



APPENDIX. 18.

QUESTA. REPORT.  
ON. DST - 1.

PINE LODGE - 1

W1034

A PRELIMINARY REPORT  
ON DST 1  
WELL PINE LODGE 1

Prepared for  
GAS AND FUEL EXPLORATION N.L.

Report No. 90026  
WP: 0116wp  
August, 1990

Questa Australia Pty Ltd

### Introduction

On the afternoon of 21st August, 1990, Questa was faxed data on the DST conducted in open hole over the interval 6364.46 to 6453.83 ft in Gas and Fuel Exploration N.L.'s well Pine Lodge 1 (Attachment 1). This test produced CO<sub>2</sub> (reported to be 97% pure) at a rate of about 3.5 MMCFPD during a period of about 1 1/2 hours.

Questa was requested to review the data from this test and discuss the findings with Mr. Gary Scott of Gas and Fuel.

Later that day, Steve Ingham of Questa contacted Mr. Gary Scott and discussed the initial findings.

This report contains these and other matters relevant to the test and some conclusions and recommendations that result from them. A map of the general area is given at the end of the text of this report.

### Conclusions

1. Without an initial reservoir pressure it is impossible to determine the size of the reservoir being accessed during this test.
2. Buildup indications are of a tight, fractured reservoir.
3. Drawdown suggests the existence of a limited reservoir being accessed. These indications could be negated if a specific set of circumstances were occurring during this test. These circumstances are discussed later in this report.

### Recommendation

After running logs and analysing the parameters of the probable source of this CO<sub>2</sub>, decide whether further testing is warranted of this zone. Data obtained from logs will provide values of porosity, net pay and saturation. These data, apart from their conventional utility, may alter some of the results of the analysis of the DST. Since these values are not now available, assumptions have had to be made in the current analysis.

### Buildup Analysis

The initial analysis of this three-hour buildup was made using Haliburton's plot of pseudo pressure vs. Horner time (Figure 1). To use this effectively, these pseudo pressures had to be converted to actual pressures. Figure 2 shows the results of this conversion.

Preliminary analysis of this Horner plot gave a very low permeability capacity (Kh) of less than 20 md.ft and a built-up pressure of some 2770 psia.

With more time available, a conventional Horner plot was made (Figure 3). Analysis of this gave a built-up pressure of 2750 psia and a permeability capacity of 21 md.ft. Since no initial pressure was taken, it is not possible to determine if depletion took place during the test (0.21 MMCF produced). This pressure is equivalent to a gradient of 0.431 psi/ft to surface which is normal. Equally, however, had a pressure drop of 50 psi (say) occurred, the original gradient would have been 0.439 psi/ft which is also normal.

The low Kh is significant. Without knowing the permeability and porosity, an exact calculation of skin is not possible. However, if the porosity is taken as 10%, values of skin may be calculated for a suite of values of K as in the following tables and using:

$P_{1hr}$	= 2550 psia	Visc	= 0.04 cps
$P_{wf}$	= 1780 psia	c	= 0.0003 vol/vol/psi
m	= 550 psi/cycle	$r_w$	= 0.35 ft

<u>K (md)</u>	<u>Skin</u>	<u><math>\Delta p</math> Skin (psi)</u>
0.25	-1.8	-890
0.50	-2.2	-1050
1.00	-2.5	-1210
2.50	-3.0	-1430
5.00	-3.3	-1600
10.00	-3.7	-1770

Over a 90 ft interval, a 21 md.ft Kh implies a lower bound for the value of K of about 0.25 md. Based on the calculated  $\Delta P$  Skin values, the upper bound for the value of K is about 10 md. Thus, skin must lie in the range of about -1.8 to -3.7.

Negative skins imply natural fracturing. This is confirmed by the shape of the buildup curve (Figure 3). It would thus be reasonable to recalculate these results using an increased well bore radius to simulate these fractures. Thus, using identical values for the other parameters but using different values of the wellbore radius, the following table results:

<u><math>R_w</math> (ft)</u>	<u>K md</u>	<u>Skin</u>	<u><math>\Delta P</math> Skin (psi)</u>
2	0.25	-0.1	-50
2	1.00	-0.8	-380
2	10.00	-1.9	-930
5	0.25	0.8	+390
5	1.00	0.1	+60
5	10.00	-1.0	-490
10	0.25	1.5	+720
10	1.00	0.8	+390
10	10.00	-0.3	-160

From these results, a possible model emerges: that of a relatively thin zone 2 to 20 ft thick, with fractures extending 20 to 40 ft from the well bore and undamaged permeability beyond this of 1 to 10 mds. It is to be emphasized that many other possibilities exist but this one is physically reasonable.

### Drawdown

Figure 4 gives the general pressure behaviour of the well during the drawdown test. The gas rate was estimated to be about 3.5 MMCFPD during the 1.46 hour flow period. It can be seen that for most of this period pressure was rising (possibly due to the removal of skin). For the last 20 minutes, however, the pressure began to fall and at the end was dropping at a rate of 0.5 psi/minute (Figure 5).

If it is assumed that the production rate was constant at 3500 MCFPD during this period and that skin removal was completed, a GIIP figure of only some 15 MMCF is calculated. If the skin removal process was still continuing then the calculated GIIP would be even smaller.

If the flow rate was constant then semi-steady state started to exist after 1 hour and 10 minutes into the drawdown period or earlier. With the following values being assumed,

$$\begin{aligned}
 K &= 10 \text{ mds} \\
 \text{porosity} &= 0.10 \\
 c &= 0.0003 \text{ vol/vol/psi} \\
 \text{Visc} &= 0.04 \text{ cp} \\
 t_{ss} &= 1 \text{ hr}
 \end{aligned}$$

a drainage radius of about 90 ft. results.

Assuming additionally that,

$$\begin{aligned}
 h &= 15 \text{ ft} \\
 S_w &= 0.4 \\
 B_g &= 0.00284 \text{ res vol/surface vol}
 \end{aligned}$$

a GIIP figure of about 8 MMCF is calculated.

Plainly, many other variations on this theme are possible but there are fairly strong indications that a very limited reservoir is being accessed if the production rate during the latter part of drawdown period was constant. The next section of this report discusses this in more detail.

### Special Circumstances

CO<sub>2</sub> behaves quite differently from hydrocarbon gases in many respects. It is much more compressible than hydrocarbon gases (see Figure 6). Its density varies very significantly near the critical point making surface indications essentially meaningless in trying to determine bottomhole conditions when the critical point is approached in the flow string.

The critical point of CO<sub>2</sub> is 31.06°C (87.9°F) and 73.825 bars (1071 psia). Above this temperature, liquification is impossible regardless of pressure. The following table gives the approximate pressures at which liquification occurs below the critical temperature:

<u>Temp (°F)</u>	<u>Pressure (PSIA)</u>
80	1000
60	750
40	600
20	420

Thus, at the measured constant tubing pressure of 880 psia during the latter part of the flow period, liquification could have occurred near surface if the temperature had been about 70°F or below.

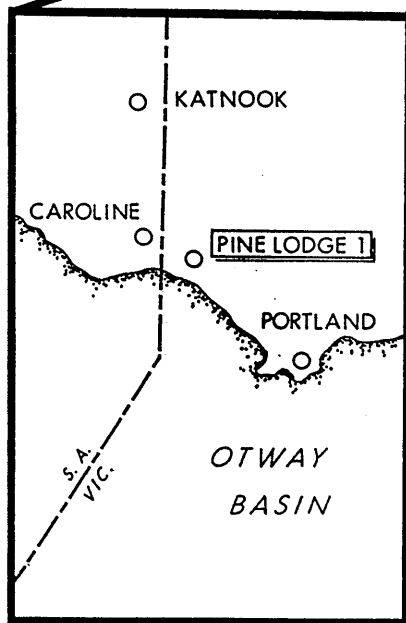
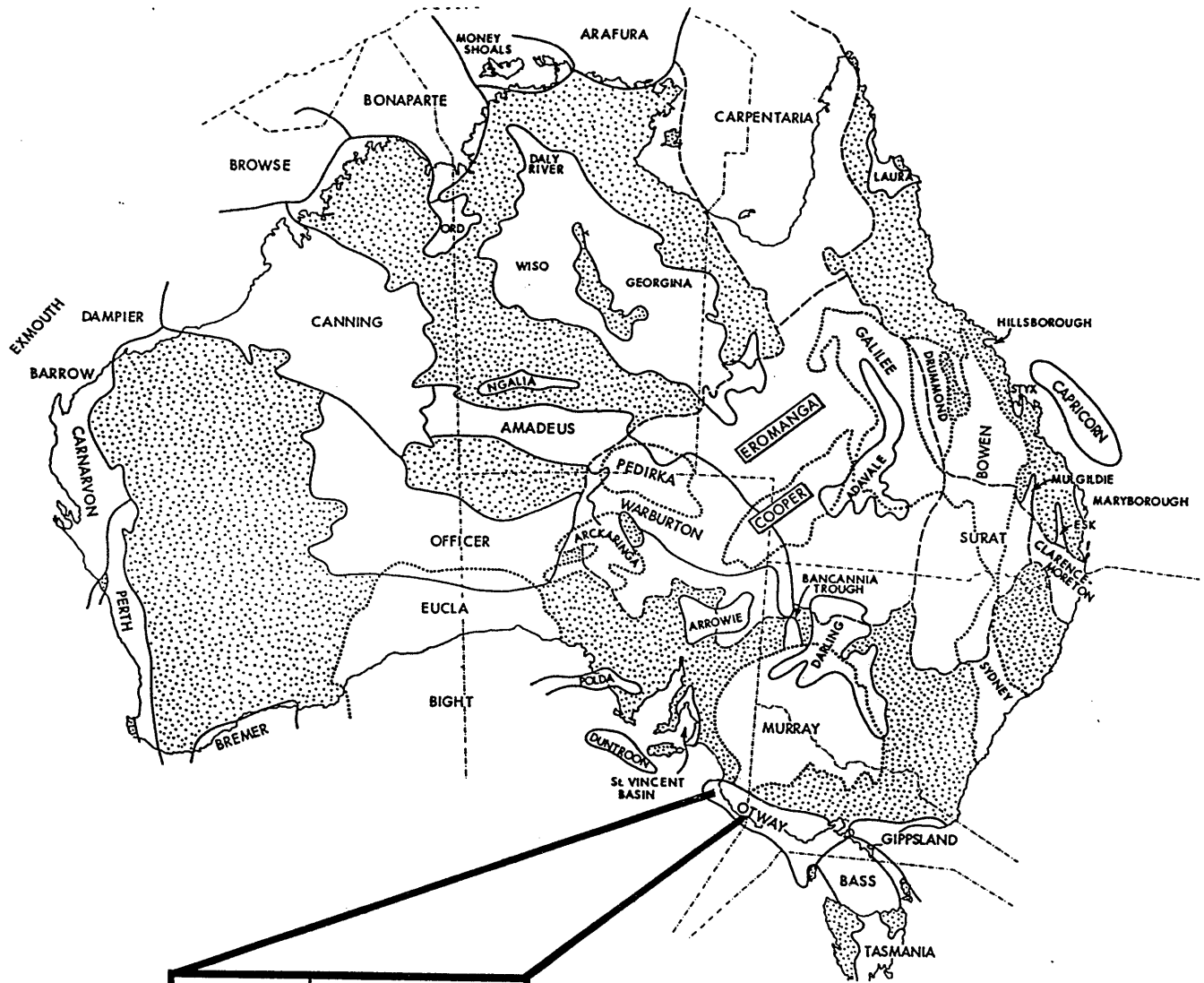
Thus, the flowing tubing head pressure being constant at 880 psia does not necessarily imply that the bottom hole production rate is constant. Figure 7 gives the variation of the specific volume of CO<sub>2</sub> with temperature and pressure. It can be seen that at 880 psia there are dramatic changes in the SV between 70 and 80°F.

Thus, an increase in flow rate from the reservoir will cause, in addition to a decrease in FBHP, an increase in the FIHT with a resulting decrease of the density of the flowing fluid.

Thus, a fairly specific set of circumstances would be required to obtain an increasing flow rate during the latter 20 minutes of the drawdown needed to negate the falling BHP.

If at the beginning of the flow period the fluid flowing through the surface choke was liquid (temperature below 70°F), then its rate could be relatively low. If during the next 20 minutes the flow rate increased, the surface temperature would gradually warm up, the fluid near surface would become gaseous and this could occur with no surface indications that it was happening.

If these conditions were met during the test, then it is possible that the pessimistic results of the drawdown test could be discounted. If not, it looks as though a very limited reservoir was being accessed.

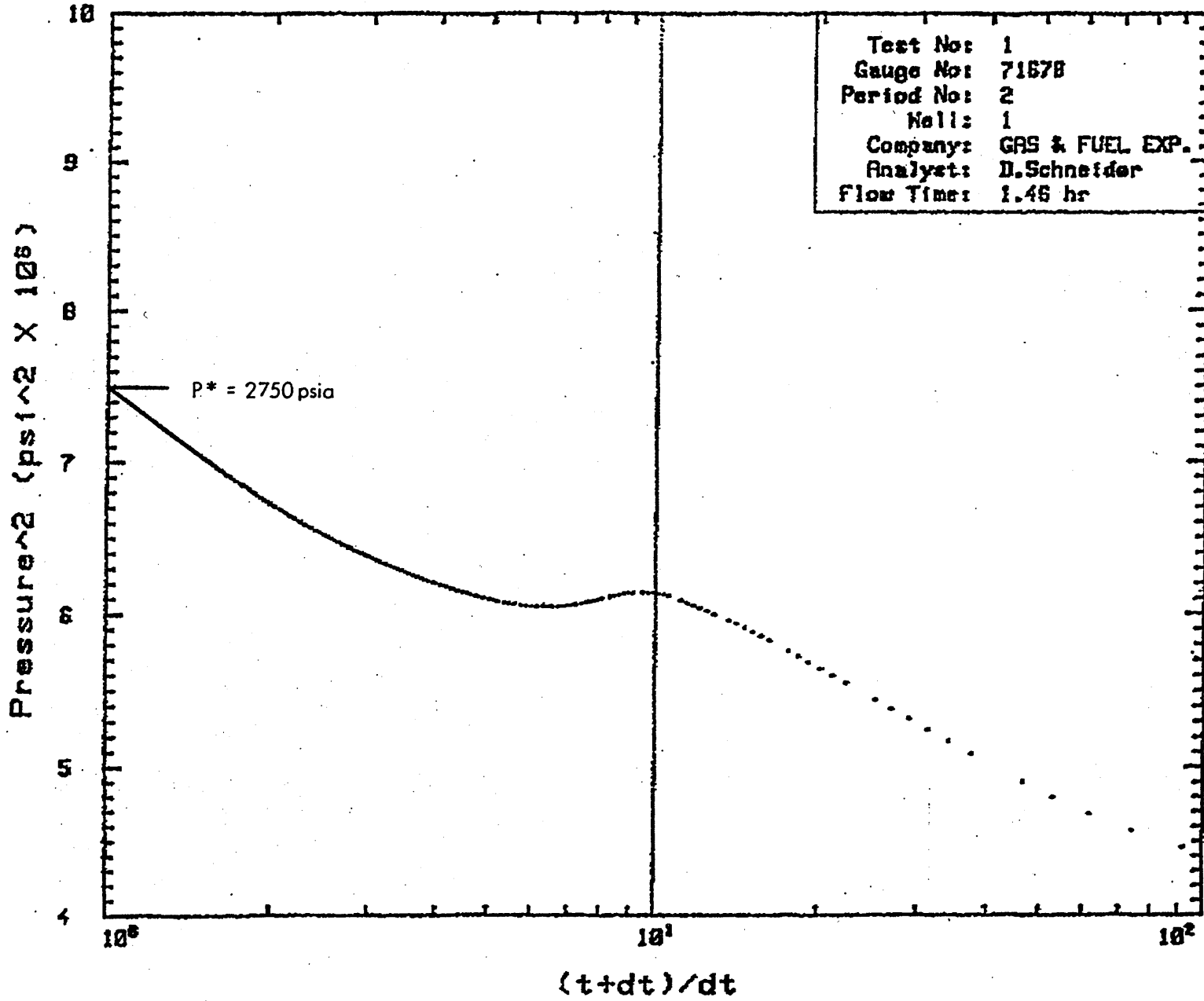


LOCATION OF PINE LODGE 1  
 OTWAY BASIN  
 Australia



AUTHOR:	C.I.:
DRAFTED: C.R.	REPORT NO.:
DATE:	FIGURE NO.:

