

SOUTH AUSTRALIA
DEPARTMENT OF MINES AND ENERGY



OPEN FILE ENVELOPE NO. 7019/2

PEL 5 AND PEL 6, MERRIMELIA-INNAMINCKA BLOCK

EROMANGA AND COOPER BASINS

BIMBAYA 2

TEST REPORTS

Submitted by

Santos Ltd

1992

(c) South Australian Department of Mines and Energy: 24/2/92

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SA 5063
In reply quote:

amdel

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7 November 1986

F 3/520/0
F 5121/87

Santos Limited
Santos House
39 Grenfell Street
ADELAIDE SA 5000

Attention: David Anthony

REPORT F 5121/87

YOUR REFERENCE: Exploration Wingfield 000386
MATERIAL: HP gas and stable condensate
LOCALITY: BIMBAYA-2, DST 1
WORK REQUIRED: Codes R2.1, R2.3, R2.5, R1.1

Investigation and Report by: Dr Brian G. Steveson

Manager, Petroleum Services Section: Dr Brian G. Steveson

for Dr William G. Spencer
General Manager
Applied Sciences Group

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cc. Copy of Front Page to Accounts Payable Section

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SCANNED

Distillation analysis: Bimbaya-2; DST 1, 9158-9260 ft,
condensate recovery

Vol. %	Temp. °C
Initial B.Pt	90
5	112
10	118
20	128
30	141
40	154
50	173
60	197
70	227
80	265
90	311
95	350
Final B. Pt	359
Loss	2.0%
Residue	2.0%



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NATA CERTIFICATE

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Physical Properties

Report # F5121/87

Client: DELHI PETROLEUM

Sample: Bimbaya no. 2, condensate recovery
1-2/10/86

Method	Description	Units	DST 1
IP2 ASTM D611	Aniline Point	'C	
ASTM D4176	Appearance, Free Water and Particulate Matter		
IP364 ASTM D976	Calculated Cetane Index		
IP219 ASTM D2500	Cloud Point	'C	
IP17	Colour by Lovibond Tintometer		
IP274 ASTM D2624	Conductivity of Fuels	pS	
IP13 ASTM D189	Conradson Carbon Residue	%wt	
IP154 ASTM D130	Copper Corrosion		
IP160 ASTM D1298	Density @ 15'C	gm/ml	0.7931
IP21	Diesel Index		
IP123 ASTM D86	Distillation		
	IBP	'C	
	10%	'C	
	20%	'C	
	50%	'C	
	90%	'C	
	FBP	'C	
	Residue	%vol	
	Loss	%vol	
	Evaporated @ 75'C, 105'C, 135'C	%vol	
IP131 ASTM D381	Existent Gum by Evaporation	mg/100ml	
IP170	Flash Point Abel Closed Cup	'C	
IP34 ASTM D93	Flash Point Pensky Martens Closed Cup	'C	
IP156 ASTM D1319	Fluorescent Indicator Absorption Aromatics	%	
IP16 ASTM D2386	Freezing Point of Aviation Fuels	'C	
IP71 ASTM D445	Kinematic Viscosity @ 40'C	cSt	1.170
IP71 ASTM D445	Kinematic Viscosity @ 100'C	cSt	
IP15 ASTM D97	Pour Point	'C	-25
ASTM D323	Reid Vapour Pressure	kPa	
IP277	Silver Corrosion		
IP57	Smoke Point	mm	
IP160 ASTM D1298	Specific Gravity @ 60/60'F		0.7934
IP354 ASTM D3242	Total Acidity in Aviation Fuel	mgKOH/gm	
IP270	Total Lead in Gasoline by Iodine Monochloride	gm/l	
ASTM D2270	Viscosity Index		
IP289 ASTM D1094	Water Reaction		
	Interface Rating		
	Separation		
ASTM D96	Water and Sediment	%vol	
IP74 ASTM D95	Water in Petroleum Products by Distillation	%vol	
IP160	API Gravity		46.85

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Approved Signatory

Brian Steene

Date 31-Oct-86



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NATA CERTIFICATE

AMDEL LIQUID ANALYSIS SERVICE Method R2.1

Client: DELHI

Report # F5121/87

Sample: BIMBAYA No. 2
DST 1, 9158-9260 ft
Condensate recovery ex bubble hose

Boiling Point Range (Deg.C)	Component	Weight%	Mol%
-88.6	ETHANE	0.03	0.14
-42.1	PROPANE	0.02	0.06
-11.7	I-BUTANE	0.02	0.05
-0.5	N-BUTANE	0.07	0.17
27.9	I-PENTANE	0.16	0.31
36.1	N-PENTANE	0.22	0.43
36.1-68.9	C-6	1.02	1.68
80.0	BENZENE	0.08	0.15
68.9-98.3	C-7	7.12	10.08
100.9	METHYLCYCHX	5.70	8.23
110.6	TOLUENE	2.11	3.25
98.3-125.6	C-8	11.07	13.74
136.1-144.4	ETHYLBZ+XYL	4.82	6.44
125.6-150.6	C-9	10.03	11.09
150.6-173.9	C-10	11.92	11.88
173.9-196.1	C-11	8.71	7.90
196.1-215.0	C-12	6.30	5.24
215.0-235.0	C-13	5.87	4.51
235.0-252.2	C-14	4.51	3.22
252.2-270.6	C-15	4.56	3.04
270.6-287.8	C-16	3.08	1.93
287.8-302.8	C-17	2.40	1.42
302.8-317.2	C-18	2.72	1.52
317.2-330.0	C-19	1.91	1.01
330.0-344.4	C-20	1.32	0.66
344.4-357.2	C-21	1.12	0.54
357.2-369.4	C-22	0.85	0.39
369.4-380.0	C-23	0.58	0.25
380.0-391.1	C-24	0.52	0.22
391.1-401.7	C-25	0.50	0.20
401.7-412.2	C-26	0.22	0.09
412.2-422.2	C-27	0.19	0.07
>422.2	C-28+	0.25	0.09
Total		100.00	100.00

(0.00 = LESS THAN 0.01%)

The above boiling point ranges refer to the normal paraffin hydrocarbon boiling in that range. Aromatics, branched hydrocarbons, naphthenes and olefins may have higher or lower carbon numbers but are grouped and reported according to their boiling points.

Average molecular weight of C-8 plus 154 g/mol

This report relates specifically to the sample tested; it also relates to the batch insofar as the sample is representative of the Batch.

Approved Signatory



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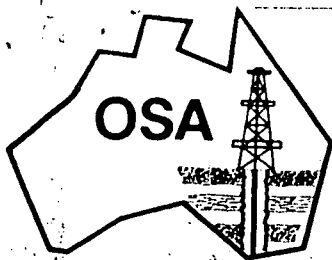
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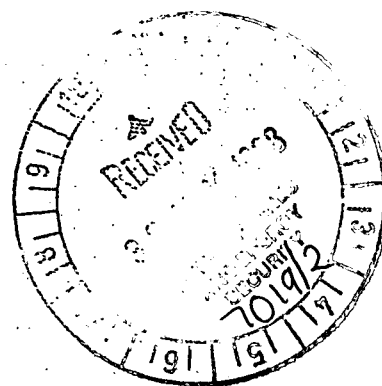
OILSERV AUSTRALIA

Well Testing/Oilfield Equipment Supply/Personnel-Consultant Placement

MODIFIED ISOCHRONAL TEST REPORT

BIMBAYA NO:2

SANTOS LTD



Suite 21, 242-244 Glen Osmond Road,
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Telephone: (08) 338 1630 — Telex: AA88713

SANTOS LTD
39 GRENFELL ST
ADELAIDE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 02 FIELD BIMBAYA	WELL 02
EFF DEPTH		WELL STAT	TOOL HUNG 9176'
CASING 7"	-	CASING PRESS	ON BOTTOM 0925 25/3
LINER	-	TUBING PRESS	OFF BOTTOM 0600 30/3
DATE 880330		ELEMENT RANGE 0 - 6230	ZERO POINT
ELEVATION		ZONE	SHUT-IN 1000 27/3
MAX TEMP		PICK-UP	ON-PROD
PERF 9212' -9313'		CAL SER NO. 71589	MPP 9263'
TUBING 2-7/8"	-		
UNITS ENGLISH		PURPOSE	MODIFIED ISOCHRONAL

SURVEY DATA

CO. SANTOS			RUN 02 FIELD BIMBAYA			WELL 02		
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME	
10:00	1454.5	0.0	0.0	16:00	3917.8	2463.3	6.0	
10:04	1623.0	168.5	.1	17:00	3925.7	2471.2	7.0	
10:09	1909.4	454.9	.2	18:00	3930.4	2476.0	8.0	
10:15	2177.7	723.3	.3	0:00	3950.5	2496.0	14.0	
10:20	2362.3	907.9	.3	6:00	3959.9	2505.4	20.0	
10:25	2530.8	1076.3	.4	12:00	3964.3	2509.8	26.0	
10:30	2700.0	1245.5	.5	18:00	3969.0	2514.6	32.0	
10:37	2861.1	1406.6	.6	0:01	3972.5	2518.0	38.0	
10:45	3079.5	1625.0	.8	6:00	3975.6	2521.2	44.0	
10:50	3203.3	1748.8	.8	12:00	3977.6	2523.1	50.0	
11:00	3411.9	1957.4	1.0	18:00	3979.1	2524.7	56.0	
11:09	3547.7	2093.3	1.1	0:00	3979.8	2525.3	62.0	
11:15	3618.5	2164.0	1.2	6:00	3982.9	2528.5	68.0	
11:22	3674.2	2219.7	1.4	- 12:46	3995.0	2540.5	-46.8	
11:30	3723.9	2269.4	1.5	- 11:05	2866.3	1411.9	-45.1	
11:40	3766.7	2312.3	1.7	- 8:49	3960.8	2506.3	-42.8	
11:45	3778.3	2323.8	1.7	- 7:07	2359.5	905.1	-41.1	
11:54	3801.8	2347.3	1.9	- 4:49	3940.3	2485.8	-38.8	
12:00	3815.2	2360.7	2.0	- 3:10	2072.8	618.3	-37.2	
12:23	3844.2	2389.7	2.4	- 0:46	3928.9	2474.5	-34.8	
13:00	3872.6	2418.1	3.0	- 23:13	1300.4	-154.1	-33.2	
14:00	3895.1	2440.7	4.0	10:00	1456.4	1.9	0.0	
15:00	3908.4	2453.9	5.0	0:00	0.0	0.0	0.0	

LUB IN DWT = 2747 PSI / OUT = 2743 PSI
LUB IN AMERADA = 2733 PSI / OUT = 2737 PSI

SANTOS LTD
39 GRENFELL ST
ADELAIDE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS	RUN 01 FIELD BIMBAYA	WELL 02
EFF DEPTH	WELL STAT	TOOL HUNG 9170'
CASING 7"	CASING PRESS	ON BOTTOM 0925 25/3
LINER	TUBING PRESS	OFF BOTTOM 0600 30/3
DATE 880330	ELEMENT RANGE 0 - 6615	ZERO POINT
ELEVATION	ZONE	SHUT-IN 1000 27/3
MAX TEMP	PICK-UP	ON-PROD
PERF 9212' - 9313'	CAL SER NO. 71588	MPP 9263'
TUBING 2-7/8"		
UNITS ENGLISH	PURPOSE	MODIFIED ISOCHRONAL

SURVEY DATA

CO. SANTOS				RUN 01 FIELD BIMBAYA				WELL 02			
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
10:00	1466.1	0.0	0.0	16:00	3929.1	2463.0	6.0				
10:04	1619.8	153.7	.1	17:00	3935.0	2468.9	7.0				
10:08	1793.0	326.9	.1	18:00	3941.2	2475.1	8.0				
10:15	2115.7	649.6	.3	0:00	3959.5	2493.4	14.0				
10:24	2442.5	976.3	.4	6:00	3969.6	2503.4	20.0				
10:31	2651.4	1185.3	.5	12:00	3977.7	2511.5	26.0				
10:37	2876.9	1410.7	.6	18:00	3982.1	2516.0	32.0				
10:45	3070.9	1604.8	.8	23:59	3985.6	2519.4	38.0				
10:53	3251.9	1785.8	.9	6:00	3988.0	2521.9	44.0				
11:00	3401.5	1935.4	1.0	12:00	3990.2	2524.0	50.0				
11:08	3525.7	2059.6	1.1	18:00	3991.3	2525.2	56.0				
11:15	3611.1	2145.0	1.2	0:00	3993.8	2527.7	62.0				
11:23	3678.7	2212.5	1.4	6:00	4000.9	2534.7	68.0				
11:30	3727.1	2261.0	1.5	13:20	4012.4	2546.3	-47.3				
11:37	3760.7	2294.6	1.6	11:32	2869.0	1402.9	-45.5				
11:45	3786.7	2320.6	1.7	9:18	3974.8	2508.6	-43.3				
12:00	3822.5	2356.4	2.0	7:36	2361.5	895.4	-41.6				
12:28	3858.5	2392.3	2.5	5:14	3954.6	2488.4	-39.2				
12:55	3879.9	2413.8	2.9	3:32	2074.6	608.5	-37.5				
13:00	3882.5	2416.4	3.0	1:09	3942.6	2476.5	-35.2				
13:36	3897.6	2431.4	3.6	23:36	1305.3	-160.8	-33.6				
14:00	3905.5	2439.4	4.0	10:00	1468.8	2.7	0.0				
15:00	3918.0	2451.9	5.0	0:00	0.0	0.0	0.0				

LUB IN DWT = 2747 PSI / OUT = 2743 PSI
LUB IN AMERADA = 2738 PSI / OUT = 2757 PSI

TYPE OF TEST: Clean Up



SANTOS LTD.

WELL TEST DATA SHEET

DATE: 19/3/88

PAGE No: 1 of 1

WELL TEST DATA SHEET																		PAGE No:.....1 of 11.....						
DATE TIME		WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS								
		CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE MM	B.S.W. %	PI KPA	HW KPA	TEMP. °C	ORIFICE SIZE MM	TANK DIP CM	TANK PROD M ³	API GRAVITY @60 °F	TANK DIP CM	TANK PROD M ³	GAS FLOW RATE M ³ /DAY	OIL FLOW RATE M ³ /DAY	WATER FLOW RATE M ³ /DAY	TOTAL LIQUID FLOW RATE M ³ /DAY	O.G.R. M ³ /M ³ x10 ³				
March 19, 1988																								
		Move On To Location & Rig Up Test Equipment																						
1845 Ø		18950		S.I.		R.E.H. With 1.75" Blind Box																		
1935						Tbg. Clear To 9330' KB, P.O.D.																		
2020 Ø		18825				Tool String @ Surface																		
2030 Ø		18825				Pressure Test Flow Lines To Full S.I. Press. & Sep. To 7000k																		
		Secure Well Overnight																						
March 20, 1988																								
0500 Ø		18950		↓		Open Well On 26/64 Choke To Flow																		
0515 Ø		8965	26	10.32																				
0530 Ø		6826	27																					
0600		2300	4580	27																				
0630		2900	4770	28																				
0700		3600	4825	29																				
0800		4600	4930	30	↓	Adjust Choke To 24/64 & Divert Flow To Separator																		
0830		5200	4605	31	9.50	2450	19.92	20	38.1							60.5								
0900		5700	4675	32		2460	20.17	20		8.5	.892		Ø	Ø	61.1	21.42	Ø	21.42	.351					
1000		6300	5715	33		2470	20.42	21		18.0	.997		Ø	Ø	61.4	23.94	Ø	23.94	.390					
1400		8200	5830	36	↓	2470	23.66	23	↓	62.5	4.672	50.9	Ø	Ø	65.4	28.03	Ø	28.03	.429					

OPERATOR... Knox / General AKC-9

10031

TYPE OF TEST: Clean Up



SANTOS LTD.

WELL TEST DATA SHEET

DATE: 20/3/88

PAGE No: 25/11

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	O. G. R.
	KPA	KPA	°C	SIZE MM	%	KPA	KPA	°C	SIZE MM	DIP CM	PROD M ³	GRAVITY @80 °F	DIP CM	PROD M ³	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	
March 20, 1988																			M ³ / M ³ x 10 ³
1800	9400	6045	37	9.50		2620	23.16	24	38.1	104.0	4.357	51.2	5.0	.525	66.7	26.14	3.15	29.29	.392
2200	10300	6080	38			2450	23.90	23		147.5	4.567	52.8	8.0	.315	65.5	27.40	1.89	29.29	.418
March 21, 1988																			
0200	11000	6200	39			2275	25.65	23		191.0	4.567	52.9	12.0	.420	65.2	27.40	1.52	29.92	.420
0600	11400	6275	40			2345	26.39	24		234.5	4.567	51.3	15.0	.315	67.1	27.40	1.89	29.29	.408
1000	11900	6290	43			2585	24.90	28		220.0	4.777	51.8	18.0	.315	68.1	28.66	1.89	30.55	.421
1400	12300	6325	45			2620	25.65	31		325.0	4.725	51.6	20.0	.210	69.0	28.35	1.26	28.61	.411
1800	12450	6410	44			2760	25.15	30		369.5	4.672	51.6	21.0	.105	70.5	28.03	0.63	28.66	.398
2200	12750	6425	45			2260	27.89	28		413.0	4.567	52.2	24.0	.315	66.9	27.40	1.89	29.29	.410
March 22, 1988																			
0200	13000	6460	45			2380	27.39	28		456.5	4.567	52.0	26.0	.210	68.1	27.40	1.26	28.66	.402
0600	13200	6475	46	✓		2345	28.88	28	✓	500.5	4.620	51.8	28.5	.262	69.4	27.72	1.57	28.29	.399
* Bleed Off Casing Pressure To 32.50 KPA, Change Tanks																			
1000	3600	6480	47	9.50		2380	27.39	30	38.1	48.5	4.777	50.3	2.0	.157	67.8	28.66	0.94	29.60	.423
1400	3750	6515	47			2380	27.64	32		93.0	4.672	50.9	3.5	.157	67.5	28.03	0.94	28.97	.415
1800	3800	6530	48			2620	26.89	32		134.0	4.305	51.4	7.0	.367	70.2	25.83	2.20	28.03	.368
2200	4100	6535	48	✓		2480	27.89	31	✓	178.0	4.620	52.9	9.5	.157	69.7	27.72	0.94	28.66	.398

OPERATOR... KNOX/KENECABUR

237

WELL: Bimbaya #2TYPE OF TEST: Clean Up

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 23/3/88PAGE No: 3 of 11

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	O.G.R.
	KPA	KPA	°C	SIZE MM	%	KPA	KPA	°C	SIZE MM	DP CM	PROD M ³	GRAVITY @60 °F	DP CM	PROD M ³	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	
March 23, 1988																			M ³ /10 ³
0200	4100	6545	48	9.50		2380	2764	31	38.1	223.5	4.777	53.5	11.0	.157	67.8	28.66	0.94	29.60	.423
0600	4300	6585	48			2415	28.14	31		267.0	4.567	52.4	13.0	.210	69.0	27.40	1.26	28.66	.397
* 1000	4500	6598	49			2585	26.89	32		311.5	4.672	50.9	15.5	.262	69.9	28.03	1.57	29.60	.401
* Cut Choke To 12/64 To Begin To Set Rates																			
1030	4500	12045	47			2585	16.47	25											
1045	4500	12750	47			2330	8.47	20											
* 1100	4400	12965	46			2310	8.71	18		320.0	.892		16.0	.052	38.7	21.42	1.26	22.68	
* Open Choke To 1/64																			
1115	4250	11790	48			2585	18.18	18											
* 1130	4200	11030	48			2480	17.18	20							56.3				
* Open Choke To 1/64																			
1145	4250	9720	48			2310	26.39	22											
1200	4250	9345	48			2335	24.65	23		329.5	.997		16.5	.052		23.94	1.26	25.20	
* 1215	4300	9100	48			2290	23.66	24							62.5				
* Open Choke To 27/64																			
1230	4350	8410	49			2480	46.31	30											
1245	4400	5625	49			2470	42.83	35											
* 1300	4450	5500	49			2460	32.89	36		342.5	1.365	51.8	17.0	.052	74.5	32.76	1.26	34.02	.440
* Shut In Well, End Of Clean Up																			

OPERATOR: Knox/Julian

00033

TYPE OF TEST: Clean Up



WELL TEST DATA SHEET

DATE: 23/3/88.....

PAGE No: 4 of 11

OPERATOR.. Клох / Julien ..

3400

TYPE OF TEST: Mod. Isochronal



SANTOS LTD.

WELL TEST DATA SHEET

DATE: 25/3/88

PAGE No: 5 of 11

[illegible]

OPERATOR... Knox/Nasilewski

10035

WELL: Bimbaya #2TYPE OF TEST: Mod. Isochronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 25/3/88PAGE No: 6 of 11

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	O.G.P.
	KPA	KPA	°C	SIZE mm	%	KPA	KPA	°C	SIZE mm	DIP cm	PROD M ³	GRAVITY °60 °F	DIP cm	PROD M ³	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	
March 25, 1988																			
1445	Ø	18880																	
1500	Ø	18900																	
1515	Ø	13135	35	6.35		2440	21.66	1	38.10						66.6				
1530	Ø	11740	36			2400	16.93	4		364.0	.735		19.0	Ø	57.8	35.28	Ø	35.28	.610
1545	Ø	11665	36			2400	12.45	7							49.0				
1600	Ø	11245	36			2585	14.94	7		370.5	.682		19.0	Ø	56.1	32.76	Ø	32.76	.584
1615	Ø	11170	36			2585	14.44	7							55.2				
1630	Ø	11045	36			2450	14.94	7		376.0	.571		19.0	Ø	54.4	27.72	Ø	27.72	.510
1645	Ø	10955	37			2425	15.94	7							55.9				
* 1700	Ø	10910	37	✓		2415	15.69	8	✓	381.0	.525		19.0	Ø	55.2	25.20	Ø	25.20	.457
1715	Ø	15550		S.I.		* Shut In Well, End Of Rate #2													
1730	Ø	17435																	
1745	Ø	18270				Total Gas Elapsed - Rate #2 = 4.69 M ³ x 10 ³													
1800	Ø	18615				Total Cond Produced - Rate #2 = 2.519 M ³													
1815	Ø	18770				Total Water Produced - Rate #2 = Ø													
1830	Ø	18850																	
1845	Ø	18900		✓															

OPERATOR: K.A.O.X. / Nasilowski

00036

WELL: Bimbaya #2TYPE OF TEST: Mod. Isochoral

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 25/3/88PAGE No: 7 of 11

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	O.G.R.
	KPA	KPA	°C	SIZE MM	%	KPA	KPA	°C	SIZE MM	DIP CM	PROD M ³	GRAVITY @60 °F	DIP CM	PROD M ³	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	FLOW RATE M ³ /DAY	M ³ / M ³ × 10 ³
March 25, 1988																			
1900	Ø	18925		S.I.		Open Well On 19/64 For Rate #3													
1915	Ø	11915	36	7.54		2550	30.78	Ø	38.10						80.8				
1930	Ø	10375	37			2515	21.41	8		180.5	1.050		Ø	Ø	65.6	50.40	Ø	50.40	.768
1945	Ø	10085	37			2535	22.91	7							65.1				
2000	Ø	9695	38			2510	22.41	9		187.5	.735		Ø	Ø	63.6	35.28	Ø	35.28	.555
2015	Ø	9630	38			2220	22.66	9							62.6				
2030	Ø	9585	38			2515	18.92	11		193.5	.630		Ø	Ø	61.0	30.24	Ø	30.24	.496
2045	Ø	9585	38			2515	18.92	12							60.8				
* 2100	Ø	9585	38	✓		2450	19.67	12	✓	199.5	.630		Ø	Ø	61.0	30.24	Ø	30.24	.496
2115	Ø	4515		S.I.	*	Shut In Well, End Of Rate #3													
2130	Ø	17015																	
2145	Ø	18065				Total Gas Flared - Rate #3 = 5.422 M ³ × 10 ³													
2200	Ø	18540				Total Cond. Produced - Rate #3 = 3.045 M ³													
2215	Ø	18730				Total Water Produced - Rate #3 = Ø													
2230	Ø	18850																	
2245	Ø	18905																	
2300	Ø	18940		✓		Open Well On 27/64 Choke For Rate #4													
2315	Ø	7790		10.72		2425	40.34	8	44.45						121.4				

OPERATOR: K.A.R. Nasirianski

00037

WELL: Bimbaga #2TYPE OF TEST: Mod. Isachronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 25/3/88PAGE No: 8 of 11

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE mm	B.S.W. %	PI KPA	HW KPA	TEMP. °C	ORIFICE SIZE mm	TANK DIP cm	TANK PROD m ³	API GRAVITY °80 °F	TANK DIP cm	TANK PROD m ³	GAS FLOW RATE m ³ /DAY	OIL FLOW RATE m ³ /DAY	WATER FLOW RATE m ³ /DAY	TOTAL LIQUID FLOW RATE m ³ /DAY	O.G.R. M ³ / M ³ × 10 ³
March 25, 1988																			
2330	Ø	6275	39	10.72		2330	2465	19	44.45	210.5	1.155		0.5	0.052	89.8	55.44	2.52	57.96	6.17
2345	Ø	5955	39			2482	19.92	22							82.8				
2400	Ø	5780	39			2400	18.92	23		217.0	1.682		1.0	0.052	79.7	32.76	2.52	35.28	4.14
March 26, 1988																			
0015	Ø	5730	40			2400	18.43	24							77.8				
0030	Ø	5710	40			2415	18.43	24		227.5	1.682		2.0	0.105	78.1	32.76	5.04	37.80	4.19
0045	Ø	5690	40			2415	18.18	25							77.3				
*0100	Ø	5680	40	↓		2415	18.18	25	↓	229.0	0.577	53.4	2.5	0.052	77.3	27.72	2.52	30.24	3.59
						* Cut Choke To 24/64 For Extended Rate													
						Total Gas Flared - Rate #4 = 7.122 M ³ × 10 ³													
						Total Cond. Produced - Rate #4 = 3.096 M ³													
						Total Water Produced - Rate #4 = 0.262 M ³													
0200	1000	6680	41	9.52		2455	29.38	22	38.1	242.0	1.365		3.0	0.052	72.7	32.76	1.26	34.02	4.51
0300	1800	6675	41			2450	29.88	23		244.5	1.312		3.5	0.052	73.5	31.50	1.26	32.76	4.29
0400	2000	6665	42			2450	30.38	24		267.0	1.312		4.0	0.052	73.9	31.50	1.26	32.76	4.26
0500	2250	6675	43			2480	28.88	24		279.5	1.312	52.6	4.5	0.052	72.6	31.50	1.26	32.76	4.34
0600	2400	6655	43	↓		2480	28.63	25	↓	280.5	1.155		5.5	0.105	72.1	27.72	2.52	30.24	3.84

OPERATOR: Max Nasilonaki

00038

WELL: Simkaya #2TYPE OF TEST: Mod. Isothermal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 26/3/88PAGE No: 9 of 11

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE mm	B.S.W. %	PI KPA	HW KPA	TEMP. °C	ORIFICE SIZE mm	TANK DIP cm	TANK PROD m ³	API GRAVITY @60 °F	TANK DIP cm	TANK PROD m ³	GAS FLOW RATE m ³ /D	OIL FLOW RATE m ³ /DAY	WATER FLOW RATE m ³ /DAY	TOTAL LIQUID FLOW RATE m ³ /DAY	O.G.R.
March 26, 1988																			0.9 R.
0700	2650	6680	44	9.52		2450	28.88	25	38.1	302.5	1.260		6.5	.105	71.5	30.24	2.52	32.76	.423
0800	2800	6675	45			2450	29.38	26		316.0	1.417		7.0	.052	71.9	34.02	1.26	35.28	.473
0900	3000	6655	45			2450	29.38	27		328.5	1.312	52.2	7.5	.052	71.7	31.50	1.26	32.76	.439
1000	3200	6665	46			2515	29.13	29		340.0	1.207		8.0	.052	72.2	28.98	1.26	30.24	.401
1100	3500	6665	46			2515	29.38	30		352.5	1.312		8.5	.052	72.4	31.50	1.26	32.76	.435
1200	3500	6660	46			2515	29.88	30		364.0	1.207		9.0	.052	73.0	28.98	1.26	30.24	.397
1300	3600	6665	47			2515	30.88	30		376.5	1.312	54.3	9.5	.052	74.2	31.50	1.26	32.76	.425
1400	3750	6655	47			2620	29.88	31		388.0	1.207		10.0	.052	74.4	28.98	1.26	30.24	.390
1600	3900	6665	48			2345	31.62	31		411.0	2.415	54.1	11.0	.105	71.9	28.98	1.26	30.24	.403
1800	4100	6665	48			2450	31.37	31		434.5	2.467		12.5	.157	73.3	28.61	1.89	31.50	.404
2000	4250	6660	49			2460	31.37	31		456.0	2.257	52.0	14.0	.157	73.5	27.09	1.89	28.98	.369
2200	4400	6665	49			2480	30.88	31		32.5	2.205		3.5	.105	73.3	26.46	1.26	27.72	.361
2400	4500	6655	49			2480	29.88	31		57.0	2.572	52.6	4.5	.105	72.1	30.87	1.26	32.13	.428
March 27, 1988																			
0200	4600	6660	49			2515	30.38	31		79.5	2.362		5.5	.105	73.2	28.35	1.26	29.61	.387
0400	4600	6640	50			2515	29.88	31		102.0	2.362	53.5	7.0	.157	72.7	28.35	1.89	30.24	.390
0600	4750	6660	50			2530	30.13	32		124.0	2.310		8.0	.105	73.1	27.72	1.26	28.98	.379
0800	4800	6645	50	✓		2480	30.88	32	✓	147.0	2.415	52.8	9.0	.105	73.0	28.98	1.26	30.24	.397

OPERATOR: K. MAX. / Nasir, S. W. SKI

00039

WELL: <u>Simkaya #2</u>						SANTOS LTD.										DATE: <u>27/3/88</u>				
TYPE OF TEST: <u>Mod. Flow</u>						WELL TEST DATA SHEET										PAGE No: <u>10 of 11</u>				
DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS					
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE mm	B.S.W. %	PI KPA	HW KPA	TEMP. °C	ORIFICE SIZE mm	TANK DIP cm	TANK PROD M ³	API GRAVITY @60 °F	TANK DIP cm	TANK PROD M ³	GAS FLOW RATE M ³ /DAY	OIL FLOW RATE M ³ /DAY	WATER FLOW RATE M ³ /DAY	TOTAL LIQUID FLOW RATE M ³ /DAY	O.G.P. M ³ /M ³ × 10 ³	
March 27, 1988																				
0805																				
0830																				
0900																				
0925																				
0930																				
1000	4800	6680	51	9.52		2450	31.37	33	38.1	171.0	2.52		10.0	105	72.9	30.24	1.26	31.50	415	
1015	5000	12825		S.I.																
1030	4900	15410																		
1045	4750	17215																		
1100	4250	17955																		
1115	3800	18270																		
1130	3500	18460																		
1145	3000	18560																		
1200	2800	18635																		
1300	2000	18770																		
1400	1200	18825																		
1500	Ø	18865																		
1600	Ø	18870		✓																

OPERATOR: KARX Nasikawati

00040

WELL: <i>Bimanya #2</i>						SANTOS LTD.										DATE: <i>27/3/88</i>				
TYPE OF TEST: <i>Build Up</i>						WELL TEST DATA SHEET										PAGE No: <i>1 of 1</i>				
DATE TIME	WELLHEAD					GAS FLOW DATA					OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE mm	B.S.W. %	PI PSI	HW IN.H ₂ O	TEMP. °F	ORIFICE SIZE IN.	TANK DIP INS.	TANK PROD BBL.	API GRAVITY @60 °F	TANK DIP INS.	TANK PROD BBL.	GAS FLOW RATE MMSCFD	OIL FLOW RATE BBL./DAY	WATER FLOW RATE BBL./DAY	TOTAL LIQUID FLOW RATE BBL./DAY	G.O.R. SCF/BBL	
<i>March 27, 1988</i>																				
<i>1700</i>	<i>Ø</i>	<i>18885</i>		<i>S.I.</i>																
<i>1800</i>	<i>Ø</i>	<i>18890</i>																		
<i>2400</i>	<i>Ø</i>	<i>18920</i>																		
<i>March 28, 1988</i>																				
<i>0600</i>	<i>Ø</i>	<i>18925</i>																		
<i>1200</i>	<i>Ø</i>	<i>18935</i>																		
<i>1800</i>	<i>Ø</i>	<i>18955</i>																		
<i>2400</i>	<i>Ø</i>	<i>18935</i>																		
<i>March 29, 1988</i>																				
<i>0600</i>	<i>Ø</i>	<i>18925</i>																		
<i>1200</i>	<i>Ø</i>	<i>18925</i>																		
<i>1800</i>	<i>Ø</i>	<i>18920</i>																		
<i>2400</i>	<i>Ø</i>	<i>18915</i>																		
<i>March 30, 1988</i>																				
<i>0600</i>	<i>Ø</i>	<i>18915</i>				<i>P.O.H. with Pressure Elements</i>														
<i>0640</i>	<i>Ø</i>	<i>18905</i>				<i>Elements @ Surface</i>														
<i>0740</i>	<i>Ø</i>	<i>18915</i>		<i>✓</i>		<i>Depressure Lubricator</i>														
<i>Carry Out Static Gradient Survey, Rig Down & Move To Deana #1</i>																				

OPERATOR: *Knox/Nasilowski*

13000

WELL: *Bimbaya #2*
 OPERATOR: *L. K. A. X.*



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: *20/3/88*
 PAGE No: *1 of 9*

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M ³ /D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M ³ /D	MMSCF/D	Mm ³ /D	G.O.R. Cu/FT BBL	G.O.R. M ³ /M ³
<i>March 20, 1988</i>															
<i>0500</i>	<i>Ø</i>	<i>Ø</i>	<i>2750</i>	<i>18960</i>	<i>S.I.</i>			<i>Open Well On 26/64 Choke To Flare</i>							
<i>0800</i>	<i>667</i>	<i>4600</i>	<i>715</i>	<i>4930</i>	<i>26/64</i>	<i>86</i>	<i>30</i>	<i>Adjust Choke To 24/64 & Divert Flow Through Sep.</i>							
<i>1000</i>	<i>914</i>	<i>6300</i>	<i>829</i>	<i>5715</i>	<i>24/64</i>	<i>91</i>	<i>33</i>	<i>150.57</i>	<i>23.94</i>	<i>Ø</i>	<i>Ø</i>	<i>2.178</i>	<i>61.367</i>		
<i>1400</i>	<i>1189</i>	<i>8200</i>	<i>860</i>	<i>5930</i>		<i>97</i>	<i>36</i>	<i>176.29</i>	<i>28.03</i>	<i>Ø</i>	<i>Ø</i>	<i>2.322</i>	<i>65.427</i>		
<i>1800</i>	<i>1363</i>	<i>9400</i>	<i>877</i>	<i>6045</i>		<i>99</i>	<i>37</i>	<i>164.40</i>	<i>26.14</i>	<i>19.81</i>	<i>3.15</i>	<i>2.369</i>	<i>66.743</i>		
<i>2200</i>	<i>1494</i>	<i>10300</i>	<i>882</i>	<i>6080</i>		<i>100</i>	<i>38</i>	<i>172.33</i>	<i>27.40</i>	<i>11.89</i>	<i>1.89</i>	<i>2.324</i>	<i>65.487</i>		
<i>March 21, 1988</i>															
<i>0200</i>	<i>1595</i>	<i>11000</i>	<i>899</i>	<i>6200</i>		<i>102</i>	<i>39</i>	<i>172.33</i>	<i>27.40</i>	<i>15.85</i>	<i>2.52</i>	<i>2.313</i>	<i>65.158</i>		
<i>0600</i>	<i>1653</i>	<i>11400</i>	<i>910</i>	<i>6275</i>		<i>104</i>	<i>40</i>	<i>172.33</i>	<i>27.40</i>	<i>11.89</i>	<i>1.89</i>	<i>2.380</i>	<i>67.059</i>		
<i>1000</i>	<i>1726</i>	<i>11900</i>	<i>912</i>	<i>6290</i>		<i>109</i>	<i>43</i>	<i>180.25</i>	<i>28.66</i>	<i>11.89</i>	<i>1.89</i>	<i>2.417</i>	<i>68.083</i>		
<i>1400</i>	<i>1784</i>	<i>12300</i>	<i>917</i>	<i>6325</i>	<i>Y</i>	<i>113</i>	<i>45</i>	<i>178.30</i>	<i>28.35</i>	<i>7.92</i>	<i>1.26</i>	<i>2.448</i>	<i>68.978</i>		

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: *Bimraya #2*.....
 OPERATOR: *L. K. Rax*.....



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: *21/3/88*.....
 PAGE No: *2 of 9*.....

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
<i>March 21, 1988</i>															
<i>1800</i>	<i>1826</i>	<i>12450</i>	<i>930</i>	<i>6410</i>	<i>24/64</i>	<i>111</i>	<i>44</i>	<i>176.29</i>	<i>28.03</i>	<i>3.96</i>	<i>0.63</i>	<i>2.502</i>	<i>70.490</i>		
<i>2200</i>	<i>1849</i>	<i>12750</i>	<i>932</i>	<i>6425</i>		<i>113</i>	<i>45</i>	<i>172.33</i>	<i>27.40</i>	<i>11.89</i>	<i>1.89</i>	<i>2.373</i>	<i>66.853</i>		
<i>March 22, 1988</i>															
<i>2200</i>	<i>1885</i>	<i>13000</i>	<i>937</i>	<i>6460</i>		<i>113</i>	<i>45</i>	<i>172.33</i>	<i>27.40</i>	<i>7.92</i>	<i>1.26</i>	<i>2.417</i>	<i>68.101</i>		
<i>2600</i>	<i>1914</i>	<i>13200</i>	<i>939</i>	<i>6475</i>		<i>115</i>	<i>46</i>	<i>174.34</i>	<i>27.72</i>	<i>9.87</i>	<i>1.57</i>	<i>2.465</i>	<i>69.438</i>		
<i>1000</i>	<i>532</i>	<i>3600</i>	<i>940</i>	<i>6480</i>		<i>117</i>	<i>47</i>	<i>180.25</i>	<i>28.66</i>	<i>5.91</i>	<i>0.94</i>	<i>2.406</i>	<i>67.685</i>		
<i>400</i>	<i>544</i>	<i>3750</i>	<i>945</i>	<i>6515</i>		<i>117</i>	<i>47</i>	<i>176.29</i>	<i>28.03</i>	<i>5.91</i>	<i>0.94</i>	<i>2.397</i>	<i>67.524</i>		
<i>1800</i>	<i>551</i>	<i>3800</i>	<i>947</i>	<i>6530</i>		<i>118</i>	<i>48</i>	<i>162.45</i>	<i>25.83</i>	<i>13.84</i>	<i>2.20</i>	<i>2.493</i>	<i>70.239</i>		
<i>2200</i>	<i>595</i>	<i>4100</i>	<i>948</i>	<i>6535</i>		<i>118</i>	<i>48</i>	<i>174.34</i>	<i>27.72</i>	<i>5.91</i>	<i>0.94</i>	<i>2.473</i>	<i>69.667</i>		
<i>March 23, 1988</i>															
<i>2200</i>	<i>595</i>	<i>4100</i>	<i>949</i>	<i>6545</i>		<i>118</i>	<i>48</i>	<i>180.25</i>	<i>28.66</i>	<i>5.91</i>	<i>0.94</i>	<i>2.405</i>	<i>67.756</i>		
<i>2600</i>	<i>624</i>	<i>4300</i>	<i>962</i>	<i>6565</i>	<i>↓</i>	<i>118</i>	<i>48</i>	<i>172.33</i>	<i>27.40</i>	<i>7.92</i>	<i>1.26</i>	<i>2.448</i>	<i>68.984</i>		

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: *Bim Bayu #2*
 OPERATOR: *L. Knox*



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: *23/3/88*
 PAGE No: *3 of 9*

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
<i>March 23, 1988</i>															
<i>1000</i>	<i>653</i>	<i>4500</i>	<i>957</i>	<i>6598</i>	<i>24/64</i>	<i>120</i>	<i>49</i>	<i>176.29</i>	<i>28.03</i>	<i>9.87</i>	<i>1.57</i>	<i>2.479</i>	<i>69.852</i>		
<i>1100</i>	<i>638</i>	<i>4400</i>	<i>1880</i>	<i>12965</i>	<i>12/64</i>	<i>115</i>	<i>46</i>	<i>134.72</i>	<i>21.42</i>	<i>7.92</i>	<i>1.26</i>	<i>1.374</i>	<i>38.706</i>		
<i>1130</i>	<i>609</i>	<i>4200</i>	<i>1600</i>	<i>11030</i>	<i>16/64</i>	<i>118</i>	<i>48</i>					<i>1.998</i>	<i>56.248</i>		
<i>1215</i>	<i>624</i>	<i>4300</i>	<i>1320</i>	<i>9100</i>	<i>19/64</i>	<i>118</i>	<i>48</i>					<i>2.219</i>	<i>62.518</i>		
<i>* 1300</i>	<i>645</i>	<i>4450</i>	<i>798</i>	<i>5500</i>	<i>27/64</i>	<i>120</i>	<i>49</i>	<i>206.04</i>	<i>32.76</i>	<i>7.92</i>	<i>1.26</i>	<i>2.644</i>	<i>74.501</i>		
<i>1400</i>	<i>536</i>	<i>3700</i>	<i>2614</i>	<i>18023</i>	<i>S.I. *</i>	<i>Shut In Well, End Of Clean Up</i>									
<i>1500</i>	<i>363</i>	<i>2500</i>	<i>2707</i>	<i>18665</i>											
<i>1600</i>	<i>218</i>	<i>1500</i>	<i>2725</i>	<i>18790</i>											
<i>1800</i>	<i>Ø</i>	<i>Ø</i>	<i>2736</i>	<i>18865</i>											
<i>2400</i>	<i>Ø</i>	<i>Ø</i>	<i>2744</i>	<i>18920</i>	<i>✓</i>										

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: *Bimbaya #2*
OPERATOR: *L. Knox*



SANTOS LTD WELL TEST DATA METRIC SUMMARY SHEET

DATE: 24/3/88
PAGE No: 4 of 9

[illegible]

CONVERSION FACTORS:

- BBL'S x 0.15899 = M³ • MMSCF x 28.174 = 10³ M³
 • Cu/FT PER BBL x 0.1773 = M³/M³ • PSI x 6.895 = KPA • °C x 9 ÷ 5 + 32 = °F

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WELL: ...Bimboya #2.....

OPERATOR: ...L. Knox.....



SANTOS LTD
WELL TEST DATA
METRIC SUMMARY SHEET

DATE: ...25/3/88.....

PAGE No: ...5 of 9.....

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M ³ /D	FLOWRATE H ₂ O BBL'S/D	FLOWRATE H ₂ O M ³ /D	MMSCF/D	Mm ³ /D	G.O.R. Cu/FT BBL	G.O.R. M ³ /M ³
March 25, 1988															
0925	Ø	Ø	2748	18945	S.I.			Americadas @ Survey Depth Of 9182' KID							
1100	Ø	Ø	2747	18940	"			Open Well On 12/64 Choke For Rate #1							
* 1300	Ø	Ø	1924	18265	12/64	95	35	126.79	20.16	Ø	Ø	1.455	41.0		
	* Shut In Well, End Of Rate #1														
1500	Ø	Ø	2741	18900	S.I.			Open Well On 16/64 Choke For Rate #2							
* 1700	Ø	Ø	1582	10910	16/64	99	37	158.49	25.20	Ø	Ø	1.958	55.2		
	* Shut In Well, End Of Rate #2														
1900	Ø	Ø	2745	18925	S.I.			Open Well On 19/64 Choke For Rate #3							
* 2100	Ø	Ø	1390	9885	19/64	100	38	190.19	30.24	Ø	Ø	2.166	61.0		
	* Shut In Well, End Of Rate #3														

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: *Bimbaya #2*.....OPERATOR: *L. Knox*.....

SANTOS LTD
WELL TEST DATA
METRIC SUMMARY SHEET

DATE: *25/3/88*.....PAGE No: *6 of 9*.....

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M ³ /D	FLOWRATE H ₂ O BBL'S/D	FLOWRATE H ₂ O M ³ /D	MMSCF/D	Mm ³ /D	G.O.R. Cu/FT BBL	G.O.R. M ³ /M ³
<i>March 25, 1988</i>															
<i>2300</i>	<i>0</i>	<i>0</i>	<i>2747</i>	<i>18940</i>	<i>S.I.</i>			<i>Open Well On 27/64 Choke For Rate #4</i>							
<i>March 26, 1988</i>															
<i>2100</i>	<i>0</i>	<i>0</i>	<i>824</i>	<i>5680</i>	<i>27/64</i>	<i>104</i>	<i>40</i>	<i>174.34</i>	<i>27.72</i>	<i>15.85</i>	<i>2.52</i>	<i>2.745</i>	<i>77.3</i>		
	<i>* Cut Choke To 24/64 For Extended Flow Rate</i>														
<i>2200</i>	<i>145</i>	<i>1000</i>	<i>969</i>	<i>6680</i>	<i>24/64</i>	<i>106</i>	<i>41</i>	<i>206.04</i>	<i>32.76</i>	<i>7.92</i>	<i>1.26</i>	<i>2.579</i>	<i>72.7</i>		
<i>2400</i>	<i>290</i>	<i>2000</i>	<i>967</i>	<i>6665</i>		<i>108</i>	<i>42</i>	<i>198.11</i>	<i>31.50</i>	<i>7.92</i>	<i>1.26</i>	<i>2.623</i>	<i>73.9</i>		
<i>2600</i>	<i>348</i>	<i>2400</i>	<i>965</i>	<i>6655</i>		<i>109</i>	<i>43</i>	<i>174.34</i>	<i>27.72</i>	<i>15.85</i>	<i>2.52</i>	<i>2.558</i>	<i>72.1</i>		
<i>2800</i>	<i>406</i>	<i>2800</i>	<i>968</i>	<i>6675</i>		<i>113</i>	<i>45</i>	<i>213.96</i>	<i>34.02</i>	<i>7.92</i>	<i>1.26</i>	<i>2.553</i>	<i>71.9</i>		
<i>3000</i>	<i>464</i>	<i>3200</i>	<i>967</i>	<i>6665</i>		<i>115</i>	<i>46</i>	<i>182.26</i>	<i>28.98</i>	<i>7.92</i>	<i>1.26</i>	<i>2.564</i>	<i>72.2</i>		
<i>3200</i>	<i>508</i>	<i>3500</i>	<i>966</i>	<i>6660</i>		<i>115</i>	<i>46</i>	<i>182.26</i>	<i>28.98</i>	<i>7.92</i>	<i>1.26</i>	<i>2.591</i>	<i>73.0</i>		
<i>1400</i>	<i>544</i>	<i>3750</i>	<i>965</i>	<i>6655</i>	<i>✓</i>	<i>117</i>	<i>47</i>	<i>182.26</i>	<i>28.98</i>	<i>7.92</i>	<i>1.26</i>	<i>2.642</i>	<i>74.4</i>		

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: *Bintaya #2*
 OPERATOR: *L. Knox*



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: *26/3/88*
 PAGE No: *7 of 9*

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
<i>March 26, 1988</i>															
<i>1600</i>	<i>566</i>	<i>3900</i>	<i>967</i>	<i>6665</i>	<i>24/16-1</i>	<i>118</i>	<i>48</i>	<i>182.26</i>	<i>28.98</i>	<i>7.92</i>	<i>1.26</i>	<i>2.553</i>	<i>71.9</i>		
<i>1800</i>	<i>595</i>	<i>4100</i>	<i>967</i>	<i>6665</i>		<i>118</i>	<i>48</i>	<i>186.23</i>	<i>29.61</i>	<i>11.89</i>	<i>1.89</i>	<i>2.603</i>	<i>73.3</i>		
<i>2000</i>	<i>616</i>	<i>4250</i>	<i>966</i>	<i>6660</i>		<i>120</i>	<i>49</i>	<i>170.38</i>	<i>27.09</i>	<i>11.89</i>	<i>1.89</i>	<i>2.609</i>	<i>73.5</i>		
<i>2200</i>	<i>638</i>	<i>4400</i>	<i>967</i>	<i>6665</i>		<i>120</i>	<i>49</i>	<i>166.42</i>	<i>26.46</i>	<i>7.92</i>	<i>1.26</i>	<i>2.600</i>	<i>73.3</i>		
<i>2400</i>	<i>653</i>	<i>4500</i>	<i>965</i>	<i>6655</i>		<i>120</i>	<i>49</i>	<i>194.15</i>	<i>30.87</i>	<i>7.92</i>	<i>1.26</i>	<i>2.588</i>	<i>72.1</i>		
<i>March 27, 1988</i>															
<i>2200</i>	<i>667</i>	<i>4600</i>	<i>966</i>	<i>6660</i>		<i>120</i>	<i>49</i>	<i>178.30</i>	<i>28.35</i>	<i>7.92</i>	<i>1.26</i>	<i>2.599</i>	<i>73.2</i>		
<i>2400</i>	<i>667</i>	<i>4600</i>	<i>963</i>	<i>6640</i>		<i>122</i>	<i>50</i>	<i>178.30</i>	<i>28.35</i>	<i>11.89</i>	<i>1.89</i>	<i>2.581</i>	<i>72.7</i>		
<i>2600</i>	<i>689</i>	<i>4750</i>	<i>966</i>	<i>6660</i>		<i>122</i>	<i>50</i>	<i>174.34</i>	<i>27.72</i>	<i>7.92</i>	<i>1.26</i>	<i>2.593</i>	<i>73.1</i>		
<i>2800</i>	<i>696</i>	<i>4800</i>	<i>964</i>	<i>6645</i>	<i>✓</i>	<i>122</i>	<i>50</i>	<i>182.26</i>	<i>28.98</i>	<i>7.92</i>	<i>1.26</i>	<i>2.591</i>	<i>73.0</i>		

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: *Bimhaga #2*
 OPERATOR: *L. Knox*



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: *27/3/88*
 PAGE No: *8 of 9*

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
<i>March 27, 1988</i>															
<i>1000</i>	<i>696</i>	<i>4800</i>	<i>969</i>	<i>6680</i>	<i>24/64</i>	<i>124</i>	<i>51</i>	<i>190.19</i>	<i>30.24</i>	<i>7.92</i>	<i>1.26</i>	<i>2.589</i>	<i>72.9</i>		
<i>1100</i>	<i>616</i>	<i>4250</i>	<i>2604</i>	<i>17955</i>	<i>S.I.</i>	<i>* Shut In Well, End Of Extended Rate</i>									
<i>1200</i>	<i>466</i>	<i>2800</i>	<i>2703</i>	<i>18635</i>											
<i>1400</i>	<i>174</i>	<i>1200</i>	<i>2730</i>	<i>18825</i>											
<i>1600</i>	<i>Ø</i>	<i>Ø</i>	<i>2737</i>	<i>18870</i>											
<i>1800</i>	<i>Ø</i>	<i>Ø</i>	<i>2740</i>	<i>18890</i>											
<i>2400</i>	<i>Ø</i>	<i>Ø</i>	<i>2744</i>	<i>18820</i>											
<i>March 28, 1988</i>															
<i>2600</i>	<i>Ø</i>	<i>Ø</i>	<i>2745</i>	<i>18925</i>											
<i>1200</i>	<i>Ø</i>	<i>Ø</i>	<i>2746</i>	<i>18935</i>	<i>✓</i>										

CONVERSION FACTORS:

- BBL'S x 0.15899 = M³
- MMSCF x 28.174 = 10³ M³
- Cu/FT PER BBL x 0.1773 = M³/M³
- PSI x 6.895 = KPA
- °C x 9 ÷ 5 + 32 = °F

WELL: *Bimbaya #2*OPERATOR: *L. Knox*SANTOS LTD
WELL TEST DATA

METRIC SUMMARY SHEET

DATE: *28/3/88*PAGE No: *9 of 9*

DATE TIME	WELLHEAD							FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	CHOKE SIZE INS.	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
<i>March 28, 1988</i>															
<i>1800</i>	<i>Ø</i>	<i>Ø</i>	<i>2746</i>	<i>18935</i>	<i>S.I.</i>										
<i>2400</i>	<i>Ø</i>	<i>Ø</i>	<i>2746</i>	<i>18935</i>											
<i>March 29, 1988</i>															
<i>0600</i>	<i>Ø</i>	<i>Ø</i>	<i>2745</i>	<i>18925</i>											
<i>1200</i>	<i>Ø</i>	<i>Ø</i>	<i>2745</i>	<i>18925</i>											
<i>1800</i>	<i>Ø</i>	<i>Ø</i>	<i>2744</i>	<i>18920</i>											
<i>2400</i>	<i>Ø</i>	<i>Ø</i>	<i>2743</i>	<i>18915</i>											
<i>March 30, 1988</i>															
<i>0600</i>	<i>Ø</i>	<i>Ø</i>	<i>2743</i>	<i>18915</i>											
						<i>Pull Out Of Hole With Ameradas</i>									
						<i>Redress Ameradas For Static Gradient</i>									
						<i>Rig Down, Secure Well & Move To Next Location</i>									

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL Bimbaya #2TANK:— CAPACITY 56.6 M³
SCALE 1cm = 105 M³

SANTOS LTD

FLUID PRODUCTION SHEET

DATE 20/3/88PAGE No. 1 of 5OPERATOR L. Knox

DATE TIME	CUM. TIME	OIL/CONDENSATE PRODUCTION					WATER PRODUCTION					REMARKS
		TANK DIP CM	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM.PROD. M ³	OIL CONDENSATE GRAVITY "API60"	TANK DIP CM	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM.PROD. M ³	SALINITY PPM	
March 20, 1988		0			0		0			0		
0500		Open Well For Cleanup, Bypass To Flare										
0800		Divert Flow Through Separator										
0900		8.5	0.892	21.42	0.892		0	0	0	0		
1000		18.0	0.997	23.94	1.889		0	0	0	0		
1400		62.5	4.672	28.03	6.561	50.9	0	0	0	0		
1800		104.0	4.357	26.14	10.918	51.2	5.0	0.525	3.15	0.525	1300	
2200		147.5	4.567	27.40	15.485	52.8	8.0	0.315	1.89	0.840	1000	
March 21, 1988												
2200		191.0	4.567	27.40	20.052	52.9	12.0	0.420	2.52	1.260	1000	
0600		234.5	4.567	27.40	24.619	51.3	15.0	0.315	1.89	1.575	1000	
1000		280.0	4.777	28.66	29.396	51.8	18.0	0.315	1.89	1.890	800	
1400		325.0	4.725	28.35	34.121	51.6	20.0	0.210	1.26	2.100	800	
1800		369.5	4.672	28.03	38.793	51.6	21.0	0.105	0.63	2.205	600	
2200		413.0	4.567	27.40	43.360	52.2	24.0	0.315	1.89	2.520	500	
March 22, 1988												
2200		456.5	4.567	27.40	47.927	52.0	26.0	0.210	1.26	2.730	500	
0600		500.5	4.620	27.72	52.547	51.8	28.5	0.262	1.57	2.992	500	
* Change Tanks												

TANK:- CAPACITY 56.6 M³
SCALE 1cm = 10.5 M³



FLUID PRODUCTION SHEET

OPERATOR L. Knox

[illegible]

WELL <u>Bimbaya #2</u>		 SANTOS LTD FLUID PRODUCTION SHEET						DATE <u>25/3/88</u> PAGE No. <u>3 of 5</u> OPERATOR <u>L. Knox</u>				
TANK:— CAPACITY <u>56.6 M³</u> SCALE <u>1 cm = 1.05 M³</u>		OIL/CONDENSATE PRODUCTION					WATER PRODUCTION					REMARKS
DATE TIME	CUM. TIME	TANK DIP cm	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM. PROD. M ³	OIL CONDENSATE GRAVITY "API60F"	TANK DIP cm	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM. PROD. M ³	SALINITY PPM	
March 25, 1988		339.5			Ø		19.0			Ø		
1100		Open Well On 12/64 Choke For Rate #1										
1130		343.5	0.420	20.16	0.420		19.0	Ø	Ø	Ø		
1200		348.5	0.525	25.20	0.945		19.0	Ø	Ø	Ø		
1230		353.0	0.472	22.68	1.417		19.0	Ø	Ø	Ø		
1300		357.0	0.420	20.16	1.837	54.5	19.0	Ø	Ø	Ø	—	
		* Shut In Well, End Of Rate #1										
1500		Open Well On 16/64 Choke For Rate #2										
1530		364.0	0.735	35.28	2.572		19.0	Ø	Ø	Ø		
1600		370.5	0.682	32.76	3.254		19.0	Ø	Ø	Ø		
1630		376.0	0.577	27.72	3.831		19.0	Ø	Ø	Ø		
1700		381.0	0.525	25.20	4.356	55.1	19.0	Ø	Ø	Ø	—	
		* Shut In Well, End Of Rate #2 - Change Tanks - Opening Dips: 170.5 + Ø H ₂ O										
1900		Open Well On 19/64 Choke For Rate #3										
1930		180.5	1.050	50.40	5.406		Ø	Ø	Ø	Ø		
2000		187.5	0.735	35.28	6.141		Ø	Ø	Ø	Ø		
2030		193.5	0.630	30.24	6.771		Ø	Ø	Ø	Ø		
2100		199.5	0.630	30.24	7.401		Ø	Ø	Ø	Ø	—	
		* Shut In Well, End Of Rate #3										

WELL <u>Bimbana #2</u>		 SANTOS LTD FLUID PRODUCTION SHEET						DATE <u>25/3/88</u>				
TANK— CAPACITY <u>56.6 M³</u> SCALE <u>1 cm = 1.05 M³</u>								PAGE No. <u>4 of 5</u>				
DATE		OIL/CONDENSATE PRODUCTION						WATER PRODUCTION				REMARKS
TIME	CUM. TIME	TANK DIP cm	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM. PROD. M ³	OIL CONDENSATE GRAVITY "API60F"	TANK DIP cm	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM. PROD. M ³	SALINITY PPM	
March 25, 1988		199.5			7.401		0			0		
2300		Open Well On 2 7/8" Choke For Rate #4										
2330		210.5	1.155	55.44	8.556		0.5	0.052	2.52	0.052		
2400		217.0	0.682	32.76	9.238		1.0	0.052	2.52	0.105		
March 26, 1988												
0030		223.5	0.682	32.76	9.920		2.0	0.105	5.04	0.210		
* 0100		229.0	0.577	27.72	10.497	53.4	2.5	0.052	2.52	0.262	800	
		* Cut Choke To 2 1/2" For Extended Flow Rate										
0200		242.0	1.365	32.76	11.862		3.0	0.052	1.26	0.314		
0300		254.5	1.312	31.50	13.174		3.5	0.052	1.26	0.366	600	
0400		267.0	1.312	31.50	14.486		4.0	0.052	1.26	0.418		
0500		279.5	1.312	31.50	15.798	52.6	4.5	0.052	1.26	0.470	400	
0600		290.5	1.155	27.72	16.953		5.5	0.105	2.52	0.575		
0700		302.5	1.260	30.24	18.213		6.5	0.105	2.52	0.680		
0800		316.0	1.417	34.02	19.630		7.0	0.052	1.26	0.732		
0900		328.5	1.312	31.50	20.942	52.2	7.5	0.052	1.26	0.784	400	
1000		340.0	1.207	28.98	22.149		8.0	0.052	1.26	0.836		
1100		352.5	1.312	31.50	23.461		8.5	0.052	1.26	0.888		
1200		364.0	1.207	28.98	24.668		9.0	0.052	1.26	0.940		

