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NUMBER 7374/2

PEL 5 AND PEL 6, NAPPACOONGEE-MURTEREE BLOCK

EROMANGA AND COOPER BASINS

COOLOON SOUTH 1

TEST REPORTS

Submitted by

Santos Ltd
1992

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MINES AND ENERGY
SOUTH AUSTRALIA



ENVELOPE 7374/2

TENEMENT: PEL 5 and PEL 6, Nappacoongee-Murteree Block; Eromanga and Cooper Basins

TENEMENT HOLDER: Santos Ltd (operator), Delhi Petroleum Pty Ltd, Vamgas Ltd, Crusader Ltd and SAGASCO Resources Ltd

CONTENTS

	MESA NO.
REPORT: Kurasiak, I., 1992. Results of perforation operation, 2-rate cleanup flow and conditioning flow tests, plus of the 85 hour pressure buildup and static pressure gradient surveys of 7 separate Patchawarra Formation gas reservoir perforated intervals between 7578 and 8280 feet depth, conducted over the period 11 November - 4 December 1992 (Expertest Pty Ltd).	7374/2 R 1 Pgs 3-71

END OF CONTENTS

SEQUENCE OF EVENTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 8203'-8280'KB

PAGE: 1 OF 9

WELL NAME: Cooloon Sth#1

FORMATION : Patchawarra.

DATE: 18. 11. 92

TEST TYPE : Cooloon Sth#1 Perforations.

OPR : J. Kumsiak.

DATE/TIME	DESCRIPTION OF EVENTS
18. 11. 92	
0950	Arrive on location. and wait on separator and caravan.
1000	Shlumberger arrive on site. and start riging up mast truck and wire line.
1100	Separator #38, choke manifold on side.
1115	Start riging up choke manifold connections - flavelines to the separator and fract tank and flaveline to the pit. Inspect choke manifold - O.K.
1300	Shlumberger pressure test lubricator and BOP and snub valve.
1400	Pressure test flaveline in to the separator choke manifold and check same. to 2500 PSI
	All lines and choke manifold OK. (one of valves on separator has a slight leak)
1415	Pressure test completed. Rig down pump truck and packer pressure test equipment
1500	Shlumberger RTH with guns to perforate 79-4 sand.
1520	(guns did not go through snub valve. Replace snub valve. and run in hole with gun #1)
1615	On depth Correlate (depth 7978'-7994'KB 16' of perfs)
1625	With well s/i Shoot Gun #1
	SITHP Prior to perfs. 1783 PSI SITHP after shot 1785 PSI
1640	POOH Shlumberger guns.
1715	At surface with guns
1815	With well shut in run second guns
1900	Guns on depth. of 7978'-7994'KB (16' of perfs)
1910	With well shut in Shoot gun #2
1915	Shlumberger P.O.O.H.
1945	Guns at surface.

7374/2

SEQUENCE OF EVENTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7978' - 8280' KB

PAGE: 2. OF 9

WELL NAME: Cooloon Stn. #1

FORMATION : Patchawarra.

DATE: 18. 11. 92

TEST TYPE : Cooloon Stn. #1 perforations.

OPR : I. Kurasiek.

DATE/TIME

DESCRIPTION OF EVENTS

18. 11. 92

1950 Open well by pass separator on 16/64" choke size.

2050 Liquid to surface.

2115 Water to surface.

2200 Water to surface.

19. 11. 92

0220 Hydrate across the choke
- well stop flowing.

0550 Rock the choke.

0555 Increase choke size to 24/64".

0557 Liquid to surface - H₂O.

0604 Liquid stop flowing - gas to surface only.

0605 Cut choke size to 16/64".

0900 Trim flow through separator to monitor gas rate.

1440 Shut well in for Schlumberger to R1H with guns to perforate at 76-5 sand.

1530 Guns at depth of 7660' KB to 7692' KB (32' of perms)

1535 With well shut in Shoot gun # 3

1540 Schlumberger P.O.O.H.

1630 Guns at surface.

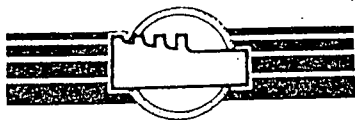
1640 Open well on 18/64" choke size with flow by pass separator.

1700 Shut well in to run in with second guns.

1808 On depth of 7628' KB to 7651' KB. (23' of perms)

1810 Open well on 18/64" choke size.

1820 Cut choke to 12/64".



SEQUENCE OF EVENTS

CUSTOMER :	Santos Ltd.	PERFORATIONS:	7628' - 8280' KB	PAGE:	3 OF 9
WELL NAME:	Coooloon Stn #1	FORMATION :	Potlchawarra.	DATE:	19. 11. 92
TEST TYPE :	Coooloon Stn #1 perforations.				
OPR :	I. Kunesia E				

DATE/TIME	DESCRIPTION OF EVENTS
19. 11. 92	
1825	With well flowing Shoot gun # 4
1845	Shut well in for Schlumberger to P.O.O.H.
1905	Schlumberger start P.O.O.H.
2015	Guns at Surface
2030	Open well on $2\frac{1}{64}$ " choke size with flow by pass separator.
2033	Cut choke to $16\frac{1}{64}$ " size
2034	Liquid to surface - condensate.
2039	Rock the choke
2042	Water to surface.
2130	Trim flow through separator.
20. 11. 92	
0220	Hydrate across the choke Rock the choke.
0235	Shut well in due to Hydration across choke.
	Monitor build up.
0855	Schlumberger R.I.H. to perforate at 75-B sand.
0925	Guns on bottom at 7578' KB to 7613' KB. (35' of perfs)
0930	Open well by pass separator on $1\frac{1}{64}$ " choke size
0944	Shoot guns with well flowing. Guns # 5
1005	Shut well in.
1025	Schlumberger P.O.O.H.
1118	Guns at Surface.
1130	Open well by pass separator on $2\frac{1}{64}$ " choke size (For more information see Test Results)

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SEQUENCE OF EVENTS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB.

PAGE: 6 OF 9

WELL NAME: Cooloom Sth #1

FORMATION : Paddawarra.

DATE: 22. 11. 92

TEST TYPE : Cooloom Sth #1 clean up flow after perforating plus two rate flow and build up.

OPR : I. Kurasiak.

DATE/TIME	DESCRIPTION OF EVENTS
22. 11. 92	
1345	Open well on $3\frac{1}{4}$ " choke size.
1430	Trim flow through separator.
1631	Pressure up lubricator with amerada gauges.
1731	Depressure lubricator
1831	Pressure up lubricator and run in hole.
1900	Arrive on hang depth of 7929' KB.
1401	Bleed off casing pressure to 387 PSI or 2668 kPa.
23. 11. 92	
	Continue monitor flow.
1530	Gradually cut choke size to $1\frac{5}{16}$ " to flow well on second rate of $\approx 2.00 \text{ MMSCF/D}$.
24. 11. 92	
0800	Rock the choke.
0900	Start collecting first set of samples.
0925	First set of samples completed.
0930	Rock the choke.
1000	Start collecting second set of samples
1025	Second set of samples completed.
1130	Rock the choke.
1230	Rock the choke.
1330	Rock the choke
1430	Rock the choke
1530	Rock the choke.
1730	Shut well in for build up.

SEQUENCE OF EVENTS

CUSTOMER : Santos Ltd

PERFORATIONS: 7578' - 8280' KB.

PAGE: 7 OF 9

WELL NAME: Cooloom Stn #1

FORMATION : Patchawarra.

DATE: 24. 11. 92

TEST TYPE: Cooloom Stn #1 clean up flow after perforating plus two rate flow test and build up.

OPR: I. Kurasias

DATE/TIME

DESCRIPTION OF EVENTS

24.11.92

1730

Shut well in for build up.

25.11.92

0700

Rig out separator - drain water from fractank in to the pit. (Liquid left in tank 11'6.5" of oil 37 m³
4.5" of water 1.2 m³)

0830

Check choke manifold - stem - OK seat - wash out
Removed seat and taken to Moomba for inspection by supervisor.

26.11.92

0530

MONITOR BUILD-UP. (SAFETY MEETING HELD)

27.11.92

0530

MONITOR BUILD-UP (SAFETY MEETING HELD)

28.11.92

0530

MONITOR BUILD-UP (SAFETY MEETING HELD)

29.11.92

0700

MONITOR BUILD-UP (SAFETY MEETING HELD)

30.11.92

0645

PULL GAUGES OUT OF HOLE. SEE RUN DATA SHEET FOR DETAILS

0715

CHARTS INSPECTED. NOTED CLOG ON TOP ELEMENT STOPPED PART WAY INTO
BUILD-UP. RESTARTED WHEN PULLING OUT OF HOLE (HOLD SAFETY MEETING)

0720

PREPARE AMERASAS FOR STATIC GRADIENT.

0754

R.I.H TO CONDUCT STATIC GRADIENT.

0900

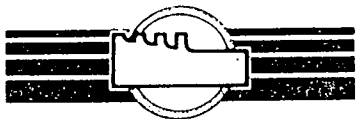
GAUGES AT BOTTOM STOP

0918

P.O.O.H

0935

GAUGES AT SURFACE.



SEQUENCE OF EVENTS

CUSTOMER : SANTOS LTD
 WELL NAME : COOLOON STA #1
 TEST TYPE : FLOW + BUILD-UP

PERFORATIONS : 7578' - 8280'KB
 FORMATION : PATCHAWARRA

PAGE: 8 OF 9
 DATE: 30.11.92
 OPR: A. GRINDLAY

DATE/TIME	DESCRIPTION OF EVENTS
30.11.92	
0955	DEPRESSURE LUBRICATOR. REMOVE AND INSPECT CHARTS. ALL O.K.
1015	RE-STAR LUBRICATOR. LEAVE WIRELINE UNIT RIGGED IN.
1100	RIG IN SEPARATOR AND FLOWLINES.
1340	PRESSURE TEST LINE TO SEPARATOR MANIFOLD.
1350	OPEN WELL ON 25/64THS CHOKE. DRAW DOWN WELLHEAD PRESSURE
1400	RATE ACROSS CHOKE INDICATES 7 MMSCFD. CUT CHOKE BACK TO 16/64THS.
1410	WELLHEAD PRESSURE INCREASING. HYDRATES FORMING. RATE APPROX 2.5 MMSCFD
1415	S.W.I. CONTACT MOOMBA. ARRANGE FOR HEATER.
1700	HEATER ARRIVED ON LOCATION. SECURE OVERNIGHT
1.12.92	
0700	RIG UP HEATER AND SUPPLY LINE (HOLD SAFETY MEETING.)
0850	WATER FOR HEATER ON LOCATION. FILL UP BATH.
0925	ATTEMPT PRESSURE TEST. VALVE ON HEATER MANIFOLD LEAKING. DEPRESSURE AND REPAIR LEAK.
0935	ATTEMPT PRESSURE TEST. SECONDARY VALVE LEAKING. UNABLE TO REPAIR. WAIT ON REDRESS KITS FROM MOOMBA.
1200	REDRESS KITS ARRIVE. INSTALL IN A.V.C VALVES
1305	PRESSURE TEST SUCCESSFULLY (17134 KPA)
1330	PRESSURE UP VESSEL LIGHT HEATER.
1400	OPEN WELL ON 15/64THS CHOKE. START TEST.
1500	MONITOR FLOW.
2.12.92	
0700	MONITOR FLOW. (HOLD SAFETY MEETING)

SEQUENCE OF EVENTS		
CUSTOMER : SANTOS LTD	PERFORATIONS: 7578' - 8280' KB	PAGE: 9 OF 9
WELL NAME: COALCON SH #1	FORMATION : PACHAWARRA	DATE: 2.12.92
TEST TYPE: Conditioning Flow.		OPR: A. GRINDAY

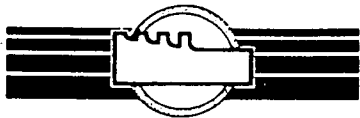
PAGE: 9 OF 9

DATE: 2.12.92

OPR : A. GRINDAY

[illegible]

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FIELD READINGS

CUSTOMER : Santos Ltd.

PERFORATIONS: 8203'-8280'KB.

PAGE: 1 OF 18

WELL NAME: Cooloom Stn. #1

FORMATION : Patchawarra.

DATE: 18. 11. 92

TEST TYPE : Cooloom Stn. #1 perforations.

OPR : I. Kurasial.

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPA)	ANNULUS PRESSURE (PSI/KPA)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF. PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
11 of November 1992.														
1000		1840	0											
1620		1783	0											
1630		1785	0											
1900		1760	0											
1915		1772	0											
1950		1772	0											
1955		1310	0											
2000		1020	0	25										
2005		770	0											
2010		533	0											
2015		368	0											
2020		220	0											
2025		148	0											
2030		98	0	25										
2035		53	0											
2040		28	0											
2045		9	0											
2050		11	0											
2055		86	0	26										
2100		77	0	26										
2115		205	0											

Wellhead shut in pressure.

Shut in pressure before first shot.

Shut in pressure after first shot.

Shut in pressure before second shot.

Shut in pressure after second shot.

Open well by pass separator on 16/64" choke size.

liquids to surface.

00012

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FIELD READINGS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7942' - 8280' KB

PAGE: 2 OF 18

WELL NAME: Cooloom Sh #1

FORMATION : Patchawarra.

DATE: 18. 11. 92

TEST TYPE : Cooloom Sh #1 perforations.

OPR : I. Kumsiat

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
18 of November 1992														
2130		220	0	26.5	16/64									
2200		441	0	27	16/64	Water to surface.								
19 of November 1992														
0200		687	0	26	16/64									
0220						Hydrate across choke - well stop flowing.								
0550		1780	0			Rock the choke.								
0555						Open choke to 24/64"								
0557						Liquid to surface (H ₂ O)								
0604		423	0		24/64	Liquid stop flowing - gas to surface only.								
0605						Cut choke to 16/64"								
0615		308	0	27	16/64									
0630		92	0	26	16/64									
0700		180	0	29	16/64									
0730		583	0	29	16/64									
0800		373	0	29	16/64									
0830		481	0	30	16/64									
0900	0	648	0	30	16/64	Trim flow through the separator				3"	.75"		2.25"	
0930		714	0	30	16/64		.750	109	88	87.8	3"	.75"		2.25"
1000	1	700	0	31	16/64		.750	114	80	84.2	3"	.75"		2.25"
1030		672	0	32	16/64		.750	115	76	84.2	3"	.75"		2.25"
1100	2	648	0	32	16/64		.750	107	72	86	3"	.75"		2.25"

ET 103

FIELD READINGS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7942' - 8280' KB

PAGE: 3 OF 18

WELL NAME: Cooloom Sh. #1

FORMATION : Patchawarra.

DATE: 19. 11. 92

TEST TYPE : Cooloom Sh. #1 perforations.

OPR : I. Kurasiak.

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKESIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)	
19 of November 1992															
1130		650	0	32	16/64		.750	108	65	89.6	3"	.75"		2.25"	
1200	3	680	0	32	16/64		.750	118	72	91.4	3"	.75"		2.25"	
1230		716	0	33	16/64		.750	116	78	93.2	3"	.75"		2.25"	
1300	4	654	0	33	16/64		.750	112	72	93.2	3"	.75"		2.25"	
1330		617	0	34	16/64		.750	118	77	95	3"	.75"		2.25"	
1400	5	679	0	34	16/64		.750	102	64	96.8	3"	.75"		2.25"	
1430		655	0	33	16/64		.750	130	140	96.8	3"	.75"		2.25"	
1440		658	0	34	16/64		Shut well in for Schlumberger to RTH with guns								
		Schlumberger perforate with two guns. For more information see Test Results.													
2030		2114	0	29		Open well on 24/64" choke size with flow by pass separator.									
2038		1481	0		24/64	Cut choke to 16/64" size									
2035		1385	0	30	16/64										
2045		1255			16/64										
2100		1019	35	30	16/64										
2115		949	90	30	16/64						3"	.75"		2.25"	
2130	0	1164	122	30	16/64	Trim flow through separator.									
2135		Rock the choke													
2200		1065	150	31	16/64		.750	400	60						
2230	1	1087	192	30	16/64		.750	350	72		5"	1"		4"	

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FIELD READINGS

7628' - 9280' KB

CUSTOMER : SANTOS Ltd.

PERFORATIONS:

PAGE: 4 OF 18

WELL NAME: Cooloom Sth. #1

FORMATION : Patchawarra.

DATE: 19.11.92

TEST TYPE : Cooloom Sth. #1 perforations.

OPR : I. Kurasiak

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF. PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
19 of November 1992														
2300		1236	194	30	16/64		.750	350	112	68				
2330	2	1207	196	30	16/64		.750	325	98	64.4	6.5"	1.25"		5.25'
20 of November 1992														
0130	4	1215	222	30	16/64		.750	323	98	53.6	8.75'	2"		6.75'
0220		1307		Hydrol across the choke - Rock the choke.										
0230	5	1204	247	30	16/64		.750	338	120	53.6	9.75'	2.75"		7"
0235		Shut well in.												
0245		1398	242	28										
0300		1678	229	27										
0330		2003	193	24										
0530		2405	45											
0730		2452	21											
0855						Run in hole with guns to perforate at 75-8 sand.								
0925						On bottom at 7528' KB to 7613' KB (35' of perms)								
0930		2470	0			Open well on 18/64" choke size.								
0944		1700	0			With well flowing by pass separator shoot guns.								
1005		1450				Shut well in.								
1025		1935				Slumberger P.O.O.H								
1118						Arrive in lubricator with guns.								
1130		2380	0			Open well by pass separator on 24/64"								
1131		2038	16	36	24/64	Cut choke size to 16/64"								

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578'-8280'KB

PAGE: 5 OF 18

WELL NAME: Cooloom Sth. #1

FORMATION : Patchawarra.

DATE: 20.11.92

TEST TYPE : Cooloom Sth. #1 perforations.

OPR : J. Kurasiah.

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
20 of November 1992														
1134														
1135		1845		34	16/64									
1140		1671		34	16/64									
1145		1499	33	33	18/64									
1146														
1150		1167	44	33										
1153		1019												
1155		912	82	33	26/64									
1157		861												
1200		763	129	33	27/64									
1203		700			27/64									
1208		Liquid to surface												
1212		960			26/64									
1215		885			32/64									
1216		830			36/64									
1220		560			40/64									
1221		631			30/64									
1225		668			24/64									
1230		781			24/64									
1235		817	386	36	32/64									
1245		662		36	34/64									

Rock choke.

Rock choke.

Open choke to 18/64"

Open choke to 24/64"

Increase choke size to 26/64"

Increase choke size to 27/64"

Cut choke size to 23/64"

Open choke size to 26/64"

Open choke size to 32/64"

Open choke to 36/64"

Open choke size to 40/64" Lot of liquid to surface (H2O)

Gas to surface - only Cut choke to 30/64"

— 11 — 11 — 11 — Cut choke to 24/64"

Liquid to surface - Open choke to 32/64"

— 11 — 11 — Open choke to 34/64"

Cut choke 30/64" → Trim flow through separator.

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 6. OF 18

WELL NAME: Cooloom Sth.#1

FORMATION : Patchowarra.

DATE: 20. 11. 92

TEST TYPE : Cooloom Sth#1 perforation.

OPR : I. Kurasia.

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
20 of November 1992														
1300	0	725	444	35	3 3/4		1.25"	305	82	80.6	13.5"	3.75"		9.75" Opening
1330	.5	734	491	37	3 3/4		1.25"	306	88	80.6	15.25"	4.5"		10.75"
1400	1	729	530	38	3 3/4		1.25"	317	88	83.3	16.5"	5"		11.5"
1400			Shut well in for Schlumberger to run in hole with perforating guns.											
1430		1730	RIH with perforating guns to perforate at 81-0 sand.											
1520		2201	On bottom at 8097' KB to 8136' KB - Open well on 1 1/4" choke size.											
1525		2050	Cut choke size to 1 1/4".											
1536		1808	With well flowing - Shoot guns.											
1537		1817												
1540		1830												
1545		1830												
1550		1820												
1555		1805	Shut well in.											
1605		2104												
1615		2278	Schlumberger P.O.O.H with guns.											
1640		2420												
1650			Guns at surface.											
1700		2452												
1715		2455	RIH with perforating guns to perforate at 78-0 sand.											
1800		2490	On bottom at 7834' KB - 7841' KB (7' of perfs) - Open well on 1 1/4" choke size.											
1820		1813	Cut choke size to 1 1/4"											

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280'KB

PAGE: 7 OF 18

WELL NAME: Cooloom Stn. #1

FORMATION : Paddawarra

DATE: 20.11.92

TEST TYPE : Cooloom Stn #1 perforations.

OPR : T. Kurasial

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
20 of November 1992														
1823					With the well flowing by pass separator Shoot gun # 7									
1825		1804												
1843		1715			Shut well in.									
1900		2165			Pull out of hole with guns.									
1930		2355			Guns at surface.									
2000	0	2418	227	28	Open well by pass separator on 30/64" choke size.									
2005		1375	246	32	30/64									
2010		1106		34	Increase choke size to 36/64"									
2015		906	407	34	36/64									
2030		1062	657	37	36/64									
2100	0	936	815	35	Trim flow through separator.									
2200	1	934	1017	37	36/64		1.500"	372	92	73.4	20"	6.5"		13.5"
2215		Depressure casing to			345 PSI									
2300	2	941	453	38	36/64		1.5000"	371	90	75.2	23"	8.75"		14.25"
21 of November 1992														
0100	4	928	628	38	26/64		1.500"	370	92	78.8	28.5"	12. "		16.5"
0500	8	920	827	40	36/64		1.500	370	92	78.8	39"	19"		20"
0700	10	916	902	40	36/64		1.500"	370	92	80.6	43.75'	22.25"		21.5"
0900	12	912	961	42	36/64		1.500"	370	94	84.2	48.5"	25"		23.5"
0930	12.5	909	967	42	36/64		1.500"	377	93	86	49.25"	25.75"		23.5"
0930		Shut well in for Schlumberger to perforate.												

FIELD READINGS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 8 OF 18

WELL NAME: Cooloom Stn. #1

FORMATION : Palawan

DATE: 21. 11. 92

TEST TYPE : Cooloom Stn #1 perforations.

OPR : I. Kurasiah.

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF. PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
21. of November 1992														
0935		1400												
1014		2248												
1015														
1021		2005			16/64									
1052		2015			12/64									
1112		2080			12/64									
1132		2340												
1155														
1200		2372												
1230		2390												
1250														
1515														
1540														
1635														
1638														
1705														
1710														
1730		2487	0											
1733					40/64									
1735		968	0	36	46/64									

Run in hole with perforating guns (Schlumberger)
 On bottom at 7716' KB - 7750' KB (34' of perf)

Open well on 16/64" choke size.

Cut choke size to 12/64"

With well flowing Shoot guns # 8

Shut well in

Pull out of hole

Arrive in lubricator.

Wait on Schlumberger to rig down equipment.

Rig in wireline unit

Run in hole with 1.75" b. box.

Tag PBTD at 8658' KB.

Pull out of hole.

Arrive in lubricator.

Rig down wireline unit

Open well on 40/64" choke to flow on clean up flow by pass separator

Increase choke size to 46/64"

Cut choke size to 44/64"

EXPERTEST PTY. LTD.

FIELD READINGS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 9 OF 18

WELL NAME: Cooloom Stn #1

FORMATION : Peldiawarra.

DATE: 21. 11. 92

TEST TYPE : Cooloom Stn #1 perforations

OPR : I. Kurnasak.

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
21 of November 1992														
1737					44/64		Cut choke to 42/64"							
1740		706	0	37	42/64		Cut choke to 40/64"							
1745		669	0	37	40/64									
1752		692		38	40/64		Cut choke to 38/64"				liquid to surface.			
1758		698		39	38/64									
1800		715	274	38	38/64									
1830		691	509	40	38/64									
1900		678	657	40	38/64									
1930		671	763	40	38/64									
2000		656	838	41	38/64		Bleed casing to 269 PSI							
2100		650	398	43	38/64									
2115		651		43	38/64		Cut choke size to 37/64							
2200	0	679	496	45	37/64		Trim flow through separator.	50.5"	26.75"				23.75"	
22 of November 1992														
0200	4	661	719	47	37/64		2.25"	295	70	107.6	63"	35"		28"
0600	8	652	828	49	37/64		2.25"	298	68	109.4	75"	43.5"		31.5" Cut choke to 35/64"
0800	10	686	877	51	36/64		2.25"	298	66	109.4	81"	48.25"		32.75"
1000	12	687	917	55	36/64		2.25"	304	65	113.	85.75"	51.25"		34.5"
1200	14	686	946	56	36/64		2.25"	308	64	114.8	91.5"	55.25"		36.25"
1330	15.5	685	964	54	36/64		2.25"	307	64	114.8	95"	57.75"		37.25"
1330		Shut well in to rig in swab valve.					and rig in wireline unit.							

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB.

PAGE: 10 OF 18

WELL NAME: Cooloom Sth #1

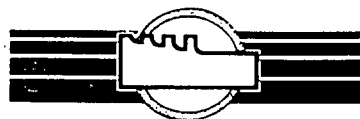
FORMATION : Petchawana.

DATE: 22. 11. 92

TEST TYPE : Cooloom Sth #1 Cleanup flow after perforating and two rate flow test.

OPR : I. Kurasiak

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
22 of November 1992														
1345		1857												
1400		709	918	54	36/64									
1430	15.5	682	956	56	36/64									
1530	16.5	678	978	58	36/64		2.25"	306	63	116.6	98.5"	60"		38.5"
1631		676	983		36/64									
1730	18.5	675	997	55	36/64		2.25"	304	64.5	116.6	104.1"	63.75"		40.25"
1731		675												
1831	19.5	672	1006	55	36/64									
1900		671	1007	54	36/64									
1901														
1930	20.5	680	426	54	36/64		2.25"	304	63	116.6	109.5"	67.5"		42."
2130	22.5	681	454	54	36/64		2.25"	299	63	118.4	114.5"	71"		43.5"
23 of November 1992														
0130	26.5	680	483	53	36/64		2.25"	299	63	118.4	124"	77.25"		46.75"
0530	30.5	676	505	53	36/64		2.25"	299	62	118.4	133.25"	83.5"		49.75"
0730	32.5	677	519	53	36/64		2.25"	302	62	118.4	138.5"	87.5"		51."
0930	34.5	681	532	54	36/64		2.25"	304	61	120.2	143.5"	91"		52.5"
1130	36.5	679	542	56	36/64		2.25"	307	61	122.0	148."	94"		54"
1330	38.5	678	553	59	36/64		2.25"	310	61	123.8	153"	97.25"		55.75"
1530	40.5	672	558	60	36/64		2.25"	302	61	123.8	157.75"			
1530	Gradually cut choke size to 15/64" for second flow rate													



FIELD READINGS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB.

