

SOUTH AUSTRALIA
DEPARTMENT OF MINES AND ENERGY



OPEN FILE ENVELOPE NO. 7183/2

PEL 5 AND PEL 6, LAKE HOPE BLOCK

EROMANGA AND COOPER BASINS

STURT EAST 1

TEST REPORTS

Submitted by

Santos Ltd

1989

(c) South Australian Department of Mines and Energy: 4/12/92

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ENVELOPE 7183/2

TENEMENT: PEL 5 and PEL 6, Lake Hope Block; Eromanga and Cooper Basins

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

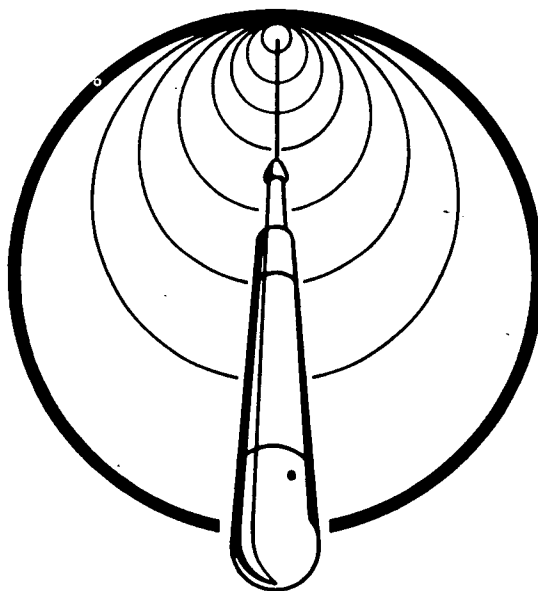
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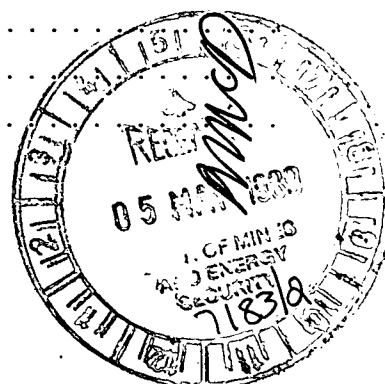
EXPERTEST

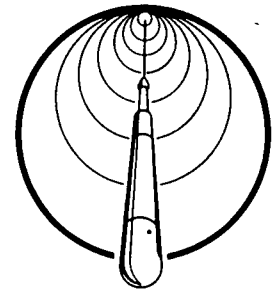
ELECTRIC WIRELINE
SERVICE



Electronic BHP/BHT Survey

Customer: SANTQS LTD
Location: STURT EAST #1
Formation: POOLQWANNA
Date: 29/12/88 TO 02/01/89





CUSTOMER: SANTOS LTD
LOCATION: STURT EAST #1
FORMATION: POOLWANNA
DATE: 29/12/88 TO 02/01/89

[illegible]

WIRELINE REPORT

CLIENT SANTOS LIMITED WELL STURT EAST #1

DATE 24/12/88

PROGRAMME DUMMY RUN

PURPOSE OF WORK TAG P.B.T.D.

REPORT OF WORK PERFORMED

1130 Arrive on location, rig up wireline unit.

Well S.I. press - tubing 5385 kpa, casing 4799 kpa.

1445 R.I.H. with 1.75 B/box.

1515 Tag P.B.T.D. @ 6094'KB, P.O.O.H.

1534 Depress Lub.

Rig down wireline unit, move off location.

1615 Return Moomba.

Operator's Signature

WORKED PERFORMED BY D. McAllister OF Expertest

WELL DATA:

Tubing Size 2 7/8" FWHP SIWHP 5399 kpa

Subsurface S.V./Landing Nipple @ S.S.D. @

'X' Nipple @ 'N'/XN' Nipple @ Pump Seat
Other Nipple @ 6008

Min. I.D. 2.210 @ 6008' Packer @ 5956'

Perforated Interval: 6086' - 6114' (Poolowanna)

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 29-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
29-12-88	12:00:00	0.000	795.05	0.01	91.34		1st GRADIENT STOP
29-12-88	12:06:00	0.100	795.04	-0.01	91.42		
29-12-88	12:07:00	0.119	795.07	0.03	91.51		
29-12-88	12:08:00	0.135	795.16	0.09	91.56		
29-12-88	12:09:00	0.152	795.16	0.00	91.63		
29-12-88	12:10:00	0.169	795.22	0.06	91.67	790	CSG = 350 PSIG
29-12-88	12:11:00	0.185	795.10	-0.12	91.72		
29-12-88	12:12:00	0.202	795.84	0.74	91.77		RUN IN THE HOLE
29-12-88	12:13:00	0.219	1073.31	277.47	99.04		2nd GRADIENT STOP
29-12-88	12:41:00	0.683	1119.78	46.47	108.02		
29-12-88	12:42:00	0.700	1119.91	0.13	108.11		DELTA T FROM
29-12-88	12:43:00	0.716	1120.16	0.25	108.19		START OF SURVEY
29-12-88	12:44:00	0.733	1120.69	0.53	108.25		
29-12-88	12:45:00	0.750	1120.68	-0.01	108.30		DELTA P FROM
29-12-88	12:46:00	0.766	1121.12	0.44	108.35		PREVIOUS VALUE
29-12-88	12:47:00	0.783	1121.06	-0.06	108.39		
29-12-88	12:48:00	0.800	1121.71	0.65	108.43		
29-12-88	12:49:00	0.816	1121.45	-0.26	108.47		GRADIENT = .327
29-12-88	12:50:00	0.833	1121.70	0.25	108.49		RUN IN HOLE
29-12-88	13:01:00	1.016	1414.28	292.58	122.11		3rd STOP AT 2000'KB
29-12-88	13:11:00	1.183	1439.35	25.07	130.35		
29-12-88	13:12:00	1.200	1440.02	0.67	130.77		
29-12-88	13:13:00	1.216	1440.54	0.52	130.97		1 MIN SAMPLE RATE
29-12-88	13:14:00	1.233	1440.94	0.40	131.54		
29-12-88	13:15:00	1.250	1441.28	0.34	131.28		
29-12-88	13:16:00	1.266	1441.57	0.29	131.40		
29-12-88	13:17:00	1.283	1441.78	0.21	131.51		
29-12-88	13:18:00	1.300	1441.96	0.18	131.59		
29-12-88	13:19:00	1.316	1442.19	0.23	131.67		
29-12-88	13:20:00	1.333	1442.33	0.14	131.73		
29-12-88	13:21:00	1.350	1442.42	0.09	131.78		
29-12-88	13:22:00	1.366	1442.53	0.11	131.83		
29-12-88	13:23:00	1.383	1442.62	0.09	131.87		
29-12-88	13:24:00	1.400	1442.36	-0.26	131.91		GRADIENT = .321
29-12-88	13:25:00	1.416	1442.76	0.40	131.94		RUN IN THE HOLE
29-12-88	13:37:00	1.616	1760.37	317.61	149.36		4th STOP AT 3000'KB
29-12-88	13:48:00	1.799	1759.09	-1.28	154.99		
29-12-88	13:49:00	1.816	1760.29	1.20	155.13		
29-12-88	13:50:00	1.832	1760.32	0.03	155.27		
29-12-88	13:51:00	1.849	1760.22	-0.10	155.37	790	CSG=350 psig
29-12-88	13:52:00	1.866	1760.14	-0.08	155.46		
29-12-88	13:53:00	1.882	1760.12	-0.02	155.55		
29-12-88	13:54:00	1.899	1760.04	-0.08	155.62		GRADIENT=.317
29-12-88	13:55:00	1.916	1759.47	-0.57	155.68		RUN IN HOLE
29-12-88	14:06:00	2.099	2099.73	340.26	171.22		5th STOP 4000'KB
29-12-88	14:18:00	2.299	2076.48	-23.25	180.13		
29-12-88	14:19:00	2.316	2075.84	-0.64	180.30		
29-12-88	14:20:00	2.332	2075.24	-0.60	180.44		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 29-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS :

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
29-12-88	14:21:00	2.349	2074.86	-0.38	180.47		
29-12-88	14:22:00	2.366	2074.43	-0.43	180.67		
29-12-88	14:23:00	2.382	2074.11	-0.32	180.77		
29-12-88	14:24:00	2.399	2073.87	-0.24	180.86		GRADIENT=.314
29-12-88	14:25:00	2.416	2073.64	-0.23	180.93		RUN IN HOLE
29-12-88	14:38:00	2.633	2406.46	332.82	193.38		6th STOP 5000'KB
29-12-88	14:51:00	2.849	2384.46	-22.00	198.14		
29-12-88	14:52:00	2.866	2384.00	-0.46	198.22		
29-12-88	14:53:00	2.882	2384.64	0.64	198.29		
29-12-88	14:54:00	2.899	2383.29	-1.35	198.34		
29-12-88	14:55:00	2.916	2383.05	-0.24	198.39		
29-12-88	14:56:00	2.932	2382.80	-0.25	198.44		
29-12-88	14:57:00	2.949	2382.59	-0.21	198.47		GRADIENT=.309
29-12-88	14:58:00	2.966	2382.44	-0.15	198.50		RUN IN HOLE
29-12-88	15:06:00	3.099	2389.65	7.21	202.70		7th STOP @ 5600'KB
29-12-88	15:16:00	3.266	2570.47	180.82	202.88		
29-12-88	15:17:00	3.283	2569.87	-0.60	205.97		
29-12-88	15:18:00	3.299	2569.37	-0.50	206.06		
29-12-88	15:19:00	3.316	2568.92	-0.45	206.12		
29-12-88	15:20:00	3.333	2568.52	-0.40	206.19		
29-12-88	15:21:00	3.349	2568.22	-0.30	206.23		
29-12-88	15:22:00	3.366	2567.90	-0.32	206.27		
29-12-88	15:23:00	3.383	2567.70	-0.20	206.31		
29-12-88	15:24:00	3.399	2567.50	-0.20	206.34		GRADIENT=.308
29-12-88	15:25:00	3.416	2567.35	-0.15	206.35		RUN IN HOLE AND
29-12-88	15:52:00	3.866	2726.11	158.76	214.15		CORRELATE ADD 18'
29-12-88	15:53:00	3.883	2722.29	-3.82	214.37		FOR CABLE STRETCH
29-12-88	15:54:00	3.899	2719.67	-2.62	214.50		8th STOP @ 6100'KB
29-12-88	16:03:00	4.049	2713.17	-6.50	214.67		
29-12-88	16:04:00	4.066	2713.11	-0.06	214.67		
29-12-88	16:05:00	4.082	2713.03	-0.08	214.66		
29-12-88	16:06:00	4.099	2712.95	-0.08	214.66		
29-12-88	16:07:00	4.116	2712.92	-0.03	214.65		
29-12-88	16:08:00	4.132	2712.89	-0.03	214.66		
29-12-88	16:09:00	4.149	2712.87	-0.02	214.65		GRADIENT=.290
29-12-88	16:10:00	4.166	2712.83	-0.04	214.65		RUN IN HOLE
29-12-88	16:18:00	4.299	2724.38	11.55	215.21		9th STOP @ 6130'KB
29-12-88	16:19:00	4.316	2724.31	-0.07	215.29		
29-12-88	16:20:00	4.332	2724.07	-0.24	215.35	789	CSG=350 PSIG
29-12-88	16:21:00	4.349	2723.90	-0.17	215.41		
29-12-88	16:22:00	4.366	2723.71	-0.19	215.46		
29-12-88	16:23:00	4.382	2723.54	-0.17	215.51		
29-12-88	16:24:00	4.399	2723.34	-0.20	215.55		
29-12-88	16:25:00	4.416	2723.18	-0.16	215.58		
29-12-88	16:26:00	4.432	2723.05	-0.13	215.61		GRADIENT=.329
29-12-88	16:27:00	4.449	2722.94	-0.11	215.63		
29-12-88	16:28:00	4.466	2722.82	-0.12	215.65		START FLOW PERIOD
29-12-88	16:30:00	0.000	2722.70	0.00	215.68		OPEN WELL ON
29-12-88	16:30:30	0.008	2716.04	-6.66	215.69		9.5/64 CHOKE
29-12-88	16:31:00	0.017	2701.39	-21.31	215.69		
29-12-88	16:31:30	0.025	2698.49	-24.21	215.69		DELTA T FROM
29-12-88	16:32:00	0.033	2696.72	-25.98	215.69		START OF FLOW

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 29-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
29-12-88	16:32:30	0.042	2695.78	-26.92	215.69		
29-12-88	16:33:00	0.050	2695.05	-27.65	215.70		DELTA P FROM
29-12-88	16:33:30	0.058	2694.52	-28.18	215.71		START OF FLOW
29-12-88	16:34:00	0.067	2694.03	-28.67	215.72		
29-12-88	16:34:30	0.075	2693.47	-29.23	215.72	750	CSG=340 PSIG
29-12-88	16:35:00	0.083	2692.95	-29.75	215.73		
29-12-88	16:35:30	0.092	2692.58	-30.12	215.74		30SEC SAMPLE RATE
29-12-88	16:36:00	0.100	2692.31	-30.39	215.75		
29-12-88	16:36:30	0.108	2691.99	-30.71	215.75		
29-12-88	16:37:00	0.117	2691.69	-31.01	215.76		
29-12-88	16:37:30	0.125	2691.46	-31.24	215.77		
29-12-88	16:38:00	0.133	2691.18	-31.52	215.78		
29-12-88	16:38:30	0.142	2690.84	-31.86	215.78		
29-12-88	16:39:00	0.150	2690.61	-32.09	215.79		
29-12-88	16:39:30	0.158	2690.43	-32.27	215.79		
29-12-88	16:40:00	0.167	2690.19	-32.51	215.80	758	
29-12-88	16:41:00	0.183	2689.79	-32.91	215.81		
29-12-88	16:42:00	0.200	2689.43	-33.27	215.84		1 MIN SAMPLE RATE
29-12-88	16:43:00	0.217	2689.09	-33.61	215.86		
29-12-88	16:44:00	0.233	2688.68	-34.02	215.88		
29-12-88	16:45:00	0.250	2688.26	-34.44	215.89	758	
29-12-88	16:46:00	0.267	2687.97	-34.73	215.91		
29-12-88	16:47:00	0.283	2687.69	-35.01	215.91		
29-12-88	16:48:00	0.300	2687.76	-34.94	215.92		
29-12-88	16:49:00	0.317	2687.47	-35.23	215.93		
29-12-88	16:50:00	0.333	2687.15	-35.55	215.93		
29-12-88	16:51:00	0.350	2686.97	-35.73	215.94		
29-12-88	16:52:00	0.367	2686.84	-35.86	215.94		
29-12-88	16:53:00	0.383	2686.67	-36.03	215.94		
29-12-88	16:54:00	0.400	2686.49	-36.21	215.94		
29-12-88	16:55:00	0.417	2686.29	-36.41	215.94		
29-12-88	16:56:00	0.433	2686.29	-36.41	215.94		
29-12-88	16:57:00	0.450	2686.07	-36.63	215.95		
29-12-88	16:58:00	0.466	2685.79	-36.91	215.95		
29-12-88	16:59:00	0.483	2685.61	-37.09	215.95		
29-12-88	17:00:00	0.500	2685.43	-37.27	215.95	763	CSG=650
29-12-88	17:05:00	0.583	2684.75	-37.95	216.00		
29-12-88	17:10:00	0.666	2684.03	-38.67	216.03		
29-12-88	17:15:00	0.750	2683.21	-39.49	216.03		5 min SAMPLE RATE
29-12-88	17:20:00	0.833	2683.84	-38.86	216.02		
29-12-88	17:25:00	0.916	2684.44	-38.26	216.02		
29-12-88	17:30:00	0.100	2684.18	-38.52	216.02	763	CSG=650
29-12-88	17:35:00	1.083	2689.29	-33.41	216.02		
29-12-88	17:40:00	1.166	2693.83	-28.87	216.03		
29-12-88	17:45:00	1.250	2694.59	-28.11	216.03		
29-12-88	17:50:00	1.333	2697.36	-25.34	216.03		
29-12-88	17:55:00	1.416	2684.03	-38.67	216.03		ROCK THE CHOKE
29-12-88	18:00:00	1.500	2683.29	-39.41	216.03		
29-12-88	18:05:00	1.583	2683.16	-39.54	216.04		
29-12-88	18:10:00	1.666	2682.98	-39.72	216.04		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 29-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
29-12-88	18:15:00	1.750	2682.99	-39.71	216.04		
29-12-88	18:20:00	1.833	2682.99	-39.71	216.04		
29-12-88	18:25:00	1.916	2683.39	-39.31	216.03		
29-12-88	18:30:00	1.100	2684.24	-38.46	216.04	762	CSG=650 PSIG
29-12-88	18:35:00	2.083	2678.82	-43.88	216.04		
29-12-88	18:40:00	2.166	2678.79	-43.91	216.04		
29-12-88	18:45:00	2.250	2678.65	-44.05	216.04		
29-12-88	18:50:00	2.333	2678.72	-43.98	216.04		
29-12-88	18:55:00	2.416	2678.79	-43.91	216.04		
29-12-88	19:00:00	2.500	2678.77	-43.93	216.04		
29-12-88	19:05:00	2.583	2680.85	-41.85	216.04		
29-12-88	19:10:00	2.666	2680.92	-41.78	216.04		
29-12-88	19:15:00	2.750	2680.93	-41.77	216.04		
29-12-88	19:20:00	2.833	2681.01	-41.69	216.04		
29-12-88	19:25:00	2.916	2680.95	-41.75	216.04	760	CSG=650 PSIG
29-12-88	19:30:00	2.100	2681.20	-41.50	216.04		
29-12-88	19:35:00	3.083	2683.01	-39.69	216.04		
29-12-88	19:40:00	3.166	2684.10	-38.60	216.04		
29-12-88	19:45:00	3.250	2684.72	-37.98	216.04		
29-12-88	19:50:00	3.333	2684.97	-37.73	216.04		
29-12-88	19:55:00	3.416	2678.10	-44.60	216.04		
29-12-88	20:00:00	3.500	2679.64	-43.06	216.05		
29-12-88	20:05:00	3.583	2679.92	-42.78	216.04		
29-12-88	20:10:00	3.666	2680.28	-42.42	216.05		
29-12-88	20:15:00	3.750	2680.49	-42.21	216.05		
29-12-88	20:20:00	3.833	2681.06	-41.64	216.05		
29-12-88	20:25:00	3.916	2681.80	-40.90	216.05		
29-12-88	20:30:00	3.100	2682.36	-40.34	216.04	760	CSG=650 PSIG
29-12-88	20:35:00	4.083	2682.61	-40.09	216.04		
29-12-88	20:40:00	4.166	2683.32	-39.38	216.04		
29-12-88	20:45:00	4.250	2683.84	-38.86	216.04		
29-12-88	20:50:00	4.333	2685.04	-37.66	216.03		
29-12-88	20:55:00	4.416	2686.10	-36.60	216.03		
29-12-88	21:00:00	4.500	2686.37	-36.33	216.03		
29-12-88	21:05:00	4.583	2686.94	-35.76	216.03		
29-12-88	21:10:00	4.666	2687.14	-35.56	216.03		
29-12-88	21:15:00	4.750	2687.21	-35.49	216.03		
29-12-88	21:20:00	4.833	2687.23	-35.47	216.03		
29-12-88	21:25:00	4.916	2687.37	-35.33	216.02		
29-12-88	21:30:00	4.100	2687.36	-35.34	216.02		
29-12-88	21:35:00	5.083	2687.40	-35.30	216.03		
29-12-88	21:40:00	5.166	2687.39	-35.31	216.02		
29-12-88	21:45:00	5.250	2687.39	-35.31	216.02		
29-12-88	21:50:00	5.333	2687.42	-35.28	216.02		
29-12-88	21:55:00	5.416	2687.40	-35.30	216.02		
29-12-88	22:00:00	5.500	2687.44	-35.26	216.02		
29-12-88	22:05:00	5.583	2687.42	-35.28	216.02		
29-12-88	22:10:00	5.666	2687.39	-35.31	216.02		
29-12-88	22:15:00	5.750	2687.51	-35.19	216.02		
29-12-88	22:20:00	5.833	2687.52	-35.18	216.03		

ROCK THE CHOKE
ON EACH READING

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 29-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
29-12-88	22:25:00	5.916	2687.15	-35.55	216.02	766	CSG=650 PSIG
29-12-88	22:30:00	5.100	2687.62	-35.08	216.02		
29-12-88	22:35:00	6.083	2687.60	-35.10	216.02		
29-12-88	22:40:00	6.166	2687.63	-35.07	216.02		
29-12-88	22:45:00	6.250	2687.62	-35.08	216.02		
29-12-88	22:50:00	6.333	2687.62	-35.08	216.02		
29-12-88	22:55:00	6.416	2687.60	-35.10	216.02		
29-12-88	23:00:00	6.500	2687.56	-35.14	216.02		
29-12-88	23:05:00	6.583	2687.57	-35.13	216.03		
29-12-88	23:10:00	6.666	2687.53	-35.17	216.02		
29-12-88	23:15:00	6.750	2687.52	-35.18	216.02		
29-12-88	23:20:00	6.833	2687.51	-35.19	216.02		
29-12-88	23:25:00	6.916	2687.54	-35.16	216.02		
29-12-88	23:30:00	6.100	2687.52	-35.18	216.02		
29-12-88	23:35:00	7.083	2687.53	-35.17	216.02		
29-12-88	23:40:00	7.166	2687.54	-35.16	216.02		
29-12-88	23:45:00	7.250	2687.52	-35.18	216.02		
29-12-88	23:50:00	7.333	2687.50	-35.20	216.02		
29-12-88	23:55:00	7.416	2687.41	-35.29	216.02		
31-12-88	00:00:00	7.500	2687.38	-35.32	216.02	767	CSG=650 PSIG
31-12-88	00:05:00	7.583	2687.41	-35.29	216.02		
31-12-88	00:10:00	7.666	2687.35	-35.35	216.02		
31-12-88	00:15:00	7.750	2687.31	-35.39	216.94		
31-12-88	00:20:00	7.833	2687.32	-35.38	216.93		
31-12-88	00:25:00	7.916	2687.38	-35.32	216.97		
31-12-88	00:30:00	7.100	2687.33	-35.37	216.00		
31-12-88	00:35:00	8.083	2688.09	-34.61	216.01		
31-12-88	00:40:00	8.166	2688.09	-34.61	216.02		
31-12-88	00:45:00	8.250	2688.12	-34.58	216.02		
31-12-88	00:50:00	8.333	2688.14	-34.56	216.02		
31-12-88	00:55:00	8.416	2688.23	-34.47	216.02		
31-12-88	01:00:00	8.500	2688.21	-34.49	216.02		
31-12-88	01:05:00	8.583	2688.21	-34.49	216.03		
31-12-88	01:10:00	8.666	2688.25	-34.45	216.03		
31-12-88	01:15:00	8.750	2688.25	-34.45	216.02		
31-12-88	01:20:00	8.833	2688.81	-33.89	216.03		
31-12-88	01:25:00	8.916	2688.87	-33.83	216.03		
31-12-88	01:30:00	8.100	2688.94	-33.76	216.03		
31-12-88	01:35:00	9.083	2688.96	-33.74	216.02		
31-12-88	01:40:00	9.166	2688.81	-33.89	216.02		
31-12-88	01:45:00	9.250	2688.89	-33.81	216.02		
31-12-88	01:50:00	9.333	2688.82	-33.88	216.03		
31-12-88	01:55:00	9.416	2688.79	-33.91	216.02		
31-12-88	02:00:00	9.500	2688.83	-33.87	216.03		
31-12-88	02:05:00	9.583	2688.82	-33.88	216.02		
31-12-88	02:10:00	9.666	2688.84	-33.86	216.02		
31-12-88	02:15:00	9.750	2688.85	-33.85	216.03		
31-12-88	02:20:00	9.833	2688.80	-33.90	216.03		
31-12-88	02:25:00	9.916	2682.81	-39.89	216.03		
31-12-88	02:30:00	9.100	2682.16	-40.54	216.02	768	CSG=650 PSIG

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 31-12-88

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	02:35:00	10.083	2682.13	-40.57	216.02		
31-12-88	02:40:00	10.166	2682.04	-40.66	216.03		
31-12-88	02:45:00	10.250	2682.27	-40.43	216.03		
31-12-88	02:50:00	10.333	2682.23	-40.47	216.03		
31-12-88	02:55:00	10.416	2682.08	-40.62	216.04		
31-12-88	03:00:00	10.500	2682.08	-40.62	216.03		
31-12-88	03:05:00	10.583	2681.98	-40.72	216.03		
31-12-88	03:10:00	10.666	2681.98	-40.72	216.03		
31-12-88	03:15:00	10.750	2682.02	-40.68	216.03		
31-12-88	03:20:00	10.833	2681.96	-40.74	216.03		
31-12-88	03:25:00	10.916	2681.94	-40.76	216.03		
31-12-88	03:30:00	10.100	2682.06	-40.64	216.03		
31-12-88	03:35:00	11.083	2682.01	-40.69	216.03		
31-12-88	03:40:00	11.166	2681.95	-40.75	216.03		
31-12-88	03:45:00	11.250	2681.92	-40.78	216.03		
31-12-88	03:50:00	11.333	2681.86	-40.84	216.03		
31-12-88	03:55:00	11.416	2682.02	-40.68	216.03		
31-12-88	04:00:00	11.500	2682.14	-40.56	216.03		
31-12-88	04:05:00	11.583	2682.16	-40.54	216.03		
31-12-88	04:10:00	11.666	2682.19	-40.51	216.03		
31-12-88	04:15:00	11.750	2682.15	-40.55	216.03		
31-12-88	04:20:00	11.833	2682.22	-40.48	216.03		
31-12-88	04:25:00	11.916	2682.18	-40.52	216.03		
31-12-88	04:30:00	11.100	2682.20	-40.50	216.03	762	CSG=650 PSIG
31-12-88	04:35:00	12.083	2682.20	-40.50	216.03		
31-12-88	04:40:00	12.166	2682.23	-40.47	216.03		
31-12-88	04:45:00	12.250	2682.21	-40.49	216.03		
31-12-88	04:50:00	12.333	2682.22	-40.48	216.03		
31-12-88	04:55:00	12.416	2682.27	-40.43	216.03		
31-12-88	05:00:00	12.500	2682.30	-40.40	216.03		
31-12-88	05:05:00	12.583	2682.23	-40.47	216.03		
31-12-88	05:10:00	12.666	2682.26	-40.44	216.03		
31-12-88	05:15:00	12.750	2682.24	-40.46	216.03		
31-12-88	05:20:00	12.833	2682.23	-40.47	216.03		
31-12-88	05:25:00	12.916	2682.25	-40.45	216.03		
31-12-88	05:30:00	12.100	2682.20	-40.50	216.03		
31-12-88	05:35:00	13.083	2682.17	-40.53	216.04		
31-12-88	05:40:00	13.166	2682.46	-40.24	216.04		
31-12-88	05:45:00	13.250	2682.48	-40.22	216.04		
31-12-88	05:50:00	13.333	2682.48	-40.22	216.04		
31-12-88	05:55:00	13.416	2682.48	-40.22	216.04		
31-12-88	06:00:00	13.500	2682.50	-40.20	216.04		
31-12-88	06:05:00	13.583	2682.49	-40.21	216.04		
31-12-88	06:10:00	13.666	2682.48	-40.22	216.04		
31-12-88	06:15:00	13.750	2681.94	-40.76	216.04		
31-12-88	06:20:00	13.833	2682.51	-40.19	216.04		
31-12-88	06:25:00	13.916	2682.48	-40.22	216.04		
31-12-88	06:30:00	13.100	2682.62	-40.08	216.04	762	CSG=650 PSIG
31-12-88	06:35:00	14.083	2682.59	-40.11	216.04		
31-12-88	06:40:00	14.166	2682.73	-39.97	216.04		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 31-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	06:45:00	14.250	2682.74	-39.96	216.04		
31-12-88	06:50:00	14.333	2682.77	-39.93	216.04		
31-12-88	06:55:00	14.416	2682.83	-39.87	216.04		
31-12-88	07:00:00	14.500	2682.71	-39.99	216.04		
31-12-88	07:05:00	14.583	2682.73	-39.97	216.04		
31-12-88	07:10:00	14.666	2682.74	-39.96	216.04		
31-12-88	07:15:00	14.750	2682.69	-40.01	216.04		
31-12-88	07:20:00	14.833	2682.75	-39.95	216.04		
31-12-88	07:25:00	14.916	2682.78	-39.92	216.04		
31-12-88	07:30:00	14.100	2682.71	-39.99	216.04		
31-12-88	07:35:00	15.083	2682.73	-39.97	216.04		
31-12-88	07:40:00	15.166	2682.80	-39.90	216.04		
31-12-88	07:45:00	15.250	2682.75	-39.95	216.03		
31-12-88	07:50:00	15.333	2682.84	-39.86	216.03		
31-12-88	07:55:00	15.416	2682.88	-39.82	216.03		
31-12-88	08:00:00	15.500	2682.95	-39.75	216.03		
31-12-88	08:05:00	15.583	2682.96	-39.74	216.04		
31-12-88	08:10:00	15.666	2683.00	-39.70	216.03		
31-12-88	08:15:00	15.750	2682.99	-39.71	216.03		
31-12-88	08:20:00	15.833	2682.97	-39.73	216.03		
31-12-88	08:25:00	15.916	2682.94	-39.76	216.02		
31-12-88	08:30:00	15.100	2683.03	-39.67	216.02	763	CSG=650 PSIG
31-12-88	08:35:00	16.083	2683.04	-39.66	216.02		
31-12-88	08:40:00	16.166	2683.07	-39.63	216.03		
31-12-88	08:45:00	16.250	2683.04	-39.66	216.03		
31-12-88	08:50:00	16.333	2683.04	-39.66	216.03		
31-12-88	08:55:00	16.416	2683.08	-39.62	216.03		
31-12-88	09:00:00	16.500	2683.05	-39.65	216.03		
31-12-88	09:05:00	16.583	2683.04	-39.66	216.03		
31-12-88	09:10:00	16.666	2683.04	-39.66	216.02		
31-12-88	09:15:00	16.750	2683.14	-39.56	216.03		
31-12-88	09:20:00	16.833	2683.12	-39.58	216.03		
31-12-88	09:25:00	16.916	2683.06	-39.64	216.03		
31-12-88	09:30:00	16.100	2683.06	-39.64	216.03		
31-12-88	09:35:00	17.083	2683.04	-39.66	216.03		
31-12-88	09:40:00	17.166	2683.07	-39.63	216.03		
31-12-88	09:45:00	17.250	2683.07	-39.63	216.02		
31-12-88	09:50:00	17.333	2683.05	-39.65	216.02		
31-12-88	09:55:00	17.416	2683.04	-39.66	216.03		
31-12-88	10:00:00	17.500	2683.04	-39.66	216.03		
31-12-88	10:05:00	17.583	2682.82	-39.88	216.03		
31-12-88	10:10:00	17.666	2683.02	-39.68	216.02		
31-12-88	10:15:00	17.750	2682.99	-39.71	216.03		
31-12-88	10:20:00	17.833	2682.72	-39.98	216.04		
31-12-88	10:25:00	17.916	2682.90	-39.80	216.03		
31-12-88	10:30:00	17.100	2682.92	-39.78	216.03	767	CSG=660 PSIG
31-12-88	10:35:00	18.083	2682.90	-39.80	216.03		
31-12-88	10:40:00	18.166	2682.93	-39.77	216.03		
31-12-88	10:45:00	18.250	2682.88	-39.82	216.04		
31-12-88	10:50:00	18.333	2683.13	-39.57	216.03		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 31-12-88

