

Open File Envelope

NUMBER 5896

PEL 5 AND PEL 6, MURTA BLOCK

EROMANGA AND COOPER BASINS

WANCOOCHA 4

TEST REPORTS

Submitted by

**Delhi Petroleum Pty Ltd
1985**

© 23/5/96

MINES AND ENERGY
SOUTH AUSTRALIA



This report was supplied as part of the requirement to hold a mineral or petroleum exploration tenement in the State of South Australia.

MESA accepts no responsibility for statements made, or conclusions drawn, in the report or for the quality of text or drawings. All rights reserved under the copyright. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the written permission of Mines and Energy South Australia, PO Box 151, Eastwood, SA 5063

Enquiries: Records Management

Mines and Energy South Australia
191 Greenhill Road, Parkside 5063

Telephone: (08) 274 7687
Facsimile: (08) 272 7597

ENVELOPE 5896

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

TENEMENT HOLDER: Delhi Petroleum Pty Ltd (operator), Santos Ltd, Vamgas Ltd, South Australian Oil and Gas Corp. Pty Ltd and Hartogen Energy Ltd

CONTENTS

	MESA NO.
REPORTS: Snogles, R. and Capelo, F., 1985. Well testing contractor's formation testing field reports for open hole DST 1 (Dowell Schlumberger, 9/3/85).	5896 R 1 Pgs 3-7
Gearhart Australia Pty Ltd, 1985. Well workover contractor's results of the post-completion production flow test, reservoir pressure buildup and static pressure gradient surveys of the Birkhead Formation oil reservoir perforated interval 5111-5136 feet depth KB, conducted over the period 3-6/4/85.	5896 R 2 Pgs 8-65
APPENDIX: Provias, D., 1985. Operator's reservoir engineering interpretation of the results of the above post-completion flow/buildup test (July 1985). Constant and variable rate flow/buildup analysis Horner plots.	5896 R 3 Pgs 66-98 Pgs 99-105
ATTACHMENT: Field maintenance contractor's results of extended production testing of the Birkhead oil reservoir, 31/3/85 to 4/5/85 (Expertest Pty Ltd).	Pgs 106-139
REPORTS: Halliburton Services, 1985. Formation testing service report, open hole DST 2 (18/6/85).	5896 R 4 Pgs 140-149
Halliburton Services, 1985. Formation testing service report, open hole DST 3 (19/6/85).	5896 R 5 Pgs 150-162
Halliburton Services, 1985. Formation testing service report, open hole DST 4 (17/7/85).	5896 R 6 Pgs 163-177

END OF CONTENTS

Company: DELHI PETROLEUM Well No: Wanooocha #4 Test No.: 1
Field: Wanooocha Location: Copper Basins Country: AUSTRALIA
Tested Interval: From 5661.44 Ft. to 5728.70 Ft.
Co-ordinates: 28°32' 21.7 S - 139°59' 36.5 E
Type Test: Open Hole ☒ Casing: ☐ Conventional ☐ Straddle: ☒ Land rig ☒ Jack-up ☐ Floater ☐
Valve: MFE ☒ PCT ☐ SPRO ☐ Other: _____ with Packer ☒ Retainer ☐

Geologic Level : Patchawarra Description : STARTED sands
 Net Productive Interval : — ft. Estimated Porosity : — %
 Total Depth : 5922 ft. Depths measured from : KB Elevation : 104 ft.
 Open Hole Size : 8 1/2 in. Rat Hole Size : — in., from — ft.
 Casing Size : — in. lbs/ft. Liner Size : — in., lbs/ft. from — ft.
 Before test : Caliper Yes ☒ No ☐ Scraper Yes ☐ No ☒ Circulation Yes ☒ for 2 hrs: No ☐

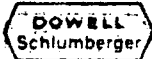
Mud Type: Gel/Lignosulphonate/Polymer System Weight: 9.2 ppg
Viscosity: _____ Water Loss _____ cc Mud Resistivity _____ at _____ °F
Filtrate Resistivity: _____ at _____ °F; Chloride ppm: _____

Recorder No.		J-1758	J-2196	J-2005	J-2006
Capacity (psig)		6000	4700	6400	6400
Depth		5618.29	5715.11	5637.09	5905.25
Inside/Outside		Inside	Outside	Inside	Outside
Above/Below valve		Above	Below	Below	Below
Clock No.		9-1408	9-4001	9-3488	9-4091
Capacity (hrs.)		48	24	48	48
Temperature		202	204	204	207
Initial Hydrostatic Pressure		<u>202</u>	2841.12	2801.95	2320
Pre-flow	(1) Start Pressure				
	(2) Finish Pressure				
Initial Shut-in Pressure					
Second Flow	(1) Start Pressure				
	(2) Finish Pressure				
Second Shut-in Pressure					
Final Flow	(1) Start Pressure				
	(2) Finish Pressure				
Final Shut-in Pressure					
Final Hydrostatic Pressure		222.39	2855.07	2795.69	2355

Left Station at 03 : 45 on 8-3-85 On Location at 04 : 30 on 8-3-85
 Started Operations at 09 : 40 on 8-3-85 Finished Operations at 07 : 30 on 9-3-85
 Off Location at 19 : 45 on 9-3-85 Return Station at 20 : 30 on 9-3-85 Mileage 70 km

J-2005 - F=1252.242 psi - A= -9.359808 psi
J-2006 - F=1248.961 psi - A= -9.038483 psi
J-2196 - F=929.836 psi - A= 9.723189 psi
J-1758 - F=1254.275 psi - A= -9.654845 psi

Station: Moomla SIR No. Date: 9-3-85
Customer: Tester: R. Snodges Customer:
Purchase Order: F. Capelo Representative: Bill Snodges



Surface Data

000004

Page 2 of 4

Report No. 1

Customer: DELHI PETROLEUM Well No: Wanepeba # 4

Test No. 1

TEST SEQUENCE AND FLOW RATE DATA

Description and Flow Rates	Date	Time hrs mins	Pressure psig	Surface Choke
Packer Depth: TOP: 5661.44 ft. Bottom: 5728.70 ft Set at:	8-3-85	18 00		
Opened Tool: (Annulus pressure psi)	8-3-85	18 38	0	1/2"
NO SURFACE INDICATION THE TOOL WAS OPEN ATTEMPTED TO CYCLE TOOL CLOSED (APPEARED STRING WAS DIFFERENTIAL STUCK)		20 38		
START TO WORK PIPE		22 43		
30 000 kg OVER PULL				
20 000 kg SET DOWN WEIGHT				
PACKER AND STRING CAME LOOSE		23 01		
DROP THE BAR		23 25		
BAR DIDN'T REACH REV. CIRC. SUB BREAK OFF				
TRY TO PUMP OUT REV. CIRC. SUB PUMP OUT (USED 2300 PSI SURFACE PRESSURE, DISCS DIDN'T BURST)		00 05		
Reverse Circulation Started (Pump pressure psig)				
Reverse Circulation Finished <u>No Circulation</u>				
Pulled Packer Loose/Pulled Out of Retainer	8-3-85	23 00		
Cushion Type: <u>NONE</u> Amount — bbls : Length — ft : Pressure — psi				Bottom Choke 1 1/16"

RECOVERY DATA

	Recovery Description	Feet	Bbls	% Oil	% Water	% Other
1						
2						
3						
4						
5						
6						

	Oil-API Gravity	Gas Gravity	G.O.R.	Resistivity	Chlorides
1	° at °F			at °F	ppm
2	° at °F			at °F	ppm
3	° at °F			at °F	ppm
4	° at °F			at °F	ppm
5	° at °F			at °F	ppm
6	° at °F			at °F	ppm

Comments: WEIGHT DID NOT REACH HFE TO OPERATE TOOL
BECAUSE OF DIFFERENTIAL STICKING OF DRILL COLLARS
ABOVE TOOL

Equipment Data

Report No. 1

Customer: DELHI PETROLEUM

Well No. : waneppaha * 4

Test No. : 1

SAMPLE CHAMBER RECOVERY DATA

Sampler Drained On Location ☒ Elsewhere ☐ Name : _____ Address : _____	Recovery		Resistivity		Chlorides (ppm)	
	Gas _____	cu ft.	Water _____	at _____	°F	
	Oil _____	c.c.	Mud _____	at _____	°F	
	Water _____	c.c.	Mud Filtrate _____	at _____	°F	
	Mud _____	c.c.	Pit Mud _____	at _____	°F	
	_____	°API _____ °F	Pit Mud Filtrate _____	at _____	°F	
Gas/Oil Ratio _____		cu ft./bbl	Sample Chamber Pressure _____		psi.	

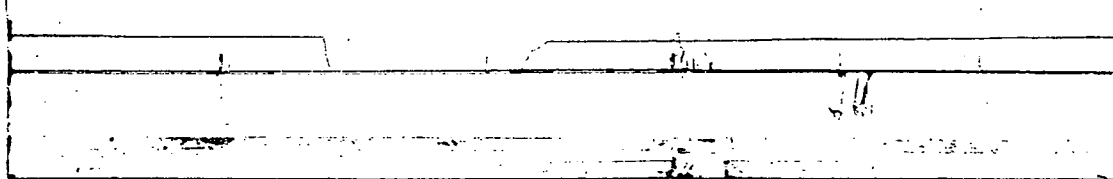
EQUIPMENT SEQUENCE

[illegible]

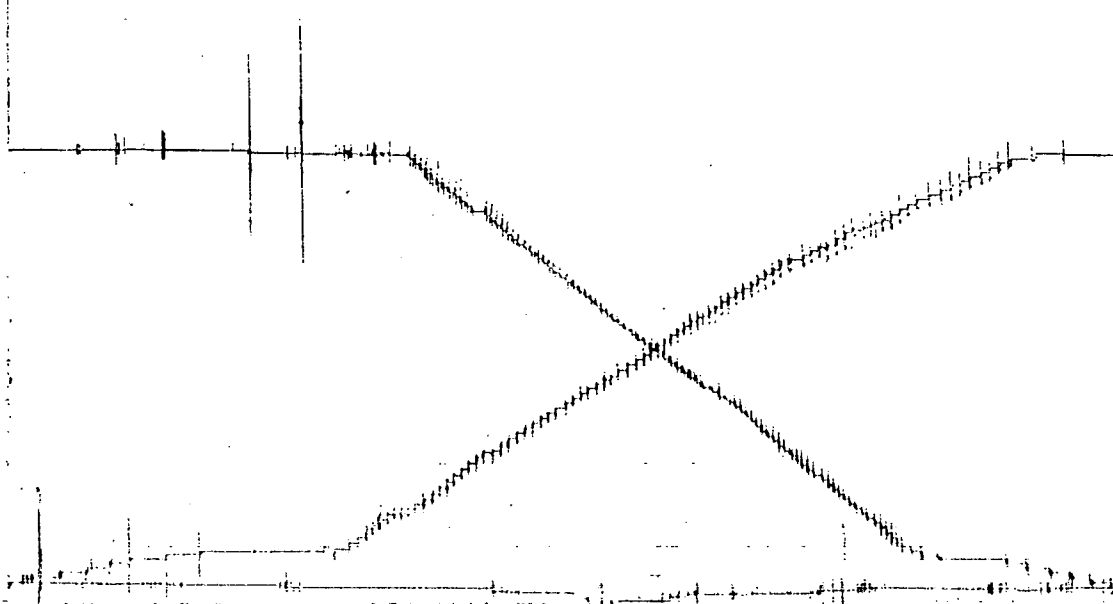
Comments: WEIGHT did not REACH MFE to operate tool because of differential sticking of drill collars above tool.

000006

DELHI PETE
REC # 175
RANGE - 6000
CLOCK # 9-12
CLOCK - 48
DSF # 1
8/3/85
WANCOOCHA
DEPTH 5618

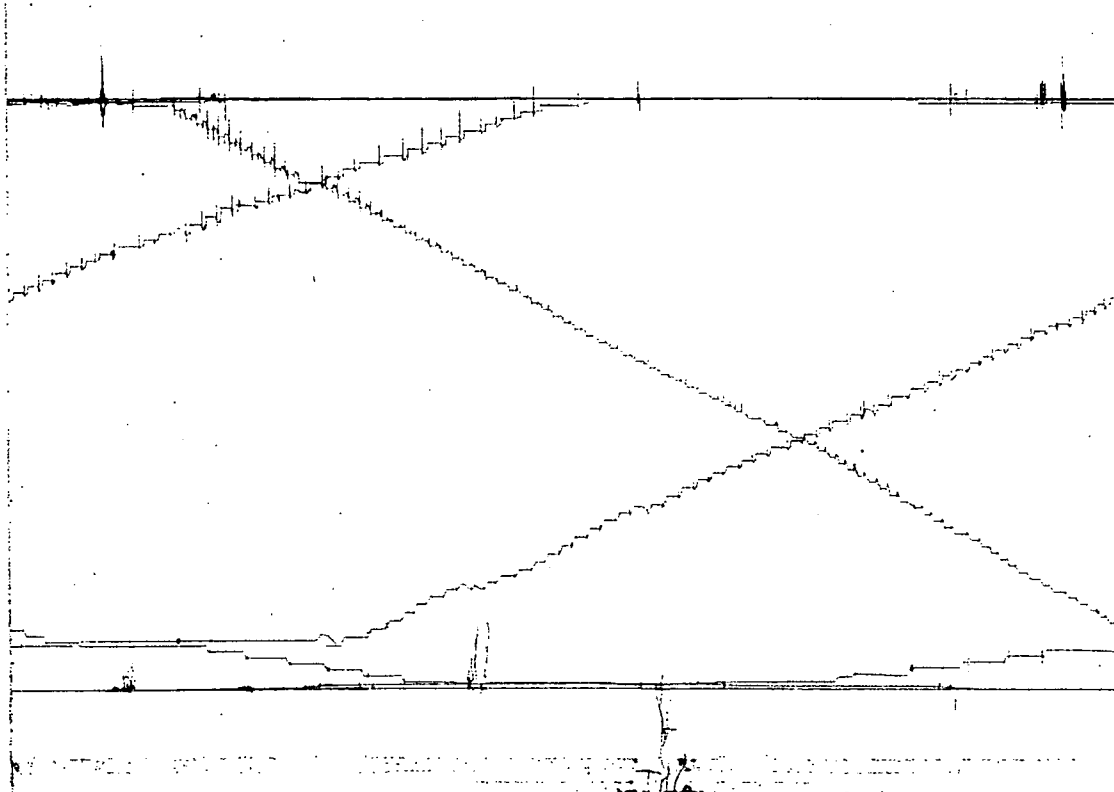


DELHI PETE
REC # 2000
RANGE - 6000
CLOCK # 9-40
DSF # 1
8/3/85
WANCOOCHA
DEPTH 5905

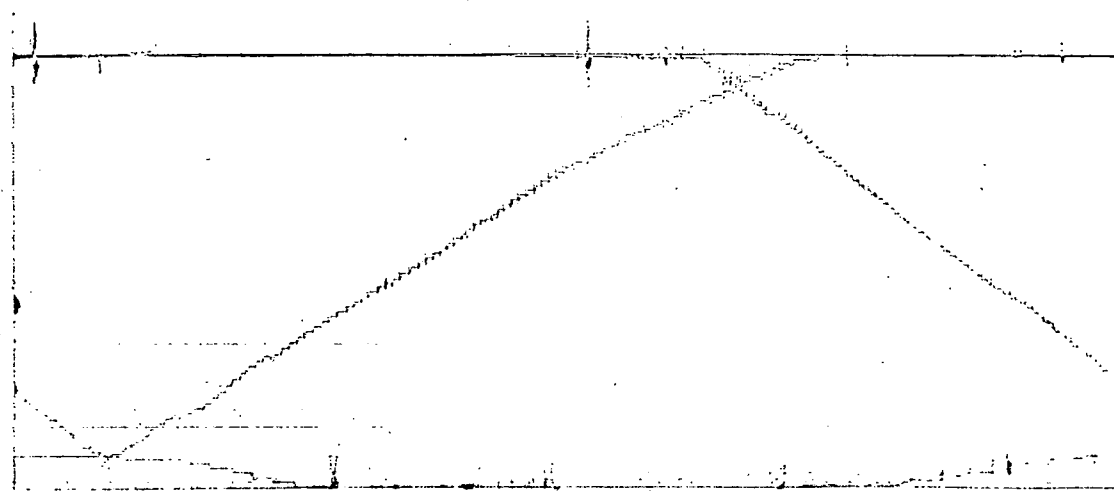


000007

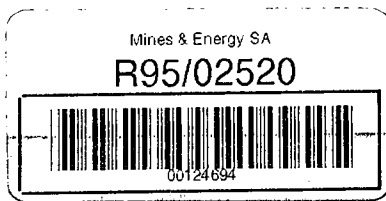
DELHI PETROL
REC.# J-219,
RANGE - 4700
CLOCK # 7-40
BUREAU - 2.0M
DST # 1
8/3/85
WADCOCKA
DEPTH 5715.1



DELHI PETROL
WELL#4
FIELD - WADCOCKA
RECORDER # J-2005
RANGE - 6400 #5
CLOCK # 9-3488 - 4E483
DEPTH 5637.09
DST # 1
8/3/85



000008



DELHI PETROLEUM PTY LTD

WANCOOCHA #4

6th April 1985

GEARHART AUSTRALIA

I - N - D - E - X

- (1) OPERATIONS SCHEDULE
- (2) OVERALL SURVEY PLOT (linear)
- (3) TUBING & CASING PRESSURE PLOTS & DATA (DWT)
- (4) LUBRICATOR STOP WITH PLOTS & DATA (linear)
- (5) BOTTOM HOLE FLOWING PLOTS & DATA (linear)
- (6) BUILD-UP PLOT & DATA (LINEAR)
- (7) HORNER PLOT & DATA
- (8) STATIC GRADIENT PLOTS & DATA
- (9) TUBING HEAD PRESSURE PLOTS & DATA (DWT)
- (10) H/P CALIBRATION CHECK BEFORE & AFTER SURVEY

GEARHART PTY. LTD
1/138 MUSGRAVE AVE.,
WELLAND, S.A. 5007.

DELHI PETROLEUM PTY. LTD.

WANCOOCHA # 4

OPERATIONS SCHEDULE

<u>HOURS</u>	<u>REMARKS</u>
3rd April 1985	
0800 hrs.	Arrive location with Plu-001 truck and HP surface read out equipment.
0805 hrs.	Rig up on well with unit and lubricator.
1000 hrs.	Open up swab valve to pressure up lubricator Hang H/P tool at 5ft KB, All measurements from KB.
1020 hrs.	Commence logging, pressure and temperature recordings every 5 minutes using HP tool # 631 temperature tool #70. Commence Vaetrix recordings every 5 minutes of tubing and casing pressures.
1105 hrs.	Shut in well to check variable choke (appeared to be blocked).
1109 hrs.	Open up well resume flow to tanks.
1210 hrs.	Shut in well to change choke.
1218 hrs.	Open up well resume flow to tanks using 10/64" fixed choke.
1407 hrs.	R.I.H. with HP and Temperature gauge.
1439 hrs.	Hang tools at 5080 ft KB. Monitor bottom hole pressures, choke size 10/64" oil flow rate 508 BPD. Spikes on bottom hole flowing plot is due to well testers taken oil samples from wellhead.
2030 hrs.	Well shut in for commencement of build up. Monitor bottom hole pressures with H/P gauge. Well testers from Wancoocha #2 monitoring tubing and casing pressures.

GEARHART PTY. LTD
1/138 MUSGRAVE AVE.,
WELLAND, S.A. 5007.

DELHI PETROLEUM PTY. LTD.

WANCOOCHA # 4

OPERATIONS SCHEDULE

HOURS

REMARKS

4th April 1985

Monitor bottom hole pressure and temperature with H/P gauge and surface read out equipment on build up survey.
Well testers from Wancoocha #2 monitoring tubing casing pressures.

1230 hrs.

Change surface read out sample rate to 10 minute.

Monitor bottom hole pressure and temperature with H/P gauge and surface read out equipment on build up survey.
Well testers from Wancoocha #2 monitoring tubing and casing pressures.

5th April 1985

Monitor bottom hole pressure and temperature with H/P gauge and surface read out equipment on build up survey.
Well testers from Wancoocha #2 monitoring tubing and casing pressures.

6th April 1985

Monitor bottom hole pressure and temperature with H/P gauge and surface read out equipment on build up survey.
Well testers from Wancoocha #2 monitoring tubing and casing pressures.

0600 hrs.

Stop logging, END of build-up survey.

GEARHART PTY. LTD
1/138 MUSGRAVE AVE.,
WELLAND, S.A. 5007.

DELHI PETROLEUM PTY. LTD.

WANCOOCHA # 4

OPERATIONS SCHEDULE

HOURS

REMARKS

6th April 1985

0602 hrs.	R.I.H. to 5160 ft, Start of static gradient.
0605 hrs.	Hang at 5160 ft with H/P tool.
0652 hrs.	P.O.O.H. to 5120 ft MPP with H/P tool.
0654 hrs.	Hang at 5120 ft ft MPP with H/P tool.
0737 hrs.	P.O.O.H. to 5080 ft with H/P tool.
0740 hrs.	Hang at 5080 ft monitor depth with H/P tool.
0823 hrs.	P.O.O.H. to 5000 ft with H/P tool.
0825 hrs.	Hang at 5000 ft with H/P tool.
0901 hrs.	P.O.O.H. to 4500 ft with H/P tool.
0906 hrs.	Hang at 4500 ft with H/P tool.
0955 hrs.	P.O.O.H. to 4000 ft with H/P tool.
1000 hrs.	Hang at 4000 ft with H/P tool.
1050 hrs.	P.O.O.H. to 3000 ft with H/P tool.
1105 hrs.	Hang at 3000 ft with H/P tool.
1147 hrs.	P.O.O.H. to 2000 ft with H/P tool.
1153 hrs.	Hang at 2000 ft with H/P tool.
1250 hrs.	P.O.O.H. to 1000 ft with H/P tool.
1256 hrs.	Hang at 1000 ft with H/P tool.

000013

GEARHART PTY. LTD
1/138 MUSGRAVE AVE.,
WELLAND, S.A. 5007.

DELHI PETROLEUM PTY. LTD.

WANCOOCHA # 4

OPERATIONS SCHEDULEHOURSREMARKS

6th April 1985

1346 hrs.	P.O.O.H. to 5 ft KB with H/P tool.
1358 hrs.	Hang at 5ft KB in lubricator with H/P tool.
1500 hrs.	Shut in swab valve and bleed down lubricator. END OF BUILD-UP & STATIC GRADIENT SURVEY.
1505 hrs.	Rig down off well with lubricator H/P tool etc.
1630 hrs.	GEARHART OFF LEASE & BACK TO MOOMBA.

GEARHART AUSTRALIA

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

WELL : WANCOOCHA #4

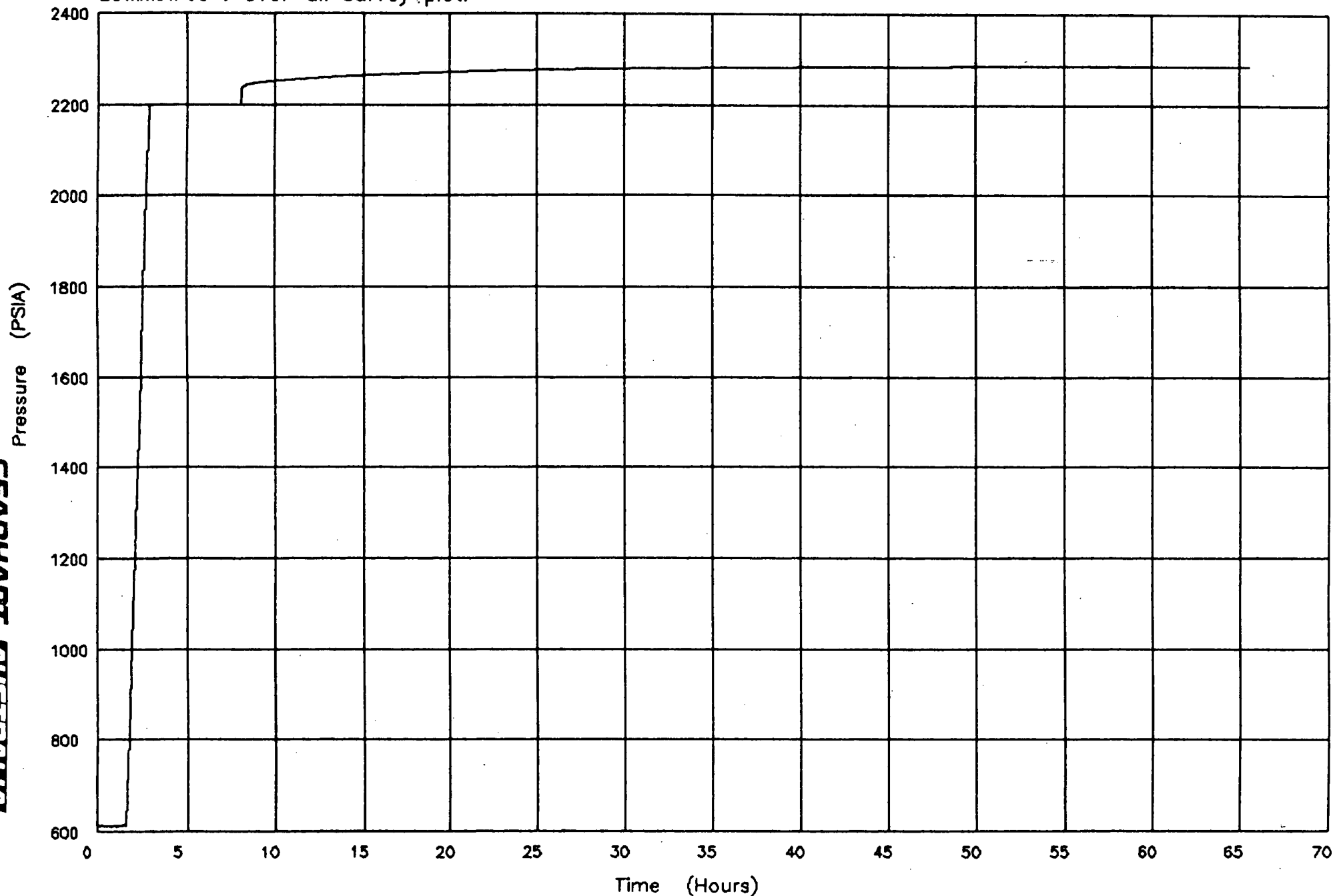
Comments : Over all survey plot.

Eq. Type: H.P.

Gauge No: 631

From : 12:26:00 03/04/85

To : 06:00:00 06/04/85



000014

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

WELL : WANCOOCHA #4

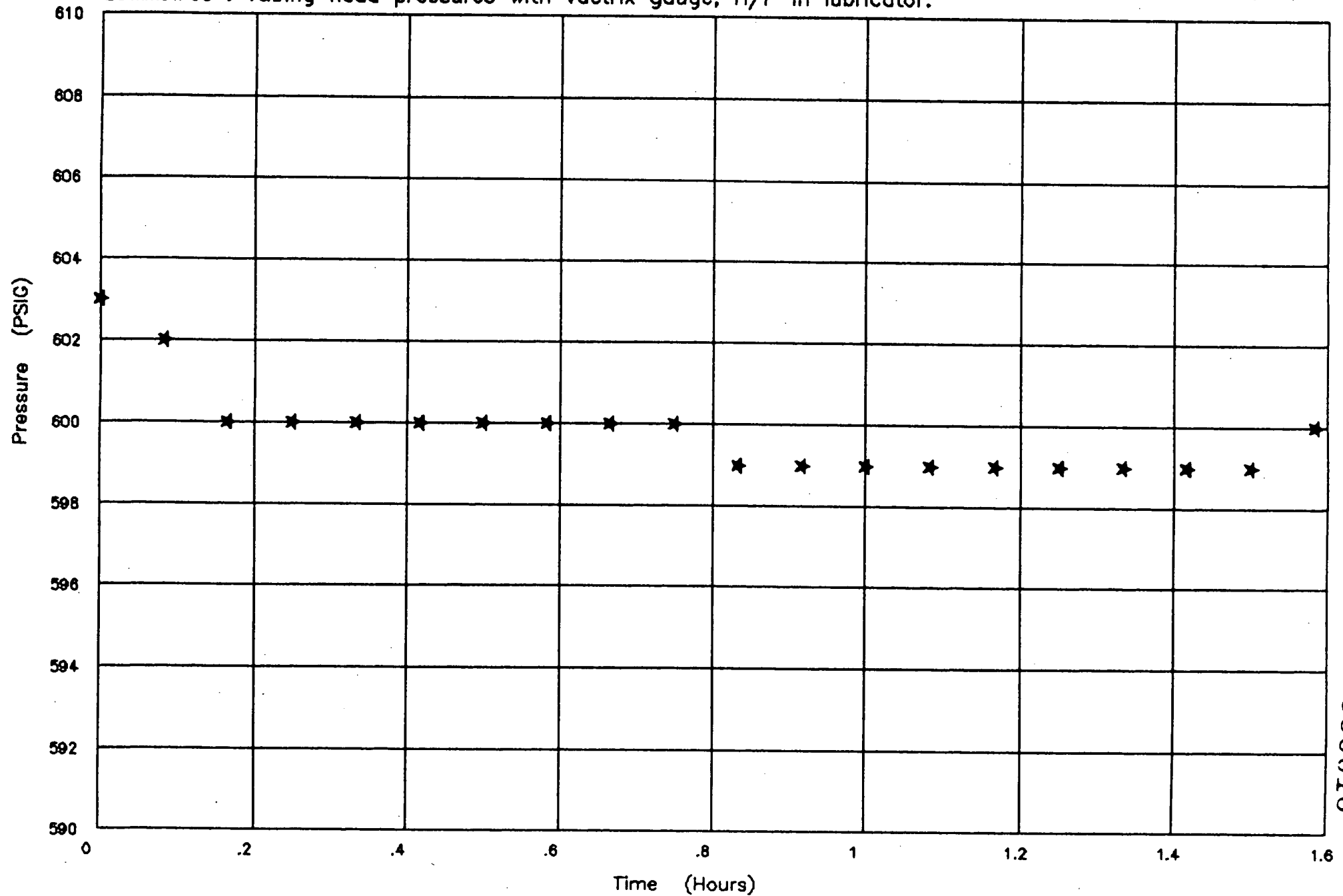
Eq. Type:

Gauge No:

From : 12:20:00 03/04/85

To : 13:55:00 03/04/85

Comments : Tubing head pressures with Vaetrix gauge, H/P in lubricator.



PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type :
Gauge # :
Depth : 0 Feet

Comments : Tubing head pressures with Vaetrix gauge, H/P in lubricator.

Seq.#	Date	Time	dt	Pressure (PSIG)	Temp (Deg.F)
1	03/04/85	12:20:00	0.0000	603.00	+81.0
2	03/04/85	12:25:00	0.0833	602.00	+81.0
3	03/04/85	12:30:00	0.1667	600.00	+81.0
4	03/04/85	12:35:00	0.2500	600.00	+81.0
5	03/04/85	12:40:00	0.3333	600.00	+81.0
6	03/04/85	12:45:00	0.4167	600.00	+81.0
7	03/04/85	12:50:00	0.5000	600.00	+81.0
8	03/04/85	12:55:00	0.5833	600.00	+81.0
9	03/04/85	13:00:00	0.6667	600.00	+81.0
10	03/04/85	13:05:00	0.7500	600.00	+81.0
11	03/04/85	13:10:00	0.8333	599.00	+81.0
12	03/04/85	13:15:00	0.9167	599.00	+81.0
13	03/04/85	13:20:00	1.0000	599.00	+81.0
14	03/04/85	13:25:00	1.0833	599.00	+81.0
15	03/04/85	13:30:00	1.1667	599.00	+81.0
16	03/04/85	13:35:00	1.2500	599.00	+81.0
17	03/04/85	13:40:00	1.3333	599.00	+81.0
18	03/04/85	13:45:00	1.4167	599.00	+81.0
19	03/04/85	13:50:00	1.5000	599.00	+81.0
20	03/04/85	13:55:00	1.5833	600.00	+81.0

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type:

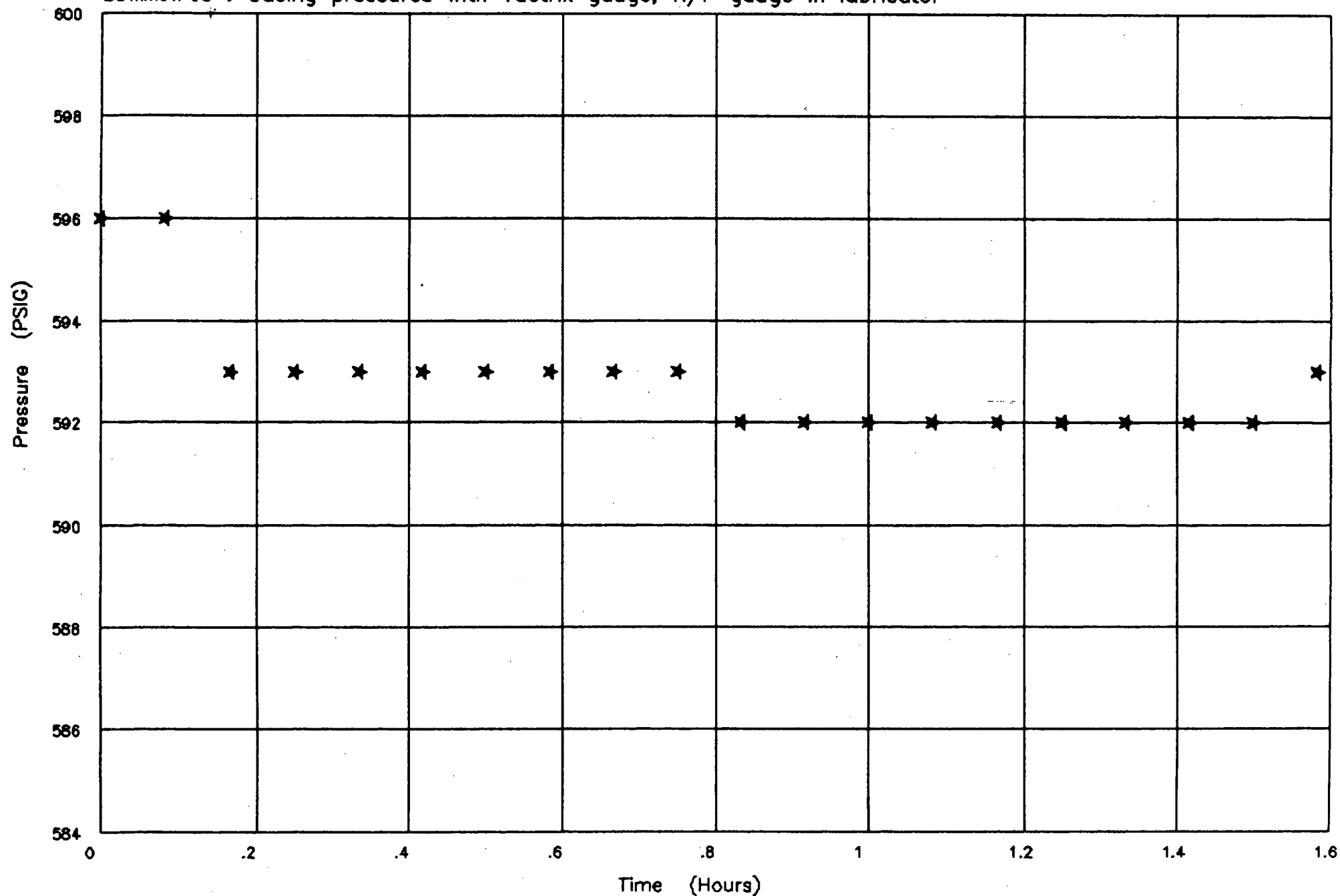
From : 12:20:00 03/04/85

WELL : WANCOOCHA #4

Gauge No:

To : 13:55:00 03/04/85

Comments : Casing pressures with Vaetrix gauge, H/P gauge in lubricator



GEARHART AUSTRALIA

000017

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCDOOCHA #4

Eq. Type :
Gauge # :
Depth : 0 Feet

Comments : Casing pressures with Vaetrix gauge, H/P gauge in lubricator

Seq.#	Date	Time	dt	Pressure (PSIG)	Temp (Deg.F)
1	03/04/85	12:20:00	0.0000	596.00	+81.0
2	03/04/85	12:25:00	0.0833	596.00	+81.0
3	03/04/85	12:30:00	0.1667	593.00	+81.0
4	03/04/85	12:35:00	0.2500	593.00	+81.0
5	03/04/85	12:40:00	0.3333	593.00	+81.0
6	03/04/85	12:45:00	0.4167	593.00	+81.0
7	03/04/85	12:50:00	0.5000	593.00	+81.0
8	03/04/85	12:55:00	0.5833	593.00	+81.0
9	03/04/85	13:00:00	0.6667	593.00	+81.0
10	03/04/85	13:05:00	0.7500	593.00	+81.0
11	03/04/85	13:10:00	0.8333	592.00	+81.0
12	03/04/85	13:15:00	0.9167	592.00	+81.0
13	03/04/85	13:20:00	1.0000	592.00	+81.0
14	03/04/85	13:25:00	1.0833	592.00	+81.0
15	03/04/85	13:30:00	1.1667	592.00	+81.0
16	03/04/85	13:35:00	1.2500	592.00	+81.0
17	03/04/85	13:40:00	1.3333	592.00	+81.0
18	03/04/85	13:45:00	1.4167	592.00	+81.0
19	03/04/85	13:50:00	1.5000	592.00	+81.0
20	03/04/85	13:55:00	1.5833	593.00	+81.0

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type: H.P.

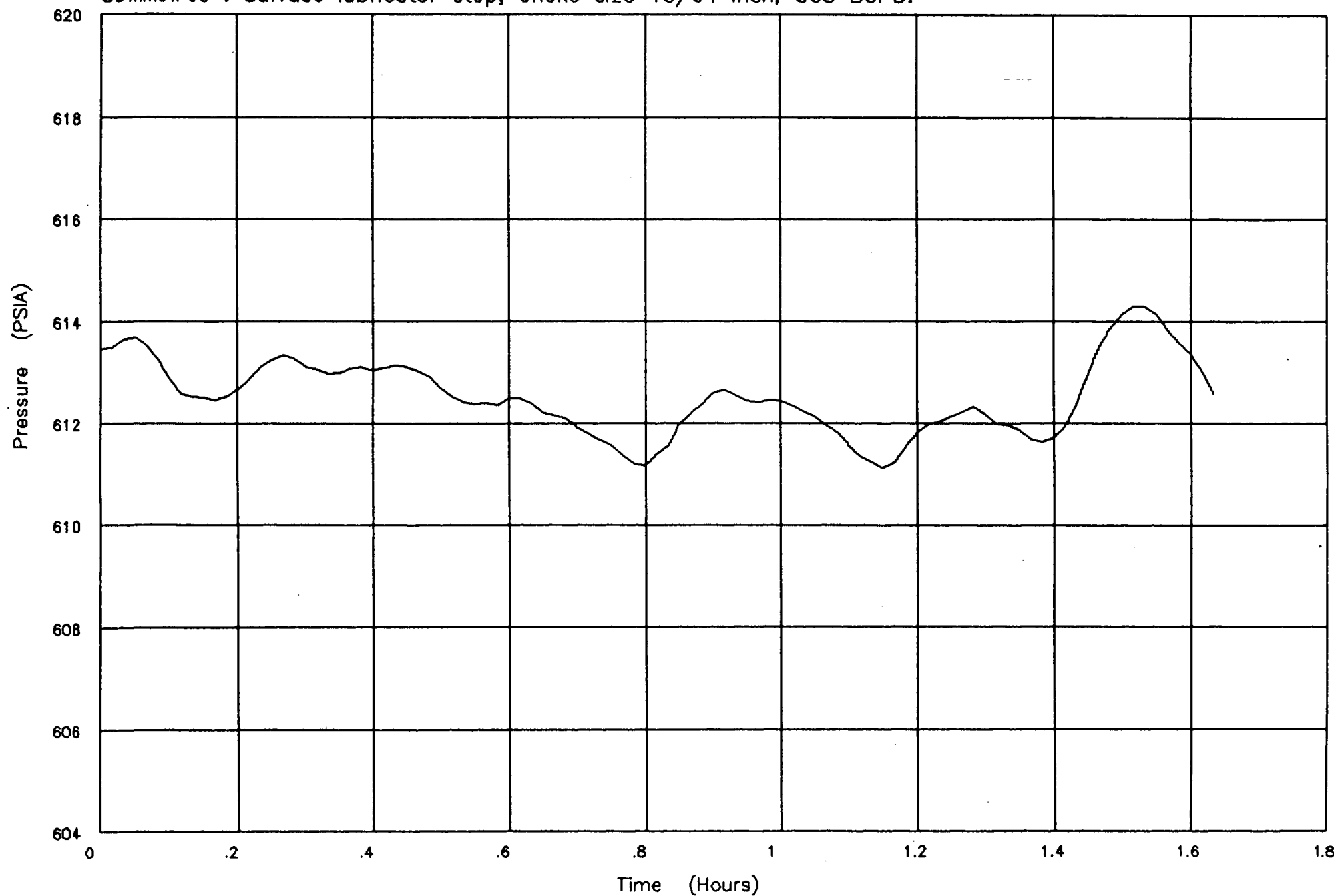
From : 12:26:00 03/04/85

WELL : WANCOOCHA #4

Gauge No: 631

To : 14:04:00 03/04/85

Comments : Surface lubricator stop, choke size 10/64 inch, 508 BOPD.



PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Surface lubricator stop, choke size 10/64 inch, 508 BOPD.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
1	03/04/85	12:26:00	0.0000	613.46	+83.1
2	03/04/85	12:27:00	0.0167	613.48	+82.9
3	03/04/85	12:28:00	0.0333	613.65	+82.9
4	03/04/85	12:29:00	0.0500	613.67	+83.0
5	03/04/85	12:30:00	0.0667	613.51	+83.0
6	03/04/85	12:31:00	0.0833	613.23	+83.1
7	03/04/85	12:32:00	0.1000	612.85	+83.2
8	03/04/85	12:33:00	0.1167	612.59	+83.2
9	03/04/85	12:34:00	0.1333	612.53	+83.3
10	03/04/85	12:35:00	0.1500	612.51	+83.2
11	03/04/85	12:36:00	0.1667	612.46	+83.2
12	03/04/85	12:37:00	0.1833	612.53	+83.2
13	03/04/85	12:38:00	0.2000	612.66	+83.1
14	03/04/85	12:39:00	0.2167	612.86	+83.1
15	03/04/85	12:40:00	0.2333	613.10	+83.1
16	03/04/85	12:41:00	0.2500	613.25	+83.1
17	03/04/85	12:42:00	0.2667	613.33	+83.1
18	03/04/85	12:43:00	0.2833	613.26	+83.2
19	03/04/85	12:44:00	0.3000	613.10	+83.1
20	03/04/85	12:45:00	0.3167	613.06	+83.1
21	03/04/85	12:46:00	0.3333	612.98	+83.1
22	03/04/85	12:47:00	0.3500	612.99	+83.0
23	03/04/85	12:48:00	0.3667	613.06	+82.9
24	03/04/85	12:49:00	0.3833	613.11	+82.9
25	03/04/85	12:50:00	0.4000	613.03	+82.9
26	03/04/85	12:51:00	0.4167	613.09	+82.8
27	03/04/85	12:52:00	0.4333	613.13	+82.9
28	03/04/85	12:53:00	0.4500	613.10	+82.9
29	03/04/85	12:54:00	0.4667	613.02	+83.0
30	03/04/85	12:55:00	0.4833	612.91	+83.1
31	03/04/85	12:56:00	0.5000	612.69	+83.1
32	03/04/85	12:57:00	0.5167	612.52	+83.1
33	03/04/85	12:58:00	0.5333	612.41	+83.1
34	03/04/85	12:59:00	0.5500	612.38	+83.1
35	03/04/85	13:00:00	0.5667	612.39	+83.1
36	03/04/85	13:01:00	0.5833	612.37	+83.0
37	03/04/85	13:02:00	0.6000	612.48	+83.0
38	03/04/85	13:03:00	0.6167	612.49	+83.1
39	03/04/85	13:04:00	0.6333	612.38	+83.2
40	03/04/85	13:05:00	0.6500	612.21	+83.1
41	03/04/85	13:06:00	0.6667	612.16	+83.2
42	03/04/85	13:07:00	0.6833	612.10	+83.3
43	03/04/85	13:08:00	0.7000	611.93	+83.4
44	03/04/85	13:09:00	0.7167	611.81	+83.4
45	03/04/85	13:10:00	0.7333	611.68	+83.5
46	03/04/85	13:11:00	0.7500	611.59	+83.5
47	03/04/85	13:12:00	0.7667	611.39	+83.6
48	03/04/85	13:13:00	0.7833	611.21	+83.6
49	03/04/85	13:14:00	0.8000	611.18	+83.5
50	03/04/85	13:15:00	0.8167	611.42	+83.5

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 2

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5 Feet

Comments : Surface lubricator stop, choke size 10/64 inch, 508 BOPD.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
51	03/04/85	13:16:00	0.8333	611.57	+83.4
52	03/04/85	13:17:00	0.8500	611.99	+83.3
53	03/04/85	13:18:00	0.8667	612.20	+83.3
54	03/04/85	13:19:00	0.8833	612.39	+83.3
55	03/04/85	13:20:00	0.9000	612.60	+83.2
56	03/04/85	13:21:00	0.9167	612.67	+83.3
57	03/04/85	13:22:00	0.9333	612.56	+83.3
58	03/04/85	13:23:00	0.9500	612.45	+83.4
59	03/04/85	13:24:00	0.9667	612.41	+83.4
60	03/04/85	13:25:00	0.9833	612.46	+83.4
61	03/04/85	13:26:00	1.0000	612.45	+83.5
62	03/04/85	13:27:00	1.0167	612.36	+83.5
63	03/04/85	13:28:00	1.0333	612.22	+83.5
64	03/04/85	13:29:00	1.0500	612.13	+83.7
65	03/04/85	13:30:00	1.0667	611.96	+83.7
66	03/04/85	13:31:00	1.0833	611.82	+83.8
67	03/04/85	13:32:00	1.1000	611.59	+83.8
68	03/04/85	13:33:00	1.1167	611.36	+84.0
69	03/04/85	13:34:00	1.1333	611.26	+83.9
70	03/04/85	13:35:00	1.1500	611.13	+83.9
71	03/04/85	13:36:00	1.1667	611.24	+83.9
72	03/04/85	13:37:00	1.1833	611.54	+83.9
73	03/04/85	13:38:00	1.2000	611.82	+83.9
74	03/04/85	13:39:00	1.2167	611.99	+83.9
75	03/04/85	13:40:00	1.2333	612.03	+84.0
76	03/04/85	13:41:00	1.2500	612.13	+83.8
77	03/04/85	13:42:00	1.2667	612.23	+83.9
78	03/04/85	13:43:00	1.2833	612.33	+83.9
79	03/04/85	13:44:00	1.3000	612.18	+83.9
80	03/04/85	13:45:00	1.3167	612.00	+84.0
81	03/04/85	13:46:00	1.3333	611.98	+84.2
82	03/04/85	13:47:00	1.3500	611.88	+84.0
83	03/04/85	13:48:00	1.3667	611.69	+84.1
84	03/04/85	13:49:00	1.3833	611.65	+84.0
85	03/04/85	13:50:00	1.4000	611.73	+83.8
86	03/04/85	13:51:00	1.4167	611.96	+83.6
87	03/04/85	13:52:00	1.4333	612.39	+83.3
88	03/04/85	13:53:00	1.4500	612.96	+83.1
89	03/04/85	13:54:00	1.4667	613.51	+83.0
90	03/04/85	13:55:00	1.4833	613.85	+82.9
91	03/04/85	13:56:00	1.5000	614.12	+82.8
92	03/04/85	13:57:00	1.5167	614.28	+82.8
93	03/04/85	13:58:00	1.5333	614.28	+82.8
94	03/04/85	13:59:00	1.5500	614.14	+82.8
95	03/04/85	14:00:00	1.5667	613.82	+82.8
96	03/04/85	14:01:00	1.5833	613.57	+83.0
97	03/04/85	14:02:00	1.6000	613.35	+83.0
98	03/04/85	14:03:00	1.6167	613.02	+83.1
99	03/04/85	14:04:00	1.6333	612.59	+83.1

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type: H.P.

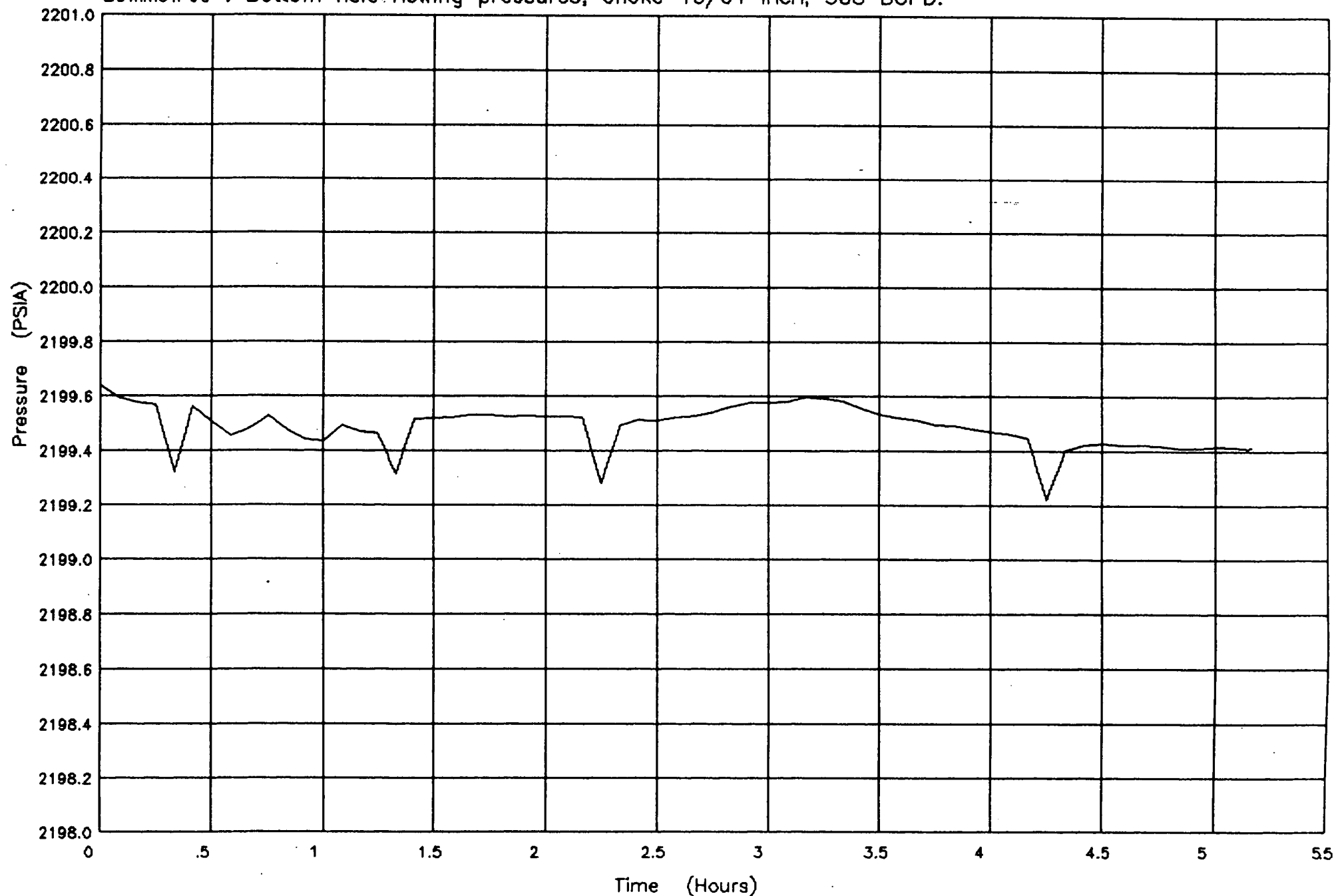
From : 15:20:00 03/04/85

WELL : WANCOOCHA #4

Gauge No: 631

To : 20:30:00 03/04/85

Comments : Bottom hole flowing pressures, choke 10/64 inch, 508 BOPD.



GEARHART AUSTRALIA

000022

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Bottom hole flowing pressures, choke 10/64 inch, 508 BOPD.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
1	03/04/85	15:20:00	0.0000	2,199.64	+217.7
2	03/04/85	15:25:00	0.0833	2,199.60	+217.8
3	03/04/85	15:30:00	0.1667	2,199.58	+217.8
4	03/04/85	15:35:00	0.2500	2,199.57	+217.8
5	03/04/85	15:40:00	0.3333	2,199.32	+217.8
6	03/04/85	15:45:00	0.4167	2,199.56	+217.7
7	03/04/85	15:50:00	0.5000	2,199.51	+217.7
8	03/04/85	15:55:00	0.5833	2,199.45	+217.8
9	03/04/85	16:00:00	0.6667	2,199.48	+217.8
10	03/04/85	16:05:00	0.7500	2,199.53	+217.8
11	03/04/85	16:10:00	0.8333	2,199.48	+217.8
12	03/04/85	16:15:00	0.9167	2,199.44	+217.8
13	03/04/85	16:20:00	1.0000	2,199.44	+217.8
14	03/04/85	16:25:00	1.0833	2,199.49	+217.8
15	03/04/85	16:30:00	1.1667	2,199.47	+217.8
16	03/04/85	16:35:00	1.2500	2,199.46	+217.8
17	03/04/85	16:40:00	1.3333	2,199.31	+217.8
18	03/04/85	16:45:00	1.4167	2,199.52	+217.8
19	03/04/85	16:50:00	1.5000	2,199.52	+217.8
20	03/04/85	16:55:00	1.5833	2,199.52	+217.8
21	03/04/85	17:00:00	1.6667	2,199.53	+217.8
22	03/04/85	17:05:00	1.7500	2,199.53	+217.8
23	03/04/85	17:10:00	1.8333	2,199.52	+217.8
24	03/04/85	17:15:00	1.9167	2,199.53	+217.8
25	03/04/85	17:20:00	2.0000	2,199.52	+217.8
26	03/04/85	17:25:00	2.0833	2,199.52	+217.8
27	03/04/85	17:30:00	2.1667	2,199.52	+217.8
28	03/04/85	17:35:00	2.2500	2,199.28	+217.8
29	03/04/85	17:40:00	2.3333	2,199.49	+217.8
30	03/04/85	17:45:00	2.4167	2,199.51	+217.8
31	03/04/85	17:50:00	2.5000	2,199.51	+217.8
32	03/04/85	17:55:00	2.5833	2,199.52	+217.8
33	03/04/85	18:00:00	2.6667	2,199.53	+217.8
34	03/04/85	18:05:00	2.7500	2,199.54	+217.8
35	03/04/85	18:10:00	2.8333	2,199.56	+217.8
36	03/04/85	18:15:00	2.9167	2,199.58	+217.8
37	03/04/85	18:20:00	3.0000	2,199.58	+217.8
38	03/04/85	18:25:00	3.0833	2,199.58	+217.8
39	03/04/85	18:30:00	3.1667	2,199.60	+217.8
40	03/04/85	18:35:00	3.2500	2,199.59	+217.8
41	03/04/85	18:40:00	3.3333	2,199.58	+217.8
42	03/04/85	18:45:00	3.4167	2,199.56	+217.8
43	03/04/85	18:50:00	3.5000	2,199.53	+217.8
44	03/04/85	18:55:00	3.5833	2,199.52	+217.8
45	03/04/85	19:00:00	3.6667	2,199.51	+217.8
46	03/04/85	19:05:00	3.7500	2,199.50	+217.8
47	03/04/85	19:10:00	3.8333	2,199.49	+217.8
48	03/04/85	19:15:00	3.9167	2,199.48	+217.8
49	03/04/85	19:20:00	4.0000	2,199.47	+217.8
50	03/04/85	19:25:00	4.0833	2,199.46	+217.8

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 2

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Bottom hole flowing pressures, choke 10/64 inch, 508 BOPD.

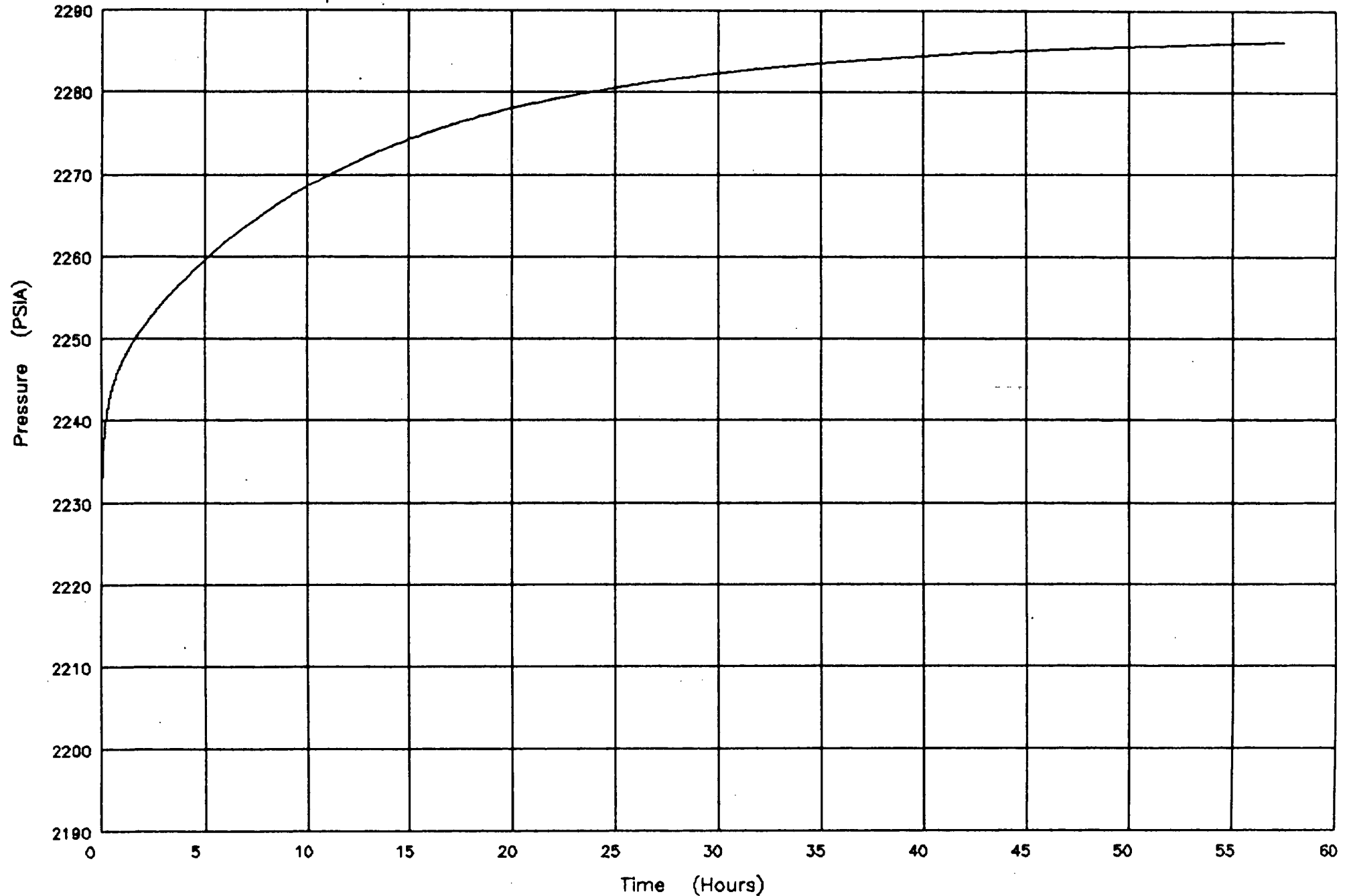
Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
51	03/04/85	19:30:00	4.1667	2,199.45	+217.9
52	03/04/85	19:35:00	4.2500	2,199.22	+217.9
53	03/04/85	19:40:00	4.3333	2,199.40	+217.8
54	03/04/85	19:45:00	4.4167	2,199.42	+217.9
55	03/04/85	19:50:00	4.5000	2,199.43	+217.9
56	03/04/85	19:55:00	4.5833	2,199.42	+217.8
57	03/04/85	20:00:00	4.6667	2,199.42	+217.9
58	03/04/85	20:05:00	4.7500	2,199.42	+217.9
59	03/04/85	20:10:00	4.8333	2,199.41	+217.9
60	03/04/85	20:15:00	4.9167	2,199.41	+217.9
61	03/04/85	20:19:00	4.9833	2,199.41	+217.9
62	03/04/85	20:20:00	5.0000	2,199.42	+217.9
63	03/04/85	20:25:00	5.0833	2,199.41	+217.9
64	03/04/85	20:28:00	5.1333	2,199.41	+217.9
65	03/04/85	20:28:30	5.1417	2,199.41	+217.9
66	03/04/85	20:29:00	5.1500	2,199.41	+217.9
67	03/04/85	20:29:30	5.1583	2,199.41	+217.9
68	03/04/85	20:30:00	5.1667	2,199.41	+217.9

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4
Comments : Build up after flow test.

Eq. Type: H.P.
Gauge No: 631

From : 20:30:00 03/04/85
To : 06:00:00 06/04/85



PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
1	03/04/85	20:30:00	0.0000	2,199.41	+217.9
2	03/04/85	20:30:30	0.0083	2,204.45	+217.9
3	03/04/85	20:31:00	0.0167	2,222.16	+217.9
4	03/04/85	20:31:30	0.0250	2,230.31	+217.9
5	03/04/85	20:32:00	0.0333	2,232.52	+217.9
6	03/04/85	20:32:30	0.0417	2,233.75	+217.9
7	03/04/85	20:33:00	0.0500	2,234.61	+217.9
8	03/04/85	20:33:30	0.0583	2,235.28	+217.9
9	03/04/85	20:34:00	0.0667	2,235.81	+217.9
10	03/04/85	20:34:30	0.0750	2,236.25	+217.9
11	03/04/85	20:35:00	0.0833	2,236.63	+217.9
12	03/04/85	20:35:30	0.0917	2,236.97	+217.9
13	03/04/85	20:36:00	0.1000	2,237.27	+217.9
14	03/04/85	20:36:30	0.1083	2,237.55	+217.8
15	03/04/85	20:37:00	0.1167	2,237.82	+217.8
16	03/04/85	20:37:30	0.1250	2,238.06	+217.8
17	03/04/85	20:38:00	0.1333	2,238.30	+217.8
18	03/04/85	20:38:30	0.1417	2,238.52	+217.8
19	03/04/85	20:39:00	0.1500	2,238.74	+217.8
20	03/04/85	20:39:30	0.1583	2,238.94	+217.8
21	03/04/85	20:40:00	0.1667	2,239.14	+217.8
22	03/04/85	20:40:30	0.1750	2,239.33	+217.8
23	03/04/85	20:41:00	0.1833	2,239.51	+217.8
24	03/04/85	20:41:30	0.1917	2,239.68	+217.8
25	03/04/85	20:42:00	0.2000	2,239.85	+217.8
26	03/04/85	20:42:30	0.2083	2,240.02	+217.8
27	03/04/85	20:43:00	0.2167	2,240.18	+217.8
28	03/04/85	20:43:30	0.2250	2,240.33	+217.8
29	03/04/85	20:44:00	0.2333	2,240.48	+217.7
30	03/04/85	20:44:30	0.2417	2,240.61	+217.7
31	03/04/85	20:45:00	0.2500	2,240.75	+217.7
32	03/04/85	20:45:30	0.2583	2,240.87	+217.7
33	03/04/85	20:46:00	0.2667	2,241.00	+217.7
34	03/04/85	20:46:30	0.2750	2,241.12	+217.7
35	03/04/85	20:47:30	0.2917	2,241.28	+217.7
36	03/04/85	20:48:00	0.3000	2,241.48	+217.7
37	03/04/85	20:49:00	0.3167	2,241.74	+217.7
38	03/04/85	20:50:00	0.3333	2,241.90	+217.7
39	03/04/85	20:51:00	0.3500	2,242.12	+217.7
40	03/04/85	20:52:00	0.3667	2,242.34	+217.6
41	03/04/85	20:53:00	0.3833	2,242.55	+217.6
42	03/04/85	20:54:00	0.4000	2,242.75	+217.6
43	03/04/85	20:55:00	0.4167	2,242.94	+217.6
44	03/04/85	20:56:00	0.4333	2,243.13	+217.6
45	03/04/85	20:57:00	0.4500	2,243.31	+217.6
46	03/04/85	20:58:00	0.4667	2,243.48	+217.6
47	03/04/85	20:59:00	0.4833	2,243.65	+217.6
48	03/04/85	21:00:00	0.5000	2,243.81	+217.6
49	03/04/85	21:01:00	0.5167	2,243.96	+217.6
50	03/04/85	21:02:00	0.5333	2,244.11	+217.5

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 2

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
51	03/04/85	21:03:00	0.5500	2,244.26	+217.5
52	03/04/85	21:04:00	0.5667	2,244.40	+217.5
53	03/04/85	21:05:00	0.5833	2,244.54	+217.5
54	03/04/85	21:06:00	0.6000	2,244.68	+217.5
55	03/04/85	21:07:00	0.6167	2,244.82	+217.5
56	03/04/85	21:08:00	0.6333	2,244.95	+217.5
57	03/04/85	21:09:00	0.6500	2,245.08	+217.5
58	03/04/85	21:10:00	0.6667	2,245.21	+217.5
59	03/04/85	21:11:00	0.6833	2,245.33	+217.5
60	03/04/85	21:12:00	0.7000	2,245.45	+217.4
61	03/04/85	21:13:00	0.7167	2,245.56	+217.4
62	03/04/85	21:14:00	0.7333	2,245.67	+217.4
63	03/04/85	21:15:00	0.7500	2,245.78	+217.4
64	03/04/85	21:16:00	0.7667	2,245.89	+217.4
65	03/04/85	21:17:00	0.7833	2,246.00	+217.4
66	03/04/85	21:18:00	0.8000	2,246.11	+217.4
67	03/04/85	21:19:00	0.8167	2,246.21	+217.4
68	03/04/85	21:20:00	0.8333	2,246.32	+217.4
69	03/04/85	21:21:00	0.8500	2,246.42	+217.4
70	03/04/85	21:22:00	0.8667	2,246.52	+217.4
71	03/04/85	21:23:00	0.8833	2,246.62	+217.4
72	03/04/85	21:24:00	0.9000	2,246.72	+217.4
73	03/04/85	21:25:00	0.9167	2,246.82	+217.4
74	03/04/85	21:26:00	0.9333	2,246.92	+217.4
75	03/04/85	21:27:00	0.9500	2,247.01	+217.3
76	03/04/85	21:28:00	0.9667	2,247.10	+217.3
77	03/04/85	21:29:00	0.9833	2,247.20	+217.3
78	03/04/85	21:30:00	1.0000	2,247.29	+217.3
79	03/04/85	21:31:00	1.0167	2,247.37	+217.3
80	03/04/85	21:32:00	1.0333	2,247.46	+217.3
81	03/04/85	21:33:00	1.0500	2,247.54	+217.3
82	03/04/85	21:34:00	1.0667	2,247.63	+217.3
83	03/04/85	21:35:00	1.0833	2,247.71	+217.3
84	03/04/85	21:36:00	1.1000	2,247.80	+217.3
85	03/04/85	21:37:00	1.1167	2,247.84	+217.3
86	03/04/85	21:38:00	1.1333	2,247.96	+217.3
87	03/04/85	21:39:00	1.1500	2,248.04	+217.3
88	03/04/85	21:40:00	1.1667	2,248.13	+217.3
89	03/04/85	21:41:00	1.1833	2,248.20	+217.3
90	03/04/85	21:42:00	1.2000	2,248.28	+217.3
91	03/04/85	21:43:00	1.2167	2,248.36	+217.2
92	03/04/85	21:44:00	1.2333	2,248.44	+217.2
93	03/04/85	21:45:00	1.2500	2,248.52	+217.2
94	03/04/85	21:46:00	1.2667	2,248.60	+217.2
95	03/04/85	21:47:00	1.2833	2,248.67	+217.2
96	03/04/85	21:48:00	1.3000	2,248.75	+217.2
97	03/04/85	21:49:00	1.3167	2,248.82	+217.2
98	03/04/85	21:50:00	1.3333	2,248.89	+217.2
99	03/04/85	21:51:00	1.3500	2,248.97	+217.2
100	03/04/85	21:52:00	1.3667	2,249.04	+217.2

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 3

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
101	03/04/85	21:53:00	1.3833	2,249.11	+217.2
102	03/04/85	21:54:00	1.4000	2,249.19	+217.2
103	03/04/85	21:55:00	1.4167	2,249.26	+217.2
104	03/04/85	21:56:00	1.4333	2,249.33	+217.2
105	03/04/85	21:57:00	1.4500	2,249.40	+217.2
106	03/04/85	21:58:00	1.4667	2,249.46	+217.2
107	03/04/85	21:59:00	1.4833	2,249.53	+217.2
108	03/04/85	22:00:00	1.5000	2,249.60	+217.2
109	03/04/85	22:01:00	1.5167	2,249.66	+217.2
110	03/04/85	22:02:00	1.5333	2,249.73	+217.2
111	03/04/85	22:03:00	1.5500	2,249.80	+217.2
112	03/04/85	22:04:00	1.5667	2,249.87	+217.2
113	03/04/85	22:05:00	1.5833	2,249.93	+217.1
114	03/04/85	22:06:00	1.6000	2,250.00	+217.1
115	03/04/85	22:07:00	1.6167	2,250.07	+217.1
116	03/04/85	22:08:00	1.6333	2,250.13	+217.1
117	03/04/85	22:09:00	1.6500	2,250.19	+217.1
118	03/04/85	22:10:00	1.6667	2,250.26	+217.1
119	03/04/85	22:11:00	1.6833	2,250.32	+217.1
120	03/04/85	22:12:00	1.7000	2,250.38	+217.1
121	03/04/85	22:13:00	1.7167	2,250.44	+217.1
122	03/04/85	22:14:00	1.7333	2,250.51	+217.1
123	03/04/85	22:15:00	1.7500	2,250.57	+217.1
124	03/04/85	22:20:00	1.8333	2,250.79	+217.1
125	03/04/85	22:25:00	1.9167	2,251.10	+217.1
126	03/04/85	22:30:00	2.0000	2,251.39	+217.1
127	03/04/85	22:35:00	2.0833	2,251.71	+217.1
128	03/04/85	22:40:00	2.1667	2,251.99	+217.1
129	03/04/85	22:45:00	2.2500	2,252.27	+217.0
130	03/04/85	22:50:00	2.3333	2,252.54	+217.0
131	03/04/85	22:55:00	2.4167	2,252.81	+217.0
132	03/04/85	23:00:00	2.5000	2,253.08	+217.0
133	03/04/85	23:05:00	2.5833	2,253.34	+217.0
134	03/04/85	23:10:00	2.6667	2,253.59	+217.0
135	03/04/85	23:15:00	2.7500	2,253.85	+217.0
136	03/04/85	23:20:00	2.8333	2,254.09	+217.0
137	03/04/85	23:25:00	2.9167	2,254.34	+217.0
138	03/04/85	23:30:00	3.0000	2,254.58	+216.9
139	03/04/85	23:35:00	3.0833	2,254.82	+216.9
140	03/04/85	23:40:00	3.1667	2,255.06	+216.9
141	03/04/85	23:45:00	3.2500	2,255.30	+216.9
142	03/04/85	23:50:00	3.3333	2,255.52	+216.9
143	03/04/85	23:55:00	3.4167	2,255.64	+216.9
144	04/04/85	00:00:00	3.5000	2,255.86	+216.9
145	04/04/85	00:05:00	3.5833	2,256.09	+216.9
146	04/04/85	00:10:00	3.6667	2,256.31	+216.9
147	04/04/85	00:15:00	3.7500	2,256.52	+216.9
148	04/04/85	00:20:00	3.8333	2,256.74	+216.9
149	04/04/85	00:25:00	3.9167	2,256.96	+216.9
150	04/04/85	00:30:00	4.0000	2,257.17	+216.9

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 4

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
151	04/04/85	00:35:00	4.0833	2,257.38	+216.9
152	04/04/85	00:40:00	4.1667	2,257.59	+216.9
153	04/04/85	00:45:00	4.2500	2,257.79	+216.9
154	04/04/85	00:50:00	4.3333	2,258.00	+216.9
155	04/04/85	00:55:00	4.4167	2,258.20	+216.9
156	04/04/85	01:00:00	4.5000	2,258.40	+216.8
157	04/04/85	01:05:00	4.5833	2,258.60	+216.8
158	04/04/85	01:10:00	4.6667	2,258.79	+216.8
159	04/04/85	01:15:00	4.7500	2,258.99	+216.8
160	04/04/85	01:20:00	4.8333	2,259.18	+216.8
161	04/04/85	01:25:00	4.9167	2,259.37	+216.8
162	04/04/85	01:30:00	5.0000	2,259.56	+216.8
163	04/04/85	01:35:00	5.0833	2,259.78	+216.8
164	04/04/85	01:40:00	5.1667	2,259.93	+216.8
165	04/04/85	01:45:00	5.2500	2,260.11	+216.8
166	04/04/85	01:50:00	5.3333	2,260.29	+216.8
167	04/04/85	01:55:00	5.4167	2,260.47	+216.8
168	04/04/85	02:00:00	5.5000	2,260.65	+216.8
169	04/04/85	02:05:00	5.5833	2,260.83	+216.8
170	04/04/85	02:10:00	5.6667	2,261.01	+216.8
171	04/04/85	02:15:00	5.7500	2,261.18	+216.8
172	04/04/85	02:20:00	5.8333	2,261.35	+216.8
173	04/04/85	02:25:00	5.9167	2,261.53	+216.8
174	04/04/85	02:30:00	6.0000	2,261.70	+216.8
175	04/04/85	02:35:00	6.0833	2,261.86	+216.8
176	04/04/85	02:40:00	6.1667	2,262.03	+216.8
177	04/04/85	02:45:00	6.2500	2,262.19	+216.8
178	04/04/85	02:50:00	6.3333	2,262.35	+216.8
179	04/04/85	02:55:00	6.4167	2,262.51	+216.8
180	04/04/85	03:00:00	6.5000	2,262.67	+216.8
181	04/04/85	03:05:00	6.5833	2,262.82	+216.8
182	04/04/85	03:10:00	6.6667	2,262.99	+216.8
183	04/04/85	03:15:00	6.7500	2,263.15	+216.8
184	04/04/85	03:20:00	6.8333	2,263.30	+216.8
185	04/04/85	03:25:00	6.9167	2,263.46	+216.8
186	04/04/85	03:30:00	7.0000	2,263.62	+216.8
187	04/04/85	03:35:00	7.0833	2,263.77	+216.8
188	04/04/85	03:40:00	7.1667	2,263.92	+216.8
189	04/04/85	03:45:00	7.2500	2,264.06	+216.7
190	04/04/85	03:50:00	7.3333	2,264.21	+216.7
191	04/04/85	03:55:00	7.4167	2,264.36	+216.7
192	04/04/85	04:00:00	7.5000	2,264.51	+216.7
193	04/04/85	04:05:00	7.5833	2,264.66	+216.7
194	04/04/85	04:10:00	7.6667	2,264.80	+216.7
195	04/04/85	04:15:00	7.7500	2,264.95	+216.7
196	04/04/85	04:20:00	7.8333	2,265.09	+216.7
197	04/04/85	04:25:00	7.9167	2,265.24	+216.7
198	04/04/85	04:30:00	8.0000	2,265.38	+216.7
199	04/04/85	04:35:00	8.0833	2,265.52	+216.7
200	04/04/85	04:40:00	8.1667	2,265.66	+216.7

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 5

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCODCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
201	04/04/85	04:45:00	8.2500	2,265.80	+216.7
202	04/04/85	04:50:00	8.3333	2,265.94	+216.7
203	04/04/85	04:55:00	8.4167	2,266.07	+216.7
204	04/04/85	05:00:00	8.5000	2,266.21	+216.7
205	04/04/85	05:05:00	8.5833	2,266.34	+216.7
206	04/04/85	05:10:00	8.6667	2,266.47	+216.7
207	04/04/85	05:15:00	8.7500	2,266.61	+216.7
208	04/04/85	05:20:00	8.8333	2,266.74	+216.7
209	04/04/85	05:25:00	8.9167	2,266.86	+216.7
210	04/04/85	05:30:00	9.0000	2,266.99	+216.6
211	04/04/85	05:35:00	9.0833	2,267.12	+216.6
212	04/04/85	05:40:00	9.1667	2,267.25	+216.6
213	04/04/85	05:45:00	9.2500	2,267.37	+216.6
214	04/04/85	05:50:00	9.3333	2,267.50	+216.6
215	04/04/85	05:55:00	9.4167	2,267.62	+216.6
216	04/04/85	06:00:00	9.5000	2,267.75	+216.6
217	04/04/85	06:05:00	9.5833	2,267.88	+216.6
218	04/04/85	06:10:00	9.6667	2,268.00	+216.6
219	04/04/85	06:15:00	9.7500	2,268.12	+216.6
220	04/04/85	06:20:00	9.8333	2,268.25	+216.6
221	04/04/85	06:25:00	9.9167	2,268.37	+216.6
222	04/04/85	06:30:00	10.0000	2,268.54	+216.6
223	04/04/85	06:35:00	10.0833	2,268.65	+216.6
224	04/04/85	06:40:00	10.1667	2,268.72	+216.6
225	04/04/85	06:45:00	10.2500	2,268.85	+216.6
226	04/04/85	06:50:00	10.3333	2,268.96	+216.6
227	04/04/85	06:55:00	10.4167	2,269.07	+216.6
228	04/04/85	07:00:00	10.5000	2,269.19	+216.6
229	04/04/85	07:05:00	10.5833	2,269.30	+216.6
230	04/04/85	07:10:00	10.6667	2,269.41	+216.6
231	04/04/85	07:15:00	10.7500	2,269.53	+216.6
232	04/04/85	07:20:00	10.8333	2,269.64	+216.6
233	04/04/85	07:25:00	10.9167	2,269.76	+216.6
234	04/04/85	07:30:00	11.0000	2,269.87	+216.6
235	04/04/85	07:35:00	11.0833	2,269.98	+216.6
236	04/04/85	07:40:00	11.1667	2,270.09	+216.6
237	04/04/85	07:45:00	11.2500	2,270.20	+216.6
238	04/04/85	07:50:00	11.3333	2,270.31	+216.6
239	04/04/85	07:55:00	11.4167	2,270.41	+216.6
240	04/04/85	08:00:00	11.5000	2,270.52	+216.5
241	04/04/85	08:05:00	11.5833	2,270.62	+216.5
242	04/04/85	08:10:00	11.6667	2,270.72	+216.5
243	04/04/85	08:15:00	11.7500	2,270.82	+216.6
244	04/04/85	08:20:00	11.8333	2,270.93	+216.6
245	04/04/85	08:25:00	11.9167	2,271.04	+216.5
246	04/04/85	08:30:00	12.0000	2,271.14	+216.5
247	04/04/85	08:35:00	12.0833	2,271.24	+216.5
248	04/04/85	08:40:00	12.1667	2,271.34	+216.5
249	04/04/85	08:45:00	12.2500	2,271.44	+216.5
250	04/04/85	08:50:00	12.3333	2,271.53	+216.5

