TPR
OR-357F
Vol I

452001

R249/86

Pelican-5
DST Memorandum

October, 1986

Volume I

TPR
OR-357F
(VOL I)/2

Amoco Australia Petroleum Company

CONTENTS

	Page No.
INTRODUCTION	1
SUMMARY	2
CONCLUSION	3
DISCUSSION	4
GENERAL	4
OPEN HOLE LOGS	4
RFT LOGS	4
CORE DATA	5
FLUID ANALYSIS	5
TEST PROCEDURE & EQUIPMENT	6
DST NO. 1	6
DST NO. 2	6
DST NO. 3	6
DST NO. 4	7
DST NO. 5	8
DST NO. 5-A	8
DST NO. 6	8

ATTACHMENTS

DESCRIPTION	NO.
MAP OF THE BASS STRAIT	1
DRILLING TIME CURVE	2
DST SUMMARY	3
TYPE LOG	4
WELLBORE SKETCH	5

APPENDICES

DESCRIPTION	NO.
LOG ANALYSIS	1
PRESSURE EVALUATION LOG	2
CORE DATA	3
CORE ANALYSIS OF DST NO. 5 INTERVAL	4
SIDEWALL CORE DATA	5
THIN SECTIONS & SEM OF CORE & SIDEWALL CORE	6

FIGURES

DESCRIPTION	NO.
DST NO. 4 HORNER PLOT	1
DST NO. 6 HORNER PLOT	2

ENCLOSURES (VOL. II)

DESCRIPTION	NO.
AMDEL WATER ANALYSIS DST NOS. 5, 5-A & 6	1
CORE LAB RESERVOIR FLUID ANALYSIS	2
OTIS PRESSURE REPORT DST NO. 1	3
OTIS BOTTOM HOLE PRESSURE REPORT DST NO. 1	4
OTIS PRESSURE REPORT DST NO. 2	5
OTIS PRESSURE REPORT DST NO. 2-A	6
OTIS PRESSURE REPORT DST NO. 3	7
OTIS PRESSURE REPORT DST NO. 4	8
OTIS BOTTOM HOLE PRESSURE REPORT DST NO. 4	9
OTIS PRESSURE REPORT DST NO. 5	10
OTIS PRESSURE REPORT DST NO. 5-A	11
OTIS PRESSURE REPORT DST NO. 6	12
OTIS BOTTOM HOLE PRESSURE REPORT DST NO. 6	13
HALLIBURTON FORMATION TEST REPORT DST NOS. 1 & 2	14
HALLIBURTON FORMATION TEST REPORT DST NOS. 2-A & 3	15
HALLIBURTON FORMATION TEST REPORT DST NO. 4	16

HALLIBURTON FORMATION TEST REPORT DST NO. 5 17
HALLIBURTON FORMATION TEST REPORT DST NO. 5-A 18
HALLIBURTON FORMATION TEST REPORT DST NO. 6 19
HALLIBURTON ECHO MEMORY GAUGE DATA DST NO. 6 20

INTRODUCTION

The Amoco Pelican No. 5 well in the Bass Strait, Australia tested six intervals between March 14, and April 12, 1986. Eight cased hole drill stem tests were run in six intervals between 3699m (12,136') and 2786m (9140'). This memorandum documents the results of the tests and analyzes the well data that was collected.

The objectives of the DST are listed below:

1. Determine the initial reservoir pressure.

2. Determine reservoir parameters (Permeability, Skin, etc.).

3. Obtain representative samples of the formation water and hydrocarbons for laboratory analysis.

4. Determine the productivity of the well.

SUMMARY

The Pelican No. 5 was located approximately forty miles north of Tasmania, Australia in the Bass Strait T22/P permit area in 254 feet of water (Attachment No. 1 area map). The objective of the well was to test marginal and non-marine sands within the Eastern View Coal Measures of the Eocene to late Cretaceous age. The well was spud on December 28, 1985 and reached TD (4267 meters or 14000 ft.) in 64 days (Attachment No. 2 drilling depth vs time plot). An additional forty-nine days were spent logging, running the casing, testing and abandoning the well. The table presented below summarizes the results of each test.

DST	INTERVAL	RESULTS
1	3672M - 3699M (12,047FT - 12,136FT)	No measurable fluid entry into the wellbore.
2	3607M - 3619M (11,834FT - 11,873FT)	No measurable fluid entry into the wellbore. (Reversed out 1,410 units of gas)
2A	3611M - 3617M (11,850FT - 11,870FT)	No fluid entry recorded with production logging tool.
3	3440M - 3451M (11,286FT - 11,873FT)	After a 4 3/4 hour shut in, surface pressure built to 1000 psi. The well was opened and the pressure bled down to 0 psi in a couple of minutes with no measurable flow.
4	3143M - 3162.5M (10,312FT - 10,376FT)	The well flowed 430 MCFD on a 1 inch choke with 35 psi FTP. (Condensate rates, were too small to measure).
5	2869M - 2883M (9,413FT - 9,459FT)	A 500 psi surface pressure increase was recorded during the initial shut in period. The well was opened and flowed back some gas and condensate, then went to 100% water at a rate of 12 BBLS/Day.
5A	2855M - 2869.5M (9,367FT - 9,385FT)	No flow to surface. (Reversed out gas cut muddy water).
6	2786M - 2790M (9,140FT - 9,153FT)	The well flowed 5.5 MMCFD, 400 BCPD, 675 BWPD on a 1 inch choke with 520 psi FTP.

A more detailed summary is provided in Attachment No. 3.

CONCLUSIONS

1. Based on the results of DST Nos. 1-4 the Paleocene sands all demonstrated low permeability.

2. The analysis of formation water from DST Nos. 5, 5-A & 6 provided a reliable Rw which, when used to calculate Sw, lead to the conclusion that most of the Eocene sands were wet (as was demonstrated by DST Nos. 5 & 5-A).

DISCUSSION

GENERAL

The Amoco Pelican No. 5 well, located in the Bass Strait approximately 75 miles north of the city of Burnie, Tasmania, Australia, was spud on December 28, 1986 with the semi-submersible drilling rig Epoch. This was the fourth Amoco well drilled in the Bass Strait. Esso had drilled the Pelican Nos. 1 and 2 in 1970 and had recorded shows and positive tests for hydrocarbons from FITs and RFTs run in the Eocene section. The Amoco Pelican No. 5, DST No. 6 results (5.5 MMCFD 400 BCPD, 675 BWPD) confirmed the presence of hydrocarbons; however, due to a much fresher connate water than originally anticipated, the amount of hydrocarbons calculated from the logs of Pelican Nos. 1 and 2 was significantly less than forecast. After the drill stem tests were completed on April 12, 1986 the well was permanently abandoned and the rig released on April 16, 1986.

OPEN HOLE LOGS

A full open hole log suite was run by Schlumberger over the prospective intervals and an analysis of the logs was done by Amoco's W. T. Bryant. His analysis is provided in this report as Appendix No. 1.

Mr. Bryant's analysis suggested that there may be 62 meters (203 ft) of pay in the Eocene section (1750m-3003m). The average porosity in the Eocene section was calculated to be 18% and the average water saturation was calculated as 48%. The water saturation was calculated using an Rw of .07 ohms (@30,000 ppm) but when the Eocene was actually tested and a water sample taken and analyzed (DST 5-A) the Rw of the water was found to be a much higher .32 ohms at 250 degrees F (see Enclosure No. 1 for the laboratory water analysis). Using all of Mr. Bryants assumptions and recalculating Sw, changing only the Rw value, yields water saturations on the order of 80-100%. In fact, the interval tested in DST Nos. 5 & 5-A produced a small amount of gas, then loaded up with salt water and died; just the performance one would expect from a wet sand.

A log analysis of the Paleocene section (2995m-3674m) is also provided in Appendix No. 1. The average calculated porosity for this section was 13% and the average calculated Sw was 40%.

A type log of the intervals tested is provided in Attachment No. 4.

RFT LOGS

Appendix No. 1 lists the valid RFT pressures taken during the logging of the well as interpreted by W. T. Bryant. This data is important in understanding why DST Nos. 1-3 did not flow. Appendix No. 2 is a pressure evaluation log prepared by EXLOG which plots estimated formation balance

gradient, estimated normal formation balance gradient, mud density out, equivalent circulating mud density and RFT pressures. It is worth noting that based on ten reliable RFT responses plotted on EXLOG's pressure evaluation log it appears that we drilled from 3445m-3645m (11,302 ft.-11,960 ft.) about 1 ppg underbalanced. Since there were no well control problems while drilling this section, we can assume that the Paleocene section has low permeability.

CORE DATA

Three cores were cut in the Pelican No. 5 over the interval from 2790.5-2900 meters. This is the interval in which DST Nos. 5 and 5-A were conducted. The average porosity of this interval was 16.1% with a porosity range from 0% to 46%. The permeability ranged from 0 md. to 240 md., with an arithmatic average of 20 md., a harmonic average of 0.49 md. and a geometric average of 2.9 md. (uncorrected for slippage). The more detailed Core Laboratories Inc. Report is enclosed as Appendix No. 3. Appendix No. 4 is the specific analysis of the core over the DST No. 5 perforation interval, Appendix No. 5 contains the sidewall core descriptions and Appendix No. 6 is the thin section petrography, SEM and XRD analysis of core and sidewall core samples. None of the core or sidewall core data indicated a very strong presence of hydrocarbons over the intervals tested.

FLUID ANALYSIS

The critical fluid analysis in these tests was not the analysis of the hydrocarbons but rather the analysis of the formation water. Enclosure No. 1 contains the water analyses done on DST Nos. 5, 5-A & 6. Though the well had not cleaned up totally, i.e., a very small amount of nitrate was still being recorded, we can see that the total measured PPM was much less than the 30,000 PPM that was initially assumed and used to calculate water saturation. Since the PPM was lower, the Rw is higher and the Sw is higher than originally anticipated.

The fluid analyses of gas samples from DST Nos. 4 & 6 is recorded in Enclosure No. 2, Core Laboratories Reservoir Fluid Analysis. The gas contains 9%-10% carbon dioxide which is the heavy component that causes the gas to have a gravity of 0.8. Other than the CO_2 in the gas there is nothing worthy of note. The condensate from DST Nos. 4, 5 & 6 was analyzed by high temperature distillation to eicosanes plus and the basic crude tests were also run with the results summarized below:

DST No.	4	5	6
API Gravity @ 60 degrees F	46	49	59
Pour Point - degrees F	54	48	37
Cloud Point-degrees F	59	59	48
Wax Content-%	2.4	.3	3.4

TEST PROCEDURE AND EQUIPMENT

The test procedure varied from test to test and the DST Summary in Attachment No. 3 adequately describes the type of gun, the underbalance and the fluid in the hole as well as the results of each test. The standard written procedure for flowing the well consisted of a short ten minute flow, followed by an hour shut in period, followed by an extended flow and finally an extended shut in used for pressure transient analysis. However, this procedure could not always be followed and was modified on location by the test engineer as required. The actual step by step flow test procedure and the equipment used is described in the Otis and Halliburton Pressure Reports (Enclosure Nos. 3-20).

DST DATA SUMMARY AND ANALYSIS

DST No. 1

The first interval tested was 3672m-3699m (12,047'-12,136'). This interval was perforated 2000 psi underbalanced with 2 1/8" Schlumberger Enerjet guns and a full liquid column in the string. The result of the perforating was no pressure increases at the surface and no fluid movement in the well. An Otis bottom hole pressure recorder was run in the hole and the recorded liquid gradient across the perforations was still the same as the liquid gradient used when the well was completed, 15 ppg equivalent. The only conclusion that can be drawn in the absence of data is that the formation has no measurable permeability.

DST Nos. 2 & 2-A

DST No. 2 was perforated 3000 psi underbalanced to the estimated formation pressure (estimated formation pressure was 9040 psi at 3616m from RFT data) with 2 1/8" Schlumberger Enerjet guns and a full column of liquid in the string. This perforated interval, 3607m-3619m (11,834'-11,873'), did not yield any liquid and performed exactly like DST No. 1. At this point, the decision was made to reperforate the interval from 3611m-3617m (11,847'-11,867') with 3 3/8" casing guns to assure that we had indeed perforated through the 5 1/2" and 7" strings of casing. The result of reperforating was negative. A Schlumberger production logging tool was run across the interval and no flow was recorded. Once again the lack of any flow or increase in pressure leads one to believe that there was no measurable permeability in this zone.

DST No. 3

On March 20, 1986 at 10:10 PM in the evening the interval 3440m-3451m (11,286'-11,322') was perforated with 2 1/8" Enerjet guns, 2200 psi underbalanced to the estimated reservoir pressure of 7336 psi. A 30 psi increase was noted for a couple of minutes after perforating but the pressure was 0 psi after 10 minutes. The well was then shut in for 268 minutes and during this time the surface pressure built up to 1000 psi.

The well was then opened to flow but the pressure dropped to zero immediately with no appreciable flow. Again the well was logged with a production logging tool and small fluctuations in the density of the fluid in the wellbore were noted, which may have been indications of small amounts of gas cutting the liquid in the wellbore. The well reversed out gas cut mud and this was the first indication of produced hydrocarbons since we began testing the well. As we were testing up the wellbore the porosity of the sands was increasing and the permeability was probably increasing also, though the permeability was still too low to measure with much reliability using a build up test. Though there was little quantitative data, qualitatively we could say that there was gas present but the permeability was still too low to allow the gas to flow in commercial quantities.

DST No. 4

DST No. 4 perforated the interval 3143m-3162.5m (10,312'-10,376') using a 5" tubing conveyed perforating system. The wellbore was filled with diesel to achieve approximately a 2300 psi underbalance to the estimated formation pressure. The TCP method of perforating was used in this interval to minimize problems experienced on the previous tests with debris left across the perforations by the expendable Enerjet guns. (The debris from the guns caused problems with the wireline work since the wells did not flow and the debris did not move away from the perforations). The first twelve minute flow period recorded only 6 psi on the surface pressure gauges but there was a good blow in the bubble bucket as the well flowed through a 16/64" choke to the flare. The well was then shut in for sixty minutes and the wellhead pressure was allowed to build up to 1350 psi before the well was opened on a 16/64" choke and allowed to flow to the flare. The flowing surface wellhead pressure after four minutes had bled to 0 psi with a small amount of diesel still being flared. The well was then turned from the flare to the gauge tank and measured a rate of flow of two barrels per hour while unloading the diesel that was used for the completion fluid. Otis measured the flowing bottom hole pressure (Enclosure No. 4) as the well was flowed over the next twenty-one hours and thirty-nine minutes. During this time the well unloaded and flowed gas at metered rates between 290 and 503 MCFD. The most significant point to note is that the well was flowing at low rates with a large drawdown (5200 psi drawdown which was 84% of the original reservoir pressure) which intuitively indicates a low permeability and/or a large skin value. Enclosure No. 16 is the Halliburton test report with the raw pressure data taken from DST No. 4 (Amerada gauges) listed and the Halliburton interpretation presented. Halliburton calculated an original reservoir pressure of 5908.1 psi, a permeability of .08 md., a skin value of 10.7 and a radius of investigation of 88.1 ft. Calculations made using Amoco's PTA Program (Figure No. 1) resulted in an original reservoir pressure of 6042 psi (RFT pressure 6203 psi) a permeability of .03 md., and a skin of 15.6. Included with Figure No. 1 is a Darcy calculation to support the validity of the permeabilities calculated from the buildup test. This was the final test of the Paleocene section and the only test that had sufficient data for quantifiable analysis. From this test it is concluded that this sand (highest

porosity of the Paleocene Sands) does not have sufficient permeability to flow liquids at commercial rates even if the high skin value could be reduced.

DST No. 5

DST No. 5, the first Eocene reservoir tested, was perforated from 2869m-2883m (9413'-9459') using the 5 inch TCP guns. The test interval was perforated 3000 psi underbalanced by using a 7900 foot cushion of nitrogen on top of the 9.2 ppg mud. The well flowed small amounts of gas and condensate with high water cuts. Measured stable flow rates never were obtained, therefore a meaningful pressure transient analysis could not be performed. Of special note was the water production which was thought to have come from up hole due to the freshness of the water being produced (1200 ppm CL/see Enclosure No. 10). Discussions were held with Loren Krase, Amoco Research Center, in an attempt to analyze the data that was available, but none of the resulting work done by the Research Center was conclusive enough to warrant publication. Due to the surprising freshness of the water produced the decision was made to squeeze the interval, reperforate and retest to insure there was no communication from uphole.

DST No. 5-A

This test reperforated the interval 2855m-2860.5m (9367'-9385') with a 3000 psi underbalance using 2 1/8" Enerjet guns. Once again some small amount of gas was produced but the majority of the flow was water. The water produced was analyzed (Enclosure No. 1) and the water was found to be much fresher than anticipated. Based on the water analysis, the total calculated net pay in the wellbore was thirteen feet. The flow rates were not significant or stable thus no meaningful pressure transient work was done.

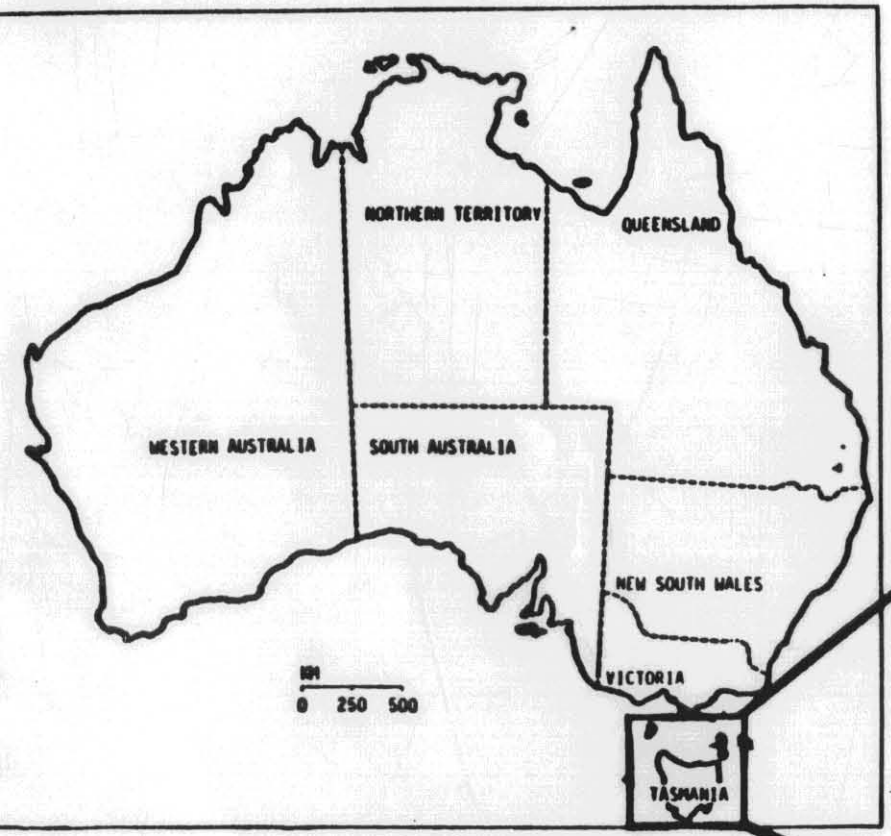
DST No. 6

The final Eocene interval tested was perforated from 2786m-2790m (9140'-9153'), using 2 1/8" Enerjet guns with a 2100 psi underbalance. The sand produced at a maximum measured rate of 5.5 MMCFD, 400 BCPD and 675 BWPD on a one inch choke with a pressure drop across the perforations of 2570 psi of the 4170 psi original reservoir pressure measured by an RFT. Enclosure No. 19 contains Halliburton's summary of the reservoir parameters using the Horner method of interpreting a buildup test on a gas well. The calculated initial reservoir pressure was 4071.6 psi, the permeability was 6.85 md. and the skin was 5.6. Amoco's PTA program was applied to the Halliburton data and an initial reservoir pressure of 4213.5 psi was extrapolated from the Horner plot, a permeability of 4.6 md. was backed into from the calculated kh and a skin of 3.1 was obtained (Figure No. 2).

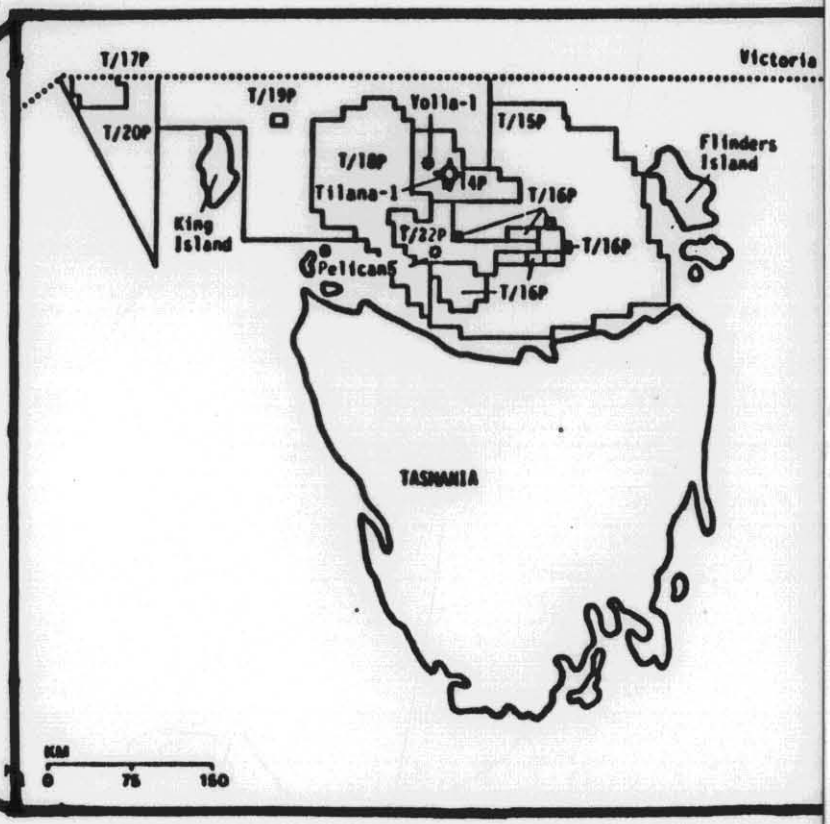
RJB/jlt
OP13LR029

Attachment No. 1

ustralia



Tasmania



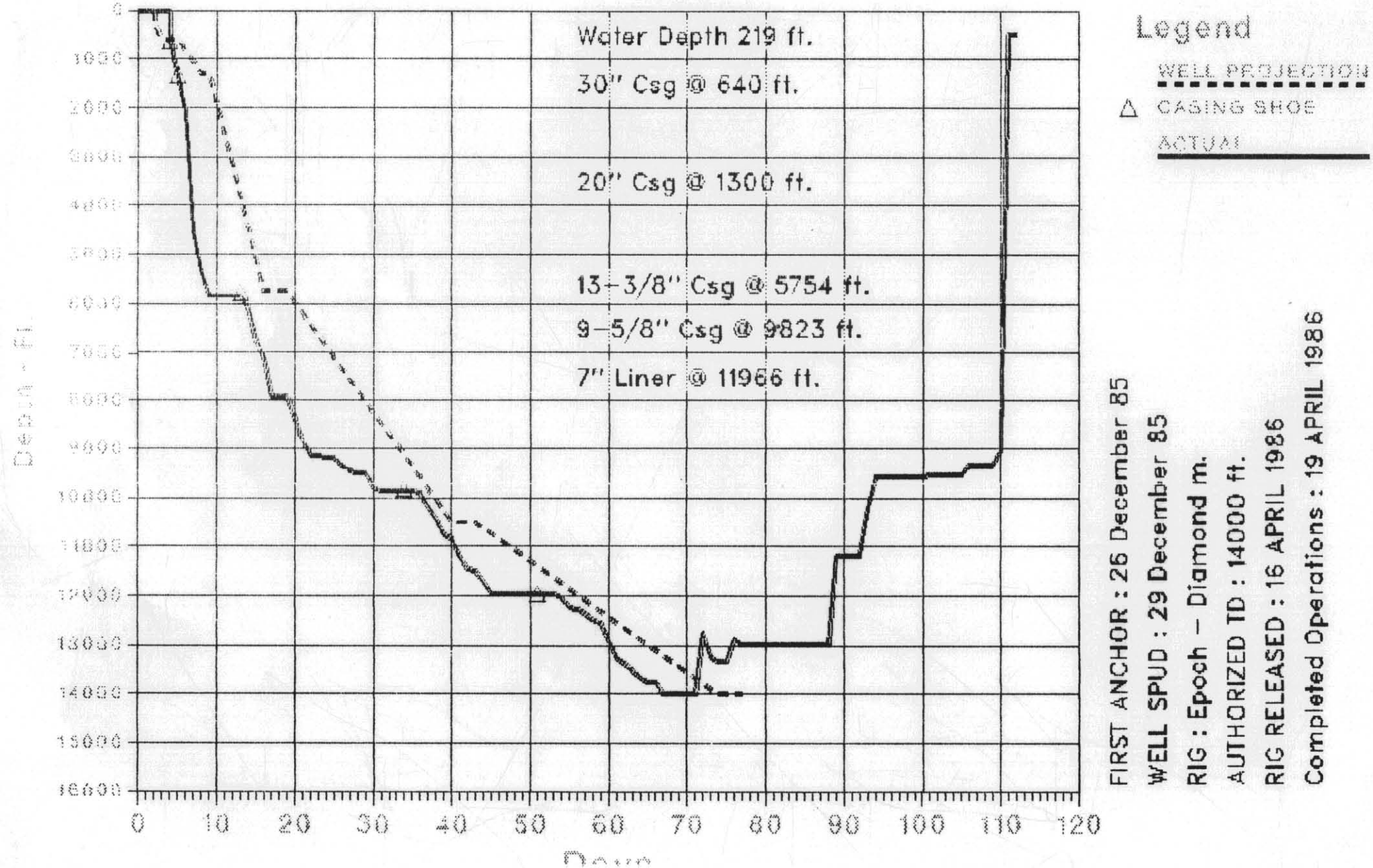
5 cm

ATTACHMENT NO. 2

452014

Amoco Australia Petroleum Company
Bass Basin
Field T-22P - PELICAN No.5

5 cm



452015

Attachment No. 3

AMOCO PELICAN NO 5 - DST SUMMARY

DATE	INTERVAL	PERFORATING TECHNIQUE	UNDERBALANCE	FLUID IN HOLE	RESULTS
86-3-14 to 16 1445 1057	3672-3686 M 3686-3699	2-1/8" Enerjets 4s/ft 2-1/8" Enerjets 4s/ft	2000 psi	Mud Drilling water (61 bbls)	- no measurable fluid entry - when attempting to open hydraulic by pass unseated packer then redisplace underbalance cushion - Lost gauge cutter in hole due to debris in tools. - Ran GRC for fluid level data
86-3-16 to 16 1057 2206	3607-3619 M	2-1/8" Enerjets	3000 psi	Mud Drillwater (81 bbls)	- P surface increase to 460 psi (6-1/2 hours) no flow. - LPR-M2 failed due to high mud wt - Total peak gas on reverse out 1410 units (28.2%) - Test with same string as DST No 1
86-3-19 to 20 1245 2000	3611-3617 M	3-3/8" Casing Guns 6 s/ft 60 Deg phasing	3500 psi	Mud Drillwater (77 bbls)	- reperf zone 2 no fluid influx noted - ran PLT log no flow recorded.
86-3-20 to 21 2000 0911	3440-3451 M	2-1/8" Enerjets 6 s/ft	2201 psi	Mud Drillwater	- P surface increase to 1000 psi (4-3/4 hours) no flow 1st build up - P surface increase to 1175 psi (3-1/4 hours) no flow 2nd build up - Ran PLT log no flow recorded - Stuck PLT tool but recovered. Debris in tools. - Test with same string as DST No 2A
86-3-25 to 27 1620 0918	3143-3162.5 M	5" Tubing Conveyed Perforating 22.7 gm charges	2300 psi	Mud Diesel (71 bbls)	- P surface increase to 1350 psi (1 hr). Unload diesel and mud. Rate 1 = 290 MCF/D 16/64" CH, psi, P surface 250 psi. Rate 2 = 430 MCF/D, 64/64" CH, P surface 35 psi

T	DATE	INTERVAL	PERFORATING TECHNIQUE	UNDERBALANCE	FLUID IN HOLE	RESULTS
						- Broke salt water line to flare booms - No measurable liquid rate but liquid recovery - Unable to latch SRO, Broke Tool Down hole. Used PLT.
	86-3-30 to 31 0545 1742	2869-2883 M	5" Tubing Conveyed Perforating 22.7 gm	3000 psi	Mud N2	- P surface increase 500 psi from 1350 to 1850 psi (2 hours) Flow rate 1-2 b/hr water (1200 PPM) PLT Log Run
	86-4-6 86-4-8 to 10 1350 1640	2855-2860.5 M	2-1/8" Enerjets 6 s/ft	3000 psi	Mud N2	- Omni valve failed. Test string tripped and rerun with bypass circulating valve instead. Seal failure. - No flow to surface - Reverse out gas cut muddy water (1100-1200 PPM CL) - Four out of five downhole pressure gauges failed.
	86-4-11 to 12 0126 0930	2786-2790 M	2-1/8" Enerjets 6 s/ft	2100 psi	Mud N2	- P surface increase 1270 psi from 135 to 2620 psi in 1 hour - Two of four downhole pressure gauges failed. Rate 1 = 3.45 MMCF/D, 450 B/D Conden B/D water (1600 PPM, TBH 256 Deg F, PBH=2520 psi, P surface 1620 psi 24/64 choke. Rate 2 = 5.50 MMCF/D 400 B/D Condens 675 B/D water (3000 PPM, TBH = 244 Deg F, PBH = 1600 Psi, P surface = 520 psi, 1" choke). - Otis wireline unit failed ran SRO on Schlumberger

AMOCO PRODUCTION COMPANY

AMOCO
PELICAN 5 COMPOSITE LOG
DATE=05/14/86

PELICAN 5

Z50050

5 cm

IRSFDC
M VOLT
-200. 0.

IRCLDC
INCHES
0. 30.

XXERDC
API
0. 150.

MLCLDC
INCHES
0. 30.

MLSFDC
OHMS
0.2 2000.

IRSFDC
OHMS
0.2 2000.

IRIDDC
OHMS
0.2 2000.

NCNPSC
30. -10.

POROSN
30. -10.

DST 6

DST 5-A

DST 5

DST 4

DST 3

DST 2&2A

DST 1

Ø=18%
S_w=29%

Ø=17%
S_w=50%

Ø=16%
S_w=52%

Ø=14.5%
S_w=37%

Ø=13%
S_w=39%

Ø=10.5%
S_w=36%

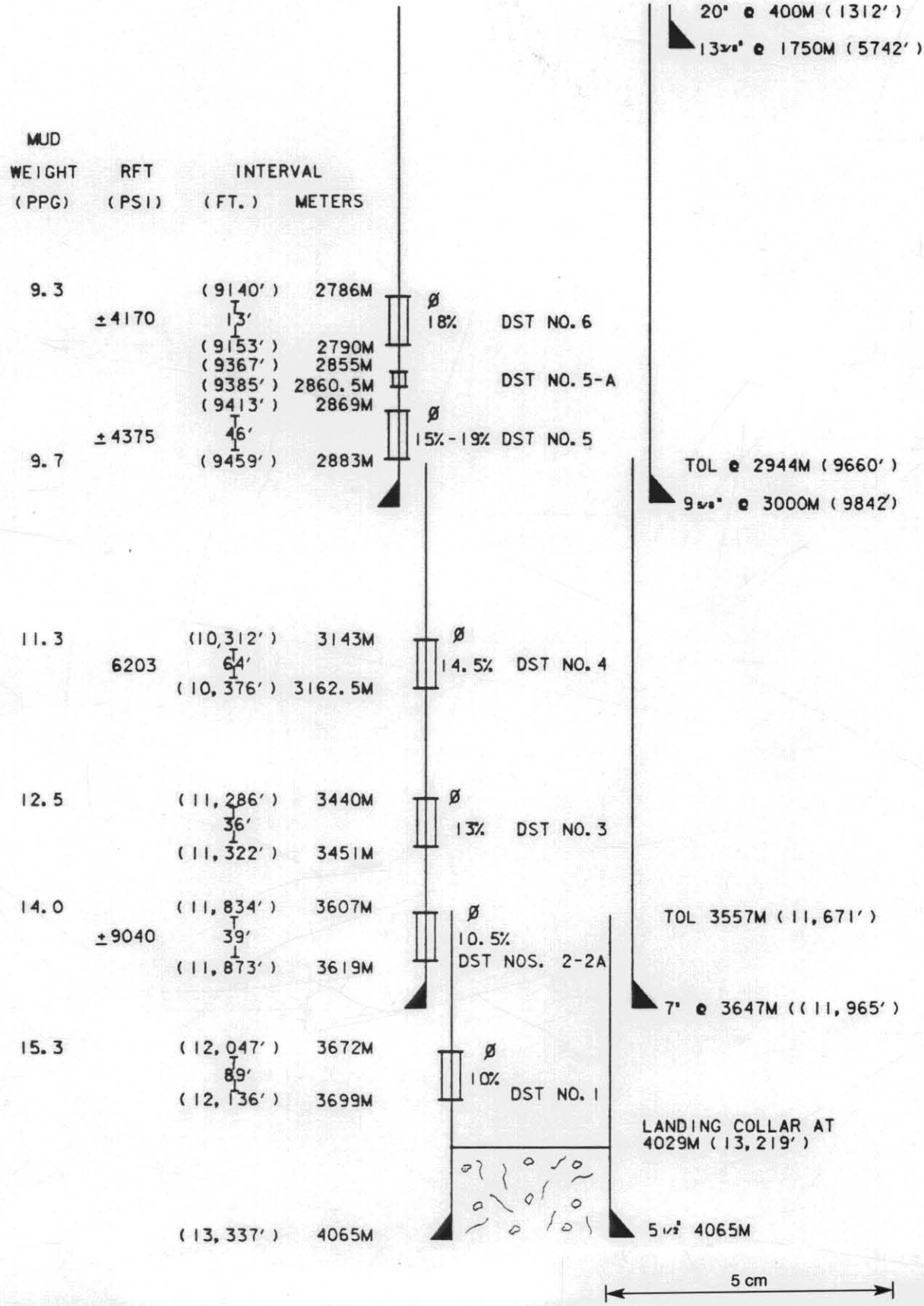
Ø=12%
S_w=44%

5 cm

452018

Attachment No. 5

PELICAN NO. 5
WELLBORE SKETCH



Facsimile Transmission
6-166 (7-85)

452019

Date
FEBRUARY 18, 1986

TO		FROM	
Name	ROBERT L. BLANTON	Name	C. W. WARING
Company	AMOCO PRODUCTION COMPANY	Company	AMOCO AUSTRALIA PETROLEUM COMPANY
Location	HOUSTON, TEXAS	Location	SYDNEY, AUSTRALIA
Facsimile Telephone No.	00111 713 556 2139	Facsimile Telephone No.	(02) 922 4886

This transmission consists of: TEN pages (including this page)

Time Sent

Confirmed By

(00111) 713 556 2139

ATTN: W.R. MOEHL - ROOM NO. 2.232
HO-AUP-124-F-400/420.1-RGM

SOUTH AUSTRALIAN OIL AND GAS CORPORATION PTY. LIMITED (08) 223 1851
BEVAN DEVINE
ATTN: P.S. MOIGNARD

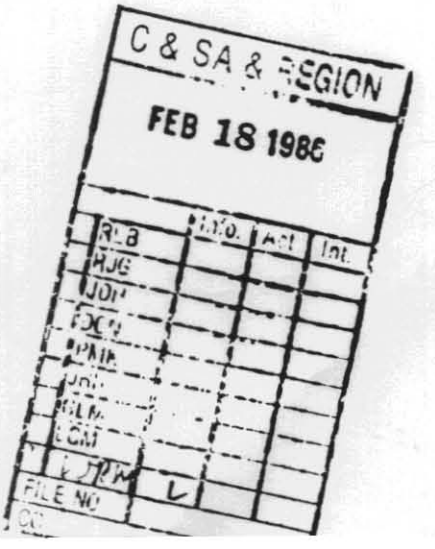
BASS STRAIT OIL AND GAS N.L. (002) 23 7167
TASMANIAN OIL AND GAS N.L.
CUE PETROLEUM GROUP N.L.
ATTN: J.K. DAVIDSON
MISC-AUP-AUP-041-F-400/420.1-RGM

AMOCO AUSTRALIA PETROLEUM COMPANY - HOBART (002) 72 0713
ATTN: C.D. CORNELL
ABB-AUP-007-F-400/420.1-RGM

PELICAN NO. 5

PLEASE FIND ATTACHED A MEMO WRITTEN BY W.T. BRYANT (AMOCO, HOUSTON) TO C.E. KONEN (HOUSTON), REGARDING WIRELINE LOG ANALYSIS AND RFT RESULTS OF LOGGING SUITES NUMBERS 2 AND 3 IN THE PELICAN -5 WELL.

REGARDS,
C.W. WARING



452020

MEMO

TO: C.E. KONEN
C.C. S.C. BANE
FROM: W.T. BRYANT
DATE: FEBRUARY 14, 1986
SUBJECT: PELICAN NO. 5

SUMMARY

Log analysis of well Pelican No. 5 located offshore Tasmania suggests that many zones are hydrocarbon bearing.

Approximately 62 meters of Eastern View Sandstone pass the net pay cut offs of water saturation less than 50%, shale content less than 50%, and porosity greater than 10% over the interval covered by log Suite No. 2 (1750-3003m.). The average porosity is 18 P.U. and the average water saturation is 48%. The porosity decreases with increasing depth. A hydrocarbon water contact is not interpreted from the logs, although some zones may be in transition and may produce water. High abnormal pressure is not evident from the well logs.

An additional 93 meters pass the pay criteria over log Suite No. 3 (2995-3674m). The average porosity is 13 P.U. and the average water saturation is 40%. A water contact is not interpreted in the interval. The zones with calculated water saturation near 50% may produce water.

The results of the analysis along with pertinent log data are shown in Table No. 3.

DISCUSSION

Well Pelican No. 5 wireline logs were analyzed for porosity, water saturation and fluid content. Well logs available for interpretation were from Suite 2 and Suite 3 and are:

ISF-SLS-MSFL-GR-SP
LDT-CNL-GR
HDT
RFT

ISF	=	Induction Spherically Focused
SLS	=	Long Spacing Sonic
MSFL	=	Micro Spherically Focused
GR	=	Gamma Ray
SP	=	Spontaneous Potential
LDT	=	Litho Density
CNL	=	Compensated Neutron
HDT	=	High Resolution Dipmeter
RFT	=	Repeat Formation Tester

The quality of the data was basically good except for washed out areas of the well.

Frequently the wireline tools would stick causing invalid data to be recorded. These areas are easily recognized by the straight line characteristic nature of the curve.

There were tool problems with the ISF which were corrected by relogging. The first attempt with the RFT stuck. Additional pressure points were obtained by reducing the outside diameter of the tool.

Hydrocarbon fluid density could not be determined from the well logs because of the uncertainty of the water saturation of the flushed zone (SXO) and the low porosity of the rock.

Other log information used in processing the data:

Suite No. 2

Date of Logging	25 January, 1986
Run Number	2
Depth Logger	3003.5m.
Resistivity of the filtrate	.714 at 78 degrees F
Bottom hole temperature	204 degrees F.

Suite No. 3

Date of Logging	8 February, 1986
Run Numbers	3
Depth Logger	3649m.
Resistivity of the filtrate	.495 at 71 degress F
Bottom hole temperature	288 degrees F

The temperature used to correct the formation fluid resistivities is the temperature obtained from the ISF log runs and not the projected static bottom hole temperature.

452022

TECHNIQUE

The dual water method of analyzing shaly formations was used in processing this data. The basic Archie water saturation equation was modified to take into account the varying amounts of shale. The water saturation equation used in the interpretation is:

$$Sw = (Rmix/(Rt*Phi^{**}M))^{**}0.5$$

$$Rmix=Rwb*Rwf/(Vsh(Rwf-Rwb)+Rwb)$$

Sw = water saturation
Rmix = resistivity of the formation water (a function of free and bound water resistivities)
Rwf = free water resistivity
Rwb = bound water resistivity
Rt = true resistivity
Phi = total porosity
M = 2.0
A = .81

LOG ANALYSIS

The following zones along with other input parameters are listed below in Table No. 1.

Table No. 1 (Pelican No. 5, Tasmania)
Zone Parameters

Zone	Depth	Formation	RWF	NACL-PPM	RMF	T (Degrees F)
A	2465-2525	Eastern View	.094	30,000	.316	178
B	2525-2590	-	.092	30,000	.311	181
C	2590-2692	-	.091	30,000	.306	184
D	2692-2785	-	.088	30,000	.299	189
E	2785-2850	-	.086	30,000	.292	193
F	2850-2980	-	.085	30,000	.288	197
G	2980-3647	-	.070	30,000	.144	246

Table No. 1

DEFINITION OF TERMS

RWF = Resistivity of the free formation fluid
NACL-PPM = Salinity of RWF in parts per million
RMF = Resistivity of mud filtrate
T(Degrees F) = Temperature for RWF and RMF

With High Temp Gradient RMF/RWF Changes w/ Depth

452023

Shale log parameters used in processing are shown in Table 2.

Table No. 2 (Pelican No. 5, Tasmania)
Shale Parameters

Zone	RHOB	PHIN	DT	RT	GRSH	GRCL	M	N
A-F	2.62	.21	73	13	120	23	.81	.64
G	2.65	.33	72	10	75	18	.81	.64

DEFINITION OF TERMS

RHOB = Bulk Density
PHIN = Porosity of Neutron limestone matrix
DT = Interval Transit Time
RT = True Resistivity
GRSH = Gamma Ray Shale
GRCL = Gamma Ray Clean
M = Porosity independent parameter (RHOB,DT)
N = Porosity independent parameter (RHOB,PHIN)

RWB (Resistivity of the bound water) is calculated from the shale resistivity and the total porosity derived from the shale neutron and density values.

The bulk volume shale (VSH) is equal to the minimum amount calculated from all the shale indicators used.

VSH = Minimum of VSHND, VSHSD, VSHGR

Vsh = Bulk Volume shale
Vshnd = Bulk Volume shale from the Neutron Density crossplot
Vshsd = Bulk Volume shale from the Sonic Density crossplot
Vshgr = Bulk Volume shale from the Gamma Ray

The neutron is in limestone porosity units. The total porosity was derived from the crossplot of the neutron versus density. All porosities listed in the results summary are corrected for shale volume and are effective porosities. The intepretation assumes complex lithology plus shale.

452024

RFT data obtained during the logging of Suite 2 and 3 is listed in Table Nos. 4 and 5.

A sample was recovered during test No. 118 of log Suite No. 2. The sample contained:

375	cc	Condensate
5000	cc	Mud filtrate
38.4	cf	Gas

The gas breakdown according to the constituent hydrocarbon types is:

	ppm	%
C1	700,800	75.2
C2	112,560	12.1
C3	68,640	7.4
iC4	18,165	1.9
nC4	26,973	2.9
C5	4,936.5	0.5
	932,074.5	

COV

W.T. Bryant

WTB/lrc

Table No. 3
Suite No.2

Depth	PHIN	RHOB	DT	GR	RT	RXOC	RW	RHOMA	M	N	PHIT	VSH	SW	PHIE
2468.5	.17	2.32	85	33	2.0	6.5	.094	2.65	.79	.63	.20	.00	.98	.20
2697.0	.17	2.30	86	45	6.2	5.9	.088	2.63	.79	.64	.20	.00	.53	.20
2763.0	.20	2.38	81	53	7.8	5.9	.087	2.72	.78	.58	.20	.07	.50	.18
2745.0	.18	2.40	81	50	9.0	7.1	.087	2.71	.77	.59	.18	.06	.50	.17
2750.0	.21	2.30	83	30	6.0	4.8	.087	2.67	.82	.61	.22	.01	.49	.22
2789.0	.14	2.32	88	30	26.0	7.2	.086	2.61	.77	.66	.18	.00	.29	.18
2820.0	.14	2.38	78	48	9.0	8.3	.086	2.65	.81	.63	.17	.00	.52	.17
2828.0	.18	2.37	79	57	8.2	6.7	.086	2.69	.80	.60	.19	.01	.49	.19
2858.0	.14	2.35	77	27	9.2	7.4	.085	2.63	.83	.64	.17	.00	.50	.17
2874.0	.19	2.39	78	30	9.2	6.5	.085	2.71	.80	.58	.19	.01	.46	.19
2879.0	.11	2.39	73	27	11.0	9.7	.085	2.63	.84	.64	.15	.00	.53	.15
2888.0	.13	2.40	79	39	9.2	9.8	.084	2.65	.79	.63	.15	.00	.56	.15
2912.5	.13	2.38	78	23	12.0	8.8	.084	2.65	.80	.63	.16	.00	.47	.16
2920.0	.11	2.30	80	23	12.0	7.7	.084	2.57	.84	.67	.17	.00	.44	.17
2963.0	.11	2.39	80	22	9.5	10.3	.083	2.63	.78	.64	.15	.00	.57	.15

DEFINITION OF TERMS

RXOC = Calculated Resistivity of the flushed zone
RHOMA = Matrix density
PHIT = Total Porosity
SW = Water saturation
PHIE = Effective Porosity

452025

Table No.3
Suite No.3

Depth	PHIN	RHOB	DT	GR	RT	RXOC	RW	RHOMA	M	N	PHIT	VSH	SW	PHIE
3021.5	.11	2.38	78	18	9.0	5.0	.07	2.62	.80	.64	.155	.00	.51	.155
3033	.21	2.43	81	35	10.0	5.0	.07	2.76	.76	.55	.188	.34	.45	.100
3059	.18	2.35	83	27	13.0	2.5	.07	2.70	.79	.61	.205	.18	.33	.168*
3100	.11	2.48	71	27	15.0	6.0	.07	2.68	.77	.60	.123	.18	.52	.101
3109	.10	2.46	74	19	14.0	3.0	.07	2.66	.79	.62	.125	.02	.51	.122
3158	.13	2.43	76	19	19.0	8.0	.07	2.68	.79	.61	.148	.02	.37	.145
3195	.15	2.49	71	21	14.0	8.0	.07	2.73	.79	.57	.140	.08	.45	.129
3330	.11	2.35	77	17	20.0	5.0	.06	2.62	.83	.66	.165	.00	.30	.165
3450	.15	2.43	79	26	13.0	9.0	.06	2.68	.77	.59	.155	.16	.39	.130
3586.5	.13	2.45	79	22	30.0	5.0	.06	2.69	.76	.60	.143	.08	.29	.132
3615	.09	2.48	74	22	30.0	12.0	.06	2.66	.78	.61	.114	.08	.36	.105

* DATA ESTIMATED TOOL STICKING

452026

Table No. 5
RFT Results Suite No. 3
Run No. 2

No.	Depth	SG
2	3616	9040
3	3616	9029
8	3592.5	8808
9	3586.7	8610+
10	3587	8643
11	3592.7	8830
15	3510	8530
20	3508	8575
21	3108	5652
22	3098	7450+

Table No. 5
RFT Results Suite No. 3
Run No. 1.

No.	Depth	SG	HP
4	3021.5	5659	5640
5	3022	5627	3534
6	3108	5571	5582
8	3157.4	6187	6203

Table No. 4
RFT Results Suite No. 2

No.	Depth	HP	SG
4	2424	3543.1	3531
5	2430.5	3552.7	3539
6	2440	3566.8	3554
7	2445	3573.8	3560
8	2448	3576.4	3564
9	2466.5	3606.7	3592
11	2476	3623.9	3609
13	2535.5	3702.1	3686
14	2538.5	3705.2	3691
15	2541.5	3709.7	3695
16	2548	3718.9	3704
17	2617	3819.9	3805
18	2623	3821.5	3809
19	2651	3927.5	3913
20	2650.5	3889	3868
27	2744	4048	4026
28	2748	4025.8	4011
30	2786.5	4170.6	4155
33	2789	4268	4213
34	2788.5	4170.3	4156
38	2787	4176.1	4162
39	2788.3	-	4162
43	2819	4283.5	4269
44	2822.5	4343	4325
50	2857.5	4346	4332
51	2858.5	4344.5	4330
53	2427	-	3930
57	2873.5	-	4558
58	2876.5	-	4343
59	2881	-	4324
62	2912.5	-	4417
75	2740.5	4108	4091
77	2750	4024.2	4010
78	2742	4041	4027
81	2787	4181.1	4162
82	2789.5	4215	4197
83	2816.5	4368	4354
84	2819.5	4367	4353
85	2822.5	4366	4348
86	2855	4357	4342
87	2858	4332.6	4316
90	2859.5	4547	4329
94	2873.8	-	4460
96	1877	4366.3	4348
97	2879	4366	4349
98	2881	4377	4355
99	2883	4353	4333
105	2890.5	4352.3	4336
106	2891.5	4446	4430
107	2914	4458	4441
109	2919.5	4450	4432
115	2882		4341
118	2788.2		4224

DEFINITION OF TERMS

File = File No. on RFT Log
HP = Hewlett Packard Guage
SG = Strain Gauge

EXLOG

COMPANY	AMOCO AUSTRALIA
WELL	PELICAN No.5
FIELD	PELICAN
REGION	GAS BASIN
COORDINATES	LAT. 40° 20' 43.58" S LONG. 145° 51' 49.21" E
API WELL INDEX NO.	
SPUD DATE	28TH DECEMBER 1985
ELEVATION	RKB - SEABED 99.7M MSL - SEABED 78.3M
TOTAL DEPTH	4267M
CONTRACTOR	DIAMOND M
RIG / TYPE	EPOCH / SEMI SUB
LOG INTERVAL	
DEPTH	FROM 411M TO 4267M
DATE	FROM 31/12/85 TO 2/1/86
SCALE	1:5000 UNIT 216
LOG PREPARED BY	NEWS HODGE FELLI REEVES HALLWORTHY PATTERSON

HOLE SIZE

36"	TO	195M	12¼"	TO	3002M
26"	TO	400M	8½"	TO	3647M
17½"	TO	1776M	6"	TO	4267M

CASING RECORD

30"	AT	195M	9⅝"	AT	2994M
20"	AT	400M	7"	AT	3647M
13⅜"	AT	1754M	5"	AT	4065M

MUD TYPES

SEAWATER		TO	411M
SEAWATER / GEL-STARCH		TO	1776M
FRESHWATER DISPERSED		TO	4267M

LITHOLOGY SYMBOLS

LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, SALT, COAL AND LIGNITE, CLAY, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, CHALK, UNCONSOLIDATED

EXLOG SUITE

FORMATION EVALUATION LOG
PRESSURE EVALUATION LOG
DRILLING DATA PRESSURE LOG
TEMPERATURE DATA LOG
SEISMIC SEAWATER LOG

ABBREVIATIONS

NB	NEW BIT	SVG	SURVEY GAS
RNB	RERUN BIT	C	CARBIDE TEST
CB	CORE BIT	MW	MUD DENSITY 2.25
WOB	WEIGHT ON BIT	V	FUNNEL VISCOSITY
RPM	REVS PER MINUTE	FL	FILTRATE API
FLC	FLOW CHECK	FC	FILTER CAKE
CR	CIRCULATE RETURNS	PV	PLASTIC VISCOSITY
PR	POOR RETURNS	YP	YIELD POINT
NR	NO RETURNS	SOL	SOLIDS — %
LAT	LOGGED AFTER TRIP	SD	SAND — %
BG	BACKGROUND GAS	B	BALNITE — PPB
TG	TRIP GAS	RM	MUD RESISTIVITY
STG	SHORT TRIP GAS	RMF	FILTRATE RESISTIVITY
CG	CONNECTION GAS		
SWG	SWAB GAS		

CASING SEAT — WIRELINE LOG RUN
CORED INTERVAL — TEST INTERVAL
NO RECOVERY — WIRELINE TEST
SIDEWALL CORE

GAS — 100 Total gas units in conjunction with % methane (C1)
OIL & Stained (in) % of the unsaturated cuttings and percentage staining of saturated cuttings

5 cm

PRESSURE EVALUATION LOG

APPENDIX 2

DEPTH AND DRILLING DATA	ESTIMATED FORMATION BALANCE GRADIENT / ESTIMATED NORMAL FORMATION BALANCE GRADIENT	MUD DENSITY OUT (●) EQUIVALENT CIRCULATING DENSITY (ECD) (○)	RFT ●	FORMATION FRACTURE PRESSURE GRADIENT ESTIMATED □ LEAK-OFF TEST ■	ESTIMATED OVERBURDEN PRESSURE GRADIENT (▲)

Normal Over Balance

Possible Formation Balance Gradient

Possible Under Balance

Under balance

Possible Low Permeability

5 cm

CORE ANALYSIS REPORT

FOR

AMOCO AUSTRALIA PETROLEUM CO.