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	10:55:00	18.416	2683.12	-39.58	216.03		TIME LOST DUE TO DISC FAILURE
31-12-88	11:00:00	18.500	2683.11	-39.59	216.03		
31-12-88	11:05:00	18.583	2683.11	-39.59	216.03		
30-12-88	11:30:00	19.000	2683.16	-39.54	216.03		5 MIN SAMPLE RATE
30-12-88	11:35:00	19.083	2683.17	-39.53	216.03		
30-12-88	11:40:00	19.167	2683.12	-39.58	216.03		
30-12-88	11:45:00	19.250	2683.27	-39.43	216.04		
30-12-88	11:50:00	19.333	2683.36	-39.34	216.03		
30-12-88	11:55:00	19.417	2683.36	-39.34	216.03		
30-12-88	12:00:00	19.500	2683.53	-39.17	216.03		
30-12-88	12:05:00	19.583	2683.57	-39.13	216.03		
30-12-88	12:10:00	19.667	2683.69	-39.01	216.03		
30-12-88	12:15:00	19.750	2683.70	-39.00	216.03		
30-12-88	12:20:00	19.833	2683.73	-38.97	216.03		
30-12-88	12:25:00	19.917	2683.75	-38.95	216.03		
30-12-88	12:30:00	20.000	2683.40	-39.30	216.03	764	
30-12-88	12:35:00	20.083	2679.44	-43.26	216.03		
30-12-88	12:40:00	20.167	2679.10	-43.60	216.03		
30-12-88	12:45:00	20.250	2679.00	-43.70	216.04		
30-12-88	12:50:00	20.333	2679.16	-43.54	216.04		CSG = 675 PSIG
30-12-88	12:55:00	20.417	2679.15	-43.55	216.03		
30-12-88	13:00:00	20.500	2678.39	-44.31	216.04		
30-12-88	13:05:00	20.583	2677.10	-44.70	216.04		
30-12-88	13:10:00	20.667	2677.92	-44.78	216.03		
30-12-88	13:15:00	20.750	2678.14	-44.56	216.04		
30-12-88	13:20:00	20.833	2678.22	-44.48	216.03		
30-12-88	13:25:00	20.917	2678.25	-44.45	216.03		
30-12-88	13:30:00	21.000	2678.42	-44.28	216.04		
30-12-88	13:35:00	21.083	2678.43	-44.27	216.04		
30-12-88	13:40:00	21.167	2678.60	-44.10	216.04		
30-12-88	13:45:00	21.250	2678.63	-44.07	216.04		
30-12-88	13:50:00	21.333	2679.01	-43.69	216.03		
30-12-88	13:55:00	21.417	2679.58	-43.12	216.04		
30-12-88	14:00:00	21.500	2679.73	-42.97	216.04		
30-12-88	14:05:00	21.583	2679.64	-43.06	216.04		
30-12-88	14:10:00	21.667	2679.77	-42.93	216.04		
30-12-88	14:15:00	21.750	2679.75	-42.95	216.04		
30-12-88	14:20:00	21.833	2679.92	-42.78	216.04		
30-12-88	14:25:00	21.917	2679.99	-42.71	216.04		
30-12-88	14:30:00	22.000	2680.26	-42.44	216.04	761	
30-12-88	14:35:00	22.083	2680.33	-42.37	216.04		
30-12-88	14:40:00	22.167	2680.41	-42.29	216.04		
30-12-88	14:45:00	22.250	2680.48	-42.22	216.04		
30-12-88	14:50:00	22.333	2680.50	-42.20	216.04		
30-12-88	14:55:00	22.417	2680.62	-42.08	216.03		
30-12-88	15:00:00	22.500	2680.78	-41.92	216.04		
30-12-88	15:05:00	22.583	2680.81	-41.89	216.04		
30-12-88	15:10:00	22.667	2680.80	-41.90	216.04		
30-12-88	15:15:00	22.750	2680.93	-41.77	216.04		
30-12-88	15:20:00	22.833	2681.07	-41.63	216.04		
30-12-88	15:25:00	22.917	2681.16	-41.54	216.04		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 30-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
30-12-88	15:30:00	23.000	2681.19	-41.51	216.04	761	CSG = 660 PSIG
30-12-88	15:35:00	23.083	2681.26	-41.44	216.04		
30-12-88	15:40:00	23.167	2681.24	-41.46	216.04		
30-12-88	15:45:00	23.250	2681.34	-41.36	216.04		
30-12-88	15:50:00	23.333	2681.35	-41.35	216.04		
30-12-88	15:55:00	23.417	2681.39	-41.31	216.04		
30-12-88	16:00:00	23.500	2681.47	-41.23	216.04		
30-12-88	16:05:00	23.583	2681.50	-41.20	216.04		
30-12-88	16:10:00	23.667	2681.47	-41.23	216.04		
30-12-88	16:15:00	23.750	2681.47	-41.23	216.04		
30-12-88	16:20:00	23.833	2681.51	-41.19	216.04		
30-12-88	16:25:00	23.917	2681.60	-41.10	216.04		
30-12-88	16:30:00	24.000	2681.58	-41.12	216.04		
30-12-88	16:35:00	24.083	2681.61	-41.09	216.04		
30-12-88	16:40:00	24.167	2681.66	-41.04	216.04		
30-12-88	16:45:00	24.250	2681.71	-40.99	216.04		
30-12-88	16:50:00	24.333	2681.76	-40.94	216.04		
30-12-88	16:55:00	24.417	2681.84	-40.86	216.04		
30-12-88	17:00:00	24.500	2681.86	-40.84	216.04		
30-12-88	17:05:00	24.583	2682.02	-40.68	216.04		
30-12-88	17:10:00	24.667	2681.99	-40.71	216.04		
30-12-88	17:15:00	24.750	2681.81	-40.89	216.04		
30-12-88	17:20:00	24.833	2681.70	-41.00	216.04		
30-12-88	17:25:00	24.917	2681.86	-40.84	216.03		
30-12-88	17:30:00	25.000	2681.96	-40.74	216.04		
30-12-88	17:35:00	25.083	2681.90	-40.80	216.04		
30-12-88	17:40:00	25.167	2681.98	-40.72	216.04		
30-12-88	17:45:00	25.250	2682.10	-40.60	216.04		
30-12-88	17:50:00	25.333	2682.11	-40.59	216.05		
30-12-88	17:55:00	25.417	2682.14	-40.56	216.05		
30-12-88	18:00:00	25.500	2682.13	-40.57	216.04	762	CSG = 660 PSIG
30-12-88	18:05:00	25.583	2682.14	-40.56	216.04		
30-12-88	18:10:00	25.667	2682.22	-40.48	216.04		
30-12-88	18:15:00	25.750	2682.36	-40.34	216.04		
30-12-88	18:20:00	25.833	2682.44	-40.26	216.04		
30-12-88	18:25:00	25.917	2682.36	-40.34	215.98		
30-12-88	18:30:00	26.000	2682.67	-40.03	215.94		
30-12-88	18:35:00	26.083	2682.71	-39.99	215.92		
30-12-88	18:40:00	26.167	2682.77	-39.93	215.91		
30-12-88	18:45:00	26.250	2682.78	-39.92	215.92		
30-12-88	18:50:00	26.333	2682.82	-39.88	215.91		
30-12-88	18:55:00	26.417	2682.76	-39.94	215.91		
30-12-88	19:00:00	26.500	2682.73	-39.97	215.91		
30-12-88	19:05:00	26.583	2682.80	-39.90	215.91		
30-12-88	19:10:00	26.667	2682.76	-39.94	215.91		
30-12-88	19:15:00	26.750	2682.78	-39.92	215.90		
30-12-88	19:20:00	26.833	2682.81	-39.89	215.90		
30-12-88	19:25:00	26.917	2682.83	-39.87	215.90		
30-12-88	19:30:00	27.000	2682.95	-39.75	215.90		
30-12-88	19:35:00	27.083	2682.10	-39.70	215.91		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 30-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
30-12-88	19:40:00	27.167	2682.10	-39.70	215.91		
30-12-88	19:45:00	27.250	2683.01	-39.69	215.91		
30-12-88	19:50:00	27.333	2683.02	-39.68	215.90		
30-12-88	19:55:00	27.417	2683.02	-39.68	215.91		
30-12-88	20:00:00	27.500	2683.01	-39.69	215.91		
30-12-88	20:05:00	27.583	2683.02	-39.68	215.91		
30-12-88	20:10:00	27.667	2683.04	-39.66	215.90		
30-12-88	20:15:00	27.750	2683.08	-39.62	215.90		
30-12-88	20:20:00	27.833	2683.12	-39.58	215.90		
30-12-88	20:25:00	27.917	2683.15	-39.55	215.90		
30-12-88	20:30:00	28.000	2683.20	-39.50	215.90	762	CSG = 660 PSIG
30-12-88	20:35:00	28.083	2683.24	-39.46	215.90		
30-12-88	20:40:00	28.167	2683.27	-39.43	215.90		
30-12-88	20:45:00	28.250	2683.24	-39.46	215.90		
30-12-88	20:50:00	28.333	2683.27	-39.43	215.90		
30-12-88	20:55:00	28.417	2683.32	-39.38	215.90		
30-12-88	21:00:00	28.500	2683.41	-39.29	215.90		
30-12-88	21:05:00	28.583	2683.43	-39.27	215.90		
30-12-88	21:10:00	28.667	2683.44	-39.26	215.90		
30-12-88	21:15:00	28.750	2683.45	-39.25	215.90		
30-12-88	21:20:00	28.833	2683.48	-39.22	215.90		
30-12-88	21:25:00	28.917	2683.50	-39.20	215.90		
30-12-88	21:30:00	29.000	2683.58	-39.12	215.90		
30-12-88	21:35:00	29.083	2683.62	-39.08	215.90		
30-12-88	21:40:00	29.167	2683.59	-39.11	215.90		
30-12-88	21:45:00	29.250	2683.64	-39.06	215.90		
30-12-88	21:50:00	29.333	2683.64	-39.06	215.90		
30-12-88	21:55:00	29.417	2683.64	-39.06	215.90		
30-12-88	22:00:00	29.500	2683.69	-39.01	215.90		
30-12-88	22:05:00	29.583	2683.72	-38.98	215.90		
30-12-88	22:10:00	29.667	2683.72	-38.98	215.90		
30-12-88	22:15:00	29.750	2683.78	-38.92	215.90		
30-12-88	22:20:00	29.833	2683.80	-38.90	215.90		
30-12-88	22:25:00	29.917	2678.62	-44.08	215.90		
30-12-88	22:30:00	30.000	2678.42	-44.28	215.90	763	CSG = 660 PSIG
30-12-88	22:35:00	30.083	2678.17	-44.53	215.90		
30-12-88	22:40:00	30.167	2678.27	-44.43	215.90		
30-12-88	22:45:00	30.250	2678.30	-44.40	215.90		
30-12-88	22:50:00	30.333	2678.55	-44.15	215.90		
30-12-88	22:55:00	30.417	2678.64	-44.06	215.90		
30-12-88	23:00:00	30.500	2678.63	-44.07	215.90		
30-12-88	23:05:00	30.583	2678.84	-43.86	215.90		
30-12-88	23:10:00	30.667	2679.09	-43.61	215.90		
30-12-88	23:15:00	30.750	2679.21	-43.49	215.90		
30-12-88	23:20:00	30.833	2679.26	-43.44	215.91		
30-12-88	23:25:00	30.917	2679.03	-43.67	215.90		
30-12-88	23:30:00	31.000	2679.10	-43.60	215.90		
30-12-88	23:35:00	31.083	2679.17	-43.53	215.90		
30-12-88	23:40:00	31.167	2679.27	-43.43	215.90		
30-12-88	23:45:00	31.250	2679.51	-43.19	215.90		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 30-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
30-12-88	23:50:00	31.333	2679.64	-43.06	215.90	763	CSG = 660 PSIG
30-12-88	23:55:00	31.417	2679.61	-43.09	215.90		
31-12-88	00:00:00	31.500	2679.66	-43.04	215.90		
31-12-88	00:05:00	31.583	2679.71	-42.99	215.90		
31-12-88	00:10:00	31.667	2679.90	-42.80	215.90		
31-12-88	00:15:00	31.750	2679.91	-42.79	215.90		
31-12-88	00:20:00	31.833	2679.97	-42.73	215.90		
31-12-88	00:25:00	31.917	2679.95	-42.75	215.91		
31-12-88	00:30:00	32.000	2679.86	-42.84	215.91		
31-12-88	00:35:00	32.083	2679.96	-42.74	215.90		
31-12-88	00:40:00	32.167	2679.99	-42.71	215.91		
31-12-88	00:45:00	32.250	2679.94	-42.76	215.90		
31-12-88	00:50:00	32.333	2680.05	-42.65	215.91		
31-12-88	00:55:00	32.417	2680.09	-42.61	215.91		
31-12-88	01:00:00	32.500	2680.18	-42.52	215.90		
31-12-88	01:05:00	32.583	2680.29	-42.41	215.90		
31-12-88	01:10:00	32.667	2680.43	-42.27	215.90		
31-12-88	01:15:00	32.750	2680.27	-42.43	215.90		
31-12-88	01:20:00	32.833	2680.37	-42.33	215.90		
31-12-88	01:25:00	32.917	2680.42	-42.28	215.90		
31-12-88	01:30:00	33.000	2680.60	-42.10	215.90		
31-12-88	01:35:00	33.083	2680.71	-41.99	215.90		
31-12-88	01:40:00	33.167	2680.83	-41.87	215.90		
31-12-88	01:45:00	33.250	2680.92	-41.78	215.90		
31-12-88	01:50:00	33.333	2681.20	-41.50	215.90		
31-12-88	01:55:00	33.417	2681.22	-41.48	215.90		
31-12-88	02:00:00	33.500	2681.29	-41.41	215.90	762	CSG = 660 PSIG
31-12-88	02:05:00	33.583	2681.29	-41.41	215.90		
31-12-88	02:10:00	33.667	2681.49	-41.21	215.90		
31-12-88	02:15:00	33.750	2681.58	-41.12	215.90		
31-12-88	02:20:00	33.833	2681.94	-40.76	215.90		
31-12-88	02:25:00	33.917	2682.36	-40.34	215.90		
31-12-88	02:30:00	34.000	2682.51	-40.19	215.90		
31-12-88	02:35:00	34.083	2682.71	-39.99	215.90		
31-12-88	02:40:00	34.167	2683.08	-39.62	215.90		
31-12-88	02:45:00	34.250	2683.32	-39.38	215.90		
31-12-88	02:50:00	34.333	2683.39	-39.31	215.89		
31-12-88	02:55:00	34.417	2683.44	-39.26	215.90		
31-12-88	03:00:00	34.500	2683.48	-39.22	215.90		
31-12-88	03:05:00	34.583	2683.69	-39.01	215.90		
31-12-88	03:10:00	34.667	2683.85	-38.85	215.90		
31-12-88	03:15:00	34.750	2683.89	-38.81	215.91		
31-12-88	03:20:00	34.833	2683.82	-38.88	215.90		
31-12-88	03:25:00	34.917	2683.91	-38.79	215.90		
31-12-88	03:30:00	35.000	2683.96	-38.74	215.90		
31-12-88	03:35:00	35.083	2683.94	-38.76	215.90		
31-12-88	03:40:00	35.167	2683.99	-38.71	215.90		
31-12-88	03:45:00	35.250	2683.99	-38.71	215.90		
31-12-88	03:50:00	35.333	2684.07	-38.63	215.90		
31-12-88	03:55:00	35.417	2683.93	-38.77	215.90		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 31-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	04:00:00	35.500	2683.98	-38.72	215.90	762	CSG = 660 PSIG
31-12-88	04:05:00	35.583	2683.98	-38.72	215.90		
31-12-88	04:10:00	35.667	2684.07	-38.63	215.90		
31-12-88	04:15:00	35.750	2683.23	-39.47	215.90		
31-12-88	04:20:00	35.833	2684.09	-38.61	215.90		
31-12-88	04:25:00	35.917	2684.14	-38.56	215.90		
31-12-88	04:30:00	36.000	2684.14	-38.56	215.90		
31-12-88	04:35:00	36.083	2684.18	-38.52	215.90		
31-12-88	04:40:00	36.167	2684.22	-38.48	215.90		
31-12-88	04:45:00	36.250	2684.24	-38.46	215.90		
31-12-88	04:50:00	36.333	2684.24	-38.46	215.90		
31-12-88	04:55:00	36.417	2684.54	-38.16	215.90		
31-12-88	05:00:00	36.500	2684.63	-38.07	215.90		
31-12-88	05:05:00	36.583	2684.72	-37.98	215.90		
31-12-88	05:10:00	36.667	2684.73	-37.97	215.91		
31-12-88	05:15:00	36.750	2684.77	-37.93	215.90		
31-12-88	05:20:00	36.833	2684.82	-37.88	215.90		
31-12-88	05:25:00	36.917	2684.90	-37.80	215.90		
31-12-88	05:30:00	37.000	2684.92	-37.78	215.90		
31-12-88	05:35:00	37.083	2684.90	-37.80	215.90		
31-12-88	05:40:00	37.167	2684.94	-37.76	215.90		
31-12-88	05:45:00	37.250	2685.08	-37.62	215.90		
31-12-88	05:50:00	37.333	2685.04	-37.66	215.90		
31-12-88	05:55:00	37.417	2685.11	-37.59	215.90		
31-12-88	06:00:00	37.500	2685.09	-37.61	215.90		
31-12-88	06:05:00	37.583	2685.11	-37.59	215.90		
31-12-88	06:10:00	37.667	2685.15	-37.55	215.90		
31-12-88	06:15:00	37.750	2685.16	-37.55	215.90		
31-12-88	06:20:00	37.833	2685.18	-37.52	215.90	763	CSG = 660 PSIG
31-12-88	06:25:00	37.917	2685.16	-37.54	215.90		
31-12-88	06:30:00	38.000	2685.24	-37.46	215.90		
31-12-88	06:35:00	38.083	2685.23	-37.47	215.90		
31-12-88	06:40:00	38.167	2685.30	-37.40	215.90		
31-12-88	06:45:00	38.250	2685.31	-37.39	215.90		
31-12-88	06:50:00	38.333	2685.31	-37.39	215.90		
31-12-88	06:55:00	38.417	2685.36	-37.34	215.89		
31-12-88	07:00:00	38.500	2685.33	-37.37	215.90		
31-12-88	07:05:00	38.583	2685.37	-37.33	215.90		
31-12-88	07:10:00	38.667	2685.42	-37.28	215.90		
31-12-88	07:15:00	38.750	2685.46	-37.24	215.90		
31-12-88	07:20:00	38.833	2685.46	-37.24	215.90		
31-12-88	07:25:00	38.917	2685.36	-37.34	215.90		
31-12-88	07:30:00	39.000	2685.46	-37.24	215.90		
31-12-88	07:35:00	39.083	2685.51	-37.19	215.89		
31-12-88	07:40:00	39.167	2685.48	-37.22	215.89		
31-12-88	07:45:00	39.250	2685.48	-37.22	215.90		
31-12-88	07:50:00	39.333	2685.48	-37.22	215.90		
31-12-88	07:55:00	39.417	2685.49	-37.21	215.90		
31-12-88	08:00:00	39.500	2685.55	-37.15	215.90		
31-12-88	08:05:00	39.583	2685.61	-37.09	215.90		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 31-12-88

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	08:10:00	39.667	2685.57	-37.13	215.90	764	CSG = 660 PSIG
31-12-88	08:15:00	39.750	2685.55	-37.15	215.90		
31-12-88	08:20:00	39.833	2685.53	-37.17	215.89		
31-12-88	08:25:00	39.917	2685.68	-37.02	215.90		
31-12-88	08:30:00	40.000	2685.63	-37.07	215.89		
31-12-88	08:35:00	40.083	2685.66	-37.04	215.90		
31-12-88	08:40:00	40.167	2685.68	-37.02	215.90		
31-12-88	08:45:00	40.250	2685.71	-36.99	215.89		
31-12-88	08:50:00	40.333	2685.75	-36.95	215.89		
31-12-88	08:55:00	40.417	2685.70	-37.00	215.89		
31-12-88	09:00:00	40.500	2685.75	-36.95	215.89		
31-12-88	09:05:00	40.583	2685.81	-36.89	215.90		
31-12-88	09:10:00	40.667	2685.80	-36.90	215.90		
31-12-88	09:15:00	40.750	2685.98	-36.72	215.90		
31-12-88	09:20:00	40.833	2686.01	-36.69	215.90		
31-12-88	09:25:00	40.917	2685.94	-36.76	215.89		
31-12-88	09:30:00	41.000	2685.92	-36.78	215.89		
31-12-88	09:35:00	41.083	2686.03	-36.67	215.89		
31-12-88	09:40:00	41.167	2686.15	-36.55	215.89		
31-12-88	09:45:00	41.250	2686.20	-36.50	215.89		
31-12-88	09:50:00	41.333	2686.39	-36.31	215.89	765	CSG = 660 PSIG
31-12-88	09:55:00	41.417	2686.46	-36.24	215.89		
31-12-88	10:00:00	41.500	2686.49	-36.21	215.89		
31-12-88	10:05:00	41.583	2686.53	-36.17	215.89		
31-12-88	10:10:00	41.667	2686.56	-36.14	215.89		
31-12-88	10:15:00	41.750	2686.56	-36.14	215.89		
31-12-88	10:20:00	41.833	2686.82	-35.88	215.89		
31-12-88	10:25:00	41.917	2686.96	-35.74	215.89		
31-12-88	10:30:00	42.000	2686.90	-35.80	215.89		
31-12-88	10:35:00	42.083	2687.11	-35.59	215.89		
31-12-88	10:40:00	42.167	2687.12	-35.58	215.89		
31-12-88	10:45:00	42.250	2687.19	-35.51	215.89		
31-12-88	10:50:00	42.333	2687.22	-35.48	215.89		
31-12-88	10:55:00	42.417	2687.29	-35.41	215.89		
31-12-88	11:00:00	42.500	2687.53	-35.17	215.89		
31-12-88	11:05:00	42.583	2687.43	-35.27	215.89		
31-12-88	11:10:00	42.667	2687.54	-35.16	215.89		
31-12-88	11:15:00	42.750	2687.59	-35.11	215.89		
31-12-88	11:20:00	42.833	2687.65	-35.05	215.88		
31-12-88	11:25:00	42.917	2687.72	-34.98	215.89		
31-12-88	11:30:00	43.000	2687.88	-34.82	215.89		
31-12-88	11:35:00	43.083	2687.92	-34.79	215.89		
31-12-88	11:40:00	43.167	2688.11	-34.59	215.89		
31-12-88	11:45:00	43.250	2688.42	-34.28	215.88		
31-12-88	11:50:00	43.333	2688.53	-34.17	215.89		
31-12-88	11:55:00	43.417	2688.68	-34.02	215.88		
31-12-88	12:00:00	43.500	2688.78	-33.92	215.89		
31-12-88	12:05:00	43.583	2688.76	-33.94	215.89		
31-12-88	12:10:00	43.667	2688.78	-33.92	215.88		
31-12-88	12:15:00	43.750	2688.79	-33.91	215.88		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 31-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	12:20:00	43.833	2688.72	-33.98	215.88	766	CSG = 660 PSIG
31-12-88	12:25:00	43.917	2688.73	-33.97	215.88		
31-12-88	12:30:00	44.000	2688.69	-34.01	215.88		
31-12-88	12:35:00	44.083	2688.40	-34.30	215.88		
31-12-88	12:40:00	44.167	2680.40	-42.30	215.88		
31-12-88	12:45:00	44.250	2680.04	-42.66	215.88		
31-12-88	12:50:00	44.333	2679.92	-42.78	215.88		
31-12-88	12:55:00	44.417	2680.26	-42.44	215.88		
31-12-88	13:00:00	44.500	2680.12	-42.58	215.89		
31-12-88	13:05:00	44.583	2680.10	-42.60	215.89		
31-12-88	13:10:00	44.667	2680.14	-42.56	215.89		
31-12-88	13:15:00	44.750	2680.28	-42.42	215.89		
31-12-88	13:20:00	44.833	2680.11	-42.59	215.89		
31-12-88	13:25:00	44.917	2680.10	-42.60	215.90		
31-12-88	13:30:00	45.000	2681.32	-41.38	215.89		
31-12-88	13:35:00	45.083	2681.30	-41.40	215.89		
31-12-88	13:40:00	45.167	2681.34	-41.36	215.89		
31-12-88	13:45:00	45.250	2681.66	-41.04	215.88		
31-12-88	13:50:00	45.333	2681.80	-40.90	215.89		
31-12-88	13:55:00	45.417	2681.97	-40.73	215.89		
31-12-88	14:00:00	45.500	2681.53	-41.17	215.88	762	CSG = 660 PSIG
31-12-88	14:05:00	45.583	2681.65	-41.05	215.88		
31-12-88	14:10:00	45.667	2681.66	-41.04	215.88		
31-12-88	14:15:00	45.750	2681.74	-40.96	215.88		
31-12-88	14:20:00	45.833	2681.81	-40.89	215.89		
31-12-88	14:25:00	45.917	2681.82	-40.88	215.89		
31-12-88	14:30:00	46.000	2681.85	-40.85	215.89		
31-12-88	14:35:00	46.083	2681.93	-40.77	215.89		
31-12-88	14:40:00	46.167	2681.88	-40.82	215.89		
31-12-88	14:45:00	46.250	2681.94	-40.76	215.88		
31-12-88	14:50:00	46.333	2681.10	-40.70	215.89		
31-12-88	14:55:00	46.417	2682.17	-40.53	215.88		
31-12-88	15:00:00	46.500	2682.20	-40.50	215.88		
31-12-88	15:05:00	46.583	2682.27	-40.43	215.88		
31-12-88	15:10:00	46.667	2681.05	-41.65	215.88		
31-12-88	15:15:00	46.750	2681.10	-40.70	215.88		
31-12-88	15:20:00	46.833	2682.32	-40.38	215.88		
31-12-88	15:25:00	46.917	2682.40	-40.30	215.89		
31-12-88	15:30:00	47.000	2682.39	-40.31	215.89		
31-12-88	15:35:00	47.083	2682.41	-40.29	215.89		
31-12-88	15:40:00	47.167	2682.58	-40.12	215.89		
31-12-88	15:45:00	47.250	2682.68	-40.02	215.88		
31-12-88	15:50:00	47.333	2682.65	-40.05	215.89		
31-12-88	15:55:00	47.417	2682.65	-40.05	215.88		
31-12-88	16:00:00	47.500	2682.72	-39.98	215.89		
31-12-88	16:05:00	47.583	2682.69	-40.01	215.89		
31-12-88	16:10:00	47.667	2682.67	-40.03	215.89		
31-12-88	16:15:00	47.750	2682.71	-39.99	215.89		
31-12-88	16:20:00	47.833	2682.57	-40.13	215.89		
31-12-88	16:25:00	47.917	2682.61	-40.09	215.89		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 31-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : FLOW PERIOD

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	16:30:00	48.000	2682.62	-40.08	215.89	761	CSG = 660 PSIG
31-12-88	16:35:00	48.083	2682.61	-40.09	215.89		
31-12-88	16:40:00	48.167	2682.66	-40.04	215.89		
31-12-88	16:45:00	48.250	2682.61	-40.09	215.89		
31-12-88	16:50:00	48.333	2682.61	-40.09	215.88		
31-12-88	16:55:00	48.417	2682.59	-40.11	215.89		
31-12-88	17:00:00	48.500	2682.57	-40.13	215.89		
31-12-88	17:05:00	48.583	2682.58	-40.12	215.89		
31-12-88	17:10:00	48.667	2682.92	-39.78	215.88		
31-12-88	17:15:00	48.750	2683.04	-39.66	215.89	762	CSG = 662 PSIG
31-12-88	17:20:00	48.833	2683.09	-39.61	215.89		
31-12-88	17:25:00	48.917	2683.10	-39.60	215.89		SHUT IN THE WELL FOR BUILD UP
31-12-88	17:30:00	0.000	2683.12	0.00	215.89		
31-12-88	17:30:30	0.008	2693.67	10.55	215.89		
31-12-88	17:31:00	0.017	2696.27	13.15	215.87	780	CSG = 700 PSIG
31-12-88	17:31:30	0.025	2697.71	14.59	215.86		
31-12-88	17:32:00	0.033	2698.61	15.49	215.85	780	CSG = 700 PSIG
31-12-88	17:32:30	0.042	2699.33	16.21	215.84		
31-12-88	17:33:00	0.050	2699.86	16.74	215.83	782	CSG = 700 PSIG
31-12-88	17:33:30	0.058	2700.24	17.12	215.81		
31-12-88	17:34:00	0.067	2700.67	17.55	215.81	783	CSG = 700 PSIG
31-12-88	17:34:30	0.075	2701.05	17.93	215.80		
31-12-88	17:35:00	0.083	2701.25	18.13	215.79	783	CSG = 700 PSIG
31-12-88	17:35:30	0.092	2701.55	18.43	215.79		
31-12-88	17:36:00	0.100	2701.79	18.67	215.79		30 SEC SAMPLE RATE
31-12-88	17:36:30	0.108	2702.03	18.91	215.78		
31-12-88	17:37:00	0.117	2702.26	19.14	215.77		
31-12-88	17:37:30	0.125	2702.41	19.29	215.77		DELTA T FROM SHUT IN
31-12-88	17:38:00	0.133	2702.57	19.45	215.76		
31-12-88	17:38:30	0.142	2702.77	19.65	215.76		
31-12-88	17:39:00	0.150	2702.94	19.82	215.76		DELTA P FROM SHUT IN
31-12-88	17:39:30	0.158	2703.17	20.05	215.75		
31-12-88	17:40:00	0.167	2703.27	20.15	215.75	783	CSG = 700 PSIG
31-12-88	17:40:30	0.175	2703.39	20.27	215.75		
31-12-88	17:41:00	0.183	2703.57	20.45	215.75		
31-12-88	17:41:30	0.192	2703.73	20.61	215.75		
31-12-88	17:42:00	0.200	2703.86	20.74	215.75		
31-12-88	17:42:30	0.208	2704.04	20.92	215.74		
31-12-88	17:43:00	0.217	2704.11	20.99	215.74		
31-12-88	17:43:30	0.225	2704.18	21.06	215.74		
31-12-88	17:44:00	0.233	2704.30	21.18	215.74		
31-12-88	17:44:30	0.242	2704.45	21.33	215.74		
31-12-88	17:45:00	0.250	2704.60	21.48	215.74	784	CSG = 700 PSIG
31-12-88	17:46:00	0.267	2704.81	21.69	215.74		
31-12-88	17:47:00	0.283	2705.03	21.91	215.76		
31-12-88	17:48:00	0.300	2705.20	22.08	215.77		1 MIN SAMPLE RATE
31-12-88	17:49:00	0.317	2705.38	22.26	215.79		
31-12-88	17:50:00	0.333	2705.57	22.45	215.79		
31-12-88	17:51:00	0.350	2705.71	22.59	215.80		
31-12-88	17:52:00	0.367	2705.80	22.68	215.80		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 31-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	17:53:00	0.383	2705.10	22.88	215.80	785	CSG = 700 PSIG
31-12-88	17:54:00	0.400	2706.10	22.98	215.80		
31-12-88	17:55:00	0.417	2706.26	23.14	215.80		
31-12-88	17:56:00	0.433	2706.42	23.30	215.80		
31-12-88	17:57:00	0.450	2706.52	23.40	215.80		
31-12-88	17:58:00	0.467	2706.61	23.49	215.80		
31-12-88	17:59:00	0.483	2706.77	23.65	215.81		
31-12-88	18:00:00	0.500	2706.82	23.70	215.80		
31-12-88	18:01:00	0.517	2706.99	23.87	215.80		
31-12-88	18:02:00	0.533	2707.11	23.99	215.80		
31-12-88	18:03:00	0.550	2707.15	24.03	215.80		
31-12-88	18:04:00	0.567	2707.27	24.15	215.80		
31-12-88	18:05:00	0.583	2707.39	24.27	215.80		
31-12-88	18:06:00	0.600	2707.41	24.29	215.79		
31-12-88	18:07:00	0.617	2707.48	24.36	215.79	787	CSG = 700 PSIG
31-12-88	18:08:00	0.633	2707.59	24.47	215.79		
31-12-88	18:09:00	0.650	2707.61	24.49	215.78		
31-12-88	18:10:00	0.667	2707.70	24.58	215.77		
31-12-88	18:11:00	0.683	2707.70	24.58	215.76		
31-12-88	18:12:00	0.700	2707.82	24.70	215.76		
31-12-88	18:13:00	0.717	2707.84	24.72	215.75		
31-12-88	18:14:00	0.733	2707.94	24.82	215.74		
31-12-88	18:15:00	0.750	2708.01	24.89	215.74		
31-12-88	18:16:00	0.767	2708.06	24.94	215.73		
31-12-88	18:17:00	0.783	2708.25	25.13	215.73		
31-12-88	18:18:00	0.800	2708.25	25.13	215.73		
31-12-88	18:19:00	0.817	2708.32	25.20	215.72		
31-12-88	18:20:00	0.833	2708.38	25.26	215.72		
31-12-88	18:21:00	0.850	2708.38	25.26	215.72		
31-12-88	18:22:00	0.867	2708.49	25.37	215.72		
31-12-88	18:23:00	0.883	2708.53	25.41	215.71		
31-12-88	18:24:00	0.900	2708.52	25.40	215.71		
31-12-88	18:25:00	0.917	2708.58	25.46	215.71		
31-12-88	18:26:00	0.933	2708.63	25.51	215.70		
31-12-88	18:27:00	0.950	2708.74	25.62	215.71		
31-12-88	18:28:00	0.967	2708.81	25.69	215.70		
31-12-88	18:29:00	0.983	2708.83	25.71	215.70		
31-12-88	18:30:00	1.000	2708.90	25.78	215.70	787	CSG = 700 PSIG
31-12-88	18:35:00	1.083	2709.56	26.44	215.75	787	5 MIN SAMPLE RATE
31-12-88	18:40:00	1.167	2709.96	26.84	215.77		
31-12-88	18:45:00	1.250	2710.10	26.98	215.78		
31-12-88	18:50:00	1.333	2710.07	26.95	215.81		
31-12-88	18:55:00	1.417	2710.26	27.14	215.82	787	CSG = 700 PSIG
31-12-88	19:00:00	1.500	2710.37	27.25	215.82		
31-12-88	19:05:00	1.583	2710.60	27.48	215.82		
31-12-88	19:10:00	1.667	2710.77	27.65	215.82		
31-12-88	19:15:00	1.750	2710.91	27.78	215.82	787	CSG = 700 PSIG
31-12-88	19:20:00	1.833	2711.11	27.99	215.81		
31-12-88	19:25:00	1.917	2711.30	28.18	215.81		
31-12-88	19:30:00	2.000	2711.34	28.22	215.80		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 31-12-88 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	19:35:00	2.083	2711.54	28.42	215.81		
31-12-88	19:40:00	2.167	2711.65	28.53	215.81		
31-12-88	19:45:00	2.250	2711.83	28.71	215.80		
31-12-88	19:50:00	2.333	2711.87	28.75	215.80		
31-12-88	19:55:00	2.417	2712.05	28.93	215.81		
31-12-88	20:00:00	2.500	2712.10	28.98	215.80	787	CSG = 700 PSIG
31-12-88	20:05:00	2.583	2712.21	29.09	215.80		
31-12-88	20:10:00	2.667	2712.32	29.20	215.80		
31-12-88	20:15:00	2.750	2712.45	29.33	215.80		
31-12-88	20:20:00	2.833	2712.54	29.42	215.80		
31-12-88	20:25:00	2.917	2712.59	29.47	215.80		
31-12-88	20:30:00	3.000	2712.75	29.63	215.80	787	CSG = 700 PSIG
31-12-88	20:35:00	3.083	2712.83	29.71	215.80		
31-12-88	20:40:00	3.167	2712.89	29.77	215.80		
31-12-88	20:45:00	3.250	2712.97	29.85	215.80		
31-12-88	20:50:00	3.333	2713.06	29.94	215.80		
31-12-88	20:55:00	3.417	2713.12	30.00	215.80		
31-12-88	21:00:00	3.500	2713.16	30.04	215.80		
31-12-88	21:05:00	3.583	2713.27	30.15	215.80		
31-12-88	21:10:00	3.667	2713.36	30.24	215.81		
31-12-88	21:15:00	3.750	2713.45	30.33	215.80		
31-12-88	21:20:00	3.833	2713.49	30.37	215.80		
31-12-88	21:25:00	3.917	2713.59	30.47	215.80		
31-12-88	21:30:00	4.000	2713.64	30.52	215.80	788	CSG = 700 PSIG
31-12-88	21:35:00	4.083	2713.74	30.62	215.81		
31-12-88	21:40:00	4.167	2713.73	30.61	215.81		
31-12-88	21:45:00	4.250	2713.83	30.71	215.80		
31-12-88	21:50:00	4.333	2713.90	30.78	215.80		
31-12-88	21:55:00	4.417	2713.96	30.84	215.81		
31-12-88	22:00:00	4.500	2714.01	30.89	215.80		
31-12-88	22:05:00	4.583	2714.08	30.96	215.80		
31-12-88	22:10:00	4.667	2714.11	30.99	215.80		
31-12-88	22:15:00	4.750	2714.21	31.09	215.80		
31-12-88	22:20:00	4.833	2714.24	31.12	215.80		
31-12-88	22:25:00	4.917	2714.28	31.16	215.81		
31-12-88	22:30:00	5.000	2714.36	31.24	215.81		
31-12-88	22:35:00	5.083	2714.42	31.30	215.80		
31-12-88	22:40:00	5.167	2714.49	31.37	215.81		
31-12-88	22:45:00	5.250	2714.53	31.41	215.81		
31-12-88	22:50:00	5.333	2714.57	31.45	215.81		
31-12-88	22:55:00	5.417	2714.66	31.54	215.81		
31-12-88	23:00:00	5.500	2714.64	31.52	215.81		
31-12-88	23:05:00	5.583	2714.72	31.60	215.82		
31-12-88	23:10:00	5.667	2714.78	31.66	215.81		
31-12-88	23:15:00	5.750	2714.82	31.70	215.82		
31-12-88	23:20:00	5.833	2714.87	31.75	215.82		
31-12-88	23:25:00	5.917	2714.90	31.78	215.82		
31-12-88	23:30:00	6.000	2714.94	31.82	215.82	789	CSG = 700 PSIG
31-12-88	23:35:00	6.083	2715.01	31.89	215.82		
31-12-88	23:40:00	6.167	2715.05	31.93	215.81		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 31-12-88

