top of the Lower Stokes Siltstone. This is partly accountable by the slightly higher bedding angle intersected. The average dip of the bedding at this location was expected to be 17° but the SHDT log showed it to be 19°.

West Mereenie-12 has been cased with 7" production casing to a depth of 1655m (Driller), 1656.3m (extrapolated Logger).
Production testing of the Pacoota P3-120 reservoir will be undertaken in mid September, 1997.

Mereenie Rig 1 was released on 6/ 9/ 97 and moved further west to the West Mereenie-13 lease.

WELL HISTORY

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE 12

DATE: 14/08/97 (0600 Hours)

DEPTH: 39m **PROGRESS:** 39m **DAYS FROM SPUD:** 1

OPERATION: MIST HAMMER DRILLING 13 1/2" SURFACE HOLE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A)$ (C&S)$ **COST TO DATE:** $230,099

CASING DEPTH: SET AT 36.00 LB/FT. **RIG:** MEREENIE 1

PROGRAMMED TD: 1663.2' **ROTARY TABLE:** 745.8' **GROUND LEVEL:** 740'

MUD DATA (2400 Hours)	Type:	Wt:	Visc:	WL:	pH:	K^+:	Cl^-:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Footage	Condition
	PRESENT							
	PAST							

SURVEYS:	MD	INCLINATION	AZIMUTH (T)	MD	INCLINATION	AZIMUTH (T)

PREVIOUS 24 HOURS OPERATIONS:

FINISH RIGGING UP, MAKE UP SWIVEL, KELLY AND SD12 HAMMER AND HAMMER BIT, PICK UP RAT HOLE DIGGING GEAR, RIG UP TO AND DRILL RAT HOLE, DRILL MOUSE HOLE, LAY OUT RAT HOLE DIGGING GEAR, WELD RISER ON 16" CONDUCTOR AND INSTALL SCHAFER ROTATING HEAD - INSTALL BLOOIE LINE AND RIG UP ON SAME, DRILL AHEAD 13 1/2" SURFACE HOLE TO 39M. SPUD WELL AT 0600 HOURS 14/08/97.

ANTICIPATED OPERATIONS:

AIR HAMMER DRILL TO 280M.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE 12

DATE: 15/08/97 (0600 Hours)

DEPTH: 238m **PROGRESS:** 199m **DAYS FROM SPUD:** 2

OPERATION: AIR HAMMER DRILLING 13 1/2" SURFACE HOLE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A)$ (C&S)$ **COST TO DATE:** $272,080

CASING DEPTH: SET AT 36.00 LB/FT. **RIG:** MEREENIE 1

PROGRAMMED TD: 1663.2' **ROTARY TABLE:** 745.8' **GROUND LEVEL:** 740'

MUD DATA (2400 Hours)	Type:	Wt:	Visc:	WL:	pH:	K^+:	Cl^-:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Footage	Condition
	PRESENT	1	SMITH	IMPAX	13.50"	-	-	-
	PAST							

SURVEYS:	MD	INCLINATION	AZIMUTH (T)	MD	INCLINATION	AZIMUTH (T)

PREVIOUS 24 HOURS OPERATIONS:

AIR HAMMER DRILL TO 238M WITH SURVEYS, LAY DOWN DRILL PIPE AND REPLACE WITH DRILL COLLARS.

ANTICIPATED OPERATIONS:

AIR HAMMER DRILL TO 370M, CHANGE BOTTOM HOLE ASSEMBLY, FOAM DRILL TO 390M..

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 16/ 8/ 97 (0600 Hours)

DEPTH: 355m **PROGRESS:** 0m **DAYS FROM SPUD:** 3

OPERATION: WAITING ON FISHING TOOLS.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S) $ **COST TO DATE:** $291,789

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1663.2m MD (-916.6m) MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	1	Smith	IMPAX	13.5"		355	
	LAST							

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	101	0	-			
	195	1	-			
	301	1	-			

PREVIOUS 24 HOURS OPERATIONS:
DRILLED AHEAD WITH HAMMER BIT AND SURVEYS TO 355m - HAMMER CEASED DRILLING. BLOW HOLE CLEAN PRIOR TO TRIP, PULL OUT OF HOLE TO PICK UP CONVENTIONAL AIR-DRILLING ASSEMBLY - HAMMER BIT SHANKED 13mm UP ON DRIVE SPLINES. SERVICE RIG, BREAK AND SERVICE SD12 HAMMER, SAFETY MEETING AND ORIENTATION WITH BOTH CREWS, LAY OUT SD12 HAMMER, 8" PONY COLLAR AND 12.25" STABILISER. MEASURE AND MAKE UP TAPER TAP FISHING ASSEMBLY, RUN IN HOLE WITH BOTTOM HOLE ASSEMBLY, PICK UP NEW 6.5" DRILL COLLARS AND SERVICE BREAK ALL NEW CONNECTIONS, RUN IN HOLE TO 348m, PICK UP KELLY, CIRCULATED DOWN TO TOP OF FISH, ATTEMPT TO SCREW ONTO FISH. PULL OUT OF HOLE, LAY OUT TAP AND CROSS OVERS, WAIT ON FISHING TOOLS.

ANTICIPATED OPERATIONS:
RUN IN HOLE WITH NEW TOOLS, RETRIEVE FISH.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 16/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, SS	DIFF.TO PROGNOSIS	DIFFERENCE TO W.M 10

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
60 - 190m ROP: 0.5 - 2.5 AV: 1.5	DOMINANTLY SANDSTONE WITH MINOR SILTSTONE SANDSTONE: clear, translucent, opaque, increasing Fe staining with depth, predominantly medium with occasional fine grained and rare coarse, moderately well sorted to very sorted, subangular to mainly sub rounded and rounded, unconsolidated to loose and occasionally weakly cemented calcareous aggregates, trace argillaceous matrix in parts, trace lithics, fair visual and good inferred porosity, no fluorescence. SILTSTONE: purple, red-brown, arenaceous to mainly argillaceous, commonly calcareous, firm to soft, sub blocky to amorphous grading to claystone.	Trace
190 - 355m ROP:0.5 - 3.0 AV: 1.5	SANDSTONE WITH RARE SILTSTONE SANDSTONE: dominantly light to medium orange and occasionally red-brown, clear and translucent, medium to fine grained and locally coarse, moderately well sorted, sub angular to well rounded, weak siliceous cement, local sparse silt and argillaceous matrix, lithics in parts, loose and friable aggregates to locally moderately hard, fair to good visual porosity, no fluorescence. SILTSTONE: brick red, dark orange, trace cream and medium grey, calcareous in parts, argillaceous and arenaceous grading to very fine sandstone, local siliceous cement, hard to soft, blocky to amorphous.	Trace

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 17/ 8/ 97 (0600 Hours)

DEPTH: 355m **PROGRESS:** 0m **DAYS FROM SPUD:** 4

OPERATION: PREPARING TO DRILL AHEAD WITH FOAM.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S) $ **COST TO DATE:** $321,201

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1663.2m MD (-916.6m) MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hrs)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	1	Smith	IMPAX	13.5"		355	
(2400 Hrs)	LAST							

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)

PREVIOUS 24 HOURS OPERATIONS:

WAIT ON FISHING TOOL, INSTALL COUNTER WEIGHTS ON BLOOIE LINE - SERVICE FIRE TRAILER AND HOLD FIRE DRILL. MAKE UP FISHING TOOL AND RUN IN HOLE TO 347m. INSTALL ROTATING HEAD AND BLOW HOLE. WORK BOX TAP OVER FISH, PULL OUT OF HOLE SLOWLY WITH FISH. LAY OUT FISH AND FISHING TOOL AND 13.5" STABILISER. BREAK AND LAY OUT 13.5" NRS, MAKE UP PONY COLLAR, STABILISER AND 13.5" BIT. RUN IN HOLE WITH BOTTOM HOLE ASSEMBLY. MAKE UP CROSS-OVER, SHORT SUB AND CONTINUE TO RUN IN HOLE. MAKE UP JARS. RUN IN HOLE WITH EXCESS DRILL PIPE - LAY OUT SAME. RUN IN HOLE. INSTALL ROTATING HEAD, BLOW HOLE CLEAN PRIOR TO DRILLING AHEAD.

ANTICIPATED OPERATIONS:
DRILL AHEAD.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 18/ 8/ 97 (0600 Hours)

DEPTH: 516m **PROGRESS:** 161m **DAYS FROM SPUD:** 5

OPERATION: DRILLING AHEAD IN THE MEREENIE SANDSTONE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $381,667

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1653.2m MD 1490.4m TVD, -744.6m MD **ROTARY TABLE:** 745.8m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	2/2	Hughes	AT J55	13.5"	11.5	116	
	LAST	1	Smith	IMPAX	13.5"	18	355	(HAMMER)

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	398	1.0	-			

PREVIOUS 24 HOURS OPERATIONS:

RUN IN HOLE, NO TIGHT SPOTS. FOAM DRILL WITH SURVEY TO 516m.

ANTICIPATED OPERATIONS:

DRILL AHEAD AND CHANGE BIT AROUND NOON.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 18/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, SS	DIFF.TO PROGNOSIS	DIFFERENCE TO W.M 10

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
355 - 412m ROP: 2 - 6.1 AV: 4.5	SANDSTONE WITH RARE SILTSTONE SANDSTONE: dominantly light to medium orange, trace light grey opaque, clear and translucent, medium to predominantly fine grained and rarely coarse, moderately well to poorly sorted, sub angular to well rounded, weak to moderately strong siliceous cement, lithics in parts, loose to occasional moderately hard aggregates, fair to poor inferred porosity, fair to tight visual porosity, no fluorescence. SILTSTONE: brick red, dark orange, occasionally purple grey, argillaceous to mainly arenaceous grading to very fine sandstone, local siliceous cement, micromicaceous, hard to soft, blocky to sub-fissile.	none
412 - 440m ROP: 4 - 12.5 AV: 7.0	MASSIVE SANDSTONE SANDSTONE: light orange to increasingly clear and translucent as above predominantly fine to very fine, loose to rare moderately hard aggregates, fair to poor inferred porosity, fair to tight visual porosity, no fluorescence.	none
440 - 516m ROP: 7 - 11 AV: 9.0	MASSIVE SANDSTONE: clear, translucent, rare light grey opaque and pale pink quartz, fine to very fine and locally medium, moderately well to poorly sorted, sub angular to well rounded and common shattered angular grains, loose to occasional moderately hard aggregates with weak to moderately strong siliceous cement, lithics in parts, fair to poor inferred porosity, fair to tight visual porosity, no fluorescence.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 19/ 8/ 97 (0600 Hours)

DEPTH: 612m **PROGRESS:** 96m **DAYS FROM SPUD:** 6

OPERATION: DRILLING AHEAD IN CARMICHAEL SANDSTONE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $412,642

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1653.2m MD 1490.4m TVD, -744.6m MD **ROTARY TABLE:** 745.8m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	3	Hughes	ATJ11H	13.5"	1.5	19	
	LAST	2/2	Hughes	AT J55	13.5"	26.5	193	6 - 6 - 1/16

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	504	1.25	-			
	600	275	-			

PREVIOUS 24 HOURS OPERATIONS:

AIR-MIST DRILL TO 593m, BLOW WELL CLEAN, PULL OUT OF HOLE TO CHANGE BIT. MAKE UP BIT 3 AND BOTTOM HOLE ASSEMBLY, RUN IN HOLE, SERVICE RIG, CONTINUE RUN IN HOLE TO 583m. REAM TO TOTAL DEPTH. DRILL TO 612m, RUN SURVEY, DRILL AHEAD.

ANTICIPATED OPERATIONS:

DRILL AHEAD.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 19/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, SS	DIFF.TO PROGNOSIS	DIFFERENCE TO W.M 10
CARMICHAEL SANDSTONE	589	158	3m LOW	0

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
516 - 550m ROP: 7.4-15.7 AV: 10	MASSIVE SANDSTONE WITH OCCASIONAL SILTSTONE SANDSTONE: predominantly clear, translucent and pale pink , fine to very fine and locally medium, moderately well to poorly sorted, sub angular to rounded, loose to occasional moderately hard aggregates with moderately strong siliceous cement, fair to poor inferred porosity, fair to tight visual porosity, no fluorescence. SILTSTONE: brick red, dark orange, occasionally purple grey, argillaceous to mainly arenaceous grading to very fine sandstone, local siliceous cement, micromicaceous, hard to soft, blocky to sub-fissile.	none
550 - 589m ROP: 5.1-13.3 AV: 11.0	SANDSTONE WITH RARE SILTSTONE SANDSTONE: dominantly clear and translucent with increasing light orange and pink stained quartz grains, medium to fine grained to occasionally very fine grained, moderately well to poorly sorted, sub angular to sub rounded, weak to moderately strong siliceous cement, loose to occasional hard aggregates, poor inferred porosity, poor to tight visual porosity, no fluorescence. SILTSTONE: brick red, dark orange, occasionally pale to medium green, argillaceous to mainly arenaceous grading to very fine sandstone, local siliceous cement, abundant haematite, hard to soft, blocky to platey and sub-fissile	none
	CARMICHAEL SANDSTONE	
589 - 595m ROP: 4.3-18.3 AV: 11	INTERBEDDED SANDSTONE AND SUBORDINATE SILTSTONE SANDSTONE: mainly medium orange and also clear and translucent, predominantly fine to very fine with local medium grains, angular (broken aggregates) to sub rounded, moderately well sorted, moderately strong siliceous cement, loose to rare aggregates with clean to occasional red silty matrix, poor visual and inferred porosity becoming fair with depth, no fluorescence. SILTSTONE: brick red, dark orange, argillaceous to mainly arenaceous grading to very fine sandstone, local siliceous cement, abundant haematite, hard to soft, blocky to platey and sub-fissile.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 19/ 8/ 97 (0600 Hours)

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
595 - 612m ROP: 1.7 - 2.4 AV: 2.0	MASSIVE SANDSTONE AND SUBORDINATE SILTSTONE SANDSTONE: as above but mainly medium to dark orange and common haematite coated frosted grains, rare firm aggregates - predominantly loose, fair inferred porosity, fair to trace visual porosity, no fluorescence. SILTSTONE: brick red, dark orange, argillaceous to mainly arenaceous grading to very fine sandstone, local siliceous cement, abundant haematite, hard to soft, blocky to platey and sub-fissile.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 20/ 8/ 97 (0600 Hours)

DEPTH: 749m **PROGRESS:** 137m **DAYS FROM SPUD:** 7

OPERATION: RUNNING MULTISHOT SURVEY AT 10.75" CASING POINT.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $471,050

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	3	Hughes	ATJ11H	13.5"	15	156	
(2400 Hours)	LAST	2/2	Hughes	AT J55	13.5"	26.5	238	6-6-BT-G-6-1-WT-HR

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	735	7.0	-			
			-			

PREVIOUS 24 HOURS OPERATIONS:

AIR-MIST DRILL TO 747m, RUN SURVEY, DRILL TO 749m, BLOW HOLE CLEAN PRIOR TO PULLING OUT PULL OUT OF HOLE FOR WIPER TRIP AND TO PICK UP MULTISHOT ASSEMBLY. BREAK AND LAY OUT SUB, CROSS OVER, PONY SUB,2 STABILISERS AND BIT, PICK UP MONEL, BIT, BIT SUB AND MAKE UP SAME. INSTALL MULTISHOT, RUN IN HOLE STOPPING WHEN REQUESTED BY DIRECTIONAL DRILLER, TAG 748m (1m FILL). RECOVER MULTISHOT.

ANTICIPATED OPERATIONS:

RUN 10.75" CASING, CEMENT SAME AND INSTALL BOP.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 20/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, SS	DIFF.TO PROGNOSIS	DIFFERENCE TO W.M 10
CARMICHAEL SANDSTONE	589	152	ON PROG.	12m LOW
UPPER STOKES SILTSTONE	671	76	1M LOW	17m LOW

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
612 - 650m ROP: 1.8-6.1 AV: 3.0	SANDSTONE WITH THIN INTERBEDDED SILTSTONE SANDSTONE: predominantly medium dark orange, fe stained quartz and subordinate clear to translucent, fine to very fine with local medium , sub angular to well rounded, common angular broken grains, moderately strong siliceous and fe cement, trace silica overgrowths, friable to hard aggregates, clean to occasional red brown silty matrix, poor to tight visual porosity, no fluorescence. SILTSTONE: dark orange, brick-red, occasionally medium brown and trace pale green, argillaceous to arenaceous grading to very fine sandstone, strong fe and siliceous cement in parts, trace lithics and mica, moderately firm, blocky to sub fissile.	none
650 - 671m ROP: 2.6-8.7 AV: 4.0	SANDSTONE WITH INCREASING SILTSTONE SANDSTONE: varicoloured as above with occasional purple brown aggregates with argillaceous matrix, angular to sub rounded, weak to moderately strong siliceous cement, loose to occasional very hard aggregates, poor inferred porosity, poor to tight visual porosity, no fluorescence. SILTSTONE: as above with occasional dolomitic cement, platey, brittle to hard.	none
	UPPER STOKES SILTSTONE	
671 - 710m ROP: 2 - 6.2 AV: 3.5	SILTSTONE WITH SUBORDINATE INTERBEDDED SANDSTONE SILTSTONE: medium red brown, dark brown, occasionally pale green patches and bands, dominantly argillaceous with occasional large mica flakes, locally arenaceous grading to very fine sandstone, common strong calcareous and dolomitic cement, fe cement in parts, hard to brittle, massive, blocky to platey and sub-fissile. SANDSTONE: clear, translucent, occasionally light brown, medium to very fine grained, moderately well sorted, strong siliceous cement and occasional strong dolomitic cement, common loose grains and hard aggregates, poor to tight visual porosity, no fluorescence .	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 20/ 8/ 97 (0600 Hours)

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
710 - 749m ROP: 2.6 - 9.4 AV: 3.3	SILTSTONE WITH MINOR SANDSTONE SILTSTONE: as above with strong calcareous and dolomite cement, hard. SANDSTONE: clear, translucent, occasionally pale grey-green, rare off-white, fine to very fine to locally medium , subangular to well rounded, generally well sorted, common strong dolomite cement, rare brown mica, hard aggregates, no visual porosity, no fluorescence.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 21/ 8/ 97 (0600 Hours)

DEPTH: 749m **PROGRESS:** 0m **DAYS FROM SPUD:** 8

OPERATION: WAITING ON CEMENT HAVING SET 10 3/4" SURFACE CASING.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $712,901

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT							
	LAST	3	Hughes	ATJ11H	13.5"	30	312	2-2-WT-A-E-I-NO-CP

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
			-			
			-			

PREVIOUS 24 HOURS OPERATIONS:

CONTINUE TO RECOVER MULTISHOT, WASH 1m FILL AND BLOW WELL CLEAN, SPOT 60 BBLS HI-VIS MUD ON BOTTOM, PULL OUT OF HOLE. LAY OUT 13.5" BOTTOM HOLE ASSEMBLY, ROTATING HEAD AND CONDUCTOR BARREL. RIG TO RUN CASING. HOLD SAFETY MEETING. RUN 60 JOINTS 10.75" SURFACE CASING TO 745.32m. HEAD UP HOWCO, CIRCULATE 251 BBLS WATER, HOLD SAFETY MEETING. PRESSURE TEST TO 3000 PSI WITH HOWCO UNIT. MIX AND PUMP 306 SACKS CLASS 'A' CEMENT (NO ADDITIVES) AT 15.6 PPG. DISPLACE WITH 326 BBLS WATER. BUMP PLUG WITH 1000 PSI. PERFORM TOP UP JOB, WAIT ON CEMENT.