PELICAN NO.5
PELICAN
BASS BASIN

452031

MOCO AUSTRALIA PETROLEUM CO.
ELICAN NO.5
ELICAN
ASS BASIN

DATE : 7/2/86
FORMATION :
DRLG. FLUID:
LOCATION : TASMANIA

FILE NO : 318 86006
LABORATORY: ADELAIDE
ANALYSTS : R.M & P.A
ELEVATION :

CONVENTIONAL CORE ANALYSIS

AMPLE UMBER	DEPTH METERS	PERM MD HORIZ Ka	He POR	GRAIN DEN M	DESCRIPTION
	CORE NO.1				
1	2790.50	57.	20.9	2.66	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
2	2790.80	32.	19.8	2.66	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
3	2791.10	61.	19.4	2.68	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
4	2798.15	210.	22.7	2.64	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
5	2798.40	39.	20.0	2.66	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
6	2800.86	6.3	16.0	2.67	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
7	2801.23	9.4	17.3	2.67	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
8	2801.80	100.	18.3	2.66	SST LTBRN MG WL CMT SBANG-SBRND WL SRT
9	2802.12	35.	18.9	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
10	2802.55	14.	18.2	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
11	2802.85	16.	18.8	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
12	2803.15	4.3	17.3	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
13	2803.66	1.1	12.8	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
	CORE NO.2				
14	2868.73	0.17	11.2	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
15	2869.00	0.47	15.0	2.71	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
16	2869.30	1.1	15.3	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
17	2869.57	0.93	18.0	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
18	2869.90	0.42	15.7	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
19	2870.20	0.56	16.9	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
20	2870.50	1.4	8.4	2.54	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
21	2870.80	0.15	9.4	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
22	2871.10	3.0	15.1	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
23	2871.38	1.4	15.8	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
24	2871.80	0.80	14.7	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgmeat of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

452032

AMOCO AUSTRALIA PETROLEUM CO. DATE : 7/2/86 FILE NO : 318 86006
PELICAN NO.5 FORMATION : LABORATORY: ADELAIDE

CONVENTIONAL CORE ANALYSIS

SAMPLE NUMBER	DEPTH METERS	PERM MD HORIZ Ka	He POR	GRAIN DEN M	DESCRIPTION
25	2872.10	3.5	18.2	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
26	2872.38	7.6	17.4	2.64	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
27	2872.70	1.0	14.2	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
28	2873.00	1.2	9.3	2.79	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
29	2873.31	0.84	12.6	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
30	2873.60	5.5	17.6	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
31	2873.88	4.2	17.1	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
32	2874.10	0.38	12.9	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
33	2874.40	34.	18.6	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
34	2874.70	68.	19.1	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
35	2875.05	59.	18.7	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
36	2875.30	29.	18.6	2.69	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
37	2875.60	26.	17.6	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
38	2875.90	3.5	12.4	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
39	2876.20	8.1	14.5	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT
40	2876.50	13.	15.8	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
41	2876.80	2.3	12.7	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
42	2877.10	15.	15.9	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
43	2877.40	17.	16.3	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT
44	2877.70	7.2	14.7	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
45	2878.00	25.	17.3	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT
46	2878.30	2.0	13.6	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT
47	2878.60	3.0	16.8	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT
48	2878.90	6.1	13.9	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
49	2879.20	13.	17.3	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT
50	2879.50	16.	17.1	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
51	2879.83	2.5	13.0	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
52	2880.10	20.	17.6	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT
53	2880.40	19.	17.4	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT
54	2880.85	190.	19.7	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT
55	2881.13	240.	20.8	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT
56	2881.40	0.54	16.1	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

452033

AMOCO AUSTRALIA PETROLEUM CO. DATE : 7/2/86 FILE NO : 318 86006
PELICAN NO.5 FORMATION : LABORATORY: ADELAIDE

CONVENTIONAL CORE ANALYSIS

SAMPLE NUMBER	DEPTH METERS	PERM MD HORIZ Ka	He POR	GRAIN DEN M	DESCRIPTION
	CORE NO.3				
57	2881.75	0.48	17.3	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
58	2882.08	0.31	16.4	2.71	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
59	2882.33	0.64	17.4	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
60	2882.59	0.12	9.6	2.69	SST LIGY F-MG WL CMT SBANG-SBRND WL SRT SHLY LA
61	2882.79	5.1	18.8	2.64	SST LIGY MG WL CMT SBANG-SBRND WL SRT
62	2883.06	0.34	14.4	2.69	SST LIGY MG WL CMT SBANG-SBRND WL SRT SHLY LAM
63	2883.28	0.58	15.2	2.66	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
64	2883.60	0.77	17.4	2.71	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
65	2883.90	0.82	17.9	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
66	2884.17	0.13	12.3	2.69	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
67	2884.49	0.51	15.5	2.70	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
68	2884.79	0.52	16.0	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
69	2885.06	0.47	13.1	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
70	2885.41	0.80	17.3	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT
71	2885.70	1.3	18.2	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT
72	2886.01	0.47	15.0	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
73	2886.31	0.34	14.1	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
74	2886.56	0.78	16.5	2.68	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
75	2886.91	1.1	16.9	2.69	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
76	2887.23	1.1	14.3	2.67	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
77	2887.53	47.	20.6	2.74	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
78	2887.82	130.	19.6	2.65	SST LIGY MG WL CMT SBANG-SBRND WL SRT S SHLY
79	2888.15	43.	18.1	2.66	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY
80	2888.50	0.18	11.4	2.88	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY
81	2888.77	0.05	13.2	2.84	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY
82	2889.08	0.05	14.8	2.85	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY
83	2889.38	0.10	18.5	2.84	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY
84	2889.72	0.04	11.5	2.73	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY
85	2889.97	0.12	16.0	2.70	SST LIGY VFG WL CMT SBANG-SBRND WL SRT SLTY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

452034

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTY, STATE: BASS BASIN

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.000 TO 240.
POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS (METERS) : 2790.50 - 2900.00 INTERVAL LENGTH : 109.50
METERS ANALYZED IN ZONE : 25.91 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES		
AVERAGE	ARITHMETIC	HARMONIC	GEOMETRIC
16.1	20.	0.49	2.9

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

452035

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTY, STATE: BASS BASIN

GROUPING BY POROSITY RANGES

POROSITY RANGE	METERS IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
8.0 - 10.0	1.22	9.2	0.417	0.717	4.7	4.7
10.0 - 12.0	0.91	11.4	0.107	0.130	3.5	8.2
12.0 - 14.0	3.35	13.0	0.886	1.8	12.9	21.2
14.0 - 16.0	5.49	15.0	1.1	3.0	21.2	42.4
16.0 - 18.0	7.92	17.0	2.6	7.1	30.6	72.9
18.0 - 20.0	5.49	18.8	17.	46.	21.2	94.1
20.0 - 22.0	1.22	20.6	71.	96.	4.7	98.8
22.0 - 24.0	0.30	22.7	210.	210.	1.2	100.0

TOTAL NUMBER OF METERS= 25.91

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgmeat of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

452036

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTY, STATE: BASS BASIN

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	METERS IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.039 - 0.078	0.91	0.046	0.047	13.2	3.5	3.5
0.078 - 0.156	1.52	0.123	0.124	13.2	5.9	9.4
0.156 - 0.312	0.91	0.212	0.220	13.0	3.5	12.9
0.312 - 0.625	3.96	0.461	0.468	15.2	15.3	28.2
0.625 - 1.250	4.27	0.912	0.927	15.3	16.5	44.7
1.250 - 2.500	1.52	1.6	1.7	13.7	5.9	50.6
2.500 - 5.000	2.13	3.4	3.4	15.7	8.2	58.8
5.- 10.	2.44	6.8	6.9	16.3	9.4	68.2
10.- 20.	2.44	15.	15.	17.1	9.4	77.6
20.- 40.	2.44	29.	30.	18.6	9.4	87.1
40.- 80.	1.83	55.	56.	19.5	7.1	94.1
80.- 160.	0.61	114.	115.	18.9	2.4	96.5
160.- 320.	0.91	212.	213.	21.1	3.5	100.0

TOTAL NUMBER OF METERS = 25.91

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

452037

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTY, STATE: BASS BASIN

POROSITY-METERS OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	METERS LOST	CAPACITY LOST (%)	METERS REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.00	0.0	25.91	100.0	16.1	16.5
2.0	0.00	0.0	25.91	100.0	0.0	16.5
4.0	0.00	0.0	25.91	100.0	0.0	16.5
6.0	0.00	0.0	25.91	100.0	0.0	16.5
8.0	0.00	0.0	25.91	100.0	0.0	16.5
10.0	1.22	2.7	24.69	97.3	0.0	16.7
12.0	2.13	5.2	23.77	94.8	0.0	16.8
14.0	5.49	15.6	20.42	84.4	0.0	17.2
16.0	10.97	35.3	14.94	64.7	0.0	17.9
18.0	18.90	67.7	7.01	32.3	0.0	19.3
20.0	24.38	92.3	1.52	7.7	0.0	21.3
22.0	25.60	98.3	0.30	1.7	0.0	23.0
24.0	25.91	100.0	0.00	0.0	0.0	

TOTAL STORAGE CAPACITY IN POROSITY-METERS = 416.97

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

452038

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

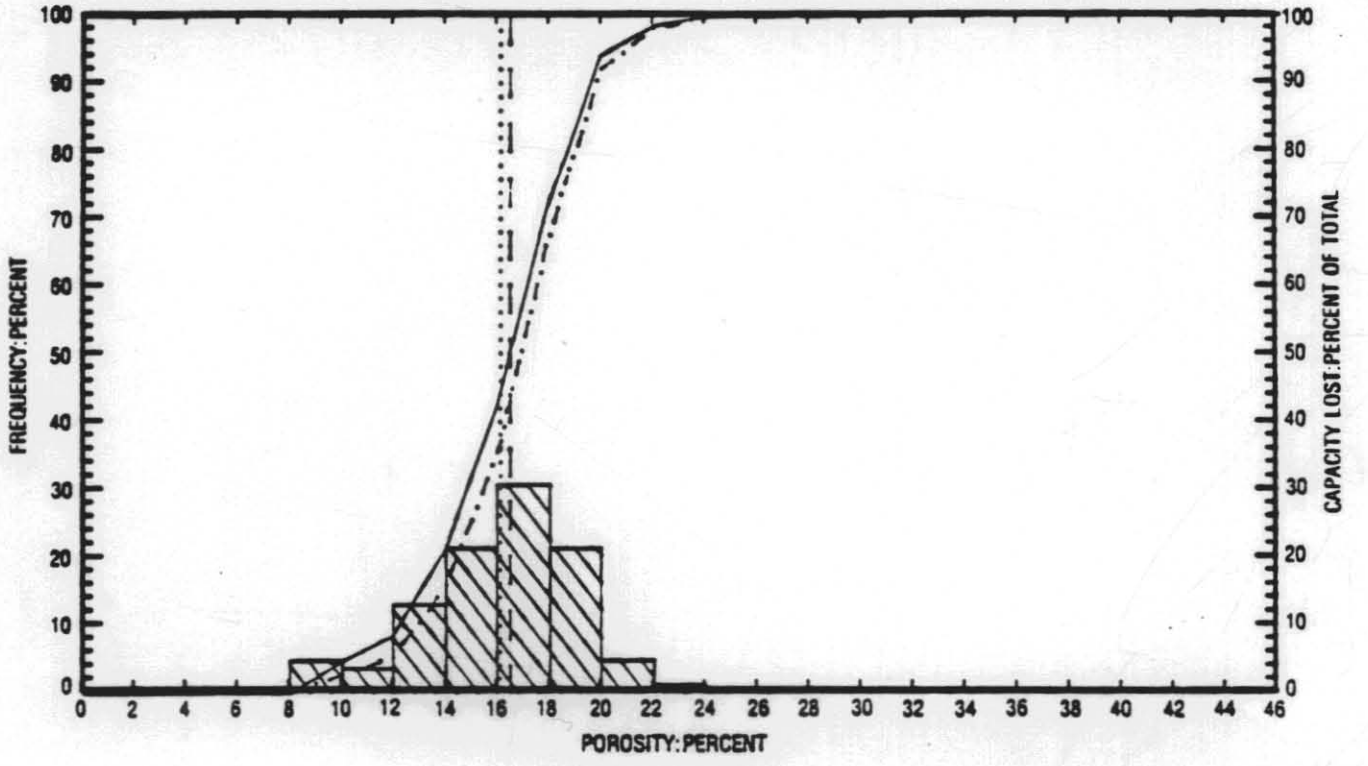
COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTY, STATE: BASS BASIN

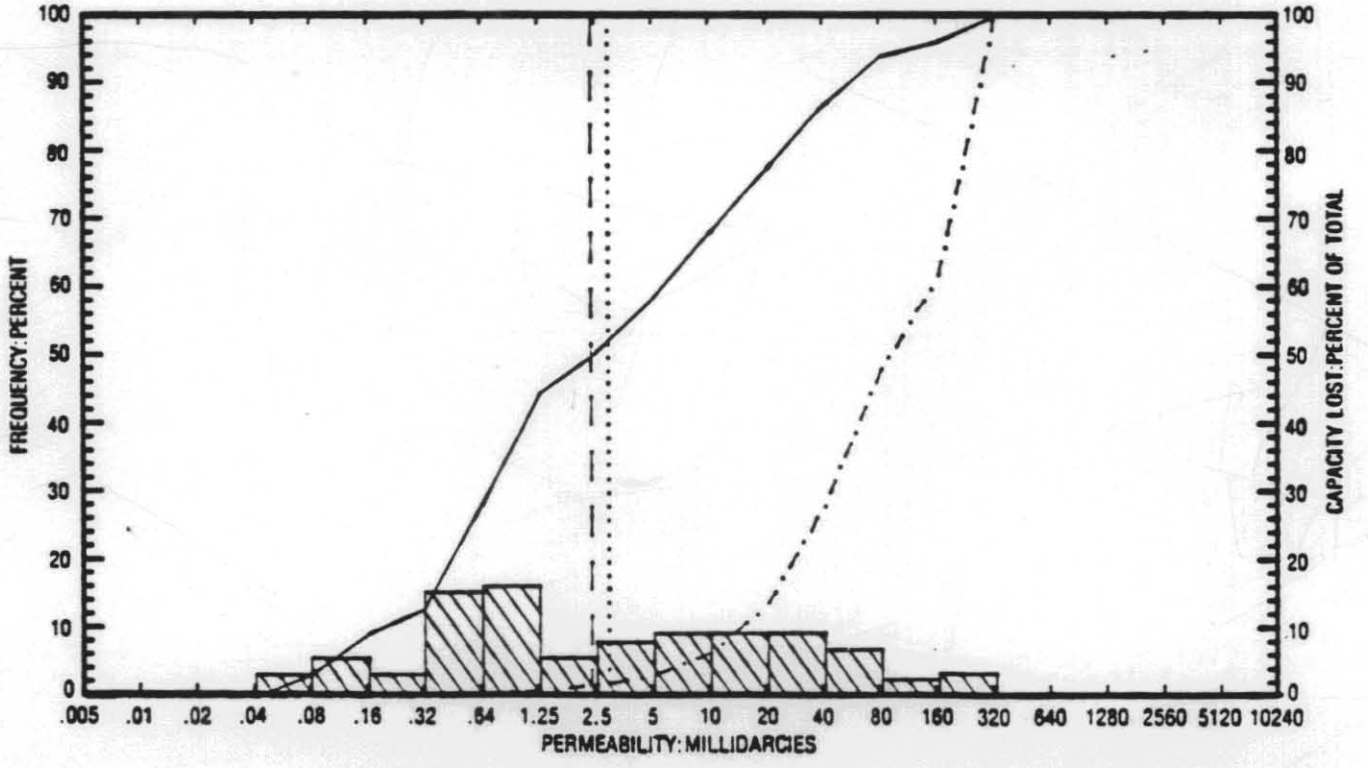
MILLIDARCY-METERS OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	METERS LOST	CAPACITY LOST (%)	METERS REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.00	0.0	25.91	100.0	2.85	2.33
0.010	0.00	0.0	25.91	100.0	2.85	2.33
0.020	0.00	0.0	25.91	100.0	2.85	2.33
0.039	0.00	0.0	25.91	100.0	2.85	2.33
0.078	0.91	0.0	24.99	100.0	3.31	2.76
0.156	2.44	0.0	23.47	100.0	4.11	3.54
0.312	3.35	0.1	22.56	99.9	4.63	4.10
0.625	7.32	0.4	18.59	99.6	7.57	7.38
1.250	11.58	1.2	14.33	98.8	14.22	13.54
2.500	13.11	1.7	12.80	98.3	18.39	16.82
5.	15.24	3.2	10.67	96.8	25.81	22.78
10.	17.68	6.5	8.23	93.5	38.35	32.21
20.	20.12	13.8	5.79	86.2	56.53	47.57
40.	22.56	28.1	3.35	71.9	90.92	75.51
80.	24.38	48.1	1.52	51.9	165.59	179.59
160.	24.99	61.8	0.91	38.2	212.35	226.27
320.	25.91	100.0	0.00	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-METERS(ARITHMETIC) = 510.90

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or





PERMEABILITY AND POROSITY HISTOGRAMS

AMOCO AUSTRALIA PETROLEUM CO.
PELICAN NO.5
PELICAN
BASS BASIN

5 cm

LEGEND

ARITHMETIC MEAN POROSITY
GEOMETRIC MEAN PERMEABILITY
MEDIAN VALUE
CUMULATIVE FREQUENCY
CUMULATIVE CAPACITY LOST

452040

PERMEABILITY VS POROSITY

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTY, STATE: BASS BASIN

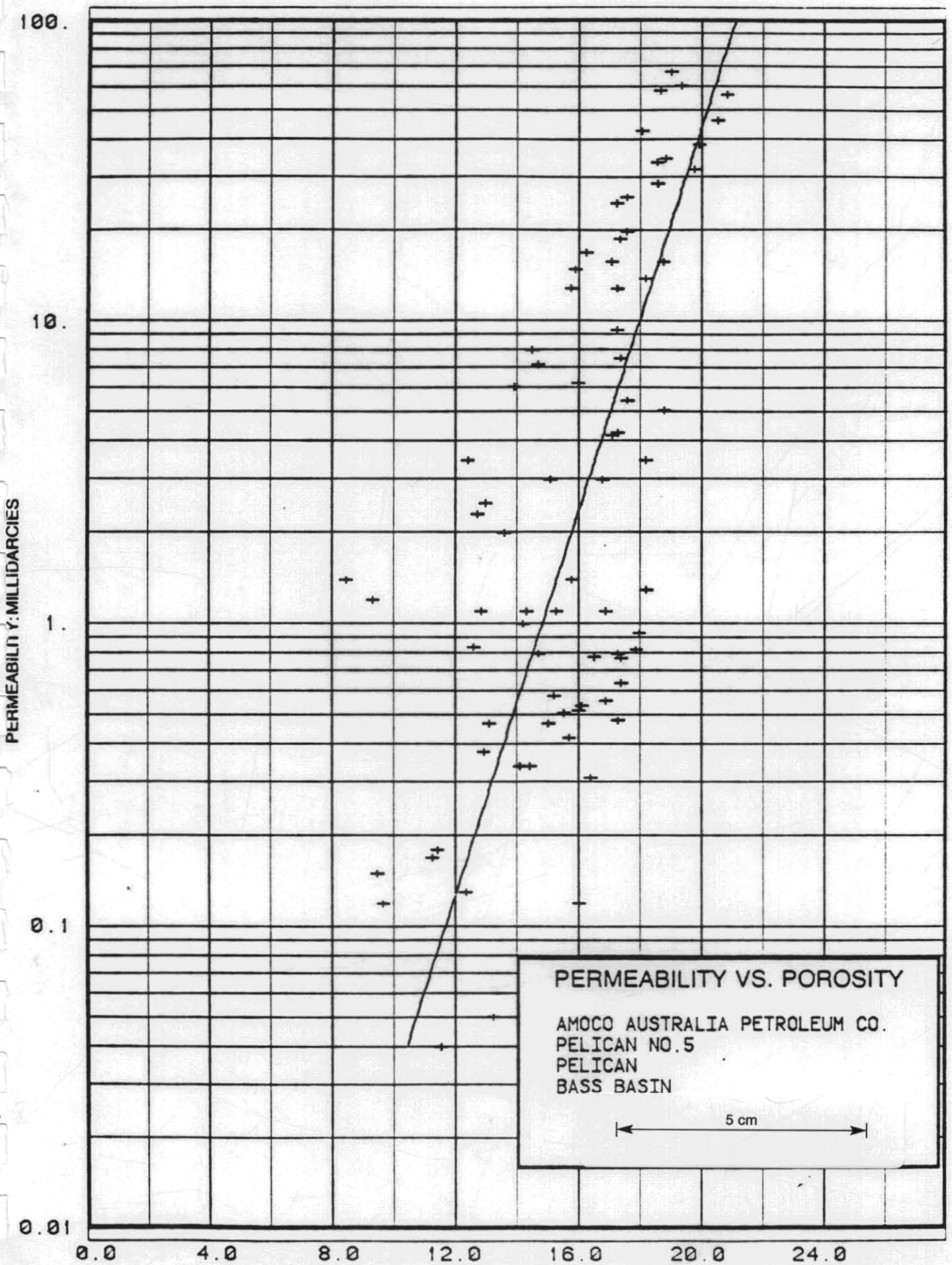
AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRI
2790.5 - 2900.0	1 (+)	0.040	240.0	8.4	22.7	16.0	17.	0.51	2.2

EQUATION OF REDUCED LINE RELATING PERMEABILITY(K) TO POROSITY :
LOG(K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTILOG((SLOPE)(POROSITY) + LOG OF INTERCEPT)

RANGE	EQUATION OF THE LINE
1	PERM = ANTILOG((0.3142)(POROSITY) + -4.6666)

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions


100.
10.
1.
0.1
0.01
PERMEABILITY: MILLIDARCIES
0.0
4.0
8.0
12.0
16.0
20.0
24.0
PERMEABILITY VS. POROSITY
AMOCO AUSTRALIA PETROLEUM CO.
PELICAN NO.5
PELICAN
BASS BASIN
5 cm

452042

STATISTICAL DATA FOR GRAIN DENSITY HISTOGRAM

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTRY : BASS BASIN

GRAIN DENSITY : gm/cc (MEASURED) RANGE USED 2.34 TO 2.94

DEPTH LIMITS : 2790.50 - 2900.00 INTERVAL LENGTH : 109.50
METERS ANALYZED IN ZONE : 100.72 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

GRAIN DENSITY ARITHMETIC MEAN	GRAIN DENSITY MEDIAN
2.67	2.67

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions

STATISTICAL DATA FOR GRAIN DENSITY HISTOGRAM

COMPANY: AMOCO AUSTRALIA PETROLEUM CO. WELL : PELICAN NO.5
FIELD : PELICAN COUNTRY : BASS BASIN

GROUPING BY GRAIN DENSITY RANGES

GRAIN DENSITY RANGE	METERS IN RANGE	AVERAGE DENSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
2.54 - 2.56	1.00	2.54	1.0	1.0
2.64 - 2.66	22.00	2.65	21.8	22.8
2.66 - 2.68	51.72	2.66	51.4	74.2
2.68 - 2.70	14.00	2.68	13.9	88.1
2.70 - 2.72	5.00	2.71	5.0	93.1
2.72 - 2.74	1.00	2.73	1.0	94.0
2.74 - 2.76	1.00	2.74	1.0	95.0
2.78 - 2.80	1.00	2.79	1.0	96.0
2.84 - 2.86	3.00	2.84	3.0	99.0
2.88 - 2.90	1.00	2.88	1.0	100.0

TOTAL NUMBER OF METERS = 100.72

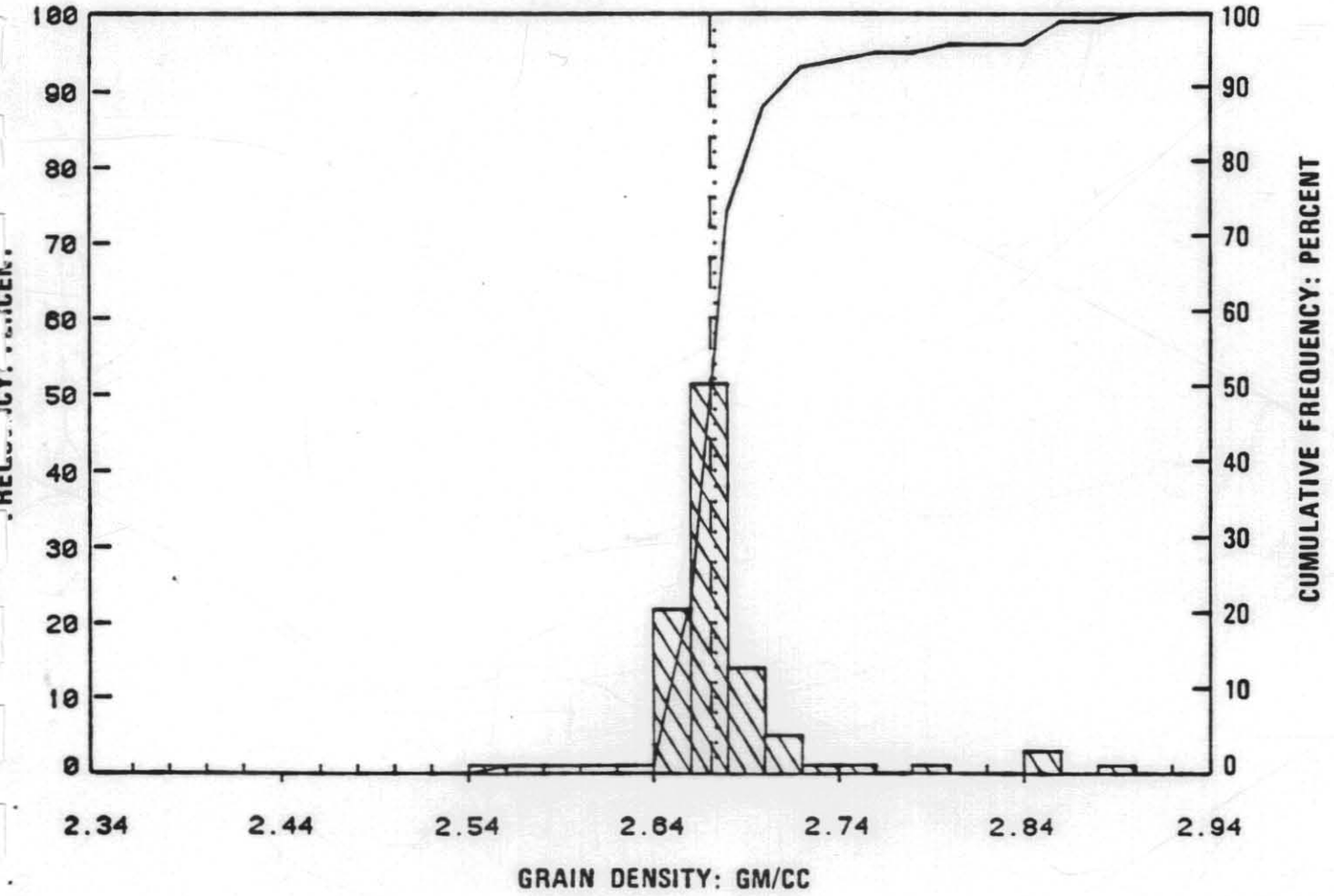
These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretation ... upon

452044

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY AMOCO AUSTRALIA PETROLEUM CO. FILE NO. 318 86006
WELL PELICAN NO.5 DATE 7/2/86
FIELD PELICAN FORMATION ELEV.
COUNTRY BASS BASIN DRLG. FLD. CORES
LOCATION TASMANIA

GRAIN DENSITY HISTOGRAM



5 cm

LEGEND
ARITHMETIC MEAN GRAIN DENSITY .....
MEDIAN VALUE — — —
CUMULATIVE FREQUENCY ———

452045

Company Name
AMOCO AUSTRALIA PETROLEUM COMPANY

PAGE 1 OF 1

Record of Transmittal, Destruction and Inventory of Classified Material

R. Blanton Amoco Prod. Att: C. Mazzullo 2.264 W. Moehl 2.232 | Location 501 Westlake Park Blvd, Houston, Texas 77079 | Date 21.4.86

Control Number	Description	Report Number	Scale	Author	Date of Report	Date Printed	Record of Destruction: Authorized Initials	Authorized Date	Destroyed Initials	Destroyed Date
	Please find enclosed:									
	Bass Basin Data Reports									
✓	1 x Thin Section Petrography,			Arnold	April 86.					
	Sem and XRD Analyses of									
	Core and Sidewall Core									
	Samples from Pelican-5.									
✓	1 x Vol 2 Sem photography			"	" "					

Authorized by S C Jones

Please acknowledge receipt by signing and returning one copy of this transmittal to
Amoco Australia Petroleum Company
P.O.Box 126,
North Sydney, N.S.W. 2060, Australia

Receipt of above material is acknowledged 4-23-86

Appendix No. 4

452046

16-186 (7-85)

APRIL 2,1986

TO		FROM	
Name	ROBERT L. BLANTON	Name	C. W. WARING
Company	AMOCO PRODUCTION COMPANY	Company	AMOCO AUSTRALIA PETROLEUM COMPANY
Location	HOUSTON, TEXAS	Location	SYDNEY, AUSTRALIA
Facsimile Telephone No.	00111 713 556 2139	Facsimile Telephone No.	(02) 922 4886

AAA REGION APR 2 1986

	Init.	Act	Int.
RLB			
RJG	✓		
JDH			
OCN			
PMK			
JRR			
GLM			
LGM			
FILE NO.			

This transmission consists of: THREE pages (including this page)

Time Sent

Confirmed By

CC: RCS, EMT, WBM

ATTN: W.R. MOEHL - M.C. 2.232
J.C. STRICKLAND - M.C. 2.470
E.M. TRAPP /C.W. WARING - M.C. 2.318

RE: PELICAN-5 DST NO.5 PERFORATIONS
HO-AUP-246-F-400-GMK

REUR TELEX (AUP-HO-202-T-RJB-400) OF APRIL 1 CONCERNING THE PERFORATION OF THE INTERVAL 2871M TO 2881M, WE RECOMMEND, BASED ON CORE ANALYSIS DATA AND RECENTLY COMPLETED WHOLE CORE DESCRIPTIONS THAT THIS INTERVAL BE VARIED TO 2876M TO 2883M LOG DEPTH.

BY PERFORATING THIS INTERVAL ONLY, THE MORE PERMEABLE ZONES AND THOSE WITH THE HIGHEST RESIDUAL OIL SATURATIONS WILL BE TESTED. FURTHER, BEARING IN MIND A DEPTH SHIFT OF +1.8M TO BE ADDED TO CORE DEPTH TO OBTAIN THE ELECTRIC LOG DEPTH, THE FOLLOWING IS A SUMMARY OF KEY DATA:

ZONE	PERMEABILITY (MD)	He POROSITY (%)	OIL SATN (%)
2876-2883M	2-240	12.4 - 20.8	0 - 1.3
(2874.4-2881.1M CORE PLUG DEPTHS)	AV. 34.3	AV. 16.5	AV. 0.2

THUS, THIS ZONE EXHIBITS MUCH BETTER RESERVOIR CHARACTERISTICS AND RESIDUAL OIL SATURATIONS THAN THE REMAINING CORED INTERVAL.

THE ATTACHED CORE DESCRIPTION FOR CORE NO. 2 SHOWS THAT A MASSIVE TO PLANAR HORIZONTALLY BEDDED CHANNEL SAND WAS DESCRIBED OVER THE INTERVAL 2874.4 TO 2881.3M. IT IS FINE TO VERY COARSE GRAINED, DOMINANTLY MEDIUM TO COARSE GRAINED WITH 5-10% AND OCCASIONALLY 10-15% WHITE CLAY MATRIX. TRACE TO 5% SILICA CEMENT WAS OBSERVED AS AUTHIGENIC OVERGROWTHS WITH TRACE TO 5% CALCITE CEMENT OCCURRING IN THE SANDSTONE ABOVE 2880.5M CORE DEPTH. THESE OBSERVATIONS ARE SUPPORTED BY THIN-SECTION PETROGRAPHY CONDUCTED BY AMDEL ON CORE CHIPS REFER OUR FAX (HO-AUP-219-F-400-RGM) OF MARCH 26, WHERE THE COMBINED TOTAL OF LITHICS AND AUTHIGENIC KAOLINITE APPROXIMATES AMOCO'S ESTIMATES OF WHITE CLAY MATRIX.

FOR THIS SAND, NO NATURAL FLUORESCENCE WAS OBSERVED AND ONLY NIL TO VERY PALE GREENISH-YELLOW TO YELLOWISH WHITE VERY SLOW CUTS AND CRUSH CUTS WERE OBSERVED. VERY RARE TO SPOTTY 5% PALE TO OCCASIONALLY DARK BROWN OIL STAINING WAS NOTED IN THIS SAND.

REGARDS,
C.W. WARING

2 APR 86 6: 36

Distribution:
WHITE – ORIGINATOR
PINK – AUTHOR'S FILE
YELLOW – UREN FILE
GREEN – NUMBER FILE

Typed By Lyn Coleman

PELICAN NO. 5

DATE: 1/2/86 LOGGING SUITE NO: 2 BY: SCHLUMBERGER GEOLOGIST: G.M. KJELLGREN/R. McCULLOUGH

RUN NO: 1 SHOT: 60 RECOVERED: 58

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
1	3000.0	-	3.0	GOOD	SLST: MDBRN TOGY, SOFT ARGILL, V CALC, COMPLETED DISSAGG WITH DILUTE HCL. SST: DK BRN TO BLK, V FN GRN, HD & BRITTLE. COMM QTZ-XTALS SCATTER THRU SLST.	POOR <10%	-	-	-	-	SLOW DULL YELL-BRN	-	TRACE
2	2995.0	-	2.0	GOOD	SLST: CRMY WHT, V SOFT, UNCONSOL, NON-CALC, CLY COMM, TR GLAUC AS DARK EMERALD GRN PELLATOIDS, TR FN BLK LAMS OF ORGANIC DEBRIS	POOR <10%	-	-	-	-	-	-	-
3	2991.0	-	3.0	GOOD	CLST: GYBRN TO DK GY, V SOFT FLAKY TO SUB-FISS, NON-CALC, GRDS TO SLST, V HOMOGENIOUS, NO BEDDING.	-	-	TR RD BRN	-	-	-	-	-
4	2979.5	-	4.0	GOOD	SST: LGY TO CRMY WH, LOW M TO UP FRGRD, M TO W SRT, SA-ANG. TR CALC CMT, 10-15%, CLY MATRIX TR, COAL BKLY TO FISSLE, BLK VIT LUST, TR EMERALD GRN GLAUC	10 - 15% FAIR TO GOOD	-		-	MOD FAST WHT TO YELL GOLD	FAST WHT TO GLDN YELL	-	POOR
5	2978.5	-	1.5	FAIR	CLST: M BRN TO GY, NON-CALC SOFT FLAKY TO SUB-FISS, POSS MICMIC V. HOMOGENIOUS.	-	-	-	-	-	-	-	-
6	2972.0	-	NO REC	-	-								
7	2970.5	-	BROK-EN	POOR	COAL: BK BLKY TO SUB-CONCH FRAC, RICH VIT LUST V CLEAN V HOMOGENIOUS	-	-	-	-	-	-	-	-
8	2969.0	-	1.5	GOOD	SST: LT BRN TO GY, V SOFT, V FRIABLE PRED LOW M GRN RARE UP M GRN V CALC. SAMPLE DISSAG WITH HCL. CLAY TR TO COMM M TO W SRT SR-SA,	<10% FAIR	-	-	-	-	POOR PALE YELL GOLDEN	-	(V COMMON MIN FLUOR) TRACE
9	2965.0	-	BRO-KEN	POOR	SST: LT BRN TO GY, V SOFT, PREDOM LOW MDGRN RARE UP MD GRN. V CALC. SAMPLE DISSAG WITH HCL M TO S SRT SR TO SA. CLAY TR TO COMM, RARE EMERALD GRN GLAUC PELLATOIDS.	10-15% FAIR TO GOOD	-	-	-	POOR SLOW GOLDEN YELL	POOR SLOW GOLDEN YELL WHT	-	POOR
10	2962.5	-	2.5	GOOD	SST: LT BRN TO GY, PRED UP FN GRN, M TO W SRT, SA-SR. TR CALC CMT. TR DISS ORGANIC DEBRIS, TR GLAUC EMERALD GRN PELLATOIDS.	FAIR TO GOOD 10-20%	-	-	30% YEL WH	DULL YELL WHT	IMMED GRN YEL	-	GOOD
11	2941.0	-	4.0	GOOD	SST: LT BRN TO GY, UP FNGRN, M TO W SRT, SA. A SLOW CONTINUOUS DISSOLUTION OF SAMPLE WITH HCL (DOLO?) CMT SOFT TO FIRM, CLAY TR TO COMM	FAIR TO GOOD 10-15%	-	-	-	-	-	-	-
12	2937.0	-	2.5	GOOD	SLST: CRMY WH TO TAN BRN, NON-CALC, SILICOUS. BANDED APPEARANCE DUE TO ALTERATIONS OF COLOR. TR TO COMMON DESSIM ORGAN DEBRIS.	POOR <10%	-	-	-	-	TR PALE YELL TO WHT	-	TRACE
13	2926.0	-	BRO-KEN	POOR	SLST: MD BRN GY, SOFT V-CALC, SAMPLE DISSAG COMPLETELY WITH HCL. NO APPAR BEDDING OR BANDING. COMMON BLK ORGANIC DEBRIS DISS THROUGHOUT, CLAY TR TO COMM.	POOR <10%	-	-	-	-	-	-	-
14	2920.0	-	2.5	GOOD	SST: WH TO LT GY, UP VFNGRN, W SRT, SR, NON-CALC, SOFT TO SEMI FISS. PROB SILIC CMT, TR CLY. TR ORGAN DEBRIS, TR MAFICS,	FAIR TO GOOD 10-15%	-	-	-	-	-	-	-
15	2915.0	-	3.0	GOOD	SST: LT BRN/GY, LOW UP MD GRN, IN SR-SA. NON-CALC SILICEOUS CMT, TR TO COMM CLY, TR TO COMM ORGANIC LAMINS, DK BRN VIT LUST V HOMOGENIOUS.	FAIR TO GOOD 10-30%	-	LT TAN TO YELL BRN SPOTTY	BRT YELL TO PALE YELLOW OVER 30-40%	IMMED BRT WHT TO YELL FADING TO ORANGE	SLOW BRT YELL TO CRMY WHT	-	EXCELLENT
16	2912.0	-	4.0	GOOD	SST: LT GY, UP FN GRN M TO W SRT, SA-SR. MOD CALCARIOUS, TR CLAY. TR ORGANIC DEBRIS, SOFT TO FRIABLE, V HOMOGENIOUS.	FAIR TO GOOD 15-20%	-	-	-	POSS TR OF PALE ORANGE	TR SLOW PALE YELLOW TO MILKY WHITE	-	TRACE
17	2900.0	-	2.5	GOOD	SLST: LT TANGY, SOFT. BANDED APPEAR DUE TO ALTERATIONS OF LT TO TAN SILICA. NON-CALC, TR TO COMM LAMIN ORGANIC DEBRIS	POOR <10%	-	-	-	-	-	-	-
18	2891.0	-	4.0	GOOD	SST: LT GRN TO TAN, PREDOM LOW V FN GRN, TR TO COMM FN TO LOW FN, M TO W SRT, V FN SR, OTHERS SA. CALC CMT, TR SILIC CMT. SOFT TO FIRM, TR CLAY, TR SCATTERED ORGANIC.	FAIR - GOOD 15-20%	-	-	-	-	-	-	-
19	2885.5	-	3.5	GOOD	SLST: MED BRN GY, BANDED DUE TO LAMIN OF DISS ORGANIC MAT. PROB CALC CMT SAMPLE DISSAG WITH HCL. SST: 10% ONE THIN LAMINATION (5mm) V V FN TO SUPER FN, SILIC CMT, TR CLAY, V W SRT, SR.	POOR <10%	-	-	BRT YELL TO GOLD 30% OF SST	SLOW PALE YELL TO WHT	IMM CRMY WHT TO YELL	-	GOOD

DATE: 1/2/86 LOGGING SUITE NO: 2 BY: SCHLUMBERGER GEOLOGIST: G.M. KJELLGREN/R. McCULLOUGH

RUN NO: 1 SHOT: 60 RECOVERED: 58

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
20	2882.5	-	3.5	GOOD	SST: LT GY TO LT BRN, V FN GRN, W TO VW SRT, SR. SILICEOUS CMT, TR CLAY. V HOMOGENEOUS, TR ORGANIC DEBRIS, SOFT TO FIRM SEMI-FRIABLE.	FAIR 7 - 12%	-	-	-	-	-	-	-
21	2881.0	-	3.0	GOOD	SST: LT GY, VFN GRN V W TO W SRT, SR. SILICEOUS. RARE TO TR CLAY. FIRM TO SEMI-FRIABLE. TR OF DESS ORGANICS.	FAIR TO GOOD 12 - 20%	-	-	-	-	-	-	-
22	2877.0	-	3.0	GOOD	SST: LT GY, TO TAN, V FN GRN, W TO VW SRT, SR. TR TO COMM SCATTERED CRSE QTZ XTALS. CALC, TR GLAUCON.	FAIR TO GOOD 12 - 20%	-	-	-	PALE YELL	YELLOW GOLD	-	POOR
23	2874.5	-	2.0	GOOD	SST: LT GY, UP MED GRN, SR-SA, M TO W SRT, SILIC CMT. TR CLAY, COMMON DESS ORGANIC. FRACTURES? MED TO DK BRN SLST. HIGH ORGANIC CONTENT, POSS BITUMEN.	FAIR TO GOOD 10 - 15%	-	POSS MED TO DK BRN - BITUMEN?	PATCHY YELL GOLD	SLOW TO MOD FAST STRMG YELL/WHT	MOD FAST YELL/WHT	-	GOOD
24	2870.0	-	4.0	GOOD	SST: MED TO DK GY, UP FN TO LOW MED GRN, GRADS TO SILT IN PART. BLK VIT DEBRIS COMMON IN SLST, CLAY TR TO COMM. CALC WITH TR SILICA CMT. FIRM, M TO W SRT, SA-SR. TR ROSE QTZ X TALS.	FAIR TO GOOD 10 - 15%	-	-	-	V SLOW GREEN-YELL	TR DULL YELL	-	POOR
25	2860.0	-	3.0	GOOD	SST: MD GY, LOW FN GRN, M TO W SRT, SR. TR CALC CMT, PRED SILIC CMT. CLAY TR TO COMM. SCATTERED ORGANIC DEBRIS.	FAIR <10%	-	-	-	V SLOW PALE YELL TO CRMY WHT	-	-	TRACE
26	2858	-	2.5	GOOD	SST: MED GY, LOW FN GRN, TR CALC CMT PREDOM SILIC CMT. CLAY TR TO COMM, M TO W SRT, SR FIRM. TR SCATT ORGANIC DEBRIS. TR SLST. TAN TO MED BRN - COLOR DUE TO RESIDUAL HYDRO.	FAIR <10%	-	TR OF LT TAN TO BRN IN SLST FRACT	TR PATCHY ORANG	V SLOW GOLDEN YELLOW	MOD SLOW DULL YELL GOLD	-	FAIR
27	2856	-	2.5	GOOD	SST: MED TO LT GY, MED GRN SPANS UP AND LOWER, M TO W SRT, SA. SILIC CMT, MOD TO HEAVY OVERGROWTHS. V HOMOGENEOUS, RARE TO TR SCATTER ORGANICS. NO APP BEDDING OR LAMINATIONS.	FAIR <10%	-	-	-	-	-	-	-
28	2854	-	2.5	GOOD	SST: LT BRN, V FN GRN W TO V W SRT, R-SR. SILICA CMT. FIRM TO SEMI FRIABLE, PLATY APPEAR. TR CLAY. V HOMOGENIOUS.	FAIR TO GOOD 10 - 20%	-	-	POSS ORANGE TO GOLDEN YELL HUE	V SLOW CRMY YELL	-	-	POOR
29	2846	-	3.0	GOOD	SST WITH SLST INTERBEDS. SST (60%): LT GY, W TO V W SRT, SR, UPPER V FN SILICA CMT WITH TR TO COMM CLY. SCATTER ORGANICS. SLST: MED BRN LTGY, LAMIN TO SEMI-FISS, COMM MICRO-LAMINS OF COAL.	POOR TO FAIR <7%	-	TR YELL/BRN IN SST	PATCHY BRT YELL	DULL YELL PATCHY	MOD BRT YELL TO CRMY MOD FAST	-	GOOD - EXC.
30	2825.5	-	3.5	GOOD	SST: MED TO LT GY, UPPER FN GRN, W TO V W SRT, SR. SILIC CMT, TR CALC CMT. TR CLAY, FIRM. TWO SLST LAMINS: RD BRN TO DK GY BLK.	FAIR 8 - 12%	-	TR LT TAN-BRN IN SST	-	PATCHY BRT YELL ON SST	SLOW DULL PATCHY YELL	-	POOR
31	2822.5	-	2.0	GOOD	SST: LT GY, BOTH LOW AND UP FN GRN, M SRT SA. SILICA CMT, TR CALC CMT. PROB QTZ OVERGROWTHS. V CLEAN HOMOGENEOUS SST, TR CLAY, SOFT.	POOR TO FAIR 5 - 15%	-	-	-	-	-	-	-
32	2820	-	3.0	GOOD	SST: LT TO MED GY, UPPER FN GRN, MOD TO WELL SORT, SR. SILICA CMT, TR QTZ OVERGROWTHS. FIRM, TR CLAY, TR ORGANICS.	FAIR <12%	-	-	RARE PIN-POINT DULL ORNG	-	-	-	NIL
33	2816.5	-	2.0	GOOD	SST WITH LAMINATED CLST AND COAL: SST: M GY, LOW FN GRN, SR-SA, M TO W SRT. MOD CALC, PREDOM SILICA CMT. SOFT, TR ORGANIC. CLST: ONE 2MM LAMIN M BRN, V SOFT, COMMON ORGANIC (COAL). TWO 5MM LAMIN.	POOR <10%	-	-	60% MOD BRI EVEN BL-WH AND TR MOD DULL ORNG	INSTANT V. V. SLOW STREAMING PL BL-WH AND V.PL BL-WH	MOD BRT BL-WH AND PL BL-WH	THIN RING	GOOD
34	2803.5	-	1.75	GOOD	SST WITH SLST / CLST LAMINATIONS SST: LT GY, PRED UP V FN GRN RARE LOW MED GR, M TO W SRT, SR, SILICEOUS CMT. CLST: LT BRN/RD GRADES TO SLST, NON-CALC. HIGH CARBONACEOUS DEBRIS CONTENT.	POOR <10%	-	-	-	-	FAINT PL BL.	V. THIN	TRACE
35	2798.5	-	2.5	GOOD	SST WITH LAMINATIONS OF CLST/SLST. SST: LT TO M GY, UP TO V FN GRN, M TO W SRT, SR. SILICEOUS CMT, MOD FIRM TO SOFT. CLST/SLST: THREE V THIN LAMINATIONS, LT BRN/GY TO BLK, ARGILL AND CARBONACEOUS.	FAIR <12%	-	-	-	-	FAINT PL BL	V. THIN	TRACE

DATE: 1/2/86 LOGGING SUITE NO: 2 BY: SCHLUMBERGER GEOLOGIST: G.N. KJELGAARD R. MCCULLOUGH

RUN NO: 1 SHOT: 60 RECOVERED 58 PAGE 3 OF 6

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
36	2794	-	BRO-KEN	POOR	COAL: BLK SUB-VIT LUST BLKY TO SUB-FISS, MICRO LAMINATED, SUB-CONCH FRAC SURF. BITUMEN GRADE.	-	-	-	V. RARE DULL ORNG STREAKS	V.PL BL	MOD BL-WH		POOR - FAIR
37	2788.5	-	2.5	GOOD	SST WITH V THIN CLST LAMINATIONS: SST: M GY, RANGES FROM LOW FN TO UP FN, SILICEOUS, M TO W SRT, SR. SOFT, RARE ORGANICS CLST: ONE V THIN LAMIN, DK DY TO LT BRN.	FAIR <12%	-	-	10-20% PATCHY PL BL-WH	PL BL-WH V.SLW STRMG	MOD BL-WH		FAIR
38	2787	-	2.5	GOOD	SST: MED GY TO DK GY, LOW FN GRN, W SRT, SR. PREDOM SILICA CMT TR CALC CMT. SOFT, V RARE ROSE QTZ AND GLAUCONITE.	FAIR TO GOOD 10 - 15%	-	-	V. RARE PINPOINT DULL ORNG	V. PL BL	MOD BL-WH		POOR - FAIR
39	2780.5	-	.50	POOR	SST: DOLOMITIC TO LIMY SST, V HD V DENSE, V CALC WITH MINOR SILICA CMT. V FN GRN, M TO DK LT BRN/GY. UP TO 2% MAFICS.	V. POOR <5%	-	-	EVEN V. DULL ORNG.	V. PL YEL V.SLW STRMG	PL YEL		(MINERAL? POOR
40	2769	-	2.0	GOOD	SST: M GY, LOW FN GRN, W SRT, SR. PRED SILICA CMT, TR CALC. TR CLAY IN MATRIX, TR MAFICS, SOFT.	FAIR TO GOOD 10 - 17%	-	-	TR PINPOINT DULL ORNG	-	-	-	(MINERAL?
41	2763.5	-	NO REC	-	-	-	-	-	-	-	-	-	-
42	2758	-	2.5	GOOD	SST: LT TO MED GY, GRADES FROM LOW FN TO UP FN GRN, W SRT, SR. PRED SILICA CMT. SLIGHTLY CALCARIOUS, SOFT TO FIRM.	FAIR TO GOOD 10 - 15%	-	-	RARE PINPOINT DULL ORNG	-	-	-	(MINERAL?
43	2754	-	2.5	GOOD	SST: LT GY ALTERNATING WITH LT GY BRN. LT GY FRAC, LOW V FN GRN, MOD CALC, SOFT, LT G YL BRN UP V FN GRN, NON-CALC, SOFT.	FAIR <12%	-	-	TR PINPOINT V. DULL ORNG	-	V.V.PL BL	V.V. THIN RING	TRACE
44	2750	-	4	GOOD	SST: V LT GY, SUPERFINE - F GR, DOM VF-FGR, SA-SR, MOD W SRTD, 20-25% WH CLY MTX. TR SIL CMT, FRI.	POOR 5 - 10%	-	-	-	-	-	-	-
45	2746.5	-	2.5	GOOD	SST WITH CLST: SST: V LT GY, SUPERFINE - FGR, DOM V FGR SA-SR, MOD W SRTD, 20% WH CLY MTX. TR SIL CMT, FRI.	FAIR 10 - 15%	-	V.PL BRN (LIVE) + DK BRN DEAD	5% MOD BRI YEL IN THIN BED	PL BL-WH V.V. SLW STRMG	MOD BRT BL-WH	THIN RING	EXC.
46	2742	-	3	GOOD	SST WITH CLST: V LT GY, SUPERFINE - FGR, DOM V FGR, SR-ST, MOD W SRTD, 20% WH CLY MTX. TR SIL CMT FRI.	POOR 5-10 %	-	PATCHY V. PL BRN	TR MOD BRI YEL ADJ TO CLY BEDS	V. PL BL	MOD BRT BL-WH	THIN RING	GOOD - EXC.
47	2737.5	-	3	GOOD	SST: V LT-LT GY, SUPERFINE V-V FGR DOM V FGR, SR-SR, MOD W SRTD, 20% WH CLY MTX, TR SIL CMT, FRI.	POOR 5-10%	-	TR LT-MOD BRN DEAD OIL	TR PINPOINT V. DULL ORNG	-	-	-	NIL
48	2709	-	3	GOOD	SST WITH THIN COALY STREAKS: V LTGY, SUPERFINE - V FGR, DOM VFGR, SA-SR M W SRT, 20% WH CLY MTX. TR SIL CMT.	POOR 5 - 10%	-	PL-MOD BRN DEAD OIL STN	1-2% PINPOINT V. DULL ORNG	-	-	-	NIL
49	2708.5	-	3.5	GOOD	SST: V LT GY, SUPERFINE - FGR, DOM V FGR SA-SR, MOD W SRTD, 20% WH CLY MTX. TR SIL CMT TR COALY, FRI.	POOR 5 - 10%	-	V. RARE DK BRN DEAD OIL	-	-	V.V. PL BL	-	NIL
50	2697	-	2	GOOD	SST WITH TR CLST CLASTS: LT GY, SUPERFINE - FGR, DOM VFGR, SA-SR, MOD W SRTD, 15% WH CLY MTX. TR SIL CMT.	FAIR 10 - 15%	-	PATCHY V PL BRN (LIVE)	70% MOD BRT BL-WH	PL BL-WH	MOD BRT BL-WHT	V. THIN RING	EXC.

DATE: 1/2/86 LOGGING SUITE NO: 2 BY: SCHLUMBERGER GEOLOGIST: G.M. KJELLGREN/ R. McCULLOUGH

RUN NO: 1 SHOT: 60 RECOVERED 58

2 SHOT: 27 RECOVERED 27

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
51	2694	-	FEW CHIPS	V. PR	DOLOMITIC SST: V PL ORNG, VF-FGR, DOM VFGR, A-SA, W SRTD, 25% + PL ORNG DOL CMT, V HD, FRAC.	NIL - TR 0 - 5%	-	-	100% EVEN DULL PK ORNG	V.V. PL YEL ORNG	V. PL YEL	-	(MINERAL?
52	2692	-	2	GOOD	SST: LT GY, SUPERFINE - FGR, DOM VFGR, SA-SR, MOD W SRTD, 20% WH CLY MTX, TR SIL CMT, GD TR ALT FELD, FRI.	POOR 5 - 10 %	-	TR MOD-DK BRN DEAD OIL	TR PINPOINT V. DULL ORNG	-	V.V. PL YEL	-	NIL
53	2688	-	2.5	GOOD	CLST W/THIN SST LAM: DUSKY BRN, MOD CARB AS THIN STREAKS AND LAM - MOD MICMIC, NON-CALC, FIRM.	-	-	-	-	V.PL BL EXTR. SLW STRMG	PL BL-WH	V.THIN RING	TRACE - POOR
54	2670.5	-	2.5	GOOD	SST W/THIN CLST LAM: LT GY, SUPERFINE - FGR, DOM VFGR, SA-SR, MOD W SRTD, 10-15% WH CLY MTX, TR SIL, V FRI.	FAIR-GOOD 10 - 20%	-	V. RARE DEAD OIL SPECKS	-	-	-	-	NIL
55	2659.5	-	2.5	GOOD	SST W/CLST LAM: YEL GY, SUPERFINE - FGR, DOM SUPERFINE - V FGR, SA-SR, W SRTD, 10 - 15% WH CLYMTX, TR SIL.	FAIR-GOOD 10 - 20%	-	PATCHY MOD BRN DEAD OIL	-	-	-	-	NIL
56	2650.5	-	3	GOOD	SST: YEL GY, SUPERFINE - FGR, DOM VFGR, SA-SR, MOD W SRTD, 20% WH CLY MTX, TR SIL CMT, FRI.	POOR 5 - 10%	-	PATCHY LT-MOD BRN DEAD OIL	-	-	-	-	NIL
57	2626.5	-	3	GOOD	SST: YEL GY, VF-FGR, SA-SR, W SRTD, 15-20% WH CLY MTX, TR SIL CMT, FRI.	FAIR 10 - 15%	-	PATCHY LT-MOD BRN DEAD OIL	V. RARE V. DULL ORNG	-	-	-	NIL
58	2622.5	-	2.5	GOOD	SST: V LT GY, VF-FGR, DOM F GR, SA-SR, W SRTD, 15-20% WH CLY MTX. TR SIL CMT, V FRI.	FAIR 10 - 15%	-	V. RARE LT-MOD BRN DEAD	V. RARE V. DULL ORNG	-	-	-	NIL
59	2618.5	-	3	GOOD	SST: V LTGY, VF-F, DOM F GR, A-SA, W SRTD, 10-15% WH CLY MTX. TR SIL CMT, FRI.	FAIR 10 - 15%	-	V. RARE MOD-DK BRN DEAD OIL	-	-	-	-	NIL
60	2607	-	2.5	GOOD	I/B SST & CLST: LT GY, SUPERFINE - V FGR, DOM V FGR, SA-SR, W SRTD, 20% WH CLY MTX, FR SIL CMT.	POOR 5 - 10%	-	-	TR PINPOINT V. DULL ORNG	-	V.V. PL BL	-	NIL - TRACE
61	2602	-	FEW CHIPS	V. PR	DOL: OL GY, TR VFGR SDY & SLTY - COMMON CARB STREAKS & FLECKS V. HARD & FRAC.	NIL-TR 0 - 5%	-	-	RARE LAMINAE V. DULL ORNG	V.PL YEL-WH EXTR SLW STRMG	V. PL BL	-	TRACE - POOR
62	2592	-	2	GOOD	SST W/THIN CLST LAM: LT GY, SUPERFINE - OCC MGR, DOM F GR, SA-SR, PR SRTD, 20% WH CLY MTX, TR SIL, FRI.	POOR 5 - 10%	-	V. RARE MOD BRN DEAD OIL	-	-	V.V. PL BL	-	NIL - TRACE
63	2574	-	1.5	GOOD	FINELY INTERLAM CLST & SST: BRN BLK, MOD MIC, CARB & MICMIC ALONG LAM, FIRM, SUBFIS.	-	-	-	-	-	V.V. PL BL	-	NIL - TRACE
64	2557	-	1.5	GOOD	CLST: OL BLK, COMMONLY SLTY & VFGR SDY, MOD MIC, CARB TR MICMIC, FIRM, BLOCKY.	-	-	-	-	V. PL YEL-WH EXTR SLW STRMG	MOD BRI BL - WH	-	TRACE
65	2549	-	1.5	GOOD	SST: LT GY-YEL GY, VF-FGR DOM F GR, SA-SR, W SRTD 15-20% WH CLY MTX - TR SIL CMT, FRI.	FAIR 10-15%	-	TR DK BRN DEAD OIL STN	-	-	-	-	NIL
66	2541	-	2.5	GOOD	SST: VLT GY-YEL GY, F-MGR, DOM MGR, A-SA, MOD SRTD, 10-15% WH CLY MTX - TR SIL CMT, FRI.	FAIR 10 - 15%	-	V. RARE DK BRN DEAD OIL	-	V.PL YEL WH EXTR SLW STRMG	MOD BRI YEL-WH	-	POOR
67	2517.5	-	3	GOOD	CLST: MGY, OCC STREAKS & THIN LAM. OF CARB MAT, NON-CALC, SFT TO FIRM, BLOCKY.	-	-	-	-	V.PL.YEL-WH EXTR SLW STRMG	MOD BRI BL-WH	-	POOR

RUN NO: 2 SHOT: 27 RECOVERED 27 PAGE 5 OF 6

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
68	2499	-	1.5	GOOD	SST: V LT GY - YEL GY, SUPERFINE - FGR, DOM V FGR, SA-SR, MOD TO W SRTD, 20% WH CLY MTX. TR DOL CMT.	POOR 5 - 10%	-	V. RARE MOD-DK BRN DEAD OIL	-	-	V.PL.BL-WH	-	TRACE
69	2486	-	2.5	GOOD	SST I/BW/THIN CLST LAM: V LT GY, SUPERFINE - FGR, DOM V FGR, SA-SR, MOD W SRTD, 20% WH CLY MTX, FRI.	POOR 5 - 10%	-	V. RARE LT-MOD BRN DEAD OIL	TR PINPOINT DULL ORNG	-	V PL BL-WH	-	TRACE
70	2464	-	2	GOOD	CLST: DK GY, TR CARB AS FLECKS STREAKS & DISCONTIN LAM. TR MICMIC, FIRM-HD BLKY.	-	-	-	V. RARE PINPOINT DULL ORNG	-	V. PL BL-WH	-	TRACE (FROM CARB MAT)
71	2451	-	3.0	FAIR	COALY CLST: DK TO GY BLK, V COMMON LAMIN OF CARBONACEOUS MAT, SUB-FISS TO BLKY, NON-CALC.	-	-	-	-	MOD BL-WH V SLW STRMG	MOD BRT BL-WH	-	POOR
72	2437	-	2.5	GOOD	SST: M GY, UP FN GRNS M TO W SRT, SA-SR, SILICA CMT, TR CALC CMT. V FINELY LAM WITH CLST: MED TO DK BRN, V CARBONACEOUS.	POOR TO FAIR 7 - 12%	-	-	TR PINPOINT V. DULL ORNG	-	-	-	NIL
73	2411.5	-	1.0	POOR	CLST WITH THIN LAMINATIONS OF SST CLST: MD BRN/GY GRADES TO SLST IN PART. BLKY TO SUB-FISSLE. TR CALC CMT. SST: LT GY, LOW V FN GRN, W SRT, SR, NON-CALC.	POOR 5%	-	-	-	MOD BRT BL-WH V. SLW STRMG	MOD BRT BL-WH	-	POOR
74	2394.5	-	4.0	GOOD	SST WITH INTERLAMINATED CLST: SST: LT GY, UP FRGRN, W SRT SR-SA, PRED SILIC CMT TR TO COMMON CALC CMT. CLST: M BRN TO RD BRN, NON-CALC, SUB FISS, MICRO-LAMINATED - CARBONACEOUS.	POOR TO FAIR 10 - 15%	-	-	RARE PINPOINT V. DULL ORNG	V.PL BL-WH V.V. SLOW STRMG	V PL BL-WH	-	POOR
75	2365	-	1.5	GOOD	CARBONACEOUS CLST: LT BRN TO GY BRN, NON-CALC, MICRO LAM TO LAM WITH CARBONACEOUS (COAL). SUB-FISS.	POOR 5%	-	-	-	-	-	-	-