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
31-12-88	23:45:00	6.250	2715.10	31.98	215.81		
31-12-88	23:50:00	6.333	2715.22	32.10	215.80		
31-12-88	23:55:00	6.417	2715.42	32.30	215.79		
01-01-89	00:00:00	6.500	2715.51	32.39	215.78		
01-01-89	00:05:00	6.583	2715.57	32.45	215.79		
01-01-89	00:10:00	6.667	2715.51	32.39	215.78		
01-01-89	00:15:00	6.750	2715.37	32.25	215.78		
01-01-89	00:20:00	6.833	2715.32	32.20	215.78		
01-01-89	00:25:00	6.917	2715.36	32.24	215.78		
01-01-89	00:30:00	7.000	2715.38	32.26	215.78		
01-01-89	00:35:00	7.083	2715.45	32.33	215.78		
01-01-89	00:40:00	7.167	2715.54	32.42	215.78		
01-01-89	00:45:00	7.250	2715.55	32.43	215.77		
01-01-89	00:50:00	7.333	2715.59	32.47	215.78		
01-01-89	00:55:00	7.417	2715.66	32.54	215.77		
01-01-89	01:00:00	7.500	2715.69	32.57	215.77		
01-01-89	01:05:00	7.583	2715.73	32.61	215.78		
01-01-89	01:10:00	7.667	2715.80	32.68	215.78		
01-01-89	01:15:00	7.750	2715.83	32.71	215.78		
01-01-89	01:20:00	7.833	2715.88	32.76	215.78		
01-01-89	01:25:00	7.917	2715.94	32.82	215.78		
01-01-89	01:30:00	8.000	2715.95	32.83	215.78	789	CSG = 700 PSIG
01-01-89	01:35:00	8.083	2715.10	32.88	215.78		
01-01-89	01:40:00	8.167	2716.07	32.95	215.78		
01-01-89	01:45:00	8.250	2716.08	32.96	215.78		
01-01-89	01:50:00	8.333	2716.14	33.02	215.78		
01-01-89	01:55:00	8.417	2716.18	33.06	215.79		
01-01-89	02:00:00	8.500	2716.24	33.12	215.78		
01-01-89	02:05:00	8.583	2716.22	33.10	215.79		
01-01-89	02:10:00	8.667	2716.32	33.20	215.79		
01-01-89	02:15:00	8.750	2716.33	33.21	215.78		
01-01-89	02:20:00	8.833	2716.36	33.24	215.79		
01-01-89	02:25:00	8.917	2716.41	33.29	215.79		
01-01-89	02:30:00	9.000	2716.43	33.31	215.79		
01-01-89	02:35:00	9.083	2716.48	33.36	215.79		
01-01-89	02:40:00	9.167	2716.49	33.37	215.78		
01-01-89	02:45:00	9.250	2716.49	33.37	215.79		
01-01-89	02:50:00	9.333	2716.55	33.43	215.79		
01-01-89	02:55:00	9.417	2716.59	33.47	215.79		
01-01-89	03:00:00	9.500	2716.60	33.48	215.79		
01-01-89	03:05:00	9.583	2716.59	33.47	215.79		
01-01-89	03:10:00	9.667	2716.67	33.55	215.78		
01-01-89	03:15:00	9.750	2716.69	33.57	215.79		
01-01-89	03:20:00	9.833	2716.77	33.65	215.78		
01-01-89	03:25:00	9.917	2716.75	33.63	215.78		
01-01-89	03:30:00	10.000	2716.78	33.66	215.78		
01-01-89	03:35:00	10.083	2716.83	33.71	215.78		
01-01-89	03:40:00	10.167	2716.85	33.73	215.79		
01-01-89	03:45:00	10.250	2716.87	33.75	215.79		
01-01-89	03:50:00	10.333	2716.86	33.74	215.78		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE : 01-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
01-01-89	03:55:00	10.417	2716.92	33.80	215.78		
01-01-89	04:00:00	10.500	2716.93	33.81	215.78		
01-01-89	04:05:00	10.583	2716.10	33.88	215.78		
01-01-89	04:10:00	10.667	2717.02	33.90	215.79		
01-01-89	04:15:00	10.750	2717.03	33.91	215.78		
01-01-89	04:20:00	10.833	2717.07	33.95	215.79		
01-01-89	04:25:00	10.917	2717.06	33.94	215.79		
01-01-89	04:30:00	11.000	2717.06	33.94	215.79		
01-01-89	04:35:00	11.083	2717.15	34.03	215.79		
01-01-89	04:40:00	11.167	2717.14	34.02	215.79		
01-01-89	04:45:00	11.250	2717.16	34.04	215.79		
01-01-89	04:50:00	11.333	2717.21	34.09	215.79		
01-01-89	04:55:00	11.417	2717.21	34.09	215.79		
01-01-89	05:00:00	11.500	2717.24	34.12	215.79		
01-01-89	05:05:00	11.583	2717.23	34.11	215.79		
01-01-89	05:10:00	11.667	2717.28	34.16	215.79		
01-01-89	05:15:00	11.750	2717.31	34.19	215.79		
01-01-89	05:20:00	11.833	2717.35	34.23	215.79		
01-01-89	05:25:00	11.917	2717.36	34.24	215.79		
01-01-89	05:30:00	12.000	2717.39	34.27	215.79	789	CSG = 700 PSIG
01-01-89	05:35:00	12.083	2717.39	34.27	215.79		
01-01-89	05:40:00	12.167	2717.40	34.28	215.79		
01-01-89	05:45:00	12.250	2717.44	34.32	215.79		
01-01-89	05:50:00	12.333	2717.44	34.32	215.79		
01-01-89	05:55:00	12.417	2717.45	34.33	215.79		
01-01-89	06:00:00	12.500	2717.49	34.37	215.79		
01-01-89	06:05:00	12.583	2717.52	34.40	215.79		
01-01-89	06:10:00	12.667	2717.53	34.41	215.79		
01-01-89	06:15:00	12.750	2717.58	34.46	215.78		
01-01-89	06:20:00	12.833	2717.56	34.44	215.79		
01-01-89	06:25:00	12.917	2717.65	34.53	215.78		
01-01-89	06:30:00	13.000	2717.64	34.52	215.78		
01-01-89	06:35:00	13.083	2717.62	34.50	215.79		
01-01-89	06:40:00	13.167	2717.65	34.53	215.78		
01-01-89	06:45:00	13.250	2717.67	34.55	215.79		
01-01-89	06:50:00	13.333	2717.70	34.58	215.78		
01-01-89	06:55:00	13.417	2717.73	34.61	215.78		
01-01-89	07:00:00	13.500	2717.72	34.60	215.79		
01-01-89	07:05:00	13.583	2717.78	34.66	215.79		
01-01-89	07:10:00	13.667	2717.80	34.68	215.79		
01-01-89	07:15:00	13.750	2717.79	34.67	215.79		
01-01-89	07:20:00	13.833	2717.86	34.74	215.79		
01-01-89	07:25:00	13.917	2717.88	34.76	215.79		
01-01-89	07:30:00	14.000	2717.87	34.75	215.79		
01-01-89	07:35:00	14.083	2717.91	34.79	215.79		
01-01-89	07:40:00	14.167	2717.89	34.77	215.78		
01-01-89	07:45:00	14.250	2717.94	34.82	215.79		
01-01-89	07:50:00	14.333	2717.96	34.84	215.79		
01-01-89	07:55:00	14.417	2717.94	34.82	215.79		
01-01-89	08:00:00	14.500	2718.00	34.88	215.79		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 01-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
01-01-89	08:05:00	14.583	2718.01	34.89	215.79		
01-01-89	08:10:00	14.667	2718.02	34.90	215.79		
01-01-89	08:15:00	14.750	2718.03	34.91	215.79		
01-01-89	08:20:00	14.833	2718.05	34.93	215.78		
01-01-89	08:25:00	14.917	2718.06	34.94	215.79		
01-01-89	08:30:00	15.000	2718.03	34.91	215.79		
01-01-89	08:35:00	15.083	2718.11	34.99	215.78		
01-01-89	08:40:00	15.167	2718.13	35.01	215.79		
01-01-89	08:45:00	15.250	2718.19	35.07	215.79		
01-01-89	08:50:00	15.333	2718.15	35.03	215.79		
01-01-89	08:55:00	15.417	2718.20	35.08	215.79		
01-01-89	09:00:00	15.500	2718.25	35.13	215.79		
01-01-89	09:05:00	15.583	2718.23	35.11	215.79		
01-01-89	09:10:00	15.667	2718.26	35.14	215.78		
01-01-89	09:15:00	15.750	2718.23	35.11	215.79		
01-01-89	09:20:00	15.833	2718.27	35.15	215.79		
01-01-89	09:25:00	15.917	2718.28	35.16	215.79		
01-01-89	09:30:00	16.000	2718.30	35.18	215.79	790	CSG = 700 PSIG
01-01-89	09:35:00	16.083	2718.32	35.20	215.78		
01-01-89	09:40:00	16.167	2718.34	35.22	215.78		
01-01-89	09:45:00	16.250	2718.35	35.23	215.78		
01-01-89	09:50:00	16.333	2718.36	35.24	215.78		
01-01-89	09:55:00	16.417	2718.37	35.25	215.78		
01-01-89	10:00:00	16.500	2718.38	35.26	215.79		
01-01-89	10:05:00	16.583	2718.38	35.26	215.79		
01-01-89	10:10:00	16.667	2718.43	35.31	215.79		
01-01-89	10:15:00	16.750	2718.46	35.34	215.78		
01-01-89	10:20:00	16.833	2718.41	35.29	215.78		
01-01-89	10:25:00	16.917	2718.53	35.41	215.79		
01-01-89	10:30:00	17.000	2718.48	35.36	215.79		
01-01-89	10:35:00	17.083	2718.53	35.41	215.79		
01-01-89	10:40:00	17.167	2718.52	35.40	215.78		
01-01-89	10:45:00	17.250	2718.52	35.40	215.78		
01-01-89	10:50:00	17.333	2718.53	35.41	215.79		
01-01-89	10:55:00	17.417	2718.57	35.45	215.78		
01-01-89	11:00:00	17.500	2718.56	35.44	215.78		
01-01-89	11:05:00	17.583	2718.59	35.47	215.78		
01-01-89	11:10:00	17.667	2718.61	35.49	215.78		
01-01-89	11:15:00	17.750	2718.60	35.48	215.78		
01-01-89	11:20:00	17.833	2718.67	35.55	215.78		
01-01-89	11:25:00	17.917	2718.65	35.53	215.78		
01-01-89	11:30:00	18.000	2718.61	35.49	215.78		
01-01-89	11:35:00	18.083	2718.66	35.54	215.78		
01-01-89	11:40:00	18.167	2718.73	35.61	215.78		
01-01-89	11:45:00	18.250	2718.69	35.57	215.78		
01-01-89	11:50:00	18.333	2718.73	35.61	215.78		
01-01-89	11:55:00	18.417	2718.77	35.65	215.78		
01-01-89	12:00:00	18.500	2718.77	35.65	215.78		
01-01-89	12:05:00	18.583	2718.78	35.66	215.78		
01-01-89	12:10:00	18.667	2718.77	35.65	215.78		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 01-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 6130'KB
 COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
01-01-89	12:15:00	18.750	2718.82	35.70	215.77		
01-01-89	12:20:00	18.833	2718.84	35.72	215.78		
01-01-89	12:25:00	18.917	2718.85	35.73	215.78		
01-01-89	12:30:00	19.000	2718.84	35.72	215.77		
01-01-89	12:35:00	19.083	2718.82	35.70	215.78		
01-01-89	12:40:00	19.167	2718.90	35.78	215.77		
01-01-89	12:45:00	19.250	2718.88	35.76	215.78		
01-01-89	12:50:00	19.333	2718.91	35.79	215.78		
01-01-89	12:55:00	19.417	2718.89	35.77	215.77		
01-01-89	13:00:00	19.500	2718.90	35.78	215.78		
01-01-89	13:05:00	19.583	2718.95	35.83	215.77		
01-01-89	13:10:00	19.667	2718.95	35.83	215.78		
01-01-89	13:15:00	19.750	2719.00	35.88	215.77		
01-01-89	13:20:00	19.833	2718.99	35.87	215.77		
01-01-89	13:25:00	19.917	2719.01	35.89	215.77		
01-01-89	13:30:00	20.000	2719.01	35.89	215.77	790	CSG = 700 PSIG
01-01-89	13:35:00	20.083	2719.04	35.92	215.77		
01-01-89	13:40:00	20.167	2719.02	35.90	215.77		
01-01-89	13:45:00	20.250	2719.00	35.88	215.78		
01-01-89	13:50:00	20.333	2719.01	35.89	215.77		
01-01-89	13:55:00	20.417	2719.08	35.96	215.78		
01-01-89	14:00:00	20.500	2719.09	35.97	215.78		
01-01-89	14:05:00	20.583	2719.08	35.96	215.78		
01-01-89	14:10:00	20.667	2719.07	35.95	215.78		
01-01-89	14:15:00	20.750	2719.12	35.10	215.78		
01-01-89	14:20:00	20.833	2719.10	35.98	215.77		
01-01-89	14:25:00	20.917	2719.18	36.06	215.77		
01-01-89	14:30:00	21.000	2719.20	36.08	215.78		
01-01-89	14:35:00	21.083	2719.20	36.08	215.77		
01-01-89	14:40:00	21.167	2719.20	36.08	215.77		
01-01-89	14:45:00	21.250	2719.22	36.10	215.77		
01-01-89	14:50:00	21.333	2719.23	36.11	215.77		
01-01-89	14:55:00	21.417	2719.21	36.09	215.77		
01-01-89	15:00:00	21.500	2719.26	36.14	215.77		
01-01-89	15:05:00	21.583	2719.22	36.10	215.77		
01-01-89	15:10:00	21.667	2719.26	36.14	215.77		
01-01-89	15:15:00	21.750	2719.28	36.16	215.77		
01-01-89	15:20:00	21.833	2719.24	36.12	215.78		
01-01-89	15:25:00	21.917	2719.23	36.11	215.78		
01-01-89	15:30:00	22.000	2719.23	36.11	215.77		
01-01-89	15:35:00	22.083	2719.30	36.18	215.77		
01-01-89	15:40:00	22.167	2719.31	36.19	215.77		
01-01-89	15:45:00	22.250	2719.28	36.16	215.77		
01-01-89	15:50:00	22.333	2719.38	36.26	215.77		
01-01-89	15:55:00	22.417	2719.34	36.22	215.77		
01-01-89	16:00:00	22.500	2719.37	36.25	215.77		
01-01-89	16:05:00	22.583	2719.44	36.32	215.77		
01-01-89	16:10:00	22.667	2719.44	36.32	215.77		
01-01-89	16:15:00	22.750	2719.42	36.30	215.77		
01-01-89	16:20:00	22.833	2719.42	36.30	215.77		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 01-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
01-01-89	16:25:00	22.917	2719.46	36.34	215.77		
01-01-89	16:30:00	23.000	2719.48	36.36	215.77		
01-01-89	16:35:00	23.083	2719.46	36.34	215.77		
01-01-89	16:40:00	23.167	2719.49	36.37	215.77		
01-01-89	16:45:00	23.250	2719.50	36.38	215.77		
01-01-89	16:50:00	23.333	2719.49	36.37	215.77		
01-01-89	16:55:00	23.417	2719.51	36.39	215.77		
01-01-89	17:00:00	23.500	2719.51	36.40	215.76		
01-01-89	17:05:00	23.583	2719.57	36.45	215.77		
01-01-89	17:10:00	23.667	2719.50	36.38	215.77		
01-01-89	17:15:00	23.750	2719.51	36.39	215.77		
01-01-89	17:20:00	23.833	2719.52	36.40	215.77		
01-01-89	17:25:00	23.917	2719.58	36.46	215.77		
01-01-89	17:30:00	24.000	2719.54	36.42	215.77	790	CSG = 700 PSIG
01-01-89	17:35:00	24.083	2719.55	36.43	215.76		
01-01-89	17:40:00	24.167	2719.63	36.51	215.76		
01-01-89	17:45:00	24.250	2719.63	36.51	215.76		
01-01-89	17:50:00	24.333	2719.63	36.51	215.77		
01-01-89	17:55:00	24.417	2719.60	36.48	215.77		
01-01-89	18:00:00	24.500	2719.67	36.55	215.76		
01-01-89	18:05:00	24.583	2719.66	36.54	215.77		
01-01-89	18:10:00	24.667	2719.66	36.54	215.77		
01-01-89	18:15:00	24.750	2719.67	36.55	215.76		
01-01-89	18:20:00	24.833	2719.68	36.56	215.76		
01-01-89	18:25:00	24.917	2719.73	36.61	215.76		
01-01-89	18:30:00	25.000	2719.73	36.61	215.76		
01-01-89	18:35:00	25.083	2719.75	36.63	215.76		
01-01-89	18:40:00	25.167	2719.71	36.59	215.76		
01-01-89	18:45:00	25.250	2719.72	36.60	215.76		
01-01-89	18:50:00	25.333	2719.76	36.64	215.76		
01-01-89	18:55:00	25.417	2719.76	36.64	215.76		
01-01-89	19:00:00	25.500	2719.72	36.60	215.76		
01-01-89	19:05:00	25.583	2719.76	36.64	215.76		
01-01-89	19:10:00	25.667	2719.76	36.64	215.76		
01-01-89	19:15:00	25.750	2719.80	36.68	215.76		
01-01-89	19:20:00	25.833	2719.78	36.66	215.76		
01-01-89	19:25:00	25.917	2719.84	36.72	215.76		
01-01-89	19:30:00	26.000	2719.85	36.73	215.77		
01-01-89	19:35:00	26.083	2719.85	36.73	215.77		
01-01-89	19:40:00	26.167	2719.85	36.73	215.77		
01-01-89	19:45:00	26.250	2719.90	36.78	215.76		
01-01-89	19:50:00	26.333	2719.88	36.76	215.76		
01-01-89	19:55:00	26.417	2719.87	36.75	215.76		
01-01-89	20:00:00	26.500	2719.83	36.71	215.76		
01-01-89	20:05:00	26.583	2719.84	36.72	215.76		
01-01-89	20:10:00	26.667	2719.86	36.74	215.76		
01-01-89	20:15:00	26.750	2719.88	36.76	215.76		
01-01-89	20:20:00	26.833	2719.89	36.77	215.75		
01-01-89	20:25:00	26.917	2719.95	36.83	215.75		
01-01-89	20:30:00	27.000	2719.93	36.81	215.76		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 01-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
01-01-89	20:35:00	27.083	2719.94	36.82	215.76	790	CSG = 700 PSIG
01-01-89	20:40:00	27.167	2719.94	36.82	215.76		
01-01-89	20:45:00	27.250	2719.94	36.82	215.75		
01-01-89	20:50:00	27.333	2719.98	36.86	215.76		
01-01-89	20:55:00	27.417	2719.10	36.88	215.76		
01-01-89	21:00:00	27.500	2719.97	36.85	215.76		
01-01-89	21:05:00	27.583	2719.10	36.88	215.76		
01-01-89	21:10:00	27.667	2720.03	36.91	215.76		
01-01-89	21:15:00	27.750	2719.99	36.87	215.76		
01-01-89	21:20:00	27.833	2719.99	36.87	215.76		
01-01-89	21:25:00	27.917	2720.06	36.94	215.76		
01-01-89	21:30:00	28.000	2720.07	36.95	215.76		
01-01-89	21:35:00	28.083	2720.04	36.92	215.76		
01-01-89	21:40:00	28.167	2720.05	36.93	215.76		
01-01-89	21:45:00	28.250	2720.07	36.95	215.76		
01-01-89	21:50:00	28.333	2720.05	36.93	215.76		
01-01-89	21:55:00	28.417	2720.07	36.95	215.76		
01-01-89	22:00:00	28.500	2720.09	36.97	215.75		
01-01-89	22:05:00	28.583	2720.11	36.99	215.75		
01-01-89	22:10:00	28.667	2720.13	37.01	215.75		
01-01-89	22:15:00	28.750	2720.12	36.10	215.75		
01-01-89	22:20:00	28.833	2720.14	37.02	215.75		
01-01-89	22:25:00	28.917	2720.15	37.03	215.75		
01-01-89	22:30:00	29.000	2720.16	37.04	215.76		
01-01-89	22:35:00	29.083	2720.15	37.03	215.76		
01-01-89	22:40:00	29.167	2720.16	37.04	215.76		
01-01-89	22:45:00	29.250	2720.19	37.07	215.76		
01-01-89	22:50:00	29.333	2720.15	37.03	215.75		
01-01-89	22:55:00	29.417	2720.20	37.08	215.75		
01-01-89	23:00:00	29.500	2720.17	37.05	215.76		
01-01-89	23:05:00	29.583	2720.22	37.10	215.76		
01-01-89	23:10:00	29.667	2720.22	37.10	215.75		
01-01-89	23:15:00	29.750	2720.23	37.11	215.76		
01-01-89	23:20:00	29.833	2720.22	37.10	215.76		
01-01-89	23:25:00	29.917	2720.23	37.11	215.76		
01-01-89	23:30:00	30.000	2720.24	37.12	215.76		
01-01-89	23:35:00	30.083	2720.26	37.14	215.76		
01-01-89	23:40:00	30.167	2720.26	37.14	215.76		
01-01-89	23:45:00	30.250	2720.27	37.15	215.76		
01-01-89	23:50:00	30.333	2720.31	37.19	215.77		
01-01-89	23:55:00	30.417	2720.27	37.15	215.76		
02-01-89	00:00:00	30.500	2720.32	37.20	215.76		
02-01-89	00:05:00	30.583	2720.31	37.19	215.76		
02-01-89	00:10:00	30.667	2720.34	37.22	215.76		
02-01-89	00:15:00	30.750	2720.36	37.24	215.76		
02-01-89	00:20:00	30.833	2720.34	37.22	215.76		
02-01-89	00:25:00	30.917	2720.29	37.17	215.76		
02-01-89	00:30:00	31.000	2720.30	37.18	215.77		
02-01-89	00:35:00	31.083	2720.34	37.22	215.76		
02-01-89	00:40:00	31.167	2720.38	37.26	215.76		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 02-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
02-01-89	00:45:00	31.250	2720.36	37.24	215.76	790	CSG = 700 PSIG
02-01-89	00:50:00	31.333	2720.38	37.26	215.76		
02-01-89	00:55:00	31.417	2720.39	37.27	215.76		
02-01-89	01:00:00	31.500	2720.42	37.30	215.76		
02-01-89	01:05:00	31.583	2720.42	37.30	215.76		
02-01-89	01:10:00	31.667	2720.43	37.31	215.76		
02-01-89	01:15:00	31.750	2720.44	37.32	215.76		
02-01-89	01:20:00	31.833	2720.37	37.25	215.77		
02-01-89	01:25:00	31.917	2720.43	37.31	215.76		
02-01-89	01:30:00	32.000	2720.39	37.27	215.76		
02-01-89	01:35:00	32.083	2720.43	37.31	215.75		
02-01-89	01:40:00	32.167	2720.47	37.35	215.76		
02-01-89	01:45:00	32.250	2720.44	37.32	215.76		
02-01-89	01:50:00	32.333	2720.49	37.37	215.76		
02-01-89	01:55:00	32.417	2720.48	37.36	215.76		
02-01-89	02:00:00	32.500	2720.47	37.35	215.75		
02-01-89	02:05:00	32.583	2720.48	37.36	215.75		
02-01-89	02:10:00	32.667	2720.52	37.40	215.76		
02-01-89	02:15:00	32.750	2720.54	37.42	215.76		
02-01-89	02:20:00	32.833	2720.50	37.38	215.76		
02-01-89	02:25:00	32.917	2720.53	37.41	215.75		
02-01-89	02:30:00	33.000	2720.58	37.46	215.75		
02-01-89	02:35:00	33.083	2720.52	37.40	215.75		
02-01-89	02:40:00	33.167	2720.58	37.46	215.75		
02-01-89	02:45:00	33.250	2720.56	37.44	215.75		
02-01-89	02:50:00	33.333	2720.55	37.43	215.75		
02-01-89	02:55:00	33.417	2720.50	37.38	215.76		
02-01-89	03:00:00	33.500	2720.57	37.45	215.76		
02-01-89	03:05:00	33.583	2720.61	37.49	215.75		
02-01-89	03:10:00	33.667	2720.58	37.46	215.75		
02-01-89	03:15:00	33.750	2720.61	37.49	215.75		
02-01-89	03:20:00	33.833	2720.60	37.48	215.75		
02-01-89	03:25:00	33.917	2720.61	37.49	215.75		
02-01-89	03:30:00	34.000	2720.65	37.53	215.75		
02-01-89	03:35:00	34.083	2720.60	37.48	215.75		
02-01-89	03:40:00	34.167	2720.68	37.56	215.75		
02-01-89	03:45:00	34.250	2720.66	37.54	215.75		
02-01-89	03:50:00	34.333	2720.67	37.55	215.75		
02-01-89	03:55:00	34.417	2720.67	37.55	215.75		
02-01-89	04:00:00	34.500	2720.65	37.53	215.75		
02-01-89	04:05:00	34.583	2720.68	37.56	215.75		
02-01-89	04:10:00	34.667	2720.69	37.57	215.76		
02-01-89	04:15:00	34.750	2720.64	37.52	215.76		
02-01-89	04:20:00	34.833	2720.69	37.57	215.76		
02-01-89	04:25:00	34.917	2720.70	37.58	215.76		
02-01-89	04:30:00	35.000	2720.68	37.56	215.75		
02-01-89	04:35:00	35.083	2720.72	37.60	215.76		
02-01-89	04:40:00	35.167	2720.68	37.56	215.76		
02-01-89	04:45:00	35.250	2720.72	37.60	215.76		
02-01-89	04:50:00	35.333	2720.67	37.55	215.76		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 02-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
02-01-89	04:55:00	35.417	2720.69	37.57	215.76	789	CSG = 700 PSIG
02-01-89	05:00:00	35.500	2720.70	37.58	215.76		
02-01-89	05:05:00	35.583	2720.76	37.64	215.75		
02-01-89	05:10:00	35.667	2720.69	37.57	215.76		
02-01-89	05:15:00	35.750	2720.74	37.62	215.75		
02-01-89	05:20:00	35.833	2720.73	37.61	215.76		
02-01-89	05:25:00	35.917	2720.80	37.68	215.76		
02-01-89	05:30:00	36.000	2720.75	37.63	215.76		
02-01-89	05:35:00	36.083	2720.76	37.64	215.76		
02-01-89	05:40:00	36.167	2720.76	37.64	215.75		
02-01-89	05:45:00	36.250	2720.75	37.63	215.76		
02-01-89	05:50:00	36.333	2720.76	37.64	215.75		
02-01-89	05:55:00	36.417	2720.82	37.70	215.75		
02-01-89	06:00:00	36.500	2720.82	37.70	215.75		
02-01-89	06:05:00	36.583	2720.82	37.70	215.75		
02-01-89	06:10:00	36.667	2720.81	37.69	215.76		
02-01-89	06:15:00	36.750	2720.84	37.72	215.76		
02-01-89	06:20:00	36.833	2720.83	37.71	215.76		
02-01-89	06:25:00	36.917	2720.82	37.70	215.76		
02-01-89	06:30:00	37.000	2720.86	37.74	215.75		
02-01-89	06:35:00	37.083	2720.85	37.73	215.75		
02-01-89	06:40:00	37.167	2720.82	37.70	215.75		
02-01-89	06:45:00	37.250	2720.89	37.77	215.75		
02-01-89	06:50:00	37.333	2720.90	37.78	215.75		
02-01-89	06:55:00	37.417	2720.89	37.77	215.75		
02-01-89	07:00:00	37.500	2720.90	37.78	215.75		
02-01-89	07:05:00	37.583	2720.91	37.79	215.75		
02-01-89	07:10:00	37.667	2720.89	37.77	215.75		
02-01-89	07:15:00	37.750	2720.93	37.81	215.75		
02-01-89	07:20:00	37.833	2720.93	37.81	215.75		
02-01-89	07:25:00	37.917	2720.90	37.78	215.76		
02-01-89	07:30:00	38.000	2720.92	37.80	215.75		
02-01-89	07:35:00	38.083	2720.88	37.76	215.75		
02-01-89	07:40:00	38.167	2720.95	37.83	215.75		
02-01-89	07:45:00	38.250	2720.94	37.82	215.75		
02-01-89	07:50:00	38.333	2720.10	37.88	215.75		
02-01-89	07:55:00	38.417	2720.93	37.81	215.75		
02-01-89	08:00:00	38.500	2720.94	37.82	215.75		
02-01-89	08:05:00	38.583	2720.97	37.85	215.75		
02-01-89	08:10:00	38.667	2720.95	37.83	215.75		
02-01-89	08:15:00	38.750	2720.96	37.84	215.75		
02-01-89	08:20:00	38.833	2720.98	37.86	215.75		
02-01-89	08:25:00	38.917	2720.97	37.85	215.75		
02-01-89	08:30:00	39.000	2721.03	37.91	215.75		
02-01-89	08:35:00	39.083	2721.01	37.89	215.76		
02-01-89	08:40:00	39.167	2721.01	37.89	215.75		
02-01-89	08:45:00	39.250	2721.02	37.90	215.75		
02-01-89	08:50:00	39.333	2720.10	37.88	215.75		
02-01-89	08:55:00	39.417	2721.02	37.90	215.75		
02-01-89	09:00:00	39.500	2720.10	37.88	215.75		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 02-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: SINGLE RATE FLOW

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 5086'-6114'KB

GAUGE DEPTH: 6130'KB

COMMENTS : BUILD UP

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
02-01-89	09:05:00	39.583	2721.05	37.93	215.75		
02-01-89	09:10:00	39.667	2721.05	37.93	215.75		
02-01-89	09:15:00	39.750	2721.06	37.94	215.75		
02-01-89	09:20:00	39.833	2721.06	37.94	215.75		
02-01-89	09:25:00	39.917	2721.10	37.98	215.75		
02-01-89	09:30:00	40.000	2721.07	37.95	215.76	789	CSG = 700 PSIG
02-01-89	09:35:00	40.083	2721.04	37.92	215.75		
02-01-89	09:40:00	40.167	2721.06	37.94	215.76		
02-01-89	09:45:00	40.250	2721.11	37.99	215.74		
02-01-89	09:50:00	40.333	2721.11	37.99	215.74		
02-01-89	09:55:00	40.417	2721.07	37.95	215.74		
02-01-89	10:00:00	40.500	2721.13	38.01	215.75		
02-01-89	10:05:00	40.583	2721.10	37.98	215.75		
02-01-89	10:10:00	40.667	2721.09	37.97	215.75		
02-01-89	10:15:00	40.750	2721.09	37.97	215.75		
02-01-89	10:20:00	40.833	2721.09	37.97	215.75	790	CSG = 700 PSIG
02-01-89	10:25:00	40.917	2721.11	37.99	215.74		
02-01-89	10:30:00	0.000	2721.15	0.04	215.74		START STATIC GRADIE
02-01-89	10:31:00	0.017	2721.13	-0.02	215.73		PULLING OUT OF HOLE
02-01-89	10:32:00	0.033	2721.11	-0.02	215.72		1st STOP AT 6130'KB
02-01-89	10:33:00	0.050	2721.13	0.02	215.71		
02-01-89	10:34:00	0.067	2721.13	0.00	215.70		
02-01-89	10:35:00	0.083	2721.14	0.01	215.69		1 MIN SAMPLE RATE
02-01-89	10:36:00	0.100	2721.15	0.01	215.68		
02-01-89	10:37:00	0.117	2721.17	0.02	215.68		
02-01-89	10:38:00	0.133	2721.16	-0.01	215.68		
02-01-89	10:39:00	0.150	2721.19	0.03	215.68		
02-01-89	10:40:00	0.167	2721.16	-0.03	215.68		
02-01-89	10:41:00	0.183	2721.17	0.01	215.68		PULL OUT OF HOLE
02-01-89	10:47:00	0.283	2709.55	-11.63	215.40		2nd STOP AT 6100'KB
02-01-89	10:48:00	0.300	2709.42	-0.12	215.30		
02-01-89	10:49:00	0.317	2709.47	0.05	215.21		
02-01-89	10:50:00	0.333	2709.64	0.17	215.13		
02-01-89	10:51:00	0.350	2709.87	0.23	215.06		
02-01-89	10:52:00	0.367	2710.03	0.16	214.99		
02-01-89	10:53:00	0.383	2710.27	0.24	214.93		
02-01-89	10:54:00	0.400	2710.48	0.20	214.88		
02-01-89	10:55:00	0.417	2710.59	0.12	214.83		
02-01-89	10:56:00	0.433	2710.80	0.20	214.79		
02-01-89	10:57:00	0.450	2710.94	0.14	214.76		
02-01-89	10:58:00	0.467	2711.06	0.13	214.73		
02-01-89	10:59:00	0.483	2711.17	0.11	214.70		GRADIENT = .329
02-01-89	11:00:00	0.500	2711.29	0.12	214.68		PULL OUT OF HOLE
02-01-89	11:08:00	0.633	2535.23	-176.06	210.07		3rd STOP AT 5600'KB
02-01-89	11:09:00	0.650	2538.63	3.41	209.47		
02-01-89	11:10:00	0.667	2541.98	3.35	209.00		
02-01-89	11:11:00	0.683	2544.91	2.93	208.64		
02-01-89	11:12:00	0.700	2547.24	2.33	208.34		
02-01-89	11:13:00	0.717	2549.17	1.93	208.10		
02-01-89	11:14:00	0.733	2550.79	1.61	207.90		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 02-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS : STATIC GRADIENT OUT OF HOLE

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
02-01-89	11:15:00	0.750	2552.09	0.00	207.74		
02-01-89	11:16:00	0.767	2553.19	1.10	207.61		
02-01-89	11:17:00	0.783	2554.03	0.85	207.50		
02-01-89	11:18:00	0.800	2554.71	0.68	207.41		
02-01-89	11:19:00	0.817	2555.35	0.63	207.32		
02-01-89	11:20:00	0.833	2555.78	0.44	207.26		
02-01-89	11:21:00	0.850	2556.16	0.38	207.20		
02-01-89	11:22:00	0.867	2556.50	0.34	207.15		
02-01-89	11:23:00	0.883	2556.77	0.26	207.11		
02-01-89	11:24:00	0.900	2556.98	0.21	207.06		
02-01-89	11:25:00	0.917	2557.15	0.17	207.03		
02-01-89	11:26:00	0.933	2557.35	0.20	207.00		
02-01-89	11:27:00	0.950	2557.45	0.10	206.98		
02-01-89	11:28:00	0.967	2557.62	0.17	206.95		
02-01-89	11:29:00	0.983	2557.74	0.13	206.94		
02-01-89	11:30:00	1.000	2557.78	0.04	206.92		GRADIENT = .307
02-01-89	11:31:00	1.017	2557.86	0.08	206.91		PULL OUT OF HOLE
02-01-89	11:40:00	1.167	2354.44	-203.42	202.19		4th STOP AT 5000'KB
02-01-89	11:41:00	1.183	2357.59	3.15	201.65		
02-01-89	11:42:00	1.200	2360.32	2.72	201.22	790	CSG = 700 PSIG
02-01-89	11:43:00	1.217	2362.48	2.17	200.88		
02-01-89	11:44:00	1.233	2364.34	1.86	200.60		
02-01-89	11:45:00	1.250	2365.85	1.50	200.37		
02-01-89	11:46:00	1.267	2367.16	1.32	200.19		
02-01-89	11:47:00	1.283	2368.16	0.99	200.03		
02-01-89	11:48:00	1.300	2369.02	0.87	199.90		
02-01-89	11:49:00	1.317	2369.71	0.68	199.79		
02-01-89	11:50:00	1.333	2370.31	0.60	199.70		
02-01-89	11:51:00	1.350	2370.81	0.50	199.62		
02-01-89	11:52:00	1.367	2371.20	0.39	199.55		
02-01-89	11:53:00	1.383	2371.52	0.32	199.49		
02-01-89	11:54:00	1.400	2371.85	0.32	199.45		
02-01-89	11:55:00	1.417	2372.06	0.22	199.40		
02-01-89	11:56:00	1.433	2372.28	0.22	199.37		
02-01-89	11:57:00	1.450	2372.43	0.15	199.34		
02-01-89	11:58:00	1.467	2372.56	0.13	199.31		
02-01-89	11:59:00	1.483	2372.64	0.08	199.28		GRADIENT = .309
02-01-89	12:00:00	1.500	2372.75	0.11	199.26		PULL OUT OF HOLE
02-01-89	12:24:00	1.900	2046.41	-326.33	187.73		5th STOP AT 4000'KB
02-01-89	12:25:00	1.917	2048.39	1.98	186.88		
02-01-89	12:26:00	1.933	2050.89	2.49	186.21		
02-01-89	12:27:00	1.950	2053.21	2.32	185.65		
02-01-89	12:28:00	1.967	2054.94	1.74	185.23		
02-01-89	12:29:00	1.983	2056.60	1.66	184.87		
02-01-89	12:30:00	2.000	2057.87	1.27	184.58		
02-01-89	12:31:00	2.017	2058.10	1.12	184.33		
02-01-89	12:32:00	2.033	2059.88	0.89	184.13		
02-01-89	12:33:00	2.050	2060.58	0.70	183.96		
02-01-89	12:34:00	2.067	2061.25	0.67	183.82		
02-01-89	12:35:00	2.083	2061.71	0.46	183.70		

EXPERTEST PTY. LTD.

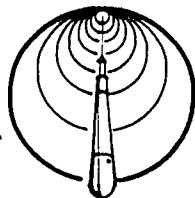
CUSTOMER : SANTOS LTD DATE: 02-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS : STATIC GRADIENT OUT OF HOLE

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
02-01-89	12:36:00	2.100	2062.12	0.41	183.60		
02-01-89	12:37:00	2.117	2062.51	0.38	183.51		
02-01-89	12:38:00	2.133	2062.74	0.23	183.43		
02-01-89	12:39:00	2.150	2062.97	0.23	183.36		
02-01-89	12:40:00	2.167	2063.19	0.23	183.31		
02-01-89	12:49:00	2.317	1729.48	-333.72	170.57		GRADIENT = .310 PULL OUT OF HOLE 6th STOP AT 3000'KB
02-01-89	12:50:00	2.333	1733.30	3.82	168.18		
02-01-89	12:51:00	2.350	1737.27	3.96	166.34		
02-01-89	12:52:00	2.367	1740.48	3.22	164.85		
02-01-89	12:53:00	2.383	1742.79	2.31	163.69		
02-01-89	12:54:00	2.400	1744.76	1.97	162.72		
02-01-89	12:55:00	2.417	1746.19	1.43	161.94		
02-01-89	12:56:00	2.433	1747.27	1.08	161.29		
02-01-89	12:57:00	2.450	1748.20	0.93	160.76		
02-01-89	12:58:00	2.467	1748.92	0.72	160.30		
02-01-89	12:59:00	2.483	1749.47	0.55	159.93		
02-01-89	13:00:00	2.500	1749.91	0.44	159.60		GRADIENT = .313 PULL OUT OF HOLE 7th STOP AT 2000'KB
02-01-89	13:11:00	2.683	1444.89	-305.02	143.42		
02-01-89	13:12:00	2.700	1443.43	-1.46	141.66		
02-01-89	13:13:00	2.717	1442.57	-0.86	140.37		
02-01-89	13:14:00	2.733	1441.66	-0.90	139.31		
02-01-89	13:15:00	2.750	1440.83	-0.84	138.47		
02-01-89	13:16:00	2.767	1440.06	-0.77	137.79		
02-01-89	13:17:00	2.783	1439.32	-0.74	137.24		
02-01-89	13:18:00	2.800	1438.69	-0.63	136.78		
02-01-89	13:19:00	2.817	1438.22	-0.47	136.38		
02-01-89	13:20:00	2.833	1437.80	-0.42	136.08		
02-01-89	13:21:00	2.850	1437.36	-0.44	135.81		
02-01-89	13:22:00	2.867	1437.02	-0.35	135.59		
02-01-89	13:23:00	2.883	1436.74	-0.27	135.39		
02-01-89	13:33:00	3.050	1148.92	-287.83	120.79		GRADIENT = .313 PULL OUT OF HOLE 8th STOP AT 1000'KB
02-01-89	13:34:00	3.067	1144.26	-4.66	118.96		
02-01-89	13:35:00	3.083	1140.08	-4.18	117.49		
02-01-89	13:36:00	3.100	1136.22	-3.86	116.30		
02-01-89	13:37:00	3.117	1132.87	-3.35	115.35		
02-01-89	13:38:00	3.133	1130.22	-2.65	114.58		
02-01-89	13:39:00	3.150	1127.74	-2.48	113.94		
02-01-89	13:40:00	3.167	1125.66	-2.08	113.39		
02-01-89	13:41:00	3.183	1123.97	-1.69	112.95		
02-01-89	13:42:00	3.200	1122.39	-1.58	112.59		
02-01-89	13:43:00	3.217	1121.30	-1.09	112.28		
02-01-89	13:44:00	3.233	1120.23	-1.07	112.01		
02-01-89	13:45:00	3.250	1119.23	-0.10	111.77		
02-01-89	13:46:00	3.267	1118.40	-0.83	111.59		
02-01-89	13:47:00	3.283	1117.83	-0.58	111.43		
02-01-89	13:48:00	3.300	1117.20	-0.62	111.29		
02-01-89	13:49:00	3.317	1116.88	-0.32	111.16		
02-01-89	13:50:00	3.333	1116.47	-0.41	111.07		
02-01-89	14:05:00	3.583	801.69	-314.78	93.48		GRADIENT = .320 PULL OUT OF HOLE 9th STOP AT SURFACE
02-01-89	14:06:00	3.600	796.80	-4.89	93.51		

EXPERTEST PTY. LTD.