WELL <u>Bimban #2</u>		 SANTOS LTD FLUID PRODUCTION SHEET										DATE <u>26/3/88</u>	
TANK— CAPACITY <u>56.6 M³</u> SCALE <u>1 cm³ = 105 M³</u>												PAGE No. <u>5 of 5</u>	
DATE		OIL/CONDENSATE PRODUCTION					WATER PRODUCTION					REMARKS	
TIME	CUM. TIME	TANK DIP cm	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM. PROD. M ³	OIL CONDENSATE GRAVITY °API60F	TANK DIP cm	TANK PROD. M ³	FLOWRATE M ³ /Day	CUM. PROD. M ³	SALINITY PPM		
March 26, 1988		364.0			24.668		9.0			0.940			
1300		376.5	1.312	31.50	25.980		9.5	0.052	1.26	0.992			
1400		388.0	1.207	28.98	27.187		10.0	0.052	1.26	1.044			
1600		411.0	2.415	28.98	29.602	54.1	11.0	0.105	1.26	1.149	400		
1800		434.5	2.467	29.61	32.069		12.5	0.157	1.89	1.306			
* 2000		456.0	2.257	27.09	34.326	52.0	14.0	0.157	1.89	1.463	400		
* Change Tanks		11.5					2.5						
2200		32.5	2.205	26.46	36.531		3.5	0.105	1.26	1.568			
2400		57.0	2.572	30.87	39.104	52.6	4.5	0.105	1.26	1.673	400		
March 27, 1988													
0200		79.5	2.362	28.35	41.465		5.5	0.105	1.26	1.778			
0400		102.0	2.362	28.35	43.827	53.5	7.0	0.157	1.89	1.935	400		
0600		124.0	2.310	27.72	46.137		8.0	0.105	1.26	2.040			
0800		147.0	2.415	28.98	48.552	52.8	9.0	0.105	1.26	2.145	400		
* 1000		171.0	2.520	30.24	51.072		10.0	0.105	1.26	2.250			
* Shut In Well, End Of Test													

OILSERV AUSTRALIA

GAS RATE CALCULATION

Page 1 of 8

Client: Santos Ltd.Well: Bimbaya #2Test: Clean UpOperator: L. KnoxInterval: 9212' To 9313' KBMeter Run Size: 4.026"

Date	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pf psia	√Hw*Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MscfD	Gas Ra M ³ X10 ³ /
Time	Accum													
March 20, 1988														
0500														
0800														
1230		1.890	68	80	370	171.98	160.79	1.0600	1.0014	.9924	1.0719	520.2810	2.148	60.50
0900		"	68	81	372	173.52		"	1.0014	.9924	1.0723	520.5166	2.168	61.07
1000		"	70	82	373	174.83		"	1.0014	.9905	1.0715	519.1264	2.178	61.36
1400		.905	73	95	373	188.17		1.0512	1.0017	.9877	1.0730	514.2102	2.322	65.42
1800		"	75	93	395	191.60		"	1.0015	.9859	1.0772	515.1743	2.369	66.74
2300		.904	73	96	370	188.40		1.0518	1.0017	.9877	1.0721	514.0651	2.324	65.48
March 21, 1988														
0200		"	73	103	345	188.43		"	1.0019	.9877	1.0662	511.3877	2.313	65.15
0600		.902	75	106	355	193.91		1.0529	1.0019	.9859	1.0672	511.4400	2.380	67.05
1000		"	82	100	390	197.42		"	1.0017	.9795	1.0715	510.0298	2.417	68.08
1400		.904	88	103	395	201.64		1.0518	1.0017	.9741	1.0698	505.9212	2.448	68.97
1800		"	86	101	415	204.66	✓	"	1.0016	.9759	1.0753	509.3580	2.502	70.49

00056

OILSERV AUSTRALIA

GAS RATE CALCULATION

Page 2 of 8

Client: Santos Ltd.Well: Bimbaya #2Test: Clean UpOperator: L. KnoxInterval: 9212' To 9313' KBMeter Run Size: 4.026"

Date		Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pf psia	√Hw*Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MscfD	Gas Ra M ³ ×10 ³ /D
Time	Accum														
March 21, 1988															
2200		.906	1.500	82	112	343	195.92	460.79	1.0506	1.0021	.9795	1.0620	504.6316	2.373	66.85
March 22, 1988															
0200		.906		82	110	360	198.92		"	1.0020	.9795	1.0656	506.3041	2.417	68.101
0600		.909		82	116	355	202.85		1.0518	1.0021	.9795	1.0612	506.2437	2.465	69.438
1000		"		86	110	360	198.92		"	1.0020	.9759	1.0634	503.9521	2.406	67.685
1400		.912		90	111	360	199.82		1.0471	1.0020	.9723	1.0631	499.7451	2.397	67.524
1800		"		90	108	395	206.47		"	1.0018	.9723	1.0704	503.1060	2.493	70.238
2200		.910		88	112	375	204.87		1.0483	1.0019	.9741	1.0668	502.9221	2.473	69.667
March 23, 1988															
0200		.910		88	111	360	199.82		"	1.0020	.9741	1.0636	501.4610	2.405	67.756
0600		.907		88	113	365	203.01		1.0500	1.0020	.9741	1.0641	502.5311	2.448	68.984
1000		"		90	108	390	205.16		"	1.0018	.9723	1.0684	503.5289	2.479	69.852
1100		"		64	35	350	110.64		"	1.0006	.9962	1.0727	517.3836	1.374	38.706
1130		"	✓	68	69	375	160.80	✓	"	1.0012	.9924	1.0768	517.6588	1.998	56.248

00057

OILSERV AUSTRALIA

GAS RATE CALCULATION

Page 4 of 8

Client: Santos Ltd.Well: Rimbaya #2Test: Modified IsachronOperator: L. KnoxInterval: 9212 To 9313' KBMeter Run Size: 4.026"

Date	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pf psia	√Hw*Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MMscfD	Gas Rate M ³ ×10 ³ /D
Time	Accum													
March 25, 1988														
1100		Open Well On		12/64	For Rate #1									
1115		.877	1.250	36	96	355	184.54	317.45	1.0678	1.0018	1.0239	1.0848	377.1774	1.670 47.06
1130				37	71	370	162.02		1.0013	1.0229	1.0887	377.9597	1.470	41.407
1145				41	66	360	154.08		1.0012	1.0186	1.0828	374.3770	1.384	39.006
1200				45	69	370	159.72		1.0012	1.0147	1.0829	372.9482	1.430	40.277
1215				41	70	390	165.17		1.0012	1.0188	1.0918	377.4922	1.496	42.16
1230				43	64	397	155.28		1.0011	1.0168	1.0863	374.8366	1.397	39.356
1245				43	66	383	158.93		1.0011	1.0168	1.0881	375.4578	1.432	40.350
* 1300		✓	✓	43	71	370	162.02	✓	1.0013	1.0168	1.0843	374.1818	1.455	40.99
		* Shut In Well,			End Of Rate #1									
1500		Open Well On		16/64	Choke For Rate #2									
1515		.886	1.500	34	87	369	179.11	460.79	1.0624	1.0015	1.0260	1.0933	549.9777	2.364 66.607
1530				39	68	363	157.05		1.0012	1.0208	1.0875	544.1111	2.051	57.782
1545				45	50	363	134.67		1.0009	1.0147	1.0832	538.5573	1.741	49.042
1600				45	60	390	152.92		1.0010	1.0147	1.0913	542.6383	1.991	56.108

00059

Client: Santos Ltd.Well: Bimbaya #2Test: Modified IsochroneOperator: L. KnoxInterval: 9212' TO 9313' KESMeter Run Size: 4.026"

Date		Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pf psia	√Hw*Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MMscfD	Gas Rate M3x103 /Day
Time	Accum														
1615		.886	1.500	45	58	390	150.35	460.79	1.0624	1.0010	1.0147	1.0913	542.6202	1.958	55.16
1630		↓	↓	45	60	370	148.94	↓	↓	1.0011	1.0147	1.0852	539.6677	1.929	54.35
1645		↓	↓	45	64	367	153.20	↓	↓	1.0011	1.0147	1.0844	539.2697	1.983	55.86
*1700		↓	↓	46	63	365	151.58	↓	↓	1.0011	1.0137	1.0831	538.0947	1.958	55.15
* Shut In Well, End Of Rate # 2															
1900	Open Well On 1 1/4 Choke For Rate # 3														
1915		.910	1.500	32	122	385	216.65	460.79	1.0483	1.0021	1.0281	1.1090	551.8439	2.869	80.84
1930		↓	↓	46	86	380	180.71	↓	↓	1.0015	1.0137	1.0944	536.6679	2.328	65.57
1945		↓	↓	45	92	354	180.40	↓	↓	1.0017	1.0147	1.0867	533.5589	2.310	65.08
2000		↓	↓	48	90	350	177.41	↓	↓	1.0017	1.0117	1.0833	530.3242	2.258	63.61
2015		↓	↓	48	91	337	175.05	↓	↓	1.0018	1.0117	1.0774	528.4506	2.220	62.55
2030		↓	↓	52	76	380	169.88	↓	↓	1.0013	1.0078	1.0897	531.1348	2.166	61.01
2045		↓	↓	54	76	380	169.88	↓	↓	1.0013	1.0058	1.0882	529.3790	2.158	60.80
2100		↓	↓	54	79	370	170.91	↓	↓	1.0014	1.0058	1.0852	527.9725	2.166	61.01
* Shut In Well, End Of Rate # 3															

Client: Santos Ltd.Well: Bimbaya #2Test: Modified IsochroneOperator: L. KnoxInterval: 9212' To 9313' KB Meter Run Size: 4.026"

Date	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pf psia	√Hw×Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MMscfD	Gas Rate M ³ ×10 ³ / D
Time	Accum													
March 25, 1988														
2300		Open Well	CA	2 1/4	64 Choke For Rate #4									
2315		.911	1.750	46	162	367	243.74	634.39	1.0477	1.0028	1.0537	1.0904	736.7580	4.310 121.462
2330				66	99	353	186.87			1.0018	.9943	1.0732	710.5204	3.187 89.779
2345				72	80	375	173.14			1.0014	.9887	1.0754	707.6049	2.940 82.84
2400		↓		73	76	363	166.03			1.0013	.9877	1.0719	704.6219	2.808 79.107
March 26, 1988														
0015		.911		75	74	363	163.84			1.0013	.9859	1.0708	702.5775	2.763 77.83
0030				75	74	365	164.29			1.0013	.9859	1.0713	702.8845	2.771 78.08
0045				77	73	365	163.17			1.0013	.9840	1.0702	700.8718	2.745 77.33
* 0100		↓	↓	77	73	365	163.17	↓	↓	1.0013	.9840	1.0702	700.8718	2.745 77.33
		* Cut Choke To	2 1/4	64 For Extended Rate										
0200		.911	1.500	72	118	371	209.16	460.79	1.0477	1.0021	.9887	1.0744	513.8605	2.579 72.67
0300		.895		73	120	370	210.64		1.0570	1.0021	.9877	1.0702	515.9602	2.608 73.48
0400				75	122	370	212.38			1.0021	.9859	1.0692	514.5130	2.623 73.889
0500		↓	↓	75	116	375	208.49	↓	↓	1.0026	.9859	1.0703	514.9900	2.577 72.605

Client: Santos Ltd.Well: Bimbaya #2Test: Modified IsochronalOperator: L. KnoxInterval: 9212' To 9313' KBMeter Run Size: 4.026

Date		Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pf psia	√Hw*Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MMscfD	Gas Rate M ³ ×10 ³ / Day
Time	Accum														
March 26, 1988															
0600		.895	1.500	77	115	375	207.59	46079	1.0570	1.0020	.9840	1.0693	513.5213	2.558	72.08
0700		.907		77	116	370	207.10		1.0500	1.0020	.9840	1.0706	510.7571	2.579	71.52
0800		"		79	118	370	208.87			1.0021	.9822	1.0695	509.3223	2.553	71.936
0900		"		81	118	370	208.87			1.0021	.9804	1.0685	507.9075	2.546	71.77
1000		"		84	117	380	210.78			1.0020	.9777	1.0682	506.8017	2.564	72.236
1100		.905		86	118	380	211.68		1.0512	1.0020	.9759	1.0678	505.7806	2.570	72.39
1200		"		86	120	380	213.47			1.0021	.9759	1.0678	505.7979	2.591	73.007
1300		"		86	124	380	216.99			1.0021	.9759	1.0678	505.8325	2.634	74.219
1400		"		88	120	395	217.64			1.0020	.9741	1.0700	505.8788	2.642	74.447
1600		.910		88	127	355	212.25			1.0023	.9741	1.0626	501.1298	2.553	71.922
1800		"		88	126	370	215.84			1.0022	.9741	1.0657	502.5585	2.603	73.346
2000		.912		88	126	372	216.42		1.0471	1.0022	.9741	1.0665	502.3786	2.609	73.517
2200		"		88	124	375	215.56			1.0021	.9741	1.0671	502.6548	2.600	73.266
2400		"		88	120	375	212.06			1.0021	.9741	1.0671	502.6200	2.588	72.069



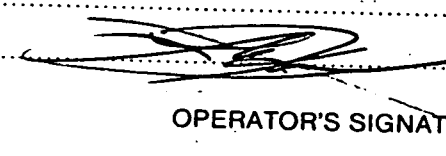
WIRELINE REPORT

00064

WELL: Bimbaya #2DATE: 19/3/88PROGRAM: Modified Isochronal TestingPURPOSE OF WORK: To Insure Tbg. Clear Of Obstruction.
Prior To Running Bombs

REPORT OF WORK PERFORMED:

1530 - Equipment On Location, Commence
Rigging Up
1845 - R.I.H. With 1.75" Blind Box
1935 - Tbg. Clear To 9330' KB, P.O.H.
(Fish In Hole)
2020 - Tool String @ Surface, Depress. Sub.
& Secure Well Overnight


OPERATOR'S SIGNATUREWORK PERFORMED BY: L. Knox OF Oil/serv

WELL DATA:

Tubing Size: 2 7/8" FWHP: _____ SIWHP: 18950 KPA

Sub Surface S.V./Landing Nipple @ _____ S.S.D. @: _____

"X" Nipple @ 9068' KB "N"/"X" Nipple @ 9081' KB other _____Min I.D. 2.205 " @ 9081' KB Packer @ 9048' KBPerforated Interval: 9262' To 9313' KBForward to: Petroleum Engineering — Adelaide
Production Department — Moomba

ISO - CHRONAL AND BUILD-UP SURVEY

Well: Bim Baya #2Date: 25/3/88Lubricator Data: 2738 2757
2733 2737

(2747 PSI)

(2743 PSI)

Pressure with D.W.T. In = 18940 KPA Out = 18915 KPATime Pressured 25/3/88 @ 0730 Hrs Time Depressed 30/3/88 @ 0740 HrsTime Run in Hole 25/3/88 @ 0830 Hrs Time off Bottom 30/3/88 @ 0600 Hrs

Bomb No. 1 Data

Bomb No. 2 Data

Element No. and Range	<u>71588/6000psi</u>	<u>71589/6000psi</u>
Recorder No.	<u>62363/15TLS</u>	<u>12068/15TLS</u>
Clock and Lead Screw Data	<u>F23152/120Hr</u>	<u>F23013/120Hr</u>
Engage Stylus	Date: <u>25/3/88</u> Time: <u>@ 0713 Hrs</u>	Date: <u>25/3/88</u> Time: <u>@ 0713 Hrs</u>
Disengage	Date: <u>30/3/88</u> Time: <u>@ 0750 Hrs</u>	Date: <u>30/3/88</u> Time: <u>@ 0750 Hrs</u>

Remarks: Temp El. # 10066/90° to 349°F Also Ran

Well-Head Data for Final Build-up

Date	Time	Hours shut-in Time	Wellhead KPA.G	Casing KPA.G	Wellhead Temp. °C	Remarks
<u>25/3/88</u>	<u>0730</u>		<u>18940</u>	<u>0</u>		<u>Press. Lub.</u>
	<u>0830</u>		<u>18940</u>	<u>0</u>		<u>Run In 1-1/2" L</u>
	<u>0925</u>		<u>18945</u>	<u>0</u>		<u>@ Hang Depth 9182' E</u>
	<u>1100</u>		<u>18940</u>	<u>0</u>		<u>Open Well 1 3/4" Rate #1</u>
	<u>1300</u>		<u>13265</u>	<u>0</u>	<u>35</u>	<u>S.I. Well - End Rate #1</u>
	<u>1500</u>		<u>18900</u>	<u>0</u>		<u>Open Well 1 3/4" Rate #2</u>
	<u>1700</u>		<u>10910</u>	<u>0</u>	<u>37</u>	<u>S.I. Well - End Rate #2</u>
	<u>1900</u>		<u>18925</u>	<u>0</u>		<u>Open Well 1 3/4" Rate #3</u>
	<u>2100</u>		<u>9885</u>	<u>0</u>	<u>38</u>	<u>S.I. Well - End Rate #3</u>
	<u>2300</u>		<u>18940</u>	<u>0</u>		<u>Open Well 2 3/4" Rate #4</u>
<u>26/3/88</u>	<u>0100</u>		<u>5680</u>	<u>0</u>	<u>40</u>	<u>Adjust Choke 2 3/4" Ex. Rate</u>
	<u>0200</u>		<u>6680</u>	<u>1000</u>	<u>41</u>	
	<u>0600</u>		<u>6655</u>	<u>2400</u>	<u>43</u>	
	<u>1000</u>		<u>6665</u>	<u>3200</u>	<u>46</u>	
	<u>1400</u>		<u>6655</u>	<u>3750</u>	<u>47</u>	
	<u>1800</u>		<u>6665</u>	<u>4100</u>	<u>48</u>	
	<u>2200</u>		<u>6665</u>	<u>4400</u>	<u>49</u>	
<u>27/3/88</u>	<u>0200</u>		<u>6660</u>	<u>4600</u>	<u>49</u>	
	<u>0600</u>		<u>6660</u>	<u>4750</u>	<u>50</u>	
	<u>1000</u>		<u>6680</u>	<u>4800</u>	<u>51</u>	<u>S.I. Well End Ex. Rate</u>
	<u>1100</u>	<u>1</u>	<u>17955</u>	<u>4250</u>		
	<u>1200</u>	<u>2</u>	<u>18635</u>	<u>2800</u>		
	<u>1400</u>	<u>11</u>	<u>2200</u>	<u>1000</u>		

Well: Bimbaca 2

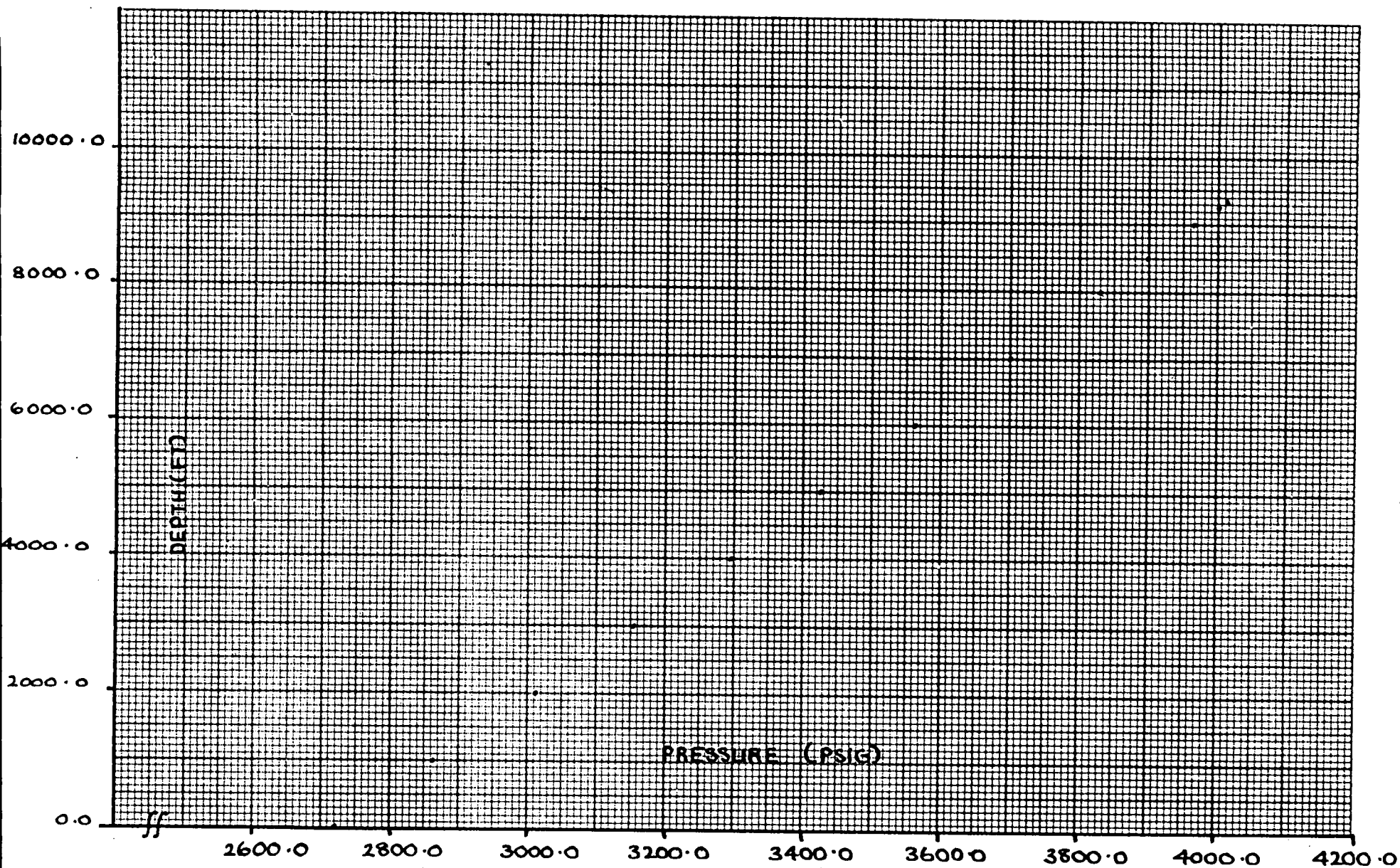
Date: 27/3/88

PAGE # 2 of 2

[illegible]

BIMBAYA # 2 - STATIC PRESSURE GRADIENT - 30/3/88

ELEMENT # 71588 / 6000 (TOP)



DATE: 30/5/88

BOMB No. 1 DATA

ELEMENT No. 71588 ELEMENT RANGE: 0-6000 ps.
RECORDER No. 62763 CLOCK DATA: 18547/34.
ENGAGE SYLUS: 0813 Hrs. DISENGAGE: 1135 Hrs.

BOMi 2 DATA

ELEMENT No. 71589 ELEMENT RANGED 6009.
RECORDER No. 12068 CLOCK DATA: 18548/34.
ENGAGE STYLUS 0813 DISENGAGE: 11354.

LUBRICATOR DATA

PRESSURE WITH D.W.T.: $I_2 = 1890.5 \text{ KPa}$ (27)
TIME PRESSURED: 0828 Hrs
TIME DEPRESSURED: 1111 Hrs

[illegible]

General Comments: Temp. Element # 10066 / 90-349°K Ran

SANTOS LIMITED
PETROLEUM DEVELOPMENT DEPARTMENT

BIMBAYA #2 - TIRRAWARRA SANDSTONE
MODIFIED ISOCHRONAL
19TH - 30TH MARCH, 1988

Report No. RE:032/89
Author: P.B. Lansom/D.M. Woodley
Date: June 1989



1. SUMMARY

2. INTRODUCTION

3. RESULTS

4. DISCUSSION

5. FIGURES

1. Log $\Delta\psi$ vs Log Δt Plot
2. Horner Plot
3. Back Pressure Plot
4. Deliverability Plot
5. Log k vs T_c^2 Plot
6. Static Gradient Plot

6. APPENDIX

- GASPAC PVT Properties of FWS Composition
- FLOPETROL PVT Study Report
- Well Test Summary sheets

00071

1. SUMMARY

This report presents the results of the modified isochronal test performed on the Tirrawarra Sandstone in Bimbaya #2 in March 1988. A representative full well stream composition has been determined from recombined high pressure gas and liquid samples taken during the test. Analysis of the buildup data indicated a flow capacity of 66 md-ft and an initial reservoir pressure of 4007 psia at 9263'KB (MPP). The LIT analysis indicated that the well has an absolute open flow potential of 2.8 MMSCFD.

Because of the low permeability ($k = 1.03$ md) and high skin ($s' = 13.7$) the well was fracture stimulated in December 1988 to improve its deliverability. A flowrate of 6.8 MMSCFD (at 1990 psia FWHP) was recorded during the extended flow period of the post-frac modified isochronal on Bimbaya #2.

00072

2. INTRODUCTION

Bimbaya #2 was drilled in September/October 1986 as a Block gas appraisal well 900m northeast of Bimbaya #1 to evaluate the gas/condensate potential of the Tirrawarra Sandstone.

Evaluation of wireline logs indicated a total of 64 feet of net gas/condensate pay within the Tirrawarra Sandstone. No pay was intersected in the Toolachee Formation as all sands were intersected downdip from Bimbaya #1 and were water wet. Two open hole DST's were run. DST #1 tested the 90-6 sand of the Tirrawarra Sandstone, resulting in a gas/condensate flow of 3.7 MMCFD and 254 BCPD plus recovery of 482 feet of 57.1 API condensate from the drill pipe. DST #2 tested a tight sand in the Merrimelia Formation, resulting in a gas flow too small to measure.

The well was completed and perforated in February, 1988 as a single gas producer from the Tirrawarra Sandstone. Below are the geological parameters:

SAND	PERFORATION INTERVAL (ft KB)	NET PAY (ft)	POROSITY (%)	WATER SATURATION (%)
90-6	9212-9313	64.0	11.4	26.1

All perforations shot with 2 1/8" enerjets at 4 spf and 0° phasing.

This report presents the results of the modified isochronal and build-up test performed in March, 1988.

00073

3. RESULTS

Interpretation of the test data yielded the following results:

Reservoir Pressure (psia)	
at 9263'KB (MPP)	4007
Flow Capacity (md-ft)	65.9
Permeability (md)	1.03
Apparent Skin	13.66
Turbulence Coefficient (D/MMSCF)	1.135
True Skin	10.94
LIT Absolute Open Flow Potential (MMSCF/D)	2.84
Stabilized Flow Constants	B 267.6×10^6 psia ² /cp/MMscfd
	F 17.87×10^6 psia ² /cp/MMscfd ²
Back Pressure Coefficients	C 2.215×10^{-8} MMscfd/psia
	n 1.12
Simplified Analysis AOF (MMSCD/D)	2.82

EXTENDED FLOW

Gas Rate (MMSCF/D)	2.40
Condensate Rate (BBLs/D)	185.64
Water Rate (BBLs/D)	9.13
Choke (inches)	24/64
FTP (psia)	980

4. DISCUSSION

4.1 Horner Data

Figure 1 is a log $\Delta\psi$ versus log Δt plot to determine the valid data for the straight line portion of the Horner build-up (Figure 2). The Horner plot provides a straight line and the results are considered representative of the reservoir properties.

The extrapolated reservoir pressure is 4007 psia at 9263'KB (MPP) compared to 4000 psia (Element #71588) measured during the static gradient which was run after the test. The higher extrapolated pressure is taken to be the stabilized reservoir pressure.

The Horner plot gave a flow capacity of 65.9 md-ft, corresponding to a permeability of 1.03 md, an apparent skin of 13.7 and a true skin of 10.9. These results compare favourably with those obtained during DST #1 ($k = 0.9$ md). However, the apparent skin has increased from 0.8 to 13.7 indicating possible liquid drop out around the wellbore due to retrograde condensation and possible completion inefficiencies.

4.2 Modified Isochronal Data

The Back Pressure Plot (Figure 3) gave a reasonable straight line using all four flowing periods. The slope gave an 'n' exponent of 1.12 indicating slight inconsistencies with the data since the 'n' exponent should not be greater than 1.0.

The Deliverability Plot (Figure 4) had a satisfactory unit slope indicating valid data. The Absolute Open Flow Potential of 2.84 MMSCFD is considered representative of the well.

Although the well flowed at a rate of 2.59 MMSCFD at a flowing tubing head pressure of 840 psia under transient conditions in the 4th flow period, the deliverability plot shows that the AOF after a longer flow time (probably still in a transient flow condition) is only 2.84 MMSCFD.

4.3 Gas Composition and FWS Recombination

During the stabilized flow period separator gas and liquid samples were taken and sent to FLOPETROL for analysis. The flash gas and stock tank liquid resulting from the flash of the separator liquid to stock tank conditions were recombined to form the HP liquid.

The HP Gas and HP liquid were then recombined to form the full well stream. A plot of $\text{Log } k \text{ vs } T_c^2$ (Figure 5) indicates the samples appear valid. The recombination data is in the Appendix, along with the FLOPETROL P.V.T. study report.

5. FIGURES

FIGURE 1
LOG ΔY VS LOG Δt PLOT

00077

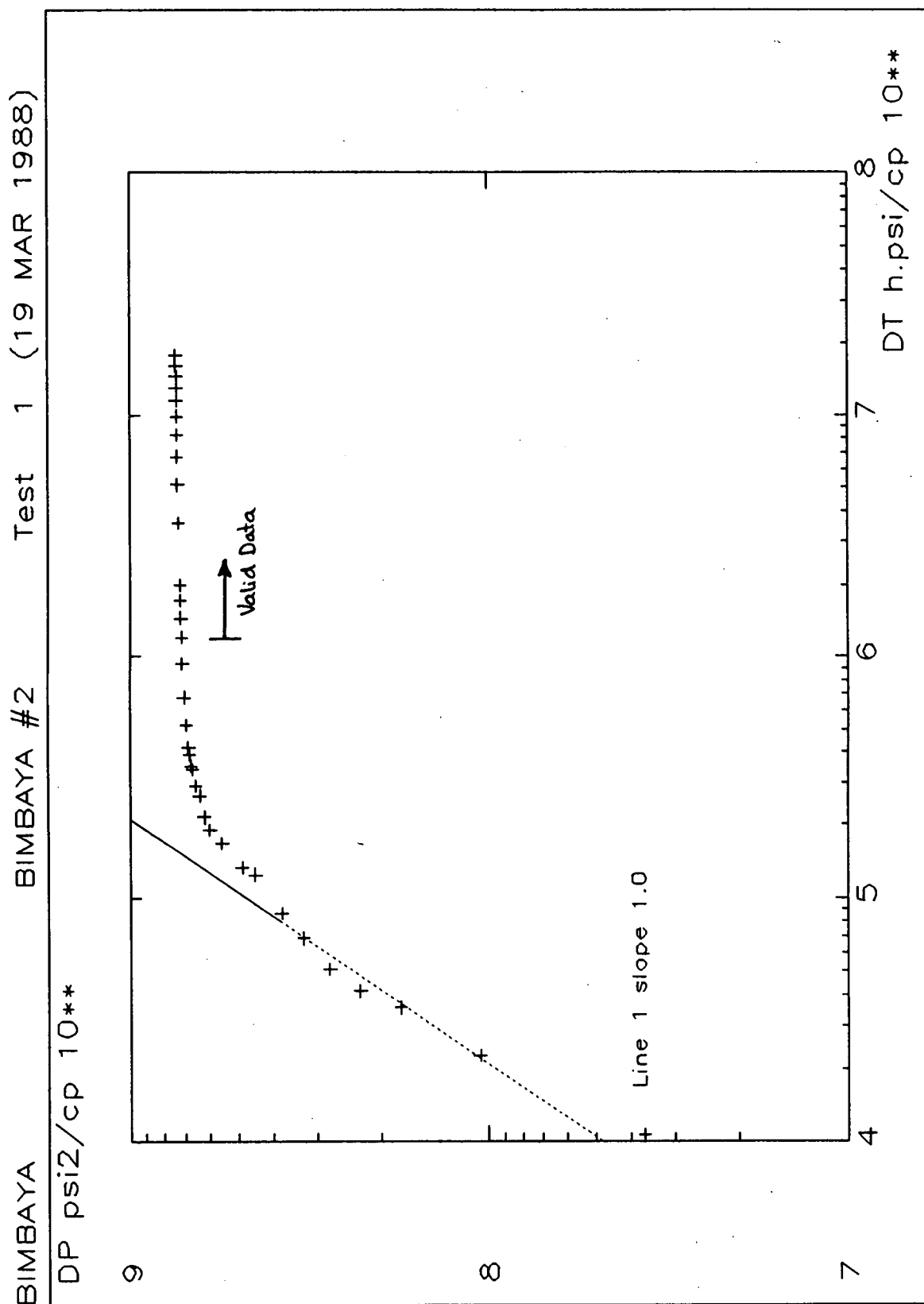


FIGURE 2
HORNER PLOT

00078

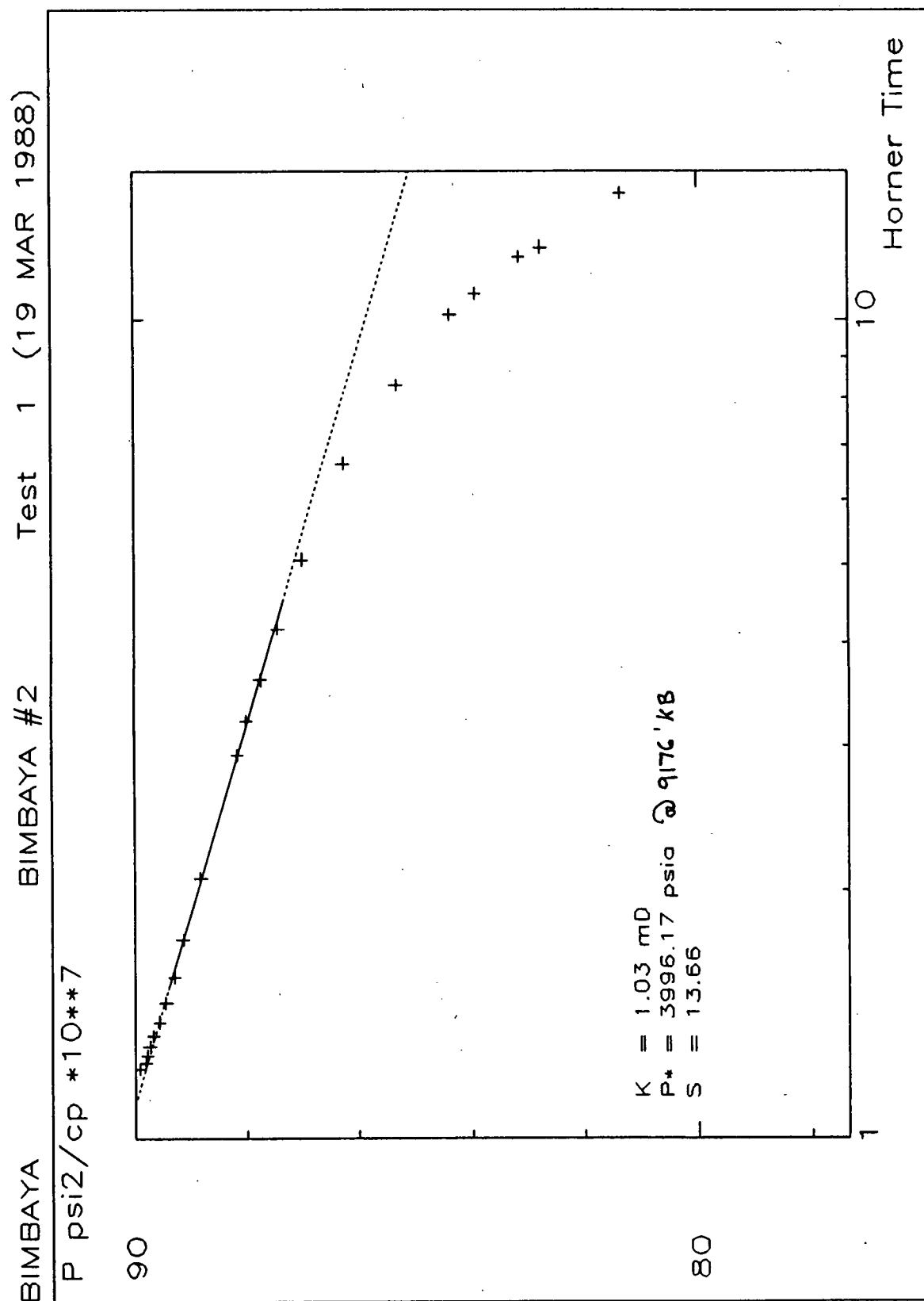


FIGURE 3

00079

BACK PRESSURE PLOT

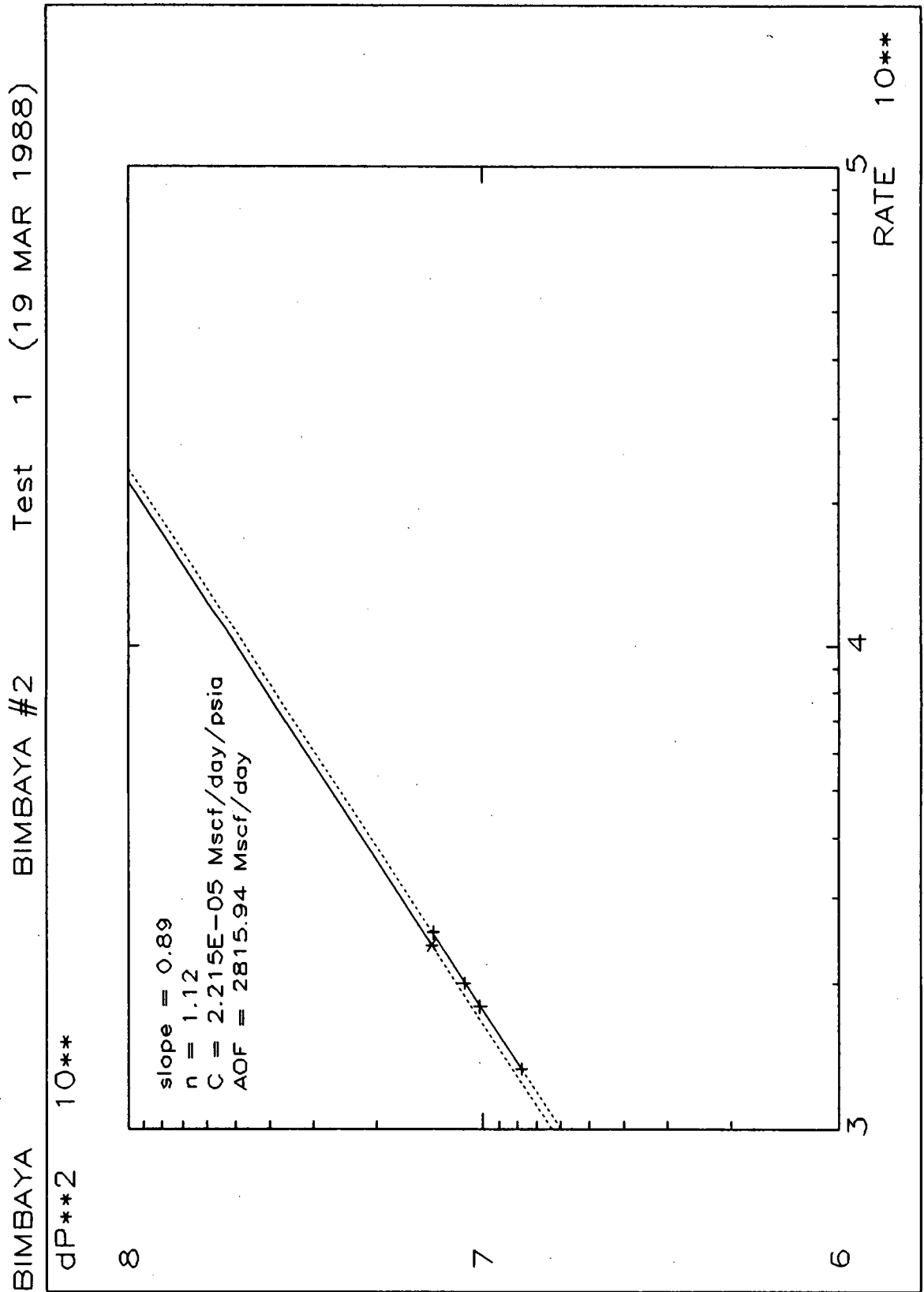
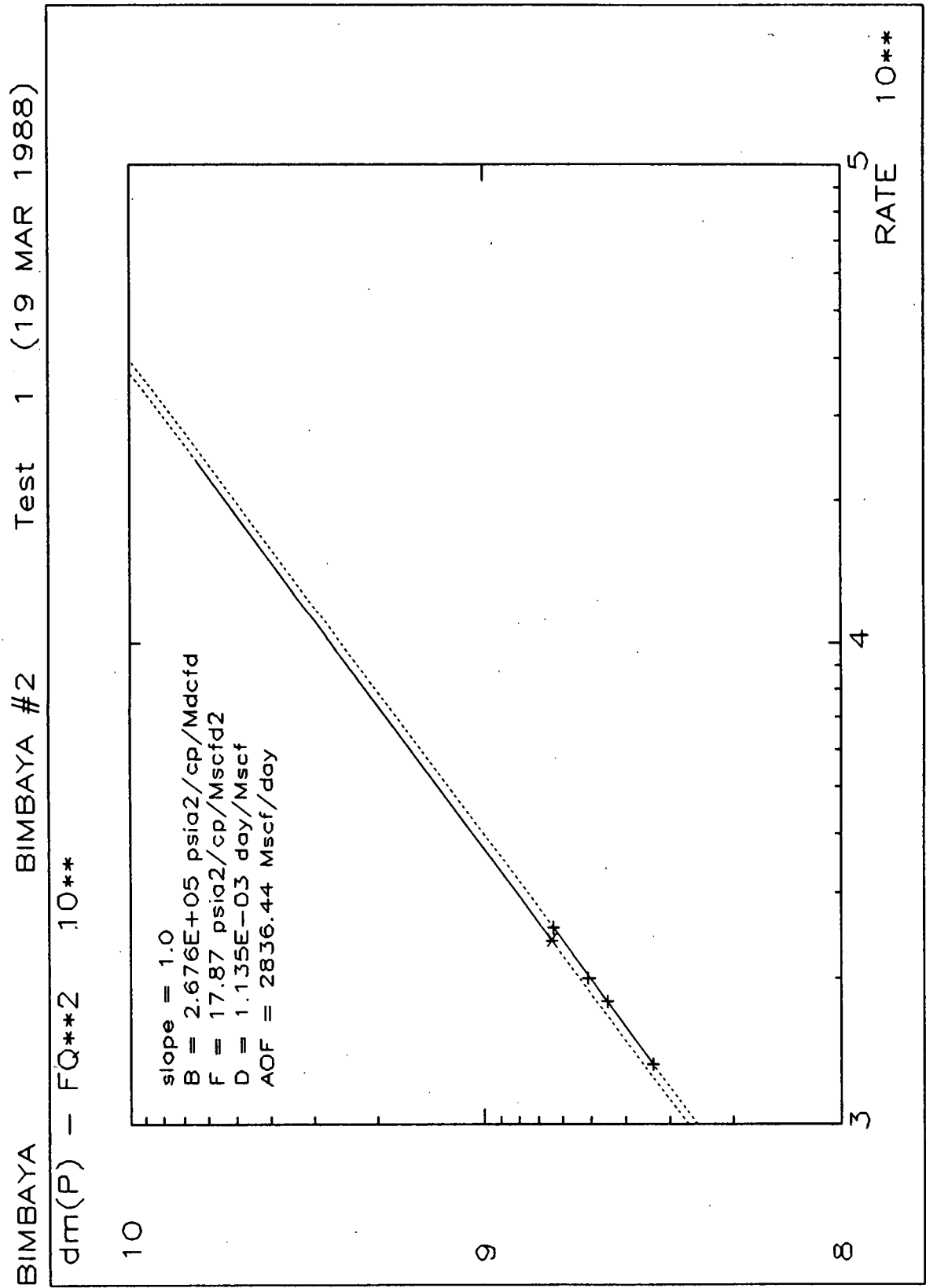


FIGURE 4

DELIVERABILITY PLOT

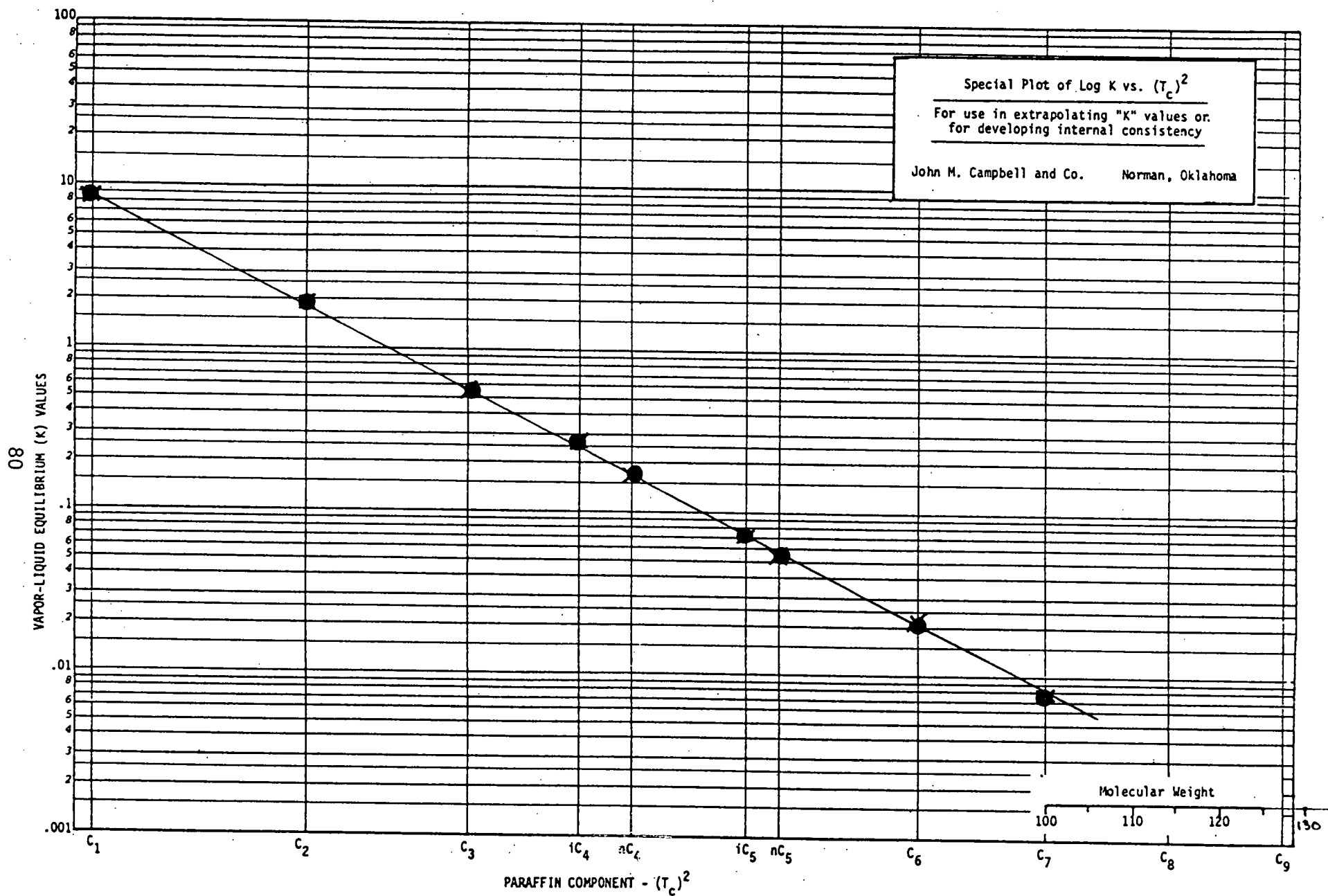


Figure 6.4 Example of Log K vs. T_c^2

FIGURE 5
LOG K VS T_c^2 PLOT

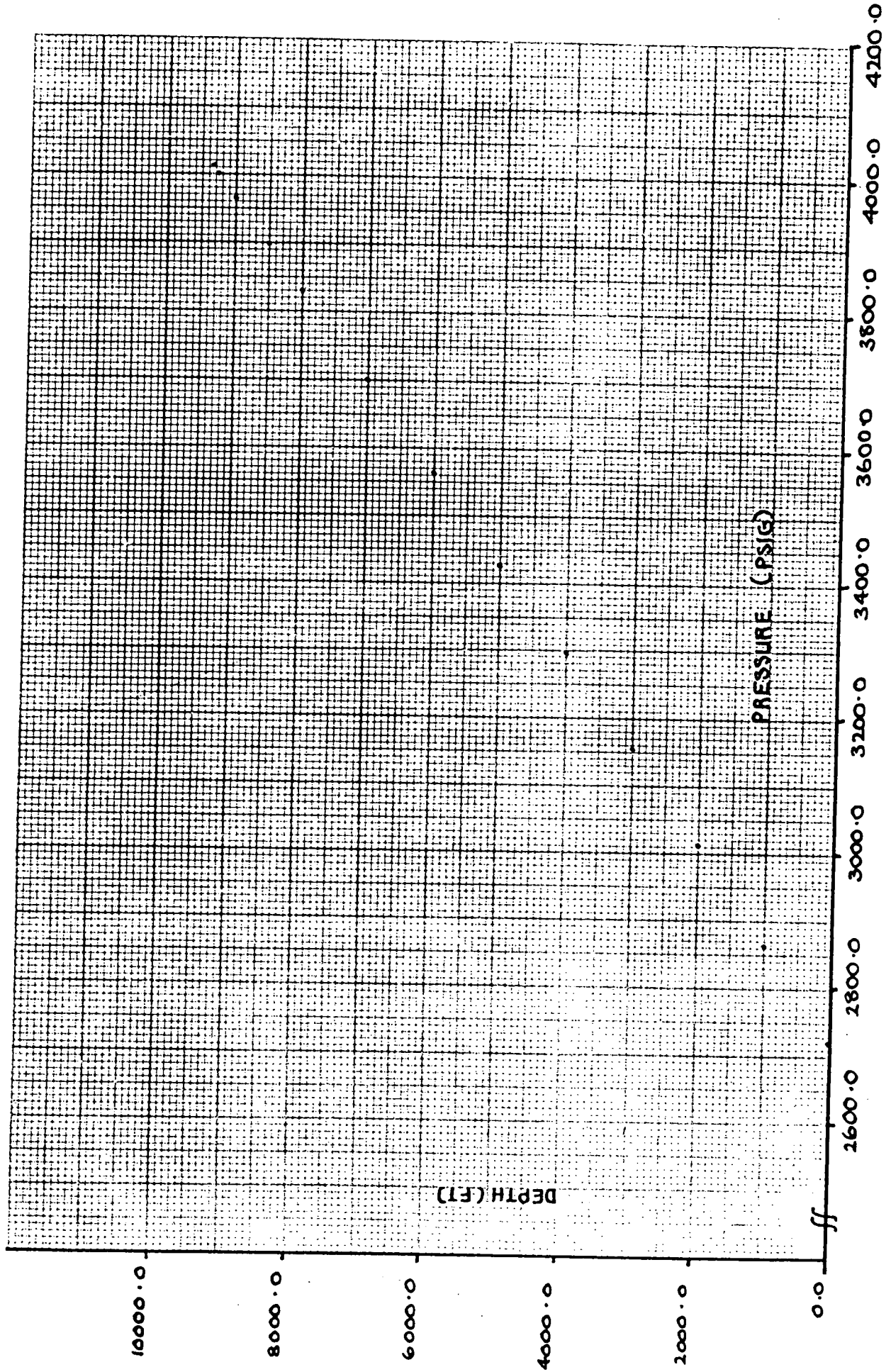
00081

BIMBAYA # 2 - STATIC PRESSURE GRADIENT - 30/3/88
ELEMENT # 71588 / 6000 (TOP)

FIGURE 6

STATIC GRADIENT PLOT

00082



6. APPENDIX

MBAYA - TIRRAWARRA
GASPAC PACKAGE - GAS

MODIFIED ISOCHRONAL - 27/3/88

12/10/88 PAGE 3

TABLE AT RESERVOIR

TEMPERATURE = 270. DEG. F = 730. DEG. R

PRESSURE PSIA	Z	COMPRESS. PSIA(-1) X 10(-3)	VISCOSITY CP	POTENTIAL PSIA(2)/CP X 10(6)	PRESSURE GRADIENT PSI/FT	P/Z PSIA
14.65	0.99831	68.37465	0.01316			
100.00	0.98854	10.11528	0.01319	0.765	0.00274	101.16
200.00	0.97722	5.11503	0.01331	3.069	0.00555	204.66
300.00	0.96606	3.44781	0.01344	6.917	0.00842	310.54
400.00	0.95511	2.61359	0.01362	12.307	0.01136	418.80
500.00	0.94438	2.11232	0.01376	19.226	0.01436	529.45
600.00	0.93390	1.77729	0.01400	27.675	0.01743	642.47
700.00	0.92373	1.53702	0.01423	37.584	0.02056	757.80
800.00	0.91388	1.35577	0.01444	48.975	0.02375	875.39
900.00	0.90441	1.21364	0.01467	61.829	0.02700	995.13
1000.00	0.89535	1.09871	0.01492	76.106	0.03030	1116.88
1100.00	0.88675	1.00337	0.01521	91.748	0.03365	1240.49
1200.00	0.87864	0.92256	0.01551	108.711	0.03705	1365.74
1300.00	0.87108	0.85279	0.01582	126.959	0.04049	1492.40
1400.00	0.86410	0.79160	0.01616	146.417	0.04395	1620.19
1500.00	0.85773	0.73718	0.01652	167.029	0.04744	1748.80
1600.00	0.85201	0.68822	0.01688	188.745	0.05095	1877.91
1700.00	0.84696	0.64376	0.01723	211.523	0.05445	2007.17
1800.00	0.84261	0.60307	0.01759	235.319	0.05795	2136.22
1900.00	0.83896	0.56560	0.01795	260.088	0.06144	2264.71
2000.00	0.83602	0.53094	0.01830	286.783	0.06490	2392.29
2100.00	0.83378	0.49879	0.01866	312.358	0.06833	2518.64
2200.00	0.83225	0.46889	0.01909	339.708	0.07171	2643.45
2300.00	0.83139	0.44106	0.01952	367.729	0.07505	2766.45
2400.00	0.83119	0.41513	0.01996	396.373	0.07833	2887.41
2500.00	0.83164	0.39096	0.02039	425.590	0.08155	3006.12
2600.00	0.83269	0.36845	0.02082	455.335	0.08471	3122.42
2700.00	0.83432	0.34748	0.02125	485.563	0.08779	3236.17
2800.00	0.83650	0.32795	0.02169	516.229	0.09081	3347.29
2900.00	0.83919	0.30976	0.02212	547.287	0.09375	3455.70
3000.00	0.84237	0.29282	0.02256	578.694	0.09661	3561.37
3100.00	0.84601	0.27704	0.02300	610.412	0.09941	3664.27
3200.00	0.85007	0.26235	0.02344	642.405	0.10212	3764.41
3300.00	0.85452	0.24867	0.02388	674.640	0.10477	3861.80
3400.00	0.85935	0.23591	0.02432	707.085	0.10733	3956.48
3500.00	0.86452	0.22402	0.02476	739.711	0.10983	4048.49
3600.00	0.87001	0.21293	0.02519	772.490	0.11225	4137.89
3700.00	0.87580	0.20258	0.02563	805.397	0.11461	4224.73
3800.00	0.88186	0.19291	0.02607	838.408	0.11690	4309.07
3900.00	0.88818	0.18387	0.02651	871.500	0.11912	4391.00
4000.00	0.89474	0.17542	0.02695	904.654	0.12128	4470.58
4100.00	0.90152	0.16751	0.02739	937.849	0.12338	4547.87
4200.00	0.90851	0.16010	0.02783	971.070	0.12541	4622.97
4300.00	0.91569	0.15316	0.02823	1004.321	0.12739	4695.93
4400.00	0.92304	0.14664	0.02863	1037.609	0.12932	4766.83
4500.00	0.93057	0.14053	0.02903	1070.919	0.13119	4835.76
4600.00	0.93825	0.13478	0.02943	1104.237	0.13301	4902.77
4700.00	0.94607	0.12937	0.02983	1137.551	0.13477	4967.94
4800.00	0.95402	0.12428	0.03023	1170.847	0.13649	5031.33
4900.00	0.96210	0.11949	0.03063	1204.116	0.13817	5093.02
5000.00	0.97030	0.11497	0.03103	1237.346	0.13980	5153.07

REPORTING OFFICER
Schmidt

00085

P.V.T.STUDY REPORT

Client: SANTOS LTD.

Field : Bimbaya Well : Bimbaya #2

Zone : TIRRAWARRA Samp. date: 27/03/88

Report #: 88PVA016 Date: MAY 1988

ADELAIDE LABORATORY

INDEX

- ☒ ANNEX 1: SAMPLING CONDITIONS AND SAMPLE(S) VALIDITY
- ☒ ANNEX 2: MOLECULAR COMPOSITION OF FIELD SEPARATOR GAS(ES)
- ☒ ANNEX 3: RECOMBINATION OF SEPARATOR SAMPLES
- ☒ ANNEX 4: MOLECULAR COMPOSITION OF RESERVOIR FLUID(S)
- ☒ ANNEX 5: CONSTANT MASS STUDY
- ☐ ANNEX 6: DEPLETION STUDY
- ☐ ANNEX 7: SEPARATION TEST(S)
- ☐ ANNEX 8: ADDITIONAL ANALYSIS
- ☐ ANNEX 9:
- ☐ ANNEX 10:
- ☐ ANNEX 11:
- ☒ ANNEX 12: NOMENCLATURE AND SYSTEM OF UNITS

NOTICE

Curve Presentation

This report contains graphs of physical properties together with curves which are now drawn by computer program. These curves are empirical as the formulae used are not based on any theory, and are obtained using special Flopetrol computer programs. Except for saturation pressure determinations, equations are given on pages following each graph to enable easy and accurate interpolation using a calculator or a computer; generally extrapolation is not advisable as the Flopetrol software is based only on the experimental range of measurements.

Although in most cases less significant figures can be used for parameters, we advise a validity check against experimental points when using less than the eleven significant figures given.

Clearly, properties can be calculated in this fashion to high precision, but cannot be more accurate than the original experimental measurements.

Parameters are given in E-format, where, for example :
 $b = -3.76908251347E-02$ means $b = -0.037690851347$.

COMPANY : SANTOS LTD.