ANTICIPATED OPERATIONS:

INSTALL BOP.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 22/ 8/ 97 (0600 Hours)

DEPTH: 749m **PROGRESS:** 0m **DAYS FROM SPUD:** 9

OPERATION: WELDING SPACER ON BLOOIE LINE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $762,035

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT							
	LAST	3	Hughes	ATJ11H	13.5"	30	312	2-2-WT-A-E-I-NO-CP

SURVEYS: see attached multishot survey sheet	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
			-			

PREVIOUS 24 HOURS OPERATIONS:

WAIT ON CEMENT, PREPARE TO NIPPLE UP, CUT CONDUCTOR AND WELD SUPPORT PLATES. RIG DOWN CEMENT HEAD, LAY OUT LANDING JOINT. MAKE UP 11" 3000 PSI CASING HEAD, 11" 3000 PSI, 13 5/8" 5000 PSI DOUBLE STUDDED ADAPTOR AND 13 5/8" BOP ARRANGEMENT WITH ROTATING HEAD. NIPPLE UP BOPS, FUNCTION TEST HCR, BLIND AND PIPE RAMS, ANNULAR PREVENTER. PULL TEST ON BOP TO 60,000 PSI. DRESS AND WELD SPACER IN BLOOIE LINE.

ANTICIPATED OPERATIONS:

FINISH SURFACE EQUIPMENT INSTALLATION AND TESTING, MAKE UP BIT AND BOTTOM HOLE ASSEMBLY, RUN IN HOLE, PRESSURE TEST CASING, PIPE RAMS AND ANNULAR PREVENTER, DRILL OUT PLUG, CEMENT TRACK AND FLOATS AND 3m FORMATION, RUN LEAK OFF TEST, DRILL AHEAD.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 23/ 8/ 97 (0600 Hours)

DEPTH: 751m **PROGRESS:** 2m **DAYS FROM SPUD:** 10

OPERATION: CONDUCTING FORMATION LEAK OFF TEST.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $802,919

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
(2400 Hours)	PRESENT							
	LAST	3	Hughes	ATJ11H	13.5"	30	312	2-2-WT-A-E-I-NO-CP

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	-					

PREVIOUS 24 HOURS OPERATIONS:

WELD SPACER IN BLOOIE LINE, TEST ACCUMULATOR, PRESSURE TEST BLIND RAMS TO 200 PSI LOW AND 1500 PSI HIGH. TEST PIPE RAM, KILL LINE, CHOKE LINE VALVES AND CHOKE MANIFOLD VALVES TO 200 PSI AND 2000 PSI. TEST ANNULAR PREVENTER TO 200 PI AND 1000 PSI. LAY DOWN TEST PLUG, RACK BACK DRILL PIPE. PICK UP KELLY AND PRESSURE TEST UPPER AND LOWER KELLY COCKS - LOWER ONE NO GOOD. REPAIR LOWER KELLY COCK AND STABBING VALVE. LAY OUT 8" DCS, MAKE UP 9 7/8" BUILD ASSEMBLY AND RUN IN HOLE. PICK UP AND MAKE UP JARS, KELLY, SAVER SUB. TAG CEMENT AT 732m. DRILL OUT PLUG, FLOAT AND SHOE AND 2m OF FORMATION. RIG UP HOWCO AND RUN FORMATION INTEGRITY TEST: EMW = 16.2 PPG.

ANTICIPATED OPERATIONS:

RIG DOWN HOWCO, DRILL AHEAD.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 24/ 8/ 97 (0600 Hours)

DEPTH: 1028m **PROGRESS:** 277m **DAYS FROM SPUD:** 11

OPERATION: PULLING OUT OF HOLE FOR BIT CHANGE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $837,423

CASING DEPTH: **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	4	Hughes	ATJ11H	9.87"	17.5	277	
	LAST	3	Hughes	ATJ11H	13.5"	30	312	2-2-WT-A-E-I-NO-CP

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	791	9.2	224	896	21.5	221
	819	12.5	224	935	26.5	221
	858	17	223	973	30.5	220

PREVIOUS 24 HOURS OPERATIONS:

PRESSURE TEST INSIDE BLOW- OUT PREVENTER 200 AND 2000 PSI, PRESSURE TEST OIL TOOLS LINES AND PRESSURE RELIEF VALVE. TEST EMERGENCY ENGINE KILLS, UNLOAD FLUID FROM HOLE. AIR-MIST DRILL USING 3000# WOB, 75 RPM, 290 PSI, 2400 SCFM AIR, 12 BBL/HR WATER, 0.3 BBL/HR BARACOR AND 1.5 BBL/HR QUICKFOAM TO 1028m WITH SURVEYS.

ANTICIPATED OPERATIONS:

CHANGE BIT, RUN IN HOLE AND DRILL AHEAD.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 24/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, SS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10, m
LOWER STOKES SILTSTONE	910	903.9	-157.3	0.3 HIGH	8.3 LOW
UPPER STAIRWAY SANDSTONE	988	971	-224	0.5 HIGH	7.4 LOW

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
749 - 780m ROP: 2 - 5 AV: 3.0	SILTSTONE WITH MINOR SANDSTONE AND DOLOMITE SILTSTONE: brick-red, purple - brown, pale green-grey, generally arenaceous with strong dolomite cement, occasional fine grained sandstone grains, trace mica, blocky, hard. SANDSTONE: clear, pale grey, pale green, strong dolomite and siliceous cement, hard, no visual porosity, no fluorescence. DOLOMITE: clear, translucent, pale green, crystalline to occasionally granular, blocky, hard.	none
780 - 825m ROP: 1 - 3 AV: 1.5	MASSIVE SILTSTONE SILTSTONE: predominantly brick-red and pale green to occasionally purple brown as above, argillaceous to occasionally arenaceous, common dolomite and calcareous cement, massive, blocky, firm to hard.	none
825 - 910m ROP: 1 - 8 AV: 2.0	SILTSTONE WITH MINOR DOLOMITE SILTSTONE: brick-red, purple - brown, pale green-grey, generally arenaceous with strong dolomite cement, occasional fine grained sandstone grains, trace mica, blocky, hard. DOLOMITE: clear, translucent, pale green, crystalline to occasionally granular, blocky, hard.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 24/ 8/ 97 (0600 Hours)

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
	LOWER STOKES SILTSTONE	
910 - 988m ROP: 1 - 4 AV: 2.5	INTERBEDDED SILTSTONE, DOLOMITE AND LIMESTONE SILTSTONE: brick-red, purple - brown, becoming mainly pale green-grey from 950m, generally argillaceous with strong dolomite and calcareous cement, occasional fine grained sandstone grains, rare mica, blocky, hard. DOLOMITE: clear, translucent, pale green, occasionally pink and pale red, microcrystalline and coarsely crystalline to occasionally granular, blocky, hard. LIMESTONE: white (as free calcite), pale grey, cream, buff translucent in parts, micritic to sparitic, silty in parts, rounded to blocky, hard to brittle.	none
	UPPER STAIRWAY SANDSTONE	
988 - 1001m ROP: 2 - 4 AV: 3	SANDSTONE WITH INTERBEDDED SILTSTONE AND DOLOMITE SANDSTONE: clear, translucent, off-white, predominantly fine to very fine and locally medium and trace coarse, sub rounded to well rounded, , subangular to well rounded, moderately well sorted, common strong dolomite and calcareous cement, trace argillaceous matrix, trace lithics, hard aggregates, poor to tight visual porosity, dull yellow mineral fluorescence only. SILTSTONE: grey, medium grey, grey-green, arenaceous, dolomitic and calcareous (occasional veining), rare pyrite banding, hard to firm, blocky. DOLOMITE: clear, translucent, pale green, occasionally pink and pale red, microcrystalline and coarsely crystalline to occasionally granular, blocky, hard.	none
1001 - 1028m ROP: 3 -11 AV: 6.0	SANDSTONE WITH MINOR SILTSTONE AND DOLOMITE INTERBEDS SANDSTONE: clear, white, translucent, pale brown, coarse to very fine grained and predominantly medium to fine, subangular to well rounded loose grains and subangular to subrounded grains in aggregates, poorly sorted, trace white to cream argillaceous matrix, strong siliceous and dolomite cement, crystalline texture in parts, occasional black lithics, trace disseminated pyrite, trace micaceous, hard, tight visual porosity, minor fluorescence only. SILTSTONE: medium grey-brown, light grey, dolomite, arenaceous, blocky to occasionally sub fissile, hard to splintery. DOLOMITE: light grey, buff, crystalline, very hard, blocky.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 25/ 8/ 97 (0600 Hours)

DEPTH: 1150m, (1102.4m TVD) **PROGRESS:** 122m **DAYS FROM SPUD:** 12

OPERATION: DRILLING AHEAD IN MIDDLE STAIRWAY SANDSTONE.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $893,708

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	5	Smith	MF3OD	9.87"	10.5	114	-
(2400 Hours)	LAST	4	Hughes	ATJ11H	9.87"	17	279	4-4-BT-H-E-I-WT-TQ

SURVEYS:	MD,m	INCLINATION	AZIMUTH (T)	MD,m	INCLINATION	AZIMUTH (T)
	934	26.5	221	1012	35.5	218
	973	30.5	220	1136	37	214

PREVIOUS 24 HOURS OPERATIONS:

BLOW HOLE CLEAN, PULL OUT OF HOLE TO CHANGE BIT. FUNCTION TEST BLIND RAMS, MAKE UP BIT #5, CHANGE STABILISER SLEEVES, PICK UP 1 STABILISER. RUN IN HOLE TO 294m. SLIP AND CUT DRILLING LINE, SERVICE RIG. RUN IN HOLE TO 1009m. INSTALL ROTATING HEAD AT 745m. REAM FROM 1009 TO 1028m. AIR/MIST DRILL 9 7/8" HOLE WITH SURVEYS TO 1142m WITH 100 RPM, 30K WOB, 2400 SCFM AIR, 290 PSI AND 12 BBL/MIN WATER WITH BARACOR AND QUICKFOAM ADDITIVES.

ANTICIPATED OPERATIONS:

DRILL TO INTERMEDIATE LOGGING POINT AT 1150m. RUN WIPER TRIP TO CASING SHOE, RUN DOWN TO BOTTOM, DISPLACE HOLE WITH BRINE, POOH TO RUN GR AND DIPMETER LOGS.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 25/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, SS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10, m
UPPER STAIRWAY SANDSTONE	988	971	-224	0.5 HIGH	7.4 LOW
MIDDLE STAIRWAY SANDSTONE	1048	1022	-275	2.7 HIGH	3.4 LOW

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1028 - 1048m ROP: 3.8-12.7 AV: 8	SANDSTONE WITH MINOR SILTSTONE AND TRACE DOLOMITE SANDSTONE: clear, translucent, becoming locally medium to dark olive green, occasionally medium to predominantly fine grained and very fine grained, subangular to well rounded, well sorted, strong siliceous and dolomitic cement, crystalline texture in parts, occasional black lithic and siltstone inclusions, hard to very hard, tight visual porosity, pale dull yellow mineral fluorescence. SILTSTONE: medium grey-brown, light grey, dolomitic and calcareous in parts, arenaceous, blocky to occasionally sub fissile, hard to splintery. DOLOMITE: light grey, buff, crystalline, very hard, blocky.	none
	MIDDLE STAIRWAY SANDSTONE	
1048 - 1061m ROP: 4.7-12.2 AV: 7.0	SANDSTONE WITH TRACE SILTSTONE SANDSTONE: clear, translucent, occasionally off-white and pale grey, fine and very fine grained, subangular to moderately well rounded, well sorted, strong siliceous and local dolomitic cement, crystalline texture in parts, clean aggregates with slight siltstone matrix in parts, hard to very hard, tight visual porosity, pale dull yellow mineral fluorescence only. SILTSTONE: medium grey-brown, dolomitic and calcareous in parts, arenaceous, blocky to occasionally sub fissile, hard.	none
1061 - 1150m ROP: 2.0 - 6.6 AV: 3.0	INTERGRADATIONAL SANDSTONE AND SILTSTONE SANDSTONE: clear, translucent and increasingly grey brown to olive black, fine to very fine and rare medium , subangular to subrounded , well sorted aggregates, strong siliceous cement with occasional silica overgrowths and trace strong dolomite cement, abundant olive grey silty matrix in parts grading to and interlaminated with siltstone, local mica and black lithics, trace pyrite, hard and very hard to occasional moderately friable aggregates, poor to mainly tight visual porosity, no fluorescence. SILTSTONE: dark olive grey, arenaceous grading to sandstone, trace pyrite, occasional mica, trace dolomite cement, hard.	none

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 26/ 8/ 97 (0600 Hours)

DEPTH: 1150m, (1102.4m TVD) **PROGRESS:** 0m **DAYS FROM SPUD:** 13

OPERATION: RUNNING IN HOLE TO DRILL AHEAD FOLLOWING INTERMEDIATE LOGGING RUN (GR-SHDT).

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $951,907

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	6	Smith	MF3OD	9.87"			-
(2400 Hours)	LAST	5	Smith	MF3OD	9.87"	13	122	3-6-WT-G-E-I-BT-LOG

SURVEYS:	MD	INC.	AZ. (TN)	TVD	N/S	E/W	Section	DLS	BUR
	m	°	°	m	m	m		°/30m	°/30m
	1136.59	37	214	1091.68	-147.18	-117.34	187.96	0.74	-0.36

PREVIOUS 24 HOURS OPERATIONS:

AIR/MIST DRILL TO 1150m, BLOW HOLE CLEAN, RUN SURVEY AT 1136m. RUN WIPER TRIP TO SHOE, DOUBLE LINE TONG BREAK DRILL PIPE, FILL HOLE WITH 316 BBLS WATER. RUN IN HOLE, TAG FILL AT 1131m (19m). WASH AND REAM TO 1150m. CIRCULATE BOTTOMS UP, SPOT BRINE, PULL OUT OF HOLE TO LOG. DOUBLE LINE TONG TO BREAK DRILL PIPE - EXCESSIVE TORQUE REQUIRED. SAFETY MEETING, RIG UP SCHLUMBERGER, RUN GR-AMS-SHDT LOGS (APPROXIMATELY 8m FILL ENCOUNTERED). TRANSMIT LOG AND WAIT ON NEW DIRECTIONAL PLAN. MAKE UP BUILD BOTTOM HOLE ASSEMBLY AND BIT #6. RUN IN HOLE SERVICE BREAKING ALL DRILL PIPE CONNECTIONS DUE TO HIGH TORQUE. UNLOAD HOLE AT 800m, CONTINUE TO RUN IN HOLE .

ANTICIPATED OPERATIONS:

BREAK SERVICE ALL DRILL PIPE CONNECTIONS WHILE RUNNING IN HOLE, DRILL AHEAD.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 26/ 8/ 97 (0600 Hours)

FORMATION TOPS: PRELIMINARY FROM LOGS	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10, m
LOWER STOKES SILTSTONE	916.5	909.8	-163.2	5.6 L	14.2 LOW
UPPER STAIRWAY SANDSTONE	992.5	976.4	-229.8	5.8 L	12.6 LOW
MIDDLE STAIRWAY SANDSTONE	1056	1027.7	-281.1	3.4 L	3.4 LOW
GAMMA RAY MARKER HORIZON	1129.3	1086	-339.3	NOT PROG.	

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 27/ 8/ 97 (0600 Hours)

DEPTH: 1276m (1202.2m TVD)* **PROGRESS:** 128m **DAYS FROM SPUD:** 14

OPERATION: RUNNING IN HOLE WITH BIT #7
* adjusted up 2m for bottom hole assembly correction

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $1,381,100 (C&S)$1,543,000 **COST TO DATE:** $ 970,586

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
(2400 Hours)	PRESENT							-
	LAST	6	Smith	MF3OD	9.87"	10	128	

SURVEYS:

MD	INC.	AZ. (TN)	TVD	N/S	E/W	Section	DLS	BUR
m	°	°	m	m	m		°/30m	°/30m
1174.89	37	214	1091.68	-166.52	-129.84	210.97		
1213.39	37.6	212	1152.92	-186.25	-142.29	234.26		
1242.24	38.4	211	1175.65	-201.40	-151.57	251.98		
1271.18	38	210	1198.39	-216.82	-160.65	269.81		

Survey depths have not been adjusted for corrected string length.