DATE: 1/2/80 LOGGING SUITE NO.: 2 BY: SCHLUMBERGER GEOLOGIST: G.M. KJELLGREN/R. McCULLOUGH

RUN NO.: 2 SHOT: 27 RECOVERED 27 PAGE 6 of 6

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
76	2298.5	-	BRO-KEN	FAIR	COAL: MGY LBLK, SUB-VIT LUST, SUB-CONCH FRAC SURF, MICRO-LAMINATED, PRED BLKY FRAC.	-	-	-	RARE V. DULL ORNG STREAKS	V.V. PL BL	V PL BL	-	POOR
77	2233	-	2.0	GOOD	SST WITH LAMINATED CLST SST: LTGY, UP FNGRN, W SRT, SR, SILICA CMT. TR CLAY. CLST: M BRN TO RD BRN, V CARBONACEOUS, NON-CALC, BLKY FRAC.	FAIR TO GOOD 12 - 20%	-	-	TR PINPOINT V. DULL ORNG	-	-	-	NIL
78	2223	-	BRO-KEN	FAIR	COAL: DKGY TO BLK, SUB-VIT LUST, BLKY TO SUB-FISS FRAC, SUB-CONCH FRAC SURF, MICMIC, MICRO-LAMINS.	-	-	-	-	V.PL BL V.V. SLW STRNG	V PL BL	-	POOR
79	2185	-	2.75	GOOD	CLST WITH V THIN LAMINATION OF SST: CLST: LT BRN TO MED BRN IN PART GRADING TO SLST, BLKY FRAC, NON-CALC. SST: LTGY VR FNGRN, NON-CALC, SILICA CMT, IN PART LENTICULAR.	POOR < 5%	-	-	-	-	-	-	NIL
80	2091.5	-	4.0	GOOD	SST: LT TO MODGY, LOW FN GRD, M TO W SRT, SA-SR. PRED CAL CMT MINOR SILICA CMT, TR CLAY IN MATRIX.	FAIR TO GOOD 15 - 20%	-	-	PATCHY (IN THIN LAM) DULL-MOD BRI WH	PL BL-WH V.SLWSTRNG	MOD BRT BL-WH	V. THIN RING	FAIR
81	2089	-	BRO-KEN	FAIR	COAL: DK BRN TO BLK, SUB-VIT TO VIT LUST, PREDOM BLKY FRAC, TR TO COMM SUB-CONCH FRAC, HD & BRITTLE V. HOMOGENEOUS.	-	-	-	-	V.V. PL BL	V.V. PL BL	-	POOR
82	2086	-	1.5	GOOD	CLST: LT TO M BRN, TR BLK CARBONACEOUS MAT DESS THROUGHOUT, TR QTZ. GRNS. SUB-FISS, SOFT.	-	-	-	-	V.PL BL-WH STRNG	MOD BRT BL-WH	V. THIN	POOR
83	1999	-	BRO-KEN	FAIR	COAL: DKGY TO BLK, VIT LUST, BLKY TO SEMI-CONCH FRAC, IN-PART FISS. HD AND BRITTLE. V. HOMOGENEOUS.	-	-	-	-	-	-	-	NIL
84	1933	-	1.75	GOOD	CLST WITH INTERBED SLST: CLST MDGY BRN, GRADES TO SLST, COMM DESSIC ORGANIC DEBRIS OCCUR AS LENT TO WAVY BANDS, YELL BRN TO WHT TR RDSH BRN STAIN. V COMM PLATES OF PYRITE ASS WITH SLST, NON-CALC.	POOR	-	-	TR RDSH BRN STAIN	-	-	-	NIL
85	1905	-	2.75	GOOD	SST: WH TO LTGY, V FNGRN GRADES TO VV FN GRN, M TO W SRT, SA-SR, POOR TO LOOSLY CONSOL. TR CALC CMT, TR TO RARE WISPY ORGAN DEBRIS, TR MAFICS.	GOOD	-	-	-	-	-	-	NIL
86	1826	-	3.0 cm	GOOD	CLST WITH INTERBED SST: CLST: YELL/BRN TO DK BRN, POOR CONSOL. V. SILICEOUS GRDNG TO SLST. TR TO COMM PARELL LAMINES OF ORGAN DEBRIS. SST: WAVY TO LENTIC BEDDED, V FNGRN M TO W SRT, WHT TO CLR, CAL CMT.	GOOD	-	-	-	-	V.V. PL BL	-	NIL - TRACE
87	1800	-	2.5cm	GOOD	SST: CLR TO LTGY, VV FNGRN, GRAD TO SLST, V WELLSRT, SR TO R. UNCONSOL PARALLEL BEDDED ALTERATIONS OF CLR TO LTGY DUE TO GRN COLOR. TR GLAUC AND MAFICS.	PROB V GOOD	-	-	-	-	-	-	NIL

DATE: '/2/86 LOGGING SUITE 3 BY: SCHLUMBERGER GEOLOGIST: R.G. McCULLOUGH

RUN 3 SHOT 60 REC. 48 PAGE 1 OF 3

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D cms	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
1	3617	-	BRO-KEN	POOR	SST: MED GY, FNGRD, SILICA CMT WITH TR DOLO CMT. M TO W SRT, S.A. FINELY LAMIN WITH CARBONACEOUS DEBRIS, FRIABLE.	10 - 15%	-	-	-	V SLOW, PATCHY CRMY WHT TO PALE YELL	MOD TO SLOW, PATCHY YELL	PATCHY TO EVEN YELL WHT	POOR
2	3614	-	NO REC	-	-	-	-	-	-	-	-	-	-
3	3609.5	-	BRO-KEN	FAIR	SST: LT GY, FN GRD, CALC CMT, M TO W SRT, SA. TR TO COMM SCATT CARBONACEOUS DEBRIS, FRIABLE.	10 - 15%	-	-	-	SLOW YELL/ WHT	PATCHY YELL/ WHT	BRT YELL/ WHT	POOR
4	3592	-	BRO-KEN	FAIR	SST: LT GY, FN TO VFN GRD, SILICA CMT, W SRT, SA-SR. V COMM SCATT CARBONACOUS MATTER, FRIABLE TO SOFT.	10 - 15%	-	-	-	SLOW YELL/ WHT	PATCHY YELL/ WHT	PATCHY DULL WHT	POOR
5	3586.5	-	BRO-KEN	FAIR	SST: LT GY, MD GRD, CALC CMT, M TO W SRT, SA-SR. V COMM SCATT ORG MATTER, SOFT.	10 - 15%	-	-	-	V SLOW, PATCHY YELL	V SLOW, PATCHY PALE YELL	BRT YELL WHT	POOR
6	3555.5	-	BRO-KEN	FAIR	SST: MED GY, PRED FN TO V FN, TR MED GRN, PREDOM CALC CMT, TR SILICA CMT, F TO P SRT, SA-SR, TR SCATTERED ORGANIC MATTER.	10 - 15%	-	-	-	V SLOW, PATCHY GOLDEN YELL	V SLOW DULL GOLDEN YELL	EVEN BRT WHT/YELL	POOR
7	3552.5	-	BRO-KEN	FAIR	SST: MED TO DK GY, MED GRN, PRED CALC CMT. TR TO COMM SILICA CMT, M TO W SRT, SA-SR, SOFT, TR TO COMM ORGANIC MATTER.	15 - 20%	-	-	TR PATCHY ORG	V SLOW, SPECKLED DULL YELL	-	SCATTERED BRT YELL/ WHT	POOR
8	3524.5	-	3.0	GOOD	SST: LT TO MED GY, SILICA CMT, LOW FN GRN, M TO W SRT, SR. FIRM, SCATT ORGANIC MATTER.	15 - 20%	-	-	-	V SLOW, BRT YELL/WHT OVER 10%	V SLOW GOLDEN YELL	-	POOR
9	3513.5	-	2.5	GOOD	SST: LT GY, PREDOM MED WITH COMM UP FN, SILICA CMT. TR CALC CMT, M TO W SRT, SA. FIRM, SCATTERED ORGANIC DEBRIS.	10 - 15%	-	-	-	SLOW, PATCHY GOLDEN YELL OVER 30%	V SLOW, PATCHY BRT YELL/WHT	EVEN PALE YELLOW	POOR
10	3508	-	BRO-KEN	FAIR	SST: MED GY, PREDOM MD WITH COMM UP FR GRN, PRED CALC CMT WITH COMM SILICA CMT. SOFT, WITH COMM ORGANIC DEBRIS.	15 - 20%	-	-	-	-	V SLOW, PALE GRN/ YELL	BRT YELL WHT	TRACE
11	3498	-	BRO-KEN	POOR	DOLOMITIC SST: DK GY/BRN, V V FN GRN, V W SRT, SR. V DENSE AND HARD. PRED DOLO CMT WITH TR CALC CMT.	<5%	-	-	DULL ORG OVER 80%	MED ORG/ BRN	MOD FAST STRMING GOLDEN YELL TO CRMY WHT	BRT YELL WHT	FAIR
12	3483.5	-	BRO-KEN	FAIR	SST: LT GY/BRN, FN GRN, W SRT, SR. CALC CMT, SOFT TO FRIABLE, COMM SCATT ORGANIC DEBRIS.	10 - 15%	-	-	-	PATCHY GOLDEN YELL	V SLOW, TR YELL/WHT	-	POOR
13	3461.5	-	BRO-KEN	FAIR	SST: LT GY, V FN TO FN GRN, M TO W SRT, SR. CALC CMT. V COMM SCATT ORG MATTER.	10 - 15%	-	-	-	PATCHY GOLDEN YELL	-	PATCHY WHT	POOR
14	3455.5	-	BRO-KEN	FAIR	SST: LT GY, V FN GRN, CALC CMT, SA-SR, M TO W BRT. SOFT TO FRIABLE. TR TO COMM SCATT ORGANIC DEBRIS.	12 - 15%	-	-	-	PATCHY GOLDEN YELL	-	-	POOR
15	3450	-	BRO-KEN	FAIR	SST: LT GY, V FN GRN, W SRT, SA-SR, PRED DOLO CMT WITH COMM CALC CMT. SCATT ORGANIC MATTER WITH V RARE GLAUCONITE?	12 - 15%	-	-	-	PATCHY GOLDEN YELL	TR PATCHY YELL	-	POOR
16	3447	-	BRO-KEN	FAIR	SST: LT GY, V FN GRN, M TO W SRT. SR. DOLO CMT. COMM SCATT TO LAMINATED WITH ORGANIC DEBRIS, V SOFT TO FRIABLE.	10 - 15%	-	-	-	RARE PALE YELL	V RARE GOLDEN YELL	-	POOR
17	3442.5	-	2.5	GOOD	SST: MED TO LT GY, FN GRN, WELL SRT, SA-SR. DOLO CMT WITH V COMM SCATT ORGANIC MATTER. SOFT TO MOD FIRM.	10 - 15%	-	-	-	PATCHY GOLDEN YELL	-	-	POOR
18	3432	-	1.75	FAIR-GOOD	SST: LT GY, V FN TO FN GRN, MOD SRT, SA-SR, DOLO CMT. V COMM ORGANIC MATTER, SOFT TO MOD FIRM.	8 - 12%	-	-	-	MOD FAST, YELL TO CRMY WHT	MOD FAST, CRMY WHT TO YELLOW	EVEN BRT WHT TO YELL	POOR
19	3418	-	2.0	GOOD	SST: LT GY BRN, FN TO V FN GRN, W SRT, SR. CALC CMT, COMM LAMIN TO SCATTERED ORGANIC MATTER, SOFT.	8 - 12%	-	-	-	-	-	EVEN WHT	NIL
20	3412.5	-	1.5	GOOD	SST: MED GY, FN TO V FN GRN, W SRT, SA, CALC CMT. COMMON SCATTERED TO LAMINATED ORGANIC MATTER SOFT	10%	-	-	SPECKLED PALE ORG	-	PATCHY BRT YELL/ WHT	PATCHY YELL/WHT	POOR

PELICAN -5

DATE: 14/2/[illegible]

LOGGING SUITE 3 BY: SCHLUMBERGER

GEOLOGIST: R.G. McCULLOUGH

RUN 3 SHOT 60 REC. 48

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
21	3406.5	-	NO REC		-	-	-	-	-	-	-	-	-
22	3398.5	-	NO REC		-	-	-	-	-	-	-	-	-
23	3388.5	-	1.75	GOOD	SST: MED GY, FN GRN, M TO W SRT, SA-SR, DOLO CMT, COMM SCATTERED ORGANIC MATTER, MOD FIRM TO FIRM.	10 - 15%	-	-	-	-	PATCHY GOLDEN YELL TO WHT	PATCHY DULL YELL	POOR
24	3386.5	-	1.50	GOOD	SST: MED GY, FN GRN, MOD TO W SRT, SA-SR, DOLO CMT. V COMM SCATTERED ORGANIC DEBRIS, FIRM.	10 - 15%	-	-	-	V SLOW PALE ORG/ GRN	PATCHY DULL YELL/ WHT	PATCHY DULL YELL	POOR
25	3376.5	-	1.5	GOOD	SST: LT GY/BRN, FN GRN, MOD TO W SRT, SA-SR. PRED CALC CMT WITH COMM DOLO CMT. FINELY LAMINATED WITH ORGANIC MATTER, SOFT TO FRIABLE.	10 - 15%	-	-	ORG, RANGING FROM SOLID TO SPECKLED	MOD FAST YELL/ORG	FAST STRMY YELL/WHT COMM ORG	WEAK CRMY WH TO YELL	FAIR
26	3368.5	-	NO REC		-	-	-	-	-	-	-	-	-
27	3355.5	-	NO REC		-	-	-	-	-	-	-	-	-
28	3349	-	1.75	GOOD	SST: LT GY/BRN, V FN TO FN GRN, M TO W SRT, SR, CALC CMT. TR SCATTERED ORGANIC DEBRIS, MOD FIRM.	8 - 12%	-	-	RARE PIN PT, ORG	RARE PIN PT YELL/ GOLD	SLOW DULL YELL/GOLD	EVEN BRT YELL/WHT	FAIR
29	3343	-	NO REC		-	-	-	-	-	-	-	-	-
30	3339	-	NO REC		-	-	-	-	-	-	-	-	-
31	3335.5	-	BRO-KEN	FAIR	SST: LT GY/TAN BRN, V FN TO FN, M SRT, SA-SR, CALC CMT WITH TR DOLO CMT. TR TO COMM SCATT ORGANIC DEBRIS, SOFT.	10 - 15%	-	-	PATCHY TO PIN PT PALE YELL 20%	V SLOW, EVEN DULL YELL TO WHT	V SLOW EVEN YELL WHT	WEAK EVEN YELL WHT	FAIR
32	3327	-	BRO-KEN	FAIR	SST: LT GY/BRN, FN GRN, M TO W SRT, SA-SR, CALC CMT. V COMM SCATT ORGANIC DEBRIS, SOFT.	10 - 15%	-	-	PIN PT TO PATCHY PALE YELL/ GOLD 30%	SLOW PATCHY STRM YELL/ WHT	V SLOW DULL WHT	BRT EVEN YELL/WHT	FAIR
33	3320.5	-	NO REC		-	-	-	-	-	-	-	-	-
34	3276	-	NO REC		-	-	-	-	-	-	-	-	-
35	3268	-	BRO-KEN	POOR	SST: DK BRN TO MED GY, FN TO V FN GRN, PRED SILICA CMT WITH TR TO COMM CALC. CMT, FIRM TO HARD.	10 - 15%	-	TR TO COMM RD/ BRN TO BLK	RARE PIN PT, GOLDEN YELL	-	-	PATCHY GOLDEN YELLOW	POOR
36	3254.5	-	BRO-KEN	POOR	SST: MED BRN/GY, FN GRN, M TO W SRT, SA. PRED DOLO CMT WITH TR TO COMM SILICA CMT. TR TO COMM RK FRAGS. FIRM TO HARD.	10 - 15%	-	-	RARE PIN PT, ORG	-	-	-	POOR
37	3247.5	-	2.5	GOOD	SST: LT TO MED GY, FN GRN, M SRT, SA. PRED DOLO CMT, TR SILICA CMT. RARE TO V RARE RK FRAGS, FIRM.	10 - 15%	-	-	PATCHY TO PIN PT DULL ORG 80%	TR PATCHY V SLOW DULL YELL	V WEAK SLOW PATCHY DULL YELL/ GOLD	PATCHY BRT WHT TO YELL	FAIR
38	3231.5	-	NO REC		-	-	-	-	-	-	-	-	-
39	3218	-	1.5	FAIR TO GOOD	SST: LT TO MED GY, V FN GRN, W SRT, SR, CALC CMT. V COMM SCATT ORGANIC MATTER. SLST LAMINATIONS, DK BRN TO BLK, V CARBONACEOUS (COAL?).	8-10 %	-	-	V RARE DULL ORG PIN PT	TR PATCHY V SLOW DULL YELL	V WEAK SLOW PATCHY DULL YELL	PATCHY BRT WHT TO YELL	FAIR
40	3207.5	-	1.0	FAIR TO GOOD	SST: LTGY, FN GRN, M TO W SRT, SA-SR. CALC CMT. V COMM SCATT TO LAMINATED ORGANIC MATTER, MOD FIRM.	10%	-	TR RD/BRN	-	RARE DULL GOLD/YELL 10%	-	-	POOR

PELICAN -5

DATE: 14/2/86 ___ LOGGING SUITE 3 BY: SCHLUMBERGER GEOLOGIST: R.G. McCULLOUGH

RUN 3 SHOT 60 REC. 48

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
41	3198.5	-	2.5	GOOD	SST: LT GY/BRN, FN TO LOW MED GRN, MOD SRT, SA-SR, CALC CMT. COMM SCATT ORGANIC MATT, MOD FIRM.	10 - 15%	-	-	V RARE DULL YELL	-	-	-	POOR
42	3194	-	BRO-KEN	FAIR	SST: LT GY/BRN, FN GRN. M TO W SRT. SA-SR, CALC CMT. TR TO COMM LAMIN TO SCATT ORGANIC MATT, SOFT TO MOD FIRM.	10 - 15%	-	-	-	-	-	-	-
43	3178	-	NO REC	-	-	-	-	-	-	-	-	-	-
44	3170.5	-	1.5	GOOD	SST: LT TO MED GY, FN GRN, W SRT SA-SR DOLO CMT TR SCATT ORGANIC DEBRIS. SOFT	8 - 12%	-	-	PATCHY PALE YELL/WHT, 40%	-	-	-	POOR
45	3169	-	1.75	GOOD	SLST: DKGY/BRN, V CARBONACEOUS, SILICA CMT COMM DOLO CMT. FIRM TO HARD. GRADES TO VVFN GRN SST IN PART.	< 8%	-	-	V PALE ORG PATCHY TO PIN-PT 60%	V SLOW, DULL YELL/GOLD	V SLOW, YELL/WHT TO MILKY	-	POOR TO FAIR
46	3167	-	2.0	GOOD	SST: MED GY, V FN GRN, W SRT, SR. CALC CMT WITH TR DOLO CMT. V COMM SCATT ORGANIC MATT (COAL); BLK VIT LUST. SOFT.	10 - 15%	-	-	V PALE ORG PATCHY TO PIN-PT 40%	-	-	PATCHY YELL/WHT	POOR
47	3159	-	BRO-KEN	FAIR TO GOOD	SST: LT GY, FN TO MD GRN, M TO W SRT. CALC CMT. V COMM ORGANIC MATT, SOFT.	10 - 15%	-	-	SPECKLED YELL/WHT 40%	V SLOW, PIN-PT TO PATCH DULL YELL	MOD FAST, CRMY YELL STRMING	EVEN BRT WHT TO YELL	FAIR
48	3155.5	-	1.75	FAIR TO GOOD	SST: LT GY TO TAN/GY, FN TO MED, M SRT, SA-SR, CALC CMT. V COMMON SCATT ORGANIC MATT, SOFT.	10 - 15%	-	-	-	V SLOW, EVEN DULL YELL	-	EVEN BRT YELL/WHT	POOR
49	3139	-	1.75	FAIR TO GOOD	SLST: MED GY/BRN, SILICA AND CLY CMT. FN LAMIN OF ORGANIC MATTER. MOD FIRM.	< 8%	-	-	LAMINATED WITH PALE ORG	-	-	EVEN PALE WHT	POOR
50	3137.5	-	3.0	GOOD	SST: LT BRN/GY, FNGRN, M TO W SRT, SA-SR. CALC TO DOLO CMT. COMM SCATT ORGANIC MATTER, SOFT.	< 12%	-	-	-	PATCHY DULL YELL	-	-	POOR
51	3130	-	BRO-KEN	FAIR	SST: LTGY. FN TO MED GRN, M SRT, SR, CALC CMT. COMM SCATT ORGANIC MATT, SOFT.	10 - 15%	-	-	-	-	-	-	-
52	3109	-	1.75	FAIR TO GOOD	SST: LTGY. FN TO MED GRN, P SRT, SA-SR. PRED SILICA CMT WITH COMM CALC CMT. TR TO COMM SCATT ORGANIC MATTER. MOD FIRM.	10 - 15%	-	-	BRT GOLDEN YELL OVER 30%	MOD FAST ORG/YELL	MOD FAST, MILKY/YELL/WHT	EVEN WEAK YELL/WHT	FAIR
53	3103.5	-	BRO-KEN	FAIR TO POOR	SST: LT TO DK GY/BRN, MED GRN, W SRT, SR. V HD, V DENSE DOLO AND SIDERITIC CMT.	< 5%	-	-	PALE ORG HUE THROUGHOUT	PALE ORG THROUGHOUT	PALE ORG THROUGHOUT	-	POOR
54	3098.5	-	BRO-KEN	FAIR	SST: LTGY. FN TO MED GRN, P TO M SRT, SA-SR. PRED SILICA CMT WITH TR CALC CMT, SOFT.	10 - 15%	-	TR LT YELL/BRN	SPECKLED WITH ORG/YELL THROUGHOUT	-	-	-	POOR
55	3093	-	1.5	GOOD	SST: MED GY/BRN, FN TO MED GRN, M SRT, SA-SR; CALC CMT. TR TO COMM SCATT ORGANIC MATTER, SOFT.	10 - 15%	-	-	-	-	-	-	-
56	3063	-	2.5	GOOD	SST: MED GY/BRN, FN GRN, M TO W SRT, A-SA. ARGILL IN PART, CALC CMT. FIRM.	10 - 15%	-	-	-	-	-	-	-
57	3059	-	2.0	GOOD	SST: MED GY, MED GRN, M TO W SRT, SR, CALC CMT. MICACEOUS AND CARBONACEOUS LAMINA. FIRM.	10 - 15%	-	TR DK BLK	DULL GOLDEN YELL OVER 35%	-	-	-	POOR
58	3042.5	-	BRO-KEN	FAIR	CLST: DK BRN, BLKY TO SUB-FISS, SLIGHTLY CALC, MICMIC. FIRM.	-	-	-	-	V PATCHY WEAK GOLD/YELL	V SLOW CRMY YELL/WHT	-	POOR
59	3021.5	-	BRO-KEN	FAIR	SST: LTGY, MED GRN, M TO W SRT, SA-SR, CALC CMT. TR TO COMM SCATT ORGANIC MATT. SOFT.	10 - 15%	-	-	-	PIN PT YELL/WHT	V SLOW WEAK GOLDEN/YELL	-	POOR
60	-	-	NO REC		-	-	-	-	-	-	-	-	-

452056

PELICAN NO. 5

DATE: MARCH 10, 1986 LOGGING SUITE 4 BY: SCHLUMBERGER GEOLOGIST: R.G. McCULLOUGH

RUNS 1,2,3 SHOT 63 REC. 39

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
1	4255.0	-	2.5	POOR TO FAIR	SST: MED TO DK GY, V FN GRN, M TO W SRT, SR - SA, CALC CMT. SAMPLE COMPLETELY DISSAGG 20% CARB DEBRIS.	?	-	-	-	-	-	-	NIL
2	4247.0	-	BROKEN	FAIR	CLST: RDSH BRN TO BLK, SUB-FISS TO FISS, V MIC MIC, FIRM TO HD. CARB, NON-CALC, IN-PT GRDS TO SLST.	-	-	-	-	-	V SLOW RARE PATCHY GOLDEN YELL	-	TRACE
22	4236,5	-	N.R.	-	-	-	-	-	-	-	-	-	-
3	4216.0	-	BROKEN	POOR	CLST: RDSH BRN TO BLK, BLKY TO SUB-FISS, MIC MIC, CARB, FIRM TO HD. GRDS TO SLST. TR DOLO CMT.	-	-	-	-	-	-	PATCHY DULL YELL/WHT	NIL
23	4213,2	-	N.R.	-	-	-	-	-	-	-	-	-	-
24	4203,7	-	N.R.	-	-	-	-	-	-	-	-	-	-
25	4170.6	-	BROKEN	FAIR	SST: RDSH BRN GY TO TAN GY, V FN TO MED GRN, PRED MED P TO F SRT, SA, CALC CMT. ORGIN TEX DESTROYED, TR RK FRAGS?	?	-	-	-	-	-	-	NIL
26	4154.7	-	BROKEN	FAIR	SST: RDSH BRN TO TAN BRN PRED MED GRN COMM V FN TO FN M SRT SA-SR CALC CMT. ORGIN TO DESTROYED CARB?	?	-	-	-	-	-	-	NIL
4	4152,0	-	N.R.	-	-	-	-	-	-	-	-	-	-
27	4130.0	-	1.0	FAIR TO GOOD	CLST: RDSH BRN TO DK GY, BLKY TO SUB-FISS, V SLTY, MIC MIC, CARB TR CALC & DOLO CMT. FIRM TO HD.	-	-	-	-	-	-	-	NIL
5	4120,0	-	N.R.	-	-	-	-	-	-	-	-	-	-
28	4113,0	-	N.R.	-	-	-	-	-	-	-	-	-	-
6	4107,0	-	N.R.	-	-	-	-	-	-	-	-	-	-
43	4106.5	-	BROKEN	FAIR	CLST: RDSH BRN/GY, SUB-FISS, SLTY IN PT, MIC MIC, CARB AS FLAKES AND MICRO LAMINS. V CALC MOD FIRM	-	-	-	-	-	-	TR PATCHY YELLOW/WHT	NIL
9	4103,5	-	N.R.	-	-	-	-	-	-	-	-	-	-
29	4087,6	-	N.R.	-	-	-	-	-	-	-	-	-	-
30	4085.0	-	BROKEN	FAIR	CLST/SLST: BANDED LT GY AND DK GY, BLKY, CARB AS MICRO LAMINI AND FLAKES. GRD TO SUPER FN SST, MOD CALC.	-	-	-	-	-	-	-	NIL
7	4076.2	-	BROKEN	FAIR TO GOOD	SST: LT GY TO TAN GY, VFN GRN, SILICA AND DOLO CMT, FRIABLE M TO W SRT, SR, TR CARB.	10-15%	-	-	-	-	-	EVEN CRMY WHT TO BRT WHT	NIL
31	4071.6	-	BROKEN	FAIR	SST: RDSH BRN TO MED GY, GRDS FROM FN TO V FN GRN, PRED V FN, M TO W SRT, SR. CALC CMT, TR CARB DEBRIS, FRIABLE.	8-12%	-	-	-	-	-	-	NIL
32	4057.0	-	BROKEN	POOR	SLST: RDSH BRN, BLKY FRAC, SLGTY CALC, MIC MIC, MOD CARB GRDS TO SUPER FN SST, FIRM.	-	-	-	-	-	-	-	NIL
8	4048,7	-	N.R.	-	-	-	-	-	-	-	-	-	-
33	4034.2	-	BROKEN	FAIR	SST: LT GY TO TAN BRN, V FN TO FN GRN, M TO W SRT, SA-SR, SILICA AND DOLO CMT. COMM CARB DEBRIS AS FLAKES AND PIECES.	10%	-	-	TR NAT MIN FLUOR	-	-	-	NIL
34	4016,2	-	N.R.	-	-	-	-	-	-	-	-	-	-
44	4012,5	-	N.R.	-	-	-	-	-	-	-	-	-	-
35	4010,3	-	N.R.	-	-	-	-	-	-	-	-	-	-
36	4005	-	N.R.	-	-	-	-	-	-	-	-	-	-
45	4005	-	1.5	FAIR TO GOOD	SST: RDSH BRN TO MED GY, V FN TO FN GRN, M TO W SRT, SA-SR. MIC MIC, MOD CARB, TR DOLO CMT, PRED SILICA CMT, MOD FIRM.	10-15%	-	-	-	-	-	-	NIL
10	3998.2	-	2.0	FAIR	SST: RDSH BRN TO MED GY, V FN GRN, M TO W SRT, SR-SA. ORGIN TEX DESTROYED, CALC CMT, TR CARB. 1 TO 3% RK FRAGS.	10-15%	-	-	-	-	-	-	NIL
37	3995,5	-	N.R.	-	-	-	-	-	-	-	-	-	-
46	3995.0	-	BROKEN	POOR	SST: RDSH BRN TO DK GY, V FN GRN, M TO W SRT, SR, CALC CMT. ORG TEX DESTROYED. MOD FIRM, MOD CARB.	10-15%	-	-	-	-	-	-	NIL

DATE: MARCH 10, 1986 LOGGING SUITE 4 BY: SCHLUMBERGER GEOLOGIST: R.G. McCULLOUGH

RUNS 1,2 3 SHOT 63 REC. 39 PAGE 2 OF 3

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
38	3989.5	-	N.R.	-	-	-	-	-	-	-	-	-	-
11	3976.5	-	BRO-KEN	FAIR TO GOOD	CLST: DK GY, BLKY TO SUB-FISS, GRDS TO SLST. MIC MIC, CARB, TR DOLO, FIRM.	-	-	-	-	-	-	PATCHY CRMY WHT TO BRT YELLOW	NIL
39	3941.0	-	BRO-KEN	POOR	CLST: RDSH BRN, BLKY, GRDS TO SLST. V RARE SUPER FN QTZ X-TALS. NON-CALC, CARB AS FLAKES.	-	-	-	-	-	V.V.SLOW DULL EVEN CRMY WHT	EVEN WEAK CRMY WHT	TRACE
40	3937.1	-	BRO-KEN	FAIR	SST: RDSH BRN TO MED GY, V FN GRN, M TO W SRT, SR. ORG TEX DESTROYED, CARB, CALC CMT.	?	-	-	-	-	TR V SLOW CRMY YELL/ WHT	PATCHY YELL/ WHT TO PIN-PT BRT GOLDEN/YELL	TRACE
12	3928.5	-	BRO-KEN	FAIR	SST: RDSH BRN TO LT GY, V FN GRN, W SRT, SR. ORGIN TEX DESTROYED. POSS 5-10% CLY (FILTRATE) MATRIX? SOFT, NON-CALC.	?	-	-	-	-	-	-	NIL
41	3910.5	-	N.R.	-	-	-	-	-	-	-	-	-	-
42	3907.0	-	2.5	GOOD	CLST: DK GY TO MED BRN, BLKY TO SUB-FISS. MIC MIC, MODLY CARB, NON-CALC.	-	-	-	-	V.V. SLOW PATCHY / CRMY WHT	V SLOW EVEN TO PATCHY YELL /WHT	PIN PT GOLDEN YELL/ WHT	POOR
13	3903.8	-	N.R.	-	-	-	-	-	-	-	-	-	-
47	3903.0	-	BRO-KEN	POOR	SST: LT GY, V V FN GRN, GRDS TO SLST AND CLST IN PART, PROB LAMINATED, ORGIN TEX DESTROYED. V CARB, TR CALC CMT.	?	-	-	-	-	-	V SLOW EVEN TO PATCHY YELL/WHT	NIL
48	3900.5	-	BRO-KEN	FAIR	SST: LT GY, FN GRN, M TO W SRT. SR. PRED SILICA CMT TR CALC CMT. MOD CARB AS FLAKES AND MICRO LAMICS, MOD FIRM.	?	-	-	-	-	-	-	NIL
49	3895.5	-	BRO-KEN	V POOR	SST: SAMPLE MAINLY FILTRATE FN TO MED GRN, M SRT, SR. CMT?	?	-	-	-	-	-	V SLOW DULL PATCHY CRMY WHT	NIL
50	3875.0	-	BRO-KEN	POOR	SLST: LT TO MED GY, GRDS TO SUPER FN SST, V CARB, TR CALC CMT. MOD FIRM.	-	-	-	-	-	-	V SLOW V WEAK PALE PATCHY WHT	NIL
51	3846.0	-	2.0	FAIR TO GOOD	CLST/COAL: CLST MED TO DK BRN, NON-CALC, BLKY FRAC, INTERBEDDED WITH COAL BLK, BLKY, SUB-VIT TO VIT, BITUMINOUS GRD.	-	-	-	-	-	MOD TO FAST GOLDEN YELL TO WHT, FLOW-ING	EVEN GOLDEN YELL	TRACE
15	3836.5	-	BRO-KEN	POOR TO FAIR	SST: RDSH BRN TO MED GY, V FN GRN, W SRT SR, V ANG. TR MIC MIC, COMM CARB. ORGIN TEX DESTROYED.	?	-	-	-	-	-	RARE PALE YELL	NIL
52	3810.5	-	N.R.	-	-	-	-	-	-	-	-	-	-
53	3778.1	-	BRO-KEN	V. POOR	SLST: RDSH BRN TO DK GY, V CARB. ORG TEX DESTROYED, PROB FN GRN. CMT?	-	-	-	-	-	-	RARE PATCHY TO PIN PT BRT WHT	NIL
16	3774.5	-	N.R.	-	-	-	-	-	-	-	-	-	-
54	3741.3	-	2.0	FAIR TO GOOD	SLST: RDSH BRN/GY, MODLY CALC, V MIC MIC, GRDS TO SUPER-FN SST, FIRM.	-	-	-	-	-	-	EVEN TO PATCHY DULL YELL/WHT	NIL
55	3726.0	-	N.R.	-	-	-	-	-	-	-	-	-	-
17	3716.5	-	BRO-KEN	FAIR TO GOOD	SST: LT GY TO TAN, V FN GRN, PRED DOLO WITH COMM CALC CMT. W SRT, SR, MODLY CARB AS FLAKES.	10-15%	-	-	-	-	-	BRT WHT PATCHY TO EVEN	NIL
56	3710	-	BRO-KEN	POOR	CLST: RDSH BRN/BLK, BLKY, MIC MIC, GRDS TO SLST. CARB AS MICRO-LAMINS, NON-CALC.	-	-	-	-	-	-	BRT WHT PATCHY TO EVEN	NIL
57	3700.0	-	N.R.	-	-	-	-	-	-	-	-	-	-
18	3697.0	-	BRO-KEN	FAIR TO GOOD	SST: MED GY TO TAN, V FN TO FN GRN, M TO W SRT, SR, V CALC. INTERBEDDED WITH COAL: LAMINS OF BLK, VIT LUST, BITUM GRD, SOFT.	10-15%	-	-	-	MOD FAST PIN PT TO EVEN GOLDEN YELL OVER 50%	PIN PT GOLDEN YELLOW OVER 80%	BRT WHT PATCHY EVEN	POOR

DATE: MARCH 10, 1986 LOGGING SUITE 4 BY: SCHLUMBERGER GEOLOGIST: R.G. McCULLOUGH

RUNS 1,2,3 SHOT 63 REC. 39 PAGE 3 OF 3

SHOT NO.	DEPTH (m)	PULL (lbs)	REC'D (cms)	CONDITION	ROCK TYPE	VISUAL POROSITY	ODOR	STAIN	FLUORESCENCE	CUT FLUORESCENCE	CRUSH CUT FLUORESCENCE	CUT RESIDUE	RATING
58	3692.5	-	1.5	FAIR TO GOOD	SST: MED GY BRN, FN TO MED GRN, M TO W SRT, SR, SILICA WITH TR CALC CMT. V COMM SCATTER COAL FRAGS, SOFT.	10-15%	-	-	TR NAT MIN	TR SLOW DULL ORG OVER 20%	V DULL ORG/ YELLOW OVER 20%	-	POOR TO FAIR
19	3684.0	-	BRO-KEN	FAIR TO GOOD	SST: MED GY, FN TO MED GRN, PRED MED, M SRT, SA-SR.PRED SILICA CMT, TR CALC/DOLO CMT. V COMM COAL FRAGS, SOFT.	10-15%	-	-	-	-	-	-	NIL
60	3679.5	-	N.R.	-	-	-	-	-	-	-	-	-	-
61	3673.0	-	BRO-KEN	FAIR	SST: LT BRN, PRED FN WITH TR TO COMM V FN, M TO W SRT, SA-SR. PRED SILICA CMT, TR SILTY/CLY MATRIX. SOFT TO FRIABLE, CARB.	5-10%	-	-	-	-	-	-	NIL
20	3667.5	-	N.R.	-	-	-	-	-	-	-	-	-	-
62	3663.6	-	1.0	POOR TO FAIR	SST: LT BRN TO TAN GY, V F TO FN GRN, F SRT, SA-SR. PRED SILICA CMT TR CALC CMT. MOD CARB AS FLAKES. TR LITHIC RK FRAGS, SOFT.	5-10%	-	-	-	-	-	-	-
21	3653.0	-	1.5	FAIR TO GOOD	SLST: MED TAN GY, BLKY, ARGILLACEOUS, NON-CALC, GRDS TO SUPER FN SST.	-	-	-	-	-	-	-	NIL
63	3660	-	N.R.	-	-	-	-	-	-	-	-	-	-
14	3891.5	-	BRO-KEN	POOR	SST: LT GY, PRED MED GRN, TR TO COMM FN GRN, SILICA CMT, TR CALC CMT, TR TO COMM CARB DEBRIS. HARD.	10%	-	-	-	-	-	-	NIL
59	3688	-	BRO-KEN	POOR TO FAIR	SST: LT GY, FN TO LOW MED GRN, M SRT, SR. PRED SILICA CMT, V COMM CARB DEBRIS, TR LITHIC RK FRAGS, SOFT TO FRIABLE.	10-15%	-	-	-	-	-	-	NIL

452059

Appendix No. 6

THIN SECTION PETROGRAPHY, SEM AND XRD ANALYSES OF CORE AND SIDEWALL CORE SAMPLES FROM PELICAN-5

Amoco Australia Petroleum Company

3/786/0-F6707/86&6709/86 April 1986

The Australian
neral Development
Laboratories

gtc Street, Frewville,
South Australia 5063
Adelaide (08) 79 1662
Telex AA82520

ease address all
correspondence to
O. Box 114 Eastwood
SA 5063
In reply quote:

452060

amdel

18 April 1986

F 3/786/0
F 6407/86, 6409/86

Amoco Australia Petroleum Company
15 Blue Street
NORTH SYDNEY NSW 2060

Attention: Steven C. Bane

REPORT F 6407/86 & 6409/86

YOUR REFERENCE: LPO 1094

TITLE: Thin section petrography, SEM and XRD analyses of core and sidewall core samples from Pelican-5, Misc-AUP 493-T-400-GMK

MATERIAL: Sandstones

LOCALITY: Pelican-5

DATE RECEIVED: 1 April 1986

WORK REQUIRED: Thin section petrography, SEM and XRD analyses

Investigation and Report by: Dr Brian G. Steveson
XRD analyses by: Dr Roger N. Brown
SEM photography by: Brian L. Watson

Manager-Petroleum Services Section: Dr Brian G. Steveson

Brian G Steveson.

for Dr William G. Spencer
General Manager
Applied Sciences Group

cap

Head Office:
min n Street, Frewville
South Australia 5063
Telephone (08) 79 1662
Telex: Amdel AA82520
Pilot Plant:
Osman Place
Thebarton, S.A.
Telephone (08) 43 5733
Telex: Amdel AA82725
anch Laboratories:
Melbourne, Vic.
elephone (03) 645 3093
Perth, W.A.
Tel hone (09) 325 7311
Te x: Amdel AA94893
Sydney, N.S.W.
Telephone (02) 439 7735
Te x: Amdel AA20053
Townsville
Queensland 4814
Telephone (077) 75 1377

1. INTRODUCTION

Thirty-five sandstone samples from Pelican-5 (12 core chips and 23 SWC's) were received for thin section petrography, SEM and XRD analyses. In some cases there was insufficient sample for XRD and SEM analyses.

2. RESULTS

XRD results for the thirteen sandstones analysed (2 core chips and 11 SWC's) are presented in Table 1 (Volume 1). SEM plates are presented in Volume 2 (Appendix 3 : Core 2 and Appendix 4 : sidewall cores). Thin section petrography is presented in Volume 1 (Appendix 1 : core chips, Appendix 2 : sidewall cores).

A discussion and summary of the data presented in this report follows.

3. SUMMARY AND DISCUSSION

3.1 Petrography and SEM

This is a summary of the petrography of 12 core chips and 23 SWC's from Pelican-5.

The rocks are generally litharenites which contain fairly well sorted sand-grade grains of quartz and lithic fragments. Feldspar, mica and heavy minerals are rare or absent. Sedimentary (shales, mudstones, chert) and metasedimentary (phyllites, schists) lithologies are by far the most abundant kinds of lithic clasts. Apart from chert (and possible rare limestones) they are deformable, soft fragments with fine-grained textures and abundant phyllosilicate minerals. Some retain vestiges of original outlines, others can be seen to have been squashed between adjacent quartz grains.

Long, curved and sutured grain boundaries are present in most samples.

Authigenesis is shown by quartz (epitaxial overgrowths), kaolinite (void filling aggregates) and carbonate (mostly partially replacing lithics).

There is no evidence of genuine, muddy matrix and the rocks therefore appear to be sedimentologically mature, although derived from a not-too-distant provenance of sedimentary terrain.

1. Porosity

   Two dimensional sections (1" x 3") of rocks which have been cored, broken with a hammer, sawn with a diamond-impregnated blade, heated, impregnated and finally sliced and ground to a thickness of 0.03 mm are not the best medium from which to estimate the porosity of a reservoir quantitatively. SWC's are even worse. Microscopy can indicate the size of the larger pores (>0.01 mm) and sometimes, their mode of formation. No estimate is obtainable on microporosity. In all cases, physically measured porosity (or even log-derived values) should be regarded as definitive, at least as regards contrast with microscopically derived estimates.

SEM photography often shows microporosity which occurs within aggregates of clay (either authigenic clays or lithic fragments); such a feature would be invisible in most thin sections.

There has been considerable attention paid in recent years to the distinction between primary and secondary pores : primary pores can be related to the intergranular cavities in the sand (as deposited), secondary pores result from dissolution of minerals, fracturing, etc. Often primary pores are not larger than adjacent grains and are evenly distributed throughout the rock. Secondary pores have widely varying sizes - large pores are invariably of secondary origin and result from dissolution of framework grains. The decipherment of sequences of precipitation and solution of minerals at different stages of diagenesis (by SEM mainly) has led to a more complete understanding of the complexity of porosity formation and occlusion.

In the Pelican-5 samples there has been precipitation of quartz, carbonate, kaolinite and smectite. Quartz, and possibly carbonate, crystals have grown on a 'template' provided by pre-existing crystals whereas kaolinite and smectite have grown by direct precipitation from pore waters. Feldspars in these rocks appear to be fresh and not spatially associated with the kaolinite; it is therefore unlikely that kaolinite development is associated with alteration of detrital feldspar.

Primary porosity in these Pelican-5 sandstones was reduced initially by the deformation of soft lithic fragments between the more rigid quartz grains. The extent to which this primary porosity has been occluded by this process is proportional to the volume of lithic fragments in the sandstones. These volumes range from approximately 5-50% in the samples examined. Some microporosity remains in these lithic fragments (see SEM plates : Volume 2) although it is unlikely that much of this porosity is interconnected.

The small volumes of primary interconnected pore spaces remaining were then filled with authigenic quartz (mainly from quartz overgrowths), clays (kaolinite, smectite, smectite-illite, illite and chlorite) and finally carbonate (mainly dolomite). Some microporosity remains between these authigenic clays and much of this is likely to be interconnected (see SEM plates : Volume 2).

As a result of these diagenetic effects the majority of the resultant sandstones are tight. The sandstones with the best porosity contain few lithic fragments. Quartz overgrowths are extensive and authigenic clays are abundant in these sandstones. These more porous sandstones occur at 2881, 3891.5 and 3900.5 metres depth in Pelican-5.

2. Lithic Fragments

Fine-grained material in these rocks which is not attributable to authigenic carbonate or kaolinite is derived from sand-grade lithic clasts which were deposited with the quartz grains. This identification/interpretation is based on the fact that the material varies in nature (mineralogy and texture) on a scale of 0.1 to 0.4 mm. This variation reflects the different kinds of lithics incorporated into the sandstone. Had the clays been derived from a clay matrix (fine-grained detritus which infiltrated between the sand grains in the immediate environment of deposition) then they would be homogeneous over the whole area of the thin section. It is likely that the fine-grained sedimentary and metasedimentary lithics encountered in Pelican-5 are likely to contain mainly illitic and illite-smectite interstratified clays - derived from the alteration of sericite and micas in the original rocks.

Note that there is likely to be a variety of reactive minerals in these Pelican-5 reservoirs (carbonate, kaolinite, smectite and more than one clay from the lithics) and this should be considered in assessing, for example, stimulation proposals.

3. Diagenetic Model

It is not possible to evolve a full understanding of the diagenesis of these sandstones without more detailed study, but some comments can be made.

These are fluvial (non-marine) sandstones and are hence likely to have been saturated initially with low pH waters of low ionic strength. In these conditions, and given flushing with equally fresh water, kaolinite (and quartz) are stable mineral species and recipitate when the concentration of alluvium and silicon ions in the porewater is sufficient. Other authigenic clays (smectite, randomly interstratified smectite/illite and hairy illite) appear to form after the kaolinite and quartz and commonly coat these minerals. These authigenic clays are commonly associated with the lithic fragments, and probably form from the alteration of sericite and micas in the original sediments.

The authigenic clay minerals tend to be most abundant in samples and portions of samples, where some porosity has remained after the lithic fragments have been squashed between the quartz grains during compaction of these sandstones.

Carbonate cement is relatively late and could be formed from the influx of seawater into the system or by an increase in CO_2 in the porewaters (from organic-matter diagenesis or perhaps from the diagenesis of adjacent shales). The advent of CO_2 (increasing pH) may also be responsible for some mineral dissolution and an increase in (secondary) porosity.

3.2 X-Ray Diffraction

The XRD results illustrate that the clay fractions of these sandstones comprise of mixtures of ten different minerals, a large proportion of which are generally present in each sample. Barite is probably a contaminant in these samples derived from the drilling mud. The size of the -2 μm fraction relates to the proportion of clay minerals in each sample and in this case is largely dependent on the proportion of lithic fragments.

The most abundant clay minerals in the -2 μm fraction are kaolinite, randomly interstratified mixed-layer smectite-illite and mica/illite. Smectite occurs in the interval 2746.5-3098.5 metres depth and chlorite is present between 3155.5-3617 metres depth. Quartz and feldspars in this size range are most likely derived from the lithic fragments.

452065

MINERALOGY CLAY FRACTION OF 13 PELICAN-5 SAMPLES — F6409 - Pelican 5

le	2746.5m		2750m		2869m		2881m		3098.5m		3109m		3155.5m	
fract. %:	6		5		3		1		10		5		11	
Mineralogy:	K	D	Q	D	ML	D	ML	D	B	D	ML	D	B	D
	ML	A	K	SD	K	SD	M	A-SD	ML	A-SD	Q	SD	ML	A-SD
	Q	A	ML	A	M	A	K	A-SD	M	A	B	A	M	A
	M	A	M	A	Q	Tr-A	Q	Tr	Q	A	M	A	K	A
	Sm*	A	Sm*	A					K	A	K	Tr	Q	A
	B	Tr-A	B	Tr					Sm*	Tr-A	F?	Tr	C	Tr
	F'?	Tr	F'	Tr									F?	Tr

ple	3159m		3194m		3198m		3442.5m		3447m		3617m	
fract. %:	10		11		11		11		13		2	
Mineralogy:	M	D	ML	CD	ML	D	ML	D	ML	D	M	D
	Q	SD	M	CD	B	A-SD	M	A-SD	K	SD	Q	SD
	K	A	Q	A	M	A	K	A-SD	M	A	K	A
	B	A	K	A	Q	A	Q	A	Q	A	ML	A
	ML	A	B	A	K	A	C	Tr	B	Tr-A	B	A
	C	Tr	C	Tr	C	Tr	F	Tr	C	Tr	F	Tr
	F?	Tr	F?	Tr	F?	Tr			F	Tr	C	F

In these instances it was not possible to tell whether the smectite was interstratified.

Mineral Key

- Barite
- Chlorite
- F Feldspar (plag., -albite)
- F' K feldspar
- Kaolinite
- Mica/illite
- Randomly-interstratified mixed-layer smectite-illite with approx. equal proportions of the two layer types.
- Quartz
- Smectite
- Smectite with appreciable interstratification of illite layers.

SEMIQUANTITATIVE ABBREVIATIONS:

- D = Dominant. Used for the component apparently most abundant, regardless of its probable percentage level.
- CD = Co-dominant. Used for two (or more) predominating components, both or all of which are judged to be present in roughly equal amounts.
- SD = Sub-dominant. The next most abundant component(s) providing its percentage level is judged above about 20.
- A = Accessory. Components judged to be present between the levels of roughly 5 and 20%.
- Tr = Trace. Components judged to be below about 5%.

452066

APPENDIX 1

CORES 1, 2 AND 3; PETROGRAPHY

Sample: ISC47080; Location: Pelican-5, Core 1; 2790.5 m

Rock Name:

Compact lithic sandstone

Thin Section:

An optical estimate of the constituents gives the following:

	%
Quartz	70
Pores	10
Lithic fragments	7
Authigenic kaolinite	5-7
Carbonate	3-5
Mica	1
Feldspar	1

In textural terms this sample appears to be a distinctly tight and compact sandstone in that it shows the presence of authigenic kaolinite and carbonate, a moderate amount of lithic fragments and noticeably compact and intergrown quartz grains; nevertheless, the thin section retains about 10% porosity and many of these pores are relatively large. This being the case, it seems likely that the porosity is of secondary origin and is in some way related to a relatively late stage of dissolution of some particular component from the rock leaving numerous pores up to about 0.2 mm in size.

Although the average grain size of the rock is about 0.2 mm there are some variations from place to place in the thin section and there are isolated grains as much as 0.8 mm in size. In pressolved zones the average grain size of the quartz appears to be about 0.15 mm and these zones are characterised by the abundance of sutured and curved contacts between the grains, relatively abundant fine-grained authigenic carbonate and moderate amounts of apparently insoluble clays and detrital mica. These pressolved zones are generally not more than about 1 to 2 mm in thickness.

In other parts of the thin section the rock has a somewhat cleaner and more open texture and contacts between the quartz grains are generally long, tangential or, in a few cases, sutured and curved. In these parts of the rock carbonate is relatively less abundant but there are some aggregates of kaolinite ranging in size from about 0.1 to 0.3 mm. The heterogeneous patchy distribution of clay can also be seen in the more open parts of the rock and it is clear that the fine-grained material is derived entirely from original lithic fragments. Most of these appear to be aluminous lithologies, probably sedimentary and metasedimentary rocks. In this part of the rock there are also isolated instances of overgrowths on the quartz grains whereas these are not seen in the pressolved zones.

This is a tight rock characterised by what appear to be comformable zones in which pressure solution of quartz has been particularly thorough; in general the rock contains isolated patches of authigenic kaolinite and widely distributed small granules of an authigenic carbonate mineral. These features, together with the presence of relatively soft lithic fragments, are conducive to a sandstone with rather poor reservoir quality.

Sample: TSC47081; Location: Pelican-5, Core 1; 2791.3 m

Rock Name:
Compact sandstone

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	75
Pores	7-10
Lithic fragments	5
Authigenic kaolinite	5
Carbonate	3
Feldspar	1
Mica	<1

In most mineralogical and textural features this sample is very similar to that from 2790.5 m. The rock shows authigenic carbonate and kaolinite which form widely dispersed small granules and isolated monomineralic patches, respectively. Zones of notably advanced pressure solution are present but they tend in this sample to be less well defined and possibly not continuous in a horizontal direction. The limited extent of these pressure solution zones in this sample means that the rock has a somewhat higher average grain size but, even in the zones which don't show pressure solution, the rocks are only moderately to moderately well sorted. In this sample there are many grains of the order of 0.3 to 0.6 mm in size. Some parts of the rock may have a bimodal grain size distribution.

Pores in this sample are probably essentially of secondary origin and tend to range in size commonly from about 0.1 mm to 0.5 mm. Where feldspar occurs it is fresh and it seems unlikely that either the large secondary pores (or for that matter aggregates of kaolinite) are derived from the alteration of feldspar. It seems likely that the pores represent a particular kind of lithic fragment which were susceptible to dissolution. In some cases the cavities remaining after this dissolution have been filled by authigenic kaolinite. As a result, there are well defined monomineralic patches of this mineral as much as 1 mm in size. There is some textural evidence to indicate that the deposition of the authigenic kaolinite preceded that of the fine-grained secondary carbonate mineral.

Sample: TSC47068; Location: Pelican-5, Core 2: 2869 m

Rock Name:

Compact lithic sandstone with microstylolites

Hand Specimen:

A buff to cream coloured fine-grained sandstone which contains discontinuous dark brown microstylolitic bands at right angles to the length of core.

Thin Section:

An optical estimate of the constituents gives the following:

	%
Quartz	85
Lithic fragments	7
Pores	5
Carbonate	2
Feldspar	<1
Mica	Trace
Authigenic kaolinite	Trace

Rigid detrital grains of quartz and feldspar are well sorted about an average size of 0.15 to 0.2 mm. Grain boundaries show considerable modification by post-deposition effects and long and somewhat curved boundaries are fairly common. Overgrowths are seen on only a small proportion of the quartz grains and it is not likely that the development of these overgrowths has contributed much to the porosity reduction. The rock contains a significant proportion of clay and fine-grained constituents and these are interpreted as being derived entirely from original lithic fragments. Much of this material in the thin section is rather turbid and grey but shows variations in both the relative proportions of quartz and phyllosilicates and in average crystal size. There appears to be a considerable amount of fine-grained quartz-rich lithologies some of which are clearly chert but others are probably fine-grained metasediments with a relatively siliceous composition. Other lithic fragments are richer in mica and what appear to be illitic phases and some of these, particularly, show the effects of compression between the more rigid quartz grains. It is thought that the abundance of this clay and the clastic deformation during compaction have had relatively large effects in reducing the original porosity.

The rock does contain small amounts of authigenic kaolinite and of a carbonate mineral. The latter is also distinctly fine-grained and appears to form as a replacement product of some of the finer grained lithic fragments rather than being genuinely a pore fill constituent. The carbonate is particularly abundant in some of the microstylolitic zones where it occurs in fine-grained aggregates with micas and heavy minerals particularly.

Pores are generally relatively small and widely scattered but appear to be of secondary rather than primary origin. Apart from the possibility that they represent sites of preferential dissolution of clay, it is not clear what the origin of these secondary pores is.

Sample: TSC47069; Location: Pelican-5, Core 2; 2871 m

Rock Name:
Compact lithic sandstone

Hand Specimen:
A distinctly pale grey to creamy coloured rock with a small proportion of distinctive white spots. The rock is slightly friable.

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	80
Lithic fragments	15-20
Pores	<5
Feldspar	<1
Mica	<1
Authigenic kaolinite	<1

In this sandstone the average size of the quartz grains is of the order of 0.2 to 0.3 mm and the grains are moderately to well sorted. There is some development of long and curved contacts and overgrowths on the quartz grains, although not abundant are somewhat more common than in the sample described immediately above.

The most characteristic feature of the rock is a presence of a considerable amount of fine-grained material between the quartz grains. This is generally a mixture of fine-grained quartz and rather varied phyllosilicate minerals. The material is heterogeneous and is clearly derived probably entirely from original lithic clasts. It is the abundance of this material and its deformation and compaction during lithification of the rock which has resulted in reduction of the original porosity. This will also have been affected by the modifications to the quartz grains whereas the development of authigenic kaolinite will have done little to reduce the porosity. The pores themselves are generally at least 0.2 mm in size and are thought to be of secondary origin. Many have marginal areas of rather porous clay and hence it appears most likely that the pores have derived from dissolution or physical removal in some way of some of the intergranular clay component. As far as can be distinguished in the thin section it seems unlikely that the pores are well interconnected in three dimensions.

Sample: TSC47070; Location: Pelican-5, Core 2; 2873 m

Rock Name:
Lithic sandstone

Hand Specimen:
A slightly friable, pale grey sandstone with a small proportion of distinctive white spots.

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	80-85
Lithic fragments	7
Pores	7(+)
Authigenic kaolinite	≤1
Feldspar	Trace
Mica	Trace
Carbonate	Rare

This sandstone is a little cleaner than that described above and has, therefore, somewhat more porosity. There are fields of view in this thin section in which long and concavo-convex boundaries between the quartz grains are abundant and the low porosity stems from the pressure solution effects on the quartz grains. Considering the thin section overall, however, it is likely that an equally important effect has been the deformation of relatively soft lithic fragments during compaction and lithification. The distribution of these lithic clasts is somewhat patchy in the thin section and it seems likely that although the rock may have a reasonable porosity the permeability may be somewhat restricted. The lithic fragments themselves are extremely variable and include cherts, psammitic metamorphic rocks and distinctly more argillaceous sedimentary and metasedimentary varieties. Clay is also represented by small patches of authigenic kaolinite. These occur in this rock, as in others in this well, as isolated monomineralic patches which generally fill the intergranular space where they occur. The kaolinite invariably has a patchy distribution and the estimated proportion of this mineral in the rock is an indication of the extent to which it will have reduced the original porosity.

The pores in the thin section are generally about 0.1 to 0.4 mm in size and do not appear to well interconnected in three dimensions. There is somewhat more evidence in this rock of the pores being of primary origin in some cases and some, indeed, are small cuspate or triangular patches surrounded by clean faces of quartz crystals or grains. Other areas of the thin section are somewhat more porous with a greater proportion of large secondary pores which appear to have been derived from the dissolution of original grains.

In brief, therefore, this sample shows rather more the effect of pressure solution having reduced the original porosity to a similar extent to the process of deformation of original lithic fragments.

Sample: TSC47071; Location: Pelican-5, Core 2; 2875.1 m

Rock Name:
Compact lithic sandstone

Hand Specimen:
A slightly friable cream to pale grey rock which appears to be massive in the hand specimen. The sandstone shows some spotting by rare white patches.

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	80
Lithic fragments	15
Pores	3
Mica	1
Authigenic kaolinite	<1
Carbonate	Rare

This is a somewhat coarser grained and distinctly tighter rock than many others from core 2; in fact the sample is characterised by abundant concavo-convex grain boundaries and by the paucity of pores. There are small amounts of authigenic kaolinite and very fine-grained aggregates of carbonate; however, the apparent impervious nature of the sample is a result of modifications to the quartz grains during diagenesis and to a somewhat smaller extent compaction and deformation of soft lithic clasts between the relatively rigid grains of quartz. Pores now appear to be not well interconnected in three dimensions and many are not more than about 0.1 mm in size. Most of these small pores could readily be interpreted as being of primary origin, slightly modified during compaction of the rock. There is a small proportion of somewhat larger pores very widely distributed over the area of the thin section. These may well be of secondary origin and related to the preferential dissolution of some types of argillaceous fragments. The clay material in the rock and other fine-grained constituents are notably heterogeneous and varied. There are some monomineralic cherts but most of the fine-grained material consists of quartz and phyllosilicate with varying relative proportions and crystal sizes. As well, there are patches in which argillaceous material forms a network between the grains and this, also, has probably resulted in a marked reduction of any original permeability.

Authigenic kaolinite forms small isolated patches which are relatively coarsed grained, clear and monomineralic and are thought to represent a precipitate from circulating pore waters. In this rock, as in others from this core, feldspar is relatively fresh and is not spatially associated with the kaolinite and hence the kaolinite is not thought to have been derived from alteration of detrital feldspar.

Carbonate forms patches up to as much as 0.4 mm in size which are extremely fine-grained and appear to be almost opaque in plane polarised light. This is an unusual habit for authigenic carbonate and it is possible that these aggregates of carbonate represent original limestone clasts probably somewhat recrystallised during diagenesis of the rock.

Sample: TSC47072; Location: Pelican-5, Core 2; 2877 m

Rock Name:
Compact lithic sandstone

Hand Specimen:
A very pale somewhat spotted fine-grained sandstone.