WELL : Bimbaya #2

SUMMARY AND MAIN RESULTS

The present report gives the experimental results of the P.V.T. study carried out on recombined surface samples from well Bimbaya #2

The initial reservoir conditions are :

- P_i : N/A
- T : 132.0 C

Flow point pressure determined on sample which was selected for complete P.V.T. study is :

- P_d : 3732 psig at 270 F
- Z at P_d : 0.881
- Specific volume at P_d : 0.0602 cu ft/pound

TABLE 1

SAMPLING CONDITIONS

I. RESERVOIR AND WELL CHARACTERISTICS

Producing zone	:	TERRAWARFA
Static pressure	:	N/A
Bottom hole temperature	:	132.0 C
Tubing diameter	:	N/A
Casing size	:	N/A
Casing shoe	:	N/A

II. SAMPLING CONDITIONS

A) SURFACE SAMPLE(S)

Date	:	27/03/88
Choke	:	24/64"
Flowing bottom hole pressure	:	N/A
Well head pressure	:	980 psig
Separator pressure	:	360 psig
Well head temperature	:	31.0 C
Separator temperature	:	33.0 C
Gas rate (Separator)	:	73000 M3/D
Stock tank temperature	:	N/A
Compressibility factor	:	0.965
Gas gravity	:	0.914 (Air=1)
Liquid rate	:	29.6 M3/D
G.L.F.	:	10635.1 SCF/BEL
Sample(s) received	:	gas 487A, 490A, 491A 487, 097, 111 liq.

B) BOTTOM HOLE SAMPLE(S)

Date	:	-
Choke	:	-
Sample(s) received	:	-

COMPANY : SANTOS LTD.

00090

WELL : BIMEAYA #2

SAMPLE(S) VALIDITY

SEPARATOR LIQUID SAMPLE(S)

1) Sample bottle No 097

Bubble point pressure determination at 91 F is 374 psi

2) Sample bottle No 487

Bubble point pressure determination at 91 F is 360 psi

COMPANY : SANTOS LTD.

WELL : EIMBAYA #2

TABLE 2

BUBBLE POINT PRESSURE DETERMINATION AT 91 F

Separator liquid sample (cylinder 097)

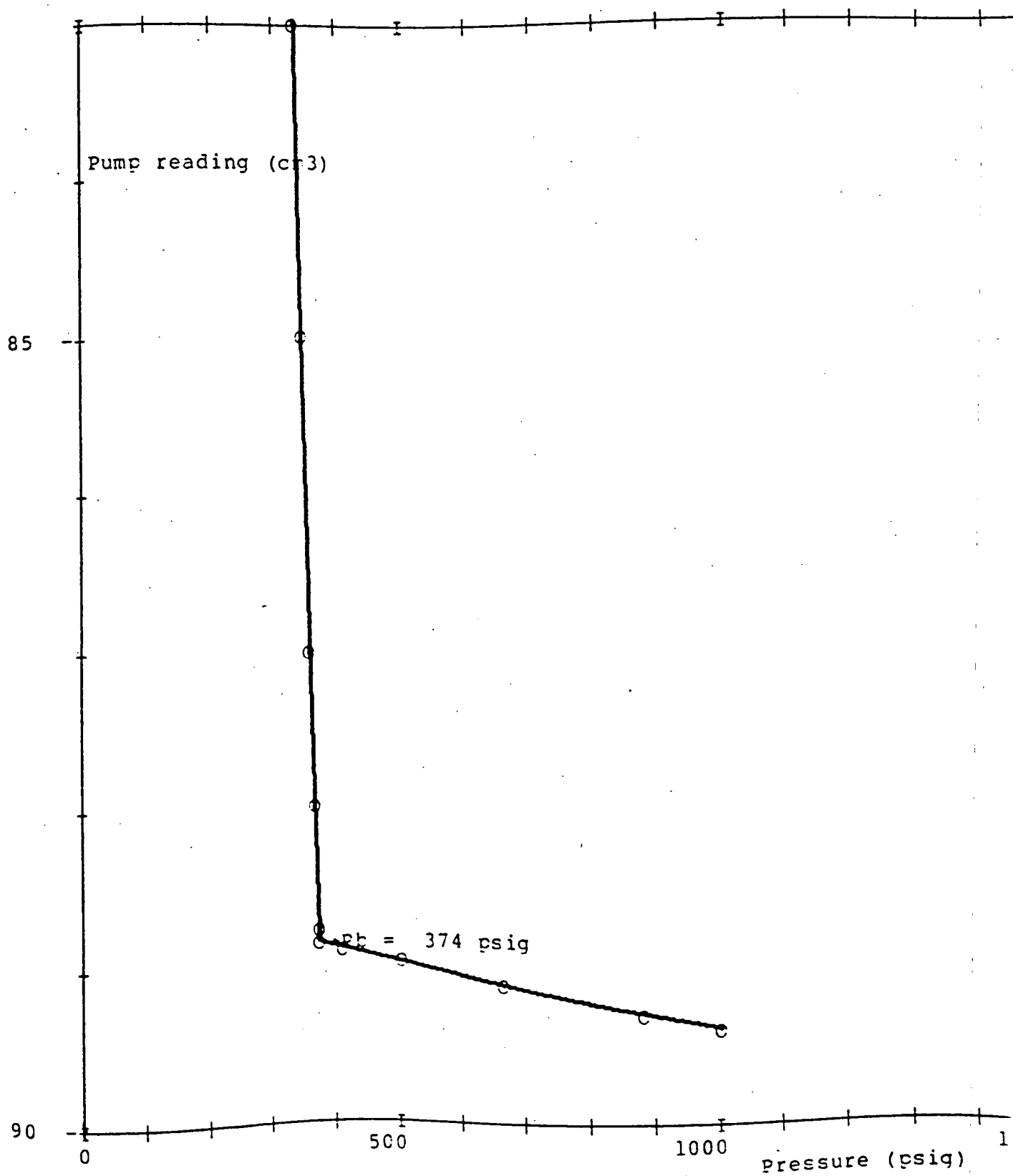
Pressure (psig)	Pump reading (cm3)
1000	89.40
879	89.31
663	89.10
502	88.98
409	88.90
Pb = 374	88.86
370	88.78
366	87.96
360	87.00
347	84.98
335	83.00

FLASH OF SEPARATOR LIQUID TO STOCK TANK CONDITIONS

GLR : 448 Std cu ft/Std bbl
 Shrinkage factor : 0.754 Std bbl/bbl
 Liberated gas gravity : 1.447 (Air = 1)
 Stock tank liquid gravity: 0.755 60/60 F

BUBBLE POINT PRESSURE DETERMINATION AT 91 F

Separator liquid sample (cylinder 097)



COMPANY : SANTOS LTD.

WELL : BIMPAYA #2

TABLE 3

BUBBLE POINT PRESSURE DETERMINATION AT 91 F

Separator liquid sample (cylinder 487)

Pressure (psig)	Pump reading (cm3)
1000	70.99
802	70.82
715	70.72
568	70.56
445	70.41
Pb = 340	70.30
355	69.52
350	68.50
340	66.97
322	63.71
304	60.07

FLASH OF SEPARATOR LIQUID TO STOCK TANK CONDITIONS

CLF : 460 Std cu ft/Std bbl
 Shrinkage factor : 0.768 Std bbl/bbl
 Liberated gas gravity : 1.412 (Air = 1)
 Stock tank liquid gravity: 0.754 60/60 F

This sample has been used for recombination

COMPANY : SANTOS LTD.

WELL : BIMBAYA #2

BUBBLE POINT PRESSURE DETERMINATION AT 91 F

Separator liquid sample (cylinder 487)

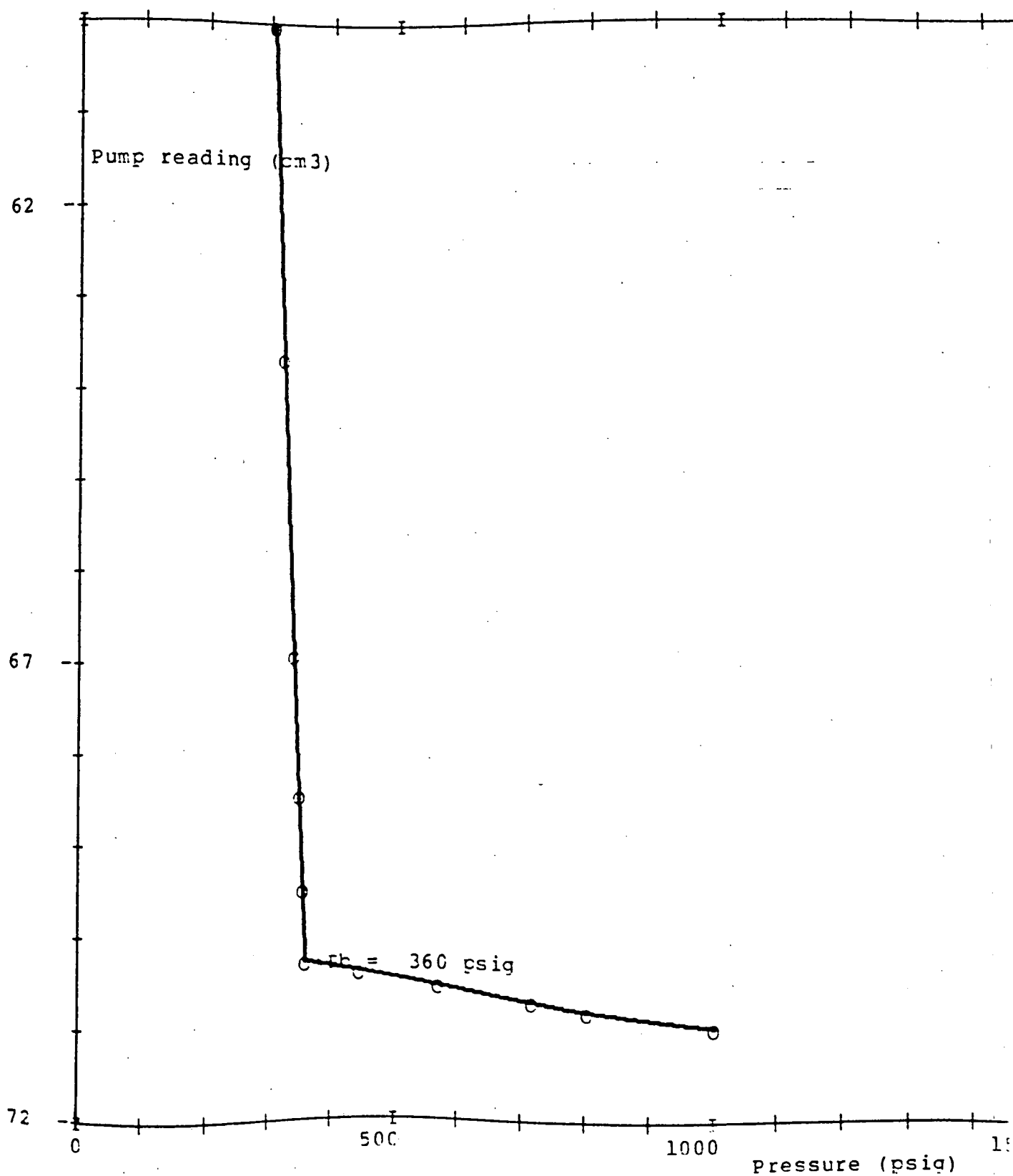


TABLE 4

MOLECULAR COMPOSITION OF FIELD SEPARATOR GAS(ES)

I-Molecular composition (mole percent)

Components	Cylinder 490A	Cylinder 487A
Nitrogen	1.91	1.90
Carbon dioxide	13.68	14.46
<u>Hydrocarbons:</u>		
Methane	62.05	62.10
Ethane	10.02	12.83
Propane	5.81	5.62
I - Butane	0.93	0.78
N - Butane	1.47	1.36
I - Pentane	0.36	0.34
N - Pentane	0.34	0.29
Hexanes	0.23	0.18
Heptanes plus	0.28	0.14
TOTAL	100.00	100.00
Molecular weight	25.349	25.197
Gravity (Air=1)	0.875	0.869
Molecular weight of heptanes plus	109.7	106.2

II-Liquid content (g.p.m.)

Propane plus	2.817	2.590
Eutanes plus	1.225	1.050
Pentanes plus	0.494	0.370

The cylinder 487A has been used for recombination

TABLE 5

RECOMBINATION OF SEPARATOR SAMPLESI. FLASE OF SEPARATOR LIQUID TO STOCK TANK CONDITIONS

G.L.F. : 460 Std cu ft/Std bbl
Shrinkage factor : 0.768 Std bbl/bbl
Liberated gas gravity : 1.412 (Air=1)
Stock tank liquid gravity: 0.754 60/60 F

II. CORRECTION OF GAS LIQUID RATIO

Field G.L.R. : 10635 Std cu ft/bbl
Separator gas gravity(from chromatographic analysis)
G lab. : 0.869 (Air=1)
Compressibility factor Z at separator conditions
Z lab. : 0.932

$$\text{Corrected G.L.R.: Field G.L.R.} \times \sqrt{\frac{G \text{ field} \times Z \text{ field}}{G \text{ lab.} \times Z \text{ lab.}}}$$

$$\text{Corrected G.L.F.: } 10635 \times \sqrt{\frac{0.914 \times 0.965}{0.869 \times 0.932}} = 11098 \text{ Std cu ft ,}$$

III. PHYSICAL RECOMBINATION

Surface samples were physically recombined in the ratio of
11098 standard cubic feet of separator gas per barrel
of separator liquid

COMPANY : SANTOS LTD.

WELL : BEMBAYA #2

TABLE 6

FLASH OF SEPARATOR LIQUID TO STOCK TANK CONDITIONS
(Molecular composition)

Components	Stock tank liquid (mole percent)	Evolved gas (mole percent)	Recombined separator liquid (mole percent)
Nitrogen	0.00	0.17	0.06
Carbon dioxide	0.00	9.80	3.34
<u>Hydrocarbons:</u>			
Methane	0.00	20.99	7.15
Ethane	0.00	19.35	6.59
Propane	2.86	23.98	10.05
i - Butane	1.71	5.34	2.95
n - Butane	6.26	11.24	7.96
i - Pentane	5.21	3.38	4.59
n - Pentane	6.57	3.01	5.36
Hexanes	11.75	1.73	8.34
Heptanes	15.21	0.58	10.23
Octanes	19.64	0.42	13.08
Nonanes	10.43	0.01	6.88
Decanes	6.37	0.00	4.20
Undecanes	3.69	0.00	2.43
Dodecanes plus	10.30	0.00	6.79
TOTAL	100.00	100.00	100.00
Molecular weight	112.6	40.933	88.2
Gravity	0.754 60/60 F	1.412 (Air=1)	-----
Molar ratio	65.95	34.05	100.00
Mass ratio	84.20	15.80	100.00

Molecular weight of Dodecanes plus in STL: 216

TABLE 7

MOLECULAR COMPOSITION OF RESEVOIR FLUID

Components	Recombined Separator liquid (mole percent)	Separator gas (mole percent)	Recombined Reservoir fluid (mole percent)
Nitrogen	0.06	1.90	1.74
Carbon dioxide	3.34	14.46	13.51
<u>Hydrocarbons:</u>			
Methane	7.15	62.10	57.40
Ethane	6.59	12.83	12.30
Propane	10.05	5.62	6.00
I - Butane	2.95	0.78	0.97
N - Butane	7.96	1.36	1.92
I - Pentane	4.59	0.34	0.70
N - Pentane	5.36	0.29	0.72
Hexanes	8.34	0.18	0.88
Heptanes	10.23	0.08	0.95
Octanes	13.08	0.06	1.17
Nonanes	6.88	0.00	0.59
Decanes	4.20	0.00	0.36
Undecanes	2.43	0.00	0.21
Dodecanes plus	6.79	0.00	0.58
TOTAL	100.00	100.00	100.00
Molecular weight	88.2	25.197	30.6
Gravity	-----	0.869 (Air=1)	1.055 (Air
Molar ratio	8.55	91.45	100.00
Mass ratio	24.66	75.34	100.00

Molecular weight of Dodecanes plus in reservoir fluid : 216

TABLE 8

CONSTANT MASS STUDY AND DEW POINT PRESSURE DETERMINATION AT 270 F

Pressure (psig)	Relative volume (V/V _{Pd})	Compressibility factor (Z=PV/nRT)	Retrograde liquid deposit (% of hydrocarbon pore space)*
5235	0.8211	1.014	
5060	0.8351	0.997	
4940	0.8456	0.985	
4856	0.8535	0.978	
4774	0.8615	0.970	
4689	0.8701	0.962	
4514	0.8892	0.947	
4430	0.8991	0.940	
4323	0.9123	0.931	
4230	0.9246	0.923	
4095	0.9438	0.912	
3876	0.9769	0.894	
Pd = 3732	1.0000	0.881	0.00
3587	1.0141		0.13
3650	1.0211		0.24
3618	1.0288		0.34
3517	1.0524		0.64
3267	1.1139		1.48
2866	1.2497		2.90
2414	1.4607		4.21
1986	1.8015		4.98
1769	2.0362		5.24

-Specific volume at dew point pressure = 0.06020 cu ft/pound

* Percent of retrograde liquid per volume of reservoir fluid at p



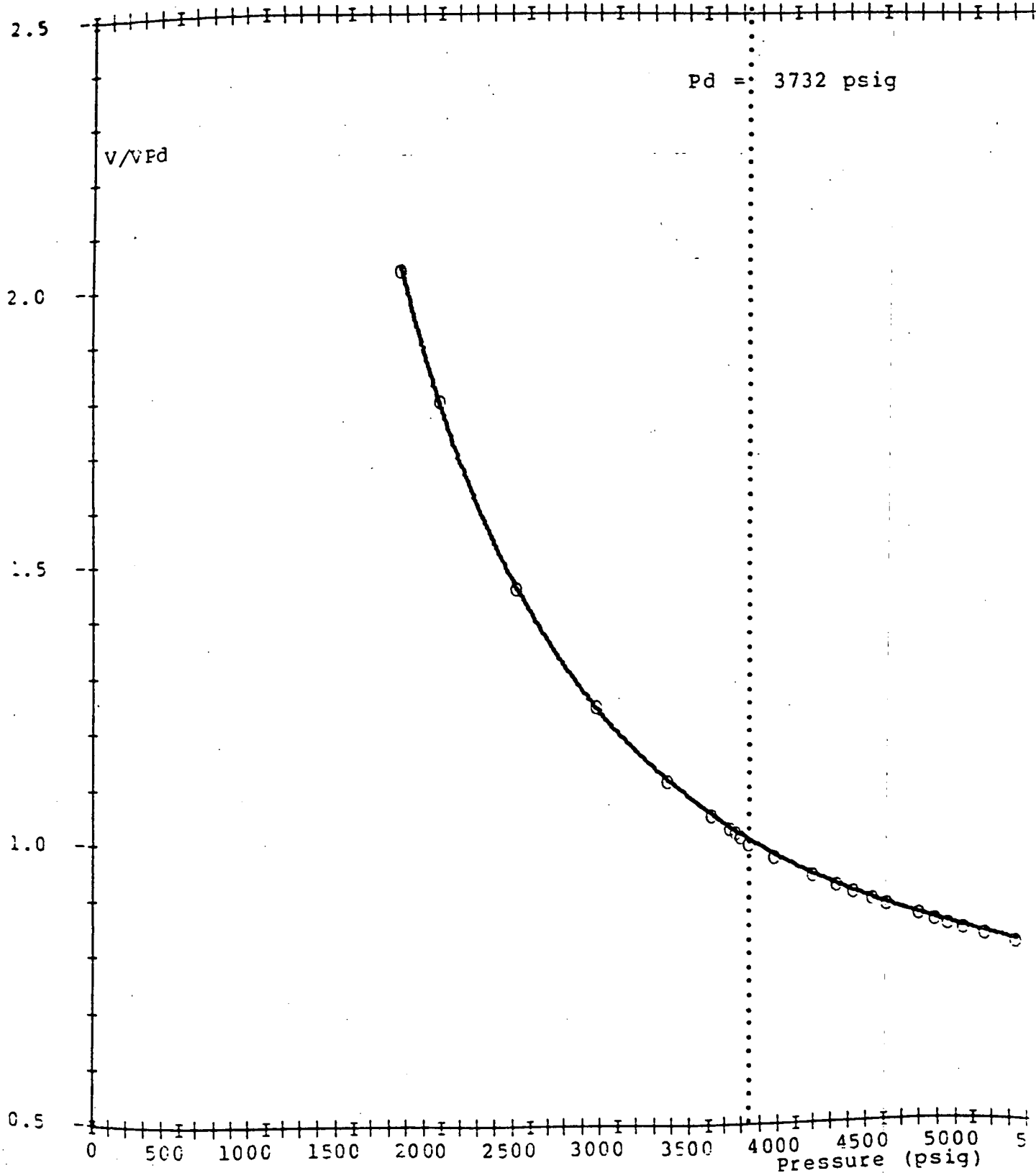
COMPANY : SANTOS LTD.

00100

WELL : BEMBAYA #2

DEW POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 270 F

Relative volume



DEW POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 270 F

Relative Volume

For 1769 <= P <= 5235

$$V_r = (a \cdot x^2 + b \cdot x + c) / (d \cdot x + 1)$$

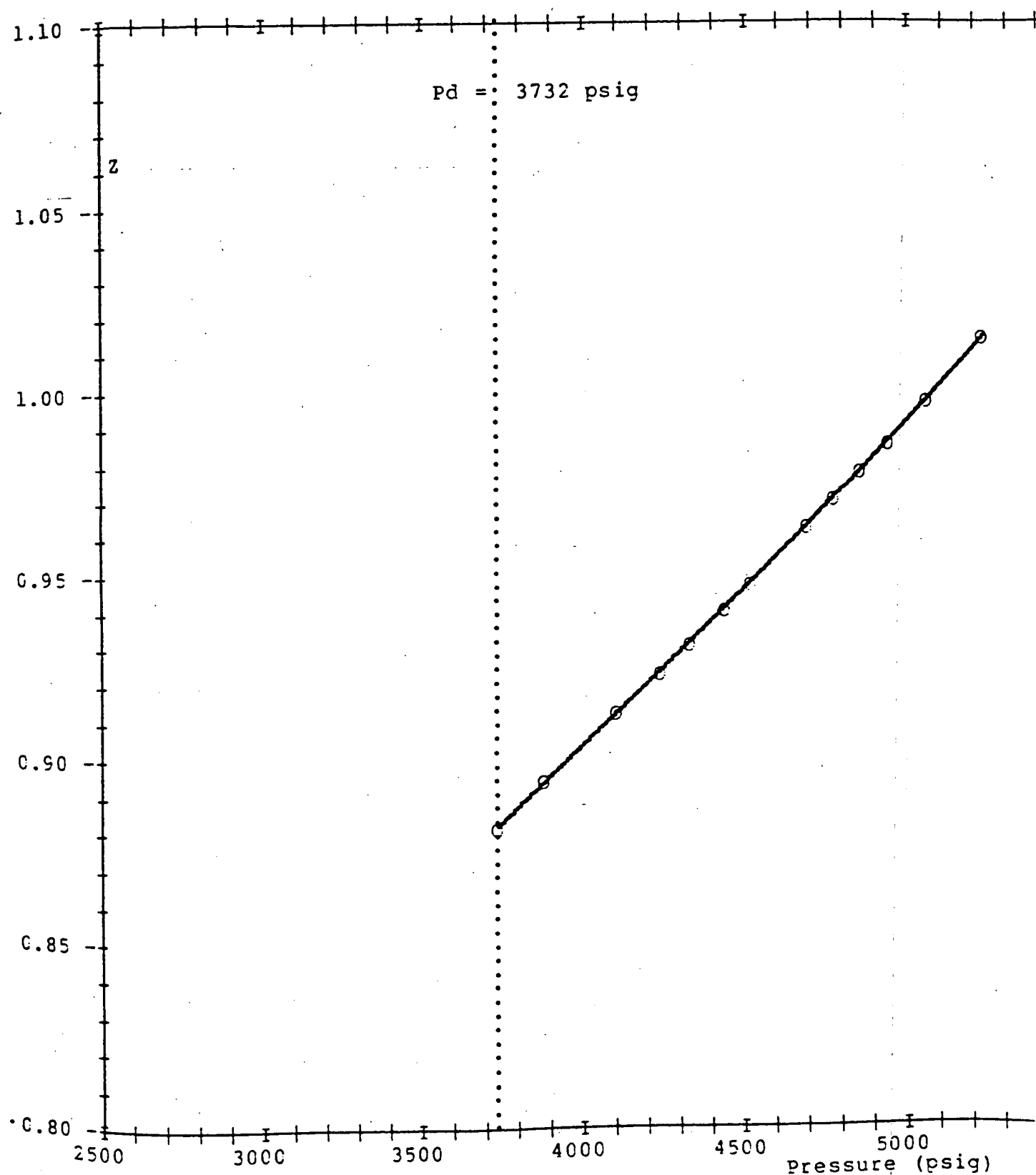
where:

$P_d = 3732$ psig
 $a = -1.39025775622E-00$
 $b = -6.36498076621E-01$
 $c = -6.65369222192E-00$
 $d = -9.63971973436E-00$

$$x = P / P_d$$

DEW POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 270 F

compressibility factor



COMPANY : SANTOS LTD.

WELL : BIMEAYA #2

DEW POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 270 F

Compressibility factor Z

For $P_d \leq P \leq 5235$

$$Z = (a \cdot x^2 + b \cdot x + c) / (d \cdot x + 1)$$

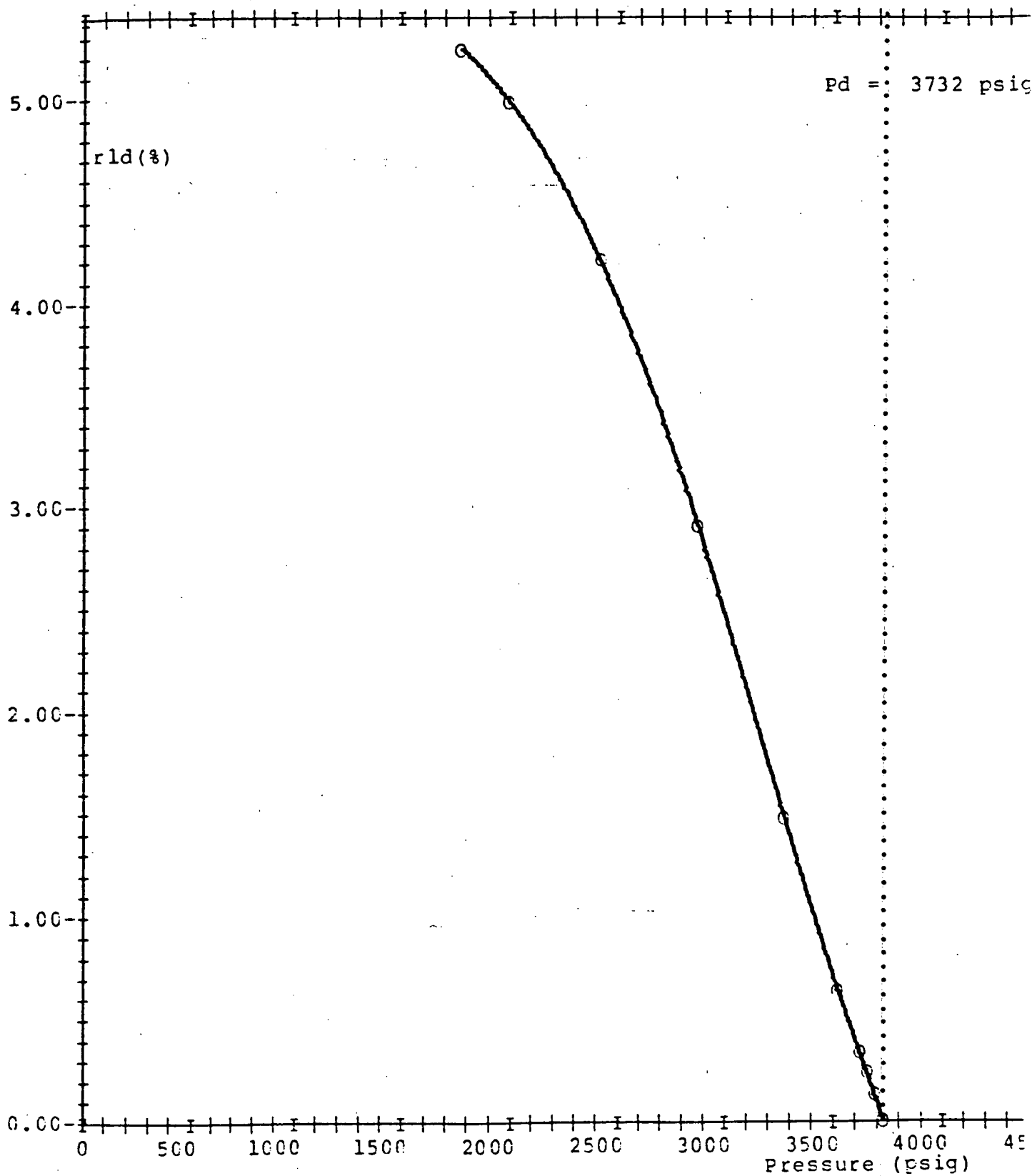
where:

$P_d = 3732$ psig
 $a = -1.84763432324E-01$
 $b = -5.23075099928E-02$
 $c = 5.76489015573E-01$
 $d = -6.14735444654E-01$

$x = P/P_d$

DEW POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 270 F

Retrograde liquid deposit



00105

 ADVERTISING
 Schlumberger

COMPANY : SANTOS LTD.

WELL : BIMEAYA #2

DEW POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 270 F

Petrograde liquid deposit

For $1769 \leq P \leq P_d$

$$rld (\%) = a + b \cdot x^i + c \cdot x^{3i} + d \cdot x^{6i} + e \cdot x^{9i}$$

where:

$P_d = 3732 \text{ psig}$
 $a = 5.88398535387E \text{ } 00$
 $b = -1.57044347943E \text{ } 00$
 $c = -9.45925226644E \text{ } 00$
 $d = 7.67474584778E \text{ } 00$
 $e = -2.52903545577E \text{ } 00$

$x = P/P_d$
 $i = 1.7$

NOMENCLATURE

P	:	Pressure
V	:	Volume
T	:	Temperature
Pi	:	Initial static pressure
Pb	:	Bubble point pressure
Pd	:	Dew point pressure
$V_r = V/V_{pb}$	:	Relative volume (oil reservoir fluid)
$V_r = V/V_{pd}$	:	Relative volume (gas reservoir fluid)
$c = - \frac{1}{V} \frac{dV}{dP}$	:	Compressibility factor of reservoir fluid
$\alpha = \frac{1}{V} \frac{dV}{dT}$	:	Thermal expansion of reservoir fluid
$Y = \frac{P_b/P - 1}{V_r - 1}$	:	Dimensionless compressibility function
Bo	:	Oil formation volume factor
Rs	:	Solution gas oil ratio
Z	:	Gas compressibility factor or gas deviation fac
Eg	:	Gas formation volume factor
dc	:	Reservoir oil density
Gc	:	Residual oil gravity
G	:	Gas gravity (Air=1)
sto	:	Stock tank oil
GCF	:	Gas oil ratio
GLF	:	Gas liquid ratio
WOR	:	Water liquid ratio
Shrinkage factor	:	$\frac{\text{Oil volume at standard conditions}}{\text{Oil volume at separator conditions}}$
$Z = \frac{PV}{nRT}$	:	n=Total moles of a mixture in the gas state R=Universal gas constant (per mole)
gpm	:	Gallons per thousand standard cubic feet
Standard conditions	:	For gas volumes = 60 F and 14.7 psia For oil measurements = 60 F and atmospheric press

Gross heat content is calculated from API research project 44
Molecular weights, densities, critical values are from CRC Handbook of chemistry and physics
Gas viscosity is calculated with equations from Standing (Behavior of oil field hydrocarbon systems)

SANTOS LTD.
WELL TEST SUMMARY

Page 1. ✓

WELL: Bimbaya #2 Lat.: 27°32'51.5"S
 TESTED BY: Oilserv Australia LOCATION: Long: 140° 25' 21.6" E
 CASING SIZE: 7 ins PERFORATIONS: 9212-9313 ft DATE: 19-30/3/88 FORMATION: Timrawarra 90-6 sand.
 TUBING SIZE: 2-7/8 ins WEIGHT: 26 lb/ft PRODUCING THROUGH: Tubing
 WEIGHT: 6.5 lb/ft GRADE: N80 & J55 LT±C
 GRADE: L80 ELUE

DESCRIPTION OF TEST

INITIAL SHUT IN PERIOD

Time of Observations			Observed Pressures			REMARKS
Date	Time	Shut In Time (Hours)	Tubing kPa	Casing kPa	Temp. °C	
23/3/88	1300	0	5500	4450	49	Shut well in after clean-up.
25/3/88	1100	46	18940	0		B.O.L. for rate #1

Flow Period

Run No.: 1 Duration of Run: 2 Hours. Orifice Size: 1.250 ins
 Flow Well On: 12/64" Choke. Meter Run: 4.026 ins

Date	Time	Flow Time (Hours)	Wellhead Readings			Meter or Prover Data			Condensate Production m ³ /d	Water Production m ³ /d
			Tubing	Casing	Temp.	Pf	Hw	Temp.		
			kPa	kPa	°C	kPa	kPa	°C		
25/3/88	1100	0	18940	0						
	1115	0.25	14480	0	33	2345	23.90	2		
	1130	0.5	13570	0	34	2450	17.68	3	20.160	
	1145	0.75	13520	0	34	2380	16.43	5		
	1200	1	13570	0	35	2450	17.18	7	25.200	
	1215	1.25	13430	0	35	2585	17.43	5		
	1230	1.5	13285	0	35	2495	15.94	6	22.680	
	1245	1.75	13280	0	35	2535	16.43	6		
	1300	2	13265	0	35	2450	17.78	6	20.160	NIL

SANTOS LTD.
WELL TEST SUMMARY

Page 2. ✓

2nd SHUT IN PERIOD

Time of Observations			Observed Pressures			REMARKS
Date	Time	Shut In Time (Hours)	Tubing	Casing	Temp.	
			kPa	kPa	°C	
25/3/88	1300	0	13265	0	35	Shut well in
	1315	0.25	16650	0		
	1330	0.5	18045	0		
	1345	0.75	18505	0		
	1400	1	18700	0		
	1415	1.25	18810	0		
	1430	1.5	18850	0		
	1445	1.75	18880	0		
	1500	2	18900	0		B.O.L. for rate #2

Flow Period

Run No.: 2 Duration of Run: 2 Hours.
Flow Well On: 16/64" Choke.

Orifice Size: 1.500 ins
Meter Run: 4.026 ins

Date	Time	Flow Time (Hours)	Wellhead Readings			Meter or Prover Data			Condensate Production m ³ /d	Water Production m ³ /d
			Tubing	Casing	Temp.	Pf	Hw	Temp.		
			kPa	kPa	°C	kPa	kPa	°C		
25/3/88	1500	0	18900	0						
	1515	0.25	13135	0	35	2440	21.66	1		
	1530	0.5	11740	0	36	2400	16.93	4	35.280	
	1545	0.75	11665	0	36	2400	12.45	7		
	1600	1	11245	0	36	2585	14.94	7	32.760	
	1615	1.25	11140	0	36	2585	14.44	7		
	1630	1.5	11045	0	36	2450	14.94	7	27.720	
	1645	1.75	10955	0	37	2425	15.94	7		
	1700	2	10910	0	37	2415	15.69	8	25.200	NIL

00108

3RD SHUT IN PERIOD

Time of Observations			Observed Pressures			REMARKS
Date	Time	Shut In Time (Hours)	Tubing	Casing	Temp.	
			KPa	KPa	°C	
25/3/88	1700	0	10910	0	37	Shut well in
	1715	0.25	15550	0		
	1730	0.5	17435	0		
	1745	0.75	18270	0		
	1800	1	18615	0		
	1815	1.25	18770	0		
	1830	1.5	18850	0		
	1845	1.75	18900	0		
	1900	2	18925	0		Opened well on rate #3

Flow Period

Run No.: 3 Duration of Run: 2 Hours.
Flow Well On: 19/64" Choke.

Orifice Size: 1.500 ins
Meter Run: 4.026 ins

Date	Time	Flow Time (Hours)	Wellhead Readings			Meter or Prover		Data	Condensate Production	Water Production
			Tubing	Casing	Temp.	Pf	Hw			
			KPa	KPa	°C	KPa	KPa	°C	m³/d	m³/D
25/3/88	1900	0	18925	0						
	1915	0.25	11915	0	36	2550	30.78	0		
	1930	0.5	10375	0	37	2515	21.41	8	50.400	
	1945	0.75	10085	0	37	2335	22.91	7		
	2000	1	9695	0	38	2310	22.41	9	35.280	
	2015	1.25	9630	0	38	2220	22.66	9		
	2030	1.5	9585	0	38	2515	18.92	11	30.240	
	2045	1.75	9585	0	38	2515	18.92	12		
	2100	2	9585	0	38	2450	19.67	12	30.240	NIL

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00109

SANTOS LTD.
WELL TEST SUMMARY

Page 4. ✓

4TH SHUT IN PERIOD

Time of Observations			Observed Pressures			REMARKS
Date	Time	Shut In Time (Hours)	Tubing	Casing	Temp.	
			KPa	KPa	°C	
25/3/88	2100	0	9585	0	38	Shut well in
	2115	0.25	14515	0		
	2130	0.5	17015	0		
	2145	0.75	18065	0		
	2200	1	18540	0		
	2215	1.25	18750	0		
	2230	1.5	18850	0		
	2245	1.75	18905	0		
	2300	2	18940	0		Opened well on rate # 4

Flow Period

Run No.: 4 Duration of Run: 2 Hours.
Flow Well On: 27/64" Choke.

Orifice Size: 1.750 ins
Meter Run: 4.026 ins

Date	Time	Flow Time (Hours)	Wellhead Readings			Meter or Prover Data			Condensate Production m ³ /d	Water Production m ³ /d
			Tubing KPa	Casing KPa	Temp. °C	Pf KPa	Hw KPa	Temp. °C		
25/3/88	2300	0	18940	0						
	2315	0.25	7790	0		2425	40.34	8		
	2330	0.5	6275	0	39	2330	24.65	19	55.440	2.520
	2345	0.75	5955	0	39	2482	19.92	22		
	2400	1	5780	0	39	2400	18.92	23	32.760	2.520
26/3/88	0015	1.25	5730	0	40	2400	18.43	24		
	0030	1.5	5710	0	40	2415	18.43	24	32.760	5.040
	0045	1.75	5690	0	40	2415	18.18	25		
	0100	2	5680	0	40	2415	18.18	25	27.720	2.520

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00110

Flow Period

Orifice Size: 1.500 ins
Meter Run: 4.026 ins

[illegible]

1011

FINAL BUILD-UP PERIOD

[illegible]

ELEMENT NO. 71589 /6000 (BOT)

BOMB DEPTH 9176 'KB

DWT IN: 2747 PSI /OUT: 2743 PSI

LUB. IN: 2733 PSI /OUT: 2737 PSI

[illegible]

00173

SANTOS LTD.
WELL TEST SUMMARY
CALCULATION SHEET

Page 8.

GAS RATES THROUGH SEPARATOR

Run No.	Hw (inches in water)	Pf (psig)	Size Orifice Plate (inches)	Ft (°F)
1	71	355	1.250	42.8
2	63	350	1.500	46.4
3	79	355	1.500	53.6
4	73	350	1.750	77.0
5	126	355	1.500	91.4

Separator Gas Properties

Specific Gravity = 1.033
 TC = 462°F °R WZ
 PC = 703 psia
 CO2 CONTENT = 13.33 mole %
 Meter Run = 4.026"

GAS RATES THROUGH SEPARATOR

Run No.	Q	
	(Mmscfd)	hours
1	1.330	2
2	1.793	2
3	2.001	2
4	2.542	2
5	2.398	33

Production

✓ 0.111
 ✓ 0.149
 ✓ 0.167
 ✓ 0.212
 ✓ 3.297
3.936 ✓

WP 2548G

00114

GAS WELL DELIVERABILITY TEST CALCULATIONS
(Base Conditions = 14.65 psia and 60°F)

WELL NAME: Bimbaya # 2DATE: 19-30/3/88

ELEMENT NO: 71589/6000(80T) DEPTH TESTED: 9176' KB
 DWT IN: 2747 PSI OUT: 2743 PSI
 LUB IN: 2733 PSI OUT: 2737 PSI

SIMPLIFIED ANALYSIS

	Duration (hours)	Sandface Pressure (psia)	Temp. (°F)	Meas.	Δp^2 ($\times 10^6$ psia ²)	Flow Rate (Mmscfd)	H/Carbon Prod. (m ³ /D)	Water Prod. (m ³ /D)	REMARKS
Initial Shut In	46	4009.7	269.4	✓	—	—	—	—	$q = C(\bar{p}_R^2 - p_{wf}^2)^n$ slope n = _____ $\bar{p}_R =$ _____ psia $C = \frac{q}{(\bar{p}_R^2 - p_{wf}^2)^n}$ = _____ AOF (MMscfd) = _____
Flow 1	2	2881.0	264.4	✓	7.778		22.050	NIL	
Shut In	2	3975.5	269.2	✓	—	—	—	—	
Flow 2	2	2374.2	258.8	✓	10.168		30.240	NIL	
Shut In	2	3955.0	267.3	✓	—	—	—	—	
Flow 3	2	2087.5	254.2	✓	11.284		36.540	NIL	
Shut In	2	3943.6	265.7	✓	—	—	—	—	
Flow 4	2	1315.1	237.8	✓	13.822		37.170	3.150	
Extended Flow	33	1469.2	237.8	✓	13.822		29.515	1.451	
Final Shut In	68	3997.6	270.6	✓	—	—	—	—	

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10115

GAS WELL DELIVERABILITY TEST CALCULATIONS
 (Base Conditions = 14.65 psia and 60°F)

LIT (ψ) ANALYSIS

	Duration (hours)	Sandface Pressure (psia)	ψ ($\times 10^6$ psia ² /cp)	$\Delta\psi$ ($\times 10^6$ psia ² /cp)	Flow Rate (q) (MMscfd)	$\Delta\psi/q$	q^2	$\Delta\psi - bq^2$
Initial Shut In	46	4009.7						
Flow 1	2	2881.0						
Shut In	2	3975.5						
Flow 2	2	2374.2						
Shut In	2	3955.0						
Flow 3	2	2087.5						
Shut In	2	3943.6						
Flow 4	2	1315.1						
Total=								
Extended Flow	33	1469.2						
Final Shut In	68	3997.6						

WP 2548G

00116



PERTH: 9 Thorpe Way, Kwinana W.A. 6167. Tel: (09) 419 5933. Tlx: 94374. Fax: (09) 419 2250
BRISBANE: 98 Commercial Rd., Newstead, Qld. 4006. Tel: (07) 854 1530. Tlx: 43532. Fax: (07) 854 1351
ADELAIDE: 242 Glen Osmond Rd., Fullarton, S.A. 5063. Tel: (08) 338 1630. Tlx: 88713. Fax: (08) 79 6351

CLIENT:.....SANTOS LTD.

WELL:.....BIMBAYA No 2.
(TIRRAWARRA SS)

TEST:.....MODIFIED
ISOCHRONAL.



WELL: <u>Bimbaya #2</u>						SANTOS LTD.										DATE: <u>19.1.89</u>				
TYPE OF TEST: <u>Isachronal</u>						WELL TEST DATA SHEET										PAGE No: <u>2 of 5</u>				
DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS					
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE INS.	B.S.W. %	PI PSI	HW INS. H ₂ O	TEMP. °F	ORIFICE SIZE INS.	TANK DIP INS.	TANK PROD BBLs	API GRAVITY @ 60 °F	TANK DIP INS.	TANK PROD BBLs	GAS FLOW RATE MMSCFD	OIL FLOW RATE BBLs/DAY	WATER FLOW RATE BBLs/DAY	TOTAL LIQUID FLOW RATE BBLs/DAY	G.O.R. SCF/BBL	
16.15																				
20.1.89																				
10.50																				
11.00	0	16458	38																	
11.00	0	16458	38																	
11.30	0	16113	65	16																
12.00	0	16010	66	16																
13.00	0	15961	66	16																
14.00	0	15906	66	16																
14.30	0	15858	66	16																
18.07	0	16513	30																	
18.39																				
18.43																				
18.45																				
20.30																				
22.00	0	16513	30	16																
22.00																				

671100

WELL: Bimbaya #2TYPE OF TEST: Isochronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 20.1.89PAGE No: 3 of 5

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE INS.	B.S.W. %	PI KPA	HW INSH ₂ O	TEMP. °C	ORIFICE SIZE INS.	TANK DIP litres	TANK PROD m ³	API GRAVITY @60 °F	TANK DIP litres	TANK PROD m ³	GAS FLOW RATE m ³ /DAY	OIL FLOW RATE m ³ /DAY	WATER FLOW RATE m ³ /DAY	TOTAL LIQUID FLOW RATE m ³ /DAY	G.O.R. 10 ³ /m ³ /m ³
24.00	0	16134	61	16		1447	68	13	1.500	1050	1.05	59.6	0	0	43.04	25.2	0	25.2	1.70
21/1/89																			
02.00	0	16010	61	16		1447	60	13	1.500	2630	1.58	"	0	0	40.45	18.96	0	18.96	2.13
04.00	0	16030	61	16		1447	56	13	1.500	4180	1.55	"	0	0	39.07	18.60	0	18.60	2.10
06.00	0	16030	61	16		1447	56	13	1.500	5630	1.45	"	0	0	39.07	17.40	0	17.40	2.24
08.00	0	16044	61	16		1447	56	14	1.500	7120	1.72	"	0	0	38.99	20.64	0	20.64	1.88
08.00	0	Start to			choke	Settings.													
08.45	0	13969	67	29								"							
09.00	0	14024	68	29		1654	64	22	3.0			"			209.05				
09.00		Change choke to			38/64														
09.20	0	12066	70	38															
09.35	0	12011	70	38		1654	136	32	3.0			"			298.64				
10.20		Change choke to			12/64														
10.45	0	15892	69	12								"							
11.00	0	15941	67	12		1516	102	21	1.500			"			52.96				
11.15		Change choke to			22														
11.30	0	15065	70	22								"							
11.45	0	15031	71	22		1551	78	25	2.500			"			140.30				
11.46		Change choke to			16														
11.55	0	15720	70	16								"							

00120

WELL: Bimbaya #2TYPE OF TEST: Isochronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 21.1.89PAGE No: 14 of 5

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE INS	B.S.W. %	PI KPA	HW INS. H ₂ O	TEMP. °	ORIFICE SIZE INS	TANK DIP INS	TANK PROD BBLs	API GRAVITY @ 60 °F	TANK DIP INS	TANK PROD BBLs	GAS FLOW RATE SCF/D	OIL FLOW RATE BBLs/DAY	WATER FLOW RATE BBLs/DAY	TOTAL LIQUID FLOW RATE BBLs/DAY	G.O.R. SCF/BBL
12.10	0	15755	70	16		1551	77	23	2.0			59.6			84.80	m ³	m ³		
12.14	change choke			30.															
12.30	0	13755	72	30		1654	76	29	3.0										
12.55	0	13652	74	30		1654	76	32	3.0						223.13				
15.00	0	13652	74	30		Shut in for buildup					14710	1401	59.6	7	3.36	67.24	3.36		08.00 - 1300
13.15	0	16210	56																
13.30	0	16375	50																
14.00	0	16423	46																
15.00	0	16492	45																
16.00	0	16582	44																
18.00	0	16650	41																
22.00	0	16650	30																
22.11.89	6																		
22.00	0	16630	27																
26.00	0	16699	20			11 hrs since shut in													
10.00	0	16747	34																
14.00	0	16782	43																
18.00	0	16782	41																
22.00	0	16782	28																
23.11.89																			

00121

OPERATOR B. Lohrey

00123

OILSERV AUSTRALIA

GAS RATE CALCULATION

Page 1 of 2

Client: SANTOSWell: Bimbaga #2Test: modified Iso.Test No: Clean upInterval: 9242' - 9313'Meter Run Size: 4.026

Date	Time	Accum	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp deg C	Diff hw "H2O	Static P psig	√Hw*Pf	Fb	Fg	Y	Ftf	Fpv	C	Gas Rate Q MscfD	Cumulative Production MMscfD
20189																
				Cleanup flow & choke settings										Est. Cum	from Am	6.1
22.05	0															
24.00	2		.870	1.500	13	68	225	123.69	460.79	1.0721	1.0019	1.005	1.035	514.83	43.04	9.68
21.11.89																
22.00	4		.870	1.500	13	60	225	116.19	460.79	1.0721	1.0019	1.005	1.035	514.84	40.45	13.05
04.00	6		.870	1.500	13	56	225	112.25	460.79	1.0721	1.0019	1.005	1.035	514.84	39.07	16.30
06.00	8		.870	1.500	13	56	225	112.25	460.79	1.0721	1.0019	1.005	1.035	514.84	39.07	19.55
08.00	10		.870	1.500	14	56	225	112.25	460.79	1.0721	1.0019	1.003	1.035	513.81	38.99	22.79
			Start choke settings													
08.45		29 11/64														
09.00			.870	3.0	22	64	240	127.74	2195.0	1.0721	1.0011	.9887	1.04	2422.39	209.05	
09.20		38/64														
09.35			.870	3.0	32	136	240	186.22	2195.0	1.0721	1.0019	.9723	1.035	2372.65	298.64	
10.45		12/64														
11.00			.870	1.5	21	102	220	154.82	460.79	1.0721	1.0026	.9905	1.035	507.76	52.96	

00124

Well: Bimbaya #2

Test: Mod. Isochronal

Client: SANTOS

Interval: 9212 - 9313

Motor Run Size: 4.026"

Test No: Clean up

[illegible]

00125



WIRELINE REPORT

00126

WELL: Bimbaya #2

DATE: 18.1.89

PROGRAM: Modified Isochronal

PURPOSE OF WORK: Dummy Run. (Tag PBTD)

REPORT OF WORK PERFORMED: 15.30 Run in hole with Rope socket,
3' stem, knuckle joint, Jars P. 1750" Gauge ring. Total length 11 ft 8"
16.15 Tag PBTD @ 9342 ft. P.O.D.H. Stuck in fish @ 9300
Try unsuccessfully to pull free until dark
19.1.89 wait for instructions from P.E. Dept Moomba.
10.50 Pull 300 lbs on wire 11.00 Flow well. Try to free string
no luck shut in well at 14.30 hrs.
18.07 Pull 440 lbs on wire 18.39 Drop 5 ft go devil.
18.43 Cut wire. (Pressure drops to 150 lbs) 18.45 P.O.D.H.
20.30 Retrieve all wire from hole. Close m/V.
(Cut off at Rope socket. All wire recovered.)

B Lohrey

OPERATOR'S SIGNATURE

WORK PERFORMED BY: B Lohrey OF Oil Serv.

WELL DATA:

Tubing Size: 2 7/8" FWHP: — SIWHP: 16548 KPA.

Sub Surface S.V./Landing Nipple @ S.S.D. @ 2747.00 m.

"X" Nipple @ 2764.58 m "N"/"XN" Nipple @ 2768.63 m other

Min I.D. 56 mm @ 2768.63 m Packer @ 2759 m

Perforated Interval: 9212 ft — 9313 ft Tirrawarra

Forward to: Petroleum Engineering — Adelaide
Production Department — Moomba

WELL: Bimbaya #2TYPE OF TEST: Isachronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 23.1.89PAGE No: 1 of 7

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE INS.	B.S.W. %	PI KPA	HW INSH ₂ O	TEMP. °C	ORIFICE SIZE INS.	TANK DIP LITRES	TANK PROD m ³	API GRAVITY @60 °F	TANK DIP LITRES	TANK PROD m ³	GAS FLOW RATE m ³ /DAY	OIL FLOW RATE m ³ /DAY	WATER FLOW RATE m ³ /DAY	TOTAL LIQUID FLOW RATE m ³ /DAY	G.O.R. 10 ³ m ³ /m ³
			Main Flow																
09.00			Pressure up lubricator.																
11.00	0	16837	43	R 1 H with 2 x RPG 3" and 1 x RT1 gauges.															
11.45			43	On bottom at 9185 ft KB.															
13.00	0	16812	55	12	Open well thru separator 100								100						
13.15	0	16492	54	12		1447	106	9	1.500	320	.22	62	100	0	54.72	21.12	0	21.12	2.59
13.30	0	16479	55	12		1447	104	9	1.500	500	.18		100	0	54.20	17.28	0	17.28	3.13
13.45	0	16479	55	12		1447	100	9	1.500	800	.30		100	0	53.14	28.80	0	28.80	1.84
14.00	0	16458	55	12		1447	100	9	1.500	1095	.295		100	0	53.14	28.32	0	28.32	1.87
14.15	0	16444	55	12		1447	98	9	1.500	1355	.26		100	0	52.61	24.96	0	24.96	2.10
14.30	0	16416	55	12		1447	98	9	1.500	1605	.25		100	0	52.61	24.00	0	24.00	2.19
14.45	0	16403	56	12		1447	98	9	1.500	1900	.295		100	0	52.61	28.32	0	28.32	1.85
15.00	0	16389	56	12		1447	98	9	1.500	2190	.29	62	100	0	52.61	27.84	0	27.84	1.88
15.00			Shut in well for P.B.U.																
15.15	0	16651	50																
15.30	0	16651	50																
15.45	0	16651	50																
16.00	0	16651	50																
16.15	0	16672	50																
16.30	0	16685	50																

B. Lohrey.

00127

WELL: <u>Bimbaya #2</u>						SANTOS LTD.										DATE: <u>23.1.89</u>				
TYPE OF TEST: <u>Synchronous</u>						WELL TEST DATA SHEET										PAGE No: <u>2 of 7</u>				
DATE TIME	WELLHEAD					GAS FLOW DATA					OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING KPA	TUBING KPA	TEMP. °C	CHOKE SIZE INS.	B.S.W. %	PI KPA	HW INS. H ₂ O	TEMP. °C	ORIFICE SIZE INS.	TANK DIP Litres	TANK PROD m ³	API GRAVITY @60 °F	TANK DIP Litres	TANK PROD m ³	GAS FLOW RATE m ³ /DAY	OIL FLOW RATE m ³ /DAY	WATER FLOW RATE m ³ /DAY	TOTAL LIQUID FLOW RATE m ³ /DAY	G.O.R. m ³ /m ³	
16.45	0	16720	45																	
17.00	0	16747	47																	
17.00			Flow well for Rate #2						2.0	2190			100							
17.15	0	16279	55	15		1551	64	10	2.0	2570	.37	56.2	110	.01	80.04	35.52	0.96	36.48	2.19	
17.30	0	16292	56	15		1551	60	9	2.0	2950	.365	↑	125	.015	77.67	35.04	1.44	36.48	2.12	
17.45	0	16292	56	15		1551	60	8	2.0	3250	.29		130	.01	78.51	27.84	0.96	28.80	2.72	
18.00	0	16279	57	15		1551	60	8	2.0	3550	.28		150	.02	77.86	26.88	1.92	28.80	2.70	
18.15	0	16279	57	15		1551	60	9	2.0	3950	.40		150	0	77.67	38.40	0.0	38.40	2.02	
18.30	0	16265	57	15		1551	60	9	2.0	4350	.40		150	0	77.67	38.40	0.0	38.40	2.02	
18.45	0	16251	57	15		1551	60	10	2.0	4650	.30	↑	150	0	77.49	28.80	0.0	28.80	2.69	
19.00	0	16251	57	15		1551	59	9	2.0	5050	.40	56.2	150	0	77.02	38.40	0.0	38.40	2.00	
19.00			Shut in for PBU																	
19.15	0	16672	48																	
19.30		16699	46																	
19.45		16713	43																	
20.00		16727	40																	
20.15		16741	38																	
20.30		16741	36																	
20.45		16741	35																	
21.00		16754	35	Flow well for Rate #3						2.2	64									

B. L. Nkren.

WELL: Bimbaya #2TYPE OF TEST: Isachronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 23.1.89PAGE No: 3 of 7

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	G.O.R.
	KPA	KPA	°C	SIZE INS	%	KPA	INS.H ₂ O	°C	SIZE IN	DIP litres	PROD m ³	GRAVITY @60°F	DIP litres	PROD m ³	FLOW RATE 10 ³ m ³ /DAY	FLOW RATE m ³ /DAY	FLOW RATE m ³ /DAY	FLOW RATE m ³ /DAY	10 ³ m ³ /m ³
21.15	0	15617	56	22		1447	76	10	2.5	660	.63	56	30	.03	140.37	60.48	2.88	63.36	2.21
21.30	0	15892	58	22		1447	52	10	2.5	1500	.79	"	50	.05	116.05	75.84	4.80	80.64	1.43
21.45	0	15872	58	22		1447	48	9	2.5	2050	.55	"	50	0	111.74	52.80	0	52.80	2.11
22.00	0	15872	58	22		1447	46	9	2.5	2550	.50	"	50	0	109.38	48.00	0	48.00	2.27
22.15	0	15872	58	22		1447	46	9	2.5	3100	.55	"	50	0	109.38	52.80	0	52.80	2.07
22.30	0	15872	58	22		1447	46	9	2.5	3600	.50	"	50	0	109.38	48.00	0	48.00	2.27
22.45	0	15872	58	22		1447	46	9	2.5	4150	.55	"	50	0	109.38	52.80	0	52.80	2.07
23.00	0	15872	58	22		1447	46	9	2.5	4650	.50	"	50	0	109.38	48.00	0	48.00	2.27
23.00		Well shut in for P.B.U.																	
23.15	0	16665	44																
23.30	0	16692	40																
23.45	0	16727	36																
24.00	0	16734	34																
24/1/89																			
00.15	0	16747	32																
00.30	0	16754	30																
00.45	0	16761	30																
01.00	0	16782	29																
01.00	0		Start flow # 4																
01.15	0	12445	58	38		1551	140	18	3.0	3650	1.25	"	60	.06	302.46	122.88	5.76	128.64	2.35

00129

WELL: Bimbaya #2TYPE OF TEST: Ischronal

SANTOS LTD.