PREVIOUS 24 HOURS OPERATIONS:
CONTINUE TO RUN IN HOLE, UNLOAD HOLE AT 1133m, REAM TO 1150m, DRILL TO 1181m, SERVICE RIG, RUN SURVEY. WORK TIGHT HOLE FROM 1169 - 1181m. DRILL WITH SURVEYS TO 1276m. BLOW HOLE, WORK PIPE, PULL OUT OF HOLE FOR BIT CHANGE. CHANGE OUT STABILISER BLADE, MAKE UP BIT #7, RUN IN HOLE WITH BOTTOM HOLE ASSEMBLY, SLIP AND CUT DRILLING LINE 33' DRILLING LINE, SERVICE RIG - REPLACE BACK UP AND BREAK OUT LINE - RUN IN HOLE.

ANTICIPATED OPERATIONS:
RUN IN HOLE AND REAM TO TOTAL DEPTH, DRILL AHEAD.

NOTE: INCORRECT BOTTOM HOLE ASSEMBLY LENGTH CALCULATED SINCE SURFACE CASING DEPTH, A CORRECTION OF -2m HAS BEEN MADE FROM THE CURRENT TOTAL DEPTH AND TO FORMATION TOPS POST LOGGING.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 28/ 8/ 97 (0600 Hours)

DEPTH: 1295m (1217.24m TVD) **PROGRESS:** 19m **DAYS FROM SPUD:** 15

OPERATION: REAMING WITH NEW BOTTOM HOLE ASSEMBLY.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $1,007,107

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	7	Smith	MF3OD	9.87"	1.5	17	2-3-1/16"
	LAST	6	Smith	MF3OD	9.87"	10	128	

SURVEYS:	MD	INC.	AZ. (TN)	TVD	N/S	E/W	Section
	m	°	°	m	m	m	
	1271.18	38	210	1198.39	-216.82	-160.65	269.81
	1290	37.5	208	1213.62	-227.13	-166.37	281.52

PREVIOUS 24 HOURS OPERATIONS:

RUN IN HOLE TO 1092m, PICK UP KELLY, INSTALL ROTATING HEAD AND BLOW HOLE. REAM FROM 1092 - 1123m. LAY OUT 4 SINGLES, RUN IN HOLE 2 STANDS, LAY OUT TOP SINGLE, BLOW HOLE AND REAM. SAFETY MEETING, RACK KELLY, LAY OUT 12 DRILL PIPES, RUN IN HOLE TO 1160m, BLOW HOLE AND REAM TO 1276m. BLOW HOLE AND DRILL TO 1295m. RUN SURVEY, BLOW HOLE, WORK TIGHT HOLE FROM 1283m TO 1264m, PULL OUT OF HOLE TO CHANGE BOTTOM HOLE ASSEMBLY. MAKE UP NEW BOTTOM HOLE ASSEMBLY, RUN IN HOLE TO 1023m, TAG BRIDGE. INSTALL ROTATING HEAD, LAY OUT 2 SINGLES, PICK UP KELLY, BLOW HOLE, REAM.

ANTICIPATED OPERATIONS:

REAM TO TOTAL DEPTH, DRILL AHEAD TRYING TO BUILD ANGLE.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 28/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10, m

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1276 - 1295m ROP: 1.8 - 4.0 AV: 2.9	SILTSTONE WITH MINOR INTERBEDDED SANDSTONE AND OCCASIONAL LIMESTONE AND DOLOMITE SANDSTONE: clear, translucent, off-white and predominantly pale to medium grey, fine to very fine, angular to subrounded, well sorted, strong siliceous and dolomite cement, with common overgrowths and crystalline texture, moderately hard to very hard, no visual porosity, dull pale yellow and gold mineral fluorescence only. SILTSTONE: very dark grey to medium grey, argillaceous to occasionally arenaceous grading to sandstone, predominantly massive with local banded and disseminated pyrite, trace mica, calcareous and dolomite in parts, rounded to platey, blocky to trace sub fissile, hard to brittle. DOLOMITE: pale beige, off-white, pink in parts, coarsely crystalline, sub euhedral crystals in parts, blocky, hard. LIMESTONE: off-white, pale grey and as white and translucent free calcite, micritic to mainly sparritic, blocky, hard. Common nodular and disseminated pyrite as cement and in banded form in siltstones.	Trace 100% C1

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 29/ 8/ 97 (0600 Hours)

DEPTH: 1350m (1245.34m TVD) **PROGRESS:** 55m **DAYS FROM SPUD:** 16

OPERATION: DRILLING AHEAD IN PACOOTA P1 UNIT

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $ 1,048,524

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR/MIST /FOAM	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition	
	PRESENT	9RR 8	Smith	MF3OD	9.87"	3	55	-	
(2400 Hours)	LAST	8	Smith	MF3OD	9.87"	1.5	17	1-2-NO-H-E-I-NO-BHA, (+Reaming)	

SURVEYS:	MD	INC.	AZ. (TN)	Section	TVD	N/S	E/W
	m	°	°	m	m	m	m
	1305.5	38	207.5	290.65	1225.53	-235.30	-170.64
	1324.78	39.4	207	302.58	1240.58	-246.02	-176.15

PREVIOUS 24 HOURS OPERATIONS:
REAM FROM 1023 - 1295m, PULL OUT OF HOLE TO CHECK GAUGE ON BIT AND STABILISER. RUN IN HOLE TO 1256m, PICK UP ROTATING HEAD, RUN IN HOLE TO 1281m, PICK UP KELLY AND REAM TO 1295m. BLOW HOLE CLEAN, DRILL AHEAD WITH SURVEYS TO 1350m.

ANTICIPATED OPERATIONS:
DRILL AHEAD BUILDING ANGLE

POST 0600 HOURS: DRILLING AHEAD TO 1360M MD, 1255M TVD, PULL OUT OF HOLE TO CHANGE BIT AND STABILISE, EXPECT TO DRILL AHEAD LATE TODAY.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 29/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10, m
PACOOTA SANDSTONE - P1 UNIT	1331	1245.3	-498.7	1.7 LOW	15.3 HIGH

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NONE	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1295 - 1331m ROP: 1.8 - 3.1 AV: 2.0	SILTSTONE WITH TRACE INTERBEDDED SANDSTONE AND OCCASIONAL LIMESTONE AND DOLOMITE SANDSTONE: clear, translucent, off-white and predominantly pale to medium grey, fine to very fine, angular to subrounded, well sorted, strong siliceous and dolomite cement, with common overgrowths and crystalline texture, moderately hard to very hard, no visual porosity, dull pale yellow and gold mineral fluorescence only. SILTSTONE: very dark grey to medium grey, argillaceous to occasionally arenaceous grading to sandstone, predominantly massive with local banded and disseminated pyrite, trace mica, calcareous and dolomite in parts, rounded to platy, blocky to trace sub fissile, hard to brittle. DOLOMITE: pale beige, off-white, pink in parts, coarsely crystalline, sub euhedral crystals in parts, blocky, hard. LIMESTONE: off-white, pale grey and as white and translucent free calcite, micritic to mainly sparritic, blocky, hard. Common nodular and disseminated pyrite as cement and in banded form in siltstones.	Trace 100% C1
	PACOOTA SANDSTONE - P1 UNIT	
1331 - 1340m ROP: 2.5 - 4.0 AV: 2.0	SILTSTONE WITH INTERBEDDED DOLOMITE SILTSTONE: medium to occasionally dark grey, argillaceous, micaceous, massive, rare disseminated pyrite, bladed to blocky, hard to brittle. DOLOMITE: pale beige, off-white, translucent, microcrystalline to coarsely crystalline, blocky, hard.	Trace 100% C1

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 29/ 8/ 97 (0600 Hours)

GEOLOGICAL SUMMARY		
INTERVAL & ROP, min/ m	**LITHOLOGY**	**GAS, units peak / bkgrnd & comp.**
1340 - 1350m ROP: 2.0 - 3.1 AV: 2.5	SANDSTONE WITH INTERBEDDED SILTSTONE, DOLOMITE AND LIMESTONE SANDSTONE: two types (1), clear, translucent, coarse to fine grained, sub rounded to well rounded, poorly sorted, weak to moderately strong siliceous and dolomitic and calcareous cement, trace silty matrix, common siliceous and dolomitic overgrowths, crystalline texture in parts, abundant dark green glauconite, common disseminated pyrite, friable to hard aggregates, poor to tight visual porosity, fair inferred porosity, no fluorescence; (2) light grey to translucent - grey brown, fine to very fine grained, sub rounded, moderately well sorted, strong dolomite cement, glassy texture in parts, occasionally silty matrix, trace mica, local pyrite, common glauconite, moderately hard to hard, poor to tight visual porosity, no fluorescence . SILTSTONE: medium to light grey, argillaceous, massive, trace pyrite, commonly micromicaceous, bladed to blocky, hard to brittle. DOLOMITE: pale beige, off-white, pink in parts, coarsely crystalline, sub euhedral crystals in parts, blocky, hard. LIMESTONE: off-white, pale grey and as white and translucent free calcite, micritic to mainly sparritic, blocky, hard. Common nodular pyrite.	3 55/31/7/7

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 30/ 8/ 97 (0600 Hours)

DEPTH: 1435m (1324m TVD) **PROGRESS:** 85m **DAYS FROM SPUD:** 17

OPERATION: DRILLING AHEAD IN BASAL PACOOTA P1 UNIT.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $1,094,340

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR/MIST /FOAM	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition	
	PRESENT	9	Reed	EHP61	8.5"	4.5	75	-	
(2400 Hours)	LAST	RR8	Smith	MF3OD	9.87"	4.5	65	2-3-WT-A-E-I-NO-BHA	

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
	1353.68	41.4	205	1262.59	321.05	-262.85	-184.36
	1394.82	42.0	204.5	1293.30	347.94	-287.71	-195.81

PREVIOUS 24 HOURS OPERATIONS:

DRILL TO 1360', RUN SURVEY, BLOW HOLE AND WORK PIPE, LAY OUT ROTATING HEAD, PULL OUT OF HOLE FOR BOTTOM HOLE ASSEMBLY CHANGE. LAY OUT 3 X 7" DRILL COLLARS. PICK UP 8.5" BIT, PICK UP 3 X 6.5" DRILL COLLARS, RUN IN HOLE TO SHOE. SLIP AND CUT DRILLING LINE, RUN IN HOLE. INSTALL NEW ROTATING HEAD, RUN IN HOLE. BLOW HOLE CLEAN, DRILL WITH SURVEYS TO 1431m. BLOW HOLE AND TRANSFER GAS FLOW TO FLARE LINE, COMMENCE FLOW TEST AT 02:19 HRS.- END TEST AT 05:00 HRS. BLEED DOWN THROUGH CHOKE. LINE UP FLOW TO BLOOIE AND DRILL AHEAD TO 1435m

NOTE: OPEN HOLE FLOW TEST #1 (AT 1431m md, 1320m TVD) FLOWED GAS AT 3.35 MMSCFD (94,000 m3/day) FROM THE P1-280 SAND. STABILISED PRESSURE WAS 609 PSIA AFTER 116 MINS. FLOW TIME WAS 161 MINS.

ANTICIPATED OPERATIONS:

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 30/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10
(P1-280 SAND)	1421	1312.76	-566.16	NP	20m high*

* APPROXIMATE.

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
1421-1426m P1-280 SAND	GAS SAND: fine to very fine and occasionally medium, well sorted, loose to well cemented aggregates, poor inferred to tight visual porosity, no fluorescence.	770 / trace 72:17:7:4

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1350 - 1388m ROP: 1.4 - 4.3 AV: 2.5	SANDSTONE WITH SUBORDINATE SILTSTONE AND MINOR DOLOMITE AND LIMESTONE SANDSTONE: white, clear, translucent, occasionally mottled clear - black, medium to mainly fine grained to very fine grained, angular to sub rounded, generally well sorted, moderately strong to very strong siliceous and local dolomitic and calcareous cement, trace silty matrix, common siliceous and dolomitic overgrowths, crystalline texture in parts, locally abundant dark green glauconite and disseminated pyrite, moderately friable to very hard aggregates, trace to tight visual porosity, occasionally poor inferred porosity, pale blue-white fluorescence with no cut; (2) light grey to translucent - dark grey - brown, fine to very fine grained, sub rounded, moderately well sorted, strong dolomite cement, glassy texture in parts, occasional silty matrix, trace mica, local pyrite, common glauconite, moderately hard to very hard, poor to tight visual porosity, no fluorescence. SILTSTONE: medium to light grey, argillaceous, massive, trace pyrite, commonly micromicaceous, bladed to blocky, hard to brittle. DOLOMITE: pale beige, off-white, pink in parts, coarsely to micro crystalline, blocky, hard. LIMESTONE: off-white, pale grey, pale translucent - brown, cryptocrystalline, very hard, also micritic to mainly sparritic and commonly silty, blocky, hard. and as white free calcite. Common nodular pyrite present.	Trace 100% C1
1388 - 1396m ROP: 2.3 - 4.5 AV: 2.7	SANDSTONE WITH INTERBEDDED SILTSTONE SANDSTONE: as above and... mottled translucent - brown/ off-white, medium to very fine , angular to subrounded , poorly sorted, very strong siliceous cement, abundant altered grains and silica overgrowths, trace dolomite cement, common dark green glauconite, very hard, no visual porosity. SILTSTONE: as above	8/1 99:1

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 30/ 8/ 97 (0600 Hours)

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1396 - 1401m ROP: 4.0 - 6.7 AV: 5.0	SANDSTONE: white, clear, translucent, pale grey, fine to very fine, subangular to subrounded, well sorted, strong siliceous cement, clean to occasionally silty matrix, generally hard and occasionally moderately friable, poor to tight visual porosity, no fluorescence .	30 / 1 74:16:10:trace
1401 - 1421m ROP: 1.5 - 4.5 AV: 2.5	INTERBEDDED SANDSTONE AND SILTSTONE WITH OCCASIONAL DOLOMITE AND LIMESTONE SANDSTONE: as above predominantly grey brown, rare pale green (chloritic), fine to very fine, well sorted, strong siliceous cement, common silica overgrowths, crystalline texture in parts, silty matrix, occasional glauconite, trace mica, hard, tight visual porosity, no fluorescence; and becoming ... clear, translucent, fine to very fine and occasionally medium, sub angular to rounded, predominantly loose to well cemented aggregates, fair inferred porosity to tight visual porosity, no fluorescence.	10 decreasing to trace 74:16:10:trace
1421 - 1426m ROP: 5.5 - 8.0 AV: 6.5	**P1-280** SANDSTONE: clear, translucent, fine to very fine and occasionally medium, sub angular to rounded, predominantly loose to well cemented clean aggregates with trace overgrowths, poor inferred porosity, poor to tight visual porosity, no fluorescence.	770 / trace 72:17:7:4
1426 - 1435m ROP: 3.1 - 7.1 AV: 3.8	SANDSTONE: as above predominantly loose with fair inferred porosity, and common moderately hard aggregates with poor to tight visual porosity, no oil fluorescence.	770 / trace 70:17:8:5

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 31/ 8/ 97 (0600 Hours)

DEPTH: 1487m (1356.3m TVD) **PROGRESS:** 52m **DAYS FROM SPUD:** 18

OPERATION: DRILLING AHEAD IN PACOOTA P2.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $1,139,455

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR/MIST /FOAM	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition	
	PRESENT	10	Smith	F5ODRP	8.5"	4	45		
(2400 Hours)	LAST	9	Reed	EHP61	8.5"	4.5	75	4-8-RG-G-F-8-WT-TQ	

SURVEYS:

MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
m	°	°	m	m	m	m
1443.34	42.5	205	1329.2	380.01	-317.27	-209.61
1482.64	42.2	204.5	1358.25	406.01	-341.39	-220.56

PREVIOUS 24 HOURS OPERATIONS:

AIR DRILL TO 1442m BIT TORQUEING. SAFETY MEETING. KILL WELL WITH MUD, PULL OUT OF HOLE TO CHANGE BIT. REPAIR WASHED OUT BLOOIE LINE, CHANGE STABILISER BLADES, RUN IN HOLE TO 1360m. CHANGE ROTATING HEAD RUBBER. REAM FROM 1430m TO 1441m. DISPLACE HOLE TO WATER. AIR DRILL AHEAD TO 1487m.
NOTE: WATER SLUGGING FROM BLOOIE LINE FROM BASE PACOOTA P1 UNIT MAKING FLARE IRREGULAR AT TIMES.

ANTICIPATED OPERATIONS:

DRILL AHEAD. PULL OUT OF HOLE TO CONVERT TO MUD DRILLING AT APPROXIMATELY 1525m MEASURED DEPTH.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 31/ 8/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10
PACOOTA P2 UNIT	1447	1331.91	-585.31	1.3 LOW	25.7m high

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NO ADDITIONAL MAJOR GAS SANDS, NO FLUORESCENCE.	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1435 - 1447m ROP: 5.0-11.6 AV: 7.5	SANDSTONE WITH MINOR SILTSTONE SANDSTONE: clear, translucent, fine to very fine and occasionally medium, sub angular to rounded, predominantly loose to well cemented clean aggregates with trace overgrowths, poor inferred porosity, poor to tight visual porosity, no fluorescence. SILTSTONE: medium to occasionally dark grey, argillaceous to arenaceous and commonly siliceous, massive, micromicaceous in parts, bladed and platy to sub blocky, brittle to hard.	715 / trace 71:16:9:4
	PACOOTA SANDSTONE: P2 UNIT	
1447 - 1458m ROP: 3.0 - 4.2 AV: 3.6	SILTSTONE WITH SUBORDINATE SANDSTONE SILTSTONE: medium to occasionally dark grey, argillaceous to arenaceous and commonly siliceous, massive, micromicaceous in parts, bladed and platy to sub blocky, brittle to hard. SANDSTONE: clear, translucent, pale translucent - grey, medium to very fine, sub angular to rounded, loose to well cemented, generally clean aggregates with occasional siliceous overgrowths, trace lithics, poor inferred porosity, tight visual porosity, no fluorescence.	600 decreasing to 570 71:17:8:4
1458 - 1487m ROP: 3.1 - 7.7 AV: 5.2	SANDSTONE AND MINOR SILTSTONE SANDSTONE: mainly loose as above with increasing coarse grains and clear aggregates - fine to very fine, strong siliceous cement and common silica overgrowths, poor to tight visual porosity, no fluorescence. SILTSTONE: as above	500 71:17:8:4

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 1/ 9/ 97 (0600 Hours)

DEPTH: 1552m (1410m TVD) **PROGRESS:** 65m **DAYS FROM SPUD:** 19

OPERATION: RUNNING SURVEY IN PACOOTA P3 UNIT.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $1,184,570

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type: AIR/MIST /FOAM	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition	
	PRESENT	11	Smith	F5ODR	8.5"	3	34		
(2400 Hours)	LAST	10	Smith	F5ODRP	8.5"	8	76		

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
	1536.69	41.8	205.5	1398.42	441.57	-374.17	-235.85

PREVIOUS 24 HOURS OPERATIONS:

DRILL AHEAD TO 1518m. HOLD SAFETY MEETING, DISPLACE HOLE TO MUD, PUMP PILL, PULL OUT OF HOLE TO CHANGE BOTTOM HOLE ASSEMBLY. CHANGE BOTTOM HOLE ASSEMBLY, RUN IN HOLE TO SHOE, SLIP AND CUT DRILLING LINE, RUN IN HOLE, DISPLACE MUD TO WATER, UNLOAD WATER USING AIR, BLOW HOLE AND WORK PIPE. DRILL FROM 1518 - 1543m, BLOW HOLE AND RUN SURVEY. DRILL TO 1552m.