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 6

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
251	04/04/85	08:55:00	12.4167	2,271.63	+216.5
252	04/04/85	09:00:00	12.5000	2,271.72	+216.5
253	04/04/85	09:05:00	12.5833	2,271.82	+216.5
254	04/04/85	09:10:00	12.6667	2,271.92	+216.5
255	04/04/85	09:15:00	12.7500	2,272.01	+216.5
256	04/04/85	09:20:00	12.8333	2,272.11	+216.5
257	04/04/85	09:25:00	12.9167	2,272.20	+216.5
258	04/04/85	09:30:00	13.0000	2,272.30	+216.5
259	04/04/85	09:35:00	13.0833	2,272.39	+216.5
260	04/04/85	09:40:00	13.1667	2,272.47	+216.5
261	04/04/85	09:45:00	13.2500	2,272.56	+216.5
262	04/04/85	09:50:00	13.3333	2,272.67	+216.5
263	04/04/85	09:55:00	13.4167	2,272.75	+216.5
264	04/04/85	10:00:00	13.5000	2,272.84	+216.5
265	04/04/85	10:05:00	13.5833	2,272.90	+216.5
266	04/04/85	10:10:00	13.6667	2,272.98	+216.5
267	04/04/85	10:15:00	13.7500	2,273.07	+216.5
268	04/04/85	10:20:00	13.8333	2,273.15	+216.5
269	04/04/85	10:25:00	13.9167	2,273.24	+216.5
270	04/04/85	10:30:00	14.0000	2,273.32	+216.5
271	04/04/85	10:35:00	14.0833	2,273.41	+216.5
272	04/04/85	10:40:00	14.1667	2,273.49	+216.5
273	04/04/85	10:45:00	14.2500	2,273.60	+216.5
274	04/04/85	10:50:00	14.3333	2,273.65	+216.5
275	04/04/85	10:55:00	14.4167	2,273.73	+216.5
276	04/04/85	11:00:00	14.5000	2,273.81	+216.5
277	04/04/85	11:10:00	14.6667	2,273.99	+216.5
278	04/04/85	11:15:00	14.7500	2,274.06	+216.5
279	04/04/85	11:20:00	14.8333	2,274.15	+216.5
280	04/04/85	11:25:00	14.9167	2,274.23	+216.5
281	04/04/85	11:30:00	15.0000	2,274.33	+216.5
282	04/04/85	11:35:00	15.0833	2,274.40	+216.5
283	04/04/85	11:40:00	15.1667	2,274.47	+216.5
284	04/04/85	11:45:00	15.2500	2,274.54	+216.4
285	04/04/85	11:50:00	15.3333	2,274.62	+216.4
286	04/04/85	11:55:00	15.4167	2,274.69	+216.5
287	04/04/85	12:00:00	15.5000	2,274.78	+216.4
288	04/04/85	12:05:00	15.5833	2,274.84	+216.4
289	04/04/85	12:10:00	15.6667	2,274.91	+216.4
290	04/04/85	12:15:00	15.7500	2,274.97	+216.4
291	04/04/85	12:20:00	15.8333	2,275.05	+216.4
292	04/04/85	12:25:00	15.9167	2,275.11	+216.4
293	04/04/85	12:30:00	16.0000	2,275.18	+216.4
294	04/04/85	12:40:00	16.1667	2,275.32	+216.4
295	04/04/85	12:50:00	16.3333	2,275.46	+216.0
296	04/04/85	13:00:00	16.5000	2,275.59	+216.4
297	04/04/85	13:10:00	16.6667	2,275.73	+216.4
298	04/04/85	13:20:00	16.8333	2,275.86	+216.4
299	04/04/85	13:30:00	17.0000	2,275.99	+216.4
300	04/04/85	13:40:00	17.1667	2,276.12	+216.4

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 7

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
301	04/04/85	13:50:00	17.3333	2,276.24	+216.4
302	04/04/85	14:00:00	17.5000	2,276.36	+216.4
303	04/04/85	14:10:00	17.6667	2,276.47	+216.4
304	04/04/85	14:20:00	17.8333	2,276.60	+216.4
305	04/04/85	14:30:00	18.0000	2,276.71	+216.4
306	04/04/85	14:40:00	18.1667	2,276.84	+216.4
307	04/04/85	14:50:00	18.3333	2,276.96	+216.4
308	04/04/85	15:00:00	18.5000	2,277.07	+216.4
309	04/04/85	15:10:00	18.6667	2,277.19	+216.4
310	04/04/85	15:20:00	18.8333	2,277.30	+216.4
311	04/04/85	15:30:00	19.0000	2,277.40	+216.4
312	04/04/85	15:40:00	19.1667	2,277.50	+216.4
313	04/04/85	15:50:00	19.3333	2,277.61	+216.4
314	04/04/85	16:00:00	19.5000	2,277.73	+216.4
315	04/04/85	16:10:00	19.6667	2,277.84	+216.4
316	04/04/85	16:20:00	19.8333	2,277.93	+216.4
317	04/04/85	16:30:00	20.0000	2,278.04	+216.4
318	04/04/85	16:40:00	20.1667	2,278.14	+216.4
319	04/04/85	16:50:00	20.3333	2,278.24	+216.4
320	04/04/85	17:00:00	20.5000	2,278.33	+216.4
321	04/04/85	17:10:00	20.6667	2,278.42	+216.4
322	04/04/85	17:20:00	20.8333	2,278.52	+216.4
323	04/04/85	17:30:00	21.0000	2,278.60	+216.4
324	04/04/85	17:40:00	21.1667	2,278.69	+216.4
325	04/04/85	17:50:00	21.3333	2,278.78	+216.3
326	04/04/85	18:00:00	21.5000	2,278.87	+216.3
327	04/04/85	18:10:00	21.6667	2,278.96	+216.3
328	04/04/85	18:20:00	21.8333	2,279.05	+216.3
329	04/04/85	18:30:00	22.0000	2,279.13	+216.3
330	04/04/85	18:40:00	22.1667	2,279.21	+216.3
331	04/04/85	18:50:00	22.3333	2,279.29	+216.3
332	04/04/85	19:00:00	22.5000	2,279.38	+216.3
333	04/04/85	19:10:00	22.6667	2,279.46	+216.3
334	04/04/85	19:20:00	22.8333	2,279.53	+216.3
335	04/04/85	19:30:00	23.0000	2,279.61	+216.3
336	04/04/85	19:40:00	23.1667	2,279.70	+216.3
337	04/04/85	19:50:00	23.3333	2,279.78	+216.3
338	04/04/85	20:00:00	23.5000	2,279.84	+216.3
339	04/04/85	20:10:00	23.6667	2,279.92	+216.3
340	04/04/85	20:20:00	23.8333	2,280.00	+216.3
341	04/04/85	20:30:00	24.0000	2,280.08	+216.3
342	04/04/85	20:40:00	24.1667	2,280.15	+216.3
343	04/04/85	20:50:00	24.3333	2,280.22	+216.3
344	04/04/85	21:00:00	24.5000	2,280.32	+216.3
345	04/04/85	21:10:00	24.6667	2,280.39	+216.3
346	04/04/85	21:20:00	24.8333	2,280.45	+216.3
347	04/04/85	21:30:00	25.0000	2,280.53	+216.3
348	04/04/85	21:40:00	25.1667	2,280.59	+216.3
349	04/04/85	21:50:00	25.3333	2,280.66	+216.3
350	04/04/85	22:00:00	25.5000	2,280.74	+216.3

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 8

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
351	04/04/85	22:10:00	25.6667	2,280.80	+216.3
352	04/04/85	22:20:00	25.8333	2,280.86	+216.3
353	04/04/85	22:30:00	26.0000	2,280.92	+216.3
354	04/04/85	22:40:00	26.1667	2,280.99	+216.3
355	04/04/85	22:50:00	26.3333	2,281.07	+216.3
356	04/04/85	23:00:00	26.5000	2,281.11	+216.3
357	04/04/85	23:10:00	26.6667	2,281.17	+216.3
358	04/04/85	23:20:00	26.8333	2,281.25	+216.3
359	04/04/85	23:30:00	27.0000	2,281.30	+216.3
360	04/04/85	23:40:00	27.1667	2,281.36	+216.3
361	04/04/85	23:50:00	27.3333	2,281.42	+216.3
362	05/04/85	00:00:00	27.5000	2,281.48	+216.3
363	05/04/85	00:10:00	27.6667	2,281.54	+216.3
364	05/04/85	00:20:00	27.8333	2,281.60	+216.3
365	05/04/85	00:30:00	28.0000	2,281.65	+216.3
366	05/04/85	00:40:00	28.1667	2,281.72	+216.3
367	05/04/85	00:50:00	28.3333	2,281.76	+216.3
368	05/04/85	01:00:00	28.5000	2,281.82	+216.3
369	05/04/85	01:10:00	28.6667	2,281.88	+216.3
370	05/04/85	01:20:00	28.8333	2,281.92	+216.3
371	05/04/85	01:30:00	29.0000	2,281.97	+216.3
372	05/04/85	01:40:00	29.1667	2,282.04	+216.3
373	05/04/85	01:50:00	29.3333	2,282.08	+216.3
374	05/04/85	02:00:00	29.5000	2,282.14	+216.3
375	05/04/85	02:10:00	29.6667	2,282.20	+216.3
376	05/04/85	02:20:00	29.8333	2,282.24	+216.3
377	05/04/85	02:30:00	30.0000	2,282.30	+216.3
378	05/04/85	02:40:00	30.1667	2,282.34	+216.3
379	05/04/85	02:50:00	30.3333	2,282.40	+216.3
380	05/04/85	03:00:00	30.5000	2,282.43	+216.3
381	05/04/85	03:10:00	30.6667	2,282.48	+216.3
382	05/04/85	03:20:00	30.8333	2,282.54	+216.3
383	05/04/85	03:30:00	31.0000	2,282.58	+216.3
384	05/04/85	03:40:00	31.1667	2,282.65	+216.3
385	05/04/85	03:50:00	31.3333	2,282.67	+216.3
386	05/04/85	04:00:00	31.5000	2,282.73	+216.3
387	05/04/85	04:10:00	31.6667	2,282.77	+216.3
388	05/04/85	04:20:00	31.8333	2,282.81	+216.3
389	05/04/85	04:30:00	32.0000	2,282.84	+216.3
390	05/04/85	04:40:00	32.1667	2,282.90	+216.3
391	05/04/85	04:50:00	32.3333	2,282.95	+216.3
392	05/04/85	05:00:00	32.5000	2,282.98	+216.3
393	05/04/85	05:10:00	32.6667	2,283.02	+216.3
394	05/04/85	05:20:00	32.8333	2,283.07	+216.3
395	05/04/85	05:30:00	33.0000	2,283.12	+216.3
396	05/04/85	05:40:00	33.1667	2,283.14	+216.3
397	05/04/85	05:50:00	33.3333	2,283.18	+216.3
398	05/04/85	06:00:00	33.5000	2,283.23	+216.3
399	05/04/85	06:10:00	33.6667	2,283.26	+216.3
400	05/04/85	06:20:00	33.8333	2,283.28	+216.3

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 9

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
401	05/04/85	06:30:00	34.0000	2,283.32	+216.3
402	05/04/85	06:40:00	34.1667	2,283.35	+216.3
403	05/04/85	06:50:00	34.3333	2,283.39	+216.2
404	05/04/85	07:00:00	34.5000	2,283.43	+216.3
405	05/04/85	07:10:00	34.6667	2,283.49	+216.3
406	05/04/85	07:20:00	34.8333	2,283.53	+216.3
407	05/04/85	07:30:00	35.0000	2,283.53	+216.2
408	05/04/85	07:40:00	35.1667	2,283.55	+216.2
409	05/04/85	07:50:00	35.3333	2,283.59	+216.2
410	05/04/85	08:00:00	35.5000	2,283.63	+216.2
411	05/04/85	08:10:00	35.6667	2,283.68	+216.2
412	05/04/85	08:20:00	35.8333	2,283.70	+216.2
413	05/04/85	08:30:00	36.0000	2,283.74	+216.2
414	05/04/85	08:40:00	36.1667	2,283.77	+216.2
415	05/04/85	08:50:00	36.3333	2,283.81	+216.2
416	05/04/85	09:00:00	36.5000	2,283.84	+216.2
417	05/04/85	09:10:00	36.6667	2,283.87	+216.2
418	05/04/85	09:20:00	36.8333	2,283.89	+216.2
419	05/04/85	09:30:00	37.0000	2,283.93	+216.2
420	05/04/85	09:40:00	37.1667	2,283.95	+216.2
421	05/04/85	09:50:00	37.3333	2,283.98	+216.2
422	05/04/85	10:00:00	37.5000	2,284.05	+216.2
423	05/04/85	10:10:00	37.6667	2,284.06	+216.2
424	05/04/85	10:20:00	37.8333	2,284.07	+216.2
425	05/04/85	10:30:00	38.0000	2,284.10	+216.2
426	05/04/85	10:40:00	38.1667	2,284.14	+216.2
427	05/04/85	10:50:00	38.3333	2,284.16	+216.2
428	05/04/85	11:00:00	38.5000	2,284.19	+216.2
429	05/04/85	11:10:00	38.6667	2,284.22	+216.2
430	05/04/85	11:20:00	38.8333	2,284.24	+216.2
431	05/04/85	11:30:00	39.0000	2,284.27	+216.2
432	05/04/85	11:40:00	39.1667	2,284.31	+216.2
433	05/04/85	11:50:00	39.3333	2,284.33	+216.2
434	05/04/85	12:00:00	39.5000	2,284.36	+216.2
435	05/04/85	12:10:00	39.6667	2,284.37	+216.2
436	05/04/85	12:20:00	39.8333	2,284.41	+216.2
437	05/04/85	12:30:00	40.0000	2,284.44	+216.2
438	05/04/85	12:40:00	40.1667	2,284.46	+216.2
439	05/04/85	12:50:00	40.3333	2,284.48	+216.2
440	05/04/85	13:00:00	40.5000	2,284.51	+216.2
441	05/04/85	13:10:00	40.6667	2,284.54	+216.2
442	05/04/85	13:20:00	40.8333	2,284.56	+216.2
443	05/04/85	13:30:00	41.0000	2,284.62	+216.2
444	05/04/85	13:40:00	41.1667	2,284.63	+216.2
445	05/04/85	13:50:00	41.3333	2,284.65	+216.2
446	05/04/85	14:00:00	41.5000	2,284.68	+216.2
447	05/04/85	14:10:00	41.6667	2,284.71	+216.2
448	05/04/85	14:30:00	42.0000	2,284.79	+216.2
449	05/04/85	14:40:00	42.1667	2,284.78	+216.2
450	05/04/85	14:50:00	42.3333	2,284.80	+216.2

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 10

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : 5080 Feet

Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
451	05/04/85	15:00:00	42.5000	2,284.90	+216.2
452	05/04/85	15:10:00	42.6667	2,284.89	+216.2
453	05/04/85	15:20:00	42.8333	2,284.87	+216.2
454	05/04/85	15:30:00	43.0000	2,284.89	+216.2
455	05/04/85	15:40:00	43.1667	2,284.91	+216.2
456	05/04/85	15:50:00	43.3333	2,284.93	+216.2
457	05/04/85	16:00:00	43.5000	2,284.95	+216.2
458	05/04/85	16:10:00	43.6667	2,284.97	+216.2
459	05/04/85	16:20:00	43.8333	2,284.99	+216.2
460	05/04/85	16:30:00	44.0000	2,285.01	+216.2
461	05/04/85	16:40:00	44.1667	2,285.02	+216.2
462	05/04/85	16:50:00	44.3333	2,285.05	+216.2
463	05/04/85	17:00:00	44.5000	2,285.08	+216.2
464	05/04/85	17:10:00	44.6667	2,285.09	+216.2
465	05/04/85	17:20:00	44.8333	2,285.11	+216.2
466	05/04/85	17:30:00	45.0000	2,285.13	+216.2
467	05/04/85	17:40:00	45.1667	2,285.14	+216.2
468	05/04/85	17:50:00	45.3333	2,285.17	+216.2
469	05/04/85	18:00:00	45.5000	2,285.19	+216.2
470	05/04/85	18:10:00	45.6667	2,285.20	+216.2
471	05/04/85	18:20:00	45.8333	2,285.22	+216.2
472	05/04/85	18:30:00	46.0000	2,285.24	+216.2
473	05/04/85	18:40:00	46.1667	2,285.26	+216.2
474	05/04/85	18:50:00	46.3333	2,285.27	+216.2
475	05/04/85	19:00:00	46.5000	2,285.29	+216.2
476	05/04/85	19:10:00	46.6667	2,285.30	+216.2
477	05/04/85	19:20:00	46.8333	2,285.31	+216.2
478	05/04/85	19:30:00	47.0000	2,285.33	+216.2
479	05/04/85	19:40:00	47.1667	2,285.35	+216.2
480	05/04/85	19:50:00	47.3333	2,285.37	+216.2
481	05/04/85	20:00:00	47.5000	2,285.39	+216.2
482	05/04/85	20:10:00	47.6667	2,285.40	+216.2
483	05/04/85	20:20:00	47.8333	2,285.42	+216.2
484	05/04/85	20:30:00	48.0000	2,285.44	+216.2
485	05/04/85	20:40:00	48.1667	2,285.45	+216.2
486	05/04/85	20:50:00	48.3333	2,285.46	+216.2
487	05/04/85	21:00:00	48.5000	2,285.47	+216.2
488	05/04/85	21:10:00	48.6667	2,285.49	+216.2
489	05/04/85	21:20:00	48.8333	2,285.51	+216.2
490	05/04/85	21:30:00	49.0000	2,285.52	+216.2
491	05/04/85	21:40:00	49.1667	2,285.54	+216.2
492	05/04/85	21:50:00	49.3333	2,285.55	+216.2
493	05/04/85	22:00:00	49.5000	2,285.57	+216.2
494	05/04/85	22:10:00	49.6667	2,285.58	+216.2
495	05/04/85	22:20:00	49.8333	2,285.59	+216.2
496	05/04/85	22:30:00	50.0000	2,285.61	+216.2
497	05/04/85	22:40:00	50.1667	2,285.64	+216.2
498	05/04/85	22:50:00	50.3333	2,285.66	+216.2
499	05/04/85	23:00:00	50.5000	2,285.66	+216.2
500	05/04/85	23:10:00	50.6667	2,285.67	+216.2

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 11

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

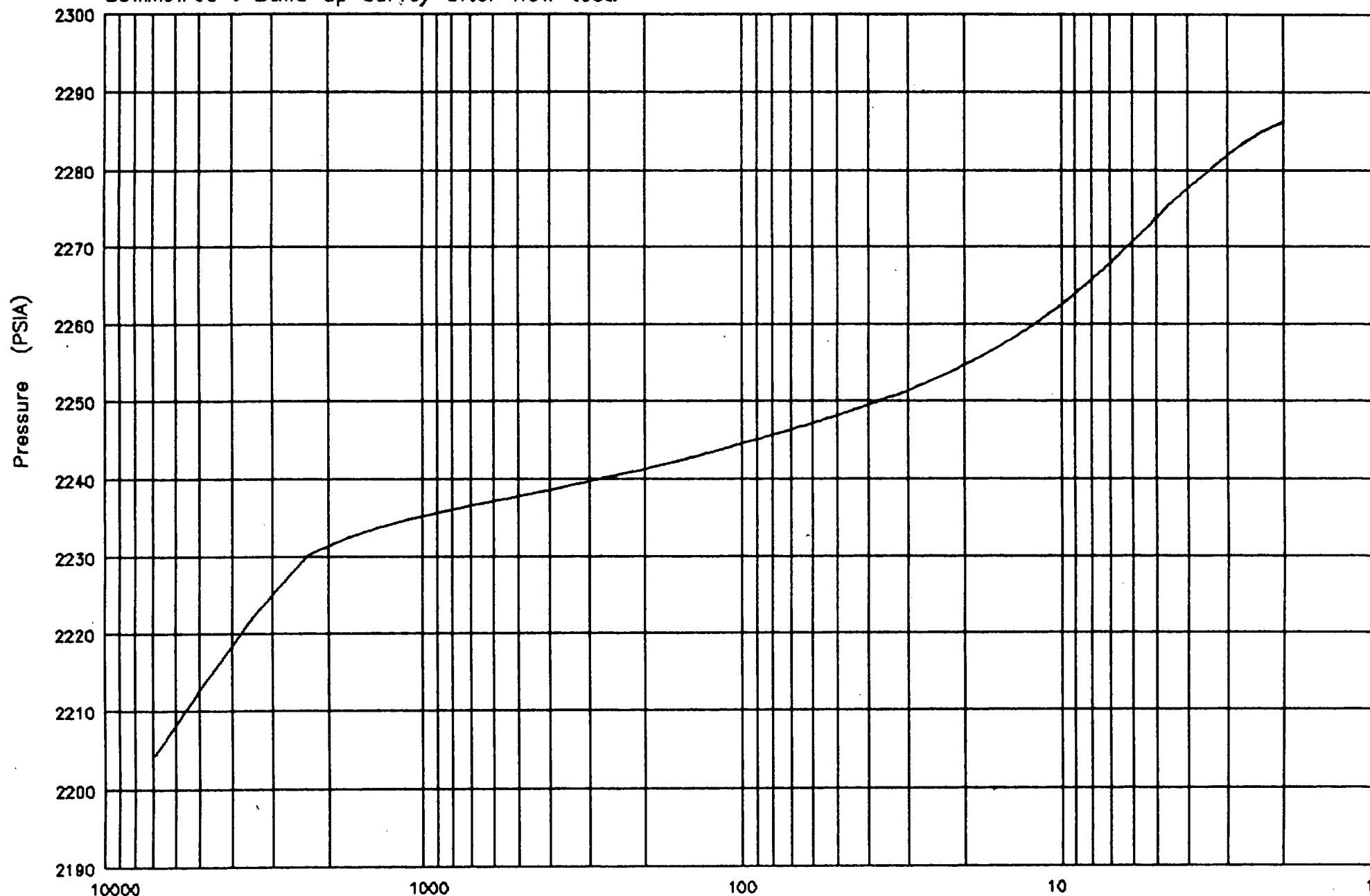
Comments : Build up after flow test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)
501	05/04/85	23:20:00	50.8333	2,285.68	+216.2
502	05/04/85	23:30:00	51.0000	2,285.69	+216.2
503	05/04/85	23:40:00	51.1667	2,285.69	+216.2
504	05/04/85	23:50:00	51.3333	2,285.70	+216.2
505	06/04/85	00:00:00	51.5000	2,285.71	+216.2
506	06/04/85	00:10:00	51.6667	2,285.73	+216.2
507	06/04/85	00:20:00	51.8333	2,285.75	+216.2
508	06/04/85	00:30:00	52.0000	2,285.77	+216.2
509	06/04/85	00:40:00	52.1667	2,285.79	+216.2
510	06/04/85	00:50:00	52.3333	2,285.80	+216.2
511	06/04/85	01:00:00	52.5000	2,285.81	+216.2
512	06/04/85	01:10:00	52.6667	2,285.83	+216.2
513	06/04/85	01:20:00	52.8333	2,285.85	+216.2
514	06/04/85	01:30:00	53.0000	2,285.85	+216.2
515	06/04/85	01:40:00	53.1667	2,285.86	+216.2
516	06/04/85	01:50:00	53.3333	2,285.89	+216.2
517	06/04/85	02:00:00	53.5000	2,285.90	+216.2
518	06/04/85	02:10:00	53.6667	2,285.91	+216.2
519	06/04/85	02:20:00	53.8333	2,285.92	+216.2
520	06/04/85	02:30:00	54.0000	2,285.94	+216.2
521	06/04/85	02:40:00	54.1667	2,285.96	+216.2
522	06/04/85	02:50:00	54.3333	2,285.98	+216.2
523	06/04/85	03:00:00	54.5000	2,285.99	+216.2
524	06/04/85	03:10:00	54.6667	2,285.99	+216.2
525	06/04/85	03:20:00	54.8333	2,286.00	+216.2
526	06/04/85	03:30:00	55.0000	2,286.02	+216.2
527	06/04/85	03:40:00	55.1667	2,286.03	+216.2
528	06/04/85	03:50:00	55.3333	2,286.05	+216.2
529	06/04/85	04:00:00	55.5000	2,286.05	+216.2
530	06/04/85	04:10:00	55.6667	2,286.06	+216.2
531	06/04/85	04:20:00	55.8333	2,286.08	+216.2
532	06/04/85	04:30:00	56.0000	2,286.09	+216.2
533	06/04/85	04:40:00	56.1667	2,286.09	+216.2
534	06/04/85	04:50:00	56.3333	2,286.10	+216.2
535	06/04/85	05:00:00	56.5000	2,286.11	+216.2
536	06/04/85	05:10:00	56.6667	2,286.13	+216.2
537	06/04/85	05:20:00	56.8333	2,286.14	+216.2
538	06/04/85	05:30:00	57.0000	2,286.15	+216.2
539	06/04/85	05:40:00	57.1667	2,286.15	+216.2
540	06/04/85	05:50:00	57.3333	2,286.16	+216.2
541	06/04/85	06:00:00	57.5000	2,286.18	+216.2

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Comments : Build up survey after flow test.

Eq. Type: H.P.
 Gauge No: 631

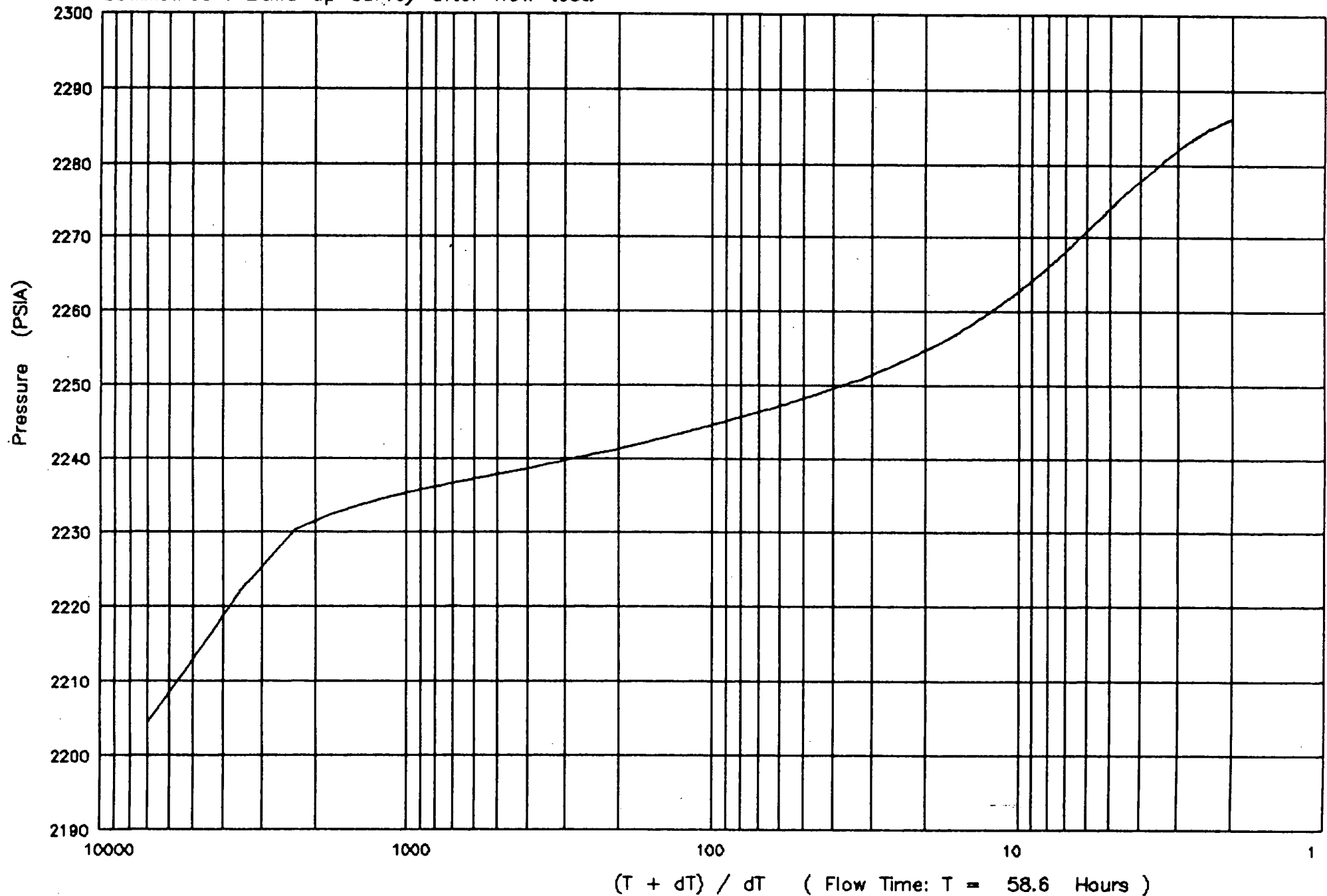
From : 20:30:00 03/04/85
 To : 06:00:00 06/04/85



COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4
Comments : Build up survey after flow test.

Eq. Type: H.P.
Gauge No: 631

From: 20:30:00 03/04/85
To : 06:00:00 06/04/85



COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type: H.P.

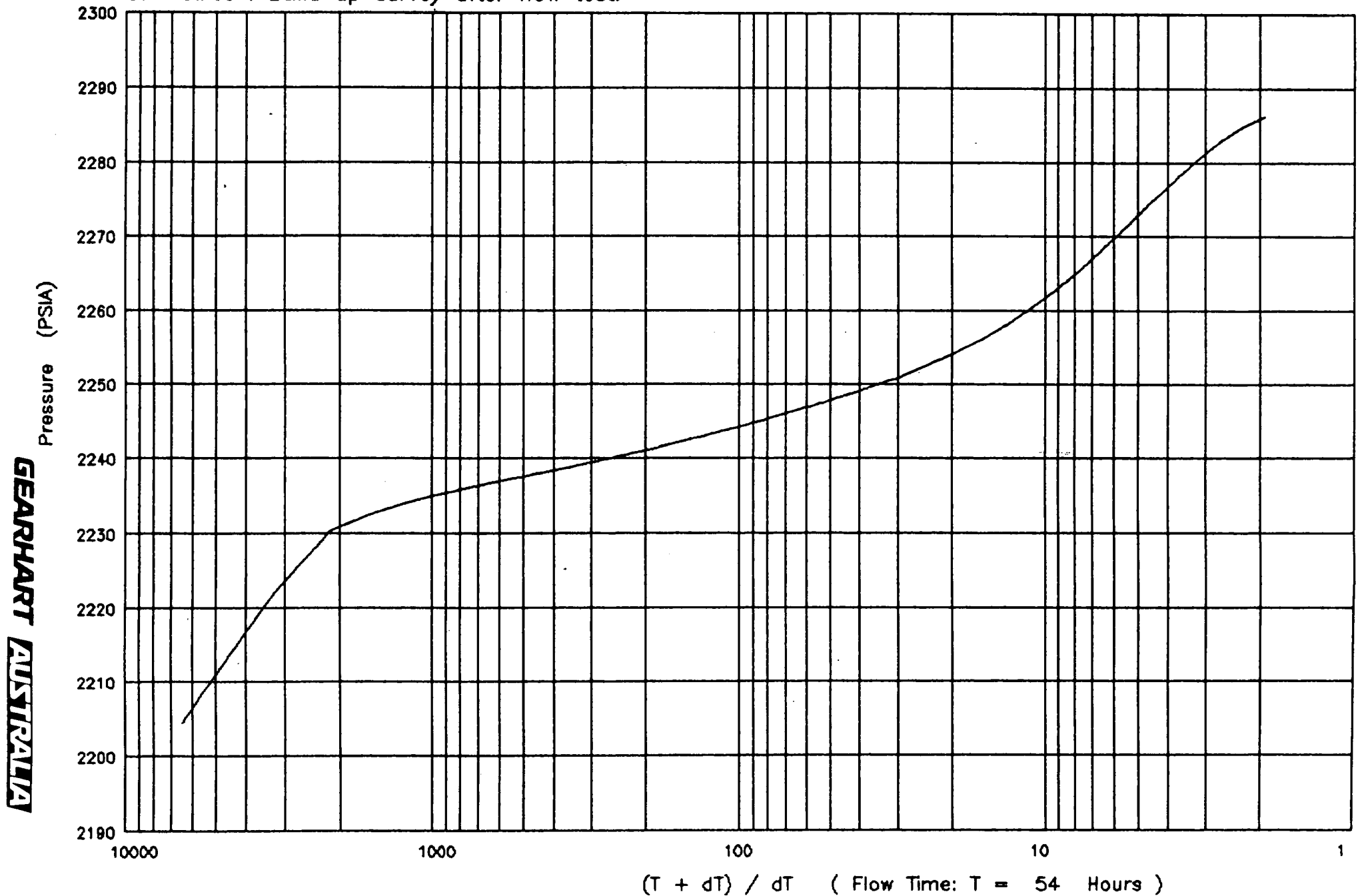
From : 20:30:00 03/04/85

WELL : WANCOOCHA #4

Gauge No: 631

To : 06:00:00 06/04/85

Comments : Build up survey after flow test.



000039

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
1	03/04/85	20:30:00	0.0000	9999.999	2,199.41	+217.9
2	03/04/85	20:30:30	0.0083	6481.099	2,204.45	+217.9
3	03/04/85	20:31:00	0.0167	3241.050	2,222.16	+217.9
4	03/04/85	20:31:30	0.0250	2161.033	2,230.31	+217.9
5	03/04/85	20:32:00	0.0333	1621.025	2,232.52	+217.9
6	03/04/85	20:32:30	0.0417	1297.020	2,233.75	+217.9
7	03/04/85	20:33:00	0.0500	1081.016	2,234.61	+217.9
8	03/04/85	20:33:30	0.0583	926.728	2,235.28	+217.9
9	03/04/85	20:34:00	0.0667	810.989	2,235.81	+217.9
10	03/04/85	20:34:30	0.0750	720.993	2,236.25	+217.9
11	03/04/85	20:35:00	0.0833	648.995	2,236.63	+217.9
12	03/04/85	20:35:30	0.0917	590.088	2,236.97	+217.9
13	03/04/85	20:36:00	0.1000	540.998	2,237.27	+217.9
14	03/04/85	20:36:30	0.1083	499.460	2,237.55	+217.8
15	03/04/85	20:37:00	0.1167	463.857	2,237.82	+217.8
16	03/04/85	20:37:30	0.1250	433.000	2,238.06	+217.8
17	03/04/85	20:38:00	0.1333	406.000	2,238.30	+217.8
18	03/04/85	20:38:30	0.1417	382.177	2,238.52	+217.8
19	03/04/85	20:39:00	0.1500	361.001	2,238.74	+217.8
20	03/04/85	20:39:30	0.1583	342.054	2,238.94	+217.8
21	03/04/85	20:40:00	0.1667	325.001	2,239.14	+217.8
22	03/04/85	20:40:30	0.1750	309.573	2,239.33	+217.8
23	03/04/85	20:41:00	0.1833	295.547	2,239.51	+217.8
24	03/04/85	20:41:30	0.1917	282.738	2,239.68	+217.8
25	03/04/85	20:42:00	0.2000	270.999	2,239.85	+217.8
26	03/04/85	20:42:30	0.2083	260.199	2,240.02	+217.8
27	03/04/85	20:43:00	0.2167	250.230	2,240.18	+217.8
28	03/04/85	20:43:30	0.2250	241.000	2,240.33	+217.8
29	03/04/85	20:44:00	0.2333	232.428	2,240.48	+217.7
30	03/04/85	20:44:30	0.2417	224.448	2,240.61	+217.7
31	03/04/85	20:45:00	0.2500	217.000	2,240.75	+217.7
32	03/04/85	20:45:30	0.2583	210.032	2,240.87	+217.7
33	03/04/85	20:46:00	0.2667	203.500	2,241.00	+217.7
34	03/04/85	20:46:30	0.2750	197.364	2,241.12	+217.7
35	03/04/85	20:47:30	0.2917	186.143	2,241.28	+217.7
36	03/04/85	20:48:00	0.3000	181.000	2,241.48	+217.7
37	03/04/85	20:49:00	0.3167	171.526	2,241.74	+217.7
38	03/04/85	20:50:00	0.3333	163.000	2,241.90	+217.7
39	03/04/85	20:51:00	0.3500	155.286	2,242.12	+217.7
40	03/04/85	20:52:00	0.3667	148.273	2,242.34	+217.6
41	03/04/85	20:53:00	0.3833	141.870	2,242.55	+217.6
42	03/04/85	20:54:00	0.4000	136.000	2,242.75	+217.6
43	03/04/85	20:55:00	0.4167	130.600	2,242.94	+217.6
44	03/04/85	20:56:00	0.4333	125.616	2,243.13	+217.6
45	03/04/85	20:57:00	0.4500	121.000	2,243.31	+217.6
46	03/04/85	20:58:00	0.4667	116.714	2,243.48	+217.6
47	03/04/85	20:59:00	0.4833	112.724	2,243.65	+217.6
48	03/04/85	21:00:00	0.5000	109.000	2,243.81	+217.6
49	03/04/85	21:01:00	0.5167	105.516	2,243.96	+217.6
50	03/04/85	21:02:00	0.5333	102.250	2,244.11	+217.5

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 2

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOCCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
51	03/04/85	21:03:00	0.5500	99.182	2,244.26	+217.5
52	03/04/85	21:04:00	0.5667	96.294	2,244.40	+217.5
53	03/04/85	21:05:00	0.5833	93.571	2,244.54	+217.5
54	03/04/85	21:06:00	0.6000	91.000	2,244.68	+217.5
55	03/04/85	21:07:00	0.6167	88.568	2,244.82	+217.5
56	03/04/85	21:08:00	0.6333	86.263	2,244.95	+217.5
57	03/04/85	21:09:00	0.6500	84.077	2,245.08	+217.5
58	03/04/85	21:10:00	0.6667	82.000	2,245.21	+217.5
59	03/04/85	21:11:00	0.6833	80.024	2,245.33	+217.5
60	03/04/85	21:12:00	0.7000	78.143	2,245.45	+217.4
61	03/04/85	21:13:00	0.7167	76.349	2,245.56	+217.4
62	03/04/85	21:14:00	0.7333	74.636	2,245.67	+217.4
63	03/04/85	21:15:00	0.7500	73.000	2,245.78	+217.4
64	03/04/85	21:16:00	0.7667	71.435	2,245.89	+217.4
65	03/04/85	21:17:00	0.7833	69.936	2,246.00	+217.4
66	03/04/85	21:18:00	0.8000	68.500	2,246.11	+217.4
67	03/04/85	21:19:00	0.8167	67.122	2,246.21	+217.4
68	03/04/85	21:20:00	0.8333	65.800	2,246.32	+217.4
69	03/04/85	21:21:00	0.8500	64.529	2,246.42	+217.4
70	03/04/85	21:22:00	0.8667	63.308	2,246.52	+217.4
71	03/04/85	21:23:00	0.8833	62.132	2,246.62	+217.4
72	03/04/85	21:24:00	0.9000	61.000	2,246.72	+217.4
73	03/04/85	21:25:00	0.9167	59.909	2,246.82	+217.4
74	03/04/85	21:26:00	0.9333	58.857	2,246.92	+217.4
75	03/04/85	21:27:00	0.9500	57.842	2,247.01	+217.3
76	03/04/85	21:28:00	0.9667	56.862	2,247.10	+217.3
77	03/04/85	21:29:00	0.9833	55.915	2,247.20	+217.3
78	03/04/85	21:30:00	1.0000	55.000	2,247.29	+217.3
79	03/04/85	21:31:00	1.0167	54.115	2,247.37	+217.3
80	03/04/85	21:32:00	1.0333	53.258	2,247.46	+217.3
81	03/04/85	21:33:00	1.0500	52.429	2,247.54	+217.3
82	03/04/85	21:34:00	1.0667	51.625	2,247.63	+217.3
83	03/04/85	21:35:00	1.0833	50.846	2,247.71	+217.3
84	03/04/85	21:36:00	1.1000	50.091	2,247.80	+217.3
85	03/04/85	21:37:00	1.1167	49.358	2,247.84	+217.3
86	03/04/85	21:38:00	1.1333	48.647	2,247.96	+217.3
87	03/04/85	21:39:00	1.1500	47.957	2,248.04	+217.3
88	03/04/85	21:40:00	1.1667	47.286	2,248.13	+217.3
89	03/04/85	21:41:00	1.1833	46.634	2,248.20	+217.3
90	03/04/85	21:42:00	1.2000	46.000	2,248.28	+217.3
91	03/04/85	21:43:00	1.2167	45.384	2,248.36	+217.2
92	03/04/85	21:44:00	1.2333	44.784	2,248.44	+217.2
93	03/04/85	21:45:00	1.2500	44.200	2,248.52	+217.2
94	03/04/85	21:46:00	1.2667	43.632	2,248.60	+217.2
95	03/04/85	21:47:00	1.2833	43.078	2,248.67	+217.2
96	03/04/85	21:48:00	1.3000	42.538	2,248.75	+217.2
97	03/04/85	21:49:00	1.3167	42.013	2,248.82	+217.2
98	03/04/85	21:50:00	1.3333	41.500	2,248.89	+217.2
99	03/04/85	21:51:00	1.3500	41.000	2,248.97	+217.2
100	03/04/85	21:52:00	1.3667	40.512	2,249.04	+217.2