WELL TEST DATA SHEET

DATE: 24.1.89PAGE No: 4 of 7

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	G.O.R.
	PSI	PSI	°F	SIZE INS.	%	PSI	INS. H ₂ O	°F	SIZE INS.	DIP INS.	PROD BBLs	GRAVITY @ 60 °F	DIP INS.	PROD BBLs	FLOW RATE MMSCFD	FLOW RATE BBLs/ DAY	FLOW RATE BBLs/ DAY	FLOW RATE BBLs/ DAY	SCF/BBL
01.30	0	12245	60	38		1551	140	21	3.0	2650	125	56.7	120	06	30047	120.00	5.76	125.76	2.38
01.45	0	12211	63	38		1551	140	24		4190	153		130	01	298.54	146.88	0.96	147.84	2.01
02.00	0	12162	65	38		1551	140	26		5700	149		150	02	297.27	143.04	1.92	144.96	2.05
02.15	0	12135	66	38		1551	140	27		7350	128		170	07	296.65	122.88	6.72	129.60	2.28
02.30	0	12107	67	38		1551	140	29		2500	107		150	08	295.42	102.72	7.68	110.40	2.67
02.45	0	12100	68	38		1551	140	29		3800	121		240	09	295.42	116.16	8.64	235.20	1.25
03.00	50	12073	69	38/30	c/c	1551	140	30		4900	099	56.7	350	11	294.81	95.04	10.56	105.60	2.79
03.15	100	13700	70	30		1551	80	26		980	94	56.3	40	04	22451	90.24	3.84	94.08	2.38
03.30	150	13631	69	30		1551	80	26		1920	91		70	03	22451	87.36	2.88	90.24	2.48
03.45	170	13651	69	30		1551	80	27		2880	93		100	03	22404	89.28	2.88	92.16	2.43
04.00	180	13700	69	30		1551	80	27		3920	99		150	05	22404	95.04	4.8	99.84	2.24
04.15	180	13700	69	30		1551	80	27		800	74		60	06	22404	71.04	5.76	76.80	2.91
04.30	195	13734	69	30		1551	80	27		1590	73		120	06	22404	70.08	5.76	75.84	2.95
04.45	195	13734	72	30		1551	80	27		2780	111		200	08	22404	106.56	7.68	114.24	1.96
05.00	195	13734	72	30		1551	80	27		3950	112		250	05	22404	107.56	4.8	112.36	1.99
05.15	195	13734	72	30		1551	80	27		920	86		60	06	22404	82.56	5.76	88.32	2.53
05.30	200	13755	72	30		1551	80	27		1860	90		100	04	22404	86.40	3.84	90.24	2.48
05.45	220	13769	72	30		1551	80	27		2780	87		150	05	22404	83.52	4.8	88.32	2.53
06.00	230	13790	72	30		1551	80	27		3700	87		200	05	22404	83.52	4.8	88.32	2.53
07.00	240	13721	75	30		1551	81	27	3.0	3890	3.66	56.3	230	23	222.67	87.84	5.52	93.36	2.38

B. Lohrey

00130

WELL: <u>Bimbaya #2</u>						SANTOS LTD.										DATE: <u>24.1.89</u>				
TYPE OF TEST: <u>Isochronal</u>						WELL TEST DATA SHEET										PAGE No: <u>5 of 7</u>				
DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS					
	CASING	TUBING	TEMP.	CHOKE SIZE INS.	B.S.W. %	PI	HW INS. H ₂ O	TEMP.	ORIFICE SIZE	TANK DIP	TANK PROD	API GRAVITY @ 60 °F	TANK DIP	TANK PROD	GAS FLOW RATE MMSCFD	OIL FLOW RATE BBLSDAY	WATER FLOW RATE BBLSDAY	TOTAL LIQUID FLOW RATE BBLSDAY	G.O.R. SCF/BBL	
08:00	260	13617	76	30		1551	80	34	3.0"	3600	3.40	56.3	200	20	220.84	81.6	4.3	86.4	2.56	
09:00	280	13528	77	"		1551	80	35	"	3800	3.65	"	150	15	220.40	87.6	3.6	91.2	2.42	
10:00	300	13431	78	"		1551	79	36	"	7000	3.02	"	330	18	218.58	72.48	4.32	76.8	2.84	
12:00	385	13273	80	"		1551	78	38	"	6450	6.12	"	330	33	216.33	73.44	3.96	77.4	2.79	
14:00	390	13197	81	"		1551	76	39	"	6320	5.94	"	380	38	213.11	71.28	4.56	75.84	2.81	
16:00	420	13134	81	"		1585	76	40	"	6100	5.80	"	300	30	215.09	69.60	3.60	73.20	2.93	
18:00	480	13072	81	"		1551	76	40	"	6280	5.93	"	350	35	212.69	71.16	4.20	75.36	2.82	
20:00	500	13114	82	"		1551	76	40	"	6140	5.79	"	350	35	212.69	69.48	4.2	73.68	2.88	
22:00	500	13045	82	"		1551	75	41	"	6200	5.85	"	350	35	210.88	70.2	4.2	74.4	2.83	
24:00	500	12976	82	"		1551	75	41	"	6150	5.82	"	330	33	210.88	69.84	3.96	73.8	2.86	
25/1/89																				
02:00	500	12956	82	"		1551	75	41	"	6000	5.66	"	340	34	210.88	67.92	4.08	72.0	2.93	
03:00	500	12955	82	"		1551	75	41	"	3150	2.97	"	180	18	210.88	71.28	4.32	75.6	2.79	
03:15	500	15927	68			SHUT IN AT WING VALVE FOR P.B.U.														
03:30	440	16148	59																	
03:45	380	16238	51																	
04:00	340	16307	46																	
04:15	300	16355	40																	
04:30	250	16403	35																	
04:45	220	16438	32																	

00131

WELL: *Bimbaya #2*TYPE OF TEST: *Isachronal*

SANTOS LTD.

WELL TEST DATA SHEET

DATE: *25/1/89*PAGE No: *6 of 7*

DATE TIME	WELLHEAD					GAS FLOW DATA				OIL/CONDENSATE PRODUCTION			WATER PRODUCTION		WELL TEST RESULTS				
	CASING	TUBING	TEMP.	CHOKE	B.S.W.	PI	HW	TEMP.	ORIFICE	TANK	TANK	API	TANK	TANK	GAS	OIL	WATER	TOTAL	G.O.R.
			°C	SIZE INS	%	PSI	INS. H ₂ O	°F	SIZE INS	DIP INS	PROD BBLs	GRAVITY @ 60 °F	DIP INS	PROD BBLs	FLOW RATE MMSCFD	FLOW RATE BBLs/ DAY	FLOW RATE BBLs/ DAY	FLOW RATE BBLs/ DAY	SCF/BBL
05-00	200	16458	31	S/I.															
06-00	160	16527	28																
07-00	120	16610	26																
08-00	100	16651	32																
09-00	90	16686	35																
15-00	60	16789	46																
21-00	40	16844	30																
26/1/89																			
03-00	30	16972	23	S/I															
09-00	20	16977	32																
12-00	0	16942	33																
1800	0	16956	33																
27-1-89																			
0000	0	16956	28	S/I															
0600	0	16970	20																
1200	0	17004	46																
1800	0	17004	42																
28 JAN 88																			
0000	0	17004	31	S/I															
0600	0	17004	22																

OPERATOR

00132

TYPE OF TEST: ISOCHORONAL (HOB)



WELL TEST DATA SHEET

PAGE No: 7 OF 7.

[illegible]

00133

WELL 15m bay 2
TANK:- CAPACITY 2 x 7850 litres
SCALE Calib Dip Stick.



SANTOS LTD

FLUID PRODUCTION SHEET

PAGE No. 1 of 4
OPERATOR B. Lohrey

DATE TIME	CUM. TIME	OIL/CONDENSATE PRODUCTION					WATER PRODUCTION					REMARKS
		TANK DIP liters	TANK PROD. m ³	FLOWRATE m ³ /D	CUM.PROD. m ³	OIL CONDENSATE GRAVITY "API60F"	TANK DIP liters	TANK PROD. m ³	FLOWRATE m ³ /D	CUM.PROD. m ³	SALINITY PPM	
					23.98					0.7		Off From cleanup
13.00	0	100					100	0				Open well rate #1
13.15		320	.22	21.12	24.20	62	100	0				
13.30		500	.18	17.28	24.38		100	0				
13.45		800	.30	28.80	24.68		100	0				
14.00	1	1095	.295	28.32	24.98		100	0				
14.15		1355	.26	24.96	25.24		100	0				
14.30		1605	.25	24.00	25.49		100	0				
14.45		1900	.295	28.32	25.79		100	0				
15.00	2	2190	.29	27.84	26.08	62	100	0		0.7		Shut in for PBU.
												Open well #2
17.00	4	2190					100					
17.15		2570	.37	35.52	26.45	56.2	110	0.01	.96	0.71		
17.30		2950	.365	35.04	26.82		125	0.015	1.44	0.72	0	
17.45		3250	.29	27.84	27.11		130	0.005	0.96	0.73		
18.00	5	3550	.28	26.88	27.39		150	0.02	1.92	0.75		
18.15		3950	.40	38.40	27.79		150	0	0	0.75		
18.30		4350	.40	38.40	28.19		150	0	0	0.75		
18.45		4650	.30	28.80	28.49		150	0	0	0.75		
19.00	6	5050	.40	38.40	28.89		150	0	0	0.75		

*0/5576

DD3

00134

TANK:- CAPACITY 2 x 7850 litres
SCALE Calib Dip Stick



SANTOS LTD

FLUID PRODUCTION SHEET

DATE 3/5

PAGE No

OPERATOR

DR Blahvey

DATE TIME	CUM. TIME	OIL/CONDENSATE PRODUCTION					WATER PRODUCTION					REMARKS
		TANK DIP litres	TANK PROD. m ³	FLOWRATE m ³ /D	CUM.PROD. m ³	OIL CONDENSATE GRAVITY °API60F	TANK DIP litres	TANK PROD. m ³	FLOWRATE m ³ /D	CUM.PROD. m ³	SALINITY PPM	
21.00	8	0			28.89		0			0.75		Flow Rate # 3.
21.15		660	0.63	60.48	29.52	56.2	30	.03	2.88	0.78	'0'	
21.30		1500	0.79	75.84	30.31	"	50	0.52	4.80	0.83	'0'	
21.45		2050	0.55	52.80	30.86	"	50	0	0	0.83	-	
22.00	9	2550	0.50	48.00	31.36	"	50	0	0	0.83	-	
22.15		3100	0.55	52.80	31.91	"	50	0	0	0.83	-	
22.30		3600	0.50	48.00	32.41	"	50	0	0	0.83	-	
22.45		4150	0.55	52.80	32.96	"	50	0	0	0.83	-	
23.00	10	4650	0.50	48.00	33.46	"	50	0	0	0.83	-	Shut in for PBU
24/1/89												
01.00	12											Flow Rate # 4,
01.15		1340	1.28	122.88	34.74	56.7	160	.06	5.76	0.89	'0'	
01.30		2650	1.25	120.00	35.99	"	120	.06	5.76	0.95	'0'	
01.45		4190	1.53	146.88	37.52	"	180	.01	.96	0.96	'0'	
02.00	13	5700	1.49	143.04	39.01	"	150	.02	1.92	0.98	'0'	
02.15		71350	1.28	122.88	40.29	"	170	.07	6.72	1.05	0	
02.30		2500	1.07	102.72	41.36	"	150	.08	7.68	1.13	0	
02.45		3800	1.21	116.16	42.57	"	240	.09	8.64	1.22	0	
03.00	14	4900	0.99	95.04	43.56	"	350	.11	10.56	1.33	0	Flow on EXTEND
03.15		9980	0.94	90.24	44.50	"	40	.04	3.84	1.37		

★0/5576

DD3

00135

TANK:- CAPACITY 2 x 7850 LITRES.
SCALE Calib Dip Stick



SANTOS LTD

FLUID PRODUCTION SHEET

DATE 24.7.89

PAGE No. 3 of 4

OPERATOR B Lohrey

DATE TIME	CUM. TIME	OIL/CONDENSATE PRODUCTION					WATER PRODUCTION					REMARKS
		TANK DIP mtr.	TANK PROD. M ³	FLOWRATE M ³ /D	CUM.PROD. M ³	OIL CONDENSATE GRAVITY "API60F"	TANK DIP mtr.	TANK PROD. M ³	FLOWRATE M ³ /D	CUM.PROD. M ³	SALINITY PPM	
03.30		1920	.91	87.36	45.51	56.3	80	.03	2.88	1.40	'0'	
03.45		2880	.93	89.28	46.35		100	.03	2.88	1.43		
04.00	15	3920	.99	95.04	47.34		150	.05	4.80	1.48		
04.15		4800	.74	71.04	48.08		160	.06	5.76	1.54		
04.30		5590	.73	70.08	48.81		120	.06	5.76	1.60		
04.45		2180	1.11	106.56	49.92		200	.08	7.68	1.68		
05.00	16	3950	1.12	107.52	51.04		250	.05	4.80	1.73		
05.15		4920	.86	82.56	51.90		160	.06	5.76	1.79		
05.30		1860	.90	86.40	52.80		190	.04	3.84	1.83		
05.45		2780	.87	83.52	53.67		150	.05	4.80	1.88		
06.00	17	3700	.87	83.52	54.54		200	.05	4.80	1.93		
07.00	18	3890	3.66	87.84	58.2		230	.23	5.52	2.16		
08.00	19	3600	3.40	81.60	61.6		200	.20	4.80	2.36		
09.00	20	3800	3.65	87.60	65.25		150	.15	3.60	2.51		
10.00	21	7000	3.02	72.48	68.27		330	.18	4.32	2.69		
12.00	23	6450	6.12	73.44	74.39		330	.33	3.96	3.02		
14.00	25	6320	5.94	71.28	80.33		380	.38	4.56	3.40		
16.00	27	6100	5.80	69.60	86.13		300	.30	3.60	3.70		
18.00	29	6280	5.93	71.16	92.06		350	.35	4.2	4.05	'0'	
20.00	31	6140	5.79	69.48	97.85	56.3	350	.35	4.2	4.40		

*0/5576

DD3

00136

OPERATOR

00137

Client: SANTOS LTDWell: Bimbaya #2Test: Mod Isochronal

Test No: _____

Interval: 92.12' - 93.13'Meter Run Size: 4.026"

Date	Time	Accum	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degC	Diff hw "H2O	Static Pf psig	√Hw*Pf	Fb	Fg	FTF	Y	Fpv	C	Gas Rate 10 ³ m ³ /h	Cumulative Production m ³
23/89												C/F	From	clean up		190.94
13.00	0		.868	Open well		thru separator for rate #1						12/64				
13.15				1.500	9	106	210	154.34	461.38	1.0733	1.0115	1.0031	1.0437	524.242	54.72	191.51
13.30					9	104	210	152.87	461.38	1.0733	1.0115	1.0030	1.0437	524.39	54.20	192.07
13.45					9	100	210	149.91	461.38	1.0733	1.0115	1.0029	1.0437	524.33	53.14	192.62
14.00	1				9	100	210	149.91	461.38	1.0733	1.0115	1.0029	1.0437	524.33	53.14	193.17
14.15					9	98	210	148.40	461.38	1.0733	1.0115	1.0028	1.0437	524.29	52.61	193.71
14.30					9	98	210	148.40	461.38	1.0733	1.0115	1.0028	1.0437	524.29	52.61	194.25
14.45					9	98	210	148.40	461.38	1.0733	1.0115	1.0028	1.0437	524.29	52.61	194.79
15.00	2		.868	1.500	9	98	210	148.40	461.38	1.0733	1.0115	1.0028	1.0437	524.29	52.61	195.33
17.00	4		.870	Open well		for Rate #2						15/64				
17.15			"	2.000	10	64	225	123.86	842.12	1.0721	1.0098	1.0016	1.0466	955.71	80.04	196.16
17.30			"	"	9	60	225	119.93	842.12	1.0721	1.0115	1.0015	1.0472	957.85	77.67	196.96
17.45			"	"	8	61	225	120.92	842.12	1.0721	1.0133	1.0015	1.0478	960.14	78.51	197.77
18.00	5		"	"	8	60	225	119.93	842.12	1.0721	1.0133	1.0015	1.0478	960.12	77.86	198.58

Client: SANTOS LTDWell: Bimbaya #2Test: Mod Isochronal

Test No: _____

Interval: 9212 - 9313'Meter Run Size: 4.026"

Date	Time	Accum	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp deg F	Diff hw "H2O	Static P psig	VHw=Pf	Fb	Fg	Frf	γ	Fpv	C	Gas Rate ⁹ 10 ³ m ³ /d	Cumulative Production 10 ³ m ³ .
23.189			.870	2.000	9	60	225	119.93	842.12	1.0721	1.0115	1.0015	1.0472	957.85	77.67	199.38
18.30			.870	2.000	9	60	225	119.93	842.12	1.0720	1.0115	1.0015	1.0472	957.85	77.67	200.18
18.45	"		.870	2.000	10	60	225	119.93	842.12	1.0721	1.0098	1.0015	1.0466	955.61	77.49	200.98
19.00	6		.870	2.000	9	59	225	118.92	842.12	1.0721	1.0115	1.0015	1.0472	957.83	77.02	201.78
19.00			Shut in well for build up													
21.00	8		Open well from Rate #3.													
21.15			.870	2.500	10	76	215	132.13	1387.17	1.0721	1.0098	1.0017	1.0444	1571.15	140.37	203.24
21.30			.870	2.500	10	52	215	109.29	1387.17	1.0721	1.0098	1.0002	1.0444	1570.29	116.05	204.44
21.45			.870	2.500	9	48	215	105.00	1387.17	1.0721	1.0115	1.0011	1.0450	1573.79	111.74	205.60
22.00	9		.870	2.500	9	46	215	102.79	1387.17	1.0721	1.0115	1.0010	1.0450	1573.71	109.38	206.73
22.15			.870	2.500	9	46	215	102.79	1387.17	1.0721	1.0115	1.0010	1.0450	1573.71	109.38	207.86
22.30			.870	2.500	9	46	215	102.79	1387.17	1.0721	1.0115	1.0010	1.0450	1573.71	109.38	208.99
22.45			.870	2.500	9	46	215	102.79	1387.17	1.0721	1.0115	1.0010	1.0450	1573.71	109.38	210.13
23.00	10		.870	2.500	9	46	215	102.79	1387.17	1.0721	1.0115	1.0010	1.0450	1573.71	109.38	211.27
23.00			Shut in for build up.													
24.1189																

Client: SANTOS LTD.Well: Bimbaya #2.Test: MOQ ISOCHRONAL

Test No: _____

Interval: 9212 - 9313'Meter Run Size: 4.026"

Date 24-1-89		Gas Gravity Air=1	Orifice diam. Inches	Gas Temp deg F	Diff hw "H2O	Static Pf psia	√Hw÷Pf	Fb	Fg	APP	Y	Fpv	C	Gas Rate Q Mscf/D	Cumulative Production MMscf/D
Time	Accum														
01:00	12			Flow	for	rate#	4							CF	211.27
01:15		.870	3.0	18	140	225	183.19	2189.7	1.0721	.9958	1.0022	1.0422	2441.65	302.46	214.42
01:30	"	.870	3.0	21	140	225	183.19	2189.7	1.0721	.9967	1.0022	1.0406	2425.63	300.47	219.78
01:45		.870	3.0	24	140	225	183.19	2189.7	1.0721	.9857	1.0022	1.0392	2410.02	298.54	222.88
02:00	13	.870	3.0	26	140	225	183.19	2189.7	1.0721	.9824	1.0022	1.0383	2399.82	297.27	225.97
02:15		.870	3.0	27	140	225	183.19	2189.7	1.0721	.9808	1.0022	1.0387	2394.78	296.65	229.06
02:30		.870	3.0	29	140	225	183.19	2189.7	1.0721	.9775	1.0022	1.0369	2384.83	295.42	232.13
02:45		.870	3.0	29	140	225	183.19	2189.7	1.0721	.9775	1.0022	1.0369	2384.83	295.42	235.20
03:00	14	.870	3.0	50	140	225	183.19	2189.7	1.0721	.9759	1.0022	1.0365	2379.91	294.81	238.27
03:15		.870	3.0	26	80	225	138.48	2189.7	1.0721	.9824	1.0012	1.0383	2397.57	224.51	240.60
03:30		.870	3.0	26	80	225	138.48	2189.7	1.0721	.9824	1.0012	1.0383	2397.57	224.51	242.93
03:45		.870	3.0	27	80	225	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	245.26
04:00	15	.870	3.0	27	80	225	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	247.59
04:15		.870	3.0	27	80	225	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	249.93
04:30		.870	3.0	27	80	225	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	252.26
04:45		.870	3.0	27	80	225	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	254.59

00140

Client: SANTOS LTDWell: Bimbaya #2Test: Mod Isochronal

Test No: _____

Interval: 9212'-9313'Meter Run Size: 4.026"

Date Time	Accum	Gas Gravity Air=1	Orifice diam. Inches	Gas Temp degF	Diff hw "H2O	Static Pp psig	VHw=Pp	Fb	Fg	P _{T4}	Y ₁	Fpv	C	Gas Rate Q MscfD	Cumulative Production MMscfD
05:00	16	.870	3.0	27	80	22.5	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	256.92
05:15		.870	3.0	27	80	22.5	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	259.25
05:30	"	.870	3.0	27	80	22.5	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	261.58
05:45		.870	3.0	27	80	22.5	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	263.91
06:00	17	.870	3.0	27	80	22.5	138.48	2189.7	1.0721	.9808	1.0012	1.0378	2392.54	224.04	266.25
07:00	18	.870	3.0	33	81	22.5	139.35	2189.7	1.0721	.9711	1.0012	1.0358	2363.21	222.67	275.52
08:00	19	.870	3.0	34	80	22.5	138.49	2189.7	1.0721	.9695	1.0012	1.0349	2358.41	220.84	284.72
09:00	20	.870	3.0	35	80	22.5	138.48	2189.7	1.0721	.9680	1.0012	1.0345	2353.68	220.40	293.90
10:00	21	.870	3.0	36	79	22.5	137.62	2189.7	1.0721	.9664	1.0012	1.0341	2348.96	218.58	303.00
12:00	23	.870	3.0	38	78	22.5	136.74	2189.7	1.0721	.9633	1.0012	1.0333	2339.64	216.33	321.03
14:00	25	.870	3.0	39	76	22.5	134.98	2189.7	1.0721	.9617	1.0012	1.0330	2334.98	213.11	338.79
16:00	27	.870	3.0	40	76	23.0	136.37	2189.7	1.0721	.9602	1.0011	1.0333	2332.02	215.05	356.71
18:00	29	.870	3.0	40	76	22.5	134.97	2189.7	1.0721	.9602	1.0012	1.0326	2330.42	212.69	374.43
20:00	31	.870	3.0	40	76	22.5	134.97	2189.7	1.0721	.9602	1.0012	1.0326	2330.42	212.69	392.16
22:00	33	.870	3.0	41	75	22.5	134.09	2189.7	1.0721	.9577	1.0012	1.0322	2325.87	210.88	409.73
24:00	35	.870	3.0	41	75	22.5	134.09	2189.7	1.0721	.9587	1.0012	1.0322	2325.87	210.88	427.31

00141

Test No:

Interval: 9212' - 9313'

Motor Run Size: 4.026"

[illegible]



WIRELINE REPORT

00143

WELL: Bimbaya #2DATE: 23.1.89PROGRAM: Modified Isochronal. (Post Frac.)PURPOSE OF WORK: Pressure Survey

REPORT OF WORK PERFORMED:

09.00 Pressure up lubricator.11.00 Run in hole with 2 x RPG3 and 1 x RT7 gauges
on Bottom @ 9185' KB.B. Lohrey
OPERATOR'S SIGNATUREWORK PERFORMED BY: Bruce Lohrey OF Oil Serv Aust.

WELL DATA:

Tubing Size: 2 7/8" FWHP: - SIWHP: -Sub Surface S.V./Landing Nipple @ - S.S.D. @: 2747.00 m."X" Nipple @ 2764.58 m. "N"/"XN" Nipple @ 2768.63 m. other -Min I.D. 56 mm @ 2768.63 m. Packer @ 2759 m.Perforated Interval: 9212 ft. - 9313 ft. TirrawarraForward to: Petroleum Engineering — Adelaide
Production Department — Moomba

SANTOS LTD.

ISO - CHRONAL AND BUILD-UP SURVEY

Well: Bimbaya #2Date: 23.1.89

Lubricator Data:

① 2448

2466

② 2423

2444

Page 1 of 4

Pressure with D.W.T. 2442

/ 2466

Time Pressured 09.00 hrsTime Depressed 0908 ON 28.1.89Time Run in Hole 11.00 hrsTime off Bottom 0625 ON 28.1.89

Bomb No. 1 Data

Bomb No. 2 Data

Element No. and Range	<u>53563</u>	<u>53564</u>
Recorder No.	<u>73359</u>	<u>47405</u>
Clock and Lead Screw Data	<u>S/P, F23707, 120hr</u>	<u>S.P. 120hr, F23708</u>
Engage Stylus	Date: <u>23.1.89</u> Time: <u>08.37</u>	Date: <u>23.1.89</u> Time: <u>08.41</u>
Disengage	Date: Time: <u>09:32</u>	Date: Time: <u>09:32</u>

Remarks: RT7 #10066 90-349°F RE 12068 120hr
#16591 08.30 Stylus on 09:32

Well-Head Data for Final Build-up

Date	Time	Hours shut-in Time	Wellhead KPA	Casing KPA	Wellhead Temp. °C	Remarks
<u>23.1.89</u>	<u>09.00</u>					<u>Pressure up lubricator</u>
	<u>11.00</u>		<u>16837</u>	<u>0</u>	<u>43</u>	<u>R.I.H.</u>
	<u>11.45</u>					<u>On Bottom @ 9185</u>
	<u>13.00</u>		<u>16872</u>	<u>0</u>	<u>55</u>	<u>Open well Rate #1</u>
	<u>13.15</u>		<u>16492</u>	<u>0</u>	<u>54</u>	
	<u>13.30</u>		<u>16479</u>	<u>0</u>	<u>55</u>	
	<u>13.45</u>		<u>16479</u>	<u>0</u>	<u>55</u>	
	<u>14.00</u>		<u>16458</u>	<u>0</u>	<u>55</u>	
	<u>14.15</u>		<u>16444</u>	<u>0</u>	<u>55</u>	
	<u>14.30</u>		<u>16416</u>	<u>0</u>	<u>55</u>	
	<u>14.45</u>		<u>16403</u>	<u>0</u>	<u>56</u>	
	<u>15.00</u>		<u>16389</u>	<u>0</u>	<u>56</u>	<u>Shut-in for PBO</u>
	<u>15.15</u>		<u>16651</u>	<u>0</u>	<u>50</u>	
	<u>15.30</u>		<u>16651</u>	<u>0</u>	<u>50</u>	
	<u>15.45</u>		<u>16651</u>	<u>0</u>	<u>50</u>	
	<u>16.00</u>		<u>16651</u>	<u>0</u>	<u>50</u>	
	<u>16.15</u>		<u>16672</u>	<u>0</u>	<u>50</u>	
	<u>16.30</u>		<u>16685</u>	<u>0</u>	<u>50</u>	
	<u>16.45</u>		<u>16720</u>	<u>0</u>	<u>47</u>	
	<u>17.00</u>		<u>16747</u>	<u>0</u>	<u>47</u>	<u>Open for Rate #2 15/</u>
	<u>17.15</u>		<u>16279</u>	<u>0</u>	<u>55</u>	
	<u>17.30</u>		<u>16292</u>	<u>0</u>	<u>56</u>	

SANTOS LTD.

ISO - CHRONAL AND BUILD-UP SURVEY CONTINUATION

Well: Bimbaya #2,

Date: 23.1.89

Page 2 of 4

Well-Head Data for Final Build-up

Date	Time	Hours shut-in Time	Wellhead	Casing	Wellhead Temp. °C	Remarks
23.1.89	18.00		16279	0	57	Rate #2 cont.
	18.15		16279	0	57	
	18.30		16265	0	57	
	18.45		16251	0	57	
	19.00		16251	0	57	Shut in for PBU.
	19.15		16612	0	48	
	19.30		16699	0	46	
	19.45		16713	0	43	
	20.00		16721	0	40	
	20.15		16741	0	38	
	20.30		16741	0	36	
	20.45		16741	0	35	
	21.00		16754	0	35	Flow for Rate #3, 22/64.
	21.15		15617	0	56	
	21.30		15892	0	58	
	21.45		15872	0	58	
	22.00		15872	0	58	
	22.15		15872	0	58	
	22.30		15872	0	58	
	22.45		15872	0	58	
	23.00		15872	0	58	Shut in for PBU.
	23.15		16665	0	44	
	23.30		16692	0	40	
	23.45		16727	0	36	
	24.00		16734	0	34	
24.1.89	00.15		16747	0	32	
	00.30		16754	0	30	
	00.45		16761	0	30	
	01.00		16782	0	29	Start Rate #4 38/64
	01.15		12445	0	58	
	01.30		12245	0	60	
	01.45		12211	0	63	
	02.00		12162	0	65	
	02.15		12135	0	66	
	02.30		12107	0	67	
	02.45		12100	0	68	
	03.00		12073	50	69	Extended Rate 30/64.

SANTOS LTD.

ISO - CHRONAL AND BUILD-UP SURVEY CONTINUATION

Well: Bimbaya #2

Date: 24.1.89

Page 3 of 4

Well-Head Data for Final Build-up

Date	Time	Hours shut-in Time	Wellhead	Casing	Wellhead _{OC}	Remarks
24.1.89	03:15		13700	100	70	
	03:30		13631	150	69	
	03:45		13651	170	69	
	04:00		13700	180	69	
	04:15		13700	180	69	
	04:30		13734	195	69	
	04:45		13734	195	72	
	05:00		13734	195	72	
	05:15		13734	195	72	
	05:30		13755	200	72	
	05:45		13769	220	72	
	06:00		13790	230	72	
	07:00		13721	240	75	
	08:00		13617	260	76	
	09:00		13528	230	77	
	10:00		13431	300	78	
	12:00		13273	385	80	
	14:00		13197	390	81	
	16:00		13134	420	81	
	18:00		13072	480	81	
	20:00		13114	500	82	
	22:00		13054	500	82	
	24:00		12976	500	82	
25.1.89	02:00		12956	500	82	
	03:00		12955	500	82	
	03:15	0	12927	500	82	SI AT NING VALVE FOR P.B.U.
	03:30		16148	440	59	
	03:45		16238	380	51	
	04:00		16307	340	46	
	04:15	1	16355	300	40	
	04:30		16403	250	35	
	04:45		16438	220	32	
	05:00	2:45	16458	200	31	
	06:00	3:45	16527	160	28	
	07:00	4:45	16610	120	26	
	08:00	5:45	16651	100	32	
	09:00		16686	90	35	

ISO - CHRONAL AND BUILD-UP SURVEY CONTINUATION

well: Bimbaya #2.

Date: 25.1.89.

PAGE 4 of 4

Well-Head Data for Final Build-up

[illegible]



00148

WIRELINE REPORT

WELL: Bimbaya # 2

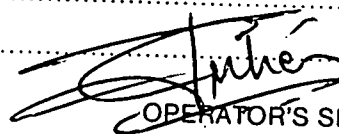
DATE: 28 JAN 89

PROGRAM: Mod. Isochoronal

PURPOSE OF WORK: TO CONDUCT A STATIC GRADIENT SURVEY

REPORT OF WORK PERFORMED:

1210 PRESSURISED LUBE.
1225 R.I.H. WITH 2x RPG 3. TO RECORD PRESSURES AT
VARIOUS DEPTHS.
1357 P.D.D.H FROM 9262' KB.
1448 IN LUBE.
1459 DEPRESSURISED LUBE.



OPERATOR'S SIGNATURE

WORK PERFORMED BY: GERARD JULIEN OF OILSERV AUSTRALIA

WELL DATA:

Tubing Size: 2 7/8" FWHP: — SIWHP:

Sub Surface S.V./Landing Nipple @ S.S.D. @ 2747.00m

"X" Nipple @ 2764.58m "N"/"XN" Nipple @ 2768.63m other

Min I.D. 56mm @ 2768.63m Packer @ 2759m

Perforated Interval: 9212' - 9313' KB. TIRRAWARRA FORMATION

Forward to: Petroleum Engineering — Adelaide
Production Department — Moomba

YEL NAME: Bimbaya[#] 2.

STATIC GRADIENT SURVEY

DATE: 28 JAN 1989.

BOMB No. 1 DATA

MENT No. 53563 ELEMENT RANGE: 0-5000PSIG
ORDER No. 73359 CLOCK DATA: D/P. 6-6824 (12HR)
PAGE STYLUS: 1150 DISENGAGE: 1514

BOMB No. 2 DATA

ELEMENT No. 53564 ELEMENT RANGE: 0-5000 SIG
RECORDER No. 47405 CLOCK DATA: S/P 689 34R
ENGAGE SYLUS: 1150 DISENGAGE: 151A

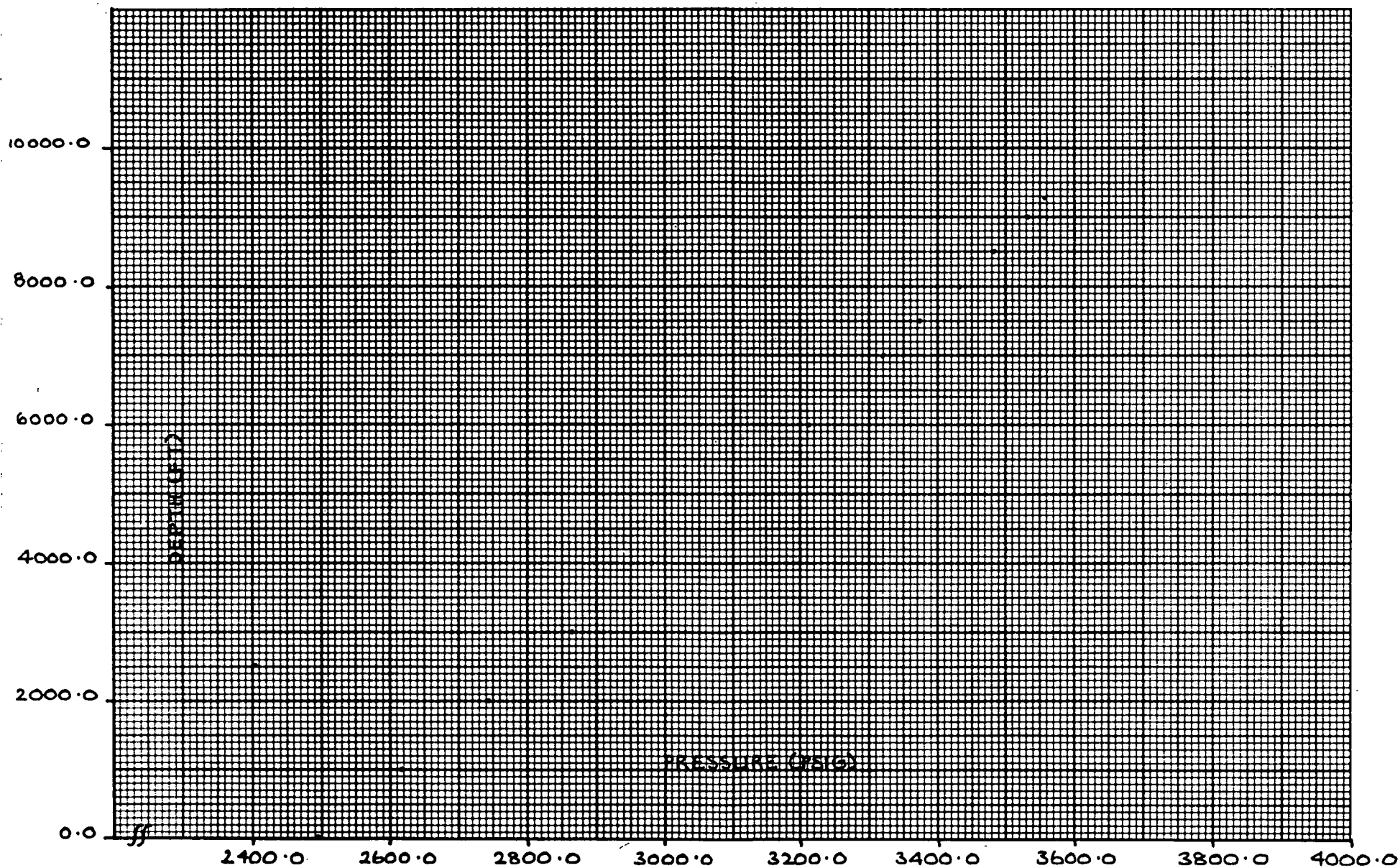
LUBRICATOR DATA

PRESSURE WITH D.W.T.: 17038 KPA (2471 psig)
TIME PRESSURED: 1210
TIME DEPRESSURED: 1459

DATE	TIME	DEPTH'	DEFLECTION	PRESSURE TEMP.	GRADIENT psi/ft	DEPTH'	DEFLECTION	PRESSURE TEMP.	GRADIENT psi/ft	REMARKS
1-89	1210	O		2494.5		O		2464.0		PRESSURISED LUBE (BOMBS IN LUBE).
	1225									R.I.H.
	1234	1000		2618.9		1000		2583.1		STOP AT FIRST DEPTH.
	1238									CONTINUE R.I.H.
	1241:14	2000		2742.0		2000		2702.7		STOP AT SECOND DEPTH.
	1245:14									CONTINUE R.I.H.
	1248:30	3000		2864.2		3000		2820.9		STOP AT THIRD DEPTH
	1252:30									CONTINUE R.I.H.
	1255:30	4000		2980.5		4000		2936.5		STOP AT FOURTH DEPTH
	1259:30									CONTINUE R.I.H.
	1302:50	5000		3099.1		5000		3056.4		STOP AT FIFTH DEPTH.
	1306:50									CONTINUE R.I.H.
	1309:40	6000		3211.2		6000		3164.5		STOP AT SIXTH DEPTH.
	1313:40									CONTINUE R.I.H.
	1316:40	7000		3320.0		7000		3277.6		STOP AT SEVENTH DEPTH
	1320:40									CONTINUE R.I.H.
	1322:20	7500		3372.7		7500		3333.9		STOP AT EIGHTH DEPTH.
	1326:20									CONTINUE R.I.H.
	1328:00	8000		3431.4		8000		3390.8		STOP AT NINTH DEPTH.
	1332:00									CONTINUE R.I.H.
	1334:00	8500		3483.2		8500		3445.1		STOP AT TENTH DEPTH
	1338:00									CONTINUE R.I.H.
	1340:45	9000		3533.2		9000		3499.1		STOP AT ELEVENTH DEPTH
	1344:45									CONTINUE R.I.H.
	1347:00	9262		3557.9		9262		3525.4		STOP AT TWELVTH DEPTH
	1357:00									COMMENCE P.O.O.H.
	1448:30	O		2495.3		O		2462.6		HANGING IN LUBE.
	1459:00									DEPRESSURISE LUBE.
					max SIBH Temp = 280°F			(138°C)	✓	

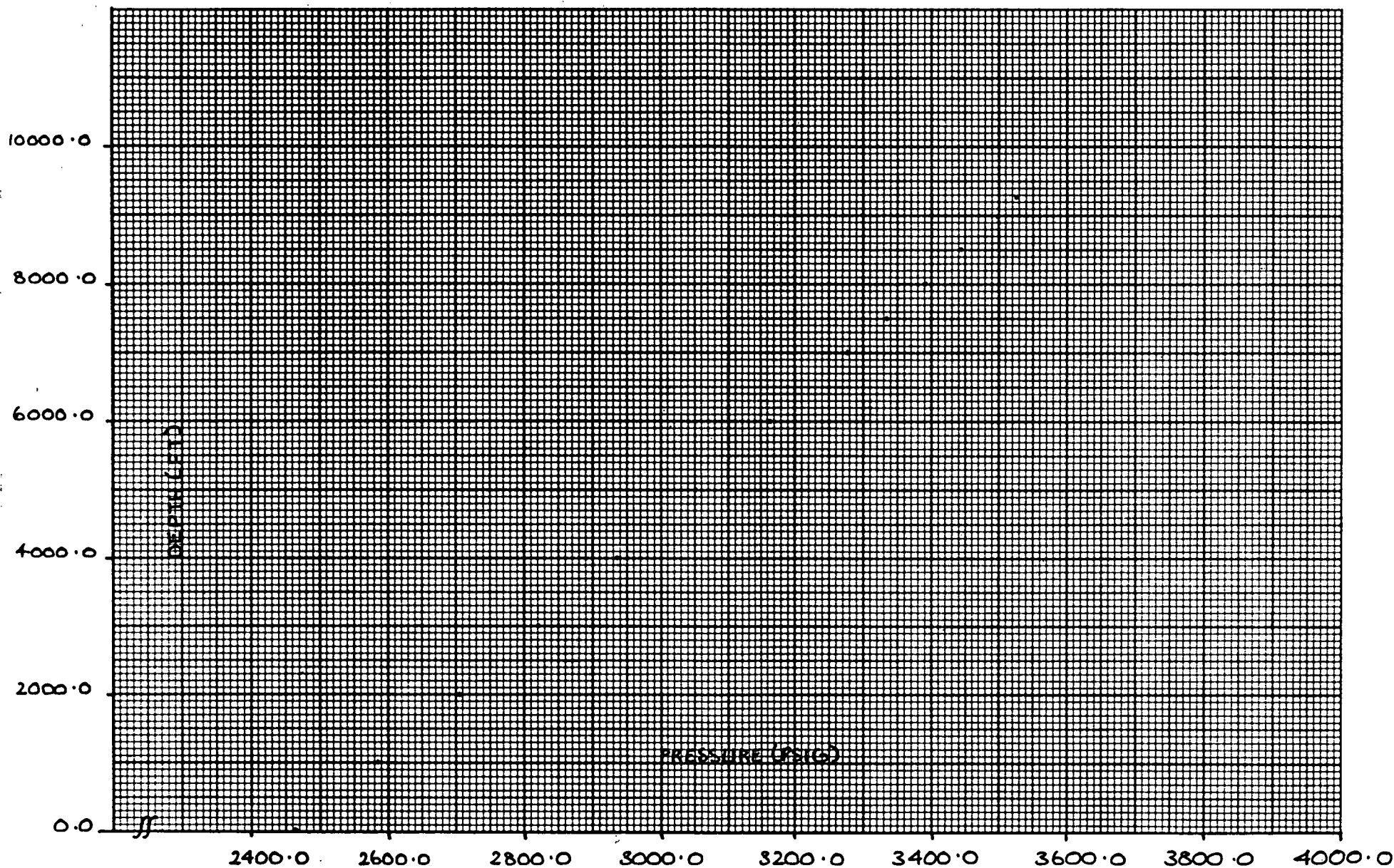
00149

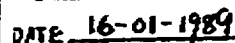
BIMBAYA # 2 - STATIC PRESSURE GRADIENT - 28 / 1 / 1989
ELEMENT # 53563/5000 (TOP)



BIMBAYA # 2 - STATIC PRESSURE GRADIENT - 28/1/1989

ELEMENT # 53564/5000 (BOT)





COMPANY SANTOS LTM.

WELL NO. BIMBAYA #2

Subsurface Pressure Gauge Calibration Report

PAGE _____ OF _____

FIELD _____ INTERVAL TESTED _____

COUNTRY _____ TECHNICIAN _____ TIME _____

CALIBRATION NO. _____ DATE OF LAST CALIBRATION: _____

CALIBRATION NO.

CALIBRATION STEPS

PRESSURE DWT	D (1)	Y (4)	AT (5)	Y'	Y P	$P_s = KY + s$	NON LINEARITY CORRECTION $s = P - P_s$	C'
500	0.1939					496.82		
1000	0.3854					1000.01		
1500	0.5763					1501.62		
2000	0.7670					2002.71		
2500	0.9575					2503.27		
3000	1.1465					2999.89		
3500	1.3360					3497.82		
4000	1.5269					3999.43		
4500	1.7170					4498.94		
5000	1.9079					5000.55		
E				14,042	36,763.66	$\Sigma + = 7.1$ $\Sigma - = 7.06$		

OWNER OF GAUGE: OILSERU TYPE OF ELEMENT: PAG-3
RECORDING SECTION NO. 7359

OWNER OF GAUGE: OLSEN 1125
PRESSURE ELEMENT NO. 53561 RANGE: 0 - 5000 RECORDING SECTION NO. 73254
SERIAL NO. 18731

PRESSURE ELEMENT NO. 5358T RANGE: 0-50 SERIAL NO. 18731
DEADWEIGHT TESTER TYPE AND RANGE: CHANDLER 55-1 TEMPERATURE: 75°F

DEADWEIGHT TESTER TYPE AND RANGE: CHAMBER 251 GENERAL NO. _____
 BASELINE DRAWN AT ATMOSPHERIC PRESSURE READING DO = 0 TEMPERATURE = 75°F
 PRESSURE = _____ TEMPERATURE = _____

BASELINE DRAWN AT ATMOSPHERIC PRESSURE READING 00 TEMPERATURE = 270°F
REFERENCE LINE READING D_R = 00 REFERENCE PRESSURE P_R = 00 TEMPERATURE = 270°F

REFERENCE LINE READING D_R = _____ REFERENCE PRESSURE P_R = _____
 MAXIMUM TEMPERATURE EXPECTED = 570°F CALIBRATION TEMPERATURE = 370°F
 _____ CRANK _____ CRANK

MAXIMUM TEMPERATURE EXPECTED = 57°F CRANK

DRAWING ALL CALIBRATION STEPS D WITH A CLOCK ☒ WITH A CRANK.

_____ BETWEEN DUTY AND THE FELLOWS

DRAWING ALL CALIBRATION STEPS D WITH A CLOCK & WITH A SENSITIVE PRESSURE GAUGE
EQUIVALENT PRESSURE p OF LEVEL DIFFERENCE BETWEEN DWT AND THE BELLows

EQUIVALENT PRESSURE p OF LEVEL DIFFERENCE BETWEEN DWT AND THE BELLOWS

LEVEL DIFFERENCE $H =$ _____

☒ PLUS INCREASE OF DWT ABOVE THE BELLOWS

LEAF DIFFERENCE $H =$ $P =$ ☐ PLUS IN CASE OF DWT ABOVE THE BELLOWS
 CORRECT QUANTITY OF OIL $D =$ ☐ MINUS IN CASE OF DWT BENEATH THE BELLOWS

SPECIFIC GRAVITY OF OIL $D =$ _____ $P =$ _____ $\square$ MINUS IN CASE OF OWT BENEATH THE BELLOW

14) $C =$ READING ON THE CHART SCANNER FOR THE PRESSURE p (5) Δ $\gamma =$ FOR CHECKING
(6) σ $=$ NUMBER OF CALIBRATION STEPS

(1) C = READING ON THE CHART SCANNER FOR THE PRESSURE
(2) C₀ = READING FOR BASE LINE

(2) $\bar{C}_0$ = READING FOR BASE LINE (7) Σ = SUM
(3) $\bar{C}_r$ = READING FOR REFERENCE LINE (8) σ = STANDARD DEVIATION

(3) ☐ - READING FOR REFERENCE LINE (8) ☐ - STANDARD DEVIATION

(4) y - DEFLECTION $\left\{ \begin{array}{l} 00 - \text{DO IF NO REFERENCE LINE} \\ 00 - \text{DR IF REFERENCE LINE DRAWN} \end{array} \right.$

LEAST SQUARES CALCULATIONS

$$A = \frac{\Sigma P}{n} = \underline{\hspace{2cm}} = \underline{250}$$

$$B = \frac{\sum Y}{n} = \underline{\hspace{2cm}} = \underline{1.05}$$

$$C = \frac{I(Y)}{I(Y)} = \frac{\quad}{\quad} = 1.335$$

$$D = \frac{\sum (Y_P)}{\sum Y} = \frac{3406}{100} = 34.06$$

$$K = \frac{D - A}{C - B} = \underline{\hspace{2cm}} = 2627$$

$a = A - BK = \underline{\hspace{2cm}} = -12$

8 - D - CK - _____ - 12-5

$$Q = \frac{I}{C} = \frac{1}{2.1} = 0.476$$

CALIBRATION RESULTS

CALIBRATION RESULTS

K = 2697.61

$$a + p = \underline{-12.67}$$

$$D_1 - D_0 = Y_R = \frac{P_R}{P_0}$$

REMARKS

SANTOS LTD
39 GRENFELL ST
ADELAIDE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 01 FIELD BIMBAYA		WELL 02
EFF DEPTH		WELL STAT		TOOL HUNG 9173'
CASING 7	-	CASING PRESS		ON BOTTOM 1145 23/1
LINER	-	TUBING PRESS		OFF BOTTOM 0625 28/1
DATE 890128		ELEMENT RANGE 0 - 5423		ZERO POINT
ELEVATION		ZONE		SHUT-IN 0315 25/1
MAX TEMP		PICK-UP		ON-PROD
PERF 9212'-9313'		CAL SER NO. 53563		MPP 9263'
TUBING 2-7/8"				
UNITS ENGLISH		PURPOSE	MODIFIED ISOCHRONAL	

SURVEY DATA

CO. SANTOS				RUN 01 FIELD BIMBAYA				WELL 02			
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
3:15	3069.8	0.0	0.0	5:05	3320.3	250.5	1.8				
3:16	3109.7	39.9	.0	5:10	3321.5	251.7	1.9				
3:17	3144.6	74.8	.0	5:15	3323.8	253.9	2.0				
3:18	3158.2	88.4	.1	5:30	3331.2	261.4	2.2				
3:19	3172.1	102.2	.1	5:46	3337.4	267.5	2.5				
3:20	3182.2	112.4	.1	6:00	3342.5	272.7	2.7				
3:21	3191.0	121.2	.1	6:15	3346.6	276.8	3.0				
3:22	3196.0	126.1	.1	6:30	3352.2	282.4	3.2				
3:23	3200.9	131.0	.1	6:45	3356.3	286.5	3.5				
3:24	3206.1	136.2	.2	7:00	3358.2	288.3	3.7				
3:25	3209.9	140.1	.2	7:16	3363.0	293.2	4.0				
3:30	3230.6	160.7	.3	7:30	3365.9	296.0	4.2				
3:35	3241.1	171.2	.3	7:45	3368.7	298.9	4.5				
3:40	3248.7	178.9	.4	8:00	3371.3	301.5	4.7				
3:45	3260.5	190.7	.5	8:16	3374.9	305.1	5.0				
3:50	3265.6	195.8	.6	9:15	3385.7	315.9	6.0				
3:55	3270.9	201.1	.7	10:15	3395.0	325.2	7.0				
4:00	3277.8	207.9	.8	11:15	3402.3	332.4	8.0				
4:05	3283.3	213.5	.8	12:15	3409.8	340.0	9.0				
4:10	3286.6	216.8	.9	13:16	3416.6	346.7	10.0				
4:15	3289.4	219.5	1.0	19:15	3443.5	373.7	16.0				
4:20	3295.4	225.6	1.1	1:16	3461.9	392.0	22.0				
4:25	3297.6	227.8	1.2	7:15	3476.0	406.1	28.0				
4:30	3300.4	230.6	1.2	13:15	3487.6	417.7	34.0				
4:35	3304.7	234.8	1.3	19:15	3496.6	426.8	40.0				
4:40	3307.7	237.8	1.4	1:16	3503.5	433.7	46.0				
4:45	3310.4	240.6	1.5	7:16	3509.9	440.0	52.0				
4:50	3312.6	242.8	1.6	13:15	3514.7	444.9	58.0				
4:55	3315.1	245.3	1.7	19:15	3519.1	449.3	64.0				
5:01	3318.6	248.8	1.8	1:15	3524.5	454.6	70.0				

SURVEY DATA

CO. SANTOS				RUN 01 FIELD BIMBAYA				WELL 02			
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
6:25	3528.7	458.9	75.2	-	2:44	3484.1	414.3	-	2:44	3484.1	-30.0
- 10:40	3496.6	426.8	-37.9	-	0:47	3382.4	312.6	-	0:47	3382.4	-28.0
- 8:44	3450.9	381.1	-36.0	-	22:47	3473.9	404.1	-	22:47	3473.9	-26.0
- 6:44	3490.2	420.3	-34.0	-	20:50	3105.9	36.1	-	20:50	3105.9	-24.1
- 4:46	3424.9	355.0	-32.0	-	3:15	3069.3	-1.5	-	3:15	3069.3	0.0

LUB IN DWT = 2442 PSI / OUT = 2466 PSI

LUB IN AMERADA = 2438 PSI / OUT = 2466 PSI

SANTOS LTD
39 GRENELL ST
ADELAIDE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 02 FIELD BIMBAYA	WELL 02
EFF DEPTH		WELL STAT	TOOL HUNG 9179'
CASING 7	-	CASING PRESS	ON BOTTOM 1145 23/1
LINER	-	TUBING PRESS	OFF BOTTOM 0625 28/1
DATE 890128		ELEMENT RANGE 0 - 5241	ZERO POINT
ELEVATION		ZONE	SHUT-IN 0315 25/1
MAX TEMP		PICK-UP	ON-PROD
PERF 9212'-9313'		CAL SER NO. 53564	MPP 9263'
TUBING 2-7/8"			
UNITS ENGLISH		PURPOSE	MODIFIED ISOCHRONAL

SURVEY DATA

CO. SANTOS				RUN 02 FIELD BIMBAYA				WELL 02			
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
3:15	3024.9	0.0	0.0	5:05	3265.1	240.2	1.8				
3:16	3074.6	49.7	.0	5:10	3268.7	243.8	1.9				
3:17	3101.2	76.4	.0	5:15	3270.8	245.9	2.0				
3:18	3115.2	90.4	.1	5:31	3278.0	253.1	2.3				
3:19	3123.2	98.3	.1	5:45	3283.1	258.2	2.5				
3:20	3127.6	102.7	.1	6:00	3287.9	263.0	2.7				
3:21	3136.4	111.5	.1	6:15	3293.0	268.1	3.0				
3:22	3142.4	117.5	.1	6:31	3296.8	271.9	3.3				
3:23	3146.6	121.7	.1	6:45	3302.7	277.8	3.5				
3:24	3153.2	128.3	.2	7:01	3305.2	280.3	3.8				
3:25	3158.5	133.6	.2	7:16	3310.0	285.1	4.0				
3:30	3170.1	145.2	.3	7:30	3312.0	287.1	4.2				
3:35	3184.5	159.6	.3	7:45	3316.3	291.4	4.5				
3:40	3192.4	167.5	.4	8:00	3319.5	294.6	4.7				
3:46	3202.9	178.0	.5	8:15	3322.0	297.1	5.0				
3:50	3209.4	184.5	.6	9:15	3333.2	308.3	6.0				
3:55	3216.8	191.9	.7	10:15	3341.5	316.6	7.0				
4:00	3222.2	197.4	.8	11:15	3350.3	325.4	8.0				
4:05	3226.4	201.5	.8	12:15	3358.3	333.4	9.0				
4:10	3231.9	207.0	.9	13:15	3363.4	338.5	10.0				
4:15	3236.3	211.4	1.0	14:15	3392.3	367.4	16.0				
4:20	3240.2	215.3	1.1	1:16	3412.0	387.1	22.0				
4:25	3242.3	217.4	1.2	7:15	3425.0	400.1	28.0				
4:30	3246.2	221.3	1.2	13:15	3436.8	411.9	34.0				
4:35	3249.3	224.4	1.3	19:15	3446.2	421.3	40.0				
4:40	3252.9	228.1	1.4	1:15	3452.6	427.7	46.0				
4:45	3256.9	232.0	1.5	7:15	3460.2	435.3	52.0				
4:50	3258.4	233.5	1.6	13:15	3465.6	440.7	58.0				
4:55	3262.0	237.1	1.7	19:15	3472.1	447.2	64.0				
5:00	3264.3	239.4	1.7	1:16	3476.4	451.5	70.0				

SURVEY DATA

05. SANTOS

RUN 02 FIELD BIMBAYA

WELL 02

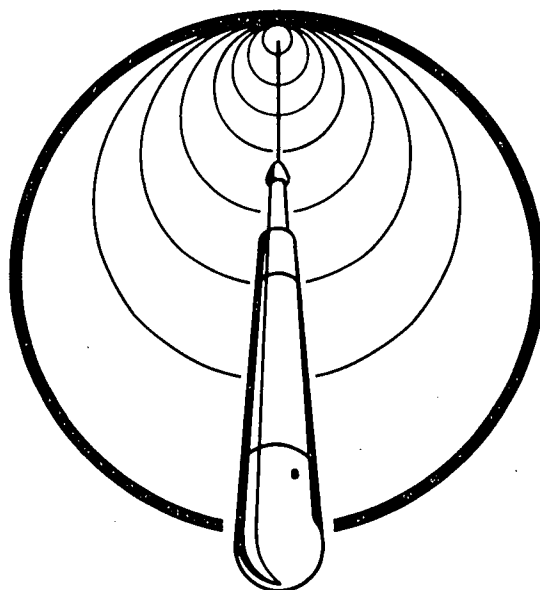
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
8:25	3478.0	453.1	75.2	9:42	3451.2	426.4	-37.0
- 19:33	3463.9	439.1	-46.8	- 7:15	3343.4	318.5	-34.5
- 17:05	3414.9	390.0	-44.3	- 4:49	3440.1	415.2	-32.1
- 14:38	3457.5	432.6	-41.9	- 2:26	3063.0	38.1	-29.7
- 12:11	3387.6	362.7	-39.4	3:15	3024.9	0.0	0.0

LUB IN DWT = 2442 PSI / OUT = 2466 PSI

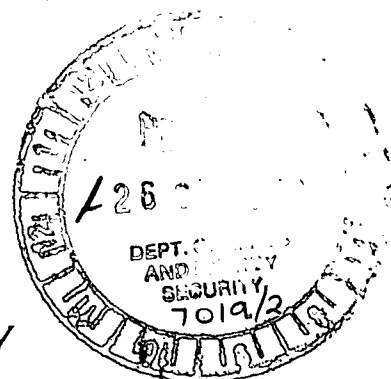
LUB IN AMERADA = 2423 PSI / OUT = 2444 PSI

EXPERTEST

ELECTRIC WIRELINE
SERVICE



Electronic BHP/BHT Survey



Customer: SANTOS LTD
Location: BIMBAYA #2
Formation: TIRRAWARRA
Date: 15-02-90

Bimbaya #2Liquid Evaluation Test & Buildup Survey13th - 19th February 1990Liquid Evaluation Test

13th - 15th February 1990

13/2/90 : Started LET @ 1700 hrs on 40% choke.
Flowed well at this rate for 50 hours.

F.T.H.P. (final)	=	8108 kPa
Sep Pressure (final)	=	5584 kPa
Sep Temp (final)	=	75°C
Gas rate (ave)	=	126.090 E3 m ³ /d
Condensate rate (ave)	=	19.707 m ³ /d
Water rate (ave)	=	2.751 m ³ /d
WGR (ave)	=	21.8 m ³ /E6m ³

15/2/90 : Shut well in @ 1900 hours

Buildup Survey

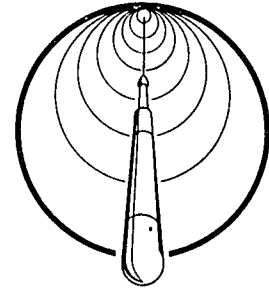
15th - 19th February 1990

15/2/90 : Shut well in @ 1900 hours for 88 hours buildup.
Pressure @ 9180' KB after 88 hours buildup = 15269 kPa
Shut in bottomhole temperature = 133°C

Static Reservoir Pressure

19/2/90 : Ran static gradient survey as pulling out of hole.