NOTE: WATER FROM BLOOIE LINE HAD 2000 PPM CHLORIDES AND pH 6.5 COMPARED TO INJECTED WATER'S 800 PPM AND pH OF 7. CONCLUSION, BASAL P3 UNIT IS PRODUCING WATER.

ANTICIPATED OPERATIONS:

DRILL AHEAD AND REVERT TO MUD DRILLING AT 1556m (1413m TVD), APPROXIMATELY 2m ABOVE TOP P3-120/130 RESERVOIR.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 1/ 9/ 97 (0600 Hours)

FORMATION TOPS:	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10
PACOOTA P3 UNIT	1520	1386	-6394	ON PROG.	30.1m High

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
	NO OIL SHOWS AND NO INCREASE IN GAS FLOW.	

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1487 - 1520m ROP: 3.1-10.5 AV: 5.3	SANDSTONE AND MINOR SILTSTONE SANDSTONE: mainly loose as above with increasing coarse grains and clear aggregates - fine to very fine, strong siliceous cement and common silica overgrowths, poor to tight visual porosity, no fluorescence. SILTSTONE: medium to occasionally dark grey, argillaceous to arenaceous and commonly siliceous, massive, micromicaceous in parts, bladed and platy to sub blocky, brittle to hard.	500 71:17:8:4
	PACOOTA P3 UNIT	
1520 - 1542M ROP: 4.2 - 8.0 AV: 5.0	PREDOMINANTLY SANDSTONE WITH OCCASIONAL SILTSTONE SANDSTONE: clear, translucent, very light grey, generally medium to fine grained and locally coarse, angular to sub rounded, poorly sorted, loose to common well cemented aggregates, clean, poor inferred porosity, tight visual porosity, no fluorescence . SILTSTONE: medium t increasingly dark grey, arenaceous to predominantly argillaceous, micaceous and local pyritic, sub fissile to blocky, hard to brittle.	500 71:17:8:4
1542 - 1552m ROP: 4.0 - 4.8 AV: 4.6	MAINLY SANDSTONE WITH INCREASING SILTSTONE SANDSTONE: as above with abundant pink to pale red stained quartz, poor inferred porosity, no fluorescence. SILTSTONE: medium to dark grey as above and...brick - red, argillaceous to slightly arenaceous in parts, micromicaceous, generally massive, sub fissile to sub blocky, hard to brittle. trace pale purple- grey, rare very micaceous, fissile, schistosic siltstone.	500 71:17:8:4

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 2/ 9/ 97 (0600 Hours)

DEPTH: 1581m (1432m TVD) **PROGRESS:** 29m **DAYS FROM SPUD:** 20

OPERATION: DRILLING AHEAD IN PACOOTA P3 UNIT

NOPE COST (P&A)$ 1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A)$1,381,100 (C&S)$1,543,000 **COST TO DATE:** $1,222,835

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA	Type:	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
(2400 Hours)	NaCl /POL	8.8	45	5.6	9.1	-	26,500	12/11	-

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	12	Smith	F5ODR	8.5"	1.5	5	
(2400 Hours)	LAST	11	Smith	F5ODR	8.5"	5	38	4-5-WT-A-E-I-N-PR

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
LAST	1536.69	41.8	205.5	1398.42	441.57	-374.17	-235.85

PREVIOUS 24 HOURS OPERATIONS:

DRILL AHEAD TO 1581m, PUMP PILL, PULL OUT OF HOLE FOR BIT CHANGE. CHANGE BIT AND STABILISER. HOLD SAFETY MEETING, RUN IN HOLE TO 745m, CONDUCT BOP DRILL, LAY OUT ROTATING HEAD INSERT, RUN IN HOLE TO 1559m, WASH AND REAM TO BOTTOM, DRILL AHEAD TO 1581m WITH MUD.

ANTICIPATED OPERATIONS:

DRILL AHEAD TO TOTAL DEPTH OR PROBABLE BIT CHANGE.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 2/ 9/ 97 (0600 Hours)

FORMATION TOPS / SANDS	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10
P3 - 120/130 RESERVOIR	1558	1414.3	-667.7	1.3m High	39.8m H

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
1555 - 1558m	FLUORESCENCE: trace bright pale blue, weak crush cut only, thin ring residue.	8 74:16:8:2
1558 - 1573m	FLUORESCENCE: maximum 80% decreasing to 20%, bright pale blue to dull yellow, solid to patchy becoming increasingly patchy and dull pale blue from 1570m, occasional slow streaming cut to instant diffuse cut, fair white crush cut in parts, thin to moderately thick ring residue in fine to very fine sandstone with good to tight visual porosity.	8 60:18:11:11

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1552 - 1558m ROP: 4.5 - 31 AV: 25 switched to mud drilling at 1556m.	MAINLY SANDSTONE WITH INCREASING SILTSTONE SANDSTONE: clear, translucent and abundant pink to pale red stained quartz, fine to very fine and occasionally medium, sub angular to rounded, abundant loose grains - some angular and broken - generally well sorted aggregates, strong siliceous cement with local silica overgrowths, poor inferred porosity. FLUORESCENCE: trace from 1555m. See Hydrocarbon Show Summary above. SILTSTONE: predominantly brick - red, red - brown, argillaceous to increasingly arenaceous, micromicaceous, generally massive, sub fissile to sub blocky, hard to brittle and ... common purple - brown, arenaceous, very micaceous, fissile, schistosic.	8 74:16:8:2
	P3-120 / 130 SAND	
1558 - 1566m ROP:18.2 - 31 AV: 24	SANDSTONE: clear to mainly pink and pale red stained quartz, fine to very fine and occasionally medium, angular to sub rounded, abundant loose grains, generally well sorted aggregates, weak to strong siliceous cement with local silica overgrowths, clean to trace silty matrix, locally good to tight visual porosity. FLUORESCENCE: maximum 80% with instant to occasional slow streaming cut. See Hydrocarbon Show Summary above. SILTSTONE: brick - red, red - brown as above.	8 60:18:11:11

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 2/ 9/ 97 (0600 Hours)

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1566 - 1569m ROP: 18.2 - 25.6 AV: 23	SANDSTONE WITH SUBORDINATE SILTSTONE SANDSTONE: as above with generally poor visual porosity with FLUORESCENCE: 80% as above, and ...SANDSTONE: dark pink to red, very fine to occasionally fine grained, sub rounded, moderately well sorted, weak to moderately strong siliceous cement, abundant brick-red silt matrix, grading to siltstone in parts, moderately friable to hard, good to mainly tight visual porosity, trace fluorescence. SILTSTONE: as above.	7 60:18:11:11
1569 - 1574m ROP: 14.5 - 19.1 AV:17.0	SANDSTONE: as above :- clear to mainly pink and pale red stained quartz, fine to very fine and occasionally medium, angular to sub rounded, abundant loose grains, generally well sorted aggregates, weak to strong siliceous cement with local silica overgrowths, clean to trace silty matrix, trace good to tight visual porosity. FLUORESCENCE: 80% decreasing to 20%. See Hydrocarbon Show Summary above.	6 60:18:11:11
1574 - 1581m ROP: 18-38.5 AV: 30	MASSIVE SANDSTONE: dominantly clear, trace pink, medium to very fine grained and occasionally coarse, poorly sorted, sub angular to rounded, moderately strong to very strong siliceous cement - common silica overgrowths , abundant loose grains (many broken and angular), poor inferred porosity, trace good to generally tight visual porosity. FLUORESCENCE: 20% decreasing to 10%, dull pale blue as above, no cut.	6 60:18:11:11

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 3/ 9/ 97 (0600 Hours)

DEPTH: 1635m (1453.7m TVD) **PROGRESS:** 54m **DAYS FROM SPUD:** 21

OPERATION: DRILLING AHEAD IN PACOOTA P4 UNIT

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $ 1,250,558

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA	Type:	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
(2400 Hours)	NaCl /POL	8.8	42	5.3	8.8	-	28,000	11/12	-

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	12	Smith	F5ODR	8.5"	25.5	2	
(2400 Hours)	LAST	11	Smith	F5ODR	8.5"	5	59	4-5-WT-A-E-I-N-PR

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
LAST	1584	39.5	207.5	1434.5	472.06	-401.57	-249.93

PREVIOUS 24 HOURS OPERATIONS:

DRILL AHEAD TO 1635m WITH ONE SURVEY.

ANTICIPATED OPERATIONS:

DRILL AHEAD TO TOTAL DEPTH AT 1660m OR PULL OUT OF HOLE FOR BIT CHANGE. EXPECT TO LOG TOMORROW.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 3/ 9/ 97 (0600 Hours)

FORMATION TOPS / SANDS	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10
P3 - 190 (STRATIGRAPHIC)	1581	1432	-685.4	1 High	40m High
P3 - 190 (RESERVOIR)	1593	1442.3	-695.7	ON PROG.	34m High
P4 - UNIT	1609	1453.7	-707.1	2.1 High	38m High

HYDROCARBON SHOW SUMMARY

INTERVAL	LITHOLOGY & FLUORESCENCE	GAS
1582 - 1592m	FLUORESCENCE: 10% moderately bright to very bright yellow - gold, solid, instant to fast streaming yellow cut, thin ring residue in sandstone with poor to tight visual porosity.	9 / 1 74:16:8:2
1592 - 1609m	FLUORESCENCE:10% increasing to 30% maximum then decreasing to trace, solid to occasionally patchy blue-yellow, instant cut to moderately strong crush cut, thin ring residue in sandstone with poor to generally tight visual porosity.	42 / 3 70:14: 8: 8

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
	P3-190 SAND (stratigraphic)	
1581 - 1593m ROP: 31-17 AV: 24	SANDSTONE OVERLYING SILTSTONE SANDSTONE: dominantly clear, trace pink, medium to very fine and locally coarse, moderately well sorted, sub angular to rounded, moderately strong to very strong siliceous cement - common silica overgrowths, clean to occasionally silty aggregates, abundant loose grains (many broken and angular), poor to no visual porosity, FLUORESCENCE: 10% with instant cut to good crush cut. See Hydrocarbon Show Summary above. SILTSTONE: predominantly brick - red, red - brown, argillaceous to minor arenaceous, micromicaceous, to very micaceous, fissile, and schistosic, generally massive, sub fissile to sub blocky, hard to brittle.	6 decreasing to 1 70:14: 8: 8
	P3-190 SAND (reservoir)	
1593 - 1598m ROP: 14-25 AV: 22	SANDSTONE: dominantly clear and pink, medium to very fine, well sorted, angular to rounded, weak to strong siliceous cement and occasional silica overgrowths, clean aggregates, abundant loose grains fair to tight visual porosity. FLUORESCENCE: 30% with instant cut to good crush cut as above. See Hydrocarbon Show Summary.	17 / 3 67:15: 7: 11

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 3/ 9/ 97 (0600 Hours)

GEOLOGICAL SUMMARY

INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1598 - 1602m ROP: 11-18 AV: 13	SANDSTONE: dominantly clear and pink, as above, medium to very fine, well sorted, angular to rounded, weak to moderately strong siliceous cement, clean aggregates, abundant loose grains fair to poor visual porosity. FLUORESCENCE: 30% with instant and occasional slow streaming cut to good crush cut as above. See Hydrocarbon Show Summary.	15 / 3 67:15: 7: 11
1602 - 1604m ROP:13 - 26 AV:18.0	SILTSTONE: predominantly brick - red, red - brown, argillaceous to minor arenaceous, micromicaceous, to very micaceous, fissile, and schistosic, generally massive, sub fissile to sub blocky, hard to brittle.	Trace 67:15: 7: 11
1604 - 1609m ROP: 12.2-26 AV: 13.2	SANDSTONE: pink to occasionally clear and translucent, fine to very fine, well sorted, subangular to rounded, weak to moderately strong siliceous cement, clean aggregates, abundant loose grains fair to poor visual porosity. FLUORESCENCE: 15% decreasing to trace, with weak crush cut. See Hydrocarbon Show Summary.	6 60:18:11:11
	PACOOTA P4 - UNIT	
1609 - 1621m ROP: 30.8 -40 AV: 37	SANDSTONE: clear, translucent, minor pink, occasional coarse and medium to predominantly fine, poorly to moderately well sorted, sub angular to well rounded, abundant silica overgrowths, welded grains in parts, quartzitic, clean aggregates, very hard, no porosity, trace fluorescence.	Trace 70:14:8:8
1621 - 1635m ROP: 19 - 35 AV: 23	SANDSTONE: clear, translucent, minor pink, occasional coarse and medium to predominantly fine, poorly to moderately well sorted, sub angular to well rounded, abundant silica overgrowths, welded grains in parts, clean, hard, no porosity, trace fluorescence.	Trace 70:14:8:8

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 4/ 9/ 97 (0600 Hours)

DEPTH: 1657m TD (1490.9m TVD) **PROGRESS:** 22m **DAYS FROM SPUD:** 22

OPERATION: RUNNING WIRELINE LOGS (PLATFORM EXPRESS).

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $ 1,291,973

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA	Type:	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
(2400 Hours)	NaCl /POL	8.8	42	5.3	8.8	-	28,000	11/12	-

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT	13	Smith	F5ODPR	8.5"	7.5	20	3-5-BT-G-E-IN-WT-TD
(2400 Hours)	LAST	12	Smith	F5ODP	8.5"	19.5	45	3-8-LT-G-E-6-WT-TO

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
LAST	1632	39.0	207	1471.47	502.07	-428.76	-263.49

PREVIOUS 24 HOURS OPERATIONS:

DRILL AHEAD TO 1635m WITH ONE SURVEY, PULL OUT OF HOLE FOR BIT CHANGE. MAKE UP BIT 13, RUN IN HOLE, DRILL TO 1657m (1490.9 TVD). REACHED TOTAL DEPTH AT 23:00, 3/9/97. CIRCULATE HOLE CLEAN, PULL OUT OF HOLE TO LOG. RIG UP SCHLUMBERGER, RUN IN HOLE TO LOG WITH PLATFORM EXPRESS.

ANTICIPATED OPERATIONS:

RUN LOGS. EXPECT COPIES TO BE IN TOWN BY EARLY AFTERNOON. RUN IN HOLE AND PREPARE HOLE FOR CASING.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 4/ 9/ 97 (0600 Hours)

FORMATION TOPS / SANDS	DEPTH m, RT	DEPTH m, TVD	DEPTH m, TVDSS	SS DIFF.TO PROG., m	SS DIFF.TO W.M 10

HYDROCARBON SHOW SUMMARY		
INTERVAL	LITHOLOGY & FLUORESCENCE	GAS

GEOLOGICAL SUMMARY		
INTERVAL & ROP, min/ m	LITHOLOGY	GAS, units peak / bkgrnd & comp.
1635 - 1657m ROP: 12 - 28 AV: 21	SANDSTONE: clear, translucent, occasionally pink, locally coarse and medium to predominantly fine and very fine, poorly to moderately well sorted, sub angular to well rounded, abundant silica overgrowths and welded grains, quartzitic, clean, hard, no porosity, no fluorescence. SILTSTONE: dark to medium grey, arenaceous grading to very fine sandstone, trace mica, sub blocky, hard to brittle and ... brick-red, generally argillaceous, trace mica, arenaceous in parts, blocky to occasionally rounded, mainly hard and brittle to occasionally firm.	1 100% trace

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 5/ 9/ 97 (0600 Hours)

DEPTH: 1657m TD (1490.9m TVD) (LGR'S TD 1658.3m, 1492.2m TVD) **PROGRESS:** 0m **DAYS FROM SPUD:** 23

OPERATION: TESTING PIPE RAMS BEFORE RUNNING 7" PRODUCTION CASING.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $1,347,181

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

MUD DATA (2400 Hours)	Type: NaCl /POL	Wt: 8.9	Visc: 39	WL: 5.3	pH: 8.6	K+: -	Cl: 31,000	PV/YP: 11/10	Rmf: -

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT							
	LAST	13	Smith	F5-DODPD	8.5"	7.5	20	3-5-BT-G-E-IN-WT-TD

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
LAST	1632	39.0	207	1471.47	502.07	-428.76	-263.49

PREVIOUS 24 HOURS OPERATIONS:

RUN HIGH RESOLUTION PLATFORM EXPRESS LOGS, RIG DOWN SCHLUMBERGER, LAY OUT DIRECTIONAL TOOLS, RUN IN HOLE TO TOTAL DEPTH, CIRCULATE, PULL OUT OF HOLE SIDEWAYS, PICK UP KELLY, REMOVE DRIVE BUSHINGS, BREAK ALL CONNECTIONS, LAY OUT DRILL COLLARS. CHANGE PIPE RAMS TO 7", TEST SAME TO 500 PSI FOR 15 MINUTES.