PAGE: 11 OF 18

WELL NAME: Cooloom Sth. #1

FORMATION : Patchawarra.

DATE: 23. 11. 92

TEST TYPE : Cooloom Sth. #1 Clean up flow after perforating and two rate flow test and build up.

OPR : I. Kurasiat

TIME		WELLHEAD DATA					SEPARATOR DATA					LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)	
23 of November 1992															
1630	41.5	1571	521	57	15/64										
1730	42.5	1599	440	57	15/64		1.50"	300	90	82.4	160.5"	103.25"		57.25"	
1930	44.5	1620	380	53	15/64		1.50"	297	92	75.2	163.5"	106"		57.5"	
2130	46.5	1643	355	52	15/64		1.50"	298	93	73.4	166.75"	109"		57.75"	
24 of November 1992															
0130	50.5	1681	348	50	15/64		1.50"	300	96	69.8	173.5"	115"		58.5"	
0530	54.5	1738	330	50	15/64		1.50"	294	86	64.4	180.75"	120.75"		60"	
0730	56.5	1748	313	46	15/64		1.50"	295	83	64.4	183.75"	123.25"		60.5"	
0800		1753			15/64	Rock the choke.									
0830	57.5	1717	318	47	15/64		1.50"	300	93	66.2	185"	124.25"		60.75"	
0900		1714	320	47	15/64	Start collecting first set of samples.									
0925						First set of samples completed.									
0930	58.5	1747	323	47	15/64		1.50"	302	85	68	186.5"	125.25"		61.25"	
0930						Rock the choke.									
1000		1718	325	47	15/64	Start collecting Second set of samples.									
1025						Second set of samples completed.									
1030	59.5	1724	328	46	15/64		1.50"	301	92	68	187.5"	125.75"		61.75"	
1130	60.5	1750	328	48	15/64		1.50"	301	88	66.2	188.75"	126.75"		62"	Rock the choke
1230	61.5	1715	337	48	15/64		1.50"	302	94	66.2					Rock the choke.
1330	62.5	1712	346	45	15/64		1.50"	306	96	68	191.75"	129"		62.75"	Rock the choke.
1430	63.5	1726	350	47	15/64		1.50"	302	93.5	67.1					Rock the choke

00022

FIELD READINGS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' x 8.

PAGE: 12 OF 18

WELL NAME: Cooloom Sth #1

FORMATION : *Paldigarna.*

DATE: 24. 11. 92

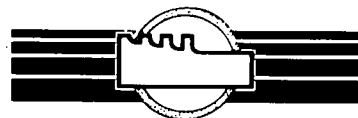
TEST TYPE : Coolumb Stn #1 Cleanup flow after perforating and two rate flow test and build up. OPR : J. Kurasiab

OPR : J. Kurasich

[illegible]

EXPERTEST PTY. LTD.

FIELD READINGS



CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 13 OF 18

WELL NAME: COOLOON STA #1

FORMATION : PATCHAWARRA

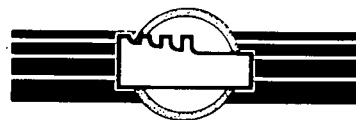
DATE: 24.11.92

TEST TYPE : BUILD UP.

OPR : I. KURASIAK

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)	
24	NOVEMBER 1992														
1730	0	1723	364												
1735															
1740		2105													
1745		2168	302												
1800		2229	209												
1815		2259	135												
1830	1	2276	71												
1845		2280	0												
1900		2290	0												
1915		2295	0												
1930	2	2298	0												
1945		2302	0												
2000		2305	0												
2015		2311	0												
2030	3	2314	0												
2045		2315	0												
2100		2320	0												
2115		2323	0												
2130	4	2323	0												
25	NOVEMBER 1992														
0130	8	2354	0												

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 7578' - 8280' KB.

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WELL NAME: COOLOON STH # 1

FORMATION : PATCHAWARRA

DATE: 25.11.92

TEST TYPE : BUILD UP

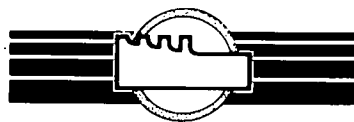
OPR : I. KURASIAK

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
25	NOVEMBER	1992												
0530	12	2381	0											
0930	16	2411	0											
1330	20	2424	0											
1730	24	2436	0											
2130	28	2446	0											
26	NOVEMBER	1992												
0130	32	2458	0											
0530	36	2463	0											
0930	40	2471	0											
1330	44	2477	0											
1730	48	2483	0											
2130	52	2488	0											
27	NOVEMBER	1992												
0130	56	2492	0											
0530	60	2495	0											
0930	64	2499	0											
1330	68	2503	0											
1730	72	2507	0											
2130	76	2511	0											
28	NOVEMBER	1992												
0130	80	2515	0											

READING FROM CHART - CREW IN MOOMBA.

} READINGS FROM CHART - CREW AT TOOLACHEE

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280'KB

PAGE: 15 OF 18

WELL NAME: COOLOON STN #1

FORMATION : PATCHAWARRA

DATE: 28-11-92

TEST TYPE : BUILD-UP.

OPR : A. GRINDLAY

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE <i>P.S.E</i>	ANNULUS PRESSURE (PSI)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
28 -	11 -	92												
0530	84	2519	Ø											
0930	88	2522	Ø											
1330	92	2524	Ø											
1730	96	2526	Ø											
2130	100	2528	Ø											
29 -	11 -	92												
0130	104	2530	Ø											
0530	108	2532	Ø											
0930	112	2533	Ø											
1330	116	2535	Ø											
1730	120	2536	Ø											
2130	124	2538	Ø											
30 -	11 -	92												
0130	128	2539	Ø											
0530	132	2539	Ø											
0645		2539	Ø											
1100														
1340		2540	Ø											
1350		2540	Ø											
1400		1890	Ø											

} READINGS FROM CHART. CREW AT TOOLACHEE

} READINGS FROM CHART. CREW AT TOOLACHEE

P.O.O.H END BUILD-UP. SEE TEST RESULTS SHEET.

RIG IN SEPARATOR AND FLOWLINES

PRESSURE TEST LINE TO SEPARATOR MANIFOLD

OPEN WELL ON 25/64" TO DRAW DOWN WELLHEAD PRESSURE

RATE ACROSS CHOKE T.O MMSCA CUT CHOKE TO 16/64" INCHES

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280'KB

PAGE: 16 OF 18

WELL NAME: COOLCON STA #1

FORMATION : PATCHAWARRA

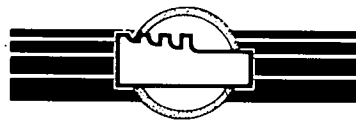
DATE: 30.11.92

TEST TYPE : FLOW AND SAMPLE

OPR : A. GRINAWAY

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
30. 11. 92														
1410		13997	Ø		1 5/64		WELLHEAD PRESSURE INCREASING, HYDRATES FORMING, RATE 2.5mmSCFD.							
1415		14238	Ø		"		S.W.I. ARRANGE FOR HEATER TO BE SENT OUT.							
1700							HEATER ON LOCATION							
2230		17713	Ø											
1. 12. 92														
0100		17713	Ø											
0500		17713	Ø											
0700							RIG IN HEATER.							
0850							WATER FOR HEATER BATH ON LOCATION.							
0925							PRESSURE TEST. FAIL. SEE SEQUENCE OF EVENTS FOR DETAILS.							
1305		17817	Ø				SUCCESSFUL PRESSURE TEST.							
1330							PRESSURE UP VESSEL. START HEATER.							
1400	Ø	17803	Ø		1 5/64		OPEN WELL & START TEST. 9.0 6.0 3.0							
1415							DIVERT FLOW THROUGH VESSEL.							
1450							INSTALL A 1.75" ORIFICE PLATE.							
1500	1	14348	Ø	34	"		1.75	285	72	122	9.0	6.0		3.0
1600	2	14652	Ø	37	"		"	277	68	122	9.0	6.0		3.0
1700	3	14486	Ø	38	"		"	275	65	122	9.0	6.0		3.0
1900	5	14466	28	38	"		"	274	61	120	10.5	7.0		3.5
2100	7	14390	48	38	"		"	274	58	124	12.5	9.0		3.5

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 17 OF 18

WELL NAME: COOLOON STN #1

FORMATION : PATCHAWARRA

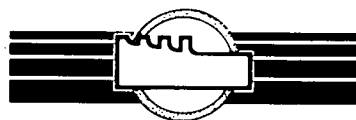
DATE: 2.12.92

TEST TYPE : FLOW AND SAMPLE

OPR : A. GRINDWAY

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
2 -	12 -	92												
0100	11	14328	103	39	1 5/8		1.75	278	52	124	16.5	10.5		6.0
0500	15	14300	152	39	"		"	278	50	122	19.75	13.25		6.5
0700	17	14300	179	40	"		"	276	48	122	22.0	15.0		7.0
0900	19	14259	207	41	"		"	276	48	124	23.5	16.0		7.5
0945							CHANGE PLATE TO 1.5"							
1100	21	14259	241	43	"		1.5	278	93	131	25.5	17.5		8.0
1300	23	14259	262	44	"		"	278	90	133	27.0	18.25		8.75
1500	25	14128	290	43	"		"	278	93	131	29.0	19.75		9.25
1505							ROCK CHOKE, DISLOOGE DEBRIS							
1700	27	13542	462	45	"		1.5	280	127	129	31.5	21.25		10.25
1900	29	13500	627	45	"		"	280	126	131	33.5	22.0		11.5
2100	31	13452	738	45	"		"	280	121	131	36.0	24.0		12.0
3 -	12	92												
0100	35	13376	952	45	"		"	284	116	131	41.0	28.0		13.0
0500	39	13294	1165	45	"		"	282	117	131	45.5	31.25		14.25
0700	41	13280	1262	45	"		"	281	116	131	47.5	32.5		15.0
0900	43	13266	1365	46	"		"	279	120	131	50.0	34.5		15.5
1100	45	13287	1462	47	"		"	272	121	131	51.5	35.25		16.25
1300	47	13294	1551	47	"		"	272	119	131	54.0	37.0		17.0
1500	49	13307	1620	48	"		"	273	118	133	56.0	38.75		17.25
1600	50	13294	1648	48	"		"	273	118	133	57.0	39.25		17.75

EXPERTEST PTY. LTD.



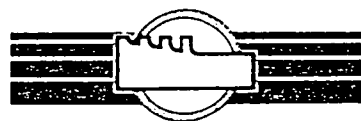
FIELD READINGS

CUSTOMER : *SANTOS LTD*
 WELL NAME : *COOLON STA #1*
 TEST TYPE : *CONDITIONING FLOW*

PERFORATIONS: *7578' - 8280' KB*
 FORMATION : *PATCHAWARRA*

PAGE: *18* OF *18*
 DATE: *3.12.92*
 OPR : *A. GRINDLAY*

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/CM)	OIL (IN/CM)	OIL API GRAVITY @ 60°F	WATER (IN/CM)
<i>3.</i>	<i>12. 92</i>													
<i>1600</i>		<i>START FIRST SET OF SAMPLES.</i>												
<i>1625</i>		<i>FINISH SAMPLE SET #1</i>												
<i>1700</i>	<i>51</i>	<i>13294</i>	<i>1675</i>	<i>47</i>	<i>15/64</i>		<i>1.5</i>	<i>273</i>	<i>116</i>	<i>131</i>	<i>58.0</i>	<i>40.0</i>		<i>18.0</i>
<i>1700</i>		<i>START SECOND SET OF SAMPLES</i>												
<i>1725</i>		<i>FINISH SAMPLE SET #2</i>												
<i>1800</i>	<i>52</i>	<i>13280</i>	<i>1703</i>	<i>48</i>	<i>15/64</i>		<i>1.5</i>	<i>273</i>	<i>116</i>	<i>131</i>	<i>59.0</i>	<i>40.75</i>		<i>18.25</i>
<i>1800</i>		<i>START THIRD SET OF SAMPLES</i>												
<i>1825</i>		<i>FINISH SAMPLE SET #3</i>												
<i>1900</i>	<i>53</i>	<i>13266</i>	<i>1724</i>	<i>47</i>	<i>15/64</i>		<i>1.5</i>	<i>273</i>	<i>116</i>	<i>131</i>	<i>60.25</i>	<i>41.75</i>		<i>18.5</i>
<i>2100</i>	<i>55</i>	<i>13225</i>	<i>1786</i>	<i>46</i>	<i>"</i>		<i>"</i>	<i>275</i>	<i>114</i>	<i>131</i>	<i>62.0</i>	<i>42.75</i>		<i>19.25</i>
<i>4.</i>	<i>12. 92</i>													
<i>0100</i>	<i>59</i>	<i>13190</i>	<i>1917</i>	<i>46</i>	<i>"</i>		<i>"</i>	<i>276</i>	<i>114</i>	<i>131</i>	<i>66.0</i>	<i>45.75</i>		<i>20.25</i>
<i>0500</i>	<i>63</i>	<i>13245</i>	<i>2000</i>	<i>46</i>	<i>"</i>		<i>"</i>	<i>285</i>	<i>112</i>	<i>131</i>	<i>70.25</i>	<i>48.75</i>		<i>21.5</i>
<i>0700</i>	<i>65</i>	<i>13259</i>	<i>2020</i>	<i>46</i>	<i>"</i>		<i>"</i>	<i>283</i>	<i>108</i>	<i>131</i>	<i>72.25</i>	<i>50.0</i>		<i>22.25</i>
<i>0900</i>	<i>67</i>	<i>13266</i>	<i>2055</i>	<i>47</i>	<i>"</i>		<i>"</i>	<i>274</i>	<i>110</i>	<i>131</i>	<i>74.5</i>	<i>51.75</i>		<i>22.75</i>
<i>1100</i>	<i>69</i>	<i>13273</i>	<i>2089</i>	<i>47</i>	<i>"</i>		<i>"</i>	<i>270</i>	<i>113</i>	<i>131</i>	<i>76.5</i>	<i>53.5</i>		<i>23.0</i>
<i>1300</i>	<i>71</i>	<i>13245</i>	<i>2131</i>	<i>47</i>	<i>"</i>		<i>"</i>	<i>272</i>	<i>113</i>	<i>131</i>	<i>78.25</i>	<i>54.75</i>		<i>23.5</i>
<i>1300</i>		<i>S.W. I END TEST.</i>												



TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 8203'-8280'KB

PAGE: 1 OF 20

WELL NAME: Cooloon Sh.#1

FORMATION : Patchawarra.

DATE: 18.11.92.

TEST TYPE : Cooloon Sh.#1 perforations.

OPR : I. Kurasiak.

TIME		WELLHEAD DATA				FLOW RATES					CUMULATIVE PRODUCTION						
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCF m³10³	OIL BBLs m³	WATER BBLs m³				
18 of	November	1992.															
0950		Arrive on location and wait on separator and caravan.															
1000		12687	0	Well head shut in pressure.													
1000		Shlumberger arrive on site and start riging up mast truck and wireline truck.															
1100		Separator #38, choke manifold and caravan arrive on location.															
1103		Pump truck on location. (Discuss plan of work for the day and safety aspects)															
1115		Start riging up choke manifold, flowlines, separator and flareline to the pit.															
1315		Rig in Pump truck to manifold on the separator to pressure test flowline, choke manifold and gate valve on the separator.															
1400		Start pressure test. (2500 PSI or 17237 kPa) test O.K.															
1415		Pressure test completed. (One of valves on the separator has slight leak ≈ 10 PSI in 15 min)															
1430		Rig down Pump truck.															
1500		Shlumberger R11 with guns to perforate 79-4 sand.															
		(guns did not go through snub valve. Replace snub valve) and															
1520		Run in hole with gun #1.															
1615		Shlumberger on depth of 7942' to 7968' KB (26' of perfs)															
1620		12294	0														
1625		With well shut in Shoot gun #1															
1630		12307	0														
1640		Shlumberger P.O.O.H.															
1815		With well shut in run second gun #2															
1900		Guns on depth of 7978' KB to 7994' KB (16' of perfs.)															

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TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7942' - 8280' KB

PAGE: 2 OF 20

WELL NAME: Cooloon Eth #1

FORMATION : Patchawarra.

DATE: 18.11.92

TEST TYPE: Cooloon Eth #1 perforations.

OPR: I. Kurasial.

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION					
DATE	TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKESIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCFD m³10³	OIL BBLs m³	WATER BBLs m³		
18 of November 1992																
1900			12135	0												
1910			With well shut in				Shoot gun #2									
1915			12218	0												
1915			Shlumberger P.O.O.H.													
1945			Guns at surface													
1950			12218	0			Open well by pass separator on 16/64" choke size.									
1955			9032	0												
2000			7033	0	25	16/64										
2005			5309	0		16/64										
2010			3675	0		16/64										
2015			2537	0		16/64										
2020			1517	0		16/64										
2025			1020	0		16/64										
2030			676	0	25	16/64										
2035			365	0		16/64										
2040			193	0		16/64										
2045			62	0		16/64										
2050			75	0	liquid to surface.											
2055			593	0		16/64										
2100			530	0	26	16/64										
2115			1413	0		16/64	Water to surface									

00031

TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7942' - 8280' KB

PAGE: 3 OF 20

WELL NAME: Cooloom Stn. #1

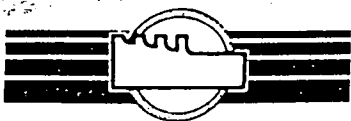
FORMATION : Peldhawarra.

DATE: 18. 11. 92

TEST TYPE : Cooloom Stn. #1 Perforations.

OPR : I. Kurasiat.

TIME		WELLHEAD DATA				Separator		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCFD m ³ /D	OIL BBLG m ³	WATER BBLG m ³		
18. of November 1992.															
2130		1517	0	26.5	16/64										
2200		3041	0	27	16/64	Water to surface.									
19. of November 1992															
0200		4737	0	26	16/64										
0220						Hydrate across the choke - well stop flowing.									
0550		12273	0			Rock the choke									
0555						Open choke to 24/64									
0557						liquid to surface. (H ₂ O)									
0604		2916	0			liquid stop flowing - gas to surface only.									
0605						Cut choke size to 16/64									
0615		2123		27	16/64										
0630		634	0	26	16/64										
0700		1241	0	29	16/64										
0730		4019	0	29	16/64										
0800		2572	0	29	16/64										
0830		3316	0	30	16/64										
0900	0	4433	0	30	16/64	Trim flow through separator.									
0930		4923	0	30	16/64	751	27	8.875	0	0	.185	0	0		
1000	1	4826	0	31	16/64	786	29	8.663	0	0	.365	0	0		
1030		4633	0	32	16/64	793	29	8.476	0	0	.542	0	0		
1100	2	4468	0	32	16/64	738	32	7.968	0	0	.708	0	0		



CUSTOMER : SANTOS LTD.

PERFORATIONS: 7942' - 8280' KB

PAGE: 4 OF 20

WELL NAME: Cooloom Stn. #1

FORMATION : Patchawarra.

DATE: 19. 11. 92

TEST TYPE : Cooloom Stn. #1 perforations.

OPR : I. Kuresiak.

TIME		WELLHEAD DATA				FLOW RATES				CUMULATIVE PRODUCTION					
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCF m³10³	OIL BBLs m³	WATER BBLs m³		
19 of November			1992												
1130		4482	0	32	16/64	745	32	7.572	0	0	866	0	0		
1200	3	4688	0	32	16/64	813	33	8.285	0	0	1.039	0	0		
1230		4937	0	33	16/64	799	34	8.543	0	0	1.217	0	0		
1300	4	4509	0	33	16/64	772	34	8.076	0	0	1.385	0	0		
1330		4254	0	34	16/64	813	35	8.539	0	0	1.563	0	0		
1400	5	4682	0	34	16/64	703	36	7.271	0	0	1.714	0	0		
1430	5.5	4516	0	33	16/64	896	36	12.051	0	0	1.965	0	0		
1440		4537	0	34	16/64	738	35								
1440		Shut well in for Schlumberger to R.I.H. with guns. to perforate at 76-5 Sand.													
1530		On depth of 7660' KB to 7692' KB (32' of perfs.)													
1530		8619	0			Well on build up.									
1535						With well shut in Shoot gun # 3.									
1536		8660	0												
1540		Schlumberger P.O.O.H													
1630		At surface with the gun # 3													
1640		13183	0		0/64	Open well on 18/64" choke with flow by pass separator.									
1700		6888	0		18/64	Shut well in to run second gun # 4									
1808		13252	0		0/64	On depth of 7628' KB to 7651' KB (23' of perfs)									
1810						Open well on 18/64" choke									
1820						Cut choke to 12/64"									
1825		8950	0		12/64	With well flowing Shoot gun # 4									

ET 104

00033

TEST RESULTS



CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7628' - 8280' KB.

PAGE: 5 OF 20

WELL NAME: Cooloon Stn. #1

FORMATION : Patchawarra

DATE: 19.11.92

TEST TYPE : Cooloon Stn #1 perforations.

OPR : I. Kurasiak.

TIME		WELLHEAD DATA				Separator.		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	LGR m ³ /10 ⁶ ms	
19 of November 1992															
1831		8701	0		12/64										
1845		8653	0		12/64										
1905															
2015		14245	0		0/64										
2030		14576	0	29											
2033		10211	0		24/64										
2034															
2035		9549	0	30	16/64										
2039															
2040		8998		30	16/64										
2042															
2045		8653		30	16/64										
2100		7026	241	30	16/64										
2115		6543	620	30	16/64										
2130	0	8026	841	30	16/64										
2135															
2200		7343	1034	31	16/64	2758	26	14.102			2938				
2230	1	7495	1324	31	16/64	2413	22	14.511	1.602	11.214	5961	0.667	4.67	883	
2300		8522	1337	30	16/64	2413	20	18.199			9752				
2330	2	8322		30	16/64	2241	18	16.733	1.602	8.01	13238	1334	800	574	00034

TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7628' - 8280' KB

PAGE: 6 OF 20

WELL NAME: Cooloom Stn #1

FORMATION : Patchawanna.

DATE: 20.11.92

TEST TYPE : Cooloom Stn #1 perforations.

OPR : I. Kurasiek

TIME		WELLHEAD DATA				FLOW RATES						CUMULATIVE PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKESIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	LGR m ³ /10 ⁶ ms	
20 of November 1992															
0130	4	8322	1531	30	16/64	2227	12	16.925	2.403	4.806	2.734	.333	1.200	426	
0220		9011			16/64	Well Hydrate across the choke Rock choke.									
0230	5	8301	1703	30	16/64	2330	12	19.202	4.806	1.602	3534	.533	1.267	334	
0235		Shut well in.			10.5hrs. Cumulative production for last two flow =							5.499	.533	1.267	
0245		9639	1668	28											
0300		11570	1579	27											
0330		13811	1331	24											
0530		16582	310												
0730		16906	21												
0855						Shlumberger 2.I.H. with guns to perforate at 75-8 sand.									
0925						On depth of 7578' KB - 7613' KB (35' of perfs)									
0930		17030	0			Open well by pass separator on 18/64" choke size.									
0944		11721	0			Shoot guns. with well flowing by pass separator. Gun # 5									
1005		9997				Shut well in.									
1025		13342				Shlumberger P.O.O.H.									
1118						Arrive in lubricator with guns.									
1130		16410	0			Open well by pass separator on 24/64"									
1131		14052	16	36	24/64	Cut choke size to 16/64"									
1134						Rock the choke.									
1135		12721		34	16/64	— 11 — 11 —									
1140		11521		34	16/64	Open choke size to 18/64"									

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00035

TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 7 OF 20

WELL NAME: Cooloom Sth #1

FORMATION : Patchawana.

DATE: 20. 11. 92

TEST TYPE : Cooloom Sth #1 perforations.

OPR : I. Kurasia K.

TIME		WELLHEAD DATA				FLOW RATES				CUMULATIVE PRODUCTION					
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³		
20 of November 1992											(0.0	0.0	0.0	cumulative)	
1145		10335	227	33	18/64										
1146						Open choke size to 24/64"									
1150		8046	303	33	24/64										
1153		7026				Increase choke size to 26/64"									
1155		6288	565	33	26/64										
1157		5936				Increase choke size to 27/64"									
1200		5261	889	33	27/64										
1203		4826			27/64	Cut choke size to 23/64"									
1208						Liquid to surface - Open choke to 26/64"									
1212		6619			26/64	Open choke size to 32/64"									
1215		6102			32/64	Open choke size to 36/64"									
1216		5722			36/64	Open choke to 40/64" - Lot of liquid to surface (H ₂ O)									
1220		3861			40/64"	Gas to surface - only. Cut choke size to 30/64"									
1221		4350			30/64"	" " " " Cut choke size to 24/64"									
1225		4605			24/64"										
1230		6385			24/64"	Liquid to surface Open choke size to 32/64"									
1235		5633	2661	36	32/64"	" " " " Open choke size to 34/64"									
1245		4564		36	34/64"	Cut choke size to 30/64" and trim flow through separator.									
1300	0	4998	3061	35	30/64	2103	27	43.433			.452				
1330	5	5061	3385	37	30/64	2109	27	45.076	9.612	12.816	1.391	.200	.267	497	
1400	1	5026	3654	38	30/64	2185	28.5	45.765	6.408	9.612	2.344	.335	.467	350	
11.5 hrs cumulative productions for all flow periods through separator											=	7.843	.866	1.734	

00036

TEST RESULTS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 9 OF 20

WELL NAME: Cooloom Sth. #1

FORMATION : Patchawarra.

DATE: 20.11.92

TEST TYPE: Cooloom Sth #1 perforations.

OPR: I. Kurasiat.