CUSTOMER: SANTOS LTD
LOCATION: BIMBAYA #2
FORMATION: TIRRAWARRA
DATE: 15-02-90

[illegible]

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 15-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: SURFACE

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	00:15:00	0.000	1194.24	8.55	92.00	1184	HANG IN LUB
15-02-90	00:20:00	0.083	1191.56	-2.68	92.00		GUAGE STABLIZING
15-02-90	00:25:00	0.167	1199.02	7.46	92.00		5 MIN SAMPLE RATE
15-02-90	00:30:00	0.250	1200.44	1.42	92.00		DELTA P FROM
15-02-90	00:35:00	0.333	1192.61	-7.82	92.00		PREVIOUS READING
15-02-90	00:40:00	0.417	1194.92	2.31	92.00		DELTA T FROM
15-02-90	00:45:00	0.500	1197.82	2.90	92.00		ORIGINAL START UP
15-02-90	00:50:00	0.583	1195.51	-2.32	92.00		CSG 83PSIG WHT 72'
15-02-90	00:55:00	0.667	1198.20	2.69	92.00		
15-02-90	01:00:00	0.750	1197.62	-0.57	92.00	1184	CSG 83PSIG WHT 72'
15-02-90	01:05:00	0.833	1185.69	-11.93	92.00		
15-02-90	01:10:00	0.917	1195.58	9.89	92.00		
15-02-90	01:15:00	1.000	1199.01	3.43	92.00		
15-02-90	01:20:00	1.083	1185.84	-13.17	92.00		
15-02-90	01:25:00	1.167	1198.89	13.04	92.00		
15-02-90	01:30:00	1.250	1198.25	-0.63	92.00		
15-02-90	01:35:00	1.333	1196.18	-2.08	92.00		
15-02-90	01:40:00	1.417	1198.17	1.99	92.00		
15-02-90	01:45:00	1.500	1200.18	2.01	92.00		
15-02-90	01:50:00	1.583	1194.45	-5.73	92.00		
15-02-90	01:55:00	1.667	1198.70	4.25	92.00		
15-02-90	02:00:00	1.750	1199.32	0.61	92.00	1182	CSG 83PSIG WHT 72'
15-02-90	02:05:00	1.833	1200.09	0.78	92.00		
15-02-90	02:10:00	1.917	1200.06	-0.04	92.00		
15-02-90	02:15:00	2.000	1199.41	-0.64	92.00		
15-02-90	02:20:00	2.083	1199.94	0.53	92.00		
15-02-90	02:25:00	2.167	1199.87	-0.07	92.00		
15-02-90	02:30:00	2.250	1199.68	-0.19	92.00		
15-02-90	02:35:00	2.333	1189.47	-10.21	92.00		
15-02-90	02:40:00	2.417	1198.35	8.88	92.00		
15-02-90	02:45:00	2.500	1199.89	1.54	92.00		
15-02-90	02:50:00	2.583	1199.11	-0.79	92.00		
15-02-90	02:55:00	2.667	1199.10	-0.01	92.00		
15-02-90	03:00:00	2.750	1199.62	0.53	92.00	1182	CSG 83PSIG WHT 72'
15-02-90	03:05:00	2.833	1190.74	-8.89	92.00		
15-02-90	03:10:00	2.917	1197.69	6.95	92.00		
15-02-90	03:15:00	3.000	1198.27	0.58	92.00		
15-02-90	03:20:00	3.083	1199.00	0.73	92.00		
15-02-90	03:25:00	3.167	1197.61	-1.39	92.00		
15-02-90	03:30:00	3.250	1198.22	0.60	92.00		
15-02-90	03:35:00	3.333	1189.24	-8.97	92.00		
15-02-90	03:40:00	3.417	1199.61	10.37	92.00		
15-02-90	03:45:00	3.500	1198.11	-1.50	92.00		
15-02-90	03:50:00	3.583	1198.95	0.84	92.00		
15-02-90	03:55:00	3.667	1196.83	-2.13	92.00		
15-02-90	04:00:00	3.750	1198.59	1.76	92.00	1184	CSG 83PSIG WHT 72'
15-02-90	04:05:00	3.833	1196.21	-2.38	92.00		
15-02-90	04:10:00	3.917	1183.78	-12.42	92.00		
15-02-90	04:15:00	4.000	1197.58	13.80	92.00		
15-02-90	04:20:00	4.083	1198.25	0.67	92.00		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 15-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: SURFACE

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	04:25:00	4.167	1190.64	-7.61	92.00		
15-02-90	04:30:00	4.250	1199.01	8.37	92.00		
15-02-90	04:35:00	4.333	1199.88	0.87	92.00		
15-02-90	04:40:00	4.417	1199.61	-0.27	92.00		
15-02-90	04:45:00	4.500	1199.63	0.02	92.00		
15-02-90	04:50:00	4.583	1198.74	-0.89	92.00		
15-02-90	04:55:00	4.667	1198.93	0.18	92.00		
15-02-90	05:00:00	4.750	1196.75	-2.17	92.00	1182	CSG 83PSIG WHT 72'
15-02-90	05:05:00	4.833	1198.93	2.17	92.00		
15-02-90	05:10:00	4.917	1199.61	0.68	92.00		
15-02-90	05:15:00	5.000	1198.25	-1.35	92.00		
15-02-90	05:20:00	5.083	1198.93	0.67	92.00		
15-02-90	05:25:00	5.167	1198.20	-0.73	92.00		
15-02-90	05:30:00	5.250	1198.58	0.38	92.00		
15-02-90	05:35:00	5.333	1194.48	-4.10	92.00		
15-02-90	05:40:00	5.417	1198.48	4.00	92.00		
15-02-90	05:45:00	5.500	1199.26	0.78	92.00		
15-02-90	05:50:00	5.583	1197.04	-2.22	92.00		
15-02-90	05:55:00	5.667	1188.82	-8.22	92.00		
15-02-90	06:00:00	5.750	1199.12	10.30	92.00	1181	CSG 83PSIG WHT 72'
15-02-90	06:05:00	5.833	1198.54	-0.57	92.00		
15-02-90	06:10:00	5.917	1198.41	-0.13	92.00		
15-02-90	06:15:00	6.000	1192.59	-5.82	92.00		
15-02-90	06:20:00	6.083	1198.54	5.96	92.00		
15-02-90	06:25:00	6.167	1199.25	0.71	92.00		
15-02-90	06:30:00	6.250	1199.17	-0.08	92.00		
15-02-90	06:35:00	6.333	1199.29	0.11	92.00		
15-02-90	06:40:00	6.417	1195.58	-3.71	92.00		
15-02-90	06:45:00	6.500	1199.29	3.71	92.00		
15-02-90	06:50:00	6.583	1199.28	-0.01	92.00		
15-02-90	06:55:00	6.667	1199.16	-0.12	92.00		
15-02-90	07:00:00	6.750	1198.55	-0.60	92.00	1182	CSG 83PSIG WHT 72'
15-02-90	07:05:00	6.833	1199.04	0.49	92.00		
15-02-90	07:10:00	6.917	1196.43	-2.61	92.00		
15-02-90	07:15:00	7.000	1199.18	2.76	92.00		
15-02-90	07:20:00	7.083	1199.07	-0.11	92.00		
15-02-90	07:25:00	7.167	1190.85	-8.22	92.00		
15-02-90	07:30:00	7.250	1199.05	8.20	92.00		
15-02-90	07:35:00	7.333	1198.86	-0.19	92.00		
15-02-90	07:40:00	7.417	1199.03	0.17	92.00		
15-02-90	07:45:00	7.500	1198.85	-0.18	92.00		
15-02-90	07:50:00	7.583	1198.83	-0.02	92.00		
15-02-90	07:55:00	7.667	1198.74	-0.09	92.00		
15-02-90	08:00:00	7.750	1194.50	-4.24	92.00	1182	CSG 83PSIG WHT 72'
15-02-90	08:01:00	7.767	1191.45	-3.05	182.00		
15-02-90	08:02:00	7.783	1191.44	-0.01	182.00		
15-02-90	08:16:00	0.017	1191.28	-0.16	182.54		
15-02-90	08:17:00	0.033	1191.31	0.03	182.54		
15-02-90	08:18:00	0.050	1191.33	0.02	182.54		
15-02-90	08:19:00	0.067	1191.43	0.11	182.54		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION: TIRRAWAARA
 COMMENTS :

DATE: 15-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: SURFACE

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	08:20:00	0.083	1191.44	0.20	182.54		
15-02-90	08:22:00	0.117	1191.25	-0.19	184.37		
15-02-90	08:23:00	0.133	1191.24	-0.01	184.37		
15-02-90	08:24:00	0.150	1191.24	0.00	184.37		
15-02-90	08:25:00	0.167	1191.33	0.09	184.37		
15-02-90	08:26:00	0.183	1191.40	0.08	184.37		
15-02-90	08:27:00	0.200	1191.18	-0.22	184.37		
15-02-90	08:28:00	0.217	1191.08	-0.11	184.37		
15-02-90	08:29:00	0.233	1191.01	-0.07	184.37		
15-02-90	08:30:00	0.250	1190.89	-0.12	184.37		
15-02-90	08:33:00	0.300	1190.77	-0.12	182.90		
15-02-90	08:34:00	0.317	1190.63	-0.13	182.90		
15-02-90	08:35:00	0.333	1190.55	-0.09	182.90		
15-02-90	08:36:00	0.350	1190.46	-0.09	182.90		
15-02-90	08:37:00	0.367	1190.39	-0.07	182.90		
15-02-90	08:38:00	0.383	1190.41	0.02	182.90		
15-02-90	08:39:00	0.400	1190.38	-0.03	182.90		
15-02-90	08:40:00	0.417	1190.37	-0.01	182.90		
15-02-90	08:41:00	0.433	1190.35	-0.02	182.90		
15-02-90	08:42:00	0.450	1190.35	0.00	182.90		
15-02-90	08:43:00	0.467	1190.27	-0.09	182.90		END OF LUB STOP
15-02-90	08:44:00	0.483	1190.19	-0.08	182.90		
15-02-90	08:45:00	0.500	1190.23	0.04	182.90	1182	R.I.H.
15-02-90	13:31:00	0.017	1826.31	636.08	274.26	1178	START OF 4HR FLOW
15-02-90	13:32:00	0.033	1826.56	0.25	274.26		CSG 83PSIG WHT 80'
15-02-90	13:33:00	0.050	1827.97	1.41	274.26		
15-02-90	13:34:00	0.067	1824.47	-3.50	274.26		
15-02-90	13:35:00	0.083	1828.67	4.20	274.26		
15-02-90	13:36:00	0.100	1827.97	-0.71	274.26		
15-02-90	13:37:00	0.117	1825.15	-2.82	274.26		HANG @ 9180'KB
15-02-90	13:38:00	0.133	1826.61	1.46	274.26		
15-02-90	13:39:00	0.150	1827.21	0.61	274.26		
15-02-90	13:40:00	0.167	1828.67	1.46	274.26		1 MIN SAMPLE RATE
15-02-90	13:41:00	0.183	1821.65	-7.02	274.26		
15-02-90	13:42:00	0.200	1816.58	-5.07	274.26		
15-02-90	13:43:00	0.217	1827.24	10.67	274.26		
15-02-90	13:44:00	0.233	1825.18	-2.07	274.26		
15-02-90	13:45:00	0.250	1825.19	0.01	274.26		
15-02-90	13:46:00	0.267	1823.21	-1.98	274.26		
15-02-90	13:47:00	0.283	1827.28	4.08	274.26		
15-02-90	13:48:00	0.300	1828.63	1.34	274.26		
15-02-90	13:49:00	0.317	1827.20	-1.42	274.26		
15-02-90	13:50:00	0.333	1826.02	-1.19	274.26		
15-02-90	13:51:00	0.350	1819.55	-6.46	274.26		
15-02-90	13:52:00	0.367	1827.91	8.36	274.26		
15-02-90	13:53:00	0.383	1825.80	-2.11	274.26		
15-02-90	13:54:00	0.400	1825.75	-0.06	274.26		
15-02-90	13:55:00	0.417	1823.06	-2.69	274.26		
15-02-90	13:56:00	0.433	1827.20	4.14	274.26		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE : 15-02-90
 TEST : FLOW BUILD UP
 PERFORATIONS : 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	13:57:00	0.450	1827.18	-0.03	274.26	1176	CSG 83PSIG WHT 80'
15-02-90	13:58:00	0.467	1823.01	-4.16	274.26		
15-02-90	13:59:00	0.483	1825.81	2.80	274.26		
15-02-90	14:00:00	0.500	1827.83	2.02	274.26		
15-02-90	14:01:00	0.517	1823.70	-4.13	274.26		
15-02-90	14:02:00	0.533	1824.35	0.66	274.26		
15-02-90	14:03:00	0.550	1820.91	-3.45	274.26		
15-02-90	14:04:00	0.567	1825.06	4.15	274.26		
15-02-90	14:05:00	0.583	1825.12	0.06	274.26		
15-02-90	14:06:00	0.600	1827.09	1.97	274.26		
15-02-90	14:07:00	0.617	1828.59	1.50	274.26		
15-02-90	14:08:00	0.633	1813.43	-15.16	274.26		
15-02-90	14:09:00	0.650	1825.15	11.72	274.26		
15-02-90	14:10:00	0.667	1827.19	2.04	274.26		
15-02-90	14:11:00	0.683	1828.58	1.39	274.26		
15-02-90	14:12:00	0.700	1822.09	-6.48	274.26		
15-02-90	14:13:00	0.717	1826.46	4.37	274.26		
15-02-90	14:14:00	0.733	1823.15	-3.31	274.26		
15-02-90	14:15:00	0.750	1827.28	4.13	274.26		
15-02-90	14:16:00	0.767	1826.49	-0.79	274.26		
15-02-90	14:17:00	0.783	1822.37	-4.12	274.26		
15-02-90	14:18:00	0.800	1827.20	4.83	274.26		
15-02-90	14:19:00	0.817	1822.34	-4.87	274.26		
15-02-90	14:20:00	0.833	1825.79	3.46	274.26		
15-02-90	14:21:00	0.850	1804.28	-21.51	274.26		
15-02-90	14:22:00	0.867	1828.49	24.21	274.26		
15-02-90	14:23:00	0.883	1827.87	-0.62	274.26		
15-02-90	14:24:00	0.900	1822.19	-5.68	274.26		
15-02-90	14:25:00	0.917	1821.45	-0.74	274.26		
15-02-90	14:26:00	0.933	1817.58	-3.86	274.26		
15-02-90	14:27:00	0.950	1826.41	8.83	274.26		
15-02-90	14:28:00	0.967	1808.29	-18.12	274.26		
15-02-90	14:29:00	0.983	1816.56	8.27	274.26		
15-02-90	14:30:00	1.000	1799.93	-16.63	274.26		
15-02-90	14:40:00	1.167	1814.23	14.30	272.36	1178	CHANGE TO 5 MIN SAMPLE RATE
15-02-90	14:45:00	1.250	1826.11	11.88	272.36		
15-02-90	14:50:00	1.333	1827.42	1.31	272.36		
15-02-90	14:55:00	1.417	1824.80	-2.63	272.36		
15-02-90	15:00:00	1.500	1810.14	-14.65	272.36		CSG 83PSIG WHT 75'
15-02-90	15:05:00	1.583	1823.38	13.24	272.36		
15-02-90	15:10:00	1.667	1817.13	-6.26	272.36		
15-02-90	15:15:00	1.750	1798.75	-18.38	272.36		
15-02-90	15:20:00	1.833	1806.51	7.77	272.36		
15-02-90	15:25:00	1.917	1820.58	14.07	272.36		
15-02-90	15:30:00	2.000	1809.24	-11.34	272.36		
15-02-90	15:35:00	2.083	1824.78	15.53	272.36		
15-02-90	15:40:00	2.167	1824.05	-0.72	272.36		
15-02-90	15:45:00	2.250	1825.50	1.45	272.36		
15-02-90	15:50:00	2.333	1827.55	2.05	272.36		
15-02-90	15:55:00	2.417	1827.57	0.02	272.36		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 15-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	16:00:00	2.500	1812.21	-15.36	272.36	1178	CSG 83PSIG WHT 77'
15-02-90	16:05:00	2.583	1824.76	12.55	272.36		
15-02-90	16:10:00	2.667	1824.12	-0.64	272.36		
15-02-90	16:15:00	2.750	1828.29	4.17	272.36		
15-02-90	16:20:00	2.833	1827.60	-0.70	272.36		
15-02-90	16:25:00	2.917	1826.92	-0.68	272.36		
15-02-90	16:35:00	3.083	1825.92	-.00	273.29		
15-02-90	16:40:00	3.167	1827.10	1.18	273.29		
15-02-90	16:45:00	3.250	1828.47	1.37	273.29		
15-02-90	16:50:00	3.333	1828.50	0.03	273.29		
15-02-90	16:55:00	3.417	1828.51	0.01	273.29		
15-02-90	17:00:00	3.500	1827.78	-0.73	273.29	1177	CSG 83PSIG WHT 76'
15-02-90	17:05:00	3.583	1823.60	-4.18	273.29		
15-02-90	17:10:00	3.667	1823.57	-0.03	273.29		
15-02-90	17:15:00	3.750	1827.76	4.19	273.29		
15-02-90	17:20:00	3.833	1814.75	-13.01	273.29		
15-02-90	17:25:00	3.917	1827.07	12.33	273.29		
15-02-90	17:30:00	4.000	1827.79	0.71	273.29		
15-02-90	17:35:00	4.083	1828.45	0.67	273.29		
15-02-90	17:40:00	4.167	1817.22	-11.23	273.29		
15-02-90	17:45:00	4.250	1828.50	11.28	273.29		
15-02-90	17:50:00	4.333	1823.63	-4.87	273.29		
15-02-90	17:55:00	4.417	1813.89	-9.75	273.29		
15-02-90	18:00:00	4.500	1826.76	12.88	273.29	1178	CSG 83PSIG WHT 77'
15-02-90	18:05:00	4.583	1825.03	-1.73	273.29		
15-02-90	18:10:00	4.667	1826.56	1.53	273.29		
15-02-90	18:15:00	4.750	1827.87	1.31	273.29		
15-02-90	18:20:00	4.833	1825.04	-2.83	273.29		
15-02-90	18:25:00	4.917	1823.70	-1.34	273.29		END OF
15-02-90	18:30:00	5.000	1827.80	4.10	273.29	1177	FLOW PERIOD
15-02-90	19:00:00	0.000	1821.29	0.00	270.71	1176	START BUILD UP
15-02-90	19:00:20	0.006	1821.29	0.00	270.75		CSG 83PSIG WHT 76'
15-02-90	19:00:30	0.008	1819.11	-2.18	270.75		30 SEC SAMPLE RATE
15-02-90	19:00:40	0.011	1813.27	-8.02	270.75		DELTA T SET TO ZER
15-02-90	19:00:50	0.014	1824.70	3.41	270.75		
15-02-90	19:01:00	0.017	1824.99	3.70	270.75		
15-02-90	19:01:10	0.019	1822.09	0.80	270.75		
15-02-90	19:01:20	0.022	1825.67	4.38	270.75		
15-02-90	19:01:30	0.025	1822.31	1.02	270.75		
15-02-90	19:01:40	0.028	1819.65	-1.64	270.75		
15-02-90	19:01:50	0.031	1831.19	9.90	270.75		
15-02-90	19:02:00	0.033	1831.34	10.05	270.75		
15-02-90	19:02:10	0.036	1838.98	17.69	270.75		
15-02-90	19:02:20	0.039	1839.33	18.04	270.75		
15-02-90	19:02:30	0.042	1840.75	19.46	270.75		
15-02-90	19:02:40	0.044	1844.13	22.84	270.75		
15-02-90	19:02:50	0.047	1847.91	26.62	270.75		
15-02-90	19:03:00	0.050	1850.71	29.42	270.75		
15-02-90	19:03:10	0.053	1850.73	29.44	270.75		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION: TIRRAWAARA
 COMMENTS :

DATE: 15-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	19:03:20	0.056	1844.43	23.14	270.75		
15-02-90	19:03:30	0.058	1848.87	27.58	270.75		
15-02-90	19:03:40	0.061	1857.04	35.75	270.75		
15-02-90	19:03:50	0.064	1862.38	41.09	270.75		
15-02-90	19:04:00	0.067	1866.07	44.78	270.75		
15-02-90	19:04:10	0.069	1857.68	36.39	270.75		
15-02-90	19:04:20	0.072	1865.70	44.41	270.75		
15-02-90	19:04:30	0.075	1863.51	42.22	270.75		
15-02-90	19:04:40	0.078	1859.38	38.09	270.75		
15-02-90	19:04:50	0.081	1868.97	47.68	270.75		
15-02-90	19:05:00	0.083	1863.72	42.43	270.75		
15-02-90	19:05:30	0.092	1876.24	54.95	270.75		
15-02-90	19:06:00	0.100	1879.74	58.45	271.78		
15-02-90	19:06:30	0.108	1886.48	65.19	271.66		LOST SIGNAL
15-02-90	19:17:30	0.292	1919.10	97.81	271.66		
15-02-90	19:18:00	0.300	1918.54	97.25	271.66		
15-02-90	19:18:30	0.308	1913.04	91.75	271.66		
15-02-90	19:19:00	0.317	1907.67	86.38	271.66		REGAIN SIGNAL
15-02-90	19:19:30	0.325	-249.77	-071.06	271.66		
15-02-90	19:45:00	0.750	1946.03	124.74	271.66		
15-02-90	19:45:30	0.758	1947.85	126.56	271.66		
15-02-90	19:46:00	0.767	1947.56	126.27	271.66		
15-02-90	19:46:30	0.775	1943.59	122.30	271.66		
15-02-90	19:47:00	0.783	1945.28	123.99	271.66		
15-02-90	19:47:30	0.792	1944.22	122.93	271.66		
15-02-90	19:48:00	0.800	1940.73	119.44	271.66		
15-02-90	19:48:30	0.808	1952.51	131.22	271.66		
15-02-90	19:49:30	0.825	1956.70	135.41	271.66		
15-02-90	19:50:00	0.833	1954.98	133.69	271.66		1 MIN SAMPLE RATE
15-02-90	19:51:00	0.850	1957.70	136.41	271.66		
15-02-90	19:52:00	0.867	1954.90	133.61	271.66		
15-02-90	19:53:00	0.883	1956.87	135.58	271.66		
15-02-90	19:54:00	0.900	1953.35	132.06	271.66		
15-02-90	19:55:00	0.917	1957.40	136.11	271.66		
15-02-90	19:56:00	0.933	1958.05	136.76	271.66		
15-02-90	19:58:00	0.967	1957.88	136.59	271.66		
15-02-90	19:59:00	0.983	1961.94	140.65	271.66		
15-02-90	20:00:00	1.000	1959.73	138.44	271.66	1408	CSG 83PSIG WHT 54'
15-02-90	20:01:00	1.017	1963.08	141.79	271.66		
15-02-90	20:02:00	1.033	1960.12	138.83	271.66		
15-02-90	20:03:00	1.050	1961.04	139.75	271.66		
15-02-90	20:04:00	1.067	1961.96	140.67	271.66		
15-02-90	20:05:00	1.083	1959.35	138.06	271.66		
15-02-90	20:06:00	1.100	1963.05	141.76	271.66		
15-02-90	20:07:00	1.117	1959.24	137.95	271.66		
15-02-90	20:08:00	1.133	1961.10	139.81	271.66		
15-02-90	20:09:00	1.150	1963.26	141.97	271.66		
15-02-90	20:10:00	1.167	1963.05	141.76	271.66		
15-02-90	20:12:00	1.200	1965.88	144.59	271.66		
15-02-90	20:13:00	1.217	1961.70	140.41	271.66		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 15-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	20:14:00	1.233	1954.26	132.97	271.66		
15-02-90	20:15:00	1.250	1966.97	145.68	271.66		
15-02-90	20:16:00	1.267	1966.04	144.75	271.66		
15-02-90	20:17:00	1.283	1971.37	150.08	271.66		
15-02-90	20:18:00	1.300	1971.16	149.87	271.66		
15-02-90	20:19:00	1.317	1965.34	144.05	271.66		
15-02-90	20:20:00	1.333	1965.05	143.76	271.66		
15-02-90	20:21:00	1.350	1969.04	147.75	271.66		
15-02-90	20:22:00	1.367	1970.93	149.64	271.66		
15-02-90	20:23:00	1.383	1974.14	152.85	271.66		
15-02-90	20:24:00	1.400	1971.13	149.84	271.66		
15-02-90	20:25:00	1.417	1970.19	148.90	271.66		
15-02-90	20:26:00	1.433	1976.21	154.92	271.66		
15-02-90	20:27:00	1.450	1975.93	154.64	271.66		
15-02-90	20:28:00	1.467	1976.33	155.04	271.66		
15-02-90	20:29:00	1.483	1976.79	155.50	271.66		
15-02-90	20:30:00	1.500	1976.53	155.24	271.66		
15-02-90	20:31:00	1.517	1976.22	154.93	271.66		
15-02-90	20:32:00	1.533	1978.78	157.49	271.66		
15-02-90	20:33:00	1.550	1977.12	155.83	271.66		
15-02-90	20:34:00	1.567	1979.54	158.25	271.66		
15-02-90	20:35:00	1.583	1978.59	157.30	271.66		
15-02-90	20:36:00	1.600	1974.78	153.49	271.66		
15-02-90	20:37:00	1.617	1974.53	153.24	271.66		
15-02-90	20:38:00	1.633	1972.81	151.52	271.66		
15-02-90	20:39:00	1.650	1978.08	156.79	271.66		
15-02-90	20:40:00	1.667	1980.55	159.26	271.66		
15-02-90	20:41:00	1.683	1981.63	160.34	271.66		
15-02-90	20:42:00	1.700	1982.08	160.79	271.66		
15-02-90	20:43:00	1.717	1981.75	160.46	271.66		
15-02-90	20:44:00	1.733	1983.55	162.26	271.66		
15-02-90	20:45:00	1.750	1982.40	161.11	271.66		
15-02-90	20:46:00	1.767	1984.27	162.98	271.66		
15-02-90	20:47:00	1.783	1984.66	163.37	271.66		
15-02-90	20:48:00	1.800	1982.95	161.66	271.66		
15-02-90	20:49:00	1.817	1985.41	164.12	271.66		
15-02-90	20:50:00	1.833	1981.54	160.25	271.66		
15-02-90	20:51:00	1.850	1984.80	163.51	271.66		
15-02-90	20:52:00	1.867	1980.91	159.62	271.66		
15-02-90	20:53:00	1.883	1969.13	147.84	271.66		
15-02-90	20:54:00	1.900	1975.98	154.69	271.66		
15-02-90	20:55:00	1.917	1964.14	142.85	271.66		
15-02-90	20:56:00	1.933	1969.01	147.72	271.66		
15-02-90	20:57:00	1.950	1966.73	145.44	271.66		
15-02-90	20:58:00	1.967	1969.02	147.73	271.66		
15-02-90	20:59:00	1.983	1962.50	141.21	271.66		
15-02-90	21:00:00	2.000	1976.00	154.71	271.66	1427	CSG 83PSIG WHT 44'
15-02-90	21:01:00	2.017	1977.10	155.81	271.66		
15-02-90	21:05:00	2.083	1966.64	145.35	271.66		
15-02-90	21:10:00	2.167	1975.81	154.52	271.66		5 MIN SAMPLE RATE

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 15-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
15-02-90	21:15:00	2.250	1989.22	167.93	271.66		
15-02-90	21:20:00	2.333	1978.03	156.74	271.66		
15-02-90	21:25:00	2.417	1986.57	165.28	271.66		
15-02-90	21:30:00	2.500	1998.53	177.24	271.66		
15-02-90	21:35:00	2.583	1977.03	155.74	271.66		
15-02-90	21:40:00	2.667	2001.32	180.03	271.66		
15-02-90	21:45:00	2.750	2002.63	181.34	271.66		
15-02-90	21:50:00	2.833	2003.24	181.95	271.66		
15-02-90	21:55:00	2.917	1999.03	177.74	271.66		
15-02-90	22:00:00	3.000	2005.12	183.83	271.66	1449	CSG 83PSIG WHT 37'
15-02-90	22:05:00	3.083	1999.68	178.39	271.66		
15-02-90	22:10:00	3.167	2002.71	181.42	271.66		
15-02-90	22:15:00	3.250	2001.94	180.65	271.66		
15-02-90	22:20:00	3.333	2011.39	190.10	271.66		
15-02-90	22:25:00	3.417	2008.66	187.37	271.66		
15-02-90	22:30:00	3.500	2003.57	182.28	271.66		
15-02-90	22:35:00	3.583	2013.20	191.91	271.66		
15-02-90	22:40:00	3.667	2008.73	187.44	271.66		
15-02-90	22:45:00	3.750	2016.92	195.63	271.66		
15-02-90	22:50:00	3.833	2013.96	192.67	271.66		
15-02-90	22:55:00	3.917	2009.44	188.15	271.66		
15-02-90	23:00:00	4.000	2016.33	195.04	271.66	1471	CSG 83PSIG WHT 35
15-02-90	23:05:00	4.083	2017.81	196.52	271.66		
15-02-90	23:10:00	4.167	2020.30	199.01	271.66		
15-02-90	23:15:00	4.250	2024.05	202.76	271.66		
15-02-90	23:20:00	4.333	2022.31	201.02	271.66		
15-02-90	23:25:00	4.417	2021.90	200.61	271.66		
15-02-90	23:30:00	4.500	2026.37	205.08	271.66		
15-02-90	23:35:00	4.583	2027.37	206.08	271.66		
15-02-90	23:40:00	4.667	2025.52	204.23	271.66		
15-02-90	23:45:00	4.750	2029.28	207.99	271.66		
15-02-90	23:50:00	4.833	2030.23	208.94	271.66		
15-02-90	23:55:00	4.917	2031.83	210.54	271.66		
16-02-90	00:00:00	5.000	2032.78	211.49	271.66		
16-02-90	00:05:00	5.083	2033.70	212.41	271.66		
16-02-90	00:10:00	5.167	2034.59	213.30	271.66		
16-02-90	00:15:00	5.250	2035.48	214.19	271.66		
16-02-90	00:20:00	5.333	2036.37	215.08	271.66		
16-02-90	00:25:00	5.417	2037.23	215.94	271.66		
16-02-90	00:30:00	5.500	2038.10	216.81	271.66		
16-02-90	00:35:00	5.583	2038.96	217.67	271.66		
16-02-90	00:40:00	5.667	2038.40	217.11	271.66		
16-02-90	00:45:00	5.750	2039.90	218.61	271.66		
16-02-90	00:50:00	5.833	2041.47	220.18	271.66		
16-02-90	00:55:00	5.917	2040.09	218.80	271.66		
16-02-90	01:00:00	6.000	2040.95	219.66	271.66		10 MIN SAMPLE RATE
16-02-90	01:10:00	6.167	2044.62	223.33	271.66		
16-02-90	01:20:00	6.333	2045.51	224.22	271.66		
16-02-90	01:30:00	6.500	2046.99	225.70	271.66		
16-02-90	01:40:00	6.667	2048.51	227.22	271.66		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 16-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
16-02-90	01:50:00	6.833	2048.53	227.24	271.66		
16-02-90	02:00:00	7.000	2050.70	229.41	271.66		
16-02-90	02:10:00	7.167	2053.47	232.18	271.66		
16-02-90	02:20:00	7.333	2052.07	230.78	271.66		
16-02-90	02:30:00	7.500	2052.08	230.79	271.66		
16-02-90	02:40:00	7.667	2051.33	230.04	271.66		
16-02-90	02:50:00	7.833	2048.48	227.19	271.66		
16-02-90	03:00:00	8.000	2058.77	237.48	271.66	1493	CSG 83PSIG WHT 27'
16-02-90	03:10:00	8.167	2057.95	236.66	271.66		
16-02-90	03:20:00	8.333	2062.64	241.35	271.66		
16-02-90	03:30:00	8.500	2059.56	238.27	271.66		
16-02-90	03:40:00	8.667	2060.20	238.91	271.66		
16-02-90	03:50:00	8.833	2064.40	243.11	271.66		
16-02-90	04:00:00	9.000	2067.44	246.15	271.66		
16-02-90	04:10:00	9.167	2065.79	244.50	271.66		
16-02-90	04:20:00	9.333	2068.97	247.68	271.66		
16-02-90	04:30:00	9.500	2070.13	248.84	271.66		
16-02-90	04:40:00	9.667	2071.22	249.93	271.66		
16-02-90	04:50:00	9.833	2072.29	251.00	271.66		
16-02-90	05:00:00	10.000	2073.35	252.06	271.66		
16-02-90	05:10:00	10.167	2074.42	253.13	271.66		
16-02-90	05:20:00	10.333	2074.73	253.44	271.66		
16-02-90	05:30:00	10.500	2076.45	255.16	271.66		
16-02-90	05:40:00	10.667	2076.76	255.47	271.66		
16-02-90	05:50:00	10.833	2077.72	256.43	271.66		
16-02-90	06:00:00	11.000	2075.46	254.17	271.66		
16-02-90	06:10:00	11.167	2079.71	258.42	271.66		
16-02-90	06:20:00	11.333	2079.29	258.00	271.66		
16-02-90	06:30:00	11.500	2080.23	258.94	271.66		
16-02-90	06:40:00	11.667	2083.94	262.65	271.66		
16-02-90	06:50:00	11.833	2083.45	262.16	271.66		
16-02-90	07:00:00	12.000	2085.82	264.53	271.66	1514	CSG 83PSIG. WHT 23'
16-02-90	07:10:00	12.167	2085.27	263.98	271.66		
16-02-90	07:20:00	12.333	2087.56	266.27	271.66		
16-02-90	07:30:00	12.500	2086.17	264.88	271.66		
16-02-90	07:40:00	12.667	2087.95	266.66	271.66		
16-02-90	07:50:00	12.833	2089.50	268.21	271.66		
16-02-90	08:00:00	13.000	2088.97	267.68	271.66		
16-02-90	08:10:00	13.167	2087.05	265.76	271.66		
16-02-90	08:20:00	13.333	2092.08	270.79	271.66		
16-02-90	08:30:00	13.500	2092.09	270.80	271.66		
16-02-90	08:40:00	13.667	2091.86	270.57	271.66		
16-02-90	08:50:00	13.833	2090.89	269.60	271.66		
16-02-90	09:00:00	14.000	2088.85	267.56	271.66		
16-02-90	09:10:00	14.167	2079.84	258.55	271.66		
16-02-90	09:20:00	14.333	2087.82	266.53	271.66		
16-02-90	09:30:00	14.500	2089.77	268.48	271.66		
16-02-90	09:40:00	14.667	2081.96	260.67	271.66		
16-02-90	09:50:00	14.833	2076.11	254.82	271.66		
16-02-90	10:00:00	15.000	2091.45	270.16	271.66		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE : 16-02-90
 TEST : FLOW BUILD UP
 PERFORATIONS : 9212'-9313'

HP GAUGE S/N : 725
 OPERATOR : D. NORCROSS
 GAUGE DEPTH : 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
16-02-90	10:10:00	15.167	2095.66	274.37	271.66	1529	CSG 83PSIG WHT 42'
16-02-90	10:20:00	15.333	2085.12	263.83	271.66		
16-02-90	10:30:00	15.500	2098.50	277.21	271.66		
16-02-90	10:40:00	15.667	2102.67	281.38	271.66		
16-02-90	10:50:00	15.833	2104.14	282.85	271.66		
16-02-90	11:00:00	16.000	2098.61	277.32	271.66		
16-02-90	11:10:00	16.167	2103.52	282.23	271.66		
16-02-90	11:20:00	16.333	2102.42	281.13	271.66		
16-02-90	11:30:00	16.500	2102.82	281.53	271.66		
16-02-90	11:40:00	16.667	2101.78	280.49	271.66		
16-02-90	11:50:00	16.833	2103.47	282.17	271.66		
16-02-90	12:00:00	17.000	2106.95	285.66	271.66		
16-02-90	12:10:00	17.167	2105.48	284.19	271.66		
16-02-90	12:20:00	17.333	2110.38	289.09	271.66		
16-02-90	12:30:00	17.500	2108.91	287.62	271.66		
16-02-90	12:40:00	17.667	2108.82	287.53	271.66		
16-02-90	12:50:00	17.833	2110.20	288.91	271.66		
16-02-90	13:00:00	18.000	2112.97	291.68	271.66		
16-02-90	13:10:00	18.167	2113.61	292.32	271.66		
16-02-90	13:20:00	18.333	2114.46	293.17	271.66		
16-02-90	13:30:00	18.500	2115.31	294.02	271.66		
16-02-90	13:40:00	18.667	2116.16	294.87	271.66		
16-02-90	13:50:00	18.833	2116.95	295.66	271.66		
16-02-90	14:20:00	19.333	2117.88	296.59	271.66	1532	CSG 83PSIG WHT 48'
16-02-90	14:30:00	19.500	2118.44	297.15	271.66		
16-02-90	14:40:00	19.667	2119.05	297.76	271.66		
16-02-90	14:50:00	19.833	2118.90	297.61	271.66		
16-02-90	15:00:00	20.000	2116.41	295.12	271.66		
16-02-90	15:10:00	20.167	2117.35	296.06	271.66		
16-02-90	15:20:00	20.333	2118.58	297.29	271.66		
16-02-90	15:30:00	20.500	2121.91	300.62	271.66		
16-02-90	15:40:00	20.667	2122.45	301.16	271.66		
16-02-90	15:50:00	20.833	2123.05	301.76	271.66		
16-02-90	16:00:00	21.000	2123.63	302.34	271.66		
16-02-90	16:10:00	21.167	2119.28	297.99	271.66		
16-02-90	16:20:00	21.333	2124.71	303.42	271.66		
16-02-90	16:30:00	21.500	2124.62	303.33	271.66		
16-02-90	16:40:00	21.667	2125.15	303.86	271.66		
16-02-90	16:50:00	21.833	2123.45	302.16	271.66		
16-02-90	17:00:00	22.000	2126.19	304.90	271.66		
16-02-90	17:10:00	22.167	2126.01	304.72	271.66		
16-02-90	17:20:00	22.333	2127.90	306.61	271.66		
16-02-90	17:30:00	22.500	2126.40	305.11	271.66		
16-02-90	17:40:00	22.667	2128.95	307.66	271.66		
16-02-90	17:50:00	22.833	2129.50	308.21	271.66		
16-02-90	18:00:00	23.000	2128.59	307.30	271.66		
16-02-90	18:10:00	23.167	2130.47	309.18	271.66		
16-02-90	18:20:00	23.333	2130.99	309.70	271.66		
16-02-90	18:30:00	23.500	2130.83	309.54	271.66		
16-02-90	18:40:00	23.667	2132.02	310.73	271.66		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 16-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
16-02-90	18:50:00	23.833	2132.53	311.24	271.66	1542	CSG 83PSIG WHT 39'
16-02-90	19:00:00	24.000	2132.27	310.98	271.66		
16-02-90	19:10:00	24.167	2133.50	312.21	271.66		
16-02-90	19:20:00	24.333	2132.53	311.24	271.66		
16-02-90	19:30:00	24.500	2134.46	313.17	271.66		
16-02-90	19:40:00	24.667	2133.49	312.20	271.66		
16-02-90	19:50:00	24.833	2133.29	312.00	271.66		
16-02-90	20:00:00	25.000	2135.87	314.58	271.66		
16-02-90	20:10:00	25.167	2136.35	315.06	271.66		
16-02-90	20:20:00	25.333	2136.83	315.54	271.66		
16-02-90	20:30:00	25.500	2137.25	315.96	271.66		
16-02-90	20:40:00	25.667	2137.73	316.44	271.66		
16-02-90	20:50:00	25.833	2138.23	316.94	271.66		
16-02-90	21:00:00	26.000	2138.65	317.36	271.66		
16-02-90	21:10:00	26.167	2139.11	317.82	271.66		
16-02-90	21:20:00	26.333	2139.59	318.30	271.66		
16-02-90	21:30:00	26.500	2140.04	318.75	271.66		
16-02-90	21:40:00	26.667	2140.47	319.18	271.66		
16-02-90	21:50:00	26.833	2140.89	319.60	271.66		
16-02-90	22:00:00	27.000	2141.37	320.08	271.66		
16-02-90	22:10:00	27.167	2141.79	320.50	271.66	1545	CSG 83PSIG WHT 31'
16-02-90	22:20:00	27.333	2142.20	320.91	271.66		
16-02-90	22:30:00	27.500	2142.68	321.39	271.66		
16-02-90	22:40:00	27.667	2143.12	321.83	271.66		
16-02-90	22:50:00	27.833	2143.51	322.22	271.66		
16-02-90	23:00:00	28.000	2143.94	322.65	271.66		
16-02-90	23:10:00	28.167	2144.35	323.06	271.66		
16-02-90	23:20:00	28.333	2144.78	323.49	271.66		
16-02-90	23:30:00	28.500	2145.23	323.94	271.66		
16-02-90	23:40:00	28.667	2145.64	324.35	271.66		
16-02-90	23:50:00	28.833	2146.05	324.76	271.66		
17-02-90	00:00:00	29.000	2146.52	325.23	271.66		
17-02-90	00:10:00	29.167	2146.90	325.61	271.66		
17-02-90	00:20:00	29.333	2145.93	324.64	271.66		
17-02-90	00:30:00	29.500	2147.71	326.42	271.66		
17-02-90	00:40:00	29.667	2148.10	326.81	271.66		
17-02-90	00:50:00	29.833	2148.54	327.25	271.66		
17-02-90	01:00:00	30.000	2148.90	327.61	271.66		
17-02-90	01:10:00	30.167	2149.31	328.02	271.66		
17-02-90	01:20:00	30.333	2149.70	328.41	271.66		
17-02-90	01:30:00	30.500	2150.12	328.83	271.66		
17-02-90	01:40:00	30.667	2150.53	329.24	271.66		
17-02-90	01:50:00	30.833	2150.91	329.62	271.66		
17-02-90	02:00:00	31.000	2151.27	329.98	271.66	1550	CSG 83PSIG WHT 26'
17-02-90	02:10:00	31.167	2151.70	330.41	271.66		
17-02-90	02:20:00	31.333	2152.09	330.80	271.66		
17-02-90	02:30:00	31.500	2152.45	331.16	271.66		
17-02-90	02:40:00	31.667	2152.86	331.57	271.66		
17-02-90	02:50:00	31.833	2153.23	331.94	271.66		
17-02-90	03:00:00	32.000	2153.60	332.31	271.66		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION: TIRRAWAARA
 COMMENTS :

DATE: 17-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
17-02-90	03:10:00	32.167	2154.00	332.71	271.66		
17-02-90	03:20:00	32.333	2154.38	333.09	271.66		
17-02-90	03:30:00	32.500	2154.72	333.43	271.66		
17-02-90	03:40:00	32.667	2155.05	333.76	271.66		
17-02-90	03:50:00	32.833	2155.44	334.15	271.66		
17-02-90	04:00:00	33.000	2155.82	334.53	271.66		
17-02-90	04:10:00	33.167	2155.52	334.23	271.66		
17-02-90	04:20:00	33.333	2156.61	335.32	271.66		
17-02-90	04:30:00	33.500	2156.23	334.94	271.66		
17-02-90	04:40:00	33.667	2157.33	336.04	271.66		
17-02-90	04:50:00	33.833	2157.66	336.37	271.66		
17-02-90	05:00:00	34.000	2158.03	336.74	271.66		
17-02-90	05:10:00	34.167	2156.30	335.01	271.66		
17-02-90	05:20:00	34.333	2153.20	331.91	271.66		
17-02-90	05:30:00	34.500	2158.38	337.09	271.66		
17-02-90	05:40:00	34.667	2159.45	338.16	271.66		
17-02-90	05:50:00	34.833	2159.81	338.52	271.66		
17-02-90	06:00:00	35.000	2160.14	338.85	271.66		
17-02-90	06:10:00	35.167	2159.72	338.43	271.66		
17-02-90	06:20:00	35.333	2160.82	339.53	271.66		
17-02-90	06:30:00	35.500	2160.47	339.18	271.66		
17-02-90	06:40:00	35.667	2161.54	340.25	271.66		
17-02-90	06:50:00	35.833	2161.84	340.55	271.66		
17-02-90	07:00:00	36.000	2160.81	339.52	271.66	1556	CSG 83PSIG WHT 24
17-02-90	07:10:00	36.167	2159.82	338.53	271.66		
17-02-90	07:20:00	36.333	2161.49	340.20	271.66		
17-02-90	07:30:00	36.500	2163.20	341.91	271.66		
17-02-90	07:40:00	36.667	2162.14	340.85	271.66		
17-02-90	07:50:00	36.833	2163.94	342.65	271.66		
17-02-90	08:00:00	37.000	2164.23	342.94	271.66		
17-02-90	08:10:00	37.167	2163.87	342.58	271.66		
17-02-90	08:20:00	37.333	2164.89	343.60	271.66		
17-02-90	08:30:00	37.500	2164.49	343.20	271.66		
17-02-90	08:40:00	37.667	2165.50	344.21	271.66		
17-02-90	08:50:00	37.833	2165.84	344.55	271.66		
17-02-90	09:00:00	38.000	2166.18	344.89	271.66		
17-02-90	09:10:00	38.167	2164.35	343.06	271.66		
17-02-90	09:20:00	38.333	2166.81	345.52	271.66		
17-02-90	09:30:00	38.500	2167.10	345.81	271.66		
17-02-90	09:40:00	38.667	2167.44	346.15	271.66		
17-02-90	09:50:00	38.833	2167.74	346.45	271.66		
17-02-90	10:00:00	39.000	2168.11	346.82	271.66		
17-02-90	10:10:00	39.167	2168.37	347.08	271.66		
17-02-90	10:20:00	39.333	2168.66	347.37	271.66		
17-02-90	10:30:00	39.500	2167.61	346.32	271.66		
17-02-90	10:40:00	39.667	2169.29	348.00	271.66		
17-02-90	10:50:00	39.833	2168.91	347.62	271.66		
17-02-90	11:00:00	40.000	2169.17	347.88	271.66	1560	CSG 83PSIG WHT 30'
17-02-90	11:10:00	40.167	2170.18	348.89	271.66		
17-02-90	11:20:00	40.333	2170.51	349.22	271.66		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 17-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: 9180'KB

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
17-02-90	11:30:00	40.500	2170.84	349.55	271.66		
17-02-90	11:40:00	40.667	2171.11	349.82	271.66		
17-02-90	11:50:00	40.833	2171.42	350.13	271.66		
17-02-90	12:00:00	41.000	2171.69	350.40	271.66		
17-02-90	12:10:00	41.167	2172.08	350.79	271.66		
17-02-90	12:20:00	41.333	2172.33	351.04	271.66		
17-02-90	12:30:00	41.500	2172.64	351.35	271.66		
17-02-90	12:40:00	41.667	2172.97	351.68	271.66		
17-02-90	12:50:00	41.833	2173.22	351.93	271.66		
17-02-90	13:00:00	42.000	2173.54	352.25	271.66		
17-02-90	13:10:00	42.167	2173.79	352.50	271.66		
17-02-90	13:20:00	42.333	2174.10	352.81	271.66		
17-02-90	13:30:00	42.500	2174.35	353.06	271.66		
17-02-90	13:40:00	42.667	2174.61	353.32	271.66		
17-02-90	13:50:00	42.833	2174.93	353.64	271.66		
17-02-90	14:00:00	43.000	2175.27	353.98	271.66		
17-02-90	14:10:00	43.167	2175.51	354.22	271.66		
17-02-90	14:20:00	43.333	2175.80	354.51	271.66		
17-02-90	14:30:00	43.500	2176.07	354.78	271.66		
17-02-90	14:40:00	43.667	2176.39	355.10	271.66		
17-02-90	14:50:00	43.833	2176.68	355.39	271.66		
17-02-90	15:00:00	44.000	2176.91	355.61	271.66	1565	CSG 83PSIG WHT 40'
17-02-90	15:10:00	44.167	2177.14	355.85	271.66		
17-02-90	15:20:00	44.333	2177.47	356.18	271.66		
17-02-90	15:30:00	44.500	2177.72	356.43	271.66		
17-02-90	15:40:00	44.667	2178.01	356.72	271.66		
17-02-90	15:50:00	44.833	2178.26	356.97	271.66		
17-02-90	16:00:00	45.000	2178.53	357.24	271.66		
17-02-90	16:10:00	45.167	2178.84	357.55	271.66		
17-02-90	16:20:00	45.333	2179.12	357.83	271.66		
17-02-90	16:30:00	45.500	2179.36	358.07	271.66		
17-02-90	16:40:00	45.667	2179.65	358.36	271.66		
17-02-90	16:50:00	45.833	2179.88	358.59	271.66		
17-02-90	17:00:00	46.000	2180.13	358.84	271.66		
17-02-90	17:10:00	46.167	2180.42	359.13	271.66		
17-02-90	17:20:00	46.333	2180.70	359.41	271.66		
17-02-90	17:30:00	46.500	2180.95	359.66	271.66		
17-02-90	17:40:00	46.667	2181.23	359.94	271.66		
17-02-90	17:50:00	46.833	2181.50	360.21	271.66		
17-02-90	18:00:00	47.000	2181.80	360.51	271.66		
17-02-90	18:10:00	47.167	2182.06	360.77	271.66		
17-02-90	18:20:00	47.333	2181.63	360.34	271.66		
17-02-90	18:30:00	47.500	2182.56	361.27	271.66		
17-02-90	18:40:00	47.667	2182.81	361.52	271.66		
17-02-90	18:50:00	47.833	2183.04	361.75	271.66		
17-02-90	19:00:00	48.000	2183.34	362.05	271.66	1566	CSG 83PSIG WHT 31'
17-02-90	19:10:00	48.167	2183.60	362.31	271.66		
17-02-90	19:20:00	48.333	2183.85	362.56	271.66		
17-02-90	19:30:00	48.500	2184.07	362.78	271.66		
17-02-90	19:40:00	48.667	2184.34	363.05	271.66		

EXPERTEST PTY. LTD.

00174

CUSTOMER : SANTOS LTD

DATE: 17-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: 9180'KB

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
17-02-90	19:50:00	48.833	2184.60	363.31	271.66		
17-02-90	20:00:00	49.000	2184.86	363.57	271.66		
17-02-90	20:10:00	49.167	2185.09	363.80	271.66		
17-02-90	20:20:00	49.333	2185.50	364.21	271.66		
17-02-90	20:30:00	49.500	2185.61	364.32	271.66		
17-02-90	20:40:00	49.667	2185.82	364.53	271.66		
17-02-90	20:50:00	49.833	2186.08	364.79	271.66		
17-02-90	21:00:00	50.000	2186.33	365.04	271.66		
17-02-90	21:10:00	50.167	2186.58	365.29	271.66		
17-02-90	21:20:00	50.333	2186.86	365.57	271.66		
17-02-90	21:30:00	50.500	2187.12	365.83	271.66		
17-02-90	21:40:00	50.667	2187.33	366.04	271.66		
17-02-90	21:50:00	50.833	2187.58	366.29	271.66		
17-02-90	22:00:00	51.000	2187.82	366.53	271.66		
17-02-90	22:10:00	51.167	2188.08	366.79	271.66		
17-02-90	22:20:00	51.333	2188.29	367.00	271.66		
17-02-90	22:30:00	51.500	2188.55	367.26	271.66		
17-02-90	22:40:00	51.667	2188.76	367.47	271.66		
17-02-90	22:50:00	51.833	2189.03	367.74	271.66		
17-02-90	23:00:00	52.000	2189.30	368.01	271.66	1569	CSG 83PSIG WHT 26'
17-02-90	23:10:00	52.167	2189.52	368.23	271.66		
17-02-90	23:20:00	52.333	2189.73	368.44	271.66		
17-02-90	23:30:00	52.500	2189.97	368.68	271.66		
17-02-90	23:40:00	52.667	2190.22	368.93	271.66		
17-02-90	23:50:00	52.833	2190.40	369.11	271.66		
18-02-90	00:00:00	53.000	2190.64	369.35	271.66		
18-02-90	00:10:00	53.167	2190.88	369.59	271.66		
18-02-90	00:20:00	53.333	2191.13	369.84	271.66		
18-02-90	00:30:00	53.500	2191.35	370.06	271.66		
18-02-90	00:40:00	53.667	2190.93	369.64	271.66		
18-02-90	00:50:00	53.833	2191.82	370.53	271.66		
18-02-90	01:00:00	54.000	2191.37	370.08	271.66		
18-02-90	01:10:00	54.167	2192.29	371.00	271.66		
18-02-90	01:20:00	54.333	2192.51	371.22	271.66		
18-02-90	01:30:00	54.500	2192.75	371.46	271.66		
18-02-90	01:40:00	54.667	2192.96	371.67	271.66		
18-02-90	01:50:00	54.833	2193.21	371.92	271.66		
18-02-90	02:00:00	55.000	2193.44	372.15	271.66		
18-02-90	02:10:00	55.167	2193.43	372.14	271.66		
18-02-90	02:20:00	55.333	2193.87	372.58	271.66		
18-02-90	02:30:00	55.500	2194.07	372.78	271.66		
18-02-90	02:40:00	55.667	2194.30	373.01	271.66		
18-02-90	02:50:00	55.833	2194.57	373.28	271.66		
18-02-90	03:00:00	56.000	2194.76	373.47	271.66	1569	CSG 83PSIG WHT 24'
18-02-90	03:10:00	56.167	2194.98	373.69	271.66		
18-02-90	03:20:00	56.333	2195.24	373.95	271.66		
18-02-90	03:30:00	56.500	2195.45	374.16	271.66		
18-02-90	03:40:00	56.667	2195.63	374.34	271.66		
18-02-90	03:50:00	56.833	2195.85	374.56	271.66		
18-02-90	04:00:00	57.000	2196.11	374.82	271.66		

EXPERTEST PTY. LTD.

00175

CUSTOMER : SANTOS LTD

DATE: 18-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: 9180'KB

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
18-02-90	04:10:00	57.167	2196.34	375.05	271.66		
18-02-90	04:20:00	57.333	2196.53	375.24	271.66		
18-02-90	04:30:00	57.500	2196.74	375.45	271.66		
18-02-90	04:40:00	57.667	2196.96	375.67	271.66		
18-02-90	04:50:00	57.833	2197.22	375.93	271.66		
18-02-90	05:00:00	58.000	2197.43	376.14	271.66		
18-02-90	05:10:00	58.167	2197.63	376.34	271.66		
18-02-90	05:20:00	58.333	2197.86	376.57	271.66		
18-02-90	05:30:00	58.500	2198.08	376.79	271.66		
18-02-90	05:40:00	58.667	2198.27	376.98	271.66		
18-02-90	05:50:00	58.833	2198.47	377.18	271.66		
18-02-90	06:00:00	59.000	2198.70	377.41	271.66		
18-02-90	06:10:00	59.167	2198.91	377.62	271.66		
18-02-90	06:20:00	59.333	2199.11	377.82	271.66		
18-02-90	06:30:00	59.500	2199.36	378.07	271.66		
18-02-90	06:40:00	59.667	2199.54	378.25	271.66		
18-02-90	06:50:00	59.833	2199.74	378.45	271.66		
18-02-90	07:00:00	60.000	2199.98	378.69	271.66	1575	CSG 83PSIG WHT 20'
18-02-90	07:10:00	60.167	2200.16	378.87	271.66		
18-02-90	07:20:00	60.333	2200.41	379.12	271.66		
18-02-90	07:30:00	60.500	2200.59	379.30	271.66		
18-02-90	07:40:00	60.667	2200.84	379.55	271.66		
18-02-90	07:50:00	60.833	2201.05	379.76	271.66		
18-02-90	08:00:00	61.000	2201.21	379.92	271.66		
18-02-90	08:10:00	61.167	2201.43	380.14	271.66		
18-02-90	08:20:00	61.333	2201.58	380.29	271.66		
18-02-90	08:30:00	61.500	2201.83	380.54	271.66		
18-02-90	08:40:00	61.667	2202.02	380.73	271.66		
18-02-90	08:50:00	61.833	2202.22	380.93	271.66		
18-02-90	09:00:00	62.000	2202.41	381.12	271.66		
18-02-90	09:10:00	62.167	2202.61	381.33	271.66		
18-02-90	09:20:00	62.333	2202.82	381.53	271.66		
18-02-90	09:30:00	62.500	2202.99	381.70	271.66		
18-02-90	09:40:00	62.667	2203.21	381.92	271.66		
18-02-90	09:50:00	62.833	2203.39	382.10	271.66		
18-02-90	10:00:00	63.000	2203.62	382.33	271.66		
18-02-90	10:10:00	63.167	2203.80	382.51	271.66		
18-02-90	10:20:00	63.333	2204.04	382.75	271.66		
18-02-90	10:30:00	63.500	2204.19	382.90	271.66		
18-02-90	10:40:00	63.667	2204.39	383.10	271.66		
18-02-90	10:50:00	63.833	2204.59	383.30	271.66		
18-02-90	11:00:00	64.000	2204.75	383.46	271.66		
18-02-90	11:10:00	64.167	2204.97	383.68	271.66		
18-02-90	11:20:00	64.333	2205.22	383.93	271.66		
18-02-90	11:30:00	64.500	2205.39	384.10	271.66		
18-02-90	11:40:00	64.667	2205.58	384.29	271.66		
18-02-90	11:50:00	64.833	2205.75	384.46	271.66		
18-02-90	12:00:00	65.000	2205.95	384.66	271.66		
18-02-90	12:10:00	65.167	2205.51	384.22	271.66		
18-02-90	12:20:00	65.333	2206.35	385.06	271.66		

EXPERTEST PTY. LTD.

00176

CUSTOMER : SANTOS LTD

DATE: 18-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: 9180'KB

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
18-02-90	12:30:00	65.500	2206.54	385.25	271.66		
18-02-90	12:40:00	65.667	2206.73	385.44	271.66		
18-02-90	12:50:00	65.833	2206.91	385.62	271.66		
18-02-90	13:00:00	66.000	2207.08	385.79	271.66		
18-02-90	13:10:00	66.167	2207.32	386.03	271.66		
18-02-90	13:20:00	66.333	2207.57	386.28	271.66		
18-02-90	13:30:00	66.500	2207.74	386.45	271.66		
18-02-90	13:40:00	66.667	2207.18	385.89	271.66		
18-02-90	13:50:00	66.833	2208.05	386.76	271.66		
18-02-90	14:00:00	67.000	2208.24	386.95	271.66		
18-02-90	14:10:00	67.167	2205.64	384.35	271.66		
18-02-90	14:20:00	67.333	2208.60	387.31	271.66		
18-02-90	14:30:00	67.500	2208.80	387.51	271.66		
18-02-90	14:40:00	67.667	2208.96	387.67	271.66		
18-02-90	14:50:00	67.833	2208.52	387.23	271.66		
18-02-90	15:00:00	68.000	2209.36	388.07	271.66	1581	CSG 83PSIG WHT 41'
18-02-90	15:10:00	68.167	2209.53	388.24	271.66		
18-02-90	15:20:00	68.333	2209.73	388.44	271.66		
18-02-90	15:30:00	68.500	2209.90	388.61	271.66		
18-02-90	15:40:00	68.667	2210.11	388.82	271.66		
18-02-90	15:50:00	68.833	2210.29	389.00	271.66		
18-02-90	16:00:00	69.000	2210.45	389.16	271.66		
18-02-90	16:10:00	69.167	2210.61	389.32	271.66		
18-02-90	16:20:00	69.333	2210.82	389.53	271.66		
18-02-90	16:30:00	69.500	2211.00	389.71	271.66		
18-02-90	16:40:00	69.667	2210.48	389.19	271.66		
18-02-90	16:50:00	69.833	2211.37	390.08	271.66		
18-02-90	17:00:00	70.000	2211.56	390.27	271.66		
18-02-90	17:10:00	70.167	2211.72	390.43	271.66		
18-02-90	17:20:00	70.333	2211.90	390.61	271.66		
18-02-90	17:30:00	70.500	2212.09	390.80	271.66		
18-02-90	17:40:00	70.667	2212.21	390.92	271.66		
18-02-90	17:50:00	70.833	2212.43	391.14	271.66		
18-02-90	18:00:00	71.000	2211.92	390.63	271.66		
18-02-90	18:10:00	71.167	2212.78	391.49	271.66		
18-02-90	18:20:00	71.333	2212.94	391.65	271.66		
18-02-90	18:30:00	71.500	2213.14	391.85	271.66		
18-02-90	18:40:00	71.667	2213.34	392.05	271.66		
18-02-90	18:50:00	71.833	2213.48	392.19	271.66		
18-02-90	19:00:00	72.000	2213.68	392.39	271.66	1585	CSG 83PSIG WHT 33'
18-02-90	19:10:00	72.167	2213.81	392.52	271.66		
18-02-90	19:20:00	72.333	2214.01	392.72	271.66		
18-02-90	19:30:00	72.500	2214.19	392.90	271.66		
18-02-90	19:40:00	72.667	2214.40	393.11	271.66		
18-02-90	19:50:00	72.833	2213.84	392.55	271.66		
18-02-90	20:00:00	73.000	2214.71	393.42	271.66		
18-02-90	20:10:00	73.167	2214.89	393.60	271.66		
18-02-90	20:20:00	73.333	2215.07	393.78	271.66		
18-02-90	20:30:00	73.500	2215.22	393.93	271.66		
18-02-90	20:40:00	73.667	2215.39	394.10	271.66		

EXPERTEST PTY. LTD.