ANTICIPATED OPERATIONS:

RUN AND CEMENT 7" PRODUCTION CASING.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 6/ 9/ 97 (0600 Hours)

DEPTH: 1657m TD (1490.9m TVD) (LGR'S TD 1658.3m, 1492.2m TVD)

PROGRESS: 0m

DAYS FROM SPUD: 24

OPERATION: RIGGING DOWN.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000

FINAL FORECAST COST (P&A) $ (C&S)$

COST TO DATE: $1,512,803

CASING DEPTH: 10.75" @745.3m, 7" @ 1655m MD.

RIG: MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD

ROTARY TABLE: 746.6m

GROUND LEVEL: 740.8m

MUD DATA	Type:	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
(2400 Hours)	NaCl /POL	8.9	39	5.3	8.6	-	31,000	12/10	-

BIT DATA		No.	Make	Type	Size	Hours	Metres	Condition
(2400 Hours)	PRESENT							
	LAST							

SURVEYS:	MD m	INC. °	AZ. (TN) °	TVD m	Section m	N/S m	E/W m
LAST							

PREVIOUS 24 HOURS OPERATIONS:

RUN 21 JOINTS 7", LTC 26# K-55, SEDIRCA CASING 1655m, RUN 128 JOINTS 7", LTC 23# K-55, CASING 1406m TO 10m, RUN 1 JOINT 28# K-55 10m TO SURFACE, SHOE AT 1655m, FLOAT COLLAR AT 1642m, RUN 34 CENTRALIZERS 1 PER JOINT ACROSS PRODUCTION ZONES, 1 EVERY SECOND JOINT BACK TO 980m, TAG BOTTOM, 1.6m IN, LAY OUT JOINT, RIG UP CEMENT HEAD AND LINES, WEIGHT UP = 130000, WEIGHT DOWN = 82000, CIRCULATE, CONDITION FOR CEMENTING, ADD BIOCIDE TO LAST 100 BARRELS OF CIRCULATION, CEMENT USING 10% OVER CEMENT VOLUME LOG, PUMP 20 BARRELS PREFLUSH (MF-1 + NACI @ 8.9 PPG) WITH RIG PUMP, PRESSURE TEST CEMENT LINES 3000 PSI, DROP BOTTOM PLUG, MIX AND PUMP 710 SACKS CLASS 'G' + 0.85% HALLAD 413 + 0.1% HR 5 + 3 GAL NF3 MIXED AT 15.8 PPG TO YIELD 145 BARRELS SLURRY, PUMP OUT LINES, DROP TOP PLUG, DISPLACE WITH 215.3 BARRELS FINAL PRESSURE 975 PSI, BUMPED PLUG 500 PSI OVER FOR 10 MINUTES, BLED OFF 1.35 BARRELS, FLOATS HELD, PLUG DOWN 20.29 HOURS 05/09/97, PLANNED TOC = 905m, PREPARING TO SET CASING SLIPS, SET KVAEMER CASING SLIPS, KSB-2 11" X 7" WITH 85000 LBS.

ANTICIPATED OPERATIONS:

CLEAN MUD TANKS, LAY DOWN BLOW OUT PREVENTORS, RELEASE RIG, MOVE CAMP.

Santos

A.C.N. 007 550 923

WELL PROGRESS REPORT

WEST MEREENIE-12

DATE: 7/ 9/ 97 (0600 Hours)

DEPTH: 1657m TD (1490.9m TVD) (LGR'S TD 1658.3m, 1492.2m TVD) **PROGRESS:** 0m **DAYS FROM SPUD:** 25

OPERATION: RIG RELEASED. WELL CASED AND SUSPENDED.

NOPE COST (P&A)$1,381,100 (C&S)$1,543,000 **FINAL FORECAST COST** (P&A) $ (C&S)$ **COST TO DATE:** $1,538,131

CASING DEPTH: 10.75" @745.3m **RIG:** MJV-1

PROGRAMMED T.D. 1660.4m MD 1491.4m TVD, -744.8m MD **ROTARY TABLE:** 746.6m **GROUND LEVEL:** 740.8m

---

MUD DATA (2400 Hours)	Type:	Wt:	Visc:	WL:	pH:	K+:	Cl:	PV/YP:	Rmf:
	NaCl /POL								

BIT DATA (2400 Hours)		No.	Make	Type	Size	Hours	Metres	Condition
	PRESENT							
	LAST							

SURVEYS:	MD	INC.	AZ. (TN)	TVD	Section	N/S	E/W
	m	°	°	m	m	m	m
LAST							

PREVIOUS 24 HOURS OPERATIONS:

WELD CAP ON CASING, LAY DOWN BLOW OUT PREVENTORS, CLEAN MUD TANKS AND RIG DOWN. RIG RELEASED @ 1200 HOURS 06/09/97.

ANTICIPATED OPERATIONS:

RIG DOWN, MOVE TO WEST MEREENIE 13.

SECTION 3: HYDROCARBON SHOW REPORTS

SANTOS LIMITED

OIL SHOW EVALUATION REPORT

WELL : WEST MEREENIE-12
INTERVAL : 1555 - 1558m
FORMATION : PACOOTA P3 UNIT

GEOLOGIST : L.E.L BURGESS
DATE : 2 / 9 / 97

C1 ppm	5k	10k	20k	30k	40k	50k	100k	150k	200k	>250k
C2+ ppm	500	750	1k	2k	3k	4k	5k	7.5k	10k	>15k
Porosity ∅	tight			poor		fair		good		
% with fluorescence	trace	10	20	30	40	50	60	70	80	>90
Fluorescence appearance	trace		spotted			streaked		patchy		solid
Brightness of fluorescence	very dull		dull		dim			bright	v. bright	glowing
Type of cut	trace	very slow crush cut	crush cut	instant crush	very slow streaming	slow streaming	moderate streaming	streaming	fast streaming	instant
Residue on spot plate	trace	heavy trace	very thin ring	thin ring	thick ring	very thick ring	very thin film	thin film	thick film	solid
Show rating	trace		poor		fair		good			
Comments:										

SANTOS LIMITED

OIL SHOW EVALUATION REPORT

WELL : WEST MEREENIE-12
INTERVAL : 1558 - 1573m
FORMATION : PACOOTA P3 UNIT

GEOLOGIST : L.E.L BURGESS
DATE : 3 / 9 / 97

C1 ppm	5k	10k	20k	30k	40k	50k	100k	150k	200k	>250k
C2+ ppm	500	750	1k	2k	3k	4k	5k	7.5k	10k	>15k
Porosity ∅	tight			poor		fair		good		
% with fluorescence	trace	10	20	30	40	50	60	70	80	>90
Fluorescence appearance	trace		spotted			streaked		patchy		solid
Brightness of fluorescence	very dull		dull		dim			bright	v. bright	glowing
Type of cut	trace	very slow crush cut	crush cut	instant crush	very slow streaming	slow streaming	moderate streaming	streaming	fast streaming	instant
Residue on spot plate	trace	heavy trace	very thin ring	thin ring	thick ring	very thick ring	very thin film	thin film	thick film	solid
Show rating	trace		poor		fair		good			
Comments:										

SANTOS LIMITED

OIL SHOW EVALUATION REPORT

WELL : WEST MEREENIE-12
INTERVAL : 1582 - 1592m
FORMATION : PACOOTA P3 UNIT

GEOLOGIST : L.E.L BURGESS
DATE : 3 / 9 / 97

C1 ppm	5k	10k	20k	30k	40k	50k	100k	150k	200k	>250k
C2+ ppm	500	750	1k	2k	3k	4k	5k	7.5k	10k	>15k
Porosity ∅	tight			poor		fair		good		
% with fluorescence	trace	10	20	30	40	50	60	70	80	>90
Fluorescence appearance	trace		spotted			streaked		patchy		solid
Brightness of fluorescence	very dull		dull		dim			bright	v. bright	glowing
Type of cut	trace	very slow crush cut	crush cut	instant crush	very slow streaming	slow streaming	moderate streaming	streaming	fast streaming	instant
Residue on spot plate	trace	heavy trace	very thin ring	thin ring	thick ring	very thick ring	very thin film	thin film	thick film	solid
Show rating	trace		poor		fair		good			
Comments:										

SANTOS LIMITED

OIL SHOW EVALUATION REPORT

WELL : WEST MEREENIE-12
INTERVAL : 1592 - 1609m
FORMATION : PACOOTA P3 UNIT

GEOLOGIST : L.E.L BURGESS
DATE : 3 / 9 / 97

C1 ppm	5k	10k	20k	30k	40k	50k	100k	150k	200k	>250k
C2+ ppm	500	750	1k	2k	3k	4k	5k	7.5k	10k	>15k
Porosity ∅	tight			poor		fair		good		
% with fluorescence	trace	10	20	30	40	50	60	70	80	>90
Fluorescence appearance	trace		spotted			streaked		patchy		solid
Brightness of fluorescence	very dull		dull		dim			bright	v. bright	glowing
Type of cut	trace	very slow crush cut	crush cut	instant crush	very slow streaming	slow streaming	moderate streaming	streaming	fast streaming	instant
Residue on spot plate	trace	heavy trace	very thin ring	thin ring	thick ring	very thick ring	very thin film	thin film	thick film	solid
Show rating	trace		poor		fair		good			
Comments:										

SECTION 4: WIRELINE LOGGING REPORTS

SECTION 4(A): LOGGING ORDER FORM

COMPANY:	**SANTOS - MAGELLAN PETROLEUM - UNITED OIL AND GAS CO.**				
WELL:	WEST MEREENIE - 12		**FIELD:**	MEREENIE	
RIG:	OD&E MJV-1		**STATE:**	NORTHERN TERRITORY	
LOCATION:	475m ON BEARING OF 299° FROM SP 2202, LINE M83-18		**BLOCK/LICENCE:**	MEREENIE / OL 4	
LATITUDE:	23° 59' 32.21" SOUTH		**LONGITUDE:**	139° 34' 15.58" EAST	
ELEVATIONS:	**G.L:** 740.8m		SUITE:	1	
	R.T: 746.6m				
13 9/16" HOLE:	749m	**10.75" CASG:**	745.3m	**WEIGHT:**	40.5 lbs / ft
9 7/8" HOLE:	1150m		-	**WEIGHT:**	-
8 1/2" HOLE:		**7" CASG:**			
TD, DRILLER:	1150m (1102.38m TVD)		**BIT SIZE:**	9 7/8"	
MUD SYSTEM:	BRINE		**CIRC. STOPPED:**	12:00, 25/ 8/ 97	
WEIGHT 8.4+	**RESISTIVITY:**	0.405 OHMM @75°F	**pH:** 9.5	**Cl:** 13,500	

GEOLOGIST: **LES BURGESS**

INFORMATION ABOVE IS TO BE USED ON LOG HEADING SHEETS.

HOLE CONDITIONS (TIGHT, COALS, DEVIATIONS, BARITE IN MUD ETC):

NO TIGHT HOLE

MAXIMUM DEVIATION 38° AT 1049m.

DRILL STEM TESTS/ CORED INTERVALS: NONE

COMMENTS (TO BE INCLUDED IN REMARKS SECTION ON HEADER): WELL DRILLED WITH AIR / MIST TO 1150m, HOLE DISPLACED TO BRINE FOR LOGGING

COMPANY:	**SANTOS - MAGELLAN PETROLEUM - UNITED OIL AND GAS CO.**				
WELL:	WEST MEREENIE - 12		**FIELD:**	MEREENIE	
RIG:	OD&E MJV-1		**STATE:**	NORTHERN TERRITORY	
LOCATION:	475m ON BEARING OF 299° FROM SP 2202, LINE M83-18		**BLOCK/LICENCE:**	MEREENIE / OL 4	
LATITUDE:	23° 59' 32.21" SOUTH		**LONGITUDE:**	139° 34' 15.58" EAST	
ELEVATIONS:	**G.L:** 740.8m		SUITE:	2	
	R.T: 746.6m				
13 9/16" HOLE:	749m	**10.75" CASG:**	745.3m	**WEIGHT :**	40.5 lbs / ft
9 7/8" HOLE:	745m -1360m		-	**WEIGHT :**	-
8 1/2" HOLE:	1360m -1660 m	**7" CASG:**			
TD, DRILLER:	1657m (1490.9m TVD)		**BIT SIZE:**	8.5"	
MUD SYSTEM:	NaCl / Polymer		**CIRC. STOPPED:**	0:00, 4 / 8/ 97	
WEIGHT: 8.9	**RMF:** 0.15 OHMM @75°F		**pH:** 8.9	**Cl:** 28,000	

GEOLOGIST: **LES BURGESS**

INFORMATION ABOVE IS TO BE USED ON LOG HEADING SHEETS.

HOLE CONDITIONS (TIGHT, COALS, DEVIATIONS, BARITE IN MUD ETC):

NO TIGHT HOLE
NO BARITE

MAXIMUM DEVIATION 42.5° FROM 1394m TO 1433m

DRILL STEM TESTS/ CORED INTERVALS: NONE

COMMENTS (TO BE INCLUDED IN REMARKS SECTION ON HEADER): WELL DRILLED WITH MUD FROM 1566m.

SECTION 4(B): LOGGING RUN INFORMATION

SUITE/ RUN	LOG	INTERVAL	REPEAT SECTION
1 / 1	GR - AMS - FMS (IN SHDT MODE)	TOTAL DEPTH TO 845m	1150 - 1120m

PLEASE RECORD GR DOWNHOLE FROM 740m - TOTAL DEPTH.

SHDT TO BE PROCESSED ON SITE WITH 4x4 MSD TO PRODUCE A GEODIP TADPOLE PLOT.

LOG SCALES TO BE 1:500 AND 1:200

REMARKS:

1: TENSION CURVE- TO BE DISPLAYED ON LOG FROM TD TO CASING SHOE (EXCEPT ON SLS LOGS).

2. ALL CALIBRATIONS IN CASING MUST BE VERSUS DEPTH (IF HOLE CONDITIONS PERMIT).

3. ALL ZONES OF CYCLE SKIPPING OR POOR QUALITY TO BE REPEATED AND NOTED IN REMARKS SECTION (EXCEPT ABOVE CADNA-OWIE FORMATION IF HOLE CONDITION IS POOR).

4. REPEAT SECTIONS TO BE LOGGED PRIOR TO MAIN LOG (IF HOLE CONDITIONS ALLOW).

5. ALL THERMOMETER READINGS TO BE RECORDED ON THE LOG.

6. ALL SCALES TO BE STANDARD UNLESS OTHERWISE ADVISED.

7. THE FIELD/ EDIT TAPE MUST BE A MERGED COPY OF **ALL** LOGS RUN. SEPARATE TAPES ARE ONLY ACCEPTABLE AS AN INTERIM MEASURE.

8. ANY CHANGE FROM STANDARD PROCEDURES/ SCALES TO BE NOTED IN REMARKS SECTION.

SUITE/ RUN	LOG	INTERVAL	REMARKS / REPEAT SECTION
2 / 1			TOTAL DEPTH - 1630m
	RHOZ -NPHI - MCFL	TOTAL DEPTH TO 985m	HIGH RESOLUTION (2")
	GR - HALS	TOTAL DEPTH TO 985m 985m TO 745m	HIGH RESOLUTION (2") STANDARD RESOLUTION

PLEASE RECORD DOWNHOLE AT NORMAL RUNNING IN SPEED FROM 1150m - TOTAL DEPTH.

LOG SCALES TO BE 1:500 AND 1:200

REMARKS:

1: TENSION CURVE- TO BE DISPLAYED ON LOG FROM TD TO CASING SHOE (EXCEPT ON SLS LOGS).

2. ALL CALIBRATIONS IN CASING MUST BE VERSUS DEPTH (IF HOLE CONDITIONS PERMIT).

3. ALL ZONES OF CYCLE SKIPPING OR POOR QUALITY TO BE REPEATED AND NOTED IN REMARKS SECTION (EXCEPT ABOVE CADNA-OWIE FORMATION IF HOLE CONDITION IS POOR).

4. REPEAT SECTIONS TO BE LOGGED PRIOR TO MAIN LOG (IF HOLE CONDITIONS ALLOW).

5. ALL THERMOMETER READINGS TO BE RECORDED ON THE LOG.

6. ALL SCALES TO BE STANDARD UNLESS OTHERWISE ADVISED.

7. THE FIELD/ EDIT TAPE MUST BE A MERGED COPY OF **ALL** LOGS RUN. SEPARATE TAPES ARE ONLY ACCEPTABLE AS AN INTERIM MEASURE.