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 3

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCODCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
101	03/04/85	21:53:00	1.3833	40.036	2,249.11	+217.2
102	03/04/85	21:54:00	1.4000	39.571	2,249.19	+217.2
103	03/04/85	21:55:00	1.4167	39.118	2,249.26	+217.2
104	03/04/85	21:56:00	1.4333	38.674	2,249.33	+217.2
105	03/04/85	21:57:00	1.4500	38.241	2,249.40	+217.2
106	03/04/85	21:58:00	1.4667	37.818	2,249.46	+217.2
107	03/04/85	21:59:00	1.4833	37.404	2,249.53	+217.2
108	03/04/85	22:00:00	1.5000	37.000	2,249.60	+217.2
109	03/04/85	22:01:00	1.5167	36.604	2,249.66	+217.2
110	03/04/85	22:02:00	1.5333	36.217	2,249.73	+217.2
111	03/04/85	22:03:00	1.5500	35.839	2,249.80	+217.2
112	03/04/85	22:04:00	1.5667	35.468	2,249.87	+217.2
113	03/04/85	22:05:00	1.5833	35.105	2,249.93	+217.1
114	03/04/85	22:06:00	1.6000	34.750	2,250.00	+217.1
115	03/04/85	22:07:00	1.6167	34.402	2,250.07	+217.1
116	03/04/85	22:08:00	1.6333	34.061	2,250.13	+217.1
117	03/04/85	22:09:00	1.6500	33.727	2,250.19	+217.1
118	03/04/85	22:10:00	1.6667	33.400	2,250.26	+217.1
119	03/04/85	22:11:00	1.6833	33.079	2,250.32	+217.1
120	03/04/85	22:12:00	1.7000	32.765	2,250.38	+217.1
121	03/04/85	22:13:00	1.7167	32.456	2,250.44	+217.1
122	03/04/85	22:14:00	1.7333	32.154	2,250.51	+217.1
123	03/04/85	22:15:00	1.7500	31.857	2,250.57	+217.1
124	03/04/85	22:20:00	1.8333	30.455	2,250.79	+217.1
125	03/04/85	22:25:00	1.9167	29.174	2,251.10	+217.1
126	03/04/85	22:30:00	2.0000	28.000	2,251.39	+217.1
127	03/04/85	22:35:00	2.0833	26.920	2,251.71	+217.1
128	03/04/85	22:40:00	2.1667	25.923	2,251.99	+217.1
129	03/04/85	22:45:00	2.2500	25.000	2,252.27	+217.0
130	03/04/85	22:50:00	2.3333	24.143	2,252.54	+217.0
131	03/04/85	22:55:00	2.4167	23.345	2,252.81	+217.0
132	03/04/85	23:00:00	2.5000	22.600	2,253.08	+217.0
133	03/04/85	23:05:00	2.5833	21.903	2,253.34	+217.0
134	03/04/85	23:10:00	2.6667	21.250	2,253.59	+217.0
135	03/04/85	23:15:00	2.7500	20.636	2,253.85	+217.0
136	03/04/85	23:20:00	2.8333	20.059	2,254.09	+217.0
137	03/04/85	23:25:00	2.9167	19.514	2,254.34	+217.0
138	03/04/85	23:30:00	3.0000	19.000	2,254.58	+216.9
139	03/04/85	23:35:00	3.0833	18.514	2,254.82	+216.9
140	03/04/85	23:40:00	3.1667	18.053	2,255.06	+216.9
141	03/04/85	23:45:00	3.2500	17.615	2,255.30	+216.9
142	03/04/85	23:50:00	3.3333	17.200	2,255.52	+216.9
143	03/04/85	23:55:00	3.4167	16.805	2,255.64	+216.9
144	04/04/85	00:00:00	3.5000	16.429	2,255.86	+216.9
145	04/04/85	00:05:00	3.5833	16.070	2,256.09	+216.9
146	04/04/85	00:10:00	3.6667	15.727	2,256.31	+216.9
147	04/04/85	00:15:00	3.7500	15.400	2,256.52	+216.9
148	04/04/85	00:20:00	3.8333	15.087	2,256.74	+216.9
149	04/04/85	00:25:00	3.9167	14.787	2,256.96	+216.9
150	04/04/85	00:30:00	4.0000	14.500	2,257.17	+216.9

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 4

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
151	04/04/85	00:35:00	4.0833	14.224	2,257.38	+216.9
152	04/04/85	00:40:00	4.1667	13.960	2,257.59	+216.9
153	04/04/85	00:45:00	4.2500	13.706	2,257.79	+216.9
154	04/04/85	00:50:00	4.3333	13.462	2,258.00	+216.9
155	04/04/85	00:55:00	4.4167	13.226	2,258.20	+216.9
156	04/04/85	01:00:00	4.5000	13.000	2,258.40	+216.8
157	04/04/85	01:05:00	4.5833	12.782	2,258.60	+216.8
158	04/04/85	01:10:00	4.6667	12.571	2,258.79	+216.8
159	04/04/85	01:15:00	4.7500	12.368	2,258.99	+216.8
160	04/04/85	01:20:00	4.8333	12.172	2,259.18	+216.8
161	04/04/85	01:25:00	4.9167	11.983	2,259.37	+216.8
162	04/04/85	01:30:00	5.0000	11.800	2,259.56	+216.8
163	04/04/85	01:35:00	5.0833	11.623	2,259.78	+216.8
164	04/04/85	01:40:00	5.1667	11.452	2,259.93	+216.8
165	04/04/85	01:45:00	5.2500	11.286	2,260.11	+216.8
166	04/04/85	01:50:00	5.3333	11.125	2,260.29	+216.8
167	04/04/85	01:55:00	5.4167	10.969	2,260.47	+216.8
168	04/04/85	02:00:00	5.5000	10.818	2,260.65	+216.8
169	04/04/85	02:05:00	5.5833	10.672	2,260.83	+216.8
170	04/04/85	02:10:00	5.6667	10.529	2,261.01	+216.8
171	04/04/85	02:15:00	5.7500	10.391	2,261.18	+216.8
172	04/04/85	02:20:00	5.8333	10.257	2,261.35	+216.8
173	04/04/85	02:25:00	5.9167	10.127	2,261.53	+216.8
174	04/04/85	02:30:00	6.0000	10.000	2,261.70	+216.8
175	04/04/85	02:35:00	6.0833	9.877	2,261.86	+216.8
176	04/04/85	02:40:00	6.1667	9.757	2,262.03	+216.8
177	04/04/85	02:45:00	6.2500	9.640	2,262.19	+216.8
178	04/04/85	02:50:00	6.3333	9.526	2,262.35	+216.8
179	04/04/85	02:55:00	6.4167	9.416	2,262.51	+216.8
180	04/04/85	03:00:00	6.5000	9.308	2,262.67	+216.8
181	04/04/85	03:05:00	6.5833	9.203	2,262.82	+216.8
182	04/04/85	03:10:00	6.6667	9.100	2,262.99	+216.8
183	04/04/85	03:15:00	6.7500	9.000	2,263.15	+216.8
184	04/04/85	03:20:00	6.8333	8.902	2,263.30	+216.8
185	04/04/85	03:25:00	6.9167	8.807	2,263.46	+216.8
186	04/04/85	03:30:00	7.0000	8.714	2,263.62	+216.8
187	04/04/85	03:35:00	7.0833	8.624	2,263.77	+216.8
188	04/04/85	03:40:00	7.1667	8.535	2,263.92	+216.8
189	04/04/85	03:45:00	7.2500	8.448	2,264.06	+216.7
190	04/04/85	03:50:00	7.3333	8.364	2,264.21	+216.7
191	04/04/85	03:55:00	7.4167	8.281	2,264.36	+216.7
192	04/04/85	04:00:00	7.5000	8.200	2,264.51	+216.7
193	04/04/85	04:05:00	7.5833	8.121	2,264.66	+216.7
194	04/04/85	04:10:00	7.6667	8.043	2,264.80	+216.7
195	04/04/85	04:15:00	7.7500	7.968	2,264.95	+216.7
196	04/04/85	04:20:00	7.8333	7.894	2,265.09	+216.7
197	04/04/85	04:25:00	7.9167	7.821	2,265.24	+216.7
198	04/04/85	04:30:00	8.0000	7.750	2,265.38	+216.7
199	04/04/85	04:35:00	8.0833	7.680	2,265.52	+216.7
200	04/04/85	04:40:00	8.1667	7.612	2,265.66	+216.7

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 5

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
201	04/04/85	04:45:00	8.2500	7.545	2,265.80	+216.7
202	04/04/85	04:50:00	8.3333	7.480	2,265.94	+216.7
203	04/04/85	04:55:00	8.4167	7.416	2,266.07	+216.7
204	04/04/85	05:00:00	8.5000	7.353	2,266.21	+216.7
205	04/04/85	05:05:00	8.5833	7.291	2,266.34	+216.7
206	04/04/85	05:10:00	8.6667	7.231	2,266.47	+216.7
207	04/04/85	05:15:00	8.7500	7.171	2,266.61	+216.7
208	04/04/85	05:20:00	8.8333	7.113	2,266.74	+216.7
209	04/04/85	05:25:00	8.9167	7.056	2,266.86	+216.7
210	04/04/85	05:30:00	9.0000	7.000	2,266.99	+216.6
211	04/04/85	05:35:00	9.0833	6.945	2,267.12	+216.6
212	04/04/85	05:40:00	9.1667	6.891	2,267.25	+216.6
213	04/04/85	05:45:00	9.2500	6.838	2,267.37	+216.6
214	04/04/85	05:50:00	9.3333	6.786	2,267.50	+216.6
215	04/04/85	05:55:00	9.4167	6.735	2,267.62	+216.6
216	04/04/85	06:00:00	9.5000	6.684	2,267.75	+216.6
217	04/04/85	06:05:00	9.5833	6.635	2,267.88	+216.6
218	04/04/85	06:10:00	9.6667	6.586	2,268.00	+216.6
219	04/04/85	06:15:00	9.7500	6.538	2,268.12	+216.6
220	04/04/85	06:20:00	9.8333	6.492	2,268.25	+216.6
221	04/04/85	06:25:00	9.9167	6.445	2,268.37	+216.6
222	04/04/85	06:30:00	10.0000	6.400	2,268.54	+216.6
223	04/04/85	06:35:00	10.0833	6.355	2,268.65	+216.6
224	04/04/85	06:40:00	10.1667	6.311	2,268.72	+216.6
225	04/04/85	06:45:00	10.2500	6.268	2,268.85	+216.6
226	04/04/85	06:50:00	10.3333	6.226	2,268.96	+216.6
227	04/04/85	06:55:00	10.4167	6.184	2,269.07	+216.6
228	04/04/85	07:00:00	10.5000	6.143	2,269.19	+216.6
229	04/04/85	07:05:00	10.5833	6.102	2,269.30	+216.6
230	04/04/85	07:10:00	10.6667	6.063	2,269.41	+216.6
231	04/04/85	07:15:00	10.7500	6.023	2,269.53	+216.6
232	04/04/85	07:20:00	10.8333	5.985	2,269.64	+216.6
233	04/04/85	07:25:00	10.9167	5.947	2,269.76	+216.6
234	04/04/85	07:30:00	11.0000	5.909	2,269.87	+216.6
235	04/04/85	07:35:00	11.0833	5.872	2,269.98	+216.6
236	04/04/85	07:40:00	11.1667	5.836	2,270.09	+216.6
237	04/04/85	07:45:00	11.2500	5.800	2,270.20	+216.6
238	04/04/85	07:50:00	11.3333	5.765	2,270.31	+216.6
239	04/04/85	07:55:00	11.4167	5.730	2,270.41	+216.6
240	04/04/85	08:00:00	11.5000	5.696	2,270.52	+216.5
241	04/04/85	08:05:00	11.5833	5.662	2,270.62	+216.5
242	04/04/85	08:10:00	11.6667	5.629	2,270.72	+216.5
243	04/04/85	08:15:00	11.7500	5.596	2,270.82	+216.6
244	04/04/85	08:20:00	11.8333	5.563	2,270.93	+216.6
245	04/04/85	08:25:00	11.9167	5.531	2,271.04	+216.5
246	04/04/85	08:30:00	12.0000	5.500	2,271.14	+216.5
247	04/04/85	08:35:00	12.0833	5.469	2,271.24	+216.5
248	04/04/85	08:40:00	12.1667	5.438	2,271.34	+216.5
249	04/04/85	08:45:00	12.2500	5.408	2,271.44	+216.5
250	04/04/85	08:50:00	12.3333	5.378	2,271.53	+216.5

000045

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 6

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
251	04/04/85	08:55:00	12.4167	5.349	2,271.63	+216.5
252	04/04/85	09:00:00	12.5000	5.320	2,271.72	+216.5
253	04/04/85	09:05:00	12.5833	5.291	2,271.82	+216.5
254	04/04/85	09:10:00	12.6667	5.263	2,271.92	+216.5
255	04/04/85	09:15:00	12.7500	5.235	2,272.01	+216.5
256	04/04/85	09:20:00	12.8333	5.208	2,272.11	+216.5
257	04/04/85	09:25:00	12.9167	5.181	2,272.20	+216.5
258	04/04/85	09:30:00	13.0000	5.154	2,272.30	+216.5
259	04/04/85	09:35:00	13.0833	5.127	2,272.39	+216.5
260	04/04/85	09:40:00	13.1667	5.101	2,272.47	+216.5
261	04/04/85	09:45:00	13.2500	5.075	2,272.56	+216.5
262	04/04/85	09:50:00	13.3333	5.050	2,272.67	+216.5
263	04/04/85	09:55:00	13.4167	5.025	2,272.75	+216.5
264	04/04/85	10:00:00	13.5000	5.000	2,272.84	+216.5
265	04/04/85	10:05:00	13.5833	4.975	2,272.90	+216.5
266	04/04/85	10:10:00	13.6667	4.951	2,272.98	+216.5
267	04/04/85	10:15:00	13.7500	4.927	2,273.07	+216.5
268	04/04/85	10:20:00	13.8333	4.904	2,273.15	+216.5
269	04/04/85	10:25:00	13.9167	4.880	2,273.24	+216.5
270	04/04/85	10:30:00	14.0000	4.857	2,273.32	+216.5
271	04/04/85	10:35:00	14.0833	4.834	2,273.41	+216.5
272	04/04/85	10:40:00	14.1667	4.812	2,273.49	+216.5
273	04/04/85	10:45:00	14.2500	4.789	2,273.60	+216.5
274	04/04/85	10:50:00	14.3333	4.767	2,273.65	+216.5
275	04/04/85	10:55:00	14.4167	4.746	2,273.73	+216.5
276	04/04/85	11:00:00	14.5000	4.724	2,273.81	+216.5
277	04/04/85	11:10:00	14.6667	4.682	2,273.99	+216.5
278	04/04/85	11:15:00	14.7500	4.661	2,274.06	+216.5
279	04/04/85	11:20:00	14.8333	4.640	2,274.15	+216.5
280	04/04/85	11:25:00	14.9167	4.620	2,274.23	+216.5
281	04/04/85	11:30:00	15.0000	4.600	2,274.33	+216.5
282	04/04/85	11:35:00	15.0833	4.580	2,274.40	+216.5
283	04/04/85	11:40:00	15.1667	4.560	2,274.47	+216.5
284	04/04/85	11:45:00	15.2500	4.541	2,274.54	+216.4
285	04/04/85	11:50:00	15.3333	4.522	2,274.62	+216.4
286	04/04/85	11:55:00	15.4167	4.503	2,274.69	+216.5
287	04/04/85	12:00:00	15.5000	4.484	2,274.78	+216.4
288	04/04/85	12:05:00	15.5833	4.465	2,274.84	+216.4
289	04/04/85	12:10:00	15.6667	4.447	2,274.91	+216.4
290	04/04/85	12:15:00	15.7500	4.429	2,274.97	+216.4
291	04/04/85	12:20:00	15.8333	4.411	2,275.05	+216.4
292	04/04/85	12:25:00	15.9167	4.393	2,275.11	+216.4
293	04/04/85	12:30:00	16.0000	4.375	2,275.18	+216.4
294	04/04/85	12:40:00	16.1667	4.340	2,275.32	+216.4
295	04/04/85	12:50:00	16.3333	4.306	2,275.46	+216.0
296	04/04/85	13:00:00	16.5000	4.273	2,275.59	+216.4
297	04/04/85	13:10:00	16.6667	4.240	2,275.73	+216.4
298	04/04/85	13:20:00	16.8333	4.208	2,275.86	+216.4
299	04/04/85	13:30:00	17.0000	4.176	2,275.99	+216.4
300	04/04/85	13:40:00	17.1667	4.146	2,276.12	+216.4

GEARHART AUSTRALIA

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 7

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
301	04/04/85	13:50:00	17.3333	4.115	2,276.24	+216.4
302	04/04/85	14:00:00	17.5000	4.086	2,276.36	+216.4
303	04/04/85	14:10:00	17.6667	4.057	2,276.47	+216.4
304	04/04/85	14:20:00	17.8333	4.028	2,276.60	+216.4
305	04/04/85	14:30:00	18.0000	4.000	2,276.71	+216.4
306	04/04/85	14:40:00	18.1667	3.972	2,276.84	+216.4
307	04/04/85	14:50:00	18.3333	3.945	2,276.96	+216.4
308	04/04/85	15:00:00	18.5000	3.919	2,277.07	+216.4
309	04/04/85	15:10:00	18.6667	3.893	2,277.19	+216.4
310	04/04/85	15:20:00	18.8333	3.867	2,277.30	+216.4
311	04/04/85	15:30:00	19.0000	3.842	2,277.40	+216.4
312	04/04/85	15:40:00	19.1667	3.817	2,277.50	+216.4
313	04/04/85	15:50:00	19.3333	3.793	2,277.61	+216.4
314	04/04/85	16:00:00	19.5000	3.769	2,277.73	+216.4
315	04/04/85	16:10:00	19.6667	3.746	2,277.84	+216.4
316	04/04/85	16:20:00	19.8333	3.723	2,277.93	+216.4
317	04/04/85	16:30:00	20.0000	3.700	2,278.04	+216.4
318	04/04/85	16:40:00	20.1667	3.678	2,278.14	+216.4
319	04/04/85	16:50:00	20.3333	3.656	2,278.24	+216.4
320	04/04/85	17:00:00	20.5000	3.634	2,278.33	+216.4
321	04/04/85	17:10:00	20.6667	3.613	2,278.42	+216.4
322	04/04/85	17:20:00	20.8333	3.592	2,278.52	+216.4
323	04/04/85	17:30:00	21.0000	3.571	2,278.60	+216.4
324	04/04/85	17:40:00	21.1667	3.551	2,278.69	+216.4
325	04/04/85	17:50:00	21.3333	3.531	2,278.78	+216.3
326	04/04/85	18:00:00	21.5000	3.512	2,278.87	+216.3
327	04/04/85	18:10:00	21.6667	3.492	2,278.96	+216.3
328	04/04/85	18:20:00	21.8333	3.473	2,279.05	+216.3
329	04/04/85	18:30:00	22.0000	3.455	2,279.13	+216.3
330	04/04/85	18:40:00	22.1667	3.436	2,279.21	+216.3
331	04/04/85	18:50:00	22.3333	3.418	2,279.29	+216.3
332	04/04/85	19:00:00	22.5000	3.400	2,279.38	+216.3
333	04/04/85	19:10:00	22.6667	3.382	2,279.46	+216.3
334	04/04/85	19:20:00	22.8333	3.365	2,279.53	+216.3
335	04/04/85	19:30:00	23.0000	3.348	2,279.61	+216.3
336	04/04/85	19:40:00	23.1667	3.331	2,279.70	+216.3
337	04/04/85	19:50:00	23.3333	3.314	2,279.78	+216.3
338	04/04/85	20:00:00	23.5000	3.298	2,279.84	+216.3
339	04/04/85	20:10:00	23.6667	3.282	2,279.92	+216.3
340	04/04/85	20:20:00	23.8333	3.266	2,280.00	+216.3
341	04/04/85	20:30:00	24.0000	3.250	2,280.08	+216.3
342	04/04/85	20:40:00	24.1667	3.234	2,280.15	+216.3
343	04/04/85	20:50:00	24.3333	3.219	2,280.22	+216.3
344	04/04/85	21:00:00	24.5000	3.204	2,280.32	+216.3
345	04/04/85	21:10:00	24.6667	3.189	2,280.39	+216.3
346	04/04/85	21:20:00	24.8333	3.174	2,280.45	+216.3
347	04/04/85	21:30:00	25.0000	3.160	2,280.53	+216.3
348	04/04/85	21:40:00	25.1667	3.146	2,280.59	+216.3
349	04/04/85	21:50:00	25.3333	3.132	2,280.66	+216.3
350	04/04/85	22:00:00	25.5000	3.118	2,280.74	+216.3

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 8

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
351	04/04/85	22:10:00	25.6667	3.104	2,280.80	+216.3
352	04/04/85	22:20:00	25.8333	3.090	2,280.86	+216.3
353	04/04/85	22:30:00	26.0000	3.077	2,280.92	+216.3
354	04/04/85	22:40:00	26.1667	3.064	2,280.99	+216.3
355	04/04/85	22:50:00	26.3333	3.051	2,281.07	+216.3
356	04/04/85	23:00:00	26.5000	3.038	2,281.11	+216.3
357	04/04/85	23:10:00	26.6667	3.025	2,281.17	+216.3
358	04/04/85	23:20:00	26.8333	3.012	2,281.25	+216.3
359	04/04/85	23:30:00	27.0000	3.000	2,281.30	+216.3
360	04/04/85	23:40:00	27.1667	2.988	2,281.36	+216.3
361	04/04/85	23:50:00	27.3333	2.976	2,281.42	+216.3
362	05/04/85	00:00:00	27.5000	2.964	2,281.48	+216.3
363	05/04/85	00:10:00	27.6667	2.952	2,281.54	+216.3
364	05/04/85	00:20:00	27.8333	2.940	2,281.60	+216.3
365	05/04/85	00:30:00	28.0000	2.929	2,281.65	+216.3
366	05/04/85	00:40:00	28.1667	2.917	2,281.72	+216.3
367	05/04/85	00:50:00	28.3333	2.906	2,281.76	+216.3
368	05/04/85	01:00:00	28.5000	2.895	2,281.82	+216.3
369	05/04/85	01:10:00	28.6667	2.884	2,281.88	+216.3
370	05/04/85	01:20:00	28.8333	2.873	2,281.92	+216.3
371	05/04/85	01:30:00	29.0000	2.862	2,281.97	+216.3
372	05/04/85	01:40:00	29.1667	2.851	2,282.04	+216.3
373	05/04/85	01:50:00	29.3333	2.841	2,282.08	+216.3
374	05/04/85	02:00:00	29.5000	2.831	2,282.14	+216.3
375	05/04/85	02:10:00	29.6667	2.820	2,282.20	+216.3
376	05/04/85	02:20:00	29.8333	2.810	2,282.24	+216.3
377	05/04/85	02:30:00	30.0000	2.800	2,282.30	+216.3
378	05/04/85	02:40:00	30.1667	2.790	2,282.34	+216.3
379	05/04/85	02:50:00	30.3333	2.780	2,282.40	+216.3
380	05/04/85	03:00:00	30.5000	2.770	2,282.43	+216.3
381	05/04/85	03:10:00	30.6667	2.761	2,282.48	+216.3
382	05/04/85	03:20:00	30.8333	2.751	2,282.54	+216.3
383	05/04/85	03:30:00	31.0000	2.742	2,282.58	+216.3
384	05/04/85	03:40:00	31.1667	2.733	2,282.65	+216.3
385	05/04/85	03:50:00	31.3333	2.723	2,282.67	+216.3
386	05/04/85	04:00:00	31.5000	2.714	2,282.73	+216.3
387	05/04/85	04:10:00	31.6667	2.705	2,282.77	+216.3
388	05/04/85	04:20:00	31.8333	2.696	2,282.81	+216.3
389	05/04/85	04:30:00	32.0000	2.688	2,282.84	+216.3
390	05/04/85	04:40:00	32.1667	2.679	2,282.90	+216.3
391	05/04/85	04:50:00	32.3333	2.670	2,282.95	+216.3
392	05/04/85	05:00:00	32.5000	2.662	2,282.98	+216.3
393	05/04/85	05:10:00	32.6667	2.653	2,283.02	+216.3
394	05/04/85	05:20:00	32.8333	2.645	2,283.07	+216.3
395	05/04/85	05:30:00	33.0000	2.636	2,283.12	+216.3
396	05/04/85	05:40:00	33.1667	2.628	2,283.14	+216.3
397	05/04/85	05:50:00	33.3333	2.620	2,283.18	+216.3
398	05/04/85	06:00:00	33.5000	2.612	2,283.23	+216.3
399	05/04/85	06:10:00	33.6667	2.604	2,283.26	+216.3
400	05/04/85	06:20:00	33.8333	2.596	2,283.28	+216.3

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 9

COMPANY : DELHI PETROLEUM PTY LTD

From : 20:30:00

WELL : WANCOOCHA #4

Eq. Type : H.P.

Flow Time: 54 Hours

Gauge # : 631

Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
401	05/04/85	06:30:00	34.0000	2.588	2,283.32	+216.3
402	05/04/85	06:40:00	34.1667	2.580	2,283.35	+216.3
403	05/04/85	06:50:00	34.3333	2.573	2,283.39	+216.2
404	05/04/85	07:00:00	34.5000	2.565	2,283.43	+216.3
405	05/04/85	07:10:00	34.6667	2.558	2,283.49	+216.3
406	05/04/85	07:20:00	34.8333	2.550	2,283.53	+216.3
407	05/04/85	07:30:00	35.0000	2.543	2,283.53	+216.2
408	05/04/85	07:40:00	35.1667	2.536	2,283.55	+216.2
409	05/04/85	07:50:00	35.3333	2.528	2,283.59	+216.2
410	05/04/85	08:00:00	35.5000	2.521	2,283.63	+216.2
411	05/04/85	08:10:00	35.6667	2.514	2,283.68	+216.2
412	05/04/85	08:20:00	35.8333	2.507	2,283.70	+216.2
413	05/04/85	08:30:00	36.0000	2.500	2,283.74	+216.2
414	05/04/85	08:40:00	36.1667	2.493	2,283.77	+216.2
415	05/04/85	08:50:00	36.3333	2.486	2,283.81	+216.2
416	05/04/85	09:00:00	36.5000	2.479	2,283.84	+216.2
417	05/04/85	09:10:00	36.6667	2.473	2,283.87	+216.2
418	05/04/85	09:20:00	36.8333	2.466	2,283.89	+216.2
419	05/04/85	09:30:00	37.0000	2.459	2,283.93	+216.2
420	05/04/85	09:40:00	37.1667	2.453	2,283.95	+216.2
421	05/04/85	09:50:00	37.3333	2.446	2,283.98	+216.2
422	05/04/85	10:00:00	37.5000	2.440	2,284.05	+216.2
423	05/04/85	10:10:00	37.6667	2.434	2,284.06	+216.2
424	05/04/85	10:20:00	37.8333	2.427	2,284.07	+216.2
425	05/04/85	10:30:00	38.0000	2.421	2,284.10	+216.2
426	05/04/85	10:40:00	38.1667	2.415	2,284.14	+216.2
427	05/04/85	10:50:00	38.3333	2.409	2,284.16	+216.2
428	05/04/85	11:00:00	38.5000	2.403	2,284.19	+216.2
429	05/04/85	11:10:00	38.6667	2.397	2,284.22	+216.2
430	05/04/85	11:20:00	38.8333	2.391	2,284.24	+216.2
431	05/04/85	11:30:00	39.0000	2.385	2,284.27	+216.2
432	05/04/85	11:40:00	39.1667	2.379	2,284.31	+216.2
433	05/04/85	11:50:00	39.3333	2.373	2,284.33	+216.2
434	05/04/85	12:00:00	39.5000	2.367	2,284.36	+216.2
435	05/04/85	12:10:00	39.6667	2.361	2,284.37	+216.2
436	05/04/85	12:20:00	39.8333	2.356	2,284.41	+216.2
437	05/04/85	12:30:00	40.0000	2.350	2,284.44	+216.2
438	05/04/85	12:40:00	40.1667	2.344	2,284.46	+216.2
439	05/04/85	12:50:00	40.3333	2.339	2,284.48	+216.2
440	05/04/85	13:00:00	40.5000	2.333	2,284.51	+216.2
441	05/04/85	13:10:00	40.6667	2.328	2,284.54	+216.2
442	05/04/85	13:20:00	40.8333	2.322	2,284.56	+216.2
443	05/04/85	13:30:00	41.0000	2.317	2,284.62	+216.2
444	05/04/85	13:40:00	41.1667	2.312	2,284.63	+216.2
445	05/04/85	13:50:00	41.3333	2.306	2,284.65	+216.2
446	05/04/85	14:00:00	41.5000	2.301	2,284.68	+216.2
447	05/04/85	14:10:00	41.6667	2.296	2,284.71	+216.2
448	05/04/85	14:30:00	42.0000	2.286	2,284.79	+216.2
449	05/04/85	14:40:00	42.1667	2.281	2,284.78	+216.2
450	05/04/85	14:50:00	42.3333	2.276	2,284.80	+216.2

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 10

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
451	05/04/85	15:00:00	42.5000	2.271	2,284.90	+216.2
452	05/04/85	15:10:00	42.6667	2.266	2,284.89	+216.2
453	05/04/85	15:20:00	42.8333	2.261	2,284.87	+216.2
454	05/04/85	15:30:00	43.0000	2.256	2,284.89	+216.2
455	05/04/85	15:40:00	43.1667	2.251	2,284.91	+216.2
456	05/04/85	15:50:00	43.3333	2.246	2,284.93	+216.2
457	05/04/85	16:00:00	43.5000	2.241	2,284.95	+216.2
458	05/04/85	16:10:00	43.6667	2.237	2,284.97	+216.2
459	05/04/85	16:20:00	43.8333	2.232	2,284.99	+216.2
460	05/04/85	16:30:00	44.0000	2.227	2,285.01	+216.2
461	05/04/85	16:40:00	44.1667	2.223	2,285.02	+216.2
462	05/04/85	16:50:00	44.3333	2.218	2,285.05	+216.2
463	05/04/85	17:00:00	44.5000	2.213	2,285.08	+216.2
464	05/04/85	17:10:00	44.6667	2.209	2,285.09	+216.2
465	05/04/85	17:20:00	44.8333	2.204	2,285.11	+216.2
466	05/04/85	17:30:00	45.0000	2.200	2,285.13	+216.2
467	05/04/85	17:40:00	45.1667	2.196	2,285.14	+216.2
468	05/04/85	17:50:00	45.3333	2.191	2,285.17	+216.2
469	05/04/85	18:00:00	45.5000	2.187	2,285.19	+216.2
470	05/04/85	18:10:00	45.6667	2.182	2,285.20	+216.2
471	05/04/85	18:20:00	45.8333	2.178	2,285.22	+216.2
472	05/04/85	18:30:00	46.0000	2.174	2,285.24	+216.2
473	05/04/85	18:40:00	46.1667	2.170	2,285.26	+216.2
474	05/04/85	18:50:00	46.3333	2.165	2,285.27	+216.2
475	05/04/85	19:00:00	46.5000	2.161	2,285.29	+216.2
476	05/04/85	19:10:00	46.6667	2.157	2,285.30	+216.2
477	05/04/85	19:20:00	46.8333	2.153	2,285.31	+216.2
478	05/04/85	19:30:00	47.0000	2.149	2,285.33	+216.2
479	05/04/85	19:40:00	47.1667	2.145	2,285.35	+216.2
480	05/04/85	19:50:00	47.3333	2.141	2,285.37	+216.2
481	05/04/85	20:00:00	47.5000	2.137	2,285.39	+216.2
482	05/04/85	20:10:00	47.6667	2.133	2,285.40	+216.2
483	05/04/85	20:20:00	47.8333	2.129	2,285.42	+216.2
484	05/04/85	20:30:00	48.0000	2.125	2,285.44	+216.2
485	05/04/85	20:40:00	48.1667	2.121	2,285.45	+216.2
486	05/04/85	20:50:00	48.3333	2.117	2,285.46	+216.2
487	05/04/85	21:00:00	48.5000	2.113	2,285.47	+216.2
488	05/04/85	21:10:00	48.6667	2.110	2,285.49	+216.2
489	05/04/85	21:20:00	48.8333	2.106	2,285.51	+216.2
490	05/04/85	21:30:00	49.0000	2.102	2,285.52	+216.2
491	05/04/85	21:40:00	49.1667	2.098	2,285.54	+216.2
492	05/04/85	21:50:00	49.3333	2.095	2,285.55	+216.2
493	05/04/85	22:00:00	49.5000	2.091	2,285.57	+216.2
494	05/04/85	22:10:00	49.6667	2.087	2,285.58	+216.2
495	05/04/85	22:20:00	49.8333	2.084	2,285.59	+216.2
496	05/04/85	22:30:00	50.0000	2.080	2,285.61	+216.2
497	05/04/85	22:40:00	50.1667	2.076	2,285.64	+216.2
498	05/04/85	22:50:00	50.3333	2.073	2,285.66	+216.2
499	05/04/85	23:00:00	50.5000	2.069	2,285.66	+216.2
500	05/04/85	23:10:00	50.6667	2.066	2,285.67	+216.2

000050

P vs (T + DT)/DT HORNER PLOT DATA

PAGE: 11

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4
 Flow Time: 54 Hours

From : 20:30:00
 Eq. Type : H.P.
 Gauge # : 631
 Depth : 5080 Feet

Comments : Build up survey after flow test.

Seq.#	Date	Time	dt	T+dt/dt	Pressure (PSIA)	Temp (Deg.F)
501	05/04/85	23:20:00	50.8333	2.062	2,285.68	+216.2
502	05/04/85	23:30:00	51.0000	2.059	2,285.69	+216.2
503	05/04/85	23:40:00	51.1667	2.055	2,285.69	+216.2
504	05/04/85	23:50:00	51.3333	2.052	2,285.70	+216.2
505	06/04/85	00:00:00	51.5000	2.049	2,285.71	+216.2
506	06/04/85	00:10:00	51.6667	2.045	2,285.73	+216.2
507	06/04/85	00:20:00	51.8333	2.042	2,285.75	+216.2
508	06/04/85	00:30:00	52.0000	2.038	2,285.77	+216.2
509	06/04/85	00:40:00	52.1667	2.035	2,285.79	+216.2
510	06/04/85	00:50:00	52.3333	2.032	2,285.80	+216.2
511	06/04/85	01:00:00	52.5000	2.029	2,285.81	+216.2
512	06/04/85	01:10:00	52.6667	2.025	2,285.83	+216.2
513	06/04/85	01:20:00	52.8333	2.022	2,285.85	+216.2
514	06/04/85	01:30:00	53.0000	2.019	2,285.85	+216.2
515	06/04/85	01:40:00	53.1667	2.016	2,285.86	+216.2
516	06/04/85	01:50:00	53.3333	2.013	2,285.89	+216.2
517	06/04/85	02:00:00	53.5000	2.009	2,285.90	+216.2
518	06/04/85	02:10:00	53.6667	2.006	2,285.91	+216.2
519	06/04/85	02:20:00	53.8333	2.003	2,285.92	+216.2
520	06/04/85	02:30:00	54.0000	2.000	2,285.94	+216.2
521	06/04/85	02:40:00	54.1667	1.997	2,285.96	+216.2
522	06/04/85	02:50:00	54.3333	1.994	2,285.98	+216.2
523	06/04/85	03:00:00	54.5000	1.991	2,285.99	+216.2
524	06/04/85	03:10:00	54.6667	1.988	2,285.99	+216.2
525	06/04/85	03:20:00	54.8333	1.985	2,286.00	+216.2
526	06/04/85	03:30:00	55.0000	1.982	2,286.02	+216.2
527	06/04/85	03:40:00	55.1667	1.979	2,286.03	+216.2
528	06/04/85	03:50:00	55.3333	1.976	2,286.05	+216.2
529	06/04/85	04:00:00	55.5000	1.973	2,286.05	+216.2
530	06/04/85	04:10:00	55.6667	1.970	2,286.06	+216.2
531	06/04/85	04:20:00	55.8333	1.967	2,286.08	+216.2
532	06/04/85	04:30:00	56.0000	1.964	2,286.09	+216.2
533	06/04/85	04:40:00	56.1667	1.961	2,286.09	+216.2
534	06/04/85	04:50:00	56.3333	1.959	2,286.10	+216.2
535	06/04/85	05:00:00	56.5000	1.956	2,286.11	+216.2
536	06/04/85	05:10:00	56.6667	1.953	2,286.13	+216.2
537	06/04/85	05:20:00	56.8333	1.950	2,286.14	+216.2
538	06/04/85	05:30:00	57.0000	1.947	2,286.15	+216.2
539	06/04/85	05:40:00	57.1667	1.945	2,286.15	+216.2
540	06/04/85	05:50:00	57.3333	1.942	2,286.16	+216.2
541	06/04/85	06:00:00	57.5000	1.939	2,286.18	+216.2

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type: H.P.

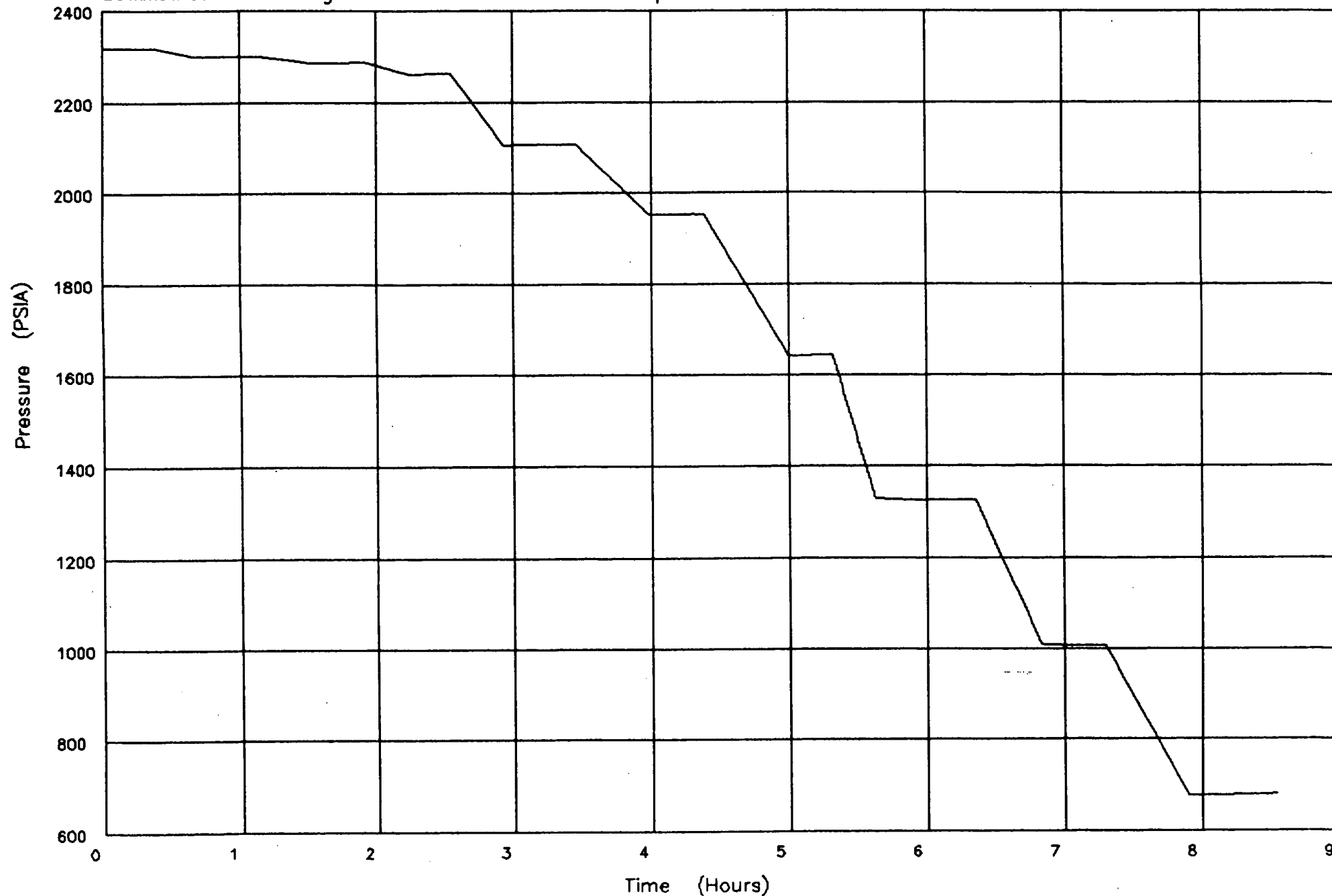
From : 06:27:00 06/04/85

WELL : WANCOOCHA #4

Gauge No: 631

To : 15:00:00 06/04/85

Comments : Static gradient after flow & build-up test.



PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	Depth (Feet)
1	06/04/85	06:27:00	0.0000	2,316.98	+217.6	5160.0
2	06/04/85	06:28:00	0.0167	2,316.97	+217.6	5160.0
3	06/04/85	06:29:00	0.0333	2,316.95	+217.6	5160.0
4	06/04/85	06:30:00	0.0500	2,316.94	+217.6	5160.0
5	06/04/85	06:31:00	0.0667	2,316.93	+217.6	5160.0
6	06/04/85	06:32:00	0.0833	2,316.92	+217.6	5160.0
7	06/04/85	06:33:00	0.1000	2,316.91	+217.6	5160.0
8	06/04/85	06:34:00	0.1167	2,316.90	+217.6	5160.0
9	06/04/85	06:35:00	0.1333	2,316.89	+217.6	5160.0
10	06/04/85	06:36:00	0.1500	2,316.89	+217.6	5160.0
11	06/04/85	06:37:00	0.1667	2,316.88	+217.6	5160.0
12	06/04/85	06:38:00	0.1833	2,316.88	+217.6	5160.0
13	06/04/85	06:39:00	0.2000	2,316.88	+217.6	5160.0
14	06/04/85	06:40:00	0.2167	2,316.89	+217.6	5160.0
15	06/04/85	06:41:00	0.2333	2,316.90	+217.6	5160.0
16	06/04/85	06:42:00	0.2500	2,316.91	+217.6	5160.0
17	06/04/85	06:43:00	0.2667	2,316.91	+217.6	5160.0
18	06/04/85	06:44:00	0.2833	2,316.90	+217.6	5160.0
19	06/04/85	06:45:00	0.3000	2,316.89	+217.6	5160.0
20	06/04/85	06:46:00	0.3167	2,316.89	+217.6	5160.0
21	06/04/85	06:47:00	0.3333	2,316.89	+217.6	5160.0
22	06/04/85	06:48:00	0.3500	2,316.89	+217.6	5160.0
23	06/04/85	06:49:00	0.3667	2,316.89	+217.6	5160.0
24	06/04/85	06:50:00	0.3833	2,316.89	+217.6	5160.0
25	06/04/85	07:07:00	0.6667	2,298.72	+217.8	5120.0
26	06/04/85	07:08:00	0.6833	2,298.71	+217.8	5120.0
27	06/04/85	07:09:00	0.7000	2,298.69	+217.8	5120.0
28	06/04/85	07:10:00	0.7167	2,298.69	+217.8	5120.0
29	06/04/85	07:11:00	0.7333	2,298.68	+217.8	5120.0
30	06/04/85	07:12:00	0.7500	2,298.67	+217.8	5120.0
31	06/04/85	07:13:00	0.7667	2,298.66	+217.8	5120.0
32	06/04/85	07:14:00	0.7833	2,298.66	+217.8	5120.0
33	06/04/85	07:15:00	0.8000	2,298.65	+217.8	5120.0
34	06/04/85	07:16:00	0.8167	2,298.65	+217.8	5120.0
35	06/04/85	07:17:00	0.8333	2,298.65	+217.8	5120.0
36	06/04/85	07:18:00	0.8500	2,298.65	+217.8	5120.0
37	06/04/85	07:19:00	0.8667	2,298.64	+217.8	5120.0
38	06/04/85	07:20:00	0.8833	2,298.64	+217.8	5120.0
39	06/04/85	07:21:00	0.9000	2,298.63	+217.8	5120.0
40	06/04/85	07:22:00	0.9167	2,298.63	+217.8	5120.0
41	06/04/85	07:23:00	0.9333	2,298.63	+217.9	5120.0
42	06/04/85	07:24:00	0.9500	2,298.62	+217.8	5120.0
43	06/04/85	07:25:00	0.9667	2,298.62	+217.9	5120.0
44	06/04/85	07:26:00	0.9833	2,298.62	+217.9	5120.0
45	06/04/85	07:27:00	1.0000	2,298.62	+217.9	5120.0
46	06/04/85	07:28:00	1.0167	2,298.61	+217.9	5120.0
47	06/04/85	07:29:00	1.0333	2,298.61	+217.9	5120.0
48	06/04/85	07:30:00	1.0500	2,298.61	+217.9	5120.0
49	06/04/85	07:31:00	1.0667	2,298.61	+217.9	5120.0
50	06/04/85	07:32:00	1.0833	2,298.61	+217.9	5120.0

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 2

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	Depth (Feet)
51	06/04/85	07:33:00	1.1000	2,298.61	+217.9	5120.0
52	06/04/85	07:34:00	1.1167	2,298.61	+217.9	5120.0
53	06/04/85	07:35:00	1.1333	2,298.61	+217.9	5120.0
54	06/04/85	07:36:00	1.1500	2,298.61	+217.9	5120.0
55	06/04/85	07:57:00	1.5000	2,285.95	+216.2	5080.0
56	06/04/85	07:58:00	1.5167	2,285.99	+216.2	5080.0
57	06/04/85	07:59:00	1.5333	2,286.05	+216.2	5080.0
58	06/04/85	08:00:00	1.5500	2,286.09	+216.2	5080.0
59	06/04/85	08:01:00	1.5667	2,286.12	+216.2	5080.0
60	06/04/85	08:02:00	1.5833	2,286.15	+216.2	5080.0
61	06/04/85	08:03:00	1.6000	2,286.17	+216.2	5080.0
62	06/04/85	08:04:00	1.6167	2,286.19	+216.2	5080.0
63	06/04/85	08:05:00	1.6333	2,286.21	+216.1	5080.0
64	06/04/85	08:06:00	1.6500	2,286.22	+216.1	5080.0
65	06/04/85	08:07:00	1.6667	2,286.23	+216.1	5080.0
66	06/04/85	08:08:00	1.6833	2,286.24	+216.2	5080.0
67	06/04/85	08:09:00	1.7000	2,286.25	+216.2	5080.0
68	06/04/85	08:10:00	1.7167	2,286.26	+216.2	5080.0
69	06/04/85	08:11:00	1.7333	2,286.27	+216.2	5080.0
70	06/04/85	08:12:00	1.7500	2,286.27	+216.2	5080.0
71	06/04/85	08:13:00	1.7667	2,286.27	+216.1	5080.0
72	06/04/85	08:14:00	1.7833	2,286.28	+216.2	5080.0
73	06/04/85	08:15:00	1.8000	2,286.28	+216.2	5080.0
74	06/04/85	08:16:00	1.8167	2,286.29	+216.2	5080.0
75	06/04/85	08:17:00	1.8333	2,286.29	+216.2	5080.0
76	06/04/85	08:18:00	1.8500	2,286.29	+216.1	5080.0
77	06/04/85	08:19:00	1.8667	2,286.29	+216.1	5080.0
78	06/04/85	08:20:00	1.8833	2,286.31	+216.2	5080.0
79	06/04/85	08:21:00	1.9000	2,286.30	+216.2	5080.0
80	06/04/85	08:22:00	1.9167	2,286.30	+216.2	5080.0
81	06/04/85	08:42:00	2.2500	2,261.49	+214.8	5000.0
82	06/04/85	08:43:00	2.2667	2,261.52	+214.8	5000.0
83	06/04/85	08:44:00	2.2833	2,261.56	+214.8	5000.0
84	06/04/85	08:45:00	2.3000	2,261.60	+214.8	5000.0
85	06/04/85	08:46:00	2.3167	2,261.62	+214.8	5000.0
86	06/04/85	08:47:00	2.3333	2,261.64	+214.8	5000.0
87	06/04/85	08:48:00	2.3500	2,261.66	+214.8	5000.0
88	06/04/85	08:49:00	2.3667	2,261.68	+214.8	5000.0
89	06/04/85	08:50:00	2.3833	2,261.69	+214.8	5000.0
90	06/04/85	08:51:00	2.4000	2,261.70	+214.8	5000.0
91	06/04/85	08:52:00	2.4167	2,261.71	+214.8	5000.0
92	06/04/85	08:53:00	2.4333	2,261.71	+214.8	5000.0
93	06/04/85	08:54:00	2.4500	2,261.72	+214.8	5000.0
94	06/04/85	08:55:00	2.4667	2,261.72	+214.8	5000.0
95	06/04/85	08:56:00	2.4833	2,261.72	+214.8	5000.0
96	06/04/85	08:57:00	2.5000	2,261.72	+214.8	5000.0
97	06/04/85	08:58:00	2.5167	2,261.72	+214.8	5000.0
98	06/04/85	08:59:00	2.5333	2,261.72	+214.8	5000.0
99	06/04/85	09:00:00	2.5500	2,261.72	+214.8	5000.0
100	06/04/85	09:23:00	2.9333	2,106.09	+207.5	4500.0

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 3

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	Depth (Feet)
101	06/04/85	09:24:00	2.9500	2,106.30	+207.5	4500.0
102	06/04/85	09:25:00	2.9667	2,106.50	+207.5	4500.0
103	06/04/85	09:26:00	2.9833	2,106.68	+207.5	4500.0
104	06/04/85	09:27:00	3.0000	2,106.84	+207.5	4500.0
105	06/04/85	09:28:00	3.0167	2,106.98	+207.5	4500.0
106	06/04/85	09:29:00	3.0333	2,107.10	+207.5	4500.0
107	06/04/85	09:30:00	3.0500	2,107.20	+207.5	4500.0
108	06/04/85	09:31:00	3.0667	2,107.29	+207.5	4500.0
109	06/04/85	09:32:00	3.0833	2,107.37	+207.5	4500.0
110	06/04/85	09:33:00	3.1000	2,107.43	+207.5	4500.0
111	06/04/85	09:34:00	3.1167	2,107.48	+207.5	4500.0
112	06/04/85	09:35:00	3.1333	2,107.53	+207.5	4500.0
113	06/04/85	09:36:00	3.1500	2,107.57	+207.5	4500.0
114	06/04/85	09:37:00	3.1667	2,107.61	+207.5	4500.0
115	06/04/85	09:38:00	3.1833	2,107.64	+207.5	4500.0
116	06/04/85	09:39:00	3.2000	2,107.66	+207.5	4500.0
117	06/04/85	09:40:00	3.2167	2,107.69	+207.5	4500.0
118	06/04/85	09:41:00	3.2333	2,107.71	+207.5	4500.0
119	06/04/85	09:42:00	3.2500	2,107.73	+207.5	4500.0
120	06/04/85	09:43:00	3.2667	2,107.75	+207.5	4500.0
121	06/04/85	09:44:00	3.2833	2,107.76	+207.5	4500.0
122	06/04/85	09:45:00	3.3000	2,107.79	+207.5	4500.0
123	06/04/85	09:46:00	3.3167	2,107.79	+207.5	4500.0
124	06/04/85	09:47:00	3.3333	2,107.79	+207.5	4500.0
125	06/04/85	09:48:00	3.3500	2,107.80	+207.5	4500.0
126	06/04/85	09:49:00	3.3667	2,107.81	+207.5	4500.0
127	06/04/85	09:50:00	3.3833	2,107.82	+207.5	4500.0
128	06/04/85	09:51:00	3.4000	2,107.83	+207.5	4500.0
129	06/04/85	09:52:00	3.4167	2,107.83	+207.5	4500.0
130	06/04/85	09:53:00	3.4333	2,107.84	+207.5	4500.0
131	06/04/85	09:54:00	3.4500	2,107.84	+207.5	4500.0
132	06/04/85	10:26:00	3.9833	1,953.13	+195.9	4000.0
133	06/04/85	10:27:00	4.0000	1,953.19	+195.9	4000.0
134	06/04/85	10:28:00	4.0167	1,953.26	+195.9	4000.0
135	06/04/85	10:29:00	4.0333	1,953.33	+195.9	4000.0
136	06/04/85	10:30:00	4.0500	1,953.39	+195.9	4000.0
137	06/04/85	10:31:00	4.0667	1,953.44	+195.1	4000.0
138	06/04/85	10:32:00	4.0833	1,953.50	+195.8	4000.0
139	06/04/85	10:33:00	4.1000	1,953.50	+195.8	4000.0
140	06/04/85	10:34:00	4.1167	1,953.54	+195.8	4000.0
141	06/04/85	10:35:00	4.1333	1,953.56	+195.8	4000.0
142	06/04/85	10:36:00	4.1500	1,953.58	+195.8	4000.0
143	06/04/85	10:37:00	4.1667	1,953.62	+195.8	4000.0
144	06/04/85	10:38:00	4.1833	1,953.63	+195.8	4000.0
145	06/04/85	10:39:00	4.2000	1,953.64	+195.8	4000.0
146	06/04/85	10:40:00	4.2167	1,953.66	+195.8	4000.0
147	06/04/85	10:41:00	4.2333	1,953.67	+195.8	4000.0
148	06/04/85	10:42:00	4.2500	1,953.68	+195.8	4000.0
149	06/04/85	10:43:00	4.2667	1,953.69	+195.8	4000.0
150	06/04/85	10:44:00	4.2833	1,953.74	+193.5	4000.0

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 4

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	Depth (Feet)
151	06/04/85	10:45:00	4.3000	1,953.86	+195.8	4000.0
152	06/04/85	10:46:00	4.3167	1,953.71	+195.8	4000.0
153	06/04/85	10:47:00	4.3333	1,953.71	+195.8	4000.0
154	06/04/85	10:48:00	4.3500	1,953.72	+195.8	4000.0
155	06/04/85	10:49:00	4.3667	1,953.72	+195.8	4000.0
156	06/04/85	10:50:00	4.3833	1,953.73	+195.8	4000.0
157	06/04/85	11:27:00	5.0000	1,642.30	+164.0	3000.0
158	06/04/85	11:28:00	5.0167	1,642.26	+164.0	3000.0
159	06/04/85	11:29:00	5.0333	1,642.36	+164.0	3000.0
160	06/04/85	11:30:00	5.0500	1,642.31	+164.0	3000.0
161	06/04/85	11:31:00	5.0667	1,642.33	+164.0	3000.0
162	06/04/85	11:32:00	5.0833	1,642.35	+164.0	3000.0
163	06/04/85	11:33:00	5.1000	1,642.37	+164.0	3000.0
164	06/04/85	11:34:00	5.1167	1,642.38	+164.0	3000.0
165	06/04/85	11:35:00	5.1333	1,642.40	+164.0	3000.0
166	06/04/85	11:36:00	5.1500	1,642.41	+164.0	3000.0
167	06/04/85	11:37:00	5.1667	1,642.45	+164.0	3000.0
168	06/04/85	11:38:00	5.1833	1,642.46	+164.0	3000.0
169	06/04/85	11:39:00	5.2000	1,642.62	+164.0	3000.0
170	06/04/85	11:41:00	5.2333	1,642.91	+163.5	3000.0
171	06/04/85	11:42:00	5.2500	1,642.49	+163.5	3000.0
172	06/04/85	11:43:00	5.2667	1,642.49	+163.5	3000.0
173	06/04/85	11:44:00	5.2833	1,642.48	+163.5	3000.0
174	06/04/85	11:45:00	5.3000	1,642.51	+163.5	3000.0
175	06/04/85	11:46:00	5.3167	1,642.50	+163.5	3000.0
176	06/04/85	12:05:00	5.6333	1,330.44	+134.4	2000.0
177	06/04/85	12:06:00	5.6500	1,330.05	+134.4	2000.0
178	06/04/85	12:07:00	5.6667	1,329.65	+134.4	2000.0
179	06/04/85	12:08:00	5.6833	1,329.32	+134.4	2000.0
180	06/04/85	12:09:00	5.7000	1,328.94	+134.4	2000.0
181	06/04/85	12:10:00	5.7167	1,328.65	+134.4	2000.0
182	06/04/85	12:11:00	5.7333	1,328.40	+134.4	2000.0
183	06/04/85	12:12:00	5.7500	1,328.19	+134.4	2000.0
184	06/04/85	12:13:00	5.7667	1,328.00	+134.4	2000.0
185	06/04/85	12:14:00	5.7833	1,327.85	+134.4	2000.0
186	06/04/85	12:15:00	5.8000	1,327.71	+134.4	2000.0
187	06/04/85	12:16:00	5.8167	1,327.59	+134.4	2000.0
188	06/04/85	12:17:00	5.8333	1,327.49	+134.4	2000.0
189	06/04/85	12:18:00	5.8500	1,327.39	+134.4	2000.0
190	06/04/85	12:19:00	5.8667	1,327.30	+134.4	2000.0
191	06/04/85	12:20:00	5.8833	1,327.22	+134.4	2000.0
192	06/04/85	12:21:00	5.9000	1,327.15	+134.4	2000.0
193	06/04/85	12:22:00	5.9167	1,327.11	+134.4	2000.0
194	06/04/85	12:23:00	5.9333	1,327.07	+134.4	2000.0
195	06/04/85	12:24:00	5.9500	1,326.99	+134.4	2000.0
196	06/04/85	12:25:00	5.9667	1,326.95	+134.4	2000.0
197	06/04/85	12:26:00	5.9833	1,326.91	+134.4	2000.0
198	06/04/85	12:27:00	6.0000	1,326.88	+134.4	2000.0
199	06/04/85	12:28:00	6.0167	1,326.85	+134.4	2000.0
200	06/04/85	12:29:00	6.0333	1,326.82	+134.4	2000.0

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 5

COMPANY : DELHI PETROLEUM PTY LTD
 WELL : WANCOOCHA #4

Eq. Type : H.P.
 Gauge # : 631
 Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	Depth (Feet)
201	06/04/85	12:30:00	6.0500	1,326.80	+134.4	2000.0
202	06/04/85	12:31:00	6.0667	1,326.77	+134.4	2000.0
203	06/04/85	12:32:00	6.0833	1,326.74	+134.4	2000.0
204	06/04/85	12:33:00	6.1000	1,326.72	+134.4	2000.0
205	06/04/85	12:34:00	6.1167	1,326.70	+134.4	2000.0
206	06/04/85	12:35:00	6.1333	1,326.69	+134.4	2000.0
207	06/04/85	12:36:00	6.1500	1,326.67	+134.4	2000.0
208	06/04/85	12:37:00	6.1667	1,326.67	+134.4	2000.0
209	06/04/85	12:38:00	6.1833	1,326.75	+134.4	2000.0
210	06/04/85	12:39:00	6.2000	1,326.66	+134.4	2000.0
211	06/04/85	12:40:00	6.2167	1,326.66	+134.4	2000.0
212	06/04/85	12:41:00	6.2333	1,326.61	+134.4	2000.0
213	06/04/85	12:42:00	6.2500	1,326.60	+134.4	2000.0
214	06/04/85	12:43:00	6.2667	1,326.61	+134.4	2000.0
215	06/04/85	12:44:00	6.2833	1,326.59	+134.4	2000.0
216	06/04/85	12:45:00	6.3000	1,326.58	+134.4	2000.0
217	06/04/85	12:46:00	6.3167	1,326.57	+134.4	2000.0
218	06/04/85	12:47:00	6.3333	1,326.67	+134.4	2000.0
219	06/04/85	12:48:00	6.3500	1,326.57	+134.4	2000.0
220	06/04/85	12:49:00	6.3667	1,326.59	+134.4	2000.0
221	06/04/85	13:17:00	6.8333	1,009.36	+105.9	1000.0
222	06/04/85	13:18:00	6.8500	1,009.00	+105.9	1000.0
223	06/04/85	13:19:00	6.8667	1,008.62	+105.9	1000.0
224	06/04/85	13:20:00	6.8833	1,008.40	+105.9	1000.0
225	06/04/85	13:21:00	6.9000	1,008.11	+105.9	1000.0
226	06/04/85	13:22:00	6.9167	1,007.91	+105.9	1000.0
227	06/04/85	13:23:00	6.9333	1,007.72	+105.9	1000.0
228	06/04/85	13:24:00	6.9500	1,007.57	+105.9	1000.0
229	06/04/85	13:25:00	6.9667	1,007.44	+105.9	1000.0
230	06/04/85	13:26:00	6.9833	1,007.31	+105.9	1000.0
231	06/04/85	13:27:00	7.0000	1,007.21	+105.9	1000.0
232	06/04/85	13:28:00	7.0167	1,007.11	+105.9	1000.0
233	06/04/85	13:29:00	7.0333	1,007.03	+105.9	1000.0
234	06/04/85	13:30:00	7.0500	1,006.95	+105.9	1000.0
235	06/04/85	13:31:00	7.0667	1,006.88	+105.9	1000.0
236	06/04/85	13:32:00	7.0833	1,006.82	+105.9	1000.0
237	06/04/85	13:33:00	7.1000	1,006.76	+105.9	1000.0
238	06/04/85	13:34:00	7.1167	1,006.71	+105.9	1000.0
239	06/04/85	13:35:00	7.1333	1,006.67	+105.9	1000.0
240	06/04/85	13:36:00	7.1500	1,006.63	+105.9	1000.0
241	06/04/85	13:37:00	7.1667	1,006.60	+105.9	1000.0
242	06/04/85	13:38:00	7.1833	1,006.56	+105.9	1000.0
243	06/04/85	13:39:00	7.2000	1,006.53	+105.9	1000.0
244	06/04/85	13:40:00	7.2167	1,006.51	+105.9	1000.0
245	06/04/85	13:41:00	7.2333	1,006.48	+105.9	1000.0
246	06/04/85	13:42:00	7.2500	1,006.49	+105.9	1000.0
247	06/04/85	13:43:00	7.2667	1,006.44	+105.9	1000.0
248	06/04/85	13:44:00	7.2833	1,006.42	+105.9	1000.0
249	06/04/85	13:45:00	7.3000	1,006.40	+105.9	1000.0
250	06/04/85	14:21:00	7.9000	677.00	+88.7	5.0

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 6

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type : H.P.

WELL : WANCOOCHA #4

Gauge # : 631

Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	Depth (Feet)
251	06/04/85	14:22:00	7.9167	677.00	+88.7	5.0
252	06/04/85	14:23:00	7.9333	677.02	+88.7	5.0
253	06/04/85	14:24:00	7.9500	677.12	+88.7	5.0
254	06/04/85	14:25:00	7.9667	677.26	+88.7	5.0
255	06/04/85	14:26:00	7.9833	677.35	+88.7	5.0
256	06/04/85	14:27:00	8.0000	677.43	+88.7	5.0
257	06/04/85	14:28:00	8.0167	677.48	+88.7	5.0
258	06/04/85	14:29:00	8.0333	677.46	+88.7	5.0
259	06/04/85	14:30:00	8.0500	677.50	+88.7	5.0
260	06/04/85	14:31:00	8.0667	677.64	+88.7	5.0
261	06/04/85	14:32:00	8.0833	677.89	+88.7	5.0
262	06/04/85	14:33:00	8.1000	677.98	+88.7	5.0
263	06/04/85	14:34:00	8.1167	678.08	+88.7	5.0
264	06/04/85	14:35:00	8.1333	678.15	+88.7	5.0
265	06/04/85	14:36:00	8.1500	678.18	+88.7	5.0
266	06/04/85	14:37:00	8.1667	678.22	+88.7	5.0
267	06/04/85	14:38:00	8.1833	678.31	+88.7	5.0
268	06/04/85	14:39:00	8.2000	678.32	+88.7	5.0
269	06/04/85	14:40:00	8.2167	678.35	+88.7	5.0
270	06/04/85	14:41:00	8.2333	678.45	+88.7	5.0
271	06/04/85	14:42:00	8.2500	678.61	+88.7	5.0
272	06/04/85	14:43:00	8.2667	678.64	+88.7	5.0
273	06/04/85	14:44:00	8.2833	678.64	+88.7	5.0
274	06/04/85	14:45:00	8.3000	678.73	+88.7	5.0
275	06/04/85	14:46:00	8.3167	678.77	+88.7	5.0
276	06/04/85	14:47:00	8.3333	678.82	+88.7	5.0
277	06/04/85	14:48:00	8.3500	678.76	+88.7	5.0
278	06/04/85	14:49:00	8.3667	678.78	+88.7	5.0
279	06/04/85	14:50:00	8.3833	678.93	+88.7	5.0
280	06/04/85	14:51:00	8.4000	679.07	+88.7	5.0
281	06/04/85	14:52:00	8.4167	679.12	+90.4	5.0
282	06/04/85	14:53:00	8.4333	679.24	+89.2	5.0
283	06/04/85	14:54:00	8.4500	679.64	+89.2	5.0
284	06/04/85	14:55:00	8.4667	679.88	+89.2	5.0
285	06/04/85	14:56:00	8.4833	680.02	+89.2	5.0
286	06/04/85	14:57:00	8.5000	680.15	+90.8	5.0
287	06/04/85	14:58:00	8.5167	680.30	+90.8	5.0
288	06/04/85	14:59:00	8.5333	680.45	+90.8	5.0
289	06/04/85	15:00:00	8.5500	680.54	+90.9	5.0

STATIC GRADIENT

COMPANY : DELHI PETROLEUM PTY LTD

WELL : WANCOOCHA #4

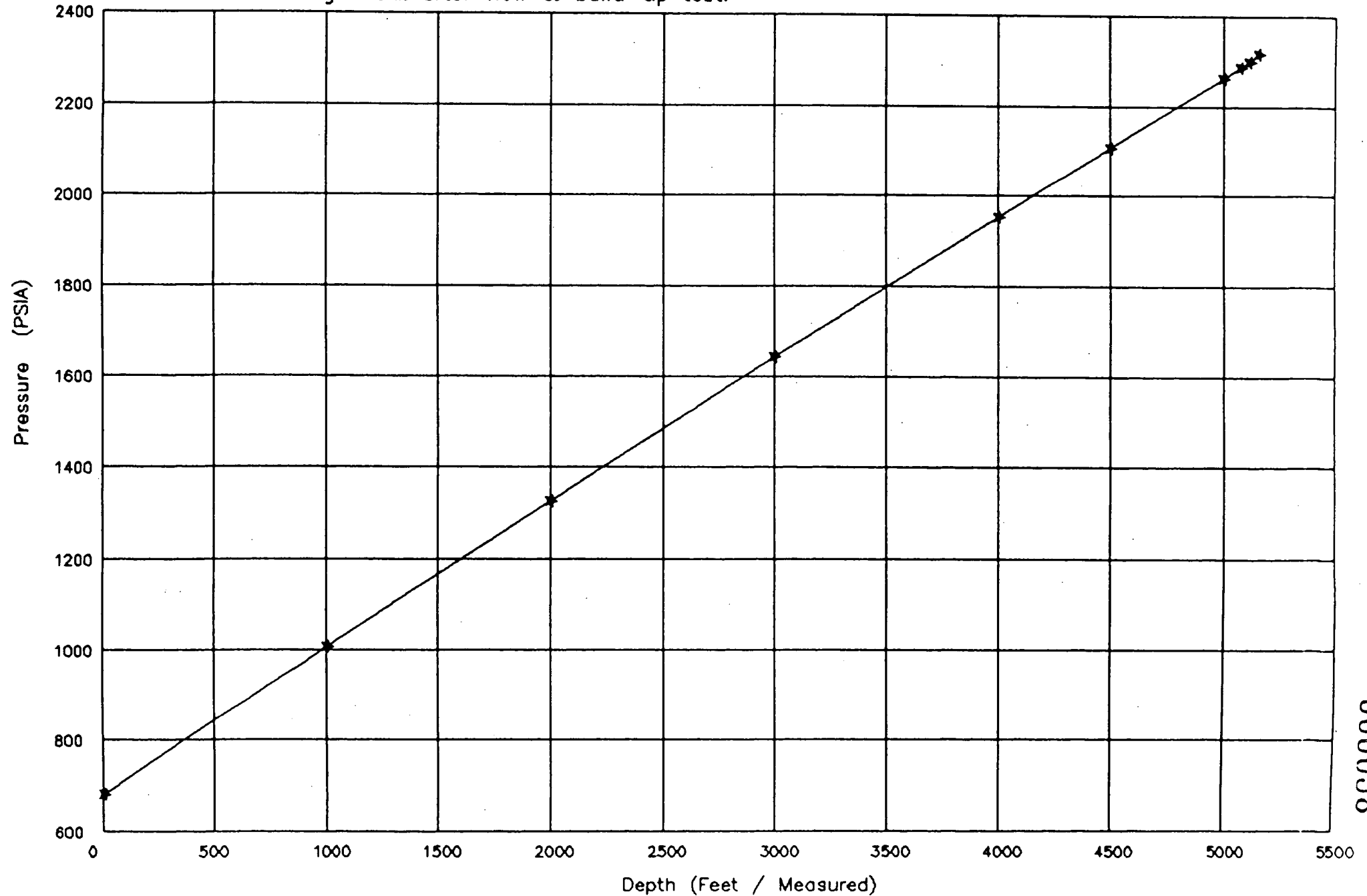
Eq. Type: H.P.

Gauge No: 631

From: 06:50:00 06/04/85

To : 15:00:00 06/04/85

Comments : Static gradient after flow & build-up test.



STATIC GRADIENT - PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type : H.P.
Gauge # : 631
Depth : Measured

Comments : Static gradient after flow & build-up test.

Seq.#	Date	Time	Temp (Deg.F)	Depth (Feet)	Pressure (PSIA)	Gradient (PSIA/Feet)
1	06/04/85	06:50:00	+217.61	5,160.0	2,316.89	.000
2	06/04/85	07:36:00	+217.87	5,120.0	2,298.61	.457
3	06/04/85	08:22:00	+216.17	5,080.0	2,286.30	.308
4	06/04/85	09:00:00	+214.75	5,000.0	2,261.72	.307
5	06/04/85	09:54:00	+207.46	4,500.0	2,107.84	.308
6	06/04/85	10:50:00	+195.78	4,000.0	1,953.73	.308
7	06/04/85	11:46:00	+163.50	3,000.0	1,642.50	.311
8	06/04/85	12:49:00	+134.40	2,000.0	1,326.59	.316
9	06/04/85	13:45:00	+105.90	1,000.0	1,006.40	.320
10	06/04/85	15:00:00	+90.89	5.0	680.54	.327

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD
WELL : WANCOOCHA #4

Eq. Type :
Gauge # :
Depth : 0 Feet

Comments : Tubing head pressures with Vaetrix gauge, H/P in lubricator.

Seq.#	Date	Time	dt	Pressure (PSIG)	Temp (Deg.F)
1	03/04/85	13:55:00	0.0000	599.00	+12.0
2	06/04/85	14:10:00	0.0000	665.00	+88.0
3	06/04/85	14:15:00	0.0000	664.00	+88.0
4	06/04/85	14:20:00	0.0000	664.00	+88.0
5	06/05/85	14:25:00	0.0000	664.00	+88.0
6	06/04/85	14:30:00	0.0000	664.00	+88.0
7	06/04/85	14:35:00	0.0000	664.00	+88.0
8	06/04/85	14:40:00	0.0000	664.00	+88.0
9	06/04/85	14:45:00	0.0000	664.00	+88.0
10	06/04/85	14:50:00	0.0000	664.00	+88.0
11	06/04/85	14:55:00	0.0000	664.00	+88.0
12	06/04/85	15:00:00	0.0000	665.00	+88.0

PRESSURE vs TIME LINEAR

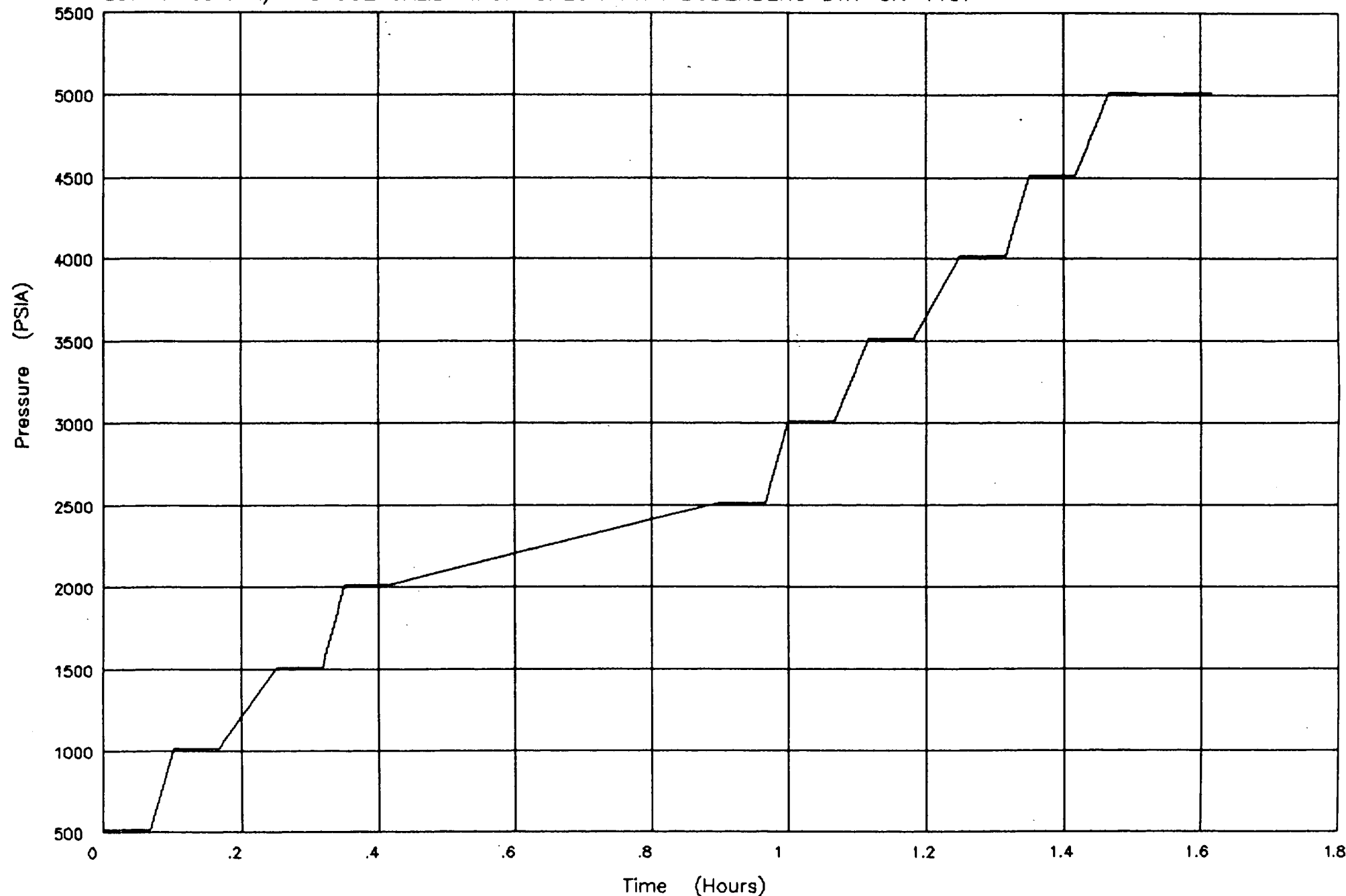
COMPANY : DELHI PETROLEUM PTY LTD
BEFORE SURVEY : DEAD WIEGHT TESTER - H/P GAUGE
Comments : H/P GAUGE CALIBRATION CHECK WITH BUDENBERG DWT SN 4157

Eq. Type: H.P.

Gauge No: 631

From : 11:39:00 31/03/85

To : 13:16:00 31/03/85



GEARHART AUSTRALIA

000061

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type : H.P.

FORE SURVEY: DEAD WIEGHT TESTER - H/P GAUGE

Gauge # : 631

Depth BENCH

Comments : H/P GAUGE CALIBRATION CHECK WITH BUDENBERG DWT SN 4157

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	DWT (PSIG)
1	31/03/85	11:39:00	0.0000	514.92	+72.5	0.0
2	31/03/85	11:40:00	0.0167	513.87	+72.4	0.0
3	31/03/85	11:41:00	0.0333	513.83	+72.5	0.0
4	31/03/85	11:42:00	0.0500	513.90	+72.4	0.0
5	31/03/85	11:43:00	0.0667	513.80	+72.5	0.0
6	31/03/85	11:45:00	0.1000	1,014.09	+72.4	1000.0
7	31/03/85	11:46:00	0.1167	1,014.15	+72.4	1000.0
8	31/03/85	11:47:00	0.1333	1,014.23	+72.5	1000.0
9	31/03/85	11:48:00	0.1500	1,014.14	+72.4	1000.0
10	31/03/85	11:49:00	0.1667	1,014.15	+72.4	1000.0
11	31/03/85	11:54:00	0.2500	1,513.94	+72.3	1500.0
12	31/03/85	11:55:00	0.2667	1,513.91	+72.4	1500.0
13	31/03/85	11:56:00	0.2833	1,514.09	+72.3	1500.0
14	31/03/85	11:57:00	0.3000	1,513.97	+72.3	1500.0
15	31/03/85	11:58:00	0.3167	1,513.87	+72.3	1500.0
16	31/03/85	12:00:00	0.3500	2,014.59	+72.4	2000.0
17	31/03/85	12:01:00	0.3667	2,014.71	+72.3	2000.0
18	31/03/85	12:02:00	0.3833	2,014.68	+72.4	2000.0
19	31/03/85	12:03:00	0.4000	2,014.64	+72.4	2000.0
20	31/03/85	12:04:00	0.4167	2,014.54	+72.4	2000.0
21	31/03/85	12:33:00	0.9000	2,513.04	+72.4	2500.0
22	31/03/85	12:34:00	0.9167	2,513.20	+72.6	2500.0
23	31/03/85	12:35:00	0.9333	2,513.13	+72.6	2500.0
24	31/03/85	12:36:00	0.9500	2,513.07	+72.7	2500.0
25	31/03/85	12:37:00	0.9667	2,513.03	+72.7	2500.0
26	31/03/85	12:39:00	1.0000	3,013.64	+72.7	3000.0
27	31/03/85	12:40:00	1.0167	3,013.67	+72.8	3000.0
28	31/03/85	12:41:00	1.0333	3,013.65	+72.8	3000.0
29	31/03/85	12:42:00	1.0500	3,013.65	+72.9	3000.0
30	31/03/85	12:43:00	1.0667	3,013.66	+72.9	3000.0
31	31/03/85	12:46:00	1.1167	3,513.32	+73.1	3500.0
32	31/03/85	12:47:00	1.1333	3,513.25	+73.1	3500.0
33	31/03/85	12:48:00	1.1500	3,513.28	+73.1	3500.0
34	31/03/85	12:49:00	1.1667	3,513.48	+73.1	3500.0
35	31/03/85	12:50:00	1.1833	3,513.57	+73.1	3500.0
36	31/03/85	12:54:00	1.2500	4,014.55	+73.1	4000.0
37	31/03/85	12:55:00	1.2667	4,014.56	+73.1	4000.0
38	31/03/85	12:56:00	1.2833	4,014.70	+73.1	4000.0
39	31/03/85	12:57:00	1.3000	4,014.59	+73.1	4000.0
40	31/03/85	12:58:00	1.3167	4,014.84	+73.2	4000.0
41	31/03/85	13:00:00	1.3500	4,513.71	+73.1	4500.0
42	31/03/85	13:01:00	1.3667	4,512.14	+73.1	4500.0
43	31/03/85	13:02:00	1.3833	4,510.75	+73.1	4500.0
44	31/03/85	13:03:00	1.4000	4,512.10	+73.0	4500.0
45	31/03/85	13:04:00	1.4167	4,513.28	+73.1	4500.0
46	31/03/85	13:07:00	1.4667	5,014.24	+73.1	5000.0
47	31/03/85	13:08:00	1.4833	5,014.23	+73.1	5000.0
48	31/03/85	13:09:00	1.5000	5,013.83	+73.2	5000.0
49	31/03/85	13:10:00	1.5167	5,012.06	+73.2	5000.0
50	31/03/85	13:11:00	1.5333	5,010.93	+73.1	5000.0

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 2

000063

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type : H.P.

BEFORE SURVEY : DEAD WIEGHT TESTER - H/P GAUGE

Gauge # : 631

Depth : BENCH

Comments : H/P GAUGE CALIBRATION CHECK WITH BUDENBERG DWT SN 4157

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	,DWT (PSIG)
51	31/03/85	13:12:00	1.5500	5,010.64	+73.2	5000.0
52	31/03/85	13:13:00	1.5667	5,012.70	+73.1	5000.0
53	31/03/85	13:14:00	1.5833	5,013.74	+73.1	5000.0
54	31/03/85	13:15:00	1.6000	5,014.40	+73.1	5000.0
55	31/03/85	13:16:00	1.6167	5,014.14	+73.1	5000.0

PRESSURE vs TIME - (LINEAR)

COMPANY : DELHI PETROLEUM PTY LTD

Eq. Type: H.P.