TIME		WELLHEAD DATA				Separator.		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	LGR m ³ /10 ⁶ m ³	
20 of November 1992															
1825		12438			12/64										
1843		11839			12/64	Shut well in									
1900		14928				Pull out of hole with guns.									
1930		16238				Guns at surface.									
2000		16672	1565	28		Open well by pass separator on 30/64" choke size.									
2005		9481	1696	32	30/64										
2010		7626		34	30/64	Increase choke size to 36/64"									
2015		6247	2806	34	36/64										
2030		7322	4530	34	36/64										
2100	0	6454	5619	35	36/64	Trim flow through separator.					0.0	0.0	0.0	(cumulatives)	
2200	1	6439	7012	37	36/64	2565	23	81.04	9.612	12.816	3.378	.400	.534	276	
2215		Depressure casing to 2379 kPa.													
2300	2	6488	3123	38	36/64	2558	24	79.876	14.418	4.806	6.706	1.000	.734	241	
21 of November 1992															
0100	4	6398	4330	38	36/64	2551	26	80.258	10.413	7.209	13.394	1.867	1.334	219	
0500	8	6343	5702	40	36/64	2551	26	80.258	11.214	5.607	26.770	3.736	2.268	209	
0700	10	6315	6219	40	36/64	2551	27	80.068	10.413	4.806	33.442	4.603	2.668	190	
0900	12	6288	6626	42	36/64	2551	29	80.560	8.811	6.408	40.155	5.337	3.202	188	
0930	12.5	6267	6667	42	36/64	2599	30	80.753	9.612	0	41.837	5.537	3.202	109	
0930		Shut well in for Schlumberger to perforate 72-2 Sand.													
24 hrs cumulative production for all flows periods, through separator =											49.68	6.404	4.936		

TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 8 OF 20

WELL NAME: Cooloom Sh #1

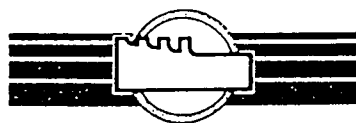
FORMATION : Patchawarra.

DATE: 20. 11. 92

TEST TYPE : Cooloom Sh #1 perforations.

OPR : I. Kurasiah.

TIME		WELLHEAD DATA				FLOW RATES					CUMULATIVE PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCFD m ³ /10 ³	OIL BBLG m ³	WATER BBLG m ³	
20 of November.														
1400		5026	3654	38	30/64	3 Shut well in for Schlumberger to perforate next sand.								
1430		11928				Run in hole to perforate at 81-0 sand.								
1520		15176				On bottom at 8097' KB to 8136' KB (39' of perfs.)								
						Open well on 16/64" choke size.								
1525		14134			16/64	Cut choke size to 12/64"								
1536		12466			12/64	With well flowing by pass separator Shoot guns # 6								
1537		12528			12/64									
1540		12618			12/64									
1545		12618			12/64									
1550		12548			12/64									
1555		12445			12/64	Shut well in.								
1605		14507				Schlumber start P.O.O.H.								
1615		15706												
1640		16685				Guns at surface.								
1650														
1700		16906												
1715		16927				Run in hole to perforate at 78-0 sand.								
1800		17168				On bottom at 7834' KB - 7841' KB (7' of perfs.)								
						Open well on 16/64" choke size								
1820		12501			16/64	Cut choke size to 12/64"								
1823						With well flowing by pass separator Shoot guns # 7								



TEST RESULTS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 10 OF 20

WELL NAME: Cooloom Stn #1

FORMATION : Patchawarra

DATE: 21. 11. 92

TEST TYPE : Cooloom Stn #1 perforations.

OPR : I. Kurasiak.

TIME		WELLHEAD DATA				FLOW RATES					CUMULATIVE PRODUCTION							
DATE	TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /D	OIL BBLS m ³	WATER BBLS m ³				
21 of November			1992															
0935			9653				Schlumberger Run in Hole with perforating guns.											
1014			15499				On bottom at 7716'KB to 7750'KB (34' of perfs)											
1015							Open well on "16/64" choke size.											
1021			13824			16/64	Cut choke size to "12/64"											
1052			13893			12/64	With well flowing shoot guns #8.											
1052			13962			12/64												
1112			14341			12/64	Shut well in.											
1132			16134															
1155							Pull out of hole.											
1200			16355															
1230			16479															
1250							Guns at surface.											
							Wait on Schlumberger to rig down equipment.											
1515							Start rigging up wireline unit.											
1540							Run in hole with 1.75" b. box.											
1635							Tag PBTD at 8658'KB.											
1638							Pull out of hole.											
1705							Arrive in lubricator.											
1710							Rig down wireline unit											
1730							Open well by pass separator on "10/64" for cleanup flow.											
1730			17148	0	N/A	0												

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TEST RESULTS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: " OF 20

WELL NAME: Cooloom Sh. #1

FORMATION : Paddawarra

DATE: 21.11.92

TEST TYPE : Cooloom Sh. #1 clean up flow after perforating and two rate flow and build up.

OPR : I. Kirusial

TIME		WELLHEAD DATA				Separator.		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCFD m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	2GR	
21 of November 1992															
1733					40/64	Increase choke size to 46/64"									
1735		6674	0	36	46/64	Cut choke size to 44/64"									
1737					46/64	Cut choke size to 42/64"									
1740		4868		37	44/64	Cut choke size to 40/64"									
1745		4613		37	40/64										
1752		4771		38	40/64	Cut choke size to 38/64" - Liquid to surface.									
1758		4813			38/64										
1800		4930	1889	38	38/64										
1830		4764	3509	40	38/64										
1900		4675	4530	40	38/64										
1930		4626	5261	40	38/64										
2000		4523	5778	41	38/64	Bleed off casing pressure to 1855 kPa									
2100		4482	2744	43	38/64										
2115		4489		43	38/64	Cut choke size to 37/64"									
2200	0	4682	3420	45	37/64	Trim flow through separator.									
22 November 1992											(49.680	6.404	6.408	cumulative)	
0200	4	4557	4957	47	37/64	2034	42	120.684	13.21	6.808	69.794	8.606	6.070	166	
0600	8	4495	5709	49	37/64	2055	43	119.323	13.61	5.607	89.681	10.875	7.004	161	
0600		Cut choke size to 36/64"													
0800	10	4729	6047	51	36/64	2055	43	117.551	15.22	4.005	99.477	12.143	7.337	163	
1000	12	4737	6323	55	36/64	2096	45	117.386	9.612	5.607	109.259	12.944	7.804	129	

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TEST RESULTS

CUSTOMER : Santos Ltd

PERFORATIONS: 7578' - 8280'KB

PAGE: 12 OF 20

WELL NAME: Cooloom Sth. #1

FORMATION : Patchawarra.

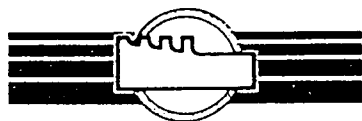
DATE: 22.11.92

TEST TYPE : Cooloom Sth #1 clean up flow after perforating - two rate flow and build up.

OPR : I. Kurasiab.

TIME		WELLHEAD DATA				Separator		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCFD m³10³	OIL BBLs m³	WATER BBLs m³	262 m³/10⁶m³	
22 of November 1992															
12 00	14	4729	6523	56	36/64	2124	46	117.030	12.816	5.607	119.011	14.012	8.271	157	
13 30	15.5	4723	6647	54	36/64	2117	46	116.835	10.68	4.272	126.313	14.679	8.538	128	
13 30		Shut well in to rig in swab valve and rig in wireline unit.													
13 45		12804		Open well by pass separator on 36/64" choke size.											
14 00		4888	6329	54	36/64										
14 30	15.5	4702	6592	56	36/64	Trim flow through separator.									
15 30	16.5	4675	6743	58	36/64	2109	47	115.495	14.418	8.01	131.125	15.279	8.872	194	
16 31		4661	6778		36/64	Pressure up lubricator with amercade gauges.									
17 30	18.5	4654	6874	55	36/64	2096	47	116.473	12.015	5.607	140.831	16.280	9.339	151	
17 31		4654	6874		36/64	Depressure lubricator.									
18 31		4633	6936	55	36/64	Pressure up lubricator and run in hole with gauges.									
19 00		4626	6943	54	36/64	On hang depth at 7929'KB.									
19 01						Bleed off casing annulus pressure to 2668 kPa.									
19 30	20.5	4689	2937	54	36/64	2096	47	115.108	12.015	5.607	150.423	17.281	9806	153	
21 30	22.5	4695	3130	54	36/64	2061	48	113.913	11.214	4.806	159.916	18.215	10.206	141	
23 of November 1992															
01 30	26.5	4689	3330	53	36/64	2061	48	113.913	10.012	5.206	178.901	19.883	11.073	133	
05 30	30.5	4661	3482	53	36/64	2061	48	113.004	9.612	4.806	197.735	21.485	11.874	127	
07 30	32.5	4667	3578	53	36/64	2082	48	113.582	12.816	4.005	207.200	22.553	12.207	148	
09 30	34.5	4695	3668	54	36/64	2096	49	112.821	11.214	4.806	216.602	23.487	12.607	142	
11 30	36.5	4681	3737	56	36/64	2116	50	113.170	9.612	4.806	226.033	24.288	13.008	127	

TEST RESULTS



CUSTOMER : Santos Ltd

PERFORATIONS: 7578' - 8280' KB

PAGE: 13 OF 20

WELL NAME: Cooloom Stn. #1

FORMATION : Patchawarra

DATE: 23.11.92

TEST TYPE : Cooloom Stn #1 cleanup flow after perforating. - two rate flow and build up.

OPR : I. Kurasia

TIME		WELLHEAD DATA				Separator.		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	LGR m ³ /10 ⁶ m ³	
23 of November 1992															
1330	38.5	4675	3813	59	3/64	2137	51	113.515	10.413	5.607	235.492	25.155	13.475	141	
1530	40.5	4633	3847	60	3/64	2082	51	112.010	11.214	4.005	244.826	26.089	13.808	136	
1530		Gradually cut choke size to 15/64"				to flow well on second rate of 2.00. MMSCFD									
1630	41.5	10832	3592	57	15/64										
1730	42.5	11025	3034	57	15/64	2075	28	60.229	8.01	.801	249.845	26.756	13.874	146	
1930	44.5	11170	2620	53	15/64	2048	24	61.011	8.811	.801	254.929	27.440	13.940	157	
2130	46.5	11328	2448	52	15/64	2055	23	61.589	9.612	.801	260.061	28.291	14.741	169	
24 of November 1992															
0130	50.5	11590	2399	50	15/64	2068	21	63.083	9.612	1.201	270.575	29.893	14.941	171	
0530	54.5	11983	2275	50	15/64	2027	18	59.475	9.211	2.403	280.488	31.428	15.341	195	
0730	56.5	12052	2158	46	15/64	2034	18	58.529	8.01	1.602	285.365	32.095	15.474	164	
0800		12053			15/64	Rock the choke.									
0830	57.5	11839	2192	47	15/64	2068	19	62.373	6.408	1.602	287.964	32.362	15.541	128	
0900		11824	2213	47	15/64	Start collecting first set of samples.									
0925						First set of samples completed.									
0930	58.5	12045	2227	47	15/64	2082	20	59.691	6.408	3.204	290.451	32.629	15.674	161	Rock the choke
1000		11845	2241	47	15/64	Start collecting second set of samples									
1025						Second set of samples completed.									
1030	59.5	11887	2261	46	15/64	2075	20	62.000	3.204	3.204	293.034	32.762	15.807	103	
1130	60.5	12066	2261	48	15/64	2075	19	60.773	6.408	1.602	295.566	33.029	15.873	132	Rock the choke.
1230	61.5	11825	2323	48	15/64	2082	19	62.928			298.188				Rock the choke.

TEST RESULTS

CUSTOMER : Santos Ltd.

PERFORATIONS: 7578'-8280'KB

PAGE: 14 OF 70

WELL NAME: Cooloom Stn #1

FORMATION :

DATE: 24.11.92

TEST TYPE : Cooldown 5thth 1 cleanup flow after perforating plus two rate flow test and build up.

OPR : I. Kurasia

[illegible]

EXPERTEST PTY. LTD.

TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578'-8280'KB.

PAGE: 15 OF 20

WELL NAME: Cooloom Sh #1

FORMATION : Patchawarra.

DATE: 24.11.92

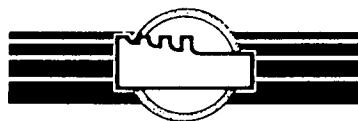
TEST TYPE : Build up.

OPR : I. Kurasiaak

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ 10 ³	OIL BBLS m ³	WATER BBLS m ³		
24 of November 1992															
1730	0	11880	2510												
1735		N/A													
1740		14514													
1745		14948	2082												
1800		15369	1441												
1815		15576	931												
1830	1	15693	490												
1845		15720	0												
1900		15790	0												
1915		15824	0												
1930	2.	15845	0												
1945		15872	0												
2000		15893	0												
2015		15934	0												
2030	3	15955	0												
2045		15962	0												
2100		15996	0												
2115		16017	0												
2130	4	16017	0												
25 of November 1992															
0130	8	16230	0												

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EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 16 OF 20

WELL NAME: Cooloom Stn #1

FORMATION : Patchawarra

DATE: 25.11.92

TEST TYPE : Build up.

OPR : I. Kurasiak

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION						
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ 10 ³	OIL BBLS m ³	WATER BBLS m ³				
25. of November		1992															
0530	12	16417	0														
0930	16	16624	0														
1330	20	16713	Ø														
1730	24	16796	Ø			READING FROM CHART — CREW IN MOOMBA.											
2130	28	16865	Ø														
26 NOVEMBER		1992															
0130	32	16948	Ø														
0530	36	16982	Ø														
0930	40	17038	Ø														
1330	44	17079	Ø		}	READINGS FROM CHART CREW AT TOOLACHEE.											
1730	48	17120	Ø														
2130	52	17155	Ø														
27 NOVEMBER		1992															
0130	56	17182	Ø														
0530	60	17203	Ø														
0930	64	17231	Ø														
1330	68	17258	Ø		}	READINGS FROM CHART CREW AT TOOLACHEE.											
1730	72	17286	Ø														
2130	76	17313	Ø														
28 NOVEMBER		1992															
0130	80	17341	Ø														

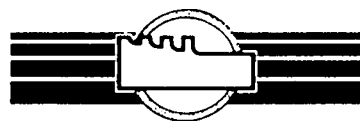
READINGS FROM CHART - CREW IN MOOMBA.

READINGS FROM CHART CREW AT TOOLACHEE.

READINGS FROM CHART CREW AT TOOLACHEE.

00045

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578'-8280'KB

PAGE: 17 OF 20

WELL NAME: COOLOON STN #1

FORMATION : PATCHAWARRA.

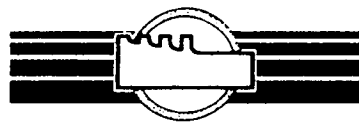
DATE: 28.11.92

TEST TYPE: BUILD - UP

OPR: A. GRINDLAY

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ 10 ³	OIL BBLS m ³	WATER BBLS m ³		
28 -	11 -	92													
0530	84	17369	Ø												
0930	88	17389	Ø												
1330	92	17403	Ø												
1730	96	17417	Ø												
2130	100	17431	Ø												
29 -	11 -	92													
0130	104	17444	Ø												
0530	108	17458	Ø												
0930	112	17465	Ø												
1330	116	17479	Ø												
1730	120	17486	Ø												
2130	124	17500	Ø												
30 -	11 -	92													
0130	128	17506	Ø												
0530	132	17506	Ø												
0645		17506	Ø												
						P.O.O.H	END	BUILD - UP	SEE	GALVAN DATA SHEET					
1100						RIG	IN	SEPARATOR	AND	FLOWLINES					
1340		17513	Ø			PRESSURE	TEST	LINE	TO	SEPARATOR	INLET.				
1350		17513	Ø			OPEN	WELL	ON	25/64ths.						
1400		13032	Ø			RATE	ACROSS	CHOKE	7.0 MMSCFD.	CUT	CHOKE	TO	16/64ths.		

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CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 18 OF 20

WELL NAME: COOREEN STN #1

FORMATION : PATHAWARRA

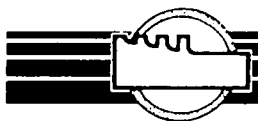
DATE: 30.11.92

TEST TYPE: CONDITIONING FLOW

OPR: A. GRINDLAY

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION			RATIO	
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCFD m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	TOTAL LIQUID m ³ /d	L.Q.R. m ³ /m ³ /10 ⁶
30 - 11 -	92														
1410		13997	Ø		1 5/64		PRESSURE INCREASING, HYDRATES FORMING, RATE 2.5 MMSCFD.								
1415		14238	Ø				S.W.I SEND FOR HEATER FROM PLOOMBA								
1700							HEATER ON LOCATION. SECURE OVERNIGHT								
2230		17713	Ø												
1 - 12 -	92														
0100		17713	Ø												
0500		17713	Ø												
0700							RIG IN HEATER								
0850							WATER FOR HEATER BATH ON LOCATION								
0925							PRESSURE TEST FAIL. SEE SEQUENCE OF EVENTS								
1305		17817	Ø				PRESSURE TEST GOOD								
1330							PRESSURE UP VESSEL. START HEATER.								
1400	Ø	17803	Ø				OPEN WELL ON 1 5/64" CHOKE. START TEST.								
1415							DIVERT FLOW THROUGH VESSEL.								
1500	1	14348	Ø	34	1 5/64	1965	50	69.10	Ø	Ø	311.417	35231	16.406		
1600	2	14652	Ø	37	"	1910	50	66.19	Ø	Ø					
1700	3	14486	Ø	38	"	1896	50	64.48	Ø	Ø					
1900	5	14466	28	38	"	1889	49	62.47	3.2	1.6		35.498	16.539	4.8	77
2100	7	14390	48	38	"	1889	51	60.66	6.4	Ø		36.032	16.539	6.4	106
2 - 12 -	92														
0100	11	14328	103	39	"	1917	51	57.85	2.4	4.0		36.432	17.206	6.4	111

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 19 OF 20

WELL NAME: COOLON STN #1

FORMATION : PATCHAWARRA

DATE: 2. 12. 92

TEST TYPE: CONDITIONING FLOW

OPR: A. GRINDLAY

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION			RATIOS	
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PST/KPa)	ANNULUS PRESSURE (PST/KPa)	WELLHEAD TEMP (PPT/°C)	CHOKE SIZE	PRESSURE (PST/KPa)	TEMP (PPT/°C)	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ 10 ³	OIL BBLs m ³	WATER BBLs m ³	TOTAL LIP. RATE m ³ /D	L.G.R m ³ /m ³ 10 ⁶
2. 12. 92.															
0500	15	14300	152	39	1 5/64	1917	50	56.84	4.4	0.8	350.487	37.166	17.339	5.2	91
0700	17	14300	179	40	"	1903	50	55.49	5.6	1.6		37.633	17.472	7.2	130
0900	19	14259	207	41	"	1903	51	55.37	3.2	1.6		37.900	17.605	4.8	87
1100	21	14259	241	43	"	1917	55	55.84	4.8	1.6		38.300	17.738	6.4	115
1300	23	14259	262	44	"	1917	56	54.82	2.4	2.4		38.500	17.938	4.8	88
1500	25	14128	290	43	"	1917	55	55.84	4.8	1.6		38.900	18.071	6.4	115
1505						ROCK CHOKE DISLODGE DEBRIS									
1700	27	13542	462	45	"	1931	54	65.68	4.8	3.2		39.300	18.338	8.0	122
1900	29	13500	627	45	"	1931	55	65.28	2.4	3.6		39.500	18.671	6.0	92
2100	31	13452	738	45	"	1931	55	63.97	6.4	1.6		40.034	18.804	8.0	125
3. 12. 92															
0100	35	13376	952	45	"	1958	55	63.07	6.4	1.6		41.102	19.071	8.0	127
0500	39	13294	1165	45	"	1944	55	63.12	5.2	2.0	410.335	41.970	19.405	7.2	114
0700	41	13280	1262	45	"	1937	55	62.74	4.0	2.4		42.304	19.605	6.4	102
0900	43	13266	1365	46	"	1924	55	63.59	6.4	1.6		42.838	19.738	8.0	126
1100	45	13287	1462	47	"	1875	55	63.05	2.4	2.4		43.038	19.938	4.8	76
1300	47	13294	1551	47	"	1875	55	62.52	5.6	2.4		43.505	20.138	8.0	128
1500	49	13307	1620	48	"	1882	56	62.25	5.6	0.8		43.972	20.205	6.4	103
1600	50	13294	1648	48	"	1882	56	62.25	6.4	3.2		44.239	20.338	9.6	154
1600		START	FIRST	SET	OF	SAMPLES									
1625		FINISH	FIRST	SET	OF	SAMPLES.									



TEST RESULTS

CUSTOMER : *SANTOS LTD* PERFORATIONS: *7578' — 8280' KB* PAGE: *20 OF 20*
 WELL NAME: *COOLON Stn #1* FORMATION : *PATCHAWARRA* DATE: *3.12.92*
 TEST TYPE : *CONDITIONING FLOW* OPR : *A. GRINDLAY*

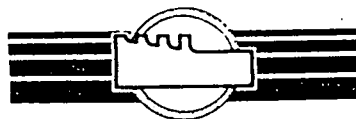
TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION			RATIOS	
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	TOTAL L/P RATE m ³ /s	L.G.R. m ³ / m ³ /10 ⁶
<i>3.12.92</i>															
<i>1700</i>	<i>51</i>	<i>13294</i>	<i>1675</i>	<i>47</i>	<i>1 5/64</i>	<i>1882</i>	<i>55</i>	<i>61.84</i>	<i>4.8</i>	<i>1.6</i>		<i>44.439</i>	<i>20.405</i>	<i>6.4</i>	<i>103</i>
<i>1700</i>		<i>START SECOND SET OF SAMPLES.</i>													
<i>1725</i>		<i>FINISH SECOND SAMPLE SET.</i>													
<i>1800</i>	<i>52</i>	<i>13280</i>	<i>1703</i>	<i>48</i>	<i>1 5/64</i>	<i>1882</i>	<i>55</i>	<i>61.84</i>	<i>4.8</i>	<i>1.6</i>		<i>44.639</i>	<i>20.472</i>	<i>6.4</i>	<i>103</i>
<i>1800</i>		<i>START THIRD SET OF SAMPLES.</i>													
<i>1825</i>		<i>FINISH SAMPLE SET # 3.</i>													
<i>1900</i>	<i>53</i>	<i>13266</i>	<i>1724</i>	<i>47</i>	<i>1 5/64</i>	<i>1882</i>	<i>55</i>	<i>61.84</i>	<i>6.4</i>	<i>1.6</i>		<i>44.906</i>	<i>20.539</i>	<i>8.0</i>	<i>129</i>
<i>2100</i>	<i>55</i>	<i>13225</i>	<i>1786</i>	<i>46</i>	<i>"</i>	<i>1896</i>	<i>55</i>	<i>61.52</i>	<i>3.2</i>	<i>2.4</i>		<i>45.173</i>	<i>20.739</i>	<i>5.6</i>	<i>91</i>
<i>4.12.92</i>															
<i>0100</i>	<i>59</i>	<i>13190</i>	<i>1917</i>	<i>46</i>	<i>"</i>	<i>1903</i>	<i>55</i>	<i>61.64</i>	<i>4.8</i>	<i>1.6</i>		<i>45.974</i>	<i>21.006</i>	<i>6.4</i>	<i>104</i>
<i>0500</i>	<i>63</i>	<i>13245</i>	<i>2000</i>	<i>46</i>	<i>"</i>	<i>1965</i>	<i>55</i>	<i>62.08</i>	<i>4.8</i>	<i>2.0</i>	<i>472.598</i>	<i>46.775</i>	<i>21.339</i>	<i>6.8</i>	<i>110</i>
<i>0700</i>	<i>65</i>	<i>13259</i>	<i>2020</i>	<i>46</i>	<i>"</i>	<i>1951</i>	<i>55</i>	<i>60.74</i>	<i>4.0</i>	<i>2.4</i>		<i>47.109</i>	<i>21.539</i>	<i>6.4</i>	<i>105</i>
<i>0900</i>	<i>67</i>	<i>13266</i>	<i>2055</i>	<i>47</i>	<i>"</i>	<i>1889</i>	<i>55</i>	<i>60.32</i>	<i>5.6</i>	<i>1.6</i>		<i>47.576</i>	<i>21.672</i>	<i>7.2</i>	<i>119</i>
<i>1100</i>	<i>69</i>	<i>13273</i>	<i>2089</i>	<i>47</i>	<i>"</i>	<i>1862</i>	<i>55</i>	<i>60.70</i>	<i>5.6</i>	<i>0.8</i>		<i>48.043</i>	<i>21.739</i>	<i>6.4</i>	<i>105</i>
<i>1300</i>	<i>71</i>	<i>13245</i>	<i>2131</i>	<i>47</i>	<i>"</i>	<i>1875</i>	<i>55</i>	<i>60.92</i>	<i>4.0</i>	<i>1.6</i>	<i>492.821</i>	<i>48.377</i>	<i>21.872</i>	<i>5.6</i>	<i>92</i>
						<i>CUMULATIVES FOR 71HR CONDITIONING FLOW</i>									
											<i>=> 181.404</i>	<i>13.146</i>	<i>5.466</i>		
						<i>CUMULATIVES FOR COMPLETE TEST</i>									
											<i>=> 492.821</i>	<i>48.377</i>	<i>21.872</i>		

CUSTOMER :	Santos Ltd.	PERFORATIONS:	7942 - 8280' KB	PAGE:	1	OF	9
WELL NAME:	Cooloom Sth.#1	FORMATION :	Palchawarra.	DATE:	18. 11. 92		
TEST TYPE :	Cooloom Sth.#1 perforations.			OPR :	I. Kurasiak.		

ORIFICE METER TYPE:	Daniel.	STATIC PRESSURE RANGE :	500	PSIG	GAS SPECIFIC GRAVITY (SG) =	.800
METER RUN SIZE :	4.026"	DIFFERENTIAL PRESS. RANGE:	200	IN WC	FG $\sqrt{(1/SG)}$	= 1.11803
SEPARATOR NO :	38	STANDARD CONDITIONS :	14.73 PSI @ 60°F		C ₂ (FU x FG)	= 26.832813

[illegible]

EXPERTEST PTY. LTD.