8. ANY CHANGE FROM STANDARD PROCEDURES/ SCALES TO BE NOTED IN REMARKS SECTION.

SECTION 4(C): FIELD ELECTRIC LOG REPORT

WELL:	WEST MEREENIE-12		
LOGGING ENGINEER:	J.WOOTTEN	GEOLOGIST: LES BURGESS	
RUN NO.	1	DATE:	25/ 8 / 97
DRILLERS DEPTH:	1148m (adjusted by -2m post logging due to strap correction)	LOGGERS DEPTH:	1142.1m recorded, 1148.1m extrapolated due to 6m fill.
ARRIVED ON SITE: LEFT SITE:	14:30, 25 / 8 / 97 19:15, 25 / 8/ 97	DATA TRANSMITTED:	NO
ACTUAL LOGGING TIME:	1.25 HR, GR-SHDT-AMS	LOST TIME LOGGER:	NONE
TOTAL TIME ON LEASE :	HOURS	LOST TIME OTHER:	NONE

TYPE OF LOG	GR - SHDT - AMS
TIME CIRC. STOPPED	12:00, 25/ 8/ 97
RUN NO.	1
TIME TOOL RIG UP	16:30, 25/ 8/ 97
TIME TOOL RIH	17;30, 25/ 8/ 97
TIME TOOL RIG DOWN	19:15, 25/ 8/ 97
TOTAL TIME, HRS	2.75

SUITE / RUN AND TYPE OF LOG	FROM (m)	TO (m)	REPEAT SECTION (m)	TIME SINCE LAST CIRCULATION/ REMARKS	BHT °F
1 / 1 GR	1134	821	1141.6 - 1096	6 HRS	114
SHDT	1141.6	821	"	DIPMETER PROCESSED ON SITE (4x4 MSD)	
AMS	1131	821	"		

WELL:	WEST MEREENIE-12		
LOGGING ENGINEER:	J.WOOTTEN	GEOLOGIST: LES BURGESS	
SUITE / RUN NO.	2 / 1	DATE:	4/ 9 / 97
DRILLERS DEPTH:	1657m	LOGGERS DEPTH:	1658.3m (extrapolated)
ARRIVED ON SITE: LEFT SITE:	19:30, 3 / 9 / 97 12:00, 4 / 9/ 97	DATA TRANSMITTED:	NO
ACTUAL LOGGING TIME:	4 HOURS	LOST TIME LOGGER:	NONE
TOTAL TIME ON LEASE :	16.5 HOURS	LOST TIME OTHER:	NONE

TYPE OF LOG	PEX
TIME CIRC. STOPPED	0:0, 4/ 9/ 97
RUN NO.	1
TIME TOOL RIG UP	04:00, 4/ 9/ 97
TIME TOOL RIH	04:45, 4/ 9/ 97
TIME TOOL RIG DOWN	9:45, 4/ 9/ 97
TOTAL TIME, HRS	5.75

SUITE / RUN AND TYPE OF LOG	FROM (m)	TO (m)	REPEAT SECTION (m)	TIME SINCE LAST CIRCULATION/ REMARKS	BHT °F
2 / 1 HGR .	1647	745	1656.9- 1591.7	STANDARD RESOLUTION	
SP	1637.9	745		STANDARD RESOLUTION	
HCAL	1652.8	745		STANDARD RESOLUTION	
HLLS, HLLD HRLS, HRLD	1656 1656	745 985		STANDARD RESOLUTION 2" RESOLUTION	
RXOI	1652.6	985		2" RESOLUTION	
RHOI, PEFI	1652.9	985		2" RESOLUTION	
HTNP	1648.8	985		2" RESOLUTION	
				6.25 HOURS	138

Schlumberger

ELECTRIC LOGGING TIME SUMMARY

SANTOS

LOGGING UNIT:	6202
START DATE:	4 19 197
END DATE:	4 19 197
DEPTH DRILLER	1657
DEPTH LOGGER	1658.3

LEFT BASE:	: HRS / /
ARRIVED AT WELLSITE:	19:30 HRS 3 19 197
INITIAL RIG UP:	04:00 HRS 4 19 197
FINAL RIG DOWN:	09:45 HRS 4 19 197
RETURN TO BASE:	12:00 HRS 4 19 197

WELL NAME:	LM #12
TRIP NUMBER:	
WELLSITE GEOLOGIST:	LES BURGESS
LOGGING ENGINEER:	J. WOOTTEN
PAGE	1 OF 1

DATE: / TIME	RIG UP / DOWN	TOOL	CHECKS	RIH / POOH	LOGGING	DATA TX	LOST TIME SCH.	I/O	WIPER TRIP	LOST TIME OTH.	OTHER	COMMENTS / REMARKS
00:00												
:30												
01:00												
:30												
02:00												
:30												
03:00												
:30												Clean Rig Floor + Safety Meeting
04:00												Rig Up 04:00
:30												
05:00												RIH 04:45 Caliper check in casing, RIH 05:10 Log Down 05:15
:30												
06:00												Repeat Section 05:50 Main Log 06:15
:30												
07:00												
:30												
08:00												
:30												
09:00												
:30												Rig Down 09:45
10:00												
:30												
11:00												
:30												

WSG (sign) ENGINEER (sign)

TOTALS HRS

1.5		.25	4						(0.5)	= 5.75

DESCENT #: TOOLS RUN:
FOOTAGE LOGGED:

DESCENT #: TOOLS RUN:
FOOTAGE LOGGED:

DESCENT #: TOOLS RUN:
FOOTAGE LOGGED:

LOGGING UNIT: 6002 | WELL NAME: WEST MERENIE # 12 | PAGE (A) OF

DATE: / TIME	RIG UP / DOWN	TOOL CHECKS	RIH / POOH	LOGGING	DATA TX	LOST TIME SCH.	I.O.	WIPER TRIP	LOST TIME OTH.	OTHER	COMMENTS / REMARKS
12:00											
:30											
13:00											
:30											
14:00											
:30											
15:00											
:30											
16:00											
:30	/										Rig Up 16:30
17:00	/									/	Safety meeting 16:45 - 1700
:30		/									Before Survey Calibrations ; RIH 17:30
18:00				/							Before Survey Casing Check. 17:45 ; RIH 17:35.
:30				/							QR Log from 950m
19:00	/		/	/							Repeat Section, Main Log TLAB 18:10
:30	/										Rig Down 19:15.
20:00											
:30											
21:00											
:30											
22:00											
:30											
23:00											
:30											

WSG (sign) | ENGINEER (sign)

TOTALS

DESCENT #: | TOOLS RUN: SHOT-GR
FOOTAGE LOGGED: 1142.1 - 837.3

DESCENT #: | TOOLS RUN:
FOOTAGE LOGGED:

DESCENT #: | TOOLS RUN:
FOOTAGE LOGGED:

SERVICE QUALITY SUMMARY

	CLIENT WSG					ENGINEER				
	1	2	3	4	5	1	2	3	4	5
SAFETY										
PROMPTNESS										
TOOL & SURFACE SYSTEM PERFORMANCE										
ATTITUDE & CO-OPERATION										

Schlumberger

ELECTRIC LOGGING TIME SUMMARY

SANTOS

LOGGING UNIT:	6002
START DATE:	25/8/97
END DATE:	/ /
DEPTH DRILLER	1150
DEPTH LOGGER	

LEFT BASE:	: HRS / /
ARRIVED AT WELLSITE:	14 :30 HRS 25/8/97
INITIAL RIG UP:	16 :30 HRS 25/8/97
FINAL RIG DOWN:	14 :15 HRS 25/8/97
RETURN TO BASE:	: HRS / /

WELL NAME:	WJ M. #2
TRIP NUMBER:	
WELLSITE GEOLOGIST:	LES BOKES
LOGGING ENGINEER:	J. WOOTTEN
PAGE	1 OF

DATE: / TIME	RIG UP / DOWN	TOOL CHECKS	RIH / POOH	LOGGING	DATA TX	LOST TIME SCH.	I. O	WIPER TRIP	LOST TIME OTH	OTHER	COMMENTS / REMARKS
00:00											
:30											
01:00											
:30											
02:00											
:30											
03:00											
:30											
04:00											
:30											
05:00											
:30											
06:00											
:30											
07:00											
:30											
08:00											
:30											
09:00											
:30											
10:00											
:30											
11:00											
:30											

TOTALS

WSG (sign)	ENGINEER (sign)

DESCENT #:	TOOLS RUN:
FOOTAGE LOGGED:	

DESCENT #:	TOOLS RUN:
FOOTAGE LOGGED:	

DESCENT #:	TOOLS RUN:
FOOTAGE LOGGED:	

SECTION 4(D): WELLSITE LOG QUALITY CONTROL CHECKS

LOG ORDER FORM	Y	MUD SAMPLE RESISTIVITY	Y	LOG SEQUENCE CONFIRM	Y

LOG TYPE	GR	SHDT	CAL	REMARKS
CASING CHECK	Y	Y	Y	
SCALE CHECK	Y	Y	Y	
DEPTH :Casing & Total	Y	-	-	CASING SHOE 0.8m HIGH TO DRILLER. TD (EXTRAP.) AT 1148.1m (6m FILL).
CALIBRATIONS OK	Y	Y	Y	
REPEATABILITY	Y	Y	Y	
LOGGING SPEED	Y	Y	Y	
OFFSET WELL MATCH	Y	Y	Y	
POOR DATA	N	N	N	
CURVES & LOGS DEPTH MATCHED	Y	Y	Y	
Rm MEASUREMENT	Y	Y	Y	
LLS / LLD / CHECK	-	-	-	N/A
PEF / RHOB CHECK	-	-	-	N/A
LOG HEADER / TAIL	OK	OK	OK	
PRINT/FILM QUALITY	OK	OK	OK	

COMMENTS:

HOLE CONDITION:

INTERVAL , m LOGGER	SIZE, INCHES	REMARKS
TOTAL DEPTH - 915	IN GAUGE	VERY TIGHT SANDSTONES, HARD SILTSTONES AND OCCASIONAL DOLOMITE BEDS.
915 - 831	UP TO 12" IS RECORDED IN PARTS.	ARGILLACEOUS SILTSTONE WITH THIN DOLOMITE BEDS

LOG ORDER FORM	Y	MUD SAMPLE RESISTIVITY	Y	LOG SEQUENCE CONFIRM	Y

LOG TYPE	HGR	RXOI	HCAL	HALS	RHOI / HTNP	REMARKS
CASING CHECK	-	-	OK	-	-	
SCALE CHECK	OK	OK	OK	OK	OK	
DEPTH :Casing & Total						CASING SHOE 0.8m HIGH TO DRL. TD (EXTRAP) AT 1658.3m
CALIBRATIONS OK	Y	Y	Y	Y	Y	
REPEATABILITY	Y	Y	Y	Y	Y	
LOGGING SPEED	OK	OK	OK	OK	OK	NOT DISPLAYED AS TWO RESOLUTIONS RECORDED
OFFSET WELL MATCH	OK	OK	OK	OK	OK	EM-42 & WM-10 wells
POOR DATA	N	Y	Y	N	Y	IN RUGOSE SECTIONS
CURVES & LOGS DEPTH MATCHED	Y	Y	Y	Y	Y	
Rm MEASUREMENT	-	Y	-	-	-	
LLS / LLD / CHECK	-	-	-	Y	-	
PEF / RHOB CHECK	-	-	-	-	Y	
LOG HEADER / TAIL	OK	OK	OK	OK	OK	
PRINT/FILM QUALITY	OK	OK	OK	OK	OK	

COMMENTS:

NO CLEAN WATER BEARING SANDSTONE IS PRESENT FOR NEUTRON-DENSITY QUALITY CONTROL.

HOLE CONDITION:

INTERVAL, LOGGER m	SIZE, INCHES	REMARKS
917 - 735	11 - 16" MAXIMUM	LOWER STOKES SILTSTONE.
1065 - 917	AVERAGE 11"	FAIRLY SMOOTH BORE TO TOP LOWER STOKES SILTSTONE.
1092 - 1065	11 - 21"	VERY RUGOSE AND WASHED OUT. UPPER MID STAIRWAY SANDSTONE.
1256 - 1092	10 - 13"	'SERRATED' AND RUGOSE. LITHOLOGY AS ABOVE
1362 - 1256	UP TO 14"	AIR DRILLED SECTION - MID TO LOWER HORN VALLEY SILTSTONE. ARGILLACEOUS SILTSTONE WITH THIN, HARD SANDSTONES AND DOLOMITE BEDS
TOTAL DEPTH - 1362	IN GAUGE	MUD DRILLED SECTION - GENERALLY TIGHT SANDSTONES, HARD SILTSTONES AND OCCASIONAL DOLOMITE AND LIMESTONES.

SECTION 5: FLOW TEST REPORT

SANTOS

OPEN HOLE FLOW TEST REPORT

WELL:	WEST MEREENIE-12	**TEST NO.**	1	**DATE:**	29/ 8/ 97
WELL DEPTH:	1431m, 1320m TVD, DRLR	**FORMATION / SAND:**		PACOOTA P1-280 SAND	
TEST TYPE:	OPEN HOLE FLOW TEST (FT) - AIR DRILLED	**TIME CIRC. STOPPED:**	N/A	**TIME SINCE LAST CIRC:**	N/A
WATER CUSHION:	NONE	**Rmf:**	N/A		
SEPARATOR:	NO	**Rw (makeup)**	N/A		
GEOLOGIST:	LES BURGESS	**GR-CCL:**	NO		

REMARKS

ELAPSED TIME (MIN)	REMARKS/ PRESSURES PSIA	ELAPSED TIME (MIN)	REMARKS/ PRESSURES	TIME	REMARKS/ PRESSURES
0	OPENED 0.5" CHOKE 02:19, 50	10	243	60	571
1	74	15	318	75	591
2	98	20	375	90	601
3	126	25	421	105	609
4	139	30	456	120	609
5	160	35	487	135	609
6	177	40	512	150	609
7	196	45	532	161	CLOSED 0.5" CHOKE 609, 05:00
8	211	50	548		
9	228	55	560		

FLOW SUMMARY

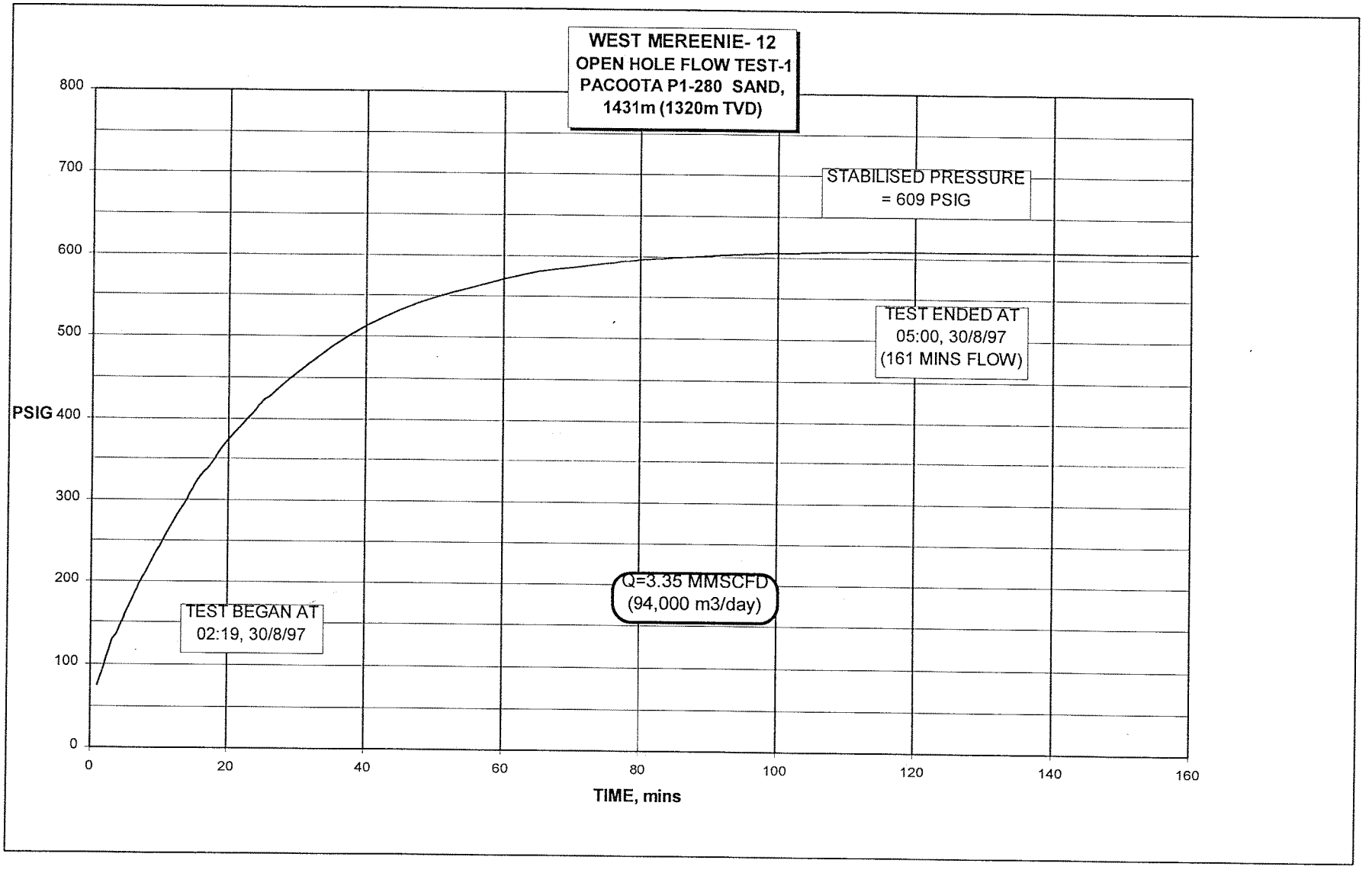
CHOKE SIZE (IN)	FLUID TO SURFACE (MIN)	FLOWING TIME (MIN)	MAXIMUM SURFACE PRESS.	FINAL GAS RATE (MMSCFD)	FINAL LIQUIDS RATE	FIELD GAS ANALYSIS	FIELD LIQUIDS ANALYSIS
(0.5)	N/A	161	609 PSIA	3.35	NONE	72:17:7:4	NONE

SAMPLE DATA

NO SAMPLES WERE REQUIRED FROM THIS TEST.

REMARKS:

A SUCCESSFUL OPEN HOLE FLOW TEST OF THE PACOOTA P1-280 GAS RESERVOIR. FINAL ESTIMATED FLOW WAS **3.35 MMSCFD** GAS. NO SAMPLES WERE REQUIRED.