00177

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 18-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
18-02-90	20:50:00	73.833	2215.51	394.22	271.66		
18-02-90	21:00:00	74.000	2215.73	394.44	271.66		
18-02-90	21:10:00	74.167	2215.92	394.63	271.66		
18-02-90	21:20:00	74.333	2216.05	394.76	271.66		
18-02-90	21:30:00	74.500	2216.24	394.95	271.66		
18-02-90	21:40:00	74.667	2216.41	395.12	271.66		
18-02-90	21:50:00	74.833	2216.55	395.26	271.66		
18-02-90	22:00:00	75.000	2216.74	395.45	271.66		
18-02-90	22:10:00	75.167	2216.89	395.60	271.66		
18-02-90	22:20:00	75.333	2215.54	394.25	271.66		
18-02-90	22:30:00	75.500	2217.21	395.92	271.66		
18-02-90	22:40:00	75.667	2217.39	396.10	271.66		
18-02-90	22:50:00	75.833	2217.60	396.31	271.66		
18-02-90	23:00:00	76.000	2217.69	396.40	271.66	1585	CSG 83PSIG WHT 28'
18-02-90	23:10:00	76.167	2217.86	396.57	271.66		
18-02-90	23:20:00	76.333	2218.02	396.73	271.66		
18-02-90	23:30:00	76.500	2218.23	396.94	271.66		
18-02-90	23:40:00	76.667	2218.37	397.08	271.66		
18-02-90	23:50:00	76.833	2217.87	396.58	271.66		
19-02-90	00:00:00	77.000	2218.70	397.41	271.66		
19-02-90	00:10:00	77.167	2218.83	397.54	271.66		
19-02-90	00:20:00	77.333	2219.04	397.75	271.66		
19-02-90	00:30:00	77.500	2219.21	397.92	271.66		
19-02-90	00:40:00	77.667	2219.37	398.08	271.66		
19-02-90	00:50:00	77.833	2219.48	398.19	271.66		
19-02-90	01:00:00	78.000	2219.67	398.38	271.66		
19-02-90	01:10:00	78.167	2219.88	398.59	271.66		
19-02-90	01:20:00	78.333	2219.99	398.70	271.66		
19-02-90	01:30:00	78.500	2220.13	398.84	271.66		
19-02-90	01:40:00	78.667	2220.35	399.06	271.66		
19-02-90	01:50:00	78.833	2220.49	399.20	271.66		
19-02-90	02:00:00	79.000	2220.66	399.37	271.66		
19-02-90	02:10:00	79.167	2220.80	399.51	271.66		
19-02-90	02:20:00	79.333	2220.93	399.64	271.66		
19-02-90	02:30:00	79.500	2221.10	399.81	271.66		
19-02-90	02:40:00	79.667	2221.24	399.95	271.66		
19-02-90	02:50:00	79.833	2221.44	400.15	271.66		
19-02-90	03:00:00	80.000	2221.61	400.32	271.66	1587	CSG 83PSIG WHT 27'
19-02-90	03:10:00	80.167	2221.78	400.49	271.66		
19-02-90	03:20:00	80.333	2221.91	400.62	271.66		
19-02-90	03:30:00	80.500	2222.08	400.79	271.66		
19-02-90	03:40:00	80.667	2222.23	400.94	271.66		
19-02-90	03:50:00	80.833	2222.35	401.06	271.66		
19-02-90	04:00:00	81.000	2222.51	401.22	271.66		
19-02-90	04:10:00	81.167	2222.66	401.37	271.66		
19-02-90	04:20:00	81.333	2222.86	401.57	271.66		
19-02-90	04:30:00	81.500	2223.04	401.75	271.66		
19-02-90	04:40:00	81.667	2223.16	401.87	271.66		
19-02-90	04:50:00	81.833	2223.30	402.01	271.66		
19-02-90	05:00:00	82.000	2223.44	402.15	271.66		

EXPERTEST PTY. LTD.

00178

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 19-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	05:10:00	82.167	2223.63	402.34	271.66		
19-02-90	05:20:00	82.333	2223.80	402.51	271.66		
19-02-90	05:30:00	82.500	2223.93	402.64	271.66		
19-02-90	05:40:00	82.667	2224.13	402.84	271.66		
19-02-90	05:50:00	82.833	2224.21	402.92	271.66		
19-02-90	06:00:00	83.000	2224.42	403.13	271.66		
19-02-90	06:10:00	83.167	2224.55	403.26	271.66		
19-02-90	06:20:00	83.333	2224.69	403.40	271.66		
19-02-90	06:30:00	83.500	2224.82	403.53	271.66		
19-02-90	06:40:00	83.667	2225.02	403.73	271.66		
19-02-90	06:50:00	83.833	2225.16	403.87	271.66		
19-02-90	07:00:00	0.000	2225.29	404.00	271.66	1588	CSG 83PSIG WHT 21'
19-02-90	07:01:00	0.017	2225.31	404.02	271.66		
19-02-90	07:02:00	0.033	2225.35	404.06	271.66		
19-02-90	07:03:00	0.050	2225.32	404.03	271.66		
19-02-90	07:04:00	0.067	2225.37	404.08	271.66		
19-02-90	07:05:00	0.083	2225.36	404.07	271.66		
19-02-90	07:06:00	0.100	2225.39	404.10	271.66		
19-02-90	07:07:00	0.117	2225.39	404.10	271.66		
19-02-90	07:08:00	0.133	2225.43	404.14	271.66		
19-02-90	07:09:00	0.150	2225.44	404.15	271.66		
19-02-90	07:10:00	0.167	2225.43	404.14	271.66		
19-02-90	07:11:00	0.183	2225.49	404.20	271.66		
19-02-90	07:12:00	0.200	2225.48	404.19	271.66		
19-02-90	07:13:00	0.217	2225.51	404.22	271.66		
19-02-90	07:14:00	0.233	2225.50	404.21	271.66		
19-02-90	07:15:00	0.250	2225.51	404.22	271.66		
19-02-90	07:16:00	0.267	2225.54	404.25	271.66		
19-02-90	07:17:00	0.283	2225.54	404.25	271.66		
19-02-90	07:18:00	0.300	2225.62	404.33	271.66		
19-02-90	07:19:00	0.317	2225.57	404.28	271.66		
19-02-90	07:20:00	0.333	2225.62	404.33	271.66		
19-02-90	07:21:00	0.350	2225.63	404.34	271.66		
19-02-90	07:22:00	0.367	2225.65	404.36	271.66		
19-02-90	07:23:00	0.383	2225.66	404.37	271.66		
19-02-90	07:24:00	0.400	2225.66	404.37	271.66		
19-02-90	07:25:00	0.417	2225.68	404.39	271.66		
19-02-90	07:26:00	0.433	2225.71	404.42	271.66		
19-02-90	07:27:00	0.450	2225.67	404.38	271.66		
19-02-90	07:28:00	0.467	2225.73	404.44	271.66		
19-02-90	07:29:00	0.483	2225.72	404.43	271.66		
19-02-90	07:30:00	0.500	2225.76	404.47	271.66		
19-02-90	07:31:00	0.517	2225.79	404.50	271.66		
19-02-90	07:32:00	0.533	2225.77	404.48	271.66		
19-02-90	07:33:00	0.550	2225.79	404.50	271.66		
19-02-90	07:34:00	0.567	2225.81	404.52	271.66		
19-02-90	07:35:00	0.583	2225.84	404.55	271.66		
19-02-90	07:36:00	0.600	2225.82	404.53	271.66		
19-02-90	07:37:00	0.617	2225.83	404.54	271.66		
19-02-90	07:38:00	0.633	2225.85	404.56	271.66		

EXPERTEST PTY. LTD.

00179

CUSTOMER : SANTOS LTD

DATE: 19-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: 9180'KB

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	07:39:00	0.650	2225.91	404.62	271.66		
19-02-90	07:40:00	0.667	2225.94	404.65	271.66		
19-02-90	07:41:00	0.683	2225.94	404.65	271.66		
19-02-90	07:42:00	0.700	2225.92	404.63	271.66		
19-02-90	07:43:00	0.717	2225.98	404.69	271.66		
19-02-90	07:44:00	0.733	2225.97	404.68	271.66		
19-02-90	07:45:00	0.750	2226.02	404.73	271.66		
19-02-90	07:46:00	0.767	2226.02	404.73	271.66		
19-02-90	07:47:00	0.783	2226.03	404.74	271.66		
19-02-90	07:48:00	0.800	2226.03	404.74	271.66		
19-02-90	07:49:00	0.817	2226.05	404.76	271.66		
19-02-90	07:50:00	0.833	2226.10	404.81	271.66		
19-02-90	07:51:00	0.850	2226.10	404.81	271.66		
19-02-90	07:52:00	0.867	2226.13	404.84	271.66		
19-02-90	07:53:00	0.883	2226.11	404.82	271.66		
19-02-90	07:54:00	0.900	2226.13	404.84	271.66		
19-02-90	07:55:00	0.917	2226.14	404.85	271.66		
19-02-90	07:56:00	0.933	2226.18	404.89	271.66		
19-02-90	07:57:00	0.950	2226.17	404.88	271.66		
19-02-90	07:58:00	0.967	2226.16	404.87	271.66		
19-02-90	07:59:00	0.983	2226.23	404.94	271.66		
19-02-90	08:00:00	1.000	2226.22	404.93	271.66		
19-02-90	08:01:00	1.017	2226.20	404.91	271.66		
19-02-90	08:11:00	1.183	2226.36	405.07	271.66		
19-02-90	08:20:00	1.333	2226.49	405.20	271.66		
19-02-90	08:30:00	1.500	2226.66	405.37	271.66		
19-02-90	08:40:00	1.667	2226.73	405.44	271.66		
19-02-90	08:50:00	1.833	2226.93	405.64	271.66		
19-02-90	09:00:00	2.000	2227.08	405.79	271.66		
19-02-90	09:10:00	2.167	2227.23	405.94	271.66		
19-02-90	09:20:00	2.333	2227.39	406.10	271.66		
19-02-90	09:30:00	2.500	2227.56	406.27	271.66		
19-02-90	09:40:00	2.667	2227.70	406.41	271.66		
19-02-90	09:50:00	2.833	2227.83	406.54	271.66		
19-02-90	10:10:00	3.167	2228.11	406.82	271.66		
19-02-90	10:20:00	3.333	2228.26	406.97	271.66		
19-02-90	11:20:00	0.000	2229.16	0.90	271.66	1591	START GRADIENT
19-02-90	11:21:00	0.017	2229.15	-0.01	271.66		CSG 83PSIG WHT 34'
19-02-90	11:22:00	0.033	2229.14	-0.01	271.66		HANG @ 9180'KB
19-02-90	11:23:00	0.050	2229.18	0.04	271.66		
19-02-90	11:24:00	0.067	2229.17	-0.01	271.66		
19-02-90	11:25:00	0.083	2229.20	0.03	271.66		
19-02-90	11:26:00	0.100	2229.23	0.03	271.66		
19-02-90	11:27:00	0.117	2229.25	0.02	271.66		
19-02-90	11:28:00	0.133	2229.25	0.00	271.66		
19-02-90	11:29:00	0.150	2229.23	-0.02	271.66		
19-02-90	11:30:00	0.167	2229.26	0.03	271.66		
19-02-90	11:31:00	0.183	2229.27	0.01	271.66		
19-02-90	11:32:00	0.200	2229.29	0.02	271.66		

EXPERTEST PTY. LTD.

00180

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 19-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	11:33:00	0.217	2229.29	0.00	271.66		
19-02-90	11:34:00	0.233	2229.30	0.01	271.66		
19-02-90	11:35:00	0.250	2229.31	0.02	271.66		
19-02-90	11:46:00	0.433	2218.29	-11.03	271.66		
19-02-90	11:47:00	0.450	2218.35	0.07	271.66		
19-02-90	11:48:00	0.467	2218.30	-0.06	271.66		
19-02-90	11:49:00	0.483	2218.29	-0.01	271.66		
19-02-90	11:50:00	0.500	2218.31	0.02	271.66		
19-02-90	11:51:00	0.517	2218.28	-0.03	271.66		HANG @ 9000'KB
19-02-90	12:04:00	0.733	2182.81	-35.46	271.66		G= .061
19-02-90	12:05:00	0.750	2182.99	0.17	271.66		
19-02-90	12:06:00	0.767	2183.14	0.15	271.66		
19-02-90	12:07:00	0.783	2183.22	0.08	271.66		
19-02-90	12:08:00	0.800	2183.37	0.15	271.66		
19-02-90	12:09:00	0.817	2183.47	0.11	271.66		
19-02-90	12:10:00	0.833	2183.57	0.10	271.66		
19-02-90	12:11:00	0.850	2183.57	0.00	271.66		
19-02-90	12:12:00	0.867	2183.64	0.07	271.66		
19-02-90	12:13:00	0.883	2183.65	0.01	271.66		
19-02-90	12:14:00	0.900	2183.70	0.06	271.66		
19-02-90	12:15:00	0.917	2183.76	0.06	271.66		HANG @ 8500'KB
19-02-90	12:21:00	1.017	2144.58	-39.18	271.66		G= .069
19-02-90	12:22:00	1.033	2146.08	1.50	271.66		
19-02-90	12:23:00	1.050	2146.79	0.71	271.66		
19-02-90	12:24:00	1.067	2147.21	0.43	271.66		
19-02-90	12:25:00	1.083	2147.35	0.14	271.66		
19-02-90	12:26:00	1.100	2147.52	0.17	271.66		
19-02-90	12:27:00	1.117	2147.72	0.19	271.66		
19-02-90	12:28:00	1.133	2147.79	0.08	271.66		
19-02-90	12:29:00	1.150	2147.85	0.06	271.66		
19-02-90	12:30:00	1.167	2147.94	0.09	271.66		
19-02-90	12:31:00	1.183	2148.04	0.11	271.66		
19-02-90	12:32:00	1.200	2148.08	0.04	271.66		
19-02-90	12:33:00	1.217	2148.17	0.09	271.66		
19-02-90	12:34:00	1.233	2148.21	0.04	271.66		
19-02-90	12:35:00	1.250	2148.27	0.06	271.66		
19-02-90	12:36:00	1.267	2148.30	0.03	271.66		
19-02-90	12:37:00	1.283	2148.30	0.00	271.66		
19-02-90	12:38:00	1.300	2148.35	0.06	271.66		
19-02-90	12:39:00	1.317	2148.40	0.05	271.66		
19-02-90	12:40:00	1.333	2148.48	0.08	271.66		HANG @ 8000'KB
19-02-90	12:45:00	1.417	2109.09	-39.39	271.66		G= .070
19-02-90	12:46:00	1.433	2110.97	1.88	271.66		
19-02-90	12:47:00	1.450	2111.85	0.88	271.66		
19-02-90	12:48:00	1.467	2112.32	0.47	271.66		
19-02-90	12:49:00	1.483	2112.42	0.10	271.66		
19-02-90	12:50:00	1.500	2112.51	0.09	271.66		
19-02-90	12:51:00	1.517	2112.66	0.15	271.66		
19-02-90	12:52:00	1.533	2112.72	0.06	271.66		
19-02-90	12:53:00	1.550	2112.71	-0.01	271.66		

EXPERTEST PTY. LTD.

00181

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 19-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	12:54:00	1.567	2112.79	0.08	271.66		
19-02-90	12:55:00	1.583	2112.78	-0.01	271.66		
19-02-90	12:56:00	1.600	2112.83	0.06	271.66		
19-02-90	12:57:00	1.617	2112.90	0.07	271.66		
19-02-90	12:58:00	1.633	2112.95	0.05	271.66		
19-02-90	12:59:00	1.650	2113.01	0.06	271.66		
19-02-90	13:00:00	1.667	2113.01	0.00	271.66		
19-02-90	13:01:00	1.683	2113.04	0.03	271.66		
19-02-90	13:02:00	1.700	2113.10	0.06	271.66		
19-02-90	13:03:00	1.717	2113.11	0.01	271.66		
19-02-90	13:04:00	1.733	2113.11	0.00	271.66		
19-02-90	13:05:00	1.750	2113.12	0.01	271.66		
19-02-90	13:10:00	1.833	2073.97	-39.15	271.66		HANG @ 7500'KB G= .070
19-02-90	13:11:00	1.850	2075.04	1.07	271.66		
19-02-90	13:12:00	1.867	2076.08	1.04	271.66		
19-02-90	13:13:00	1.883	2076.62	0.54	271.66		
19-02-90	13:14:00	1.900	2076.95	0.33	271.66		
19-02-90	13:15:00	1.917	2077.06	0.11	271.66		
19-02-90	13:16:00	1.933	2077.19	0.13	271.66		
19-02-90	13:17:00	1.950	2077.33	0.15	271.66		
19-02-90	13:18:00	1.967	2077.35	0.02	271.66		
19-02-90	13:19:00	1.983	2077.38	0.03	271.66		
19-02-90	13:20:00	2.000	2077.42	0.04	271.66		
19-02-90	13:21:00	2.017	2077.43	0.01	271.66		
19-02-90	13:22:00	2.033	2077.44	0.01	271.66		
19-02-90	13:23:00	2.050	2077.48	0.04	271.66		
19-02-90	13:24:00	2.067	2077.48	0.00	271.66		
19-02-90	13:25:00	2.083	2077.51	0.04	271.66		
19-02-90	13:26:00	2.100	2077.54	0.03	271.66		
19-02-90	13:27:00	2.117	2077.53	-0.01	271.66		
19-02-90	13:28:00	2.133	2077.48	-0.05	271.66		
19-02-90	13:29:00	2.150	2077.52	0.04	271.66		
19-02-90	13:38:00	2.300	2002.40	-75.12	271.66		HANG @ 7500'KB G= .071
19-02-90	13:39:00	2.317	2003.56	1.16	271.66		
19-02-90	13:40:00	2.333	2004.34	0.77	271.66		
19-02-90	13:41:00	2.350	2004.90	0.56	271.66		
19-02-90	13:42:00	2.367	2005.24	0.35	271.66		
19-02-90	13:43:00	2.383	2005.60	0.36	271.66		
19-02-90	13:44:00	2.400	2005.81	0.21	271.66		
19-02-90	13:45:00	2.417	2006.06	0.24	271.66		
19-02-90	13:46:00	2.433	2006.22	0.16	271.66		
19-02-90	13:47:00	2.450	2006.35	0.13	271.66		
19-02-90	13:48:00	2.467	2006.52	0.17	271.66		
19-02-90	13:49:00	2.483	2006.61	0.09	271.66		
19-02-90	13:50:00	2.500	2006.66	0.06	271.66		
19-02-90	13:51:00	2.517	2005.98	-0.69	271.66		
19-02-90	13:52:00	2.533	2006.77	0.79	271.66		
19-02-90	13:53:00	2.550	2006.80	0.03	271.66		
19-02-90	13:54:00	2.567	2006.86	0.06	271.66		
19-02-90	13:55:00	2.583	2006.90	0.04	271.66		

EXPERTEST PTY. LTD.

00182

CUSTOMER : SANTOS LTD

DATE: 19-02-90

HP GAUGE S/N: 725

LOCATION : BIMBAYA #2

TEST: FLOW BUILD UP

OPERATOR: D. NORCROSS

FORMATION: TIRRAWAARA

PERFORATIONS: 9212'-9313'

GAUGE DEPTH: 9180'KB

COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	13:56:00	2.600	2006.94	0.04	271.66		
19-02-90	13:57:00	2.617	2007.00	0.07	271.66		
19-02-90	13:58:00	2.633	2007.01	0.01	271.66		HANG @ 6000'KB
19-02-90	14:07:00	2.783	1932.81	-74.20	271.66		G= .070
19-02-90	14:08:00	2.800	1934.12	1.30	271.66		
19-02-90	14:09:00	2.817	1934.86	0.74	271.66		
19-02-90	14:10:00	2.833	1935.35	0.49	271.66		
19-02-90	14:11:00	2.850	1935.79	0.43	271.66		
19-02-90	14:12:00	2.867	1936.11	0.32	271.66		
19-02-90	14:13:00	2.883	1936.37	0.26	271.66		
19-02-90	14:14:00	2.900	1936.61	0.24	271.66		
19-02-90	14:15:00	2.917	1936.83	0.22	271.66		
19-02-90	14:16:00	2.933	1936.99	0.16	271.66		
19-02-90	14:17:00	2.950	1937.14	0.14	271.66		
19-02-90	14:18:00	2.967	1937.25	0.11	271.66		
19-02-90	14:19:00	2.983	1937.37	0.13	271.66		
19-02-90	14:20:00	3.000	1937.47	0.10	271.66		
19-02-90	14:21:00	3.017	1937.51	0.04	271.66		
19-02-90	14:22:00	3.033	1937.56	0.06	271.66		
19-02-90	14:23:00	3.050	1937.63	0.07	271.66		
19-02-90	14:24:00	3.067	1937.68	0.05	271.66		
19-02-90	14:25:00	3.083	1937.71	0.03	271.66		
19-02-90	14:26:00	3.100	1937.74	0.03	271.66		
19-02-90	14:27:00	3.117	1937.77	0.03	271.66		HANG @ 5000'KB
19-02-90	14:34:00	3.233	1860.94	-76.83	271.66		G= .069
19-02-90	14:35:00	3.250	1863.53	2.59	271.66		
19-02-90	14:36:00	3.267	1865.06	1.53	271.66		
19-02-90	14:37:00	3.283	1865.98	0.93	271.66		
19-02-90	14:38:00	3.300	1866.71	0.72	271.66		
19-02-90	14:39:00	3.317	1867.20	0.49	271.66		
19-02-90	14:40:00	3.333	1867.61	0.41	271.66		
19-02-90	14:41:00	3.350	1867.91	0.30	271.66		
19-02-90	14:42:00	3.367	1868.20	0.30	271.66		
19-02-90	14:43:00	3.383	1868.36	0.15	271.66		
19-02-90	14:44:00	3.400	1868.50	0.14	271.66		
19-02-90	14:45:00	3.417	1868.61	0.11	271.66		
19-02-90	14:46:00	3.433	1868.67	0.06	271.66		
19-02-90	14:47:00	3.450	1868.73	0.06	271.66		
19-02-90	14:48:00	3.467	1868.79	0.07	271.66		
19-02-90	14:49:00	3.483	1868.88	0.09	271.66		
19-02-90	14:50:00	3.500	1868.92	0.04	271.66		
19-02-90	14:51:00	3.517	1868.94	0.02	271.66		
19-02-90	14:52:00	3.533	1868.94	0.00	271.66		
19-02-90	14:53:00	3.550	1869.01	0.07	271.66		
19-02-90	14:54:00	3.567	1868.96	-0.05	271.66		
19-02-90	14:55:00	3.583	1868.99	0.03	271.66		HANG @ 4000'KB
19-02-90	15:02:00	3.700	1794.04	-74.94	271.66		G= .068
19-02-90	15:03:00	3.717	1796.15	2.11	271.66		
19-02-90	15:04:00	3.733	1797.47	1.32	271.66		
19-02-90	15:05:00	3.750	1798.33	0.86	271.66		

EXPERTEST PTY. LTD.

00183

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION : TIRRAWAARA
 COMMENTS :

DATE: 19-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	15:06:00	3.767	1798.89	0.56	271.66		
19-02-90	15:07:00	3.783	1799.24	0.35	271.66		
19-02-90	15:08:00	3.800	1799.49	0.25	271.66		
19-02-90	15:09:00	3.817	1799.65	0.15	271.66		
19-02-90	15:10:00	3.833	1799.17	-0.47	271.66		
19-02-90	15:11:00	3.850	1799.97	0.80	271.66		
19-02-90	15:12:00	3.867	1800.06	0.09	271.66		
19-02-90	15:13:00	3.883	1800.11	0.05	271.66		
19-02-90	15:14:00	3.900	1800.18	0.07	271.66		
19-02-90	15:15:00	3.917	1800.23	0.05	271.66		
19-02-90	15:16:00	3.933	1800.25	0.03	271.66		
19-02-90	15:17:00	3.950	1800.27	0.02	271.66		
19-02-90	15:18:00	3.967	1800.29	0.02	271.66		
19-02-90	15:19:00	3.983	1800.31	0.02	271.66		
19-02-90	15:20:00	4.000	1800.32	0.01	271.66		
19-02-90	15:21:00	4.017	1800.33	0.01	271.66		
19-02-90	15:22:00	4.033	1800.31	-0.02	271.66		HANG @ 3000'KB
19-02-90	15:29:00	4.150	1730.36	-69.95	271.66		G= .068
19-02-90	15:30:00	4.167	1731.07	0.70	271.66		
19-02-90	15:31:00	4.183	1731.89	0.82	271.66		
19-02-90	15:32:00	4.200	1732.33	0.44	271.66		
19-02-90	15:33:00	4.217	1731.88	-0.45	271.66		
19-02-90	15:34:00	4.233	1732.82	0.95	271.66		
19-02-90	15:35:00	4.250	1733.03	0.20	271.66		
19-02-90	15:36:00	4.267	1733.19	0.16	271.66		
19-02-90	15:37:00	4.283	1733.35	0.15	271.66		
19-02-90	15:38:00	4.300	1732.72	-0.63	271.66		
19-02-90	15:39:00	4.317	1733.47	0.75	271.66		
19-02-90	15:40:00	4.333	1733.53	0.06	271.66		
19-02-90	15:41:00	4.350	1733.52	-0.01	271.66		
19-02-90	15:42:00	4.367	1733.59	0.07	271.66		
19-02-90	15:43:00	4.383	1731.50	-2.09	271.66		
19-02-90	15:44:00	4.400	1733.54	2.04	271.66		
19-02-90	15:45:00	4.417	1733.59	0.05	271.66		
19-02-90	15:46:00	4.433	1733.59	0.00	271.66		
19-02-90	15:47:00	4.450	1733.64	0.06	271.66		
19-02-90	15:48:00	4.467	1732.95	-0.70	271.66		
19-02-90	15:49:00	4.483	1667.30	-65.65	271.66		
19-02-90	15:50:00	4.500	1733.66	66.36	271.66		
19-02-90	15:51:00	4.517	1733.66	0.00	271.66		
19-02-90	15:52:00	4.533	1733.67	0.01	271.66		
19-02-90	15:53:00	4.550	1730.92	-2.75	271.66		
19-02-90	15:54:00	4.567	1733.81	2.89	271.66		
19-02-90	15:55:00	4.583	1733.81	0.00	271.66		
19-02-90	15:56:00	4.600	1733.80	-0.01	271.66		
19-02-90	15:57:00	4.617	1733.81	0.01	271.66		
19-02-90	15:58:00	4.633	1733.80	-0.01	271.66		HANG @ 2000'KB
19-02-90	16:04:00	4.733	1667.31	-66.49	271.66		G= .067
19-02-90	16:05:00	4.750	1666.95	-0.37	271.66		
19-02-90	16:06:00	4.767	1667.22	0.27	271.66		

EXPERTEST PTY. LTD.

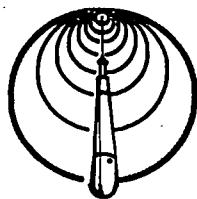
00184

CUSTOMER : SANTOS LTD
 LOCATION : BIMBAYA #2
 FORMATION: TIRRAWAARA
 COMMENTS :

DATE: 19-02-90
 TEST: FLOW BUILD UP
 PERFORATIONS: 9212'-9313'

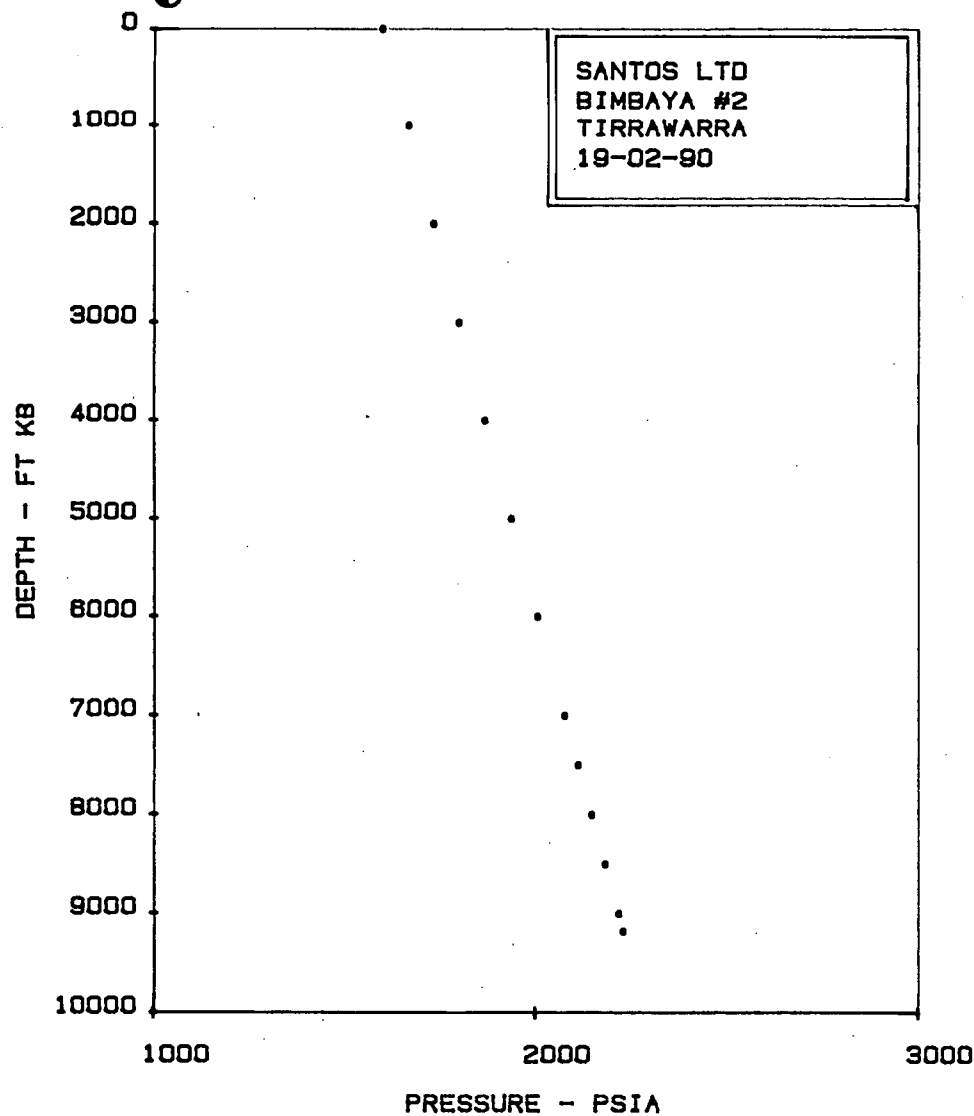
HP GAUGE S/N: 725
 OPERATOR: D. NORCROSS
 GAUGE DEPTH: 9180'KB

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
19-02-90	16:07:00	4.783	1667.41	0.19	271.66		
19-02-90	16:08:00	4.800	1667.56	0.14	271.66		
19-02-90	16:09:00	4.817	1667.67	0.12	271.66		
19-02-90	16:10:00	4.833	1667.68	0.01	271.66		
19-02-90	16:11:00	4.850	1667.78	0.10	271.66		
19-02-90	16:12:00	4.867	1667.84	0.07	271.66		
19-02-90	16:13:00	4.883	1667.85	0.01	271.66		
19-02-90	16:14:00	4.900	1667.86	0.01	271.66		
19-02-90	16:15:00	4.917	1667.85	-0.01	271.66		
19-02-90	16:16:00	4.933	1667.93	0.08	271.66		
19-02-90	16:17:00	4.950	1667.94	0.01	271.66		
19-02-90	16:18:00	4.967	1667.93	-0.01	271.66		
19-02-90	16:19:00	4.983	1667.94	0.01	271.66		
19-02-90	16:20:00	5.000	1667.96	0.02	271.66		
19-02-90	16:21:00	5.017	1667.97	0.01	271.66		
19-02-90	16:22:00	5.033	1667.97	0.00	271.66		
19-02-90	16:23:00	5.050	1667.98	0.01	271.66		
19-02-90	16:24:00	5.067	1667.96	-0.02	271.66		
19-02-90	16:25:00	5.083	1667.99	0.03	271.66		
19-02-90	16:38:00	5.300	1606.68	-61.30	271.66		HANG @ 1000'KB G= .066
19-02-90	16:39:00	5.317	1605.06	-1.62	271.66		
19-02-90	16:40:00	5.333	1603.93	-1.13	271.66		
19-02-90	16:41:00	5.350	1603.00	-0.94	271.66		
19-02-90	16:42:00	5.367	1601.74	-1.25	271.66		
19-02-90	16:43:00	5.383	1601.63	-0.12	271.66		
19-02-90	16:44:00	5.400	1601.75	0.13	271.66		
19-02-90	16:45:00	5.417	1601.56	-0.19	271.66		
19-02-90	16:46:00	5.433	1601.40	-0.16	271.66		
19-02-90	16:47:00	5.450	1601.16	-0.24	271.66		
19-02-90	16:48:00	5.467	1600.86	-0.30	271.66		
19-02-90	16:49:00	5.483	1600.65	-0.20	271.66		
19-02-90	16:50:00	5.500	1600.49	-0.16	271.66		
19-02-90	16:51:00	5.517	1600.35	-0.14	271.66		
19-02-90	16:52:00	5.533	1600.19	-0.16	271.66		
19-02-90	16:53:00	5.550	1600.10	-0.09	271.66		
19-02-90	16:54:00	5.567	1599.94	-0.16	271.66		
19-02-90	16:55:00	5.583	1599.93	-0.01	271.66		
19-02-90	16:56:00	5.600	1599.88	-0.05	271.66		
19-02-90	16:57:00	5.617	1599.90	0.02	271.66		
19-02-90	16:58:00	5.633	1599.94	0.04	271.66		
19-02-90	16:59:00	5.650	1599.85	-0.09	271.66		
19-02-90	17:00:00	5.667	1599.85	0.00	271.66		SURFACE STOP G= .068 END OF SURVEY

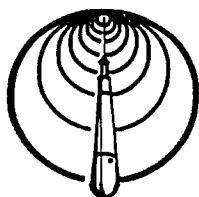


EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

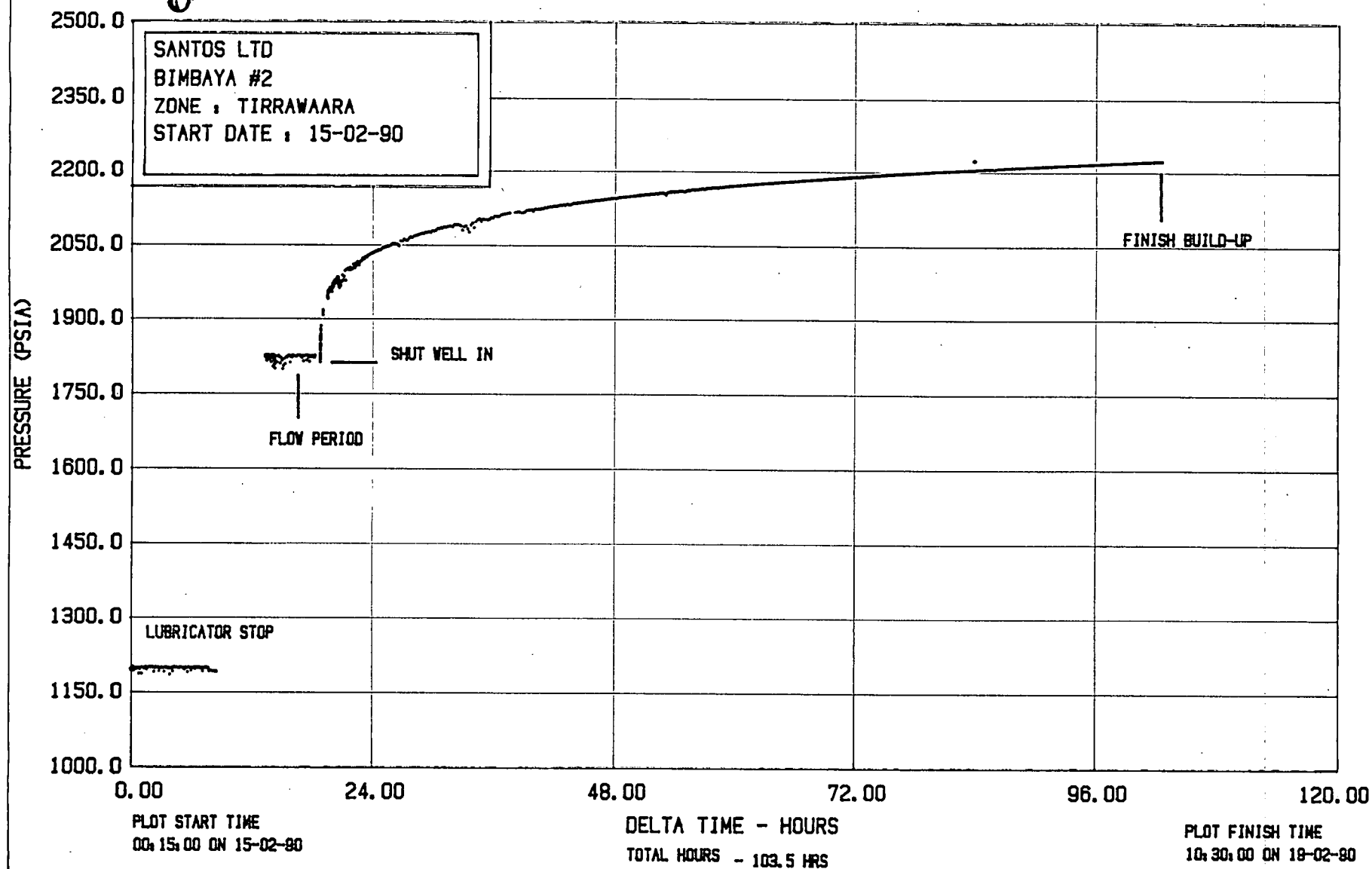
STATIC GRADIENT SURVEY



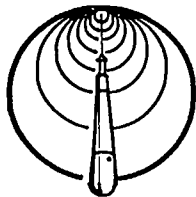
STOP	TIME	DEPTH ('KB)	PRESSURE (PSIA)	GRADIENT (PSI/FT)
1	1135	9180	2229.31	----
2	1151	9000	2218.28	0.0613
3	1215	8500	2183.76	0.0690
4	1240	8000	2148.48	0.0706
5	1305	7500	2113.12	0.0707
6	1329	7000	2077.52	0.0712
7	1358	6000	2007.01	0.0705
8	1427	5000	1937.77	0.0692
9	1455	4000	1868.99	0.0688
10	1522	3000	1800.31	0.0687
11	1558	2000	1733.80	0.0665
12	1625	1000	1667.99	0.0658
13	1700	LUB.	1599.85	0.0681



EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE LINEAR PLOT

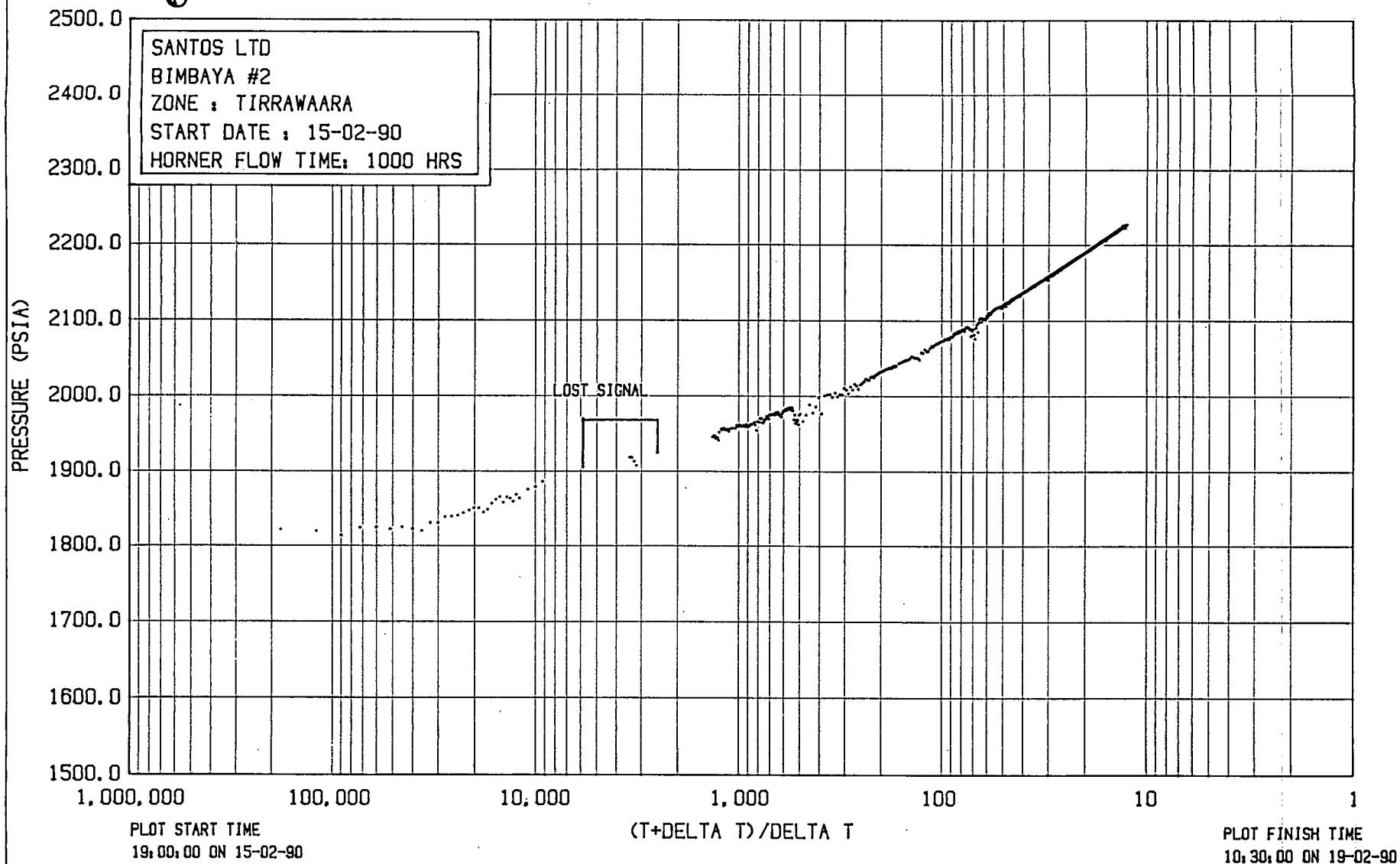


00186

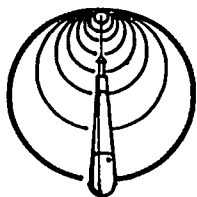


EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

HORNER PLOT

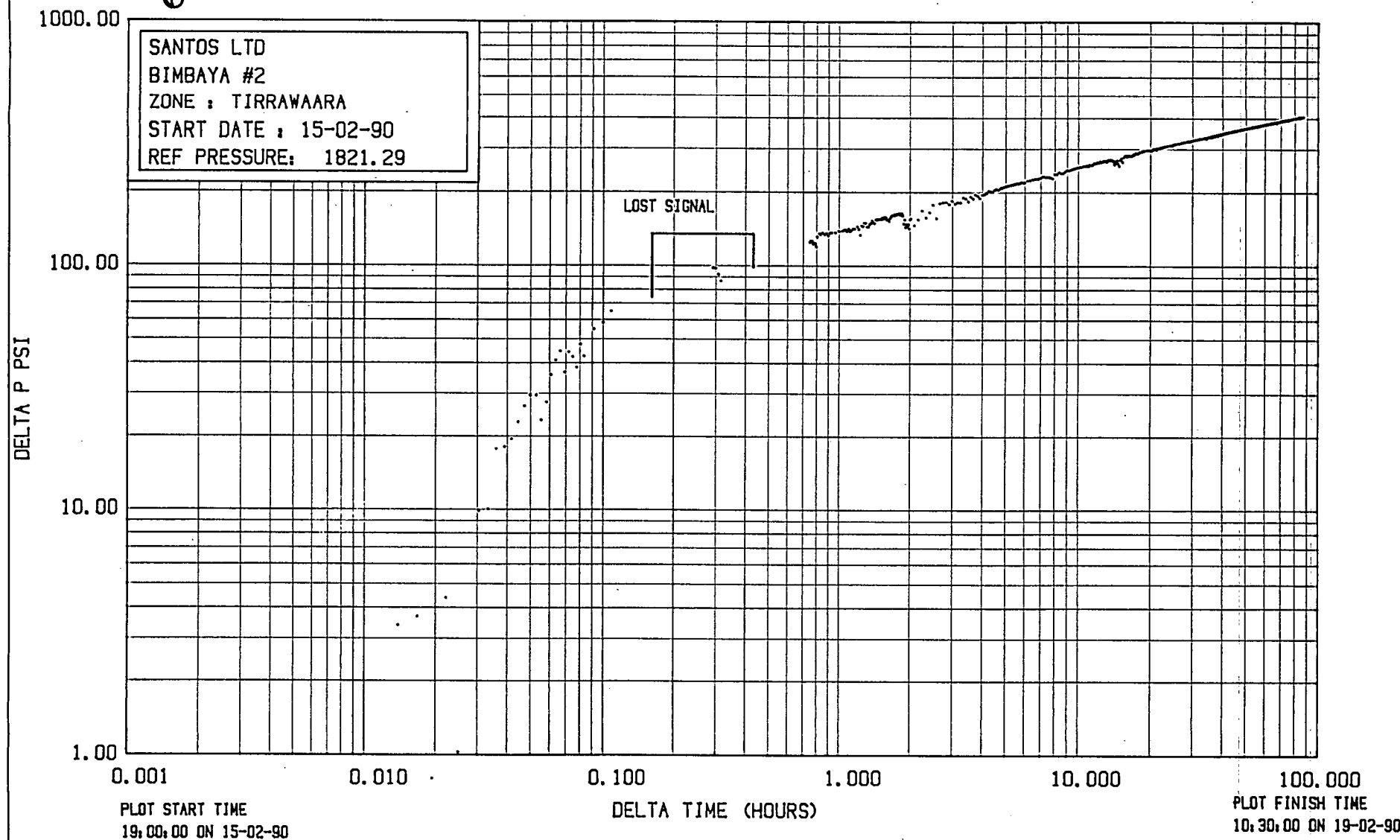


00187

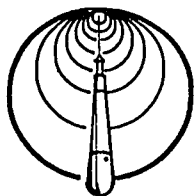


EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

LOG-LOG PLOT

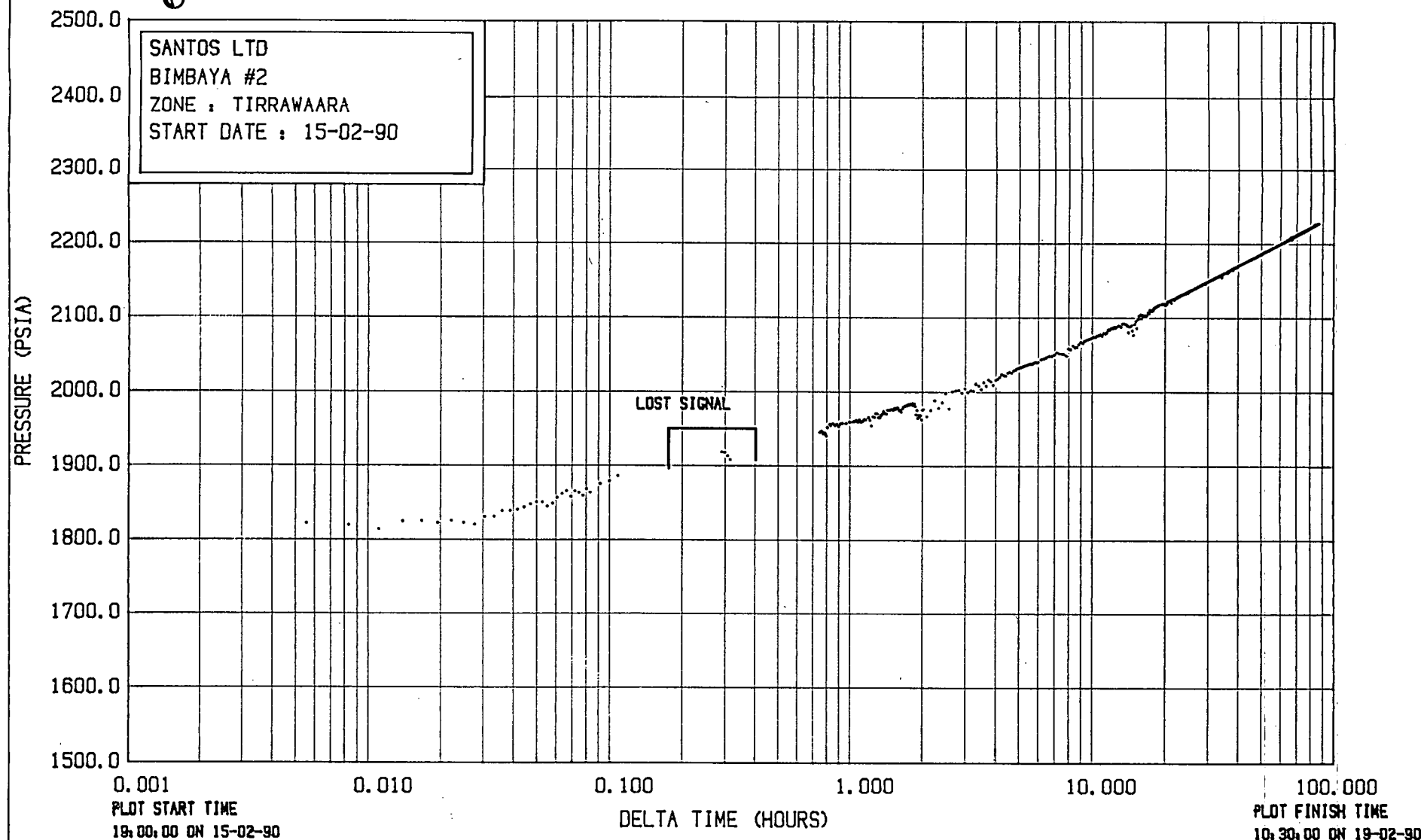


00188

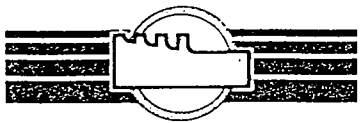


EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

SEMI-LOG PLOT



EXPERTEST PTY. LTD.



SEQUENCE OF EVENTS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 1 OF 2

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 13/2/90

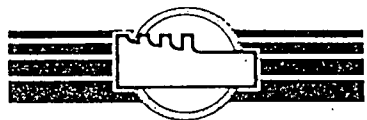
TEST TYPE : LET & BUILD UP

OPR : I. KURASIAK

DATE/TIME	DESCRIPTION OF EVENTS
13/2/90	
11:00	ARRIVE ON LOCATION AND RIG IN SEPARATOR #37 TO THE TEST FLANGES ON PRODUCTION WATER RUN
14:00	PRODUCTION OPERATOR ARRIVE ON LOCATION. SHUT WELL IN AND INSTALL SWAB VALVE.
14:15	OPEN WELL BACK TO PRODUCTION ON 40% CHOKE SIZE (PROD. CHOKE SIZE)
	RIG IN E-LINE EQUIPMENT
16:30	TRIM FLOW BY PASS SEPARATOR INTO PRODUCTION LINE.
17:00	TRIM FLOW THROUGH SEPARATOR AND START TESTING
	RUN IN HOLE C.C.L. TOOL TO LOCATE END OF TUBING AND CHECK FOR STRETCH ON LINE
	PULL OUT OF HOLE
	ARRIVE IN LUBRICATOR
14/2/90	
18:00	PRESSURE UP LUBRICATOR FOR E-LINE
20:00	RUN IN HOLE TO 25'KB AND CHECK GAUGES
21:30	PULL OUT OF HOLE AND CHECK GAUGES AT SURFACE
22:00	RUN IN HOLE TO 25'KB AND CHECK GAUGES
15/2/90	
08:45	RUN IN HOLE WITH GAUGES
09:30	ON BOTTOM @ 9180'KB
19:00	SHUT WELL IN FOR BUILD UP
16/2/90	
	ON BUILD UP
17/2/90	
	WELL ON BUILD UP
	*SEE NEXT PAGE

06100

EXPERTEST PTY. LTD.



SEQUENCE OF EVENTS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 2

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 18/2/90

TEST TYPE : LET. & BUILD UP

OPR : I. KURASIAK

DATE/TIME

DESCRIPTION OF EVENTS

18/2/90

WELL ON BUILD UP

19/2/90

11:00

PULL OUT OF HOLE WITH STATIC GRADIENT SURVEY ON THE WAY OUT

16:45

ARRIVE IN LUBRICATOR

18:00

RIG DOWN E-LINE EQUIPMENT

20/2/90

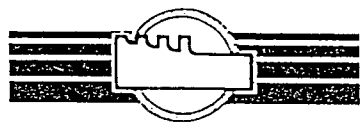
07:30

WORK OUT WELL BACK TO PRODUCTION DEPARTMENT

END OF TEST

00191

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD

PERFORATIONS: 9212' -9319' KB

PAGE: 1 OF 6

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 13TH FEBRUARY 1990

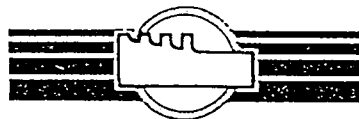
TEST TYPE : L.E.T.

OPR: I. KURASIAK

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE /KPa	ANNULUS PRESSURE KPa	WELLHEAD TEMP °C	CHOKE SIZE	PRESSURE /KPa	TEMP °C	GAS m ³ /10 ³ /D	OIL m ³ /D	WATER m ³ /D	GAS m ³ /10 ³	OIL m ³	WATER m ³	TOTAL LIQUID RATE m ³ /d	GLR m ³ 10 ³ /m ³
1700	0	8101	575	75	40%	COMMENCE L.E.T.									
1800	1	8177	575	73	"	5571	74	127.994	19.195	1.599	5.333	.799	.066	20.794	6.156
1900	2	8177	575	73	"	5528	74	124.935	20.795	3.199	10.538	1.665	.199	23.994	5.207
2000	3	8191	575	72	"	5516	74	128.943	12.797	3.199	15.910	2.198	.332	15.996	8.061
2100	4	8191	575	71	"	5481	75	121.575	28.793	3.199	20.975	3.398	.465	31.992	3.800
2200	5	8184	575	71	"	5481	74	121.575	19.195	3.199	26.040	4.198	.598	22.394	5.429
2300	6	8184	575	71	"	5460	74	121.265	19.195	3.199	31.092	4.998	.731	22.394	5.415
2400	7	8177	575	71	"	5447	74	119.894	19.195	3.199	36.088	5.798	.864	22.394	5.354
14TH FEBRUARY 1990															
0100	8	8170	580	70	"	5447	74	118.712	22.394	3.199	41.034	6.731	.997	25.593	4.638
0200	9	8163	580	70	"	5447	74	118.712	19.195	3.199	45.980	7.530	1.130	22.394	5.301
0300	10	8156	580	70	"	5447	74	121.065	19.195	3.199	51.024	8.330	1.263	22.394	5.406
0400	11	8163	580	70	"	5447	74	121.065	19.195	3.199	56.068	9.130	1.396	22.394	5.406
0500	12	8156	580	69	"	5447	74	118.712	19.195	3.199	61.014	9.930	1.529	22.394	5.301
0600	13	8156	580	70	"	5447	74	118.712	19.195	3.199	65.960	10.730	1.662	22.394	5.301
0700	14	8156	580	71	"	5447	74	118.712	23.994	1.599	70.906	11.729	1.728	25.593	4.638
0800	15	8163	575	71	"	5447	74	118.712	20.794	1.599	75.852	12.595	1.795	22.393	5.301
0900	16	8177	575	72	"	5481	74	119.213	20.794	3.199	80.819	13.461	1.928	23.993	4.968
1000	17	8157	575	72	"	5481	74	119.213	20.794	1.599	85.786	14.327	1.994	22.393	5.323
1100	18	8170	575	74	"	5516	74	118.510	22.394	1.599	90.723	15.260	2.060	23.993	4.939
1200	19	8157	575	77	"	5585	75	120.304	22.394	3.199	95.735	16.193	2.193	25.593	4.700

00192

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 6

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 14TH FEBRUARY 1990

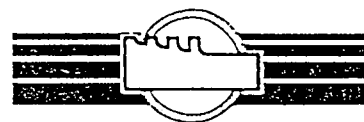
TEST TYPE : L.E.T.