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578' - 8280' KB

PAGE: 3 OF 9

WELL NAME: Cooloom Sth #1

FORMATION : Patchawarra.

DATE: 20.11.92

TEST TYPE : Cooloom Sth #1 perforations

OPR : I. Kurasiak

ORIFICE METER TYPE:

Daniel.

STATIC PRESSURE RANGE : 500

PSIG

GAS SPECIFIC GRAVITY (SG) = .800

METER RUN SIZE :

2.067"

DIFFERENTIAL PRESS. RANGE: 200

IN WC

FG $\sqrt{(I/SG)}$ = 1.11803

SEPARATOR NO :

38

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 26.832813

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	√(P _F × H _W)	C ₁ = F _B × F _{TF} × F _{PV} × Y ₂				C ₁	C (C = C ₁ × C ₂)	GAS FLOW RATE Q = √(P _F × H _W) × C		
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)	
20 of November 1992								Third flow.								
1245		30/64				1.250"		Trim flow through separator.								
1300	0	30/64	319.73	82	80.6	1.250	161.9193	345.13	.9808	1.0468	1.0014	354.8216	9520.8636	1.542	43.435	
1330	.5	30/64	320.73	88	80.6	1.250	168.0007	345.13	.9808	1.0470	1.0015	354.9106	9523.2514	1.600	45.076	
1400	1	30/64	331.73	88	83.6	1.250	170.857	345.13	.9783	1.0479	1.0014	354.3142	9507.2470	1.624	45.765	
1400		Shut well in.														
								Fourth flow.								
2100	0	36/64				1.500		Trim flow through separator.								
2200	1	36/64	386.73	92	73.4	1.500	188.6244	542.27	.9874	1.0609	1.0009	568.5499	15255.7951	2.878	81.074	
2300	2	36/64	385.73	90	75.2	1.500	186.3215	542.27	.9857	1.0599	1.0009	567.0722	15216.1431	2.835	79.876	
21 of November 1992																
0100	4	36/64	384.73	92	78.8	1.500	188.1360	542.27	.9824	1.0582	1.0010	564.2922	15141.5480	2.849	80.258	
0500	8	36/64	384.73	92	78.8	1.500	188.1360	542.27	.9824	1.0582	1.0010	564.2922	15141.5480	2.849	80.258	
0700	10	36/64	384.73	92	80.6	1.500	188.1360	542.27	.9808	1.0575	1.0010	562.9625	15105.8687	2.842	80.068	
0900	12	36/64	384.73	94	84.2	1.500	190.1700	542.27	.9775	1.0561	1.0010	560.3531	15035.8577	2.859	80.560	
0930	12.5	36/64	391.73	93	86	1.500	190.8688	542.27	.9759	1.0565	1.0009	559.6432	15016.8034	2.866	80.753	
0930		Shut well in.														
								See next page.								

GAS FLOW CALCULATIONS		
CUSTOMER :	Santos, Ltd.	PERFORATIONS: 7628' - 8280' KB
WELL NAME:	Cooloom Sh. #1	FORMATION : Patchawarra
TEST TYPE :	Cooloom Sh. #1 perforations.	DATE: 19. 11. 92
		OPR : I. Kurasjak

ORIFICE METER TYPE: <u>Daniel.</u>	STATIC PRESSURE RANGE: <u>500</u> PSIG	GAS SPECIFIC GRAVITY (SG) = <u>.800</u>
METER RUN SIZE: <u>4.026" 2.067"</u>	DIFFERENTIAL PRESS. RANGE: <u>200</u> IN WC	FG $\sqrt{(1/SG)}$ = <u>1.11803</u>
SEPARATOR NO: <u>38</u>	STANDARD CONDITIONS: <u>14.73 PSI @ 60°F</u>	C ₂ (FU x FG) = <u>26.832813</u>

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	√(P _F × H _W)	C ₁ = F _B × F _{TF} × F _{PV} × Y ₂				C ₁	C (C = C ₁ × C ₂)	GAS FLOW RATE Q = √(P _F × H _W) × C		
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)	
19 of November. 1992							Second flow.									
2130	0	16/64				.750	Meter Run Size 4.026"		Trim flow through separator.							
2200	.5	16/64	414.73	60	78.8	.750	157.7460	113.08	.9824	1.0634	1.0010	118.2490	3172.9526	.501	14.102	
2230	1	16/64	364.73	72	71.6	.750	162.0511	113.08	.9890	1.0577	1.0013	118.4491	3178.3216	.515	14.511	
2300	1.5	16/64	364.73	112	68.	.750	202.1132	113.08	.9924	1.0592	1.0020	119.1082	3196.0088	.646	18.199	
		Trim flow from 4.026" Meter Run to						2.068" Meter Run.								
2330	2	16/64	339.73	98	64.4	.750	182.4652	115.14	.9958	1.0560	1.0019	121.346	3254.9438	.594	16.733	
20 of November 1992																
0130	4	16/64	337.73	98	53.6	.750	181.9273	115.14	1.0062	1.0602	1.0019	123.0592	3302.0243	.601	16.925	
0230	5	16/64	352.73	120	53.6	.750	205.7367	115.14	1.0062	1.0633	1.0022	123.4583	3312.7325	.682	19.202	
0230		Shut well in.														
See next page.																

EXPERTEST PTY. LTD.

GAS FLOW CALCULATIONS

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7578'-8280'KB

PAGE: 4 OF 9

WELL NAME: Cooloom Stn. #1

FORMATION : Palchuwarra.

DATE: 21. 11. 92

TEST TYPE : Cooloom Stn #1 cleanup flow after perforating and two rate flow and build up.

OPR : I. Kurasiah

ORIFICE METER TYPE: Daniel

STATIC PRESSURE RANGE : 500

PSIG

GAS SPECIFIC GRAVITY (SG) = 800

METER RUN SIZE : 4.026"

DIFFERENTIAL PRESS. RANGE: 200

IN WC

FG $\sqrt{(1/SG)}$ = 1.11803

SEPARATOR NO : 38

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 26.832813

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE	STATIC PRESS P _F (PSIA)	DIFF PRESS H _w (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_F \times H_w)}$	$C_1 = F_B \times F_{TF} \times F_{PV} \times Y_2$				C ₁	C (C = C ₁ x C ₂)	GAS FLOW RATE $Q = \sqrt{(P_F \times H_w)} \times C$	
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
21 of November 1992								Clean up and first rate of test flow.							
2200	0	37/64				2.25"									
22 of November 1992															
0200	4	37/64	309.73	70	107.6	2.25"	147.2450	1089.91	.9572	1.0379	1.0013	1084.1661	29091.2302	4.284	120.684
0600	8	37/64	312.73	68	109.4	2.25"	145.8274	1089.91	.9556	1.0379	1.0012	1082.3589	29042.7379	4.235	119.323
0600		Cut choke size to 36/64"													
0800	10	36/64	312.73	66	109.4	2.25"	143.6669	1089.91	.9556	1.0379	1.0012	1082.3192	29041.6728	4.172	117.551
1000	12	36/64	318.73	65	113.0	2.25"	143.9356	1089.91	.9526	1.0378	1.0012	1078.7832	28946.7896	4.166	117.386
1200	14	36/64	322.73	64	114.8	2.25"	143.7175	1089.91	.9511	1.0379	1.0011	1077.1405	28902.7114	4.154	117.030
1330	15.5	36/64	321.73	64	114.8	2.25"	143.4947	1089.91	.9511	1.0377	1.0011	1077.0141	28899.3216	4.147	116.835
1330		Shut well in to nip in swab valve.													
1430	15.5	Term flow through the separator.													
1530	16.5	36/64	320.73	63	116.6	2.25"	142.1478	1089.91	.9497	1.0372	1.0011	1074.7527	28838.6407	4.099	115.495
1730	18.5	36/64	318.73	64.5	116.6	2.25"	143.3809	1089.91	.9497	1.0370	1.0012	1074.5329	28832.7441	4.134	116.473
1930	20.5	36/64	318.73	63	116.6	2.25"	141.7039	1089.91	.9497	1.0370	1.0011	1074.5039	28831.9661	4.086	115.108
2130	22.5	36/64	313.73	63	118.4	2.25"	140.5880	1089.91	.9482	1.0359	1.0012	1071.7956	28759.2937	4.043	113.913
23 of November 1992															
0130	26.5	36/64	313.73	63	118.4	2.25"	140.5880	1089.91	.9482	1.0359	1.0012	1071.7956	28759.2937	4.043	113.913
0530	30.5	36/64	313.73	62	118.4	2.25"	139.4678	1089.91	.9482	1.0359	1.0011	1071.7760	28758.7681	4.011	113.004
0730	32.5	36/64	316.73	62	118.4	2.25"	140.1330	1089.91	.9482	1.0363	1.0011	1072.1430	28768.6147	4.031	113.582

GAS FLOW CALCULATIONS

CUSTOMER : *SANTOS Ltd*PERFORATIONS: *7578'-8280'KB.*PAGE: *5* OF *9*WELL NAME: *Cooloom Sth.#1*FORMATION : *Datchawarra.*DATE: *23. 11. 92*TEST TYPE : *Cooloom Sth.#1 clean up flow after perforating and two rate flow and build up.*OPR : *I. Kurasiak*

ORIFICE METER TYPE: <i>Doniel.</i>	STATIC PRESSURE RANGE : <i>500</i> PSIG	GAS SPECIFIC GRAVITY (SG) = <i>.800</i>
METER RUN SIZE : <i>4.026"</i>	DIFFERENTIAL PRESS. RANGE: <i>200</i> IN WC	FG $\sqrt{(1/SG)}$ = <i>1.11803</i>
SEPARATOR NO : <i>38</i>	STANDARD CONDITIONS : <i>14.73 PSI @ 60°F</i>	C ₂ (FU x FG) = <i>26.832813</i>

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	√(P _F × H _W)	C ₁ = F _B × F _{TF} × F _{PV} × Y ₂				C ₁	C (C = C ₁ × C ₂)	GAS FLOW RATE Q = √(P _F × H _W) × C	
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
23 of November 1992							First and	second rate of test flow.							
0930	34.5	3 1/4	318.73	61	120.2	2.25"	139.4365	1089.91	.9467	1.0361	1.0011	1070.2874	28718.8258	4.004	112.821
1130	36.5	3 1/4	321.73	61	122.	2.25"	140.0911	1089.91	.9452	1.0361	1.0011	1068.5791	28672.9864	4.017	113.170
1330	38.5	3 1/4	324.73	61	123.8	2.25"	140.7428	1089.91	.9438	1.0361	1.0011	1066.8761	28627.2904	4.029	113.515
1530	40.5	3 1/4	316.73	61	123.8	2.25"	138.9983	1089.91	.9438	1.0351	1.0011	1065.9354	28602.0492	3.976 ↑	112.010
1530		Gradually cut choke size to 1 1/4"						Second rate of flow period.				Average.	4.043	113.907	
1730	42.5	1 1/4	315.73	90	82.4	1.50"	168.5696	460.79	.9791	1.0456	1.0019	472.6188	12681.6941	2.138 ↓	60.229
1930	44.5	1 1/4	311.73	92	75.2	1.50"	169.3492	460.79	.9857	1.0472	1.0019	476.5504	12787.1885	2.166	61.011
2130	46.5	1 1/4	312.73	93	73.4	1.50"	170.5400	460.79	.9874	1.0480	1.0019	477.7049	12818.1680	2.186	61.589
24 of November 1992															
0130	50.5	1 1/4	314.73	96	69.8	1.50"	173.8220	460.79	.9907	1.0495	1.0020	480.0607	12881.3810	2.239	63.083
0530	54.5	1 1/4	308.73	86	64.4	1.50"	162.9441	460.79	.9958	1.0503	1.0018	482.8152	12955.2912	2.111	59.475
0730	56.5	1 1/4	309.73	83	64.4	1.50"	160.3359	460.79	.9958	1.0505	1.0017	482.8659	12956.6510	2.077	58.529
0830	57.5	1 1/4	314.73	93	66.2	1.50"	171.0845	460.79	.9941	1.0508	1.0019	482.2482	12940.0769	2.214	62.373
0930	58.5	1 1/4	316.73	85	68	1.50"	164.0794	460.79	.9924	1.0505	1.0017	481.2128	12912.2952	2.119	59.691
1030	59.5	1 1/4	315.73	92	68	1.50"	170.4323	460.79	.9924	1.0503	1.0019	481.2032	12912.0359	2.201	62.000
1130	60.5	1 1/4	315.73	88	66.2	1.50"	166.6861	460.79	.9941	1.0510	1.0018	482.2786	12940.8915	2.157	60.773
1230	61.5	1 1/4	316.73	94	66.2	1.50"	172.5474	460.79	.9941	1.0511	1.0019	482.4180	12944.6342	2.234	62.928
1330	62.5	1 1/4	320.73	96	68	1.50"	175.4710	460.79	.9924	1.0512	1.0019	481.6364	12923.6615	2.268	63.891
1430	63.5	1 1/4	316.73	93.5	67.1	1.50"	172.0879	460.79	.9932	1.0508	1.0019	481.8536	12929.4881	2.225	62.687

00054

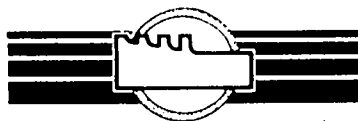
CUSTOMER :	SANTOS Ltd	PERFORATIONS:	7578'- 8280'KB.	PAGE: 6	OF 9
WELL NAME:	Cooloorn Sth #1	FORMATION :	Patchowarra.	DATE: 24. 11. 92	
TEST TYPE :	Cooloorn Sth #1 clean up flow after perforating and two rate flow and build up.			OPR :	I. Kurusae.

ORIFICE METER TYPE:	Daniel	STATIC PRESSURE RANGE :	500	PSIG	GAS SPECIFIC GRAVITY (SG) =	.800
METER RUN SIZE :	4.026"	DIFFERENTIAL PRESS. RANGE:	200	IN WC	FG $\sqrt{(1/SG)}$	= 1.11803
SEPARATOR NO :	38	STANDARD CONDITIONS :	14.73 PSI @ 60°F		C ₂ (FU × FG)	= 26.832813

[illegible]

EXPERTEST PTY. LTD.

GAS FLOW CALCULATIONS



CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 7 OF 9

WELL NAME: COOLCON STN #1

FORMATION : PATCHAWARIA

DATE: 1-12-92

TEST TYPE: CONDITIONING FLOW

OPR: A. GRINSWAY

ORIFICE METER TYPE: DANIELS

STATIC PRESSURE RANGE : 0 - 500 PSIG

GAS SPECIFIC GRAVITY (SG) = 0.800

METER RUN SIZE : 4.026

DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC

FG $\sqrt{(1/SG)}$ = 1.1803

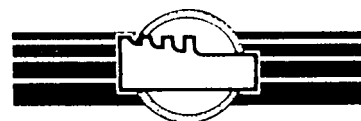
SEPARATOR NO : 38

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 26.8327

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_F \times H_W)}$	C ₁ = F _B × F _{TF} × F _{PV} × Y ₂				C ₁	C (C = C ₁ × C ₂)	GAS FLOW RATE Q = $\sqrt{(P_F \times H_W) \times C}$	
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
1-12-	92														
1400	Ø	1 5/64						OPEN	WELL						
1415								DIVERT	THROUGH VESSEL						
1450								INSTALL	A 1.75" ORIFICE PLATE						
1500	1	"	300	72	122	1.75	146.9693	634.39	0.9452	1.0306	1.0015	618.968	16608.659	2.440	69.10
1600	2	"	292	68	122	"	140.9113	"	0.9542	1.0297	1.0014	618.423	16594.047	2.338	66.19
1700	3	"	290	65	122	"	137.2953	"	0.9452	1.0295	1.0014	618.260	16589.669	2.277	64.48
1900	5	"	289	61	120	"	132.7742	"	0.9468	1.0298	1.0013	619.423	16620.889	2.206	62.47
2100	7	"	289	58	124	"	129.4681	"	0.9436	1.0291	1.0012	616.834	16551.417	2.142	60.66
2 -	12	- 92													
0100	11	1 5/64	293	52	124	"	123.4341	"	0.9436	1.0295	1.0011	616.998	16555.800	2.043	57.85
0500	15	"	293	50	122	"	121.0371	"	0.9452	1.0299	1.0010	618.244	16589.243	2.007	56.84
0700	17	"	291	48	122	"	118.1862	"	0.9452	1.0296	1.0010	618.093	16585.185	1.960	55.49
0900	19	"	291	48	124	"	118.1862	"	0.9436	1.0293	1.0010	616.822	16551.080	1.956	55.37
0945								CHANGE	PLATE TO 1.5"						
1100	21	"	293	93	131	1.5	165.0727	460.780	0.9380	1.0283	1.0020	445.389	11951.059	1.972	55.84
1300	23	"	293	90	133	"	162.3884	"	0.9364	1.0280	1.0019	444.464	11926.245	1.936	54.82
1500	25	"	293	93	131	"	165.0727	"	0.9380	1.0283	1.0020	445.389	11951.059	1.972	55.84
1505								ROCK	CHOKED						
1700	27	"	295	127	129	"	193.5587	460.780	0.9396	1.0288	1.0027	446.708	11986.447	2.320	65.68

EXPERTEST PTY. LTD.



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280'KS

PAGE: 8 OF 9

WELL NAME: COOLLOON STA #1

FORMATION : PATCHAWARRA

DATE: 2.12.92.

TEST TYPE: CONDITIONING FLOW

OPR: A. GRINDLAY

ORIFICE METER TYPE: DANIELS	STATIC PRESSURE RANGE : 0 - 500 PSIG	GAS SPECIFIC GRAVITY (SG) = 0.800
METER RUN SIZE : 4.026"	DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC	FG $\sqrt{(1/SG)}$ = 1.11803
SEPARATOR NO : # 38	STANDARD CONDITIONS : 14.73 PSI @ 60°F	C ₂ (FU x FG) = 26.8327

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_F \times H_W)}$	C ₁ = F _B × F _{TF} × F _{pv} × Y ₂				C ₁	C (C = C ₁ × C ₂)	GAS FLOW RATE Q = $\sqrt{(P_F \times H_W)} \times C$	
								F _B	F _{TF}	F _{pv}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
2.	12	92													
1900	29	1 5/64	295	126	131	1.5	192.7952	460.780	0.9380	1.0285	1.0027	445.794	11961.934	2.306	65.28
2100	31	"	295	121	131	"	188.9312	"	0.9380	1.0285	1.0026	445.745	11960.617	2.259	63.97
3	12	92													
0100	35	1 5/64	299	116	131	"	186.2364	"	0.9380	1.0289	1.0025	445.857	11963.606	2.228	63.07
0500	39	"	297	117	131	"	186.4108	"	0.9380	1.0287	1.0025	445.786	11961.713	2.229	63.12
0700	41	"	296	116	131	"	185.2997	"	0.9380	1.0286	1.0028	445.736	11960.375	2.216	62.74
0900	43	"	294	120	131	"	187.8297	"	0.9380	1.0284	1.0026	445.696	11959.283	2.246	63.59
1100	45	"	287	121	131	"	186.3518	"	0.9380	1.0277	1.0027	445.428	11952.090	2.227	63.05
1300	47	"	287	119	131	"	184.8033	"	0.9380	1.0277	1.0026	445.407	11951.549	2.208	62.52
1500	49	"	288	118	133	"	184.3474	"	0.9364	1.0275	1.0026	444.544	11928.393	2.198	62.25
1600	50	"	288	118	133	"	184.3474	"	0.9364	1.0275	1.0026	444.544	11928.393	2.198	62.25
1700	51	"	288	116	131	"	182.7785	"	0.9380	1.0278	1.0026	445.417	11951.804	2.184	61.84
1800	52	"	288	116	131	"	182.7785	"	0.9380	1.0278	1.0026	445.417	11951.804	2.184	61.84
1900	53	"	288	116	131	"	182.7785	"	0.9380	1.0278	1.0026	445.417	11951.804	2.184	61.84
2100	55	"	290	114	131	"	181.8240	"	0.9380	1.0280	1.0025	445.477	11953.405	2.173	61.52
4.	12	92													
0100	59	1 5/64	291	114	131	"	182.1373	"	0.9380	1.0281	1.0025	445.517	11954.476	2.177	61.64
0500	63	"	300	112	131	"	183.3030	"	0.9380	1.0290	1.0024	445.858	11963.650	2.192	62.08
0700	65	"	298	108	131	"	179.3989	"	0.9380	1.0288	1.0023	445.739	11960.443	2.145	60.74

CUSTOMER :	SANTOS LA	PERFORATIONS:	7578'-8280'KB	PAGE:	9 OF 9
WELL NAME:	COOLON SH #1	FORMATION :	PATIAWARRA	DATE:	4.12.92
TEST TYPE :	CONDITIONING FLOW			OPR :	A. BRINSLEY

ORIFICE METER TYPE:	DANIELS	STATIC PRESSURE RANGE :	0 - 500	PSIG	GAS SPECIFIC GRAVITY (SG) =	0.800
METER RUN SIZE :	1.026"	DIFFERENTIAL PRESS. RANGE:	0 - 200	IN WC	FG $\sqrt{(1/SG)}$	= 1.11803
SEPARATOR NO :	# 38	STANDARD CONDITIONS :	14.73 PSI @ 60°F		C ₂ (FU x FG)	= 26.8327

[illegible]

EXPERTEST PTY. LTD.

LIQUID PRODUCTION

CUSTOMER : SANTOS Ltd.

PERFORATIONS: 7942' - 8280' KB

PAGE: 1 OF 7

WELL NAME: Cooloom Sth. #1

FORMATION : Pachawarra.

DATE: 18.11.92

TEST TYPE : Cooloom Sth. #1 perforations

OPR : I. Kurasial.

TANK
NUMBER

#1 = 57

TANK

#1 = 56.60

bbls/m³

TANK

#1 = .267 m³/in

OIL API GRAVITY = @ 60°F

NUMBER

#2 =

CAPACITY

#2 = bbls/m³

SCALE

#2 = bbls/in - m³/cm

DATE

FLOW

TANK

TOTAL

OIL/CONDENSATE PRODUCTION

WATER PRODUCTION

TIME

TIME
(HOURS)USED
(NUMBER)TANK DIP
(IN/CM)TANK
DIP
(IN/CM)TANK
PRODUCTION
(BBLs/m³)FLOW
RATE
(BPD/m³D)CUMULATIVE
PRODUCTION
(BBLs/m³)TANK
DIP
(IN/CM)TANK
PRODUCTION
(BBLs/m³)FLOW
RATE
(BPD/m³D)CUMULATIVE
PRODUCTION
(BBLs/m³)

19 of November 1992.

First flow.

09 00

0

3"

.75"

2.25"

Opening dip.

09 30

3"

.75"

0

0

0

2.25"

0

0

0

10 00

1

3"

.75"

0

0

0

2.25"

0

0

0

10 30

3"

.75"

0

0

0

2.25"

0

0

0

11 00

2

3"

.75"

0

0

0

2.25"

0

0

0

11 30

3"

.75"

0

0

0

2.25"

0

0

0

12 00

3

3"

.75"

0

0

0

2.25"

0

0

0

13 00

4

3"

.75"

0

0

0

2.25"

0

0

0

14 00

5

3"

.75"

0

0

0

2.25"

0

0

0

14 30

5.5

3"

.75"

0

0

0

2.25"

0

0

0

14 40

Shut well in after first flow.

00059

EXPERTEST PTY. LTD.

LIQUID PRODUCTION

CUSTOMER : Santos Ltd.

PERFORATIONS: 7628' - 8280' KB

PAGE: 2 OF 7

WELL NAME: Cooloom Sth #1

FORMATION : Patchowarra.

DATE: 19. 11. 92

TEST TYPE : Cooloom Sth #1 perforations

OPR : I. Kurasia.

TANK #1 = 57

TANK #1 = 56.60

bbls/m³

TANK

#1 = .267 m³/in.bbls/in - m³/cm

OIL API GRAVITY = @ 60°F

TANK NUMBER

#2 =

CAPACITY

#2 =

bbls/m³

SCALE

#2 =

bbls/in - m³/cm

DATE

FLOW

TANK

TOTAL

OIL/CONDENSATE PRODUCTION

WATER PRODUCTION

TIME

TIME
(HOURS)USED
(NUMBER)TANK DIP
(IN/CM)TANK
DIP
(IN/CM)TANK
PRODUCTION
(BBLs/m³)FLOW
RATE
(BPD/m³D)CUMULATIVE
PRODUCTION
(BBLs/m³)TANK
DIP
(IN/CM)TANK
PRODUCTION
(BBLs/m³)FLOW
RATE
(BPD/m³D)CUMULATIVE
PRODUCTION
(BBLs/m³)

19. of November 1992

Second flow.

2130 0

3"

.75"

2.25"

Opening dip.

2230 1

5"

1"

.0667

1.602

.0667

4"

.467

11.214 .467

2330 2

6.5"

1.25"

.0667

1.602

.1334

5.25"

.333

8.01 .800

20 of November 1992

0130 4

8.75"

2"

.200

2.403

.333

6.75"

.400

4.806 1.200

0230 5

9.75

2.5"

.200

4.806

.533

7"

.067

1.602 1.267

0235

Shut well in.

Third flow.

Perforations: 7578' - 8280' KB.

1300 0

13.5"

3.75"

9.75"

Opening dip.

1330 .5

15.25"

4.5"

.200

9.612

.733

10.75"

.267

12.816 1.534

1400 1

16.5"

5"

.133

6.408

.866

11.5"

.200

9.82 1.734

1400

Shut well in.

Fourth flow.

Perforations: 7578' - 8280' KB.