WEST MEREENIE- 12
OPEN HOLE FLOW TEST-1
PACOOTA P1-280 SAND,
1431m (1320m TVD)
STABILISED PRESSURE
= 609 PSIG
TEST ENDED AT
05:00, 30/8/97
(161 MINS FLOW)
Q=3.35 MMSCFD
(94,000 m3/day)
TEST BEGAN AT
02:19, 30/8/97
PSIG
TIME, mins
0
100
200
300
400
500
600
700
800
0
20
40
60
80
100
120
140
160

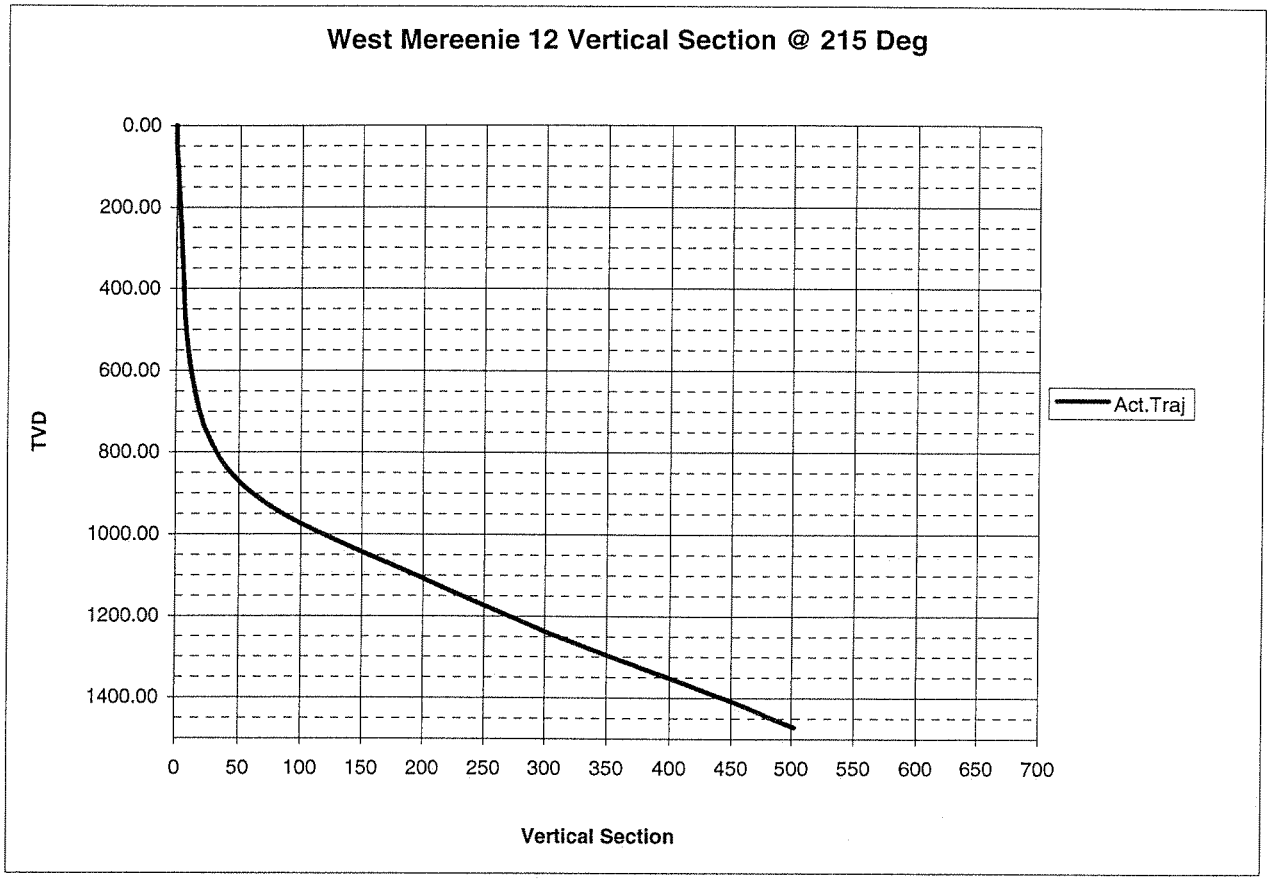
SECTION 6: WELL DEVIATION DATA

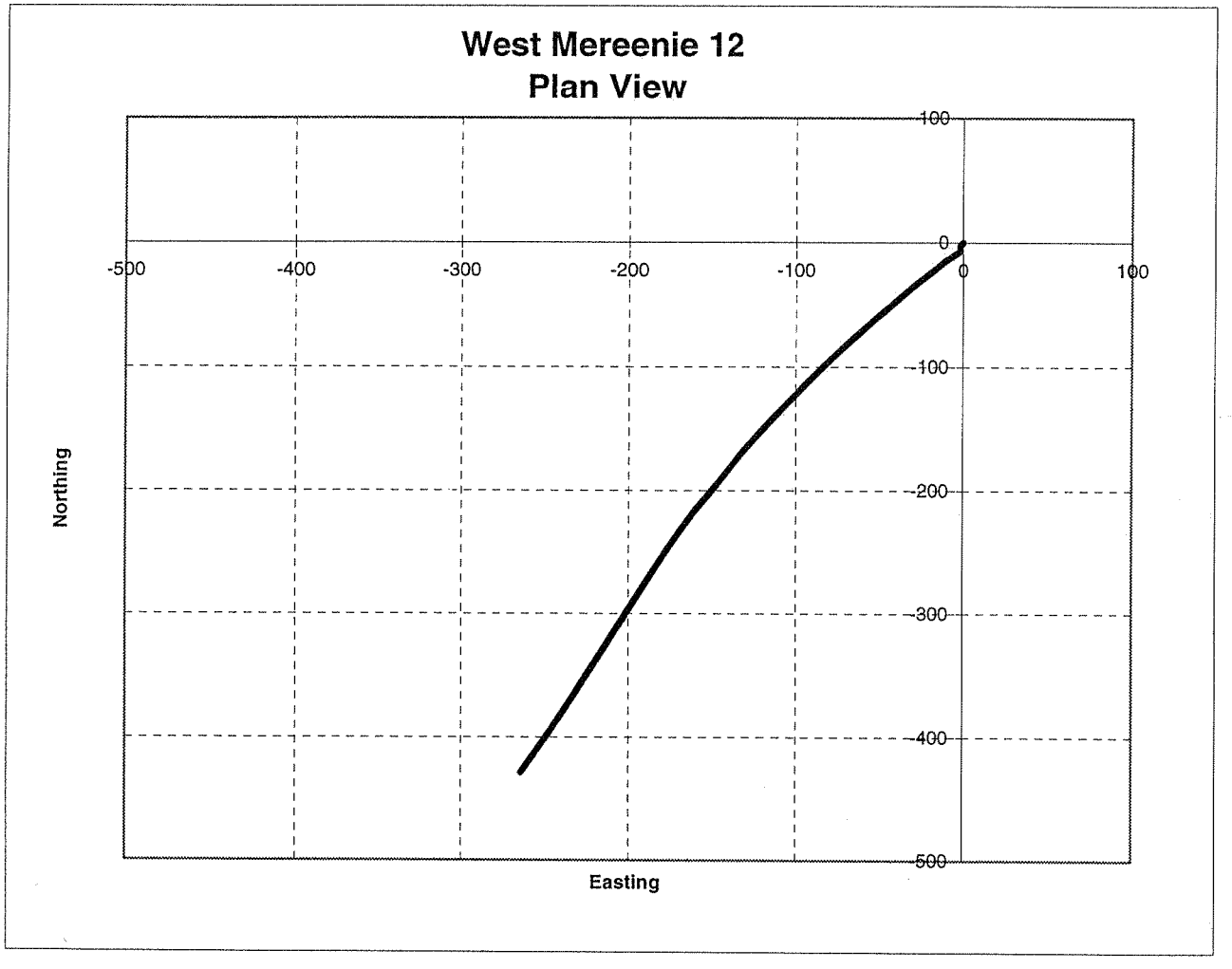
WEST MEREENIE 12 DEVIATION DATA

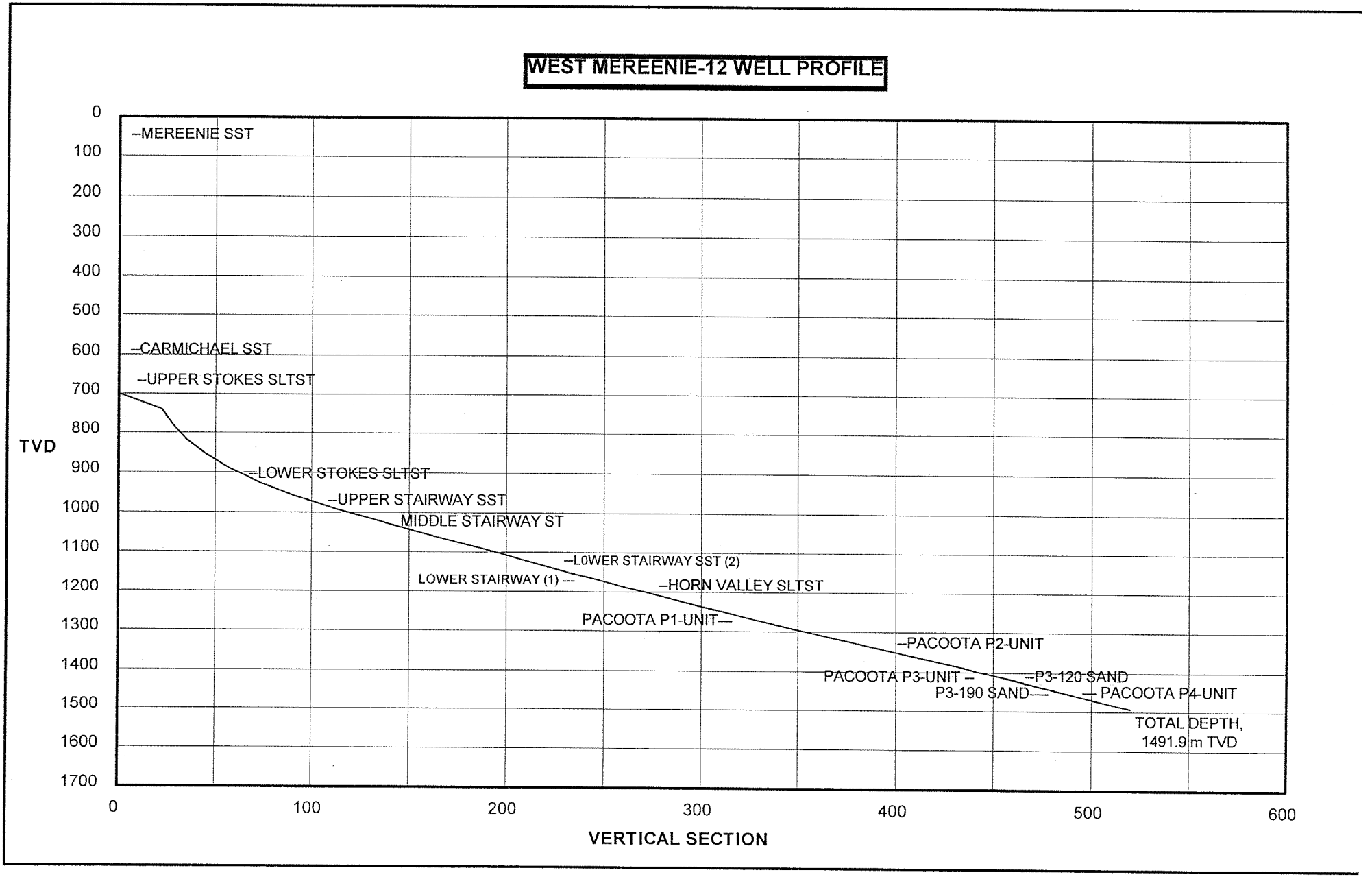
DEPTH	DEVIATION	DIRECTION	TVD	DEPTH	DEVIATION	DIRECTION	TVD
32.33	0.50	157.00	0.00	780.98	9.20	224.00	738.92
60.58	0.90	210.00	0.00	819.14	12.50	224.00	738.92
90.30	1.00	234.00	0.00	857.67	17.00	223.00	738.92
118.59	1.00	219.50	0.00	896.16	21.50	221.00	738.92
146.88	0.90	220.00	0.00	934.66	26.50	221.00	738.92
175.18	1.20	207.00	0.00	973.15	30.50	220.00	738.92
203.48	1.10	199.00	0.00	1011.69	35.50	218.00	738.92
231.78	1.00	190.00	0.00	1049.62	38.00	217.00	738.92
259.93	1.30	180.00	0.00	1097.85	37.40	215.00	738.92
287.58	1.20	180.00	0.00	1136.59	37.00	214.00	738.92
316.43	1.20	177.00	0.00	1174.89	37.00	212.50	738.92
345.28	1.20	168.50	0.00	1213.39	37.60	212.00	738.92
374.13	1.00	170.00	0.00	1242.24	38.40	211.00	738.92
402.98	0.80	194.00	0.00	1271.18	38.00	210.00	738.92
431.83	0.80	204.50	0.00	1288.44	37.50	208.00	738.92
460.68	1.30	206.00	0.00	1305.50	38.00	207.50	738.92
489.53	1.50	230.00	0.00	1324.78	39.40	207.00	738.92
518.38	1.90	225.00	0.00	1353.68	41.40	205.00	738.92
547.23	2.00	233.00	0.00	1394.82	42.00	204.50	738.92
576.08	2.80	224.00	0.00	1433.34	42.50	205.00	738.92
604.93	3.00	225.00	0.00	1482.64	42.20	204.50	738.92
633.78	3.40	230.00	0.00	1536.69	41.80	205.50	738.92
662.63	3.80	229.00	0.00	1584.82	39.50	207.50	738.92
691.48	4.7	229.00	0.00	1632.00	39.00	207.00	738.92
720.33	6.20	223.50	0.00				
739.53	7.10	222.00	0.00				

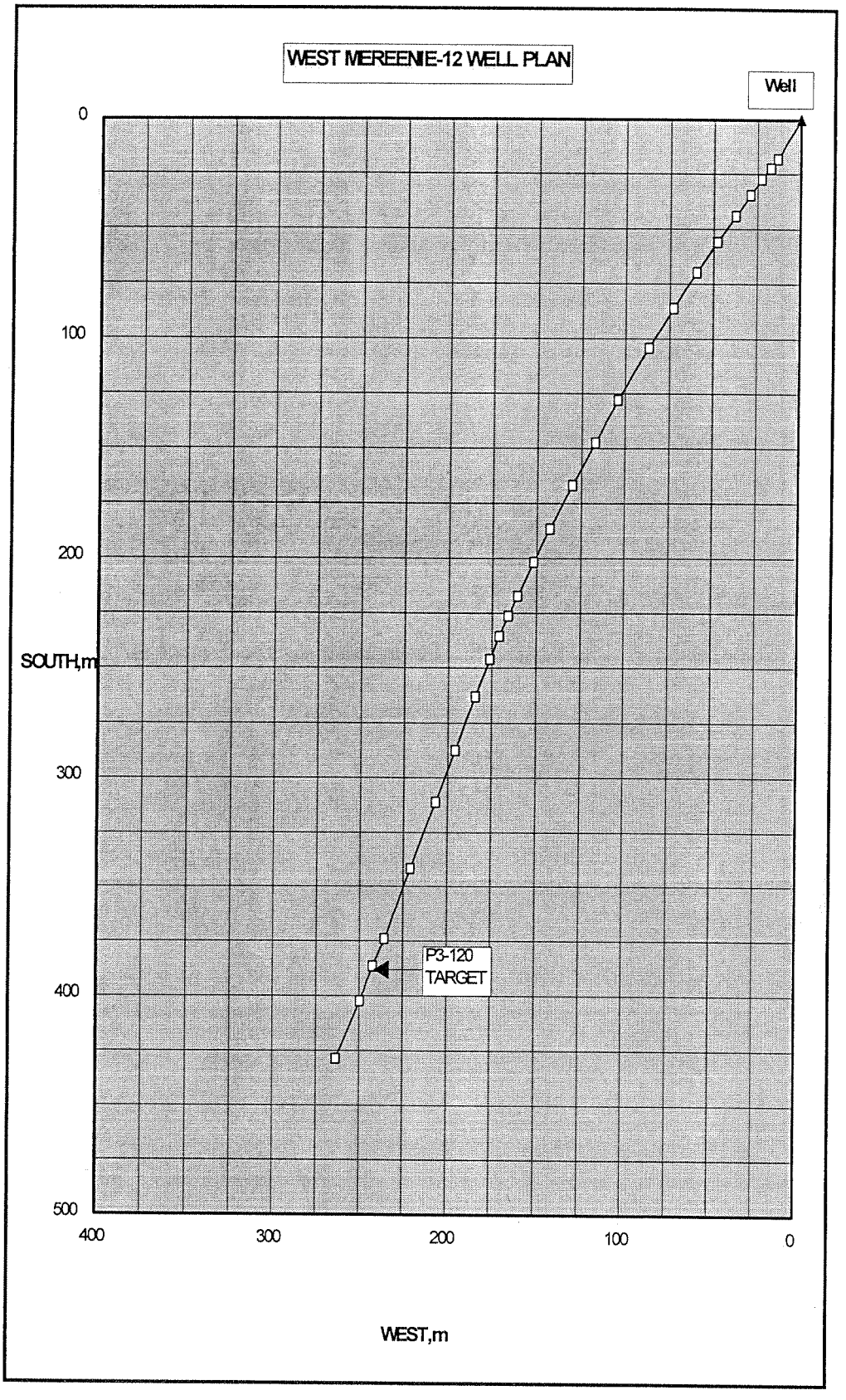
WEST MEREENIE 12 DEVIATION DATA

DEPTH	DEVIATION	DIRECTION	TVD	DEPTH	DEVIATION	DIRECTION	TVD
32.33	0.50	157.00	0.00	780.98	9.20	224.00	738.92
60.58	0.90	210.00	0.00	819.14	12.50	224.00	738.92
90.30	1.00	234.00	0.00	857.67	17.00	223.00	738.92
118.59	1.00	219.50	0.00	896.16	21.50	221.00	738.92
146.88	0.90	220.00	0.00	934.66	26.50	221.00	738.92
175.18	1.20	207.00	0.00	973.15	30.50	220.00	738.92
203.48	1.10	199.00	0.00	1011.69	35.50	218.00	738.92
231.78	1.00	190.00	0.00	1049.62	38.00	217.00	738.92
259.93	1.30	180.00	0.00	1097.85	37.40	215.00	738.92
287.58	1.20	180.00	0.00	1136.59	37.00	214.00	738.92
316.43	1.20	177.00	0.00	1174.89	37.00	212.50	738.92
345.28	1.20	168.50	0.00	1213.39	37.60	212.00	738.92
374.13	1.00	170.00	0.00	1242.24	38.40	211.00	738.92
402.98	0.80	194.00	0.00	1271.18	38.00	210.00	738.92
431.83	0.80	204.50	0.00	1288.44	37.50	208.00	738.92
460.68	1.30	206.00	0.00	1305.50	38.00	207.50	738.92
489.53	1.50	230.00	0.00	1324.78	39.40	207.00	738.92
518.38	1.90	225.00	0.00	1353.68	41.40	205.00	738.92
547.23	2.00	233.00	0.00	1394.82	42.00	204.50	738.92
576.08	2.80	224.00	0.00	1433.34	42.50	205.00	738.92
604.93	3.00	225.00	0.00	1482.64	42.20	204.50	738.92
633.78	3.40	230.00	0.00	1536.69	41.80	205.50	738.92
662.63	3.80	229.00	0.00	1584.82	39.50	207.50	738.92
691.48	4.7	229.00	0.00	1632.00	39.00	207.00	738.92
720.33	6.20	223.50	0.00				
739.53	7.10	222.00	0.00				