Pressure<sup>2</sup> vs log((t+dt)/dt)



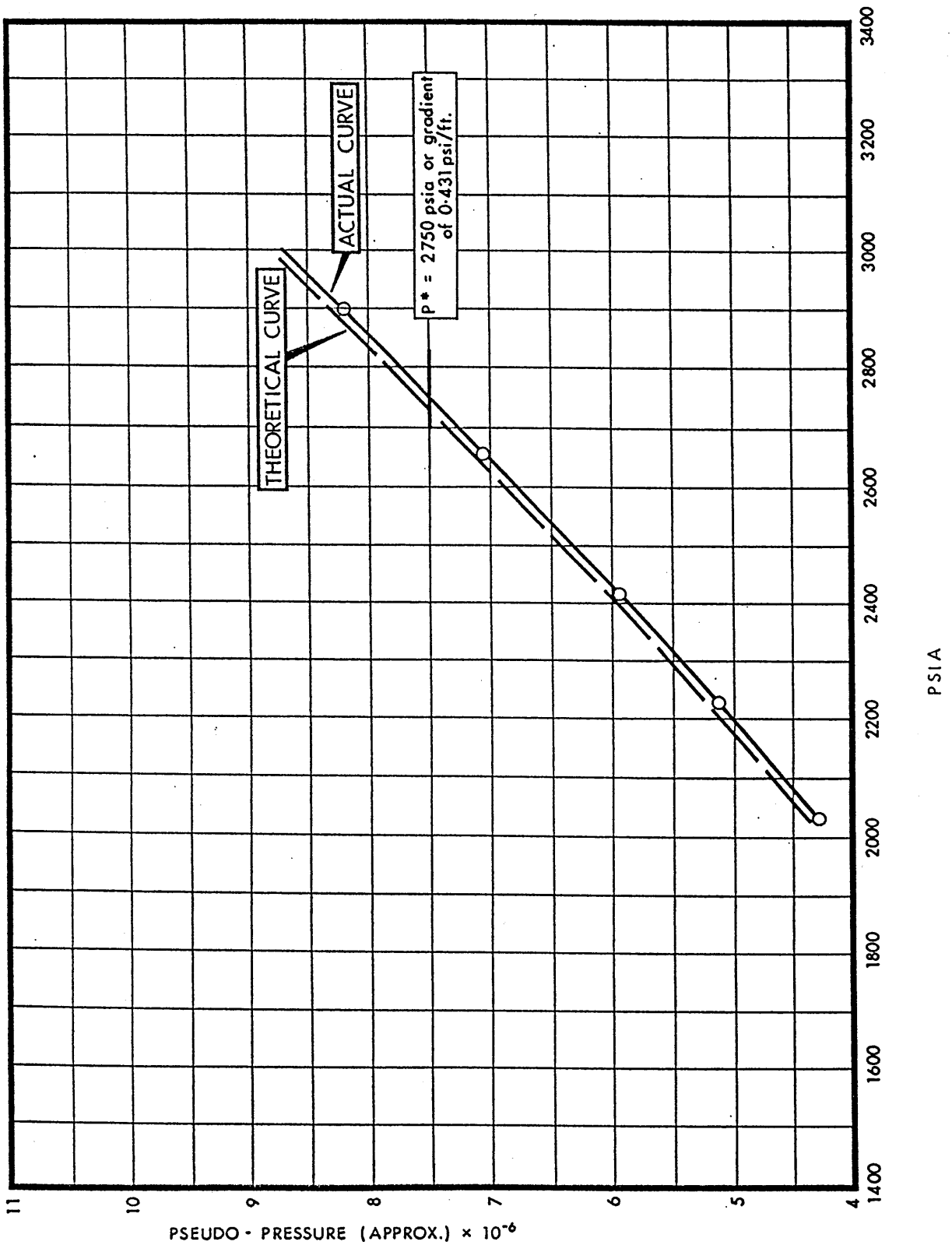
Date: 19/8/98

Ticket No: 000461

Page No: 2.2.1

FIGURE 1

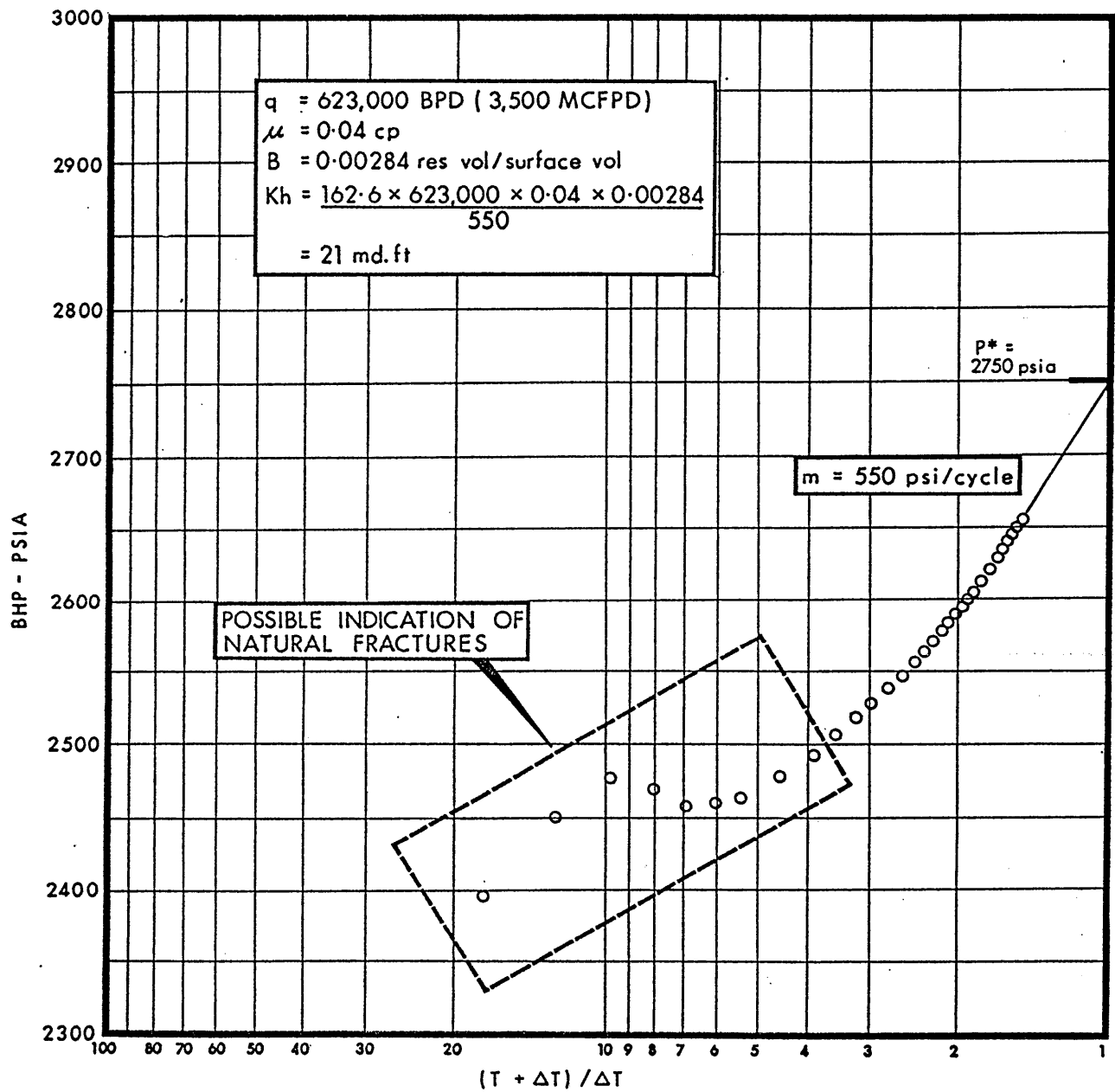




PINE LODGE 1  
 DST 1  
 Pseudo Pressure (Used) vs Pressure



AUTHOR:	C.I.:
DRAFTED: C.R.	REPORT NO.:
DATE:	FIGURE NO.: 2



PINE LODGE 1  
HORNER PLOT FOR DST 1



AUTHOR:

C.I.:

DRAFTED: C.R.

REPORT NO.:

DATE:

FIGURE NO.: 3

# Pressure/Temperature History

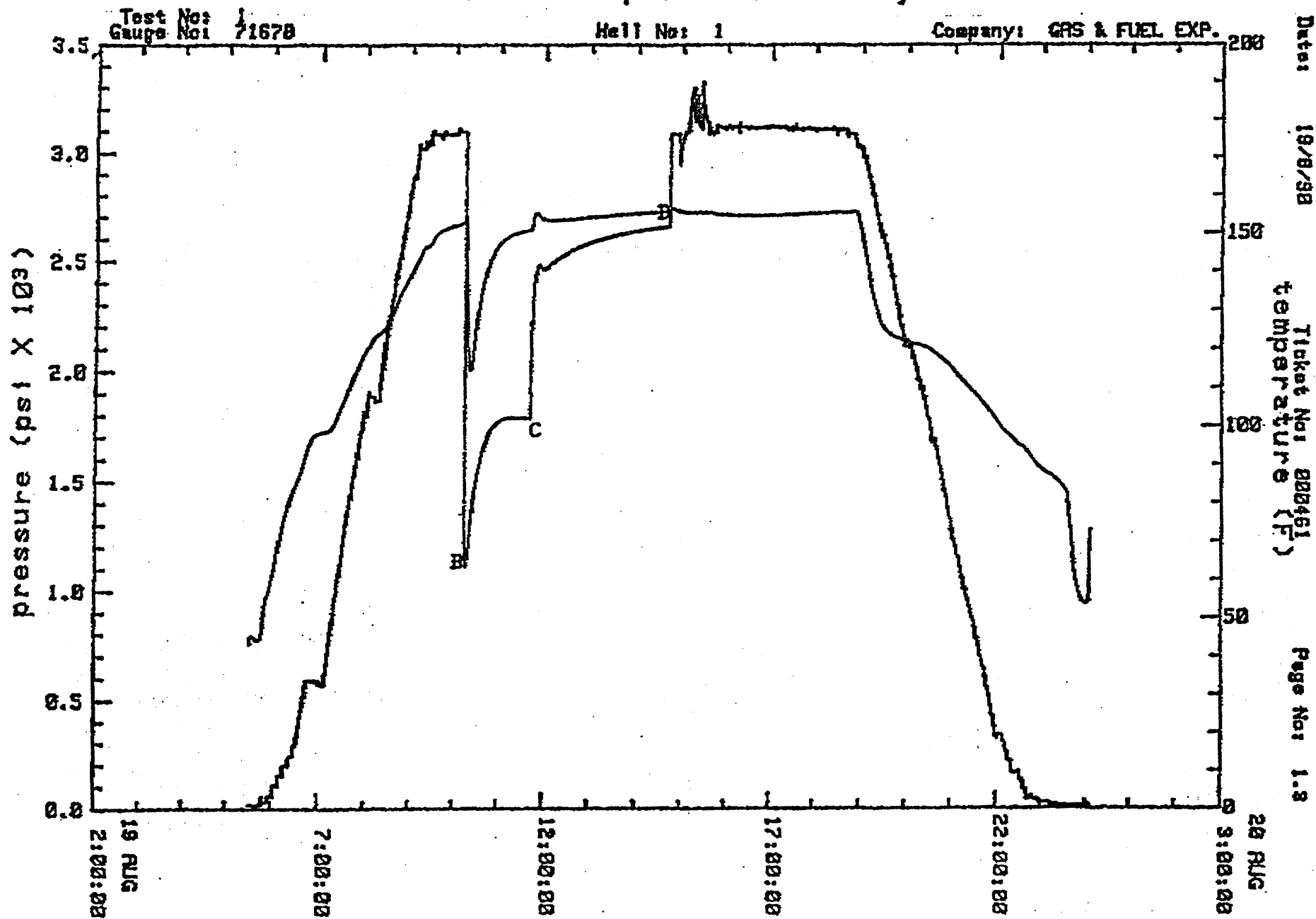
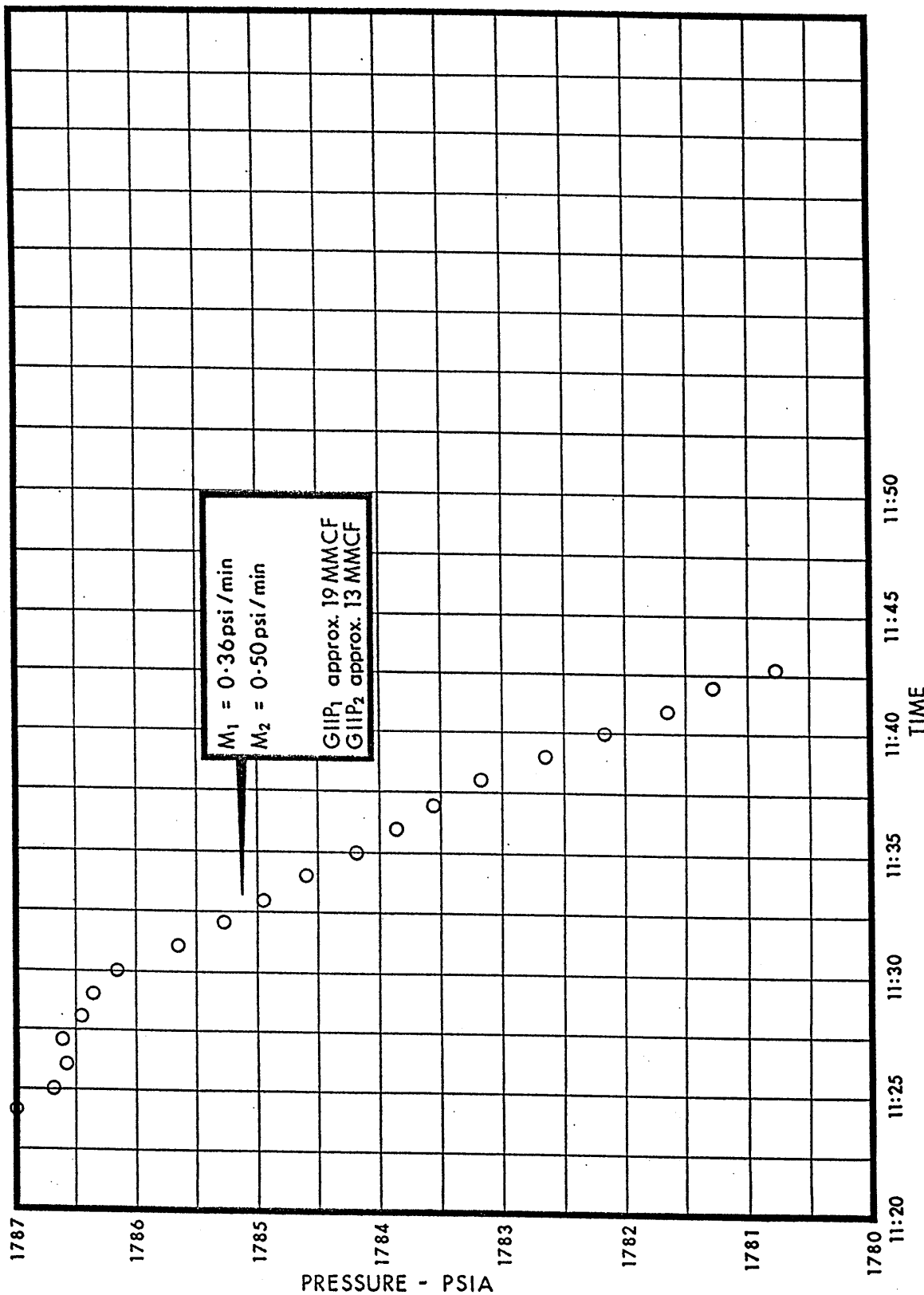