2100 0

16.5"

5"

11.5"

2200 1

20"

6.5"

.401

9.612

1.267

13.5"

.534

12.816 2.268

2300 2

23"

8.75"

.600

14.418

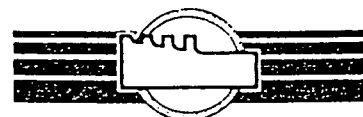
1.867

14.25"

.200

4.806 2.468

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER :	SANTOS Ltd.	PERFORATIONS:	7578' - 8280' KB.	PAGE:	4	OF	7
WELL NAME:	Cooloom Sth #1	FORMATION :	Patchawarra	DATE:	22. 11 . 92		
TEST TYPE :	Cooloom Sth #1 clean up flow after perforating + two rate flow and build up						OPR : I. Kurniati.
TANK NUMBER	#1 = 57	TANK CAPACITY	#1 = 56.60 bbls/m ³	TANK SCALE	#1 = .267 m ³ /in. bbls/in - m ³ /cm	OIL API GRAVITY =	@ 60°F
	#2 =		#2 = bbls/m ³		#2 = bbls/in - m ³ /cm		

DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/CM)	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)	TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)
22 of November 1992											
1930	20.54		109.5"	67.5"	1.001	12.015	17.281	42"	.467	5.607	9.806
2130	22.56		114.5"	71"	.935	11.214	18.215	43.5"	.400	4.806	10.206
23 of November 1992											
0130	26.510		121."	77.25"	1.668	10.012	19.883	46.75"	.867	5.206	11.073
0530	30.514		133.25"	83.5"	1.602	9.612	21.485	49.75"	.801	4.806	11.874
0730	32.516		138.5"	87.5"	1.068	12.816	22.553	51"	.333	4.005	12.207
0930	34.518		143.5"	91"	.934	11.214	23.487	52.5"	.400	4.806	12.607
1130	36.520		148."	94"	.801	9.612	24.288	54"	.400	4.806	13.008
1330	38.522		153"	97.25"	.867	10.413	25.155	55.75"	.467	5.607	13.475
1530	40.524		157.75"	100.75"	.934	11.214	26.089	57"	.333	4.005	13.808
1530	Cul choke size to 15/64" to flow well on second rate of the test.										
1630	42.50		160.5"	103.25"	.6675	8.01	26.756	57.25"	.066	.801	13.874
1930	44.53		163.5"	106."	.734	8.811	27.490	57.5"	.066	.801	13.940
2130	46.55		166.75"	109"	.801	9.612	28.291	57.75"	.066	.801	14.741
24 of November 1992											
0130	50.59		173.5"	115"	1.602	9.612	29.893	58.5"	.200	1.201	14.941
0530	54.513		180.75"	120.75	1.535	9.211	31.428	60"	.400	2.403	15.341
0730	56.515		183.75"	123.25"	.6675	8.01	32.095	60.5"	.133	1.602	15.474
0830	57.516		185"	124.25"	.267	6.408	32.362	60.75"	.067	1.602	15.541
0930	58.517		186.5"	125.25"	.267	6.408	32.629	61.25"	.133	3.204	15.674

CUSTOMER :	SANTOS Ltd.	PERFORATIONS:	7578' - 8280' KB	PAGE:	5	OF	7
WELL NAME:	Cooloom Stn #1	FORMATION :	Patchawarra.	DATE:	23. 11. 92		
TEST TYPE :	Cooloom Stn #1 clean up flow after perforating. plus two rate flow and build up.			OPR :	I. Kurasiat		

PERFORATIONS: 7578'-8280' KB

PAGE: 5 OF 7

FORMATION : *Palchawarna.*

DATE: 23. 11. 92

TEST TYPE : *cool down shut in cleanup flow after perforating. plus two rate flows and build up.*

OPR : I. Kurasia

TANK	#1 =	267 m ³ /in	bbls/in - m ³ /cm
SCALE	#2 =		bbls/in - m ³ /cm

OIL API GRAVITY = @ 60°F

[illegible]

EXPERTEST PTY. LTD.

LIQUID PRODUCTION

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 6 OF 7

WELL NAME: COOLON STR #1

FORMATION : PACHAWARRA

DATE: 1.12.92

TEST TYPE: CONDITIONING FLOW

OPR: A. GRINDLAY

TANK
NUMBER

#1 = 57

TANK

#1 = 56.6 m³ bbls/m³

TANK

#1 = 1" = 0.267 m³ bbls/in - m³/cm

OIL API GRAVITY = @ 60°F

#2 =

CAPACITY

#2 = bbls/m³

SCALE

#2 = bbls/in - m³/cm

DATE

FLOW

TANK

TOTAL

OIL/CONDENSATE PRODUCTION

WATER PRODUCTION

TIME

TIME
(HOURS)USED
(NUMBER)TANK DIP
(IN/CM)TANK
DIP
(IN/CM)TANK
PRODUCTION
(BBLT/m³)FLOW
RATE
(BPD/m³D)CUMULATIVE
PRODUCTION
(BBLT/m³)TANK
DIP
(IN/CM)TANK
PRODUCTION
(BBLT/m³)FLOW
RATE
(BPD/m³D)CUMULATIVE
PRODUCTION
(BBLT/m³)

1.12.92

1400

OPEN WELL

1400

Ø

#1

9.0

6.0

OPENING

DIP

3.0

1500

1

"

9.0

6.0

Ø

Ø

35.231

3.0

Ø

Ø

16.406

1600

2

"

9.0

6.0

Ø

Ø

"

3.0

Ø

Ø

"

1700

3

"

9.0

6.0

Ø

Ø

"

3.0

Ø

Ø

"

1900

5

"

10.5

7.0

0.267

3.2

35.498

3.5

0.133

1.6

16.539

2100

7

"

12.5

9.0

0.534

6.4

36.032

3.5

Ø

Ø

16.539

2.12.92

0100

11

"

16.5

10.5

0.400

2.4

36.432

6.0

0.667

4.0

17.206

0500

15

"

19.75

13.25

0.734

4.4

37.166

6.5

0.133

0.8

17.339

0700

17

"

22.0

15.0

0.467

5.6

37.633

7.0

0.133

1.6

17.472

0900

19

"

23.5

16.0

0.267

3.2

37.900

7.5

0.133

1.6

17.605

1100

21

"

25.5

17.5

0.400

4.8

38.300

8.0

0.133

1.6

17.738

1300

23

"

27.0

18.25

0.200

2.4

38.500

8.75

0.200

2.4

17.938

1500

25

"

29.0

19.75

0.400

4.8

38.900

9.25

0.133

1.6

18.071

1700

27

"

31.5

21.25

0.400

4.8

39.300

10.25

0.267

3.2

18.338

1900

29

"

33.5

22.0

0.200

2.4

39.500

11.5

0.333

3.6

18.671

2100

31

"

36.0

24.0

0.534

6.4

40.034

12.0

0.133

1.6

18.804

3.12.92

0100

35

"

41.0

28.0

1.068

6.4

41.102

13.0

0.267

1.6

19.071

00000000

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280'KB

PAGE: 7 OF 7

WELL NAME: COOLON STN #1

FORMATION : PATCHAWARIA

DATE: 3.12.92

TEST TYPE: Conditioning Flow

OPR: A. BRINDLEY

TANK NUMBER	#1 = 57	TANK CAPACITY	#1 = 56.6	bbls/m ³	TANK SCALE	#1 = 1" = 0.267m ³	bbls/in - m ³ /cm	OIL API GRAVITY = @ 60°F			
	#2 =		#2 =	bbls/m ³		#2 =	bbls/in - m ³ /cm				
DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/CM)	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)	TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)
3. 12	92										
0500	39	#1	45.5	31.25	0.868	5.2	41.970	14.25	0.334	2.0	19.405
0700	41	"	47.5	32.5	0.334	4.0	42.304	15.0	0.200	2.4	19.605
0900	43	"	50.0	34.5	0.534	6.4	42.838	15.5	0.133	1.6	19.738
1100	45	"	51.5	35.25	0.200	2.4	43.038	16.25	0.200	2.4	19.938
1300	47	"	54.0	37.0	0.467	5.6	43.505	17.0	0.200	2.4	20.138
1500	49	"	56.0	38.75	0.467	5.6	43.972	17.25	0.067	0.8	20.205
1600	50	"	57.0	39.25	0.267	6.4	44.239	17.75	0.133	3.2	20.338
1700	51	"	58.0	40.0	0.200	4.8	44.439	18.0	0.067	1.6	20.405
1800	52	"	59.0	40.75	0.200	4.8	44.639	18.25	0.067	1.6	20.472
1900	53	"	60.25	41.75	0.267	6.4	44.906	18.5	0.067	1.6	20.539
2100	55	"	62.0	42.75	0.267	3.2	45.173	19.25	0.200	2.4	20.739
4. 12	92										
0100	59	"	66.0	45.75	0.801	4.8	45.974	20.25	0.267	1.6	21.006
0500	63	"	70.25	48.75	0.801	4.8	46.775	21.5	0.333	2.0	21.339
0700	65	"	72.25	50.0	0.334	4.0	47.109	22.25	0.200	2.4	21.539
0900	67	"	74.5	51.75	0.467	5.6	47.576	22.75	0.133	1.6	21.672
1100	69	"	76.5	53.5	0.467	5.6	48.043	23.0	0.067	0.8	21.739
1300	71	"	78.25	54.75	0.334	4.0	48.377	23.5	0.133	1.6	21.872
1300			S.W.I	END	TEST.						

00064

CUSTOMER : *SANTOS Ltd.*PERFORATIONS: *7578' - 8280' KB*PAGE: *1* OF *2*WELL NAME: *Cooloom Sth #1*FORMATION : *Patchawarra*DATE: *23. 11. 92*TEST TYPE: *Cooloom Sth #1 clean up flow after perforations plus two rate flow test and build up.*OPR: *I. Kurasia*SAMPLE # *1*

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH		OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
0920	SPE 116	500	HPgas	15	Evacuated.		0	0		Meter Run on sq. #38		2082	20	101.56	27
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @ 60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR m³/10⁶m³	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)	
12045	47	15/64	N/A	2082	20	1.0505	.800	60.4	59.691	6.408	3.204		161		

REMARKS:

SAMPLE # *1*

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT	SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
0925	SPE 204	500	HP oil	25	Acidified brine	475	25		Bottom of oil sight glass.	2082	20	101.56	27	
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES		RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @ 60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR m³/10⁶m³	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)
12045	47	15/64	N/A	2082	20	1.0505	.800	60.4	59.691	6.408	3.204		161	

REMARKS:

SAMPLE # *1* x *2* bottles *500 cc*

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
0925	1	500	LP H ₂ O	5	—	—	—		Bottom of water sight glass		0	20	101.56	27	
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @ 60°F	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	LGR m ³ /10 ⁶ m ³	PRESSURE	TEMPERATURE	
														(PSI/KPa)	(°F/°C)
12045	47	15/64	N/A	2082	20	1.0505	.800	60.4	59.691	6.408	3.204	161			

REMARKS:

SAMPLING DATA

CUSTOMER : *SANTOS Ltd*
 WELL NAME : *Cooloomu Sh #1*
 TEST TYPE : *Cooloomu Sh. #1 clean up flow after perforations plus two rate flow and build up.*

PERFORATIONS: *7578' - 8280' KB*
 FORMATION : *Patchawarra*

PAGE: *2* OF *2*
 DATE: *23.11.92*
 OPR: *I. Kumsial*

SAMPLE

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)	SAMPLE POINT	SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
<i>1020</i>	<i>SPE 038</i>	<i>500</i>	<i>HP gas</i>	<i>15</i>	<i>Evacuated.</i>	<i>0</i>	<i>0</i>	<i>Meter Run on Sep. #38</i>	<i>2075</i>	<i>20</i>	<i>101.56</i>	<i>27</i>

WELLHEAD DATA

SEPARATOR DATA

GRAVITIES

FLOW RATES

RATIOS

BOTTOM HOLE

TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)
<i>11887</i>	<i>46</i>	<i>15/64</i>	<i>N/A</i>	<i>2075</i>	<i>20</i>	<i>1.0503</i>	<i>.800</i>	<i>60.4</i>	<i>62.000</i>	<i>3.204</i>	<i>3.204</i>	<i>103</i>	

REMARKS:

SAMPLE

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)	SAMPLE POINT	SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
<i>1025</i>	<i>SPE 224</i>	<i>500</i>	<i>HP oil</i>	<i>25</i>	<i>Acidified brine</i>	<i>475</i>	<i>25</i>	<i>Bottom of oil sight glass</i>	<i>2075</i>	<i>20</i>	<i>101.56</i>	<i>27</i>

WELLHEAD DATA

SEPARATOR DATA

GRAVITIES

FLOW RATES

RATIOS

BOTTOM HOLE

TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)
<i>11887</i>	<i>46</i>	<i>15/64</i>	<i>N/A</i>	<i>2075</i>	<i>20</i>	<i>1.0503</i>	<i>.800</i>	<i>60.4</i>	<i>62.000</i>	<i>3.204</i>	<i>3.204</i>	<i>103</i>	

REMARKS:

SAMPLE # 2 x 2 bottles 500cc

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)	SAMPLE POINT	SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
<i>1025</i>	<i>2</i>	<i>500</i>	<i>LP H₂O</i>	<i>5</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>Bottom of water sight glass</i>	<i>0</i>	<i>20</i>	<i>101.56</i>	<i>27</i>

WELLHEAD DATA

SEPARATOR DATA

GRAVITIES

FLOW RATES

RATIOS

BOTTOM HOLE

TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)
<i>11887</i>	<i>46</i>	<i>15/64</i>	<i>N/A</i>	<i>2075</i>	<i>20</i>	<i>1.0503</i>	<i>.800</i>	<i>60.4</i>	<i>62.000</i>	<i>3.204</i>	<i>3.204</i>	<i>103</i>	

REMARKS:

00066

EXPERTEST PTY. LTD.



SAMPLING DATA

CUSTOMER : SANTOS LTD

PERFORATIONS: 7578' - 8280' KB

PAGE: 1 OF 2

WELL NAME: COOLOON STH #1

FORMATION : PATCHAWARRA

DATE: 3-12-92

TEST TYPE: CONDITIONING FLOW

OPR: A. GRINDLAY

SAMPLE # 1

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)	SAMPLE POINT	SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)			
1600	L-16	500	H.P COND	25	ACID BRINE	475	25	SIGHT GLASS	1882	56	102	26			
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR	PRESSURE	TEMPERATURE	
														(PSI/KPa)	(°F/°C)
13294	48	15/64	—	1882	56	1.0275	0.8		62.25	6.4	3.2	154	—	—	

REMARKS:

SAMPLE # 2

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
1600	EC 9464	20000	HP GAS	25	VAC.	0	0		METER RUN		1882	56	102	26	
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR	PRESSURE	TEMPERATURE	
														(PSI/KPa)	(°F/°C)
13294	48	15/64	-	1882	56	1.0275	0.8		62.25	6.4	3.2	154	-	-	

REMARKS:

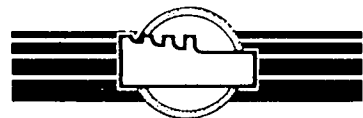
SAMPLE # 3

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
1700	Q 22	500	H.P COND	25	ACID BRINE	475	25		SIGHT GLASS		1882	55	102	26	
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
13294	47	15/64	—	1882	55	1.0278	0.8		61.84	4.8	1.6	103	—	—	

REMARKS:

EXPERTEST PTY. LTD.

SAMPLING DATA



CUSTOMER : SANTOS LTD
 WELL NAME : COOLOON STA #1
 TEST TYPE : CONDITIONING FLOW

PERFORATIONS: 7578' - 8280' KB
 FORMATION : PATCHAWARRA

PAGE: 2 OF 2
 DATE: 3-12-92
 OPR : A GRINDLAY

SAMPLE # 4

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
1700	EC 9463	20000	H.P GAS	25	VAC	0	0		METER RUN		1882	55	102	26	
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)	
13294	47	15/64	—	1882	55	1.0278	0.8		61.84	4.8	1.6		103	—	—

REMARKS:

SAMPLE # 5

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)	SAMPLE POINT	SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)		
1800	L-292	500	H.P COND	25	ACID BRINE	475	25	SIGHT GLASS	1882	55	102	26		
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS	BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR	PRESSURE	TEMPERATURE
													(PSI/KPa)	(°F/°C)
13280	48	15/64	-	1882	55	1.0278	0.8		61.84	4.8	1.6	103	-	-

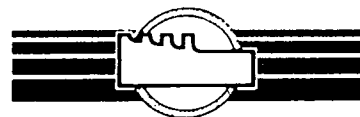
REMARKS:

SAMPLE # 6

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH		OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
1800	EC 9455	20000	H.P. GAS	25	VAC		0	0		METER RUN		1882	55	102	26
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	LGR	PRESSURE	TEMPERATURE	
														(PSI/KPa)	(°F/°C)
13280	48	15/64	-	1882	55	1.0278	0.8		61.84	4.8	1.6	103	-	-	

REMARKS:

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : *SANTOS Ltd.*PERFORATIONS: *7578' - 8280' KB.*PAGE: *1* OF *1*WELL NAME: *Cooloom Sth #1*FORMATION : *Patchawarra.*DATE: *22.11.92*TEST TYPE : *Cooloom Sth #1 Two rate flow test and build up - after perforating.*OPR : *I. Kurasiaak.*

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

TIME
(HOURS)TUBING
PRESSURE
(PSI/KPa)ANNULUS
PRESSURE
(PSI/KPa)

ELEMENT SERIAL NO.

*29321**29323*DATE : *22.11.92*

ELEMENT RANGE

*4000 PSI**3950 PSI*

PRESSURE LUBRICATOR :

*16:31**676**4661**6778*

RECORDING SECTION SERIAL NO.

*14631**12963*

RUN IN HOLE :

*18:30**4633**6936*

DATE OF CALIBRATION:

*20-5-92**20-5-92*

ON DEPTH AT :

*7929' KB. FT/M**19:00**4626**6943*

CLOCK SERIAL NO.

*2784**2870*DATE : *30.11.92*

CLOCK RANGE

*180 Hr.**180 Hr.*

PULL OUT OF HOLE :

*0645**17506**Ø*

LEAD SCREW TYPE

*15 TLS**15 TLS*

AT SURFACE :

*0702**17506**Ø*

DEPRESSURE LUBRICATOR :

*0704**17506**Ø*

ENGAGE STYLUS

DATE

22.11.92

TIME

*16:26 Hrs.**1626 Hrs.*MAXIMUM BHT AT *7929* FT/M = *290* °F/Ø*2539*

DISENGAGE STYLUS

DATE

30.11.92

TIME

*0712**0712*

N.B. ALL DEPTHS ARE MEASURED FROM K.B.

DATE

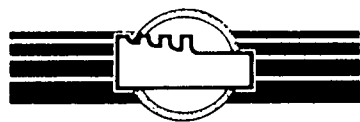
TIME

REMARKS

IN/OUT

*22.11.92**1631**Pressure up Lubricator.**TOP**679/2542**1731**Depressure Lubricator.**1831**Pressure up Lubricator and run in hole.**24.11.92**1730**Shot well in for build up.**30.11.92**0426**CLOCKS RUN OUT.**0645**PULL GAUGES**0715**INSPECT CHARTS. NOTE: CLOCK ON TOP ELEMENT STOPPED PART WAY INTO BUILD-UP*

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : *SANTOS LTD*
 WELL NAME : *COOLCOON STN #1*
 TEST TYPE : *STATIC GRADIENT*

PERFORATIONS: *7578' - 8280' KB*
 FORMATION : *PATCHANARRA*

PAGE: *1* OF *1*
 DATE: *30.11.92*
 OPR : *A. GRINDLAY*

GAUGE DATA		UPPER PRESSURE GAUGE	LOWER PRESSURE GAUGE	TEMPERATURE GAUGE	RUN DATA		TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)
ELEMENT SERIAL NO.		<i>29321</i>	<i>29323</i>		DATE	<i>30.11.92</i>			
ELEMENT RANGE		<i>4000 PSI</i>	<i>3950 PSI</i>		PRESSURE LUBRICATOR		<i>0732</i>	<i>17506</i>	<i>∅</i>
RECORDING SECTION SERIAL NO.		<i>14631</i>	<i>12963</i>		RUN IN HOLE		<i>0754</i>	<i>17506</i>	<i>∅</i>
DATE OF CALIBRATION:		<i>20.5.92</i>	<i>20.5.92</i>		ON DEPTH AT	<i>7929 FT/M</i>	<i>0900</i>	<i>17506</i>	<i>∅</i>
CLOCK SERIAL NO.		<i>K1838</i>	<i>K1850</i>		DATE	<i>30.11.92</i>			
CLOCK RANGE		<i>3HRS</i>	<i>3HRS</i>		PULL OUT OF HOLE		<i>0918</i>	<i>17513</i>	<i>∅</i>
LEAD SCREW TYPE		<i>15TNS</i>	<i>15TNS</i>		AT SURFACE		<i>0935</i>	<i>17513</i>	<i>∅</i>
					DEPRESSURE LUBRICATOR		<i>0955</i>	<i>17513</i>	<i>∅</i>
ENGAGE STYLUS	DATE	<i>30.11.92</i>	TIME	<i>0724</i>	<i>0724</i>	MAXIMUM BHT AT <i>7929 FT/M</i> = <i>290 °F</i>			
DISENGAGE STYLUS	DATE	<i>30.11.92</i>	TIME	<i>1000</i>	<i>1000</i>	N.B. ALL DEPTHS ARE MEASURED FROM K.B.			

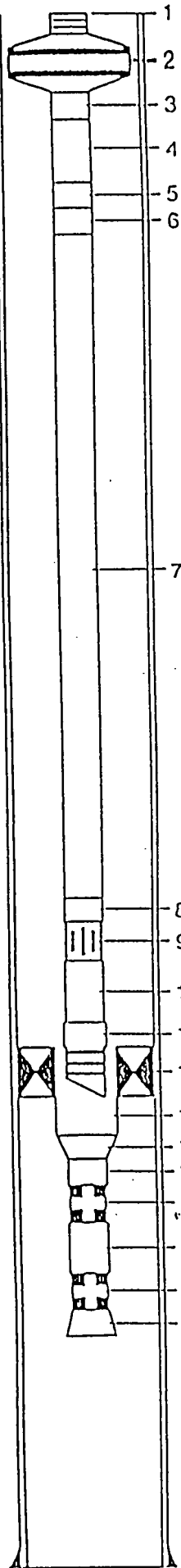
DATE	TIME	REMARKS
<i>30.11.92</i>		
	<i>0747</i>	<i>DEPRESSURE LUBRICATOR</i>
	<i>0754</i>	<i>PRESSURE UP LUBRICATOR. R.I.H.</i>
	<i>0940</i>	<i>PRESSURE UP LUBRICATOR</i>
	<i>0955</i>	<i>DEPRESSURE LUBRICATOR RIG OUT ELEMENTS</i>

00070



PETROLEUM ENGINEERING DEPARTMENT

00071

DOWNHOLE INSTALLATION Cooloon South #1

ITEM NO.	2 1/2" COMPLETION - 7" CSG	LENGTH (ft)	DEPTH K.B. (ft)	MIN. I.D. (in)
1	K.B. to top of tubinghead spool	18.85	0.00	
2	C.I.W. FBB-EN 7 1/16" x 2 1/2" AB x 2 1/2" CS Hydril	0.83	18.85	
3	Nipple 2 1/2" J55 AB-IJ3SS pin x pin	0.32		
4	1 joint 2 1/2" 6.5# J55 AB-IJ3SS	31.66		
5	Pup joints 2 1/2" 6.5# J55 AB-IJ3SS 2x4' + 2x2'	10.94		
6	X-over 2 1/2" AB-IJ3SS box x 2 1/2" NK3SS pin J55	1.75		
7	235 joints 2 1/2" 6.5# J55	7376.51	(adj. to head)	
8	X-over 2 1/2" NK3SS box x AB-IJ3SS pin J55	1.76		
9	Olis 2 1/2", 121XDH23110 sliding sleeve	3.55	7442.62	2.313
10	1 joint 2 1/2" 6.5# J55 AB-IJ3SS	31.63		
11	Baker model E-22 anchor seal assembly size 80-32, 2 1/2" AB-IJ3SS box	3.36	7477.80	2.406
	Permanent Downhole Equipment			
12	Baker DB packer size 84-32 4 1/2" AB-IJ3SS	3.92	7477.80	
13	Millout extension 4 1/2" AB-IJ3SS pin x pin	5.39		
14	Swage 4 1/2" box x 2 1/2" pin J55 AB-IJ3SS	1.77		
15	Pup joint 10' x 2 1/2" 6.5# J55 AB-IJ3SS	9.73		
16	Olis 2 1/2" nipple 711X23103 AB-IJ3SS b x p	0.95	7498.61	2.313
17	2 pup joints 10' x 2 1/2" 6.5# J55 AB-IJ3SS	19.51		
18	Olis 2 1/2" nipple 711XN23117 AB-IJ3SS b x p	1.02	7519.07	2.205
19	Re-entry guide 2 1/2" AB-IJ3SS x 3 1/2" J55	1.01		
	Bottom of Tail Pipe		7521.10	

PERFORATED INTERVALS:

GUN:

CHARGES:

FORMATION	INTERVAL	SIZE	TYPE	S.P.F.	TYPE	WT(g)
Patchanka 82-1	8203' - 8280'	4 1/2"	Ultra Deep CSG	5	RDX	37
	7578'					
	REPERFORATED					
	21-11-92					

REMARKS:

ANNULUS FLUID: 9.3 lb/gal 2% KCl Filtered Plus 1 Drum Applied 2000

INDICATED STRING WEIGHT: 45M

CALCULATED STRING WEIGHT: 45M

SLACK-OFF WEIGHT: 6M

TENSION:

NOT TO SCALE

WELLSITE SUPERVISOR

W. BAER / G. Halliday

PROPOSED

DATE OF INSTALLATION

12-11-92

RE-COMPLETION

DRAFTED

DATE

COMPLETION

REVISED

DATE

P.B.T.D. 8678' KB

D.H.D

E. 7374/2

EXPERTEST PTY. LTD.