West Mereenie 12 Vertical Section @ 215 Deg
TVD
0.00
200.00
400.00
600.00
800.00
1000.00
1200.00
1400.00
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
Vertical Section
Act.Traj


West Mereenie 12
Plan View
Northing
100
0
-100
-200
-300
-400
-500
-500
-400
-300
-200
-100
0
100
Easting


WEST MEREENIE-12 WELL PROFILE
TVD
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
–MEREENIE SST
–CARMICHAEL SST
–UPPER STOKES SLTST
–LOWER STOKES SLTST
–UPPER STAIRWAY SST
MIDDLE STAIRWAY ST
–LOWER STAIRWAY SST (2)
LOWER STAIRWAY (1) –
–HORN VALLEY SLTST
PACOOTA P1-UNIT–
–PACOOTA P2-UNIT
PACOOTA P3-UNIT –
–P3-120 SAND
P3-190 SAND–
– PACOOTA P4-UNIT
TOTAL DEPTH,
1491.9 m TVD
0
100
200
300
400
500
600
VERTICAL SECTION


WEST MEREENIE-12 WELL PLAN
Well
0
100
200
SOUTH,m
300
400
500
P3-120
TARGET
400
300
200
100
0
WEST,m

HOFCO OILFIELD SERVICES

TARGET CO-ORDINATES

Metres East = -264.34
Metres North = -370.58

Target TVD = 1415.60
Tangent angle = 40.70
Azimuth = 215.50

COMPANY: Santos Limited
SURVEY: Magnetic Multi Shot Survey.
WELL : West Mereenie-12
Declination: 4.5 Deg East
Date: Aug. - Sept. 1997

	MD	ANGLE	AZIM	TVD	V.SECT	NORTH	EAST	DLS	BUILD
	(m MD)	(deg)	(deg)	(m)	(m)	(m)	(m)	(/30m)	(/30m)
TIE IN	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1	32.33	0.50	157.00	0.00	0.00	0.00	0.00	0.00	0.46
2	60.58	0.90	210.00	0.00	0.00	0.00	0.00	0.00	0.42
3	90.30	1.00	234.00	0.00	0.00	0.00	0.00	0.00	0.10
4	118.59	1.00	219.50	0.00	0.00	0.00	0.00	0.00	0.00
5	146.88	0.90	220.00	0.00	0.00	0.00	0.00	0.00	-0.11
6	175.18	1.20	207.00	0.00	0.00	0.00	0.00	0.00	0.32
7	203.48	1.10	199.00	0.00	0.00	0.00	0.00	0.00	-0.11
8	231.78	1.00	190.00	0.00	0.00	0.00	0.00	0.00	-0.11
9	259.93	1.30	180.00	0.00	0.00	0.00	0.00	0.00	0.32
10	287.58	1.20	180.00	0.00	0.00	0.00	0.00	0.00	-0.11
11	316.43	1.20	177.00	0.00	0.00	0.00	0.00	0.00	0.00
12	345.28	1.20	168.50	0.00	0.00	0.00	0.00	0.00	0.00
13	374.13	1.00	170.00	0.00	0.00	0.00	0.00	0.00	-0.21
14	402.98	0.80	194.00	0.00	0.00	0.00	0.00	0.00	-0.21
15	431.83	0.80	204.50	0.00	0.00	0.00	0.00	0.00	0.00
16	460.68	1.30	206.00	0.00	0.00	0.00	0.00	0.00	0.52
17	489.53	1.50	230.00	0.00	0.00	0.00	0.00	0.00	0.21
18	518.38	1.90	225.00	0	0.00	0.00	0.00	0.00	0.42
19	547.23	2.00	233.00	0.00	0.00	0.00	0.00	0.00	0.10
20	576.08	2.80	224.00	0.00	0.00	0.00	0.00	0.00	0.83
21	604.93	3.00	225.00	0.00	0.00	0.00	0.00	0.00	0.21
22	633.78	3.40	230.00	0.00	0.00	0.00	0.00	0.00	0.42
23	662.63	3.80	229.00	0.00	0.00	0.00	0.00	0.00	0.42
24	691.48	4.7	229.00	0.00	0.00	0.00	0.00	0.00	0.94
25	720.33	6.20	223.50	0.00	0.00	0.00	0.00	0.00	1.56
26	739.53	7.10	222.00	0.00	0.00	0.00	0.00	0.00	1.41

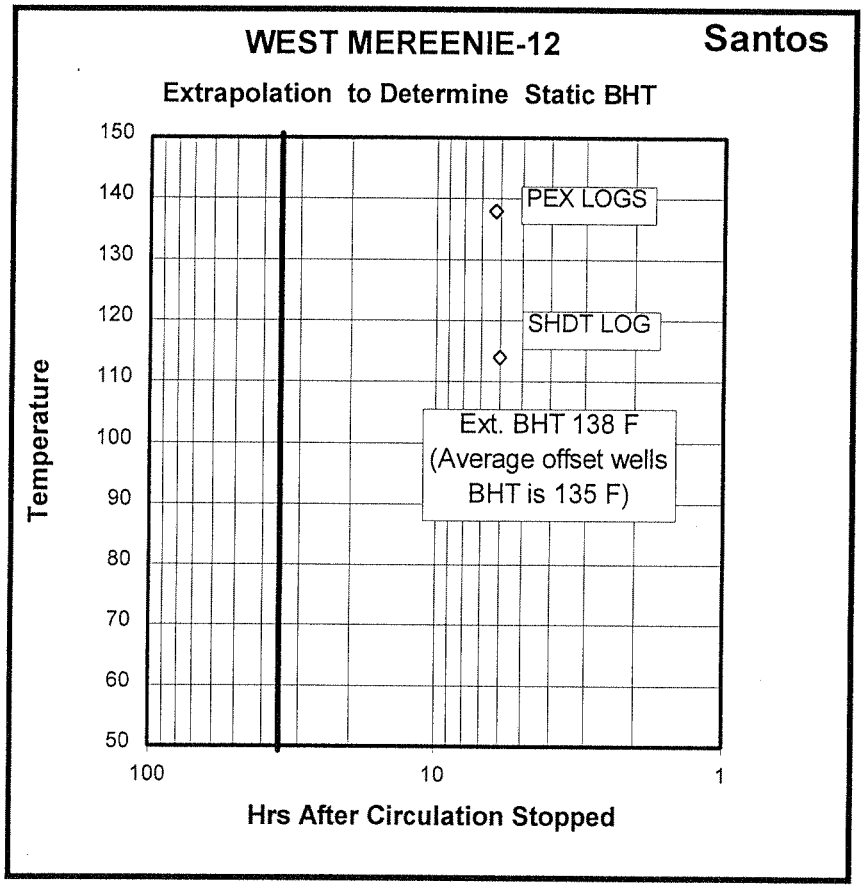
HOFCO OILFIELD SERVICES

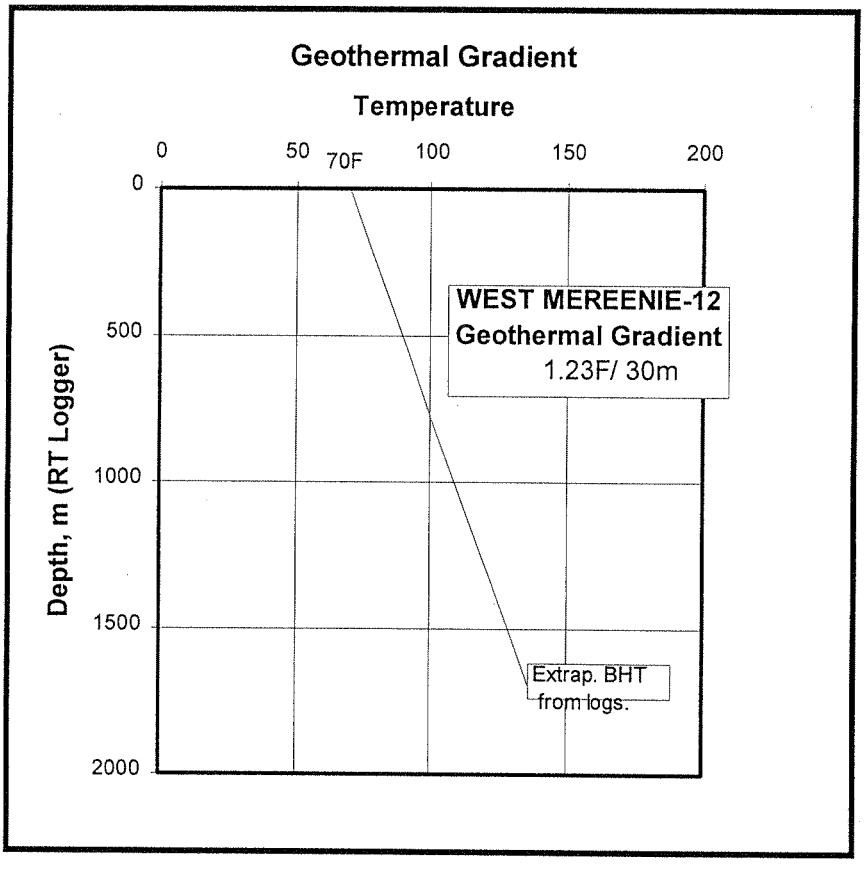
TARGET CO-ORDINATES

Metres East	=	**-264.34**	**COMPANY:**	**Santos Limited**
Metres North	=	**-370.58**	**SURVEY:**	**Magnetic Single Shot.**
Target TVD	=	**1415.60**	**WELL :**	**West Mereenie -12**
Tangent angle	=	**40.70**	**Declination:**	**4.5 Deg East**
Azimuth	=	**215.50**	**Date:**	**Aug. - Sept. 1997**

	MD	ANGLE	AZIM	TVD	V.SECT	NORTH	EAST	DLS
	(m MD)	(deg)	(deg)	(m)	(m)	(m)	(m)	(/30m)
Tie in	739.53	7.10	222.00	738.92	22.29	-17.96	-13.20	
1	780.98	9.20	224.00	738.92	0.00	-17.96	-13.20	0.00
2	819.14	12.50	224.00	738.92	0.00	-17.96	-13.20	0.00
3	857.67	17.00	223.00	738.92	0.00	-17.96	-13.20	0.00
4	896.16	21.50	221.00	738.92	0.00	-17.96	-13.20	0.00
5	934.66	26.50	221.00	738.92	0.00	-17.96	-13.20	0.00
6	973.15	30.50	220.00	738.92	0.00	-17.96	-13.20	0.00
7	1011.69	35.50	218.00	738.92	0.00	-17.96	-13.20	0.00
8	1049.62	38.00	217.00	738.92	0.00	-17.96	-13.20	0.00
9	1097.85	37.40	215.00	738.92	0.00	-17.96	-13.20	0.00
10	1136.59	37.00	214.00	738.92	0.00	-17.96	-13.20	0.00
11	1174.89	37.00	212.50	738.92	0.00	-17.96	-13.20	0.00
12	1213.39	37.60	212.00	738.92	0.00	-17.96	-13.20	0.00
13	1242.24	38.40	211.00	738.92	0.00	-17.96	-13.20	0.00
14	1271.18	38.00	210.00	738.92	0.00	-17.96	-13.20	0.00
15	1288.44	37.50	208.00	738.92	0.00	-17.96	-13.20	0.00
16	1305.50	38.00	207.50	738.92	0.00	-17.96	-13.20	0.00
17	1324.78	39.40	207.00	738.92	0.00	-17.96	-13.20	0.00
18	1353.68	41.40	205.00	738.92	0.00	-17.96	-13.20	0.00
19	1394.82	42.00	204.50	738.92	0.00	-17.96	-13.20	0.00
20	1433.34	42.50	205.00	738.92	0.00	-17.96	-13.20	0.00
21	1482.64	42.20	204.50	738.92	0.00	-17.96	-13.20	0.00
22	1536.69	41.80	205.50	738.92	0.00	-17.96	-13.20	0.00
23	1584.82	39.50	207.50	738.92	0.00	-17.96	-13.20	0.00
24	1632.00	39.00	207.00	738.92	0.00	-17.96	-13.20	0.00

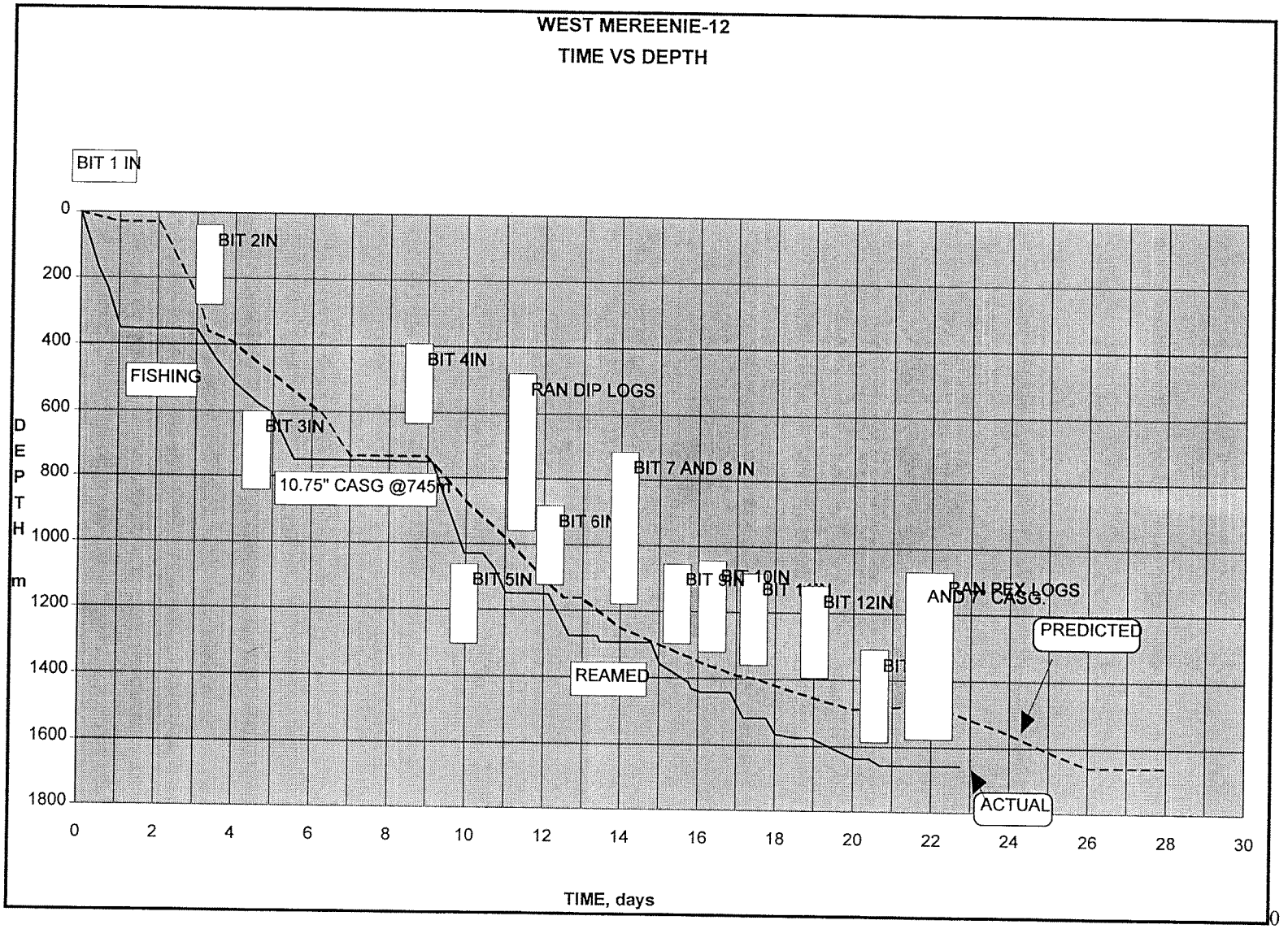
SECTION 7: WELL TEMPERATURE PLOTS


WEST MEREENIE-12
Santos
Extrapolation to Determine Static BHT
Temperature
150
140
130
120
110
100
90
80
70
60
50
PEX LOGS
SHDT LOG
Ext. BHT 138 F
(Average offset wells
BHT is 135 F)
100
10
1
Hrs After Circulation Stopped


Geothermal Gradient
Temperature
0
50
70F
100
150
200
0
500
1000
1500
2000
Depth, m (RT Logger)
WEST MEREENIE-12
Geothermal Gradient
1.23F/ 30m
Extrap. BHT
from logs.

SECTION 8: CATALOGUE OF WELLSITE SAMPLES

SECTION 9: TIME - DEPTH CURVE


WEST MEREENIE-12
TIME VS DEPTH
BIT 1 IN
BIT 2IN
FISHING
BIT 3IN
BIT 4IN
RAN DIP LOGS
10.75" CASG @745mT
BIT 6IN
BIT 7 AND 8 IN
BIT 5IN
BIT 9IN
BIT 10IN
BIT 12IN
RAN REX LOGS
AND 7" CASG.
REAMED
PREDICTED
ACTUAL
DEPTH m
0
200
400
600
800
1000
1200
1400
1600
1800
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
TIME, days

ENCLOSURE I: 1cm = 2m (1:200) MUDLOG