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	85
Lithic	7
Authigenic kaolinite	2
Carbonate	2
Pores	<2

This is a distinctly tight sandstone which shows numerous examples of most of the characteristics which are likely to lead to a reduction in porosity. The pores in the thin section are rather isolated from each other and tend to be not more than 0.2 mm in size. Most are interpreted as being probably of secondary origin.

The quartz grains are moderately to well sorted and have an average size of about 0.2 mm. Most of the grains are equant and compact in shape but many have slightly irregular and subangular outlines as a result of the development of concavo-convex boundaries and examples of suturing. Identifiable overgrowths on the quartz grains are present only to a relatively small extent.

When the sample is examined under high magnification and intense illumination it can be seen that there is a considerable amount of widely dispersed carbonate. This is invariably very fine-grained and ranges from almost opaque irregular patches up to 0.3 mm in size to a fine dusting of authigenic crystals within fine-grained patches of lithic material. Authigenic kaolinite is also somewhat more abundant in this rock than in most of the others from core 2 but it tends to form discrete monomineralic isolated patches and is not dispersed throughout every field of view. The kaolinite is well crystallised and appears to be a genuine precipitate from pore waters. Unlike the carbonate, the kaolinite tends to fill (on a microscopic scale) all of the intergranular space where it occurs.

As the list of minerals above indicate, the rock contains a fine-grained material which is interpreted as being of lithic origin. Much of this appears to be relatively quartz-rich and some grains are definitely cherty. Others have some clay or phyllosilicate content and are most likely to be rather altered and deformed sedimentary or metasedimentary rocks.

The sample shows more evidence of pressure solution effects (particularly suturing) and of the authigenic crystallisation of kaolinite and carbonate than any of the samples described above, consequently the rock has the lowest apparent porosity in thin section.

Sample: TSC47073; Location: Pelican-5, Core 2; 2878.9 m

Rock Name:

Very compact sandstone

Hand Specimen:

This is a compact apparently relatively thinly bedded sandstone which shows some evidence of incipient microstylolites. The core samples appears to have split along some of these better developed microstylolitic zones.

Thin Section:

An optical estimate of the constituents gives the following:

	%
Quartz	85
Carbonate	5
Lithic fragments	5
Mica	2
Authigenic kaolinite	1
Pores	<2

Sutured grain boundaries are amongst the commonest type present in this thin section and the sample therefore shows extreme effects of pressure solution and the reduction of porosity by localised dissolution of the quartz grains. As well as this, there is a relatively large amount of fine-grained authigenic carbonate which forms both discrete patches and in narrow intergranular spaces and within the sutured grain contacts. Pores in the thin section are isolated from each other but range in size occasionally to as much as 0.2 mm. These relatively large pores are commonly associated with rather loose aggregates of clay or have clay at their margins and hence appear to be most likely of secondary origin. Although there is clear evidence of the dissolution of quartz, optically continuous overgrowths are not at all abundant in the thin section.

The average grain size of this sample is about 0.2 mm but the shape of the grains has been affected by pressure solution and most grains, although equant in shape have distinctly irregular and rather angular outlines. In some of the incipient microstylolitic zones there appears to have been a genuine reduction in the average size of the quartz grains. The clay material is distinctly heterogeneous and is interpreted as having been derived entirely from original lithic fragments. Some of these are cherty but most are fine-grained quartz and clay aggregates which probably can be regarded as metasedimentary rocks. Some quartz-rich types have rather varying crystal sizes and spherulitic patches which may suggest their origin as acid igneous rocks.

The sample appears to have essentially similar mineralogical characteristics to most of those described above and it is not apparent from examination of this thin section alone, why this sample should show such marked suturing of the grain contacts; however, it is clear that this process has been the principal factor in reducing the original porosity. It seems likely that the suturing was a relatively late process in the diagenesis in that it has affected quartz overgrowths and the authigenic carbonate.

Sample: TSC47074; Location: Pelican-5, Core 2; 2881 m

Rock Name:
Compact lithic sandstone

Hand Specimen:
A friable very pale sandstone which appears to be essentially massive.

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	80
Lithic fragments	12
Pores	5-7
Authigenic kaolinite	1
Carbonate	Trace

This sandstone is somewhat more argillaceous and coarser grained than those described above; the rock is not well sorted but the average grain size is estimated to be about 0.3 mm and there are several grains up to about 0.8 mm in size. The sample probably also shows somewhat more evidence of quartz overgrowths than many in this collection. Grain boundaries are definitely concavo-convex but sutures are not abundant.

The intergranular material is at least as abundant as in any other rock from this core but it is in some ways less obviously derived from lithic fragments and is difficult to classify. This is probably because of the amount of quartz which has a crystal size of the order of 0.05 to 0.1 mm. This appears to occur in a fine-grained mosaic with indeterminate argillaceous material and hence to be of lithic origin but in some places there is a question whether such material is derived from fracturing of adjacent larger sand-grade grains. Elsewhere lithic material is better defined and clearly of metasedimentary origin and there are one or two fragments which are definitely chert. Authigenic kaolinite in this sample also forms both relatively large patches of distinctly well formed crystals. One such patch is about 0.5 mm in size and the kaolinite occurs adjacent to a fine-grained lithic fragment which contains finely dispersed authigenic carbonate. The kaolinite is slightly porous and a little blue stain can be seen within it.

Sample: TSC47082; Location: Pelican-5, Core 3; 2885.1 m

Rock Name:
Lithic sandstone

Thin Section:
An optical estimate of the constituent gives the following:

	%
Quartz	70
Lithic fragments	20-25
Pores	<5
Carbonate	5
Authigenic kaolinite	2
Mica	1
Feldspar	<1

As the list of minerals above indicates, the sample is characterised by the abundance of heterogeneous clay material which is clearly derived entirely from lithic fragments deposited essentially at the same time as those of quartz and feldspar. These fragments now occur as patches of clay similar in size to adjacent quartz grains and ranging widely in mineralogical characteristics, colour and crystal size. Some of the fragments clearly show the effect of being squeezed between the more rigid adjacent quartz grains but others show more evidence of an original compact outline. As well as wholely argillaceous varieties, the rock contains fine-grained metamorphic quartz-bearing lithologies and one or two apparently quartzofeldspathic rocks which may be high level, fine-grained volcanics. During compaction of the sandstone many of the lithic fragments were compressed so that they tended to squeeze into the interstices between the grains thereby reducing the porosity and permeability; this process was probably the most important in reducing the porosity from that of the original sand to the present level of probably less than 5%.

Carbonate is present in the rock as widely dispersed fine-grained material which also occurs as fine-grained monomineralic patches up to 0.2 mm in size. These latter may be derived from limestone detrital fragments which have been somewhat recrystallised and it seems likely, in any case, that the carbonate was derived from a relatively adjacent source within the sandstone body. Authigenic kaolinite forms isolated monomineralic patches similar to those in other rocks in this collection.

Sample: TSC47083; Location: Pelican-5, Core 3; 2886.5 m

Rock Name:

Argillaceous sandstone

Thin Section:

An optical estimate of the constituents gives the following:

	%
Quartz	65
Lithic fragments	20
Carbonate	7-10
Pores	5-7
Authigenic kaolinite	<2
Mica	<1
Feldspar	<1

In most features this sample is similar to that from 2885.1 m but carbonate tends to occur predominantly as monomineralic very fine-grained patches and the rock is probably a little more porous. The pores in this case are generally not more than about 0.1 to 0.15 mm in size and some appear to be associated with very porous aggregates of clay. To this extent, therefore, it seems likely that the pores are mainly of secondary origin and have been derived from recrystailisation, alteration or dissolution of clays in some of the lithic fragments. As in the sample described above, it is the abundance of lithic material which has been responsible for the apparent impervious nature of the sample; the lithic fragments comprise fully 20% of the volume of the rock and deformation of these during compaction has resulted in pore throats and original cavities being filled by the plastically deformed clay aggregates. In addition to this there is fine-grained authigenic carbonate which appears to be either derived from the recrystallisation of detrital limestone fragments or has been introduced into the system with circulating pore waters. This mineral forms either isolated patches or widely distributed small granules and crystals. As in other samples, however, the authigenic kaolinite forms distinct compact monomineralic patches.

The quartz grains are fairly well sorted about an average size of 0.15 to 0.2 mm and some show the presence of long or slightly curved boundaries; suturing is not present and it is thought likely that extreme modifications to the detrital quartz grains were inhibited by a relatively early process by which the lithic fragments choked off a considerable amount of the original permeability.

Sample: TSC47084; Location: Pelican-5, Core 3; 2888 m

Rock Name:
Porous clean sandstone

Thin Section:
An optical estimate of the constituents gives the following:

	%
Quartz	65
Pores	20(+?)
Lithic fragments	10
Carbonate	2
Authigenic kaolinite	1
Feldspar	1

This sandstone is distinctly different from the two described above in that it is coarser grained, cleaner (to the extent that it contains little lithic material) and distinctly more porous. It is thought that because of the relatively small amount of lithic fragments there was more circulation of pore waters during compaction and burial and consequently the rock contains much more evidence of the presence of overgrowths on the quartz grains and it is estimated that probably 30 to 50% of the quartz grains show some evidence of the presence of overgrowths.

The pores in this rock generally range in size from 0.1 to about 0.4 mm; many of the smaller pores are partially bounded by rational crystal faces of quartz and appear to be modified primary pores whereas the secondary pores (probably quantitatively not as abundant) are somewhat larger and are probably associated with the dissolution of original lithic fragments.

The quartz grains are well sorted about an average size of 0.25 mm and most appear to have shown reasonably well rounded outlines although these have been modified by overgrowths. Authigenic kaolinite forms well defined monomineralic patches which tend to fill the whole of the intergranular space where they occur whereas the carbonate is more widely distributed throughout the rock and is generally fine-grained.

452079

APPENDIX 2

PETROGRAPHY

1. PETROGRAPHY

A portion of each sample was mounted after impregnation and stained with alizarin red-S. The thin sections were examined and descriptions are given below. As is commonly the case with sidewall cores there has been considerable damage to the rocks which can be attributed to the way in which the cores are collected. Consequently a detailed description of the quantitative mineralogy of the samples and, in some cases, of the textures have not been given but attention is focused in the descriptions on the overall characteristics of the sample which can be determined in spite of the damage caused by the sampling bullet.

Sample: TSC47102; Location: Sidewall Core 45, 2746.5 m

Rock Name:
Compact sandstone

Thin Section:

The average grain size of the quartz grains is about 0.2 mm and possibly about 10% of the grains appear to show overgrowths. Much more abundant, however, is the development of long and curved contacts between the grains and in some of the more undisturbed parts of the thin section there is even the development of triple-point junctions and small aggregates of essentially monomineralic quartz material. More generally, however, there are patches and thin lamellae of clay between the quartz grains and authigenic kaolinite and clay derived from lithic material perhaps comprise a 10% of the volume of the rock together. Authigenic kaolinite is relatively abundant and tends to form isolated monomineralic patches which fill the intergranular space where they occur.

Authigenic carbonate is significantly less abundant but is more widely scattered throughout the thin section where it forms very small crystals dotted along the margins of quartz grains and within aggregates of both kaolinite and other clays. There are rare fine-grained monomineralic aggregates of the carbonate which may well be derived from recrystallised original limestone fragments. Carbonate also occurs in one part of the thin section where there is a thin bed of silty material about 1 mm in width.

In brief, therefore, this is a tight sandstone characterised by modifications to original quartz grains during compaction and diagenesis and the crystallisation of authigenic kaolinite and carbonate; as well, the rock does contain a relatively small amount of lithic fragments and these have been compressed and squeezed as the rock was lithified. It is likely that the sample has moderate to poor reservoir qualities. The undisturbed parts of the thin section appear to show no porosity.

Sample: TSC47101; Location: Sidewall Core 44, 2750 m

Rock Name:

Compact sandstone

Thin Section:

This sample has been badly effected by the sampling bullet and the interpretation of the petrography should be regarded as tentatively only.

The sample contains about 10 to 15% of clay minerals of which probably about 3 to 5% is kaolinite and the remainder in all likelihood derived from original lithic clasts. As far as can be determined the sample now has a rather compact texture resulting both from the crystallisation of the kaolinite and deformation of the clays in the lithic fragments; more important still, however, has been the development of long and curved contacts between the quartz grains during compaction and lithification. The more coherent parts of the section show the development of triple-point junctions similar to those described in the sample immediately above. There are some instances of overgrowths on the quartz grains and these are somewhat more abundant in this rock than in that from 2746.5 m.

Authigenic carbonate comprises less than 2% of the volume of the rock and there are trace amounts of detrital feldspar and muscovite. The rock is well sorted and has an average grain size of about 0.2 to 0.3 mm.

The thin section contains a moderate amount of porosity but it is thought unlikely that much of this is integral to the originally undisturbed sandstone and it is likely that the rock has limited porosity and permeability but probably kaolinite is the principal clay mineral and reactive illites, smectites and chlorites are likely to be present only in very small amounts.

Sample: TSC47100; Location: Sidewall Core 55, 3093 m

Rock Name:

Dolomitic compact sandstone

Thin Section:

It is estimated that authigenic carbonate comprises about 10 to 15% of the volume of this rock; the carbonate has not been stained by alizarin red-S and does not appear to be associated with ferruginous staining and therefore is most likely to be dolomite. This mineral is generally distinctly fine-grained and evenly and widely scattered over the area of the thin section. There are some crystals and aggregates up to about 0.1 mm in size and some of these could be derived from limestone fragments which were recrystallised in situ. The wide distribution of the dolomite, however, suggests that it may well be a mineral introduced into the rock and probably relatively late in the diagenetic process.

For the remainder, the rock is a somewhat lithic sandstone in which the quartz grains are well sorted about an average size of 0.1 to 0.15 mm. Clays derived from lithic fragments are rather difficult to estimate but probably do not exceed 5% of the volume of the rock. There are small amounts of detrital feldspar and mica and both of these minerals appear to be fresh. Kaolinite is essentially absent.

Most parts of the thin section show evidence of the development of long and concavo-convex boundaries between the quartz grains and it is likely that modifications to these grains during compaction, together with the crystallisation of dolomite, has been the main factor in lithifying the rock and in reducing the original permeability of the sand as it was deposited. The thin section does contain a small amount of porosity but the more compact and less damaged parts of the sandstone appear to be essentially impervious and it is likely that the rock has rather poor permeability and porosity. Reactive clays are probably present to a relatively small extent. The presence of the dolomite would have to be taken into account in designing any stimulation of the reservoir.

Sample: TSC47099; Location: Sidewall Core 54, 3098.5 m

Rock Name:

Compact lithic sandstone

Thin Section:

This is a relatively coarse grained sandstone and it appears to be well sorted about an average grain size of about 0.3 to possibly 0.4 mm. The rock shows considerable evidence of modifications of the detrital grains during compaction and there are places where sutured contacts are well developed and there is a tendency towards microstylolitic features. The rock contains about 15 to 20% of relatively birefringent clays (sericite, illite?) and these form both coherent patches and, more commonly, contiguous intergranular films. It is likely that these clays are derived from lithic fragments although this is less evident in this sample than in most others described from this well. For the most part the clay appears to be monomineralic material probably derived from original shales or mudstones but there are places where fine-grained quartz is intergrown with the illitic material. For the most part, therefore, the sample is a totally impervious aggregate of quartz grains with intervening patches and seams of this illitic material. Elsewhere in the thin section there are very small amounts of authigenic kaolinite and fine-grained ?dolomite. The rock does contain detrital feldspar and in one instance there appear to be overgrowths on a rather altered plagioclase grain.

Many fields of view contain no porosity which can be identified in the thin section but there are places where there are pores up to about 0.4 mm in size. Some of these may well be secondary pores which are integral to the rock as a whole and may be derived from the dissolution of particular kinds of lithic fragments. These pores are unlikely to be interconnected in three dimension.

Sample: TSC47098; Location: Sidewall Core 52, 3109 m

Rock Name:

Coarse grained compact lithic sandstone

Thin Section:

This sandstone, also, is distinctly coarse grained and appears to be well sorted. Most of the grains range in size from 0.2 mm to 0.5 mm. The rock has been extensively damaged during collection but more compact areas of the thin section show abundant development of long and concavo-convex boundaries between the quartz grain and as much as 20 to 30% of fine-grained material derived from lithic clasts. The latter generally fill the spaces between the quartz grains as a result of deformation during squeezing and only rare chert grains retain their original rounded outline. One or two exceptionally large detrital flakes of mica also show the effects of distortion during compaction between the lithic quartz grains. All these features have contributed to the impervious nature of the sample and most of the more coherent parts of the thin section contain no visible porosity.

The sample does not appear to contain any authigenic kaolinite but there are isolated patches of what appears to be authigenic ?dolomite and some of the larger patches of this material could be derived from the localised recrystallisation of original limestone or dolomite fragments.

In places in the thin section there are incipient microstylolites and some fine-grained carbonate tends to be present in the sutures of insoluble material in the microstylolites.

Sample: TSC47103; Location: Sidewall Core 48, 3155.5 m

Rock Name:
Compact lithic sandstone

Thin Section:
There has been considerable damage to this sample and the quartz grains in many areas are fractured and fine-grained seams are thought to be derived from this disturbance of the original sandstone. In most places, however, the quartz grains appear to show moderate to good sorting and have an average grain size of the order of 0.2 to 0.3 mm. Clay comprises approximately 25% of the volume of the rock and most of this is heterogeneous material derived from original lithic fragments. This now occurs as discrete aggregates which fill the whole of the intergranular space where they occur and the heterogeneity is the essential indicator of the derivation from lithic fragments rather than from an original argillaceous matrix. The squeezing and deformation of the soft lithic clast during compaction has been one of the principal factors resulting in the apparently impervious nature of the sample.

As well as the clay derived from lithic fragments the sample does contain isolated monomineralic pools of kaolinite and there is a small amount of widely dispersed carbonate. The latter probably comprises 3 to 5% of the volume of the rock and, as well as an unstained variety there is a small amount of calcite. The carbonate is clearly authigenic in origin and there are some moderately well formed rhombs. The carbonate is present generally as very small crystals but some larger aggregates also tend to fill the space between the quartz grains.

The rock contains small amounts of detrital feldspar and colourless mica. As far as can be determined the rock is essentially impervious and hence has very poor reservoir properties.

Sample: TSC47108; Location: Sidewall Core 47, 3159 m

Rock Name:

Compact lithic sandstone

Thin Section:

Fine-grained clays and minor carbonate comprise fully 25% of the volume of this rock. Amongst this material there is a minor amount of kaolinite which forms compact monomineralic aggregates between the quartz grains but most of the material is heterogeneous and thought, therefore, to have been derived from lithic fragments which were deposited at the same time as the abundant quartz grains. This lithic material ranges from fairly well defined fine-grained aggregates of quartz and oriented phyllosilicates, which are clearly of metasedimentary origin, to more indeterminate aggregates of very fine-grained clay which commonly have been markedly distorted by squeezing between the quartz grains during compaction. Many of these more indeterminate clay aggregates show moderate birefringence and are likely to be illitic in character. There is a small proportion of chert grains and these tend to retain compact detrital outlines.

The quartz grains are well sorted and have an average size of 0.3 mm. Most show some evidence of the development of long and curved contacts and in some instances they are separated from each other by films of clay material. Overgrowths are not common but the shape of the grains is a clear indication of the extent of pressure solution and porosity reduction by modification of the quartz grains.

The thin section contains a very small proportion of pores which are interpreted as being integral to the sandstone; these are up to 0.2 mm in size and are probably of secondary origin. Taken overall, however, the sample is probably impermeable and has poor reservoir qualities. As well as containing abundant clay, it is likely that there is a considerable range of clay minerals in rocks such as this, in that there is heterogeneous lithic material as well as apparently well crystallised authigenic kaolinite.

Sample: TSC47107; Location: Sidewall Core 42, 3194 m

Rock Name:

Dolomitic lithic sandstone

Thin Section:

Approximately 15% of the volume of this rock consists of fine-grained authigenic carbonate and there is a similar or possibly somewhat smaller amount of clay derived from lithic fragments. Authigenic kaolinite appears to be essentially absent. As far as can be determined the sandstone consists of well sorted grains which range from about 0.1 to 0.25 mm in size. Where the sandstone is relatively well preserved, there is evidence of the presence of long and curved contacts between the grains and rare instances of overgrowths. For the most part, however, intergranular space is relatively abundant and is filled either with distorted heterogeneous remnants of original lithic fragments or with fine-grained patches and porous aggregates of ?dolomite. It is the abundance of these fine-grained constituents which has lead to the apparently impervious and impermeable nature of the sandstone. Modifications to the quartz grains appear to be locally significant and there is an inverse relationship between the amount of clay in the rock and the extent of pressure solution of the quartz.

The sample has been considerably damaged during collection of the sidewall core but it seems likely that it is amongst the more carbonate-rich and lithic sandstones in this group. Its reservoir properties include not only meagre porosity and permeability but also wide varieties of potentially active minerals including carbonate as well as, probably, a range of phyllosilicates.

452088

Sample: TSC47106; Location: Sidewall Core 41, 3198.5 m

Rock Name:

Compact lithic sandstone

Thin Section:

Lithic fragments comprise about 20% of the volume of this sandstone and the remainder is comprised very largely of quartz grains with a moderate proportion of authigenic carbonate. Authigenic kaolinite is present only to a very small extent. The rock appears to be impervious as a result of modifications to the original quartz grains, distortion of the lithic fragments and the crystallisation of the authigenic carbonate mineral.

The quartz grains are moderately well sorted and commonly range in size from 0.15 mm to about 0.4 mm. In some places there are long and curved contacts between the grains with some incipient suturing but for the most part the grains are separated by aggregates or thin films of fine-grained material and it is likely that the abundance of this has somewhat inhibited free circulation of pore waters which would enhance the development of pressure solution effects.

The lithic material is heterogeneous and ranges from rare siliceous rocks (both of metamorphic origin and chert) to apparently monomineralic aggregates of fine-grained birefringent clay (probably illitic) many of these illitic fragments have been markedly distorted and now form cuspate and irregular aggregates or, in some instances, films and seams between the quartz grains.

Carbonate is present both as relatively large aggregates and widely disseminated crystals and it is sufficiently abundant to have been a major influence in reducing the original porosity. In contrast, authigenic kaolinite, although it is present and forms some relatively large monomineralic aggregates, is quantitatively less abundant than the carbonate.

The thin section does show some porosity but it is thought that the bulk of this has been induced by collection of the sidewall core and preparation of the thin section. The rock is likely to be distinctly impervious and impermeable. There is some evidence of ferruginous staining in the sample and some of the clays have a distinctly yellow colour. There is also a little opaque and semi-opaque material which is present both in incipient microstylolite zones and as rare, apparently detrital, fragments.

Sample: TSC47105; Location: Sidewall Core 17, 3442.5 m

Rock Name:
Dolomitic lithic sandstone

Thin Section:
The average grain size is approximately 0.25 mm and the quartz grains for the most part retain their original subround to subangular detrital outlines. There is little development of long contacts in places where there is a relative paucity of clay. In most fields of view, however, fine-grained constituents comprise 30 to 50% of the volume of the rock. Most of this material is rather heterogeneous and fine-grained and consists mainly of phyllosilicate minerals with intergrown fine-grained quartz and small amounts of carbonate and secondary ferruginous phases. The heterogeneity of the material is a clear indication of its derivation from lithic fragments and the abundance of this material and the way in which it has been compressed and squeezed between the more rigid quartz grains is responsible for the apparently impervious nature of the sample in thin section.

As well as this clay the rock does contain, in places, rather large aggregates of extremely fine-grained carbonate. The largest of these is about 1 cm in size but there are several which are of the order of about 0.2 mm in width and 1 mm in length. The largest of these fragments could well be some kind of concretion which has been caught up in the sandstone but the smaller aggregates of carbonate may well be derived from recrystallisation and deformation of original limestone fragments. Also present in one part of the thin section, particularly, are elongate and irregular aggregates of opaque material which could well be of plant origin.

This is a distinctly lithic sandstone which has, probably, extremely poor petrophysical characteristics. These result from the abundance of the lithic materials and hence from the sedimentological maturity of the sandstone. As well as low porosity and permeability it should be noted that this sample (like many others from this well) is likely to contain a wide variety of reactive minerals including several types of phyllosilicates as well as carbonate and kaolinite derived from authigenesis.

In one place in the thin section there is a small aggregate of a green mineral tentatively interpreted as glauconite.

Sample: TSC47104; Location: Sidewall Core 16, 3447 m

Rock Name:

Compact lithic sandstone

Thin Section:

This sample is similar to many other lithic sandstones in this collection but this one contains probably 15 to 25% of carbonate and only less than 2% of authigenic kaolinite. Fine-grained material thought to have been derived from lithic fragments comprises perhaps about 20 to 25% of the volume of the rock. The fine-grained clay material both forms irregular patches between the quartz grains and also in intergranular films so that there is limited evidence of the pressure solution effects on the quartz grains. These are confined to a few small patches where the clays are relatively less abundant. The carbonate forms many irregular porous patches in which it appears to have partially replaced some of the lithic fragments. As well, the carbonate occurs as small crystals, particularly along quartz grain boundaries. Overall the abundance of clay and of the carbonate means that the sample has an apparently impervious and impermeable nature.

Authigenic kaolinite is a minor constituent of the rock and there are traces of detrital mica and slightly turbid feldspar.

Sample: TSC47109; Location: Sidewall Core 4, 3592 m

Rock Name:

Compact lithic sandstone

Thin Section:

The average grain size of the quartz in this rock is approximately 0.3 mm and the sample appears to be well sorted. The shapes of the quartz grains have been effected by pressure solution and most fields of view show numerous long and curved contacts and even a few somewhat sutured contacts between the grains. Where the quartz grains are not in contact with each other there are patches of clay which essentially completely fill the spaces where they occur. The heterogeneity of this clay is taken as an indication that it is derived essentially entirely from lithic fragments. Some of these were cherty but most are aluminous lithologies of sedimentary or metasedimentary origin. During compaction these have been compressed and squeezed between the more rigid quartz grains and, by this mechanism, much of the porosity and permeability have been occluded.

The lithic fragments probably comprise 20 to 25% of the volume of the rock and the sample also contains a small amount (less than 3%) of authigenic kaolinite which forms monomineralic patches. Carbonate is also present as an authigenic phase to the extent of about 3 to 5% and forms both isolated crystals and some distinctly irregular fine-grained monomineralic patches.

The thin section contains a little porosity but it is thought that this is a function of disturbance of the sample; it seems more likely that, as far as can be determined in thin section, the rock is impervious and impermeable.

Sample: TSC47114; Location: Sidewall Core 3, 3609.5 m

Rock Name:
Lithic sandstone

Thin Section:

Fine-grained constituents comprise at least 40% of the volume of this rock and there is a correspondingly small proportion of sand-grade quartz grains. The latter are well sorted and most grains are 0.15 to 0.3 mm in size. There is some evidence of pressure solution effects from these grains but in general the compaction forces on the rock have been absorbed by the clastic deformation of the lithic fragments rather than by dissolution of the stressed quartz grains. A small proportion of the grains show overgrowths and these are notably smooth in a few places against kaolinite.

The lithic fragments generally show fine-grained textures and clay and phyllosilicate are the predominant constituents. A small proportion contain abundant sericitic or illitic material but most of the lithic fragments are less well defined and probably contain very fine-grained intergrowths of quartz, phyllosilicates and authigenic carbonate.

Authigenic kaolinite and authigenic carbonate are both present but the kaolinite, although it forms discrete patches, is not abundant in the rock whereas the carbonate is widely dispersed and most fields of view contain porous aggregates of this material where it appears to have partly replaced some of the lithic fragments.

This appears to be an essentially impervious sandstone which not only shows an apparent absence of porosity in thin section but also contains several potentially reactive minerals (carbonate, kaolinite and various clays in lithic fragments). To this extent, artificial stimulation of the reservoir by chemical means would be a complicated job.

Sample: TSC47113; LocationL: Sidewall Core 1, 3617 m

Rock Name:

Compact lithic sandstone

Thin Section:

This sample is similar in many respects to those described above in that it contains a relatively large proportion of clay material most of which has been derived from lithic fragments which were deposited at the same time as the sand-grade quartz grains. Occlusion of the original porosity and permeability of the sand has occurred mainly by physical squeezing and distortion of the relatively soft lithic clasts between the more rigid quartz grains. Many fields of view in the thin section simply consist of a randomly oriented aggregate of quartz grains and fine-grained patches on a scale of about 0.2 to 0.3 mm.

The lithic fragments range from siliceous types which are probably cherty through fairly well defined foliated schistose and slaty rock to very fine-grained argillaceous lithologies which are probably shales or their metamorphic equivalents. The more quartz-rich fragments retain a compact detrital outline but many of the softer fragments can be seen to be conformable to the shape of the adjacent quartz grains.

The lithic fragments probably comprise about 30 to 35% of the volume of the rock but authigenic kaolinite is present only to a very small extent and probably comprises not more than about 2%. Even so, the kaolinite does tend to form well defined monomineralic patches up to about 0.2 mm in overall size.

Some parts of the thin section contain rather large aggregates of a completely opaque constituent which may well represent plant debris. The largest aggregates of this material are several millimetres in length and up to about 1 mm in width.

The thin section contains some porosity but it is likely that this is a result of preparation of the sample before microscopy and it seems unlikely that the reservoir at this depth has good petrophysical properties both in terms of the overall amount of porosity and permeability and also in view of the wide variety of potentially reactive minerals present.

Sample: TSC47112; Location: Sidewall Core 62, 3663.6 m

Rock Name:

Compact lithic sandstone

Thin Section:

This sample is a little different from the few described immediately above in that it is a little finer grained and there appears to be an opaque or semi-opaque authigenic phase which rims and outlines many of the quartz grains. The rock shows an equally compact texture in that there are concavo-convex and sutured margins between the grains but these are marked both by the authigenic mineral referred to above and by thin smears of clays derived from adjacent deformed lithic fragments.

The average grain size of the quartz and lithic fragments appears to be about 0.15 to 0.2 mm and the lithic material probably comprises fully 20 to 25% of the volume of the rock. There are some well rounded chert grains but most of the lithic fragments are fine-grained lithologies generally consisting of phyllosilicates with or without small amounts of fine-grained quartz. Most of these rocks are probably of metasedimentary origin. There is a little detrital muscovite but feldspar is very rare.

There appears to be little or no authigenic kaolinite but the rock contains widely dispersed authigenic ?dolomite and this may comprise possibly as much as 5% of the volume of the sample. The dark granular authigenic phase referred to above may be an iron oxide or hydroxide mineral derived from the alteration of original pyrite or it may represent tiny aggregates of dolomite or siderite (which are so small that they appear to be opaque).

The least disturbed parts of this thin section contain no visible porosity and permeability and this has resulted from the abundance of clay, modification of some quartz grains and the presence of incipient microstylolitic zones.

452095

Sample: TSC47111; Location: Sidewall Core 61, 3673 m

Rock Name:

Compact lithic sandstone

Thin Section:

This sample has been extensively damaged during collection of the sidewall core but it appears to be similar in many respects to other sidewall core sandstones in this well. The average grain size is of the order of 0.2 to 0.3 mm and there is evidence of pressure solution having acted upon the quartz grains leading to the formation of long and concavo-convex grain boundaries.

The overall proportion of clay in the rock is rather difficult to determine but it is probably not more than 15 to 20%. Authigenic kaolinite can only be identified positively in a few places and it seems likely that the bulk of the fine-grained material in the rock is heterogeneous clays, mica and quartz in sedimentary and metasedimentary fragments. These have clearly been compressed between the quartz grains and this process, also, has occluded much of the original porosity and permeability.

Sample: TSC47110; Location: Sidewall Core 19, 3684 m

Rock Name:
Compact lithic sandstone

Thin Section:
Collection of the sidewall core has caused considerable and extensive damage to this sandstone and there are some zones in which the average size of the quartz crystals/grains is not more than 0.1 mm. Less damaged areas have an average grain size of approximately 0.25 mm and these are taken to be more indicative of the nature of the original sandstone. These latter areas also contain about 25 to 30% of lithic fragments which occur as rather heterogeneous fine-grained aggregates between the quartz grains. There are some clearly cherty fragments and numerous argillaceous lithologies which probably contain abundant sericitic and illitic material. Most of the latter are probably metasedimentary rocks of some kind. In one or two instances in this sample there are fine-grained, possibly quartzofeldspathic, lithologies which may be of volcanic origin.

Authigenic kaolinite is present in the sample but it has rather a patchy distribution and it is difficult to estimate the proportion present with precision but it is thought to be less than 5%. The aggregates of kaolinite are commonly not more than 0.1 mm in size and although some fill all the intergranular space where they occur others are associated with patches of lithic fragments. A process may have occurred whereby there was partial dissolution of the lithic material and the cavities thus formed were subsequently filled with kaolinite precipitates.

There are thin films of fine-grained carbonate around some of the quartz grains and as partial replacements of some lithic material but the carbonate, although widespread, is not a quantitatively important constituent of this rock.

The sample appears to be impervious in thin section and it is thought likely that it has distinctly poor reservoir properties.

Sample: TSC47115; Location: Sidewall Core 59, 3688 m

Rock Name:

Compact lithic sandstone

Thin Section:

This sample has been extremely badly damaged during collection of the sidewall core and a detailed description will not be attempted. The rock appears to contain more than 20% of lithic fragments and it seems likely that the rock is similar in many respects to others described in this collection. There is evidence of pressure solution on some of the quartz grains and the rock contains readily identifiable grains of chert. Amongst the finer grained material there is clearly some carbonate which has partly replaced some of the clay in the lithic fragments and partly formed irregular fine-grained monomineralic patches. Authigenic kaolinite was identified but it is thought that this mineral and the carbonate are neither as significant in reducing the porosity as the deformation of the lithic fragments and modifications to the original quartz grains.

452098

Sample: 15C47120; Location: Sidewall Core 58, 3692.5 m

Rock Name:

Compact lithic sandstone

Thin Section:

The better preserved parts of this thin section contain about 15 to 20% of lithic material and there are patches where quartz grains are relatively abundant and show curved boundaries and some overgrowths. In these parts of the rock the lithic fragments tend to be isolated as discrete patches similar in size to adjacent quartz grains. As well as distinctly deformed and squashed fragments of phyllosilicates the rock contains more compact lithic fragments which contain a higher proportion of quartz.

This sample appears to be somewhat more feldspathic than many in this collection and there are feldspar grains as much as 0.4 mm in size. Most of the feldspar appears to be a potassic variety but a little plagioclase was identified also. All of the feldspars are fresh and there is no evidence that, for example, the authigenic kaolinite has been derived from dissolution of feldspar grains.

The best-preserved parts of the thin section show no porosity whatsoever but there are somewhat more damaged areas with small pores and fractures; however, these are thought to have been derived from the collection of the sidewall core and the thin sectioning process.

The rock does contain a siltstone ?fragment which is about 1 cm in size overall. This contains a minor amount of detrital siltgrade quartz in an abundant dark matrix which presumably consists of clays extensively stained by ferruginous material.

Sample: TSC47119; Location: Sidewall Core 18, 3697 m

Rock Name:

Compact lithic sandstone

Thin Section:

In the better preserved parts of this thin section, this sandstone shows most of the textural features common to the majority of samples from Pelican-5. The rock is particularly characterised by the development of concavo-convex and sutured contacts between the grains.

Fine-grained components comprise about 30% of the volume of the rock and most of these are birefringent phyllosilicates with a rather characteristic brown colour. Some of the material may even be fine-grained biotite possibly derived from neomorphism of clays originally in lithic clasts. The material shows considerable evidence of having been deformed and compressed between the more rigid quartz grains. As in other rocks, the lithic material is distinctly heterogeneous and ranges from quartz-rich varieties (mainly cherts) to grains which appear to be monomineralic phyllosilicates.

The rock contains traces of authigenic kaolinite and of fine-grained carbonate but the crystallisation of these phases has probably been much less important in occluding original porosity than has the development of pressure solution on the quartz grains and deformation of the soft lithic clasts.

The sample does show microstylolitic zones and these are particularly characterised in some areas by the presence of irregular networks of opaque material which may well be of plant origin. The thin section contains hardly any porosity which can be regarded as integral to the original sandstone.

452100

THIN SECTION PETROGRAPHY, SEM AND XRD ANALYSES OF SIDEWALL CORE SAMPLES FROM PELICAN-5, T-22-P, BASS BASIN

Amoco Australia Petroleum Company

3/786/0-F6432/86 May 1986

The Australian Mi eral Development Laboratories

mir on Street, Frewville, South Australia 5063
one delaide (08) 79 1662
Telex AA82520

Please address all correspondence to P.O. Box 114 Eastwood SA 5063
In reply quote:

amdel

452101

30 May 1986

F 3/786/0
F 6432/86

Amoco Australia Petroleum Company
15 Blue Street
NORTH SYDNEY NSW 2060

Attention: Steven C. Bane
Gary M. Kjellgren

REPORT F 6432/86

YOUR REFERENCE: LPO 1100

TITLE: Thin section petrography, SEM and XRD analyses of sidewall core samples from Pelican-5, T-22-P, Bass Basin

MATERIAL: Sidewall cores

LOCALITY: PELICAN-5

WORK REQUIRED: Thin section petrography, SEM and XRD

Investigation and Report by: Brian Watson
XRD by: Michael Till
Thin Section Petrography by: Frank Radke

Manager-Petroleum Services Section: Dr Brian G. Steveson

Brian Steveson.

for Dr William G. Spencer
General Manager
Applied Sciences Group

cap

Head Office:
Fler gton Street, Frewville
South Australia 5063,
Telephone (08) 79 1662
Telex: Amdel AA82520
Pilot Plant:
Osman Place
Thebarton, S.A.
Telephone (08) 43 8053
Branch Laboratories:
Melbourne, Vic.
ephone (03) 645 3093
Perth, W.A.
Telephone (09) 325 7311
Townsville
Queensland 4814
ephone (077) 75 1377

1. INTRODUCTION

Four sidewall core samples were received for thin section petrography, SEM and XRD analyses. The sample from 6498 metres depth was too small for XRD analysis.

2. RESULTS

XRD results are presented in Table 1, which lists the following:

(a) The proportion of the sample found to separate into the -2 μm size fraction, as determined by the plummet balance. The figure obtained applies only to the pre-treatment and dispersion conditions used.

(b) The mineralogy of the -2 μm fraction.

In Table 1 the minerals smectite, "interstratified smectite", illite-smectite and illite form a series, corresponding to the presence of an increasing proportion of illite interstratification. There could be instances where one was uncertain how to describe intermediate degrees of interstratification, but this has not occurred here. Thin section petrography is presented in Appendix 1 and SEM Plates are presented in Appendix 2.

3. DISCUSSION

Authigenic clays are very rare in samples from 2788.5, 3103 and 3498 metres depth. The sandstone at 2787 meters depth contains authigenic kaolinite, smectite and randomly interstratified smectite-illite. Carbonate occurs in the samples from 3103.5 and 3498 metres depth both as fairly large crystals (up to 0.2 mm) and very fine crystals (10-20 μm). This carbonate was identified to be siderite in both thin section and by XRD.

The composition and nature of these sandstones is similar to those examined from similar depths in a previous study of sandstones from Pelican-5 (AMDEL report F6407/86 and F6409/86). However, both studies highlight the complex and variable nature of these sediments.

5. RESULTS

TABLE 1: MINERALOGY OF CLAY FRACTION BY XRD, PELICAN-5

	2787 m		2788.5 m		3103.5 m*	
-2 μm %	6		5		6	
Mineralogy	K	D	ML	D	Sm^+	D
	ML	A-SD	M	SD	M	SD
	M	A-SD	K	A-SD	K	SD
	Q	A	Q	A	Q	Tr
	Sm	A	Sid	Tr-A	C	Tr
			Sm	Tr		

*In this sample barite is the dominant mineral. This was ignored when calculating the clay mineral proportions.

MINERAL KEY

C	Chlorite
K	Kaolinite
M	Mica/Illite
ML	Mixed layer - interstratified smectite and illite in approximately equal proportions
Q	Quartz
Sm	Smectite
Sm^+	Smectite with appreciable proportion of interstratified illite

452104

APPENDIX 1

THIN SECTION PETROGRAPHY

SAMPLE: Core 11, 3498m: TSC47281

Rock Name:
Carbonate Cemented Sandstone

Thin Section:
An optical estimate of the constituents gives the following :

	%
Quartz	40
Carbonate	35
Chert and lithic clasts	5
Clay/sericite	5
Muscovite	1
Feldspar	Tr-1
Zircon	Tr-1
Opaques	3
Pores	10

This sample consists mainly of detrital quartz grains between 0.1 and 0.25 mm in size cemented by a granular carbonate matrix. The detrital quartz grains typically exhibit angular to subangular shapes with a very small proportion having subrounded shapes. The carbonate matrix consists of carbonate grains ranging up to 0.2 mm in size which forms an interstitial granular mosaic. Testing of the hand specimen with dilute hydrochloric acid failed to give a reaction indicating no calcite is present. The carbonate generally has a very pale brown to tan colour and is thought to be siderite.

Although quartz is the major detrital component smaller amounts of chert and lithic clasts as well as some feldspar and zircon grains are also disseminated through the rock. The lithic clasts consist mainly of finely granular quartz intergrown with finely divided muscovite/sericite which locally exhibits a foliated texture suggesting that at least some of the clasts are low grade metamorphic rock clasts. Other finely granular cherty clasts are also disseminated through the rock. The detrital feldspar grains range up to 0.2 mm in size and consist of untwinned feldspar. At least some of the feldspar grains show slight marginal replacement with carbonate. Minor muscovite is disseminated through the rock as well developed flakes up to 0.3 mm long which are thought to be of detrital origin.

The rock contains some disseminated weakly birefringent clay as interstitial fillings intergrown with the carbonate matrix and as small pellets or clasts up to 0.2 mm wide. The interstitial clay consists of both weakly birefringent clay (probably kaolinite) as well as smaller amounts of fibrous sericite. The clay pellets typically consist of sericite intergrown with varying amounts of weakly birefringent clay.

The rock contains a moderate proportion of interstitial pores which range in size up to about 0.5 mm wide. At least some of these pores are thought to be original but it is also possible that some of the larger pores could have been produced during sampling.

Opaque grains and aggregates up to 0.15 mm wide are disseminated through the rock. Opaque to translucent iron oxides also locally form fine intergrowths with the interstitial matrix.

This is a fine grained detrital sediment containing a significant proportion of carbonate cement as well as a moderate porosity.

SAMPLE: Core 37, 2788.5m: TSC47282

Rock Name:
Sandstone

Thin Section:
An optical estimate of the constituents gives the following :

	%
Quartz	65
Clay/sericite	15
Lithic and chert clasts	4
Siderite	3
Feldspar	2
Tourmaline	Tr
Zircon	Tr
Opaques	2
Pores	10

This sample consists mainly of an interlocking mosaic of quartz grains with a typical grain size betweeon 0.15 and 0.5 mm. The detrital quartz grains generally exhibit subangular to subrounded shapes but invariably have strong overgrowths. In some cases these overgrowths are defined by inclusions which outline the original detrital grain but in some grains the overgrowths are not differentiated from the original detrital grain. Where these overgrowths penetrate into interstitial void spaces very straight crystal faces are formed and at least locally well terminated overgrowths have developed.

The interstitial regions between the detrital quartz grains consist mainly of angular voids ranging up to 0.2 mm in size. Locally the interstices are filled or partially filled with clay including weakly birefringent clay considered to be kaolinite and a fibrous, sericitic clay. Clay is also concentrated in irregular elongate patches or lenses up to 3 mm wide where it has a translucent, iron stained colour. These lenses have a much smaller proportion of detrital quartz grains and contain some very fine detritus of about 0.05 mm size. These irregular clay patches also contain finely granular intergrowths of translucent brown carbonate believed to be siderite.

Although quartz is the major detrital component minor amounts of other detritus are also present. Detrital lithic and chert clasts are disseminated through the rock and at least some of the clasts appear to be low grade metamorphic rocks comprised of muscovite/sericite with a lepidoblastic foliation intergrown with finely granular quartz. The detrital feldspar grains consist of both polysynthetically twinned plagioclase and untwinned potash feldspar and typically have a turbid character showing a least some alteration to finely divided sericite/clay. Traces of tourmaline and zircon also form small detrital grains up to 0.2 mm wide.

Within very localised areas very weakly developed microstylolitic textures are evident. These microstylolites are generally defined by narrow bands of sericitic phyllosilicates.

Opaques are disseminated through the rock as anhedral grains and aggregates up to 0.3 mm wide which generally occur interstitially between the detrital grains. Opaques in particular tend to be concentrated adjacent to the iron stained argillaceous lenses noted earlier.

This is a quartz-rich detrital sediment containing some argillaceous lenses up to several millimetres wide. The rock shows a good porosity although the original porosity has been reduced by the strong development of overgrowth quartz.

SAMPLE: Core 38, 2787m: TSC47282

Rock Name:
Sandstone

Thin Section:
An optical estimate of the constitutents gives the following :

	%
Quartz	65
Sericite/clay	20
Lithic and chert clasts	2
Feldspar	1
Siderite	1
Zircon	Tr
Opaques	1
Pores	10

This sample consists mainly of detrital quartz grains between 0.1 and 0.6 mm wide intergrown with smaller amounts of other minerals. Most of the quartz grains are below 0.3 mm in size with only a small proportion of larger grains. Overgrowth quartz is well developed and in some grains defined by a band of inclusions although in most cases the overgrowth quartz is difficult to distinguish from the original quartz grains. The development of overgrowth quartz has locally produced an interlocking quartz mosaic. Straight crystal faces occur where overgrowth quartz penetrates pores.

The interstitial areas between the quartz grains are generally filled with clay comprised of both very weakly birefringent clay believed to be kaolinite and intergrowths of a more birefringent, fibrous clay termed sericite which probably includes an interstratified clay. Some of the interstitial birefringent clay could represent deformed detrital clay particles and at least some moderately well developed clay particles of apparently detrital origin are present. Clay is also concentrated in very elongate discontinuous stringers up to 0.3 mm wide where it has a translucent, reddish-brown colour. These clay stringers also contain very finely granular intergrowths of siderite. Minor siderite is also intergrown with some of the other interstitial clay as small crystals below 0.05 mm wide.

The rock contains a moderate proportion of pores as angular interstitial voids between 0.1 and 0.5 mm wide. A small number of very much larger pore spaces up to a few millimetres wide are also present. Some of the larger pore spaces in particular could have been produced by fracturing associated with sampling.

Although quartz is the major detrital component minor feldspar and some lithic and chert clasts also form detrital grains. Some of the lithic clasts have fine foliated characters and are thought to represent low grade metamorphic rock clasts. Traces of zircon also form small detrital grains below 0.1 mm wide.

Opaques are disseminated through the rock as anhedral grains and aggregates up to 0.2 mm wide which typically occur interstitially between the detrital quartz grains.

This is a quartz-rich sandstone somewhat similar to the Core 37 sample.

SAMPLE: Core 53, 3103.5m: TSC47284

Rock Name:
Carbonate Cemented Sandstone

Thin Section:
An optical estimate of the constituents gives the following :

	%
Quartz	45
Carbonate	25
Clay/sericite	10
Chert and lithic clasts	5
Opaques	1
Pores	15

This sample consists mainly of quartz grains ranging up to 0.5 mm in size cemented by an interstitial matrix comprised mainly of carbonate and minor clay minerals. The quartz grains typically exhibit angular to subangular shapes and often have highly broken characters. The fractured character of the quartz grains is locally very strongly developed and could have been produced during sampling.

The interstitial carbonate forms a granular mosaic with a typical grain size of about 0.1 to 0.2 mm and partially fills the angular interstices between the detrital quartz grains. The carbonate typically has a very pale brown to tan colour and is thought to be siderite. Clay also occurs as interstitial fillings between the detrital quartz grains and is often intergrown with the carbonate. The clay includes a very weakly birefringent clay believed to be kaolinite as well as a fibrous more birefringent sericite which could represent a mixed-layer phyllosilicate. Within localised areas clay forms narrow lenticular bodies with a dark reddish-brown iron stained colour. These bodies range up to 0.3 mm in width and have a highly discontinuous character.

The rock contains a significant proportion of pores ranging up to approximately 1 mm in size. Some of the pores are obviously interstitial areas while others are thought to have been produced by deformation during sampling.

Minor chert and lithic clasts form small detrital grains up to 0.5 mm in size. Many of the lithic clasts consist of fine intergrowths of sericite and clay with finely granular quartz. Minor opaques form small disseminated grains and aggregates below 0.1 mm in size which are generally intergrown with the interstitial clay.

This is a detrital sediment somewhat similar to the Core 11 sample. This sample contains highly fractured quartz and this along with at least some of the porosity is thought to be due to deformational effects associated with sampling.

452110

APPENDIX 2

SEM PLATES

4521111

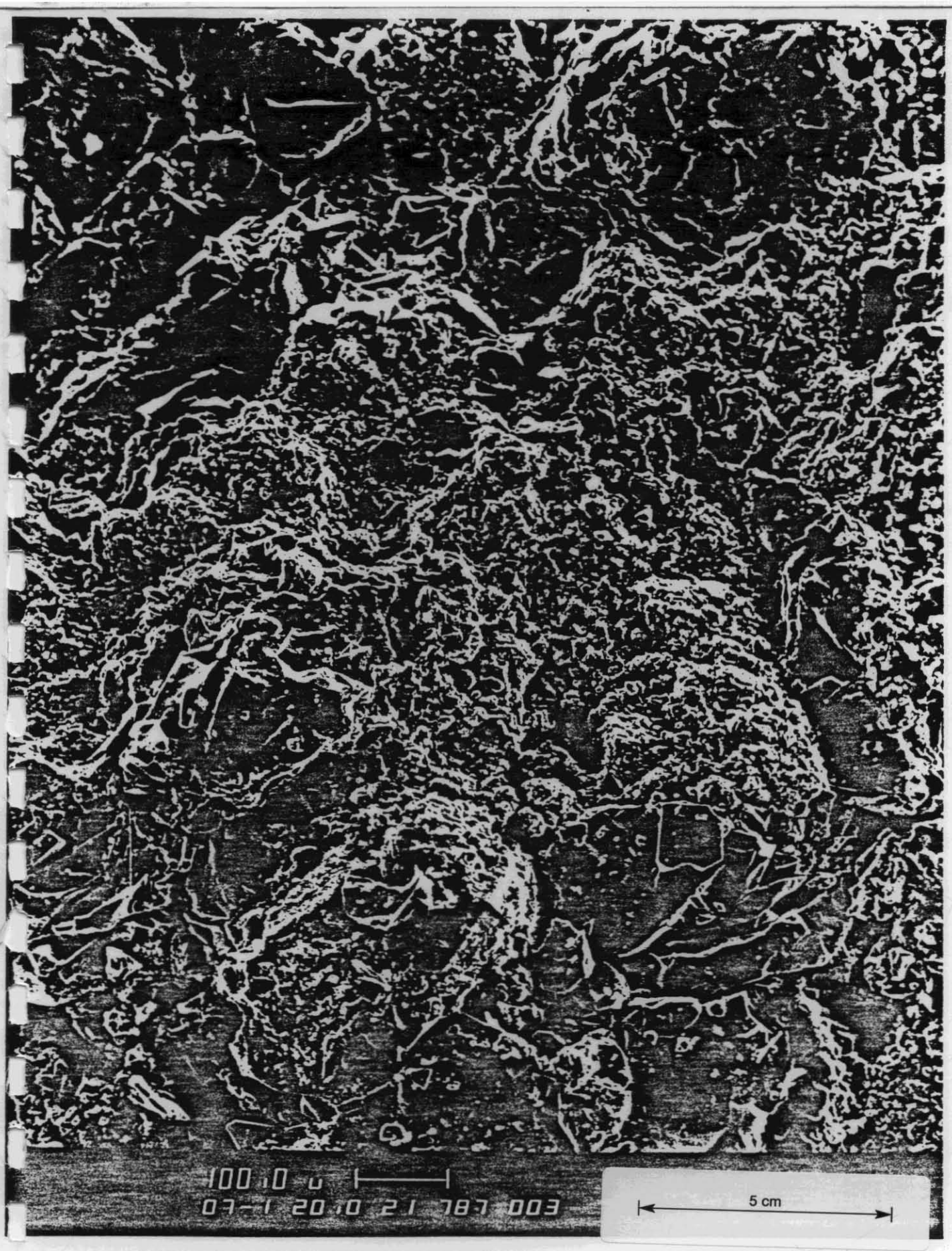


PLATE 1: 2787 m
Lithic fragments are slightly more abundant in this sandstone. Pores interstitial to the overgrown quartz grains are quite common and are enhanced by fracturing of the sample.

4521112

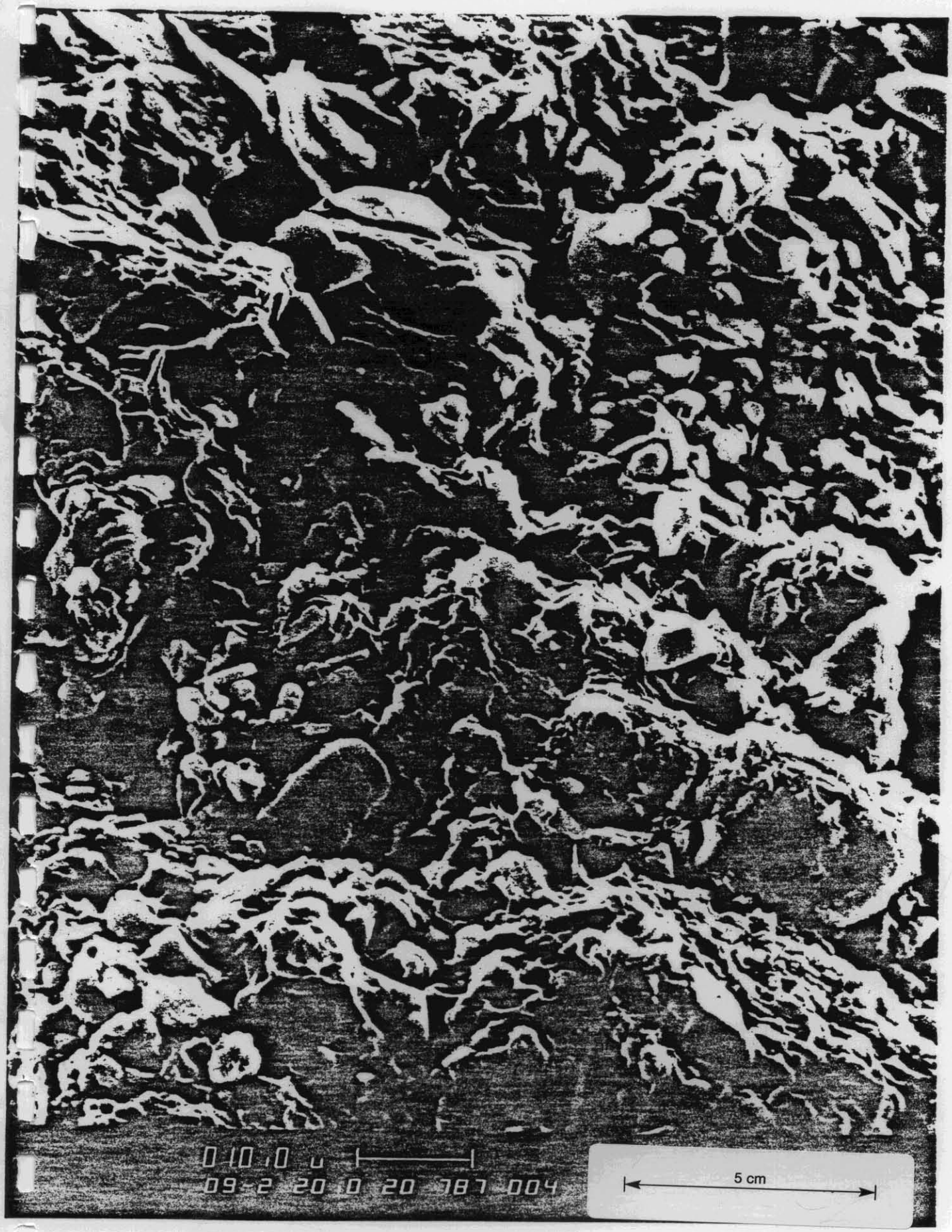


PLATE 2: 2787 m
Platy authigenic kaolinite and smectite occur on this lithic fragment and probably form from recrystalisation of the authigenic clays.

4521113



PLATE 3: 2787 m
Authigenic clays occur interstitial to the overgrown quartz grains in this sandstone. Some of the kaolinite (centre) appears to be partially re-dissolved.