SEQUENCE OF EVENTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 1 OF 43

WELL NAME: COOLOON SOUTH #1

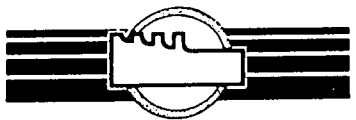
FORMATION : PATCHAWARRA

DATE: 7/9/93

TEST TYPE : L.E.T, F.G.S, B.H.P

OPR : D. POITRAS

DATE/TIME	DESCRIPTION OF EVENTS
7/9/93.	
08:45	ARRIVE ON LOCATION. CONDUCT SAFETY MEETING.
08:50	SHUT WELL IN TO FIT SLUAB VALVE
09:00	WELL BACK ON LINE ON 100% CHOKE. RIG IN WIRELINE UNIT.
09:30	R.I.H 1.75" BLIND BOX ON 1.5" TOOLSTRING
10:02	TAG P.B.T.D @ 8676' KB. NO OBSTRUCTIONS. ALL PERFORATIONS CLEAR P.O.O.H
10:24	AT SURFACE WITH BLIND BOX. SECURE WELL HEAD.
11:16	SPOT FRAC. TANK ON LOCATION
13:50	SPOT TEST SEPARATOR. COMMENCE RIGGING IN TEST EQUIPMENT
15:30	PRESSURE TEST ALL LINES AND FLANGES.
16:00	SEPARATOR ON BYPASS. STANDBY FOR EQUIPMENT FROM MUNKARIE.
17:30	TRIM FLOW THROUGH SEPARATOR. FLOW GAS BACK IN LINE. 1.250 ORIFACE RATE IN SERVICE
18:00	COMMENCE L.E.T MONITOR ALL FLOW RATES
8/9/93.	
21:00	COMPRESSORS DOWN @ STREZELEKI SATELLITE
04:00	'O' RING BLADES OUT ON OIL DUMP OF SEPARATOR. ISOLATE DUMP.
9/9/93.	
06:00	COMPRESSORS STILL DOWN. PLACE SEPARATOR ON BYPASS
12:30	COMPRESSORS COMING BACK ONLINE
16:00	TRIM FLOW THROUGH SEPARATOR. FLOW GAS BACK IN LINE. 1.250 ORIFACE PLATE IN SERVICE
11/9/93.	
07:30	PREPARE TWO 4000 PSI AMERADA GAUGES AND M.B.H.T THERMOMETER FOR F.G.S
07:51	PRESSURE LUBRICATOR.
08:11	R.I.H WITH GAUGES. PERFORMING GRADIENT STOPS AS PER PROGRAM.



SEQUENCE OF EVENTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 2 OF 3

WELL NAME: COOLBON SOUTH #1

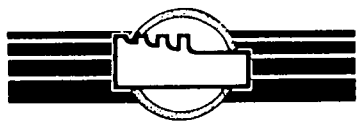
FORMATION : PATCHAWARRA

DATE: 11/9/93

TEST TYPE : L.E.T., F.G.S + B.H.P.

OPR : J. POITRAS

DATE/TIME	DESCRIPTION OF EVENTS
11/9/93	
08:30	COMPRESSORS DOWN @ SIREZELEKI SATELITE. F.T.P. INCREASING
09:00	SUSPEND F.G.S. P.O.O.H. WITH GAUGES.
09:12	SEPARATOR ON BYPASS
09:14	SHUT WELL IN
09:23	GAUGES @ SURFACE. RIG SEPARATOR IN TO FLOW TO FLARE.
09:48	OPEN WELL TO FLOW ON BYPASS @ 25% CHOKE SETTING.
10:00	TRIM FLOW THROUGH SEPARATOR. COMMENCE L.E.T. 1.625" ORIFACE PLATE IN SERVICE.
10:14	REDUCE CHOKE TO 20%
14:05	REDUCE CHOKE TO 19%
12/9/93	
08:30	PREPARE TWO 4000 PSI AMERADAS AND M.B.H.T. THERMOMETER FOR F.G.S.
08:53	PRESSURE LUBRICATOR
09:13	R.I.H. WITH GAUGES PERFORMING GRADIENT STOPS AS PER PROGRAM.
10:24	ON HANG DEPTH OF 7929' KB
10:39	P.O.O.H.
10:59	AT SURFACE WITH GAUGES.
11:20	DEPRESSURE LUBRICATOR RIG OUT GAUGES CHARTS GOOD SECURE WELL HEAD.
12:00	END OF FIRST RATE.
12:00	OPEN CHOKE SLOWLY TO 100% TO ESTABLISH 2 nd RATE. COMMENCE 2 nd RATE L.E.T. 2.250" ORIFACE PLATE IN SERVICE
14:00	2.000" ORIFACE PLATE INSTALLED.
13/9/93	
14:20	PREPARE TWO 4000 PSI AMERADAS AND M.B.H.T. THERMOMETER FOR 2 nd RATE F.G.S.
14:43	PRESSURE LUBRICATOR



SEQUENCE OF EVENTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 3. OF 3

WELL NAME: COOLLOON SOUTH #1

FORMATION : PATCHAWARRA

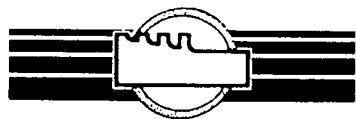
DATE: 13/9/93.

TEST TYPE : 2 RATE L.E.T., F.G.S & B.H.P

OPR : K. COMSTOCK.

DATE/TIME	DESCRIPTION OF EVENTS
13/9/93.	
14:58	R.I.H WITH GAUGES PERFORMING GRADIENT STOPS AS PER PROGRAM.
16:00	@ HANG DEPTH OF 7929' KB.
16:15	P.O.O.H
16:52	AT SURFACE WITH GAUGES.
17:07	DEPRESSURE LUBRICATOR RIG OUT GAUGES. CHARTS GOOD SECURE WELL HEAD.
14/9/93	
08:40	PREPARE TWO 4000 PSI AMERADAS AND M.B.H.T THERMOMETER. FOR B.H.P.S.
09:00	PRESSURE LUBRICATOR
10:00	DEPRESSURE LUBRICATOR
11:00	PRESSURE LUBRICATOR AND R.I.H WITH GAUGES.
11:30	ON HANG DEPTH OF 7929' KB AS PER PROGRAM. FLOW WELL FOR 4 HOURS.
15:30	SHUT WELL IN COMMENCE 96 HR BUILD-UP. OBTAIN TWO H ₂ O SAMPLES FROM STOCK TANK.
15:45	COMMENCE RIGGING OUT TEST EQUIPMENT.
1800	Rig out complete
12/9/93	RATE #1 : TO FLARE CHOKER : 19% (SIMULATE FLOW LINE) FTHP : 4914 kPa Q_g : 44.103 E3 m³/d Q_c : 3.765 m³/d Q_w : 1.842 m³/d
14/9/93	RATE #2 : TO FLARE CHOKER : 100% (TO FLARE) FTHP : 1079 kPa Q_g : 57.911 E3 m³/d Q_c : 2.631 m³/d Q_w : 2.209 m³/d

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 1 OF 7

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHAWARRA

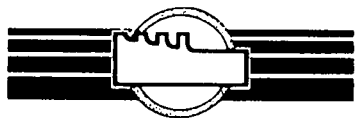
DATE: 7/9/93

TEST TYPE : 2 RATE L.E.T, F.G.S 4 B.H.P

OPR : J. POITRAS

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/ KPa)	ANNULUS PRESSURE (PSI/ KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/ CM)	OIL (IN/ CM)	OIL API GRAVITY @ 60°F	WATER (IN/ CM)
7/9/93														
08:45						A.O.L								
08:50						SHUT WELL INTO FIT SWAB VALVE								
09:00						WELL BACK ON LINE ON 100% CHOKE. RG IN WIRE LINE UNIT								
09:30		633	0			R.I.N 1.75" BLIND BOX ON 1.5" TOOLSTRING.								
10:02						TAG P.B.T.D @ 8676 KB NO OBSTRUCTIONS ALL PERFORATIONS CLEAR. P.O.O.H								
10:24						AT SURFACE WITH BLIND BOX. SECURE WELL HEAD.								
11:16						SPOT FRAC TANK.								
13:50						SPOT TEST SEPARATOR. COMMENCE RIGGING IN TEST EQUIPMENT								
15:30						PRESSURE TEST ALL LINES AND FLANGES								
16:00						SEPARATOR ON BYPASS.								
17:30		645	0	53		DIVERT FLOW THROUGH SEPARATOR. FLOW GAS BACK IN LINE. 1.250 ORIFICE PLATE.								
18:00						COMMENCE LET MONITOR ALL FLOW RATES								
18:00	0	646	0	53	100		1.250	635	47	118	5	.75		4.75
20:00	2	644	0	53	"		"	633	47	124	6	1		5
8/9/93														
06:00	12	639	0	53	"		"	628	47	113	16.5	8.75		7.75
08:00	14	639	0	52	"		"	630	47	113	18.5	10.25		8.25
10:00	16	639	0	53	"		"	628	48	118	20.5	11.5		9
12:00	18	641	0	54	"		"	630	48	122	22.75	13		9.75
14:00	20	642	0	54	"		"	630	48	124	24.25	14.25		10
16:00	22	638	0	53	"		"	627	47	115	26.25	15.25		11

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS.

PERFORATIONS: 7578' - 8280'

PAGE: 2 OF 7

WELL NAME: COOLAN SOUTH #1

FORMATION : PATCHAWARRA

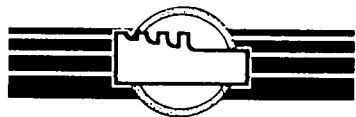
DATE: 8/9/93.

TEST TYPE : 2 RATE L.E.T., F.G.S & B.H.P

OPR : D. POITRAS

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION					
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/GM)	OIL (IN/GM)	OIL API GRAVITY @ 60°F	WATER (IN/GM)		
8/9/93											26.25	15.25		11		
18:00	24	638	0	53	100		1.250	627	47	115	28	16.5		11.5		
21:00	27	638	0	53	"		"	615	45	115	READING TAKEN FROM CHARTS.					
21:00						COMPRESSORS DOWN AT STREZELEKI SATELLITE.										
9/9/93																
06:00	36	1154	0	44	"		1.250	1152	7	86	34	21		13.		
06:00	5					SEPARATOR ON BYPASS.										
16:00	0	777	0	49	"	TRIM FLOW THROUGH SEPARATOR. FLOW GAS IN LINE					34	21		13.		
18:00	2	642	0	50	"		1.250	630	50	108	37.75	24		13.75		
10/9/93																
06:00	14	615	0	50	"		"	601	54	115	49.75	32		17.75		
08:00	16	620	0	52	"		"	607	52	109	52	33.5		18.5		
10:00	18	619	0	52	"		"	607	52	111	54	35		19.		
12:00	20	619	0	53	"		"	608	51	113	56.25			19.75		
14:00	22	634	0	52	"		"	624	49	115	58	37.5		20.5		
16:00	24	633	0	52	"		"	621	49	115	60	38.75		21.25		
18:00	26	628	0	52	"		"	617	48	111	61.75	40		21.75		
11/9/93																
06:00	38	627	0	50	"		"	617	49	111	74	48.5		25.5		
07:30	39.5					PREPARE 2 4000 PSI AMERADAS & M.B.H.T THERMOMETER FOR F.G.S.										
07:51	39.85	634	0	52	"	PRESSURE LUBRICATOR										
08:00	40	634	0	52	"		1.250	620	48	109	76	50		26		

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS.

PERFORATIONS: 7578' - 8280'

PAGE: 3 OF 7

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHAWARRA

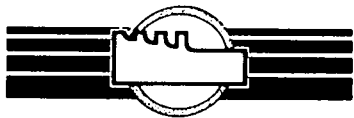
DATE: 11/9/93.

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : J. BITRAS

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION					
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/GM)	OIL (IN/GM)	OIL API GRAVITY @ 60°F	WATER (IN/GM)		
11/9/93.																
08:11	40.18					R.I.H WITH GAUGES PERFORMING GRADIENT STOP AS PER PROGRAM. SEE B.H.P/B.H.T GAUGE RUN DATA SHEET.										
08:30	4.					COMPRESSORS DOWN & SATELLITE. F.T.H.P INCREASING.										
09:00	41					SUSPEND F.G.S P.O.O.H WITH GAUGES.										
09:12						SEPARATOR ON BYPASS.										
09:14		1090	0	51		S.W.I										
09:23						RIG TEST SEPARATOR IN TO FLOW TO FLARE.										
09:48		1381	0	51		OPEN WELL TO FLOW ON BYPASS @ 25% CHOKE.										
10:00	0	693	0	52		TRIM FLOW THROUGH SEPARATOR. COMMENCE L.E.T. 76.5									50.5	26
						1.625" ORIFACE PLATE IN SERVICE										
10:14		535	0	52.		CUT CHOKE TO 20%.										
12:00	2.	654	0	54	20		1.625	91	104	88	78.5	51.5		27		
14:00	4	652	0	53	"		"	94	112	88	80	52.5		27.5		
14:05						CUT CHOKE TO 19%.										
16:00	6	715	0	52	19		1.625	90	99	84	81.5	53.5		28		
18:00	8	714	0	51	"		"	90	94	72	83	54.25		28.75		
12/9/93																
06:00	20	715	0	50	"		"	106	83	79	93.5	61.5		32		
08:00	22.	711	0	52	"		"	93	92	81	95.5	63.		32.5		
08:30						PREPARE 2 4000 PSI AMERADA GAUGES & M.B.H.T THERMOMETER.										
08:53		708	0	52.		PRESSURE LUBRICATOR										

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 4 OF 7

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHALWARA

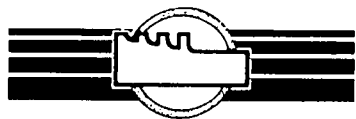
DATE: 12/9/93

TEST TYPE : 2 RATE W.E.T., F.G.S & B.H.P

OPR : D. POITRAS

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION					
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/GM)	OIL (IN/GM)	OIL API GRAVITY @ 60°F	WATER (IN/GM)		
12/9/93.																
09:00	23	708	0	52	19		1.625	86	100	81	96.25	63.5		32.75		
09:13		713	0	53	"	R.I.H. WITH GAUGES PERFORMING GRADIENT STOPS AS PER PROGRAM. SEE B.H.P/BHT REPORT.										
10:00	24	714	0	53	"		1.625	85	104	84	97	63.75		33.25		
10:59		716	0	53		AT SURFACE WITH GAUGES										
11:00	25	715	0	53	"		1.625	85	98	86	98	64.5		33.5		
11:20		710	0	53		DEPRESSURE LUBRICATOR RIG OUT GAUGES. CHARTS GOOD SECURE WELL HEAD										
12:00	26	714	0	53	"		1.625	89	98	88	99	65.25		33.75		
						END OF FIRST RATE.										
12:00	0				100	OPEN WELL TO ESTABLISH SECOND RATE COMMENCE W.E.T. 2.250" ORIFACE PLATE										
14:00	2	168	0	54	"		2.250	85	42	117	103.25	67		36.25		
14:00						INSTALL 2.000" ORIFACE PLATE.										
16:00	4	167	0	55	100		"	85	81	117	104.75	68		36.75		
18:00	6	164	0	55	"		"	83	80	115	106.5	68.75		37.75		
13/9/93.																
06:00	18	159	0	55	"		"	80	78	111	115.25	73.25		42		
08:00	20	159	0	55	"		"	79	77	109	117	74		43		
10:00	22	159	0	58	"		"	79	76	111	118.25	74.75		43.5		
12:00	24	163	0	59	"		"	81	78	118	120.75	76.25		44.5		
14:00	26	160	0	57	"		"	80	78	118	122.75	77.5		45.25		
14:20						PREPARE 2 4000PSI AMERAS & M.B.H.T THERMOMETER.										
14:43						PRESSURE LUBRICATOR										

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 5 OF 7

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 13/9/93

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : K. COMSTOCK

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE (%)	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/GM)	OIL (IN/GM)	OIL API GRAVITY @ 60°F	WATER (IN/GM)
13/9/93.														
14:58					100	R.I.H WITH GAUGES TO PERFORM F.G.S SEE BHP/BHT GAUGE RUN DATA SHEET								
15:00	27	160	0	56	100		2.000	80	78	118	123.5	77.75		45.75
16:00	28	160	0	55	"		"	81	77	117				
17:00	29	158	0	55	"		"	79	76	115				
18:00	30	160	0	55	"		"	77	76	113.				
22:00	34	157	0	56	"		"	79	76	118	128.75	81.25		47.5
14/9/93.														
06:00	42	155	0	55	"		"	77	76	117	134	83.75		50.25
08:00	44	153	0	57	"		"	77	75	108	136	85.125		50.875
08:40						PREPARE TWO 4000 PSI AMERADA GAUGES & M.B.H.T THERMOMETER FOR 96 HR BUILD UP PROGRAM.								
09:00	45	154	0	58	"	PRESSURE LUBRICATOR								
10:00	46	154	0	58	"		2.000	76	74	117	137	85.5		51.5
11:00	47	151	0	58		R.I.H WITH GAUGES TO HANG DEPTH @ 7929' KB. SEE BHP/BHT GAUGE RUN DATA SHEET.								
11:30	47.5	153	0	58	100	@ DEPTH OF 7929' KB MONITOR PRESSURES FOR 4 HOURS FLOW.								
12:00	48	152	0	57	"		2.000	77	73	117	138.25	86		52.25
12:30	48.5	152	0	57	"									
13:00	49	152	0	57	"									
13:30	49.5	152	0	57	"									

FIELD READINGS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 6 OF 7

WELL NAME: COOLLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 14/9/93

TEST TYPE : 2 RATE L.F.T, F.G.S 4-B, H.P

OPR : K. COMSTOCK

[illegible]

CUSTOMER : Santos L.T.D.	PERFORATIONS: 7578' - 8280	PAGE: 7 OF 7
WELL NAME: cooloon South #1	FORMATION : Palahawarra	DATE: 19.9.93
TEST TYPE : B.H.P. /SGS.		OPR : S.TAYLOR

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TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 1 OF 8

WELL NAME: COOLLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 7/9/93

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : D. POITRAS.

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	L.G.R. m ³ /10 ⁶ m ³	
7/9/93															
08:45						ARRIVE ON LOCATION.									
08:50						SHUT WELL IN TO FIT SWAB VALVE.									
09:00						WELL BACK ON LINE ON 100% CHOKE.									
09:30		4365	0			R.I.H 1.75" BLIND BOX ON 1.5" TOOLSTRING.									
10:02						TAG P.B.T.D @ 8676 KB. NO OBSTRUCTIONS ALL PERFS CLEAR P.O.O.H									
10:24						AT SURFACE.									
11:16						SPOT FRAC TANK.									
13:50						SPOT TEST SEPARATOR. COMMENCE RIGGING / TEST EQUIPMENT.									
15:30						PRESSURE TEST ALL LINES & FLANGES									
16:00						SEPARATOR ON BYPASS									
17:30		4447.	0	53.		DIVERT FLOW THROUGH SEPARATOR, FLOW GAS BACK IN LINE 1.250" ORIFACE PLATE									
18:00						COMMENCE L.E.T. MONITOR ALL RATES.									
18:00	0.	4454	0	53.	100	4378	48	43.987	0	0	0	0	0.		
20:00	2.	4440	0	53.	"	4365	47.	43.107	.804	.804	3.592	.067	.067	37.3.	
8/9/93.															
06:00	12	4406	0	50	"	4330	45	43.548	4.966	1.762	21.737	2.136	.801	154.5	
08:00	14	4406	0	52	"	4344	45	44.708	4.812	1.608	25.463	2.537	.935	144.	
10:00	16	4406	0	53	"	4330	48	44.818	4.008	2.400	29.198	2.871	1.135	143.	
12:00	18	4420	0	54	"	4340	50	44.674	4.812	2.400	32.921	3.272	1.335	161	
14:00	20	4427	0	54	"	4340	51	44.564	4.008	.804	36.635	3.606	1.402	108	
16:00	22	4399	0	53	"	4323	46	44.478	3.204	3.204	40.342	3.873	1.669	144	



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 2578' - 2280'

PAGE: 2. OF 8

WELL NAME: COOLOON SOUTH #1

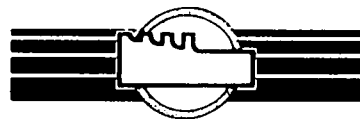
FORMATION : PATCHAWARRA

DATE: 8/9/93

TEST TYPE : 2 RATE L.E.T., F.G.S. & B.H.P.

OPR: D. POITRAS

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION						
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCF m³10³	OIL BBES m³	WATER BBES m³	LGR m³/10⁶m³			
8/9/93											40.342						
1800	24	4399	0	53	100	4323	46	44.478	4.008	1.608	44.049	4.207	1.803	126			
21:00	27	4344	0	51	"	4240	46	43.062			49.432						
								COMPRESSORS DOWN @ STRELELEKI SATEWITE									
9/9/93		NO W/H CHART FROM 1700 HRS 8/9/93 TO 0600 HRS 9/9/93															
06:00	36	7957	0	46	"	7943	86	25.683	2.404	.802	66.554	5.409	2.204	125			
06:00								SEPARATOR ON BYPASS									
12:30								COMPRESSORS BACK ON LINE									
16:00	0	5357	0	49°	"			TRIM FLOW THROUGH SEPARATOR. FLOW GAS IN LINE									
18:00	2	4427	0	50	"	4340	42	46.413	9.612	2.400	3.868	.801	.200	259			
10/9/93																	
06:00	14	4240	0	51	"	4144	46	46.586	1.068	.534	27.161	2.937	1.268	34			
08:00	16	4275	0	52	"	4185	43	46.314	4.812	2.400	31.021	3.338	1.468	156			
10:00	18	4268	0	52	"	4185	44	46.196	4.812	1.608	34.871	3.739	1.602	139			
12:00	20	4268	0	53	"	4192	45	45.674	4.812	2.400	38.677	4.140	1.802	158			
14:00	22	4371	0	52	"	4302	46	45.296	3.204	2.400	42.452	4.407	2.002	124			
16:00	24	4365	0	52	"	4282	46	45.176	4.008	2.400	46.217	4.741	2.202	142			
18:00	26	4330	0	52	"	4254	48	44.781	4.008	1.608	49.949	5.075	2.336	125			
11/9/93																	
06:00	38	4323	0	50	"	4254	44	45.246	4.540	2.002	72.572	7.345	3.337	145			
07:30	39.5							PREPARE 24000 PSI AMERADAS 9 M.B.H.T THERMOMETER FOR F.G.S.									
07:51	39.85	4365	0	52	"			PRESSURE LUBRICATOR									



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 3 OF 8

WELL NAME: COOLON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 11/9/93.

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : D. POITRAS

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	L.G.R. m ³ /10 ⁶ m ³
11/9/93.												72.572	7.345	3.337	
08:00	40	4371	0	52	100	4275	43	45.016	4.812	1.608	76.323	7.746	3.471	143.	
08:11	40.18	4365	0	52	"		R.I.H WITH GAUGES. PERFORM GRADIENT STOPS AS PER PROGRAM SEE B.H.P/B.H.T GAUGE RUN DATA SHEET.								
08:30	40.5						COMPRESSORS DOWN @ SATELLITE. F.T.H.P INCREASING								
09:00							SUSPEND F.G.S P.O.O.H WITH GAUGES.								
09:12							SEPARATOR ON BYPASS								
09:14							SHUT WELL IN.								
09:23.							GAUGES @ SURFACE. RIG SEPARATOR IN TO FLOW TO FLARE								
09:48							OPEN WELL TO FLOW ON BYPASS @ 25% CHOKE								
10:00	0	4778	0	54	25		TRIM FLOW THROUGH SEPARATOR. COMMENCE L.E.T. 1.625 ORIFACE PLATE.								
10:14		3689	0	52	20		REDUCE CHOKE TO 20%.								
12:00	2	4509	0	54	"	627	31	46.070	3.204	3.204	3.839	.267	.267	139.	
14:00	4	4496	0	53	"	648	31	48.510	3.204	1.608	7.882	.534	.401	99.	
14:05							CUT CHOKE TO 19%								
16:00	6	4930	0	52	19	621	29	44.897	3.204	1.608	11.623	.801	.535	107.	
18:00	8	4923	0	51	"	621	22	44.264	2.400	2.400	15.312	1.001	.735	108	
12/9/93.															
06:00	20	4930	0	50	"	731	26	44.361	3.872	1.736	37.493	2.937	1.603	126.	
08:00	22	4902	0	52	"	641	27	44.016	4.812	1.608	41.161	3.338	1.737	146.	
08:30							PREPARE 2 4000 PSI AMERADA GAUGES & B.H.T THERMOMETER								
08:53		4882	0	52	"		PRESSURE LUBRICATOR								



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 4 OF 8

WELL NAME: COOLAN SOUTH #1

FORMATION : PATCHAWARRA

DATE: 12/9/93

TEST TYPE : 2 RATE L.E.T., F.G.S. & B.H.P.

OPR : J. POITRAS

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	L.G.R. m ³ /10 ⁶ m ³	
12/9/93.															
09:00	23	4882	0	52	19	593	27	44.380	3.216	1.608	43.010	3.472	1.804	109.	
09:13								R.I.H. WITH AMERADA GAUGES PERFORMING GRADIENT STOPS AS PER PROGRAM. SEE B.H.P./B.H.T. GAUGE RUN DATA SHEET.							
10:00	24	4923	0	53	"	586	29	44.910	1.608	3.216	44.881	3.539	1.938	107.	
11:00	25	4930	0	53	"	586	30	43.494	4.800	1.608	46.693	3.739	2.005	147.	
12:00	26	4923	0	53	"	614	31	44.278	4.800	1.608	48.538	3.939	2.072	145	
		(4914)						END OF FIRST RATE.							
12:00	0	1427	0	54	100			OPEN WELL TO ESTABLISH SECOND RATE. COMMENCE L.E.T. 2.250" ORIFACE PLATE							
14:00	2	1158	0	54	"	586	47	59.701	5.604	8.016	4.975	.467	.668	228.	
14:00								INSTALL 2.000" ORIFACE PLATE.							
16:00	4	1151	0	55	"	586	47	61.729	3.204	1.608	10.119	.734	.802	78.	
18:00	6	1131	0	55	"	572	46	60.833	2.400	3.204	15.188	.934	1.069	92.	
13/9/93.															
06:00	18	1096	0	54	"	552	44	59.344	2.404	2.270	44.860	2.136	2.204	79.	
08:00	20	1096	0	55	"	545	43	58.754	2.400	3.204	49.756	2.336	2.471	95	
10:00	22	1096	0	58	"	545	44	58.261	2.400	1.608	54.611	2.536	2.605	69.	
12:00	24	1124	0	59	"	558	48	59.277	4.812	3.204	59.551	2.937	2.872	135.	
14:00	26	1103	0	57	"	552	48	58.661	4.008	2.400	64.439	3.271	3.072	109.	
14:20								PREPARE TWO 4000 PSI AMERADAS & M.B. H.T. THERMOMETER FOR F.G.S.							
14:43	2	1103	0	57				PRESSURE LUBRICATOR							



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 5 OF 8

WELL NAME: COOLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 13/9/93.