OPR : I. KURASIAK

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE /KPa	ANNULUS PRESSURE /KPa	WELLHEAD TEMP °C	CHOKE SIZE	PRESSURE /KPa	TEMP °C	GAS m ³ 10 ³ /D	OIL m ³ /D	WATER m ³ /D	GAS m ³ 10 ³	OIL m ³	WATER m ³	TOTAL LIQUID RATE m ³ /d	GLR m ³ 10 ³ /m
1300	20	8143	575	78	40%	5585	75	120.304	19.195	3.199	95.735	16.992	2.326	22.394	5.372
1400	21	8143	575	78	"	5585	75	120.304	19.195	3.199	100.747	17.791	2.459	22.394	5.372
1500	22	8136	575	77	"	5585	75	120.304	19.195	3.199	105.760	18.590	2.592	22.394	5.372
1600	23	8163	575	76	"	5585	75	120.304	20.794	3.199	110.772	19.456	2.725	23.993	5.014
1700	24	8163	575	76	"	5585	75	127.324	17.595	3.199	116.077	20.189	2.858	20.794	6.123
1800	25	8163	575	72	"	5585	75	127.324	17.595	1.599	121.382	20.922	2.924	19.194	6.633
1800	CHANGES TO RATES CAUSED BY WELL FLOW CONDITION PRESSURE UP LUB WITH E-GAUGES.														
1900	26	8177	575	74	"	5585	75	127.324	7.998	1.599	126.687	21.255	2.990	9.597	13.267
2000	27	8177	575	74	"	5516	75	133.938	17.595	1.599	132.267	21.988	3.056	19.194	6.978
2000	RUN IN HOLE 25' KB AND CHECK THE GAUGES														
2100	28	8170	575	73	"	5516	75	130.707	20.799	3.199	137.713	22.854	3.189	23.993	5.448
2130	PULL OUT OF HOLE AND CHECK GAUGE AT SURFACE														
2200	29	8157	575	72	"	5516	75	130.707	19.195	3.199	143.159	23.653	3.322	22.394	5.837
2200	RUN IN HOLE TO 25' KB TO CHECK THE GAUGE														
2300	30	8170	575	71	"	5516	74	128.943	19.195	1.599	148.532	24.52	3.388	20.794	6.201
2400	31	8170	575	71	"	5481	74	128.403	22.394	3.199	153.882	25.385	3.521	25.593	5.017
15TH FEBRUARY 1990															
0100	32	8170	575	72	"	5481	74	128.403	19.195	3.199	164.232	26.184	3.654	22.394	5.733
0200	33	8150	575	72	"	5481	74	126.168	22.394	3.199	169.489	27.117	3.787	25.593	4.929
0300	34	8150	575	72	"	5481	74	126.168	19.195	3.199	174.746	27.916	3.920	22.394	5.634
0400	35	8170	575	72	"	5481	74	126.168	19.195	3.199	180.003	28.715	4.053	22.394	5.634

00193

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 9212' - 9313' KB

PAGE: 3 OF 6

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 15TH FEBRUARY 1990

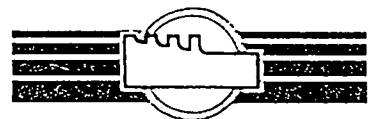
TEST TYPE : L.E.T.

OPR: I. KURASIAK

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE /KPa)	ANNULUS PRESSURE /KPa)	WELLHEAD TEMP (°C)	CHOKE SIZE	PRESSURE /KPa)	TEMP (°C)	GAS m ³ 10 ³ /D	OIL m ³ /D	WATER m ³ /D	GAS m ³ 10 ³	OIL m ³	WATER m ³	TOTAL LIQUID RATE m ³ /d	GLR m ³ 10 ³ /m ³
0500	36	8150	575	72	40%	5447	74	130.052	22.399	3.199	185.421	29.648	4.189	25.593	5.081
0600	37	8143	575	72	"	5447	74	130.052	19.195	3.199	190.839	30.447	4.319	22.394	5.807
0700	38	8150	575	72	"	5447	74	127.869	19.195	1.599	196.167	31.247	4.385	20.794	6.149
0800	39	8150	575	72	"	5481	74	130.600	15.996	1.599	201.609	31.914	4.451	17.595	7.423
0845	RUN IN HOLE WITH H.P. GAUGES														
0900	40	8129	575	71	"	5516	74	128.943	19.195	3.199	206.982	32.713	4.584	22.394	5.757
0930	ON BOTTOM STOP @ 9180' KB														
1000	41	8122	575	74	"	5516	74	128.943	25.536	1.599	212.355	33.777	4.650	27.135	4.752
1030	41.5	8129	575	75	"	5550	74	129.483							
1100	42	8129	575	76	"	5550	74	129.483	19.195	1.599	217.750	34.576	4.716	20.794	6.226
1130	42.5	8122	575	76	"	5584	75	129.580							
1200	43	8122	575	77	"	5584	75	129.580	19.195	3.199	223.149	35.376	4.849	22.394	5.786
1230	43.5	8122	575	79	"	5584	75	129.580							
1300	44	8122	575	77	"	5584	75	129.580	19.195	3.199	228.548	36.175	4.982	22.394	5.786
1330	44.5	8122	575	80	"	5584	75	129.580							
1400	45	8108	575	80	"	5584	75	130.693	19.195	3.199	233.994	36.974	5.115	22.394	5.836
1430	45.5	8122	575	77	"	5584	75	130.693							
1500	46	8122	575	75	"	5584	75	130.693	19.193	3.199	239.439	37.774	5.115	22.394	5.836
1530	46.5	8122	575	75	"	5584	75	130.693							
1600	47	8122	575	77	"	5584	75	130.693	19.193	3.199	244.863	38.573	5.248	22.394	5.836
1630	47.5	8115	575	77	"	5584	75	130.693							

00194

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD

PERFORATIONS: 9212' - 9313' KB

PAGE: 4 OF 6

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 15TH FEBRUARY 1990

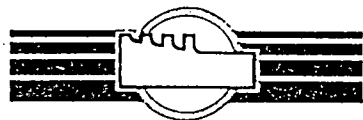
TEST TYPE : L.E.T.

OPR : I. KURASIAK

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE /KPa	ANNULUS PRESSURE /KPa	WELLHEAD TEMP /°C	CHOKE SIZE	PRESSURE /KPa	TEMP /°C	GAS m ³ 10 ³ /D	OIL m ³ /D	WATER m ³ /D	GAS m ³ 10 ³	OIL m ³	WATER m ³	TOTAL LIQUID RATE m ³ /d	GLR m ³ 10 ³ /m ³
1700	48	8115	575	76	40%	5584	75	130.693	19.193	3.199	250.308	39.373	5.381	22.394	5.836
1730	48.5	8122	575	77	"	5584	75	130.693							
1800	49	8122	575	77	"	5584	75	130.693	19.193	1.599	255.753	40.172	5.447	20.792	6.285
1830	49.5	8115	575	75	"	5584	75	129.580							
1900	50	8108	575	76	"	5584	75	129.580	20.794	3.199	261.154	41.038	5.580	23.993	5.410
1900	0	SHUT WELL IN FOR BUILD UP													
1915		9777	575	68											
1930		9763	575	63											
1945		9736	575	56											
2000	1	9708	575	54											
2015		9736	575	50											
2030		9756	575	47											
2045		9770	575	45											
2100	2	9839	575	44											
2115		N/A VAETRIX GAUGE MALFUNCTION													
2130															
2145		9929	575	39											
2200	3	9991	575	37											
2215		10060	575	37											
2230		10101	575	35											
2245		10122	575	35											

00195

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 9212' - 9313' KB

PAGE: 5 OF 6

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 15TH FEBRUARY 1990

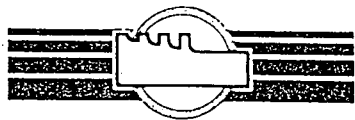
TEST TYPE : L.E.T. & BUILD UP

OPR: I. KURASIAK

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE /KPa	ANNULUS PRESSURE /KPa	WELLHEAD TEMP °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		
2300	4	10142	575	34											
16TH FEBRUARY 1990															
0300	8	10294	575	27											
0700	12	10439	575	23											
1100	16	10542	575	42											
1500	20	10563	575	48											
1900	24	10632	575	39											
2300	10653	575	31												
17TH FEBRUARY 1990															
0300	32	10687	575	26											
0700	36	10729	575	24											
1100	40	10756	575	30											
1500	44	10756	575	40											
1900	48	10797	575	35											
2300	52	10818	575	26											
18TH FEBRUARY 1990															
0300	56	10832													
0700	60	10859													
1100	64	10880													
1500	68	10901													
1900	72	10922													

00196

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 1 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

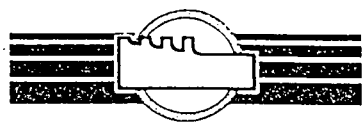
DATE: 13/2/90

TEST TYPE : L.E.T.

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)
13/2/90														
11:00		ARRIVE ON LOCATION AND RIG IN SEPARATOR #37 TO THE TEST FLANGES ON PRODUCTION												
		METER RUN.												
14:00		PRODUCTION OPERATOR ARRIVE ON LOCATION. SHUT WELL IN AND INSTALL SWAB VALVE												
14:15		OPEN WELL BACK TO PRODUCTION ON 40% CHOKE SIZE (PRODUCTION CHOKE SIZE)												
16:30		TRIM FLOW BY PASS SEPARATOR INTO PRODUCTION LINE												
17:00		TRIM FLOW THROUGH SEPARATOR AND START TESTING												
17:00	0	8101	575	75	40%		2"				6.5"	5.25"		1.25"
18:00	1	8177	575	73	40		2	808	56	163.4	9.75	8.25		1.5"
19:00	2	8177	575	73	40		2	805	54	165.2	13.5	11.5		2"
20:00	3	8191	575	72	40		2	800	58	165.2	16	13.5		2.5"
21:00	4	8191	575	71	40		2	795	52	165.2	21	18		3"
22:00	5	8184	575	71	40		2	795	52	165.2	24.5	21		3.5"
23:00	6	8184	575	71	40		2	792	52	165.2	28	24		4"
24:00	7	8177	575	71	40		2	790	51	165.2	31.5	27		4.5"
14/2/90														
01:00	8	8170	580	70	40		2"	790	50	165.2	35.5	30.5		5"
02:00	9	8163	580	70	40		2	790	50	165.2	39	33.5		5.5"
03:00	10	8156	580	70	40		2	790	52	165.2	42.5	36.5		6"
04:00	11	8163	580	70	40		2	790	52	165.2	46	39.5		6.5"
05:00	12	8156	580	69	40		2	790	50	165.2	49.5	42.5		7"
06:00	13	8156	580	70	40		2	790	50	165.2	53	45.5		7.5"

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

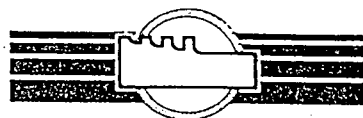
DATE: 14/2/90

TEST TYPE : L.E.T.

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)
14/2/90														
07:00	14	8156	580	71	40%		2	790	50	165.2	57	49.25"		7.75"
08:00	15	8163	575	71	40		2	790	50	165.2	60.5	52.5"		8"
09:00	16	8177	575	72	40		2	795	50	165.2	64.25	55.75"		8.5"
10:00	17	8157	575	72	40		2	795	50	165.2	67.75	59"		8.75"
11:00	18	8170	575	74	40		2	800	49	167	71.5"	62.5"		9"
12:00	19	8157	575	77	40		2	810	50	167	75.5"	66"		9.5"
13:00	20	8143	575	78	40		2	810	50	167	79"	69"		10"
14:00	21	8143	575	78	40		2	810	50	167	82.5"	72"		10.5"
15:00	22	8136	575	77	40		2	810	50	167	86"	75"		11"
16:00	23	8163	575	76	40		2	810	50	167	89.75"	78.25"		11.5"
17:00	24	8163	575	76	40		2	810	56	167	93	81"		12"
18:00	25	8163	575	72	40		2	810	56	167	96	83.75"		12.25"
18:00	25	PRESSURE UP LUBRICATOR FOR E-LINE H.P. GAUGES												
19:00	26	8177	575	74	40		2	810	56	167	97.5	85"		12.5"
20:00	27	8177	575	74	40		2	800	63	167	199.5"	87.75"		12.75"
20:00	27	RUN IN HOLE TO 25'KB TO CHECK GAUGES												
21:00	28	8170	575	73	40		2	800	60	167	104.25"	91"		13.25"
21:30		PULL OUT OF HOLE AND CHECK GAUGES AT SURFACE												
22:00	29	8157	575	72	40	R.I.H.	2	800	60	167	107.75"	94"		13.75"
23:00	30	8170	575	71	40		2	800	58	165.2	111"	97"		14"
24:00	31	8170	575	71	40		2	795	58	165.2	114.5"	100.5"		14.5"

EXPERTEST PTY. LTD.



FIELD READINGS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 9212' - 9313' KB

PAGE: 3 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 15TH FEBRUARY 1990

TEST TYPE : L.E.T.

OPR : I. KURASIAK

TIME		WELLHEAD DATA					SEPARATOR DATA				LIQUID PRODUCTION			
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (KPa)	ANNULUS PRESSURE (KPa)	WELLHEAD TEMP (°C)	CHOKE SIZE %	BS&W (%)	ORIFICE PLATE SIZE (IN)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN WC)	GAS TEMP (°F)	TOTAL LIQUID (IN/)	OIL (IN/)	OIL API GRAVITY @ 60°F	WATER (IN/)
0100	32	8170	575	72	40		2	795	58	165.2	118.5	103.5		15
0200	33	8150	575	72	40		2	795	56	165.2	122.5	107		15.5
0300	34	8150	575	72	40		2	795	56	165.2	126	110		16
0400	35	8150	575	72	40		2	795	56	165.2	129.5	113		16.5
0500	36	8150	575	72	40		2	790	60	165.2	133.5	116.5		17
0600	37	8143	575	72	40		2	790	60	165.2	137	119.5		17.5
0700	38	8150	575	72	40		2	790	58	165.2	140.25	122.5		17.75
0800	39	8150	575	72	40		2	795	60	165.2	143	125		18
0845	RUN IN HOLE WITH H.P. GAUGES.													
0900	40	8129	575	71	40		2	800	58	165.2	147	128		18.5
0930	ON BOTTOM STOP @ 9180' KB													
1000	41	8122	575	74	40		2	800	58	165.2	150.75	132		18.75
1030		8129	575	75	40		2	805	58	165.2				
1100	42	8129	575	76	40		2	805	58	165.2	154	135		19
1130		8122	575	76	40		2	810	58	167				
1200	43	8122	575	77	40		2	810	58	167	157.5	138		19.5
1230		8122	575	79	40		2	810	58	167				
1300	44	8122	575	77	40		2	810	58	167	161	141		20
1330		8122	575	80	40		2	810	58	167				
1400	45	8108	575	80	40		2	810	59	167	164.5	144		20.5
1430		8122	575	77	40		2	810	59	167				

FIELD READINGS

CUSTOMER : SANTOS LTD

PERFORATIONS: 9212'-9313' KB

PAGE: 4 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

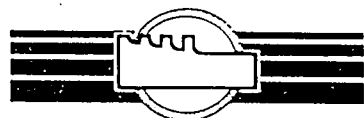
DATE: 15TH FEBRUARY 1990

TEST TYPE : L.E.T.

OPR: I. KURASIAK

[illegible]

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER : SANTOS LTD.

PERFORATIONS: 9212' - 9313' KB

PAGE 1 OF 3

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

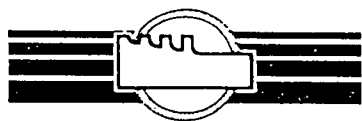
DATE: 13TH FEBRUARY 1990

TEST TYPE : L.E.T.

OPR : I. KURASIAK

TANK NUMBER	#1 = 54	TANK CAPACITY	#1 = 56.604	TANK		#1 = .2666m³/in		OIL API GRAVITY = @ 60°F			
	#2 =		#2 =	SCALE	#2 =	bbls/in - m³/cm					
DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/)	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/)	TANK PRODUCTION (m³)	FLOW RATE (m³/D)	CUMULATIVE PRODUCTION (m³)	TANK DIP (IN/)	TANK PRODUCTION (m³)	FLOW RATE (m³/D)	CUMULATIVE PRODUCTION (m³)
1700	0	54	6.5	5.25	INITIAL OIL DIP			1.25	INITIAL WATER DIP		
1800	1	"	9.75	8.25	.799	19.195	.799	1.5	.066	1.599	.066
1900	2	"	13.5	11.5	.866	20.795	1.665	2	.133	3.199	.199
2000	3	"	16	13.5	.533	12.797	2.198	2.5	.133	3.199	.332
2100	4	"	21	18	1.200	28.793	3.398	3	.133	3.199	.465
2200	5	"	24.5	21	.800	19.195	4.198	3.5	.133	3.199	.598
2300	6	"	28	24	.800	19.195	4.998	4	.133	3.199	.731
2400	7	"	31.5	27	.800	19.195	5.798	4.5	.133	3.199	.864
14TH FEBRUARY 1990											
0100	8	"	35.5	30.5	.9331	22.3944	6.731	5	.133	3.199	.997
0200	9	"	39	33.5	.7998	19.195	7.730	5.5	.133	3.199	1.130
0300	10	"	42.5	36.5	.7998	19.195	8.330	6	.133	3.199	1.263
0400	11	"	46	39.5	.7998	19.195	9.130	6.5	.133	3.199	1.396
0500	12	"	49.5	42.5	.7998	19.195	9.930	7	.133	3.199	1.529
0600	13	"	53	45.5	.7998	19.195	10.730	7.5	.133	3.199	1.662
0700	14	"	57	49.25	.999	23.994	11.729	7.75	.066	1.599	1.728
0800	15	"	60.5	52.5	.866	20.794	12.595	8	.066	1.599	1.795
0900	16	"	64.25	55.75	.866	20.794	13.461	8.5	.133	3.199	1.928
1000	17	"	67.75	59	.866	20.794	14.327	8.75	.066	1.599	1.994
1100	18	"	71.5	62.5	.933	22.394	15.260	9	.066	1.599	2.060

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER : SANTOS LTD.

PERFORATIONS: 9212' -9313' KB

PAGE: 2 OF 3

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 14TH FEBRUARY 1990

TEST TYPE : L.E.T.

OPR : I. KURASIAK

OIL API GRAVITY =53.0 @ 60°F

TANK NUMBER	#1 = 54	TANK CAPACITY	#1 = 56.604 /m³		TANK SCALE	#1 = .2666m³/in		OIL API GRAVITY =53.0 @ 60°F			
	#2 =		#2 = bbls/m³			#2 = bbls/in - m³/cm					
DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP (IN/	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP (IN/	TANK PRODUCTION /m³)	FLOW RATE /m³D)	CUMULATIVE PRODUCTION /m³)	TANK DIP (IN/	TANK PRODUCTION /m³)	FLOW RATE /m³D)	CUMULATIVE PRODUCTION 'm³)
1200	19	54	75.5	66	.933	22.394	16.193	9.5	.133	3.199	2.193
1300	20	"	79	69	.799	19.195	16.992	10	.133	3.199	2.326
1400	21	54	82.5	72	.799	19.195	17.791	10.5	.133	3.199	2.459
1500	22	54	86	75	.799	19.195	18.590	11	.133	3.199	2.592
1600	23	54	89.75	78.25	.866	20.794	19.456	11.5	.133	3.199	2.725
1700	24	54	93	81	.733	17.595	20.189	12	.133	3.199	2.858
1800	25	54	96	83.75	.733	17.595	20.922	12.25	.066	1.599	2.924
1900	26	54	97.5	85	.333	7.998	21.255	12.5	.066	1.599	2.990
2000	27	54	100.5	87.75	.733	17.595	21.988	12.75	.066	1.599	3.056
2100	28	54	104.25	91	.866	20.794	22.854	13.25	.133	3.199	3.189
2200	29	54	107.75	94	.799	19.195	23.653	13.75	.133	3.199	3.322
2300	30	54	111	97	.799	19.195	24.452	14	.066	1.599	3.388
2400	31	54	114.5	100.5	.933	22.394	25.385	14.5	.133	3.199	3.521
15TH FEBRUARY 1990											
0100	32	54	118.5	103.5	.799	19.195	26.184	15	.133	3.199	3.654
0200	33	54	122.5	107	.933	22.394	27.117	15.5	.133	3.199	3.787
0300	34	54	126	110	.799	19.195	27.916	16	.133	3.199	3.920
0400	35	54	129.5	113	.799	19.195	28.715	16.5	.133	3.199	4.053
0500	36	54	133.5	116.5	.933	22.394	29.648	17	.133	3.199	4.186
0600	37	54	137	119.5	.799	19.195	30.447	17.5	.133	3.199	4.319

	PERFORATION
	FORMATION

WELL NAME: BIMBAYA #2

TANK	#1 = 5
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FORMATION : TIBRAWARRA

DATE: 15TH FEBRUARY 1964

OPR : T. KIRASTAK

OIL API GRAVITY = 51

NUMBER	#2 =
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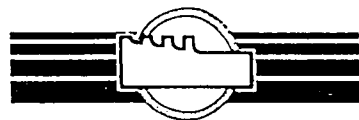
CAPACITY	#2 =	bbbls/m ³
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SCALE #2 =

OIL API GRAVITY = 53.8 @ 60°F

[illegible]

EXPERTEST PTY. LTD.



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 1 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 13/2/90

TEST TYPE : L.E.T.

OPR : J. KURASIAK

ORIFICE METER TYPE: DANIELS SENIOR

STATIC PRESSURE RANGE : 0-1500 psi PSIG

GAS SPECIFIC GRAVITY (SG) = 1.020

METER RUN SIZE : 3.826"

DIFFERENTIAL PRESS. RANGE: 0-200 psi IN WC

FG $\sqrt{(I/SG)}$ = .9901

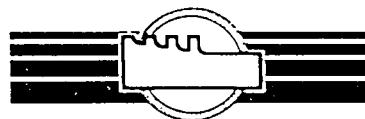
SEPARATOR NO : #37

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU × FG) = 23.764

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)
13/2/90															
17:00	0	COMMENCE L.E.T.													
18:00	1	40	822.73	56	163.4	2	214.6459	849.41	0.9133	1.1476	1.0004	890.625	21164.6851	4.543	127.994
19:00	2	"	819.73	54	165.2	"	210.3935	849.41	0.9120	1.1445	1.0004	886.355	21076.7409	4.434	124.935
20:00	3	"	814.73	58	165.2	"	217.3806	849.41	0.9120	1.1432	1.0004	885.948	21053.7045	4.577	128.943
21:00	4	"	809.73	52	165.2	"	205.1974	849.41	0.9120	1.1419	1.0004	884.940	21029.2894	4.315	121.575
22:00	5	"	809.73	52	1165.2	"	205.1974	849.41	0.9120	1.1419	1.0004	884.940	21029.2894	4.315	121.575
23:00	6	"	806.73	52	165.2	"	204.8169	849.41	0.9120	1.1412	1.0004	884.398	21015.2687	4.304	121.269
24:00	7	"	804.73	51	165.2	"	202.5864	849.44	0.9120	1.1407	1.0004	884.042	21005.7974	4.255	119.894
14/2/90															
01:00	8	40	804.73	50	165.2	"	200.5904	849.41	.9120	1.1407	1.0004	884.010	21005.6423	4.214	118.712
02:00	9	"	804.73	50	165.2	"	200.5904	849.41	.9120	1.1407	1.0004	884.010	21005.6423	4.214	118.712
03:00	10	"	804.73	52	165.2	"	204.5629	849.41	.9120	1.1407	1.0004	884.010	21005.9526	4.297	121.065
04:00	11	"	804.73	52	165.2	"	204.5629	849.41	.9120	1.1407	1.0004	884.010	21005.9526	4.297	121.065
05:00	12	"	804.73	50	165.2	"	200.5904	849.41	.9120	1.1407	1.0004	884.010	21005.6423	4.214	118.712
06:00	13	"	804.73	50	165.2	"	200.5904	849.41	.9120	1.1407	1.0004	884.010	21005.6423	4.214	118.712
07:00	14	"	804.73	50	165.2	"	200.5904	849.41	.9120	1.1407	1.0004	884.010	21005.6423	4.214	118.712
08:00	15	"	804.73	50	165.2	"	200.5904	849.41	.9120	1.1407	1.0004	884.010	21005.6423	4.214	118.712
09:00	16	"	809.73	50	165.2	"	201.2126	849.41	.9120	1.1419	1.0004	884.940	21028.9807	4.231	119.213
10:00	17	"	809.73	50	165.2	"	201.2126	849.41	.9120	1.1419	1.0004	884.940	21028.9807	4.231	119.213

EXPERTEST PTY. LTD.



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 14/2/90

TEST TYPE : L.E.T.

OPR : I. KURASIAK

ORIFICE METER TYPE: DANIEL SENIOR

STATIC PRESSURE RANGE : 0-1500

PSIG

GAS SPECIFIC GRAVITY (SG) = 1.020

METER RUN SIZE : 3.826"

DIFFERENTIAL PRESS. RANGE: 0-200

IN WC

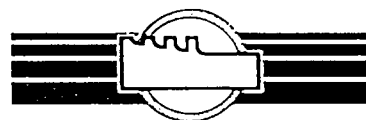
FG $\sqrt{(I/SG)}$ = .9901

SEPARATOR NO :

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU × FG) =

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)
14/2/90															
11:00	18	40%	814.73	49	165.2	2"	199.8043	849.41	.9120	1.1432	1.0004	885.948	21052.3221	4.206	118.510
12:00	19	40	824.73	50	167	2	203.0677	849.41	.9107	1.1435	1.0004	884.917	21027.7572	4.270	120.304
13:00	20	40	824.73	50	167	2	203.0677	849.41	.9107	1.1435	1.0004	884.917	21027.7572	4.270	120.304
14:00	21	40	824.73	50	167	2	203.0677	849.41	.9107	1.1435	1.0004	884.917	21027.7572	4.270	120.304
15:00	22	40	824.73	50	167	2	203.0677	849.41	.9107	1.1435	1.0004	884.917	21027.7572	4.270	120.804
16:00	23	40	824.73	50	167	2	203.0677	849.41	.9107	1.1435	1.0004	884.917	21027.7572	4.270	120.304
17:00	24	40	824.73	56	167	2	214.9067	849.41	.9107	1.1435	1.0004	884.917	21028.666	4.519	127.324
18:00	25	40	824.73	56	167	2	214.9067	849.41	.9107	1.1435	1.0004	884.917	21028.666	4.519	127.324
19:00	26	40	824.73	56	167	2	214.9067	849.41	.9107	1.1435	1.0004	884.917	21028.666	4.519	127.324
20:00	27	40	814.73	63	167	2	226.5568	849.41	.9107	1.1410	1.0005	883.071	20983.535	4.754	133.938
21:00	28	40	814.73	60	167	2	221.0968	849.41	.9107	1.1410	1.0004	882.982	20983.0757	4.639	130.707
22:00	29	40	814.73	60	167	2	221.0968	849.41	.9107	1.1410	1.0004	882.982	20983.0757	4.639	130.707
23:00	30	40	814.73	58	165.2	2	217.3806	849.41	.9120	1.1432	1.0004	885.948	21053.7045	4.577	128.943
24:00	31	40	809.73	58	165.2	2	216.7126	849.41	.9120	1.1419	1.0004	884.940	21030.2157	4.558	128.403
15/2/90															
01:00	32	40	809.73	58	165.2	2	216.7126	849.41	.9120	1.1419	1.0004	884.940	21030.2157	4.558	128.403
02:00	33	40	809.73	56	165.2	2	212.9434	849.41	.9120	1.1419	1.0004	884.940	21029.9069	4.478	126.168
03:00	34	40	809.73	56	165.2	2	212.9434	849.41	.9120	1.1419	1.0004	884.940	21029.9069	4.478	126.168
04:00	35	809.73		56	165.2	2	212.9434	849.41	.9120	1.1419	1.0004	884.940	21029.9064	4.478	126.168



GAS FLOW CALCULATIONS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313' KB

PAGE: 3 OF 4

WELL NAME: BIMBAYA #2

FORMATION : TIRRAWARRA

DATE: 15/2/90

TEST TYPE : L.E.T.

OPR : I. KURASIAK

ORIFICE METER TYPE: DANIEL SENIOR							STATIC PRESSURE RANGE : 0 - 1500 PSIG				GAS SPECIFIC GRAVITY (SG) = 1.020				
METER RUN SIZE : 3.826"							DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC				FG $\sqrt{(1/SG)}$ = .9901				
SEPARATOR NO : #37							STANDARD CONDITIONS : 14.73 PSI @ 60°F				C ₂ (FU × FG) = 23.764				
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 _{FPV} × 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 _{FPV}	Y ₂			(MMSCFD)	(m ³ 10 ³ /D)
15/2/90															
05:00	36	40%	804.73	60	165.2	2"	219.7358	849.41	.9120	1.1407	1.0004	884.010	21007.1939	4.616	130.052
06:00	37	40	804.73	60	165.2	2	219.7358	849.41	.9120	1.1407	1.0004	884.010	21007.1939	4.616	130.052
07:00	38	40	804.73	58	165.2	2	216.0424	849.41	.9120	1.1407	1.0004	884.010	21006.8836	4.538	127.864
08:00	39	40	809.73	60	165.2	2	220.4173	849.41	.9120	1.1419	1.0004	884.940	21030.5245	4.635	130.600
09:00	40	40	814.73	58	165.2	2	217.3806	849.41	.9120	1.1432	1.0004	885.948	21053.7045	4.577	128.943
10:00	41	40	814.73	58	165.2	2	217.3806	849.41	.9120	1.1432	1.0004	885.948	21053.7045	4.577	128.943
10:30	41.5	40	819.73	58	165.2	2	218.0466	849.41	.9120	1.1445	1.0004	886.955	21077.3522	4.596	129.483
11:00	42	40	819.73	58	165.2	2	218.0466	849.41	.9120	1.1445	1.0004	886.955	21077.3522	4.596	129.483
11:30	42.5	40	824.73	58	167	2	218.71006	849.41	.9107	1.1435	1.0004	878.339	21028.9696	4.599	129.580
12:00	43	40	824.73	58	167	2	218.7106	849.41	.9107	1.1435	1.0004	878.339	21028.9696	4.599	129.580
12:30	43.5	40	824.73	58	167	2	218.7106	849.41	.9107	1.1435	1.0004	878.339	21028.9696	4.599	129.580
13:00	44	40	824.73	58	167	2	218.7106	849.41	.9107	1.1435	1.0004	878.339	21028.9696	4.599	129.580
13:30	44.5	40	824.73	58	167	2	218.7106	849.41	.9107	1.1435	1.0004	878.339	21028.9696	4.599	129.580
14:00	45	40	824.73	59	167	2	220.588	849.41	.9107	1.1435	1.0004	884.917	21029.1212	4.639	130.693
14:30	45.5	40	824.73	59	167	2	220.588	849.41	.9107	1.1435	1.0004	884.917	21029.1212	4.639	130.693
15:00	46	40	824.73	59	167	2	220.588	849.41	.9107	1.1435	1.0004	884.917	21029.1212	4.639	130.693
15:30	46.5	40	824.73	50	167	2	220.588	849.41	.9107	1.1435	1.0004	884.917	21029.1212	4.639	130.693
16:00	47	824.73		59	167	2	220.588	849.41	.9107	1.1435	1.0004	884.917	21029.1212	4.639	130.693
16:30	47.5	40	824.73	59	167	2	220.588	849.41	.9107	1.1435	1.0004	884.917	21029.1212	4.639	130.693

GAS FLOW CALCULATIONS

CUSTOMER : SANTOS LIMITED

PERFORATIONS: 9212' - 9313'KB

PAGE: 4 OF 4

WELL NAME: Bimbaya #2

FORMATION : TIRRAWARRA

DATE: 15/2/90

TEST TYPE : L.E.T.

OPR: I. KURASIAK

ORIFICE METER TYPE: DANIEL SENIOR

STATIC PRESSURE RANGE : 0 - 1500 PSIG

GAS SPECIFIC GRAVITY (SG)	=	1.020
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METER RUN SIZE : 3.826"

DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC

FG	$\sqrt{(I/SG)}$	=	.9901
----	-----------------	---	-------

SEPARATOR NO : #37

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C_2	$(FU \times FG)$	$= 23.764$
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[illegible]

Bimbaya # 2
 Bottomhole Pressure Buildup
 31 July - 5 August 1991.

Pressure Buildup

31-7-91 Ran in the hole with ameradas and reached hang depth of 9180' KB @ 1700 hours. Flowed well on 100% choke until 0900 hours on 1-8-91. Shut well in and monitored pressures until 0900 hours on 5-8-91 for a buildup time of 96 hours.

Element # 62039 @ 9174 ft KB.

F.B.H.P. @ shut-in = 1167.5 psig = 8050 kPag

S.I.B.H.P. final = 1558.5 psig = 10,746 kPag

Static Gradient

5-8-91 A static gradient was run to MPP depth of 9263 ft KB.

Element # 62039 S.I.B.H.P. @ MPP = 1568.9 psig = 10,818 kPag

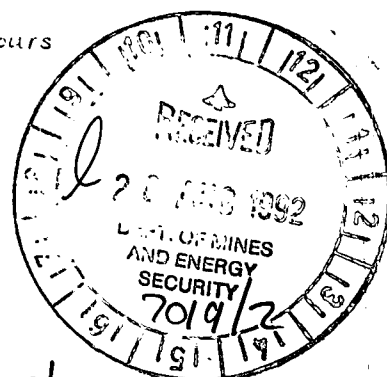
Production Summary

Cumulative production to end of July 1991 = $148.5 \cdot 10^6 \text{ m}^3$

Average production rate for July 1991 = $111.0 \cdot 10^3 \text{ m}^3/\text{d}$

$$t = \frac{148,500 \cdot 10^3 \text{ m}^3}{111.0 \cdot 10^3 \text{ m}^3/\text{d}} \times 24$$

$$t = 32,108 \text{ hours}$$



O/F

SUB-SURFACE PRESSURE SURVEY

CO.		RUN 02 FIELD BIMBAYA	WELL 02
EFF DEPTH		WELL STAT	TOOL HUNG 9174'KB
CASING	-	CASING PRESS	ON BOTTOM 1700 31/7
LINER	-	TUBING PRESS	OFF BOTTOM 0900 5/8
DATE	910805	ELEMENT RANGE 0 - 3208	ZERO POINT
ELEVATION		ZONE	SHUT-IN 0900 1/8
MAX TEMP	275°F	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 62039	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	BUILDUP

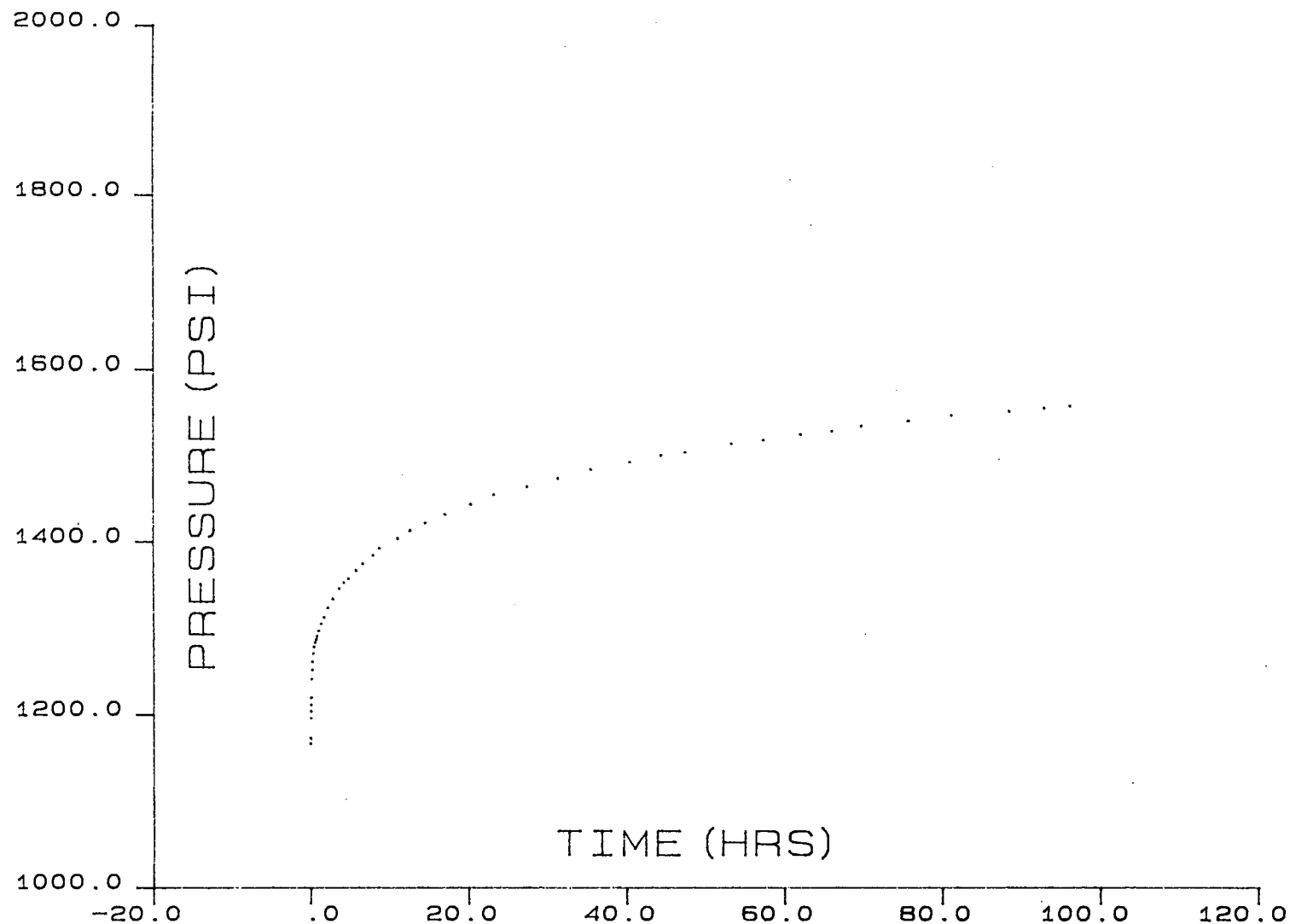
SURVEY DATA

CO.	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	9:00	1167.5	1167.5	.0	16:55	1383.8	1383.8	7.9
	9:00	1173.9	1173.9	.0	17:44	1392.1	1392.1	8.7
	9:02	1196.1	1196.1	.0	20:02	1404.4	1404.4	11.0
	9:03	1204.1	1204.1	.0	21:35	1413.0	1413.0	12.6
	9:03	1211.6	1211.6	.0	23:26	1422.0	1422.0	14.4
	9:06	1219.8	1219.8	.1	1:59	1431.8	1431.8	17.0
	9:08	1240.9	1240.9	.1	5:14	1444.0	1444.0	20.2
	9:12	1251.6	1251.6	.2	8:08	1455.0	1455.0	23.1
	9:15	1261.1	1261.1	.2	12:21	1464.7	1464.7	27.3
	9:22	1270.8	1270.8	.4	16:15	1474.0	1474.0	31.3
	9:27	1278.7	1278.7	.4	20:27	1484.5	1484.5	35.4
	9:35	1283.3	1283.3	.6	1:20	1492.9	1492.9	40.3
	9:43	1286.8	1286.8	.7	5:16	1500.7	1500.7	44.3
	9:50	1290.8	1290.8	.8	8:22	1504.4	1504.4	47.4
	10:02	1296.5	1296.5	1.0	14:12	1514.5	1514.5	53.2
	10:22	1304.6	1304.6	1.4	18:12	1518.8	1518.8	57.2
	10:44	1312.4	1312.4	1.7	22:58	1525.5	1525.5	62.0
	11:14	1323.4	1323.4	2.2	2:54	1529.3	1529.3	65.9
	11:48	1333.5	1333.5	2.8	6:39	1535.0	1535.0	69.7
	12:38	1345.3	1345.3	3.6	12:36	1541.2	1541.2	75.6
	13:12	1351.6	1351.6	4.2	18:01	1547.5	1547.5	81.0
	13:47	1356.9	1356.9	4.8	1:20	1552.4	1552.4	88.3
	14:44	1366.8	1366.8	5.7	5:45	1556.2	1556.2	92.8
	15:36	1374.5	1374.5	6.6	9:00	1558.5	1558.5	96.0

LUB IN DWT = 658 PSI / OUT = 1147 PSI

LUB IN AMERADA = 654 PSI / OUT = 1147 PSI

BIMBAYA 2 BOTTOMHOLE PRESSURE BUILDUP
31 JULY - 5 AUGUST 1991
ELEMENT #62039 @ 9174 FT KB



00211

SUB-SURFACE PRESSURE SURVEY

00212

CO.		RUN 01 FIELD BIMBAYA	WELL 02
EFF DEPTH		WELL STAT	TOOL HUNG 9168'KB
CASING	-	CASING PRESS	ON BOTTOM 1700 31/7
LINER	-	TUBING PRESS	OFF BOTTOM 0900 5/8
DATE	910805	ELEMENT RANGE 0 - 3111	ZERO POINT
ELEVATION		ZONE	SHUT-IN 0900 1/8
MAX TEMP	275°F	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 28515	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	BUILD-UP

SURVEY DATA

CO.	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	9:00	1160.9	1160.9	.0	12:12	1330.3	1330.3	3.2
	9:00	1174.4	1174.4	.0	14:07	1352.1	1352.1	5.1
	9:01	1187.8	1187.8	.0	16:59	1377.4	1377.4	8.0
	9:02	1201.9	1201.9	.0	20:00	1395.4	1395.4	11.0
	9:06	1228.0	1228.0	.1	23:59	1415.6	1415.6	15.0
	9:10	1238.8	1238.8	.2	4:36	1434.1	1434.1	19.6
	9:13	1248.6	1248.6	.2	9:12	1449.4	1449.4	24.2
	9:17	1255.1	1255.1	.3	15:12	1464.2	1464.2	30.2
	9:20	1261.0	1261.0	.3	22:53	1481.3	1481.3	37.9
	9:27	1268.8	1268.8	.4	8:09	1497.9	1497.9	47.1
	9:43	1277.7	1277.7	.7	17:50	1513.0	1513.0	56.8
	10:05	1290.3	1290.3	1.1	3:04	1525.8	1525.8	66.1
	10:31	1300.1	1300.1	1.5	14:18	1538.8	1538.8	77.3
	10:55	1308.6	1308.6	1.9	15:24	1540.0	1540.0	78.4

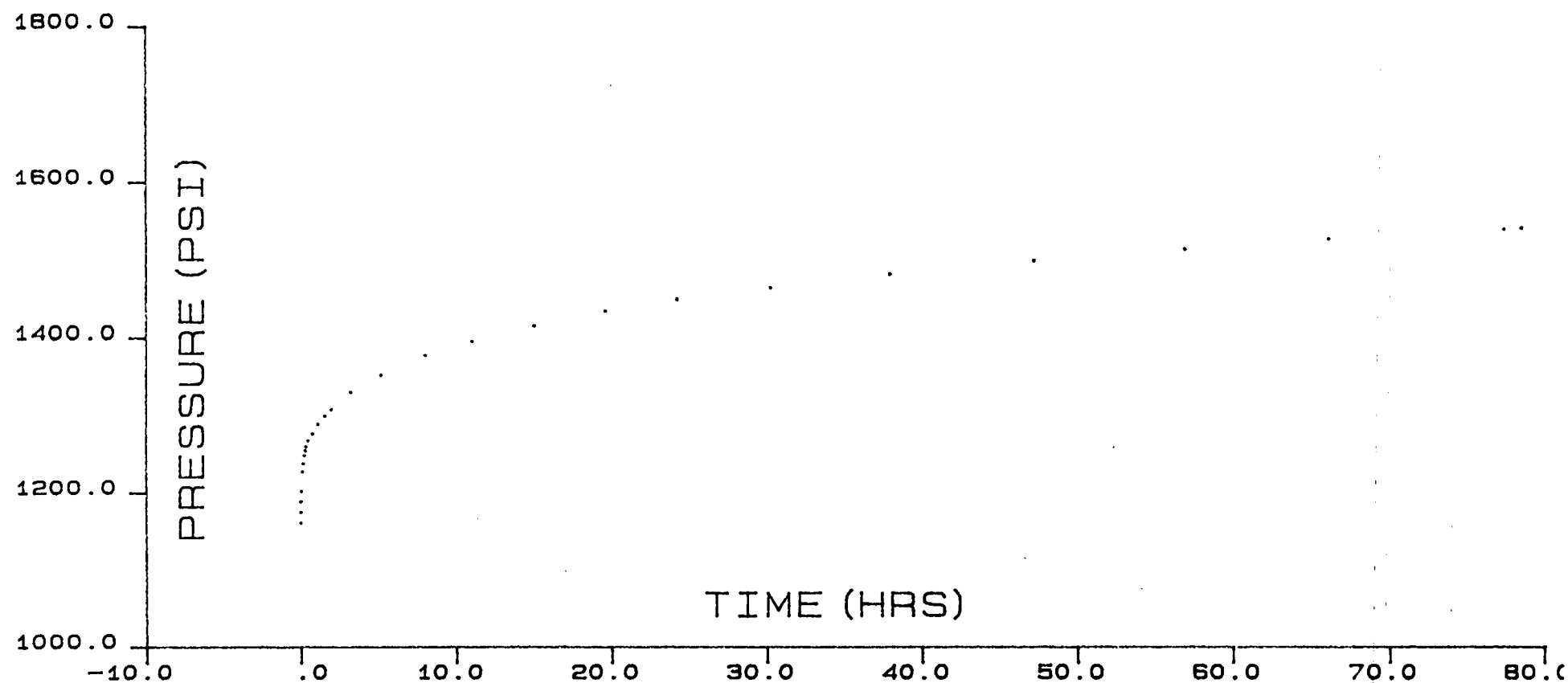
LUB IN DWT = 658 PSI / 1147 PSI

LUN IN AMERADA = 653 PSI / OUT = 1148 PSI

PLEASE NOTE ; CLOCK STOPPED APPROXIMATELY 18 HOURS BEFORE P.O.O.H.

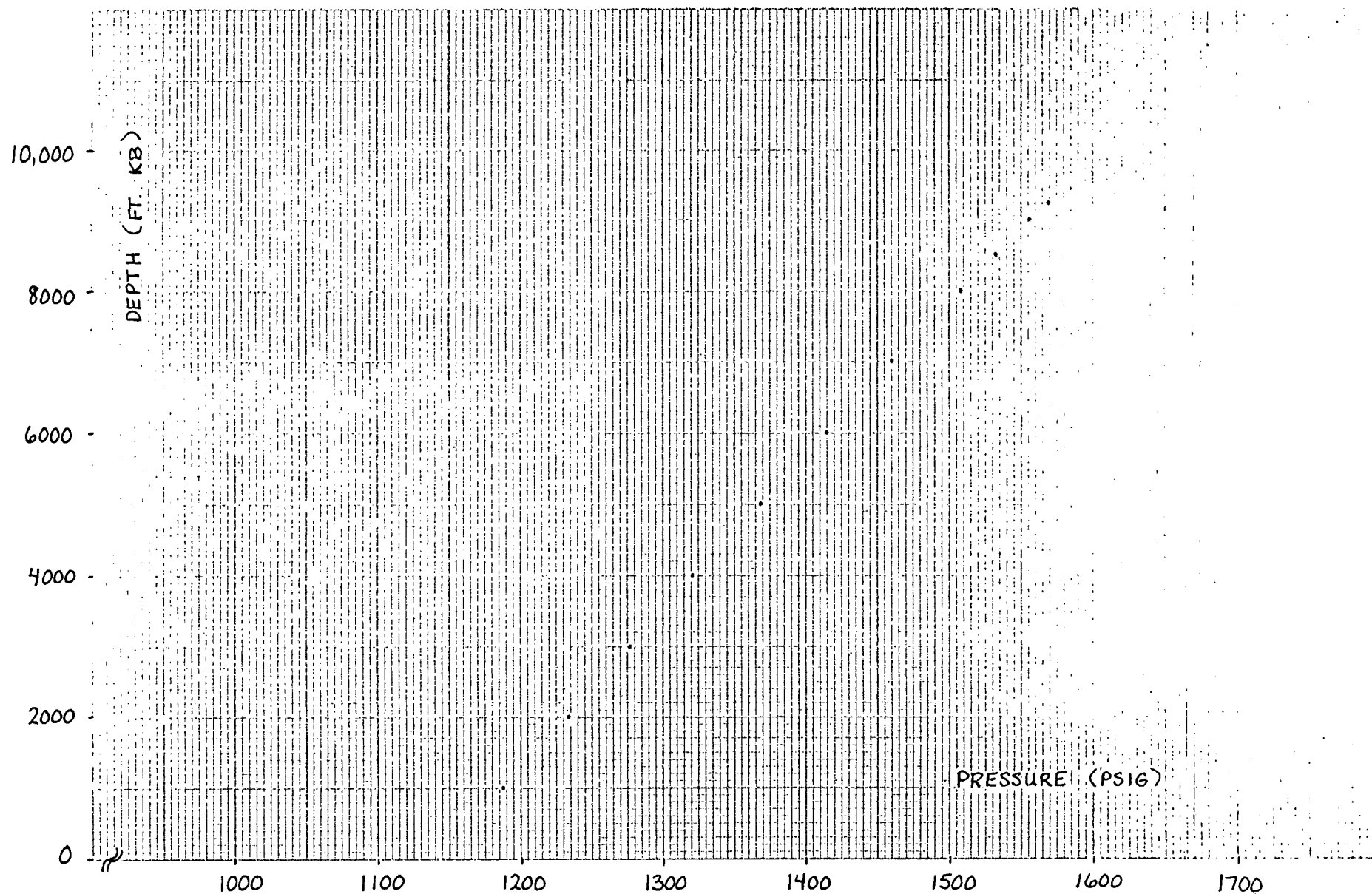
BIMBAYA #2 BUILD-UP AUGUST 1991

ELEMENT #28515 (TOP) @ 9168'KB



00213

BIMBAYA # 2 - STATIC PRESSURE GRADIENT - 5/8/91.
ELEMENT # 62039 (BOTTOM)



00214

EXPERTEST

WIRELINE & WELL TESTING SERVICE

PO BOX 354 COWANDILLA 5033

PH. (08) 354 0488 TELEX AA97183

FAX (08) 43 7408

138 RICHMOND ROAD MARLESTON
SOUTH AUSTRALIA 5033

Tested Monday, 5th August 1991.

CLIENT	LOCATION	FORMATION
Santos Ltd.	BIMBAYA #2	TIRRAWARRA

STATIC PRESSURE GRADIENT REPORT

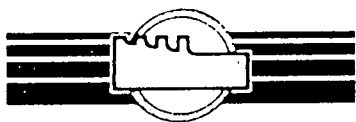
PRESSURE ELEMENT DATA			
POSITION	SERIAL NO.	RANGE	CALIBRATED
Top	28515	3000	12/ 7/91
Bottom	62039	3000	12/ 7/91

WELL DATA	
PARAMETER	VALUE
DWT In	1148 PSIG
DWT Out	1150 PSIG
Max BHT	N/A

TOP ELEMENT				BOTTOM ELEMENT		
DEPTH FT KB	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT
LUB.	0.7395	1143.0	----	0.7130	1142.5	----
1000	0.7675	1186.6	0.044	0.7410	1187.6	0.045
2000	0.7960	1230.9	0.044	0.7690	1232.6	0.045
3000	0.8240	1274.5	0.044	0.7960	1276.0	0.043
4000	0.8530	1319.7	0.045	0.8240	1321.1	0.045
5000	0.8820	1364.9	0.045	0.8530	1367.8	0.047
6000	0.9110	1410.0	0.045	0.8815	1413.6	0.046
7000	0.9390	1453.7	0.044	0.9100	1459.5	0.046
8000	0.9690	1500.4	0.047	0.9400	1507.8	0.048
8500	0.9850	1525.3	0.050	0.9550	1531.9	0.048
9000	1.0000	1548.7	0.047	0.9700	1556.0	0.048
9263	1.0085	1562.0	0.050	0.9780	1568.9	0.049
LUB.	0.7410	1145.3	----	0.7160	1147.4	----

GENERAL REMARKS

RAN TEMP ELEMENT #860788 137-391 F



SEQUENCE OF EVENTS

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 1 OF 1

WELL NAME: BUMBAYA # 2

FORMATION : TIRAWANNA

DATE: 31.7.91

TEST TYPE : P.B.U.

OPR : N. SARGEANT

DATE/TIME	DESCRIPTION OF EVENTS
30.7.91	
14:25	SHOT WELL IN TO FIT SWAB VALVE
14:45	WELL BACK ON LINE - SECURE WELL
31.7.91	
11:45	M.I.R.U.
12:15	PRESSURE TEST BORS
12:45	R.I.H. WITH 1.75" BLIND BOX
13:22	PICK UP AT 9300' KB AS PER PROGRAM P.O.O.H.
13:55	AT SURFACE - MAKE UP AMELADAS WITH 120 hrs CLOCKS
14:39	HANG GAUGES IN LUBRICATOR WITH FULL FLOWING PRESSURE
15:39	DEPRESSURE LUBRICATOR
16:39	PRESSURE UP LUBRICATOR & R.I.H. WITH GAUGES
17:00	HANG ON SURVEY DEPTH OF 9180' KB - MONITOR FLOWING WELL OVER NIGHT
	- SEE ATTACHED DATA
1.8.91	
09:00	SHOT WELL IN - BEGIN BUILD UP PERIOD
5.8.91	
09:00	FINISH BUILD UP PERIOD - P.O.O.H. WITH GAUGES
09:25	AT SURFACE - BLEED OFF LUBRICATOR
10:25	- PRESSURE UP LUBRICATOR
11:25	- BLEED OFF LUBRICATOR - CHECK CHARTS - AOK
11:35	MAKE UP GAUGES FOR STATIC GRADIENT - SEE ATTACHED DATA

SEQUENCE OF EVENTS

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 1 OF 1

WELL NAME: BIMBAYA #2

FORMATION : TIRZAWANZA

DATE: 5.8.91

TEST TYPE : STATIC GRADIENT

OPR : N. SARGEANT

[illegible]

1700

EXPERTEST PTY. LTD.

TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 1 OF 3

WELL NAME: BIMBATA #2

FORMATION : TINNAWARNA

DATE: 31-7-91

TEST TYPE : P.B.U.

OPR : R. SANCEANT

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				
31-7-91																	
14:39		4537	4978	79	100%	HANG AMERZADAS IN LUBRICATOR											
16:39		4544	4978	79	↓	R.I.H. WITH GAUGES											
17:00	Ø	4544	4992	78		HANG ON SURVEY DEPTH 9180"KG											
17:30		4544	4999	78		MONITOR FLOWING WELL OVERNIGHT											
18:00	1	4544	4985	78													
22:00		4516	4971	78													
1-8-91																	
02:00	9	4537	4985	78													
06:00		4564	4999	78													
06:30		4544	4984	78													
07:00	14	4557	4999	78													
07:30		4544	4978	78													
08:00	15	4557	4999	78													
08:30		4550	4985	78	↓												
09:00	Ø	4544	4978	78		SHUT WELL IN - BEGIN BUILD UP PERIOD											
09:15		6398	6419	N/A													
09:30	0.5	6123	6130														
09:45		6171	6199														
10:00	1	6288	6309														
10:15		6412	6440														
10:30	1.5	6536	6543														

00218

00218

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 2 OF 3

WELL NAME: BIMBAHA # 2

FORMATION : TURNAWARA

DATE: 1.8.91

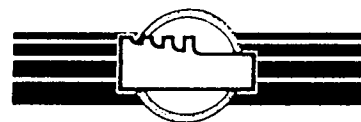
TEST TYPE : P.B.U.

OPR : R. SARGENT

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		
1.8.91															
10:45		6660	6654			CONTINUE TO MONITOR WELL									
11:00	2	6778	6784												
11:15		6826	6840												
11:30	2.5	6860	6860												
11:45		6881	6902												
12:00	3	6895	6902												
12:15		6909	6929												
12:30	3.5	6922	6943												
12:45		6943	6964												
13:00	4	6964	6985												
14:00	5	7012	7019												
18:00		7170	7170												
22:00	13	7260	7267												
2.8.91															
02:00	17	7350	7357												
06:00		7426	7432												
10:00	25	7467				THESE READINGS TAKEN FROM CHART RECORDER									
14:00		7509													
18:00	33	7550	7557												
22:00		7584	7607												

00219

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 3 OF 3

WELL NAME: BOMBAY #2

FORMATION : TINAWANNA

DATE: 3.8.91

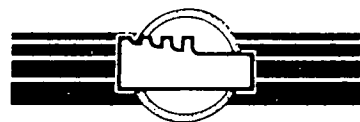
TEST TYPE : P.B.U.

OPR : R. SARGENT

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				
3-8-91																	
02:00	41	7612	7619			CONTINUE TO MONITOR WELL											
06:00		7633	7626														
10:00	49	7653	7767														
14:00		7686	7708														
18:00	57	7722	7745														
22:00		7745	7745														
4-8-91																	
02:00	65	7784	7798														
06:00		7819	7819														
10:00	73	7798	7819														
14:00		7833	7846														
18:00	81	7853	7874														
22:00		7888	7888														
5-8-91																	
02:00		7908	7915														
06:00	93	7922	7929														
09:00	96	7915	7922			END BOUND UP PERIOD - P.O.O.A. WITH GAUGES											
09:25		7895	7915			HANG GAUGES IN LUBRICATOR - SEE ATTACHED DATA											

00220

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 1 OF 1

WELL NAME: BUMBAYA #2

FORMATION : TIRNANANNA

DATE: 31-7-91

TEST TYPE : P.B.U.

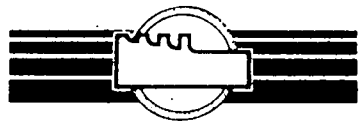
OPR : N. SAMGEANT

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.		28515	62039	860788	DATE	31-7-91		658	
ELEMENT RANGE	P.S.I.	3000	3000	137-391°F	PRESSURE LUBRICATOR		14:39	4537	4978
RECORDING SECTION SERIAL NO.		13027	34083	70545	RUN IN HOLE		16:39	4544	4978
DATE OF CALIBRATION:		12-7-91	12-7-91	11-6-91	ON DEPTH AT	9180 FT/M	17:00	4544	4992
CLOCK SERIAL NO.		1103	#7	3603	DATE	5-8-91			
CLOCK RANGE		120 hrs	120 hrs	120 hrs	PULL OUT OF HOLE		09:00	7915	7922
LEAD SCREW TYPE		15 TCS	15 TCS	15 TCS	AT SURFACE		09:25	7895	7815
					DEPRESSURE LUBRICATOR		11:25	7908	7929
ENGAGE STYLUS	DATE	31-7-91	TIME	14:27	14:27	14:27	MAXIMUM BHT AT	N/A	FT/M = °F/C
DISENGAGE STYLUS	DATE	5-8-91	TIME	11:33	11:33	11:33	N.B. ALL DEPTHS ARE MEASURED FROM K.B.		

DATE	TIME	REMARKS		
30-7-91	14:25	SHOT WELL IN TO FIT SWAB VALVE		
	14:45	WELL BACK ON LINE		
1-8-91	09:00	SHOT WELL IN, BEGIN BUILD UP PERIOD		
5-8-91	16:00	HAND WELL BACK TO PRODUCTION		
		Clock stopped - Top 653/1148 01		
		Bot 654/1147 02		
		SIBHT = 275°F		

00221

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : SANTOS

PERFORATIONS: 9212' - 9313'

PAGE: 1 OF 1

WELL NAME: BIMBIA #2

FORMATION : TIRRAMARRA

DATE: 5.8.91

TEST TYPE : POST P.B.U. STATIC GRADIENT

OPR : R. SARGENT

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

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

ELEMENT SERIAL NO.

28515

62039

860788

DATE

5.8.91

ELEMENT RANGE

P.S.I.

3000

3000

137-391°F

PRESSURE LUBRICATOR

11:55

7915

7929

RECORDING SECTION SERIAL NO.

13027

34083

70545

RUN IN HOLE

12:05

7929

7936

DATE OF CALIBRATION:

12.7.91

12.7.91

11.6.91

ON DEPTH AT

9263 FT/M

13:10

7922

7929

CLOCK SERIAL NO.

15013

15014

1279

DATE

5.8.91

CLOCK RANGE

3 hrs

3 hrs

3 hrs

PULL OUT OF HOLE

13:20

7922

7929

LEAD SCREW TYPE

15 TCS

15 TCS

15 TCS

AT SURFACE

13:45

7929

7936

DEPRESSURE LUBRICATOR

13:55

7929

7936

ENGAGE STYLUS DATE

5.8.91

TIME

11:44

11:44

11:44

MAXIMUM BHT AT N/A FT/M = °F/C

DISENGAGE STYLUS DATE

5.8.91

TIME

14:02

14:02

14:02

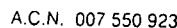
N.B. ALL DEPTHS ARE MEASURED FROM K.B.