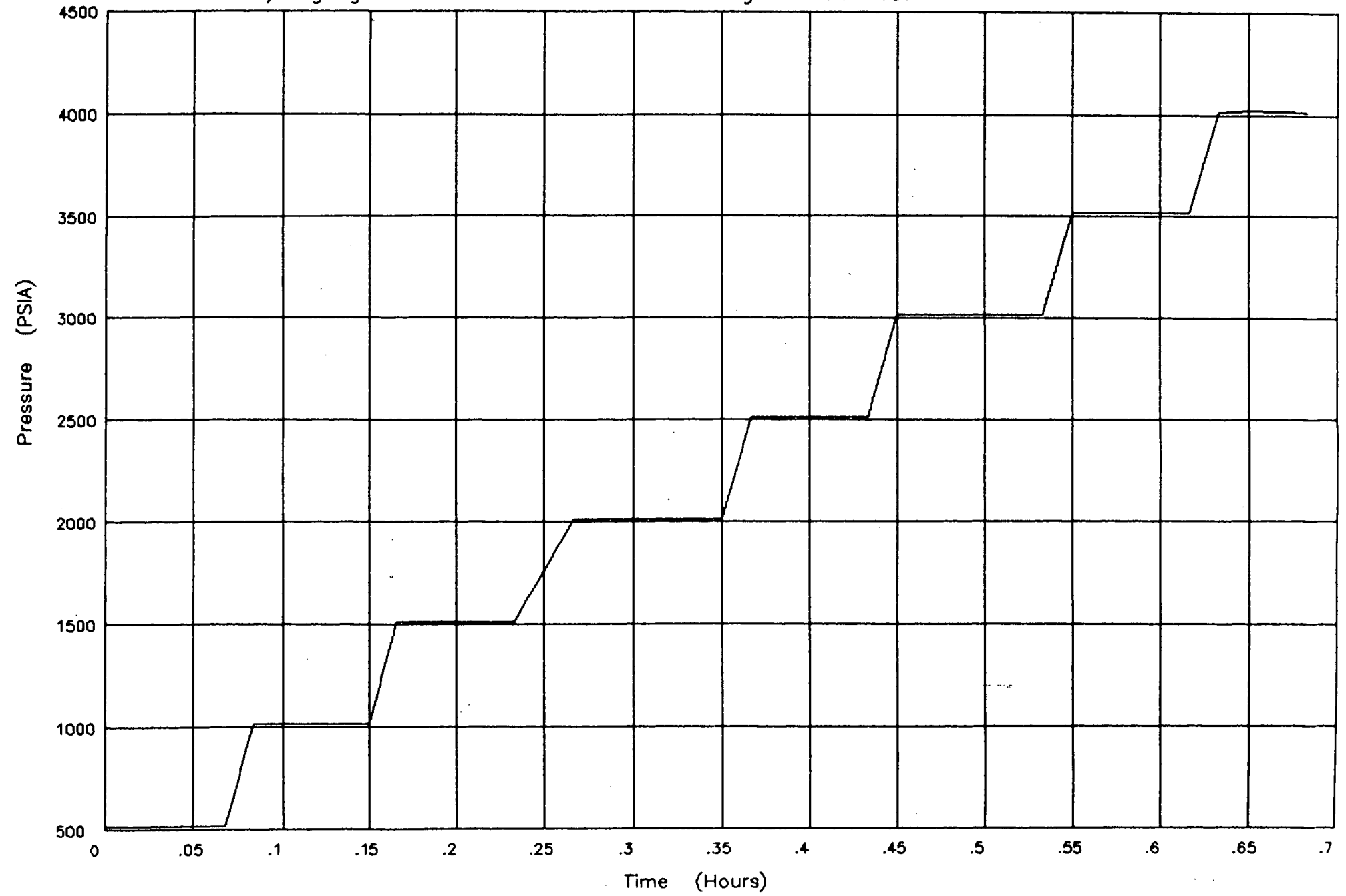
From : 20:24:00 06/04/85

AFTER SURVEY: DEAD WIEGHT TESTER - H/P GAUGE

Gauge No: 631

To : 21:06:00 06/04/85

Comments : H/P gauge calibration check with Budenberg DWT sn 4157



GEARHART AUSTRALIA

000064

PRESSURE vs TIME - (LINEAR) PLOT DATA

PAGE: 1

000065

COMPANY : DELHI PETROLEUM PTY LTD
SURVEY : DEAD WIEGHT TESTER - H/P GAUGE

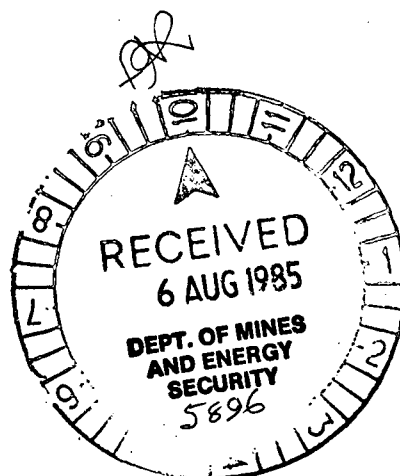
Eq. Type : H.P.
Gauge # : 631
Depth : BENCH

Comments : H/P gauge calibration check with Budenberg DWT sn 4157

Seq.#	Date	Time	dt	Pressure (PSIA)	Temp (Deg.F)	DWT (PSIG)
1	06/04/85	20:24:00	0.0000	516.26	+72.6	500.0
2	06/04/85	20:25:00	0.0167	515.87	+72.9	500.0
3	06/04/85	20:26:00	0.0333	516.88	+72.8	500.0
4	06/04/85	20:27:00	0.0500	515.53	+72.6	500.0
5	06/04/85	20:28:00	0.0667	515.27	+72.3	500.0
6	06/04/85	20:29:00	0.0833	1,014.95	+71.7	1000.0
7	06/04/85	20:30:00	0.1000	1,014.36	+71.6	1000.0
8	06/04/85	20:31:00	0.1167	1,014.91	+71.3	1000.0
9	06/04/85	20:32:00	0.1333	1,014.83	+71.1	1000.0
10	06/04/85	20:33:00	0.1500	1,014.82	+71.1	1000.0
11	06/04/85	20:34:00	0.1667	1,514.19	+71.7	1500.0
12	06/04/85	20:35:00	0.1833	1,514.70	+71.8	1500.0
13	06/04/85	20:36:00	0.2000	1,514.49	+72.0	1500.0
14	06/04/85	20:37:00	0.2167	1,514.55	+71.6	1500.0
15	06/04/85	20:38:00	0.2333	1,514.47	+71.7	1500.0
16	06/04/85	20:40:00	0.2667	2,014.46	+71.3	2000.0
17	06/04/85	20:41:00	0.2833	2,014.45	+71.2	2000.0
18	06/04/85	20:42:00	0.3000	2,014.76	+71.3	2000.0
19	06/04/85	20:43:00	0.3167	2,014.80	+71.4	2000.0
20	06/04/85	20:44:00	0.3333	2,014.88	+71.6	2000.0
21	06/04/85	20:45:00	0.3500	2,014.49	+71.7	2000.0
22	06/04/85	20:46:00	0.3667	2,514.78	+71.5	2500.0
23	06/04/85	20:47:00	0.3833	2,514.79	+71.3	2500.0
24	06/04/85	20:48:00	0.4000	2,514.82	+71.0	2500.0
25	06/04/85	20:49:00	0.4167	2,514.69	+71.0	2500.0
26	06/04/85	20:50:00	0.4333	2,514.85	+71.2	2500.0
27	06/04/85	20:51:00	0.4500	3,014.08	+71.3	3000.0
28	06/04/85	20:52:00	0.4667	3,014.02	+71.4	3000.0
29	06/04/85	20:53:00	0.4833	3,014.01	+71.3	3000.0
30	06/04/85	20:54:00	0.5000	3,014.44	+70.8	3000.0
31	06/04/85	20:55:00	0.5167	3,014.65	+70.5	3000.0
32	06/04/85	20:56:00	0.5333	3,014.14	+70.6	3000.0
33	06/04/85	20:57:00	0.5500	3,514.21	+70.8	3500.0
34	06/04/85	20:58:00	0.5667	3,514.19	+71.1	3500.0
35	06/04/85	20:59:00	0.5833	3,514.32	+71.2	3500.0
36	06/04/85	21:00:00	0.6000	3,514.06	+71.2	3500.0
37	06/04/85	21:01:00	0.6167	3,514.16	+71.1	3500.0
38	06/04/85	21:02:00	0.6333	4,014.12	+70.8	4000.0
39	06/04/85	21:03:00	0.6500	4,021.14	+70.8	4000.0
40	06/04/85	21:04:00	0.6667	4,016.80	+70.8	4000.0
41	06/04/85	21:05:00	0.6833	4,014.85	+71.0	4000.0
42	06/04/85	21:06:00	0.7000	4,014.59	+71.2	4000.0

WANCOOCHA #4 BIRKHEAD
FLOW & BUILDUP TEST RESULTS
APRIL 3 TO 6, 1985

REPORTED BY: D. PROVIAS
DATE: JULY, 1985



INTRODUCTION

Wancoocha #4 was drilled as an appraisal/development well in late February to early March, 1985 and completed as a Birkhead producer. Production from the Birkhead sand commenced in late 1984 with the discovery well. Wancoocha #4 is the second offtake point for the Birkhead pool.

This report evaluates the post-completion flow/buildup test conducted from April 1 to 6, 1985. Conclusions are drawn as to the reservoir properties within the radius of investigation of the test and to characteristics of the reservoir as a whole.

CONCLUSIONS & RECOMMENDATIONS

1. A permeability of 289 md was calculated for the Birkhead reservoir in Wancoocha #4. This value was obtained using conventional Horner techniques and confirmed by multirate analysis.
2. An apparent skin of -1.12 was calculated indicating the Birkhead zone is not damaged.
3. An average productivity index of 5.9 bpd/psi was obtained based on the drawdown portion of the flow/buildup test.
4. A final buildup pressure estimate of 2302 psia at the midpoint of perforations, 5124' KB was obtained using modified Muskat techniques.
5. The reservoir pressure from the Wancoocha #4 test is comparable to the initial field pressure established by Wancoocha #2. This implies that natural water influx is supplying pressure support to the system. Reservoir pressure at the field datum 5000' SS is taken at 2300 psia.
6. The buildup curve for the Birkhead reservoir is characteristic of an eccentric well location and/or an asymmetric reservoir.
7. Two boundaries were identified at a distance of 200' and at a maximum of 450', given an order of magnitude accuracy.
8. An initial offtake rate of 500 BOPD is recommended to maintain drawdown around the wellbore at approximately 85 psi.

WELL HISTORY

Wancoocha #4 was drilled as an appraisal/development well to evaluate Birkhead, Hutton and Patchawarra oil reservoirs discovered by Wancoocha #2. A chronological well history and a well data sheet are included as Tables 1 and 2.

The well intersected 19' of pay in the Birkhead reservoir with average log analysis parameters as listed in Table 3. Oil-water contacts were encountered in both the Hutton and Patchawarra sands and neither zone had sufficient pay for perforation.

The Birkhead zone was cored over the entire sand and perforated from 5111' KB to 5136' KB. These intervals are highlighted on the log in Figure 1. Core analysis results are shown in Figure 2.

PRODUCTION HISTORY

Wancoocha #4 was displaced to crude following perforation and the Birkhead zone flowed 310 bbls of oil over the next 5 1/2 hours.

An extended flow period followed and a constant rate was established prior to shut-in for buildup. A cumulative of 1241.9 bbls of oil was produced over 54 hours at an average rate of 552 BOPD. Choke size, tubing pressure and rate verses time is shown in Figure 3. Bottomhole pressure was monitored over the last 5 hours of flow and is plotted versus flow rate in Figure 4.

The well has been on extended production test as of April 6, 1985.

The production history outlined above is summarized on Table 4.

DISCUSSION

Bottomhole flowing and buildup pressures were recorded at 5080' KB using an HP electronic gauge with surface readout. Expertest monitored flow rates, tubing and casing pressures. Expertest data is included as Attachment #1 and Gearhart HP pressure data is included as a separate bound report.

As indicated by the flowrate verse time plot on Figure 3, rates varied from 485 to 855 BOPD before a constant rate was established. Buildup data was analysed by both conventional Horner techniques and by multirate analysis to evaluate the effect of these rate fluctuations.

The software package Wiper was used to calculate the superposition function for the multirate analysis. A single rate WIPER run was conducted and compared with the hand generated Horner analysis to ensure the validity of the model.

The end of wellbore storage was estimated at approximately .033 hours and the Horner straight line uses points after this period. The log-log plot is shown in Figure 5 and the raw data tabulated in Table 7.

It is interesting to note that the slope obtained by the early pressure data on the log-log plot is greater than 1. This is probably a result of a slight error when recording shut-in time. A correction of 21 seconds to the shut-in time will bring data to a unit slope.

The Horner plot for the buildup is shown in Figure 6. Horner time was calculated with the actual producing time of 54 hours rather than using an effective producing time based on cumulative production. Horner data is included in Table 8.

Pressure trends deviate upward from the Horner semi-log straight line after a shut-in time of .4 hours and appear to level off towards a static reservoir pressure after approximately 32 hours of buildup.

Ramey, Earlougher and others have shown that similar buildup curves can result when dealing with asymmetrical reservoir shapes and/or eccentric well locations.

The following factors support the idea that the Wancoocha #4 pressure buildup curve is an example of this situation.

1. A no-flow boundary can be approximated as acting midway between Wancoocha #2 and #4. The offtake rates for both wells were similar during the drawdown period prior to buildup.
2. Wancoocha #2 production testing indicates that pressure maintenance is occurring in the reservoir. It is possible that a constant pressure boundary indicative of natural water influx may be effecting trends.
3. The Birkhead sands are thought to be channel deposits and to date the lateral extent of the channels is not know. Stratigraphic boundaries representing no flow conditions may exist to the northeast and southwest.

Assuming that Wancoocha #4 is not centrally located, the buildup curve will become more complex as boundaries are encountered at differing distances from the wellbore.

RESERVOIR PROPERTIES

The reservoir properties for the Birkhead buildup/flow test are tabulated below. Three sets of results representing hand calculated, single rate computer generated and multirate computer generated are presented.

	HAND	SINGLE RATE	MULTI RATE
Slope	9.0	9.0249	9.0246
Flow Capacity	5488	5472.589	5149.171
Permeability	289	288.031	271.009
Skin	-1.12	-1.106	-1.075

All three sets of results are in excellent agreement. The difference between the hand and single rate results is only due to the accuracy that can be achieved by each method.

Multirate results are similar to the hand and single rate results, indicating that the constant rate period before shut-in was of sufficient length to mask the effects of prior rate fluctuations on the pressure transient.

Calculations for the hand generated results are presented in Calculation Summary 1. Computer generated results and plots have been included as a separate appendix.

Core analysis results for the Birkhead in Wancoocha #4 are shown on Figure 2. There appears to be a 2 to 3 times reduction in permeability from bench to insitu conditions. This is within the limits of permeability reduction due to overburden effects.

RESERVOIR PRESSURE

An estimate of reservoir pressure for the Birkhead zone was obtained using the modified Muskat method. Other methods were investigated but results were inconsistent with the late time buildup pressures recorded over the test.

A reservoir pressure of 2287.75 at 5080' KB was used to obtain a straight line on the $\log (p_e - p_{ws})$ vs Δt plot as shown in Figure 7. The data for this plot is shown in Table 9.

Top and bottom static gradient pressures of 2288.8 psia and 2297.2 psia were obtained at 5080' KB prior to the flow/buildup test. The reservoir pressure obtained by the Muskat analysis is slightly lower but in good agreement with the static gradient pressures. This confirms that there is sufficient late time data for the modified Muskat analysis. The Wancoocha #4 pressure history is summarized in Table 5.

A summary of the Wancoocha field pressure data corrected to a common datum 5000' SS is shown in Table 6. These corrections are presented in Calculation Summary 2.

Reservoir pressure has remained at a relative constant value of 2300 psia at 5000' SS since the onset of field production. This is indicative of a strong water drive system where aquifer influx approximates oil withdrawals. A cumulative of 30775 bbl of oil was produced at the time of Wancoocha #4 buildup.

DRAINAGE SHAPE

As previously mentioned, the buildup curve for Wancoocha #4 appears to reflect boundary conditions at some distance from the wellbore.

Under ideal conditions, a no-flow boundary within the radius of the test results in a doubling of the Horner slope. Based on this concept, two boundaries at varying distances from the wellbore have been identified. Best fit straight lines that approximate the doubling of slope are shown in Figure 8.

The distance to the nearest boundary has been estimated using the Davis and Hawkins formula as referenced in the SPE monograph - Pressure Buildup and Flow Tests in Wells. This formula although not strictly applicable has also been used to approximate a maximum distance to the second boundary. 

The distances, given an order of magnitude accuracy are as follows:-

1st boundary : 200'

2nd boundary : 450'

Calculations for estimates of the distance to a boundary are presented in Calculation Summary 3.

PRODUCTIVITY INDEX

The bottomhole flowing pressure and flow rates monitored over a five hour period prior to shut-in are shown in Figure 4. A productivity index of 5.88 bpd/psi was calculated based on an average flow rate of 519.3 BOPD at an average pressure of 2199.5 psia.

The theoretical PI value obtained by directly using reservoir properties derived from the buildup analysis is approximately double that actually observed. The buildup curve shape for Wancoocha #4 indicates the pressure drawdown is not uniformly radial, therefore results from the buildup cannot be directly applied in the theoretical PI equation.

If the buildup curve is approximated by three radial zones of different permeability, a PI of 5.79 bpd/psi results which is a good approximation to the actual value.

A radial approximation of the Wancoocha #4 buildup curve is based on the following:

- 1) Radii of the permeability zones is assumed to be the same as the distance to the boundaries previously derived.
- 2) The hypothetical kh of each permeability zone is calculated based on the slope of straight line approximation between boundaries.
- 3) Total effective drainage radius is based on an assumed drainage area of 160 acres.

The resultant radial model will have a pressure buildup curve similar to that obtained for this test. All productivity index calculations are presented in the Calculation Summary 4.

Based on the resulting PI of 5.9 bpd/psi, an initial offtake of 500 bopd will limit drawdown to approximately 85 psi.

Figure 1

Wancoocha #4
DUL-MSFL-GR
Lb'-104'

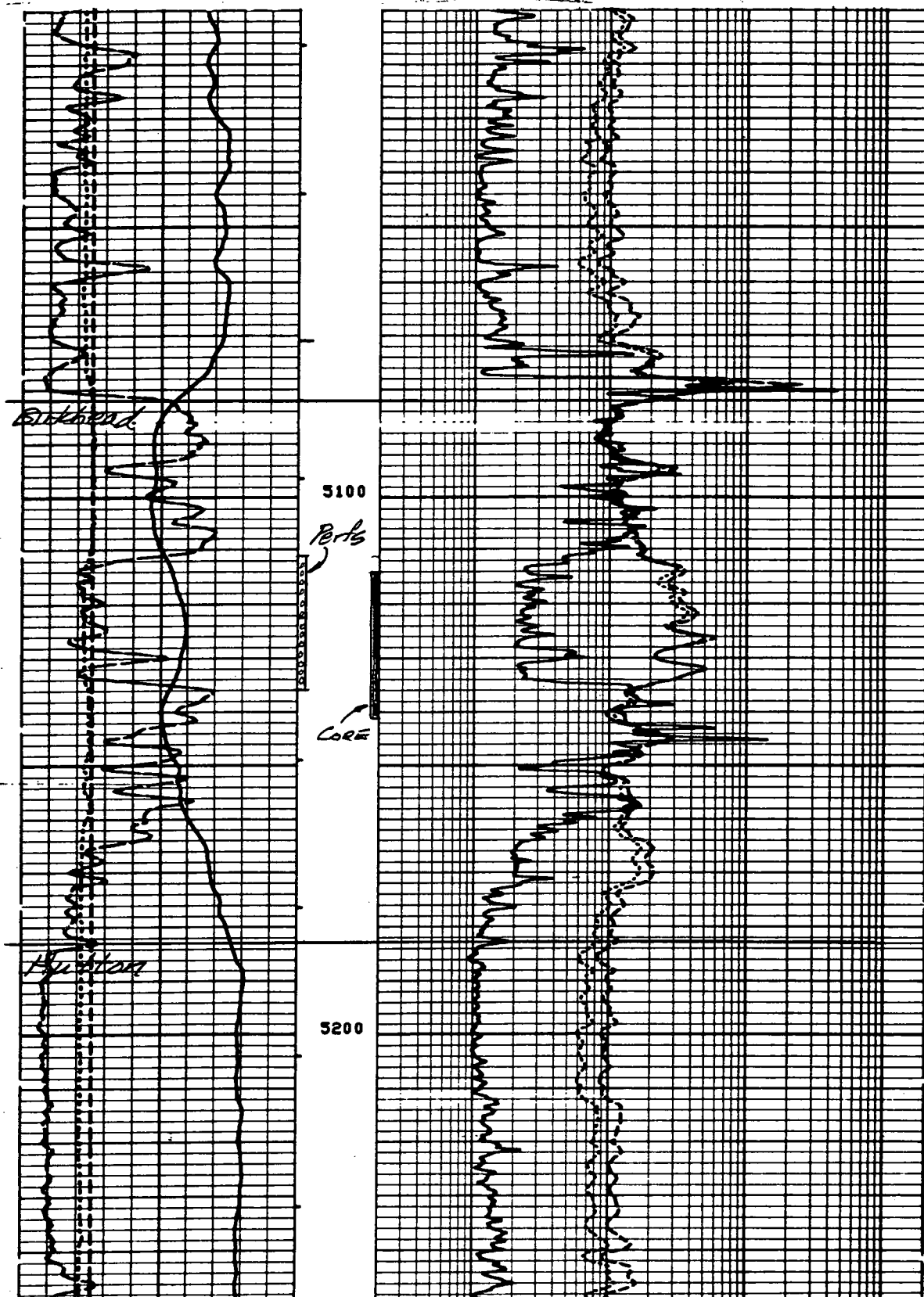


Figure 2

000078

GEARHART Core Data Pty. Ltd.

COMPLETION CORE GRAPH

COMPANY DELHI PETROLEUM PTY. LTD.

WELL NAME WANCOOCHA NO. 4

STATE SOUTH AUSTRALIA

COUNTRY AUSTRALIA

CORE No. 1

REMARKS * DENOTES FRACTURES

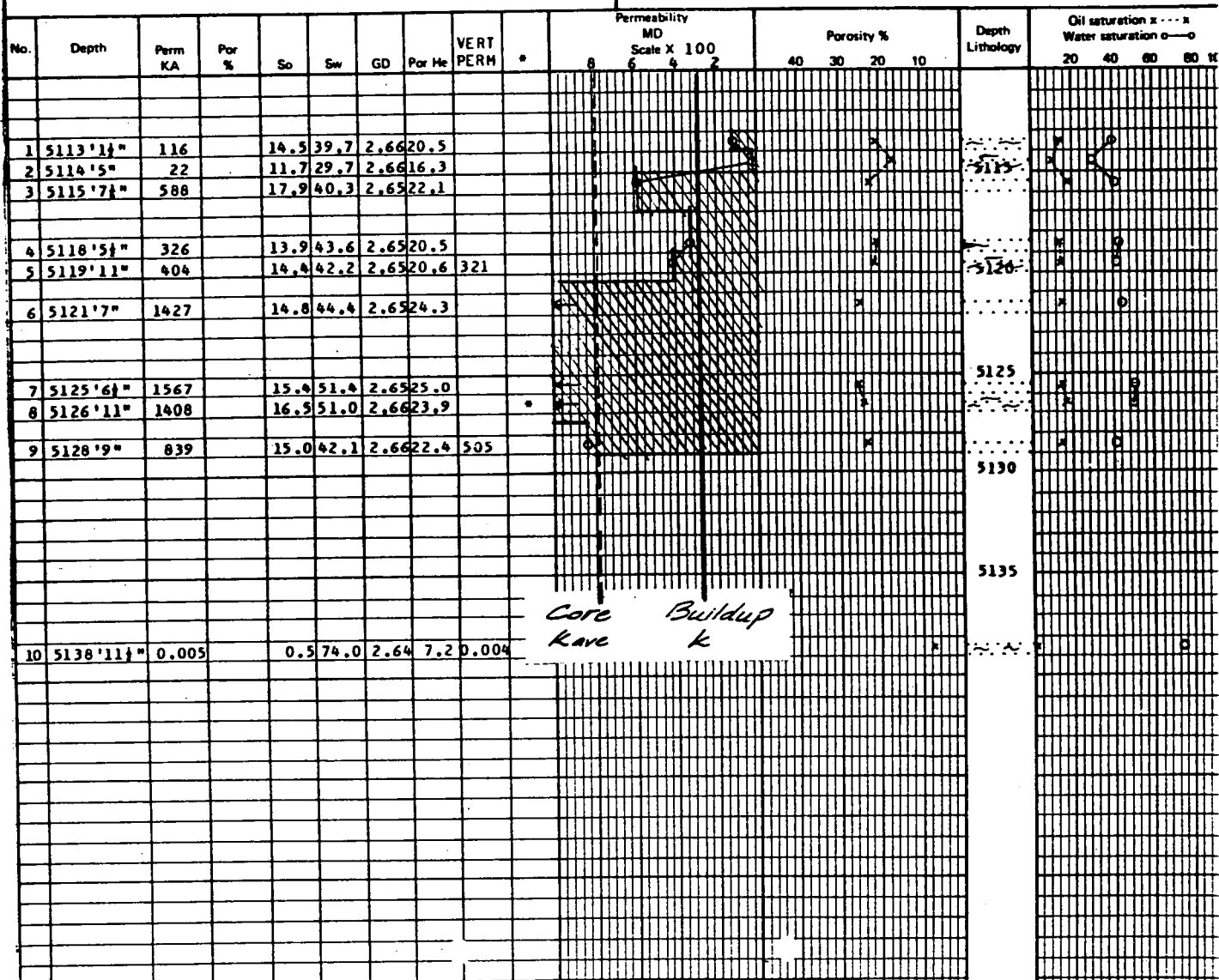
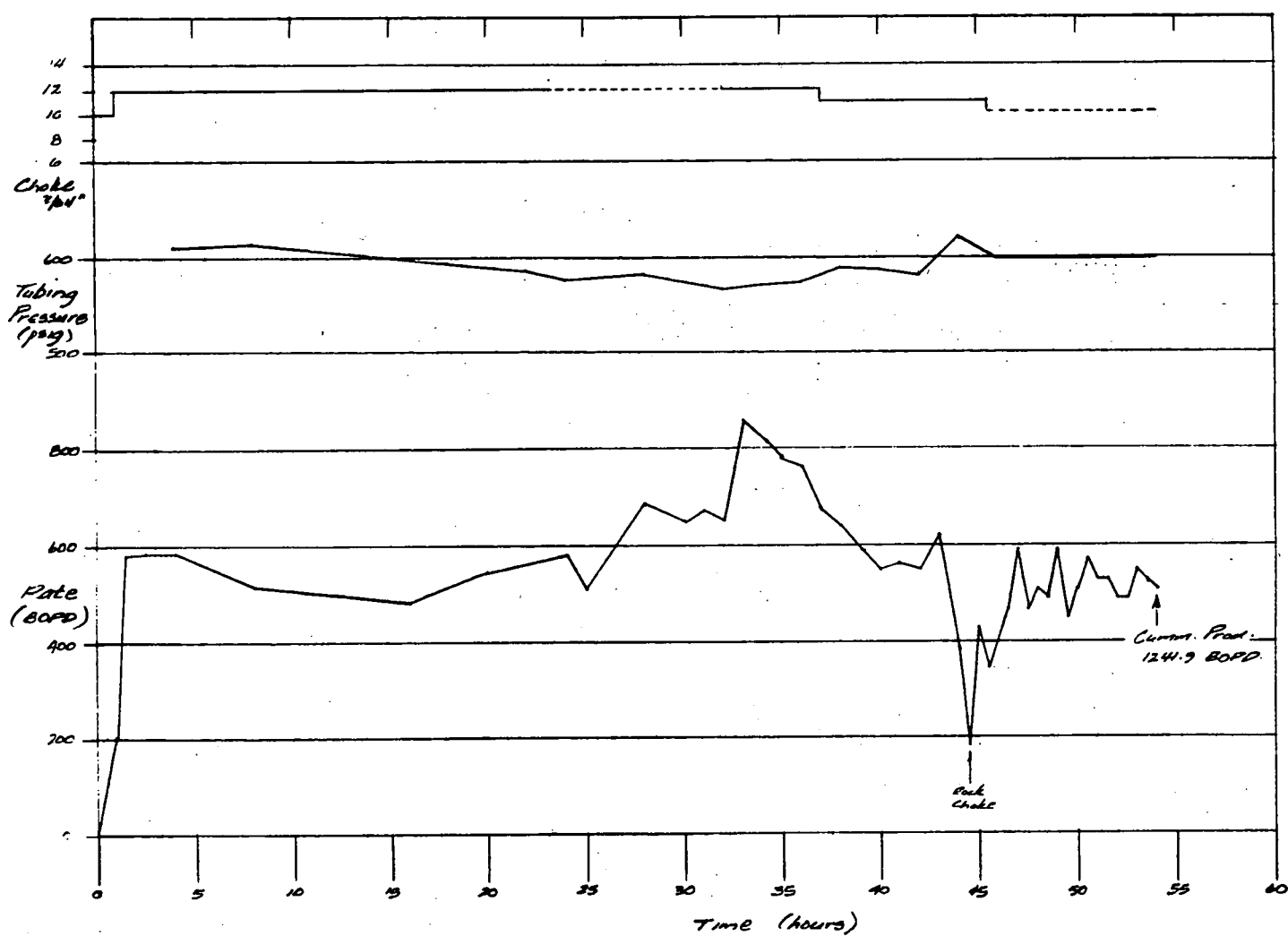


Figure 3

Birkhead Warlock #4

Flow Test 14:30 01/04/85 - 20:30 03/04/85.



Birthead Wamcocha #4
 Flow Test 14:30 01/04/85 - 20:30 03/04/85

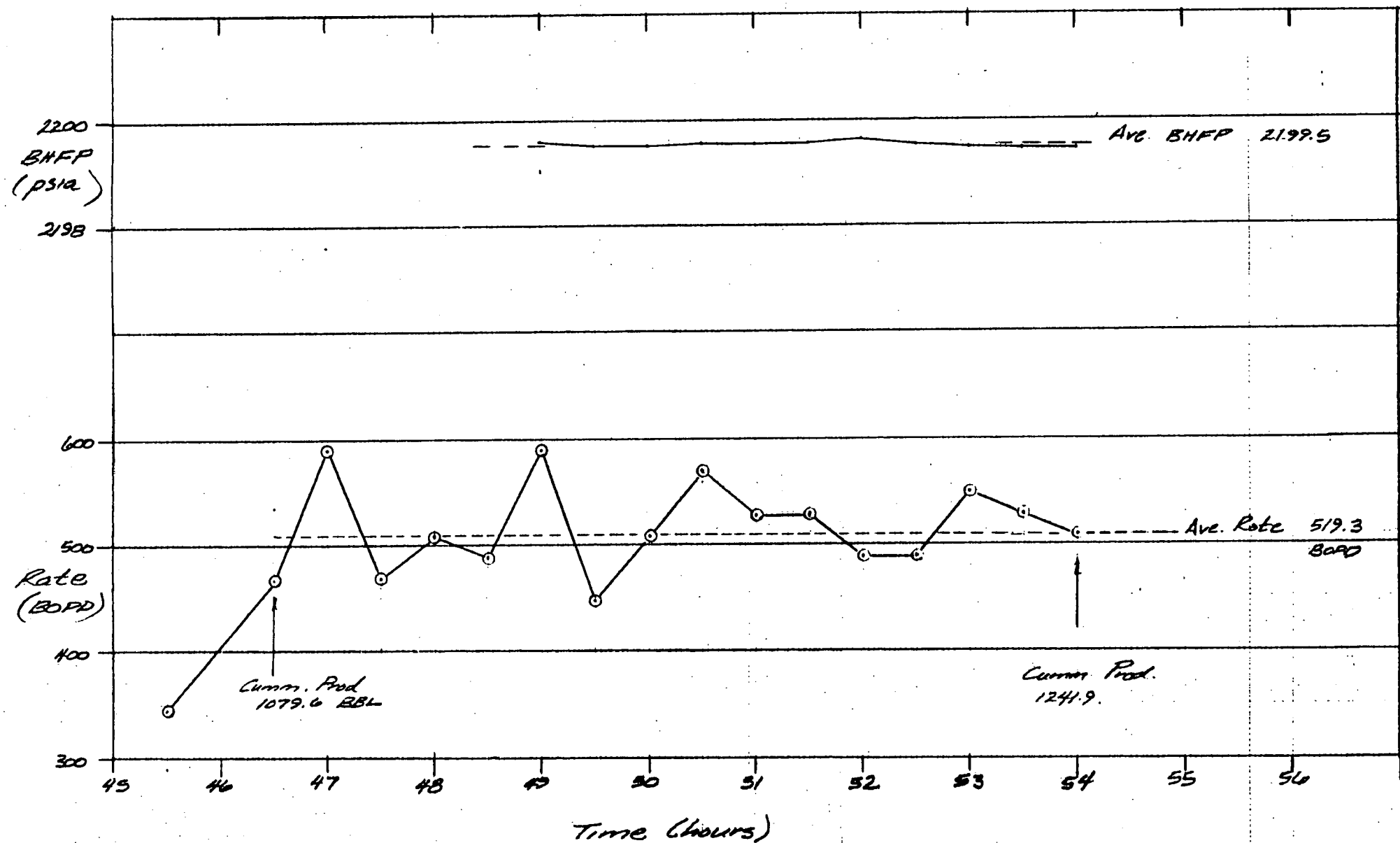


Figure 4

Birkhead Wancoocha #4
Log-Log Plot gauge Depth 5000' kb
Buildup Test 03/04/85 - 06/04/85

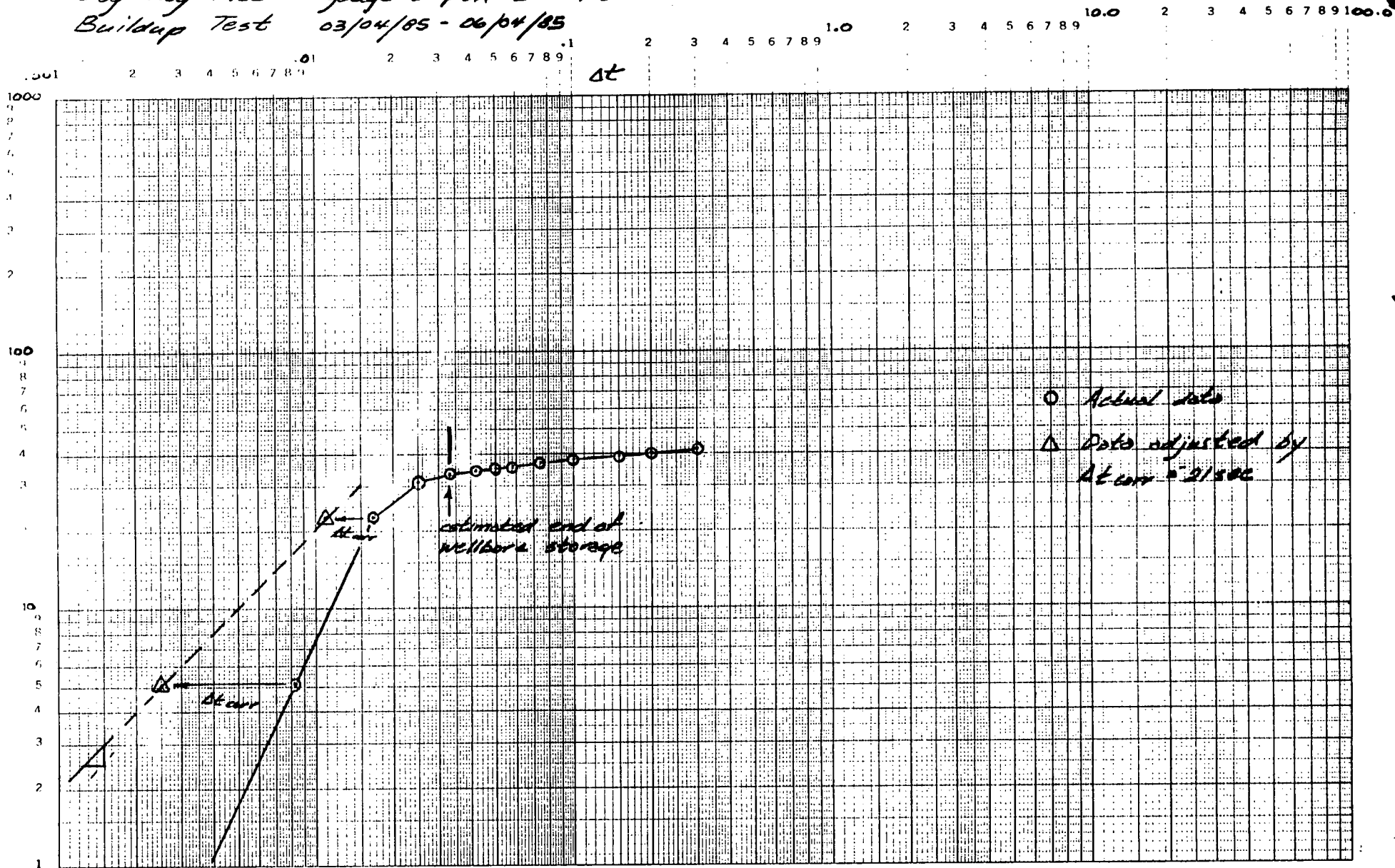


Figure 5

000081

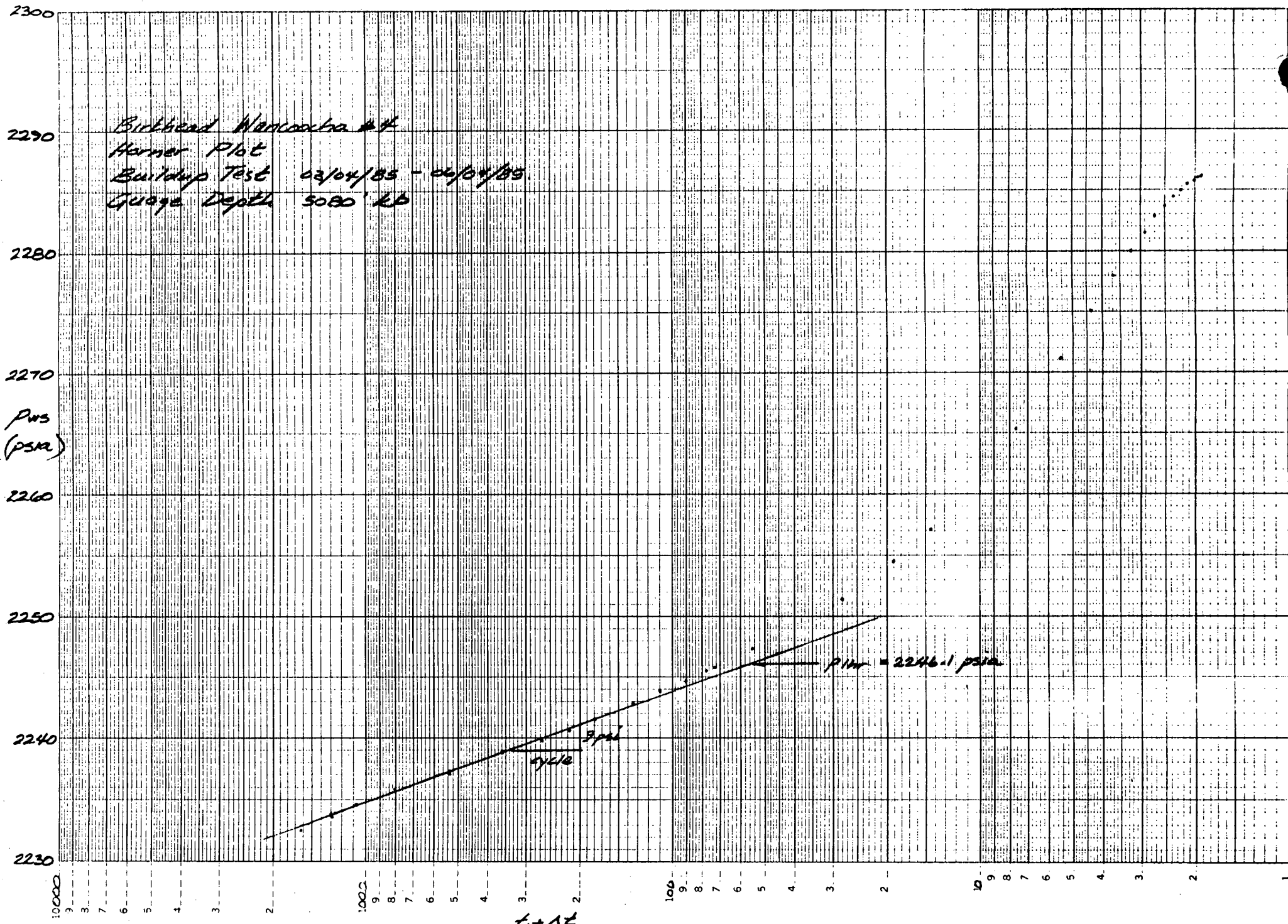


Figure 6

000082

Figure 7

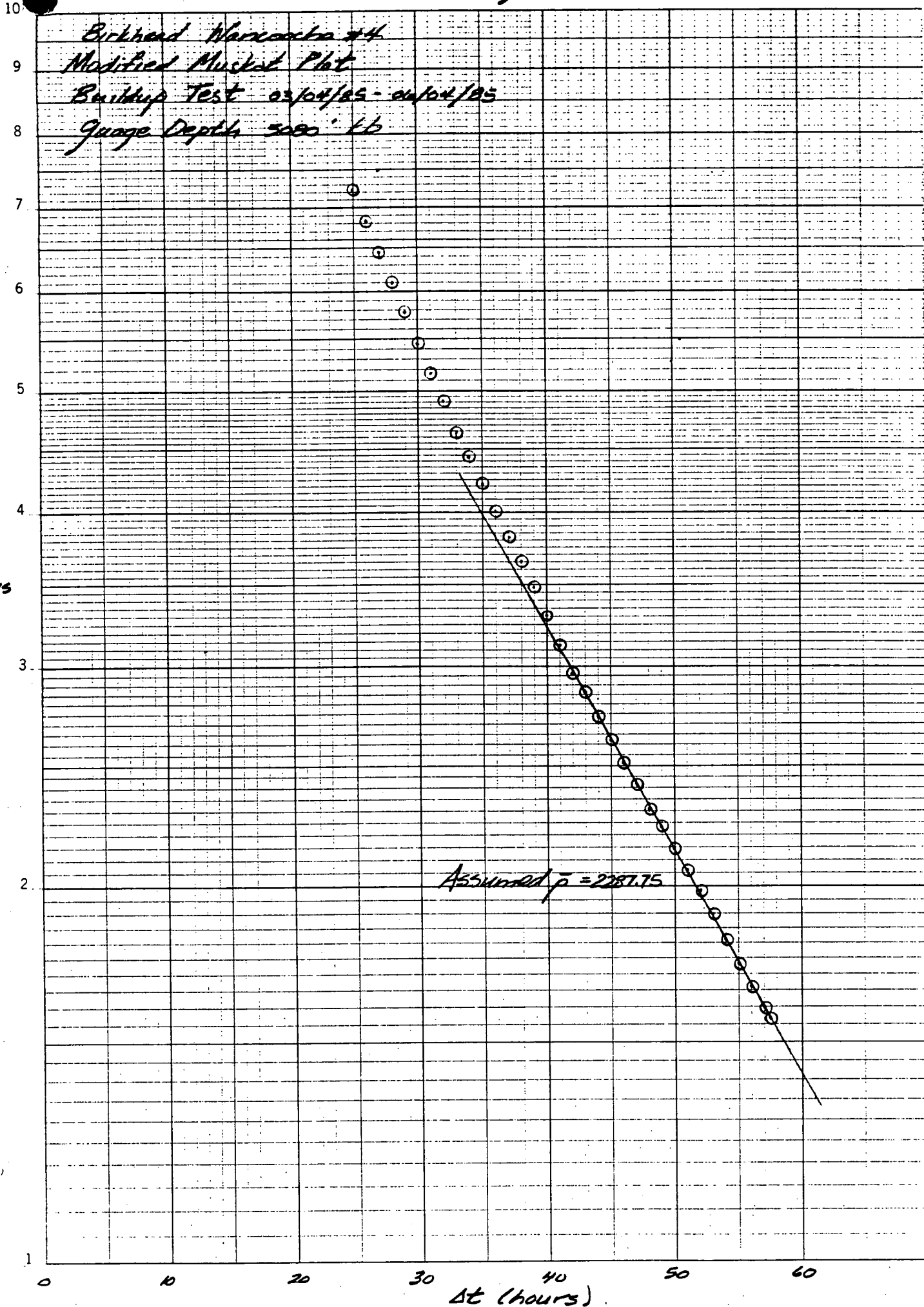
000083

46 4650

- Pws

SEMI-LOGARITHMIC, 1 CYCLE X 10 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