FIGURE 4



PINE LODGE 1  
END OF DRAWDOWN TEST



AUTHOR:	C.I.:
DRAFTED: C.R.	REPORT NO.:
DATE:	FIGURE NO.: 5

# COMPRESSIBILITY OF CO<sub>2</sub>

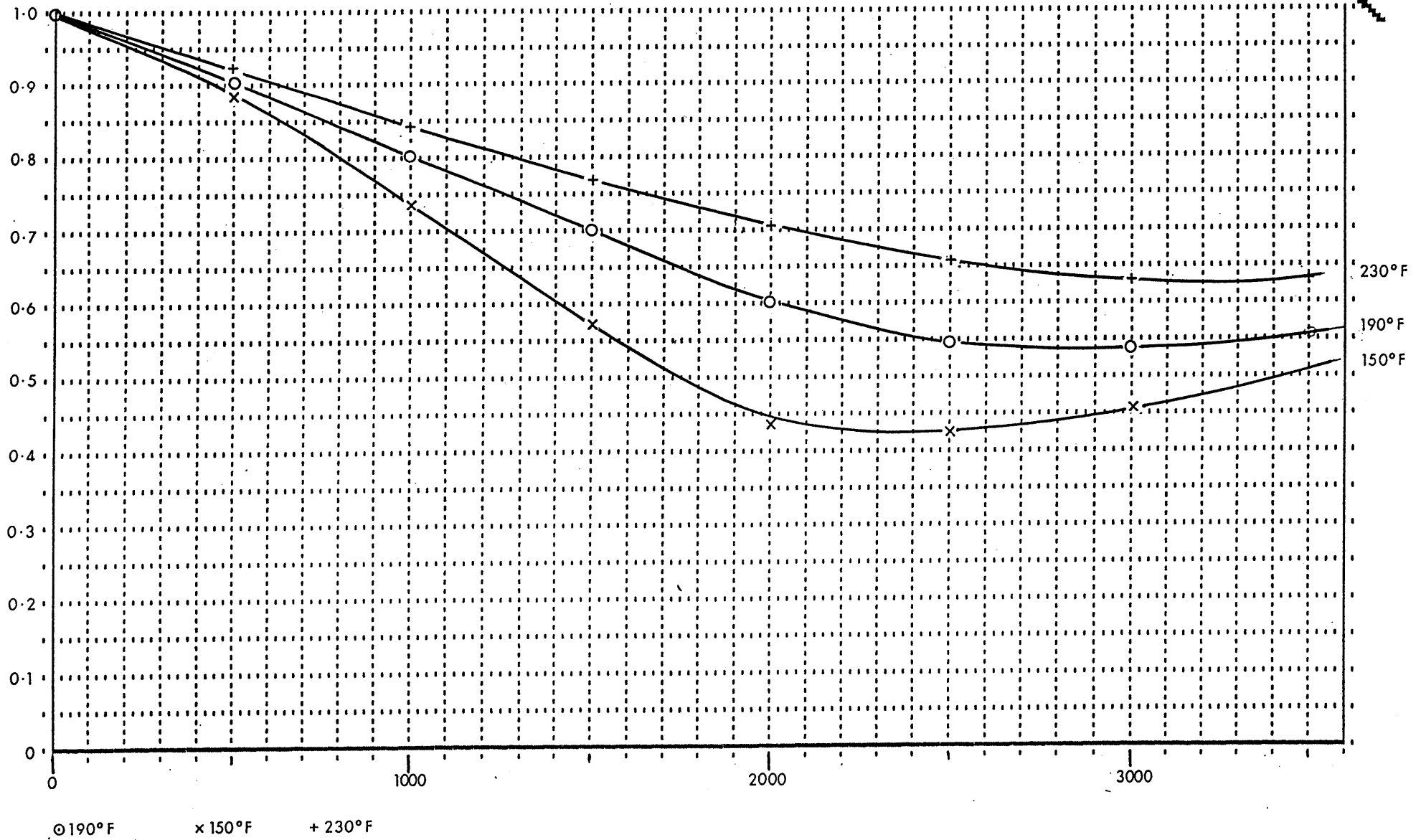


FIGURE 6

# SPECIFIC VOLUME OF CO<sub>2</sub>

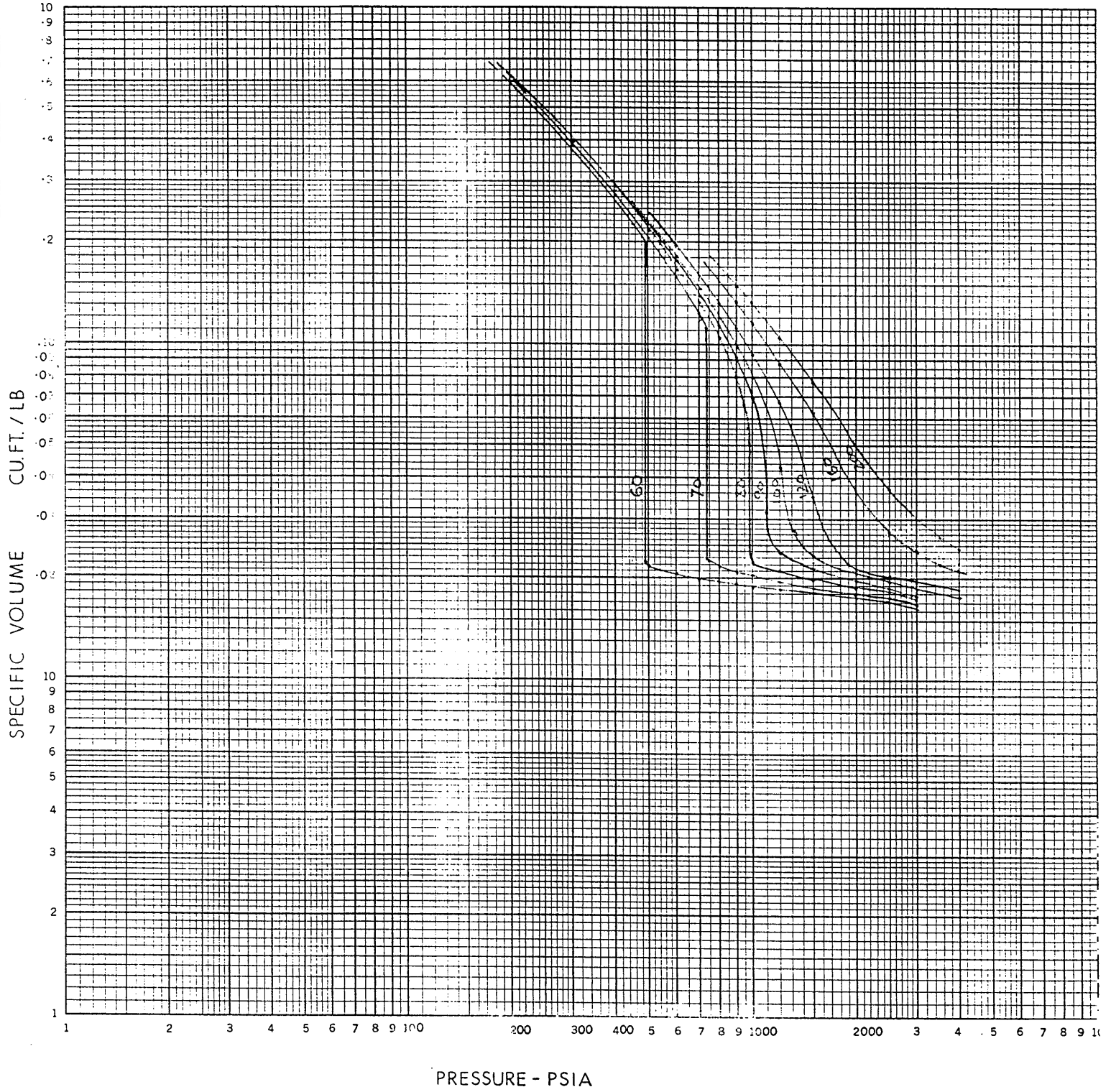


FIGURE 7





# **GAS AND FUEL EXPLORATION N.L.**

A Subsidiary of the Gas and Fuel Corporation of Victoria  
Incorporated in Victoria

11th Floor, 151 Flinders Street, Melbourne, 3000.  
Address all mail to Box 1841Q, G.P.O. Melbourne, 3001.  
Telephone: (03) 652 5722 Facsimile: (03) 652 5245

When replying please quote

## **FACSIMILE COMMUNICATION FORM**

DATE : 21 AUGUST, 1990  
TO : QUESTA - ATT: STEVE INGHAM (08) 363-2526.  
FROM : GAS AND FUEL EXPLORATION N.L.  
FAX NO. : (03) 652-5245  
NO. OF PAGES : 43

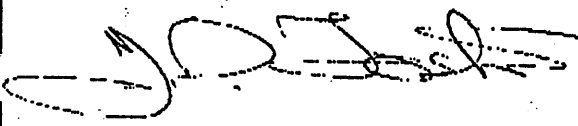
PLEASE ADVISE BY FAX IF THERE ARE ANY PROBLEMS WITH THE TRANSMISSION OR  
PHONE (03) 652-4215

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Re: **PINE LODGE - 1, DST-1, MEMORY GAUGE REPORT.**

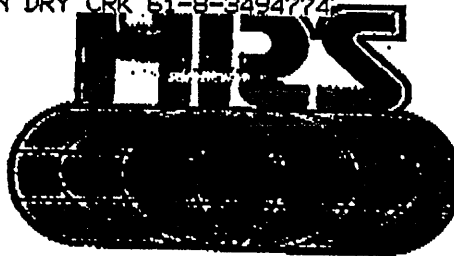
Please find attached a copy of the Halliburton memory gauge report for DST-1 from Pine Lodge - 1. Would you please review the data as per your conversation with Dave Heron/Gary Scott (21 August, 1990), and contact Gary Scott (03 - 882-7957) for discussion of the results of your findings.

Yours faithfully,  
GAS AND FUEL EXPLORATION N.L.

  
J.D. FOSTER,  
OPERATIONS CO-ORDINATOR.

33:JDF:crm:F.16.





JAH  
CRP  
SDF ✓

HALLIBURTON RESERVOIR SERVICES  
A DIVISION OF HALLIBURTON AUSTRALIA PTY LTD

TO, GAS + FUEL EXPLORATION

ATTENTION;

FROM: H.R.S. MELBAIDE

DATE: 21-8-90

FACSIMILE NUMBER;

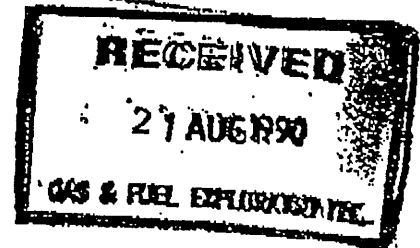
NUMBER OF PAGES INCLUDING THIS ONE 42 PAGES.

IF THERE ARE ANY PROBLEMS WITH THIS TRANSMISSION PLEASE TELEPHONE,  
08 349 4588 OR FAX 08 349 4774

ROUTINE.

URGENT. ✓

SUBJECT REF: MEMORY GAUGE REPORT PINE LODGE # 1 DST # 1



PLEASE FIND ATTACHED MEMORY GAUGE REPORT  
ON DST # 1 PINE LODGE # 1: OTWAY BASIN, VICTORIA 19890.  
Regards.  
RJC/ths

**HALLIBURTON  
SERVICES**

REPORT TICKET NO: 000461  
MEMORY GAUGE TICKET NO: 000461  
DATE: 19/8/90  
HALLIBURTON CAMP: MOOMBA  
TESTER: N.Cowley  
WITNESS: G.Nicot

DRILLING CONTRACTOR: ATCO-APM RIG#2  
LEGAL LOCATION: 37 58' 25.4"S  
141 12' 41.6"E

OPERATOR: GAS & FUEL EXP.  
LEASE NAME: PINE LODGE  
WELL NO: 1  
TEST NO: 1  
TESTED INTERVAL: 6364.46 - 6453.83 ft

FIELD AREA: OTWAY BASIN  
COUNTY/LSD:  
STATE/PROVINCE: VICTORIA  
COUNTRY: AUSTRALIA

NOTICE: THIS REPORT IS BASED ON SOUND ENGINEERING PRACTICES, BUT BECAUSE OF VARIABLE WELL CONDITIONS AND OTHER INFORMATION WHICH MUST BE RELIED UPON HALLIBURTON MAKES NO WARRANTY, EXPRESS OR IMPLIED AS TO THE ACCURACY OF THE DATA OR OF ANY CALCULATIONS OR OPINIONS EXPRESSED HEREIN. YOU AGREE THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE ARISING OUT OF OR IN CONNECTION WITH SUCH DATA, CALCULATIONS OR OPINIONS.