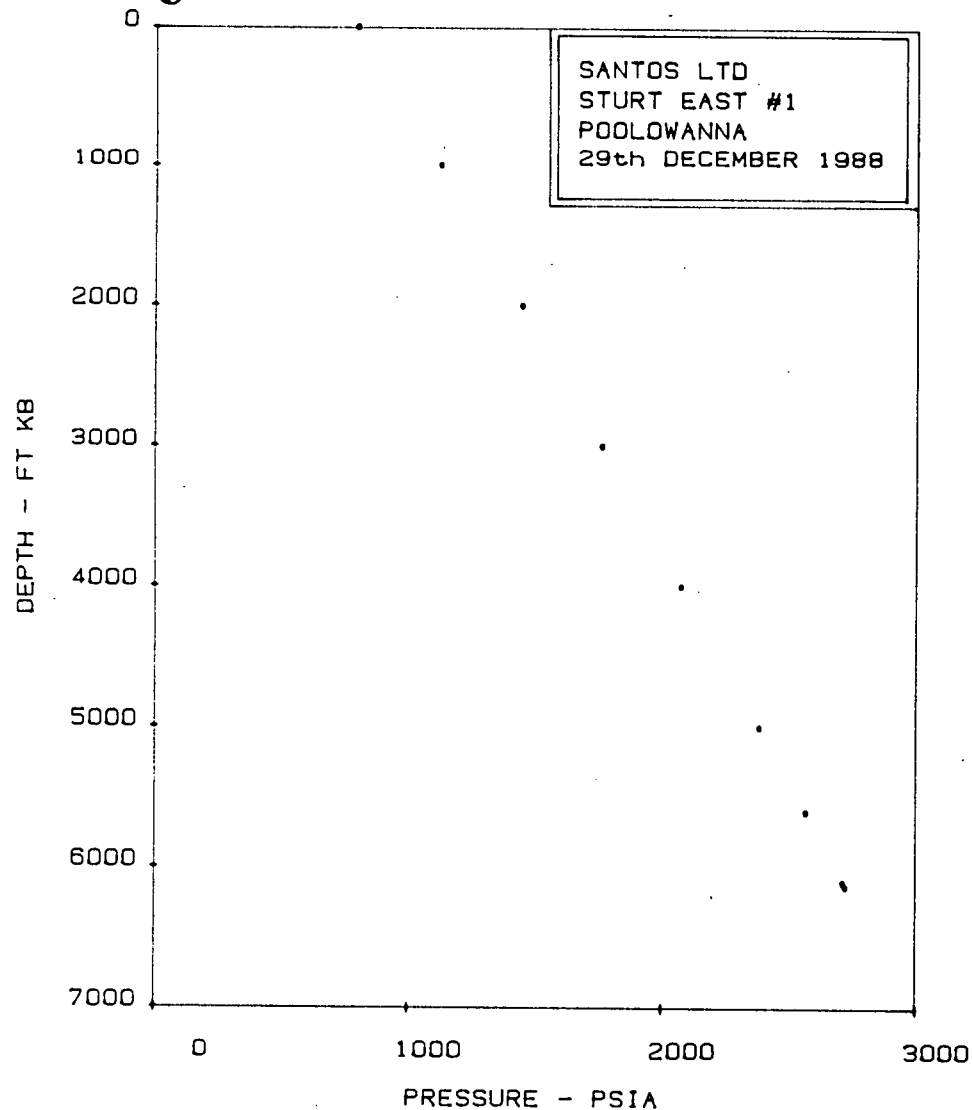
CUSTOMER : SANTOS LTD DATE: 02-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS : STATIC GRADIENT OUT OF HOLE

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
02-01-89	14:07:00	3.617	793.20	-3.60	93.60		
02-01-89	14:08:00	3.633	790.99	-2.21	93.78		
02-01-89	14:09:00	3.650	789.15	-1.84	93.98		
02-01-89	14:10:00	3.667	787.21	-1.94	94.21		
02-01-89	14:11:00	3.683	786.44	-0.77	94.47		
02-01-89	14:12:00	3.700	785.97	-0.46	94.75		
02-01-89	14:13:00	3.717	785.69	-0.29	95.04		
02-01-89	14:14:00	3.733	785.56	-0.13	95.34		
02-01-89	14:15:00	3.750	785.62	0.06	95.67		
02-01-89	14:16:00	3.767	785.77	0.15	95.99		
02-01-89	14:17:00	3.783	786.02	0.25	96.30		
02-01-89	14:18:00	3.800	786.10	0.08	96.61		
02-01-89	14:19:00	3.817	786.14	0.05	96.91	788	CSG = 700 PSIG
02-01-89	14:20:00	3.833	786.25	0.10	97.21		
02-01-89	14:21:00	3.850	786.49	0.24	97.48		
02-01-89	14:22:00	3.867	786.83	0.34	97.76		GRADIENT = .328
02-01-89	14:23:00	3.883	787.06	0.23	97.10		
02-01-89	14:24:00	3.900	787.43	0.37	98.25		DEPRESSURE LUB.
02-01-89	14:25:00	3.917	787.68	0.25	98.45		END OF BUILD UP



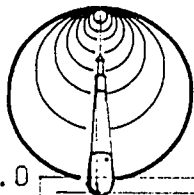
EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

STATIC GRADIENT SURVEY



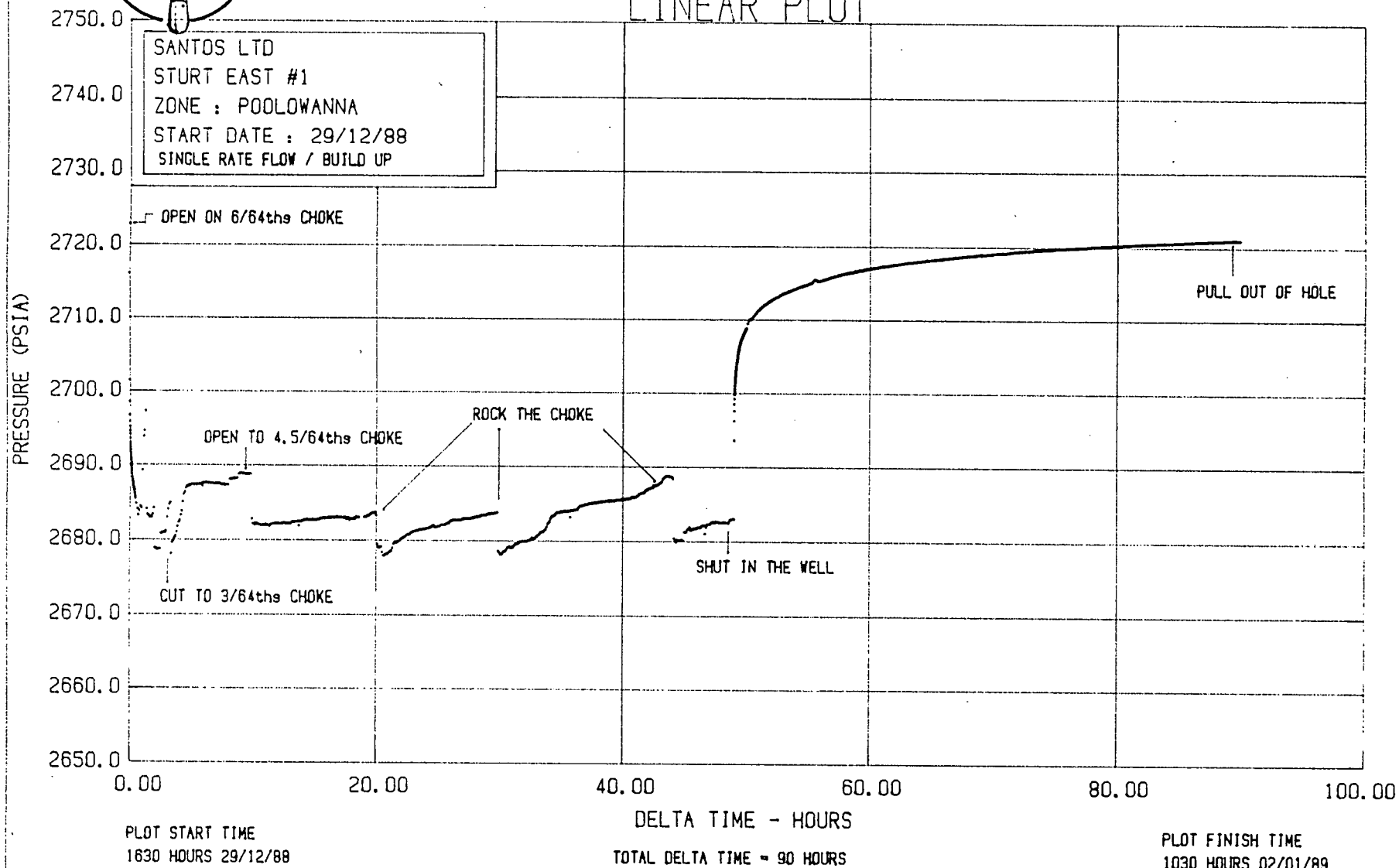
STOP	TIME	DEPTH ('KB)	PRESSURE (PSIA)	GRADIENT (PSI/FT)
1	1200	LUB.	794.87	----
2	1225	1000	1121.70	0.3268
3	1301	2000	1442.76	0.3211
4	1337	3000	1759.47	0.3167
5	1406	4000	2073.64	0.3142
6	1438	5000	2382.44	0.3088
7	1506	5600	2567.35	0.3082
8	1554	6100	2712.83	0.2910
9	1618	6130	2722.76	0.3310

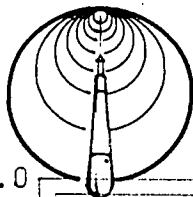
STATIC GRADIENT CONDUCTED WHILE
RUNNING IN THE HOLE



EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

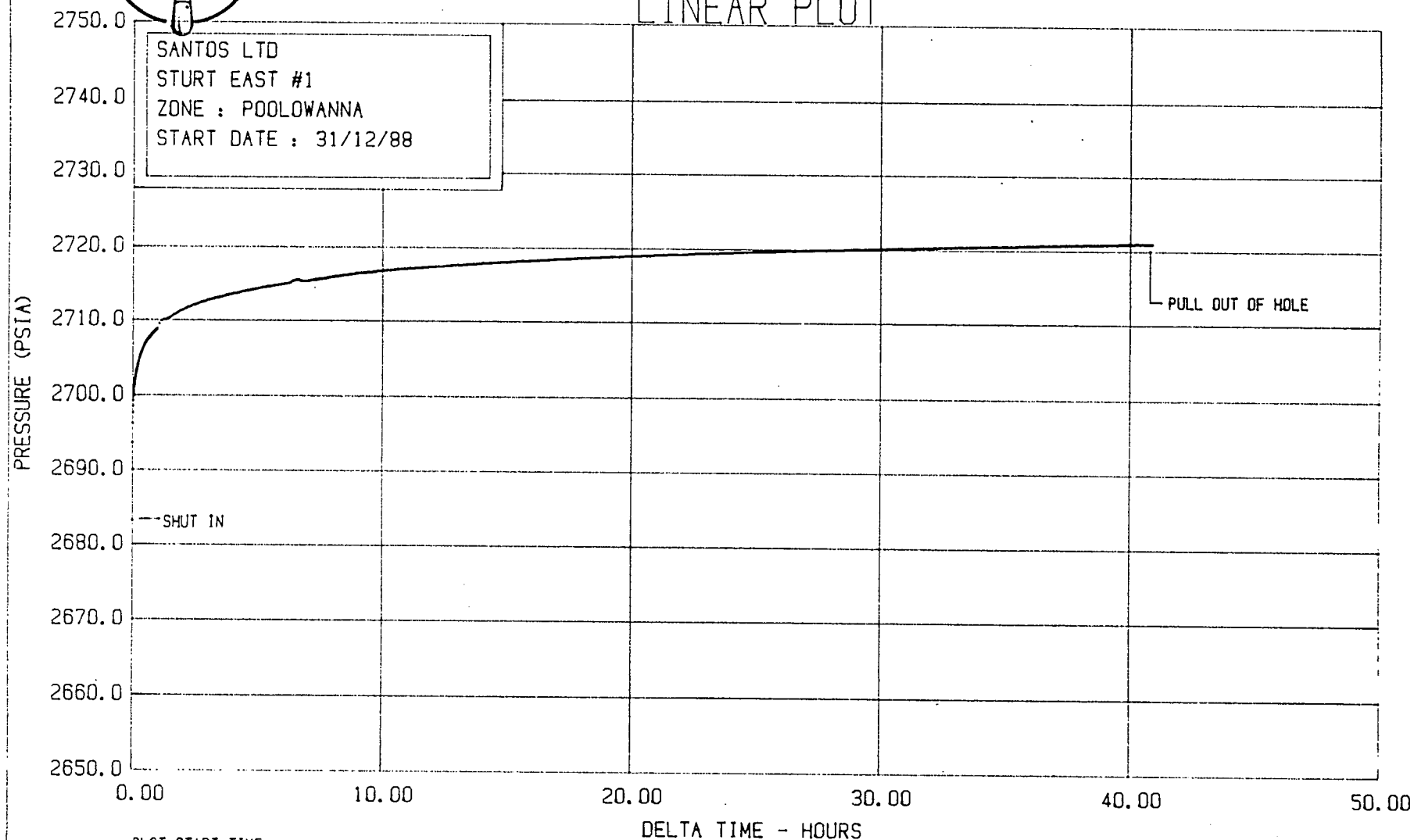
LINEAR PLOT





EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

LINEAR PLOT

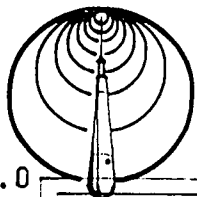


PLOT START TIME
1730 HOURS 31/12/88

DELTA TIME - HOURS
TOTAL DELTA TIME = 41 HOURS

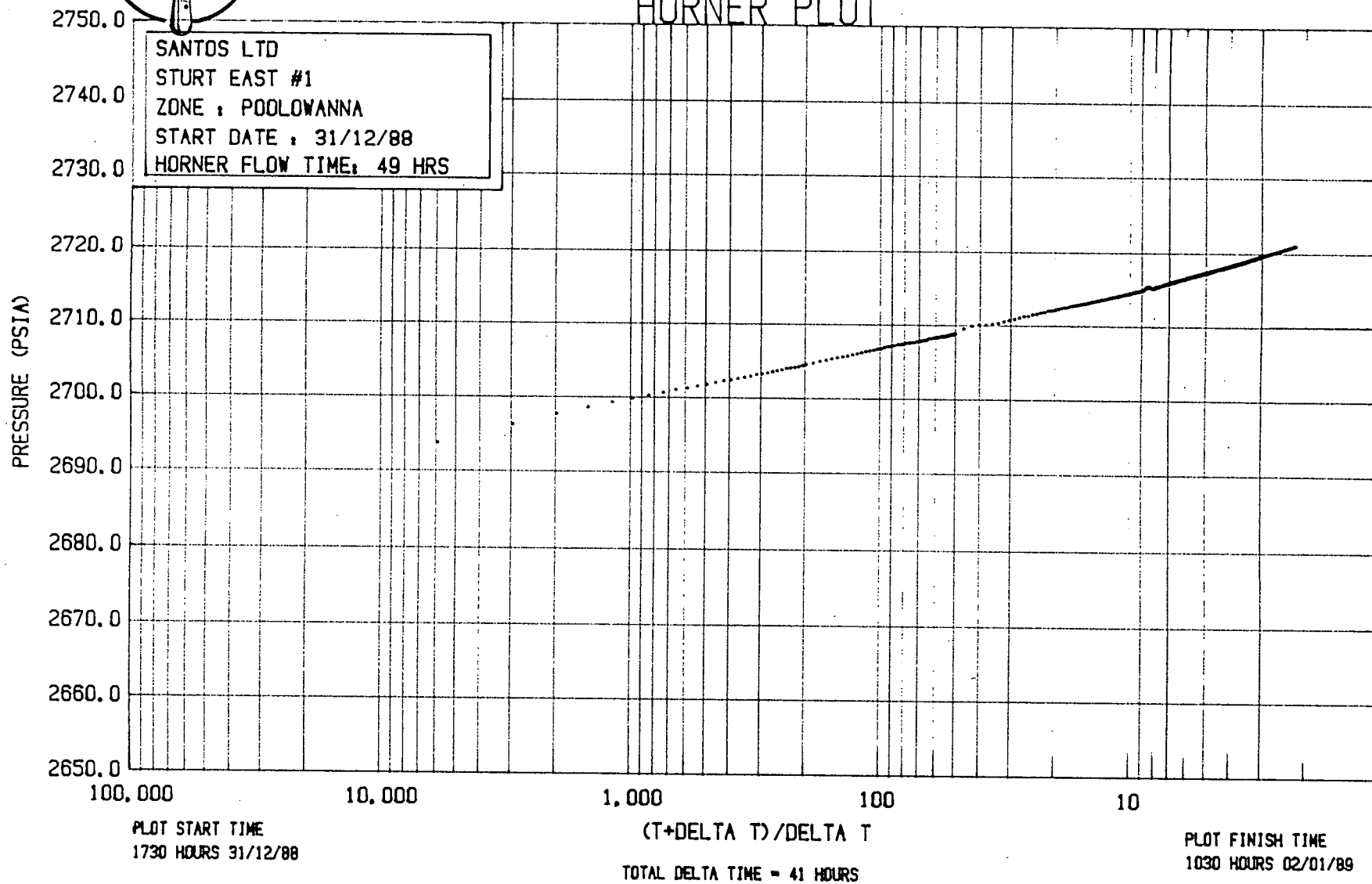
PLOT FINISH TIME
1030 HOURS 02/01/89

00038

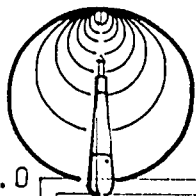


EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

HORNER PLOT



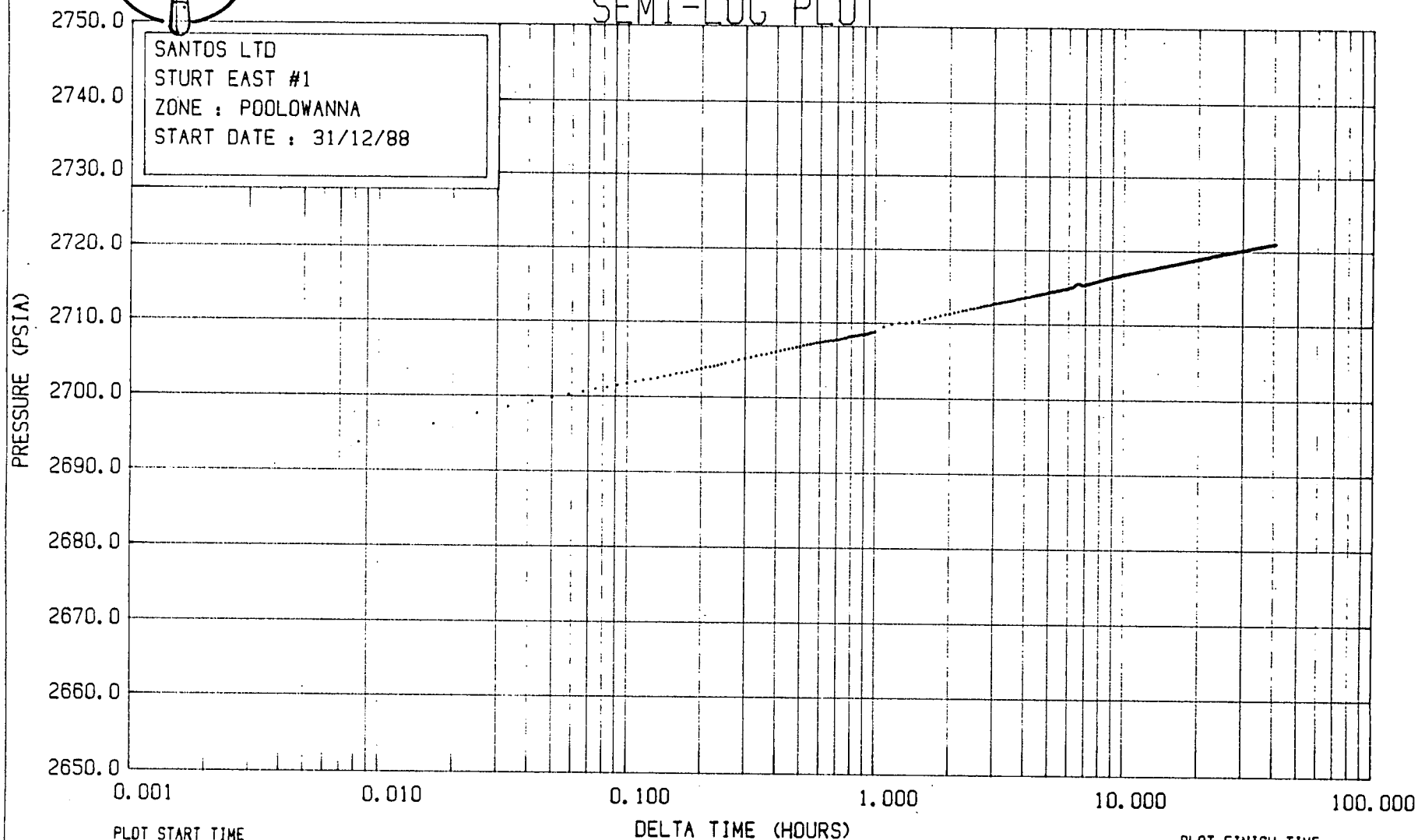
00039



EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

SEMI-LOG PLOT

SANTOS LTD
STURT EAST #1
ZONE : POOLOWANNA
START DATE : 31/12/88

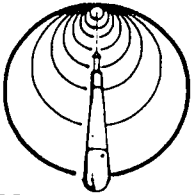


PLOT START TIME
1730 HOURS 31/12/88

TOTAL DELTA TIME = 41 HOURS

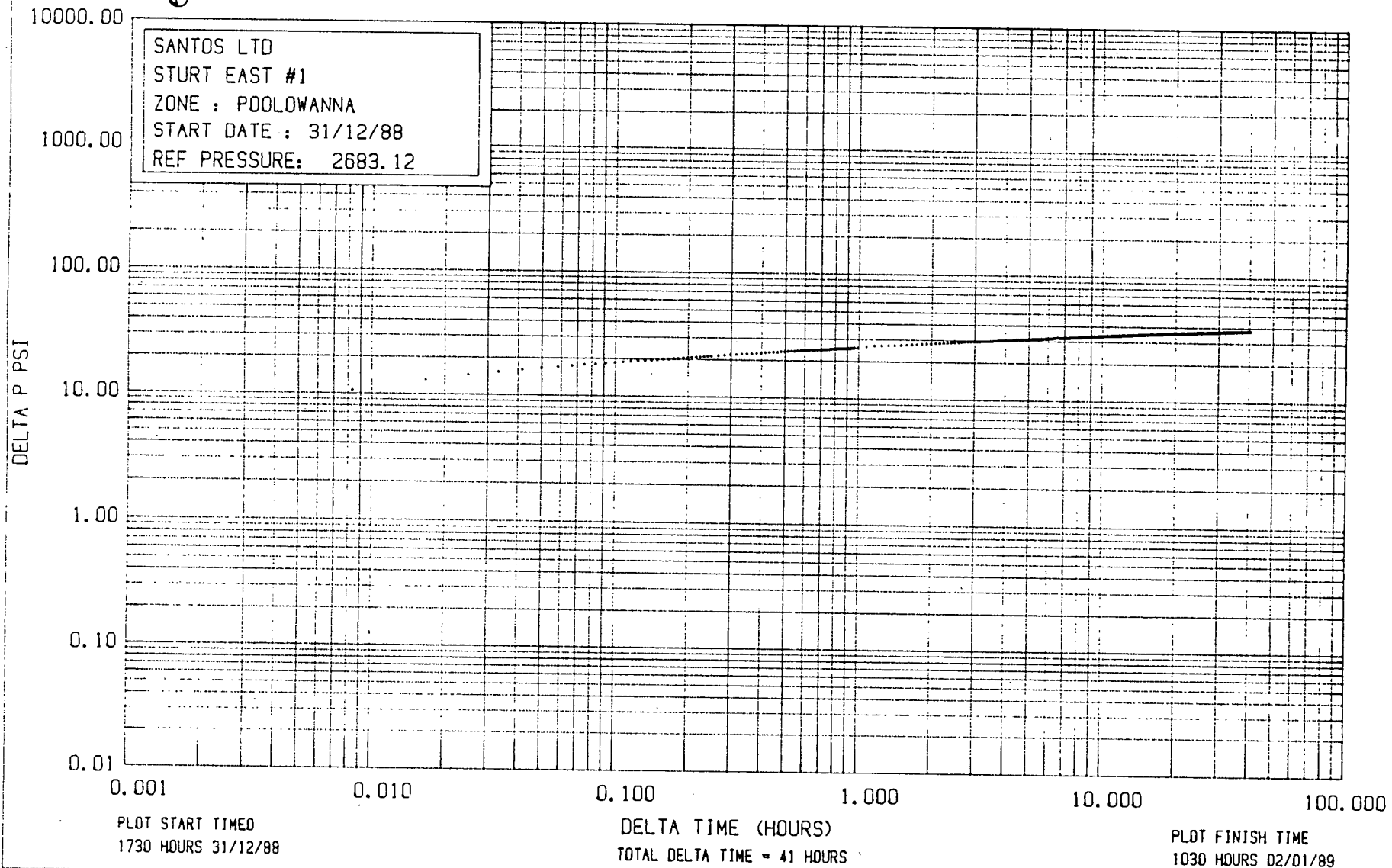
PLOT FINISH TIME
1030 HOURS 02/01/89

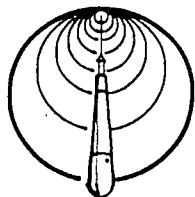
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EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

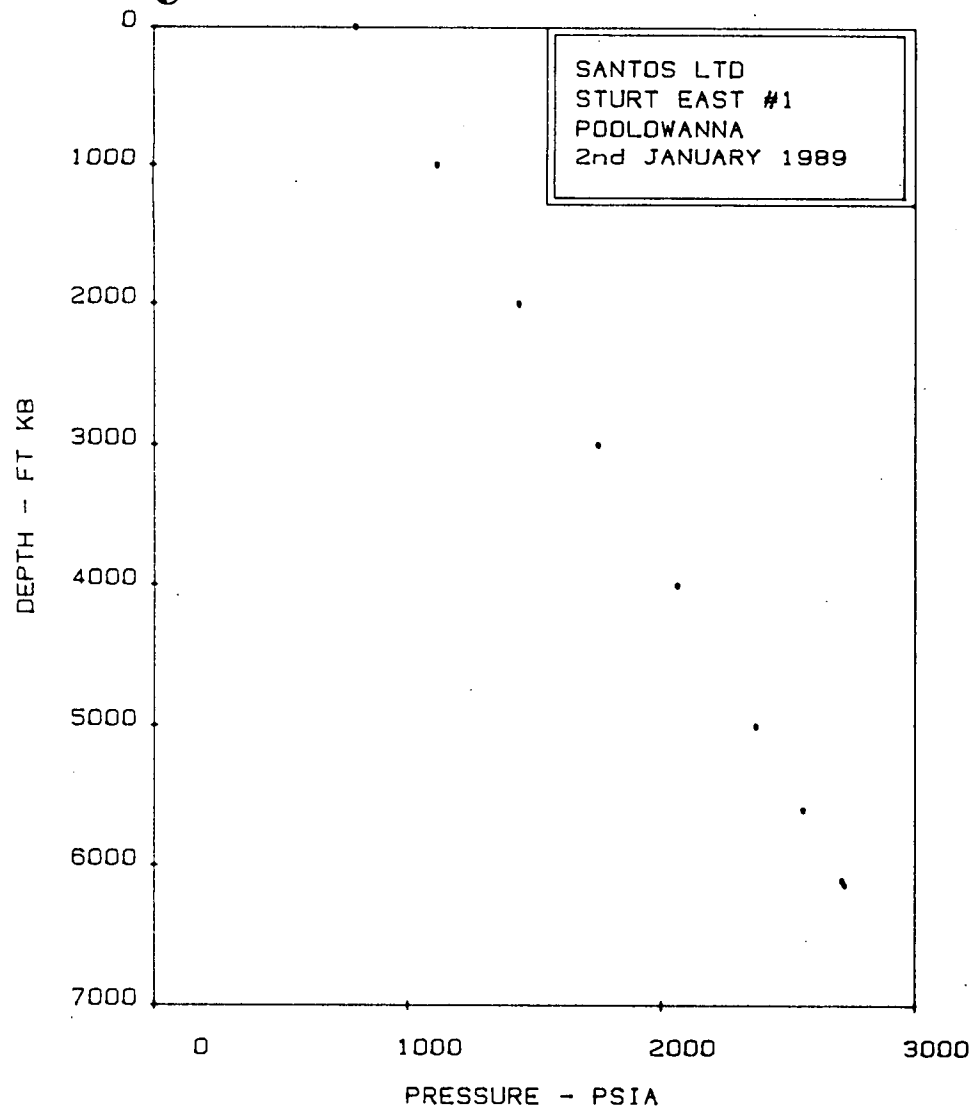
LOG-LOG PLOT





EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

STATIC GRADIENT SURVEY



STOP	TIME	DEPTH ('KB)	PRESSURE (PSIA)	GRADIENT (PSI/FT)
1	1030	6130	2721.17	----
2	1047	6100	2711.29	0.3293
3	1108	5600	2557.86	0.3069
4	1140	5000	2372.75	0.3085
5	1224	4000	2063.19	0.3096
6	1249	3000	1749.91	0.3133
7	1311	2000	1436.74	0.3132
8	1333	1000	1116.47	0.3203
9	1405	LUB.	794.38	0.3221

STATIC GRADIENT CONDUCTED WHILE
PULLING OUT OF HOLE

00042

CLIENT SANTOS LTD WELL STURT EAST #1 PAGE 1

OPERATOR TIM CHAPMAN DATE 29.12.88

SURVEY SINGLE FLOW RATE/BUILD UP

TOP BOMB C.C.L. REC. No. CLOCK DATA

MID BOMB HP. SRO 599 REC. No. CLOCK DATA

BTM BOMB 57413x3000psi REC. No. 61127 x 15 TLS CLOCK DATA F-15693 x 120 HR

ENG. SYLUS 29.12.88 @ 10.35 DISENGAGE SYLUS

DWT IN DWTOUT MBHT

Date	Time	Cum. Time	Depth	WELLHEAD KPA		BOTTOM HOLE PRESS.		Bot Def.	PSI	Remarks
				TUB	CAS	TEMP C	KPA			
29.12.88										STATIC GRADIENT
	09.50			DUMMY RUN & RIG UP COMPLETED						
	10.00			FUNCTION CHECK C.C.L. - O.K.						
	11.00			5447	2413	36				PRESS UP LUBRICATOR
	12.00		0							1ST. GRAD STOP
	12.15		RIH	5447	2413	36	5481			
	12.25		1000							2ND. GRAD STOP
	12.50		RIH				7734			
	13.00		2000	5447	2413	36				3RD. GRAD STOP
	13.25		RIH				9948			
	13.37		3000							4TH. GRAD STOP
	13.55		RIH				12132			
	14.06		4000							5TH. GRAD STOP
	14.25		RIH				14298			
	14.38		5000	5447	2413	36				6TH. GRAD STOP
	14.58		RIH				16427			
	15.06		5600							7TH. GRAD STOP
	15.25		RIH & CORRELATE @ P.S.N. - ADD 18' STRETCH							
				TAG T.D. @ (approx) 6140'KB						
	15.52		P.O.O.H. AND HANG @ 6100'KB							BHP=17702KPA
	16.10		RIH				18705			8TH. GRAD STOP
	16.18		6130	5440	2413	36				9TH. GRAD STOP
				AT SURVEY HANG DEPTH						
	16.29		6130	5440	2413	36	18773			
										CONT

00044

CLIENT SANTOS LTD WELL STURT EAST #1 PAGE2
 OPERATOR TIM CHAPMAN DATE 29TH. DECEMBER 1988
 SURVEY SINGLE RATE FLOW/ BUILD UP
 TOP BOMB C.C.L. REC. No. CLOCK DATA
 MID BOMB HP. SRO 599 REC. No. CLOCK DATA
 BTM BOMB 57413x3000psi REC. No. 61127 x 15TSLS CLOCK DATA F-15693 x 120 HR
 ENG. STYLUS 29.12.88 @ 10.35 DISENGAGE STYLUS
 DWT IN 5447 KPA DWTOUT MBHT

Date	Time	Cum. Time	Depth	WELLHEAD KPA		BOTTOM HOLE PRESS		Bot Def.	PSI	Remarks
29.12.88				TUB	CAS	TEMP. C	KPA			
	16.30		6130	5440	2413	36	18773			FLOW ON 9.5/64 CHOKE
				OPEN WELL ON 9.5/64 CHOKE AND FLOW TO TANK						
	16.35			5226		36	18568			(BH TEMP=101.6C)
	16.40			5226		36	18549			
	16.45			5226		36	18536			ROCKING CHOKE
	17.00			5226		36	18516			AT EACH READING
	17.30	1		5261	4482	36	18507			
	18.30	2		5254	4482	36	18508			
	19.30	3		5240	4482	36	18487			
	20.30	4		5240	4482	36	18495			
	22.30	6		5281	4482	36	18531			
30.12.88										
	00.30	8	6130	5288	4482	36	18529			
	02.30	10		5295	4482	35	18494			ROCK THE CHOKE
	04.30	12		5254	4482	36	18494			
	06.30	14		5254	4482	36	18497			
	08.30	16		5261	4482	36	18500			
	10.30	18		5288	4551	39	18499			
	12.30	20		5268	4654	40	18502			ROCK THE CHOKE
	14.30	22		5247	4551	42	18480			
	16.30	24		5247	4551	42	18490			
	18.30	26		5254	4551	41	18497			
	20.30	28		5254	4551	38	18501			
	22.30	30		5261	4551	47	18468			ROCK THE CHOKE
									...CONT	



CLIENT	SANTOS LTD	WELL	STURT EAST #1	PAGE	3
OPERATOR	TIM CHAPMAN	DATE	31ST DECEMBER 1988		
SURVEY	SINGLE FLOW RATE/BUILD UP				
TOP BOMB	C.C.L.	REC. No.		CLOCK DATA	
MID BOMB	HP SRO 599	REC. No.		CLOCK DATA	
BTM BOMB	57413 x 3000psi	REC. No.	61127 x 15 TLS	CLOCK DATA	F-15693 x 120 HR
ENG. SYLUS	29.12.88 @ 10.35	DISENGAGE SYLUS			
DWT IN	5447 KPA	DWTOUT		MBHT	

...CONT

CLIENT SANTOS LTD WELL STURT EAST #1 PAGE 4

OPERATOR TIM CHAPMAN DATE 1ST. JANUARY 1989

SURVEY SINGLE RATE FLOW/BUILD UP

TOP BOMB C.C.L. REC. No. CLOCK DATA

MID BOMB HP SRO 599 REC. No. CLOCK DATA

BTM BOMB 57413 x 3000 REC. No. 61127 x 15TSLS CLOCK DATA F-15693 x 120HR

ENG. STYLUS 29.12.88 @ 10.35 DISENGAGE STYLUS

DWT IN 5447 KPA DWTOUT MBHT

Date	Time	Cum. Time	Depth	WELLHEAD KPA		BOTTOM HOLE PRESS		Bot Def.	PSI	Remarks
1ST. JANUARY	1989			TUB	CAS	TEMPC	KPA			BUILD UP CONT
	01.30	8	6130	5440	4827	28	18726			
	05.30	12		5440	4827	25	18736			
	09.30	16		5447	4827	33	18743			
	13.30	20		5447	4827	42	18748			
	17.30	24		5447	4827	43	18751			
	21.30	28		5447	4827	33	18755			
2ND. JANUARY	1989									
	01.30	32	6130	5447	4827	28	18757			
	05.30	36		5440	4827	26	18760			
	09.30	40		5440	4827	31	18762			
	10.30	41		5447	4827	35	18762			PULL OUT OF HOLE
	10.31		6130							1ST GRAD STOP
	10.41		POOH				18763			
	10.47		6100							2ND. GRAD STOP
	11.00		POOH				18694			
	11.08		5600							3RD. GRAD STOP
	11.31		POOH				17636			
	11.40		5000	5447	4827	41				4TH. GRAD STOP
	12.00		POOH				16360			
	12.24		4000							5TH. GRAD STOP
	12.40		POOH				14226			
	12.49		3000							6TH. GRAD STOP
	13.00		POOH				12066			
	13.11		2000							7TH. GRAD STOP
	13.23		POOH				9906			
	13.33		1000							8TH. GRAD STOP

[illegible]

CLIENT...SANTOS LTD.....													WELL STURT. EAST. #1.....	
TANK:- CAPACITY...377 BBLs													DATE 29.12.88...PAGE No 1...	
SCALE.....20.345 BBLs/FT...													OPERATOR...TIM CHAPMAN.....	

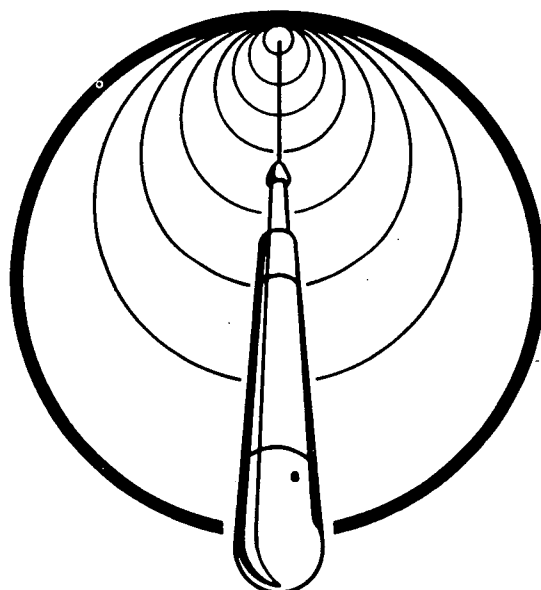
DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION						REMARKS
		METER READG	TANK DIP INS.	TANK PROD. M3	FLOWRATE M3/D	CUM. PROD. M3	OIL CONDENSATE GRAVITY *AP160F*	METER READG	TANK DIP INS	TANK PROD. M3	FLOWRATE M3/D	CUM. PROD. M3	SALINITY PPM B.S.W. %	
29.12.88	SINGLE RATE FLOW	TEST												
16.30	0		34.25	TARE DIP					0	TARE DIP				OPEN ON 9.5/64 CHOKE
17.30	1		56	5.86	140.7	5.86			0					
18.30	2		62	1.62	38.8	7.48			6.25	1.68	40.4	1.68	.1% H2O TRACE OF	DIRT ROCK THE CHOKE
19.30	3		68.75	1.82	43.7	9.3	51.6		8.25	.54	12.9	2.22	.1% H2O	ON EACH READING
20.30	4		81	3.3	79.2	12.6	51.4		8.25	0	0	2.22	0	
22.30	6		97.25	4.38	52.6	16.98	51.7		8.25	0	0	2.22	0	
30.12.88														
00.30	8		113.5	4.38	52.6	21.35	51.7		9.5	.34	4	2.56	0	
02.30	10		127.5	3.77	45.3	25.12	51.8		9.5	0	0	2.56	0	
04.30	12		134.5	1.89	22.7	27.01	51.0		9.5	0	0	2.56	0	
06.30	14		163.5	7.82	93.79	34.83	51.9		9.5	0	0	2.56	0	
08.30	16		182.5	5.12	61.5	40	52.7		9.5	0	0	2.56	0	
10.30	18		201.5	5.12	61.5	45.12	51.6		9.5	0	0	2.56	0	
12.00			211.5	2.7	43.1	47.82	51.4		9.5	0	0	2.56	0	DRAIN THE TANK
12.30	20		127	TARE DIP					0	TARE DIP				CONT TO FLOW
14.30	22		147	5.39	64.7	53.21	51.6		0	0	0	2.56	0	
16.30	24		165	4.85	58.2	58.06	51.4		0	0	0	2.56	0	

CLIENT SANTOS LTD				 EXPERTEST PTY LTD WIRELINE & WELL TESTING SERVICE 138 INCHING ROAD MARLESTON SA 5022 PORTAL ADDRESS PO BOX 384 COMMONWEALTH 5022				WELL STURT EAST #1			
TANK:- CAPACITY .. 377 BBLs								DATE 30.12.88 PAGE No .. 2			
SCALE 20.345BBLs/FT								OPERATOR .. TIM CHAPMAN			

DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION						REMARKS
		METER READG	TANK DIP	TANK PROD.	FLOWRATE	CUM. PROD.	OIL CONDENSATE GRAVITY *AP160F*	METER READG	TANK DIP	TANK PROD.	FLOWRATE	CUM. PROD.	SALINITY PPM	
		INS	M3	M3/D	M3			INS	M3	M3/D	M3	B.S.W. %		
30.12.88			165			58.06			0			2.56		9.5/64ths CHOKE
18.30	26		181	4.31	51.75	62.37	51.6		0	0	0	2.56	0	
20.30	28		198	4.58	54.98	66.95	52.2		0	0	0	2.56	0	
22.30	30		213	4.04	48.51	70.99	52.0		0	0	0	2.56	0	START TO DRAIN
23.00			132	TARE DIP					0	TARE DIP		2		FINISH DRAINING
31.12.88														
00.30	32		146	3.77	60.37	74.76	50.4		0	0	0	2.56	0	
02.30	34		163	4.58	54.98	79.34	51.4		0	0	0	2.56	0	
04.30	36		177	3.77	45.28	83.11	51.6		0	0	0	2.56	0	
06.30	38		193.5	4.45	53.36	87.56	50.6		0	0	0	2.56	0	
08.30	40		209	4.18	50.13	91.74	50.8		0	0	0	2.56	0	
10.00			218	2.43	38.81	94.17	51.3		0	0	0	2.56	0	START TO DRAIN
10.30	42		131	TARE DIP					0	TARE DIP				FINISH DRAINING
12.30	44		144.5	3.64	43.66	97.81	51.4		0	0	0	2.56	0	
14.30	46		165	5.53	66.3	103.34	51.4		0	0	0	2.56	0	
16.30	48		179	3.77	45.28	107.11	51.4		0	0	0	2.56	0	SAMPLES TAKEN
17.30	49		185.5	1.75	42.04	108.86	51.4		0	0	0	2.56	0	SHUT IN THE WELL
			TOTAL FLOW TIME = 49 HOURS											END OF FLOW
			TOTAL PRODUCE = OIL - 108.86M3, WATER - 2.56M3, FLUID = 111.42M3											

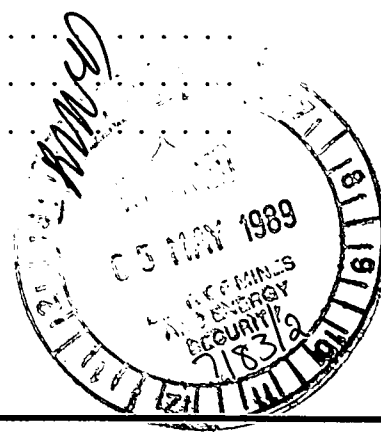
EXPERTEST

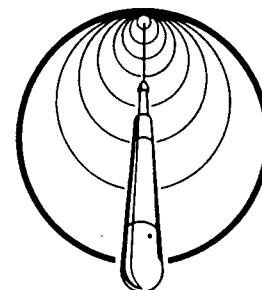
ELECTRIC WIRELINE
SERVICE



Electronic BHP/BHT Survey

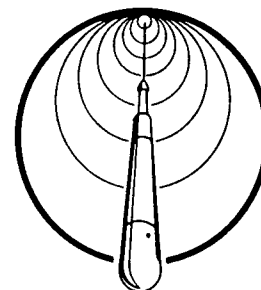
Customer: SANTOS LTD
Location: STURT EAST #1
Formation: POOLOWANNA
Date: 2nd TO 5th JANUARY 1989





DATE: 2nd TO 5th JANUARY 1989

TIME	DESCRIPTION OF EVENTS
	2nd JANUARY 1989
1430	OPEN THE WELL AND FLOW ON A 6/64ths CHOKE TO ACHIEVE A FLOW RATE OF 25 - 50 BBLs/D
1700	CUT THE CHOKE BACK TO 3/64ths
2030	OPEN THE CHOKE TO 4.5/64ths AND CONTINUE TO MONITOR DRAW DOWN AND PRODUCTION RATES
	THE CHOKE IS CONSTANTLY BLOCKING UP AT THIS RATE
	NECESSARY TO ROCK THE CHOKE AT EACH READING
	3rd JANUARY 1989
0001	CONTINUE TO MONITOR SURFACE AND BOTTOM HOLE PRESSURE AND FLUID PRODUCTION RATES
0820	CONDUCT A FLOWING GRADIENT TO ESTABLISH WATER/OIL CONTACT
	- IN PREPARATION FOR BOTTOM HOLE SAMPLING
0830	RUN IN THE HOLE CONDUCTING FLOWING GRADIENT TO THE MAXIMUM DEPTH OF 6000'KB
1202	AT 6000'KB - GRADIENT INDICATES THERE IS NO WATER - PULL OUT OF THE HOLE
1253	ARRIVE BACK AT SURFACE
1320	DEPRESSURE THE LUBRICATOR - END OF FLOWING GRADIENT
1500	PREPARE TO RUN BOTTOM HOLE SAMPLERS
	RUN #1
1510	RUN IN THE HOLE WITH TANDUM BOTTOM HOLE SAMPLERS TO 5600'KB AND HANG OFF
1540	AT 5600'KB - MONITOR FLOWING BOTTOM HOLE PRESSURE
1630	SAMPLES DUE TO BE TAKEN
1645	PULL OUT OF HOLE
1730	AT SURFACE - DEPRESSURE THE LUBRICATOR
	CHECK AND TRANSFER TWO GOOD SAMPLES - END OF FIRST SAMPLING RUN

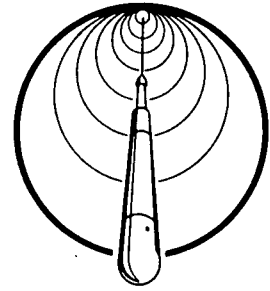


DATE: 2nd TO 5th JANUARY 1989

[illegible]

EXPERIENCES

ELECTRIC WIRELINE SERVICES



CUSTOMER: SANTOS .LTD.....