R.E



Burhead Hammered at
Harner Plot
Buildup Test 03/04/85 - 04/09/85
Gauge Depth 5000 lb

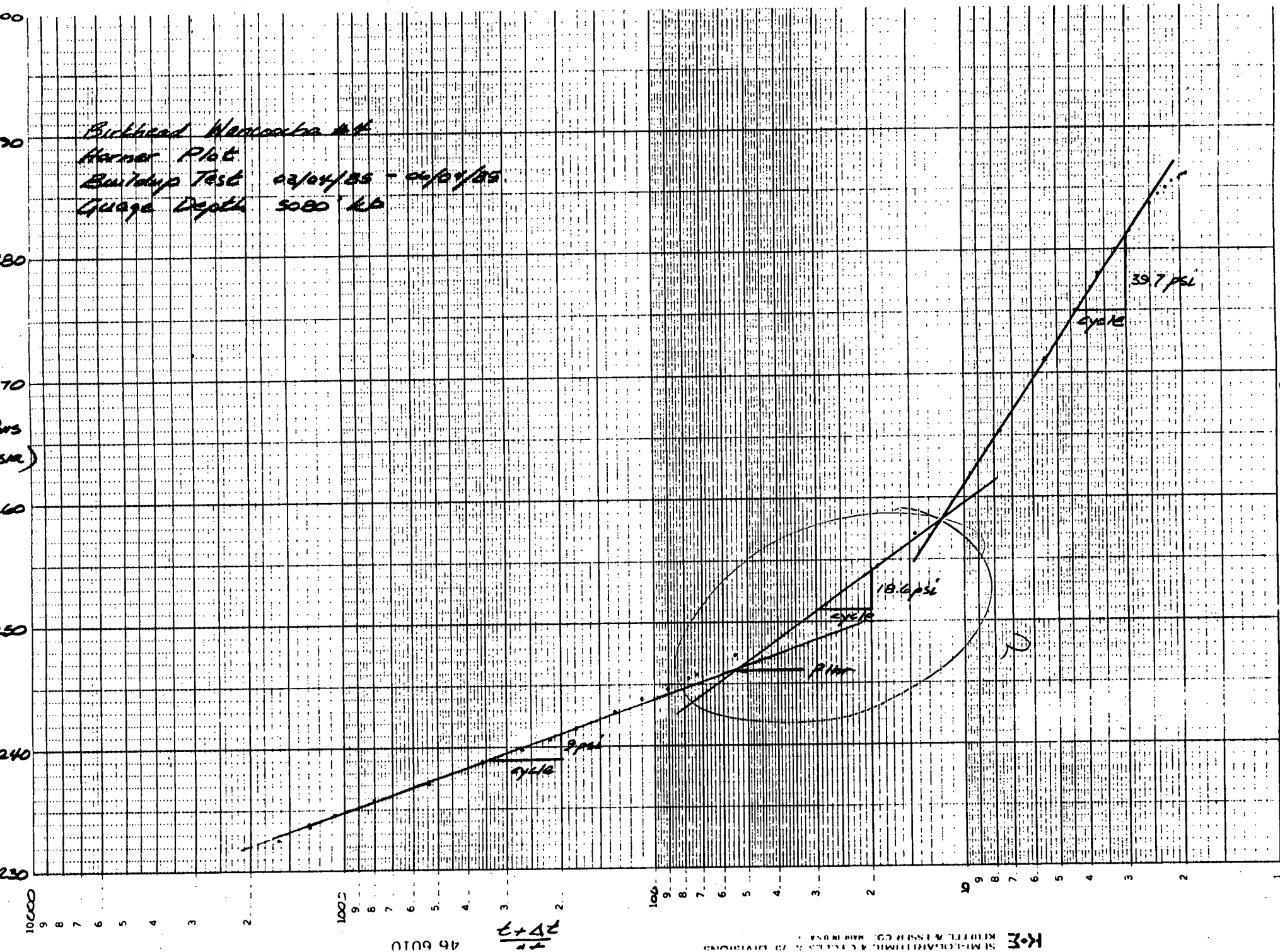


Figure 8

000084

TABLE 1
WANCOOCHA #4
CHRONOLOGICAL WELL HISTORY

27/02/85	Spud Well.
04/03/85	Cut core in Birkhead from 5112' to 5142'.
05/03/85	Reach TD at 5922' driller depth.
06-07/03/85	Logging.
08/03/85	DST#1 in the Patchawarra from 5668' to 5735' KB Misrun.
09/03/85	DST#2 in the Murta from 4266' to 4342' KB Misrun.
10/03/85	DST#3 in the Patchawarra from 5680' to 5745' KB. Flowed GTS at .195 MMcf/d and recovered 315' GCM with trace oil.
11/03/85	DST#4 in the Murta from 4266' to 4342' KB. Recovered 640' 49.3° API oil.
12/03/85	Set 7" casing.
27/03/85	Run in hole with 2 7/8" J55 EUE tubing. Tag PBTD at 5845' KB.
27/03/85	Perforate the Birkhead from 5111' to 5136' KB with 4 spf.
28/03/85	Displace well to crude. Flowed a total of 310 bbls oil in 5 1/2 hours.
31/03/85	Run static gradient.
01-03/04/85	Flow Birkhead on cleanup. Electronic gauges used to monitor bottomhole pressure for last 5 hours of flow period. Cumulative production of 1242 bbl of oil over 54 hours.
04-06/04/85	Well shut-in for bottomhole buildup.
06/04/85	Run static gradient.
06/04/85	Birkhead flowing on extended production test. Initial offtake rate 500 BOPD.

000086

DELHI PETROLEUM PTY. LTD.

WELL DATA SHEET

WELL NAME: Wanconcha #4
 DATE PREPARED: July 1985
 PREPARED BY: D. Previas
 OBJECTIVE (ZONES): Birkhead, Mutton, Bichanarra

LOCATION: 28°32'21.7"S; 139°59'36.5"E
 DATA SOURCES: _____
 CURRENT STATUS: Birkhead Producer
 WI/CR/ORR: 1 1

DEPTHS: (ft)

KB: 104'
 CF/GL: 103'/85'
 FTD: 5928'
 PBD: 5845'
 CASING: 155 GUE SIZE: 7"
 TUBING: 155 GUE SIZE: 2 7/8"

DATES:

SPUD: 27/2/85
 RIG RELEASED: 13/3/85
 COMPLETION: 26/3/85
 PRODUCTION: 4/4/85
 NOPE #: _____

DRILLING:

LOST CIRCULATION ZONES: _____

PROBLEMS: _____

DRILL STEM TESTS:

DST RECOVERY	DATE YR/MO/DY	ZONE	INTERVAL (ft)(L)	VO (min)	SI (min)	HP (psi)	(BOTTOM GAUGES)	
							FP (psi)	SIP (psi)
1.	<u>8/3/85</u>	<u>Bichanarra</u>	<u>5168'-5735'</u>	<u>Misrun</u>				
2.	<u>7/3/85</u>	<u>Murta</u>	<u>4266'-4342'</u>	<u>Misrun</u>				
3.	<u>10/3/85</u>	<u>Bichanarra</u>	<u>5180'-5745'</u>	<u>90</u>	<u>270</u>	<u>179.7</u>	<u>179.7</u>	<u>2575</u>
4.	<u>11/3/85</u>	<u>Murta</u>	<u>4266'-4342'</u>	<u>240</u>	<u>243</u>	<u>114.4</u>	<u>943.1</u>	<u>1841</u>
5.								

CORED INTERVALS:

ZONE	INTERVAL (ft)	Ø (in)	Sw (%)	LOGS (in)	Ø (in)	Sw (%)
<u>Birkhead</u>	<u>5118-5148 (L)</u>	<u>21.7</u>	<u>42.7</u>		<u>18.3</u>	<u>45.9</u>
	<u>5112-5142 (D)</u>					

COMPLETIONS:

1) ZONE: Birkhead STIMULATION: N Y/N FRAC: _____ ACID: _____
 SAND SIZE: _____ TYPE: _____
 PERF INTERVAL (ft): 5111-5136 SAND QUALITY: _____ VOLUME: _____
 SHOT DENSITY: 4 spt FEEDRATE (bbis/min): _____ FEEDRATE (bbi/min): _____
 2) ZONE: _____ STIMULATION: _____ Y/N SAND SIZE: _____ TYPE: _____
 PERF INTERVAL (ft): _____ SAND QUALITY: _____ VOLUME: _____
 SHOT DENSITY: _____ FEEDRATE (bbis/min): _____ FEEDRATE (bbi/min): _____

PRODUCTION TEST: (Main Zone)

ZONE: Birkhead GAS AOF (MMCF): _____ OIL RATE (BOPD): _____
 INTERVAL (ft): 5113-5136' BUILDUP PRESSURE (psi): _____ PUMP/FLOWING: _____
 GAS PAY (ft): _____ BUILDUP PRESSURE (psi): _____
 OIL PAY (ft): 19'

COMMENTS:

TABLE 3
BIRKHEAD - WANCOOCHA #4
LOG ANALYSIS SUMMARY

INTERVAL	Vsh	ϕ	Sw	THICKNESS
5113'-5129'	27.1	18.2	46.4	16'
5132'-5135'	24.8	18.8	43.3	3'
Weighted Ave.	26.7	18.3	45.9	

REP10.4

TABLE 4
BIRKHEAD - WANCOOCHA #4
PRODUCTION HISTORY

	TIME (hours)	TOTAL PROD. (BBL)	AVE. RATE (BOPD)
Cleanup Flow 28/03/85	5.5	310	1353
Cleanup and Production Test 01/04/85 - 03/04/85	54	1242	552
Extended Production Test 06/04/85 to current			

TABLE 5
BIRKHEAD - WANCOOCHA #4
PRESSURE HISTORY

- 1) Static Gradient 31/03/85
 Top gauge : 2288.8 psia @ 5080' KB
 or corrected to mpp
 = 2305.8 psia @ 5124' KB
 Bottom gauge : 2297.2 psia @ 5080' KB
 or corrected to mpp
 = 2313.9 psia @ 5124' KB

- 2) Buildup Analysis 06/04/85
 p = 2287.8 psia @ 5080' KB
 or corrected to mpp using post buildup gradient
 = 2301.9 psia @ 5124' KB

TABLE 6
WANCOOCHA FIELD - BIRKHEAD
PRESSURE HISTORY

DATE	WELL	SOURCE	DATUM PRESSURE psia	FIELD PRODUCTION BBL	COMMENTS
1) 18/11/84	#2	DST#2	(2338)	-	anomalously high
2) 06/02/85	#2	Buildup/ Gradient	2300	2479	
3) 31/03/85	#4	Initial Static Gradient	2304	26789	
4) 06/04/85	#4	Buildup/ Gradient	2296	30775	

REP10.4

TABLE 7
BIRKHEAD - WANCOOCHA #4
LOG - LOG PLOT DATA

Δt (hours)	$\Delta t + t_{\text{corr}}$ (hours)	P (psia)	ΔP (psia)
.0000	-	2199.41	-
.0083	.0025	2204.45	5.04
.0167	.0109	2222.16	22.75
.0250	.0308	2230.31	30.90
.0333		2232.52	33.11
.0417		2233.75	34.34
.0500		2234.61	35.20
.0583		2235.28	35.87
.0750		2236.25	36.84
.1000		2237.27	37.86
.1500		2238.74	39.33
.2000		2239.85	40.44
.3000		2241.48	42.07

A t_{corr} of -21 seconds or .0058 hours was applied to initial buildup points to obtain a unit slope.

TABLE 8
BIRKHEAD - WANCOOCHA #4
HORNER DATA

Δt (hours)	$\frac{t + \Delta t}{t}$	P (psia)
.0083	6507	2204.45
.033	1623	2232.52
.0417	1295	2233.75
.0500	1081	2234.61
.0667	811	2235.81
.10	541	2237.27
.15	361	2238.74
.20	271	2239.85
.25	217	2240.61
.30	181	2241.48
.40	136	2242.75
.50	109	2243.81
.60	91.0	2244.68
.70	78.1	2245.45
.75	73.0	2245.78
1.0	55.0	2247.29
2.0	28.0	2251.39
3.0	19.0	2254.58
4.0	14.5	2257.17
8.0	7.75	2265.38
12.0	5.50	2271.14
16.0	4.38	2275.18
20.0	3.70	2278.04
24.0	3.25	2280.08
28.0	2.93	2281.65
32.0	2.69	2282.84
36.0	2.50	2283.74
40.0	2.35	2284.44
44.0	2.23	2285.01
48.0	2.13	2285.44
52.0	2.04	2285.77
56.0	1.96	2286.09
57.5	1.94	2286.18

TABLE 9
BIRKHEAD - WANCOOCHA #4
MODIFIED MUSKAT DATA

t (hours)	P _{wf} (psia)	P _e - P _{wf} (psia)
25	2280.53	7.22
26	2280.92	6.83
27	2281.25	6.45
28	2281.65	6.10
29	2281.97	5.78
30	2282.30	5.45
31	2282.58	5.17
32	2282.84	4.91
33	2283.12	4.63
34	2283.32	4.43
35	2283.53	4.42
36	2283.74	4.01
37	2283.93	3.82
38	2284.10	3.65
39	2284.27	3.48
40	2284.44	3.31
41	2284.62	3.13
42	2284.79	2.96
43	2284.89	2.86
44	2285.01	2.74
45	2285.13	2.62
46	2285.24	2.51
47	2285.33	2.42
48	2285.44	2.31
49	2285.52	2.23
50	2285.61	2.14
51	2285.69	2.06
52	2285.77	1.98
53	2285.85	1.90
54	2285.94	1.81
55	2286.02	1.73
56	2286.09	1.66
57	2286.15	1.60
57.5	2286.18	1.57

CALCULATION SUMMARY 1
BIRKHEAD WANCOOCHA #4
BUILDUP ANALYSIS

$$\begin{aligned}\text{Flow Capacity: } kh &= \frac{162.6 \quad q \quad u \quad B}{m} \\ &= \frac{162.6 \quad (552) \quad (.49) \quad (1.123)}{9} \\ &= 5487.7 \text{ md.ft}\end{aligned}$$

$$\begin{aligned}\text{Permeability: } k &= \frac{kh}{h} \\ &= \frac{5189.5}{19} \\ &= 289 \text{ md}\end{aligned}$$

$$\begin{aligned}\text{Apparent Skin: } S' &= 1.151 \left[\frac{P_{1hr} - P_{wf}}{m} - \log \frac{k}{\phi u c_t r w^2} + 3.228 \right] \\ &= 1.151 \left[\frac{2246.1 - 2199.5}{9} - \log \frac{(288)}{(.183)(.49)(10.823 \times 10^{-6})(.354^2)} + 3.228 \right] \\ &= -1.12\end{aligned}$$

$$\begin{aligned}\text{Total Compressibility: } c_t &= c_o S_o + c_w S_w + c_f \\ &= 10.32 \times 10^{-6} (.541) + 3.18 \times 10^{-6} (.459) + 3.78 \times 10^{-6} \\ &= 10.823 \times 10^{-6}\end{aligned}$$

where

$$\begin{aligned}c_o &= 10.324 \times 10^{-6} \\ c_w &= 3.18 \times 10^{-6} \text{ assumed} \\ c_f &= 3.78 \times 10^{-6} \text{ assumed}\end{aligned}$$

CALCULATION SUMMARY 2
WANCOOCHA FIELD BIRKHEAD
PRESSURE CORRECTION TO COMMON DATUM

- 1) DST#2 Wancoocha #2 18/11/84 KB 92'
 $p^* = 2347 \text{ psia at } 5119' \text{ KB}$

 Corrected to datum using .32 psi/ft gradient
 $p^* = 2347 + [5000 - (5119 - 92)] .32$
 $= 2338 \text{ psia at } 5000' \text{ SS}$

- 2) Buildup/Static Gradient Wancoocha #2 06/02/85 KB 92'
 $p = 2306 \text{ psia at midpoint of perfs. } 5111' \text{ KB}$

 Corrected to datum using .32 psi/ft gradient
 $p = 2306 + [5000 - (5111 - 92)] .32$
 $= 2300 \text{ psia at } 5000' \text{ SS}$

- 3) Initial Static Gradient Wancoocha #4 31/03/85 KB 104'
 $p_{\text{are}} = 2310 \text{ psia at midpoint of perfs. } 5124' \text{ KB}$

 Corrected to datum using .32 psi/ft gradient
 $p = 2310 + [5000 - (5124 - 104)] .32$
 $= 2304 \text{ psia at } 5000' \text{ SS}$

- 4) Buildup Wancoocha #4 06/04/85 KB 104' KB
 $p = 2302 \text{ psia at midpoint of perfs. } 5124' \text{ KB}$

 Corrected to datum using .32 psi/ft gradient
 $p = 2302 + [5000 - (5124 - 104)] .32$
 $= 2296 \text{ psia at } 5000' \text{ SS}$

CALCULATION SUMMARY 3
BIRKHEAD - WANCOOCHA NO. 4
DRAINAGE AREA AND SHAPE

Boundary Distance

Distance to first boundary where $\Delta t_x = 1.0385$

$$\begin{aligned}
 d &= \sqrt{\frac{1.48 \times 10^{-4} (k) (\Delta t_x)}{\phi u c}} \\
 &= \sqrt{\frac{1.48 \times 10^{-4} (289)(1.0385)}{.183 (.49)(10.823 \times 10^{-6})}} \\
 &= 214' \text{ or } \approx 200'
 \end{aligned}$$

Distance to 2nd Boundary where $\Delta t_x = 4.954$

$$\begin{aligned}
 &= \sqrt{\frac{1.48 \times 10^{-4} (289)(4.954)}{(.183)(.49)(10.823 \times 10^{-6})}} \\
 &= 467' \text{ or } \approx 450'
 \end{aligned}$$

CALCULATION SUMMARY 4
BIRKHEAD - WANCOOCHA #4
PRODUCTIVITY INDEX

- 1) Actual productivity index based on average flow rates and pressure prior to shut-in for buildup.

$$\begin{aligned}
 \text{Actual PI} &= \frac{p_{ave}}{p - p_{wf}} \\
 &= \frac{519.3}{2287.75 - 2199.5} \\
 &= 5.88 \text{ bpd/psi drawdown}
 \end{aligned}$$

- 2) Theoretical productivity index using non-radial buildup derived results.

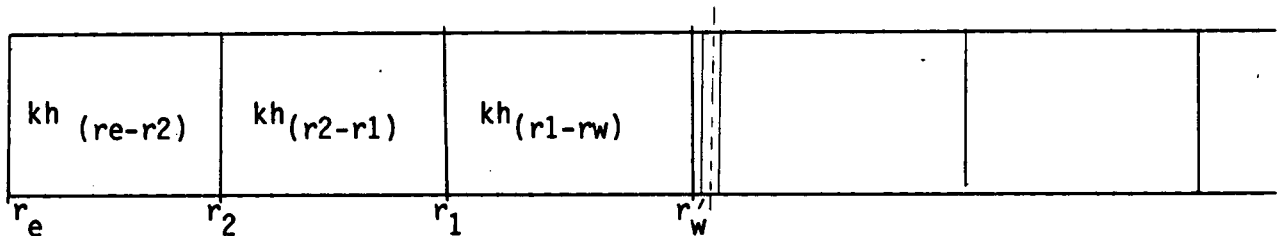
$$\begin{aligned}
 \text{Theoretical PI} &= \frac{7.08 \times 10^{-3} kh}{uB (\ln r_e/r'_w)} \\
 \text{(direct)} &= \frac{7.08 \times 10^{-3} (5487.7)}{(.49)(1.123)\ln (1489/1.05)} \\
 &= 9.7 \quad \text{where } r_e = 1489 \\
 &\quad \text{based on 160 acre drainage area.}
 \end{aligned}$$

CALCULATION SUMMARY 4 (CONT'D)

3) Theoretical PI based on hypothetical radial model

where:

$kh (re-r2) = 1244.1$	$re = 1489$ (160 acre drainage area)
$kh (r2-r1) = 2655.4$	$r2 = 450'$
$kh (r1-rw) = 5487.7$	$r1 = 200'$
	$r1' = rw (e^S) = 1.05'$



$$\begin{aligned}
 \frac{pe - pwf}{q} &= 141.2 \text{ uB} \left[\frac{1}{kh (re-r2)} \ln \frac{re}{r2} + \frac{1}{kh (r2-r1)} \ln \frac{r2}{r1} \right. \\
 &\quad \left. + \frac{1}{kh (r1-rw)} \ln \frac{r1}{rw} \right] \\
 &= 141.2 (.49)(1.123) \left[\frac{1}{1244.1} \ln \frac{1050}{450} + \frac{1}{2655.4} \ln \frac{450}{200} \right. \\
 &\quad \left. + \frac{1}{5487.7} \ln \frac{200}{1.05} \right] \\
 &= .173
 \end{aligned}$$

$$\begin{aligned}
 \text{Theoretical PI} &= \frac{1}{\frac{pe - pwf}{q}} = \frac{1}{.173} \\
 &= 5.79
 \end{aligned}$$

APPENDIX I

CASE I : CONSTANT RATE FLOW/BUILDUP ANALYSIS

CASE II : VARIABLE RATE FLOW/BUILDUP ANALYSIS

HORNER ANALYSIS - STRAIGHT LINE FIT

The number of points in test sequence number 1 is 51

Enter the index of the first point to be included
in the analysis :

4

Enter the index of the last point to be included
in the analysis :

15

Line of best fit : Intercept = 2261.9 , Slope = -9.0249

Residual Sum Squares = 0.28338 for 12 points with RMS of 0.15367

HORNER ANALYSIS - STRAIGHT LINE FIT

Analysis of Cumulative Test Sequence Number 1

Oil Analysis

Extrapolated Reservoir Pressure (P*)	=	2261.900 PSIG
Average Formation Permeability	=	288.031 M.D.
Pressure (1 Hour) from straight line	=	2246.194 PSIG
Skin factor	=	-1.106
Pressure drop due to skin	=	-8.680 PSI
Productivity Index (Actual)	=	8.833 BBL/DAY/PSI
Productivity Index (Ideal)	=	7.756 BBL/DAY/PSI
Damage ratio	=	0.878
Radius of investigation	=	4243.138 FT

The Productivity index values have been calculated using
extrapolated reservoir pressure (P*).

Case 1 - Constant Rate

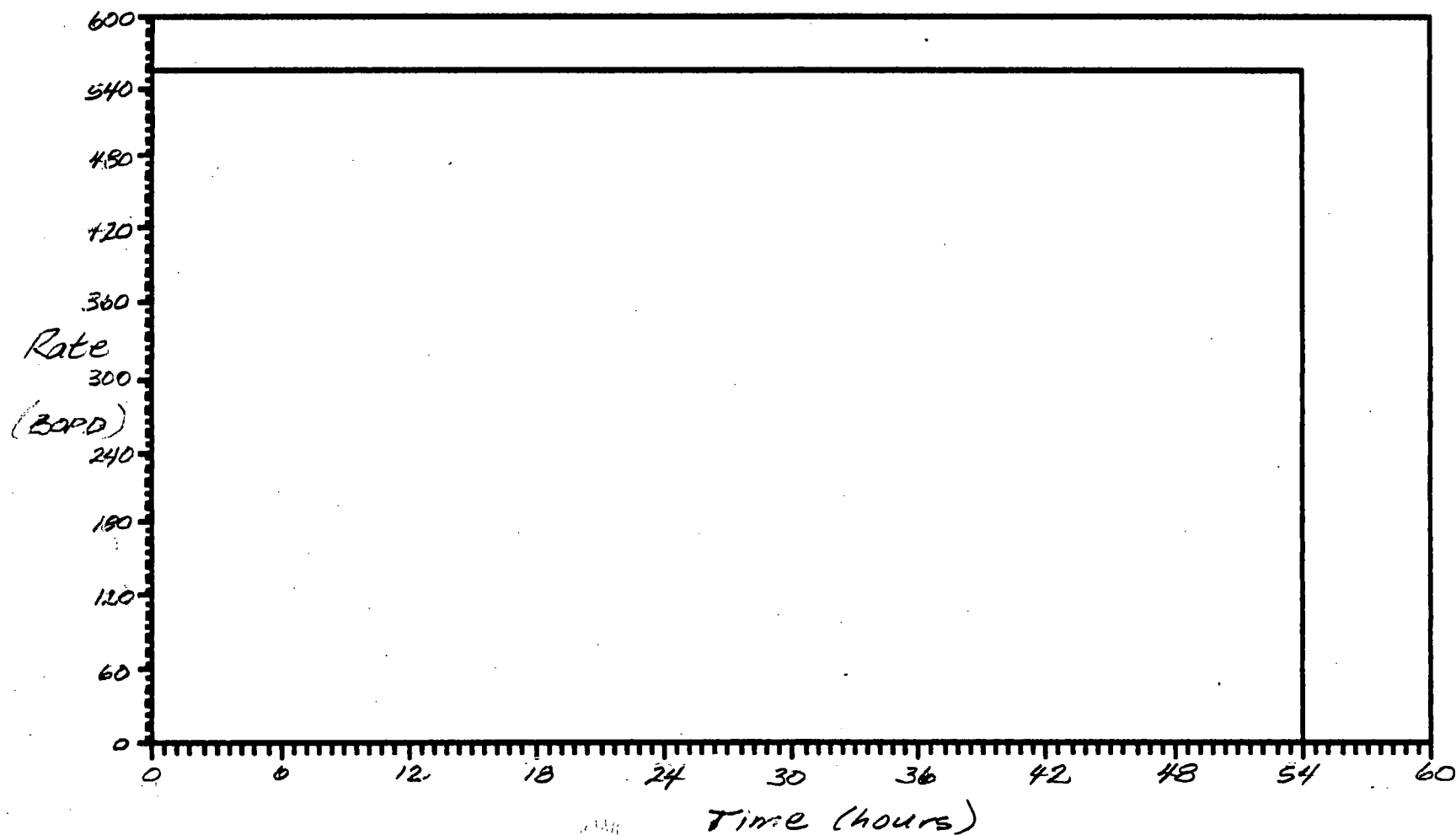
000100

IPECS WIPER SYSTEM:

WANCDOCHA 4A FLOW/BUILDUP

:30-MAY-85 13:50:03

PLOT OF RATE VERSUS TIME



Core I - Constant Rate

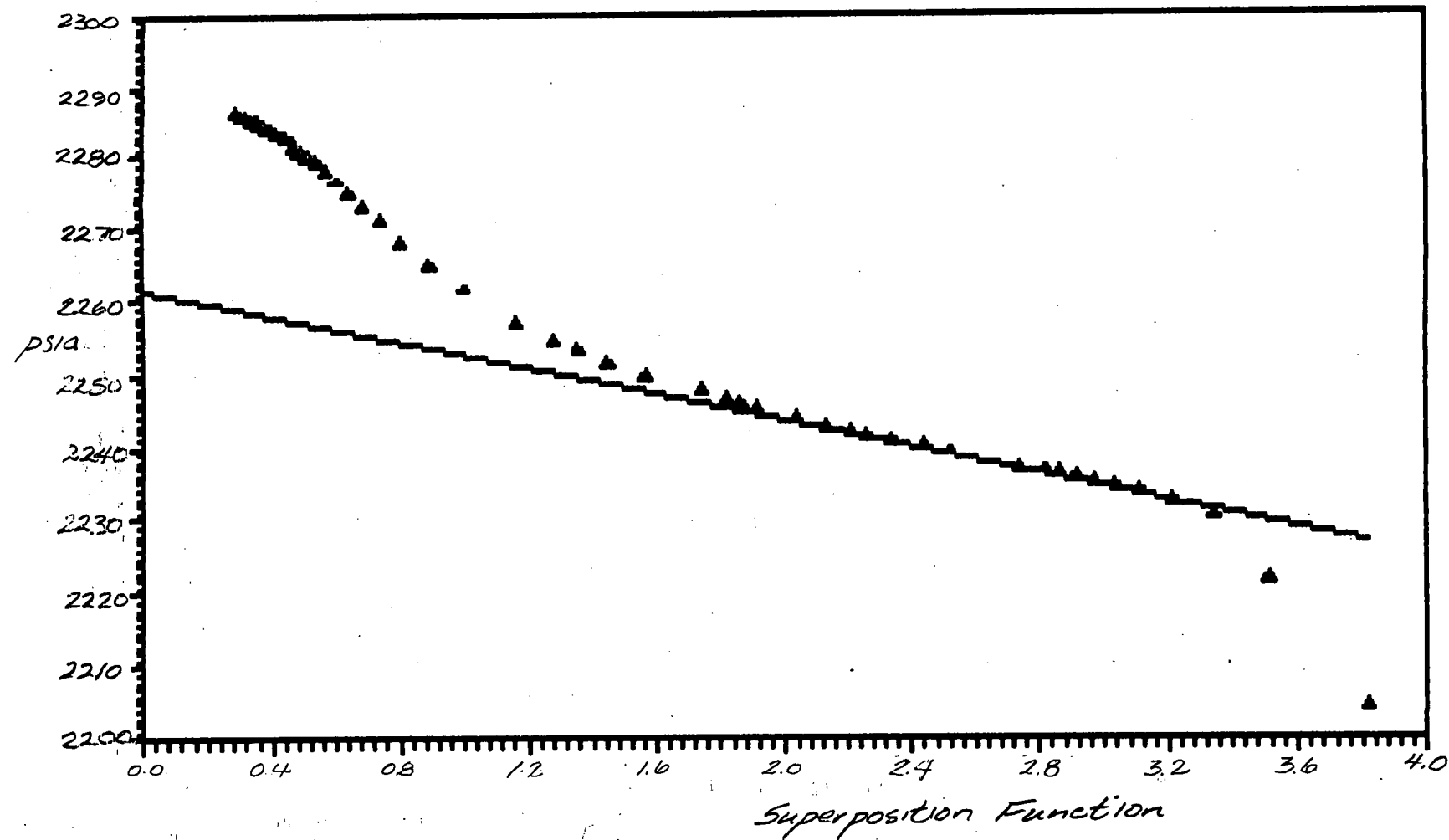
000101

IPECS WIPER SYSTEM:

WANDOOCHA #4 FLOW/BUILDUP

:31-MAY-85 12:40:52

HORNER ANALYSIS - LINE OF BEST FIT



000102

Case I - Constant Rate

HORNER ANALYSIS - STRAIGHT LINE FIT

The number of points in test sequence number 1 is 51

Enter the index of the first point to be included
in the analysis : 4
Enter the index of the last point to be included
in the analysis : 15

Line of best fit : Intercept = 2262.3 , Slope = -9.0246

Residual Sum Squares = 0.28304 for 12 points with RMS of 0.15358

HORNER ANALYSIS - STRAIGHT LINE FIT

Analysis of Cumulative Test Sequence Number 1

Oil Analysis

Extrapolated Reservoir Pressure (P*)	=	2262.342 PSIG
Average Formation Permeability	=	271.009 M.D.
Pressure (1 Hour) from straight line	=	2246.192 PSIG
Skin factor	=	-1.075
Pressure drop due to skin	=	-8.441 PSI
Productivity Index (Actual)	=	8.253 BBL/DAY/PSI
Productivity Index (Ideal)	=	7.277 BBL/DAY/PSI
Damage ratio	=	0.882
Radius of investigation	=	4115.847 FT

The Productivity index values have been calculated using
extrapolated reservoir pressure (P*).

Case II - Variable Rate

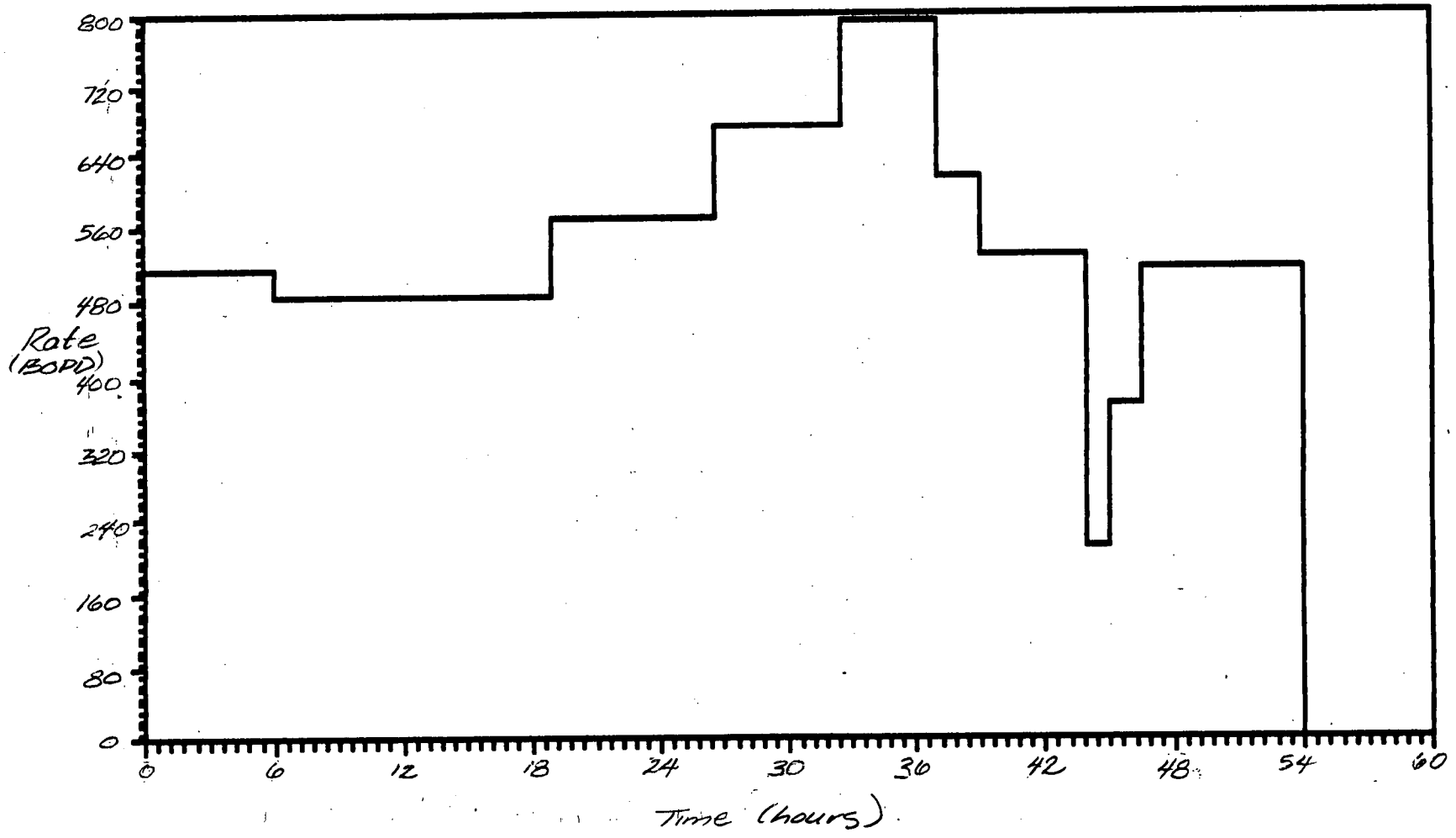
000103

IPECS WIPER SYSTEM:

#ANCOOCHA 44 FLOW/BUILDUP

:31-MAY-85 12:40:52

PLOT OF RATE VERSUS TIME

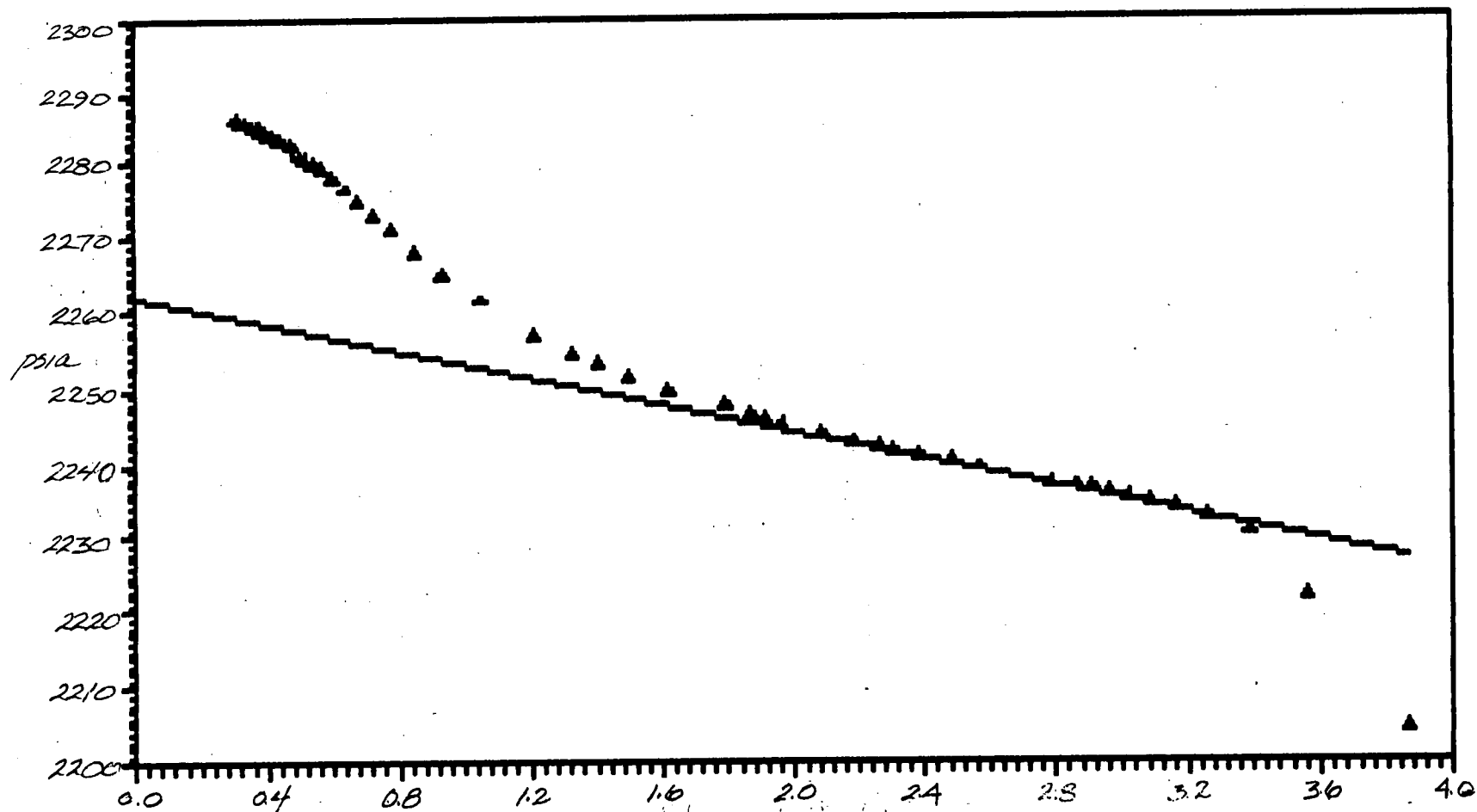


IPECS #IPER SYSTEM:

#ANCOOCHA 44 FLOW/BUILDUP

:31-MAY-85 12:40:52

HORNER ANALYSIS - LINE OF BEST FIT



Superposition Function

ATTACHMENT #1
WANCOOCHA #4 BIRKHEAD
EXTENDED PRODUCTION TESTING
31/03/85 TO 04/05/85

000107

WANOOCHA #4

BIRKHEAD

EXTENDED PRODUCTION

TESTING

31.3.85/4.5.85



☒

Wireline Report

☒

Wellhead Data

☒

Production Data

☐

B.H.P. Flow / Buildup Data

☐

Production Rate Calculations

☐

S.G.