Date: 19/8/90

Ticket No: 000461

Page No: 1.1

SUMMARY OF TEST

Lease Owner: GAS & FUEL EXP.

Lease Name: PINE LODGE

Well No.: 1

Test No.: 1

County/LSD:

State/Province: VICTORIA

Country: AUSTRALIA

Formation Tested: WAARRE

Hole Temp: 155.12 F

Total Depth: 6480.00 ft

Net Pay: 89.37 ft

Gross Tested Interval: 6364.46 - 6453.83 ft

Perforated Interval (ft):

RECOVERY:

5.46bbl GAS CUT FLUID AT 9.5lb/gal DUE  
TO THE PRESENCE OF FORMATION SILT.

REMARKS:

ALL DOWNHOLE PRESSURES ARE IN ABSOLUTE  
PSIA.

Date: 19/8/90

Ticket No: 000461

Page No: 1.2

TEST PERIOD SUMMARY

Gauge No.: 71678 Depth: 6343.87 ft Blanked off: No

ID	PERIOD	DESCRIPTION	PRESSURE (psi)	DURATION (min)
A		Initial Hydrostatic	3082.57	
B	1	Start Draw-down	1143.67	
C		End Draw-down	1780.75	
C	2	Start Build-up	1780.75	87.60
D		End Build-up	2655.28	
E		Final Hydrostatic	3082.16	180.72

NOTE: for Pressure vs. Time Plot, see next page.

Date: 19/8/90

Ticket No: 000461

Page No: 1.4

## TEST AND FORMATION DATA

Formation Tested: WAARRE

All Depths Measured From: KELLY BUSHINGS

Elevation: 169.20 ft

Total Depth: 6480.00 ft

Net Pay: 89.37 ft

Hole or Casing Size: 8.500 in

Gross Tested Interval: 6364.46 - 6453.83 ft

Perforated Interval (ft):

## HOLE FLUID

Type: DRILLING FLUID  
 Weight: 9.30 lb/gal  
 Viscosity: 38 seconds

## HOLE TEMPERATURE

Depth: 6343.87 ft  
 Estimated: 0.00 F  
 Actual: 155.12 F

## HYDROCARBON PROPERTIES

Oil Gravity (API): 0.0 @ 60 F  
 Gas/Oil ratio (ScF/STB): 0.0  
 Gas Gravity (SG): 0.75

## CUSHION DATA

TYPE	AMOUNT	WEIGHT

## FLUID PROPERTIES FOR RECOVERED MUD AND WATER

SOURCE	RESISTIVITY	CHLORIDES	SG	PH
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		
	@ F	PPM		

## SAMPLER DATA

Surface Pressure: 0 psi  
 Volume of Gas: 0 ft3  
 Volume of Oil: 0 cc  
 Volume of Water: 0 cc  
 Volume of Mud: 0 cc  
 Total Liquids: 0 cc

## REMARKS:

ALL DOWNHOLE PRESSURES ARE IN ABSOLUTE  
 PSIA.

Date: 19/8/90

Ticket No: 000461

Page No: 1.5

RATE HISTORY TABLE

Period No	Test Type	j	Prod Rate q(j) (MCF/D)	Duration (hrs)	Cum. Time t(j) (hrs)
1	DD	0	0.0	0.00	0.00
2	BU	1		1.46	1.46
		2	0.0	3.01	4.47

Date: 19/8/90  
 Test No: 1

Ticket No: 000461

Page No: 1.7.1

OPERATOR JOB LOG

Type of Flow Measuring Device: 6"CERAMIC CHOKE

TIME HH:MM:SS	CHOKE SIZE (in)	SURFACE PRESSURE (psi)	GAS RATE (MCF/D)	LIQUID RATE (bbl/d)	REMARKS
19-AUG-90					
03:20:00					SURFACE PRESSURE = PSIG
03:20:00					MAKE UP TOOLS
05:32:00					START EMR GAUGE
05:48:00					RUN IN HOLE
06:45:00					MAKE UP TEST HEAD
06:49:00					On Location
07:05:00					RUN IN HOLE
09:12:00					PICK UP SINGLE AND 10' PUP JNT
09:30:00					RIG UP SURFACE EQUIPMENT
09:50:00					PRESSURE TEST SURFACE EQUIP.
10:05:00					PUT WEIGHT ON TOOL 30,000lb
10:10:00					INCREASE WEIGHT 35,000lb
10:15:00	32/64				TOOL OPEN / MODERATE BLOW
10:16:00	32/64				STRONG BLOW
10:17:00	32/64	12.00			STRONG BLOW
10:18:00	32/64	200.00			VERY WET / NO FLAME AT FLARE
10:19:00	32/64	250.00			
10:20:00	32/64	325.00			
10:21:00	32/64	400.00			
10:22:00	32/64	470.00			
10:23:00	32/64	500.00			
10:25:00	32/64	600.00			
10:27:00	32/64	625.00			
10:30:00	32/64	700.00			
10:35:00	32/64	750.00			
10:40:00	32/64	800.00			
10:45:00	32/64	810.00			WELL SLUGGING
10:50:00	32/64	850.00			
10:55:00	32/64	850.00			
11:00:00	32/64	875.00			
11:05:00	32/64	880.00			
11:10:00	32/64	880.00			
11:15:00	32/64	880.00			
11:30:00	32/64	880.00			
11:45:00	32/64	880.00			
14:45:00					CLOSE TOOL
14:55:00					OPEN BYPASS / PACKERS FREE
14:56:00					DROP REVERSE BAR
15:40:00					PIN BROKE , START REVERSE CIRC
18:45:00					CIRCULATE LONG WAY
23:00:00					PULL OUT OF HOLE
20-AUG-90					TOOL AT FLOOR
00:05:00					STOP EMR GAUGE

Date: 19/8/90

Ticket No: 000461

Page No: 3.1

## TEST PERIOD SUMMARY

Gauge No.: 71678 Depth: 6343.87 ft Blanked off: No.

ID	PERIOD	DESCRIPTION	PRESSURE (psi)	DURATION (min)
A		Initial Hydrostatic	3082.57	
B	1	Start Draw-down	1143.67	
C		End Draw-down	1780.75	
C	2	Start Build-up	1780.75	87.60
D		End Build-up	2655.28	
E		Final Hydrostatic	3082.16	180.72

NOTE: for Pressure vs. Time Plot, see next page.



Date: 19/8/90  
Ticket No: 000461  
temperature (F)

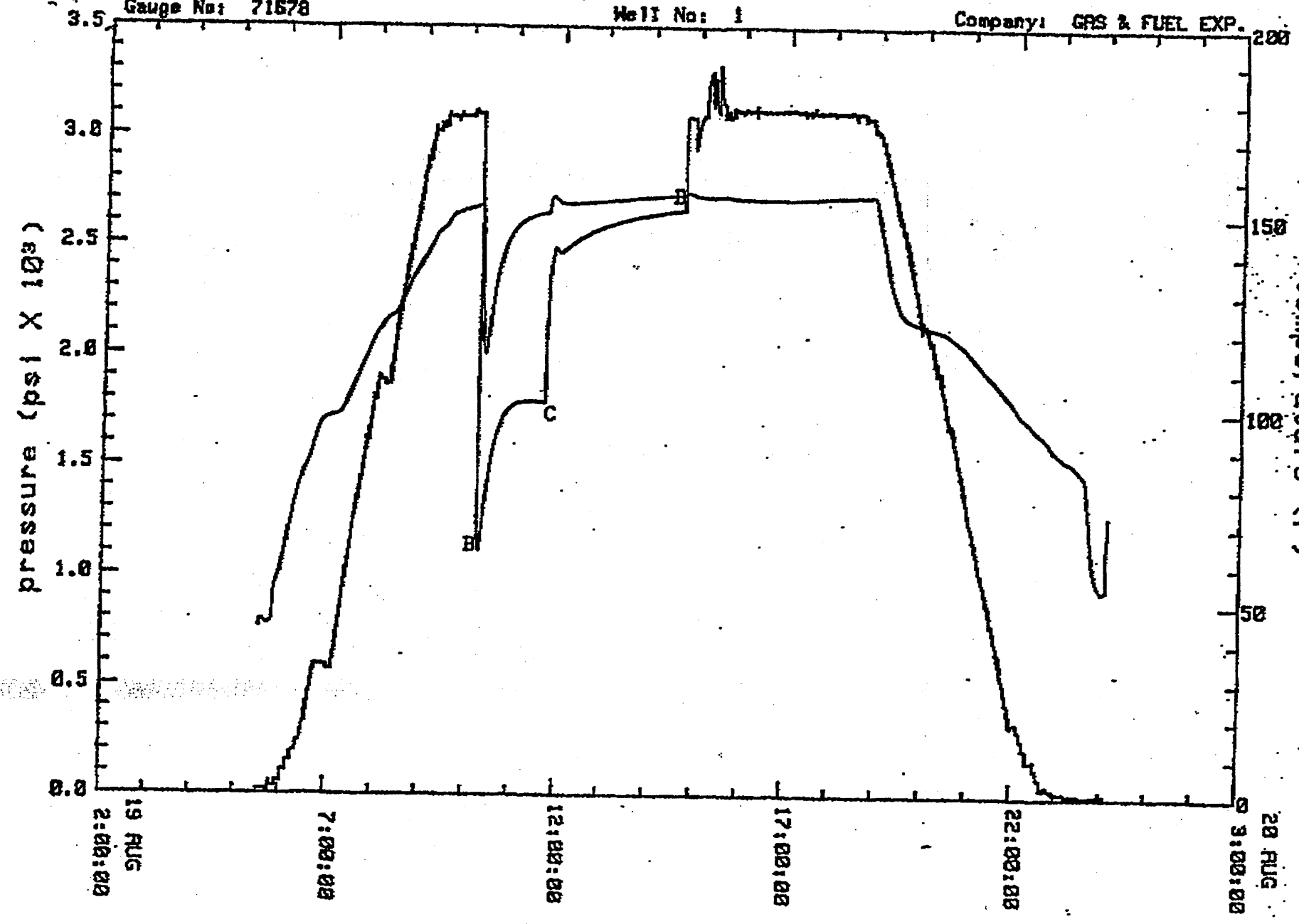
Page No: 3.1.8

### Pressure/Temperature History

Test No: 1  
Gauge No: 71578

Well No: 1

Company: GAS & FUEL EXP.



Date: 19/8/90

Ticket No: 000461

Page No: 3.1.1

PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
------------------	-----------------	-------------------	-------------	----------

19-AUG-90

Data Print Frequency: 20

03:20:00				SURFACE PRESSURE = PSIG
03:20:00				MAKE UP TOOLS
05:32:00				START EMR GAUGE
05:36:34		17.165	44.8	
05:41:22		16.422	44.1	
05:46:10		15.343	44.7	
05:48:00				RUN IN HOLE
05:50:58		29.435	53.1	
05:55:46		32.287	56.6	
06:00:34			60.3	
06:05:22		108.053	64.4	
06:10:10		105.424	69.8	
06:14:58		151.998	74.6	
06:19:46		198.163	78.2	
06:24:34		240.413	81.7	
06:29:22		265.260	84.6	
06:34:10			86.7	
06:38:58		424.295	89.6	
06:43:46		561.586	92.8	
06:45:00				MAKE UP TEST HEAD
06:48:34		589.328	95.7	
06:49:00				On Location
06:53:22		587.391	97.4	
06:58:10		586.618	98.1	
07:02:58		569.834	98.4	
07:05:00				RUN IN HOLE
07:07:46			98.6	
07:12:34		688.294	98.9	
07:17:22		832.088	99.9	
07:22:10		958.944	101.8	
07:26:58		1069.846	104.0	
07:31:46		1203.824	106.2	
07:36:34		1313.380	108.4	
07:41:22			110.8	
07:46:10		1516.722	112.9	
07:50:58		1610.553	115.2	
07:55:46		1702.475	117.3	
08:00:34		1793.597	119.1	
08:05:22		1890.036	120.6	
08:10:10		1883.576	122.2	
08:14:58			123.4	
08:19:46		1865.259	123.9	
08:24:34		2007.192	124.6	
08:29:22		2146.704	126.1	
08:34:10		2237.039	128.4	
08:38:58		2381.313	130.5	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.2

## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 20				
08:43:46		2465.841	132.7	
08:48:34			134.7	
08:53:22		2649.000	136.3	
08:58:10		2741.039	138.1	
09:02:58		2880.616	139.8	
09:07:46		2938.078	141.6	
09:12:00				
09:12:34		3016.847	143.6	PICK UP SINGLE AND 10' PUP JNT
09:17:22		3015.075	145.5	
09:22:10			146.5	
09:26:58		3035.285	147.2	
09:30:00				RIG UP SURFACE EQUIPMENT
09:31:46		3081.545	148.6	
09:36:34		3080.369	149.9	
09:41:22		3082.432	150.7	
09:46:10		3083.325	151.1	
09:50:00				PRESSURE TEST SURFACE EQUIP.
09:50:58		3082.519	151.5	
09:55:46			151.8	
10:00:34		3082.612	152.0	
10:05:00				PUP WEIGHT ON TOOL 30,000lb
10:05:22		3097.204	152.3	
10:10:00				INCREASE WEIGHT 35,000lb
10:10:10		3094.006	152.7	
10:14:58		3093.650	153.7	
10:15:00				TOOL OPEN / MODERATE BLOW

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.3

PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 1				
*** Start of Period 1 ***				
10:15:12	0.00	1143.671	153.9	
10:15:26	0.24	1224.785	154.1	
10:15:41	0.48	1269.280	154.3	
10:15:55	0.72		154.6	
10:16:00				STRONG BLOW
10:16:10	0.96	1166.624	151.8	
10:16:24	1.20	1142.562	149.0	
10:16:38	1.44	1121.240	146.2	
10:16:53	1.68	1117.358	143.4	
10:17:00				STRONG BLOW
10:17:07	1.92	1108.345	140.6	
10:17:22	2.16	1107.712	137.8	
10:17:36	2.40		135.0	
10:17:50	2.64	1107.950	133.0	
10:18:00				VERY WET / NO FLAME AT FLARE
10:18:05	2.88	1132.721	130.9	
10:18:19	3.12	1116.554	128.9	
10:18:34	3.36	1140.890	126.9	
10:18:48	3.60	1146.062	124.9	
10:19:00				
10:19:02	3.84	1142.840	122.9	
10:19:17	4.08		120.9	
10:19:31	4.32	1167.711	120.2	
10:19:46	4.56	1172.182	119.5	
10:20:00				
10:20:00	4.80	1176.036	118.7	
10:20:14	5.04	1181.189	118.0	
10:20:29	5.28	1187.415	117.3	
10:20:43	5.52	1190.979	116.6	
10:20:58	5.76		115.9	
10:21:00				
10:21:12	6.00	1204.465	115.7	
10:21:26	6.24	1212.535	115.5	
10:21:41	6.48	1221.486	115.3	
10:21:55	6.72	1230.960	115.1	
10:22:00				
10:22:10	6.96	1240.048	114.8	
10:22:24	7.20	1249.464	114.6	
10:22:38	7.44		114.4	
10:22:53	7.68	1268.184	114.6	
10:23:00				
10:23:07	7.92	1276.317	114.8	
10:23:22	8.16	1283.343	115.0	
10:23:36	8.40	1290.893	115.2	
10:23:50	8.64	1298.151	115.4	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.4

## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency:	1	
10:24:05	8.88	1307.662	115.6	
10:24:19	9.12		115.8	
10:24:34	9.36	1324.371	116.1	
10:24:48	9.60	1332.012	116.5	
10:25:00				
10:25:02	9.84	1340.504	116.8	
10:25:17	10.08	1348.835	117.2	
10:25:31	10.32	1356.645	117.6	
10:25:46	10.56	1364.000	117.9	
10:26:00	10.80		118.3	
10:26:14	11.04	1379.146	118.7	
10:26:29	11.28	1385.953	119.1	
10:26:43	11.52	1393.186	119.5	
10:26:58	11.76	1399.930	119.9	
10:27:00				
10:27:12	12.00	1406.774	120.3	
10:27:26	12.24	1413.684	120.7	
10:27:41	12.48		121.1	
10:27:55	12.72	1426.983	121.5	
10:28:10	12.96	1433.110	121.9	
10:28:24	13.20	1439.729	122.3	
10:28:38	13.44	1445.825	122.7	
10:28:53	13.68	1452.054	123.1	
10:29:07	13.92	1458.184	123.5	
10:29:22	14.16		123.9	
10:29:36	14.40	1469.855	124.3	
10:29:50	14.64	1475.167	124.7	
10:30:00				
10:30:05	14.88	1480.709	125.0	
10:30:19	15.12	1486.186	125.4	
10:30:34	15.36	1490.121	125.8	
10:30:48	15.60	1495.206	126.2	
10:31:02	15.84		126.5	
10:31:17	16.08	1505.241	126.9	
10:31:31	16.32	1509.865	127.2	
10:31:46	16.56	1514.949	127.6	
10:32:00	16.80	1519.476	127.9	
10:32:14	17.04	1524.102	128.2	
10:32:29	17.28	1528.597	128.6	
10:32:43	17.52		128.9	
10:32:58	17.76	1537.485	129.2	
10:33:12	18.00	1541.848	129.5	
10:33:26	18.24	1545.915	129.8	
10:33:41	18.48	1549.983	130.2	
10:33:55	18.72	1553.920	130.5	
10:34:10	18.96	1558.186	130.8	

Date: 19/8/90

Ticket No: 000461

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GRC gauge no.: 71678  
Memory Recorder No.: 71362

## PRESSURE VS TIME

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
10:34:24	19.20		131.1	
10:34:38	19.44	1565.827	131.4	
10:34:53	19.68	1569.532	131.6	
10:35:00				
10:35:07	19.92	1573.304	131.9	
10:35:22	20.16	1576.912	132.2	
10:35:36	20.40	1580.553	132.5	
10:35:50	20.64	1584.030	132.8	
10:36:05	20.88		133.1	
10:36:19	21.12	1591.441	133.3	
10:36:34	21.36	1595.049	133.6	
10:36:48	21.60	1598.195	133.8	
10:37:02	21.84	1601.738	134.1	
10:37:17	22.08	1605.280	134.3	
10:37:31	22.32	1608.592	134.6	
10:37:46	22.56		134.8	
10:38:00	22.80	1614.950	135.0	
10:38:14	23.04	1618.130	135.3	
10:38:29	23.28	1621.111	135.5	
10:38:43	23.52	1624.159	135.7	
10:38:58	23.76	1626.713	135.9	
10:39:12	24.00	1629.992	136.1	
10:39:26	24.24		136.4	
10:39:41	24.48	1635.428	136.6	
10:39:55	24.72	1638.113	136.8	
10:40:00				
10:40:10	24.96	1640.765	137.0	
10:40:24	25.20	1643.351	137.2	
10:40:38	25.44	1645.839	137.4	
10:40:53	25.68	1648.293	137.6	
10:41:07	25.92		137.8	
10:41:22	26.16	1653.003	137.9	
10:41:36	26.40	1655.456	138.1	
10:41:50	26.64	1657.547	138.3	
10:42:05	26.88	1659.704	138.5	
10:42:19	27.12	1661.927	138.6	
10:42:34	27.36	1664.184	138.8	
10:42:48	27.60		139.0	
10:43:02	27.84	1668.266	139.2	
10:43:17	28.08	1670.291	139.3	
10:43:31	28.32	1672.283	139.5	
10:43:46	28.56	1674.903	139.6	
10:44:00	28.80	1678.216	139.8	
10:44:14	29.04	1681.199	140.0	
10:44:29	29.28		140.1	
10:44:43	29.52	1687.265	140.3	

Date: 19/8/90

Ticket No: 000461

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PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
10:44:58	29.76	1689.952	140.5	
10:45:00				WELL SLUGGING
10:45:12	30.00	1692.705	140.6	
10:45:26	30.24	1695.127	140.8	
10:45:41	30.48	1697.947	141.0	
10:45:55	30.72	1700.238	141.1	
10:46:10	30.96		141.3	
10:46:24	31.20	1705.082	141.4	
10:46:38	31.44	1707.438	141.6	
10:46:53	31.68	1709.696	141.7	
10:47:07	31.92	1711.788	141.9	
10:47:22	32.16	1713.714	142.0	
10:47:36	32.40	1715.542	142.2	
10:47:50	32.64		142.3	
10:48:05	32.88	1719.394	142.4	
10:48:19	33.12	1721.122	142.6	
10:48:34	33.36	1722.718	142.7	
10:48:48	33.60	1724.313	142.8	
10:49:02	33.84	1725.876	142.9	
10:49:17	34.08	1727.340	143.1	
10:49:31	34.32		143.2	
10:49:46	34.56	1729.901	143.3	
10:50:00				
10:50:00	34.80	1731.265	143.4	
10:50:14	35.04	1732.529	143.5	
10:50:29	35.28	1733.727	143.6	
10:50:43	35.52	1734.892	143.7	
10:50:58	35.76	1735.991	143.8	
10:51:12	36.00		143.9	
10:51:26	36.24	1737.989	144.0	
10:51:41	36.48	1739.220	144.1	
10:51:55	36.72	1740.153	144.2	
10:52:10	36.96	1740.987	144.3	
10:52:24	37.20	1742.416	144.4	
10:52:38	37.44	1743.316	144.5	
10:52:53	37.68		144.6	
10:53:07	37.92	1745.181	144.7	
10:53:22	38.16	1746.213	144.8	
10:53:36	38.40	1747.278	144.9	
10:53:50	38.64	1748.145	145.0	
10:54:05	38.88	1749.276	145.1	
10:54:19	39.12	1750.043	145.2	
10:54:34	39.36		145.3	
10:54:48	39.60	1751.642	145.3	
10:55:00				
10:55:02	39.84	1752.309	145.4	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.7

PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
10:55:17	40.08	1753.208	145.5	
10:55:31	40.32	1754.207	145.6	
10:55:46	40.56	1754.907	145.6	
10:56:00	40.80	1755.541	145.7	
10:56:14	41.04		145.8	
10:56:29	41.28	1757.173	145.9	
10:56:43	41.52	1757.906	145.9	
10:56:58	41.76	1758.540	146.0	
10:57:12	42.00	1759.240	146.1	
10:57:26	42.24	1760.072	146.2	
10:57:41	42.48	1760.904	146.2	
10:57:55	42.72		146.3	
10:58:10	42.96	1762.337	146.4	
10:58:24	43.20	1763.302	146.4	
10:58:38	43.44	1763.968	146.5	
10:58:53	43.68	1764.701	146.6	
10:59:07	43.92	1765.335	146.6	
10:59:22	44.16	1765.968	146.7	
10:59:36	44.40		146.8	
10:59:50	44.64	1767.268	146.8	
11:00:00				
11:00:05	44.88	1767.901	146.9	
11:00:19	45.12	1768.833	146.9	
11:00:34	45.36	1769.631	147.0	
11:00:48	45.60	1770.331	147.1	
11:01:02	45.84	1770.666	147.1	
11:01:17	46.08		147.2	
11:01:31	46.32	1771.667	147.2	
11:01:46	46.56	1771.936	147.3	
11:02:00	46.80	1772.602	147.3	
11:02:14	47.04	1772.969	147.4	
11:02:29	47.28	1773.470	147.4	
11:02:43	47.52	1773.871	147.5	
11:02:58	47.76		147.5	
11:03:12	48.00	1775.534	147.6	
11:03:26	48.24	1776.399	147.7	
11:03:41	48.48	1777.230	147.7	
11:03:55	48.72	1777.598	147.8	
11:04:10	48.96	1778.065	147.8	
11:04:24	49.20	1778.566	147.9	
11:04:38	49.44		147.9	
11:04:53	49.68	1779.400	148.0	
11:05:00				
11:05:07	49.92	1779.900	148.0	
11:05:22	50.16	1780.135	148.0	
11:05:36	50.40	1780.436	148.1	



Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency:	1	
11:05:50	50.64	1780.737	148.1	
11:06:05	50.88	1780.873	148.2	
11:06:19	51.12		148.2	
11:06:34	51.36	1781.275	148.3	
11:06:48	51.60	1781.443	148.3	
11:07:02	51.84	1781.645	148.3	
11:07:17	52.08	1781.912	148.4	
11:07:31	52.32	1782.312	148.4	
11:07:46	52.56	1782.281	148.4	
11:08:00	52.80		148.5	
11:08:14	53.04	1782.651	148.5	
11:08:29	53.28	1782.620	148.5	
11:08:43	53.52	1782.921	148.6	
11:08:58	53.76	1783.122	148.6	
11:09:12	54.00	1783.224	148.6	
11:09:26	54.24	1783.392	148.7	
11:09:41	54.48		148.7	
11:09:55	54.72	1783.595	148.7	
11:10:00				
11:10:10	54.96	1783.929	148.8	
11:10:24	55.20	1783.732	148.8	
11:10:38	55.44	1784.132	148.8	
11:10:53	55.68	1784.101	148.9	
11:11:07	55.92	1784.203	148.9	
11:11:22	56.16		148.9	
11:11:36	56.40	1784.439	149.0	
11:11:50	56.64	1784.573	149.0	
11:12:05	56.88	1784.741	149.0	
11:12:19	57.12	1784.643	149.0	
11:12:34	57.36	1784.910	149.1	
11:12:48	57.60	1785.011	149.1	
11:13:02	57.84		149.1	
11:13:17	58.08	1785.015	149.2	
11:13:31	58.32	1785.182	149.2	
11:13:46	58.56	1785.284	149.2	
11:14:00	58.80	1785.451	149.2	
11:14:14	59.04	1785.552	149.3	
11:14:29	59.28	1785.521	149.3	
11:14:43	59.52		149.3	
11:14:58	59.76	1785.624	149.3	
11:15:00				
11:15:12	60.00	1785.857	149.4	
11:15:26	60.24	1786.058	149.4	
11:15:41	60.48	1786.159	149.4	
11:15:55	60.72	1786.094	149.4	
11:16:10	60.96	1786.129	149.4	

Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				Data Print Frequency: 1
11:16:24	61.20		149.5	
11:16:38	61.44	1786.331	149.5	
11:16:53	61.68	1786.333	149.5	
11:17:07	61.92	1786.434	149.5	
11:17:22	62.16	1786.767	149.6	
11:17:36	62.40	1786.934	149.6	
11:17:50	62.64	1786.969	149.6	
11:18:05	62.88		149.6	
11:18:19	63.12	1786.906	149.7	
11:18:34	63.36	1787.040	149.7	
11:18:48	63.60	1787.041	149.7	
11:19:02	63.84	1787.142	149.7	
11:19:17	64.08	1787.110	149.7	
11:19:31	64.32	1787.046	149.8	
11:19:46	64.56		149.8	
11:20:00	64.80	1787.181	149.8	
11:20:14	65.04	1787.281	149.8	
11:20:29	65.28	1786.984	149.8	
11:20:43	65.52	1787.085	149.8	
11:20:58	65.76	1787.119	149.9	
11:21:12	66.00	1787.153	149.9	
11:21:26	66.24		149.9	
11:21:41	66.48	1787.023	149.9	
11:21:55	66.72	1787.025	149.9	
11:22:10	66.96	1787.026	149.9	
11:22:24	67.20	1787.027	150.0	
11:22:38	67.44	1787.161	150.0	
11:22:53	67.68	1787.261	150.0	
11:23:07	67.92		150.0	
11:23:22	68.16	1787.098	150.0	
11:23:36	68.40	1787.099	150.0	
11:23:50	68.64	1786.802	150.1	
11:24:05	68.88	1787.036	150.1	
11:24:19	69.12	1786.838	150.1	
11:24:34	69.36	1786.872	150.1	
11:24:48	69.60		150.1	
11:25:02	69.84	1786.676	150.1	
11:25:17	70.08	1786.776	150.2	
11:25:31	70.32	1786.645	150.2	
11:25:46	70.56	1786.579	150.2	
11:26:00	70.80	1786.580	150.2	
11:26:14	71.04	1786.681	150.2	
11:26:29	71.28		150.2	
11:26:43	71.52	1786.517	150.2	
11:26:58	71.76	1786.618	150.3	
11:27:12	72.00	1786.552	150.3	