LOCATION: STURT EAST #1.....

FORMATION: POLOWANNA

DATE: 2nd TO 5th JANUARY 1989

[illegible]

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 03-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS : BOTTOM HOLE SAMPLING FLOWING GRADIENT

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
03-01-89	08:20:00	0.000	786.57	786.57	90.98		START FLOWING
03-01-89	08:21:00	0.017	787.44	0.87	91.26		GRADIENT IN
03-01-89	08:22:00	0.033	787.10	0.56	91.52		PREPARATION FOR
03-01-89	08:23:00	0.050	788.68	0.68	91.76		B.H.SAMPLING
03-01-89	08:24:00	0.067	789.09	0.41	91.98		
03-01-89	08:25:00	0.083	789.35	0.27	92.21		1st STOP IN LUB
03-01-89	08:26:00	0.100	789.70	0.34	92.41		
03-01-89	08:27:00	0.117	790.02	0.32	92.62		1 MIN SAMPLE RATE
03-01-89	08:28:00	0.133	790.51	0.50	92.83		
03-01-89	08:29:00	0.150	790.75	0.24	93.04	790	CSG = 700 PSIG
03-01-89	08:30:00	0.167	790.74	-0.01	93.24		
03-01-89	08:40:00	0.333	1055.63	264.89	99.15		RUN IN THE HOLE
03-01-89	08:53:00	0.550	1100.65	45.02	109.70		2nd STOP AT 1000'KB
03-01-89	08:54:00	0.567	1101.38	0.72	109.87		
03-01-89	08:55:00	0.583	1102.07	0.70	110.02		
03-01-89	08:56:00	0.600	1102.62	0.54	110.15		
03-01-89	08:57:00	0.617	1103.03	0.41	110.26		
03-01-89	08:58:00	0.633	1103.44	0.41	110.35		
03-01-89	08:59:00	0.650	1103.73	0.29	110.42		DELTA T FROM
03-01-89	09:00:00	0.667	1104.06	0.33	110.48		START OF GRADIENT
03-01-89	09:01:00	0.683	1104.30	0.24	110.53		
03-01-89	09:02:00	0.700	1104.48	0.18	110.59		
03-01-89	09:03:00	0.717	1104.69	0.21	110.62		DELTA P FROM
03-01-89	09:04:00	0.733	1104.84	0.15	110.66		PREVIOUS VALUE
03-01-89	09:05:00	0.750	1105.02	0.18	110.69		
03-01-89	09:06:00	0.767	1105.05	0.04	110.70		
03-01-89	09:07:00	0.783	1105.22	0.17	110.73		
03-01-89	09:08:00	0.800	1105.25	0.03	110.74		
03-01-89	09:09:00	0.817	1105.33	0.08	110.75		
03-01-89	09:10:00	0.833	1105.36	0.04	110.77		GRADIENT = .315
03-01-89	09:18:00	0.967	1405.75	300.38	124.19		RUN IN THE HOLE
03-01-89	09:29:00	1.150	1429.24	23.49	133.38		3rd STOP AT 2000'KB
03-01-89	09:30:00	1.167	1429.77	0.53	133.61		
03-01-89	09:31:00	1.183	1430.18	0.41	133.81		
03-01-89	09:32:00	1.200	1430.46	0.28	133.98		
03-01-89	09:33:00	1.217	1430.73	0.27	134.12		
03-01-89	09:34:00	1.233	1430.97	0.24	134.25		
03-01-89	09:35:00	1.250	1431.16	0.19	134.36		
03-01-89	09:36:00	1.267	1431.30	0.14	134.45		
03-01-89	09:37:00	1.283	1431.44	0.13	134.53		
03-01-89	09:38:00	1.300	1431.60	0.17	134.60		
03-01-89	09:39:00	1.317	1431.71	0.11	134.66		
03-01-89	09:40:00	1.333	1431.75	0.04	134.70		
03-01-89	09:41:00	1.350	1431.79	0.04	134.74		
03-01-89	09:42:00	1.367	1431.86	0.06	134.78		
03-01-89	09:43:00	1.383	1431.91	0.05	134.81		
03-01-89	09:44:00	1.400	1431.95	0.04	134.85		
03-01-89	09:45:00	1.417	1431.98	0.03	134.87		GRADIENT = .327
03-01-89	09:46:00	1.433	1432.03	0.05	134.90		RUN IN THE HOLE
03-01-89	09:54:00	1.567	1745.80	313.76	145.91		4th STOP AT 3000'KB

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 03-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS : BOTTOM HOLE SAMPLING FLOWING GRADIENT

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
03-01-89	09:59:00	1.650	1751.59	5.79	153.88		
03-01-89	10:00:00	1.667	1751.46	-0.13	154.68		
03-01-89	10:01:00	1.683	1751.15	-0.31	155.37		
03-01-89	10:02:00	1.700	1750.89	-0.26	155.93		
03-01-89	10:03:00	1.717	1750.66	-0.23	156.39		
03-01-89	10:04:00	1.733	1750.44	-0.22	156.79		
03-01-89	10:05:00	1.750	1750.16	-0.28	157.12		GRADIENT = .318
03-01-89	10:06:00	1.767	1749.92	-0.24	157.41		RUN IN THE HOLE
03-01-89	10:13:00	1.883	2094.50	344.59	170.56		5th STOP AT 4000'KB
03-01-89	10:31:00	2.183	2063.01	-31.49	183.51		
03-01-89	10:32:00	2.200	2062.57	-0.44	183.61		
03-01-89	10:33:00	2.217	2062.29	-0.28	183.69	790	CSG = 700 PSIG
03-01-89	10:34:00	2.233	2062.10	-0.19	183.76		
03-01-89	10:35:00	2.250	2061.84	-0.26	183.83		
03-01-89	10:36:00	2.267	2061.65	-0.19	183.89		
03-01-89	10:37:00	2.283	2061.50	-0.15	183.93		
03-01-89	10:38:00	2.300	2061.35	-0.15	183.97		
03-01-89	10:39:00	2.317	2061.30	-0.05	184.01		
03-01-89	10:40:00	2.333	2061.16	-0.15	184.04		
03-01-89	10:41:00	2.350	2061.06	-0.10	184.07		GRADIENT = .311
03-01-89	10:42:00	2.367	2061.04	-0.01	184.09		RUN IN THE HOLE
03-01-89	10:53:00	2.550	2399.11	338.06	194.93		6th STOP AT 5000'KB
03-01-89	11:06:00	2.767	2373.05	-26.06	199.48		
03-01-89	11:07:00	2.783	2372.51	-0.55	199.55		
03-01-89	11:08:00	2.800	2371.58	-0.92	199.62		
03-01-89	11:09:00	2.817	2371.59	0.01	199.68		
03-01-89	11:10:00	2.833	2371.38	-0.21	199.73		
03-01-89	11:11:00	2.850	2371.15	-0.23	199.77		
03-01-89	11:12:00	2.867	2370.82	-0.33	199.81		
03-01-89	11:13:00	2.883	2370.68	-0.14	199.84		
03-01-89	11:14:00	2.900	2370.52	-0.17	199.87		GRADIENT = .309
03-01-89	11:15:00	2.917	2370.42	-0.10	199.90		RUN IN THE HOLE
03-01-89	11:24:00	3.067	2716.16	345.75	207.14		7th STOP AT 6000'KB
03-01-89	11:42:00	3.367	2679.82	-36.35	212.96		
03-01-89	11:43:00	3.383	2679.50	-0.32	213.00		
03-01-89	11:44:00	3.400	2679.22	-0.27	213.05		
03-01-89	11:45:00	3.417	2679.02	-0.20	213.09		
03-01-89	11:46:00	3.433	2678.43	-0.59	213.11		
03-01-89	11:47:00	3.450	2678.64	0.21	213.14		
03-01-89	11:48:00	3.467	2677.70	-0.94	213.16		
03-01-89	11:49:00	3.483	2678.36	0.66	213.20		
03-01-89	11:50:00	3.500	2678.32	-0.04	213.22		
03-01-89	11:51:00	3.517	2678.21	-0.11	213.24		
03-01-89	11:52:00	3.533	2678.19	-0.02	213.25		
03-01-89	11:53:00	3.550	2678.08	-0.12	213.26		
03-01-89	11:54:00	3.567	2677.96	-0.12	213.29		
03-01-89	11:55:00	3.583	2677.87	-0.09	213.29		
03-01-89	11:56:00	3.600	2677.61	-0.26	213.30		
03-01-89	11:57:00	3.617	2677.64	0.03	213.31		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 03-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: SINGLE RATE FLOW OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: GRAD'NT
 COMMENTS : BOTTOM HOLE SAMPLING FLOWING GRADIENT

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
03-01-89	11:58:00	3.633	2677.74	0.10	213.32		
03-01-89	11:59:00	3.650	2677.75	0.01	213.32		
03-01-89	12:00:00	3.667	2677.67	-0.08	213.33		
03-01-89	12:01:00	3.683	2677.68	0.01	213.33		
03-01-89	12:02:00	3.700	2677.66	-0.02	213.34		
03-01-89	12:53:00	4.550	838.57	-839.09	101.78		GRADIENT = .307 PULL OUT OF HOLE ARRIVE AT SURFACE
03-01-89	13:07:00	4.783	794.33	-44.24	100.58		
03-01-89	13:08:00	4.800	794.32	-0.01	100.62		
03-01-89	13:09:00	4.817	794.35	0.03	100.64		
03-01-89	13:10:00	4.833	794.39	0.05	100.67		
03-01-89	13:11:00	4.850	794.41	0.01	100.71		
03-01-89	13:12:00	4.867	794.37	-0.04	100.73		
03-01-89	13:13:00	4.883	794.26	-0.11	100.76		
03-01-89	13:14:00	4.900	794.16	-0.10	100.79		
03-01-89	13:15:00	4.917	794.03	-0.13	100.83		
03-01-89	13:16:00	4.933	793.89	-0.14	100.84		
03-01-89	13:17:00	4.950	793.71	-0.18	100.90	790	CSG = 700 PSIG
03-01-89	13:18:00	4.967	793.66	-0.06	100.97		
03-01-89	13:19:00	4.983	793.93	0.27	101.02		DEPRESSURE LUB.
03-01-89	13:20:00	5.000	793.66	-0.27	101.07		END OF GRADIENT

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 03-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: BOTTOM HOLE SAMPLING

OPERATOR: TIM CHAPMAN

FORMATION: POOLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 5600'KB

COMMENTS : FIRST RUN

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
03-01-89	14:38:00	0.000	14.41	-872.47	108.10		RUN IN THE HOLE
03-01-89	15:37:00	0.983	2589.22	2574.80	202.82		WITH TANDUM BOTTOM
03-01-89	15:38:00	1.000	2583.19	-6.03	203.59		HOLE SAMPLERS
03-01-89	15:39:00	1.017	2578.02	-5.16	204.23		
03-01-89	15:40:00	1.033	2573.68	-4.35	204.75		HANG OFF AT 5600'KB
03-01-89	15:41:00	1.050	2570.17	-3.51	205.17		[+ 18' STRETCH]
03-01-89	15:42:00	1.067	2567.18	-2.98	205.52		
03-01-89	15:43:00	1.083	2564.73	-2.45	205.83		1 MIN SAMPLE RATE
03-01-89	15:44:00	1.100	2562.69	-2.04	206.07		
03-01-89	15:45:00	1.117	2561.07	-1.62	206.28		DELTA T FROM
03-01-89	15:46:00	1.133	2559.65	-1.42	206.46		START OF FIRST RUN
03-01-89	15:47:00	1.150	2558.47	-1.18	206.61		
03-01-89	15:48:00	1.167	2557.48	-0.99	206.73		DELTA P FROM
03-01-89	15:49:00	1.183	2556.67	-0.81	206.83		PREVIOUS VALUE
03-01-89	15:50:00	1.200	2555.97	-0.70	206.92		
03-01-89	15:51:00	1.217	2555.43	-0.54	207.00		
03-01-89	15:52:00	1.233	2554.95	-0.48	207.07		
03-01-89	15:53:00	1.250	2554.64	-0.31	207.13		
03-01-89	15:54:00	1.267	2554.34	-0.30	207.19		
03-01-89	15:55:00	1.283	2553.99	-0.35	207.24		
03-01-89	15:56:00	1.300	2553.75	-0.23	207.28		
03-01-89	15:57:00	1.317	2553.57	-0.19	207.31		
03-01-89	15:58:00	1.333	2553.38	-0.19	207.35		
03-01-89	15:59:00	1.350	2553.24	-0.15	207.37		
03-01-89	16:00:00	1.367	2553.12	-0.12	207.39	790	CSG = 700 PSIG
03-01-89	16:01:00	1.383	2553.00	-0.12	207.42		
03-01-89	16:02:00	1.400	2552.94	-0.06	207.43		
03-01-89	16:03:00	1.417	2552.89	-0.05	207.45		
03-01-89	16:04:00	1.433	2552.83	-0.07	207.47		
03-01-89	16:05:00	1.450	2552.79	-0.04	207.48		
03-01-89	16:06:00	1.467	2552.72	-0.07	207.49		
03-01-89	16:07:00	1.483	2552.69	-0.03	207.50		
03-01-89	16:08:00	1.500	2552.67	-0.02	207.51		
03-01-89	16:09:00	1.517	2552.66	-0.01	207.52		
03-01-89	16:10:00	1.533	2552.60	-0.06	207.53		
03-01-89	16:11:00	1.550	2552.55	-0.05	207.53		
03-01-89	16:12:00	1.567	2552.57	0.02	207.53		
03-01-89	16:13:00	1.583	2552.50	-0.07	207.54		
03-01-89	16:14:00	1.600	2552.50	-0.00	207.54		
03-01-89	16:15:00	1.617	2552.52	0.02	207.55	790	CSG = 700 PSIG
03-01-89	16:16:00	1.633	2552.49	-0.03	207.55		
03-01-89	16:17:00	1.650	2552.48	-0.01	207.55		
03-01-89	16:18:00	1.667	2552.48	-0.00	207.56		
03-01-89	16:19:00	1.683	2552.49	0.01	207.56		
03-01-89	16:20:00	1.700	2552.46	-0.03	207.56		
03-01-89	16:21:00	1.717	2552.46	-0.00	207.57		
03-01-89	16:22:00	1.733	2552.44	-0.02	207.57		
03-01-89	16:23:00	1.750	2552.43	-0.01	207.56		
03-01-89	16:24:00	1.767	2552.43	0.00	207.56		
03-01-89	16:25:00	1.783	2552.45	0.02	207.56		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 03-01-89 HP GAUGE S/N: 599
LOCATION : STURT EAST #1 TEST: BOTTOM HOLE SAMPLING OPERATOR: TIM CHAPMAN
FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 5600'KB
COMMENTS : FIRST RUN

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
03-01-89	16:26:00	1.800	2552.48	0.03	207.57	790	CSG = 700 PSIG SAMPLERS GO OFF
03-01-89	16:27:00	1.817	2552.44	-0.04	207.57		
03-01-89	16:28:00	1.833	2552.44	0.00	207.57		
03-01-89	16:29:00	1.850	2552.48	0.04	207.57		
03-01-89	16:30:00	1.867	2552.46	-0.02	207.57		
03-01-89	16:31:00	1.883	2552.47	0.01	207.57		
03-01-89	16:32:00	1.900	2552.48	0.01	207.58		
03-01-89	16:33:00	1.917	2552.38	-0.11	207.58		
03-01-89	16:34:00	1.933	2552.45	0.08	207.58		
03-01-89	16:35:00	1.950	2552.43	-0.02	207.58		
03-01-89	16:36:00	1.967	2552.59	0.15	207.59		
03-01-89	16:37:00	1.983	2552.75	0.16	207.60		
03-01-89	16:38:00	2.000	2553.62	0.87	207.62		
03-01-89	16:39:00	2.017	2553.81	0.18	207.63		
03-01-89	16:40:00	2.033	2553.90	0.10	207.64		
03-01-89	16:41:00	2.050	2553.83	-0.07	207.65	790	CSG = 700 PSIG PULL OUT OF HOLE END OF FIRST RUN
03-01-89	16:42:00	2.067	2553.82	-0.01	207.65		
03-01-89	16:43:00	2.083	2553.79	-0.04	207.66		
03-01-89	16:44:00	2.100	2553.73	-0.06	207.65		
03-01-89	16:45:00	2.117	2553.75	0.02	207.65		
03-01-89	17:30:00	2.867	832.10	-721.64	98.16		

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD DATE: 03-01-89 HP GAUGE S/N: 599
 LOCATION : STURT EAST #1 TEST: BOTTOM HOLE SAMPLING OPERATOR: TIM CHAPMAN
 FORMATION: POOLOWANNA PERFORATIONS: 6086'-6114'KB GAUGE DEPTH: 5600'KB
 COMMENTS : SECOND RUN

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
03-01-89	18:25:00	0.000	795.87	-36.23	90.07		RUN IN THE HOLE
03-01-89	19:22:00	0.950	2636.89	1841.02	194.43		WITH TANDUM BOTTOM
03-01-89	19:23:00	0.967	2627.23	-9.67	196.78		HOLE SAMPLERS
03-01-89	19:24:00	0.984	2616.27	-10.95	198.66		
03-01-89	19:25:00	1.000	2606.82	-9.45	200.16		HANG OFF AT 5600'KB
03-01-89	19:26:00	1.017	2598.46	-8.36	201.30		[+ 18' STRETCH]
03-01-89	19:27:00	1.034	2591.26	-7.19	202.28		
03-01-89	19:28:00	1.050	2584.81	-6.46	203.05		1 MIN SAMPLE RATE
03-01-89	19:29:00	1.067	2579.95	-4.85	203.67		
03-01-89	19:30:00	1.084	2575.77	-4.18	204.18		
03-01-89	19:31:00	1.100	2572.09	-3.69	204.62		
03-01-89	19:32:00	1.117	2569.22	-2.87	204.97	790	CSG = 700 PSIG
03-01-89	19:33:00	1.134	2556.21	-13.01	205.26		ROCK THE CHOKE
03-01-89	19:34:00	1.150	2553.41	-2.80	205.54		
03-01-89	19:35:00	1.167	2551.96	-1.45	205.85		DELTA T FROM
03-01-89	19:36:00	1.184	2550.81	-1.15	206.13		START OF SECOND RUN
03-01-89	19:37:00	1.200	2550.03	-0.77	206.39		
03-01-89	19:38:00	1.217	2549.34	-0.69	206.65		DELTA P FROM
03-01-89	19:39:00	1.234	2548.73	-0.62	206.88		PREVIOUS VALUE
03-01-89	19:40:00	1.250	2548.09	-0.64	207.09		
03-01-89	19:41:00	1.267	2547.41	-0.68	207.29		
03-01-89	19:42:00	1.284	2546.61	-0.80	207.46		
03-01-89	19:43:00	1.300	2545.94	-0.67	207.62		
03-01-89	19:44:00	1.317	2545.24	-0.70	207.77	780	CSG = 680 PSIG
03-01-89	19:45:00	1.334	2544.61	-0.62	207.89		SAMPLERS GO OFF
03-01-89	19:46:00	1.350	2544.14	-0.47	208.02		
03-01-89	19:47:00	1.367	2543.60	-0.55	208.14		
03-01-89	19:48:00	1.384	2543.19	-0.41	208.25		
03-01-89	19:49:00	1.400	2542.80	-0.39	208.35		
03-01-89	19:50:00	1.417	2542.46	-0.34	208.44		
03-01-89	19:51:00	1.434	2542.14	-0.31	208.53		
03-01-89	19:52:00	1.450	2541.93	-0.22	208.62		
03-01-89	19:53:00	1.467	2541.79	-0.14	208.70		
03-01-89	19:54:00	1.484	2541.55	-0.24	208.78		
03-01-89	19:55:00	1.500	2541.34	-0.22	208.86		
03-01-89	19:56:00	1.517	2541.30	-0.03	208.94		
03-01-89	19:57:00	1.534	2541.07	-0.23	209.01		
03-01-88	19:58:00	1.550	2540.90	-0.17	209.07	780	CSG = 680 PSIG
03-01-89	19:59:00	1.567	2540.86	-0.04	209.14		
03-01-89	20:00:00	1.584	2540.65	-0.22	209.22		PULL OUT OF HOLE
03-01-89	20:45:00	2.334	886.88	-653.77	105.06		END OF SECOND RUN

EXPERTEST PTY. LTD.

CUSTOMER : SANTOS LTD

DATE: 04-01-89

HP GAUGE S/N: 599

LOCATION : STURT EAST #1

TEST: BOTTOM HOLE SAMPLING

OPERATOR: TIM CHAPMAN

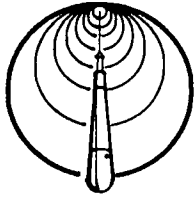
FORMATION: POLOWANNA

PERFORATIONS: 6086'-6114'KB

GAUGE DEPTH: 5600'KB

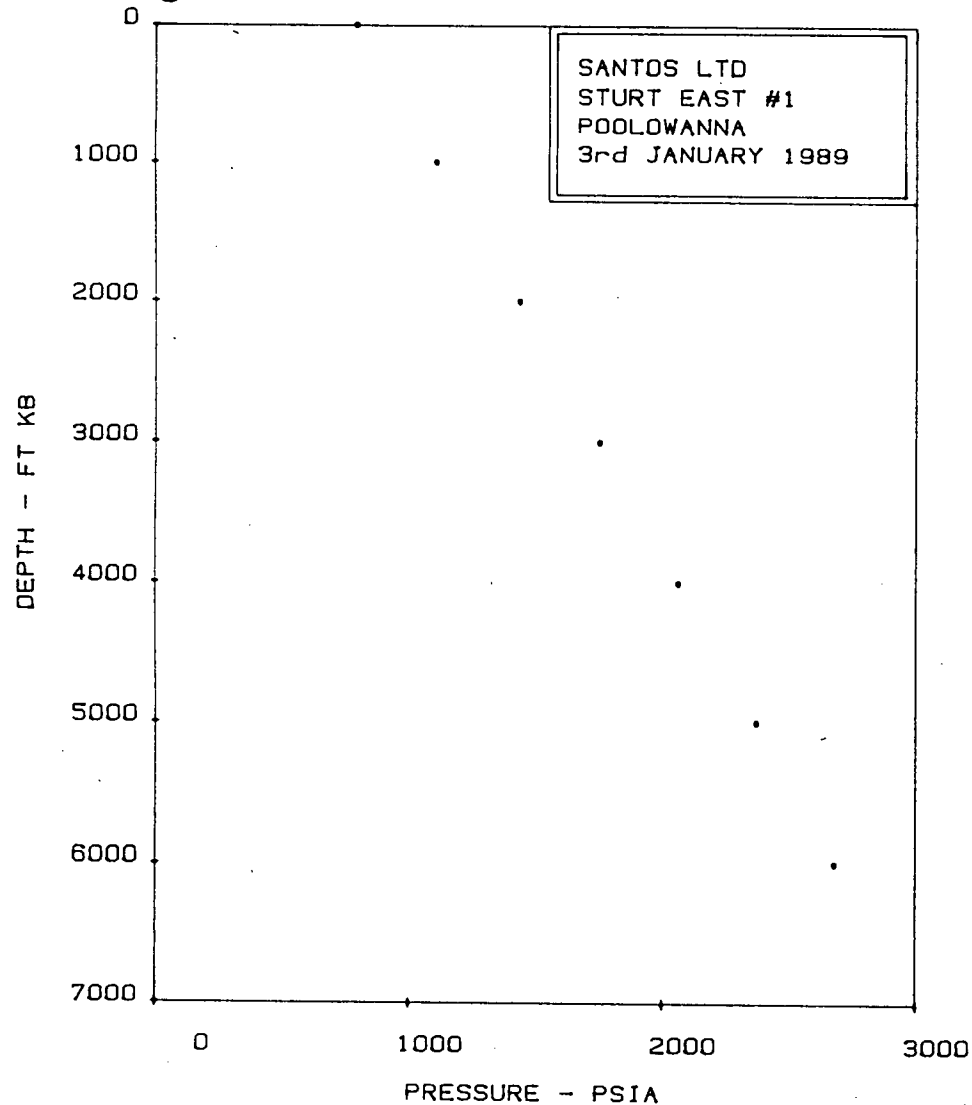
COMMENTS : THIRD RUN

DATE	REAL TIME	DELTA T (HRS)	B.H.P. (PSIA)	DELTA P (PSI)	TEMP (°F)	SURFACE (PSIG)	REMARKS
04-01-89	14:38:00	0.000	793.19	-38.91	93.49		RUN IN THE HOLE
04-01-89	15:06:00	0.467	2643.98	1850.79	193.11		WITH TANDUM BOTTOM
04-01-89	15:14:00	0.600	2575.29	-68.68	204.77		HOLE SAMPLERS
04-01-89	15:15:00	0.617	2571.09	-4.20	205.29		
04-01-89	15:16:00	0.633	2567.56	-3.53	205.73		HANG OFF AT 5600'KB
04-01-89	15:17:00	0.650	2564.59	-2.98	206.09		[+ 18' STRETCH]
04-01-89	15:18:00	0.667	2562.05	-2.54	206.40		
04-01-89	15:19:00	0.683	2559.96	-2.09	206.66		1 MIN SAMPLE RATE
04-01-89	15:20:00	0.700	2557.86	-2.10	206.88		
04-01-89	15:21:00	0.717	2556.82	-1.04	207.07		DELTA T FROM
04-01-89	15:22:00	0.733	2555.63	-1.19	207.23		START OF THIRD RUN
04-01-89	15:23:00	0.750	2554.68	-0.95	207.36		
04-01-89	15:24:00	0.767	2553.63	-1.05	207.48		DELTA P FROM
04-01-89	15:25:00	0.783	2553.04	-0.58	207.57		PREVIOUS VALUE
04-01-89	15:26:00	0.800	2552.44	-0.60	207.65		
04-01-89	15:27:00	0.817	2551.98	-0.46	207.72		
04-01-89	15:28:00	0.833	2551.66	-0.32	207.79	790	CSG = 700 PSIG
04-01-89	15:29:00	0.850	2551.35	-0.31	207.85		
04-01-89	15:30:00	0.867	2551.08	-0.27	207.90		SAMPLERS GO OFF
04-01-89	15:31:00	0.883	2550.80	-0.27	207.95		
04-01-89	15:32:00	0.900	2550.59	-0.21	208.00		
04-01-89	15:33:00	0.917	2550.39	-0.20	208.03		
04-01-89	15:34:00	0.933	2550.21	-0.18	208.06		
04-01-89	15:35:00	0.950	2550.01	-0.20	208.08		
04-01-89	15:36:00	0.967	2549.86	-0.15	208.10		
04-01-89	15:37:00	0.983	2548.80	-1.07	208.12		
04-01-89	15:38:00	1.000	2549.58	0.78	208.14		
04-01-89	15:39:00	1.017	2549.52	-0.06	208.15		
04-01-89	15:40:00	1.033	2549.54	0.02	208.17		
04-01-89	15:41:00	1.050	2549.63	0.10	208.19		
04-01-89	15:42:00	1.067	2549.79	0.15	208.22		
04-01-89	15:43:00	1.083	2549.79	-0.00	208.25		
04-01-89	15:44:00	1.100	2549.79	-0.00	208.27		
04-01-89	15:45:00	1.117	2549.71	-0.08	208.28	790	CSG = 700 PSIG
04-01-89	15:46:00	1.133	2549.71	-0.00	208.30		
04-01-89	15:47:00	1.150	2549.66	-0.05	208.31		PULL OUT OF HOLE
04-01-89	16:52:00	2.233	799.79	-749.87	96.14		END OF THIRD RUN



EXPERTEST PTY LTD - ELECTRIC WIRELINE SERVICE

FLOWING GRADIENT SURVEY



STOP	TIME	DEPTH ('KB)	PRESSURE (PSIA)	GRADIENT (PSI/FT)
1	820	LUB.	790.74	----
2	840	1000	1105.36	0.3146
3	918	2000	1432.03	0.3267
4	954	3000	1749.92	0.3179
5	1013	4000	2061.04	0.3111
6	1053	5000	2370.42	0.3094
7	1124	6000	2677.66	0.3072

FLOWING GRADIENT CONDUCTED IN PREPARATION
FOR BOTTOM HOLE SAMPLING

00061

CLIENT SANTOS LTD WELL STURT EAST #1 PAGE 1

OPERATOR TIM CHAPMAN DATE 3RD JANUARY 1989

SURVEY SINGLE RATE FLOW/BUILD UP - BOTTOM HOLE SAMPLING

TOP BOMB C.C.L. REC. No. CLOCK DATA

MID BOMB HP SRO #599 REC. No. CLOCK DATA

BTM BOMB 57413 x 3000psi REC. No. 61127 x 15TLS CLOCK DATA 2671 x 12HR

ENG. STYLUS 3/1/89 @ 07.45 DISENGAGE STYLUS

DWT IN 5447 KPA DWTOUT MBHT

Date	Time	Cum. Time	Depth	WELLHEAD KPA		BOTTOM HOLE PRESS	Bot Def.	PSI	Remarks
3RD. JANUARY		1989		TUB	CAS	TEMP °C	KPA		WELL FLOWING ON
	08.07								4.5/64 CHOKE
	08.10								IN LUBRICATOR
	08.20		0	START FLOWING GRADIENT					PRESS UP LUB
	08.30		RIH	5447	4827		5452		1ST GRAD STOP
	08.40		1000'						2ND. GRAD STOP
	09.10		RIH				7621		
	09.18		2000'						3RD. GRAD STOP
	09.46		RIH				9874		
	09.54		3000						4TH. GRAD STOP
	10.06		RIH				12066		
	10.13		4000	5447	4827				5TH. GRAD STOP
	10.42		RIH				14211		
	10.53		5000						6TH. GRAD STOP
	11.15		RIH				16344		
	11.24		6000						7TH. GRAD STOP
	12.02		POOH	5447	4827		18462		
	12.53		0						IN LUBRICATOR
									DEPRESS LUB.

CLIENT SANTOS LTD. WELL STURT EAST #1 PAGE 2
 OPERATOR TIM CHAPMAN DATE 3RD. JANUARY 1989
 SURVEY BOTTOMHOLE SAMPLING
 TOP BOMB HP. SRO #599 REC. No. RUN #1 CLOCK DATA RUN #2
 MID BOMB REC. No. BH SAMPLER #1 CLOCK DATA BH SAMPLER #3
 BTM BOMB REC. No. BH SAMPLER #2 CLOCK DATA BH SAMPLER #4
 ENG. SYLUS DISENGAGE SYLUS
 DWT IN 5447 KPA DWTOUT 5447 KPA MBHT 208F

Date	Time	Cum. Time	Depth	WELLHEAD KPA		BOTTOM HOLE PRESS		Bot Def.	PSI	Remarks
3.1.89				TUB	CAS	TEMP °C	KPA			WELL FLOWING ON 4.5/64 CHOKE
	15.00									RUN #1
	15.05		0	5440	4827	43				IN LUBRICATOR
	15.10									PRESS UP LUB
	15.37		5600'							RUN IN HOLE
	16.00			5447	4827	41	17604			@ HANG DEPTH
	16.15			5447	4827	43	17600			
	16.30			5447	4827	44	17599			DUE TO SAMPLE
	16.45			5447	4827	44	17608			PULL OUT OF HOLE
	17.30									IN LUBRICATOR
										DEPRESSURE LUB
	18.10									RUN #2
	18.15		0							IN LUBRICATOR
										PRESS UP LUB
				AIR COMPRESSOR FAILS						
	18.50			5447	4827	31				RUN IN HOLE
	19.22		5600'							@ HANG DEPTH
	19.30			5447	4827	31	17760			ROCK CHOKE
	19.45			5378	4689	31	17545			DUE TO SAMPLE
	20.00			5378	4689	31	17518			PULL OUT OF HOLE
	20.45									IN LUBRICATOR
				5447	4827	28				DEPRESSURE LUB



CLIENT SANTOS LTD WELL STURT EAST #1 PAGE 3

OPERATOR TIM CHAPMAN DATE 4TH. JANUARY 1989

SURVEY..... BOTTOMHOLE SAMPLING

TOP BOMB HP SRO #599 REC. No. RUN #3 CLOCK DATA.

MID BOMB..... REC. No. BH SAMPLER #5..... CLOCK DATA.....

BTM BOMB REC. No. BH SAMPLER #6 CLOCK DATA.....

ENG. STYLUS DISENGAGE STYLUS.