452114

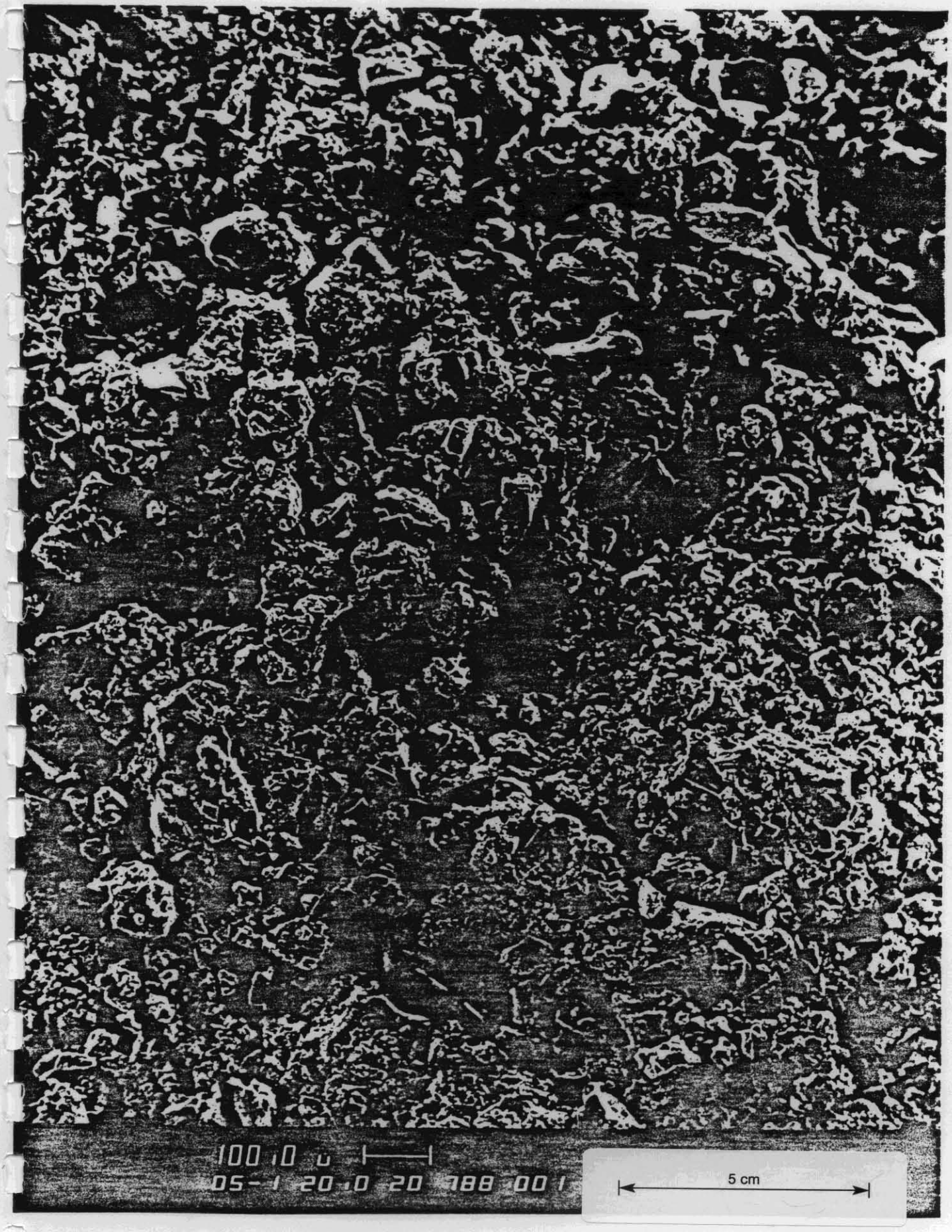


PLATE 4: 2788.5 m
This sandstone appears to be fairly porous with pores generally occurring at the interstices of the overgrown quartz grains. Lithic fragments comprise a fairly small proportion of the rock (10-15%).

452115



PLATE 5: 2788.5 m
The apparent porosity may be enhanced by fracturing during sample collection. Authigenic clays are very rare to absent and the only clays identified occurred in lithic fragments.

452116

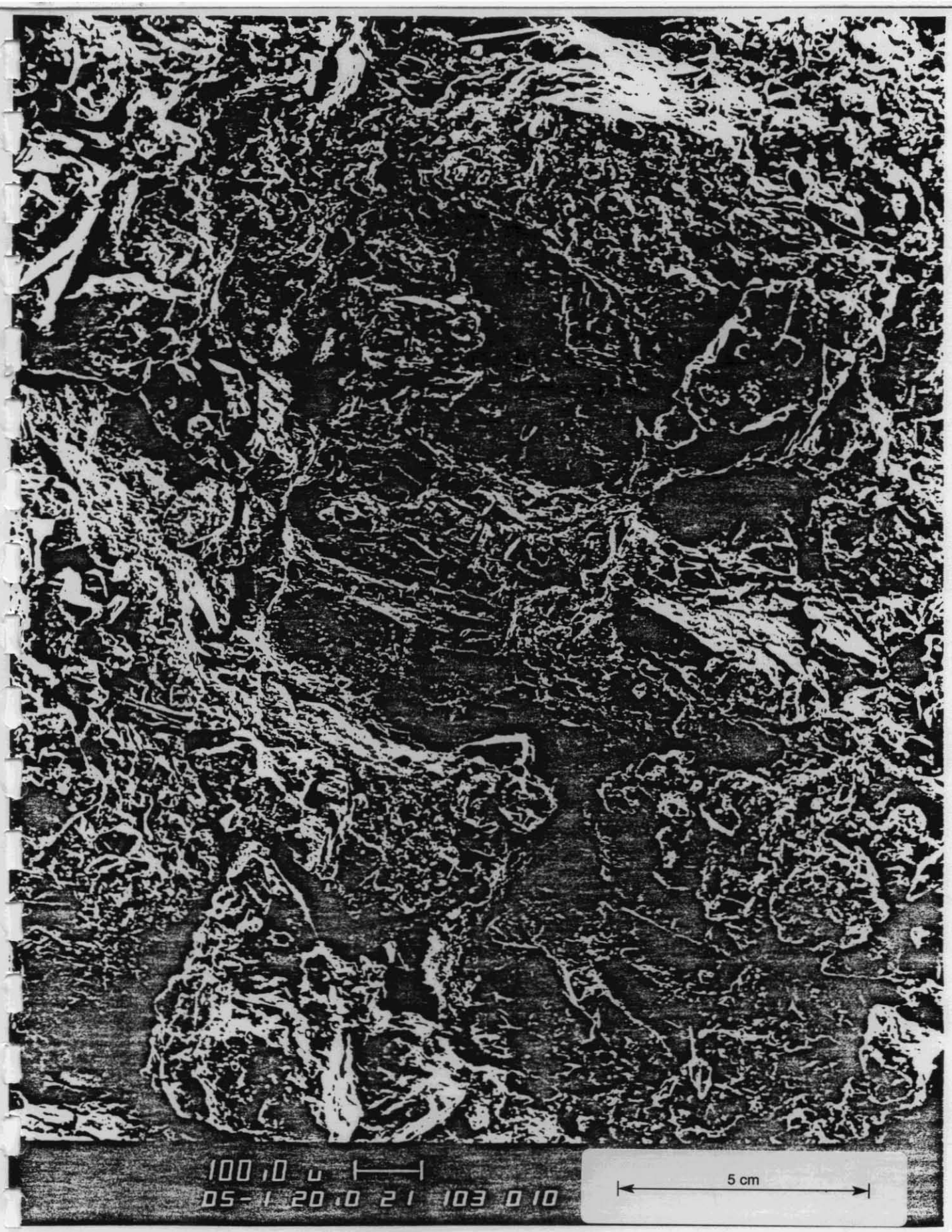


PLATE 6: 3103.5 m
Carbonate is abundant in this sandstone. Porosity is minimal but fracturing due to collection is extensive.

452117



PLATE 7: 3103.5 m
Carbonate occurs as massive intergrown crystals (Plate 6) as well as fine-grained material filling what remains of the pore spaces. Authigenic clays appear to be very rare but may be included in the carbonate crystals.

452118



PLATE 8: 3498 m
Carbonate cement has produced a rigid sandstone and filled much of the interstitial porosity. As a result porosity is low although some porosity remains between carbonate grains and at the interstices of the quartz grains.

4521119

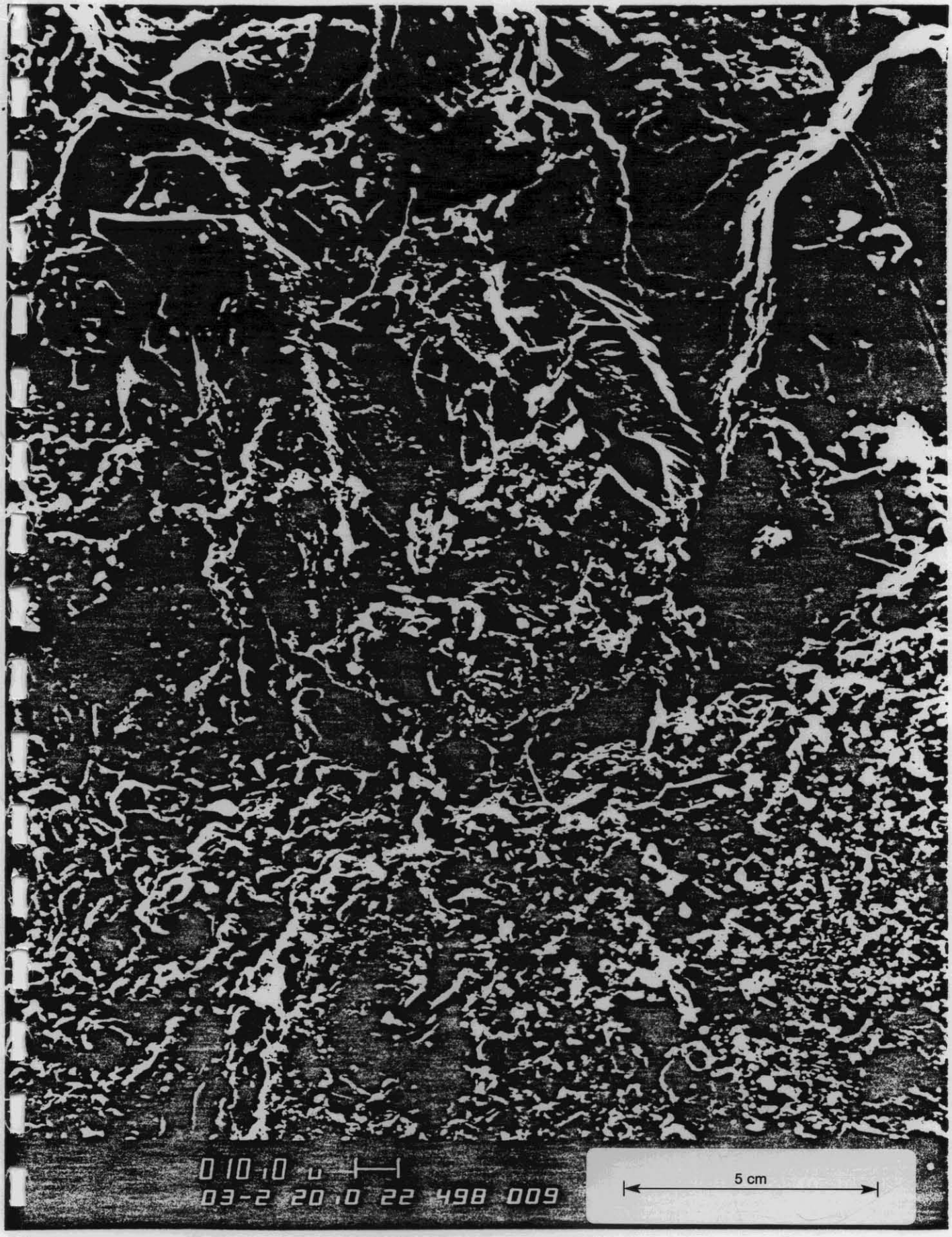
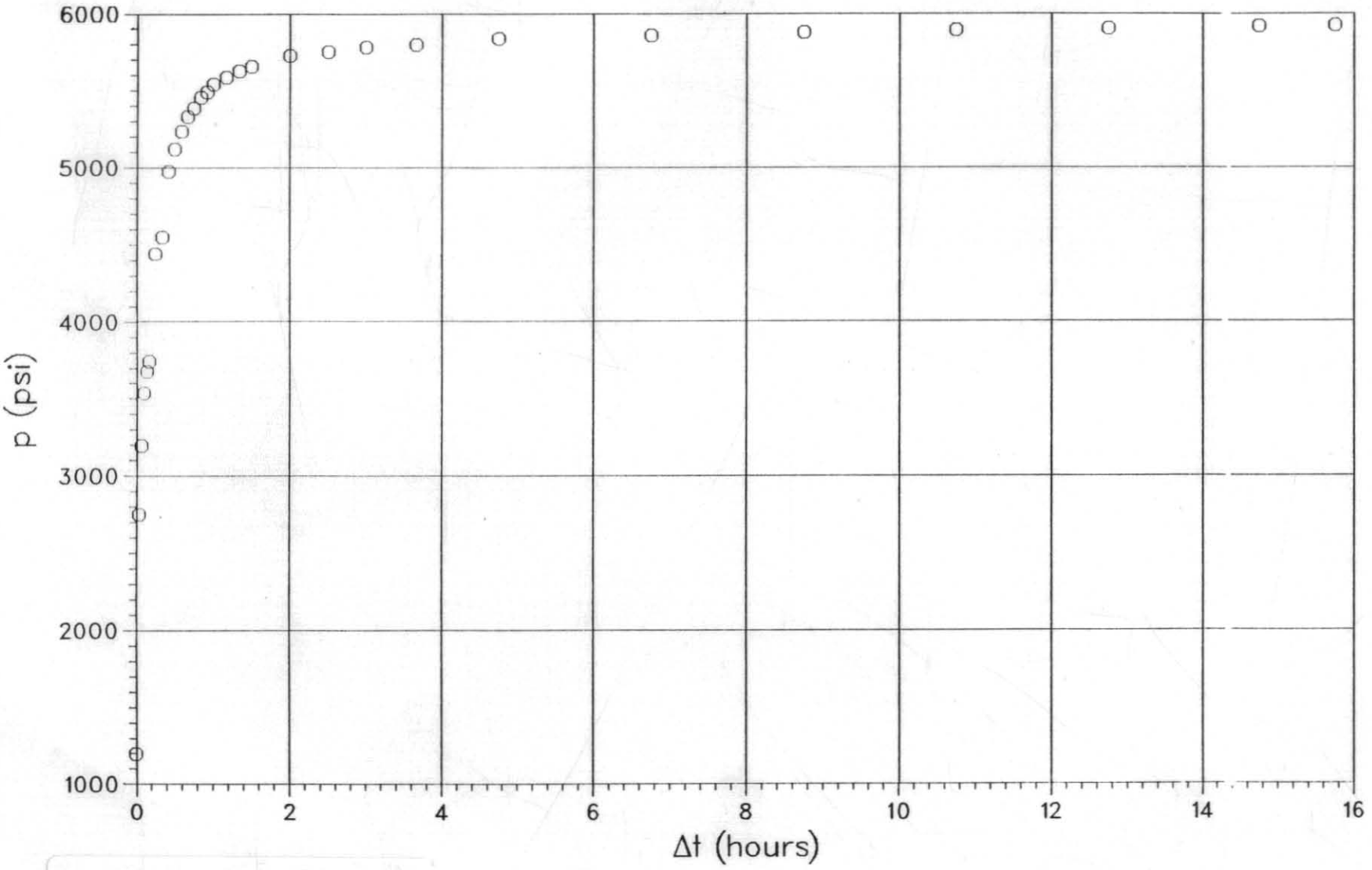


PLATE 9: 3498 m
Authigenic clays are rare as are lithic fragments. Traces of authigenic illite and randomly interstratified smectite-illites occur in the pore spaces of this sandstone.

452120

FIGURE NO. 1

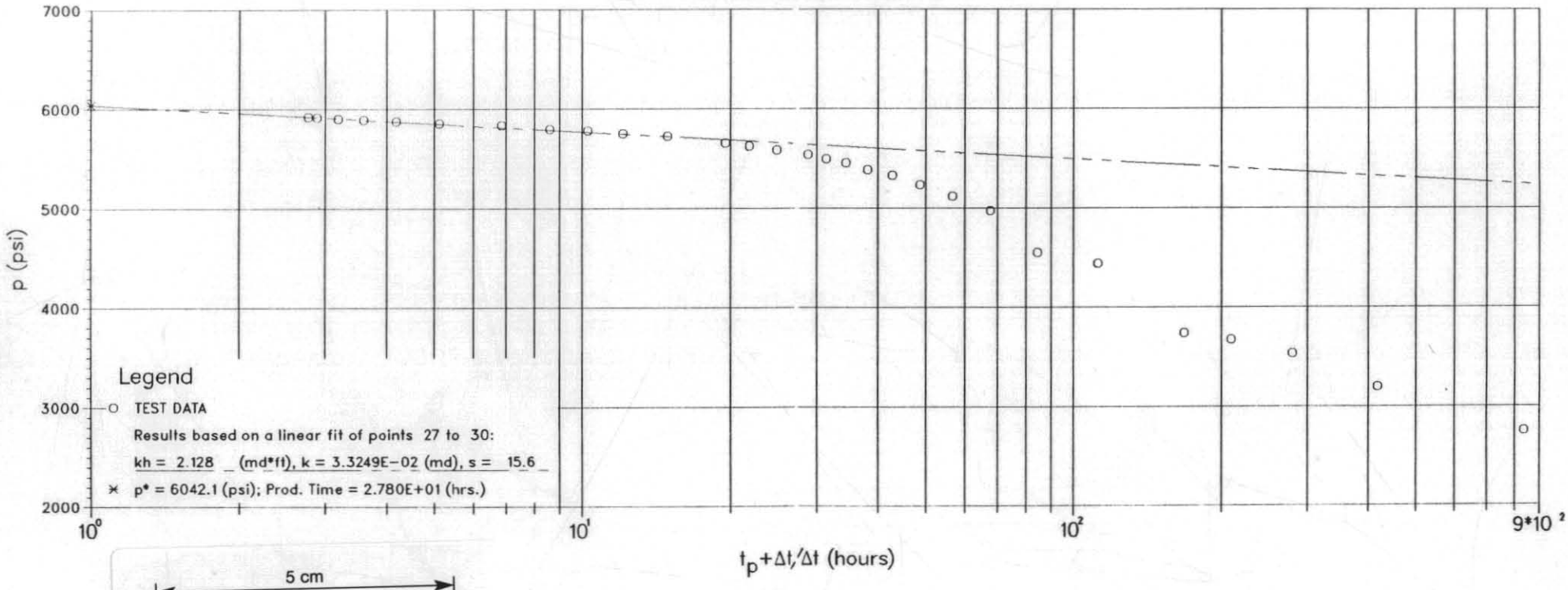
DST#4



452121

FIGURE NO. 1

DST#4
Permeability: slope; Skin: pressure function value (t=1);
p*: Pressure Function Value (t →∞)



452122

DST #4

DARCY CALCULATION

$Q = [(703)(K)(H)(P_E^2 - P_W^2)] \div [(U)(T)(Z)(LN^{RE}/_{RW}) + S]$

Q= MCFD

K= .00003 DARCIES (HORNER PLOT)

H= 64 FT. (LOG ANALYSIS)

PE= 6042 PSI (ORIGINAL RESERVOIR PRESSURE FROM HORNER PLOT)

PW= 732 PSI (FLOWING BOTTOM HOLE PRESSURE)

U= .02 CENTIPOISE

T= 730 DEGREES RANKIN

Z= .85

RE= 1000 FT. (APPROXIMATE RESERVOIR RADIUS)

RW= .55 FT. (APPROXIMATE WELLBORE RADIUS)

S= 15.6 (HORNER PLOT)

Q= 451 MCFD CALCULATED

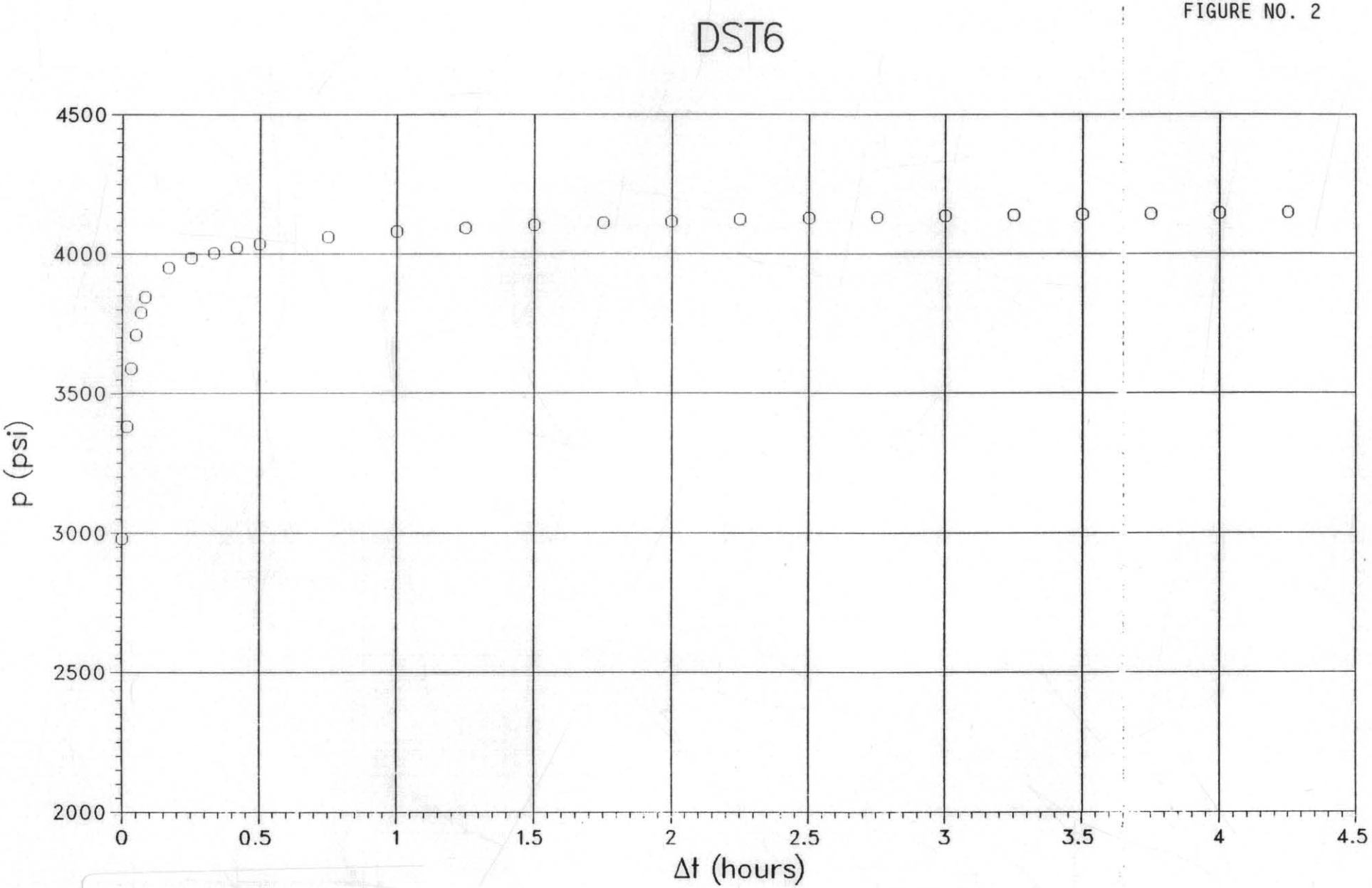
Q= 433 MCFD MEASURED (3/28/86 DRILLING WIRE)

Q= 537 MCFD LESS SKIN COMPONENT

RJB.142/GT

452123

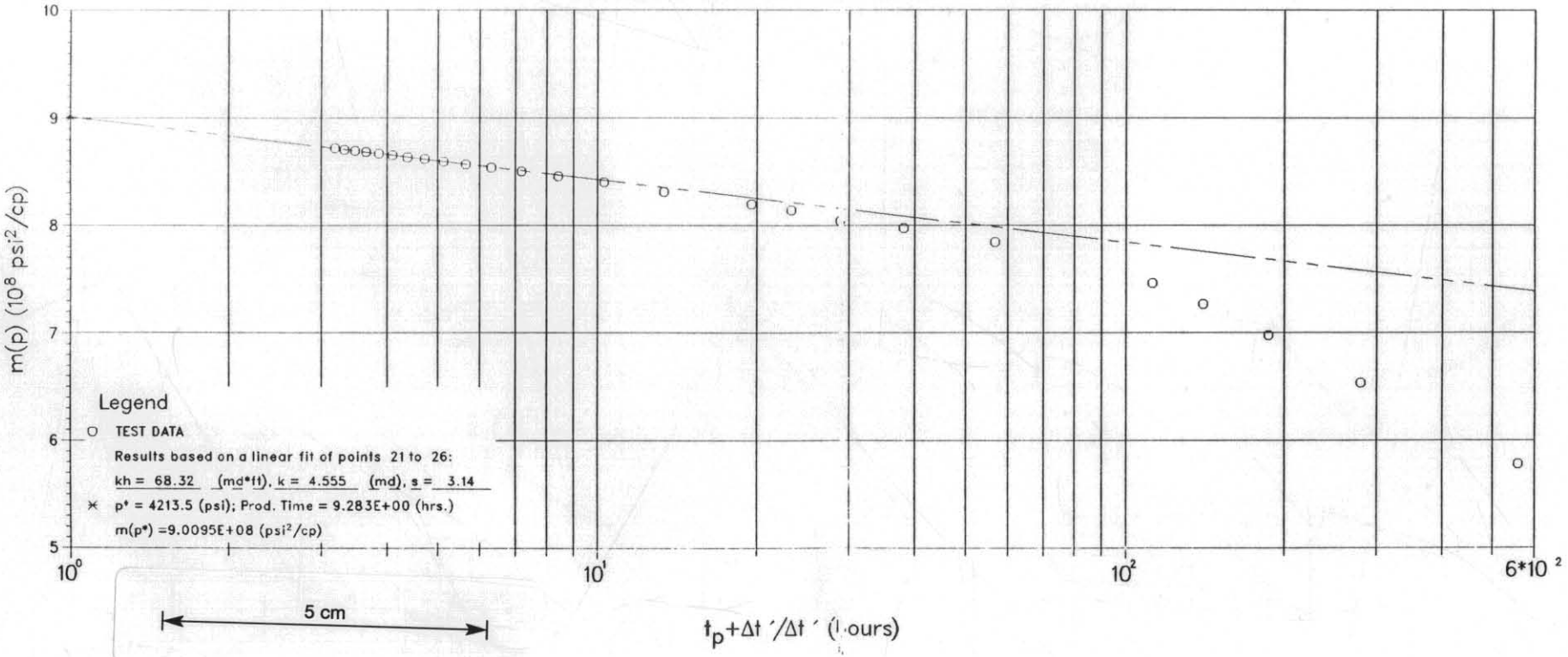
FIGURE NO. 2



452124

FIGURE NO. 2

DST6
Permeability: slope; Skin: pressure function value (t=1);
p*: Pressure Functior Value (t $\rightarrow\infty$)



The Australian
Mineral Development
Laboratories

Flemington Street, Frewville,
South Australia 5063
Phone Adelaide (08) 79 1662
Telex AA82520

Please address all
correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

Enclosure No. 1 452125

amdel

3/786/0 - AC 4192/86

15 April 1986

NATA CERTIFICATE

Petroleum

Mr. John Harkins
Amoco Minerals Australia Company
P.O. Box 493
NORTH SYDNEY N.S.W. 2060

REPORT AC 4192/86

YOUR REFERENCE:	Letter dated 10 April 1986
REPORT COMPRISING:	Cover sheet Page W1 1 Diagram
DATE RECEIVED:	10 April 1986
Approved Signatory:	Martin R. Hanckel

Manager, Chemistry Services

for Dr. William G. Spencer
General Manager
Applied Sciences Group

hy

Head Office:
Flemington Street, Frewville
South Australia 5063
Telephone (08) 79 1662
Telex: Amdel AA82520
Pilot Plant:
Osman Place
Thebarton, S.A.
Telephone (08) 43 5733
Telex: Amdel AA82725
Branch Laboratories:
Melbourne, Vic.
Telephone (03) 645 3093
Perth, W.A.
Telephone (09) 325 7311
Telex: Amdel AA94893
Sydney, N.S.W.
Telephone (02) 439 7735
Telex: Amdel AA20053

The laboratory is accredited by the National Association of Testing Authorities

amdel

452126

WATER ANALYSIS REPORT JOB NO. 4192/86 METHOD W2/1 PAGE W1

SAMPLE ID. PELICAN 5 DST 5

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	35.0	1.75
MAGNESIUM	(MG)	5.00	0.411
SODIUM	(NA)	2350	102
POTASSIUM	(K)	69.0	1.76
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)	106	3.52
BICARBONATE	(HCO3)	3350	55.0
SULPHATE	(SO4)	140	2.92
CHLORIDE	(CL)	940	26.5
NITRATE	(NO3)	20.0	0.323

Nitrates due to small amounts drilling fluid

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	4280
B. CALCULATED (HCO3=CO3)	5310
TOTAL HARDNESS	108
CARBONATE HARDNESS	108
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2930

TOTALS AND BALANCE

CATIONS(ME/L)	106	DIFF=	17.9
ANIONS (ME/L)	88.3	SUM =	194
DIFF*100./SUM =		9.20%	

SODIUM / TOTAL CATION RATIO 96.3

REMARKS

IMBALANCE UNKOWN MORE WORK REQUIRED

REACTION - PH	8.7
CONDUCTIVITY (E.C.) MICRO-S/CM AT 25 C	7200
RESISTIVITY OHM.M @ 25C	1.39

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITR

NAME- MR J HAWKINS
ADDRESS- AMOCO AUSTRALIA
SYDNEY
N.S.W
DATE COLLECTED
DATE RECEIVED 10/4/86
COLLECTED BY

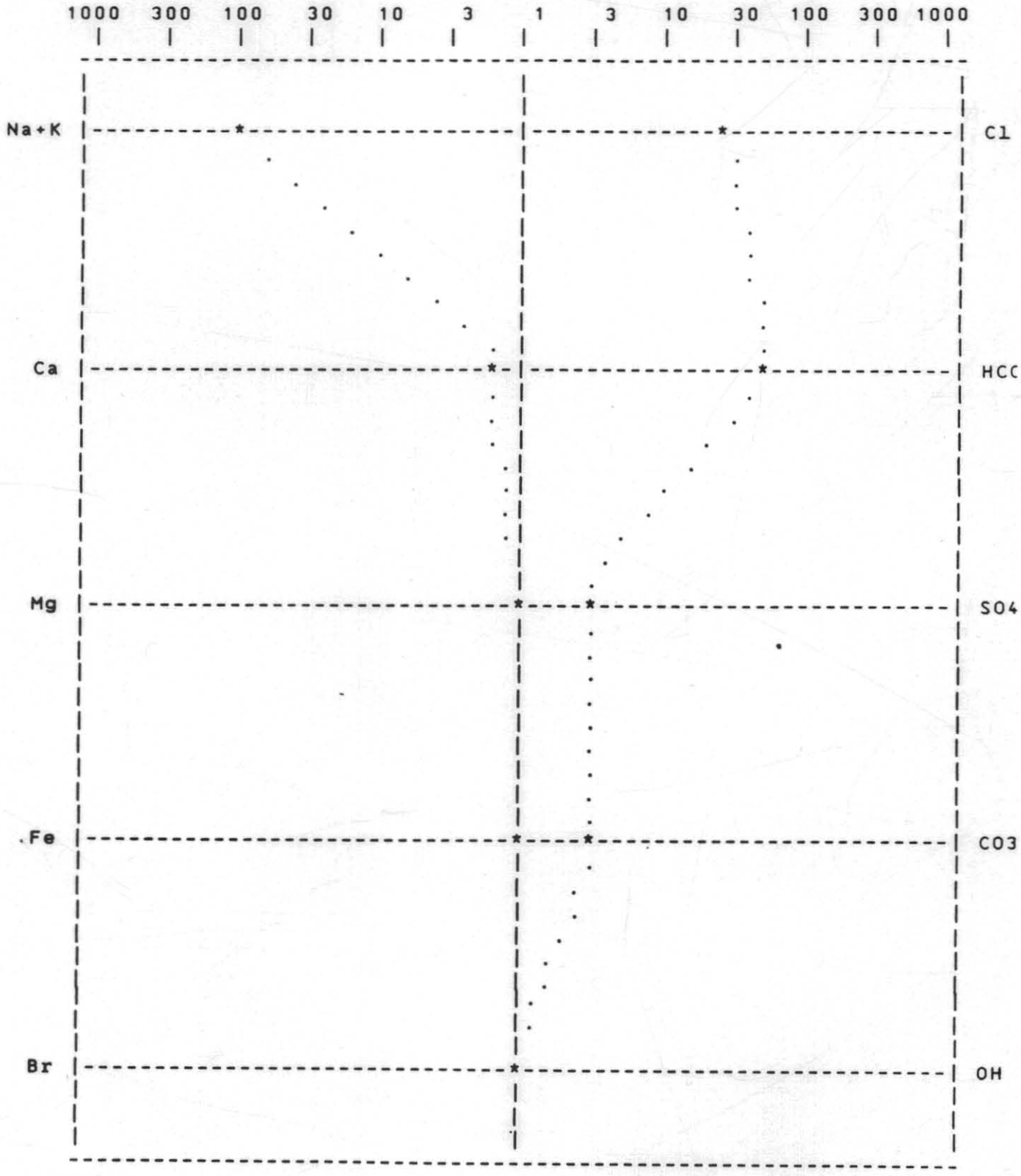
452127

5 cm

STIFF DIAGRAM. JOB NO. 4192/86 Page W1

Sample: PELICAN 5 DST 5

Scale is logarithm (base 10) of milli-equivalent values



amdel
technology and enterprise

INVOICE

17 APR 1986

FLEMINGTON STREET, FREWVILLE, S.A. 5063
P.O. BOX 114, EASTWOOD, 5063
TELEPHONE (08) 372 2700 TELEX AA82520

452128

ADELAIDE

Amoco Minerals Australia Company
P.O. Box 493
NORTH SYDNEY N.S.W. 2060

INVOICE No. 24304

DATE: 15 / 4 / 8

YOUR REF Letter dated 10/4/86

OUR REF 3/786/0 - AC 419

ITEM	ANALYSES/ELEMENTS	No SAMPLES	No DETS	CODE	UNIT RATE $	PER	FIRST SAMPLE LEVY	TOTAL
1	Standard Water Analysis	1	10	W2/1	58.00	S	N/A	58.00
2	Urgency Fee							29.00
3	Service Fee							25.00

THIS A/C IS STRICTLY 30 DAYS NETT

Amount Due $ 112.00

Date Due: 15 / 5 / 8

The Australian
Mineral Development
Laboratories

Flemington Street, Frewville,
South Australia 5063
Phone Adelaide (08) 79 1662
Telex AA82520

Please address all
correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

3/786/0 - AC 4391/86

2 May 1986

452129

amdel

NATA CERTIFICATE

Mr. C.D. Cornell
Amoco Australia Petroleum Company
G.P.O. Box 1470R
HOBART TASMANIA 7001

RECEIVED
MAY 1986
QG

REPORT AC 4391/86

YOUR REFERENCE:	Purchase Order Number 1263 Reference LPO 1659
REPORT COMPRISING:	Cover sheet Page W1 1 Diagram
DATE RECEIVED:	23 April 1986
Approved Signatory:	Martin R. Hanckel

Manager, Chemistry Services

for Dr. William G. Spencer
General Manager
Applied Sciences Group

cc Mr. W.C. Cowan
Amoco Australia Petroleum Company
P.O. Box 126
NORTH SYDNEY N.S.W. 2060

cc Mr. R.J. Giguere - MC 2.478
Amoco Production Company
P.O. Box 3092
HOUSTON TEXAS 77253
UNITED STATES OF AMERICA

hy

This laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full

Head Office:
Flemington Street, Frewville
South Australia 5063
Telephone (08) 79 1662
Telex: Amdel AA82520
Pilot Plant:
Osman Place
Thebarton, S.A.
Telephone (08) 43 5733
Telex: Amdel AA82725
Branch Laboratories:
Melbourne, Vic.
Telephone (03) 645 3093
Perth, W.A.
Telephone (09) 325 7311
Telex: Amdel AA94893
Sydney, N.S.W.
Telephone (02) 439 7735
Telex: Amdel AA20053
Townsville
Queensland 4814
Telephone (077) 75 1377

452130

WATER ANALYSIS REPORT JOB NO. 4391/86 METHOD W2/1 PAGE W1

SAMPLE ID. PELICAN 5 DST ~~2A~~ - 5A

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	120	5.99
MAGNESIUM	(MG)	9.00	0.740
SODIUM	(NA)	2400	104
POTASSIUM	(K)	135	3.45
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3680	60.4
SULPHATE	(SO4)	680	14.2
CHLORIDE	(CL)	1550	43.7
NITRATE	(NO3)	<4.0	

REACTION - PH	8.3
CONDUCTIVITY (E.C.)	
MICRO-S/CM AT 25 C	10200
RESISTIVITY OHM.M @ 25C	0.980

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	6220
B. CALCULATED (HCO3=CO3)	6710
TOTAL HARDNESS	337
CARBONATE HARDNESS	337
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	3020

TOTALS AND BALANCE

CATIONS(ME/L)	115	DIFF=	3.61
ANIONS (ME/L)	118	SUM =	233
DIFF*100./SUM =			1.55%

SODIUM / TOTAL CATION RATIO 91.1%

REMARKS

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

NAME- C.D. CORNELL
ADDRESS- AMOCO AUST. PET
TASMANIA

DATE COLLECTED
DATE RECEIVED
COLLECTED BY

$25°C = 77°F = R_{w_{77}} = .98$

$12°C = 250°F = R_{w_{250}} = .32$

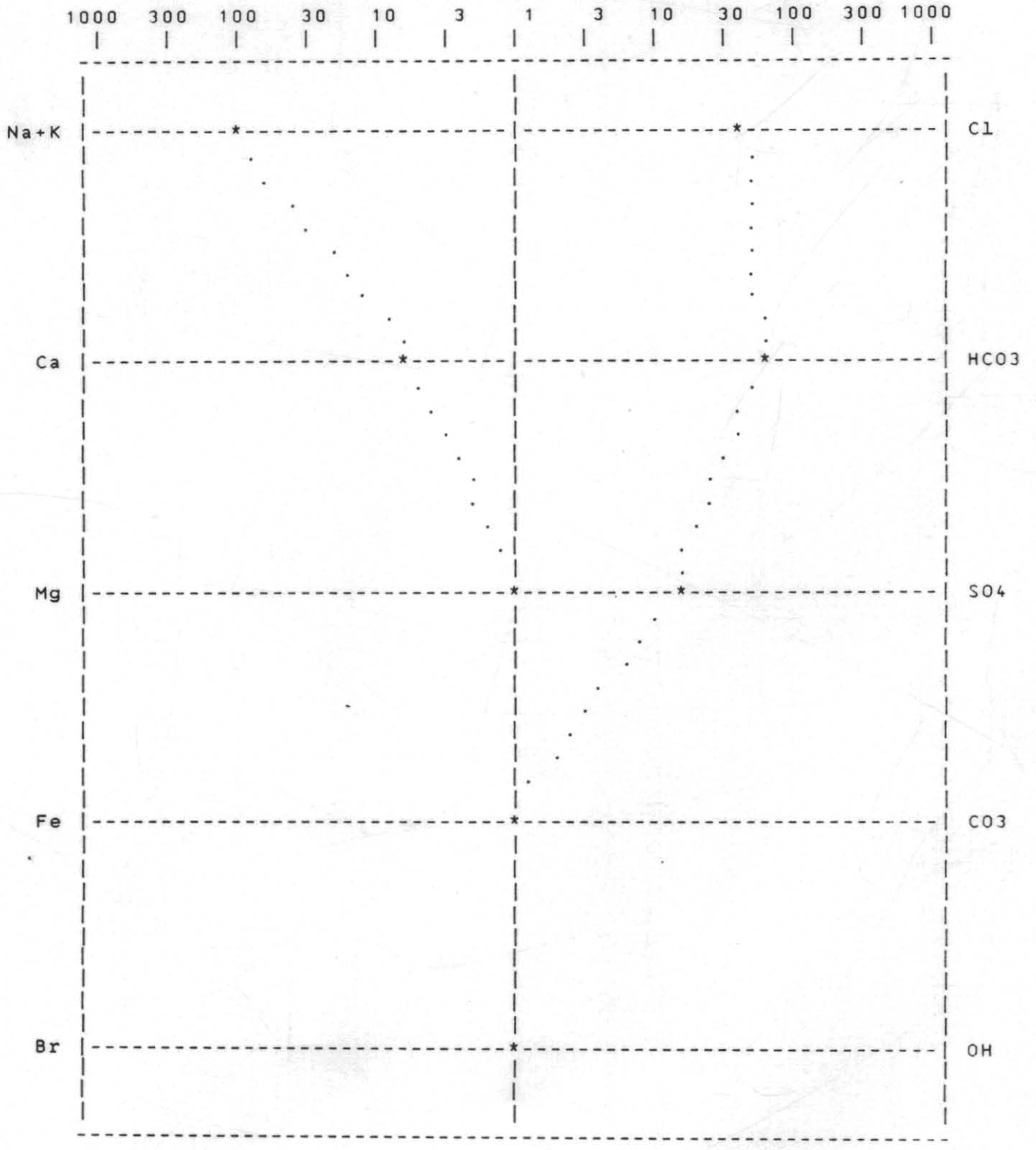
15-64
01-11

452131

STIFF DIAGRAM. JOB NO. 4391/86 Page W1

Sample: PELICAN 5 DST 2A

Scale is logarithm (base 10) of milli-equivalent values



5 cm

The Australian
Mineral Development
Laboratories

Flemington Street, Frewville,
South Australia 5063
Phone Adelaide (08) 79 1662
Telex AA82520

Please address all
correspondence to
P.O. Box 114 Eastwood
SA 5063
In reply quote:

452132

3/786/0 - AC 4919/86

27 June 1986

amdel

NATA CERTIFICATE

Mr C Cornell
Amoco Australia Petroleum Company
GPO Box 1470R
HOBART TASMANIA 7001

REPORT AC 4919/86

YOUR REFERENCE:	LPO Number 1659
REPORT COMPRISING:	Cover sheet Pages W1 - W7 7 Diagrams
DATE RECEIVED:	2 June 1986
NOTE:	Sample labelled 4-1 Cond. sample from end of 8 Hr flow. No water was extractable from this sample to carry out water analysis.
Approved Signatory:	Martin R. Hanckel

Manager, Chemistry Services

for Dr William G. Spencer
General Manager
Applied Sciences Group

cc Mr W C Cowan
Amoco Australia Petroleum Company
PO Box 126
NORTH SYDNEY NSW 2060 (6 copies)

cc Mr R J Giguere - MC 2.478
Amoco Production Company
PO Box 3092
HOUSTON TEXAS 77253
UNITED STATES OF AMERICA (2 copies)

This laboratory is registered by the National Association of Testing Authorities Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

Head Office:
Flemington Street, Frewville
South Australia 5063
Telephone (08) 79 1662
Telex: Amdel AA82520
Pilot Plant:
Osman Place
Thebarton, S.A.
Telephone (08) 43 5733
Telex: Amdel AA82725
Branch Laboratories:
Melbourne, Vic.
Telephone (03) 645 3093
Perth, W.A.
Telephone (09) 325 7311
Telex: Amdel AA94893
Sydney, N.S.W.
Telephone (02) 439 7735
Telex: Amdel AA20053
Townsville
Queensland 4814
Telephone (077) 75 1377

452133

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD W2/1 PAGE W1

SAMPLE ID. PELICAN 5 6-1

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	85.0	4.24
MAGNESIUM	(MG)	7.40	0.609
SODIUM	(NA)	3210	140
POTASSIUM	(K)	117	2.99
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3590	58.8
SULPHATE	(SO4)	420	8.75
CHLORIDE	(CL)	2780	78.4
NITRATE	(NO3)	<4.0	
REACTION - PH			7.8
CONDUCTIVITY (E.C.)			
MICRO-S/CM AT 25 C			12800
RESISTIVITY OHM.M @ 25C			0.781

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	7980
B. CALCULATED (HCO3=CO3)	8390
TOTAL HARDNESS	243
CARBONATE HARDNESS	243
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2940

TOTALS AND BALANCE

CATIONS(ME/L)	147	DIFF=	1.52
ANIONS (ME/L)	146	SUM =	293
DIFF*100./SUM =			0.519%

SODIUM / TOTAL CATION RATIO 94.7%

REMARKS

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

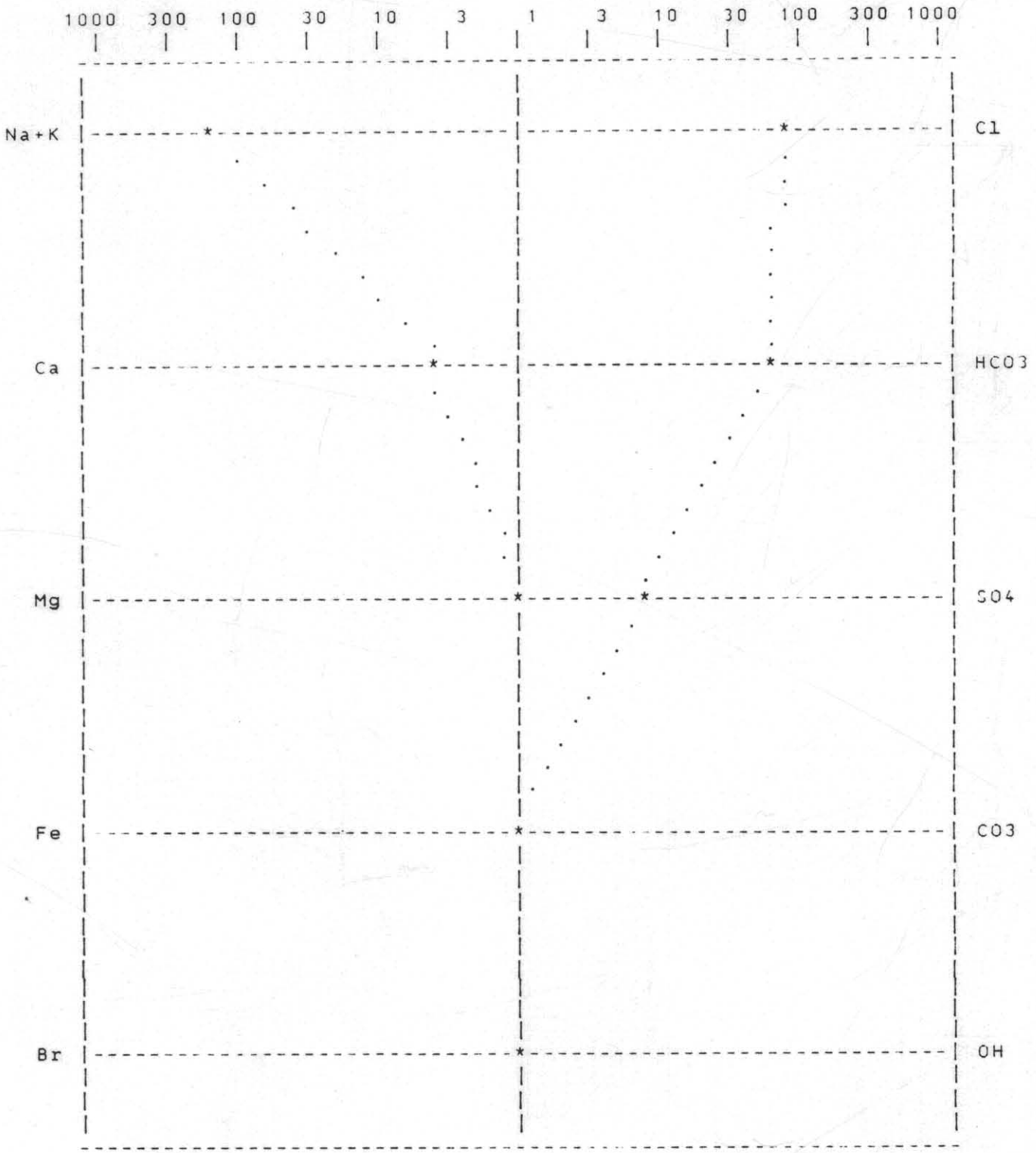
NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 12/4/86
DATE RECEIVED
COLLECTED BY

452134

STIFF DIAGRAM. JOB NO. 4919/86 Page W1

Sample: PELICAN 5 6-1

Scale is logarithm (base 10) of milli equivalent values



5 cm

452135

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD W2/1 PAGE W2

SAMPLE ID. PELICAN 5 6-2

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	61.0	3.04
MAGNESIUM	(MG)	6.60	0.543
SODIUM	(NA)	3220	140
POTASSIUM	(K)	108	2.76
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3560	58.3
SULPHATE	(SO4)	260	5.42
CHLORIDE	(CL)	2840	80.3
NITRATE	(NO3)	10.0	0.161

REACTION - PH	8.2
CONDUCTIVITY (E.C.) MICRO-S/CM AT 25 C	12700
RESISTIVITY OHM.M @ 25C	0.787

DERIVED DATA

	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	7910
B. CALCULATED (HCO3=CO3)	8260
TOTAL HARDNESS	179
CARBONATE HARDNESS	179
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2920

TOTALS AND BALANCE

CATIONS(ME/L)	146	DIFF=	2.26
ANIONS (ME/L)	144	SUM =	291
DIFF*100./SUM =	0.777%		

SODIUM / TOTAL CATION RATIO 95.7%

REMARKS

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 12/4/86
DATE RECEIVED
COLLECTED BY

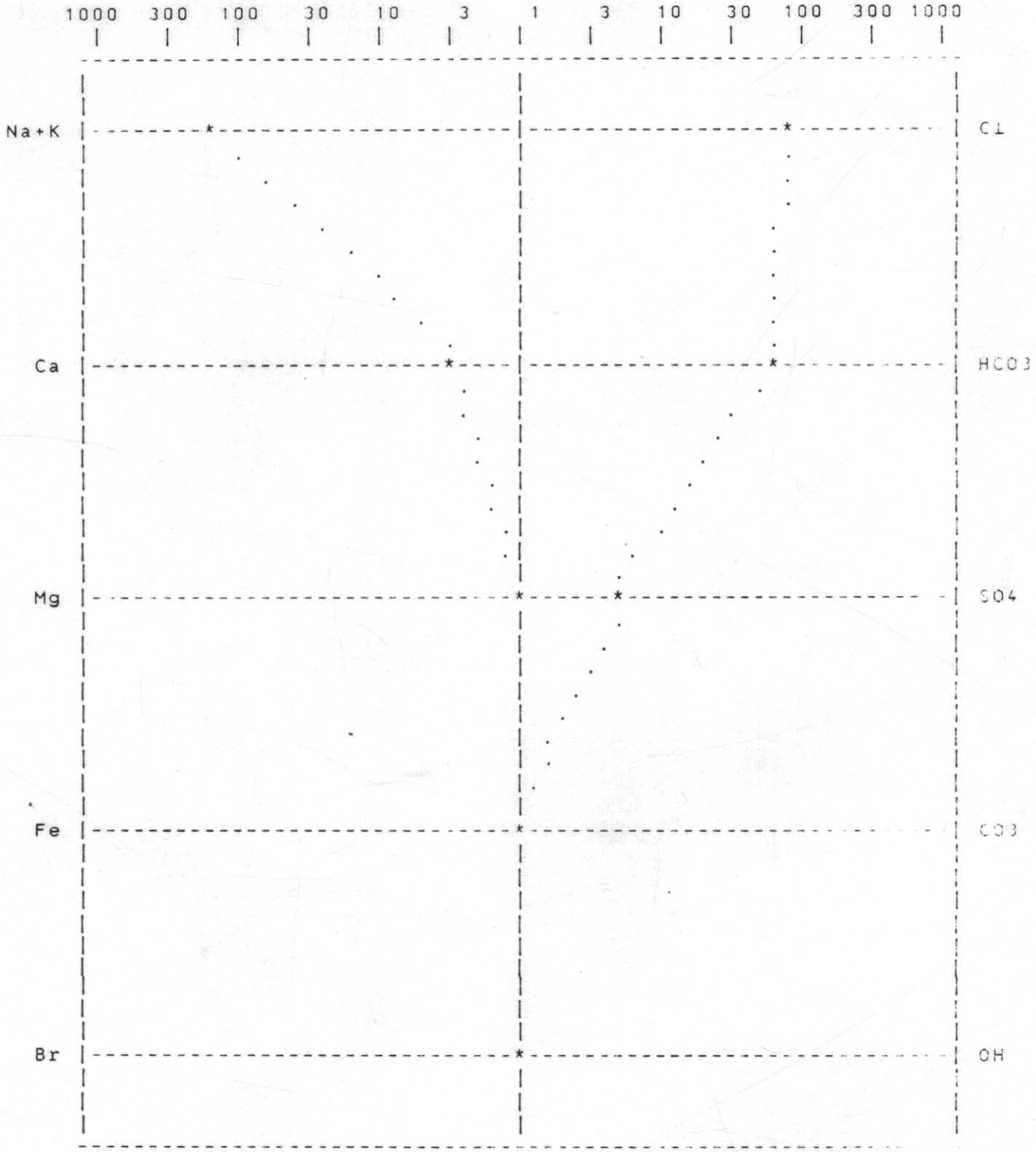
452136

5 cm

STIFF DIAGRAM. JOB NO. 4919/86 Page W2

Sample: PELICAN 5 6-2

Scale is logarithm (base 10) of milli-equivalent values



452137

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD WC/1 PAGE W3

SAMPLE ID. PELICAN 5 6-3

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	59.0	2.94
MAGNESIUM	(MG)	7.00	0.576
SODIUM	(NA)	3410	148
POTASSIUM	(K)	116	2.97
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)	16.2	0.540
BICARBONATE	(HCO3)	3620	59.4
SULPHATE	(SO4)	245	5.10
CHLORIDE	(CL)	2970	83.8
NITRATE	(NO3)	9.0	0.145
REACTION - PH			8.4
CONDUCTIVITY (E.C.)			
MICRO-S/CM AT 25 C			12800
RESISTIVITY OHM.M @ 25C			0.781

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	7080
B. CALCULATED (HCO3=CO3)	8610
TOTAL HARDNESS	176
CARBONATE HARDNESS	176
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	3000

TOTALS AND BALANCE

CATIONS(ME/L)	155	DIFF=	5.85
ANIONS (ME/L)	149	SUM =	304
DIFF*100./SUM =		1.93%	

SODIUM / TOTAL CATION RATIO 95.8%

REMARKS

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 12/4/86
DATE RECEIVED
COLLECTED BY

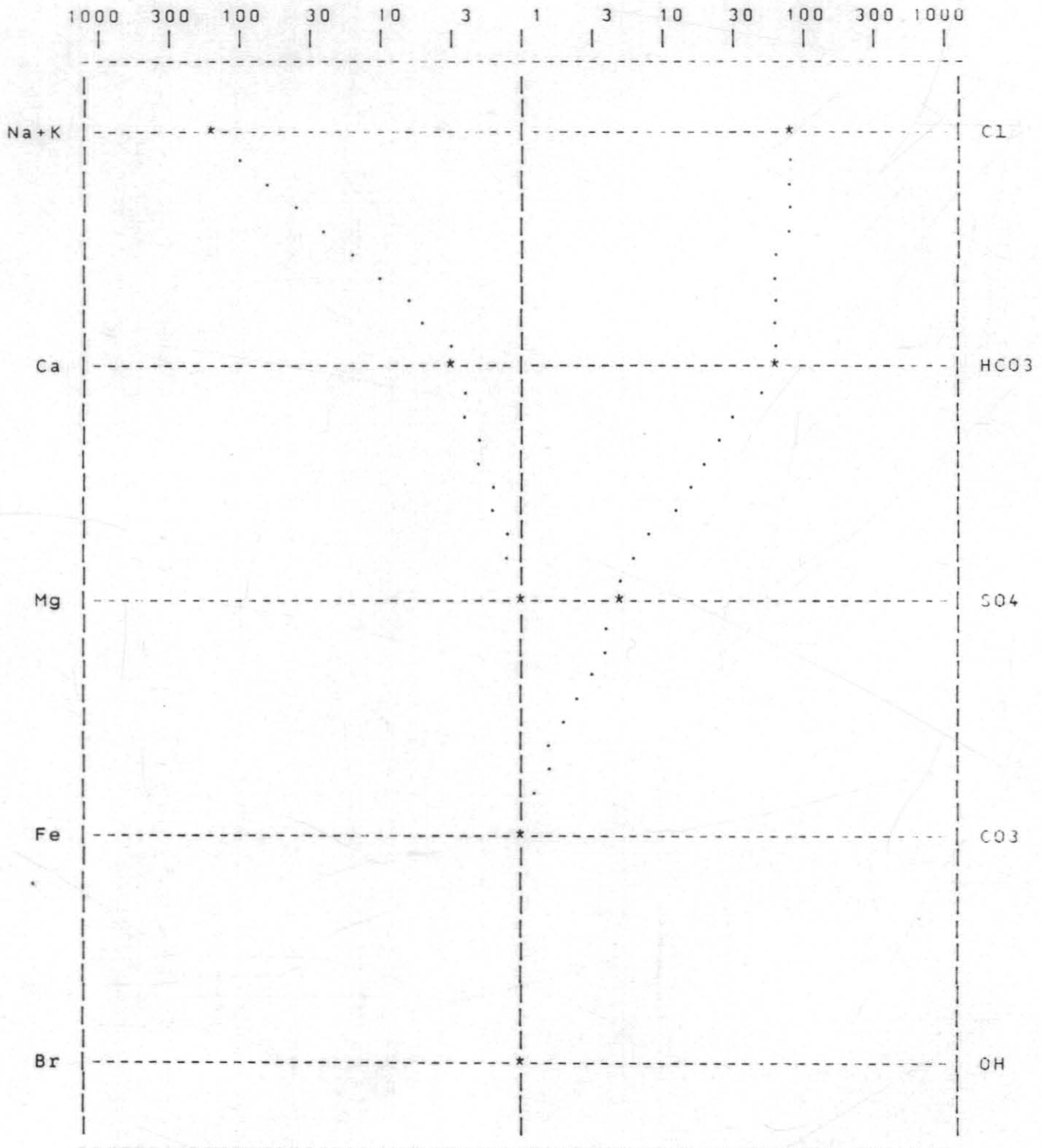
Amoco

452138

STIFF DIAGRAM. JOB NO. 4919/86 Page W3

Sample: PELICAN 5 6-3

Scale is logarithm (base 10) of milli-equivalent values



5 cm

452139

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD W2/1 PAGE W4

SAMPLE ID. PELICAN 5 6-4

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	255	12.7
MAGNESIUM	(MG)	12.0	0.987
SODIUM	(NA)	2980	130
POTASSIUM	(K)	199	5.09
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3380	55.4
SULPHATE	(SO4)	1250	26.0
CHLORIDE	(CL)	1930	54.4
NITRATE	(NO3)	9.0	0.145

REACTION - PH	7.7
CONDUCTIVITY (E.C.) MICRO-S/CM AT 25 C	12000
RESISTIVITY OHM.M @ 25C	0.833

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	7430
B. CALCULATED (HCO3=CO3)	8300
TOTAL HARDNESS	686
CARBONATE HARDNESS	686
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2770