Date: 19/8/90

Ticket No: 000461

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PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
-AUG-90		Data Print Frequency: 1		
11:27:26	72.24	1786.620	150.3	
11:27:41	72.48	1786.687	150.3	
11:27:55	72.72	1786.456	150.3	
11:28:10	72.96		150.3	
11:28:24	73.20	1786.425	150.3	
11:28:38	73.44	1786.327	150.4	
11:28:53	73.68	1786.327	150.4	
11:29:07	73.92	1786.361	150.4	
11:29:22	74.16	1786.197	150.4	
11:29:36	74.40	1786.231	150.4	
11:29:50	74.64		150.4	
11:30:00				
11:30:05	74.88	1786.166	150.4	
11:30:19	75.12	1785.902	150.4	
11:30:34	75.36	1785.902	150.4	
11:30:48	75.60	1785.804	150.5	
11:31:02	75.84	1785.639	150.5	
11:31:17	76.08	1785.640	150.5	
11:31:31	76.32		150.5	
11:31:46	76.56	1785.277	150.5	
11:32:00	76.80	1785.244	150.5	
11:32:14	77.04	1785.179	150.5	
11:32:29	77.28	1785.147	150.5	
11:32:43	77.52	1785.114	150.5	
11:32:58	77.76	1784.916	150.5	
11:33:12	78.00		150.6	
11:33:26	78.24	1784.719	150.6	
11:33:41	78.48	1784.720	150.6	
11:33:55	78.72	1784.588	150.6	
11:34:10	78.96	1784.556	150.6	
11:34:24	79.20	1784.457	150.6	
11:34:38	79.44	1784.358	150.6	
11:34:53	79.68		150.6	
11:35:07	79.92	1784.194	150.6	
11:35:22	80.16	1784.095	150.6	
11:35:36	80.40	1783.930	150.7	
11:35:50	80.64	1783.898	150.7	
11:36:05	80.88	1783.865	150.7	
11:36:19	81.12	1783.734	150.7	
11:36:34	81.36		150.7	
11:36:48	81.60	1783.470	150.7	
11:37:02	81.84	1783.570	150.7	
11:37:17	82.08	1783.405	150.7	
11:37:31	82.32	1783.240	150.7	
11:37:46	82.56	1783.174	150.7	
11:38:00	82.80	1783.175	150.7	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.11

PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
------------------	-----------------	-------------------	-------------	----------

19-AUG-90

Data Print Frequency: 1

11:38:14	83.04		150.7	
11:38:29	83.28	1782.778	150.8	
11:38:43	83.52	1782.647	150.8	
11:38:58	83.76	1782.614	150.8	
11:39:12	84.00	1782.548	150.8	
11:39:26	84.24	1782.350	150.8	
11:39:41	84.48	1782.218	150.8	
11:39:55	84.72		150.8	
11:40:10	84.96	1782.153	150.8	
11:40:24	85.20	1782.021	150.8	
11:40:38	85.44	1781.955	150.8	
11:40:53	85.68	1781.856	150.8	
11:41:07	85.92	1781.625	150.8	
11:41:22	86.16	1781.559	150.8	
11:41:36	86.40		150.8	
11:41:50	86.64	1781.301	150.9	
11:42:05	86.88	1781.272	150.9	
11:42:19	87.12	1781.144	151.0	
11:42:34	87.36	1780.453	151.1	
11:42:48	87.60	1780.755	151.1	

\*\*\* End of Period 1 \*\*\*

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.12

## PRESSURE VS TIME

GRC gauge no.: 71678

Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft.

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 1				
*** Start of Period 2 ***				
11:43:02	0.24	1891.349	151.2	
11:43:17	0.48		151.2	
11:43:31	0.72	2087.235	151.6	
11:43:46	0.96	2111.437	151.9	
11:44:00	1.20	2138.476	152.3	
11:44:14	1.44	2165.036	152.6	
11:44:29	1.68	2190.310	153.0	
11:44:43	1.92	2214.193	153.3	
11:44:58	2.16		153.7	
11:45:00				
11:45:12	2.40	2256.038	153.8	CLOSE TOOL
11:45:26	2.64	2274.136	154.0	
11:45:41	2.88	2290.761	154.2	
11:45:55	3.12	2305.877	154.3	
11:46:10	3.36	2319.955	154.5	
11:46:24	3.60	2332.858	154.6	
11:46:38	3.84		154.8	
11:46:53	4.08	2355.933	154.9	
11:47:07	4.32	2366.041	154.9	
11:47:22	4.56	2375.442	154.9	
11:47:36	4.80	2384.238	155.0	
11:47:50	5.04	2392.359	155.0	
11:48:05	5.28	2399.806	155.1	
11:48:19	5.52		155.1	
11:48:34	5.76	2413.379	155.1	
11:48:48	6.00	2419.576	155.1	
11:49:02	6.24	2425.198	155.0	
11:49:17	6.48	2430.482	155.0	
11:49:31	6.72	2435.565	155.0	
11:49:46	6.96	2440.343	155.0	
11:50:00	7.20		155.0	
11:50:14	7.44	2449.018	154.9	
11:50:29	7.68	2453.154	154.9	
11:50:43	7.92	2457.052	154.8	
11:50:58	8.16	2460.680	154.8	
11:51:12	8.40	2464.207	154.7	
11:51:26	8.64	2467.598	154.7	
11:51:41	8.88		154.6	
11:51:55	9.12	2473.636	154.6	
11:52:10	9.36	2475.569	154.6	
11:52:24	9.60	2476.755	154.5	
11:52:38	9.84	2477.501	154.5	
11:52:53	10.08	2477.907	154.4	
11:53:07	10.32	2478.008	154.4	
11:53:22	10.56		154.3	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.13

## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 1				
11:53:36	10.80	2477.564	154.3	
11:53:50	11.04	2476.952	154.3	
11:54:05	11.28	2476.068	154.2	
11:54:19	11.52	2474.777	154.2	
11:54:34	11.76	2473.351	154.1	
11:54:48	12.00	2471.856	154.1	
11:55:02	12.24		154.0	
11:55:17	12.48	2468.868	154.0	
11:55:31	12.72	2467.476	154.0	
11:55:46	12.96	2466.118	153.9	
11:56:00	13.20	2464.895	153.9	
11:56:14	13.44	2463.842	153.8	
11:56:29	13.68	2462.891	153.8	
11:56:43	13.92		153.8	
11:56:58	14.16	2461.296	153.7	
11:57:12	14.40	2460.650	153.7	
11:57:26	14.64	2460.073	153.7	
11:57:41	14.88	2459.665	153.6	
11:57:55	15.12	2459.291	153.6	
11:58:10	15.36	2459.019	153.6	
11:58:24	15.60		153.6	
11:58:38	15.84	2458.780	153.5	
11:58:53	16.08	2458.712	153.5	
11:59:07	16.32	2458.711	153.5	
11:59:22	16.56	2458.812	153.5	
11:59:36	16.80	2458.948	153.5	
11:59:50	17.04	2459.151	153.4	
12:00:05	17.28		153.4	
12:00:19	17.52	2459.693	153.4	
12:00:34	17.76	2460.032	153.4	
12:00:48	18.00	2460.371	153.4	
12:01:02	18.24	2460.777	153.4	
12:01:17	18.48	2461.218	153.3	
12:01:31	18.72	2461.693	153.3	
12:01:46	18.96		153.3	
12:02:00	19.20	2462.710	153.3	
12:02:14	19.44	2463.287	153.3	
12:02:29	19.68	2463.795	153.3	
12:02:43	19.92	2464.372	153.3	
12:02:58	20.16	2464.982	153.3	
12:03:12	20.40	2465.593	153.3	
12:03:26	20.64		153.3	
12:03:41	20.88	2466.814	153.3	
12:03:55	21.12	2467.425	153.3	
12:04:10	21.36	2468.103	153.3	
12:04:24	21.60	2468.782	153.3	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.14

## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				Data Print Frequency: 1
12:04:38	21.84	2469.461	153.3	
12:04:53	22.08	2470.139	153.2	
12:05:07	22.32		153.2	
12:05:22	22.56	2471.497	153.2	
12:05:36	22.80	2472.175	153.2	
12:05:50	23.04	2472.854	153.2	
12:06:05	23.28	2473.567	153.2	
12:06:19	23.52	2474.246	153.2	
12:06:34	23.76	2474.891	153.2	
12:06:48	24.00		153.2	
12:07:02	24.24	2476.316	153.2	
12:07:17	24.48	2477.029	153.2	
12:07:31	24.72	2477.708	153.2	
12:07:46	24.96	2478.421	153.3	
12:08:00	25.20	2479.100	153.3	
12:08:14	25.44	2479.779	153.3	
12:08:29	25.68		153.3	
12:08:43	25.92	2481.103	153.3	
12:08:58	26.16	2481.782	153.3	
12:09:12	26.40	2482.461	153.3	
12:09:26	26.64	2483.174	153.3	
12:09:41	26.88	2483.853	153.3	
12:09:55	27.12	2484.532	153.3	
12:10:10	27.36		153.3	
12:10:24	27.60	2485.924	153.3	
12:10:38	27.84	2486.569	153.3	
12:10:53	28.08	2487.248	153.3	
12:11:07	28.32	2487.894	153.3	
12:11:22	28.56	2488.607	153.3	
12:11:36	28.80	2489.286	153.3	
12:11:50	29.04		153.3	
12:12:05	29.28	2490.645	153.3	
12:12:19	29.52	2491.324	153.3	
12:12:34	29.76	2491.969	153.3	
12:12:48	30.00	2492.615	153.3	
12:13:02	30.24	2493.294	153.3	
12:13:17	30.48	2493.905	153.3	
12:13:31	30.72		153.3	
12:13:46	30.96	2495.196	153.3	
12:14:00	31.20	2495.841	153.3	
12:14:14	31.44	2496.520	153.3	
12:14:29	31.68	2497.132	153.3	
12:14:43	31.92	2497.777	153.3	
12:14:58	32.16	2498.423	153.3	
12:15:12	32.40		153.3	
12:15:26	32.64	2499.680	153.3	

Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 1				
12:15:41	32.88	2500.291	153.3	
12:15:55	33.12	2500.937	153.3	
12:16:10	33.36	2501.582	153.3	
12:16:24	33.60	2502.160	153.3	
12:16:38	33.84	2502.806	153.3	
12:16:53	34.08		153.3	
12:17:07	34.32	2504.029	153.3	
12:17:22	34.56	2504.641	153.3	
12:17:36	34.80	2505.252	153.3	
12:17:50	35.04	2505.830	153.3	
12:18:05	35.28	2506.374	153.4	
12:18:19	35.52	2506.952	153.4	
12:18:34	35.76		153.4	
12:18:48	36.00	2508.141	153.4	
12:19:02	36.24	2508.753	153.4	
12:19:17	36.48	2509.330	153.4	
12:19:31	36.72	2509.908	153.4	
12:19:46	36.96	2510.452	153.4	
12:20:00	37.20	2511.063	153.4	
12:20:14	37.44		153.4	
12:20:29	37.68	2512.151	153.4	
12:20:43	37.92	2512.729	153.4	
12:20:58	38.16	2513.307	153.4	
12:21:12	38.40	2513.816	153.4	
12:21:26	38.64	2514.326	153.4	
12:21:41	38.88	2514.836	153.4	
12:21:55	39.12		153.4	
12:22:10	39.36	2515.924	153.4	
12:22:24	39.60	2516.434	153.4	
12:22:38	39.84	2517.012	153.4	
12:22:53	40.08	2517.488	153.4	
12:23:07	40.32	2518.066	153.4	
12:23:22	40.56	2518.610	153.4	
12:23:36	40.80		153.4	
12:23:50	41.04	2519.664	153.4	
12:24:05	41.28	2520.208	153.4	
12:24:19	41.52	2520.718	153.4	
12:24:34	41.76	2521.228	153.4	
12:24:48	42.00	2521.772	153.4	
12:25:02	42.24	2522.282	153.4	
12:25:17	42.48		153.4	
12:25:31	42.72	2523.370	153.4	
12:25:46	42.96	2523.846	153.5	
12:26:00	43.20	2524.356	153.5	
12:26:14	43.44	2524.866	153.5	
12:26:29	43.68	2525.410	153.5	



Date: 19/8/90

Ticket No: 000461

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PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 1				
12:26:43	43.92	2525.920	153.5	
12:26:58	44.16		153.5	
12:27:12	44.40	2526.940	153.5	
12:27:26	44.64	2527.450	153.5	
12:27:41	44.88	2527.926	153.5	
12:27:55	45.12	2528.471	153.5	
12:28:10	45.36	2528.947	153.5	
12:28:24	45.60	2529.457	153.5	
12:28:38	45.84		153.5	
12:28:53	46.08	2530.443	153.5	
12:29:07	46.32	2530.885	153.5	
12:29:22	46.56	2531.362	153.5	
12:29:36	46.80	2531.838	153.5	
12:29:50	47.04	2532.314	153.5	
12:30:05	47.28	2532.756	153.5	
12:30:19	47.52		153.5	
12:30:34	47.76	2533.675	153.5	
12:30:48	48.00	2534.151	153.5	
12:31:02	48.24	2534.593	153.5	
12:31:17	48.48	2535.069	153.5	
12:31:31	48.72	2535.580	153.5	
12:31:46	48.96	2536.022	153.5	
12:32:00	49.20		153.5	
12:32:14	49.44	2536.940	153.5	
12:32:29	49.68	2537.417	153.5	
12:32:43	49.92	2537.859	153.5	
12:32:58	50.16	2538.301	153.6	
12:33:12	50.40	2538.743	153.6	
12:33:26	50.64	2539.254	153.6	
12:33:41	50.88		153.6	
12:33:55	51.12	2540.138	153.6	
12:34:10	51.36	2540.581	153.6	
12:34:24	51.60	2541.057	153.6	
12:34:38	51.84	2541.466	153.6	
12:34:53	52.08	2541.942	153.6	
12:35:07	52.32	2542.350	153.6	
12:35:22	52.56		153.6	
12:35:36	52.80	2543.269	153.6	
12:35:50	53.04	2543.677	153.6	
12:36:05	53.28	2544.120	153.6	
12:36:19	53.52	2544.528	153.6	
12:36:34	53.76	2545.004	153.6	
12:36:48	54.00	2545.447	153.6	
12:37:02	54.24		153.6	
12:37:17	54.48	2546.332	153.6	
12:37:31	54.72	2546.740	153.6	

21 AUG '90 12:20 HALLIBURTON DRY CRK 61-8-3494774

P.1

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.17

GRC gauge no.: 71678  
Memory Recorder No.: 71362

## PRESSURE VS TIME

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
12:37:46	54.96	2547.182	153.6	
12:38:00	55.20	2547.591	153.6	
12:38:14	55.44	2547.999	153.6	
12:38:29	55.68	2548.408	153.7	
12:38:43	55.92		153.7	
12:38:58	56.16	2549.293	153.7	
12:39:12	56.40	2549.667	153.7	
12:39:26	56.64	2550.075	153.7	
12:39:41	56.88	2550.518	153.7	
12:39:55	57.12	2550.926	153.7	
12:40:10	57.36	2551.335	153.7	
12:40:24	57.60		153.7	
12:40:38	57.84	2552.152	153.7	
12:40:53	58.08	2552.560	153.7	
12:41:07	58.32	2552.969	153.7	
12:41:22	58.56	2553.377	153.7	
12:41:36	58.80	2553.752	153.7	
12:41:50	59.04	2554.160	153.7	
12:42:05	59.28		153.7	
12:42:19	59.52	2554.943	153.7	
12:42:34	59.76	2555.351	153.7	
12:42:48	60.00	2555.760	153.7	
12:43:02	60.24	2556.134	153.7	
12:43:17	60.48	2556.509	153.7	
12:43:31	60.72	2556.917	153.7	
12:43:46	60.96		153.7	
12:44:00	61.20	2557.667	153.7	
12:44:14	61.44	2558.109	153.7	
12:44:29	61.68	2558.450	153.8	
12:44:43	61.92	2558.858	153.8	
12:44:58	62.16	2559.233	153.8	
12:45:12	62.40	2559.641	153.8	
12:45:26	62.64		153.8	
12:45:41	62.88	2560.356	153.8	
12:45:55	63.12	2560.731	153.8	
12:46:10	63.36	2561.105	153.8	
12:46:24	63.60	2561.480	153.8	
12:46:38	63.84	2561.855	153.8	
12:46:53	64.08	2562.195	153.8	
12:47:07	64.32		153.8	
12:47:22	64.56	2562.978	153.8	
12:47:36	64.80	2563.353	153.8	
12:47:50	65.04	2563.693	153.8	
12:48:05	65.28	2564.068	153.8	
12:48:19	65.52	2564.408	153.8	
12:48:34	65.76	2564.749	153.8	

Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				Data Print Frequency: 1
12:48:48	66.00		153.8	
12:49:02	66.24	2565.498	153.8	
12:49:17	66.48	2565.839	153.8	
12:49:31	66.72	2566.179	153.8	
12:49:46	66.96	2566.554	153.9	
12:50:00	67.20	2566.895	153.9	
12:50:14	67.44	2567.235	153.9	
12:50:29	67.68		153.9	
12:50:43	67.92	2567.950	153.9	
12:50:58	68.16	2568.291	153.9	
12:51:12	68.40	2568.631	153.9	
12:51:26	68.64	2568.972	153.9	
12:51:41	68.88	2569.313	153.9	
12:51:55	69.12	2569.619	153.9	
12:52:10	69.36		153.9	
12:52:24	69.60	2570.334	153.9	
12:52:38	69.84	2570.675	153.9	
12:52:53	70.08	2570.982	153.9	
12:53:07	70.32	2571.322	153.9	
12:53:22	70.56	2571.663	153.9	
12:53:36	70.80	2572.004	153.9	
12:53:50	71.04		153.9	
12:54:05	71.28	2572.651	153.9	
12:54:19	71.52	2572.957	153.9	
12:54:34	71.76	2573.298	153.9	
12:54:48	72.00	2573.639	153.9	
12:55:02	72.24	2573.945	154.0	
12:55:17	72.48	2574.286	154.0	
12:55:31	72.72		154.0	
12:55:46	72.96	2574.933	154.0	
12:56:00	73.20	2575.240	154.0	
12:56:14	73.44	2575.581	154.0	
12:56:29	73.68	2575.887	154.0	
12:56:43	73.92	2576.228	154.0	
12:56:58	74.16	2576.535	154.0	
12:57:12	74.40		154.0	
12:57:26	74.64	2577.182	154.0	
12:57:41	74.88	2577.488	154.0	
12:57:55	75.12	2577.761	154.0	
12:58:10	75.36	2578.102	154.0	
12:58:24	75.60	2578.408	154.0	
12:58:38	75.84	2578.715	154.0	
12:58:53	76.08		154.0	
12:59:07	76.32	2579.362	154.0	
12:59:22	76.56	2579.669	154.0	
12:59:36	76.80	2579.975	154.0	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.19

## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
12:59:50	77.04	2580.248	154.0	
13:00:05	77.28	2580.555	154.0	
13:00:19	77.52	2580.861	154.0	
13:00:34	77.76		154.0	
13:00:48	78.00	2581.475	154.1	
13:01:02	78.24	2581.781	154.1	
13:01:17	78.48	2582.088	154.1	
13:01:31	78.72	2582.361	154.1	
13:01:46	78.96	2582.667	154.1	
13:02:00	79.20	2582.974	154.1	
13:02:14	79.44		154.1	
13:02:29	79.68	2583.554	154.1	
13:02:43	79.92	2583.860	154.1	
13:02:58	80.16	2584.133	154.1	
13:03:12	80.40	2584.440	154.1	
13:03:26	80.64	2584.747	154.1	
13:03:41	80.88	2585.019	154.1	
13:03:55	81.12		154.1	
13:04:10	81.36	2585.564	154.1	
13:04:24	81.60	2585.905	154.1	
13:04:38	81.84	2586.178	154.1	
13:04:53	82.08	2586.450	154.1	
13:05:07	82.32	2586.723	154.1	
13:05:22	82.56	2586.962	154.1	
13:05:36	82.80		154.2	
13:05:50	83.04	2587.575	154.2	
13:06:05	83.28	2587.814	154.2	
13:06:19	83.52	2588.086	154.2	
13:06:34	83.76	2588.393	154.2	
13:06:48	84.00	2588.666	154.2	
13:07:02	84.24	2588.939	154.2	
13:07:17	84.48		154.2	
13:07:31	84.72	2589.518	154.2	
13:07:46	84.96	2589.791	154.2	
13:08:00	85.20	2590.029	154.2	
13:08:14	85.44	2590.302	154.2	
13:08:29	85.68	2590.575	154.2	
13:08:43	85.92	2590.847	154.2	
13:08:58	86.16		154.2	
13:09:12	86.40	2591.290	154.2	
13:09:26	86.64	2591.461	154.2	
13:09:41	86.88	2591.734	154.2	
13:09:55	87.12	2591.972	154.2	
13:10:10	87.36	2592.245	154.2	
13:10:24	87.60	2592.484	154.2	
13:10:38	87.84		154.2	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.20

GRC gauge no.: 71678  
Memory Recorder No.: 71362

PRESSURE VS TIME

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90				
Data Print Frequency: 1				
13:10:53	88.08	2592.995	154.2	
13:11:07	88.32	2593.233	154.3	
13:11:22	88.56	2593.506	154.3	
13:11:36	88.80	2593.779	154.3	
13:11:50	89.04	2594.017	154.3	
13:12:05	89.28	2594.290	154.3	
13:12:19	89.52		154.3	
13:12:34	89.76	2594.802	154.3	
13:12:48	90.00	2595.074	154.3	
13:13:02	90.24	2595.313	154.3	
13:13:17	90.48	2595.586	154.3	
13:13:31	90.72	2595.824	154.3	
13:13:46	90.96	2596.063	154.3	
13:14:00	91.20		154.3	
13:14:14	91.44	2596.574	154.3	
13:14:29	91.68	2596.813	154.3	
13:14:43	91.92	2597.086	154.3	
13:14:58	92.16	2597.290	154.3	
13:15:12	92.40	2597.563	154.3	
13:15:26	92.64	2597.802	154.3	
13:15:41	92.88		154.3	
13:15:55	93.12	2598.279	154.3	
13:16:10	93.36	2598.518	154.3	
13:16:24	93.60	2598.757	154.3	
13:16:38	93.84	2599.030	154.4	
13:16:53	94.08	2599.268	154.4	
13:17:07	94.32	2599.507	154.4	
13:17:22	94.56		154.4	
13:17:36	94.80	2600.018	154.4	
13:17:50	95.04	2600.223	154.4	
13:18:05	95.28	2600.462	154.4	
13:18:19	95.52	2600.700	154.4	
13:18:34	95.76	2600.939	154.4	
13:18:48	96.00	2601.178	154.4	
13:19:02	96.24		154.4	
13:19:17	96.48	2601.655	154.4	
13:19:31	96.72	2601.860	154.4	
13:19:46	96.96	2602.132	154.4	
13:20:00	97.20	2602.337	154.4	
13:20:14	97.44	2602.576	154.4	
13:20:29	97.68	2602.815	154.4	
13:20:43	97.92		154.4	
13:20:58	98.16	2603.292	154.4	
13:21:12	98.40	2603.497	154.4	
13:21:26	98.64	2603.735	154.4	
13:21:41	98.88	2603.974	154.5	

Date: 19/8/90

Ticket No: 000461

Page No: 3.1.21

GRC gauge no.: 71678  
Memory Recorder No.: 71362

PRESSURE VS TIME

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				Data Print Frequency: 1
13:21:55	99.12	2604.179	154.5	
13:22:10	99.36	2604.417	154.5	
13:22:24	99.60		154.5	
13:22:38	99.84	2604.861	154.5	
13:22:53	100.08	2605.099	154.5	
13:23:07	100.32	2605.304	154.5	
13:23:22	100.56	2605.543	154.5	
13:23:36	100.80	2605.747	154.5	
13:23:50	101.04	2605.986	154.5	
13:24:05	101.28		154.5	
13:24:19	101.52	2606.395	154.5	
13:24:34	101.76	2606.634	154.5	
13:24:48	102.00	2606.839	154.5	
13:25:02	102.24	2607.078	154.5	
13:25:17	102.48	2607.282	154.5	
13:25:31	102.72	2607.487	154.5	
13:25:46	102.96		154.5	
13:26:00	103.20	2607.930	154.5	
13:26:14	103.44	2608.169	154.5	
13:26:29	103.68	2608.374	154.5	
13:26:43	103.92	2608.578	154.5	
13:26:58	104.16	2608.783	154.5	
13:27:12	104.40	2609.022	154.5	
13:27:26	104.64		154.6	
13:27:41	104.88	2609.431	154.6	
13:27:55	105.12	2609.670	154.6	
13:28:10	105.36	2609.840	154.6	
13:28:24	105.60	2610.079	154.6	
13:28:38	105.84	2610.284	154.6	
13:28:53	106.08	2610.489	154.6	
13:29:07	106.32		154.6	
13:29:22	106.56	2610.898	154.6	
13:29:36	106.80	2611.103	154.6	
13:29:50	107.04	2611.307	154.6	
13:30:05	107.28	2611.512	154.6	
13:30:19	107.52	2611.751	154.6	
13:30:34	107.76	2611.921	154.6	
13:30:48	108.00		154.6	
13:31:02	108.24	2612.331	154.6	
13:31:17	108.48	2612.535	154.6	
13:31:31	108.72	2612.740	154.6	
13:31:46	108.96	2612.945	154.6	
13:32:00	109.20	2613.184	154.6	
13:32:14	109.44	2613.354	154.7	
13:32:29	109.68		154.7	
13:32:43	109.92	2613.763	154.7	

Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
13:32:58	110.16	2613.968	154.7	
13:33:12	110.40	2614.139	154.7	
13:33:26	110.64	2614.378	154.7	
13:33:41	110.88	2614.548	154.7	
13:33:55	111.12	2614.753	154.7	
13:34:10	111.36		154.7	
13:34:24	111.60	2615.094	154.7	
13:34:38	111.84	2615.333	154.7	
13:34:53	112.08	2615.538	154.7	
13:35:07	112.32	2615.708	154.7	
13:35:22	112.56	2615.913	154.7	
13:35:36	112.80	2616.118	154.7	
13:35:50	113.04		154.7	
13:36:05	113.28	2616.493	154.7	
13:36:19	113.52	2616.664	154.7	
13:36:34	113.76	2616.868	154.7	
13:36:48	114.00	2617.073	154.7	
13:37:02	114.24	2617.244	154.7	
13:37:17	114.48	2617.448	154.7	
13:37:31	114.72		154.8	
13:37:46	114.96	2617.824	154.8	
13:38:00	115.20	2617.994	154.8	
13:38:14	115.44	2618.199	154.8	
13:38:29	115.68	2618.370	154.8	
13:38:43	115.92	2618.574	154.8	
13:38:58	116.16	2618.745	154.8	
13:39:12	116.40		154.8	
13:39:26	116.64	2619.120	154.8	
13:39:41	116.88	2619.291	154.8	
13:39:55	117.12	2619.461	154.8	
13:40:10	117.36	2619.666	154.8	
13:40:24	117.60	2619.837	154.8	
13:40:38	117.84	2620.041	154.8	
13:40:53	118.08		154.8	
13:41:07	118.32	2620.383	154.8	
13:41:22	118.56	2620.587	154.8	
13:41:36	118.80	2620.792	154.8	
13:41:50	119.04	2620.929	154.8	
13:42:05	119.28	2621.133	154.8	
13:42:19	119.52	2621.304	154.8	
13:42:34	119.76		154.8	
13:42:48	120.00	2621.645	154.8	
13:43:02	120.24	2621.850	154.8	
13:43:17	120.48	2622.021	154.8	
13:43:31	120.72	2622.191	154.8	
13:43:46	120.96	2622.362	154.9	

Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency:	1	
13:44:00	121.20	2622.532	154.9	
13:44:14	121.44		154.9	
13:44:29	121.68	2622.908	154.9	
13:44:43	121.92	2623.044	154.9	
13:44:58	122.16	2623.249	154.9	
13:45:12	122.40	2623.420	154.9	
13:45:26	122.64	2623.590	154.9	
13:45:41	122.88	2623.761	154.9	
13:45:55	123.12		154.9	
13:46:10	123.36	2624.102	154.9	
13:46:24	123.60	2624.273	154.9	
13:46:38	123.84	2624.444	154.9	
13:46:53	124.08	2624.614	154.9	
13:47:07	124.32	2624.751	154.9	
13:47:22	124.56	2624.956	154.9	
13:47:36	124.80		154.9	
13:47:50	125.04	2625.297	154.9	
13:48:05	125.28	2625.467	154.9	
13:48:19	125.52	2625.604	154.9	
13:48:34	125.76	2625.809	154.9	
13:48:48	126.00	2625.979	154.9	
13:49:02	126.24	2626.150	154.9	
13:49:17	126.48		154.9	
13:49:31	126.72	2626.457	154.9	
13:49:46	126.96	2626.628	154.9	
13:50:00	127.20	2626.798	155.0	
13:50:14	127.44	2626.969	155.0	
13:50:29	127.68	2627.106	155.0	
13:50:43	127.92	2627.276	155.0	
13:50:58	128.16		155.0	
13:51:12	128.40	2627.618	155.0	
13:51:26	128.64	2627.754	155.0	
13:51:41	128.88	2627.925	155.0	
13:51:55	129.12	2628.061	155.0	
13:52:10	129.36	2628.232	155.0	
13:52:24	129.60	2628.403	155.0	
13:52:38	129.84		155.0	
13:52:53	130.08	2628.710	155.0	
13:53:07	130.32	2628.881	155.0	
13:53:22	130.56	2629.017	155.0	
13:53:36	130.80	2629.188	155.0	
13:53:50	131.04	2629.358	155.0	
13:54:05	131.28	2629.495	155.0	
13:54:19	131.52		155.0	
13:54:34	131.76	2629.836	155.0	
13:54:48	132.00	2629.973	155.0	