DWT IN 5447 KPA DWTOUT 5447 KPA MBHT 208F

[illegible]

CLIENT...SANTOS LTD..... WELL...STURT EAST #1..... ZONE...POOLOWANNA.....							 TELEPHONE (08) 254 0486 TELEFAX 0877 163 WIRELINE & WELL TESTING SERVICE 136 RICHMOND ROAD MARLBOROUGH SA 5033 POSTAL ADDRESS PO BOX 24 COMMUNDA SA 5033							UNITS OF MEASUREMENTS TBG KPA CSG KPA C TEMP		DATE 2.1.89 PAGE NO. 1 OPERATOR...TIM CHAPMAN.....	
DATE TIME	WELL DATA					OIL/CONDENSATE PRODUCTION							WATER PRODUCTION				REMARKS
	CSG PRESS	TBG PRESS	TEMP °C	CHOKE	BS&W	API	TOTAL DIP INCHES	PRODUCTION DIP INCHES	TANK PRODUCTION M3	24 HOUR PRODUCTION M3/D	CUMMULATIVE PRODUCTION M3	TOTAL WATER DIP INCHES	TANK PRODUCTION M3	24 HOUR PRODUCTION M3/D	CUMMULATIVE PRODUCTION M3		
2ND. JANUARY 1989																TARGET RATE =25.50 BBLs/D	
14.30	4827	5447	41	-			125.5	TARE DIP				0	TARE DIP				
						OPEN WELL ON 6/64 CHOKE AND FLOW TO TEST TANK											
15.30	4827	5440	41	6/64			125.5	0				0	0	0	0		
16.30	4827	5413	38	6/64			129	3.5	.943	22.6		0	0	0	0		
17.00	4827	5413	38	6/64			130	1	.270	12.9	1.213	0	0	0	0		
17.01						CUT CHOKE TO 3/64											
18.00	4827	5433	37	3/64			130.5	.5	.135	3.23	1.348	0	0	0	0		
19.00	4827	5433	35	3/64			133	2.5	.674	16.17	2.022	0	0	0	0		
20.00	4827	5440	33	3/64			133	0	0	0	2.022	0	0	0	0		
20.30	4827	5440	33	3/64			133	0	0	0	2.022	0	0	0	0		
						OPEN CHOKE TO 4.5/64											
21.30	4827	5440	31	4.5/64			137	4	1.078	25.87	3.1	0	0	0	0		
22.30	4827	5433	28	4.5/64			137.5	.5	.135	3.23	3.235	0	0	0	0	ROCK THE CHOKE	
23.30	4827	5433	30	4.5/64			140	2.5	.674	16.17	3.909	0	0	0	0		
3RD. JANUARY 1989																	
00.30	4827	5440	30	4.5/64			140.5	.5	.135	3.23	4.044	0	0	0	0	ROCK THE CHOKE	
02.30	4827	5433	28	4.5/64			142.5	2	.674	8.09	4.718	0	0	0	0		
04.30	4827	5433	28	4.5/64			145.5	3	.809	9.7	4.987	0	0	0	0		
06.30	4827	5433	28	4.5/64			148.5	3	.809	9.7	5.796	0	0	0	0	ROCK THE CHOKE	
08.30	4827	5447	34	4.5/64			152	3.5	.943	11.3	6.739	0	0	0	0	ROCK THE CHOKE	

E13

09000

CLIENT...SANTOS LTD..... WELL...STURT EAST #1..... ZONE...POOLOWANNA.....						 128 RICHMOND ROAD MARLBOROUGH SA 5033 POSTAL ADDRESS: PO BOX 354 CONNELLVILLE SA 5033						UNITS OF MEASUREMENTS TBG KPA CSG KPA C TEMP		DATE 3.1.89.....PAGE NO. 2..... OPERATOR...TIM CHAPMAN.....	
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DATE TIME	PUMPING WELL DATA					OIL/CONDENSATE PRODUCTION						WATER PRODUCTION				REMARKS	
	CSG PRESS	TBG PRESS	TEMP °C	CHOKE	SS&W	API	TOTAL DIP INCHES	PRODUCTION DIP INCHES	TANK PRODUCTION M3	24 HOUR PRODUCTION M3/D	CUMMULATIVE PRODUCTION M3	TOTAL WATER DIP INCHES	TANK PRODUCTION M3	24 HOUR PRODUCTION M3/D	CUMMULATIVE PRODUCTION M3		
3RD JANUARY 1989																	
10.30	4827	5447	39	4.5/64			155	3	.809	9.7	7.548	0	0	0	0		
12.30	4827	5447	43	4.5/64			155	0	0	0	7.548	0	0	0	0		
							UNABLE TO ROCK CHOKE 10.30-12.30HRS DUE TO FLOWING GRADIENT										
13.30							155	0	0	0	7.548	0	0	0	0	ROCK THE CHOKE	
14.30	4827	5447	41	4.5/64			158.5	3.5	.943	22.6	8.491	0	0	0	0		
16.30	4827	5447	44	4.5/64			158.5	0	0	0	8.491	0	0	0	0		
18.30	4827	5447	31	4.5/64			158.5	0	0	0	8.491	0	0	0	0	ROCK THE CHOKE	
19.30	4827	5447	31	4.5/64			158.5	0	0	0	8.491	0	0	0	0	VIOLENTLY ROCK CHOKE	
20.30	4827	5447	28	4.5/64			161	2.5	.67	16.08	9.161	0	0	0	0		
20.45																SHUT IN THE WELL	
23.30	4827	5447					RE-OPEN ON A 4.5/64 CHOKE									RE START	
4TH. JANUARY 1989																	
00.30	4827	5447	27	4.5/64			165.5	4.5	1.21	29.0	10.371	0	0	0	0	ROCK THE CHOKE	
02.30	4827	5440	27	4.5/64			168	2.5	.67	8.04	11.041	0	0	0	0	ROCK THE CHOKE	
04.30	4827	5440	26	4.5/64			171.5	3.5	.94	11.3	11.981	0	0	0	0	ROCK THE CHOKE	
06.30	4827	5447	26	4.5/64			172	.5	.13	1.56	12.111	0	0	0	0	ROCK THE CHOKE	
12.30	4827	5447	34	4.5/64			182	10	2.69	10.76	14.801	0	0	0	0	ROCK THE CHOKE	
14.30	5827	5447	41	4.5/64			182	0	0	0	14.801	0	0	0	0	ROCK THE CHOKE	
16.30	5827	5447	41	4.5/64			184.5	2.5	.67	8.04	15.471	0	0	0	0		
18.30	5827	5447	36	4.5/64			187.5	3	.80	9.6	16.271	0	0	0	0		

E13

00066

BOTTOM HOLE SAMPLING REPORT

PAGE 1

CLIENT SANTOS WELL STURT EAST #1
 FORMATION POOLAWANNA PERFORATIONS 6086' - 6114' KB
 OPERATOR G. GIANCASPRO DATE 3.1.89

SAMPLING CONDITIONS RUN #1

	SAMPLE No #1	SAMPLE No #2
Date Well Sampled	<u>3.1.89</u>	<u>3.1.89</u>
Time Well Sampled	<u>16.20</u>	<u>16.20</u>
Hours Shut in /Flowing Prior to Sampling	<u>26</u>	<u>26</u>
Choke Setting	<u>4.5/64</u>	<u>4.5/64</u>
Flow Rate	<u>21.6 M3/D</u>	<u>21.6 M3/D</u>
Gas-Oil Contact in the tubing (ft)	<u>-</u>	<u>-</u>
Oil-Water Contact in the tubing (ft)	<u>-</u>	<u>-</u>
Sampling Depth (ft)	<u>5600' KB</u>	<u>5600' KB</u>
Sampling Depth Pressure (kpa)	<u>17598.93</u>	<u>17598.93</u>
Sampling Depth Temperature (°C)	<u>97.53</u>	<u>97.53</u>
Tubing Pressure at Surface (kpa)	<u>5447</u>	<u>5447</u>
Sampler Opening Press at Surface (kpa)	<u>310</u>	<u>1206</u>
Bubble Point Determined at	<u>48psig</u>	<u>192psig</u>
Sample Transfer Temperature	<u>24</u>	<u>26</u>
Ambient Temp °C	<u>24</u>	<u>26</u>
Sample Transfer Pressure (kpa)	<u>4480</u>	<u>4826</u>
Liquid Used to Transfer Sample	<u>MERCURY</u>	<u>MERCURY</u>
Sample Transferred to Container No	<u>22400.50</u>	<u>1116.413</u>
Volume of Sampler	<u>570cc</u>	<u>570cc</u>
Volume of Sample Container (cc)	<u>628cc</u>	<u>628cc</u>
Sample Shipping Pressure (kpa)	<u>4480</u>	<u>4826</u>
Container Opening Press. in the Lab (psig)	<u></u>	<u></u>
Lab Saturation Pressure (psig)	<u></u>	<u></u>

REMARKS:

BOTTOM HOLE SAMPLING REPORT

PAGE 2

CLIENT SANTOS WELL STURT EAST #1

FORMATION POOLAWANNA PERFORATIONS 6086'-6114' KB

OPERATOR G. GIANCASPRO DATE 3.1.89

SAMPLING CONDITIONS RUN #2

	SAMPLE No #3	SAMPLE No
Date Well Sampled	<u>3.1.89</u>	<u>3.1.89</u>
Time Well Sampled	<u>19.45</u>	
Hours : /Flowing Prior to Sampling	<u>31.25HRS</u>	
Choke Setting	<u>4.5/64</u>	
Flow Rate	<u>15.35 m3/d</u>	
Gas-Oil Contact in the tubing (ft)	<u>-</u>	
Oil-Water Contact in the tubing (ft)	<u>-</u>	
Sampling Depth (ft)	<u>5600' KB</u>	
Sampling Depth Pressure (kpa _g)	<u>17545.08</u>	
Sampling Depth Temperature (°C)	<u>97.71</u>	
Tubing Pressure at Surface (kpa _g)	<u>5378</u>	
Sampler Opening Press at Surface (kpa _g)	<u>1206</u>	
Bubble Point Determined at	<u>222psig</u>	
Sample Transfer Temperature °C	<u>35</u>	
Ambient Temp °C	<u>35</u>	
Sample Transfer Pressure (kpa _g)	<u>5171</u>	
Liquid Used to Transfer Sample	<u>MERCURY</u>	
Sample Transferred to Container No	<u>8008-N120</u>	
Volume of Sampler	<u>570cc</u>	
Volume of Sample Container (cc)	<u>628cc</u>	
Sample Shipping Pressure (kpa _g)	<u>5171</u>	
Container Opening Press. in the Lab (psig)		
Lab Saturation Pressure (psig)		

REMARKS:

TOOL FAILED

BOTTOM HOLE SAMPLING REPORT

PAGE 3

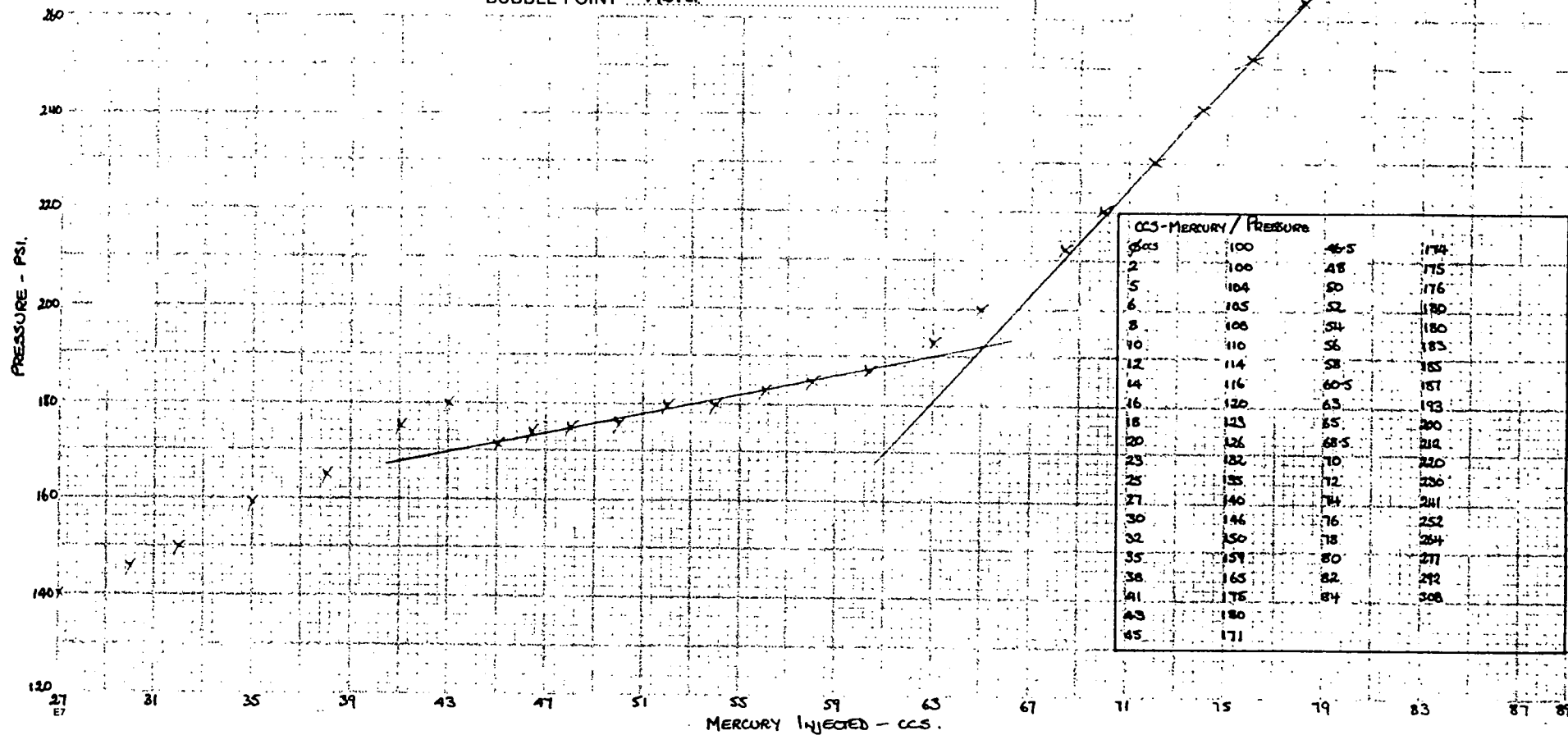
CLIENT SANTOS WELL STURT EAST #1
 FORMATION POOLAWANNA PERFORATIONS 6086'-6114' KB
 OPERATOR G. GIANCASPRO DATE 4.1.89

SAMPLING CONDITIONS RUN 3

	SAMPLE No #4	SAMPLE No	
Date Well Sampled	<u>4.1.89</u>	<u>4.1.89</u>	
Time Well Sampled	<u>15.30</u>		
Hours Shut-in/Flowing Prior to Sampling	<u>16.5HRS</u>		
Choke Setting	<u>4.5/64</u>		
Flow Rate	<u>7.68m3/d</u>		
Gas-Oil Contact in the tubing (ft)	<u>-</u>		
Oil-Water Contact in the tubing (ft)	<u>-</u>		
Sampling Depth (ft)	<u>5600' KB</u>		
Sampling Depth Pressure (kpa)	<u>17589.69</u>		
Sampling Depth Temperature (°C)	<u>97.72</u>		
Tubing Pressure at Surface (kpag)	<u>5447</u>		
Sampler Opening Press at Surface (kpag)	<u>999</u>		
Bubble Point Determined at	<u>197psig</u>		
Sample Transfer Temperature °C	<u>30</u>		
Ambient Temp °C	<u>30</u>		
Sample Transfer Pressure (kpag)	<u>4826</u>		
Liquid Used to Transfer Sample	<u>MERCURY</u>		
Sample Transferred to Container No	<u>22400-103</u>		
Volume of Sampler	<u>570cc</u>		
Volume of Sample Container (cc)	<u>628cc</u>		
Sample Shipping Pressure (kpag)	<u>4826</u>		
Container Opening Press. in the Lab (psig)			
Lab Saturation Pressure (psig)			
REMARKS:		 TOOL FAILED	



CLIENT SANTOS
 WELL STURT EAST #1
 DATE 3RD JANUARY 1989 RUN No ONE
 CONTAINER No 1116-413
 BUBBLE POINT 192 PSI



00071

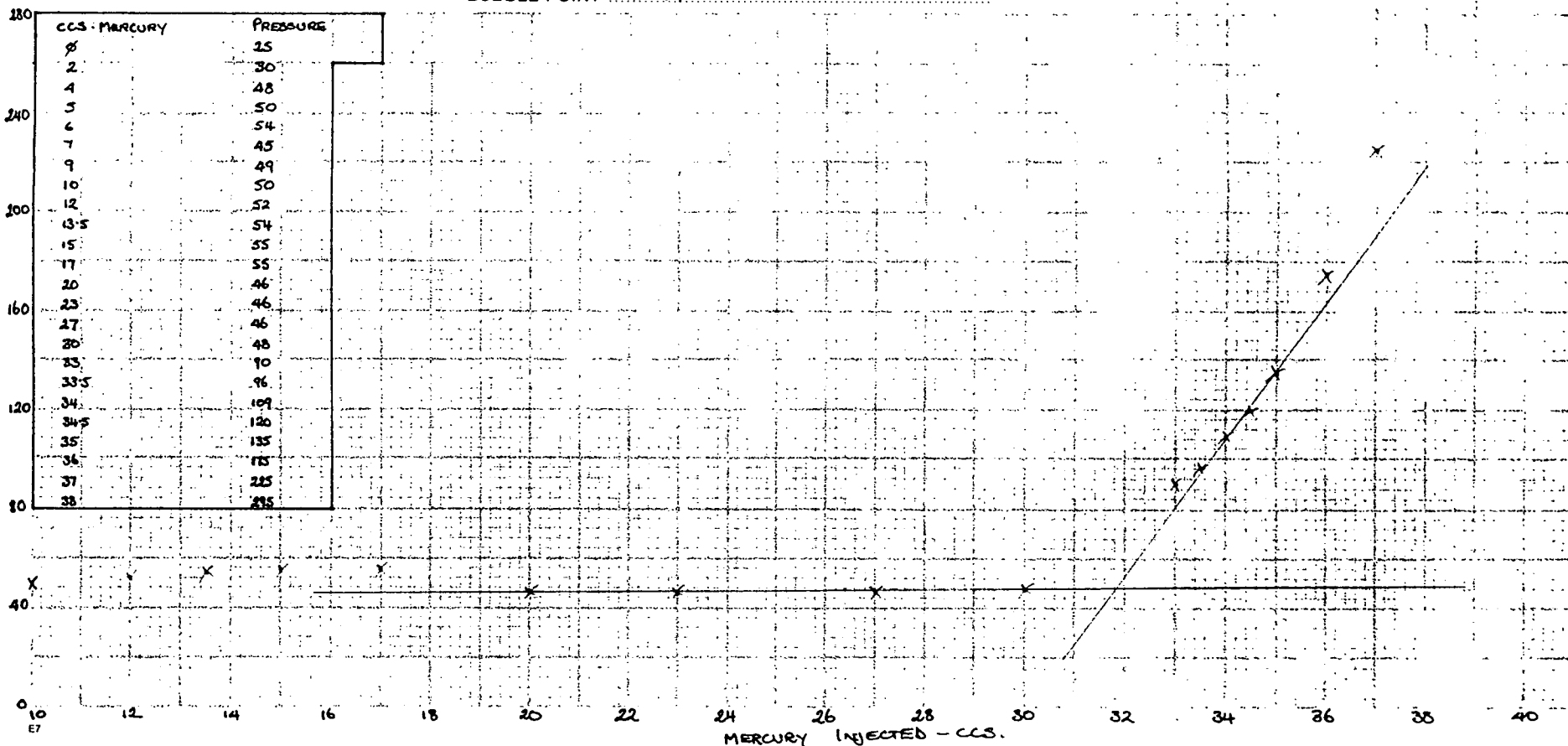


TELEPHONE (08) 354 0488 TELEX AA87183

CLIENT SANTOS
 WELL STURT EAST #1
 DATE 3RD JANUARY 1989 RUN NO ONE
 CONTAINER NO 22400-50
 BUBBLE POINT 48 PSI

CCS - MERCURY	PRESSURE
1	25
2	30
4	48
5	50
6	54
7	45
9	49
10	50
12	52
13.5	54
15	55
17	55
20	46
23	46
27	46
28	48
33	90
33.5	96
34	109
34.5	120
35	135
36	175
37	225
38	295

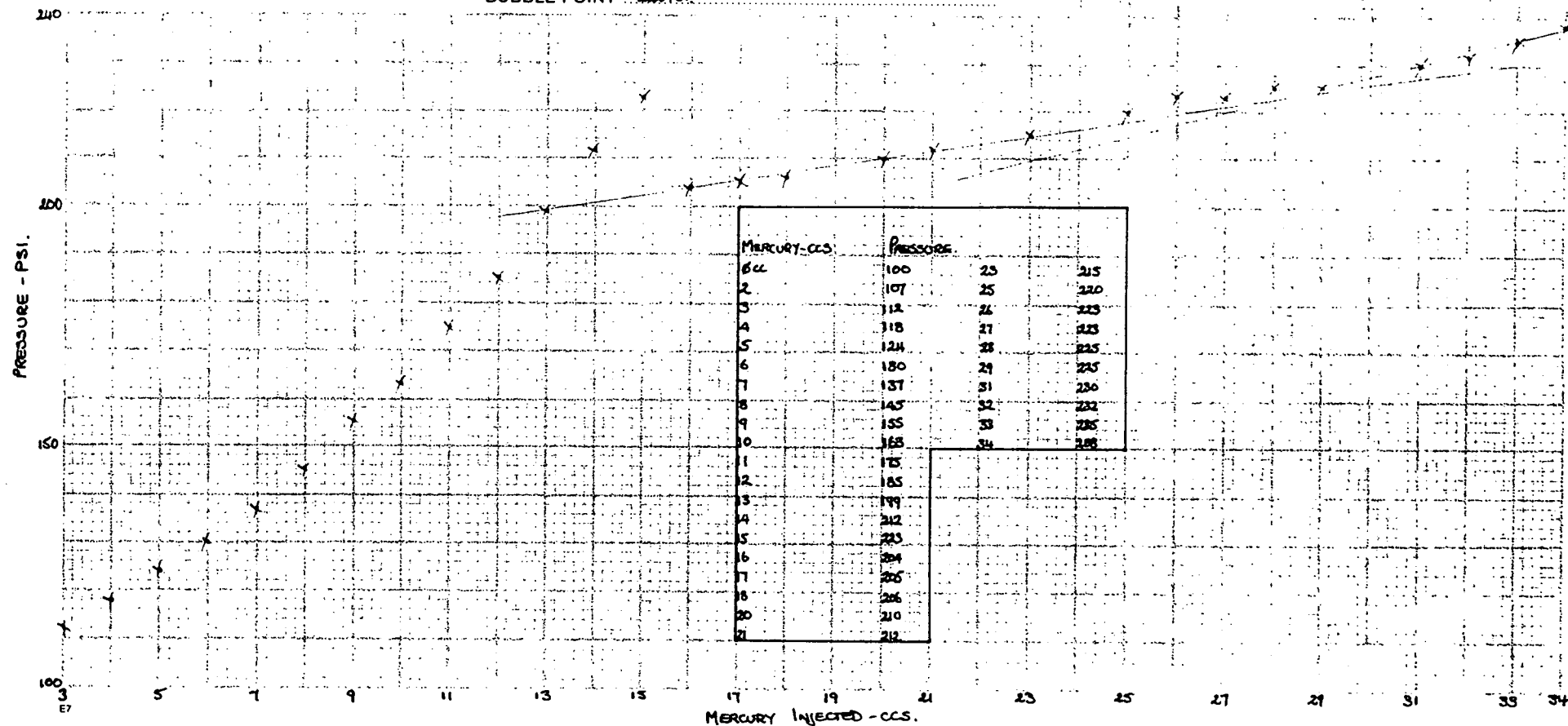
PRESSURE - PSI.



00072



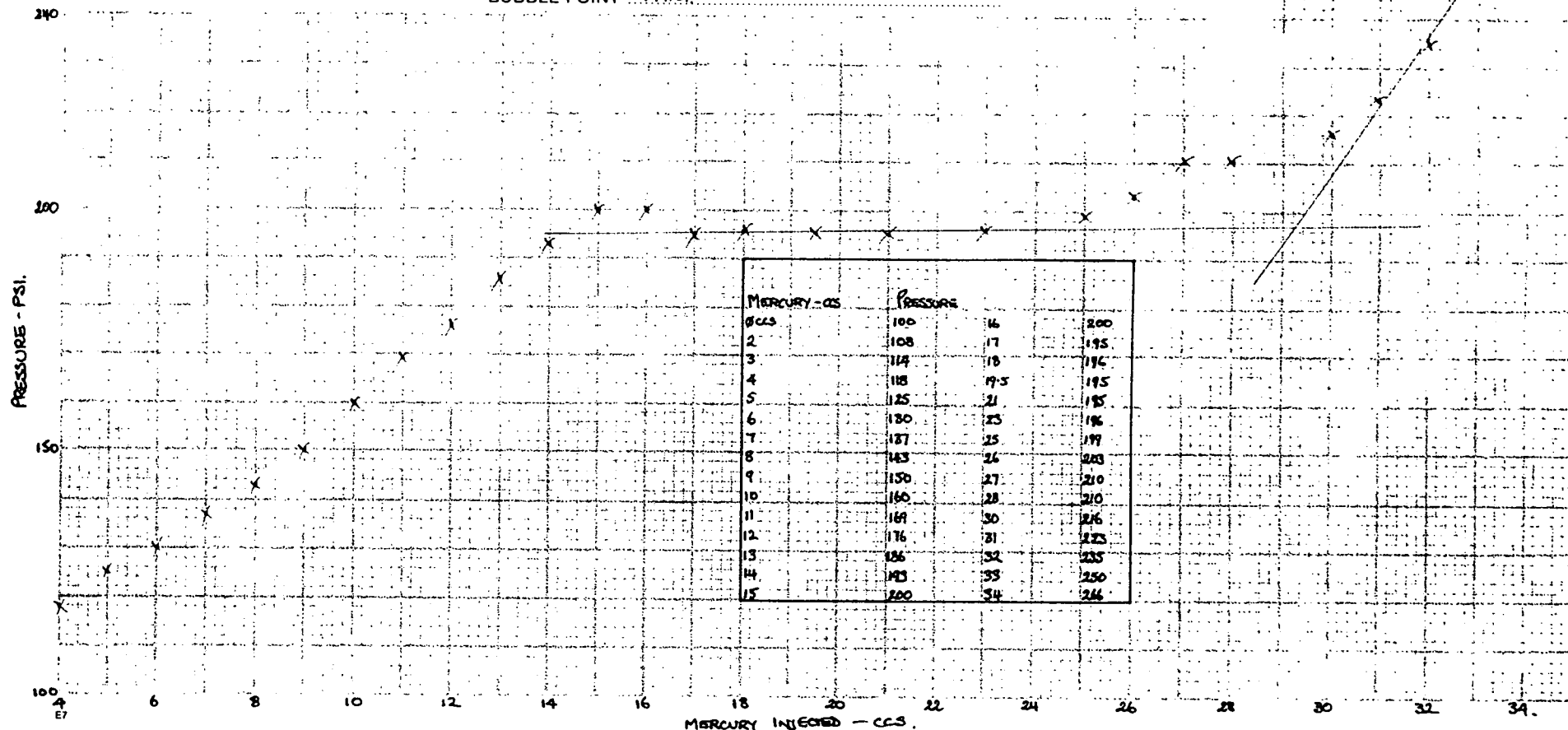
CLIENT Santos
 WELL Star East #1
 DATE 3rd January 1989 RUN No Two
 CONTAINER No 8008 - N120
 BUBBLE POINT 222 PSI



00073



CLIENT SANTOS
 WELL STURT EAST #1
 DATE 4TH JANUARY 1989 RUN No THREE
 CONTAINER No 22400-103
 BUBBLE POINT 197psi

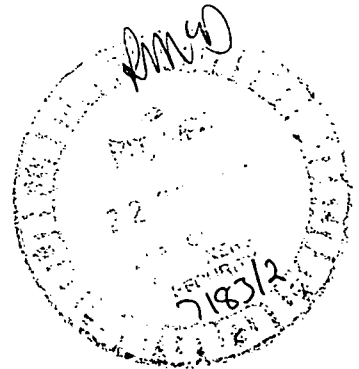


P.V.T.STUDY REPORT

Client: SANTOS LTD
Field : STURT EAST Well : STURT EAST 1
Zone : POOLOWANNA Samp. date: 4/1/89

Report #: 89pva003 Date: JANUARY 1989

ADELAIDE LABORATORY

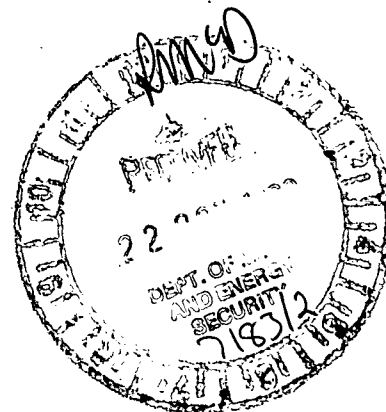


P.V.T.STUDY REPORT

Client: SANTOS LTD
Field : STURT EAST Well : STURT EAST 1
Zone : POOLWANNA Samp. date: 4/1/89

Report #: 89pva003 Date: JANUARY 1989

ADELAIDE LABORATORY



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- ☐ ANNEX 2: MOLECULAR COMPOSITION OF FIELD SEPARATOR GAS(ES)
- ☐ ANNEX 3: RECOMBINATION OF SEPARATOR SAMPLES
- 2 ☒ ANNEX 4: MOLECULAR COMPOSITION OF RESERVOIR FLUID(S)
- 3 ☒ ANNEX 5: CONSTANT MASS STUDY
- 4 ☒ ANNEX 6: DIFFERENTIAL VAPORIZATION
- ☐ ANNEX 7: SEPARATION TEST(S)
- 5 ☒ ANNEX 8: VISCOSITY
- ☐ ANNEX 9: ADDITIONNAL ANALYSIS
- ☐ ANNEX 10:
- ☐ ANNEX 11:
- 6 ☒ ANNEX 12: NOMENCLATURE AND SYSTEM OF UNITS

SUMMARY AND MAIN RESULTS

The present report gives the experimental results of the P.V.T. study carried out on bottom hole sample(s) from well STURT EAST 1

The initial reservoir conditions are :

- Pi : 2705 psig
- T : 220 F

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

- Pb : 294 psig at 220 F
- c : $9.63 \times 10^{-6} \text{ psi}^{-1}$ (2705- 2662 psig)

Main differential vaporization data at reservoir temperature :

	Pi	Pb
oil volume factor (bbl/Std bbl)	1.262	1.295
solution gas-oil ratio (Std cu ft/bbl)	223	223
reservoir fluid viscosity (centipoises)	0.74	0.65
reservoir fluid density (g/cm ³)	0.697	0.686
Residual oil gravity	0.784 48.9	60/60 F API

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 $b = -0.037690851347$.

TABLE 1

SAMPLING CONDITIONS

I. RESERVOIR AND WELL CHARACTERISTICS

Producing zone	:	POCLOWANNA
Static pressure	:	2705 psig
Bottom hole temperature	:	220 F
Tubing diameter	:	2-7/8"
Casing size	:	5-1/2"
Casing shoe	:	6126 ft-KE

II. SAMPLING CONDITIONS

A) SURFACE SAMPLE(S)

Date	:	
Choke	:	
Flowing bottom hole pressure	:	2662 psig at 6000 ft-KE
Well head pressure	:	790 psig
Separator pressure	:	
Well head temperature	:	
Separator temperature	:	
Gas rate (Separator)	:	
Stock tank temperature	:	
Compressibility factor	:	
Gas gravity	:	
Liquid rate (Separator)	:	60 EOPD
G.L.R.	:	
Sample(s) received	:	gas
		liq.

B) BOTTOM HOLE SAMPLE(S)

Date	:	4/1/89
Choke	:	4.5/64"
Sample(s) received	:	8C08N120,22400-103 1116/413,22400-30

TAELE 2

BUBBLE POINT PRESSURE DETERMINATION AT 220 F

Bottom hole sample (Cylinder 22400/103)

Pressure (psig)	Pump reading (cm3)
1000	158.66
825	158.25
606	157.73
433	157.29
365	157.13
Pb= 294	156.95
292	156.36
290	155.61
285	153.99
277	151.48
266	148.01

This sample has been used for complete PVT study

FLASH OF SAMPLE TO STOCK TANK CONDITIONS

G.O.R.	124 Std cu ft/Std bbl
Shrinkage Factor	0.844 Std bbl/bbl
Liberated gas gravity	1.509 (Air=1)
Stock tank oil gravity	0.7753 60/60 °F

BUBBLE POINT PRESSURE DETERMINATION AT 220 F

Bottom hole sample (cylinder 22400/103)

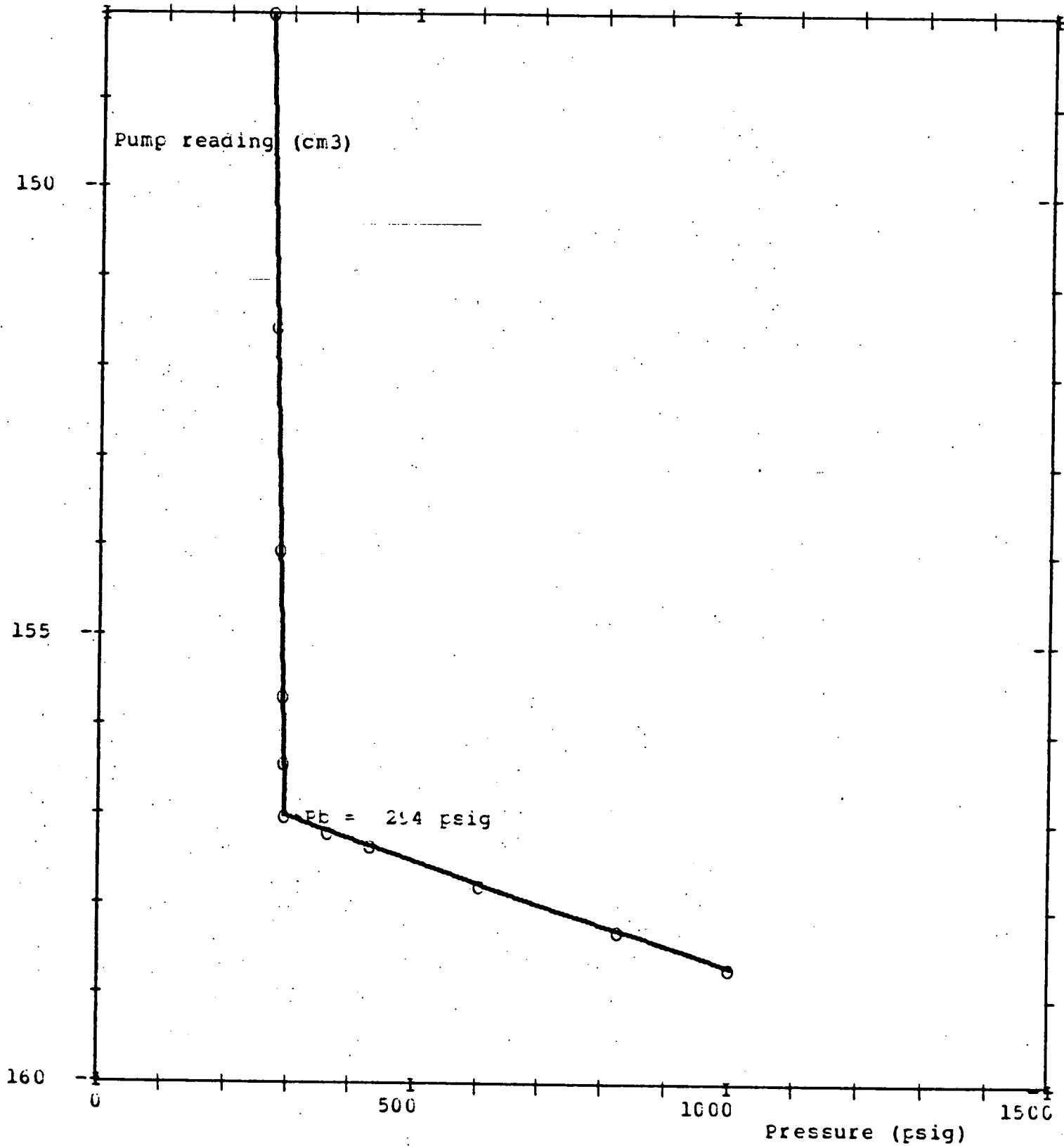


TABLE 3

BUBBLE POINT PRESSURE DETERMINATION AT 220 F

Bottom hole sample (Cylinder 1116/413)

Pressure (psig)	Pump reading (cm3)
1000	199.06
835	198.66
634	198.16
395	197.55
335	197.40
Pb= 271	197.23
268	196.45
265	195.49
259	193.31
253	191.21
244	188.02

FLASH OF SAMPLE TO STOCK TANK CONDITIONS

G.O.R.	108 Std cuft/std bbl
Shrinkage factor	0.852 Std bbl/bbl
Liberated gas gravity	1.495 (Air=1)
Stock tank oil gravity	0.7743 60/60°F

BUBBLE POINT PRESSURE DETERMINATION AT 220 F

Bottom hole sample (cylinder 1116/413)

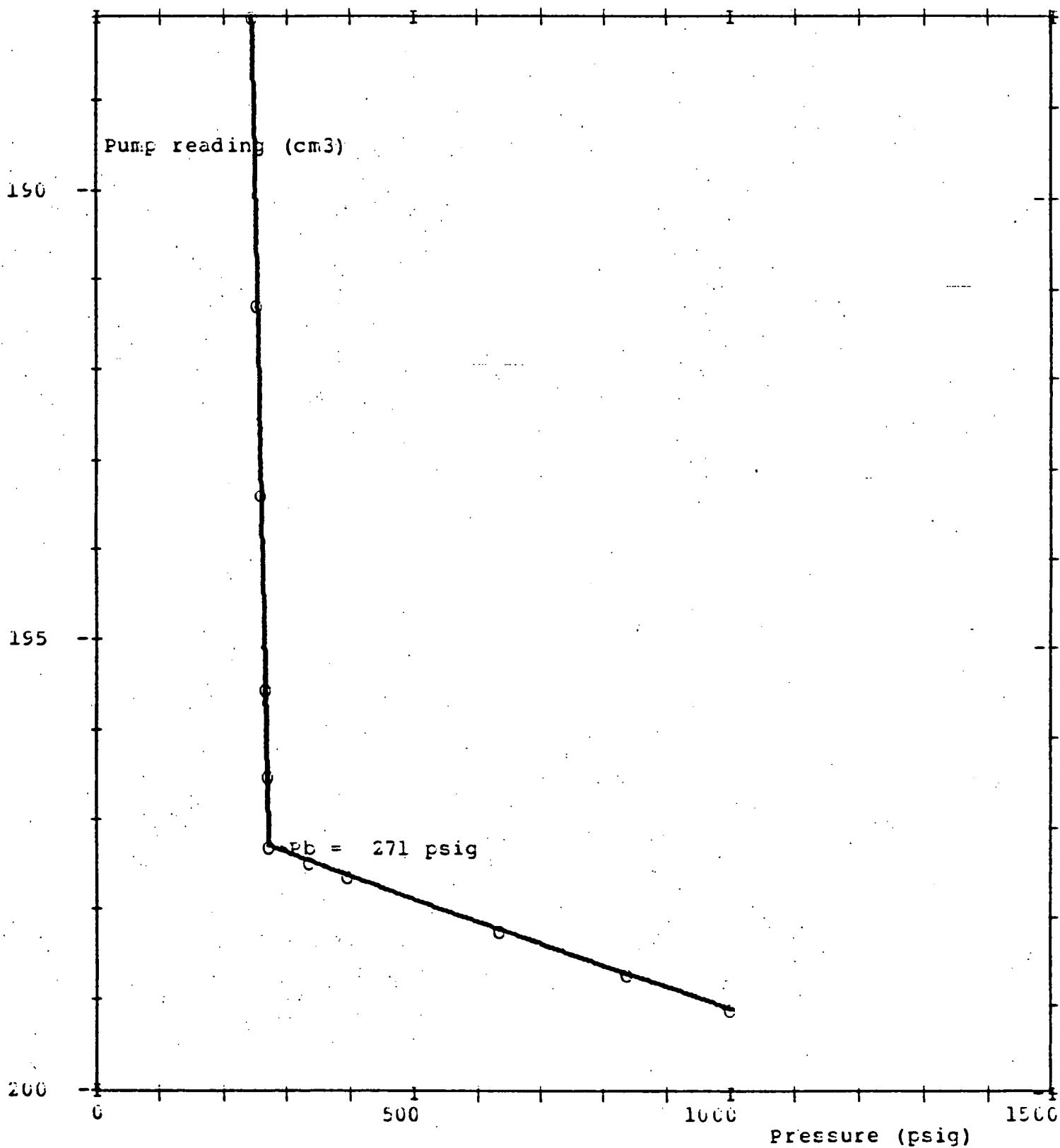


TABLE 4

BUBBLE POINT PRESSURE DETERMINATION AT 220 F

Bottom hole sample (Cylinder 8008N120)

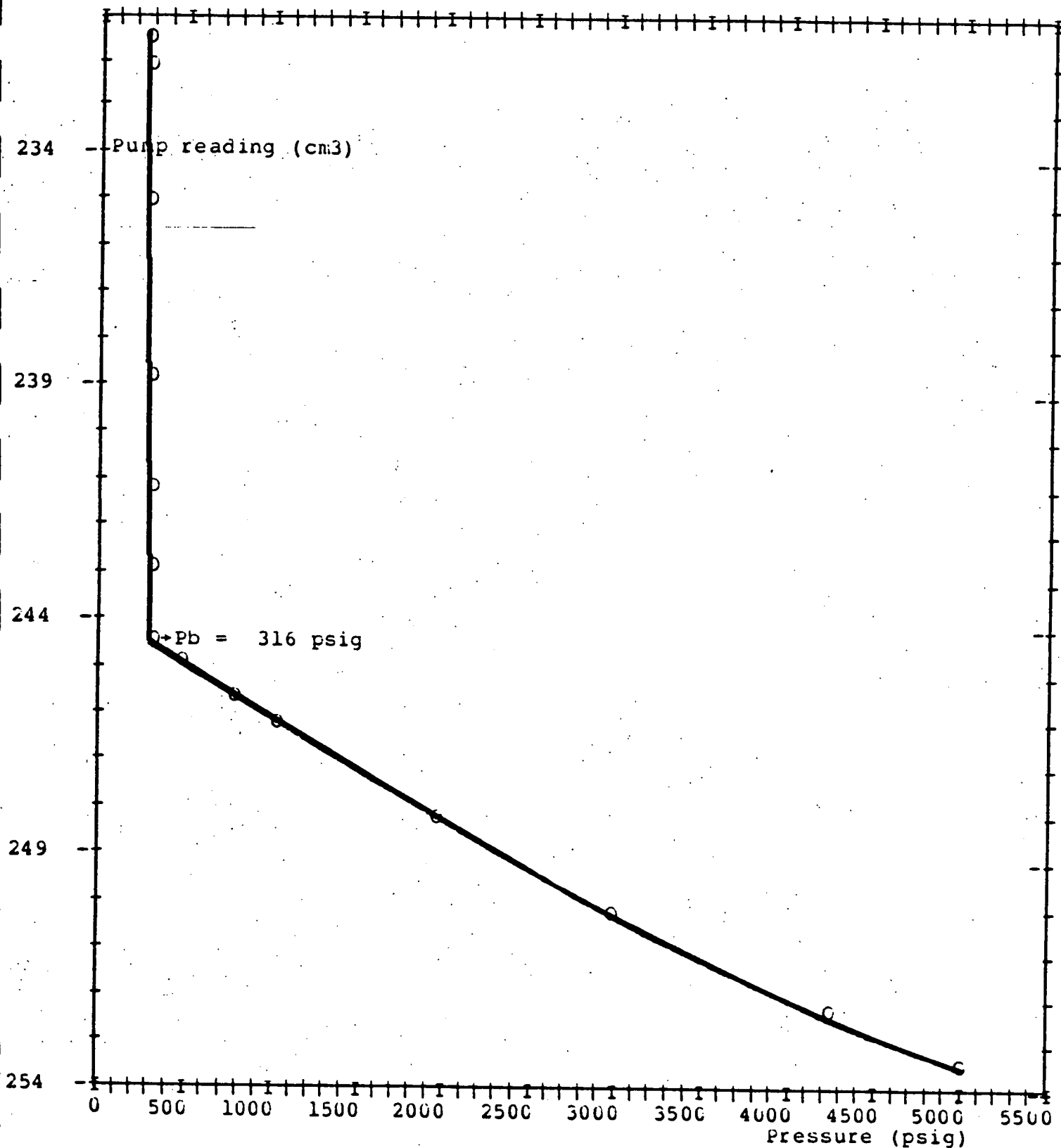
Pressure (psig)	Pump reading (cm3)
5000	253.43
4240	252.21
2983	250.06
1956	248.02
1027	246.04
787	245.46
484	244.72
Pb= 316	244.27
311	242.71
304	240.99
296	238.64
284	234.88
279	232.00
274	231.42