Flowing/Static Gradient

☐

Bottom Hole Sampling

000109



WIRELINE REPORT

CLIENT DELHI PETROLEUM PTY LTD WELL WANCOOCHA #4 (BIRKHEAD)

DATE 31/3/85

PROGRAMME

PURPOSE OF WORK CHECK FOR OBSTRUCTION AND CHECK PBTD.

REPORT OF WORK PERFORMED RIG UP W/L UNIT

R.I.H. WITH 2" BLIND BOX FOR PICK UP @ 5838 POH.

Operator's Signature

WORKED PERFORMED BY A. MICHELL OF EXPERTEST PTY LTD.

WELL DATA:

Tubing Size 2 7/8 FWHP SIWHP 674 PSI

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

'X' Nipple @ 'N'/'XN' Nipple @ Other PUMP SEATING @ 5035

Min. I.D. 2.28 @ 5035 NIPPLE Packer @

Perforated Interval: 5111' - 5136 PBTD 5838'



STATIC GRADIENT SURVEY

OPERATOR A. MICHELL

DATE 31/3/85

CLIENT DELHI PETROLEUM PTY LTD.

WELL WANCOOCHA #4 (BIRKHEAD)

BOMB No. 1 DATA						BOMB No 2 DATA					DWT IN 674 PSI		
ELEMENT No. 29385		ELEMENT RANGE 3000 PSI				ELEMENT No. 29388		ELEMENT RANGE 3000 PSI			DWT OUT 674 PSI		
RECORDER No 13034 x 15 TIS		CLOCK DATA 25512 x 3 HR.				RECORDER No 61001 x 15 TIS		CLOCK DATA 25510 x 3 HR.					
ENGAGE STYLUS 1720		DISENGAGE 2005				ENGAGE STYLUS 1720		DISENGAGE 2005					
PRESSURE LUBRICATOR 1728						BLEED LUBRICATOR 1937							
DATE	TIME	DEPTH'	DEFLEC-TION	PRESSURE TEMP.	GRADIENT psi/ft	DEPTH'	DEFLEC-TION	PRESSURE TEMP.	GRADIENT psi/ft	REMARKS			
31/3/85	17:28	LUB	.442	659.3		LUB	.444	669.4		PRESS LUB 10 MIN STOP			
	17:38									R.I.H.			
	17:44	1000	.662	990.8	.331	1000	.663	999.6	.330	HANG 5 MIN.			
	17:52	2000	.875	1311.9	.321	2000	.875	1320.1	.320				
	18:02	3000	1.085	1628.7	.316	3000	1.084	1636.9	.316				
	18:11	4000	1.292	1941.1	.312	4000	1.289	1948.1	.311				
	18:17	4500	1.394	2095.4	.308	4500	1.392	2104.6	.313				
	18:24	5000	1.496	2249.8	.309	5000	1.493	2258.1	.307				
	18:29	5080	1.512	2274.1	.303	5080	1.509	2282.5	.304	HANG 10 MINS.			
	18:39	5120	1.522	2289.3	.379	5120	1.519	2297.7	.380	HANG 20 MINS.			
	19:00	5160	1.534	2307.5	.455	5160	1.531	2315.9	.456	HANG 10 MINS			
	19:27	LUB	.444	662.3		LUB	.445	670.9					

GENERAL REMARKS: ELEMENTS CALIBRATED @ 30/3/85 @ 215°F

000110

CLIENT ... DELHI PETROLEUM						 138 RICHMOND ROAD MARLBOROUGH SA 8033 PORTAL ADDRESS: PO BOX 354 OONAHALLA 8028										DATE ... 1/4/85 ...		PAGE No ... 1 ...	
WELL ... WANCOOCHA #4						BIRKHEAD										OPERATOR ... M SAUNDERS			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
1/4/85																			
14:30	-	672																	
	OPEN WELL ON 10/64" VARIABLE CHOKE - FLOWING DIRECTLY INTO TANKS																		
14:31	-	636	-	10/64															
14:40	627	636	-	10/64	0														
15:00	627	637	-	10/64	0														
15:31	CHANGE TO 12/64 VARIABLE CHOKE																		
16:00	601	608	-	12/64	0														
17:00	603	611	92	12/64	0														
18:30	603	611	93	12/64	0														
22:30	603	610	92	12/64	0														
2/4/85																			
06:30	N/A	N/A	92	12/64	0														
	NOTE: PRESSURE READING N/A DUE TO VARTRIX GAUGE FAILURE MARTIN DECKER BOURDEN T ^{USE} GAUGE USED AS TEMPORARY REPLACEMENT																		
12:20	592	587	94	12/64	0														
13:40	-	590	93	12/64	0														
13:45	SHUT IN WELL CHANGE TO 12/64 FIXED CHOKE																		
13:45	-	633	-																
13:50	-	582	79	12/64	0														

CLIENT <u>DELHI PETROLEUM</u> WELL <u>WANOOCHA #4</u>						 136 RICHMOND ROAD MARLBOROUGH SA 6023 TELEPHONE (08) 354 0488 TELEX A467183										DATE <u>3/4/85</u> PAGE No <u>2</u> OPERATOR <u>M SAUNDERS</u>			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
2/4/85																			
14:30	82	575	76	12/64	0														
18:30	579	582	82	↓	↓														
22:00	SHUT IN WELL - CHANGE TO 12/64 VARIABLE CHOKE																		
22:30	569	565	89	↓	↓														
23:30	-	570	92	↓	↓														
3/4/85				↓	↓														
00:30	-	570	92	↓	↓														
01:30	-	572	94	↓	↓														
02:30	562	573	92	↓	↓														
03:28	CHANGE TO 11/64 VARIABLE CHOKE																		
03:30	-	576	92	11/64	↓														
04:30	-	582	93	↓	↓														
05:30	-	586	94	↓	↓														
06:30	580	588	88	↓	↓														
07:30	-	587	85	↓	↓														
08:30	-	582	86	↓	↓														
09:30	-	583	86	↓	↓														
10:30	615	621	90	↓	↓	NOTE: VAETRIX GAUGE NOW BEING USED AGAIN													

000112

CLIENT DELHI PETROLEUM																	DATE 3/4/85 PAGE No 3			
WELL WANOOCOA #4						BIRKHEAD											OPERATOR M SAUNDERS			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS	
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D					
3/4/85																				
11:05	SHUT IN WELL - CHECK CHOKE IS CLEAR																			
11:10	OPEN WELL ON 11/64 VARIABLE CHOKE																			
	608	615	90	11/64	0															
11:30	606	613	88	↓																
12:00	608	615	90	↓																
12:10	SHUT IN WELL																			
12:18	OPEN WELL ON 10/64 FIXED CHOKE																			
12:20	596	603	88	10/64																
12:30	593	600	89	↓																
13:00	593	600	89	↓																
13:30	592	599	90	↓																
14:00	593	600	91	↓																
14:10	GEARHAFT RUN HP GAUGE IN HOLE																			
14:30	592	599	91	↓																
15:00	592	599	91	↓																
15:30	592	599	92	↓																
16:30	592	598	92	↓																
17:00	592	598	92	↓																

CLIENT DELHI PETROLEUM WELL WANCOOCHA #4						 138 RICHMOND ROAD MARLETON SA 8033 TELEPHONE (08) 354 0488 TELEX AA87183 PORTAL ADDRESS: PO BOX 384 COMRAHOLLA 8033										DATE 3/4/85 PAGE No 4 OPERATOR M. SAUNDERS			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBLS/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
3/4/85																			
17:30	592	599	92	10/64	0														
18:00	592	599	92	↓	↓														
18:30	593	599	92	↓	↓														
19:00	592	599	94	↓	↓														
19:30	592	599	94	↓	↓														
20:00	592	599	94	↓	↓														
20:30	592	599	94	↓	↓	SHUT IN WELL													
	629	TUBING PRESSURE VARYING BETWEEN 640-636																	
20:35	629	639	-	-	-														
20:40	631	640																	
20:45	632	640																	
20:50	633	640																	
20:55	634	641																	
21:00	635	641																	
21:15	636	643																	
21:30	638	642																	
21:45	637	643																	
22:00	638	644																	

CLIENT <u>DELHI PETROLEUM</u> WELL <u>WANOOOCHA #4</u>						 BIRKHEAD 120 RICHMOND ROAD MARLBOROUGH SA 6022 TELEPHONE (08) 364 0486 TELEX AAB7183 POSTAL ADDRESS: PO BOX 284 COMRAHALLA 6023										DATE <u>3/4/85</u> PAGE No <u>5</u> OPERATOR <u>M SAUNDERS</u>			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
3/4/85																			
22:15	639	644	-	-	-														
22:30	641	647																	
23:30	641	647																	
4/4/85																			
00:30	643	650																	
01:30	645	651																	
02:30	645	651																	
03:30	647	652																	
04:30	649	653																	
05:30	650	655																	
06:30	652	657																	
08:30	654	659																	
10:30	656	661																	
12:30	657	662																	
14:30	658	664																	
16:30	659	664																	
18:30	660	664																	
20:30	660	666																	

CLIENT <u>DELHI PETROLEUM</u> WELL <u>WANCOOCHA #4</u>						 135 RICHMOND ROAD MARLBOROUGH SA 5033 TELEPHONE (08) 354 0485 TELEFAX 3547163										DATE <u>4/4/85</u> PAGE No <u>6</u> OPERATOR <u>M. SAUNDERS</u>			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
4/4/85																			
22:30	661	665	-	-	-														
5/4/85																			
00:30	662	666																	
02:30	662	666																	
04:30	663	668																	
06:30	663	668																	
08:30	663	668																	
10:30	663	667																	
12:30	663	667																	
14:30	663	666																	
16:30	664	666																	
18:30	664	666																	
20:30	664	666																	
22:30	665	667																	
6/4/85																			
00:30	665	667																	
02:30	664	666																	
04:30	665	667																	

CLIENT DELHI PETROLEUM						 TELEPHONE (201) 304 0400 TELEX AA87403 138 RICHMOND ROAD MARLBOROUGH SA 8003 POSTAL ADDRESS: PO BOX 204 OORAHAKULA 8003										DATE 7/4/85 PAGE No ... 8			
WELL WANCOOCHA #4						BIRKHEAD										OPERATOR M SAUNDERS			

DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
7/4/85																			
00:30	607	615	82	10/64	0														
06:30	601	609	83																
12:30	598	607	86																
18:30	597	598	88																
8/4/85																			
00:30	596	598	85																
06:30	594	597	86																
12:30	594	594	97																
18:30	594	597	96																
9/4/85																			
00:30	594	596	88																
06:30	595	597	90																
12:30	593	598	94																
18:30	594	599	94																
10/4/85																			
00:30	594	598	88																
06:30	596	599	89																
12:30	596	597	101	✓	✓														

000118

CLIENT DELHI PETROLEUM WELL WANOOCCHA #4						 TELEPHONE (28) 354 0488 TELEX AAB7183 138 RICHMOND ROAD MARLBOROUGH SA 8033 POSTAL ADDRESS: PO BOX 354 OORAHANGA 8033										DATE 10/4/85 PAGE No 9 OPERATOR DAVID KAY			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
10/4/85																			
18:30	593	598	94	10/64	0														
11/4/85																			
00:30	594	595	82																
06:30	595	599	86																
12:30	595	600	105																
18:30	595	599	100																
12/4/85																			
00:30	594	599	98																
06:30	594	598	98																
12:30	594	599	109																
18:30	594	598	100																
13/4/85																			
00:30	594	600	91																
06:30	595	599	92																
12:30	595	600	110																
18:30	594	599	104	✓	✓														

CLIENT DELHI PETROLEUM PTY. LTD.

WELL WANCOCCHA #4
BIRKHEAD



TELEPHONE (08) 354 0466 TELEX AAB7183

DATE 14/4/85 PAGE No 9

OPERATOR DAVID KAY.

DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	H.P. METER RUN I.D. =					L.P. METER RUN I.D. =								
						PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	PI PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
14/4/85																			
00:30	594	599	78	10/64	0														
06:30	594	600	76																
18:30	594	599	85																
15/4/85																			
06:30	595	598	80																
18:30	595	600	86																
16/4/85																			
06:30	590	599	91																
18:30	590	600	89																
17/4/85																			
06:30	590	600	87																
18:30	590	600	88																
18/4/85																			
06:30	590	600	89																
18:30	590	598	90																
19/4/85																			
06:30	590	590	86																
18:30	590	599	85																

WELL WANCOOCHA #. 4

BIRKHEAD



DATE 20/4/85 PAGE No 10

OPERATOR DAVID KAY

[illegible]

000121

WELL WANOOCHA #4
BIRKHEAD



DATE 24/4/85 PAGE No 12.....

OPERATORTIM CHAPMAN.....

[illegible]

000123

CLIENT DELHI PETROLEUM						 WIRELINE & WELL TESTING SERVICE 128 RICHMOND ROAD MARLBOROUGH SA 5033 TELEPHONE (08) 354 0488 TELEX AAB7183 POSTAL ADDRESS: PO BOX 354 COMBANDILLA 5033										DATE 27.4.85		PAGE No 13	
WELL WANGOOCHA # 4 BIRK HEAD																OPERATOR TIM CHAPMAN			
DATE TIME	WELLHEAD					H.P. SEPARATOR					L.P. SEPARATOR					TOTAL GAS RATE MMSCF/D	TOTAL LIQUID RATE BBL/D	G.O.R. SCF/BBL	REMARKS
	CASING PSI	TUBING PSI	TEMP °F	CHOKE SIZE INS	B.S.W. %	P1 PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D	P1 PSI	HW INS. H ₂ O	TEMP °F	ORIFICE SIZE INS	FLOW RATE MMSCF/D				
27 TH APRIL 1985																			
18:30	590	600	94	10/64	0														
28 TH APRIL 1985																			
06:30	590	600	90																
18:30	590	595	96																
29 TH APRIL 1985																			
06:30	590	600	76																
18:30	590	600	90																
30 TH APRIL 1985																			
06:30	590	600	80																
18:30	593	600	92																
1 ST MAY 1985																			
06:30	590	600	87																
18:30	590	600	95																
2 ND MAY 1985																			
06:30	590	600	82																
18:30	590	600	87																
3 RD MAY 1985																			
06:30	590	600	104	10/64	0														

CLIENT..... <u>DELHI PETROLEUM</u> TANK:— CAPACITY..... <u>377 BBL</u> SCALE...1" = 1.695 BBL.....	 TELEPHONE (08) 354 0485 TELEX A487183	WELL..... <u>WANOOCCHA #4</u> DATE... <u>1/4/85</u>PAGE No... <u>1</u> OPERATOR..... <u>M SAUNDERS</u>
--	--	--

DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION						REMARKS
		METER READG	TANK DIP INS	TANK PROD. BBL	FLOWRATE BBL/D	CUM. PROD. BBL	OIL CONDENSATE GRAVITY "AP160F"	METER READG	TANK DIP INS	TANK PROD.	FLOWRATE	CUM. PROD. BBL	SALINITY PPM	
1/4/85														
14:30	0		0			0	-		0			0		
		OPEN WELL ON 10/64" VARIABLE CHOKE												
15:30			5	8.47	203.4	8.5	-							
		CHANGE TO 12/64" VARIABLE CHOKE												
16:00			12.125	12.1	579.6	20.57	-							
17:00			26.5	24.36	584.6	44.93	54.1							
18:30	4		48	36.44	583.0	81.37	55.2							
22:30	8		98.75	86.02	516.13	167.39	55.4							
2/4/85														
06:30	16		193.5	160.6	481.8	327.99	55.2							
08:30	18	TARE 2"	CHANGE TO	#33 -	TANK #11	218								
10:30	20		31	90.68	544.0	418.67	55.1							
13:45		SHUT IN WELL - CHANGE TO 12/64" FIXED CHOKE												
13:50		OPEN WELL												
14:30	24		88	96.16	579.7	514.83	54.7		↓					
15:30	25		100.5	21.18	508.5	536.0	CHANGE TO TANK #11 - TARE 7.5"							
18:30	28		58	85.59	684.8	621.6			↓					
20:30	30		89.5	53.39	640.7	674.99			↓					
21:30	31		106	27.96	671.22	702.9			↓					

000125

CLIENT DELHI PETROLEUM TANK:— CAPACITY ... 377 BBLs SCALE ... 1" = 1.695 BBLs	 TELEPHONE (03) 354 0482 TELEX AAB7183	WELL WANOOOCHA #4 DATE 3/4/85 PAGE No 2 OPERATOR ... M. SAUNDERS
BIRKHEAD		

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	BBL	BBL/D	BBL			INS	BBL	BBL			
2/4/85						696.6								
22:00	SHUT IN	WELL - CHANGE TO 12/64" VARIABLE CHOKE												
22:30	32		122	27.12	650.9	723.7	55.9							
23:30	33		143	35.95	854.3	759.3								
3/4/85														
00:30	34		163	33.9	813.6	793.2								
01:30	35		182.25	32.63	783.1	825.83								
02:30	36		201	31.78	762.75	857.61	CHANGE TO TANK #38 - TARE 17.75							API 54.2
03:30	CHANGE TO 11/64	VARIABLE CHOKE												
03:30	37		34.25	27.96	671.2	885.57								
04:30	38		50	26.69	640.7	912.27								
05:30	39		64.5	24.57	589.86	936.85								
06:30	40		78	22.88	549.18	959.73	56.4							
07:30	41		91.75	23.31	559.35	983.03								
08:30	42		105.25	22.88	549.18	1005.9								
08:55			112	CHANGE TO	TANK NO 11 - TARE 7"									
09:30	43		15.5	25.85	620.3	1031.76								
10:30	44		25	16.10	386.5	1047.8	54.4							
11:00			27.25	SHUT WELL	IN CHECK ADJUSTABLE CHOKE									
11:10	OPEN WELL	ON 11/64" ADJUSTABLE CHOKE												

CLIENT DELHI PETROLEUM PTY. LTD. TANK:— CAPACITY ... 377 BELS SCALE ... 1" = 1.695 BELS	 TELEPHONE (08) 354 0488 TELEX AAB7183 128 RICHMOND ROAD MARLBOROUGH SA 8033 POSTAL ADDRESS: PO BOX 364 COMBAMULLA 8033	WELL WANOOOCHA #4 DATE 3/4/85 PAGE No 3 OPERATOR M. SAUNDERS
---	---	---

DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION						REMARKS
		METER READG	TANK DIP INS	TANK PROD. BELS	FLOWRATE BELS/DAY	CUM. PROD. BELS.	OIL CONDENSATE GRAVITY "AP160F"	METER READG	TANK DIP INS	TANK PROD. BELS	FLOWRATE BELS/DAY	CUM. PROD.	SALINITY PPM	
3/4/85			25			1047.86								
11:30	45		30.75	8.89	213.57	1056.75			0		0			
12:00	45.5		35	7.20	345.8	1063.95								
12:10	SHUT IN WELL - CHANGE TO 10/64" FIXED CHOKE													
12:18	OPEN WELL													
12:30	46		38.5	5.93	427.14	1069.8								
13:00	46.5		44.25	9.74	467.81	1079.6								
13:30	47		51.5	12.28	589.86	1091.9								
14:00	47.5		57.25	9.74	467.81	1101.6								
14:10	GEARHAFT R.I.H.													
14:30	48		63.5	10.59	508.5	1112.3	54.7							
15:00	48.5		69.5	10.17	488.2	1122.4								
15:30	49		76.75	12.28	589.8	1134.7	54.8							
16:00	49.5		82.25	9.32	447.5	1144.0								
16:30	50		88.5	10.59	508.5	1154.6	54.2							
17:00	50.5		95.5	11.86	569.5	1166.5								
17:30	51		102	11.01	528.4	1177.5	54.4							
18:00	51.5		108.25	11.01	528.8	1188.5								
18:30	52		114.25	10.17	488.2	1198.7								
19:00	52.5		120.25	10.17	488.2	1208.85								

CLIENT DELHI PETROLEUM PTY. LTD. TANK:— CAPACITY 377 BELS SCALE 1" = 1.695 BELS.	 TELEPHONE (08) 354 0480 TELEX AAB7183	WELL WANOOOCHA. #4 DATE 7/4/85 PAGE No 5 OPERATOR M. SAUNDERS.
---	--	---

DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION					REMARKS	
		METER READG	TANK DIP INS	TANK PROD. BELS	FLOWRATE BELS/DAY	CUM. PROD. BELS	OIL CONDENSATE GRAVITY *API60F*	METER READG	TANK DIP INS	TANK PROD. BELS	FLOWRATE BELS/DAY	CUM. PROD.		SALINITY PPM
7/4/85		START OF	EXT. TEST	PROGRAMME	(PREV. CUMULATIVE OF 1242 BELS INCLUDED)									
00:30			105.25	130.09	520.36	1372.	55.2		0		0			
06:30			182	130.09	520.36	1502.1	55.4							
09:00			215	CHANGE TO TANK #11	-	TARE	13.5" -	0.5" H ² O						
12:30			51	119.49	477.96	1621.59	55.2							
18:30			128.25	130.93	523.72	1752.5	55.3							
8/4/85														
00:30			204.5	129.24	516.97	1881.7	55.4							
01:00			210.5	CHANGE TO TANK NO #33	-	TARE	48" -	0.5" H ² O						
06:30			118	128.82	515.28	2010.6	55.1							
08:50			160.5	COMMENCE PUMPING FROM TANK #33										
09:10		TARE DIP	57	FINISH PUMPING										
12:30			97.5	118.7	475.1	2129.3	54.3							
18:30			174	129.6	518.6	2258.9	54.9							
21:00			206	CHANGE TO TANK #11		TARE	10" -	0.5" H ² O						
9/4/85														
00:30			51.75	125	500	2383.9	55.2							
06:30			128	129.24	516.9	2513.14	55.5							
09:30			163	CHANGE TO TANK #33		TARE 7"	/	0.5" H ² O						
12:30			46	125.42	501.7	2638.5	55.4		↓		↓			

000129

CLIENT DELHI PETROLEUM PTY LTD TANK:— CAPACITY 377 BBLs SCALE 1.695 BBLs = 1"				BIRKHEAD				 125 RICHMOND ROAD MARLBOROUGH SA 5033 TELEPHONE (08) 354 0480 TELEEX AAB7163 POSTAL ADDRESS: PO BOX 254 GUNNAPOLLA SA 5232				WELL WANOOOCHA #4 DATE 9/4/85 PAGE No6 OPERATOR DAVID KAY			
DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION					REMARKS		
		METER READG	TANK DIP INS	TANK PROD. BBLs	FLOWRATE BBLs/DAY	CUM. PROD. BBLs	OIL CONDENSATE GRAVITY "AP160F"	METER READG	TANK DIP INS	TANK PROD. BBLs	FLOWRATE BBLs/DAY	CUM. PROD. BBLs		SALINITY PPM	
18:30			122.75	130.09	520.36	2768.5	54.5		0				0		
10/4/85									↓				↓		
00:30			200	130.93	523.7	2899.4	54.9		↓				↓		
00:30		TARE	59	CHANGE TANKS TO #11				TARE	.5"						
06:30			134	127.1	508.5	3026.5	55.3								
12:30			210.5	129.6	518.6	3156.1	55.2		0				↓		
12:30		TARE	57.5	CHANGE TO TANK #33					↓				↓		
18:30			134	129.6	518.6	3285.7	55.6		↓				↓		
11/4/85									↓				↓		
00:30			209.5	127.9	511.8	3413.6	54.1		↓				↓		
00:30		TARE	10	CHANGE TANKS #11				TARE	.5"						
06:30			87	130.5	522	3544.1	53.9		0				↓		
10:00			131	CHANGE TO TANK #33					↓				↓		
10:00		TARE DIP	6.5						↓				↓		
12:30			39.5	130	519.7	3674.1	54		↓				↓		
18:30			116	129.6	518.6	3803.7	55.7		↓				↓		
12/4/85									↓				↓		
00:30			192	128.8	515.28	3932.5	55.4		↓				↓		

000130

CLIENT DELHI PETROLEUM PTY LTD.				BIRKHEAD								WELL WANOOOCHA #4			
TANK:— CAPACITY 377 BELS												DATE 12/4/ 85			
SCALE 1.695 BELS = 1"								OPERATOR DAVID KAY							

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	BELS	BELS/DAY	BELS			INS	BELS	BELS/DAY	BELS		
12/4/85														
00:30				CHANGE TO TANK #11		2819		TARE	34"/0" H ² O					
06:30			110	128.8	515.2	4061.3	54.3			0		0		AT 0630 HRS 12 APRIL THE FIGURE 2819 BELS HAS BEEN USED, AS THIS WAS THE CORRECTED NUMBER OF BARRELS IN THE EXTENDED TEST ONLY. NOT INCLUDING CLEAN UP FLOW.
12:30			186.5	129.6	518.6	2948.6	54.6							
15:30			225	CHANGE TO TANK #33				TARE	192					
18:30			230.5	131.2	525	3079.8	54							
18:30				CHANGE TO TANK #11				TARE	7.5"/0" H ² O					
13/4/85														
00:30			84.5	130.5	522.06	3210.3	53.9							
06:30			160	127.9	511.8	3338.2	54.5							
09:30			197	CHANGE TO TANK #33				TARE DIP	6.5					
12:30			45	127.9	511.8	3466.1	54.9							
18:30			122.5	131.36	525.4	3597.4	55.5							
14/4/85														
00:30			197	126.2	505.1	3723.6	54							
00:30	TARE DIP		12	CHANGE TO TANK #11										
06:30			195.5	126.2	505.1	3849.8	55.3							
07:30			210	CHANGE TO TANK #33	TARE 6.5"/0"	H ² O								
18:30			147	263.56	527.13	4113.36	54.7							
24:00			211.5	CHANGE TO TANK #11	101"/0"	H ² O								

CLIENT ... DELHI PETROLEUM PTY LTD. TANK :- CAPACITY ... 377 BELS SCALE : 1.695 BELS = 1"				 128 RICHMOND ROAD MARLBOROUGH SA 5033 TELEPHONE (08) 354 0485 TELEX AAB7183				WELL ... WANDOOCHA #4 DATE . 14/4/85 PAGE No . 8 ... OPERATOR . DAVID KAY			
(BIRKHEAD)											

DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION					REMARKS	
		METER READG	TANK DIP INS.	TANK PROD.	FLOWRATE	CUM. PROD.	OIL CONDENSATE GRAVITY "AP180F"	METER READG	TANK DIP INS.	TANK PROD.	FLOWRATE	CUM. PROD.		SALINITY PPM
14/4/85														
00:30			197	126.2	505.1	3723.6	54		0			0		
00:30		TARE DIP	12			CHANGE TO TANK #11								
06:30			195.5	126.2	505.1	3849.8	55.3							FROM 0630 HRS.
07:30			210			CHANGE TO TANK #33								
07:30		TARE DIP	6.5											START 12 HOURLY READINGS.
18:30			147	263.56	527.1	4113.3	54.7							
24:00			211.5			CHANGE TO TANK #11								
24:00		TARE DIP	101											
15/4/85														
06:30			187	255	510	4368.4	54.6							
09:30			224			CHANGE TO TANK #33								
09:30		TARE DIP	6.5											
15:30			84			CHANGE TO TANK #11								
15:30		TARE DIP	7											
18:30			45.5	259.3	518.6	4627.7	55.4							
16/4 85														
06:30			198	258.4	516.9	4886.1	54.3							
06:30		TARE DIP	44			CHANGE O TANK #33								
18:30			199	262.7	525.4	5148.8	54.5		↓			↓		

000132

CLIENT .. DELHI PETROLEUM PTY LTD. TANK:— CAPACITY ... 377 BELS SCALE . 1.695 BELS = 1" BIRKHEAD	 128 RICHMOND ROAD MARLBOROUGH SA 8023 TELEPHONE (08) 354 9488 TELEX AAG7183 POSTAL ADDRESS: PO BOX 354 CONNARDILLA 8023	WELL WANOOOCHA #4 DATE ... 16/4/85 PAGE No . 9 OPERATOR DAVID KAY
--	--	---

BIRKHEAD														
DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION						REMARKS
		METER READG	TANK DIP INS	TANK PROD.	FLOWRATE	CUM. PROD.	OIL CONDENSATE GRAVITY "AP160F"	METER READG	TANK DIP	TANK PROD.	FLOWRATE	CUM. PROD.	SALINITY PPM	
16/4/85														
18:30		TARE DIP	198		CHANGE TO TANK #11			0						
20:30			223		CHANGE TO TANK #33			↓						
20:30		TARE DIP	6.5'											
17/4/85														
06:30			134	258.4	516.9	5407.2	54.5				0			
10:30			186.5		CHANGE TO TANK #11			↓						
10:30		TARE DIP	6.5											
18:30			107	259.3	518.6	5666.5	54.3							
18/4/85								↓						
03:30			220		CHANGE TO TANK #33									
03:30		TARE DIP	8.5											
06:30			46	225.09	510.1	5921.5	54.6							
16:30			173		CHANGE TO TANK #11			↓						
16:30		TARE DIP	6.5											
18:30			33	258.9	517.9	6180.4	54.4							
19/4/85								↓						
06:30			187	254.1	508.2	6434.5	54.5							
08:00			204.5		CHANGE TO TANK #33									
08:00		TARE DIP	6.5					↓			↓			

000133

SCALE .. 1.695 BELS = .1".....



OPERATOR DAVID KAY.....

[illegible]

000134

CLIENT DELHI PETROLEUM PTY LTD.				 TELEPHONE (08) 254 0488 TELEX AAB7183 138 RICHMOND ROAD MARLBOROUGH SA 5023 POSTAL ADDRESS: PO BOX 384 COMRADE LA 5023				WELL WANDOOCHA #4			
TANK:— CAPACITY . 377. BBLs..... SCALE . 1.695 BBLs = 1" BIRKHEAD								DATE 21/4/85 PAGE No 11 OPERATOR DAVID KAY.....			

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	
21/4/85														
06:30			217.5	257.6	515.2	7468.2	54.5		0			0		
06:30		TARE DIP	93	CHANGE TO TANK #11										
11:30			156	CHANGE TO TANK #33										
11:30		TARE DIP	5.5											
18:30			97	261.8	523.7	7730	54.7							
22/4/85														
05:00			228	CHANGE TO TANK #11										
05:00		TARE DIP	66.5											
06:30			88.5	259.3	518.6	7989.3	54.6							
14:15			186	CHANGE TO TANK #33										
14:15		TARE DIP	6.5											
18:30			61	257.6	515.2	8246.9	54.3							
23/4/85														
06:30			213.5	258.4	516.9	8505.3	54.6							
06:30		TARE DIP	131.5	CHANGE TO TANK #11										
09:00			162.5	CHANGE TO TANK #33										
09:00		TARE DIP	6.5											
18:30			130	261.8	523.8	8767.1	54.7		↓			↓		

000135

CLIENT DELHI PETROLEUM		 WIRELINE & WELL TESTING SERVICE 128 RICHMOND ROAD MARLBOROUGH SA 8023 PORTAL ADDRESS: PO BOX 284 CONNARVILLE SA 8023										WELL WANGOOCHA #4		
TANK:— CAPACITY 377 BBLS												DATE 27.4.85		
SCALE 1.695 BBLS/INCH												PAGE No 14		
BIRK HEAD												OPERATOR TIM CHAPMAN		
DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION					REMARKS	
		METER READG	TANK DIP INCHES	TANK PROD. BBLS	FLOWRATE BBLS/D	CUM. PROD. BBLS	OIL CONDENSATE GRAVITY *AP180F*	METER READG	TANK DIP INCHES	TANK PROD. BBLS	FLOWRATE BBLS/D	CUM. PROD. BBLS		SALINITY PPM
27 TH APRIL 1985														
18:30			65.5	259.3	518.7	10836.6	54.7		0			0	0	
28 TH APRIL 1985														
06:30			217	256.8	513.6	11093.4	54.8		0			0	0	
06:30			217	CHANGE TO TANK # 33										
06:30	TARE DIP		131											
14:00			225	CHANGE TO TANK # 11										
14:00	TARE DIP		217											
15:00			227	CHANGE TO TANK # 33										
15:00	TARE DIP		147											
18:30			190	249.2	498.3	11342.6	54.5		0			0	0	
21:00			221	CHANGE TO TANK # 11										
21:00	TARE DIP		37											
29 TH APRIL 1985														
06:30			158	257.6	515.3	11600.2	54.0		0			0	0	
08:10			179	CHANGE TO TANK # 33										
08:10	TARE DIP		6											
18:30			139.5	261.9	523.8	11862.1	54.3		0			0	0	

000137

CLIENT ... DELHI PETROLEUM TANK:— CAPACITY ... 377 BBLs SCALE ... 1..695. BBLs/INCH.....		WELL ... WANCQOCHA. #...4 DATE 29.4.85... PAGE No 15... 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	
			INCHES	BBLs	BBLs/D	BBLs			INCHES	BBSL	BBLs/D	BBLs		
29 TH APRIL 1985														
22:00			181.5	CHANGE TO TANK #11										
22:00	TARE DIP		95											
30 TH APRIL 1985														
06:30			203	254.3	508.5	12116.4	54.8		0		0	0		
07:00			208.5	CHANGE TO TANK # 33										
07:00	TARE DIP		6.5											
18:30			154	259.3	518.7	12375.7	54.5		0		0	0		
22:20			202	CHANGE TO TANK # 11										
22:20	TARE DIP		85.5											
1 ST MAY 1985														
06:30			190	258.5	516.9	12634.2	54.9		0		0	0		
07:30			203	CHANGE TO TANK # 33										
07:30	TARE DIP		6.5											
18:30			146.5	259.3	518.7	12893.5	54.5		0		0	0		
21:30			184.5	CHANGE TO TANK # 11										
21:30	TARE DIP		99											
2 ND MAY 1985														
06:30			213.5	258.5	516.9	13151.9	54.1		0		0	0		

000138

CLIENT... DELHI PETROLEUM.....												WELL WANGOOCHA # 4		
TANK:- CAPACITY... 377 BBLs SCALE .1.695 BBLs/INCH.....												DATE ...2.5.85... PAGE No .16.. OPERATOR ...TIM GUAPMAN.....		
DATE TIME	ELAPSED TIME HOURS	OIL/CONDENSATE PRODUCTION						WATER PRODUCTION					REMARKS	
		METER READG	TANK DIP INCHES	TANK PROD. BBLs	FLOWRATE BBLs/D	CUM. PROD. BBLs	OIL CONDENSATE GRAVITY *AP160F*	METER READG	TANK DIP INCHES	TANK PROD. BBLs	FLOWRATE BBLs/D	CUM. PROD. BBLs		SALINITY PPM
2ND MAY 1985														
07:10			222	CHANGE TO TANK # 33										
07:10	TARE DIP		6.5											
18:30			148.5	255.1	510.2	13406.9	54.1		0		0	0		
24:00			218.5	CHANGE TO TANK # 11										
24:00	TARE DIP		103											
3 RD MAY 1985														
06:30			187	261	522.1	13667.9	54.7		0		0	0		
09:00			218	CHANGE TO TANK # 33										
09:00	TARE DIP		6.5											
18:30			128.5	259.3	518.7	13927.2	54.3		0		0	0		
22:00			171.5	CHANGE TO TANK # 11										
22:00	TARE DIP		7.5											
4 TH MAY 1985														
06:30			116	256.8	513.6	14183.9	54.5		0		0	0		
10:30			167.5	CHANGE TO TANK # 33										
10:30	TARE DIP		6.5											
18:30			108	259.3	518.7	14443.2	54.0		0		0	0		

000139

NOMENCLATURE

B	= Formation Volume Factor (Res Vol / Std Vol)	_____	
C _t	= System Total Compressibility	(Vol / Vol) / psi	
DR	= Damage Ratio	_____	
h	= Estimated Net Pay Thickness	Ft	
k	= Permeability	md	
m	{	(Liquid) Slope Extrapolated Pressure Plot	psi/cycle
		(Gas) Slope Extrapolated m(P) Plot	MM psi ² / cp/cycle
m(P*)	= Real Gas Potential at P*	MM psi ² cp	
m(P _f)	= Real Gas Potential at P _f	MM psi ² cp	
AOF ₁	= Maximum Indicated Absolute Open Flow at Test Conditions	MCFD	
AOF ₂	= Minimum Indicated Absolute Open Flow at Test Conditions	MCFD	
P*	= Extrapolated Static Pressure	Psig	
P _f	= Final Flow Pressure	Psig	
Q	= Liquid Production Rate During Test	BPD	
Q ₁	= Theoretical Liquid Production w/ Damage Removed	BPD	
Q _g	= Measured Gas Production Rate	MCFD	
r _i	= Approximate Radius of Investigation	Ft	
r _w	= Radius of Well Bore	Ft	
S	= Skin Factor		
t	= Total Flow Time Previous to Closed-in	Minutes	
Δt	= Closed-in Time at Data Point	Minutes	
T	= Temperature Rankine	°R	
φ	= Porosity	_____	
μ	= Viscosity of Gas or Liquid	cp	
Log	= Common Log		

EQUATIONS FOR DST LIQUID WELL ANALYSIS

Transmissibility	$\frac{kh}{\mu} = \frac{162.6 \text{ QB}}{m}$	$\frac{\text{md-ft}}{\text{cp}}$
Indicated Flow Capacity	$kh = \frac{kh}{\mu} \mu$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{P^* - P_f}{m} - \text{LOG} \left(\frac{k(t/60)}{\phi \mu c_f r_w^2} \right) + 3.23 \right] -$	—
Damage Ratio	$DR = \frac{P^* - P_f}{P^* - P_f - 0.87 \text{ mS}}$	—
Theoretical Potential w / Damage Removed	$Q_1 = Q \text{ DR}$	BPD
Approx. Radius of Investigation	$r_i = 0.032 \sqrt{\frac{k(t/60)}{\phi \mu c_f}}$	ft

EQUATIONS FOR DST GAS WELL ANALYSIS

Indicated Flow Capacity	$kh = \frac{1637 \text{ Q}_g \text{ T}}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG} \left(\frac{k(t/60)}{\phi \mu c_f r_w^2} \right) + 3.23 \right] -$	—
Damage Ratio	$DR = \frac{m(P^*) - m(P_f)}{m(P^*) - m(P_f) - 0.87 \text{ mS}}$	—
Indicated Flow Rate (Maximum)	$\text{AOF}_1 = \frac{Q_g m(P^*)}{m(P^*) - m(P_f)}$	MCFD
Indicated Flow Rate (Minimum)	$\text{AOF}_2 = Q_g \sqrt{\frac{m(P^*)}{m(P^*) - m(P_f)}}$	MCFD
Approx. Radius of Investigation	$r_i = 0.032 \sqrt{\frac{k(t/60)}{\phi \mu c_f}}$	ft