DATE

TIME

REMARKS

00222



CONTRACTOR: OLSERV AUSTRALIA LTD

PERFORATIONS: 9212' > 9313'

PAGE: 3 OF 3

WELL NAME: Bimibaya #2

FORMATION: TIRAWARRA

DATE: 8 - 09 - 92

TEST TYPE: L.E.T AND FLOWING GRADIENT

OPR: G. King

SECRET

1019/2

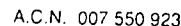


A.C.N. 007 550 923

PETROLEUM ENGINEERING : TEST RESULTS

CONTRACTOR: OILSERV AUSTRALIA LTD	PERFORATIONS: 9212' > 9313'	PAGE: 2 OF 3
WELL NAME: Bimbaya #2	FORMATION: TIRRAWARRA	DATE: 08-09-92
TEST TYPE: L.E.T. AND FLOWING GRADIENT		OPR: G. King

TIME		WELLHEAD DATA				SEPARATOR 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 m³/10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCF m³/10³	OIL BBLS m³	WATER BBLS m³	L.G.R. BBLS/MMSCF m³/10³m³
08-09-92															
	0900		4585	4758	67	100%	4413	59	62.140	12.960	1.440	55.581	8.000	2.050	0.232
	0900						TAKE 2 ND SET H.P. SAMPLES, CONDENSATE = *SPE 091, GAS = *PDE 193								
	1000		4578	4758	67.5	100%	4433	60	62.148	8.160	1.440	58.171	8.340	2.110	0.154
	1100		4578	4758	68	100%	4447	61	61.542	8.640	1.920	60.735	8.700	2.190	0.172
	1200		4578	4792	68	100%	4447	62	61.663	7.200	2.400	63.304	9.000	2.290	0.156
	1300		4578	4807	69	100%	4461	64	62.013	9.240	3.360	65.888	9.385	2.430	0.203
	1300						RIG UP SUCK LINE FOR DUMMIE RUN.								
	1340						PRESSURE UP LUBRICATOR								
	1343						R.I.H. WITH 10' WEIGHT BAR - SPANG JARS AND 1.750" GAUGE CUTTER.								
	1400		4571	4792	68.5	100%	4482	64.5	61.827	8.400	3.000	68.464	9.735	2.555	0.184
	1425						TAG OBSTRUCTION @ 9289' KB, P.O.O.H.								
	1426						PULL 600 LB - CONTACT SANTOS P.E.								
	1435						P.O.O.H. WITH 600 LB PULING WEIGHT.								
	1445						WEIGHT DROPPING OF AS TOOL STRING RISES								
	1520						TOOLSTRING @ SURFACE								
	1521						CLOSE SWAB VALVE, BLEED OFF LUBRICATOR AND CHECK TOOLSTRING - ALL O.K.								
	1540						RIG UP SAME TOOLSTRING IN LUBRICATOR.								
	1549						PRESSURE UP LUBRICATOR.								
	1550						R.I.H. AND CONDUCT PULL UPS @ 500' INTERVALS (REF TO W/LINE REPORT #2)								
	1700		4564	4792	69	100%	4482	66	62.688	9.800	2.200	76.300	10.960	2.830	0.191
	1700						P.O.O.H. + BY PASS SEPARATOR.								



CONTRACTOR: OILSERV AUSTRALIA LTD

PERFORATIONS: 9212' > 9313'

PAGE: 1 OF 3

WELL NAME: Bimbaya #2

FORMATION: TIRRAWARRA

DATE: 06 - CA-92

TEST TYPE: L.E.T. AND FLOWING GRADIENT

OPR: G. King

TIME		WELLHEAD DATA				SEPARATOR DATA		FLOW RATES			CUMULATIVE PRODUCTION				OPR: G. King	
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	L.G.R. BBLS/MMSCF m³/10⁶m³		
06-09-92																
1515																
1525																
1700																
1730																
1830																
07-09-92																
0600																
0930		4482	4827	68	100%											
1000																
1100																
1200		4585	4827	68	100%	4447	64	61.072			2.5447					
1400		4585	4827	69	100%	4461	64	61.183	8.040	2.760	7.6433	0.740	0.230	0.177		
1600		4592	4827	69	100%	4461	63	61.058	8.520	2.040	12.7315	1.450	0.400	0.173		
1800		4606	4827	67.5	100%	4447	61.5	60.332	8.160	2.160	17.7592	2.130	0.580	0.171		
2200		4606	4827	67	100%	4413	61	60.135	9.780	2.160	27.7817	3.760	0.940	0.199		
08-09-92																
0200		4606	4827	67	100%	4413	60	60.005	8.340	2.460	37.7567	5.150	1.350	0.180		
0600		4585	4792	67	100%	4413	61	60.701	9.540	2.460	47.8735	6.740	1.760	0.198		
0800		4585	4758	67	100%	4413	60	61.420	8.640	2.760	52.9114	7.460	1.990	0.186		
0800																

S E C T I O N N O 2

GAS FLOW CALCULATIONS

By: OILSERV AUSTRALIA LTD
23 GROVE AVENUE
MARLESTON SA 5033

TELEPHONE: (08) 371 2755
FACSIMILE: (08) 371 2734



PETROLEUM ENGINEERING : GAS FLOW CALCULATIONS

CONTRACTOR: OILSERV AUSTRALIA LTD	PERFORATIONS: 9212' > 9313'	PAGE: 1 OF 1
WELL NAME: BIMBAYAH #2	FORMATION: TIRZAWARZA	DATE: 07-09-92
TEST TYPE: L.E.T. AND FLOWING GRADIENT		OPR: G. King

ORIFICE METER TYPE:							STATIC PRESSURE RANGE:				PSIG	GAS SPECIFIC GRAVITY (SG) = 0.913					
METER RUN SIZE:							DIFFERENTIAL PRESS. RANGE:				IN WC	FG = $\sqrt{(1/SG)}$ = 1.0466					
SEPARATOR NO.:							STANDARD CONDITIONS: 14.73 PSI @ 60°F				C ₂ = (FU X FG) =						
DATE TIME	FLOW TIME (HOURS)	CHOKE SIZE %	STATIC PRESS P _f (PSIA)	DIFF PRESS H _w (IN WC)	GAS FLOW TEMP. (°F/°C)	ORIF. PLATE SIZE (IN)	$\sqrt{(P_f \times H_w)}$	$C_1 = F_B \times F_{Tf} \times F_{PV} \times Y_2$				CUMULATIVE GAS PRODUCTION m ³ 10 ³	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)		
07-09-92																	
1000							FLOW WELL THROUGH SEPARATOR BY PASS										
1100							TRIM FLOW THROUGH SEPARATOR, INSTALL 1.250" ORIFICE PLATE.										
1200		100%	660	110	64	1.250"	269.3888	318.0314	0.9254	1.0873	1.0011	2.5447	335.2786	2.168	61.072		
1400		100%	662	110	64	1.250"	269.7968	318.0314	0.9254	1.0877	1.0011	7.6433	335.3765	2.172	61.183		
1600		100%	662	109	63	1.250"	268.5676	318.0314	0.9268	1.0888	1.0011	12.7315	336.2243	2.167	61.058		
1800		100%	660	106	61.5	1.250"	264.4454	318.0314	0.9289	1.0902	1.0011	17.7592	337.4076	2.141	60.332		
2200		100%	665	106	61	1.250"	263.4414	318.0314	0.9296	1.0900	1.0011	27.7817	337.5851	2.134	60.135		
8-09-92																	
0200		100%	655	105	60	1.250"	262.1958	318.0314	0.9309	1.0912	1.0011	37.7567	338.4576	2.130	60.005		
0600		100%	655	108	61	1.250"	265.9151	318.0314	0.9296	1.0900	1.0011	47.8735	337.5919	2.154	60.701		
0800		100%	655	110	60	1.250"	268.3660	318.0314	0.9309	1.0912	1.0011	52.9919	338.4745	2.180	61.420		
0900		100%	655	112	59	1.250"	270.7947	318.0314	0.9323	1.0924	1.0011	55.5811	339.3682	2.206	62.140		
1000		100%	658	112	60	1.250"	271.4144	318.0314	0.9309	1.0917	1.0011	58.1706	338.6395	2.206	62.148		
1100		100%	660	110	61	1.250"	269.3888	318.0314	0.9296	1.0908	1.0011	60.7349	337.8574	2.184	61.542		
1200		100%	660	111	62	1.250"	270.6105	318.0314	0.9282	1.0896	1.0011	63.3042	336.9907	2.189	61.663		
1300		100%	662	113	64	1.250"	273.4511	318.0314	0.9254	1.0877	1.0011	65.8881	335.3865	2.201	62.013		
1400		100%	665	112	64.5	1.250"	272.8548	318.0314	0.9247	1.0876	1.0011	68.4642	335.1071	2.195	61.827		
1700		100%	665	116	66	1.250"	277.6845	318.0314	0.9227	1.0859	1.0011	76.3002	333.8657	2.225	62.688		
							By PASS SEPARATOR										
							END OF TEST										
													Agave = 2.177		61.329		

SECTION NO 3

LIQUID PRODUCTION

By: OILSERV AUSTRALIA LTD
23 GROVE AVENUE
MARLESTON SA 5033

TELEPHONE: (08) 371 2755
FACSIMILE: (08) 371 2734



A.C.N. 007 550 923

PETROLEUM ENGINEERING : LIQUID PRODUCTION

CONTRACTOR: OILSERV AUSTRALIA LTD				PERFORATIONS: 9212' > 9313'				PAGE: 1 OF 1			
WELL NAME: Bimbaya #2				FORMATION: TIRRAWARRA				DATE: 07-09-92			
TEST TYPE: L.E.T. AND FLOWING GRADIENT								OPR: C. King			
TANK NUMBER	#1 = #2 =	TANK CAPACITY	#1 = #2 =	bbls/m ³ bbls/m ³	TANK SCALE	#1 = CALIBRATED LITRES #2 = CALIBRATED LITRES	bbls/in-m ³ /cm bbls/in-m ³ /cm	OIL API GRAVITY = @ 60°F 60.5			
DATE TIME	FLOW TIME (HOURS)	TANK USED (NUMBER)	TOTAL TANK DIP LITRES	OIL/CONDENSATE PRODUCTION				WATER PRODUCTION			
				TANK DIP LITRES	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD) (m ³ /D)	CUMULATIVE PRODUCTION (BBLs/m ³)	TOTAL TANK DIP LITRES	TANK PRODUCTION (BBLs/m ³)	FLOW RATE (BPD) (m ³ /D)	CUMULATIVE PRODUCTION (BBLs/m ³)
07-09-92											
1100			TRIM FLOW THROUGH SEPARATOR								
1200		1	0/70	0/70				0/0			
1400		1	970	740	0.670	8.040	0.740	230	0.230	2.760	0.230
1600		1	1850	1450	0.710	8.520	1.450	400	0.170	2.040	0.400
1800		1	2710	2130	0.680	8.160	2.130	580	0.180	2.160	0.580
2200		1	4700	3760	1.630	9.780	3.760	940	0.360	2.160	0.940
08-09-92											
0200		1	6500	5150	1.390	8.340	5.150	1350	0.410	2.460	1.350
0600		2	0/2000	0/1590	1.590	9.540	6.740	0/410	0.410	2.460	1.760
0800		2	2950	2310	0.720	8.640	7.460	640	0.230	2.760	1.990
0900		2	3550	2850	0.540	12.960	8.000	700	0.060	1.440	2.050
1000		2	3950	3190	0.340	8.160	8.340	760	0.060	1.440	2.110
1100		2	4390	3550	0.360	8.640	8.700	840	0.080	1.920	2.190
1200		2	4790	3850	0.300	7.200	9.000	940	0.100	2.400	2.290
1300		1	50/575	40/485	0.385	9.240	9.385	10/150	0.140	3.360	2.430
1400		1	1050	775	0.350	8.400	9.735	275	0.125	3.000	2.555
1700	30	1	2550	2000	1.225	9.800	10.960	550	0.275	2.200	2.830
			END OF TEST.								
						Q _o = 8.768 m ³ /d				Q _w = 2.264 m ³ /d	

00229

SECTION NO 4

WIRELINE REPORT

By: OILSERV AUSTRALIA LTD
23 GROVE AVENUE
MARLESTON SA 5033

TELEPHONE: (08) 371 2755
FACSIMILE: (08) 371 2734



00231

WIRELINE REPORT #1

WELL: Bimbaya #2

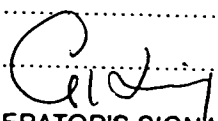
DATE: 08-09-92

PROGRAM: LET + Flowing Gradient

PURPOSE OF WORK: Dummy Run to ensure well is free of obstructions.

REPORT OF WORK PERFORMED:

13:00 Rig up w/line
13:43 R.I.H. with SPANG JARS, 'WEIGHT BAR +
1.750" GAUGE CUTTER
1425 TAG OBSTRUCTION @ 9289 KB P.O.O.H.
1426 PULL 600 LB - CONTACT SANTOS
1435 P.O.O.H. @ 600 LB pulling weight
1445 WEIGHT DROPPING OF AS THE TOOLSTRING RISES
1520 TOOLSTRING @ SURFACE
1521 SHUT IN SWAB V/V BLEED OF LUBRICATOR
AND CHECK TOOLSTRING - ALL OK.


OPERATOR'S SIGNATURE

WORK PERFORMED BY: C. King OF OILSERV AUST LTD

WELL DATA:

Tubing Size: 2 7/8 FWHP: SIWHP: N/A
Sub Surface S.V./Landing Nipple @ N/A S.S.D. @ 9012.47
"X" Nipple @ 9070.14 "N"/"XN" Nipple @ 9083.43 other —
Min I.D. 2.20 " @ 9083.43 Packer @ 9047.80

Perforated Interval: 9212' > 9313'

Forward to: Petroleum Engineering — Adelaide
Production Department — Moomba

00232



WIRELINE REPORT #2

WELL: BIMBAYA #2

DATE: 08-09-92

PROGRAM: LIQUID EVALUATION TEST AND FLOWING GRADIENT SURVEY.

PURPOSE OF WORK: TO DETERMINE THE REASON FOR EXCESS PULLING WEIGHT ON FIRST DRIFT RUN.

REPORT OF WORK PERFORMED:

1540 RG UP TOOL STRING IN LUBRICATOR

1549 PRESSURE UP LUBRICATOR

1550 R.I.H @ 1750 GAUGE CUTTER CONDUCT PULL UPS @ 500' INTERVAL

DEPTH	PULLING WEIGHT	DEPTH	P.WEIGHT	DEPTH	P.WEIGHT
500	80	4000	170	7500	375
1000	85	4500	185	8000	400
1500	100	5000	210	8500	420
2000	110	5500	230	9000	470
2500	120	6000	260		
3000	135	6500	290		
3500	150	7000	325		

1700 P.O.O.H.

1740 AT SURFACE - SHUT IN SWAB V/V - BLEED DOWN LUBRICATOR

OPERATOR'S SIGNATURE

WORK PERFORMED BY: G. KING OF OILSERV AUSTRALIA

WELL DATA:

Tubing Size: 2 7/8 FWHP: 4564 KPA SIWHP: - NA -

Sub Surface S.V./Landing Nipple @ S.S.D. @ 9012.47' KB

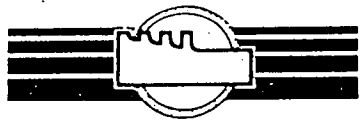
"X" Nipple @ 9070.14' KB "N"/"XN" Nipple @ 9083.43' KB other

Min I.D. 2.200" @ 9083.43' KB Packer @ 9047.80' KB

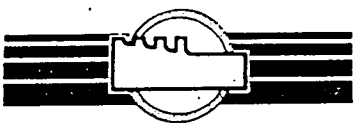
Perforated Interval: 9212' - 9313' KB

Forward to: Petroleum Engineering - Adelaide
Production Department - Moomba

7019
E. 7080/2

	SEQUENCE OF EVENTS		
	CUSTOMER :	Santos.	PERFORATIONS: 9212' - 9313' KB.
	WELL NAME:	Bimbaya #2.	FORMATION : Tirrawarra.
	TEST TYPE :	L.E.T / B.H.P.s In line.	PAGE: 1 OF 2 DATE: 11/1/94 OPR: P. Bowyer

DATE/TIME	DESCRIPTION OF EVENTS
11/1/94.	
1600	A.O.L & s.w.l to install a swab valve
1630	Well B.O.L on 100% choke, rig up wire line unit.
1710	Secure lease overnight
12/1/94	
0920	B.O.L prepare to perform drift run.
0935	R.I.H with 1.5" toolstring & 1.75" B/Box.
1000	At 9300' KB, as per program, no obstructions, P.O.O.H.
1020	At surface, depressure lub & secure wire line unit.
1100	Commence spotting test equipment & clean & Rig in test equipment
1350	S.W.L to fit test flanges, due to one block valve passing
1445	all lines pressure tested, well B.O.L to 100% choke
1530	Pressure test separator & divert flow.
1600	Start test, levels up & 1.000" orifice plate in service.
13/1/94	
1600	1 ST set of HP samples taken from separator: gas* SPE 177, condensate* PDE 084 & 1 LP H ₂ O sample
1630	————— completed
1700	2 ND set of HP samples taken from separator & gas* SPE 613, condensate* SPE 029 & 1 LP H ₂ O sample
1730	sampling completed
14/1/94	
0715	Prepare ameras for F.G.s
0753	Pressure lub for FGs (2x pressure elements & 1 MBHT)
0808	Depressure lub.
0813	Pressure lub & R.I.H to stops as per program.



SEQUENCE OF EVENTS

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 2

WELL NAME: Bimbaya #2

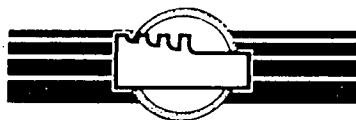
FORMATION : Tirrawarra

DATE: 14/1/94

TEST TYPE : L.E.T / BHPs In line

OPR : P. Bowyer

DATE/TIME	DESCRIPTION OF EVENTS
14/1/94	
0919	At 9180' KB, bottom stop (hang depth)
0934	POOH
0955	At surface, depressure Lub.
1000	Pressure Lub
1015	Depressure Lub, remove ameradas & check charts, good charts.
1030	Secure wire line unit.
1230	Prepare ameradas to be run on flow / Build up.
1300	Pressure Lub for BHPs. (2x pressure elements & 1 MBHT)
1400	Depressure Lub.
1500	Pressure Lub & R.I.H
1522	At 9180' KB, hang depth continue to flow well overnight
15/1/94	
0900	S.W.I for 96 hr build up & rig out test equipment
19/1/94	
0900	96 hr Build up period completed. P.O.O.H with gauges.
0925	At surface with gauges. Depressure Lub.
1025	Press Lub
1125	Depress Lub and Recover charts.
1135	Both charts good, prepare gauges for S.G.S.
1200	Perform S.G.S as per program.
1430	S.G.S Completed, Both charts good. Rig down w/L unit.
1600	Hand over well to Production Dept.
	Program completed.



FIELD READINGS

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB.

PAGE: 1 OF 3

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 11/1/94

TEST TYPE : L.E.T / B.H.P.S In line.

OPR : P. Bowyer

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 °C (°F)	TOTAL LIQUID (IN/GM)	OIL (IN/GM)	OIL API GRAVITY @ 60°F	WATER (IN/GM)	
11/1/94															
1600					100	A.O.L. , swl to fit a swab valve.									
1630					sl	Well B.O.L to 100% , rig up wire line unit.									
1710					100	Secure lease overnight.									
12/1/94															
0920						B.O.L prepare to run drift run									
0935						R.L.H with 15" toolstring & 1.75" B/Box									
1000						At 9300' KB , as per program, no obstructions , P.O.O.H									
1020						At surface, depressure lub & secure wire line unit									
1100						Spot test equipment & clean , commence rig in									
1350					100	S.W.I to fit test flanges , one block valve is passing									
1445					sl	Well B.O.L to 100% , separator on by pass									
1530		595	64	55	100	Pressure test separator & divert flow									
1600	0	600	76	56		1.000 orifice plate in service & commence test									
1600											21.25	17.5		3.75	
1800	2	608	92	54				600	92	53	23	19		4	
13/1/94															
0600	14	600	3	49				590	82	48	36.75	30.25		6.5	
0800	16	600	0	48				590	86	46	39	31.75		7.25	
1000	18	600	0	50				595	84	48	41.25	33.5		7.75	
1200	20	600	0	54				595	84	52	43.25	35		8.25	
1400	22	601	0	56	100		1.000	595	85	53	45.25	36.5		8.75	

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 3

WELL NAME: Bimbaya* 2

FORMATION : Tirrawarra

DATE: 13/1/94

TEST TYPE : L.E.T / B.H.P.S In line

OPR : P. Bowyer

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 °C (°F)	TOTAL LIQUID (IN/GM)	OIL (IN/GM)	OIL API GRAVITY @ 60°F	WATER (IN/GM)
13/1/94														
1600	24	601	0	55	100		1.000	595	85	53	47.25	38		9.25
1600			1st set of HP samples taken from separator : gas* SPE 177, condensate* PDE 084 & 1 unit H ₂ O sample.											
1630			1st set of samples completed											
1700	25	599	0	55	100		1.000	595	84	53	48.25	38.75		9.5
1700			2nd set of HP samples taken from separator : gas* SPE 613, condensate* SPE 029 & 1 unit H ₂ O sample.											
1730			Sampling completed.											
1800	26	600	0	54	100		1.000	595	84	53	49.25	39.5		9.75
14/1/94														
0600	38	600	0	48				595	78	46	61.5	48.75		12.75
0715								Prepare amercadas for F.G.S.						
0753		602	0	48				Pressure Lub for F.G.S. (2x pressure elements & 1 MBHT)						
0800	40	602	0	48				595	76	46	63.25	50		13.25
0808		602	0	48				Depressure Lub						
0813		602	0	48				Pressure Lub & R.I.H to stops as per program.						
0919		601	0					At 9180' KB, bottom stop (hang depth)						
0934		601	0					P.O.O.H.						
0955		602	0					At surface, depressure Lub.						
1000		602	0	51				595	86	49	65.5	51.5		14
1000	42	602	0	51				Pressure Lub.						
1015		602	0					Depressure Lub, remove amercadas, good charts.						
1030					100		1.000	Secure wire line unit						

FIELD READINGS

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 3 OF 3

WELL NAME: Bimbaya #2

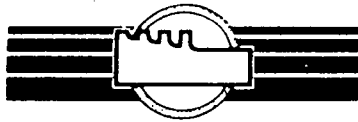
FORMATION : Tirrawarra

DATE: 14/1/94

TEST TYPE : L.E.T B.H.P.s Inline

OPR : P. Bowyer

[illegible]



TEST RESULTS

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 1 OF 5

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 11/1/94

TEST TYPE : L.E.T / B.H.P.S In line

OPR : P. Bowyer

TIME		WELLHEAD DATA				Separator		FLOW RATES			CUMULATIVE PRODUCTION				L.G.R m ³ /10 ⁶ m ³	
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			
11/1/94																
1600					100	A.O.L. & SWI to fit a swab valve.										
1630					S/I	Well B.O.L. to 100% choke, rig up wire line unit										
1710					100	Secure lease overnight										
12/1/94																
0920						B.O.L. prepare for drift run.										
0935						R.I.H. with 1.5" toolstring & 1.75" B/Box										
1000						At 9300' KB, as per program, no obstructions, P.O.O.H.										
1020						At surface, depressure tub & secure wire line unit.										
1100						Spot test equipment & C/ van, commence rig in.										
1350					100	S.W.I. to fit test flanges, one block valve is passing.										
1445					S/I	Well B.O.L. to 100%, separator on by pass.										
1530		4102	441	55	100	Divert flow through separator.										
1600	0	4137	524	56		1.000' orifice plate in service & commence test.										
1800	2	4192	634	54		4137	53	34.288	4.800	.792	2.857	.400	.066	163		
13/1/94																
0600	14	4137	20	49		4068	48	32.540	6.006	1.334	19.127	3.403	.733	225		
0800	16	4137	0	48		4068	46	33.511	4.800	2.400	21.919	3.803	.933	215		
1000	18	4137	0	50		4102	48	33.114	5.604	1.596	24.678	4.270	1.066	217		
1200	20	4137	0	51		4102	52	32.702	4.800	1.596	27.403	4.670	1.199	195		
1400	22	4144	0	56		4102	53	32.783	4.800	1.596	30.135	5.070	1.332	195		
1600	24	4144	0	55		4102	53	32.783	4.800	1.596	32.866	5.470	1.465	195		



TEST RESULTS

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 2 OF 5

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 13/1/94

TEST TYPE : L.E.T / B.H.P.S Inline

OPR : P. Bowyer

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION			L.S.R			
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	m ³ /10 ⁶ m ³			
13/1/94																	
1600	24	4144	0	55	100	1 st set of samples taken from separator gas* SPE 177, condensate* PDE 084 & 1 LP H ₂ O sample											
1630						1 st set of samples completed											
1700	25	4130	0	55		4102	53	32.589	4.800	1.584	34.223	5.670	1.531	196			
1700						2 nd set of samples taken from separator gas* SPE 613, condensate* SPE 029 & 1 LP H ₂ O sample											
1730						sampling completed											
1800	26	4137	0	54		4102	53	32.589	4.800	1.584	35.580	5.870	1.597	196			
14/1/94																	
0600	38	4137	0	48		4102	46	32.086	4.940	1.602	51.623	8.340	2.398	204			
0715						Prepare ameradas for F.G.S.											
0753		4150	0	48		Pressure Lub for F.G.S (2x pressure elements & 1 MBHT)											
0800	40	4150	0	48		4102	46	31.671	3.996	1.596	54.262	8.673	2.531	176			
0808		4150	0	48		Depressure Lub.											
0813		4150	0	48		Pressure Lub & R.H to stops as per program.											
0919		4144	0			At 9180' KB, bottom stop (hang depth)											
0934		4144	0			P.O.O.H											
0955		4150	0			At surface, depressure Lub.											
1000	42	4150	0	51		4102	49	33.385	4.800	2.400	57.044	9.073	2.731	215			
1000						Pressure Lub.											
1015		4150	0	51	100	Depressure Lub, remove ameradas & check charts, good charts											

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB.

PAGE: 3 OF 5

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 14/1/94

TEST TYPE : L.E.T / B.H.P.s In line.

OPR : P. Bowyer

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 /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /D	OIL BBLs m ³	WATER BBLs m ³		
14/1/94															
1030					100	Secure wire line unit.									
1200	44	4157	0	53		4102	52	32.702	4.800	1.596	59.769	9.473	2.864	195	
1230						Prepare amercadas for B.H.P.s.									
1300	45	4164	0	53		Pressure Lub for BHPs (2x pressure elements & 1MBHT).									
1400	46	4157	0	55		4102	53	32.394	4.800	1.596	62.468	9.873	2.997	197	Depress Lub
1500	47	4144	0			Pressure Lub & R.I.H.									
1522		4157	0			At 9180' KB, hang depth, continue to flow well overnight									
1600	48	4164	0	54		4102	52	32.702	4.800	1.596	65.193	10.273	3.130	195	
1800	50	4157	0	50		4102	50	32.082	3.996	1.596	67.866	10.66	3.263	174	
15/1/94															
0600	62	4157	0	45		4102	43	31.399	4.672	1.334	83.565	12.942	3.930	191	
0800	64	4137	0	45		4102	43	31.614	4.800	1.596	86.199	13.342	4.063	202	
0900	65	4137	0	45	100	4102	43	31.614	6.408	1.584	87.516	13.609	4.129	253	
0900	0	S.W.1 to commence. 96 HR build up. & rig out test equipment.													
0915		4709	0		S/I										
0930	(4147)	4737	0												
0945		4799	0												
1000	1	4806	0												
1015		4826	0												
1030		4840	0												
1045		4847	0		S/I										



TEST RESULTS

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 4 OF 5

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 15/1/94

TEST TYPE : L.E.T / B.H.P.s (In line)

OPR : P. Bowyer

TIME		WELLHEAD DATA							FLOW RATES			CUMULATIVE PRODUCTION				
DATE	TIME	FLOW FOR 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		
15/1/94																
1100	2	4861	0			S/I	Build up cont									
1115		4868														
1130		4875														
1145		4881														
1200	3	4888														
1215		4895														
1230		4909														
1245		4909														
1300	4	4909														
1400	5	4923														
1800	9	4964														
16/1/94																
0600	21	5081														
1000	25	5075														
1400	29	5109														
1800	33	5123														
17/1/94																
0600	45	5178														
1000	49	5185														
1400	53	5178														
1800	57	5199				S/I										

	PERFORA
	FORMATIO

TEST TYPE : L.E.T / B.H.P.s

FORMATION : Tiffawarra

DATE: 18/1/94

OPR :

ET 104

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB.

PAGE: 1 OF 2

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 12/1/94

TEST TYPE : L.E.T / B.H.P.s In line.

OPR : P. Bouryer

ORIFICE METER TYPE: Daniels Snr

STATIC PRESSURE RANGE : 0 - 1500 PSIG

GAS SPECIFIC GRAVITY (SG) = 1.020

METER RUN SIZE : 3.068"

DIFFERENTIAL PRESS. RANGE: 0 - 200 IN WC

FG $\sqrt{(1/SG)}$ = .9901

SEPARATOR NO : V459

STANDARD CONDITIONS : 14.73 PSI @ 60°F

C₂ (FU x FG) = 23.7635

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)
12/1/94															
1800	2	100	615	92	127	1.000	237.8133	202.27	.9412	1.1247	1.0010	214.3179	5092.9528	1.211	34.288
13/1/94															
0600	14		605	82	118		222.6833		.9485	1.1312	1.0009	217.2124	5161.7356	1.149	32.540
0800	16		605	86	115		228.0500		.9510	1.1345	1.0009	218.4256	5190.5666	1.184	33.511
1000	18		610	84	118		226.3124		.9485	1.1327	1.0009	217.4980	5168.5220	1.170	33.114
1200	20		610	84	125		226.3124		.9428	1.1253	1.0009	214.7901	5104.1741	1.155	32.702
1400	22		610	85	127		227.6556		.9412	1.1233	1.0009	214.0490	5086.5618	1.158	32.783
1600	24		610	85	127		227.6556		.9412	1.1233	1.0009	214.0490	5086.5618	1.158	32.783
1700	25		610	84	127		226.3124		.9412	1.1233	1.0009	214.0467	5086.5071	1.151	32.589
1800	26		610	84	127		226.3124		.9412	1.1233	1.0009	214.0467	5086.5071	1.151	32.589
14/1/94															
0600	38		610	78	115		218.0801		.9510	1.1360	1.0008	218.6986	5197.0524	1.133	32.086
0800	40		610	76	115		215.2661		.9510	1.1360	1.0008	218.6939	5196.9406	1.119	31.671
1000	42		610	86	120		228.9908		.9469	1.1305	1.0009	216.7115	5149.8316	1.179	33.385
1200	44		610	84	125		226.3124		.9428	1.1253	1.0009	214.7901	5104.1741	1.155	32.702
1400	46		610	83	127		224.9613		.9412	1.1233	1.0009	214.0444	5086.4523	1.144	32.394
1600	48		610	84	125		226.3124		.9428	1.1253	1.0009	214.7901	5104.1741	1.155	32.702
1800	50	100	610	80	122	1.000	220.8583	202.27	.9452	1.1284	1.0009	215.9206	5131.0377	1.133	32.082

	PERFORATIONS:
2	FORMATION :
25 (10 line)	

TEST TYPE : L.E.T BHPs (In line)

FORMATION : Tirrawarra

OPR: P. Bowyer

GAS SPECIFIC GRAVITY (SG) = 1.020

$$FG \sqrt{(I/SG)} = 0.9901$$
$$C_2 \quad (FU \times FG) = 23.7635$$
FT 106

EXPERTEST PTY. LTD.



LIQUID PRODUCTION

CUSTOMER : Santos.

PERFORATIONS: 9212' - 9313' KB.

PAGE: 1 OF 2

WELL NAME: Bimbaya # 2.

FORMATION : Tirrawarra

DATE: 12/1/94

TEST TYPE : L.E.T/B.H.P.s In line.

OPR : P. Bowyer

TANK
NUMBER#1 = 54
#2 =TANK
CAPACITY#1 = 56.6 m³ bbls/m³
#2 = bbls/m³TANK
SCALE#1 = 1" = 267 m³ bbls/in - m³/cm
#2 = bbls/in - m³/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 (BBL S/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBL S/m ³)	TANK DIP (IN/CM)	TANK PRODUCTION (BBL S/m ³)	FLOW RATE (BPD/m ³ D)	CUMULATIVE PRODUCTION (BBL S/m ³)
12/1/94.											
1600	0	54	21.25	17.5				3.75		opening dip	
1800	2		23	19	.400	4.800	.400	4	.066	.792	.066
13/1/94											
0600	14		36.75	30.25	3.003	6.006	3.403	6.5	.667	1.334	.733
0800	16		39	31.75	.400	4.800	3.803	7.25	.200	2.400	.933
1000	18		41.25	33.5	.467	5.604	4.270	7.75	.133	1.596	1.066
1200	20		43.25	35	.400	4.800	4.670	8.25	.133	1.596	1.199
1400	22		45.25	36.5	.400	4.800	5.070	8.75	.133	1.596	1.332
1600	24		47.25	38	.400	4.800	5.470	9.25	.133	1.596	1.465
1700	25		48.25	38.75	.200	4.800	5.670	9.5	.066	1.584	1.531
1800	26		49.25	39.5	.200	4.800	5.870	9.75	.066	1.584	1.597
14/1/94											
0600	38		61.5	48.75	2.470	4.940	8.340	12.75	.801	1.602	2.398
0800	40		63.25	50	.333	3.996	8.673	13.25	.133	1.596	2.531
1000	42		65.5	51.5	.400	4.800	9.073	14	.200	2.400	2.731
1200	44		67.5	53	.400	4.800	9.473	14.5	.133	1.596	2.864
1400	46		69.5	54.5	.400	4.800	9.873	15	.133	1.596	2.997
1600	48		71.5	56	.400	4.800	10.273	15.5	.133	1.596	3.130
1800	50	54	73.25	57.25	.333	3.996	10.606	16	.133	1.596	3.263

LIQUID PRODUCTION

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB.

PAGE: 2 OF 2

WELL NAME: Bimbaya # 2

FORMATION : Tirrawarra

DATE: 15/1/94

TEST TYPE : L.E.T / BHPS (In line)

OPR : P. Bowyer

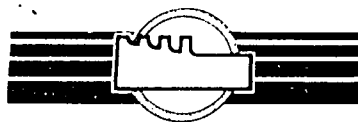
TANK	#1 = 54
NUMBER	#2 =

TANK	#1 =	56.6 m ³	bbbls/m ³
CAPACITY	#2 =		bbbls/m ³

TANK	#1 = $1^{\text{st}} = 0.267 \text{ m}^3$	bbbls/in $\rightarrow$ m ³ /cm
SCALE	#2 =	bbbls/in $\cdot$ m ³ /cm

OIL API GRAVITY = @ 60°F

[illegible]



SAMPLING DATA

CUSTOMER : Santos PERFORATIONS: 9212' - 9313' KB PAGE: 1 OF 2
 WELL NAME: Bimbaya #2 FORMATION : Tirrawarra. DATE: 13/1/94
 TEST TYPE : L.E.T / B.H.P.S In line OPR : P. Bowyer

SAMPLE # SPE 177

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	SPE 177	500	GAS	30	Evacuated	/	/		Separator Meter Run.		4102	53	14.73	50	
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	L.G.R m³/10⁶m³	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
4144	55	100%		4102	53	1.1233	1.020		32.783	4.800	1.596	195			

REMARKS:

SAMPLE # PDE 084

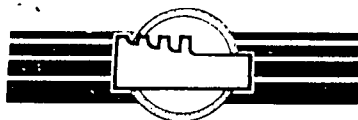
TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
1600	PDE 084	500	HP Condensate	30	Acidified brine	475	25		Separator Sight glass		4102	53	14.73	50	
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	L.G.R m³/10⁶m³	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
4144	55	100%		4102	53	1.1233	1.020		32.783	4.800	1.596	195			

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)	
1600	#1	500	H2O	2	/	/	/		Separator Sight glass			53	14.73	50	
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	L.G.R m³/10⁶m³	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
4144	55	100%		4102	53	1.1233	1.020		32.783	4.800	1.596	195			

REMARKS:



SAMPLING DATA

CUSTOMER : Santos PERFORATIONS: 9212' - 9313' KB PAGE: 2 OF 2
 WELL NAME: Bimbaya # 2 FORMATION : Tirrawarra DATE: 13/1/94
 TEST TYPE : L.E.T / BHPS In line OPR: P. Bowyer

SAMPLE # SPE 613

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	SPE 613	500	GAS	30	Evacuated	/	/		Separator Meter Run		4102	53	14.73	50	
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	L.G.R. m³/10⁶m³	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
4130	55	100%		4102	53	1.1233	1.020		32.589	4.800	1.584	196			

REMARKS:

SAMPLE # SPE 029

TIME SAMPLE COLLECTED	CYLINDER SERIAL NO.	CYLINDER VOLUME (CC)	SAMPLE TYPE HP	SAMPLING DURATION (MINS)	CYLINDER INITIALLY FILLED WITH	OUTAGE (CC)	VOLUME OF FILL REMAINING WITH SAMPLE (CC)		SAMPLE POINT Separator		SAMPLE PRESS (PSI/KPa)	SAMPLE TEMP (°F/°C)	AMBIENT PRESS (PSI/KPa)	AMBIENT TEMP (°F/°C)	
1700	SPE 029	500	Condensate	30	Acidified brine	475	25		Sight glass		4102	53	14.73	50	
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	L.G.R m³/10⁶m³	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
4130	55	100%		4102	53	1.1233	1.020		32.589	4.800	1.584	196			

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)	
1700	# 2	500	H ₂ O	2	✓	✓	✓		Separator Sight glass			53	14.73	50	
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	L.G.R m³/10⁶m³	PRESSURE	TEMPERATURE	
													(PSI/KPa)	(°F/°C)	
4130	55	100%		4102	53	1.1233	1.020		32.589	4.800	1.584	196			

REMARKS:

EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB

PAGE: 1 OF 1

WELL NAME: Bimbaya*2

FORMATION : Tirrawarra

DATE: 14/1/94

TEST TYPE : Flowing Gradient

OPR : P. Bowyer

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

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

ELEMENT SERIAL NO.

29386

29388

MBHT

DATE : 14/1/94

ELEMENT RANGE

PSI

2975

3000

PRESSURE LUBRICATOR

0753

4150

0

RECORDING SECTION SERIAL NO.

61323

61001

RUN IN HOLE

0813

4150

0

DATE OF CALIBRATION:

@ 290°F

16/1/93

16/1/93

ON DEPTH AT hang depth 9180 FT/M

0919

4144

0

CLOCK SERIAL NO.

A16084

A16085

DATE : 14/1/94

CLOCK RANGE

HR

3

3

PULL OUT OF HOLE

0934

4144

0

LEAD SCREW TYPE

T.L.S.

15

15

AT SURFACE

0955

4150

0

DEPRESSURE LUBRICATOR

1015

4150

0

ENGAGE STYLUS DATE

14/1/94

TIME

0744

0744

MAXIMUM BHT AT 9180 FT/M = 274 °F/e

DISENGAGE STYLUS DATE

14/1/94

TIME

1025

1025

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

DATE

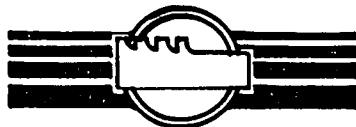
TIME

REMARKS

F.G.S was done during an L.E.T/B.H.P.S program on 100% choke.
Flow rates are available pls refer to Test Results Sheet

EXPERTEST PTY. LTD.

FLOWING PRESSURE GRADIENT SURVEY



Location: BIMBAYA #2

Tested: 14th January 1994.

Formation: TIPRAWARRA

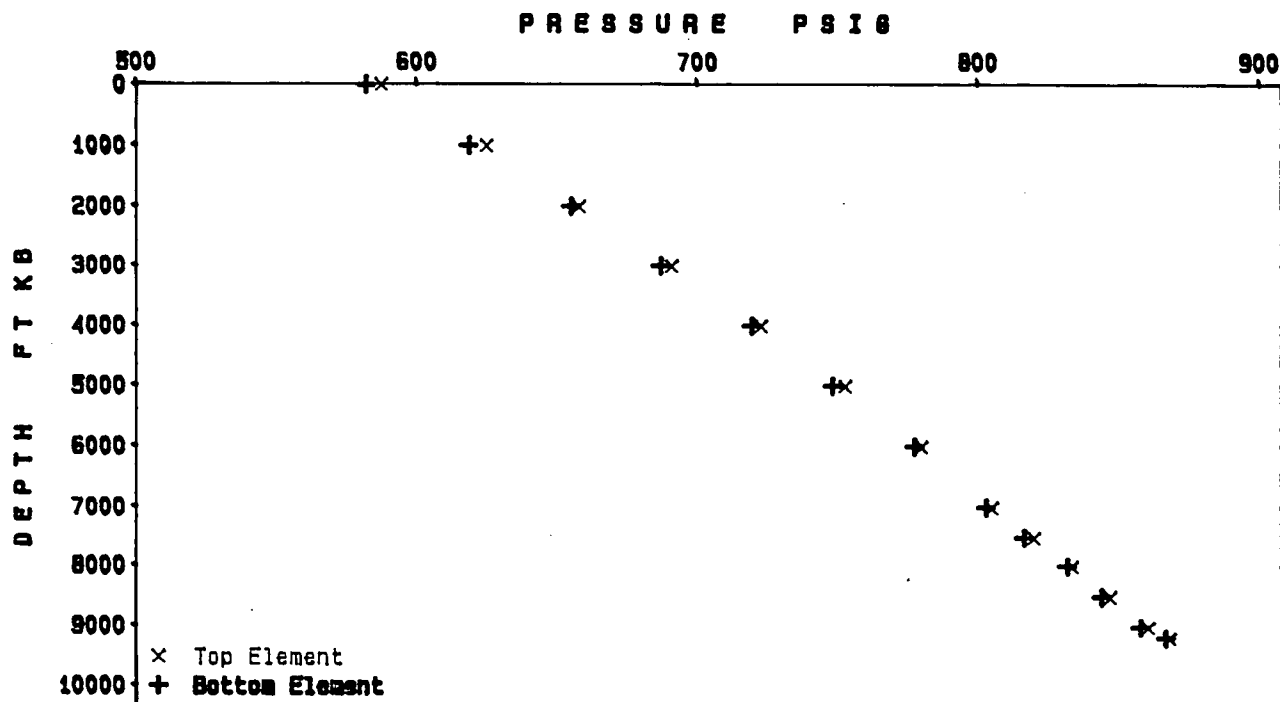
Client: SANTOS LTD.

PRESSURE ELEMENT DATA

Position	Serial No	Range	Calibrated
Top	29386	2975	16/11/93
Bottom	29388	3000	16/11/93

WELL DATA

DWT In	602 PSI6
DWT Out	602 PSI6
Max BHT	274 DEG F



TOP ELEMENT

BOTTOM ELEMENT

Depth FT KB	Deflection Inches	Pressure PSI6	Gradient PSI/FT	Deflection Inches	Pressure PSI6	Gradient PSI/FT
LUB.	0.3980	587.4	-	0.3920	582.0	-
1000	0.4230	624.9	0.038	0.4160	618.6	0.037
2000	0.4450	657.9	0.033	0.4400	655.2	0.037
3000	0.4670	691.0	0.033	0.4610	687.2	0.032
4000	0.4880	722.5	0.032	0.4820	719.2	0.032
5000	0.5080	752.5	0.030	0.5010	748.2	0.029
6000	0.5280	779.6	0.027	0.5200	777.1	0.029
7000	0.5430	805.1	0.026	0.5370	803.1	0.028
7500	0.5530	820.2	0.030	0.5480	816.8	0.027
8000	0.5620	833.7	0.027	0.5580	832.0	0.031
8500	0.5710	847.2	0.027	0.5640	844.2	0.024
9000	0.5800	860.8	0.027	0.5730	858.0	0.027
9180	0.5850	868.3	0.042	0.5790	867.1	0.051
LUB.	0.3980	587.4	-	0.3920	582.0	-

GENERAL REMARKS

100% CHOKED

		BHP/BHT GAUGE RUN DATA							
		CUSTOMER : Santos			PERFORATIONS: 9212' - 9313' KB		PAGE: 1 OF 1		
		WELL NAME: Bimbaya #2			FORMATION : Tirrawarra		DATE: 14/1/94		
		TEST TYPE : L.E.T / B.H.Ps In line					OPR : P. Bowyer		
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.		29386	29388	MBHT	DATE : 14/1/94				
ELEMENT RANGE PSI		2975	3000		PRESSURE LUBRICATOR :		1300	4164	0
RECORDING SECTION SERIAL NO.		61323	61001		RUN IN HOLE :		1500	4144	0
DATE OF CALIBRATION: @ 290°F		16/11/93	16/11/93		ON DEPTH AT hang depth 9180 FT/M		1522	4157	0
CLOCK SERIAL NO.		F15695	F15683		DATE : 19/1/94				
CLOCK RANGE HR		120	120		PULL OUT OF HOLE :		0900	5275	0
LEAD SCREW TYPE TLS		15	15		AT SURFACE :		0925	5282	0
					DEPRESSURE LUBRICATOR :		1125	5282	0
ENGAGE STYLUS DATE 14/1/94 TIME		1243	1243		MAXIMUM BHT AT 9180 FT/M = 275 °F				
DISENGAGE STYLUS DATE 19/1/94 TIME		1131	1131		N.B. ALL DEPTHS ARE MEASURED FROM K.B.				
DATE	TIME	REMARKS							
		Well flowing on 100% choke.							
15/1/94	0900	S.W.1 for 96 HR build up.							

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 01 FIELD BIMBAYA	WELL 2
EFF DEPTH		WELL STAT	TOOL HUNG 9180'KB
CASING	-	CASING PRESS	ON BOTTOM 1522 14/1
LINER	-	TUBING PRESS	OFF BOTTOM 0900 19/1
DATE	940115	ELEMENT RANGE 0 - 3036	ZERO POINT
ELEVATION		ZONE	SHUT-IN 0900 15/1
MAX TEMP	275	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 29388	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	LET/BHP

SURVEY DATA

CO. SANTOS				RUN 01 FIELD BIMBAYA				WELL 2			
	TIME	P-T	DP-DT	DTIME		TIME	P-T	DP-DT	DTIME		
START 8/11	9:00	870.7	870.7	.0		1:03	996.6	996.6	40.0		
	9:01	878.2	878.2	.0		4:14	998.3	998.3	43.2		
	9:04	890.5	890.5	.1		7:13	1000.7	1000.7	46.2		
	9:09	902.0	902.0	.1		9:28	1002.9	1002.9	48.5		
	9:19	911.4	911.4	.3		11:46	1003.4	1003.4	50.8		
	9:41	919.0	919.0	.7		14:32	1006.8	1006.8	53.5		
	10:06	922.7	922.7	1.1		16:38	1007.6	1007.6	55.6		
	10:37	926.9	926.9	1.6		19:19	1009.8	1009.8	58.3		
	11:22	931.3	931.3	2.4		23:48	1012.2	1012.2	62.8		
	12:14	935.9	935.9	3.2		3:05	1015.1	1015.1	66.1		
	13:16	941.5	941.5	4.3		5:36	1016.6	1016.6	68.6		
	14:19	946.1	946.1	5.3		8:37	1017.9	1017.9	71.6		
	15:23	948.2	948.2	6.4		12:08	1019.9	1019.9	75.1		
	16:58	952.3	952.3	8.0		14:45	1022.5	1022.5	77.7		
	18:47	957.3	957.3	9.8		18:04	1023.2	1023.2	81.1		
	20:16	960.2	960.2	11.3		21:21	1025.3	1025.3	84.4		
	22:49	965.2	965.2	13.8		1:03	1027.5	1027.5	88.0		
	1:39	970.6	970.6	16.7		4:17	1028.0	1028.0	91.3		
	4:24	974.1	974.1	19.4		9:00	1030.6	1030.6	96.0	END 8/11	
	7:00	977.4	977.4	22.0	-	3:30	870.4	870.4	-12.5		
	9:32	980.8	980.8	24.5	-	0:41	871.0	871.0	-9.7		
	12:54	985.2	985.2	27.9		2:31	871.8	871.8	-6.5		
	15:48	986.5	986.5	30.8		6:01	870.7	870.7	-3.0		
	18:42	990.0	990.0	33.7		8:21	871.5	871.5	-.7		
	21:37	993.2	993.2	36.6		0:00	.0	.0	.0		

Lubricator; DWT: IN: 601 psig / OUT: 766 psig

AMERADA: IN: 584 psig / OUT: 755 psig

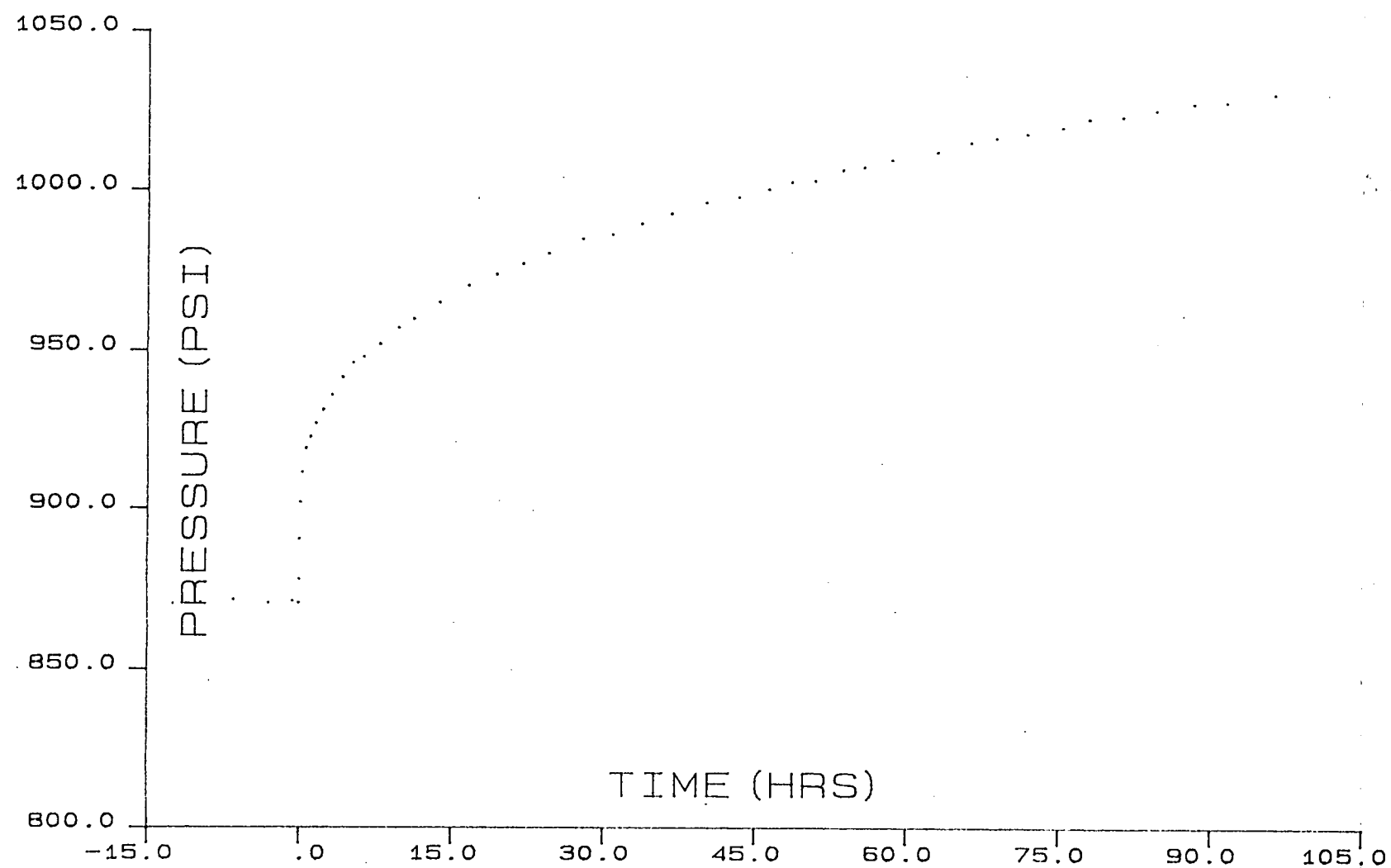
Element # 29386 was also run.

BIMBAYA #2

LET/BHP

JANUARY 1994

ELEMENT #29388 @ 9180'KB



EXPERTEST PTY. LTD.



BHP/BHT GAUGE RUN DATA

CUSTOMER : Santos

PERFORATIONS: 9212' - 9313' KB.

PAGE: 1 OF 1

WELL NAME: Bimbaya #2

FORMATION : Tirrawarra

DATE: 19th Jan 1994

TEST TYPE : Static Gradient

OPR : B. Patter

GAUGE DATA

UPPER
PRESSURE
GAUGELOWER
PRESSURE
GAUGETEMPERATURE
GAUGE

RUN DATA

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

ELEMENT SERIAL NO.

29386

29388

DATE : 19.1.94

ELEMENT RANGE

(PSI)

2975

3000

PRESSURE LUBRICATOR :

1145

5282

0

RECORDING SECTION SERIAL NO.

61323

61001

RUN IN HOLE :

1200

5282

0

DATE OF CALIBRATION:

16/11/93

16/11/93

ON DEPTH AT : 9262 FT/M

1324

5282

0

CLOCK SERIAL NO.

A-16085

A-16084

DATE : 19.1.94

CLOCK RANGE

HR

3

3

PULL OUT OF HOLE :

1334

5282

0

LEAD SCREW TYPE

TCS

15

15

AT SURFACE :

1400

5282

0

DEPRESSURE LUBRICATOR :

1415

5282

0

ENGAGE STYLUS

DATE

19.1.94

TIME

11:40

11:40

MAXIMUM BHT AT 9262 FT/M = 275 °F/B

DISENGAGE STYLUS

DATE

19.1.94

TIME

14:23

14:23

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

DATE

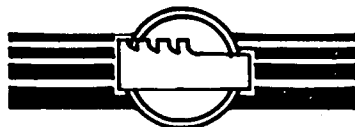
TIME

REMARKS

S.G.S was done after L.E.T / B.HPs in line survey.

EXPERTEST PTY. LTD.

STATIC PRESSURE GRADIENT SURVEY



Location: BOMBAYA #2

Tested: 19th January 1994.

Formation: TIPRAWARRA

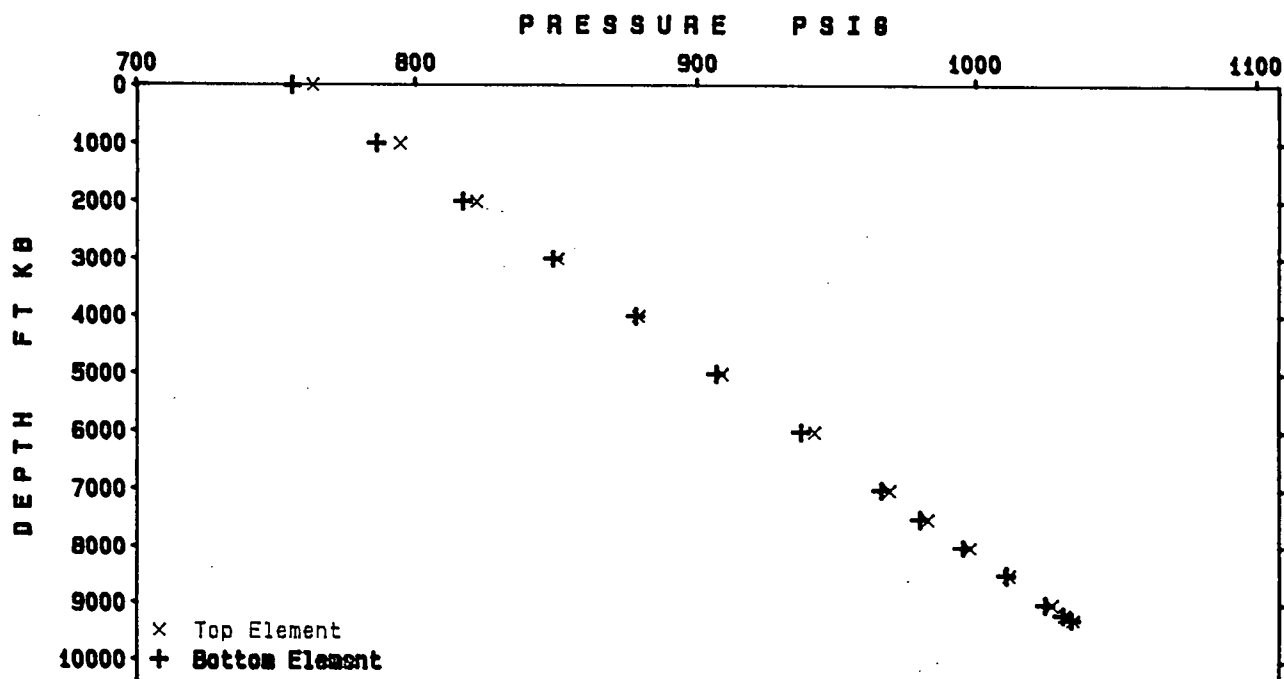
Client: SANTOS LTD.

PRESSURE ELEMENT DATA

Position	Serial No	Range	Calibrated
Top	29386	2975	16/11/93
Bottom	29388	3000	16/11/93

WELL DATA

DWT In	766 PSIG
DWT Out	766 PSIG
Max BHT	275 DEG F



TOP ELEMENT

BOTTOM ELEMENT

Depth FT KB	Deflection Inches	Pressure PSIG	Gradient PSI/FT	Deflection Inches	Pressure PSIG	Gradient PSI/FT
LUB.	0.5150	763.1	-	0.5060	755.8	-
1000	0.5360	794.6	0.032	0.5260	786.3	0.031
2000	0.5540	821.7	0.027	0.5460	816.8	0.031
3000	0.5730	850.3	0.029	0.5670	848.8	0.032
4000	0.5920	878.8	0.029	0.5860	877.8	0.029
5000	0.6120	908.9	0.030	0.6050	906.8	0.029
6000	0.6340	942.1	0.033	0.6250	937.3	0.031
7000	0.6520	969.2	0.027	0.6440	966.3	0.029
7500	0.6610	982.8	0.027	0.6530	980.0	0.027
8000	0.6710	997.8	0.030	0.6630	995.3	0.031
8500	0.6800	1011.4	0.027	0.6730	1010.5	0.031
9000	0.6900	1026.5	0.030	0.6820	1024.2	0.027
9180	0.6930	1031.0	0.025	0.6860	1030.4	0.034
9262	0.6950	1034.0	0.037	0.6880	1033.4	0.037
LUB.	0.5120	758.5	-	0.5060	755.8	-

GENERAL REMARKS