FLASH OF SAMPLE TO STOCK TANK CONDITIONS

G.O.R.	130 Std cu ft/std bbl
Shrinkage factor	0.843 Std bbl/bbl
Liberated gas gravity	1.493 (Air=1)
Stock tank oil gravity	0.7743 60/60 °F

BUBBLE POINT PRESSURE DETERMINATION AT 220 F

Bottom hole sample (cylinder 8006N120)



LIBERATED GASES FROM FLASH OF SEPARATOR LIQUID TO STOCK TANK CONDITIONS

(Molecular composition)

Bottle No.	8008N120	22400-103	1116/413
Component	(mole percent)	(mole percent)	(mole percent)
Nitrogen	4.16	3.44	3.59
Carbon dioxide	5.27	5.54	5.58
<u>Hydrocarbons:</u>			
Methane	21.59	22.02	21.88
Ethane	10.65	10.80	11.39
Propane	21.73	21.53	22.26
I - Butane	10.72	10.30	10.25
N - Butane	13.04	12.24	11.84
I - Pentane	6.19	5.49	5.08
N - Pentane	5.32	4.59	4.24
Hexanes	0.15	2.99	2.78
Heptanes plus	1.18	1.06	1.11
TOTAL	100.00	100.00	100.00
Molecular weight	43.276	43.740	43.333
Gravity (Air=1)	1.493	1.509	1.495
Molecular weight of heptanes plus	110.1	104.3	105.4

TABLE 5

MOLECULAR COMPOSITION OF STOCK TANK OIL

Components	Mole percent
Nitrogen	0.00
Carbon dioxide	0.63
<u>Hydrocarbons:</u>	
Methane	0.03
Ethane	0.08
Propane	0.84
I - Butane	1.13
N - Butane	2.48
I - Pentane	3.31
N - Pentane	4.18
Hexanes	10.10
Heptanes	11.85
Octanes	16.37
Nonanes	8.67
Decanes	6.86
Undecanes	4.28
Dodecanes	3.08
Tridecanes	3.16
Tetradecanes	2.34
Pentadecanes	2.32
Hexadecanes	1.58
Heptadecanes	1.44
Octadecanes	1.89
Nonadecanes	0.92
Eiccsanes plus	13.06
TOTAL	100.00

Molecular weight of stock tank liquid : 151
Molecular weight of Eicosanes plus in sto : 313
Gravity of Eicosanes plus in sto : 0.859 (60/60 F)

TABLE 5A

MOLECULAR COMPOSITION OF RESERVOIR FLUID

Components	Mole percent
Nitrogen	0.53
Carbon dioxide	0.87
<u>Hydrocarbons:</u>	
Methane	3.41
Ethane	1.72
Propane	4.02
I - Butane	2.54
N - Butane	3.98
I - Pentane	3.64
N - Pentane	4.25
Hexanes	9.01
Heptanes	10.15
Octanes	13.89
Nonanes	7.34
Decanes	5.81
Undecanes	3.62
Dodecanes	2.61
Tridecanes	2.68
Tetradecanes	1.98
Pentadecanes	1.96
Hexadecanes	1.34
Heptadecanes	1.22
Octadecanes	1.60
Ncnadecanes	0.78
Eiccsanes plus	11.65
TOTAL	100.00

Molecular weight of reservoir fluid : 134.2

Molecular weight of Eicosanes plus in reservoir fluid : 313

Gravity of Eicosanes plus in sto : 0.859 (60/60 F)

This composition was calculated from separation at 0 psig and 79 F
Oil P.V.T. Software Version 2.2,00 89pva003

TABLE 6

BUBBLE POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 220 F

Pressure (psig)	Relative volume V/VPb	Compressibility factor (psi ⁻¹)	Y curve $\frac{Pb/P-1}{V/VPb-1}$
3000	0.9721		
2815	0.9738	9.57 x 10 ⁻⁶	
Pi= 2705	0.9748	9.61 x 10 ⁻⁶	
2662	0.9752	9.63 x 10 ⁻⁶	
2329	0.9784	9.71 x 10 ⁻⁶	
1983	0.9817	9.85 x 10 ⁻⁶	
1676	0.9847	10.01 x 10 ⁻⁶	
1205	0.9895	10.28 x 10 ⁻⁶	
993	0.9917	10.60 x 10 ⁻⁶	
718	0.9947	10.98 x 10 ⁻⁶	
511	0.9971	11.60 x 10 ⁻⁶	
335	0.9994	12.80 x 10 ⁻⁶	
Pb= 294	1.0000	15.81 x 10 ⁻⁶	
293	1.0017		2.00
290	1.0069		1.99
284	1.0178		1.97
276	1.0335		1.95
262	1.0644		1.90
249	1.0975		1.85
229	1.1591		1.78
211	1.2284		1.72
188	1.3432		1.64
149	1.6451		1.51
125	1.9482		1.43

Thermal expansion factor of reservoir fluid at 3000 psig

between 70 F and 220 F : = 0.533 x 10⁻³ F⁻¹

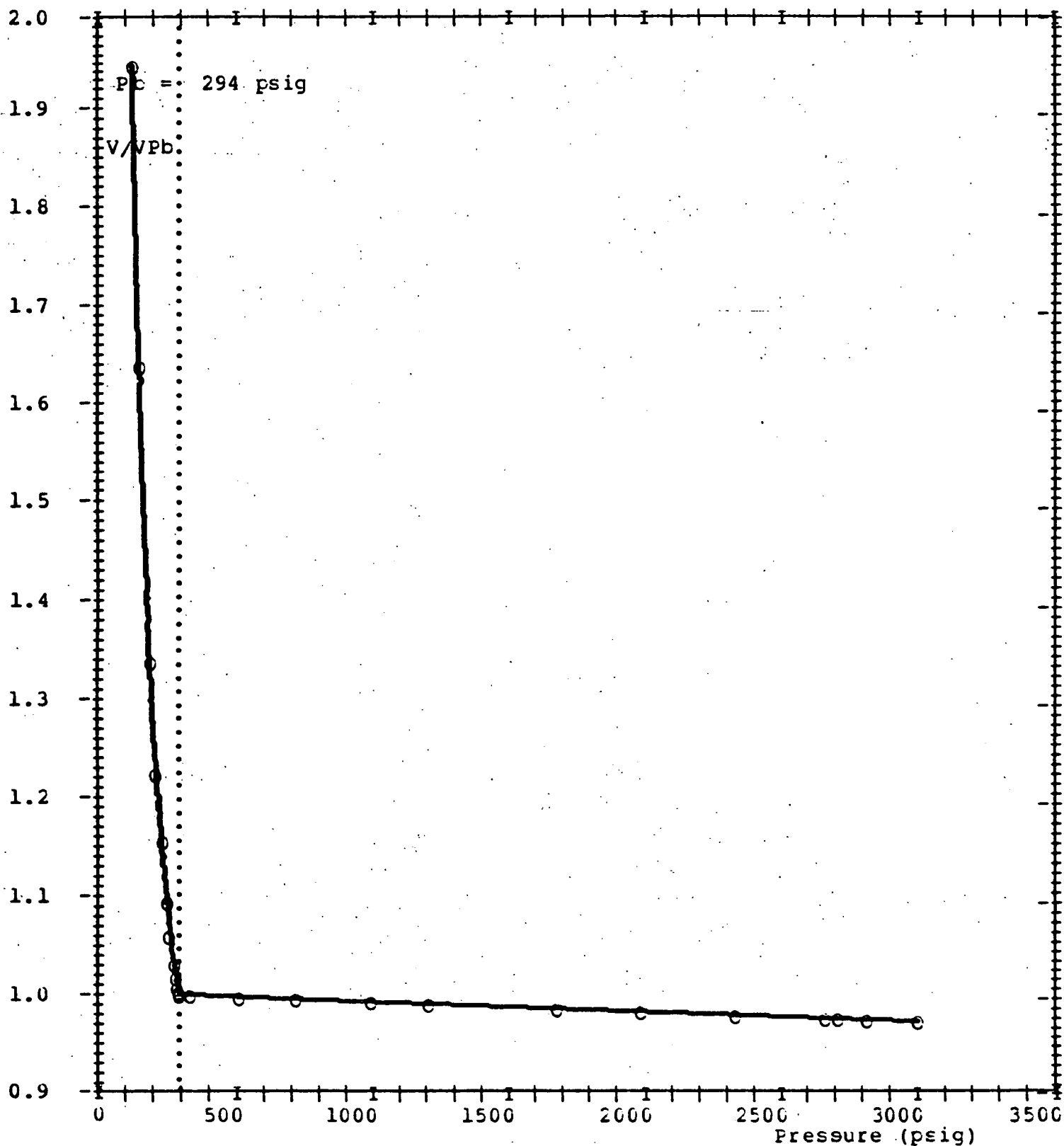
FLOPETROL JOHNSON
Schlumberger

COMPANY : SANTOS LTD

WELL : STURT EAST 1

BUBBLE POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 220 F

Relative volume



BUBBLE POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 220 F

Relative Volume

1. For $P_b < P \leq 3000$

$$V_r = 1 - 10^{(a \cdot \log(P - P_b) + b)}$$

where:

$P_b = 294$ psig
 $a = 8.98393438430E-01$
 $b = -4.63751965721E-00$

2. For $125 \leq P < P_b$

$$V_r = 1 + (1 - x) / (x \cdot (a \cdot x + b))$$

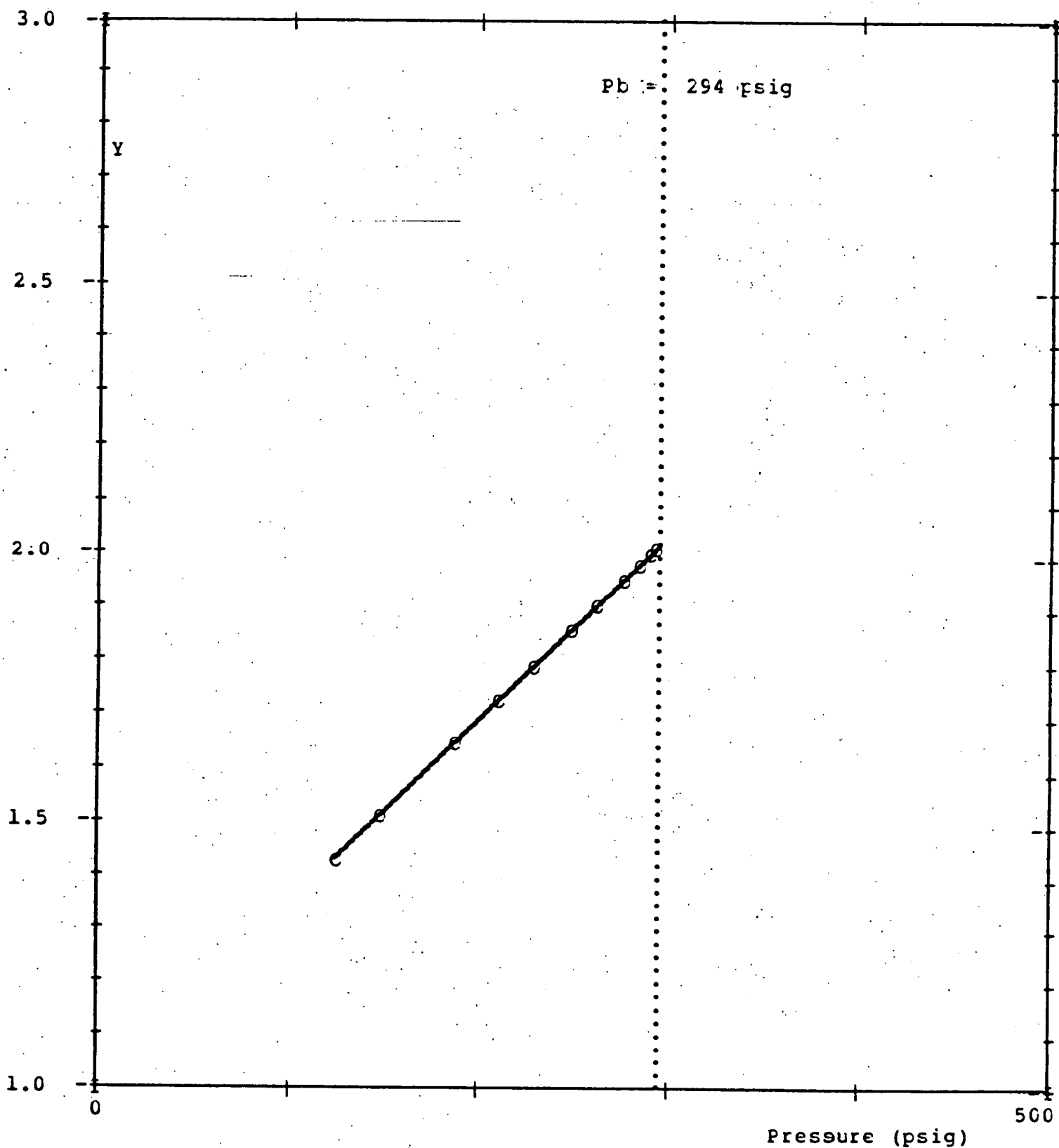
where:

$P_b = 294$ psig
 $a = 1.01267794659E-00$
 $b = 9.95322744020E-01$

$x = P / P_b$

BUBBLE POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 220 F

Y curve pressure-volume function



BUBBLE POINT PRESSURE DETERMINATION AND CONSTANT MASS STUDY AT 220 F

Y curve pressure-volume function

For $125 \leq P < P_b$

$$Y = a \cdot P + b$$

where:

$P_b = 294$ psig
 $a = 3.44448281152E-03$
 $b = 9.95322744020E-01$

TABLE 7

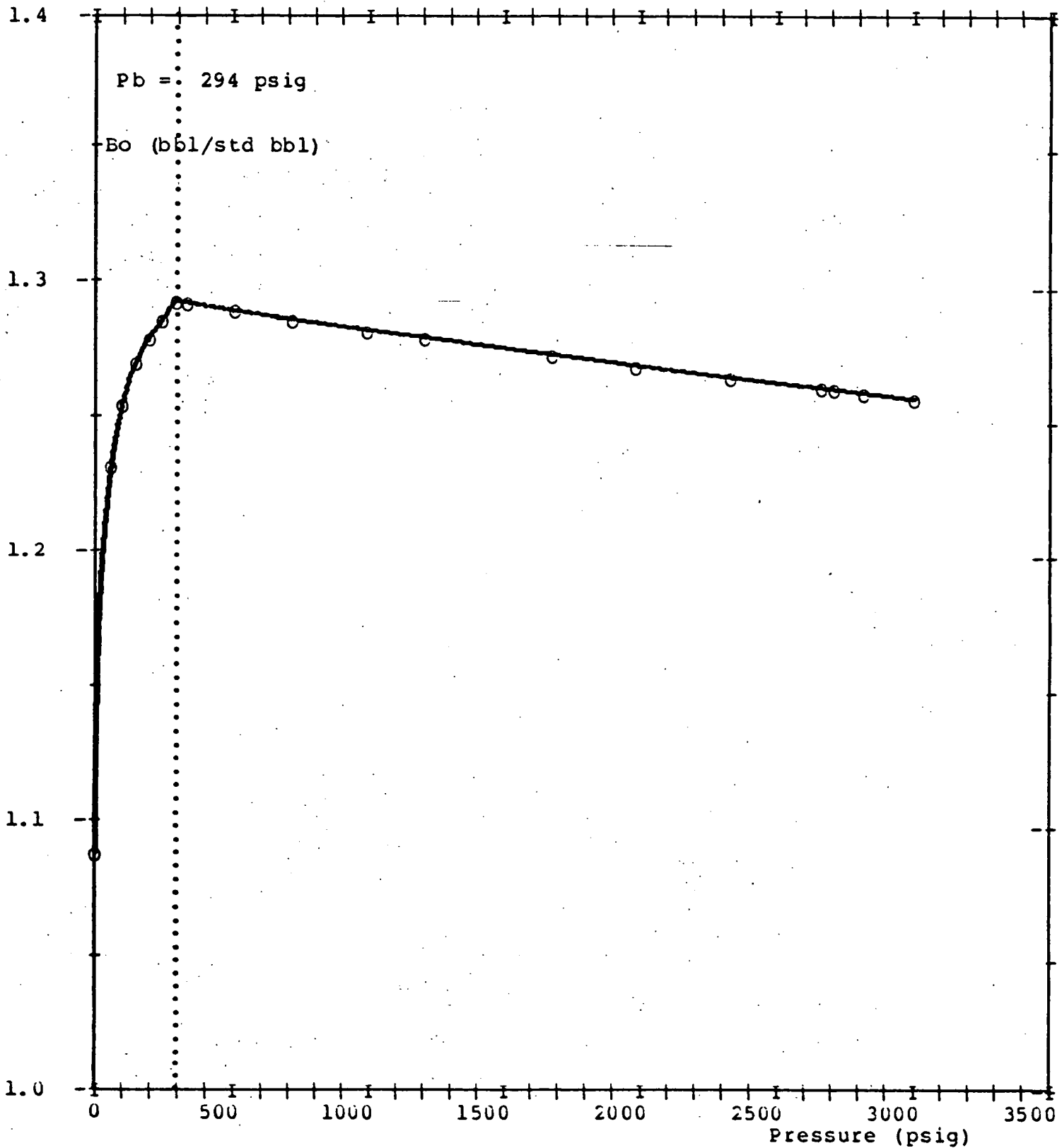
DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Pressure (psig)	Oil volume factor Bo (bbl/Std bbl)	Solution gas-oil ratio Rs (Std cu ft/Std bbl)	Gas volume factor Bg (cu ft/Std cu ft)	Reservoir oil density (g/cm3)
Pi= 3000	1.259			0.699
2815	1.261			0.698
2705	1.262			0.697
2662	1.263			0.697
2329	1.267			0.695
1963	1.271			0.693
1676	1.275			0.690
1205	1.281			0.687
993	1.284			0.686
718	1.288			0.683
511	1.291			0.682
335	1.294			0.680
Pb= 294	1.295	223		0.680
244	1.287	211	7.26×10^{-2}	0.682
197	1.279	199	8.78×10^{-2}	0.684
147	1.269	183	11.46×10^{-2}	0.686
96	1.253	163	16.72×10^{-2}	0.690
55	1.231	136	26.61×10^{-2}	0.695
0	1.087	0	-----	0.721

Residual oil gravity : 0.784 60/60 F
48.9 API

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Oil volume factor



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Oil volume factor

1. For $P_b < P \leq 3000$

$$B_o \text{ (bbl/Std bbl)} = a - 10^{(b \cdot \log(P - P_b) + c)}$$

where:

$$\begin{aligned} P_b &= 294 \text{ psig} \\ a &= 1.29477351500E 00 \\ b &= 8.98393438430E-01 \\ c &= -4.52532585002E 00 \end{aligned}$$

$$x = P/P_b$$

2. For $0 \leq P \leq P_b$

$$B_o \text{ (bbl/Std bbl)} = a + b \cdot x^i + c \cdot x^j + d \cdot x^k$$

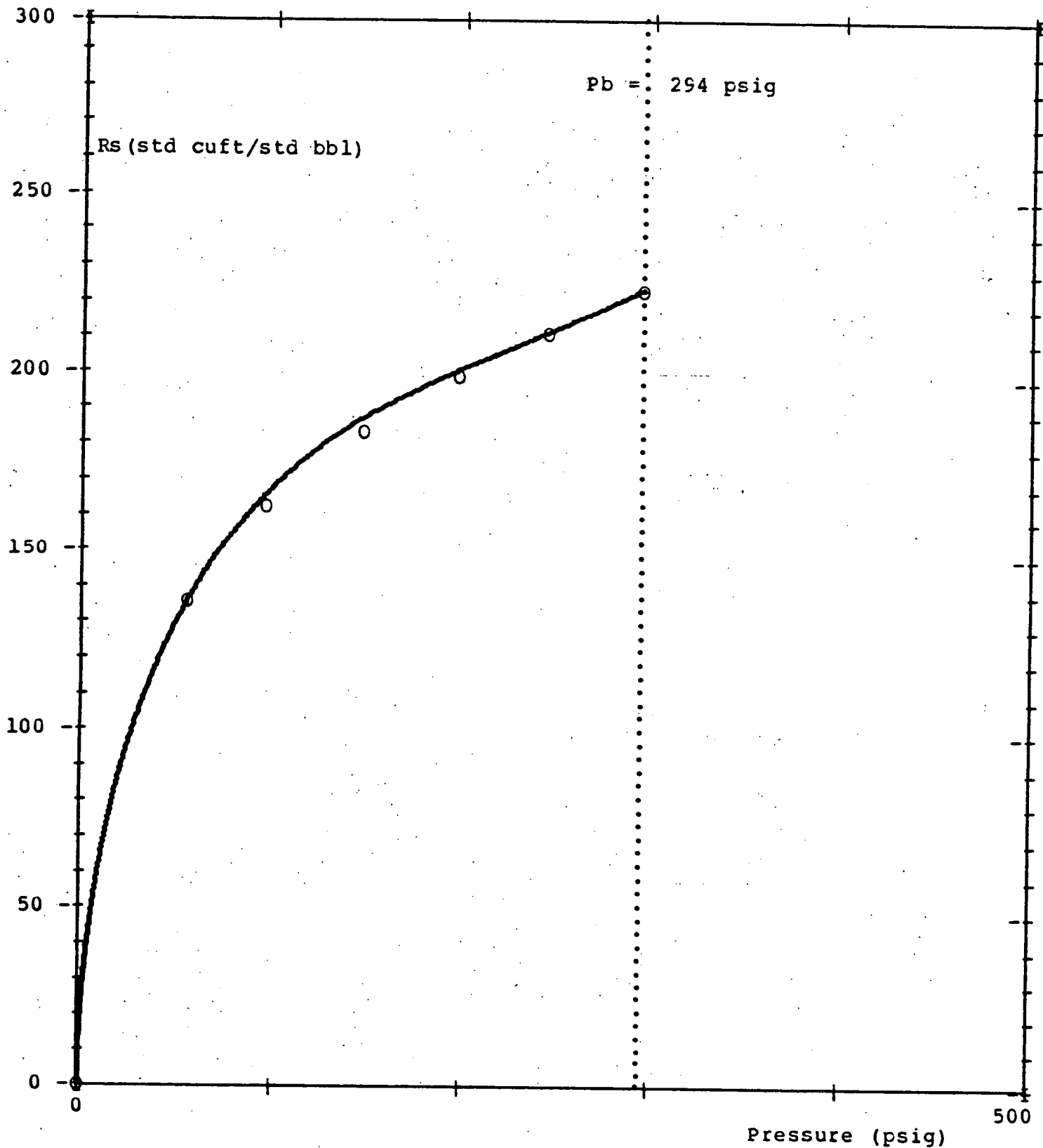
where:

$$\begin{aligned} P_b &= 294 \text{ psig} \\ a &= 1.08731107970E 00 \\ b &= 3.77534499837E-01 \\ c &= -1.98802153143E-01 \\ d &= 2.87300886092E-02 \end{aligned}$$

$$\begin{aligned} x &= P/P_b \\ i &= 0.4 \\ j &= 1.0 \\ k &= 3 \end{aligned}$$

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Solution gas oil ratio



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Solution gas oil ratio

For $0 \leq P \leq P_b$

$$R_s \text{ (std cuft/std bbl)} = a \cdot x^i + b \cdot x^j + c \cdot x^k$$

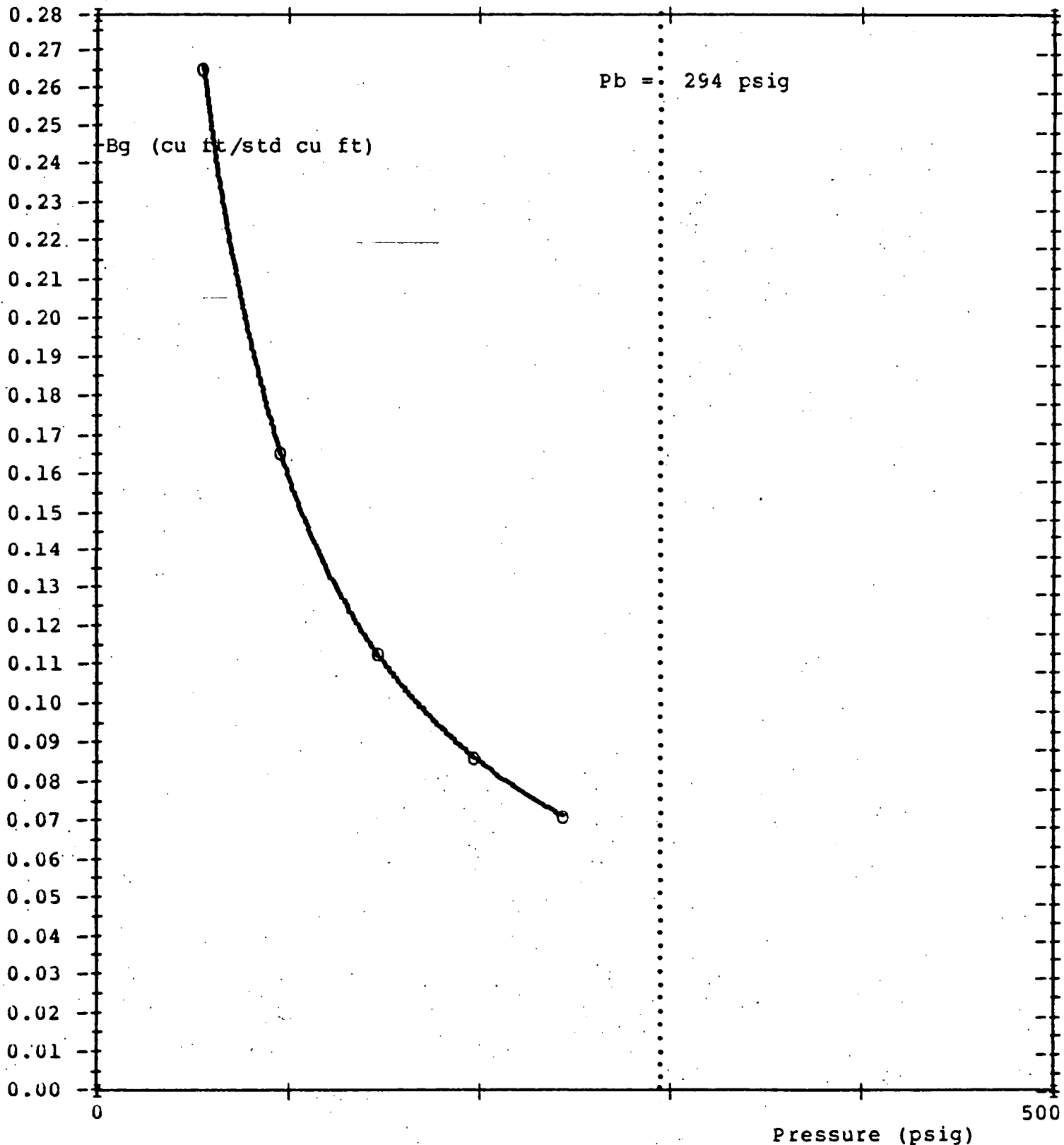
where:

$P_b = 294 \text{ psig}$
 $a = 5.67650372876E 02$
 $b = -3.86825523985E 02$
 $c = 4.22559696473E 01$

$x = P/P_b$
 $i = 0.6$
 $j = 1.0$
 $k = 3$

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Gas volume factor



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Gas volume factor

For 55 ≤ P ≤ 244

$$B_g \text{ (cuft/std cuft)} = (a \cdot x^2 + b \cdot x + c) / (d \cdot x + 1)$$

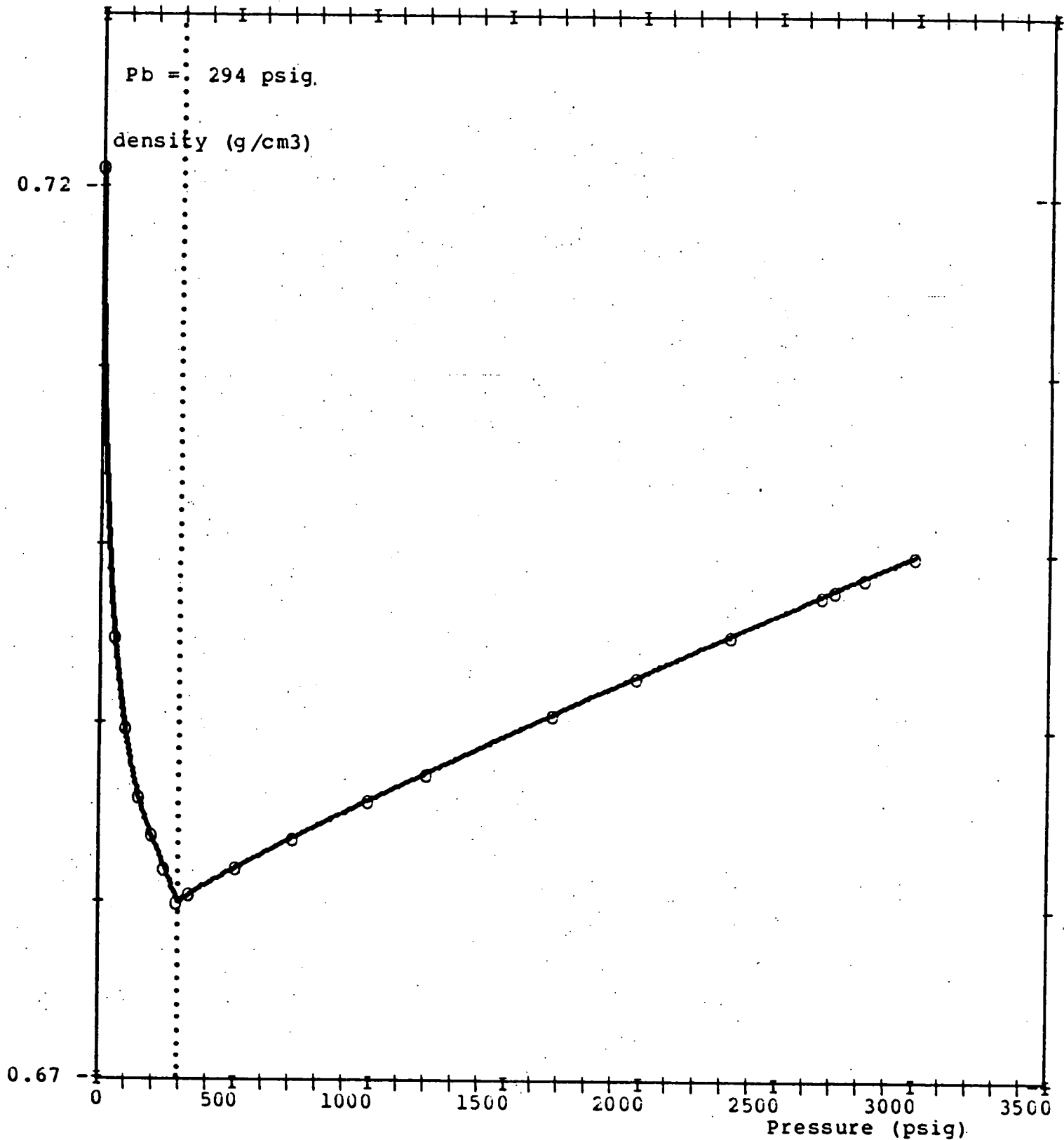
where:

Pb = 294 psig
a = 1.24658283941E-01
b = -1.18515548990E-01
c = 1.23086966968E 00
d = 1.90213093872E 01

$$x = P/P_b$$

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Reservoir oil density



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Reservoir oil density

1. For $P_b < P \leq 3000$

$$\rho_o \text{ (g/cm}^3\text{)} = 1 / (a - 10^{(b \cdot \log(P - P_b) + c)})$$

where:

$$\begin{aligned}
 P_b &= 294 \text{ psig} \\
 a &= 1.47089100655E-00 \\
 b &= 8.98393438430E-01 \\
 c &= -4.46993916464E-00
 \end{aligned}$$

2. For $0 \leq P \leq P_b$

$$\rho_o \text{ (g/cm}^3\text{)} = a + b \cdot x^i + c \cdot x^j + d \cdot x^k$$

where:

$$\begin{aligned}
 P_b &= 294 \text{ psig} \\
 a &= 7.21412680002E-01 \\
 b &= -1.13071451861E-01 \\
 c &= 8.06802940238E-02 \\
 d &= -9.16149477620E-03
 \end{aligned}$$

$$\begin{aligned}
 x &= P / P_b \\
 i &= 0.6 \\
 j &= 1.0 \\
 k &= 3
 \end{aligned}$$

TABLE 8

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Molecular composition of liberated gases (mole percent)

Pressure (psig)	244	197	147	96	55	0
Nitrogen	15.97	13.21	8.10	3.86	0.19	0.02
Carbon dioxide	7.85	6.21	8.51	7.77	6.23	1.12
<u>Hydrocarbons:</u>						
Methane	46.94	44.01	39.49	32.07	19.80	2.23
Ethane	6.46	9.41	11.41	13.10	13.15	4.04
Propane	8.97	10.70	13.99	17.80	23.47	14.83
I - Butane	3.26	4.10	5.30	7.25	10.46	10.45
N - Butane	3.69	4.56	5.65	6.18	12.20	14.94
I - Pentane	1.61	2.04	2.71	3.75	5.59	10.48
N - Pentane	1.24	1.68	2.23	3.14	4.69	10.69
Hexanes	1.04	1.22	1.60	2.20	3.12	13.32
Heptanes plus	0.97	0.86	0.81	0.88	1.10	17.88
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
Molecular weight	30.009	31.617	34.234	38.196	44.707	69.897
Gravity (Air=1)	1.036	1.091	1.181	1.318	1.543	2.412
Molecular weight of heptanes plus	109.1	107.6	106.2	105.2	105.0	110.6

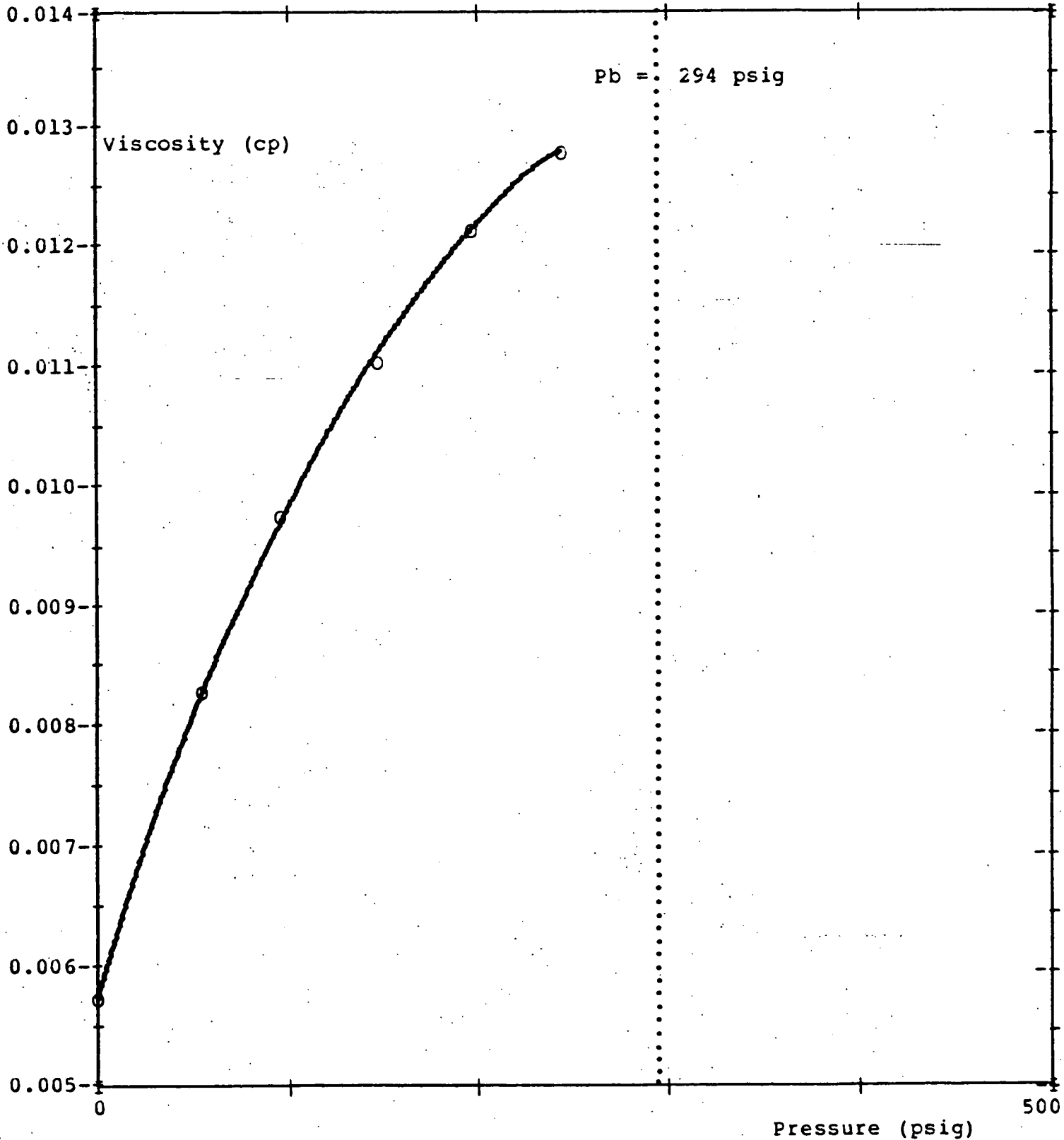
TABLE 9

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Pressure (psig)	Gas viscosity (centipoises)	Gas gravity (Air=1)	compressibility factor Z
244	0.0128	1.036	0.977
197	0.0121	1.091	0.967
147	0.0110	1.181	0.964
96	0.0097	1.318	0.963
55	0.0083	1.543	0.965
0	0.0057	2.412	1.000