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P.

OPR : K. Komstock

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (/KPa)	ANNULUS PRESSURE (/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	LGR m ³ /10 ⁶ m ³	
13/9/93															
14:58		1103	0	57	100		R.I.H WITH GAUGES. PERFORM F.G.S AS PERZ PROGRAM SEE B.H.P/B.H.T GAUGE RUN DATA SHEET FOR DETAILS.								
15:00	27	1103	0	57	11	552	48	58.661	3.179	1.588	66.883	3.338	3.673	81	
16:00	28	1103	0	55	11	558	47	58.641			69.326				
17:00	29	1089	0	55	11	545	46	57.751			71.732				
18:00	30	1103	0	55	11	531	45	57.231			74.117				
22:00	34	1083	0	56	11	545	48	57.591	3.179	1.588	91.056	4.273	3.673	83	
14/9/93															
06:00	42	1069	0	55	11	531	47	57.021	2.004	2.202	110.063	4.941	4.407	74	
08:00	44	1055	0	57	11	531	42	57.111	2.400	1.600	114.822	5.308	4.574	70	
08:40								PREPARE TWO 4000 PSI GAUGES & M.B. H.T THERMOMETER FOR: 96 HR BUILDUP SURVEY.							
09:00	45	1062	0	57	100			PRESSURE LUBRICATOR							
10:00	46	1062	0	58	11	524	47	55.951	1.200	2.004	119.485	5.408	4.741	57	
11:00	47	1041	0	58	11			R.I.H WITH GAUGES							
11:30	47.5	1055	0	58	11			0 HANG DEPTH OF 7929' KB. FLOW WELL FOR 4 HOURS MONITOR PRESSURES.							
12:00	48	1048	0	57	11	531	47	55.881	1.608	2.400	124.142	5.542	4.941	72	
12:30	48.5	1048	0	57	11										
13:00	49	1048	0	57	11										
13:30	49.5	1048	0	57	11										
14:00	50	1048	0	57	11	531	49	56.111	2.808	1.608	128.818	5.776	5.075	79	

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 6 OF 8

WELL NAME: COOLOON SOUTH # 1

FORMATION : PATCHAWARRA

DATE: 14/9/93

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : K. COMSTOCK

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCFD m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	L.G.R. m ³ /10 ⁶ m ³
14/9/93															
	14:30	50.5	1048	0	51	100									
	15:00	51	1048	0	51	"									
	15:30	51.5	1048	0	56	"	524	49	55.421	2.672	1.600	132.282	5.943	5.175	77.
	15:30	0	(1079)				OBTAIN TWO H ₂ O SAMPLES, S.W. 1 FOR 96 HR BUILDUP. COMMENCE RIGGING OUT TEST EQUIPMENT								
	15:35		4275	0											
	15:40		5337	0											
	15:45	0.25	6012	0											
	16:00	0.5	8605	0											
	16:15	0.75	9315	0											
	16:30	1	9639	0											
	16:45	1.25	9860	0											
	17:00	1.5	9949	0											
	17:15	1.75	9998	0											
	17:30	2	10115	0											
	17:45	2.25	10156	0											
	18:00	2.5	10239	0											
	18:15	2.75	10274	0											
	18:30	3	10308	0											
	18:45	3.25	10349	0											
	19:00	3.5	10405	0											
	19:15	3.75	10460	0											

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 7 OF 8

WELL NAME: COOLBON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 14/9/93

TEST TYPE : 2 RATE L.E.T F.G.S B.H.P

OPR : K. COMSTOCK

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ 10 ³	OIL BBLS m ³	WATER BBLS m ³		
14/9/93															
19:30	4	10487	0												
22:30	7	10798	0												
15/9/93															
02:30	11	10998	0												
06:00	14.5	11446	0												
10:00	18.5	11597	0												
1400	22.5	11650	0												
1800	26.5	11785	0												
2200	30.5	11876	0												
16-09-93			0												
0200	34.5	11968	0												
0600	38.5	12093	0												
1000	42.5	12120	0												
1400	46.5	12186	0												
1800	50.5	12205	0												
2200	54.5	12268	0												
17-09-93			0												
0200	58.5	12296	0												
0600	62.5	12321	0												
1000	66.5	12352	0												
1400	70.5		0												

TEST RESULTS

CUSTOMER : Santos L.T.D.

PERFORATIONS: 7578' - 8280' KB

PAGE: 8 OF 8

WELL NAME: COOLON South #1

FORMATION : Pachawanna

DATE: 17.9.93

TEST TYPE : B.H.P. / S.G.S.

OPR : S. TAYLOR

[illegible]

EXPERTEST PTY. LTD.



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 1 OF 4

WELL NAME: COOLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 7/9/93.

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : D. POITRAS.

ORIFICE METER TYPE: DANIELS S/NR

STATIC PRESSURE RANGE : 0 - 1500 PSIG

GAS SPECIFIC GRAVITY (SG) = .7451

METER RUN SIZE : 3.068"

DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC

FG $\sqrt{(1/SG)}$ = 1.1585

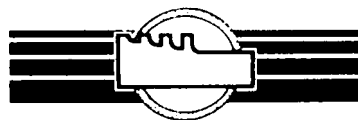
SEPARATOR NO : U 459

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 27.8038

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE %	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_F \times H_W)}$	C ₁ = F _B × F _{TF} × F _{PV} × Y ₂				C ₁	C (C = C ₁ × C ₂)	GAS FLOW RATE Q = $\sqrt{(P_F \times H_W) \times C}$	
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
7/9/93.						1.250		322.0279							
18:00	0	100	650	48	118	"	176.6352	"	.9485	1.0725	1.0005	327.7417	8794.2317	1.553	43.987.
18:00							COMMENCE 1 ST RATE L.E.T.								
20:00	2	"	648	47	124	"	174.5165	322.0279	.9436	1.0693	1.0005	325.0828	8722.8856	1.522	43.107.
8/9/93.															
06:00	12	"	643	47	113	"	173.8419	"	.9526	1.0742	1.0005	329.6860	8846.4049	1.538	43.548
08:00	14	"	645	47	113	"	174.1120	"	.9526	1.0626	1.0005	326.1340	9067.9259	1.579	44.708
10:00	16	"	643	48	118	"	175.6315	"	.9485	1.0603	1.0005	324.0249	9009.1205	1.583	44.818
12:00	18	"	645	48	122	"	175.9545	"	.9452	1.0589	1.0005	322.4780	8966.1095	1.578	44.674
14:00	20	"	645	48	124	"	175.9545	"	.9436	1.0581	1.0005	321.6864	8944.1003	1.574	44.564
16:00	22	"	642	47	115	"	173.7066	"	.9510	1.0615	1.0005	325.2167	9042.2565	1.571	44.478
18:00	24	"	642	47	115	"	173.7066	"	.9510	1.0615	1.0005	325.2167	9042.2565	1.571	44.478
21:00	27	"	630	45	115	"	168.3746	"	.9510	1.0602	1.0005	324.8357	9031.6639	1.521	43.062.
9/9/93							SEPARATOR ON BYPASS. COMPRESSORS DOWN @ SATELLITE 21:00.								
06:00	36	"	1167	7	86	"	90.3825	"	.9759	1.1484	1.0000	360.9199	10034.9407	9.070	25.683.
16:00	0						TRIM THROUGH SEPARATOR.								
18:00	2	"	645	50	108	"	179.5829	"	.9568	1.0648	1.0005	328.2631	9126.9565	1.639	46.413.
10/9/93															
06:00	14	"	616	54	115	"	182.3842	"	.9510	1.0588	1.0006	324.4302	9020.3879	1.645	46.586
08:00	16	"	622	52	109	"	179.8444	"	.9560	1.0619	1.0005	327.0846	9094.1912	1.636	46.314

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GAS FLOW CALCULATIONS

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 2 OF 4

WELL NAME: COOLLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 10/9/93.

TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P

OPR : D. POIRAS

ORIFICE METER TYPE: DANIELS SGR

STATIC PRESSURE RANGE : 0 - 1500 PSIG

GAS SPECIFIC GRAVITY (SG) = .7451

METER RUN SIZE : 3.063"

DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC

FG $\sqrt{(1/SG)}$ = 1.1585

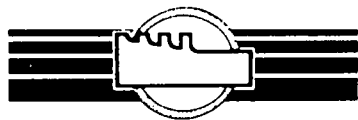
SEPARATOR NO : V 459

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 27.8038

DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE %	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_F \times H_W)}$	C ₁ = F _B x F _{TF} x F _{PV} x Y ₂				C ₁	C (C = C ₁ x C ₂)	GAS FLOW RATE Q = $\sqrt{(P_F \times H_W) \times C}$	
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
10/9/93		100				1.250		322.0279							
10:00	18	"	622	52	111	"	179.8444	"	.9543	1.0611	1.0005	326.2510	9071.0131	1.631	46.196
12:00	20	"	623	51	113	"	178.2498	"	.9526	1.0603	1.0005	325.4545	9048.8670	1.613	45.674
14:00	22	"	639	49	115	"	176.9491	"	.9510	1.0612	1.0005	325.1296	9039.8333	1.500	45.296
16:00	24	"	636	49	115	"	176.5333	"	.9510	1.0609	1.0005	325.0360	9037.2312	1.595	45.176
18:00	26	"	632	48	111	"	174.1723	"	.9543	1.0621	1.0005	326.5607	9079.6233	1.581	44.781
11/9/93															
06:00	38	"	632	49	111	"	175.9773	"	.9543	1.0621	1.0005	326.5640	9079.7153	1.598	45.246
08:00	40	"	635	48	109	"	174.5852	"	.9560	1.0633	1.0005	327.4992	9105.7184	1.590	45.016
08:30							COMPRESSORS DOWN @ SATELLITE.								
09:23							RIG SEPARATOR IN TO FLOW TO FLARE.								
10:00	0	25				1.625	TRIM FLOW THROUGH SEPARATOR.								
12:00	2	20	106	104	88	"	104.9952	562.5825	.9741	1.0110	1.0058	557.3108	15495.3509	1.627	46.070
14:00	4	"	109	112	88	"	110.4898	"	.9741	1.0114	1.0061	557.6413	15504.5411	1.713	48.510
16:00	6	19	105	99	84	"	101.9559	"	.9777	1.0112	1.0056	559.3154	15551.0878	1.586	44.897
18:00	8	"	105	94	72	"	99.3479	"	.9837	1.0120	1.0053	565.8995	15734.1502	1.563	44.264
12/9/93															
06:00	20	"	121	83	79	"	100.2148	"	.9822	1.0134	1.0041	562.2367	15632.3108	1.567	44.361
08:00	22	"	108	92	81	"	99.6795	"	.9804	1.0117	1.0051	560.8576	15593.9658	1.554	44.016
09:00	23	"	101	100	81	"	100.4988	"	.9804	1.0110	1.0059	560.8837	15594.8294	1.567	44.380

EXPERTEST PTY. LTD.



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS

PERFORATIONS: 7578'-8280'

PAGE: 3. OF 4

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 12/9/93.

TEST TYPE : 2 RATE L.E.T., F.G.S & B.H.P

OPR : D. POITRAS

ORIFICE METER TYPE: DANIELS S/N

STATIC PRESSURE RANGE : 0 - 1500 PSIG

GAS SPECIFIC GRAVITY (SG) = .7451

METER RUN SIZE : 3.068"

DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC

FG $\sqrt{(1/SG)}$ = 1.1585

SEPARATOR NO : U 459

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 27.8038

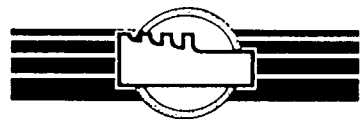
DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE %	STATIC PRESS P _F (PSIA)	DIFF PRESS H _W (IN WC)	GAS FLOW TEMP (°F)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_F \times H_W)}$	C ₁ = F _B x F _{TF} x F _{PV} x Y ₂				C ₁	C (C = C ₁ x C ₂)	GAS FLOW RATE Q = $\sqrt{(P_F \times H_W) \times C}$	
								F _B	F _{TF}	F _{PV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
12/9/93.															
10:00	24	19	100	104	84	1.625	101.9804	562.5825	.9777	1.0107	1.0062	559.3383	15551.7225	1.586	44.910
11:00	25	"	100	98	86	"	98.9949	"	.9759	1.0105	1.0058	558.0432	15515.7148	1.536	43.494
12:00	26	"	104	98	88	"	100.9554	"	.9741	1.0108	1.0056	557.0644	15488.5010	1.564	44.278
								END OF FIRST RATE. OPEN WELL TO 100%				RATE #1 Q _g :		1.565	44.103
12:00	0	100						TRIM FLOW THROUGH SEPARATOR COMMENCE 2 nd RATE L.E.T. 2.250" PLATE IN SERVICE.							
14:00	2	"	100	42	117	2.250	64.8074	1219.7656	.9493	1.0088	1.0016	1170.0502	32531.8269	2.108	59.701
14:00								2.000" PLATE IN SERVICE.							
16:00	4	"	100	81	117	2.000	90	906.0052	.9493	1.0088	1.0040	871.1510	24221.2972	2.180	61.729
18:00	6	"	98	80	115	"	88.5438	"	.9510	1.0087	1.0041	872.6228	24262.2192	2.148	60.833
13/9/93.															
06:00	18	"	95	78	111	"	86.0814	"	.9543	1.0086	1.0041	875.6282	24345.7797	2.096	59.344
08:00	20	"	94	77	109	"	85.0764	"	.9560	1.0086	1.0041	877.1624	24388.4367	2.075	58.754
10:00	22	"	94	76	111	"	84.5222	"	.9543	1.0086	1.0040	875.4931	24342.0239	2.057	58.261
12:00	24	"	96	78	118	"	86.5332	"	.9485	1.0084	1.0040	870.0591	24190.9377	2.093	59.277
14:00	26	"	95	78	118	"	86.0814	"	.9485	1.0083			24189.835	2.082	58.661
15:00	27	"	95	78	118	"	86.0814	"	.9485	1.0083			24189.835	2.082	58.661
16:00	28	"	96	77	117	"	85.9767	"	.9493	1.0084			24211.758	2.082	58.641
17:00	29	"	94	76	115	"	84.5222	"	.9510	1.0084			24252.580	2.050	57.751
18:00	30	"	92	76	113	"	83.6182	"	.9526	1.0083			24294.907	2.031	57.231

CUSTOMER : SANTOS	PERFORATIONS: 7578' - 8280'	PAGE: 4 OF 4
WELL NAME: COOLCON SOUTH # 1	FORMATION : PATCHAWARRA	DATE: 13/9/93.
TEST TYPE : 2 RATE L.E.T, F.G.S & B.H.P		OPR : K. COMSTOCK.

ORIFICE METER TYPE:	DANIELS GNR	STATIC PRESSURE RANGE :	0 - 1500	PSIG	GAS SPECIFIC GRAVITY (SG) =	.7451
METER RUN SIZE :	3.068"	DIFFERENTIAL PRESS. RANGE:	0 - 200	IN WC	FG $\sqrt{(1/SG)}$	= 1.1585
SEPARATOR NO :	V 459	STANDARD CONDITIONS :	14.73 PSI @ 60°F		C ₂ (FU x FG)	= 27.8038

ET 106

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER : SANTOS

PERFORATIONS: 75.78' -

PAGE: 1 OF 3

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 7/9/93.

TEST TYPE : 2 RATE L.E.T, F.G.S 9-B.H.P

OPR : D. POITRAS

TANK NUMBER	#1 = 50 #2 =	TANK CAPACITY	#1 = 56.6 bbls/m ³ #2 = bbls/m ³	TANK SCALE	#1 = 1" = .267 m ³ bbls/in · m ³ /cm #2 = bbls/in · m ³ /cm	OIL API GRAVITY = @ 60°F					
DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/CM)	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)	TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)
7/9/93.											
18:00	0	#1	5	.75	INITIAL DIP.			4.75			
20:00	2	"	6	1	.067	.804	.067	5	.067	.804	.067
8/9/93											
06:00	12	"	16.5	8.75	2.069	4.966	2.136	7.75	.734	1.762	.801
08:00	14	"	18.5	10.25	.401	4.812	2.537	8.25	.134	1.608	.935
10:00	16	"	20.5	11.5	.334	4.008	2.871	9	.200	2.400	1.135
12:00	18	"	22.75	13	.401	4.812	3.272	9.75	.200	2.400	1.335
14:00	20	"	24.25	14.25	.334	4.008	3.606	10	.067	.804	1.402
16:00	22	"	26.25	15.25	.267	3.204	3.873	11	.267	3.204	1.669
18:00	24	"	28	16.5	.334	4.008	4.207	11.5	.134	1.608	1.803
9/9/93.											
06:00	36	"	34	21	1.202	2.404	5.409	13	.401	.802	2.204
16:00	0	"	34	21	INITIAL DIP.			13			
18:00	2	"	37.75	24	.801	9.612	.801	13.75	.200	2.400	.200
10/9/93.											
06:00	14	"	49.75	32	2.136	1.068	2.937	17.75	1.068	.534	1.268
08:00	16	"	52	33.5	.401	4.812	3.338	18.5	.200	2.400	1.468
10:00	18	"	54	35	.401	4.812	3.739	19	.134	1.608	1.602
12:00	20	"	56.25	36.5	.401	4.812	4.140	19.75	.200	2.400	1.802
14:00	22	"	58	37.5	.267	3.204	4.407	20.5	.200	2.400	2.002

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 2 OF 3

WELL NAME: COOLCOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 10/9/93

TEST TYPE : 2 RATE L.E.T., F.G.S & B.H.P

OPR : J. POITRAS

TANK NUMBER		#1 = 50	TANK CAPACITY		#1 = 56.6	TANK SCALE		#1 = 1" = .267 m ³	OIL API GRAVITY = @ 60°F		
		#2 =			#2 =			#2 =			
DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/CM)	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/CM)	TANK PRODUCTION (BBLS/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLS/m ³)	TANK DIP (IN/CM)	TANK PRODUCTION (BBLS/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLS/m ³)
10/9/93		#1	58	37.5			4.407	20.5			2.002
16:00	24	"	60	38.75	.334	4.008	4.741	21.25	.200	2.400	2.202
18:00	26	"	61.75	40	.334	4.008	5.075	21.75	.134	1.608	2.336
11/9/93											
06:00	38	"	74	48.5	2.270	4.540	7.345	25.5	1.001	2.002	3.337
08:00	40	"	76	50	.401	4.812	7.746	26	.134	1.608	3.471
08:30	40.5		76.5	50.5	COMPRESSORS DOWN @ SATELLITE.			26			
10:00	0	"	76.5	50.5	OPENING DIP			26			
12:00	2	"	78.5	51.5	.267	3.204	.267	27	.267	3.204	.267
14:00	4	"	80	52.5	.267	3.204	.534	27.5	.134	1.608	.401
16:00	6	"	81.5	53.5	.267	3.204	.801	28	.134	1.608	.535
18:00	8	"	83	54.25	.200	2.400	1.001	28.75	.200	2.400	.735
12/9/93											
06:00	20	"	93.5	61.5	1.936	3.872	2.937	32	.868	1.736	1.603
08:00	22	"	95.5	63	.401	4.812	3.338	32.5	.134	1.608	1.737
09:00	23	"	96.25	63.5	.134	3.216	3.472	32.75	.067	1.608	1.804
10:00	24	"	97	63.75	.067	1.608	3.539	33.25	.134	3.216	1.938
11:00	25	"	98	64.5	.200	4.800	3.739	33.5	.067	1.608	2.005
12:00	26	"	99	65.25	.200	4.800	3.939	33.75	.067	1.608	2.072
12:00 (20)	0	#1	99	65.25	END FIRST RATE, INITIAL DIP			33.75			
14:00	2	"	103.25	67	.467	5.604	.467	36.25	.668	8.016	.668

RATE #1, Qc: 3.765 m³/d

RATE #1, Qw: 1.842 m³/d

EXPERTEST PTY. LTD.

LIQUID PRODUCTION

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 3 OF 3

WELL NAME: COOLCON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 12/9/93.

TEST TYPE : 2 RATE L.E.T., F.G.G & B.H.P

OPR : J. P. OILGAS

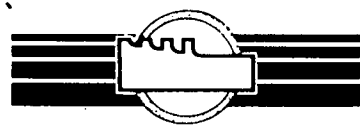
TANK NUMBER	#1 = 50 #2 =	TANK CAPACITY	#1 = 56.6 bbls/m ³ #2 = bbls/m ³	TANK SCALE	#1 = 1" = .267 m ³ bbls/in - m ³ /cm #2 = bbls/in - m ³ /cm	OIL API GRAVITY = @ 60°F
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DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/CM)	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)	TANK DIP (IN/CM)	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBLs/m ³)
12/9/93.			103.25	67			.467	36.25			.668
16:00	4	#1	104.75	68	.267	3.204	.734	36.75	.134	1.608	.802
18:00	6	"	106.5	68.75	.200	2.4	.934	37.75	.267	3.204	1.069
13/9/93.											
06:00	18	"	115.25	73.25	1.202	2.404	2.136	42.	1.135	2.270	2.204
08:00	20	"	117	74	.200	2.400	2.336	43.	.267	3.204	2.471.
10:00	22	"	118.25	74.75	.200	2.400	2.536	43.5	.134	1.608	2.605
12:00	24	"	120.75	76.25	.401	4.812	2.937	44.5	.267	3.204	2.872.
14:00	26	"	122.75	77.5	.334	4.008	3.271	45.25	.200	2.400	3.072.
15:00	27	"	123.5	77.75	.067	1.608	3.338	45.75	.134	3.216.	3.206
22:00	34	"	128.75	81.25	.935	3.179.	4.273	47.5	.467	1.588	3.673.
14/9/93.											
06:00	42	"	134	83.75	.668	2.004	4.941	50.25	.734	2.202.	4.407.
08:00	44	"	136	85.125	.367.	4.404	5.308	50.875	.167	2.004	4.574.
10:00	46	"	137	85.5	.100	1.200	5.408	51.5	.167	2.004	4.741.
12:00	48	"	138.25	86	.134	1.608	5.542	52.25	.200	2.400	4.941
14:00	50	"	139.625	86.875	.234	2.808	5.776	52.75	.134	1.608	5.075
15:30	51.5	"	140.75	87.5	.167	2.672.	5.943.	53.125	.100	1.600	5.175
(47.5)											

 END OF 2ND RATE END OF TEST.

 RATE #2, Q_C = 2.631 m³/d

 RATE #2, Q_W = 2.207 m³/d



SAMPLING DATA

CUSTOMER : SANTOS

PERFORATIONS: 7578 - 8280

PAGE: 1 OF 1

WELL NAME: COOLOON SOUTH # 1

FORMATION : PATCHAWARRA

DATE: 14/9/93

TEST TYPE : 2 RATE L.E.T F.G.S B.H.P

OPR : K. KOMSTOCK

SAMPLE # 1 & 2

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
15:30	1 & 2	500	H ₂ O	2	ATMOSPHERE				STOCK TANK					
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS	BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE %	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	L.G.R. m ³ /10 ⁶ m ³	PRESSURE (PSI/KPa)	TEMPERATURE (°F/°C)
1048	56	100		524	49	1.0079	0.7451		55.421	2.672	1.600	77		

REMARKS:

SAMPLE #

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT			SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D		PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	

REMARKS:

SAMPLE #

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT			SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)
WELLHEAD DATA				SEPARATOR DATA			GRAVITIES		FLOW RATES			RATIOS		BOTTOM HOLE	
TUBING PRESS (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	BS&W (%)	SEPARATOR PRESS (PSI/KPa)	SEPARATOR TEMP (°F/°C)	FPV	GAS SPECIFIC GRAVITY	OIL API GRAV @60°F	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D			PRESSURE	TEMPERATURE
														(PSI/KPa)	(°F/°C)

REMARKS:

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 1 OF 2

WELL NAME: COOLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 12/9/93

TEST TYPE : 2 RATE L.F.T., F.G.S & B.H.P (FGS → RATE #1)

OPR : D. POIRAS

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

TIME
(HOURS)TUBING
PRESSURE
(PSI/KPa)ANNULUS
PRESSURE
(PSI/KPa)

ELEMENT SERIAL NO.

29321

29323

DATE : 12/9/93

ELEMENT RANGE

4000 PSI

3950 PSI

PRESSURE LUBRICATOR :

08:53

4916

Ø

RECORDING SECTION SERIAL NO.

14631

12963

RUN IN HOLE :

09:13

4916

Ø

DATE OF CALIBRATION:

25/6/93

25/6/93

ON DEPTH AT :

7929 FT/M

10:24

4923

Ø

CLOCK SERIAL NO.

A 16088

A 16087

DATE : 12/9/93

CLOCK RANGE

3 HR

3 HR

PULL OUT OF HOLE :

10:39

4909

Ø

LEAD SCREW TYPE

15 TLS

15 TLS

AT SURFACE :

10:59

4937

Ø

DEPRESSURE LUBRICATOR :

11:20

4895

Ø

ENGAGE STYLUS DATE 12/9/93 TIME

08:48

08:48

MAXIMUM BHT AT 7929 FT/M = 272 °F/M

DISENGAGE STYLUS DATE 12/9/93 TIME

11:22

11:22

N.B. ALL DEPTHS ARE MEASURED FROM K.B.

DATE

TIME

REMARKS

12/9/93

08:53

WELL FLOWING ON A 19% CHOKER SETTING.



FLOWING PRESSURE GRADIENT SURVEY

Location: COOLOON STH. 1

Tested: 12th September 1993.