TOTALS AND BALANCE

CATIONS(ME/L)	148	DIFF=	12.4
ANIONS (ME/L)	136	SUM =	284
DIFF*100./SUM =		4.37%	

SODIUM / TOTAL CATION RATIO 87.3%

REMARKS

IMBALANCE UNKNOWN RESULTS CHECKED AND VERIFIED

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

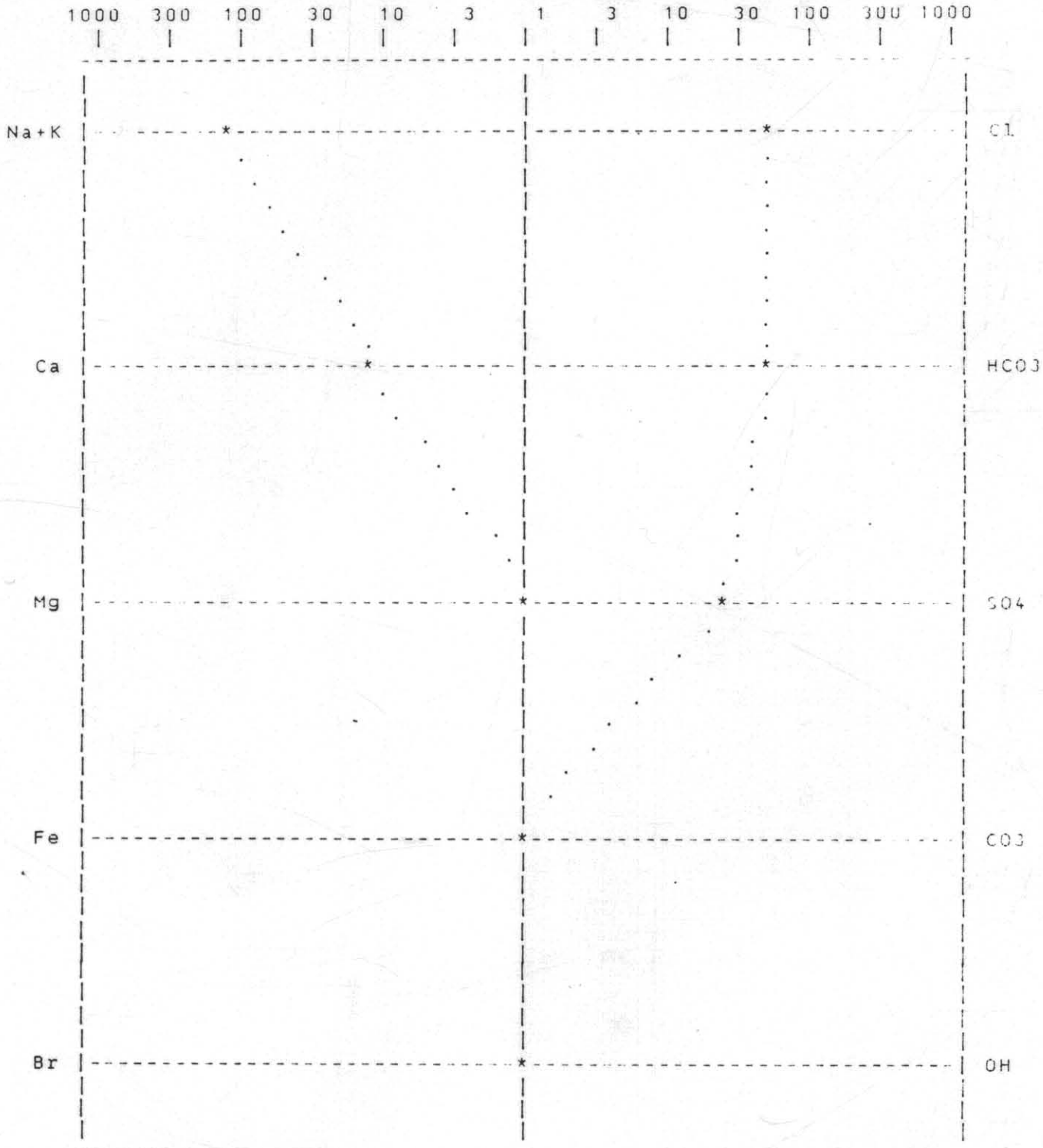
NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 11/4/86
DATE RECEIVED
COLLECTED BY

ERMAGEL

STIFF DIAGRAM. JOB NO. 4919/86 Page W4

Sample: PELICAN 5 6 4

Scale is logarithm (base 10) of milli-equivalent values



5 cm

452141

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD W2/1 PAGE W5

SAMPLE ID. PELICAN 5 6-5

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	230	11.5
MAGNESIUM	(MG)	8.60	0.707
SODIUM	(NA)	2780	121
POTASSIUM	(K)	140	3.58
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3370	55.3
SULPHATE	(SO4)	1000	20.8
CHLORIDE	(CL)	1790	50.6
NITRATE	(NO3)	13.0	0.210
REACTION - PH			7.8
CONDUCTIVITY (E.C.) MICRO-S/CM AT 25 C			10900
RESISTIVITY OHM.M @ 25C			0.917

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	6690
B. CALCULATED (HCO3=CO3)	7630
TOTAL HARDNESS	610
CARBONATE HARDNESS	610
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2770

TOTALS AND BALANCE

CATIONS(ME/L)	137	DIFF=	9.72
ANIONS (ME/L)	127	SUM =	264
DIFF*100./SUM =			3.69%

SODIUM / TOTAL CATION RATIO 88.5%

REMARKS

IMBALANCE UNKNOWN RESULTS CHECKED AND VERIFIED

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

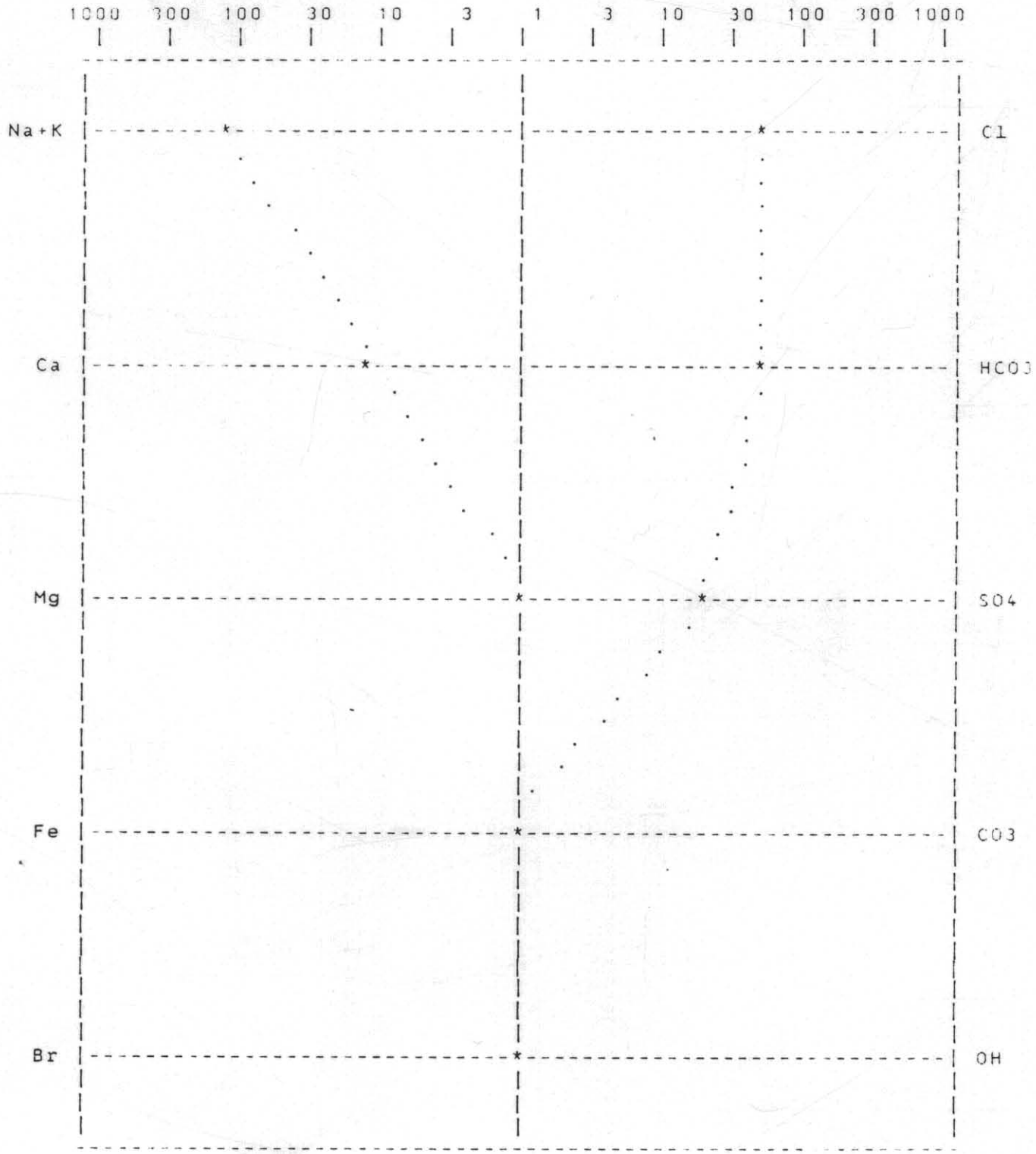
NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 12/4/86
DATE RECEIVED
COLLECTED BY

amdel

STIFF DIAGRAM. JOB NO. 4919/86 Page W5

Sample: PELICAN 5 6-5

Scale is logarithm (base 10) of milli-equivalent values



5 cm

452143

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD W2/1 PAGE W6

SAMPLE ID. PELICAN 5 6-6

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	69.0	3.44
MAGNESIUM	(MG)	6.00	0.494
SODIUM	(NA)	3200	139
POTASSIUM	(K)	110	2.81
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3280	53.8
SULPHATE	(SO4)	240	5.00
CHLORIDE	(CL)	2550	71.9
NITRATE	(NO3)	7.0	0.113
REACTION - PH		8.0	
CONDUCTIVITY (E.C.)			
MICRO-S/CM AT 25 C		13000	
RESISTIVITY OHM.M @ 25C		0.769	

DERIVED DATA	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	8120
B. CALCULATED (HCO3=CO3)	7800
TOTAL HARDNESS	197
CARBONATE HARDNESS	197
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2690

TOTALS AND BALANCE

CATIONS(ME/L)	146	DIFF=	15.1
ANIONS (ME/L)	131	SUM =	277
DIFF*100./SUM =			5.46%

SODIUM / TOTAL CATION RATIO 95.4%

REMARKS

IMBALANCE UNKNOWN RESULTS CHECKED AND VERIFIED

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 12/4/86
DATE RECEIVED
COLLECTED BY

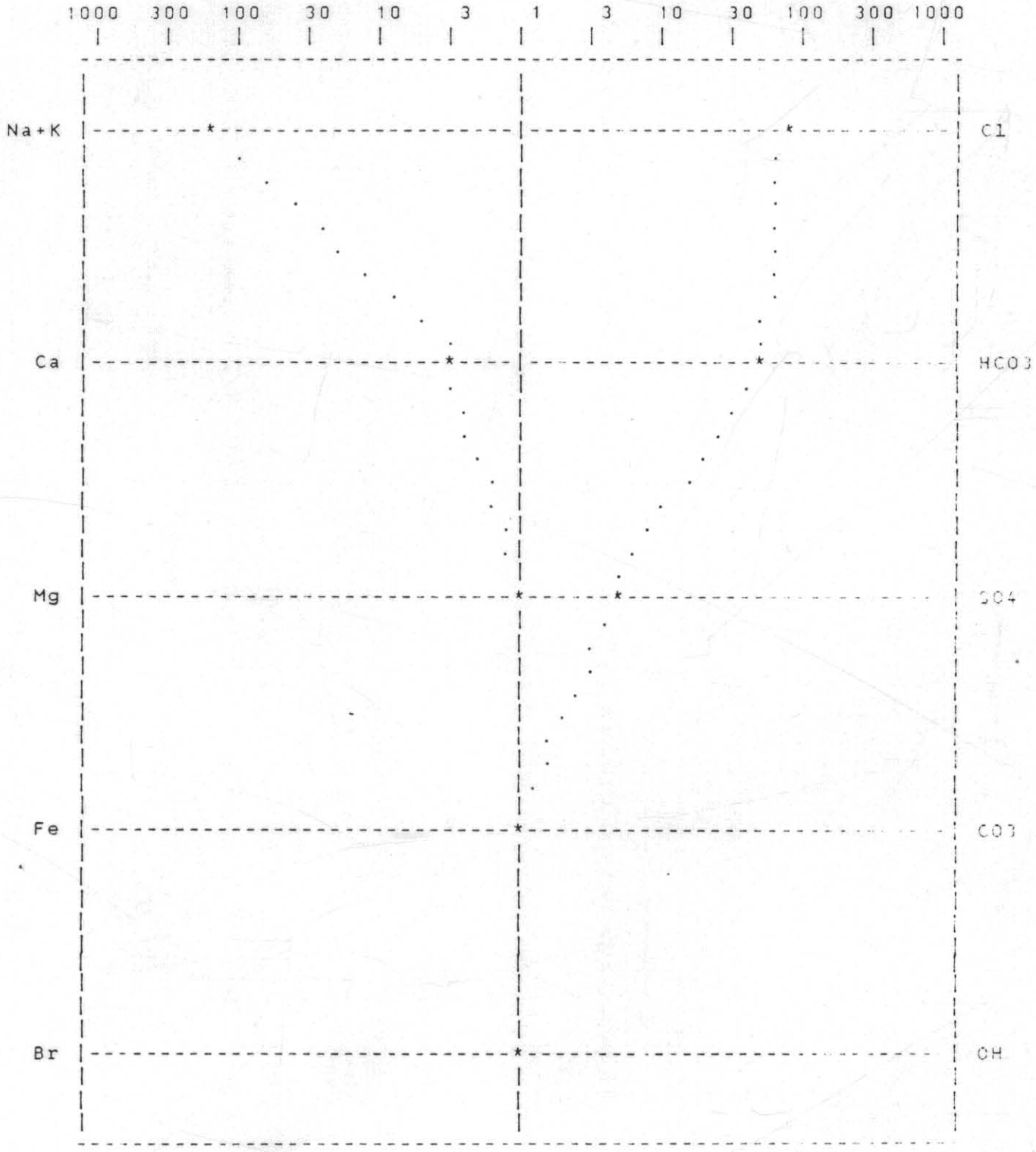
amdel

452144

STIFF DIAGRAM. JOB NO. 4010/86 Page W6

Sample: PELICAN 5 6-6

Scale is logarithm (base 10) of milli-equivalent values



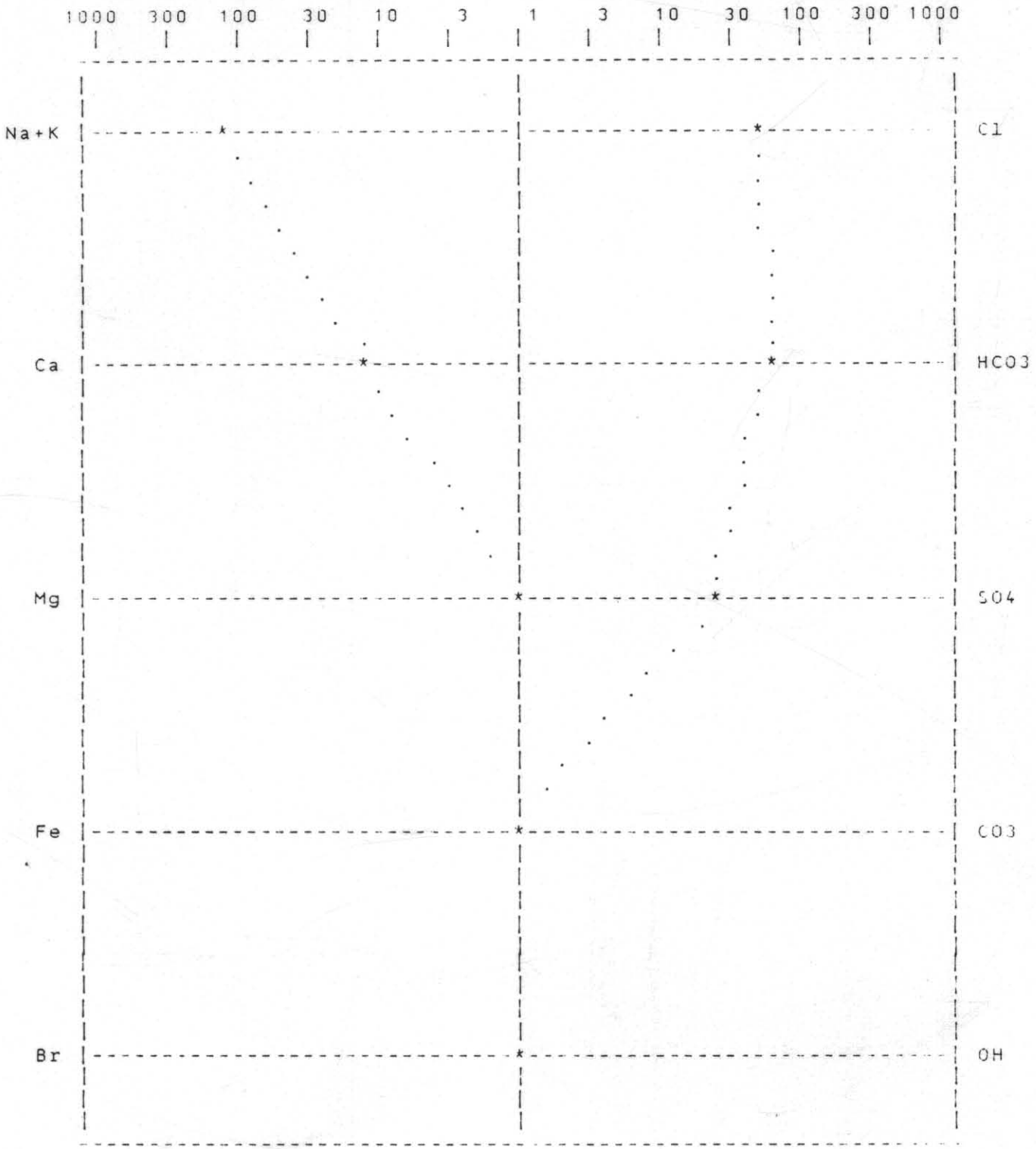
5 cm

Amoco

STIFF DIAGRAM. JOB NO. 4919/86 Page W7

Sample: PELICAN 5 6-7

Scale is logarithm (base 10) of milli-equivalent values



5 cm

452146

WATER ANALYSIS REPORT JOB NO. 4919/86 METHOD W2/1 PAGE W7

SAMPLE ID. PELICAN 5 6-7

CHEMICAL COMPOSITION		MG/L	ME/L
CATIONS			
CALCIUM	(CA)	280	14.0
MAGNESIUM	(MG)	13.0	1.07
SODIUM	(NA)	2970	129
POTASSIUM	(K)	166	4.24
ANIONS			
HYDROXIDE	(OH)		
CARBONATE	(CO3)		
BICARBONATE	(HCO3)	3470	56.9
SULPHATE	(SO4)	1230	25.6
CHLORIDE	(CL)	1970	55.5
NITRATE	(NO3)	10.0	0.161

REACTION - PH	7.7
CONDUCTIVITY (E.C.)	
MICRO-S/CM AT 25 C	12000
RESISTIVITY OHM.M @ 25C	0.833

DERIVED DATA

	MG/L
TOTAL DISSOLVED SOLIDS	
A. BASED ON E.C.	7430
B. CALCULATED (HCO3=CO3)	8350
TOTAL HARDNESS	753
CARBONATE HARDNESS	753
NON-CARBONATE HARDNESS	
TOTAL ALKALINITY (EACH AS CACO3)	2850

TOTALS AND BALANCE

CATIONS(ME/L)	148	DIFF=	10.2
ANIONS (ME/L)	138	SUM =	287
DIFF*100./SUM =		3.57%	

SODIUM / TOTAL CATION RATIO 87.0%

REMARKS

IMBALANCE UNKNOWN RESULTS CHECKED AND VERIFIED

NOTE: MG/L = MILLIGRAMS PER LITRE
ME/L = MILLIEQUIVS. PER LITRE

NAME- W.C. COWAN
ADDRESS- AMOCO AUSTRALIA
P.O. BOX 126
NORTH SYDNEY NSW 2060
DATE COLLECTED 11/4/86
DATE RECEIVED
COLLECTED BY

Enclosure No. 2

452147

AMOCO AUSTRALIA PETROLEUM CO.

PELICAN #5

RESERVOIR FLUID STUDY

LAB

452148

4 Marlow Road, Keswick, South Australia 5035 Tel: 2970777 Telex: AA87011

CORE LABORATORIES
Petroleum Reservoir Engineering

28th July, 1986

Amoco Australia Petroleum Company,
501 Westlake Park Boulevard,
Houston,
TEXAS 77253.

Attention: R. J. Giguere

RECEIVED
JUL 31 1986
RJG

Subject : Reservoir Fluid Study
Well : Pelican #5
File : AFL 86024

Dear Sir,

Gas and liquid samples were collected at the surface of the subject well and submitted to our laboratory for use in a reservoir fluid study. Presented in the following report are the results of this study as requested in attachments one and two of analysis programme MISC-AUP-171-L-400/220-JWH by Amoco Australia Petroleum Company.

Room temperature bubble points of 324 psig and 390 psig were recorded for the pressurized condensate in cylinders SS-1069 and SS-982 respectively. These results are reported on page one and depicted graphically on page eleven.

The hydrocarbon composition of all pressurized gas samples from DST's four and six was measured by extended gas chromatography to the limit of measurable components and is reported on pages two and three according to DST number. Helium analysis conducted on these samples with hydrogen as a carrier indicated none present and is reported within the above compositions.

Compositional analysis of all condensate samples was conducted by high temperature distillation through eicosanes plus and is reported with identification as per Amoco attachments one and two on pages four through eight.

A portion of each DST condensate sample was injected into a temperature programmed chromatograph and run on capillary column, using flame ionization as means of detection. This "Fingerprinting Analysis" is a quantitative determination of the normal paraffins, isoprenoids (farnesane, pristane and phytane) and the key aromatic hydrocarbon contents. A ratio of each component's concentration to that of normal tridecane is presented to exclude the possibility of differences due to weathering. This data is tabulated on page nine and depicted graphically on page twelve.

Basic crude tests were performed on the stock tank oil as requested by Amoco and this data is reported on page ten.

We thank Amoco Australia Petroleum Co. for the opportunity to be of service. Please do not hestiate in contacting us should you require any further information,

Yours faithfully,

John Thompson,
Laboratory Supervisor

JT/gm/dks

CORE LABORATORIES
Petroleum Reservoir Engineering

QUALITY CHECK OF SAMPLES RECEIVED IN THE LABORATORY

Cylinder #:	SS 1069	SS 982
Opening Pressure:	200 psig @ 67°F	280 psig @ 66°C
Sample #:	1	2

cm^3 Mercury Injected	Pressure, psig	cm^3 Mercury Injected	Pressure, psig
0	312	0	380
1	315	1	382
2	318	2	385
3	321	3	387
4	324	4	390
5	365	5	435
6	405	6	475
7	445	7	520
8	485	8	565
9	525	9	610
10	565	10	655
11	605		

Psat = 324 psig @ 67°F **Psat = 390 psig @ 66°F**

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

HYDROCARBON ANALYSIS OF SEPARATOR GAS SAMPLE TO UNDECANES PLUS

DST #4

Cylinder #:	W3A-1754		A11022		W3-1647	
Opening Pressure:	0 psig @ 72°F		39 psig @ 69°F		32 psig @ 64°F	
Component	Mol Percent	GPM	Mol Percent	GPM	Mol Percent	GPM
Helium	0.00		0.00		0.00	
Hydrogen Sulphide	0.00		0.00		0.00	
Carbon Dioxide	9.29		8.70		8.82	
Nitrogen	0.32		0.28		0.35	
Methane	66.73		67.79		65.02	
Ethane	12.00	3.201	11.35	3.028	11.83	3.156
Propane	6.74	1.850	7.02	1.927	7.27	1.995
iso-Butane	1.39	0.454	1.47	0.480	1.69	0.552
n-Butane	1.59	0.500	1.50	0.472	2.07	0.651
iso-Pentane	0.56	0.205	0.55	0.201	0.80	0.292
n-Pentane	0.46	0.166	0.48	0.174	0.70	0.253
Hexanes	0.40	0.163	0.41	0.167	0.58	0.236
Heptanes	0.31	0.236 (C7+)	0.29	0.204 (C7+)	0.50	0.394 (C7+)
Octanes	0.17		0.15		0.35	
Nonanes	0.03		0.01		0.02	
Decanes	0.01		Trace		Trace	
Undecanes plus	Trace		Trace		Trace	
	100.00	6.775	100.00	6.653	100.00	7.529
Gas gravity (Air = 1.000):	0.856		0.848		0.892	
Gross heating value (BTU per cubic foot of dry gas @ 14.696 psia and 60°F):	1242		1245		1308	

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon

HYDROCARBON ANALYSIS OF SEPARATOR GAS SAMPLE TO UNDECANES PLUS

DST #6

Cylinder #:	SS-134		SS-818		SS-756	
Opening Pressure:	288 psig @ 51°F		31 psig @ 50°F		299 psig @ 52°F	
Component	Mol Percent	GPM	Mol Percent	GPM	Mol Percent	GPM
Helium	0.00		0.00		0.00	
Hydrogen Sulphide	0.00		0.00		0.00	
Carbon Dioxide	10.47		8.86		10.50	
Nitrogen	0.35		0.28		0.30	
Methane	68.17		65.33		69.48	
Ethane	11.06	2.950	11.94	3.185	10.95	2.921
Propane	6.58	1.806	7.34	2.015	6.11	1.677
iso-Butane	1.29	0.421	1.70	0.555	1.10	0.359
n-Butane	1.22	0.384	2.07	0.651	0.98	0.308
iso-Pentane	0.31	0.113	0.81	0.296	0.22	0.080
n-Pentane	0.22	0.080	0.70	0.253	0.14	0.051
Hexanes	0.13	0.053	0.39	0.159	0.09	0.037
Heptanes	0.09	0.091 (C7+)	0.26	0.267 (C7+)	0.06	0.059 (C7+)
Octanes	0.07		0.20		0.04	
Nonanes	0.03		0.09		0.01	
Decanes	0.01		0.02		0.01	
Undecanes plus	Trace		0.01		0.01	
	100.00	5.898	100.00	7.381	100.00	5.492
Gas gravity (Air = 1.000):	0.829		0.880		0.812	
Gross heating value (BTU per cubic foot of dry gas @ 14.696 psia and 60°F):	1170		1291		1143	

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted), but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

HIGH TEMPERATURE DISTILLATION OF RESERVOIR FLUID SAMPLE TO EICOSANES PLUS

Sample #: 4 - 7 (DST #4/ Condensate Sample start of Flow No.3)

Component	Cut Temp°C	Mol Percent	Weight Percent	Volume Percent	Density, gm/cc @ 60°F	°API @ 60°F	Mol Weight
Pentanes minus	IBP 49	12.18	6.44	8.10	0.6300	92.9	72
Hexanes	84	15.34	10.15	11.51	0.6981	71.0	90
Heptanes	112	13.44	9.67	10.20	0.7511	56.7	98
Octanes	138	14.37	11.29	11.56	0.7737	51.2	107
Nonanes	162	9.23	8.00	7.96	0.7960	46.1	118
Decanes	185	6.35	6.15	6.08	0.8012	44.9	132
Undecanes	206	4.53	4.96	4.87	0.8074	43.6	149
Dodecanes	227	3.03	3.65	3.46	0.8342	38.0	164
Tridecanes	247	3.18	4.09	3.79	0.8544	34.0	175
Tetradecanes	266	4.36	5.89	5.38	0.8675	31.5	184
Pentadecanes	285	2.05	2.98	2.71	0.8685	31.3	198
Hexadecanes	304	1.72	2.75	2.53	0.8624	32.4	218
Heptadecanes	322	1.41	2.39	2.20	0.8594	33.0	230
Octadecanes	338	1.08	1.89	1.73	0.8626	32.4	238
Nonadecanes	353	0.78	1.43	1.31	0.8658	31.8	251
Eicosanes plus	FBP 353	6.95	18.27	16.61	0.8727	30.5	358
		100.00	100.00	100.00			

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES
Petroleum Reservoir Engineering

HIGH TEMPERATURE DISTILLATION OF RESERVOIR FLUID SAMPLE TO EICOSANES PLUS

Sample #: 5 - 4 (DST #5/ Condensate Sample obtained at manifold during Flow No.1)

Component	Cut Temp°C	Mol Percent	Weight Percent	Volume Percent	Density, gm/cc @ 60°F	°API @ 60°F	Mol Weight
Pentanes minus	IBP 49	16.97	8.68	10.81	0.6300	92.9	72
Hexanes	84	10.78	6.81	7.87	0.6795	76.5	89
Heptanes	112	17.90	12.53	13.27	0.7412	59.2	99
Octanes	138	11.84	9.16	9.48	0.7591	54.7	109
Nonanes	162	9.50	8.09	8.08	0.7868	48.2	120
Decanes	185	5.84	5.56	5.48	0.7963	46.0	134
Undecanes	206	2.94	3.07	3.01	0.8017	44.8	147
Dodecanes	227	4.39	5.17	4.90	0.8277	39.3	166
Tridecanes	247	2.69	3.47	3.21	0.8486	35.1	182
Tetradecanes	266	3.01	4.06	3.71	0.8586	33.1	190
Pentadecanes	285	1.57	2.35	2.14	0.8592	33.0	211
Hexadecanes	304	1.58	2.56	2.35	0.8542	34.0	228
Heptadecanes	322	1.33	2.32	2.14	0.8506	34.7	245
Octadecanes	338	0.88	1.61	1.48	0.8540	34.0	258
Nonadecanes	353	0.79	1.48	1.36	0.8573	33.4	265
Eicosanes plus	FBP 353	8.00	23.08	20.71	0.8746	30.1	406
		100.00	100.00	100.00			

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

HIGH TEMPERATURE DISTILLATION OF RESERVOIR FLUID SAMPLE TO EICOSANES PLUS

Sample #: 6 - 8 (DST #6/ Condensate LPRN - M2 Valve)

Component	Cut Temp°C	Mol Percent	Weight Percent	Volume Percent	Density, gm/cc @ 60°F	°API @ 60°F	Mol Weight
Pentanes minus	IBP 49	6.12	3.67	4.50	0.6300	92.9	72
Hexanes	84	12.19	8.89	10.04	0.6835	75.3	88
Heptanes	112	25.02	20.42	21.23	0.7436	58.6	98
Octanes	138	18.76	17.04	17.18	0.7655	53.2	109
Nonanes	162	11.80	11.70	11.47	0.7878	47.9	119
Decanes	185	8.04	8.71	8.45	0.7967	45.9	130
Undecanes	206	3.78	4.54	4.37	0.8017	44.8	144
Dodecanes	227	2.68	3.60	3.40	0.8168	41.6	161
Tridecanes	247	2.34	3.35	3.11	0.8330	38.2	172
Tetradecanes	266	2.39	3.65	3.32	0.8483	35.1	183
Pentadecanes	285	2.51	4.13	3.70	0.8615	32.6	197
Hexadecanes	304	0.94	1.72	1.55	0.8549	33.9	220
Heptadecanes	322	0.88	1.71	1.55	0.8478	35.2	234
Octadecanes	338	0.58	1.25	1.13	0.8512	34.6	257
Nonadecanes	353	0.29	0.65	0.59	0.8544	34.0	269
Eicosanes plus	FBP 353	1.68	4.97	4.41	0.8695	31.1	355
		100.00	100.00	100.00			

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES
Petroleum Reservoir Engineering

HIGH TEMPERATURE DISTILLATION OF RESERVOIR FLUID SAMPLE TO EICOSANES PLUS

Sample #: SS-982 (DST #6)

Component	Cut Temp°C	Mol Percent	Weight Percent	Volume Percent	Density, gm/cc @ 60°F	°API @ 60°F	Mol Weight
Pentanes minus	IBP 49	27.59	17.03	20.87	0.6100	100.2	70
Hexanes	84	12.64	9.82	10.72	0.6840	75.2	88
Heptanes	112	19.03	15.78	15.89	0.7416	59.1	94
Octanes	138	10.82	10.31	10.10	0.7618	54.1	108
Nonanes	162	7.49	7.73	7.31	0.7898	47.5	117
Decanes	185	5.08	5.87	5.50	0.7966	46.0	131
Undecanes	206	2.64	3.35	3.12	0.8021	44.7	144
Dodecanes	227	2.11	2.95	2.71	0.8136	42.3	159
Tridecanes	247	2.72	4.27	3.78	0.8430	36.2	178
Tetradecanes	266	2.13	3.58	3.12	0.8560	33.6	190
Pentadecanes	285	1.36	2.50	2.18	0.8584	33.2	208
Hexadecanes	304	0.79	1.55	1.36	0.8517	34.5	221
Heptadecanes	322	0.93	1.92	1.68	0.8499	34.8	234
Octadecanes	338	0.60	1.31	1.15	0.8500	34.8	248
Nonadecanes	353	0.49	1.13	0.99	0.8528	34.3	261
Eicosanes plus	FBP 353	3.58	10.90	9.52	0.8554	33.8	345
		100.00	100.00	100.00			

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES
Petroleum Reservoir Engineering

HIGH TEMPERATURE DISTILLATION OF RESERVOIR FLUID SAMPLE TO EICOSANES PLUS

Sample #: SS-1069 (DST #6)

Component	Cut Temp°C	Mol Percent	Weight Percent	Volume Percent	Density, gm/cc @ 60°F	°API @ 60°F	Mol Weight
Pentanes minus	IBP 49	28.50	17.80	21.73	0.6100	100.2	70
Hexanes	84	11.81	9.17	10.00	0.6835	75.3	87
Heptanes	112	19.48	16.86	16.92	0.7427	58.8	97
Octanes	138	11.40	10.78	10.52	0.7632	53.7	106
Nonanes	162	6.96	7.21	6.80	0.7899	47.5	116
Decanes	185	5.07	5.93	5.54	0.7965	46.0	131
Undecanes	206	2.30	2.92	2.71	0.8014	44.9	142
Dodecanes	227	2.28	3.13	2.87	0.8118	42.6	154
Tridecanes	247	3.27	5.08	4.49	0.8422	36.4	174
Tetradecanes	266	1.73	2.93	2.55	0.8572	33.4	190
Pentadecanes	285	1.17	2.14	1.86	0.8579	33.3	205
Hexadecanes	304	0.83	1.62	1.42	0.8525	34.3	220
Heptadecanes	322	0.92	1.98	1.74	0.8485	35.1	241
Octadecanes	338	0.44	1.02	0.89	0.8503	34.8	256
Nonadecanes	353	0.39	0.93	0.81	0.8528	34.3	269
Eicosanes plus	FBP 353	3.45	10.50	9.15	0.8554	33.8	341
		100.00	100.00	100.00			

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

FINGERPRINT ANALYSIS - RELATIVE RATIO DATA

DST #:	4	5	6	6	6
Sample:	4 - 7	5 - 4	6 - 8	SS-982	SS-1069
nC6/nC13	2.36	3.86	3.56	1.52	4.46
MCP/nC7	1.03	1.24	0.67	0.99	1.84
CH/nC7	1.08	1.12	0.78	1.12	1.60
nC7/nC13	1.40	2.07	3.08	1.32	1.71
MCH/nC8	1.89	2.01	1.88	1.84	2.11
Tol/nC8	1.27	1.04	0.93	1.01	1.17
nC8/nC13	1.58	2.22	3.11	1.55	2.17
Ethyl BZ/nC9	0.10	0.11	0.08	0.11	0.12
P&M Xyl/nC9	0.07	0.07	0.09	0.07	0.07
O-Xyl/nC9	0.18	0.19	0.17	0.19	0.19
nC9/nC13	1.51	1.97	2.57	1.39	1.85
i-Propyl BZ/nC10	0.06	0.08	0.16	0.08	0.09
n-Propyl BZ/nC10	0.12	0.17	0.11	0.17	0.17
1,2,4 Trim BZ/nC10	0.86	0.78	0.64	0.79	0.80
nC10/nC13	1.48	1.68	1.97	1.28	1.64
IM3 Propyl BZ/nC11	0.23	0.23	0.11	0.24	0.24
Butyl BZ/nC11	0.06	0.06	0.09	0.07	0.07
1,3 Dim 4ET BZ/nC11	0.23	0.24	0.17	0.26	0.25
nC11/nC13	1.31	1.34	1.60	1.16	1.34
nC12/nC13	1.03	1.17	1.26	0.96	1.12
Farnesane/nC14	0.44	0.28	0.23	0.43	0.36
nC14/nC13	1.00	1.07	0.84	0.96	0.93
nC15/nC13	0.95	0.98	0.59	0.93	0.86
nC16/nC13	0.86	0.86	0.46	0.80	0.77
nC17/nC13	0.73	0.75	0.38	0.62	0.58
Pristane/nC17	0.98	1.21	1.08	1.35	1.31
nC18/nC13	0.73	0.76	0.31	0.73	0.64
Phytane/nC18	0.22	0.22	0.14	0.25	0.23
nC19/nC13	0.75	0.78	0.27	0.69	0.64
nC20/nC13	0.72	0.78	0.23	0.70	0.61
nC21/nC13	0.69	0.76	0.20	0.67	0.55
nC22/nC13	0.65	0.71	0.18	0.64	0.54
nC23/nC13	0.64	0.75	0.16	0.66	0.53
nC24/nC13	0.66	0.71	0.13	0.59	0.48
nC25/nC13	0.57	0.67	0.13	0.55	0.44
nC26/nC13	0.50	0.62	0.09	0.46	0.39
nC27/nC13	0.51	0.64	0.09	0.46	0.37
nC28/nC13	0.39	0.48	0.06	0.34	0.27
nC29/nC13	0.37	0.48	0.05	0.32	0.23
nC30/nC13	0.25	0.32	0.03	0.19	0.15

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

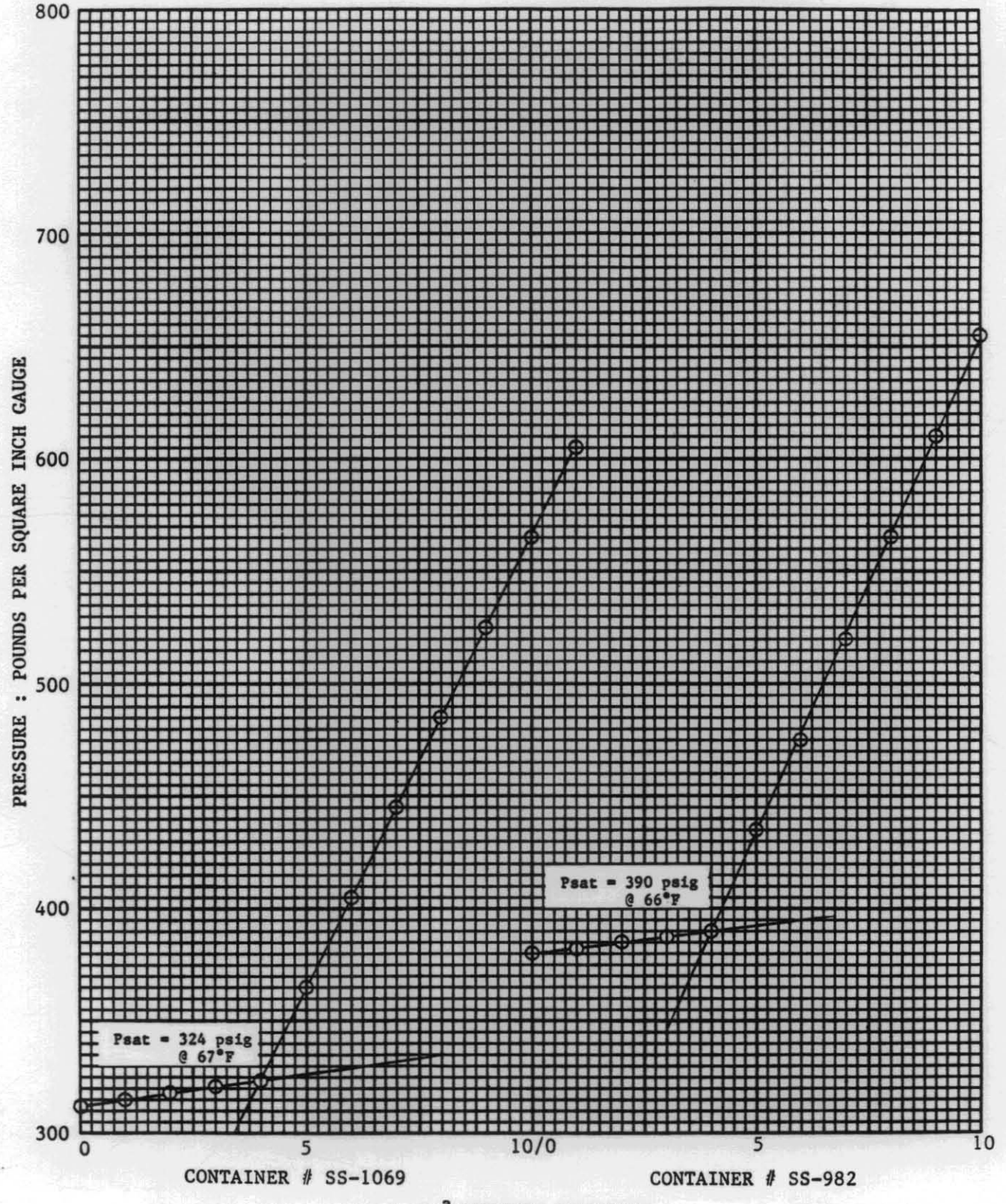
BASIC CRUDE TESTS ON STOCK TANK OIL

DST #:		4	5	6	6	6
Sample:		4-7	5-4	6-8	SS-982	SS-1069
API Gravity @ 60°F:		45.9	48.7	51.9	57.7	58.7
Pour Point :		54°F	48°F	16°F	43°F	37°F
Cloud Point :		59°F	59°F	32°F	52°F	48°F
Wax Content :		2.399%	0.300%	0.300%	3.105%	3.448%
Kinematic Viscosity (centistokes)	@ 60°F :	1.544	2.995	1.036	1.020	1.008
	@ 80°F	1.389	2.262	0.943	0.946	0.907
	@ 100°F	1.232	1.745	0.843	0.881	0.811
	@ 150°F	0.965	1.099	0.652	0.754	0.659
	@ 212°F	0.747	0.831	0.525	0.717	0.551
Water and Sediment : (BS & W)		5.30%	0.45%	0.96%	0.02%	0.05%

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES
Petroleum Reservoir Engineering

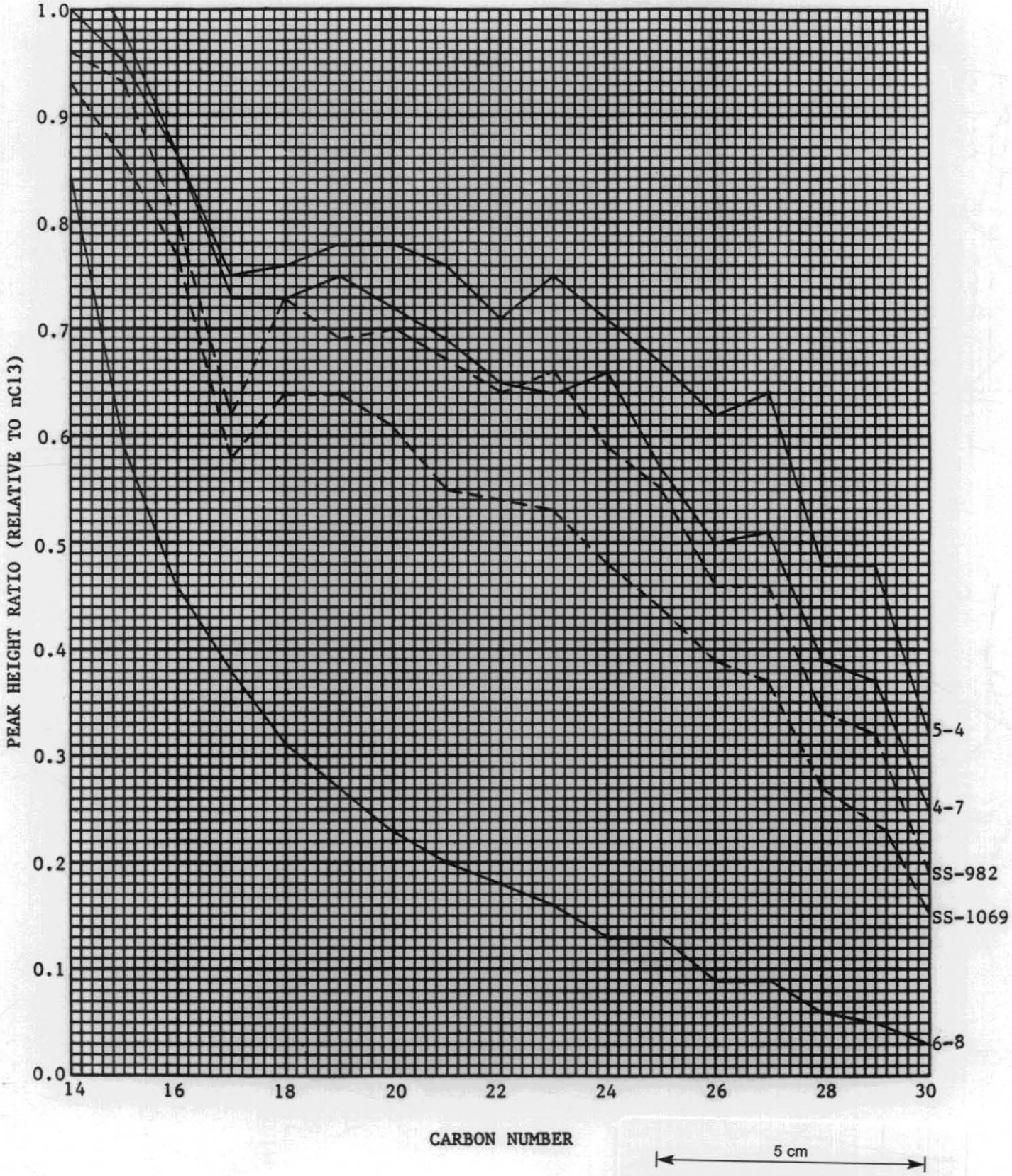
Company Amoco Australia Petroleum Co. Formation
Well Pelican #5 State Tasmania
Field Pelican Country Australia



CORE LABORATORIES
Petroleum Reservoir Engineering

File AFL 86024

Company Amoco Australia Petroleum Co. Formation
Well Pelican #5 State Tasmania
Field Pelican Country Australia



452162

AMOCO AUSTRALIA PETROLEUM COMPANY

PELICAN #5

RESERVOIR FLUID STUDY

452163

Litton
Core Lab

Core Laboratories Australia Pty. Ltd.
117 119 Belmont Avenue
Kewdale
Western Australia 6105
(09) 353 3944

7th October, 1986

Amoco Production Company
P.O.Box 3092
Houston, Texas 77253
U.S.A.

Attention: R.J. Giguere - MC 2.478

Subject : Reservoir Fluid Study
Well : Pelican #5
File : AFL 86026

Dear Sir,

Gas and liquid samples were collected at the surface of the subject well and submitted to our laboratory for use in a reservoir fluid study. Presented in the following report are the results of this study as requested in attachment three of analysis programme MISC-AUP-171-L-400/220-JWH by Amoco Australia Petroleum Company.

The separator gas sample (cylinder no. A11011) was found to have an opening pressure of 313 psig @ 65°F. The cylinder showed no signs of leaks and its hydrocarbon contents were analysed through C_{11}+ including helium content. These results are reported on page two.

The separator liquid sample (cylinder no. SS 709) was found to have a bubble point pressure of 450 psig at 67°F. When transferring liquid samples into laboratory cylinders gaseous dirty water was noted on breaking the connection after the first transfer. A new separator liquid sample (cylinder no. SS 1822) was sent to us for continuation of the study.

Cylinder no. SS 1822 arrived with one valve open but plugged. The quality check indicated the sample had a bubble point of 1320 psig @ 65°F which was not representative of the separator conditions. The results of the bubble point checks can be found on page one and are depicted graphically on pages three and four.

As suggested, sample from the original cylinder (no. SS 709) was transferred into a windowed cell to measure the volume of condensate available. Only 85 cc's of condensate was observed before water entered the cell. A visual bubble point of 522 psig @ 64°F was observed.

As it appeared neither sample was representative of the separator liquid, we were instructed to continue the study using cylinder no. SS 982 (liquid) and SS 818 (gas). When it was found that cylinder SS 818 had insufficient gas volume to continue the recombination programme, we were instructed to cease work on the remainder of the study.

We thank Amoco Australia Petroleum Company for the opportunity to have been of service. Please do not hesitate to contact us should you require any further information.

Yours faithfully
CORE LABORATORIES AUSTRALIA PTY.LTD.

John Thompson
Laboratory Supervisor

JRT:KD:jc:86026

CORE LABORATORIES
Petroleum Reservoir Engineering

File : AFL 86026
Well : Pelican #5

QUALITY CHECK OF SAMPLES RECEIVED IN THE LABORATORY

Cylinder #:	SS 709	SS 1822
Sample #:	1	2

cm^3 Mercury Injected	Pressure, psig	cm^3 Mercury Injected	Pressure, psig
0	446	0	1297
2	447	1	1300
4	448	2	1305
6	449	3	1310
8	450	4	1313
10	450	5	1318
12	520	6	1350
14	645	7	1435
16	770	8	1525
17	832	9	1620
18	898	10	1710
19	960		
20	1025		

Psat = 450 psig @ 67°F

Psat = 1320 psig @ 65°F

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

HYDROCARBON ANALYSIS OF SEPARATOR GAS SAMPLE TO UNDECANES PLUS

Cylinder #: A11011

Opening Pressure: 313 psig @ 65°F

Component	Mol Percent	GPM
Helium	0.00	
Hydrogen Sulphide	0.00	
Carbon Dioxide	10.44	
Nitrogen	0.31	
Methane	69.65	
Ethane	10.99	2.932
Propane	6.10	1.674
iso-Butane	1.09	0.349
n-Butane	0.95	0.299
iso-Pentane	0.21	0.077
n-Pentane	0.14	0.051
Hexanes	0.07	0.029
Heptanes	0.05	0.032 (C7+)
Octanes	0.02	
Nonanes	Trace	
Decanes	Trace	
Undecanes plus	Trace	
	100.00	5.443

Gas gravity (Air = 1.000): 0.808

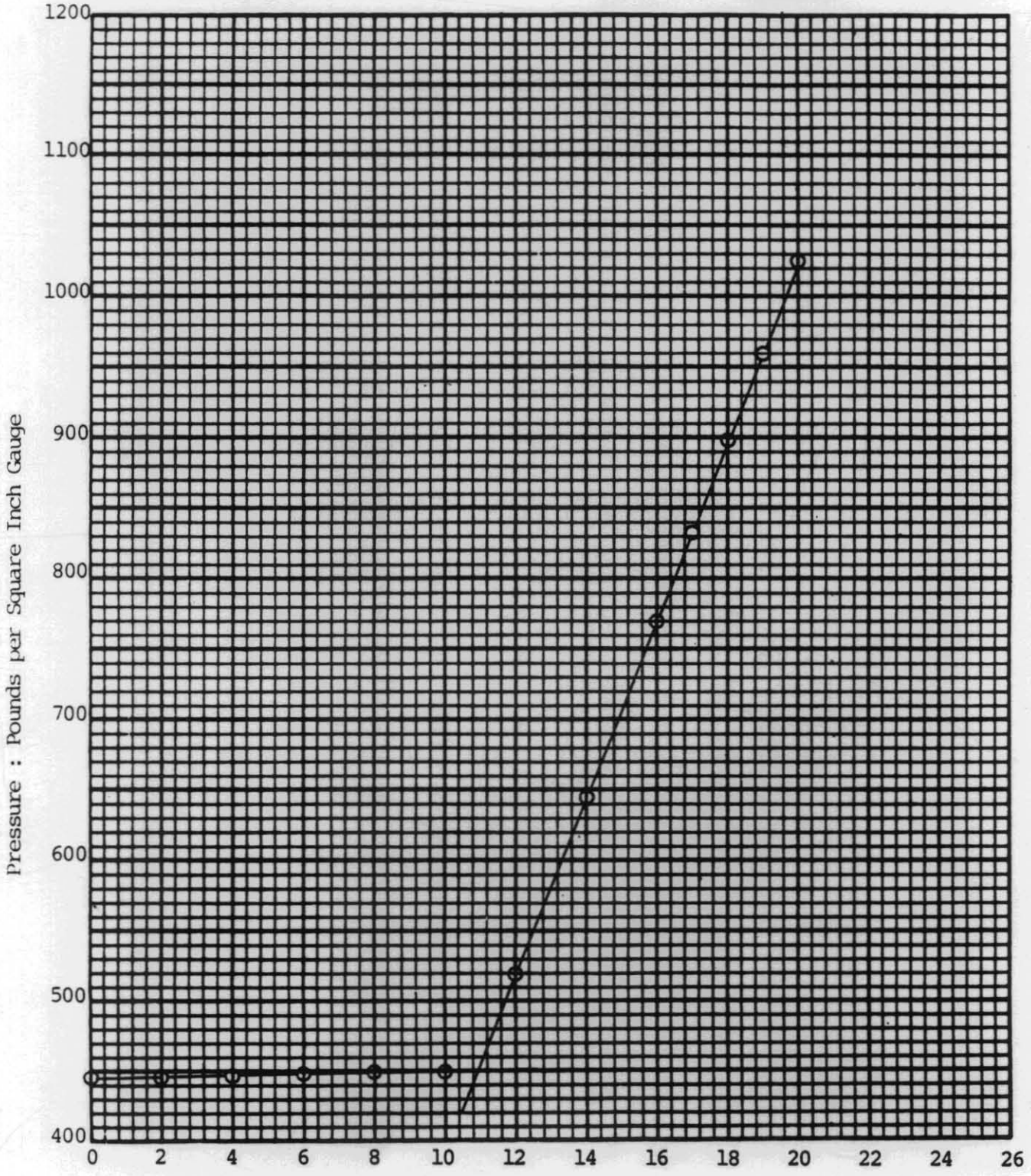
Gross heating value (BTU per cubic foot of dry gas @ 14.696 psia and 60°F): 1139

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES
Petroleum Reservoir Engineering

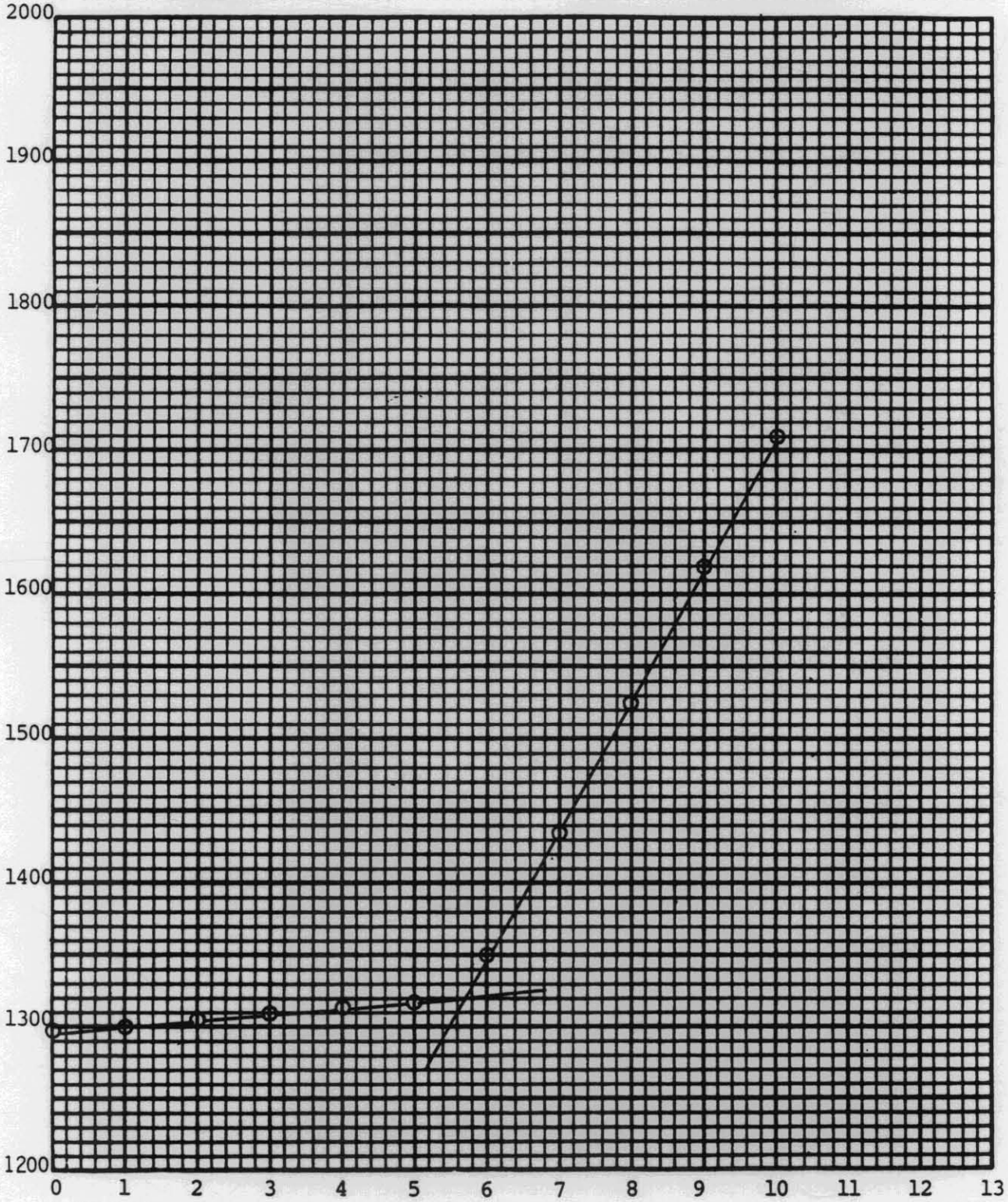
File 86026

Company Amoco Australia Petroleum Co. Formation
Well Pelican #5 State Tasmania
Field Pelican Country Australia



CORE LABORATORIES
Petroleum Reservoir Engineering

Company Amoco Australia Petroleum Co. Formation
Well Pelican #5 State Tasmania
Field Pelican Country Australia



Cylinder No: SS 1822
Cm^3 Mercury Injected

5 cm

452169

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #1	PELICAN #5	14440 PSI SINGLE STANDARD	14 MAR 86	1	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN			