Date: 19/8/90

Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 1		
13:55:02	132.24	2630.144	155.0	
13:55:17	132.48	2630.314	155.0	
13:55:31	132.72	2630.451	155.0	
13:55:46	132.96	2630.588	155.1	
13:56:00	133.20		155.1	
13:56:14	133.44	2630.929	155.1	
13:56:29	133.68	2631.065	155.1	
13:56:43	133.92	2631.236	155.1	
13:56:58	134.16	2631.373	155.1	
13:57:12	134.40	2631.543	155.1	
13:57:26	134.64	2631.680	155.1	
13:57:41	134.88		155.1	
13:57:55	135.12	2631.953	155.1	
13:58:10	135.36	2632.124	155.1	
13:58:24	135.60	2632.294	155.1	
13:58:38	135.84	2632.431	155.1	
13:58:53	136.08	2632.601	155.1	
13:59:07	136.32	2632.704	155.1	
13:59:22	136.56		155.1	
13:59:36	136.80	2633.045	155.1	
13:59:50	137.04	2633.182	155.1	
14:00:05	137.28	2633.319	155.1	
14:00:19	137.52	2633.489	155.1	
14:00:34	137.76	2633.592	155.1	
14:00:48	138.00	2633.762	155.1	
14:01:02	138.24		155.1	
14:01:17	138.48	2634.035	155.1	
14:01:31	138.72	2634.206	155.1	
14:01:46	138.96	2634.377	155.2	
14:02:00	139.20	2634.513	155.2	
14:02:14	139.44	2634.650	155.2	
14:02:29	139.68	2634.787	155.2	
14:02:43	139.92		155.2	
14:02:58	140.16	2635.060	155.2	
14:03:12	140.40	2635.230	155.2	
14:03:26	140.64	2635.367	155.2	
14:03:41	140.88	2635.503	155.2	
14:03:55	141.12	2635.674	155.2	
14:04:10	141.36	2635.811	155.2	
14:04:24	141.60		155.2	
14:04:38	141.84	2636.084	155.2	
14:04:53	142.08	2636.220	155.2	
14:05:07	142.32	2636.357	155.2	
14:05:22	142.56	2636.494	155.2	
14:05:36	142.80	2636.630	155.2	
14:05:50	143.04	2636.767	155.2	

## PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
19-AUG-90		Data Print Frequency: 1		
14:06:05	143.28		155.2	
14:06:19	143.52	2637.074	155.2	
14:06:34	143.76	2637.211	155.2	
14:06:48	144.00	2637.347	155.2	
14:07:02	144.24	2637.484	155.2	
14:07:17	144.48	2637.586	155.2	
14:07:31	144.72	2637.757	155.2	
14:07:46	144.96		155.2	
14:08:00	145.20	2638.030	155.3	
14:08:14	145.44	2638.133	155.3	
14:08:29	145.68	2638.269	155.3	
14:08:43	145.92	2638.406	155.3	
14:08:58	146.16	2638.542	155.3	
14:09:12	146.40	2638.679	155.3	
14:09:26	146.64		155.3	
14:09:41	146.88	2638.952	155.3	
14:09:55	147.12	2639.089	155.3	
14:10:10	147.36	2639.225	155.3	
14:10:24	147.60	2639.328	155.3	
14:10:38	147.84	2639.464	155.3	
14:10:53	148.08	2639.601	155.3	
14:11:07	148.32		155.3	
14:11:22	148.56	2639.874	155.3	
14:11:36	148.80	2640.010	155.3	
14:11:50	149.04	2640.147	155.3	
14:12:05	149.28	2640.284	155.3	
14:12:19	149.52	2640.420	155.3	
14:12:34	149.76	2640.523	155.3	
14:12:48	150.00		155.3	
14:13:02	150.24	2640.796	155.3	
14:13:17	150.48	2640.967	155.3	
14:13:31	150.72	2641.069	155.3	
14:13:46	150.96	2641.206	155.3	
14:14:00	151.20	2641.342	155.3	
14:14:14	151.44	2641.445	155.3	
14:14:29	151.68		155.3	
14:14:43	151.92	2641.718	155.3	
14:14:58	152.16	2641.854	155.3	
14:15:12	152.40	2641.957	155.3	
14:15:26	152.64	2642.093	155.3	
14:15:41	152.88	2642.230	155.3	
14:15:55	153.12	2642.366	155.3	
14:16:10	153.36		155.3	
14:16:24	153.60	2642.571	155.3	
14:16:38	153.84	2642.742	155.3	
14:16:53	154.08	2642.845	155.4	

Date: 19/8/90

Ticket No: 000461

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PRESSURE VS TIME

GRC gauge no.: 71678

Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				
		Data Print Frequency: 1		
14:17:07	154.32	2642.981	155.4	
14:17:22	154.56	2643.084	155.4	
14:17:36	154.80	2643.186	155.4	
14:17:50	155.04		155.4	
14:18:05	155.28	2643.493	155.4	
14:18:19	155.52	2643.596	155.4	
14:18:34	155.76	2643.698	155.4	
14:18:48	156.00	2643.835	155.4	
14:19:02	156.24	2643.972	155.4	
14:19:17	156.48	2644.074	155.4	
14:19:31	156.72		155.4	
14:19:46	156.96	2644.347	155.4	
14:20:00	157.20	2644.450	155.4	
14:20:14	157.44	2644.586	155.4	
14:20:29	157.68	2644.689	155.4	
14:20:43	157.92	2644.826	155.4	
14:20:58	158.16	2644.962	155.4	
14:21:12	158.40		155.4	
14:21:26	158.64	2645.167	155.4	
14:21:41	158.88	2645.304	155.4	
14:21:55	159.12	2645.406	155.4	
14:22:10	159.36	2645.508	155.4	
14:22:24	159.60	2645.645	155.4	
14:22:38	159.84	2645.782	155.4	
14:22:53	160.08		155.4	
14:23:07	160.32	2646.021	155.4	
14:23:22	160.56	2646.157	155.4	
14:23:36	160.80	2646.260	155.4	
14:23:50	161.04	2646.362	155.4	
14:24:05	161.28	2646.533	155.5	
14:24:19	161.52	2646.601	155.5	
14:24:34	161.76		155.5	
14:24:48	162.00	2646.840	155.5	
14:25:02	162.24	2646.943	155.5	
14:25:17	162.48	2647.080	155.5	
14:25:31	162.72	2647.182	155.5	
14:25:46	162.96	2647.319	155.5	
14:26:00	163.20	2647.421	155.5	
14:26:14	163.44		155.5	
14:26:29	163.68	2647.626	155.5	
14:26:43	163.92	2647.729	155.5	
14:26:58	164.16	2647.865	155.5	
14:27:12	164.40	2647.968	155.5	
14:27:26	164.64	2648.104	155.5	
14:27:41	164.88	2648.241	155.5	
14:27:55	165.12		155.5	

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GRC gauge no.: 71678  
Memory Recorder No.: 71362

## PRESSURE VS TIME

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency:	1	
14:28:10	165.36	2648.446	155.5	
14:28:24	165.60	2648.548	155.5	
14:28:38	165.84	2648.651	155.5	
14:28:53	166.08	2648.787	155.5	
14:29:07	166.32	2648.856	155.5	
14:29:22	166.56	2648.958	155.5	
14:29:36	166.80		155.5	
14:29:50	167.04	2649.197	155.5	
14:30:05	167.28	2649.300	155.5	
14:30:19	167.52	2649.402	155.5	
14:30:34	167.76	2649.539	155.5	
14:30:48	168.00	2649.641	155.5	
14:31:02	168.24	2649.744	155.5	
14:31:17	168.48		155.5	
14:31:31	168.72	2649.983	155.5	
14:31:46	168.96	2650.085	155.6	
14:32:00	169.20	2650.188	155.6	
14:32:14	169.44	2650.290	155.6	
14:32:29	169.68	2650.427	155.6	
14:32:43	169.92	2650.530	155.6	
14:32:58	170.16		155.6	
14:33:12	170.40	2650.735	155.6	
14:33:26	170.64	2650.837	155.6	
14:33:41	170.88	2650.974	155.6	
14:33:55	171.12	2651.076	155.6	
14:34:10	171.36	2651.179	155.6	
14:34:24	171.60	2651.315	155.6	
14:34:38	171.84		155.6	
14:34:53	172.08	2651.520	155.6	
14:35:07	172.32	2651.588	155.6	
14:35:22	172.56	2651.725	155.6	
14:35:36	172.80	2651.828	155.6	
14:35:50	173.04	2651.930	155.6	
14:36:05	173.28	2652.032	155.6	
14:36:19	173.52		155.6	
14:36:34	173.76	2652.238	155.6	
14:36:48	174.00	2652.374	155.6	
14:37:02	174.24	2652.443	155.6	
14:37:17	174.48	2652.579	155.6	
14:37:31	174.72	2652.682	155.6	
14:37:46	174.96	2652.750	155.6	
14:38:00	175.20		155.6	
14:38:14	175.44	2652.989	155.7	
14:38:29	175.68	2653.092	155.7	
14:38:43	175.92	2653.194	155.7	
14:38:58	176.16	2653.263	155.7	

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Ticket No: 000461

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## PRESSURE VS TIME

GRC gauge no.: 71678

Gauge Depth: 6343.87 ft

Memory Recorder No.: 71362

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				
				Data Print Frequency: 1
14:39:12	176.40	2653.399	155.7	
14:39:26	176.64	2653.502	155.7	
14:39:41	176.88		155.7	
14:39:55	177.12	2653.707	155.7	
14:40:10	177.36	2653.775	155.7	
14:40:24	177.60	2653.878	155.7	
14:40:38	177.84	2654.014	155.7	
14:40:53	178.08	2654.117	155.7	
14:41:07	178.32	2654.185	155.7	
14:41:22	178.56		155.7	
14:41:36	178.80	2654.424	155.7	
14:41:50	179.04	2654.527	155.7	
14:42:05	179.28	2654.595	155.7	
14:42:19	179.52	2654.732	155.7	
14:42:34	179.76	2654.800	155.7	
14:42:48	180.00	2654.937	155.7	
14:43:02	180.24		155.7	
14:43:17	180.48	2655.112	155.8	
14:43:31	180.72	2655.284	155.9	
				*** End of Period 2.***
				Data Print Frequency: 20
14:43:46		2797.351	156.0	
14:45:00				OPEN BYPASS / PACKERS FREE
14:48:34		3083.440	156.1	
14:53:22		3080.637	155.8	
14:55:00				DROP REVERSE BAR
14:56:00				PIN BROKE , START REVERSE CIRC
14:58:10			155.4	
15:02:58		3076.558	155.3	
15:07:46		3093.022	155.2	
15:12:34		3259.903	155.2	
15:17:22		3143.370	155.1	
15:22:10		3139.098	155.2	
15:26:58		3272.421	155.2	
15:31:46			155.2	
15:36:34		3089.936	155.2	
15:40:00				CIRCULATE LONG WAY
15:41:22		3089.766	155.0	
15:46:10		3121.540	154.8	
15:50:58		3116.060	154.7	
15:55:46		3113.597	154.7	
16:00:34		3114.223	154.6	
16:05:22			154.5	
16:10:10		3113.844	154.5	
16:14:58		3115.059	154.5	
16:19:46		3114.087	154.5	

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GRC gauge no.: 71678

PRESSURE VS TIME

Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				
		Data Print Frequency: 20		
16:24:34		3113.636	154.5	
16:29:22		3113.046	154.5	
16:34:10		3113.219	154.5	
16:38:58			154.5	
16:43:46		3114.537	154.5	
16:48:34		3115.613	154.5	
16:53:22		3117.313	154.5	
16:58:10		3117.764	154.5	
17:02:58		3116.445	154.5	
17:07:46		3115.543	154.6	
17:12:34			154.6	
17:17:22		3112.244	154.7	
17:22:10		3109.086	154.7	
17:26:58		3107.352	154.8	
17:31:46		3106.831	154.8	
17:36:34		3106.484	154.8	
17:41:22		3106.864	154.9	
17:46:10			154.9	
17:50:58		3106.931	155.0	
17:55:46		3106.861	155.0	
18:00:34		3105.126	155.1	
18:05:22		3104.708	155.2	
18:10:10		3105.783	155.2	
18:14:58		3105.644	155.2	
18:19:46			155.3	
18:24:34		3105.954	155.3	
18:29:22		3104.461	155.4	
18:34:10		3105.189	155.4	
18:38:58		3105.536	155.4	
18:43:46		3086.605	155.5	
18:45:00				
18:48:34		3082.860	155.6	
18:53:22			155.5	
18:58:10		3025.605	151.6	
19:02:58		2981.353	147.0	
19:07:46		2935.190	141.8	
19:12:34		2845.814	136.6	
19:17:22		2766.809	132.2	
19:22:10		2705.612	128.8	
19:26:58			126.4	
19:31:46		2570.782	124.8	
19:36:34		2496.752	123.8	
19:41:22		2431.129	123.2	
19:46:10		2340.123	122.7	
19:50:58		2246.840	122.4	
19:55:46		2157.893	121.9	

PULL OUT OF HOLE

Date: 19/8/90

Ticket No: 000461

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PRESSURE VS TIME

GRC gauge no.: 71678  
Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90		Data Print Frequency: 20		
20:00:34			121.5	
20:05:22		2111.687	121.2	
20:10:10		2063.769	121.1	
20:14:58		1955.791	120.9	
20:19:46		1928.306	120.6	
20:24:34		1881.255	120.3	
20:29:22		1786.969	119.9	
20:34:10			119.3	
20:38:58		1646.420	118.5	
20:43:46		1586.648	117.8	
20:48:34		1497.416	117.0	
20:53:22		1422.841	116.1	
20:58:10		1327.773	115.2	
21:02:58		1230.807	114.1	
21:07:46			113.0	
21:12:34		1093.582	111.9	
21:17:22		1008.586	110.8	
21:22:10		944.896	109.8	
21:26:58		875.414	108.8	
21:31:46		797.721	107.8	
21:36:34		742.968	106.8	
21:41:22			105.6	
21:46:10		582.253	104.5	
21:50:58		503.934	103.4	
21:55:46		423.506	102.2	
22:00:34		333.811	100.7	
22:05:22		336.739	99.3	
22:10:10		305.838	98.4	
22:14:58			97.6	
22:19:46		219.620	96.7	
22:24:34		164.595	95.8	
22:29:22		162.579	94.9	
22:34:10		131.518	94.3	
22:38:58		86.620	93.4	
22:43:46		40.653	92.3	
22:48:34			90.9	
22:53:22		37.949	89.7	
22:58:10		23.922	88.9	
23:00:00				TOOL AT FLOOR
23:02:58		22.951	88.2	
23:07:46		22.953	87.5	
23:12:34		22.889	87.1	
23:17:22		14.645	86.5	
23:22:10			85.6	
23:26:58		13.587	84.6	
23:31:46		13.213	83.5	

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GRC gauge no.: 71678

## PRESSURE VS TIME

Memory Recorder No.: 71362

Gauge Depth: 6343.87 ft

TIME HH:MM:SS	D TIME (min)	PRESSURE (psi)	TEMP (F)	COMMENTS
-----				
19-AUG-90				
23:36:34		6.599	78.6	
23:41:22		3.989	69.2	
23:46:10		10.780	60.2	
23:50:58		11.934	56.2	
23:55:46			54.2	
20-AUG-90				
00:00:34		17.046	53.6	
00:05:00				
00:05:29			67.8	STOP EMR GAUGE
00:06:34		13.707	72.9	