Formation: PATCHAWARRA

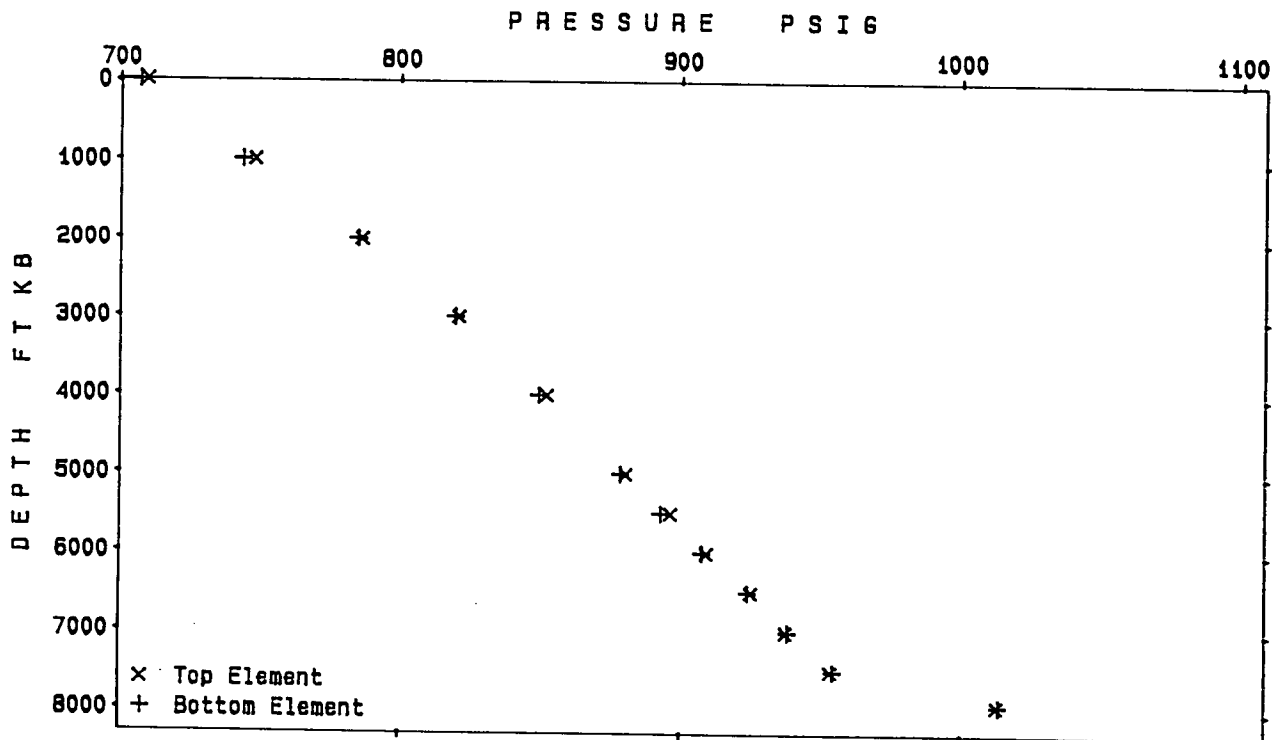
Client: SANTOS LTD.

PRESSURE ELEMENT DATA

Position	Serial No	Range	Calibrated
Top	29321	4000	25/ 6/93
Bottom	29323	3950	25/ 6/93

WELL DATA

DWT In	713 PSIG
DWT Out	713 PSIG
Max BHT	272 F



TOP ELEMENT

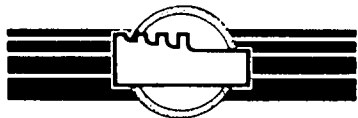
BOTTOM ELEMENT

Depth FT KB	Deflection Inches	Pressure PSIG	Gradient PSI/FT	Deflection Inches	Pressure PSIG	Gradient PSI/FT
LUB.	0.3559	709.8	-	0.3581	707.0	-
1000	0.3752	748.6	0.039	0.3767	743.9	0.037
2000	0.3942	786.7	0.038	0.3974	785.1	0.041
3000	0.4112	820.9	0.034	0.4146	819.4	0.034
4000	0.4267	852.1	0.031	0.4295	849.0	0.030
5000	0.4409	880.6	0.029	0.4442	878.3	0.029
5500	0.4488	896.5	0.032	0.4515	892.8	0.029
6000	0.4552	909.4	0.026	0.4589	907.5	0.030
6500	0.4631	925.3	0.032	0.4671	923.9	0.033
7000	0.4693	937.8	0.025	0.4743	938.2	0.029
7500	0.4772	953.7	0.032	0.4824	954.3	0.032
7929	0.5067	1013.0	0.138	0.5120	1013.3	0.137
LUB.	0.3544	706.8	-	0.3576	706.0	-

GENERAL REMARKS

FGS RATE#1

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 2 OF 2.

WELL NAME: COOLBORN SOUTH #1

FORMATION : PATCHAWARRA

DATE: 13/9/93

TEST TYPE : 2 RATE L.F.T., F.G.S & B.H.P

(F65 - RATE #2)

OPR : K. COMSTOCK

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

TIME
(HOURS)TUBING
PRESSURE
(PSI/KPa)ANNULUS
PRESSURE
(PSI/KPa)

ELEMENT SERIAL NO.

29321

29323

DATE

13/9/93.

ELEMENT RANGE

4000 PSI

3950 PSI

PRESSURE LUBRICATOR

14:43

1103

Ø

RECORDING SECTION SERIAL NO.

14631

12963

RUN IN HOLE

14:58

1103

Ø

DATE OF CALIBRATION:

25/6/93

25/6/93

ON DEPTH AT

7929 FT/14

16:00

1103

Ø

CLOCK SERIAL NO.

A 16087

A 16088

DATE

13/9/93.

CLOCK RANGE

3 HR

3 HR.

PULL OUT OF HOLE

16:15

1103

Ø

LEAD SCREW TYPE

15 TLS

15 TLS.

AT SURFACE

16:52

1103

Ø

DEPRESSURE LUBRICATOR

17:07

1103

Ø

ENGAGE STYLUS

DATE

13/9/93

TIME

14:37

14:37.

MAXIMUM BHT AT

7929 FT/14 = 254 °F/14

DISENGAGE STYLUS

DATE

13/9/93

TIME

17:12

17:12.

N.B. ALL DEPTHS ARE MEASURED FROM K.B.

DATE

TIME

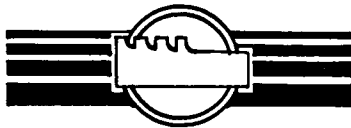
REMARKS

13/9/93

14:43

WELL FLOWING ON A 100% CHOKE.

EXPERTEST PTY. LTD.



FLOWING PRESSURE GRADIENT SURVEY

Location: COOLOON STH #1

Tested: 13th September 1993.

Formation: PATCHAWARRA

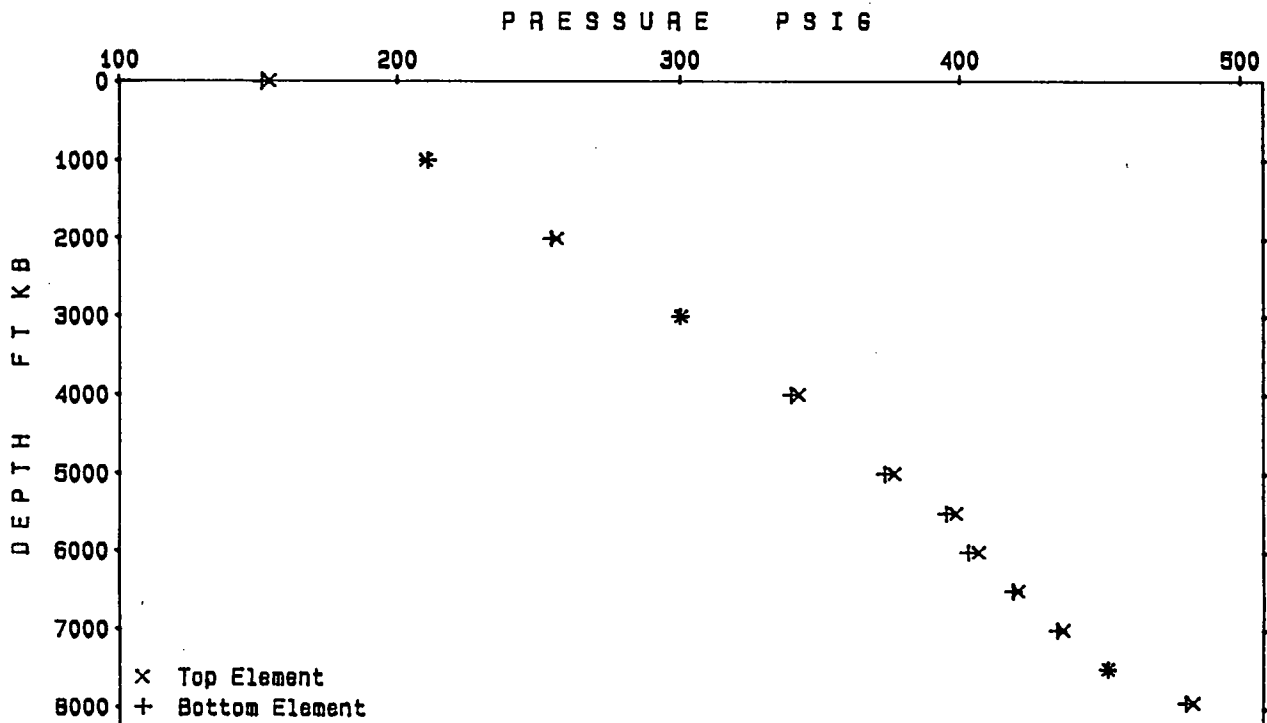
Client: SANTOS LTD.

PRESSURE ELEMENT DATA

Position	Serial No	Range	Calibrated
Top	29321	4000	25/ 6/93
Bottom	29323	3950	25/ 6/93

WELL DATA

DWT In	160 PSIG
DWT Out	160 PSIG
Max BHT	254 F



TOP ELEMENT

BOTTOM ELEMENT

Depth FT KB	Deflection Inches	Pressure PSIG	Gradient PSI/FT	Deflection Inches	Pressure PSIG	Gradient PSI/FT
LUB.	0.0790	154.1	-	0.0780	151.3	-
1000	0.1070	210.2	0.056	0.1080	210.7	0.059
2000	0.1300	256.3	0.046	0.1300	254.3	0.044
3000	0.1520	300.4	0.044	0.1530	299.8	0.046
4000	0.1730	342.6	0.042	0.1730	339.5	0.040
5000	0.1900	376.7	0.034	0.1900	373.2	0.034
5500	0.2010	398.7	0.044	0.2010	395.0	0.044
6000	0.2050	406.8	0.016	0.2050	402.9	0.016
6500	0.2120	420.8	0.028	0.2130	418.8	0.032
7000	0.2200	436.9	0.032	0.2210	434.6	0.032
7500	0.2280	452.9	0.032	0.2300	452.5	0.036
7929	0.2430	483.0	0.070	0.2440	480.3	0.065
LUB.	0.0830	162.1	-	0.0800	155.3	-

GENERAL REMARKS

WELL FLOWING ON A 100% CHOKE

FGS RATE #2

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : SANTOS

PERFORATIONS: 7578' - 8280'

PAGE: 1 OF 2

WELL NAME: COOLLOON SOUTH #1

FORMATION : PATCHAWARRA

DATE: 14/9/93.

TEST TYPE : B.H.P.S.

OPR : K. COMSTOCK.

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

TIME
(HOURS)TUBING
PRESSURE
(./KPa)ANNULUS
PRESSURE
(./KPa)

ELEMENT SERIAL NO.

29321

29323

N/A

DATE

14/9/93.

ELEMENT RANGE

4000 PSI

3950 PSI

PRESSURE LUBRICATOR

09:00

1062

0

RECORDING SECTION SERIAL NO.

14631

12963.

RUN IN HOLE

11:00

1041

0

DATE OF CALIBRATION:

25/6/93

25/6/93.

ON DEPTH AT

7929 FT/M

11:30

1055

0

CLOCK SERIAL NO.

F 15682

F 15691

DATE

19/9/93

CLOCK RANGE

120 HR

120 HR

PULL OUT OF HOLE

06:39

12680

0

LEAD SCREW TYPE

15 TLS

15 TLS.

AT SURFACE

07:04

12700

0

DEPRESSURE LUBRICATOR

09:04

12700

0

ENGAGE STYLUS

DATE

14/9/93

TIME

08:45

08:45

MAXIMUM BHT AT 7929 FT. = 282 °F.

DISENGAGE STYLUS

DATE

19/9/93

TIME

09:09

09:09

N.B. ALL DEPTHS ARE MEASURED FROM K.B.

DATE

TIME

REMARKS

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 01 FIELD COOLOON SOUTH	WELL 1
EFF DEPTH		WELL STAT	TOOL HUNG 7929'KB
CASING	-	CASING PRESS	ON BOTTOM 1130 14/9
LINER	-	TUBING PRESS	OFF BOTTOM 0639 19/9
DATE	930914	ELEMENT RANGE	0 - 3989 ZERO POINT
ELEVATION		ZONE	SHUT-IN 1530 14/9
MAX TEMP	282	PICK-UP	ON-PROD
PERF	-	CAL SER NO.	29323 MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	2RT/LET/FGS/BHP

SURVEY DATA

CO. SANTOS		RUN 01 FIELD COOLOON SOUTH	WELL 1
TIME	P-T	DP-DT	DTIME
START B/L 15:30	465.9	465.9	0.0
15:32	492.0	492.0	.0
15:34	543.3	543.3	.1
15:36	632.1	632.1	.1
15:38	711.8	711.8	.1
15:42	795.0	795.0	.2
15:44	904.0	904.0	.2
15:49	1065.2	1065.2	.3
15:55	1188.9	1188.9	.4
15:59	1316.6	1316.6	.5
16:04	1439.4	1439.4	.6
16:12	1551.0	1551.0	.7
16:26	1673.6	1673.6	.9
16:44	1760.9	1760.9	1.2
17:06	1801.8	1801.8	1.6
18:11	1858.0	1858.0	2.7
19:26	1902.4	1902.4	3.9
20:53	1941.8	1941.8	5.4
22:26	1977.8	1977.8	6.9
0:58	2030.5	2030.5	9.5
5:00	2091.6	2091.6	13.5
7:53	2121.9	2121.9	16.4
11:52	2153.6	2153.6	20.4
14:56	2174.2	2174.2	23.4
18:46	2192.9	2192.9	27.3
22:03	2207.9	2207.9	30.6
1:41	2222.0	2222.0	34.2
5:24	2231.3	2231.3	37.9
9:44	2247.3	2247.3	42.2
13:45	2254.7	2254.7	46.3
20:23	2269.7	2269.7	52.9
1:35	2279.4	2279.4	58.1
7:29	2286.1	2286.1	64.0
13:29	2295.6	2295.6	70.0
19:13	2303.3	2303.3	75.7
0:46	2312.6	2312.6	81.3
6:53	2320.2	2320.2	87.4
12:30	2328.6	2328.6	93.0
18:51	2335.6	2335.6	99.3
1:34	2344.9	2344.9	106.1
6:39	2349.5	2349.5	111.2
12:13	460.2	460.2	-3.3
13:23	466.0	466.0	-2.1
14:35	469.4	469.4	-.9

LUBRICATOR; D.W.T. IN: 154 psi / OUT: 1842 psi
 AMERADA IN: 149 psi / OUT: 1845 psi

ELEMENT #29321 was also run.

CUMULATIVE PRODUCTION BEFORE SHUT IN = 13.0 E6m3

August cumulative total = 12.5 E6m3
 August mean gas daily = 35.3 E3m3/d = 0.0353 E6m3/d
 Well on line for 13.646 days in September before shut in.
 (assumes flow rate remained constant)

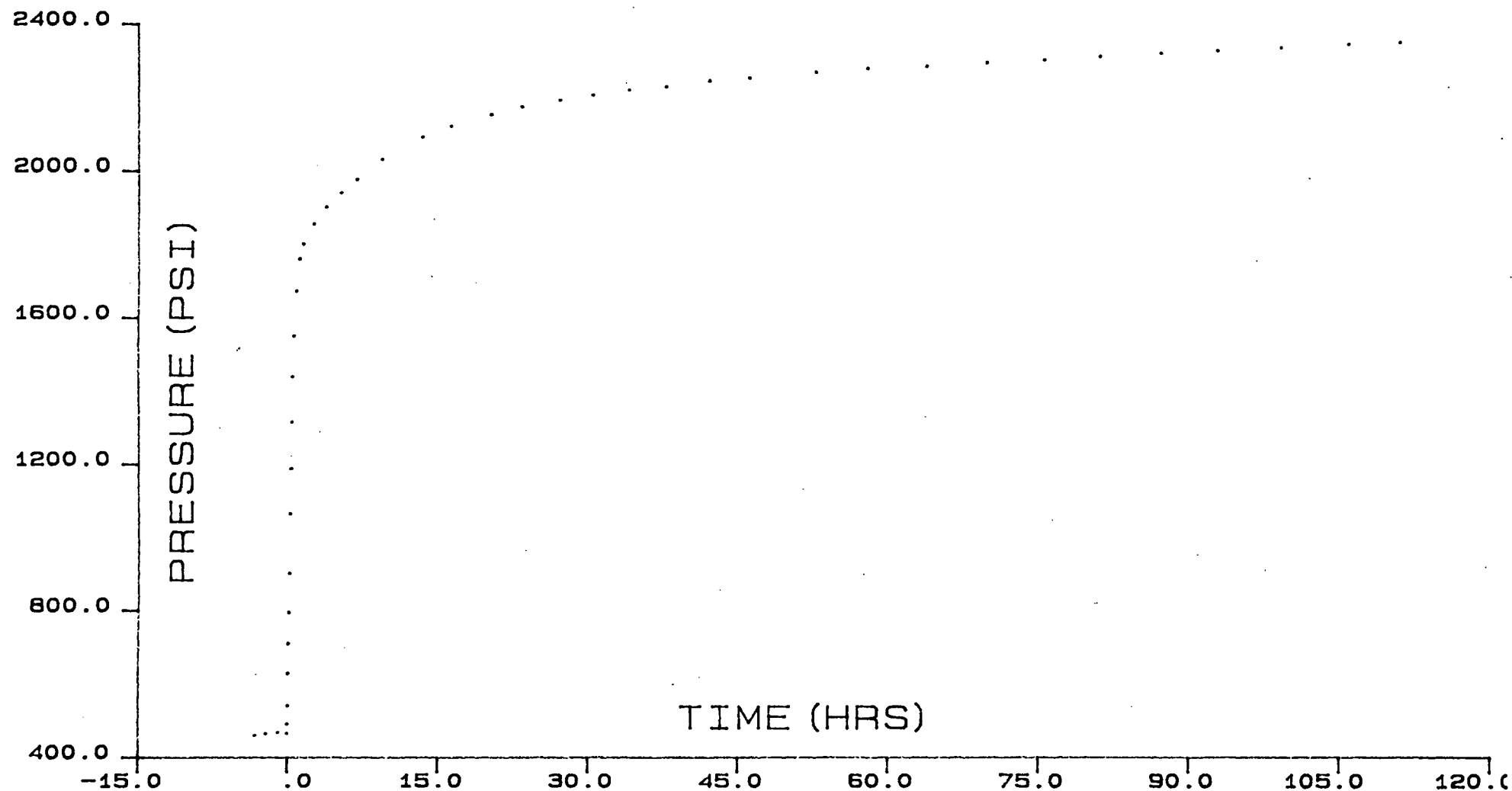
COOLOON SOUTH #1

BHP

SEPTEMBER 1993

ELEMENT #29323

@ 7929'KB





BHP/BHT GAUGE RUN DATA

CUSTOMER : Santos L.T.D.

PERFORATIONS: 7578'-8280'KB

PAGE: 2 OF 2

WELL NAME: Cooloon South #1

FORMATION : Patchawarra

DATE: 19.9.93

TEST TYPE : B.H.P. / S.G.S.

OPR : S. Taylor

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

TIME
(HOURS)TUBING
PRESSURE
(KPa)ANNULUS
PRESSURE
(KPa)

ELEMENT SERIAL NO.

29321

29323

N/A

DATE

19.9.93

ELEMENT RANGE

PSI

4000

3950

PRESSURE LUBRICATOR

09:22

12700

φ

RECORDING SECTION SERIAL NO.

14631

12963

RUN IN HOLE

09:42

12700

"

DATE OF CALIBRATION:

25/6/93

25/6/93

ON DEPTH AT

7929 FT/M

10:58

12700

"

CLOCK SERIAL NO.

K1838

K1850

DATE

19.9.93

CLOCK RANGE

HR

3

3

PULL OUT OF HOLE

11:13

12700

φ

LEAD SCREW TYPE

TCS

15

15

AT SURFACE

11:33

12700

"

DEPRESSURE LUBRICATOR

11:53

12700

"

ENGAGE STYLUS

DATE

19.9.93

TIME

09:15

09:15

MAXIMUM BHT AT 7929

FT/ = 282 °F/

DISENGAGE STYLUS

DATE

19.9.93

TIME

11:58

11:58

N.B. ALL DEPTHS ARE MEASURED FROM K.B.

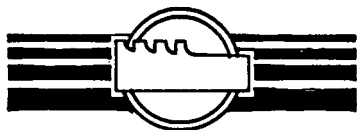
DATE

TIME

REMARKS

Static gradient survey conducted after 96HR buildup.

EXPERTEST PTY. LTD.



STATIC PRESSURE GRADIENT SURVEY

Location: COOLOON SOUTH 1

Tested: 19th September 1993.

Formation: PATCHAWARRA

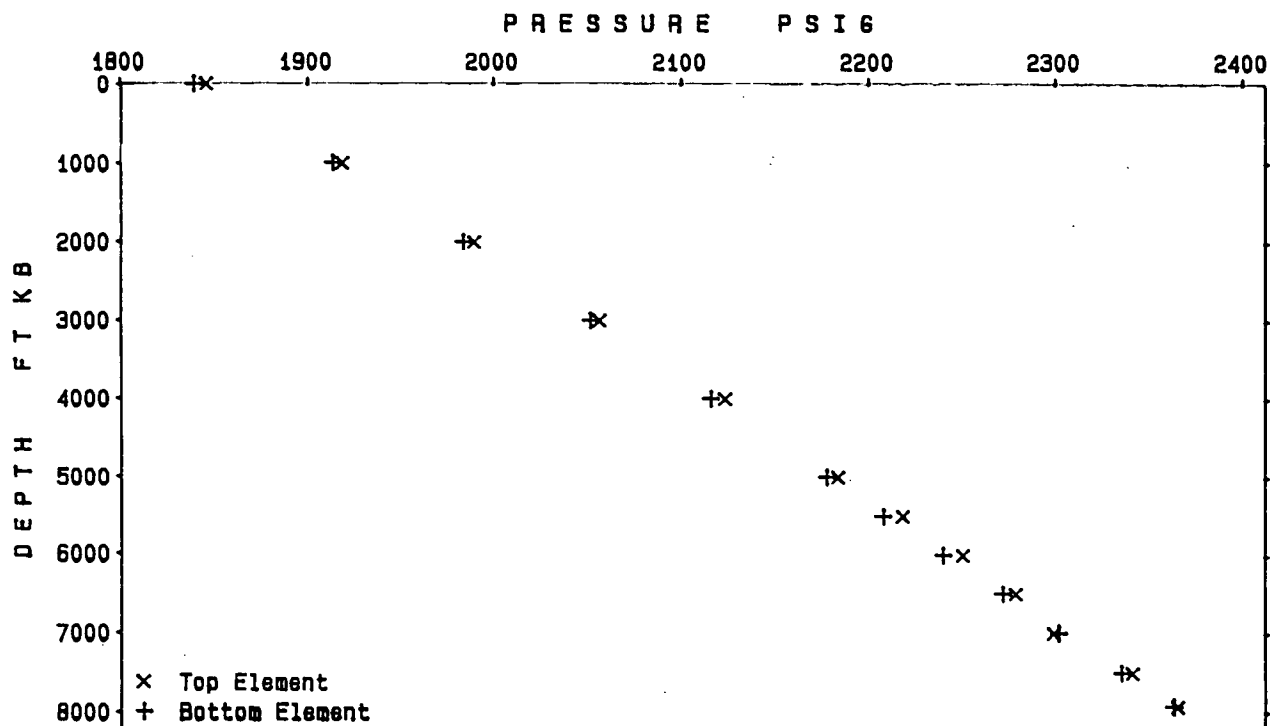
Client: SANTOS LTD.

PRESSURE ELEMENT DATA

Position	Serial No	Range	Calibrated
Top	29321	4000	25/ 6/93
Bottom	29323	3950	25/ 6/93

WELL DATA

DWT In	1839 PSIG
DWT Out	1842 PSIG
Max BHT	282



TOP ELEMENT

BOTTOM ELEMENT

Depth FT KB	Deflection Inches	Pressure PSIG	Gradient PSI/FT	Deflection Inches	Pressure PSIG	Gradient PSI/FT
LUB.	0.9200	1846.1	-	0.9260	1839.5	-
1000	0.9560	1918.8	0.073	0.9630	1913.5	0.074
2000	0.9910	1989.5	0.071	0.9980	1983.4	0.070
3000	1.0240	2056.2	0.067	1.0320	2051.4	0.068
4000	1.0570	2122.9	0.067	1.0640	2115.3	0.064
5000	1.0870	2183.5	0.061	1.0950	2177.3	0.062
5500	1.1040	2217.9	0.069	1.1100	2207.3	0.060
6000	1.1200	2250.2	0.065	1.1260	2239.3	0.064
6500	1.1340	2278.5	0.057	1.1420	2271.3	0.064
7000	1.1440	2298.8	0.040	1.1570	2301.3	0.060
7500	1.1650	2341.2	0.085	1.1740	2335.2	0.068
7929	1.1770	2365.5	0.057	1.1880	2363.2	0.065
LUB.	0.9230	1852.2	-	0.9300	1847.5	-

GENERAL REMARKS

S.G.S. CONDUCTED AFTER 96 HOUR BUILD UP