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
3672 – 3699 (FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)	6 – 100	☐ UPSTREAM ☒ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1		TEST		STRING RUN IN THE HOLE															1
2																			2
0930		TEST STRING AND SURFACE EQUIPMENT TESTED TO 8000 PSI OK.																	
3																			3
1300		PERFORATING GUNS RUN IN HOLE																	
4																			4
1445		360	66	PERFORATING USING 2½" ATLAS GUNS. WELL OPEN TO FLARE.															
5							16		NO POSITIVE INDICATION OF FLOW AT BUBBLE HOSE										5
6																			6
1445							16												
7																			7
1450		0	66	1870			16												
8																			8
1456		0	66	1870			–		WELL SHUT IN AT CHOKE MANIFOLD.										
9																			9
1500		0	66	1870			–												
10																			10
1515		0	66	1860			–												
11																			11
1520		0	66	1860			–												
12																			12
1600		0	66	1860			–												
13																			13
1625		0	66	1860			–		PERFORATING GUNS AT SURFACE										
14																			14
1630		0	66	1860			–		S.S.L.V. PUMPED CLOSE. Perf. GUNS RIGGED DOWN										
15																			15
1715		0	66	1840			–		R16 UP PERFORATING GUNS										
16																			16
1813		1	65	1840			–		PUMP OPEN S.S.L.V. GUNS RUN IN HOLE										
17																			17
		2	65	1840															

Enclosure No. 3

OTIS

FIEL. ADINGS
SINGLE STAGE UNIT

OEC-905-A

452170

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #1	PELICAN #1		14 APR 82	2 | 9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. ($\frac{IN}{H_2O}$)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1							—												1
1830		0	61	1800															
2																			2
1900		7	63	1800			—												
3																			3
1915		12	63	1800			—												
4																			4
1930		35	63	1800			—												
5																			5
6																			6
2000		0	64	1800			—												
7																			7
2000		12	64	1800			—	PERFORATING GUNS				UNABLE TO RAT				FL. START			
8							—	OUT OF HOLE.											8
9																			9
2015		55	64	1800			—												
10																			10
2030		22	63	1800			—												
11																			11
2100		15	63	1800			—												
12																			12
2122		13	63	1800			—	PERFORATING GUNS AT SURFACE.											
13																			13
2125		13	63	1800			—	PUMP CLOSE SSLV.											
14																			14
2130		0	63	1800			—	BLEED DOWN SURFACE PRESSURE											
15																			15
2215		0	63	1800			—	SCHLUMBERGER LUBRICATOR						RIGGED DOWN					
16																			16
2315		0	62	1800			—	OTIS LUBRICATOR				RIGGED UP & PRESSURE TESTED							
17																			17
[illegible]		[illegible]	[illegible]	[illegible]				[illegible]				[illegible]		[illegible]					

452171

OTIS

FIEL. _ADINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #1	PELICAN "S"		15 MAR 86	3	9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. ($\frac{IN}{H_2O}$)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
15 MAR 0141		0	60	1820	OTIS WIRELINE BACK AT SURFACE.									PUMP CLOSE SSLV.					1
2					RIG DOWN LUBRICATOR.														2
3 0205		0	58	1820	SCHLUMBERGER LUBRICATOR RIGGED UP AND PRESSURE TESTED.														3
4 0500		0	58	1820	PERFORATING GUNS PICKED UP INTO LUBRICATOR.														4
5			58		S.S.L.V. PUMPED OPEN. PERFORATING GUNS RUN IN THE HOLE														5
6 0600		45	57	1820															6
7 0615		150	57	1820															7
8 0630		450	57	1820															8
9 0645		680	57	1820															9
10 0715		700	57	1820															10
11 0730		480	60	1820	PERFORATING GUNS AT DEPTH AND CORRELATING.														11
12 0735		430	60	1820															12
13 0734		0	60	1820	PRESSURE BLED OFF TEST STRING.														13
14 0735		0	60	1820	ZONE		3686M – 3699M		PERFORATED					USING 2 1/8" ENERJET				GUNS	14
15 0735							16		WELL OPEN TO FLARE					ON 16/64" ADJUSTABLE CHOKE					15
16 0736		0	60	1820			16	NO	INDICATION OF FLOW AT SURFACE										16
17 0740		0	60	1820															17

452172

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #1	PELICAN #5		15 MAR 86	4 | 9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
15 MAR		0	60	1900			-	WELL SHUT IN AT CHOKE MANIFOLD.											1
0745																			
2																			2
0750		0	60	1920			-												
3																			3
0755		6	60	1920	PERFORATING		GUNS	START PULL OUT OF THE HOLE											
4																			4
0800		7	60	1920															
5																			5
6																			6
7																			7
8																			8
0900																			
9																			9
10																			10
0935		0	60	1900				SSLV PUMPED CLOSE											
11																			11
0940		0	60	1900				RIG DOWN SPLINT PERFORATING GUNS											
12																			12
1100		0	60	1900				RIG UP ELECTRIC LINE LUBRICATOR											
13																			13
1110		0	60	1900				PRESSURE TEST LUBRICATOR TO 5000 PSI OK.											
14																			14
1140		0	62	1880				PUMP OPEN SSLV. ELECTRIC LINE RUN IN HOLE											
15																			15
1200		0	63	1870															
16														16/64					16
1210							16	WELL OPEN TO FLARE						ON 16/64 HOLD CASING					
17																			17

OTIS

FIEL. .EADINGS
SINGLE STAGE UNIT

OEC-905-A

452173

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST 1	PELICAN #5		5 MAY 87	5 | 9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1 1300		0	63	1860			16												1
2 1330		0	63	1860			16												2
3 1400		0	64	1840			16												3
4 1430		0	64	1840			16												4
5																			5
6 1530		0	64	1820			16												6
7 1600		0	64	1820			16												7
8 1630		0	64	1810			16												8
9 1700		0	62	1810			16												9
10 1730		0	61	1800			16												10
11 1735		0	61	1800			16	ELECTRIC LINE GRC GAUGE AT SURFACE											11
12 1742		0	61	1600			—	PUMP CLOSE SSLV.											12
13 1745		0	61	1800				RIG DOWN ELECTRIC LINE											13
14 1820		0	60	—				BLEED DOWN ANNULUS PRESSURE											14
15 1830		0	60	-				PRESSURE TEST REPAIRED VALVE ON CHOKE MANIFOLD TO 8000 PSI											15
16 1845								PICK UP WEIGHT OF TEST STRING TO OPEN HYDRAULIC											16
17								CIRCULATING VALVE											17

OTIS

FIEL..EADINGS
SINGLE STAGE UNIT

OEC-905-A

452174

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #1	PELICAN #5		6 MAR 86	6	9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)	
15 MAR																				1
1900		-	-	-		PACKER UNSEATED.														
2105						PACKER RESEATED														2
2120		0	58	1800		ANNULUS PRESSURIZED TO OPEN L.P.R. TEST TOOL														3
2130		0	58	-		BLED OFF ANNULUS PRESSURE TO DISPLACE TUBING WITH														4
						51 bbls. of [illegible] water.														5
2220		0	58	1800		ANNULUS PRESSURIZED TO OPEN L.P.R. TEST TOOL														6
2227		600	58	1900		16 WELL OPEN TO FLARE. ON 16/64" ADJUSTABLE CHOKE														7
2229		30	58	1900		16														8
2230		15	59	1880		16														9
2231		10	60	1870		16														10
2232		8	60	1870		16														11
2233		4	63	1870		16														12
2238		0	63	1870		16														13
2245		0	62	1870		16														14
2250		0	61	1870		16														15
2300		0	60	1870		16														16
2315		0	60	1870		16														17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452175

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #1	PELICAN #5		15 MAR 86	7	9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
15 MAR 2330		0	59	1900			16												1
2345		0	59	1900			16												2
2350		0	59	1900			16	START TO PIG UP OTIS LUBRICATOR TO RUN GAUGE RING.											3
16 MAR 0007		0	59	1900			-	WELL SHUT IN AT CHOKE MANIFOLD FOR PRESSURE TEST											4
								LUBRICATOR STARTED TO COME OUT OF HOLE											5
0044		0	59	1930			-	GAUGE CUTTER STARTED IN THE HOLE											6
0045		0	59	1930			16	WELL OPEN TO FLARE ON 16/64" ADJUSTABLE CHOKE.											7
0100		0	58	1940			16												8
0115		0	58	1950			16												9
0125		0	58	1950			16	GAUGE CUTTER HUNG UP AT 3680 M.											10
0130		0	58	1950			16												11
0145		0	58	1960			16	GAUGE CUTTER FREE											12
0200		0	57	1960			16	GAUGE CUTTER HUNG UP AT 3530 M. (SINGLE GARNIER).											13
0215		0	57	1970			16												14
0230		0	57	1975			16												15
0245		0	57	1975			16												16
0300		0	57	—			-	R.I.H. with [illegible] P.O.O.H.											17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452176

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO YR.)	PAGE OF
DST #1	PELICAN "S"		16 MAR 86	8 9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
16 MAR 0225		0	57	2000.	PRESSURE UP ANNULUS. L.P.R.-N									DID NOT CUT WIRE			LINE		1
0300		0	57	2000	STARTED TOOK ON WIRE LINE IN ATTEMPT TO BREAK IT.														2
0304		0	57	—	BLEED DOWN ANNULUS TO CLOSE L P R-N. DID NOT CUT WIRE.														3
0310		0	57	2300	PRESSURE UP ANNULUS TO OPEN L.P.R-N.														4
[illegible]		[illegible]			[illegible]														5
0320		0	57	2300	PRESSURE UP ANNULUS TO OPEN L-P R-N.														6
0330		0	57	-	BLEED DOWN ANNULUS TO CLOSE L P R-N.														7
0335		0	57	-	WIRE LINE SEVERED START PULLING OUT OF HOLE														8
0340		0	57	900			16	PRESSURE UP ANNULUS TO OPEN L.P.R.N.											9
10								WELL OPEN TO FLARE ON 16/64" ADJUSTABLE CHOKE.											10
0355		0	58	1880			16	WIRE LINE OUT OF THE HOLE											11
0400		0	58	1880			—	PUMP CLOSE SSLV.											12
0505		0	58	1880			16	PUMP OPEN SSLV. WELL OPEN TO FLARE ON 16/64"											13
14								ADJUSTABLE CHOKE. BLIND BOX AND JARS RUN IN HOLE											14
0515		0	55	1900			16												15
0530		0	55	1900			16												16
[illegible]		[illegible]						STRIP GUNS CUTTER & JARS [illegible]											17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452177

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE	OF
DST #1	PELICAN #5		16 MAR 86	9	9

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1 16 MAR 0600		0	58	1900			16												
2 0615		0	58	1900			16												
3 0630		0	58	1900			16		WIRE LINE TOOL IN LUBRICATOR.										
4 0632		0	58	1900			-		PUMP CLOSE SSLV. RIG DOWN LUBRICATOR.										
5									STAB PICK UP PERFORATING GUNS										
6 0745		0	58	1900			-		PRESSURE TEST LUBRICATOR TO 5000 PSI										
7 0920		0	60	1900			16		PUMP OPEN SSLV. PERFORATING GUNS RUN IN HOLE.										
8									WELL OPEN TO FLARE ON 16/64" ADJUSTABLE CHOKE										
9 1025		0	62	1900			-		WELL SHUT IN AT CHOKE MANIFOLD.										
10 1055		0	63	1900			-												
11 1057		0	64	1920			-		ZONE PERFORATED FOR DST #2. ENDING DST #1.										
12																			
13																			
14																			
15																			
16																			
17																			

Enclosure No. 4

OTIS

OTIS ENGINEERING CORPORATION
BOTTOM HOLE PRESSURE
REPORTS

PELICAN # 5 (GRADIENT SURVEY)
APRIL 15, 1986

DST #1

452179

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
1	1	PELICAN#5	15/ 3/86	1	4

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
R.BYHAM	J.NICHOLSON	3672M-3699M RKB	GRC 64475	VARIOUS

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	15	1145:00	66.60	66.60	61.67						RUN IN HOLE	1
2	15	1147:30	168.39	101.79	59.20							2
3	15	1150:00	377.49	209.10	79.75							3
4	15	1152:30	566.38	188.89	92.01							4
5	15	1155:00	797.87	231.49	101.94							5
6	15	1157:30	1029.12	231.25	112.22							6
7	15	1220:00	2556.70	1527.58	119.62							7
8	15	1222:30	2727.81	171.11	119.62							8
9	15	1225:00	2975.97	248.16	211.14							9
10	15	1242:30	4508.51	1532.54	218.80							10
11	15	1245:00	4806.07	297.56	260.80							11
12	15	1247:30	5058.89	252.82	266.83							12
13	15	1250:00	5236.25	177.36	270.96							13
14	15	1252:30	5305.21	68.96	272.41							14
15	15	1255:00	5500.50	195.29	276.68							15
16	15	1257:30	5686.66	186.16	280.97							16
17	15	1300:00	5889.52	202.86	285.67							17
18	15	1302:30	6085.08	195.56	289.50						STOP AT 10700' RKB	18
19	15	1305:00	6087.04	1.96	290.13							19
20	15	1307:30	6085.19	-1.85	289.61							20
21	15	1310:00	6131.99	46.80	288.61						R.I.H.	21
22	15	1311:00	6168.13	36.14	289.30						STOP AT 10800' RKB	22
23	15	1312:00	6167.51	-.62	290.12							23
24	15	1313:00	6166.69	-.82	290.16							24
25	15	1314:00	6166.63	-.06	290.14						R.I.H.	25
26	15	1315:00	6216.04	49.41	290.19							26
27	15	1316:00	6246.23	30.19	291.17						STOP AT 10900' RKB	27
28	15	1317:00	6242.73	-3.50	291.27							28
29	15	1318:00	6239.88	-2.85	290.99							29
30	15	1319:00	6238.43	-1.45	290.73						R.I.H.	30
31	15	1320:00	6292.55	54.12	290.71							31
32	15	1321:00	6320.54	27.99	291.01						STOP AT 11000' RKB	32
33	15	1322:00	6318.36	-2.18	290.84							33
34	15	1323:00	6317.06	-1.30	290.76							34
35	15	1324:00	6316.84	-.22	290.69						R.I.H.	35
36	15	1325:00	6366.54	49.70	290.80							36
37	15	1326:00	6439.38	72.84	291.74							37
38	15	1327:00	6530.59	91.21	293.68							38

Computer-Forex Toppan Moore

452180

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
1	1	PELICAN#5	15/ 3/86	2	4

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
R.BYHAM	J.NICHOLSON	3672M-3699M RKB	GRC 64475	VARIOUS

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	15	1328:00	6548.63	18.04	295.06							1
2	15	1329:00	6549.03	.40	295.20							2
3	15	1330:00	6549.03	0.00	295.42							3
4	15	1331:00	6643.64	94.61	295.42							4
5	15	1332:00	6703.83	60.19	296.95							5
6	15	1333:00	6758.38	54.55	298.32							6
7	15	1334:00	6812.64	54.26	299.39							7
8	15	1335:00	6807.73	-4.91	299.90							8
9	15	1336:00	6807.23	-.50	299.89							9
10	15	1337:00	6805.40	-1.83	299.83							10
11	15	1338:00	6803.21	-2.19	299.68							11
12	15	1339:00	6806.98	3.77	299.53							12
13	15	1340:00	6804.59	-2.39	299.45							13
14	15	1341:00	6804.63	.04	299.45							14
15	15	1342:00	6789.75	-14.88	299.45							15
16	15	1343:00	6876.40	86.65	299.36							16
17	15	1344:00	6980.49	104.09	301.58							17
18	15	1345:00	7117.85	137.36	303.40							18
19	15	1346:00	7230.83	112.98	307.64							19
20	15	1347:00	7218.33	-12.50	307.73							20
21	15	1348:00	7249.36	31.03	307.43							21
22	15	1349:00	7355.56	106.20	308.25							22
23	15	1350:00	7384.60	29.04	310.23						STOP AT 12350' RKB	23
24	15	1351:00	7377.69	-6.91	310.51							24
25	15	1352:00	7373.11	-4.58	310.43							25
26	15	1353:00	7372.74	-.37	310.40							26
27	15	1354:00	7373.44	.70	310.32						P.O.O.H.	27
28	15	1355:00	7365.89	-7.55	310.31							28
29	15	1356:00	7280.79	-85.10	310.20							29
30	15	1357:00	7210.58	-70.21	309.10						STOP AT 12136' RKB	30
31	15	1358:00	7209.36	-1.22	307.87							31
32	15	1359:00	7206.28	-3.08	307.65							32
33	15	1400:00	7203.62	-2.66	307.61							33
34	15	1401:00	7204.22	.60	307.59							34
35	15	1402:00	7204.51	.29	307.57						P.O.O.H.	35
36	15	1403:00	7181.10	-23.41	307.52						STOP AT 12090' RKB	36
37	15	1404:00	7175.48	-5.62	306.97							37
38	15	14[illegible]00	7178.78	3.30	306.[illegible]							38

Computer-Forms Toppan Moore

452181

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
1	1	PELICAN#5	15/ 3/86	3	4

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
R.BYHAM	J.NICHOLSON	3672M-3699M RKB	GRC 64475	VARIOUS

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	15	1406:00	7180.26	1.48	306.87							1
2	15	1407:00	7180.86	.60	306.87						P.O.O.H.	2
3	15	1408:00	7146.30	-34.56	306.86						STOP AT 12047' RKB	3
4	15	1409:00	7148.13	1.83	307.45							4
5	15	1410:00	7148.02	-.11	307.55							5
6	15	1411:00	7149.12	1.10	307.59							6
7	15	1412:00	7148.99	-.13	307.61							7
8	15	1413:00	7148.93	-.06	307.62						P.O.O.H.	8
9	15	1414:00	7077.06	-71.87	307.19							9
10	15	1415:00	6980.14	-96.92	303.95							10
11	15	1416:00	6898.94	-81.20	302.81						STOP AT 11750' RKB	11
12	15	1417:00	6899.97	1.03	302.09							12
13	15	1418:00	6902.41	2.44	302.11							13
14	15	1419:00	6903.98	1.57	302.12							14
15	15	1420:00	6905.20	1.22	302.13							15
16	15	1421:00	6905.62	.42	302.10							16
17	15	1422:00	6905.93	.31	302.05							17
18	15	1423:00	6906.06	.13	302.03							18
19	15	1424:00	6905.96	-.10	302.00							19
20	15	1425:00	6906.40	.44	301.97						P.O.O.H.	20
21	15	1426:00	6870.84	-35.56	301.95							21
22	15	1427:00	6793.31	-77.53	301.24							22
23	15	1428:00	6709.70	-83.61	299.29						STOP AT 11500' RKB	23
24	15	1429:00	6711.70	2.00	297.45							24
25	15	1430:00	6714.74	3.04	297.49							25
26	15	1431:00	6717.41	2.67	297.56							26
27	15	1432:00	6717.86	.45	297.61							27
28	15	1433:00	6719.06	1.20	297.62							28
29	15	1434:00	6718.88	-.18	297.62							29
30	15	1435:00	6719.39	.51	297.62							30
31	15	1436:00	6719.87	.48	297.60						P.O.O.H.	31
32	15	1437:00	6680.86	-39.01	297.56							32
33	15	1438:00	6615.50	-65.36	296.76							33
34	15	1439:00	6520.51	-94.99	294.94							34
35	15	1440:00	6404.60	-115.91	292.93							35
36	15	1441:00	6319.92	-84.68	290.88						STOP AT 11000' RKB	36
37	15	1442:00	6321.16	1.24	290.13							37
38	15	1443:00	6323.41	2.25	290.16							38

Computer Forms Toppan Moore

452182

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
1	1	PELICAN#5	15/ 3/86	4	4

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
R.BYHAM	J.NICHOLSON	3672M-3699M RKB	GRC 64475	VARIOUS

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	15	1444:00	6325.10	1.69	290.21							1
2	15	1445:00	6325.69	.59	290.20							2
3	15	1446:00	6326.08	.39	290.20							3
4	15	1447:00	6326.39	.31	290.18						P.O.O.H.	4
5	15	1448:00	6327.20	.81	290.16							5
6	15	1449:00	6326.60	-.60	290.14							6
7	15	1450:00	6327.02	.42	290.12						GAUGE DAMAGED WHILST JARRING	7
8	15	1451:00	6327.69	.67	290.11						THROUGH TIGHT SPOT AT 10775' RKB	8
9	15	1623:00	3984.35		273.06							9
10	15	1624:00	3984.23	-.12	273.04							10
11	15	1625:00	4013.30	29.07	273.00							11
12	15	1626:00	4101.50	88.20	273.98							12
13	15	1627:00	4215.92	114.42	276.20							13
14	15	1628:00	4321.45	105.53	278.56							14
15												15
16												16
17												17
18												18
19												19
20												20
21												21
22												22
23												23
24												24
25												25
26												26
27												27
28												28
29												29
30												30
31												31
32												32
33												33
34												34
35												35
36												36
37												37
38												38

Computer-Forms Toppan Moore

452183

OTIS

P.O. BOX 324, SALE,
VICTORIA, 3850, AUSTRALIA
Telephone (051) 44 3255
Telex: OTISALE
AA55240

JN-ML-180-86

15th April, 1986

Amoco Australia Ltd.,
15 Blue Street,
SYDNEY, N.S.W., 2000.

Dear Sir,

Please find enclosed the final report for the Pelican # 5, B.H.P. Survey.

If there are queries concerning the above, please do not hesitate to contact me.

Otis Engineering Corporation wish to thank you for this opportunity of completing your B.H.P. work with our Electric Line Unit, and hope in the future Amoco Australia will give Otis the opportunity to complete more of your B.H.P. Surveys.

Yours faithfully,

JOHN NICHOLSON,
OTIS ENGINEERING CORPORATION,
AUSTRALIA, NEW ZEALAND & PAPUA NEW GUINEA.

enc.

OTIS

SEQUENCE OF OPERATIONS

OEC - 872-B

452184

TEST NUMBER	RIG NAME	PAGE	OF
1	DIAMOND M. EPOCH	1	2

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO	PELICAN # 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR
R. BYHAM	J. NICHOLSON

	DATE	TIME	OPERATIONS
1	15/3/86	1105	GAUGE IN LUBRICATOR.
2		1115	PRESSURE TEST LUBRICATOR.
3		1141	RUN IN HOLE.
4		1302	STOP AT 10,700' RKB.
5		1309	R.I.H.
6		1311	STOP AT 10,800' RKB.
7		1314	R.I.H.
8		1316	STOP AT 10,900' RKB.
9		1319	R.I.H.
10		1321	STOP AT 11,000' RKB.
11		1324	R.I.H.
12		1350	STOP AT 12,350' RKB.
13		1354	P.O.O.H.
14		1357	STOP AT 12,136' RKB.
15		1402	P.O.O.H.
16		1403	STOP AT 12,090' RKB.
17		1407	P.O.O.H.
18		1408	STOP AT 12,047' RKB.
19		1413	P.O.O.H.

OTIS

SEQUENCE OF OPERATIONS

OEC 872-B

452185

TEST NUMBER	RIG NAME	PAGE OF
1	DIAMOND M. EPOCH	2 | 2

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO	PELICAN # 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR
R. BYHAM	J. NICHOLSON

DATE	TIME	OPERATIONS
15/3/86	1416	STOP AT 11,750' RKB.
	1425	P.O.O.H.
	1428	STOP AT 11,500' RKB.
	1436	P.O.O.H.
	1441	STOP AT 11,500' RKB.
	1448	P.O.O.H.
	1450	W/L UNIT BREAKS DOWN. ATTEMPT TO REPAIR.
	1555	CONTINUE TO P.O.O.H.
	1600	GAUGE HUNG UP AT 10,775' RKB. JAR THROUGH TIGHT SPOT.
	1605	GAUGE DAMAGED. PULL OUT OF HOLE.

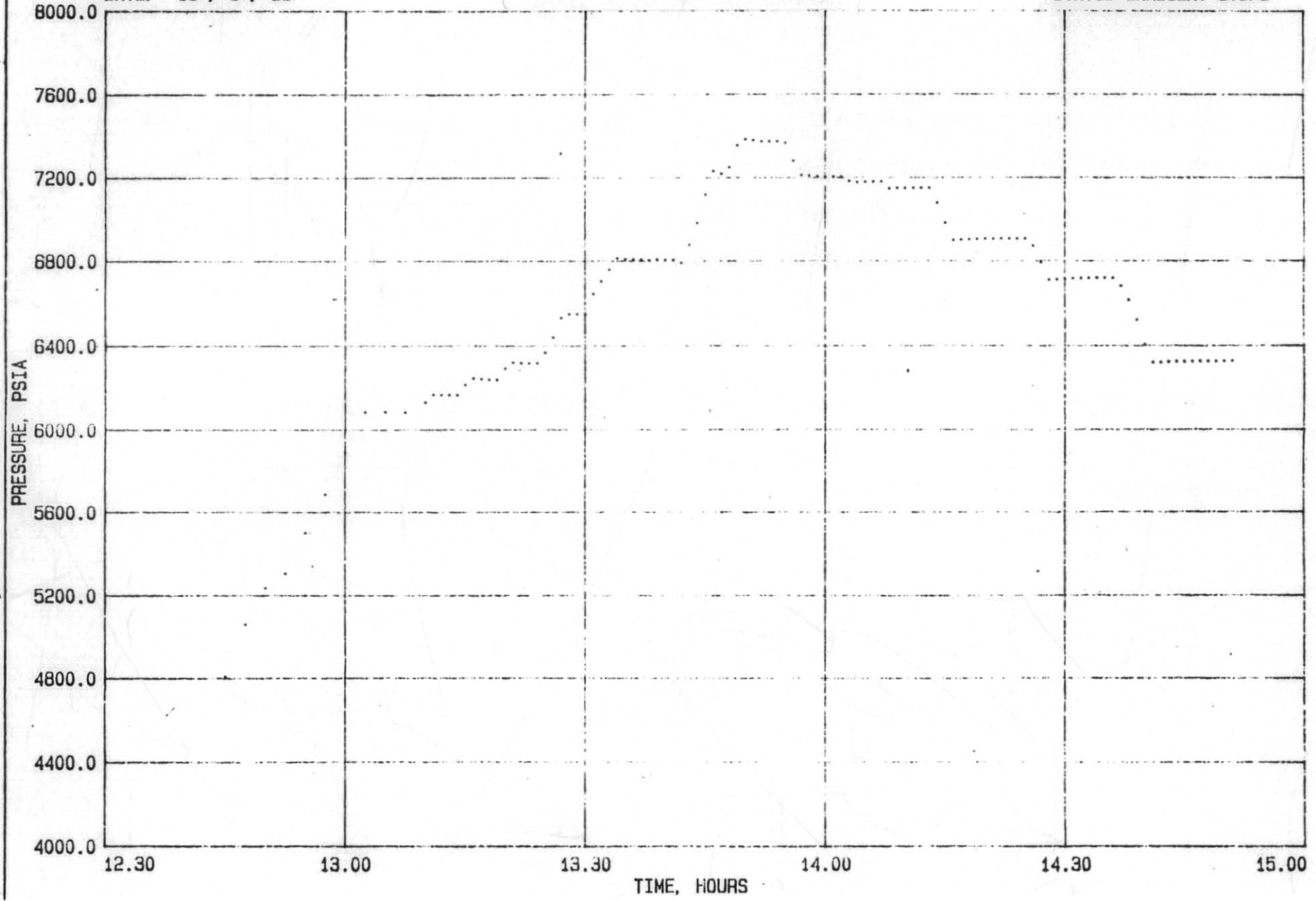
452186

OTIS ENGINEERING CORPORATION

AMOCO
WELL: PELICAN#5
DATE: 15 / 3 / 86

5 cm

TEST NO.: 1
LINEAR PLOT
STATIC GRADIENT STOPS

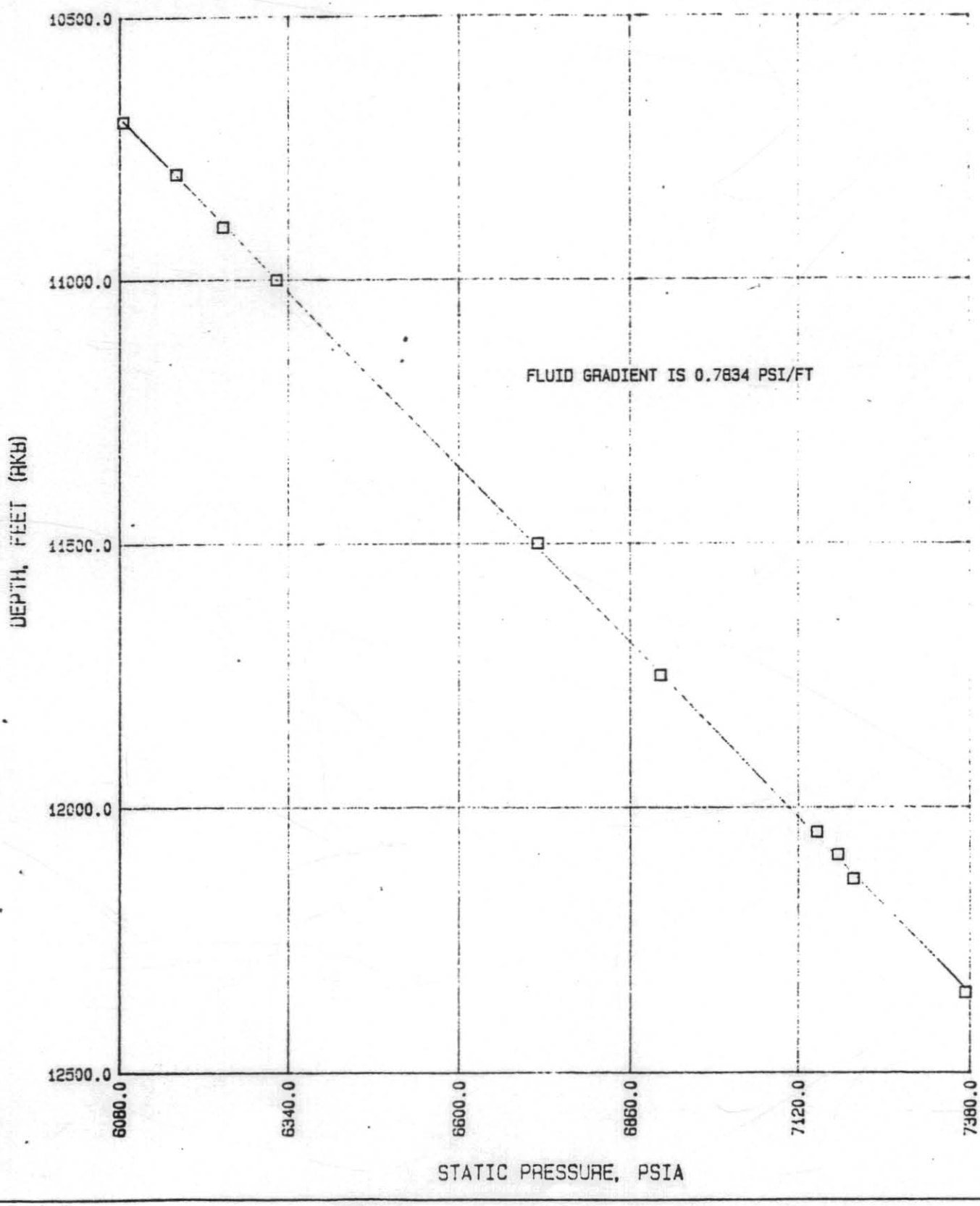


OTIS ELECTRIC LINE SERVICES
STATIC GRADIENT SURVEY

452187

AMOCO
PELICAN#5
DATE: 15 MARCH 1986

1
FIELD: PELICAN
GAUGE: GRC#64475



5 cm

OTIS

FIELD . . . INGS
SINGLE STAGE UNIT

OEC-905-A

452188

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST 2	PELICAN'S	1140 BSL 3 PHASE SEPARATOR	16 MAR 86	1	4

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN	SANDSTONE	—	—

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
	—	☐ PIPELINE ☒ FLARE		—	☐ UPSTREAM ☒ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
16 MAR 1557		0	61	1920			16.	WITH THE TEST STRING DISPLACED WITH GLYCOL OI											1
2								WATER. THE ZONE WAS PERFORATED USING 2 1/8"											2
3								ENERJET GUNS. THE WELL WAS MONITORED OPENED											3
4								TO THE FLARE ON 16/64" ADJUSTABLE CHOKE											4
5		0	6-	19-			16												5
6 1059		0	64	1920			16												6
7 1100		0	64	1920			16												7
8 1101		0	64	1920			16												8
9 1102		0	64	1920			16												9
10 1103		0	64	1920			16												10
11 1105		0	64	1920			16												11
12 1107		0	64	1920			-	WELL SHUT IN AT CHOKE MANIFOLD											12
13 1108		0	64	1920			—												13
14 1109		0	64	1960			—												14
15 1116		0	63	1940			—												15
16 1115		0	63	1940			-	SCHLUMBERGER START PULLING PERF. GUNS OUT OF HOL											16
17																			17

Enclosure No. 5

OTIS

SINGLE STAGE UNIT

OEC-905-A

452189

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #2	PELICAN #5		16 MAR 80	2	4

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
16 MAR 1125		6	62	PSO			—												1
2 1130		7	63	1930															2
3 1145		6	63	1930															3
4 1200		3	62	1930															4
5 1215		0	62	1920															5
6 1225		0	62	1920			PERFORATING GUNS AT SURFACE												6
7 1227		0	62	1920			PUMP CLOSE SSLV.												7
8 1230		0	62	1920			START RIG DOWN SPENT PERFORATING GUNS.												8
9 1425		0	62	1920			RIG UP OILS WORKOVER AND PRESSURE TEST TO 3000 PSI.												9
10 1440		0	62	1920			PUMP OPEN S.S.L.V. WIRELINE RUN IN HOLE												10
11 1705		0	64	1920															11
12 1500		10	64	1900			(THP INCREASE DUE TO SWABBING EFFECT OF WIRELINE TOOLS)												12
13 1515		30	65	1940			WIRELINE GAUGE CUTTER UNABLE TO PASS 3616 M.												13
14 1530		40	62	1940			GAUGE CUTTER UNABLE TO PASS 3540 M.												14
15 1545		50	63	1940			WIRE LINE BEING JARRED AT 3540 M.												15
16 1600		80	63	1940															16
17		1[illegible]		[illegible]															17

OTIS FIELD ...DINGS
SINGLE STAGE UNIT
OEC-905-A

452190

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE OF
DST #2	PELICAN #5		16 MAR 86	3 | 4

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)	
16 MAR 1630		170	61	1940															1
2 1645		220	61	1940															2
3 1700		300	60	1950															3
4 1715		400	60	1950															4
5 1733		400	60	1950			16		OPEN TO TEST SEP					161 BBL					5
6 1724		50	60	1950			16												6
7 1725		0	60	1950			16												7
8 1730		0	61	1950			16												8
9 1735		0	62	1950			16												9
10 1740		0	62	1950			16												10
11 1800		0	60	1950			16												11
12 1810		0	60	2500			16		INCREASED PRESSURE ON ANNULUS. TOOL STRAIN										12
13									TAKEN ON WIRE LINE										13
14 1825		0	60	—			—		BLEED OFF ANNULUS PRESSURE IN ATTEMPT TO										14
15									HYD LPR-N VALVE CUT WIRE LINE.										15
16 1845		0	60	1920					INCREASE ANNULUS PRESSURE.										16
17 1900		0	60	2420					INCREASE ANNULUS PRESSURE										17

452191

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE	OF
DST #2	PELICAN #5		16 MAR 86	4	4

FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

DATA	DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)	
0			-	ANNULUS PRESSURE BLED DOWN TO CLOSE LPR VALVE												1
				ON WIRELINE; UNSUCCESSFUL.												2
2500				REPRESSURE ANNULUS PRESSURE.												3
0				BLEED OFF ANNULUS PRESSURE; WIRE LINE SEVERED												4
				START PULL WIRE OUT OF HOLE.												5
0				WIRE LINE OUT OF HOLE. [illegible]												6
				LUBRICATOR.												7
3450				PRESSURE UP ON ANNULUS TO 3,450 PSI TO SHEAR LPR-M2												8
0				BLEED OFF ANNULUS PRESSURE. LPR-M2 NOT SHEARED												9
3480				PRESSURE UP ON ANNULUS TO 3480 PSI TO SHEAR LPR-M2.												10
0				BLEED PRESSURE OFF ANNULUS. LPR-M2 NOT SHEARED												11
3300				PRESSURE UP ON ANNULUS TO 3,300 PSI TO SHEAR LPR-M2												12
0				BLEED OFF ANNULUS PRESSURE. LPR-M2 NOT SHEARED.												13
3500				PRESSURE UP ON ANNULUS TO 3500 PSI TO SHEAR LPR-M2												14
0				BLEED OFF ANNULUS PRESSURE. LPR-M2 NOT SHEARED												15
				PICK UP TEST STRING AND OPEN CIRCULATING VALVE.												16
				REVERSING OUT; WATER CUSHION ENDING DST #2												17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452192

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #2A	PELICAN #5	1440PSI 3 PHASE SEPARATOR	20MAR86	1	3

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN	SANDSTONE	—	

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
3612 – 3618 (FT.)	(FT.)	☐ PIPELINE ☑ FLARE	5.761 (INS)	0-100	☐ UPSTREAM ☑ DOWNSTREAM

	TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
	DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W_f	#1 TANK OR METER READING	SALINITY
	24 HOUR CLOCK	(HOURS)	(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN H_2O)	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	@ 60°F °API	BSW (%)	#2 TANK OR METER READING (INS OR BBL)	(%)
1						THE TEST ZONE WAS PERFORATED USIN 3 5/8 CASING GUNS														1
2						6 S.P.F AT 60° PHASING.														2
3						THE TEST STRING WAS RUN IN THE HOLE. PRESSURE TESTED														3
4						TO 5000PSI AND DISPLACED WITH 77 bbls OF DRILL WATER														4
5	0842					TEST STRING LANDED IN WEAR BUSHING, PIPE RAMS CLOSED														5
6	0857		0	67	–	START PRESSURING UP ON ANNULUS TO OPEN LPR-N														6
7	0858		700	67	1800			AN IMMEDIATE INCREASE IN W.H.P. WHEN LPR-N OPENED.												7
8	0859		700	67	1800			16		WELL OPEN TO FLARE ON 11/64" ADJUSTABLE CHOKE										8
9	0900		30	67	1800			16												9
10	0901		0	67	1800			16												10
11	0902		0	67	1800			16												11
12	0903		0	67	1800			16												12
13	0904		0	67	1800			16												13
14	0905		0	67	2000			16												14
15	0910		0	69	1980			16												15
16	0915		0	69	1960			16												16
17								16												17

Enclosure No. 6

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452193

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE OF
DST #2A	PELICAN #5		20 MAR 88	2 | 3

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
20 MAR 0445		0	69	1910			16	START RIGGING UP SCHLUMBERGER LUBRICATOR											1
1000		0	69	1900			16												2
1015		0	69	1900			16												3
1030		0	69	1880			16												4
1045				1880			-	WELL SHUT IN, PUMP SSLV CLOSED.											5
1100		0	69	1900				PRESSURE TEST LUBRICATOR TO 5000 PSI OK											6
1235		100	65	1840			16	PUMP OPEN SSLV. WELL OPEN TO FLARE ON 16/64" ADJUSTABLE											7
1								CHOKE.											8
1236		10	65	1840			16	SCHLUMBERGER PRODUCTION LOGGING TOOL RUN IN THE HOLE											9
1237		1	65	1840			16												10
1238		1	65	1840			16												11
1239		1	65	1840			16												12
1240		0	65	1840			16												13
1245		0	65	1840			16												14
1300		0	65	1820			16												15
1315		0	65	1820			16												16
17		0	65	1840			16												17

452194

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #2A	RELIANCE #5.		20 MAR 86	3	3

FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

(FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

DATA	DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)	
1960			16													1
1940			16													2
1940			16													3
1940			16													4
1940			16													5
1940			16													6
1940			16													7
1940			16													8
1940			16													9
1920			16													10
1910			16													11
1900			16	PRODUCTION LOGGING TOOL START OUT OF HOLE												12
1890			16													13
1890			16	PRODUCTION LOGGING TOOL AT SURFACE.												14
1890			-	S.S.L.V PUMP CLOSED. ENDING DST #2A												15
																16
																17

452195

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #3	PELICAN #5	1440PSI 3PHASE SEPARATOR	20 MAR 86	1	6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN	SANDSTONE		

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
3440 – 3451 M (FT.)	(FT.)	☐ PIPELINE ☒ FLARE	5.761 (INS)	0–100	☐ UPSTREAM ☒ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
20 MAR 1806		0	64	1840	PUMP		OPEN	SSLV.	PERFORATING GUNS RUN IN HOLE										1
2010		0	67	1950			16	WELL OPEN TO FLARE ON 16/64" ADJUSTABLE CHOKE.											2
2011		30	67	1950			16	ZONE PERFORATED USING 2⅛" ENERJET GUNS.											3
								IMMEDIATE RESPONSE OF PRESSURE AT SURFACE.											4
2012		8	67	1950			16												5
2013		2	67	1950			16												6
2014		1	67	1950			16												7
2015		1	67	1950			16												8
2016		0	67	1950			16												9
2020		0	67	1950			14	WELL SHUT IN AT CHOKE MANIFOLD											10
2022		2	67	1950															11
2023		2	67	1940															12
2024		3	67	1940															13
2025		15	67	1940				SCHLUMBERGER START PULLING GUNS OUT OF THE HOLE											14
2030		10	67	1940															15
2035		10	67	1940															16
2040		9	67	1940															17

Enclosure No. 7

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452196

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #3	PELICAN "S"		20MAR86	2 of 6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
20MAR 2045		7	67	1960			—												1
2050		6	67	1930															2
2055		5	67	1930															3
2100		5	67	1930															4
2115		7	67	1920				PERFORATING GUNS AT SURFACE.											5
2120		7	67	1920				S. S. L. V. PUMPED CLOSE.											6
2125		0	67	1920				BLEED OFF SURFACE PRESSURE. RIG DOWN GUNS											7
2232		0	60	1870				PUMP OPENS S.S.L.V. PRODUCTION LOGGING TOOL RUN IN HOLE.											8
2235		0	60	1870				CHOKE MANIFOLD CLOSED.											9
2240		5	60	1870															10
2245		10	60	1870															11
2250		14	60	1870															12
2300		20	60	1860															13
2315		180	65	1860															14
2330		430	65	1850															15
2345		600	65	1840															16
21 MAR 2400		725	65	1840															17

452197

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO, YR.)	PAGE	OF
DST 3	PELICAN #5		21 MAR 86	3	6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
21 MAR 0015		850	65	1840															1
2 0030		940	65	1830															2
3 0045		985	65	1820															3
4 0048		1000	65	1820															4
5 0050		400	65	1820			16	WELL OPENED TO FLARE ON 16/64" ADJUSTABLE CHOKE.											5
6 0051		100	65	1820			16	PRESSURE UP ANNULUS											6
7 0052		0	65	1980			16	VACUUM OBSERVED AT BUBBLE HOSE.											7
8 0055		0	65	1980			16												8
9 0100		0	65	1970			16												9
10 0115		1	65	1970			16												10
11 0130		1	65	1970			16												11
12 0145		1	64	1960			16												12
13 0150		1	64	1960			16												13
14 0158		1	64	1960			-	WELL SHUT IN AT CHOKE MANIFOLD.											14
15 0159		2	64	1960															15
16 0200		2	64	1960															16
17 0201		3	64	1960															17

452198

OTIS FIELD READINGS
SINGLE STAGE UNIT
OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO. YR.)	PAGE OF
DST #3	PELICAN #5		21 MAR 86	4 | 6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. ($\frac{IN}{H_2O}$)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
21 MAR 0202		3	64	1950															1
2 0203		4	64	1950															2
3 0204		5	64	1950															3
4 0205		5	64	1950															4
5 0210		10	63	1950															5
6 0215		29	63	1950															6
7 0230		130	63	1950															7
8 0245		280	63	1940															8
9 0300		400	63	1930															9
10 0315		540	61	1930															10
11 0330		640	61	1930				PRODUCTION LOGGING TOOL START OUT OF HOLE											11
12 0345		730	61	1910				P.L.T. STUCK AT 3367M.											12
13 0400		820	60	1900															13
14 0415		920	60	1900															14
15 0430		955	60	1900															15
16 0445		1025	60	1880															16
17 0500		1100	60	1870															17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452199

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #3	PELICAN #5		21 MAR 84	5 | 6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
21 MAR																			
0515		1175	60	1870															1
0520		1175	60	1870			.128	OPEN BYPASS ON CHOKE MANIFOLD TO BLEED DOWN											2
								SURFACE PRESSURE.											3
0524		0	60	1840			-	WELL SHUT IN AT SURFACE SAFETY VALVE.											4
								P.L. TOOL BLEED. START PULL OUT OF HOLE											5
0625		0	60	1840				P.L. TOOL AT SURFACE PUMP CLOSE SSLV.											6
0720		0	60	1800				PUMP OPEN SSLV.											7
0724		110	59	1800															8
0725		115	59	1800															9
0726		120	59	1800															10
0727		130	59	1800															11
0728		135	59	1800															12
0730		158	60	1850															13
0735		200	60	1800															14
0740		250	60	1800															15
0745		285	60	1790															16
0800		415	60	1790															17

452200

OTIS FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE	OF
DST-3	PELICAN #5		21 MAR 86	6	6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
21 MAR 0815		550	60	1790															1
2 0830		670	60	1780															2
3 0845		750	60	1760															3
4 0855		800	60	1=			BLEED OFF ANNULUS PRESSURE TO CLOSE LPR-N VALVE.												4
5							BLEED OFF SURFACE PRESSURE TO ZERO THROUGH BUBBLE HOSE												5
6 0910		0	60	3400			PRESSURE UP ANNULUS TO OPEN LPR-M2												6
7 0911		0	60	—			LPR-M2 OPEN. REVERSE OUT TEST STRING OVER SHALE SHAKERS ENDING DST #3.												7
8																			8
9																			9
10																			10
11																			11
12																			12
13																			13
14																			14
15																			15
16																			16
17																			17

OTIS

FIEL EADINGS
SINGLE STAGE UNIT

OEC-905-A

452201

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #4	PELICAN #5	1440 PSI, 3 PHASE SEPARATOR	25 MAR 86	1	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN		—	—

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
3142 – 3163.5M (FT.)	(FT.)	☐ PIPELINE ☒ FLARE	5.761 (INS)	0–100"	☐ UPSTREAM ☒ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1				THE TEST STRING AND TUBING CONVEYED										PERFORATING GUNS				WERE	1
2				RUN IN THE HOLE															2
25 MAR 0630		2200		THE TEST STRING WAS DISPLACED WITH 71 bbls OF DIESEL															3
0645		0		BLEED DOWN WELLHEAD PRESSURE TO THE OIL BURNERS															4
1045						OTIS DHSIT RUN IN THE HOLE														5
1220						DHSIT HUNG UP. POSSIBLE LANDING NIPPLE.													6
1440						START PULL DHSIT TO SURFACE.													7
1600		0	65	—		DHSIT IN LUBRICATOR													8
1607		100	65	1420		PRESSURE UP ON ANNULUS TO OPEN LPR-N TEST TOOL.													9
1608		200	65	1420		OPEN BUBBLE HOSE TO BLEED OFF PRESSURE													10
1609		0	65	1420		OPEN CHOKE BYPASS TO BLEED DOWN PRESSURE													11
1610		0	65	1420															12
1615		0	65	1470															13
1620		0	65	2500		INCREASE ANNULUS PRESSURE. PERFORATE THE ZONE													14
1621		0	65	2500															15
1622		0	65	2500		VACUUM OBSERVED AT BUBBLE HOSE													16
1623		0	65	2500		DIESEL FLOWING AT BUBBLE HOSE													17

Enclosure No. 8

OTIS

FIEL EADINGS
SINGLE STAGE UNIT

OEC-905-A

452202

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST 4	PELICAN 5		25 MAR 86	2

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
25 MAR 1624		0	65	2500															1
2 1626		6	65	2440															2
3 1627		8	65	2440			16	WELL OPENED TO OIL BURNERS ON 16/64" ADJUSTABLE CHOKE											3
4 1628		5	65	2440			16												4
5 1629		5	65	2440			16												5
6 1630		5	65	2440			16												6
7 1631		5	65	2440			16												7
8 1632		5	65	2440			16												8
9 1633		6	65	2440			14	WELL SHUT IN AT CHOKE MANIFOLD FOR INITIAL BUILD UP											9
10 1634		12	65	2440															10
11 1635		45	65	2440															11
12 1636		120	65	2440															12
13 1637		160	65	2440															13
14 1638		200	65	2440															14
15 1639		290	65	2440															15
16 1640		340	65	2440															16
17 1645		555	65	2440															17

OTIS

FIEL EADINGS
SINGLE STAGE UNIT

OEC-905-A

452203

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #4	PELICAN #5		25 MAR 56	3

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
25 MAR 1650		705	65	2440			—												1
2 1655		830	65	2440															2
3 1700		950	65	2440															3
4 1705		1030	65	2440															4
5 1710		1110	65	2440															5
6 1715		1150	64	2440															6
7 1720		1240	64	2440															7
8 1725		1295	64	2450															8
9 1730		1350	63	2450															9
10 1731		000	63	2450			16	WELL OPEN TO OIL BURNERS ON 16/64" ADJUSTABLE CHOKE											10
11 1732		800	63	2450			16												11
12 1733		60	63	2450			16												12
13 1734		8	63	2440			16												13
14 1735		3	63	2440			16												14
15 1736		0	63	2440			16												15
16 1737		0	63	2440			16												16
17 1738		0	63	2440			16												17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452204

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #4	PELICAN #3		25 MAR 96	4

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (PPM)	
25 MAR 1739		0	63	2440			16													1
2 1740		0	63	2440			16													2
3 1741		0	63	2440			16													3
4 1743		0	63	2440			16		ORIFICE PLATE RUN IN THE HOLE											4
5 1745		1	63	[illegible]			16													5
6 1750		1	63	2440			16													6
7 1755		1	63	2440			16													7
8 1800		1	62	2440			16													8
9 1815		1	62	2430			16													9
10 1830		1	60	2430			16													10
11 1840		1	60	2430			16	FLOW DIVERTED TO STOCK TANK.						0.0 BBL						11
12 1845		3	60	2440			16													12
13 1900		3	60	2440			16							[illegible]						13
14 1915		2	60	2440			16							0.5						14
15 1930		2	60	2440	3604	265	16							1.5						15
16 1945		1	60	2440	[illegible]	[illegible]	16							2.0						16
17 2000		1	60	2440	[illegible]	[illegible]	16							2.5						17

OTIS

FIEL. .ADINGS
SINGLE STAGE UNIT

OEC-905-A

452205

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST-4	PELICAN'S		25MAR86	5	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
25MAR 2015		1	60	2450	[illegible]	165	16							3.0					1
2030		1	60	2450	[illegible]	166	16							4.0					2
2045		0	60	2450	[illegible]	[illegible]	16							5.0					3
2100		0	60	2460	[illegible]	166	16							5.5					4
[illegible]		0	59	2460	[illegible]	166	16							6.0					5
2130		0	59	2460	[illegible]	166	16							6.5					6
2145		0	59	2460	[illegible]	[illegible]	16							7.0					7
2200		0	59	2460	[illegible]	[illegible]	16							7.75					8
2215		0	58	2460	[illegible]	[illegible]	16							8.50					9
2230		2	59	2470	[illegible]	[illegible]	16							9.0					10
2245		2	59	2470	[illegible]	[illegible]	16							9.5					11
2300		2	59	2480	[illegible]	[illegible]	16							10.0					12
2315		2	59	2480	[illegible]	[illegible]	16							10.5					13
2330		2	59	2480	[illegible]	[illegible]	16							11.0					14
2345		2	59	2480	[illegible]	[illegible]	16							11.5					15
26MAR 2400		2	59	2480	[illegible]	[illegible]	16							12.0					16
17.																			17

452206

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #4	PELICAN #5		26 MAR 96	6	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f / BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
26 MAR 0030		2	59	2440			16							15.0					1
0045		2	59	2440			16							16.0					2
0100		2	59	2440			16							17.0					3
0115		2	59	2450			16							18.5					4
0130		3	59	2460			16							20.5					5
0145		5	59	2460			16							22.0					6
0200		9	60	2470			16							24.0					7
0215		32	61	2480			16							27.0					8
0220		54	62	2500			16							29.0					9
0225		96	64	2410			16							31.0					10
0230		160	64	2410			16							33.0					11
0231		200	65	2410			24	CHANGE	CHOKE			TO		24/64" ADJUSTABLE					12
0234		250	66	2410			24												13
0235		260	67	2410			32	CHANGE	CHOKE			TO		32/64" ADJUSTABLE					14
0236		300	68	2410			32	FLOW	DIVERTED			TO		OIL BURNERS					15
0237		290	68	2410			32		BAB	AT	SURFACE								16
17																			17

452207

OTIS FIELD READINGS
SINGLE STAGE UNIT
OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE OF
DST #4	PELICAN #5		26 MAY 76	7

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W	#1 TANK OR METER READING	SALINITY
24 HOUR CLOCK	(HOURS)	(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN_{H_2O})	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	@ 60°F °API	BSW (%)	#2 TANK OR METER READING (INS OR BBL)	(%)
1																			1
0339		320	70	2400			32												
2																			2
0240		340	70	2460			32												
3																			3
0245		350	70	2460			32	MUD TO SURFACE											
4																			4
0255		340	70	2460			32	FLOW DIVERTED TO GAS FLARE											
5																			5
0300		250	71	2500			32												
6																			6
0305		180	70	2500			32												
7																			7
0310		150	70	2510			32												
8																			8
0315		160	70	2530			32												
9																			9
0320		240	70	2530			32												
10																			10
0325		350	75	2530			32												
11																			11
0327		310	77	2530			24	CHANGE CHOKE TO 24/64" ADJUSTABLE											
12																			12
0328		310	77	2530			24												
13																			13
0329		300	76	2530			24												
14																			14
0330		265	75	2530			24												
15																			15
0335		235	73	2530			24												
16																			16
0340		213	71	2530			24												
17																			17

452208

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE OF
DST 4	PELICAN 5		26 MAY 96	8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1 0346		195	68	2410	1		16		CHANGE		CHOKE		TO	16/64"		ADJUSTABLE			1
2 0350		197	68	2420			16												2
3 0400		167	65	2420			16												3
4 0405		153	65	2420			16												4
5 0410		147	64	2420			16												5
6 0415		140	64	2420			16												6
7 0420		130	63	2420			16												7
8 0425		128	63	2420			16												8
9 0430		123	63	2420			16												9
10 0435		121	62	2420			16												10
11 0440		122	62	2420			16		CHANGE		CHOKE		TO	16/64"	POSITIVE				11
12 0442		130	62	2410			16												12
13 0445		134	62	2410			16												13
14 0449		137	62	2410			16												14
15 0455		140	62	2410			16												15
16 0450		150	62	2410			16												16
17																			17

452209

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST 4	PELICAN "S"		26 MAR 85	9	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) CO_2 ~~H_2S~~	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
26 MAR 0500		162	62	2400			16												1
2 0505		164	62	2400			16												2
3 0515		164	62	2400			16												3
4 0530		172	61	2410			16												4
5 0545		192	61	2410			16												5
6 0600		218	62	2410			16												6
7 0615		248	62	2410			16		WET	GAS									7
8 0630		278	62	2410			16		TRACES	OF	MUD		WITH THE GAS						8
9 0645		299	63	2420			16		BS&W	0.5%	SOLID,		99.5%	MUDDY WATER					9
10 0700		300	63	2420			16												10
11 0715		299	63	2420			16		BS&W	0.4%	SOLID		99.6%	MUDDY WATER					11
12 0730		304	63	2420			16												12
13 0745		307	63	2420			16		1.00	49	61	65	0.83 / 5.5						13
14 0800		290	63	2420			16		1.00	47	62	66	0.83 / 6.0						14
15 0815		280	63	2420			16		1.00	46	62	67	0.83 / 5.7		NO MORE FLUID				15
16 0830		272	63	2410			16		1.00	46	61	69	5.7						16
17 0845		252	63	2410			16		1.00	50	57	71	0.83 / 5.1						17

452210

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
				10

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1		245	64	2410			16		1.0	53	52	72	0.83						1
0900													5.1						
2		245	65	2410			16		1.0	53	45	72	0.83						2
0915													5.0						
3		250	65	2410			16		1.0	53	44	72	0.83						3
0930													5.0						
4		256	67	2410			16		1.0	50	46	72	0.83						4
0945													5.0						
5		250	68	2410			16		1.0	48	47	72	0.83						5
1000													5.0						
6		250	68	2410			16		1.0	47	49	73	0.83						6
1015													5.0						
7		250	67	2410			16		1.0	47	49	73	0.83						7
1030													5.0						
8		250	67	2410			16		1.0	46	50	74	0.83						8
1045													5.0						
9		250	66	2410			16		1.0	47	50	75	0.83						9
1100													5.0						
10		250	66	2410			16		1.0	47	50	77	0.83						10
1115													5.0						
11		250	65	2410			16		1.0	49	50	77	0.83						11
1130													5.5						
12		250	65	2410			16		1.0	50	47	77	0.83						12
1145													5.5						
13		248	65	2410			16		1.0	50	46	77	0.83						13
1200													5.5						
14		248	65	2410			16		1.0	50	45	77	0.83						14
1215													5.5						
15		298	64	2410			16		1.0	50	46	77	0.83						15
1230													5.0						
16		255	64	2410			16		1.0	50	46	77	0.83						16
1245													5.0						
17		248	63	2410			16		1.0	50	47	77	0.83						17
1300													5.0						

452211

OTIS

( ) READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST 4	PELICAN 5		26 MAR 82	11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1 / 1315		214	64	2410			16		1.0	50	46	75	0.83 / 5.0						1
2 / 1330		225	64	2410			16		1.0	50	45	74	0.83 / 5.0						2
3 / 1345		260	64	2410			16		1.0	48	43	73	0.83 / 5.0						3
4 / 1400		265	64	2420			16		1.0	44	47	72	0.83 / 5.0						4
5 / 1415		268	65	2420			16		1.0	47	46	71	0.83 / 5.0						5
6 / 1430		265	64	2430			16		1.0	44	49	70	0.83 / 5.0						6
7 / 1445		270	65	2430			16		1.0	45	51	70	0.83 / 5.0						7
8 / 1500		260	64	2430			16		1.0	48	53	70	0.83 / 5.0						8
9 / 1515		225	63	2430			16		BYPASS SEPARATOR. TOTAL LIQUIDS PRODUCED FROM										9
10									SEPARATOR 3 bbls.										10
11 / 1518		325	63	0			-		BLEED OFF ANNULUS. TO CLOSE LPR-N TEST TOOL										11
12 / 1519		310	63	0			-		BLEED OF TEST STRING TO GAS FLARE										12
13 / 1520		300	63	0															13
14 / 1521		275	63	0															14
15 / 1522		260	63	0															15
16 / 1523		220	63	0															16
17 / 1524		190	63	0															17