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

liberated gas viscosity



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Liberated gas viscosity

For $0 \leq P \leq 244$

$$\eta_g \text{ (centipoises)} = a + b \cdot x^i + c \cdot x^j + d \cdot x^k$$

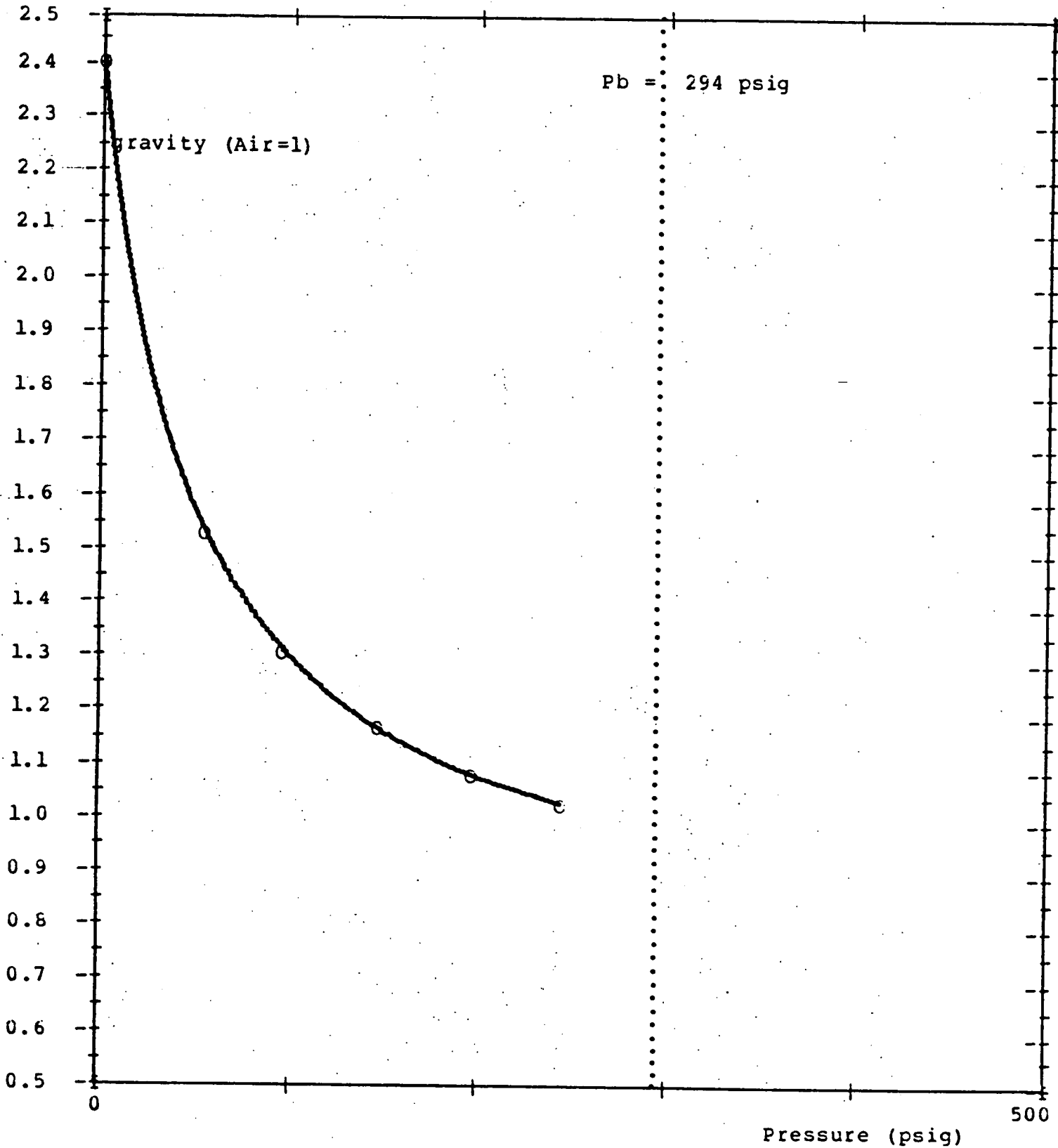
where:

Pb = 294 psig
a = 5.72002348706E-03
b = 3.72695285216E-02
c = -2.96006834826E-02
d = -1.99032748447E-02

x = P/Pb
i = 1.1
j = 1.3
k = 30

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Liberated gas gravity



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Liberated gas gravity

For $0 \leq P \leq 244$

$$dg_{(air=1)} = (a \cdot x^2 + b \cdot x + c) / (d \cdot x^2 + e \cdot x + 1)$$

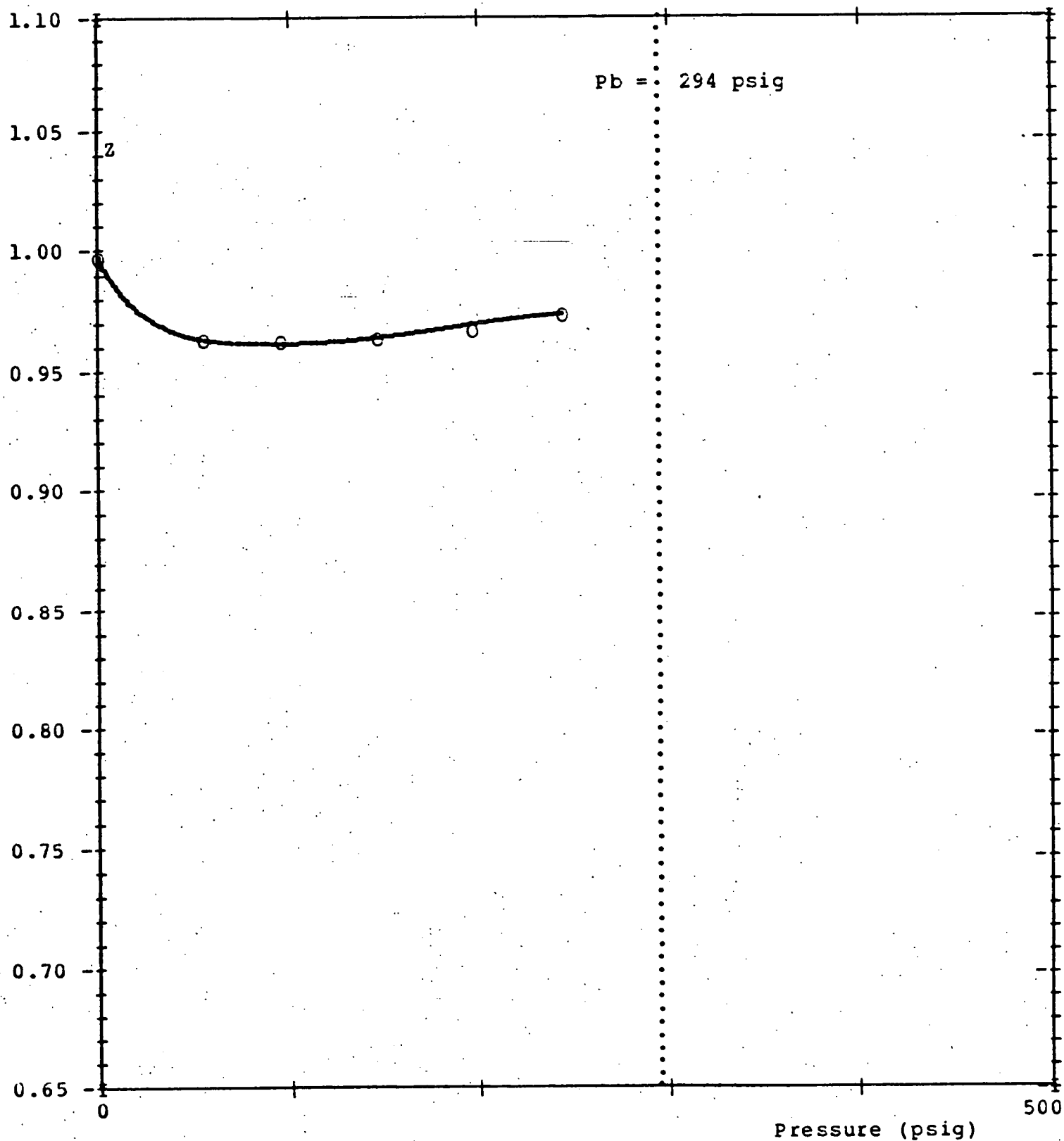
where:

Pb = 294 psig
a = -1.57621022134E 00
b = 3.89371459575E 00
c = 2.41190222567E 00
d = -1.93515618000E 00
e = 5.70454829931E 00

x = P/Pb

DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Compressibility factor Z



DIFFERENTIAL VAPORIZATION OF RESERVOIR FLUID AT 220 F

Compressibility factor Z

For $0 \leq P \leq 244$

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

where:

Pb = 294 psig
a = 3.56796482900E-01
b = 5.34269195713E 00
c = 1.00000000000E 00
d = 5.80278911330E 00

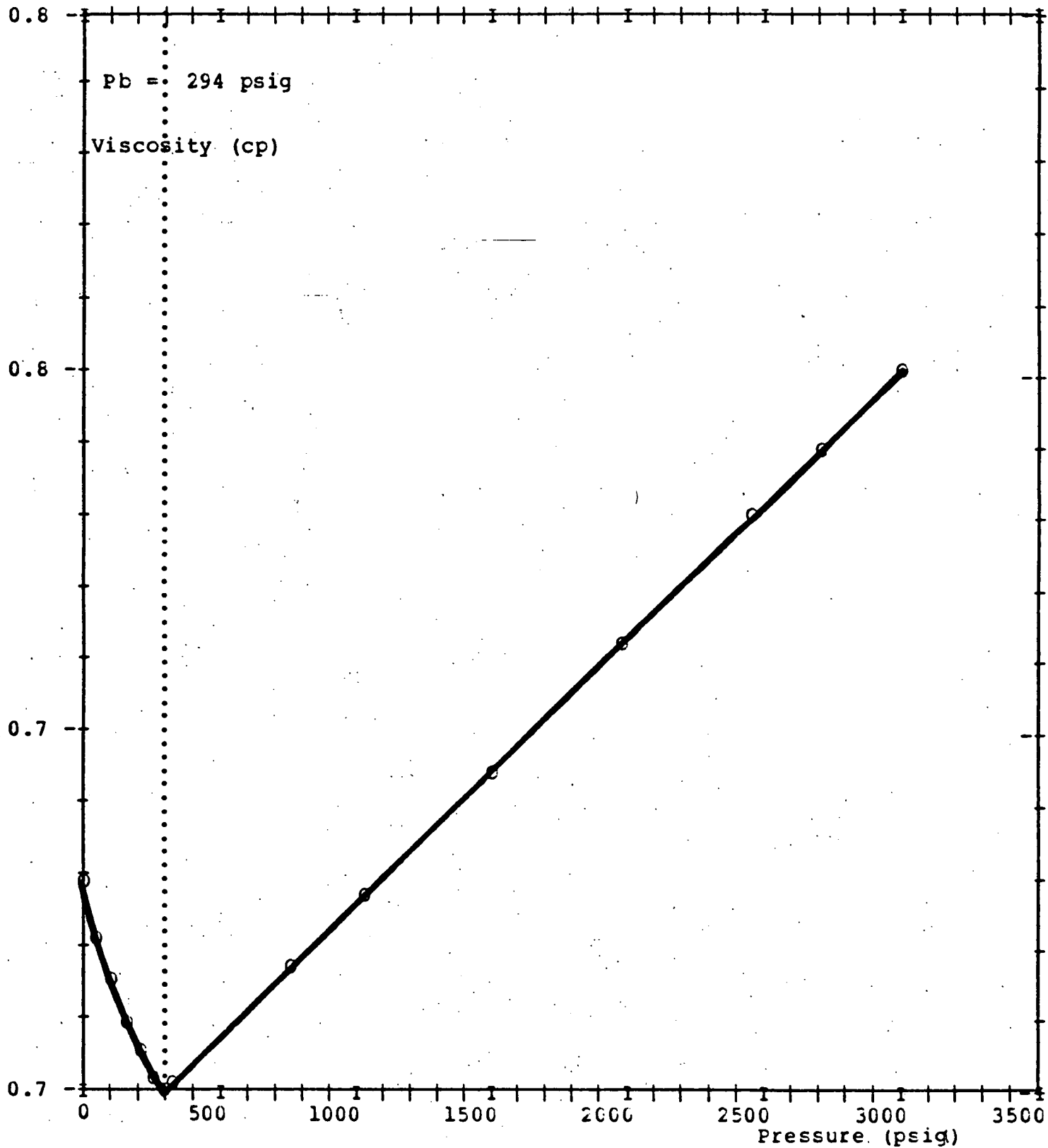
x = P/Pb

TABLE 10

VISCOSITY OF RESERVOIR FLUID AT 220 F

Pressure (psig)	Viscosity (centipoises)
3000	0.75
Pi= 2705	0.74
2454	0.73
1983	0.71
1505	0.69
1032	0.68
761	0.67
328	0.65
Pb= 294	0.65
257	0.65
204	0.66
157	0.66
102	0.67
48	0.67
0	0.68

VISCOSITY OF RESERVOIR FLUID AT 220 F



COMPANY : SANTOS LTD

00114

WELL : STURT EAST 1

VISCOSITY OF RESERVOIR FLUID AT 220 F

1. For $P_b \leq P \leq 3000$

$$\text{no (centipoises)} = a \cdot P + b$$

where:

$$\begin{aligned} P_b &= 294 \text{ psig} \\ a &= 3.69141435089\text{E-}05 \\ b &= 6.39147241808\text{E-}01 \end{aligned}$$

2. For $0 \leq P \leq P_b$

$$\text{no (centipoises)} = a + b \cdot x^i + c \cdot x^j + d \cdot x^k$$

where:

$$\begin{aligned} P_b &= 294 \text{ psig} \\ a &= 6.80000000000\text{E-}01 \\ b &= -2.96705342745\text{E-}03 \\ c &= -3.40256383917\text{E-}02 \\ d &= 6.99269181835\text{E-}03 \end{aligned}$$

$$\begin{aligned} x &= P/P_b \\ i &= 0.1 \\ j &= 1.0 \\ k &= 3 \end{aligned}$$

NCMENCLATURE

P	:	Pressure
V	:	Volume
T	:	Temperature
Pi	:	Initial static pressure
Pb	:	Bubble point pressure
Pd	:	Dew point pressure
Vr=V/V Pb	:	Relative volume (oil reservoir fluid)
Vr=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
Ks	:	Solution gas oil ratio
Z	:	Gas compressibility factor or gas deviation factor
Bg	:	Gas formation volume factor
do	:	Reservoir oil density
Go	:	Residual oil gravity
G	:	Gas gravity (Air=1)
sto	:	Stock tank oil
GOR	:	Gas oil ratio
GLR	:	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 pressure

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)



WIRELINE REPORT

CLIENT SANFOS WELL STURT EAST #1 DATE 8:12:89

PROGRAMME STATIC GRADIENT
 PURPOSE OF WORK BLIND BOX RUN (TO ENSURE TUBING IS CLEAR OF OBSTRUCTIONS)

REPORT OF WORK PERFORMED 8:12:89

1430 HRS: ARRIVE ON LOCATION S.I.T.H.P. 4365 KPA

1530 HRS: RIG UP GIN POLE, B.O.P'S & ASSOCIATED

WIRELINE EQUIPMENT.

1532 HRS: R.I.H. 1.75" BLIND BOX

1556 HRS: T.D. 6120' KB

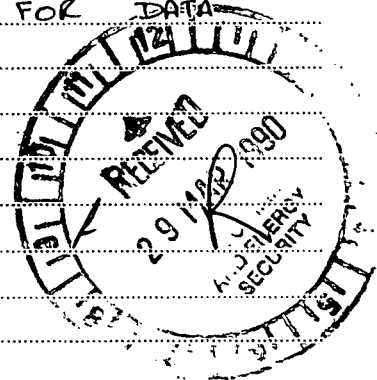
1600 HRS: P.D.O.H (NO OBSTRUCTIONS ENCOUNTERED)

1625 HRS: IN LUBRICATOR

1626 HRS: DEPRESSURE LUBRICATOR

1645 HRS. R.I.H. CONDUCTING STATIC GRADIENT

REFER STATIC GRADIENT REPORT FOR DATA



D.J. McAllister

Operator's Signature

WORKED PERFORMED BY D.J. McALLISTER OF EXPERTEST

WELL DATA:

Tubing Size..... FWHP..... SIWHP 4365 KPA

Subsurface S.V./Landing Nipple @..... S.S.D. @.....

'X' Nipple @..... 'N'/'XN' Nipple @..... Other @.....

Min. I.D. 2.280" @ 6008.48' Packer @.....

Perforated Interval: 6086'-6114'

EXPERTEST

WIRELINE & WELL TESTING SERVICE

PO BOX 354 COWANDILLA 5033

PH. (08) 354 0400 TELEX AA87183

FAX (08) 43 7408

138 RICHMOND ROAD MARLESTON
SOUTH AUSTRALIA 5033

Tested Friday, 8th December 1989.

CLIENT	LOCATION	FORMATION
Santos Ltd.	Sturt East #1	Poolowanna

STATIC PRESSURE GRADIENT REPORT

PRESSURE ELEMENT DATA			
POSITION	SERIAL NO.	RANGE	CALIBRATED
Top	56429	3000	13/10/89
Bottom	28515	3000	13/10/89

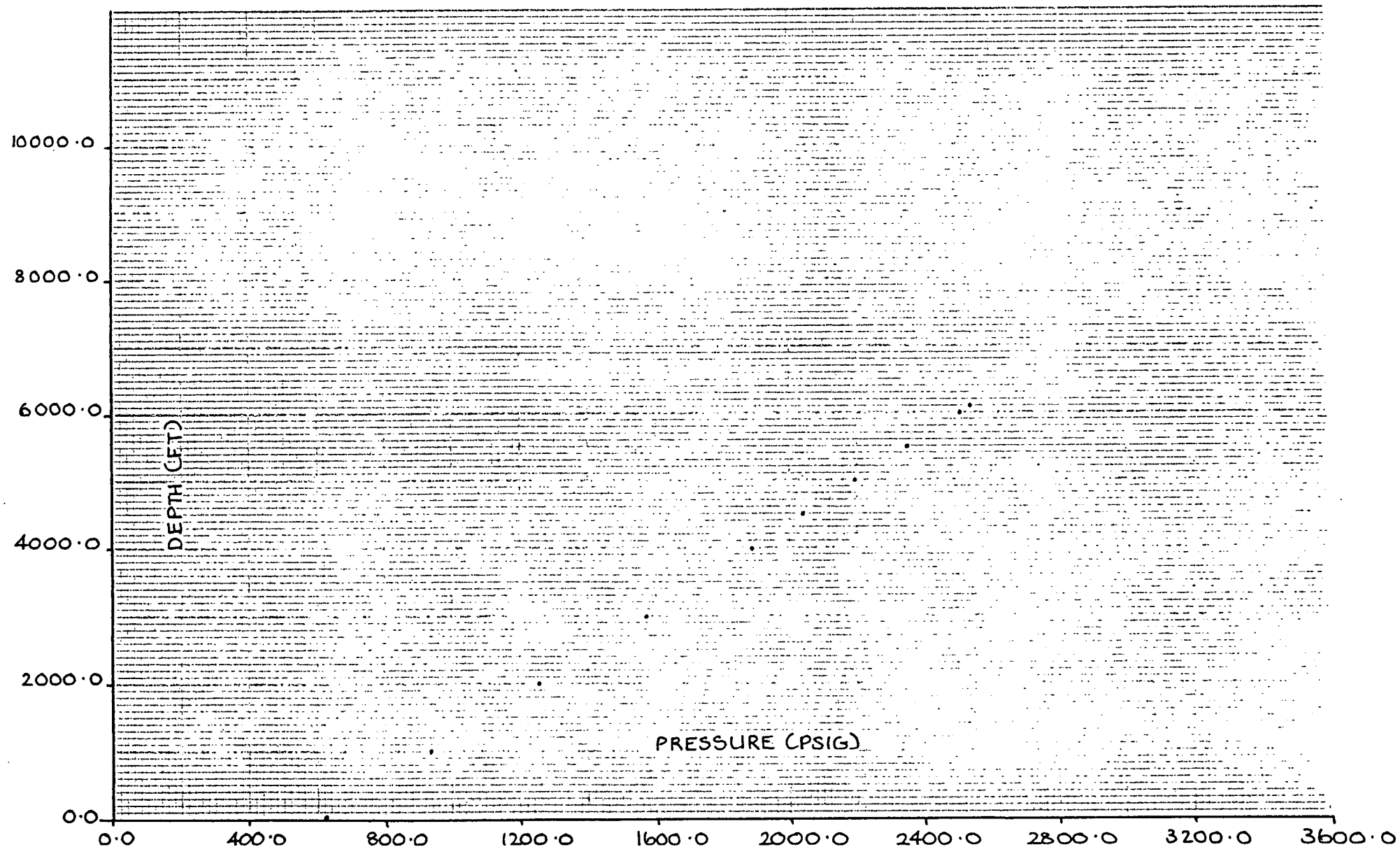
WELL DATA	
PARAMETER	VALUE
DWT In	4365 kpa
DWT Out	4365 kpa
Max DHT	224 o F

DEPTH FT KB	TOP ELEMENT			BOTTOM ELEMENT		
	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT
LUB.	0.4080	626.5	----	0.4060	622.2	----
1000	0.6110	939.8	0.313	0.6080	937.1	0.315
2000	0.8150	1255.0	0.315	0.8120	1255.1	0.318
3000	1.0160	1566.3	0.311	1.0140	1570.0	0.315
4000	1.2170	1878.1	0.312	1.2150	1883.4	0.313
4500	1.3160	2031.8	0.307	1.3150	2039.4	0.312
5000	1.4160	2187.1	0.311	1.4150	2195.5	0.312
5500	1.5160	2342.3	0.311	1.5140	2350.1	0.309
6000	1.6150	2495.9	0.307	1.6140	2506.4	0.313
6100	1.6350	2526.9	0.310	1.6330	2536.1	0.297
LUB.	0.4090	628.0	----	0.4130	633.1	----

GENERAL REMARKS

M.B.H.T. = 224 o F

STURT EAST #1 - STATIC PRESSURE GRADIENT - 8/12/89
ELEMENT # 28515/3000(BOT)





CLIENT SANTOS
WELL STURT EAST #1

STATIC GRADIENT SURVEY

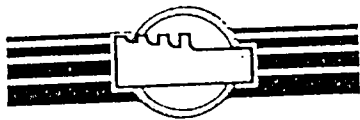
OPERATOR D J MALLISTER

DATE 8:12:89

BOMB No. 1 DATA						BOMB No. 2 DATA				DWT IN 4365 KPA	
ELEMENT No. <u>*56429</u> ELEMENT RANGE <u>3000 PSI</u>						ELEMENT No. <u>*28515</u> ELEMENT RANGE <u>3000 PSI</u>				DWT OUT 4365 KPA	
RECORDER No. <u>*14628</u> X <u>15TUS</u> CLOCK DATA <u>2489</u> X <u>3 HRS</u>						RECORDER No. <u>*13027</u> X <u>15TUS</u> CLOCK DATA <u>*1</u> X <u>3 HRS</u>					
ENGAGE STYLUS <u>1628 HRS</u> DISENGAGE <u>1813 HR.</u>						ENGAGE STYLUS <u>1628 HRS</u> DISENGAGE <u>1813 HRS</u>					
PRESSURE LUBRICATOR <u>1635 HRS</u>						BLEED LUBRICATOR <u>1805 HRS</u>					
DATE	TIME	DEPTH'	DEFLEC-TION	PRESSURE TEMP.	GRADIENT psi/ft	DEPTH'	DEFLEC-TION	PRESSURE TEMP.	GRADIENT psi/ft	REMARKS	
<u>8:12:89</u>	<u>1645</u>	<u>LUB</u>				<u>LUB</u>				<u>R.I.H.</u>	
	<u>1647</u>	<u>1000'</u>				<u>1000'</u>					
	<u>1653</u>	<u>2000'</u>				<u>2000'</u>					
	<u>1659</u>	<u>3000'</u>				<u>3000'</u>					
	<u>1705</u>	<u>4000'</u>				<u>4000'</u>					
	<u>1710</u>	<u>4500'</u>				<u>4500'</u>					
	<u>1715</u>	<u>5000'</u>				<u>5000'</u>					
	<u>1720</u>	<u>5500'</u>				<u>5500'</u>					
	<u>1725</u>	<u>6000'</u>				<u>6000'</u>					
	<u>1730</u>	<u>6100'</u>				<u>6100'</u>				<u>4365 KPA</u>	
	<u>1740</u>									<u>P.O.O.H.</u>	
	<u>1755</u>	<u>LUB</u>				<u>LUB</u>				<u>IN LUBRICATOR</u>	
	<u>1805</u>									<u>BLEED LUBRICATOR</u>	
	<u>1840</u>									<u>RIG DOWN</u>	

GENERAL REMARKS: M. B. H. T = 224°F

EXPERTEST PTY. LTD.



SEQUENCE OF EVENTS

CUSTOMER : SANTOS LTD

WELL NAME: STURT ENST *1

TEST TYPE : STATIC GRADIENT.

PERFORATIONS: 6086' - 6114'

FORMATION POOLWANNA.

PAGE: 1 OF 1

DATE: 7-1-90

OPR: W. BRIMCOURT

DESCRIPTION OF EVENTS

DATE/TIME

0900

MIRU

1005

PREPARE AMERADA GAUGES

1041

RIH WITH GAUGES AND CONDUCT STATIC GRADIENT AS PER PROGRAM TO 6100'KB

1207

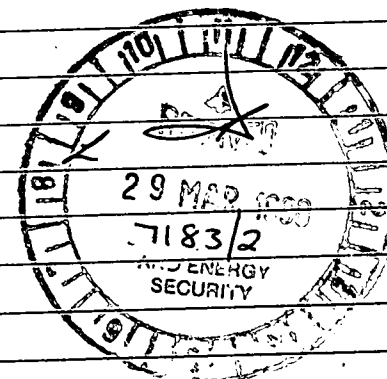
POH

1223

ARRIVE SURFACE CHARTS OK. RIG DOWN

1320

ROMO.



00120

STURT EAST 1

00121

27

TENSION

DATE

F.B.I. 6126



WIRELINE & WELL TESTING SERVICE

PO BOX 354 COWANDILLA 5033

PH. (08) 354 0488 TELEX AAB7183

FAX (08) 43 7408

138 RICHMOND ROAD MARLESTON

SOUTH AUSTRALIA 5033

Tested Sunday, 7th January 1990.

CLIENT	LOCATION	FORMATION
Santos Ltd.	STURT EAST #1	POOLOWANNA

STATIC PRESSURE GRADIENT REPORT

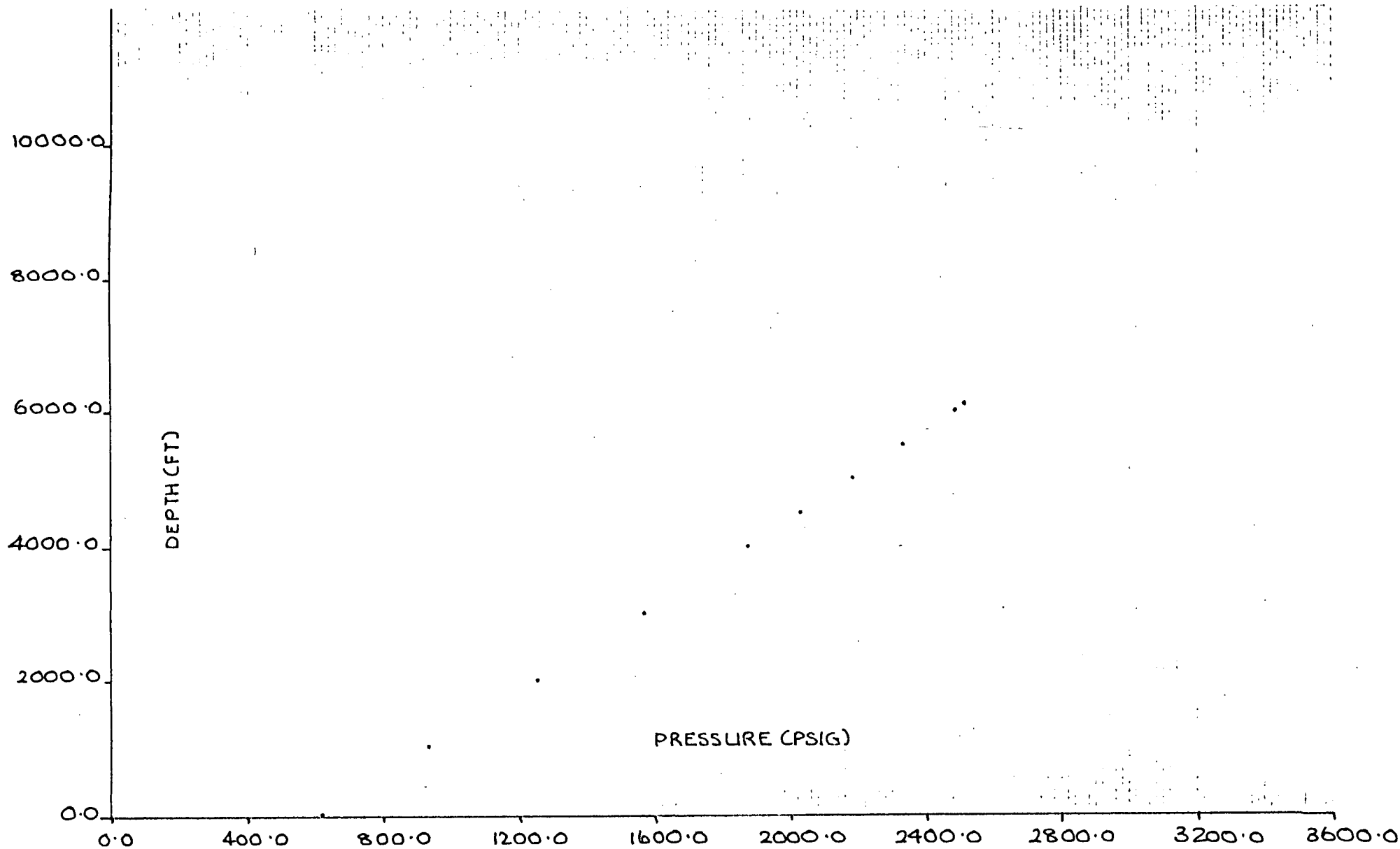
PRESSURE ELEMENT DATA			
POSITION	SERIAL NO.	RANGE	CALIBRATED
Top	28514	3000	18/12/89
Bottom	29387	2975	18/12/89

WELL DATA	
PARAMETER	VALUE
DWT In	626
DWT Out	624
Max BHT	222F

DEPTH FT KB	TOP ELEMENT			BOTTOM ELEMENT		
	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT
LUB.	0.3910	621.5	----	0.4035	615.0	----
1000	0.5900	938.2	0.317	0.6090	933.3	0.318
2000	0.7870	1252.6	0.314	0.8110	1247.7	0.314
3000	0.9815	1563.7	0.311	1.0110	1558.9	0.312
4000	1.1740	1872.1	0.308	1.2085	1868.8	0.309
4500	1.2703	2026.5	0.309	1.3073	2023.4	0.309
5000	1.3865	2180.8	0.309	1.4061	2178.0	0.309
5500	1.4620	2333.9	0.306	1.5048	2332.4	0.309
6000	1.5565	2485.4	0.303	1.6030	2485.9	0.307
6100	1.5755	2515.9	0.305	1.6230	2517.2	0.313
LUB.	0.3960	629.5	----	0.4103	625.5	----

GENERAL REMARKS

STURT EAST # 1 — STATIC PRESSURE GRADIENT — 7/1/90
ELEMENT # 28514/3000 (TOP)



BHP/BHT GAUGE RUN DATA

CUSTOMER : SANTOS LTD

PERFORATIONS: 6086' - 6114'

PAGE: 1 OF 1

WELL NAME: STURT EAST #1

FORMATION : POLOWANNA

DATE: 7-1-90:

TEST TYPE : STATIC GRADIENT

OPR : W. BRIAN COURT

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.		28514	29387		DATE : 7.1.90			
ELEMENT RANGE		3000	2975		PRESSURE LUBRICATOR :	1031	626	565
RECORDING SECTION SERIAL NO.		14631	59791		RUN IN HOLE :	1041	626	565
DATE OF CALIBRATION:		18.12.89	18.12.89		ON DEPTH AT : 6100 FT	1152	625	565
CLOCK SERIAL NO.		A16088	A16085		DATE : 7.1.90			
CLOCK RANGE		3 HR	3 HR		PULL OUT OF HOLE :	1257	625	565
LEAD SCREW TYPE		15 TUS	15 TUS		AT SURFACE :	1223	624	565
					DEPRESSURE LUBRICATOR :	1241	624	565
ENGAGE STYLUS DATE	7-1-90	TIME 1021	1021		MAXIMUM BHT AT 6100' FT = 222° F			
DISENGAGE STYLUS DATE	7-1-90	TIME 1250	1250		N.B. ALL DEPTHS ARE MEASURED FROM K.B.			

[illegible]

00122

OPR : R. Buckland.

$$718\frac{3}{2}$$

EXPERTEST

WIRELINE & WELL TESTING SERVICE

PO BOX 354 COWANDILLA 5033

PH. (08) 354 0488 TELEX AAB7183

FAX (08) 43 7408

138 RICHMOND ROAD MARLESTON
SOUTH AUSTRALIA 5033

Tested Saturday, 4th August 1990.

CLIENT	LOCATION	FORMATION
Santos Ltd.	East Sturt # 1	n/a

STATIC PRESSURE GRADIENT REPORT

PRESSURE ELEMENT DATA			
POSITION	SERIAL NO.	RANGE	CALIBRATED
Top	850207	4075	23/ 7/90
Bottom	850208	4100	23/ 7/90

WELL DATA	
PARAMETER	VALUE
DWI In	0
DWI Out	2 psi
Max BHT	90 F

TOP ELEMENT				BOTTOM ELEMENT		
DEPTH FT KB	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT
6095	1.2530	2551.0	0.419	1.2440	2546.2	0.419
6095	1.2520	2548.9	0.000	1.2440	2546.2	0.000
6095	1.2510	2546.9	0.000	1.2440	2546.2	0.000
LUB.	0.0020	3.0	----	0.0020	-7.9	----

GENERAL REMARKS

Initial lubricator stop was at atmospheric pressure, no deflection on charts so printout has omitted this stop.
The three pressure readings taken at same depth of 6095 ft. KB, were taken over two 45 minute intervals, any lesser interval showed no pressure change.

	PERFORATIONS:
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WELL NAME: STURT EAST #1

TEST TYPE : BOTTOM HOLE PRESSURE SURVEY

FORMATION :

DATE: 4. 8. 90

OPR : R. BUCKLAND

GAUGE DATA		UPPER PRESSURE GAUGE	LOWER PRESSURE GAUGE	TEMPERATURE GAUGE N/A.	RUN DATA	TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)
ELEMENT SERIAL NO.		850208	850207		DATE : 4.8.90			
ELEMENT RANGE		4100 PSI	4075 PSI		PRESSURE LUBRICATOR :	1120	0	0
RECORDING SECTION SERIAL NO.		3433	3434		RUN IN HOLE :	1330	0	0
DATE OF CALIBRATION:		23.7.90	23.7.90		ON DEPTH AT : FT/M	1150	0	0
~								
CLOCK SERIAL NO.		25569	25508		DATE : 4.8.90			
CLOCK RANGE		3 HR	3 HR		PULL OUT OF HOLE :	1320	2	0
LEAD SCREW TYPE		15	15		AT SURFACE :	1337	2	0
					DEPRESSURE LUBRICATOR :	1347	2	0
ENGAGE STYLUS	DATE 4.8.90 TIME	1113	1113		MAXIMUM BHT AT FT/M = 90 °Fip			
DISENGAGE STYLUS	DATE 4.8.90 TIME	1355	1355		N.B. ALL DEPTHS ARE MEASURED FROM K.B.			

[illegible]

00127

ITEM NO.	DESCRIPTION	LENGTH (ft)	DEPTH K3 (ft)	MAN. I.D. (in)
	K.B. to top of casing head spool	16.30		
1	C.I.V. FBEN hanger 2 7/8 EUE	0.83		
2	95 Joints 2 7/8" 6.5" JSS EUE Tubing	2992.69		
3	Guiberson 2 7/8" x 5 1/2" Tm Tbg Anchor	2.90	3009.82	
4	Swage 3 1/2" x 2 3/8" EUE c/w 2 3/8" collar	0.74		
5	1 Joint 3 1/2" 9.3" JSS EUE Tubing	31.70		
6	3 1/2" EUE Tubing drain (3 Shm. Sema)	0.88		
7	30-375-THX-20-3 Oversize Tubing	21.76	3046.04	
	Pump LOWE40SAIS2 MAX Stroke = 187"			
8	1 Joint 3 1/2" 9.3" JSS EUE Tubing	31.68		
9	3 1/2" JSS EUE Collar	0.48		
	Bottom of Tubing		3099.96	
	ROD STRING FROM BOTTOM UP			
	ON/OFF Connector For 30-375-THX-20-3			
3	4 x 1 1/2" K-BARS			
4	116 x 3/4" G-Grade 'D' Sucker Rods			
5	1 x 2' Grade 'D' Pony Rod			
6	26' x 1 1/4" Class T Polished Rod			
7	(15' Stickup w/ Pump 2' off Bottom)			
8				
9				

PERFORATED INTERVALS:

FORMATION

POOLOWANNA

INTERVAL

6086' - 6090'

6094' - 6096'

6103' - 6114'

(16.6-90) → 6077-6086

GUN:

SIZE

2 1/2"

2 1/2"

2 1/2"

4"

TYPE

E'Jel

E'Jel

E'Jel

Csg

CHARGES:

S.P.F.

4

4

4

4

TYPE

RDX

WT(lb)

22.7

REMARKS:

Anchor Shear = 60,000# Tbg Drain Shear = 3000PSI

ANNULUS FLUID:

Poolowanna Crude

INDICATED STRING WEIGHT: 23000# incl 6000# blocks

CALCULATED STRING WEIGHT: 23000# incl 6000# blocks

SLACK-OFF WEIGHT

TENSION

10000#

NOT TO SCALE

WELLSITE SUPERVISOR

B. ASSELS / D. CRANE

PROPOSED

DATE OF INSTALLATION

5-8-90

RE-COMPLETION

DRAFTED

DATE

COMPLETION

REVISED

DATE

G. F. CHIGA
PETROLEUM ENG.SUPERVISOR - MOOMBA
6126