OTIS

.D READINGS
SINGLE STAGE UNIT

OEC-905-A

452212

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE OF
DST #4	PELICAN #5		26 MAR 86	12

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)	
26 MAR 1525		150	63																	1
2 1530		75	64																	2
3 1544		99	64				FLOW		SHUT	IN	AT		CHOKE MANIFOLD							3
4																				4
5																				5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12
13																				13
14																				14
15																				15
16																				16
17																				17

452213

GAS FLOW RATE CALCULATIONS

OTIS

OEC—862-B

TEST NUMBER	RATE NUMBER	AR	WELL NAME OR NUMBER	DATE (DAY, YR)	PAGE OF
DST #4	1	BASS STRAIT	PELICAN #5	26 MAR 80	1

CUSTOMER	STANDARD CONDITIONS	ATM. PRESS	P_c =	T_c =	MEAS. / EST.	GAS SPECIFIC GRAVITY-G
AMOCO AUSTRALIA	[X] 14.73 psi 60°F [ ] OTHER				[ ] [ ]	0.83

METER TYPE	METER RUN SIZE (INCHES)	FLOW RECORDER TYPE	h_w RANGE (INCHES WATER)	STATIC PRESS RANGE (psi)	F_u TABLE PREV. PAGE	$F_g = \sqrt{1/G}$	$C_1 = F_u \times F_g$
DANIELS SENIOR	5.761	BARTON 202A	0-100	1500	24	1.09764	26.34342

DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	STATIC PRESSURE P_f (psia)	DIFFERENTIAL PRESSURE h_w (INCHES WATER)	DOWN STREAM GAS TEMP. (°F)	$\sqrt{h_w P_f}$	ORIFICE SIZE d (INCHES)	$C_2 = F_b \times F_{tf} \times F_{pv} \times Y_2$				C_2	C ($C = C_1 \times C_2$)	CORRECTED GAS FLOW RATE $Q_g = C\sqrt{h_w P_f}$ (MSCF/D)
							F_b	F_{tf}	F_{pv}	Y_2			
1 0745		63.73	61	65	62.35	1.00	201.9	0.9952	1.0089	1.0064	204.0	5374	335.11
2 0800		61.73	62	66	61.86	1.00	201.9	0.9942	1.0086	1.0067	203.82	5369	332.18
3 0815		60.73	62	67	61.36	1.00	201.9	0.9933	1.0084	1.0068	203.62	5364	329.14
4 0830		60.73	61	69	60.86	1.00	201.9	0.9914	1.0083	1.0067	203.19	5352	325.79
5 0845		64.73	57	71	60.74	1.00	201.9	0.9895	1.0087	1.0058	202.73	5340	324.39
6 0900		67.73	52	72	59.35	1.00	201.9	0.9886	1.0091	1.0051	202.46	5333	316.5
7 0915		67.73	45	72	55.21	1.00	201.9	0.9886	1.0091	1.0044	202.32	5329	294.23
8 0930		67.73	44	72	54.59	1.00	201.9	0.9886	1.0091	1.0043	202.29	5329	290.92
9 0945		64.73	46	72	54.57	1.00	201.9	0.9886	1.0087	1.0047	202.29	5329	290.79
10 1000		62.73	47	72	54.30	1.00	201.9	0.9886	1.0084	1.0050	202.29	5329	289.36
11 1015		61.73	49	73	54.99	1.00	201.9	0.9877	1.0082	1.0053	202.12	5324	292.84
12 1030		61.73	49	73	54.99	1.00	201.9	0.9877	1.0082	1.0053	202.12	5324	292.84
13 1045		60.73	50	74	55.10	1.00	201.9	0.9868	1.0080	1.0055	201.94	5319	293.14
14 1100		61.73	50	75	55.55	1.00	201.9	0.9858	1.0081	1.0054	201.75	5315	295.27
15 1115		61.73	50	77	55.55	1.00	201.9	0.9848	1.0080	1.0054	201.36	5304	294.69
16 1130		63.73	50	77	56.45	1.00	201.9	0.9840	1.0083	1.0052	201.37	5305	299.45
17 1145		64.73	47	77	55.16	1.00	201.9	0.9840	1.0084	1.0048	201.32	5303	292.52
18 1200		64.73	46	77	54.56	1.00	201.9	0.9840	1.0087	1.0047	201.3	5303	289.37

452214

OTIS

GAS FLOW RATE CALCULATIONS

OEC—862-B

TEST NUMBER	RATE NUMBER	AREA	WELL NAME OR NUMBER	DATE (DAY, MO, YR)	PAGE OF
DST 4	1		PELICANS	26 MAR 86	2 | 2

CUSTOMER	STANDARD CONDITIONS	ATM. PRESS	P_c =	T_c =	MEAS. ☐ EST. ☐	GAS SPECIFIC GRAVITY-G
	☐ 14.73 psi 60°F ☐ OTHER					

METER TYPE	METER RUN SIZE (INCHES)	FLOW RECORDER TYPE	h_w RANGE (INCHES WATER)	STATIC PRESS RANGE (psi)	F_u TABLE PREV. PAGE	$F_g = \sqrt{1/G}$	$C_1 = F_u \times F_g$

	DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	STATIC PRESSURE P_f (psia)	DIFFERENTIAL PRESSURE h_w (INCHES WATER)	DOWN STREAM GAS TEMP. (°F)	$\sqrt{h_w P_f}$	ORIFICE SIZE d (INCHES)	$C_2 = F_b \times F_{tf} \times F_{pv} \times Y_2$				C_2	C ($C = C_1 \times C_2$)	CORRECTED GAS FLOW RATE $Q_g = C\sqrt{h_w P_f}$ (MSCF/D)	
								F_b	F_{tf}	F_{pv}	Y_2				
1	1215		64.73	45	77	53.97	1.0	201.9	0.9840	1.0084	1.0046	201.28	5302	286.17	1
2	1230		64.73	46	77	54.56	1.0	201.9	0.9840	1.0084	1.0047	201.30	5303	289.37	2
3	1245		64.73	46	77	54.56	1.0	201.9	0.9840	1.0084	1.0047	201.30	5303	289.37	3
4	1300		64.73	47	77	55.15	1.0	201.9	0.9840	1.0084	1.0048	201.32	5303	292.52	4
5	1315		64.73	46	75	54.56	1.0	201.9	0.9858	1.0085	1.0047	201.69	5313	289.93	5
6	1330		64.73	45	74	53.97	1.0	201.9	0.9868	1.0086	1.0046	201.87	5318	287.02	6
7	1345		62.73	43	73	51.94	1.0	201.9	0.9877	1.0084	1.0045	202.01	5321	276.38	7
8	1400		58.73	47	72	52.54	1.0	201.9	0.9886	1.0079	1.0053	202.25	5328	279.92	8
9	1415		61.73	46	71	53.29	1.0	201.9	0.9895	1.0083	1.0049	202.46	5333	284.21	9
10	1430		58.73	49	70	53.64	1.0	201.9	0.9905	1.0080	1.0055	202.70	5339	286.45	10
11	1445		54.73	51	70	55.19	1.0	201.9	0.9905	1.0081	1.0057	202.75	5341	294.79	11
12	1500		62.73	53	70	57.66	1.0	201.9	0.9905	1.0086	1.0056	203.03	5349	308.37	12
13						END OF		RATE 1.							13
14															14
15															15
16															16
17															17
18															18

452215

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY MO. YR.)	PAGE OF
DST #4	PELICAN #5		26 MAR 86	12 / 15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f / BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
25 MAR 1525		150	63				—												1
2 1530		75	64																2
3 1544		99	64				FLOW		SHUT	IN	AT		CHOKE MANIFOLD						3
4 2030		115	64																4
26 MAR 0545		120	57																5
6 0618		120	57	1400				PRESSURE	UP	ON	ANNULUS	TO	OPEN	LPR-N	TEST	TOOL			6
7 0619		120	57	1400				TO	START	RATE	#2.								7
8 0620		120	57	1400															8
9 0621		190	57	1400															9
10 0622		200	57	1400															10
11 0623		200	57	1400															11
12 0624		210	57	1420															12
13 0625		220	57	1420															13
14 0626		225	57	1420															14
15 0627		230	57	1420															15
16 0628		235	57	1420															16
17 0629		240	57	1420															17

452216

OTIS

LD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #4	PELICAN #5		27 MAR 86	13 | 15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
27 MAR 0630		240	57	1450			16	WELL OPENED TO FLARE ON 16/64" ADJUSTABLE CHOKE.						16/64"					1
0631		215	57	1450			16												2
0632		210	57	1450			16												3
0633		180	58	1450			16												4
0634		160	58	1460			16												5
0635		140	58	1460			16												6
0636		110	58	1460			16												7
0637		98	58	1460			16												8
0638		60	58	1470			16												9
0639		40	58	1470			16												10
0640		180	58	1470			24	CHANGE CHOKE TO 24/64" ADJUSTABLE.											11
0641		250	60	1470			24												12
0642		285	60	1470			24												13
0643		280	62	1480			24												14
0644		280	62	1480			24												15
0645		273	62	1480			24												16
0650		260	62	1480			24												17

452217

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #4	PELICAN #5		27 MAR 86	14 | 15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	Wf / BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)	
1 27 MAR 0655		150	62	1480			108	CHANGE CHOKE TO 10/64" ADJUSTABLE												1
2 0700		74	61	1480			128	CHANGE CHOKE TO 12/64" POSITIVE												2
3 0705		55	60	1480			128	FLOW DIVERTED TO THE SEPARATOR.												3
4 0710		45	60	1490			128													4
5 0715		40	60	1500			128													5
6 0720		38	60	1500			128		1.50	33	36	63	0.83 / 5.0							6
7 0730		35	60	1500			128		1.50	30	35	64	5.0							7
8 0740		35	60	1500			128		1.50	30	32	63	5.5							8
9 0750		35	60	1500			128		1.50	30	32	63	5.8							9
10 0800		35	60	1520			128		1.50	30	31	64	6.0							10
11 0810		35	60	1520			128		1.50	30	30	64	5.5							11
12 0820		35	60	1520			128		1.50	30	29	64	5.5							12
13 0830		40	60	1530			128		1.50	32	28	64	5.5							13
14 0840		37	60	1530			128		1.50	32	28	65	5.5							14
15 0850		37	60	1530			128		1.50	31	28	64	5.5							15
16 0900		35	60	1530			128		1.50	31	28	64	5.5	BYPASS SEPARATOR.						16
17 0908		—	60	—			128	BLEED OFF ANNULS PRESSURE TO CLOSE LPR-N VALVE												17

452218

OTIS

LD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #4	PELICAN #5		27 MAR 86	15	15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

	TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
	DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	Wtr / BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1	27 MAR 0918		0	60	2800			128	PRESSURE UP ANNULUS TO OPEN LPR-N2 VALVE											1
2									START REVERSE CIRCULATION OF TEST STRING											2
3									TO BURNERS/FLARE: ENDING DST #4.											3
4																				4
5																				5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12
13																				13
14																				14
15																				15
16																				16
17																				17

S.I.S # 54
452219

SURFACE SAMPLING DATA

OTIS
OEC—877-B

TEST NUMBER	RATE NUMBER	AREA	DATE (DAY MO YR.)	PAGE OF
DST # 4	2	BASS STRAITS	07/3/86	1 / 1

CUSTOMER	WELL NAME OR NUMBER	FIELD	FORMATION
AMOCO AUSTRALIA	PELICAN # 1	PELICAN	

ELEVATION (FEET)	STANDARD CONDITIONS	TIME WELL FLOWING OR SHUT IN BEFORE SAMPLING	INTERVAL TESTED (FEET)
	☑ 14.73 psi 60°F ☐ OTHER PRESS. TEMP.	WELL FLOWING	3142 - 3163.5M

SAMPLE # 1

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal.)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
0800	T-77734	ONE GAL	EVACUATED	—	GAS	SEPARATOR	30	64	14.73	58	10

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ FT	BOTTOM HOLE TEMP. (°F) @ FT	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_f (c)	OIL W_f (c)	GAS GRAVITY (AIR=1)	GAS F_{PV}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☑ SEP. COND. (BPD) (MMCF/D)	☐ GOR ☐ OGR ☐ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)
35	60	128	30	64	—	—	—	—	—	—	—	—	0.83	1.0062	450.82	—	—

SAMPLE # 2

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal.)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
0810	W3-1647	ONE GAL	EVACUATED	—	GAS	SEPARATOR	30	64	14.73	58	10

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ FT	BOTTOM HOLE TEMP. (°F) @ FT	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_f (c)	OIL W_f (c)	GAS GRAVITY (AIR=1)	GAS F_{PV}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☑ SEP. COND. (BPD) (MMCF/D)	☐ GOR ☐ OGR ☐ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)
35	60	128	30	64	—	—	—	—	—	—	—	—	0.83	1.0062	435.91	—	—

SAMPLE # —

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal.)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ FT	BOTTOM HOLE TEMP. (°F) @ FT	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_f (c)	OIL W_f (c)	GAS GRAVITY (AIR=1)	GAS F_{PV}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☐ SEP. COND. (BPD) (MMCF/D)	☐ GOR ☐ OGR ☐ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)

(a) CONTAINER MAY BE INITIALLY FILLED WITH WATER OR MERCURY (H_g) OR BE EVACUATED (VACUUM).
(b) VOLUME OF WATER OR MERCURY LEFT WITH WELL EFFLUENT SAMPLE.

SAMPLED BY

452220

OTIS

OEC—862-B

.S FLOW RATE CALCULATIONS

TEST NUMBER	RATE NUMBER	AREA	WELL NAME OR NUMBER	DATE (DAY, MO, YR)	PAGE	OF
DST #4	2	BASS STRAITS	PELICAN # 5	27/3/86	1	1

CUSTOMER	STANDARD CONDITIONS	ATM. PRESS	P_c =	T_c =	GAS SPECIFIC GRAVITY-G
AMOCO AUSTRALIA	☐ 14.73 psi 60°F ☐ OTHER			MEAS. ☐ EST. ☐	0.83

METER TYPE	METER RUNSIZE (INCHES)	FLOW RECORDER TYPE	h_w RANGE (INCHES WATER)	STATIC PRESS RANGE (psi)	F_u TABLE PREV. PAGE	$F_g = \sqrt{1/G}$	$C_1 = F_u \times F_g$
DANIEL SENIOR	5.761	BARTON 202 A	0-100	0-1500	24	1.09764	26.34342

DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	STATIC PRESSURE P_f (psia)	DIFFERENTIAL PRESSURE h_w (INCHES WATER)	DOWN STREAM GAS TEMP. (°F)	$\sqrt{h_w P_f}$	ORIFICE SIZE d (INCHES)	$C_2 = F_b \times F_{tf} \times F_{pv} \times Y_2$				C_2	C ($C = C_1 \times C_2$)	CORRECTED GAS FLOW RATE $Q_g = C\sqrt{h_w P_f}$ (MSCF/D)
							F_b	F_{tf}	F_{pv}	Y_2			
1 0720		47.73	36	63	41.45	1.5	456.4	0.9971	1.0067	1.0050	460.42	12129	502.77
2 0730		44.73	35	64	39.57	1.5	456.4	0.9961	1.0062	1.0052	459.85	12114	479.31
3 0740		44.73	32	63	37.83	1.5	456.4	0.9971	1.0063	1.0047	460.10	12120	458.56
4 0750		44.73	32	63	37.83	1.5	456.4	0.9971	1.0063	1.0047	460.10	12120	458.56
5 0800		44.73	31	64	37.24	1.5	456.4	0.9961	1.0062	1.0046	459.58	12106	450.82
6 0810		44.73	30	64	36.63	1.5	456.4	0.9961	1.0062	1.0044	459.51	12105	443.43
7 0820		44.73	29	64	36.02	1.5	456.4	0.9961	1.0062	1.0043	459.44	12103	435.91
8 0830		46.73	28	64	36.17	1.5	456.4	0.9961	1.0065	1.0039	459.42	12102	437.78
9 0841		46.73	28	65	36.17	1.5	456.4	0.9952	1.0065	1.0039	458.97	12090	437.35
10 0850		45.73	28	64	35.78	1.5	456.4	0.9961	1.0064	1.0040	459.39	12102	433.05
11 0900		45.73	28	64	35.78	1.5	456.4	0.9961	1.0064	1.0040	459.39	12102	433.05
12													
13													
14													
15													
16													
17													
18													

452221

Enclosure No. 9

OTIS ENGINEERING CORPORATION

BOTTOM HOLE PRESSURE

REPORTS

DST #4

452222

Sale Office:
Otis Engineering Corporation
324 Raglan St., P.O. Box 324,
Sale, Vic., 3850, Australia
Tel.: (051) 44 3255
Telex: AA55240 OTISALE

Perth Office:
Otis Engineering Corporation
21 Alloa St.,
Maddington, W.A., 6109, Australia
Tel.: (09) 459 8045
Telex: AA93527 HALPR

Adelaide Office:
Otis Engineering Corporation
44 Churchill Rd.,
Dry Creek, S.A., 5094, Australia
Tel.: (08) 260 6057
Telex: AA87473 HALADL

LT-ML-172-86

9th April, 1986

Amoco Australia Ltd.,
10 Lampton Avenue,
DERWENT PARK, TAS., 7009.

Dear Sir,

Please find enclosed our report on Pelican No. 5 (DST No. 4) on the Diamond M. Epoch, dated 25th March 1986.

If there are any queries, please do not hesitate to call Mr. Lindsay Taylor of Otis - Sale.

Yours faithfully,

David Teague

DAVID TEAGUE,
OTIS ENGINEERING CORPORATION,
AUSTRALIA, NEW ZEALAND & PAPUA NEW GUINEA.

452223

OTIS

SEQUENCE OF OPERATIONS

OEC—872-B

TEST NUMBER	RIG NAME	PAGE OF
DST # 4	DIAMOND M. EPOCH	1 | 3

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO AUSTRALIA	PELICAN NO. 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR

	DATE	TIME	OPERATIONS
1	25/3/86	0700	RIG UP E.L.S. EQUIPMENT.
2		0800	S.R.O. TOOLS IN LUBRICATOR.
3		1012	PRESSURE TEST LUBRICATOR.
4		1041	RUN TOOLS IN HOLE.
5		1120	1ST GRAD. STOP @ 4000'.
6		1125	RUN TOOLS IN HOLE.
7		1140	2ND GRAD. STOP @ 6000'.
8		1145	RUN TOOLS IN HOLE.
9		1203	3RD GRAD. STOP @ 8000'.
10		1208	RUN TOOLS IN HOLE.
11		1219	TOOLS AT BOTTOM, ATTEPTING TO STAB INTO S.R.O. NIPPLE WITH THE DOWNHOLE SHUT
12			IN TOOL.
13		1331	UNSUCCESSFUL IN SETTING S.R.O. TOOLS AND DOWNHOLE SHUT IN TOOL. PULL TOOLS OUT
14			OF HOLE.
15		1600	TOOLS IN LUBRICATOR. PREPARING TO PERFORATE.
16		1607	PERFORATIONS GUNS FIRED. WELL OPENED TO FLOW ON 16/64" CHOKE.
17		1632	WELL SHUT IN AT SURFACE, CHOKE MANIFOLD.
18		1731	WELL OPENED TO FLOW ON 16/64" CHOKE.
19			

452224.

OTIS

SEQUENCE OF OPERATIONS

OEC—872-B

TEST NUMBER	RIG NAME	PAGE OF
DST # 4	DIAMOND M. EPOCH	2 | 3

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO AUSTRALIA	PELICAN NO. 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR

	DATE	TIME	OPERATIONS
1	25/3/86	1745	RUN TOOLS IN HOLE USING 'CCL' LOG TO COUNT COLLARS.
2		1924	TOOLS ON BOTTOM @ 9345'.
3	26/3/86	0231	CHOKE SIZE 24/64".
4		0235	CHOKE SIZE 32/64".
5		0240	GAS TO SURFACE.
6		0327	CHOKE SIZE 24/64".
7		0346	CHOKE SIZE 16/64".
8		1515	WELL SHUT IN USING 'LPR' VALVE DOWNHOLE.
9		1546	PULL TOOLS OUT OF HOLE.
10		1551	1ST GRAD. STOP @ 9200'.
11		1556	RUN TOOLS IN HOLE.
12		1559	2ND GRAD. STOP @ 9300'.
13		1605	PULL TOOLS OUT OF HOLE.
14		1606	3RD GRAD. STOP @ 9200'.
15		1609	PULL TOOLS OUT OF HOLE.
16		1613	4TH GRAD. STOP @ 9100'.
17		1618	PULL TOOLS OUT HOLE.
18		1620	5TH GRAD. STOP @ 9000'.
19		1625	PULL TOOLS OUT OF HOLE.

45225

OTIS

SEQUENCE OF OPERATIONS

OEC—872-B

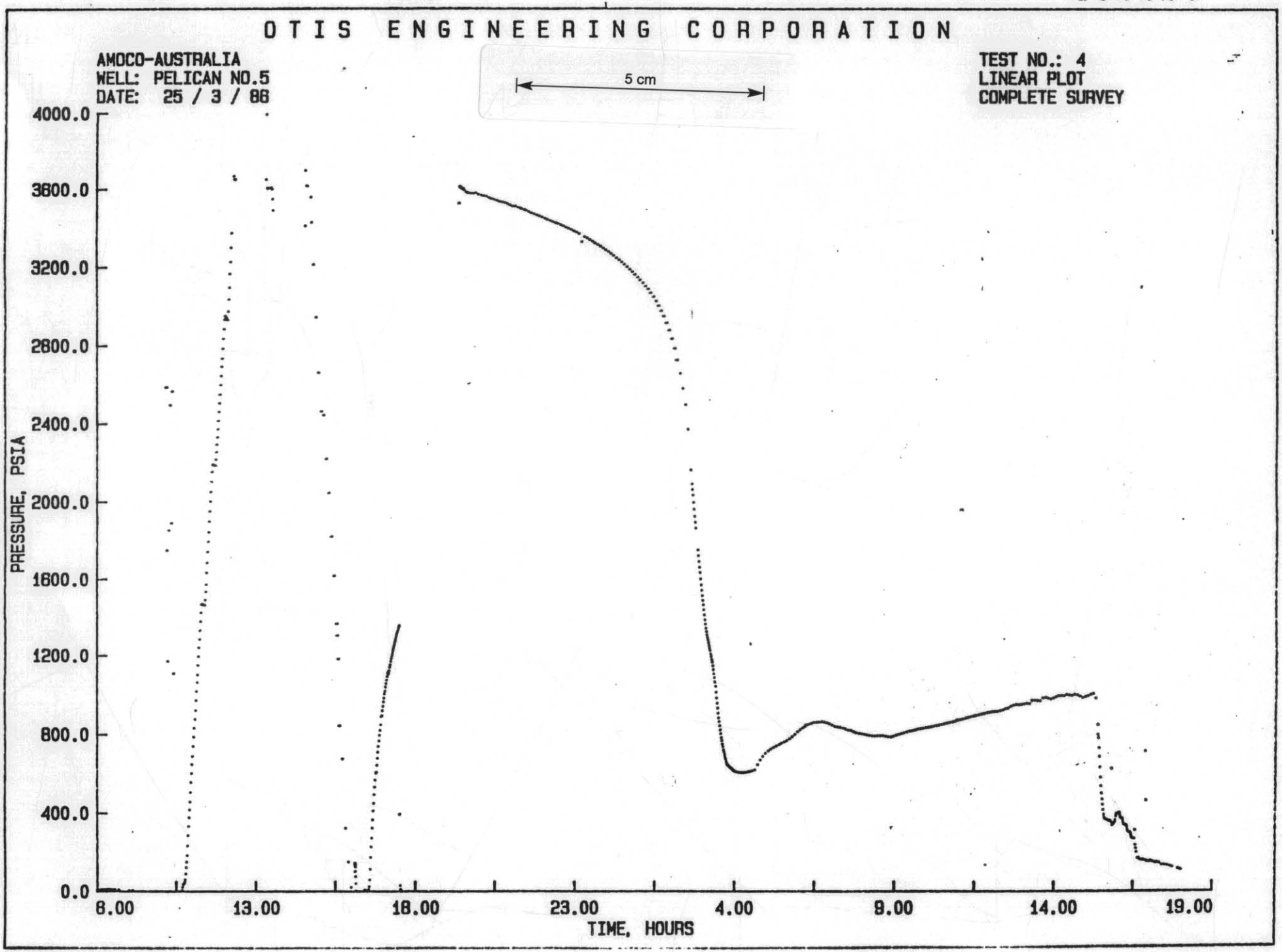
TEST NUMBER	RIG NAME	PAGE	OF
DST # 4	DIAMOND M. EPOCH	3	3

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO AUSTRALIA	PELICAN NO. 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR

	DATE	TIME	OPERATIONS
1	26/3/86	1628	6TH GRAD. STOP @ 8900'.
2		1633	PULL TOOLS OUT OF HOLE.
3		1639	7TH GRAD. STOP @ 8400'.
4		1641	PULL TOOLS OUT OF HOLE.
5		1646	8TH GRAD. STOP @ 8000'.
6		1648	PULL TOOLS OUT OF HOLE.
7		1657	9TH GRAD. STOP @ 7000'.
8		1702	PULL TOOLS OUT OF HOLE.
9		1713	10TH GRAD. STOP @ 6000'.
10		1716	PULL TOOLS OUT OF HOLE.
11		1759	TOOLS IN LUBRICATOR.
12		1801	END OF TEST.
13			
14			
15			
16			
17			
18			
19			

452226

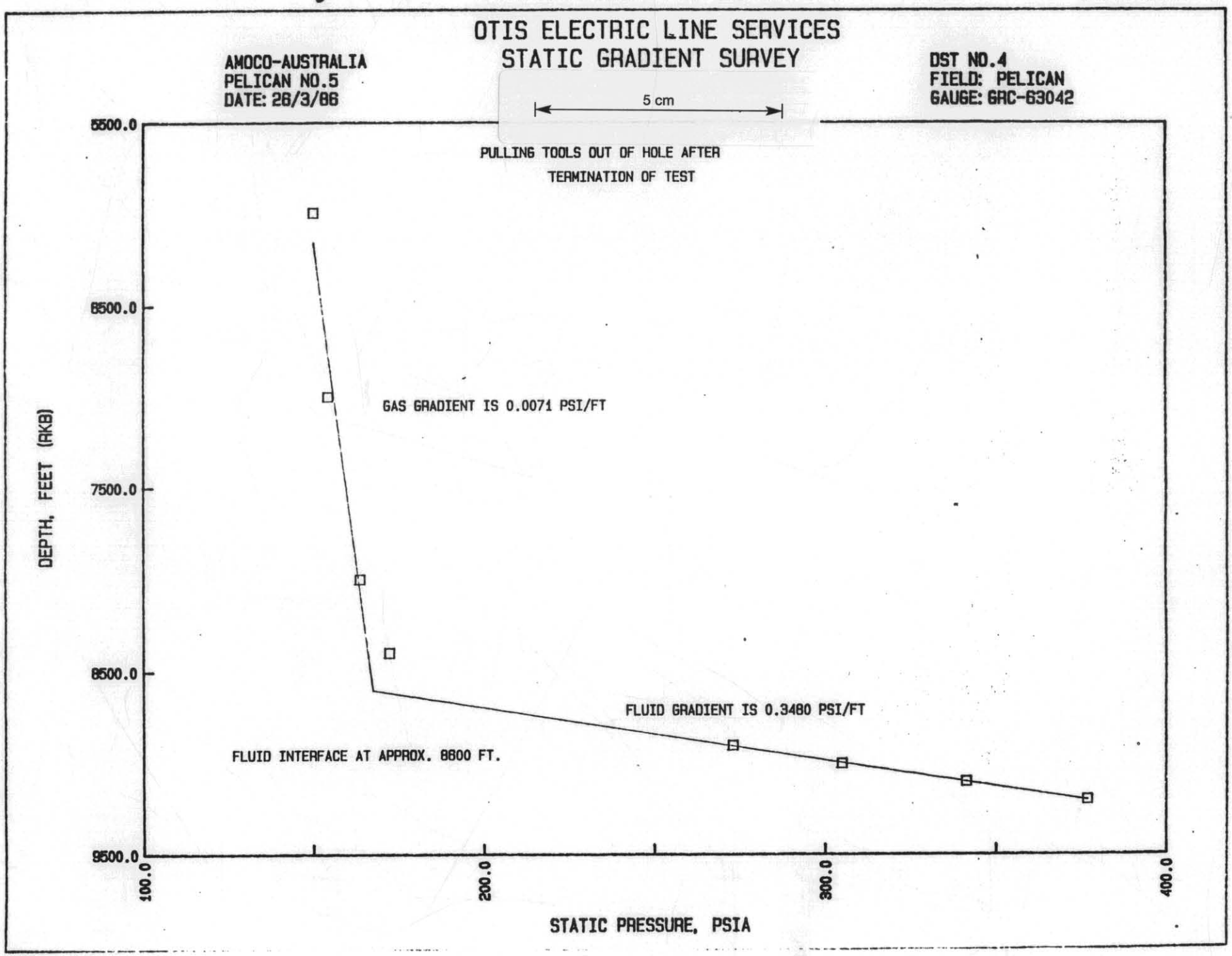

OTIS ENGINEERING CORPORATION
AMOCO-AUSTRALIA
WELL: PELICAN NO.5
DATE: 25 / 3 / 86
5 cm
TEST NO.: 4
LINEAR PLOT
COMPLETE SURVEY
PRESSURE, PSIA
4000.0
3600.0
3200.0
2800.0
2400.0
2000.0
1600.0
1200.0
800.0
400.0
0.0
8.00
13.00
18.00
23.00
4.00
9.00
14.00
19.00
TIME, HOURS

452227

OTIS ELECTRIC LINE SERVICES
STATIC GRADIENT SURVEY

AMOCO-AUSTRALIA
PELICAN NO.5
DATE: 26/3/86

DST NO.4
FIELD: PELICAN
GAUGE: GRC-63042

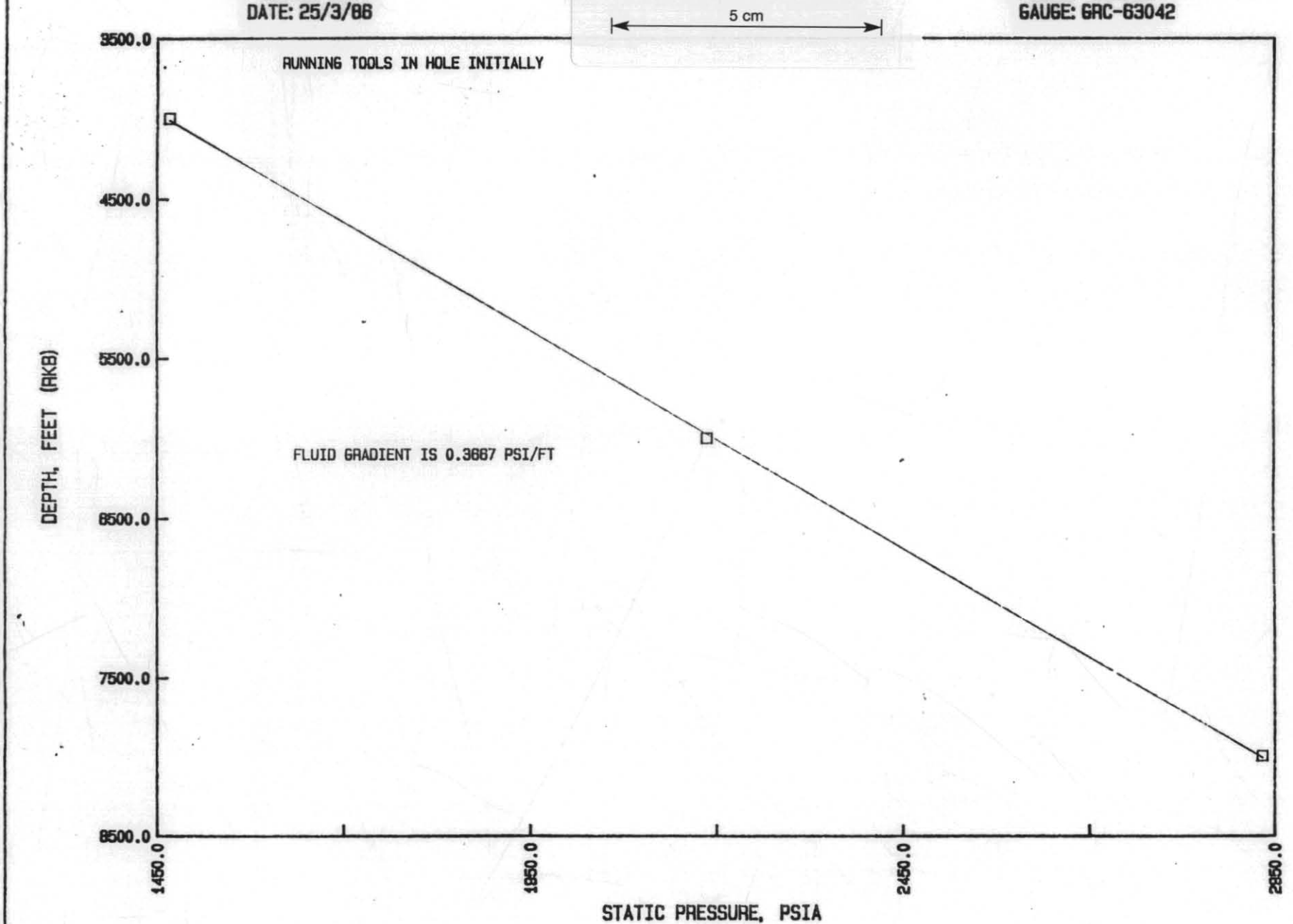


452228

OTIS ELECTRIC LINE SERVICES
STATIC GRADIENT SURVEY

AMOCO-AUSTRALIA
PELICAN NO.5
DATE: 25/3/86

DST NO.4
FIELD: PELICAN
GAUGE: GRC-63042



OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452229

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	1	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	0800:00	9.62	9.62	64.67				0		TOOLS IN LUBRICATOR	1
2	25	0801:00	9.36	-.26	64.55				0			2
3	25	0802:00	9.46	.10	64.44				0			3
4	25	0803:00	9.49	.03	64.38				0			4
5	25	0804:00	9.63	.14	64.32				0			5
6	25	0805:00	9.58	-.05	64.27				0			6
7	25	0806:00	9.75	.17	64.23				0			7
8	25	0807:00	9.75	0.00	64.19				0			8
9	25	0808:00	9.80	.05	64.17				0			9
10	25	0809:00	9.65	-.15	64.14				0			10
11	25	0810:00	9.87	.22	64.12				0			11
12	25	0811:00	9.68	-.19	64.10				0			12
13	25	0812:00	9.77	.09	64.08				0			13
14	25	0813:00	9.87	.10	64.10				0			14
15	25	0814:00	10.08	.21	64.52				0			15
16	25	0818:00	12.85	2.77	66.06				0			16
17	25	0820:00	11.67	-1.18	65.68				0			17
18	25	0821:00	10.87	-.80	65.48				0			18
19	25	0822:00	10.49	-.38	65.29				0			19
20	25	0823:00	10.60	.11	65.13				0			20
21	25	0824:00	11.23	.63	65.17				0			21
22	25	0825:00	11.00	-.23	65.20				0			22
23	25	0828:00	10.49	-.51	65.21				0			23
24	25	0829:00	10.56	.07	65.24				0			24
25	25	0833:00	10.53	-.03	65.24				0			25
26	25	0834:00	9.98	-.55	65.28				0			26
27	25	0841:00	10.07	.09	65.28				0			27
28	25	0901:00	4.98	-5.09	69.89				0			28
29	25	0907:00	4.98	0.00	71.42				0			29
30	25	0908:00	5.19	.21	71.42				0			30
31	25	1012:00	2587.58	2582.39	71.42				0		PRESSURE TEST LUBRICATOR	31
32	25	1013:00	2587.58	0.00	69.45				0			32
33	25	1014:00	1751.04	-836.54	68.93				0			33
34	25	1015:00	1170.01	-581.03	68.67				0			34
35	25	1017:00	1855.07	685.06	68.25				0			35
36	25	1018:00	4819.57	2964.50	68.64				0			36
37	25	1019:00	4736.87	-82.70	68.68				0			37
38	25	1020:00	2495.92	.	70.30				0			38

Computer-Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452230

TEST#	RUN#	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	2	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1022:00	1891.29	-604.63	68.19				0			1
2	25	1024:00	2567.21	675.92	68.07				0			2
3	25	1026:00	1108.02	.	67.56				0			3
4	25	1028:00	4954.97	3846.95	67.91				0			4
5	25	1030:00	4621.53	-333.44	68.07				0			5
6	25	1032:00	5099.14	477.61	68.00				0			6
7	25	1041:00	4.96	.	66.71				0		RUN TOOLS IN HOLE	7
8	25	1042:00	22.20	17.24	65.93				0			8
9	25	1043:00	37.48	15.28	64.91				0			9
10	25	1044:00	39.53	2.05	64.37				0			10
11	25	1045:00	41.42	1.89	64.23				0			11
12	25	1046:00	49.77	8.35	64.06				0			12
13	25	1047:00	61.81	12.04	64.03				0			13
14	25	1048:00	91.87	30.06	64.31				0			14
15	25	1049:00	123.09	31.22	65.68				0			15
16	25	1050:00	151.64	28.55	68.63				0			16
17	25	1051:00	185.40	33.76	75.53				0			17
18	25	1052:00	233.93	48.53	80.49				0			18
19	25	1053:00	287.05	53.12	85.18				0			19
20	25	1054:00	333.04	45.99	89.62				0			20
21	25	1055:00	378.50	45.46	92.88				0			21
22	25	1056:00	418.61	40.11	96.63				0			22
23	25	1057:00	459.28	40.67	475.71				0			23
24	25	1058:00	507.49	48.21	102.10				0			24
25	25	1059:00	559.20	51.71	105.59				0			25
26	25	1100:00	604.19	44.99	107.24				0			26
27	25	1101:00	649.07	44.88	110.28				0			27
28	25	1102:00	690.20	41.13	112.41				0			28
29	25	1103:00	741.48	51.28	114.43				0			29
30	25	1104:00	788.41	46.93	116.90				0			30
31	25	1105:00	833.85	45.44	119.14				0			31
32	25	1106:00	878.41	44.56	121.61				0			32
33	25	1107:00	921.91	43.50	125.74				0			33
34	25	1108:00	972.92	51.01	128.41				0			34
35	25	1109:00	1018.83	45.91	131.88				0			35
36	25	1110:00	1063.79	44.96	135.46				0			36
37	25	1111:00	1103.37	39.58	136.05				0			37
38	25	111[illegible]:00	1151.17	47.80	137[illegible]8				0			38

Computer-Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

4522310

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	3	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1113:00	1196.75	45.58	139.58				0			1
2	25	1114:00	1243.31	46.56	144.21				0			2
3	25	1115:00	1287.48	44.17	147.92				0			3
4	25	1116:00	1333.40	45.92	149.50				0			4
5	25	1117:00	1381.02	47.62	152.71				0			5
6	25	1118:00	1427.32	46.30	154.43				0			6
7	25	1119:00	1469.67	42.35	157.87				0			7
8	25	1120:00	1473.56	3.89	161.46				0		1st GRAD. STOP @ 4000 FT	8
9	25	1121:00	1471.33	-2.23	161.93				0			9
10	25	1122:00	1469.31	-2.02	162.19				0			10
11	25	1123:00	1468.03	-1.28	162.38				0			11
12	25	1124:00	1467.03	-1.00	162.60				0			12
13	25	1125:00	1466.59	-.44	162.79				0		RUN TOOLS IN HOLE	13
14	25	1126:00	1494.68	28.09	163.42				0			14
15	25	1127:00	1537.48	42.80	165.34				0			15
16	25	1128:00	1575.48	38.00	168.12				0			16
17	25	1129:00	1635.34	59.86	169.58				0			17
18	25	1130:00	1688.21	52.87	171.31				0			18
19	25	1131:00	1744.54	56.33	177.28				0			19
20	25	1132:00	1797.70	53.16	179.37				0			20
21	25	1133:00	1845.87	48.17	183.06				0			21
22	25	1134:00	1901.03	55.16	185.34				0			22
23	25	1135:00	1952.95	51.92	187.74				0			23
24	25	1136:00	2003.87	50.92	190.23				0			24
25	25	1137:00	2053.36	49.49	192.56				0			25
26	25	1138:00	2104.90	51.54	196.52				0			26
27	25	1139:00	2154.55	49.65	200.48				0			27
28	25	1140:00	2193.05	38.50	202.56				0		2nd GRAD. STOP @ 6000 FT	28
29	25	1141:00	2191.41	-1.64	203.11				0			29
30	25	1142:00	2189.14	-2.27	203.30				0			30
31	25	1143:00	2187.85	-1.29	203.51				0			31
32	25	1144:00	2187.03	-.82	203.70				0			32
33	25	1145:00	2186.60	-.43	203.83				0		RUN TOOLS IN HOLE	33
34	25	1146:00	2217.75	31.15	204.49				0			34
35	25	1147:00	2256.27	38.52	205.79				0			35
36	25	1148:00	2295.01	38.74	207.36				0			36
37	25	1149:00	2331.49	36.48	209.56				0			37
38	25	1150:00	2372.71	41.22	211.45				0			38

Computer-Forms Toppan Moore

452232

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
A	1	PELICAN NO.5	25/ 3/86	4	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1151:00	2415.96	43.25	212.22				0			1
2	25	1152:00	2461.95	45.99	214.20				0			2
3	25	1153:00	2505.69	43.74	217.16				0			3
4	25	1154:00	2551.00	45.31	219.85				0			4
5	25	1155:00	2600.95	49.95	221.66				0			5
6	25	1156:00	2646.75	45.80	223.49				0			6
7	25	1157:00	2693.66	46.91	226.25				0			7
8	25	1158:00	2734.76	41.10	229.08				0			8
9	25	1159:00	2785.62	50.86	230.96				0			9
10	25	1200:00	2836.55	50.93	233.98				0			10
11	25	1201:00	2885.34	48.79	236.42				0			11
12	25	1202:00	2933.98	48.64	240.18				0			12
13	25	1203:00	2953.88	19.90	241.97				0		3rd GRAD. STOP @ 8000 FT	13
14	25	1204:00	2947.94	-5.94	242.15				0			14
15	25	1205:00	2943.09	-4.85	242.27				0			15
16	25	1206:00	2938.67	-4.42	242.35				0			16
17	25	1207:00	2933.61	-5.06	242.44				0			17
18	25	1208:00	2931.68	-1.93	242.54				0		RUN TOOLS IN HOLE	18
19	25	1209:00	2975.17	43.49	243.29				0			19
20	25	1210:00	3036.88	61.71	245.31				0			20
21	25	1211:00	3098.17	61.29	247.82				0			21
22	25	1212:00	3167.29	69.12	249.62				0			22
23	25	1213:00	3227.73	60.44	250.88				0			23
24	25	1214:00	3299.30	71.57	252.57				0			24
25	25	1215:00	3371.91	72.61	253.60				0			25
26	25	1219:00	3668.58	296.67	253.60				0		PREP. TO LAND IN S.R.O. NIPPLE	26
27	25	1220:00	3651.22	-17.36	258.18				0		TOOLS HELD AT 9355 FT	27
28	25	1221:00	3650.31	-.91	258.17				0			28
29	25	1222:00	3651.03	.72	258.18				0			29
30	25	1320:00	3651.44	.41	540.30				0			30
31	25	1321:00	3993.71	342.27	400.22				0			31
32	25	1322:00	3606.21	-387.50	260.16				0			32
33	25	1323:00	3605.22	-.99	260.25				0			33
34	25	1324:00	3604.24	-.98	260.29				0			34
35	25	1329:00	3607.02	2.78	260.29				0			35
36	25	1330:00	3607.02	0.00	260.34				0		UNSUCCESSFUL LANDING TOOLS	36
37	25	1331:00	3600.69	-6.33	260.25				0		PULL TOOLS OUT OF HOLE	37
38	25	133[illegible]:00	3547.34	-53.35	260[illegible]4				0			38

Computer-Forms Toppan Moore

452233

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	5	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1333:00	3488.63	-58.71	259.96				0			1
2	25	1434:00	3408.24	-80.39	324.88				0			2
3	25	1434:00	3699.38	291.14	324.88				0			3
4	25	1436:00	3618.99	-80.39	261.15				0			4
5	25	1438:00	3617.03	-1.96	261.17				0			5
6	25	1444:00	3557.83	-59.20	261.09				0			6
7	25	1446:00	3426.59	+131.24	259.05				0			7
8	25	1450:00	3214.68	+211.91	254.00				0			8
9	25	1455:00	2945.70	+268.98	249.02				0			9
10	25	1500:00	2662.32	+283.38	236.78				0			10
11	25	1505:00	2463.85	+198.47	223.67				0			11
12	25	1510:00	2444.31	-19.54	219.35				0			12
13	25	1515:00	2220.13	+224.18	212.31				0			13
14	25	1520:00	2045.32	+174.81	202.92				0			14
15	25	1525:00	1823.03	+222.29	190.93				0			15
16	25	1530:00	1618.79	+204.24	179.87				0			16
17	25	1535:00	1368.37	+250.42	158.88				0			17
18	25	1536:00	1305.89	-62.48	156.08				0			18
19	25	1538:00	1182.49	+123.40	156.08				0			19
20	25	1540:00	844.23	+338.26	190.01				0			20
21	25	1545:00	675.73	+168.50	120.95				0			21
22	25	1550:00	321.52	+354.21	97.85				0			22
23	25	1555:00	150.99	+170.53	86.81				0		TOOLS IN LUBRICATOR	23
24	25	1600:00	21.88	+129.11	65.73				0		PREPARING TO PERFORATE	24
25	25	1607:10	103.10	81.22	67.65				16		PERFORATION GUNS FIRED	25
26	25	1607:20	135.42	32.32	67.65				16			26
27	25	1607:30	145.01	9.59	67.65				16			27
28	25	1607:40	138.28	-6.73	67.72				16			28
29	25	1607:50	126.82	-11.46	67.72				16			29
30	25	1608:00	102.92	-23.90	67.72				16			30
31	25	1608:10	76.71	-26.21	67.72				16			31
32	25	1608:20	76.71	0.00	68.13				16			32
33	25	1608:30	40.63	-36.08	68.13				16			33
34	25	1608:40	4.04	-36.59	68.13				16			34
35	25	1608:50	4.04	0.00	68.23				16			35
36	25	1609:00	2.48	-1.56	68.23				16			36
37	25	1609:10	2.45	-.03	68.23				16			37
38	25	1609:20	2.45	0.00	68.19				16			38

Computer-Forms Toppan Moore

OTIS QP

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452234

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	6	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1609:30	2.52	.07	68.19				16			1
2	25	1609:40	2.45	-.07	68.19				16			2
3	25	1612:00	2.15	-.30	68.19				16			3
4	25	1615:00	1.71	-.44	67.30				16			4
5	25	1622:30	1.35	-.36	67.18				16			5
6	25	1623:00	1.47	.12	67.25				16			6
7	25	1623:30	2.87	1.40	67.24				16			7
8	25	1624:00	3.67	.80	67.24				16			8
9	25	1624:30	5.11	1.44	67.24				16			9
10	25	1625:00	6.43	1.32	67.24				16			10
11	25	1625:30	7.44	1.01	67.23				16			11
12	25	1626:00	8.72	1.28	67.22				16			12
13	25	1626:30	8.30	-.42	67.20				16			13
14	25	1627:00	7.15	-1.15	67.20				16			14
15	25	1627:30	6.54	-.61	67.18				16			15
16	25	1628:00	5.97	-.57	67.16				16			16
17	25	1628:30	5.64	-.33	67.13				16			17
18	25	1629:00	5.30	-.34	67.16				16			18
19	25	1630:00	5.18	-.12	67.04				16			19
20	25	1631:00	5.01	-.17	67.00				16			20
21	25	1632:00	5.61	.60	66.96				16		WELL SHUT IN AT SURFACE	21
22	25	1633:00	10.71	5.10	66.93				0			22
23	25	1634:00	26.65	15.94	66.85				0			23
24	25	1635:00	60.77	34.12	66.77				0			24
25	25	1636:00	114.52	53.75	66.72				0			25
26	25	1637:00	176.22	61.70	66.72				0			26
27	25	1638:00	229.64	53.42	66.68				0			27
28	25	1639:00	273.59	43.95	66.69				0			28
29	25	1640:00	323.89	50.30	66.69				0			29
30	25	1641:00	366.29	42.40	66.68				0			30
31	25	1642:00	411.69	45.40	66.67				0			31
32	25	1643:00	451.68	39.99	66.71				0			32
33	25	1644:00	495.15	43.47	66.69				0			33
34	25	1645:00	532.91	37.76	66.68				0			34
35	25	1646:00	569.13	36.22	66.66				0			35
36	25	1647:00	604.03	34.90	66.64				0			36
37	25	1648:00	609.00	4.97	66.65				0			37
38	25	164[illegible]0	645.19	36.19	66[illegible]3				0			38

Computer-Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452235

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	7	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1650:00	680.40	35.21	66.62				0			1
2	25	1651:00	711.45	31.05	66.61				0			2
3	25	1652:00	740.38	28.93	66.59				0			3
4	25	1653:00	768.88	28.50	66.52				0			4
5	25	1654:00	797.13	28.25	66.67				0			5
6	25	1655:00	822.20	25.07	66.57				0			6
7	25	1656:00	850.46	28.26	66.56				0			7
8	25	1657:00	892.17	41.71	66.55				0			8
9	25	1658:00	896.45	4.28	66.53				0			9
10	25	1659:00	921.36	24.91	66.51				0			10
11	25	1700:00	944.10	22.74	66.49				0			11
12	25	1701:00	965.96	21.86	66.49				0			12
13	25	1702:00	985.27	19.31	66.45				0			13
14	25	1703:00	1006.92	21.65	66.42				0			14
15	25	1704:00	1021.36	14.44	66.40				0			15
16	25	1705:00	1042.10	20.74	66.36				0			16
17	25	1706:00	1059.70	17.60	66.33				0			17
18	25	1707:00	1077.55	17.85	66.30				0			18
19	25	1708:00	1094.99	17.44	66.26				0			19
20	25	1709:00	1111.67	16.68	66.21				0			20
21	25	1710:00	1118.82	7.15	66.12				0			21
22	25	1711:00	1108.48	-10.34	66.14				0			22
23	25	1712:00	1125.00	16.52	66.09				0			23
24	25	1713:00	1142.17	17.17	66.15				0			24
25	25	1714:00	1155.93	13.76	66.07				0			25
26	25	1715:00	1171.92	15.99	66.04				0			26
27	25	1716:00	1186.69	14.77	66.00				0			27
28	25	1717:00	1200.28	13.59	65.94				0			28
29	25	1718:00	1214.06	13.78	65.91				0			29
30	25	1719:00	1227.50	13.44	65.86				0			30
31	25	1720:00	1240.04	12.54	65.83				0			31
32	25	1721:00	1253.06	13.02	65.78				0			32
33	25	1722:00	1264.46	11.40	65.74				0			33
34	25	1723:00	1276.21	11.75	65.71				0			34
35	25	1724:00	1286.29	10.08	65.69				0			35
36	25	1725:00	1299.01	12.72	65.65				0			36
37	25	1726:00	1310.38	11.37	65.62				0			37
38	25	1727:00	1321.02	10.64	65.59				0			38

Computer-Forms Toppan Moore

452236

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	8	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	1728:00	1331.34	10.32	65.57				0			1
2	25	1729:00	1341.36	10.02	65.56				0			2
3	25	1730:00	1350.25	8.89	65.51				0			3
4	25	1730:30	1354.97	4.72	65.50				0			4
5	25	1731:00	1360.03	5.06	65.48				16		OPEN WELL TO FLOW	5
6	25	1732:00	393.36	-966.67	65.48				16			6
7	25	1732:30	30.57	-362.79	65.48				16			7
8	25	1733:00	10.75	-19.82	64.84				16			8
9	25	1733:30	6.51	-4.24	64.73				16			9
10	25	1734:00	4.22	-2.29	64.61				16			10
11	25	1734:30	2.91	-1.31	64.53				16			11
12	25	1735:00	1.88	-1.03	64.44				16		RUN IN HOLE W/TOOLS	12
13	25	1924:00	3528.76	3526.88	129.96				16		TOOLS ON BOTTOM AT 9345 FT	13
14	25	1925:00	3616.10	87.34	265.28				16			14
15	25	1926:00	3613.34	-2.76	265.40				16			15
16	25	1927:00	3608.40	-4.94	265.49				16			16
17	25	1928:00	3606.74	-1.66	265.59				16			17
18	25	1929:00	3604.23	-2.51	265.66				16			18
19	25	1931:00	3604.23	0.00	265.78				16			19
20	25	1933:00	3595.44	-8.79	265.84				16			20
21	25	1936:20	3587.25	-8.19	265.84				16			21
22	25	1940:00	3581.79	-5.46	265.84				16			22
23	25	1945:00	3580.24	-1.55	265.98				16			23
24	25	1950:00	3579.17	-1.07	265.98				16			24
25	25	1955:00	3582.42	3.25	265.99				16			25
26	25	2000:00	3573.02	-9.40	265.98				16			26
27	25	2005:00	3569.23	-3.79	265.99				16			27
28	25	2010:00	3566.02	-3.21	265.99				16			28
29	25	2015:00	3563.81	-2.21	265.99				16			29
30	25	2020:00	3555.75	-8.06	266.01				16			30
31	25	2025:00	3550.79	-4.96	266.04				16			31
32	25	2030:00	3546.39	-4.40	266.08				16			32
33	25	2035:00	3541.89	-4.50	266.10				16			33
34	25	2040:00	3536.48	-5.41	266.12				16			34
35	25	2045:00	3533.40	-3.08	266.16				16			35
36	25	2050:00	3530.80	-2.60	266.18				16			36
37	25	2055:00	3524.61	-6.19	266.20				16			37
38	25	210[illegible]:00	3517.91	-6.70	266.23				16			38

Computer-Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452237

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	9	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	2105:00	3512.36	-5.55	266.26				16			1
2	25	2110:00	3512.04	-.32	266.30				16			2
3	25	2115:00	3505.78	-6.26	266.31				16			3
4	25	2120:00	3501.37	-4.41	266.33				16			4
5	25	2121:00	3498.65	-2.72	266.32				16			5
6	25	2126:00	3494.37	-4.28	266.32				16			6
7	25	2127:00	3493.41	-.96	266.32				16			7
8	25	2128:00	3493.22	-.19	266.39				16			8
9	25	2130:00	3490.73	-2.49	266.40				16			9
10	25	2135:00	3483.74	-6.99	266.41				16			10
11	25	2140:00	3476.92	-6.82	266.44				16			11
12	25	2145:00	3471.88	-5.04	266.46				16			12
13	25	2150:00	3466.47	-5.41	266.50				16			13
14	25	2155:00	3460.96	-5.51	266.52				16			14
15	25	2200:00	3455.23	-5.73	266.55				16			15
16	25	2205:00	3449.39	-5.84	266.58				16			16
17	25	2210:00	3443.54	-5.85	266.61				16			17
18	25	2215:00	3437.70	-5.84	266.64				16			18
19	25	2220:00	3431.79	-5.91	266.66				16			19
20	25	2225:00	3426.40	-5.39	266.70				16			20
21	25	2230:00	3422.43	-3.97	266.72				16			21
22	25	2235:00	3416.22	-6.21	266.76				16			22
23	25	2240:00	3410.35	-5.87	266.77				16			23
24	25	2245:00	3403.51	-6.84	266.80				16			24
25	25	2250:00	3397.42	-6.09	266.82				16			25
26	25	2255:00	3391.03	-6.39	266.85				16			26
27	25	2300:00	3384.24	-6.79	266.86				16			27
28	25	2305:00	3377.83	-6.41	266.87				16			28
29	25	2310:00	3370.83	-7.00	266.91				16			29
30	25	2315:00	3330.39	-40.44	266.93				16			30
31	25	2320:00	3356.64	26.25	266.97				16			31
32	25	2325:00	3349.18	-7.46	266.99				16			32
33	25	2330:00	3341.25	-7.93	267.02				16			33
34	25	2335:00	3332.58	-8.67	267.03				16			34
35	25	2340:00	3323.77	-8.81	267.05				16			35
36	25	2345:00	3315.73	-8.04	267.10				16			36
37	25	2350:00	3307.34	-8.39	267.11				16			37
38	25	2355:00	3298.44	-8.90	267.02				16			38

Computer-Forms Toppan Moore

452238

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	25/ 3/86	10	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	25	2400:00	3289.42	-9.02	267.09				16			1
2	26	0005:00	3280.33	-9.09	267.13				16			2
3	26	0010:00	3270.59	-9.74	267.16				16			3
4	26	0015:00	3260.05	-10.54	267.18				16			4
5	26	0020:00	3249.81	-10.24	267.21				16			5
6	26	0025:00	3239.22	-10.59	267.23				16			6
7	26	0030:00	3228.23	-10.99	267.27				16			7
8	26	0035:00	3216.80	-11.43	267.29				16			8
9	26	0040:00	3204.62	-12.18	267.32				16			9
10	26	0045:00	3192.39	-12.23	267.34				16			10
11	26	0050:00	3179.43	-12.96	267.36				16			11
12	26	0055:00	3166.37	-13.06	267.40				16			12
13	26	0100:00	3152.31	-14.06	267.42				16			13
14	26	0105:00	3137.91	-14.40	267.45				16			14
15	26	0110:00	3122.90	-15.01	267.46				16			15
16	26	0115:00	3107.84	-15.06	267.52				16			16
17	26	0120:00	3091.46	-16.38	267.56				16			17
18	26	0125:00	3072.72	-18.74	267.59				16			18
19	26	0130:00	3052.38	-20.34	267.58				16			19
20	26	0135:00	3030.31	-22.07	267.58				16			20
21	26	0140:00	3005.81	-24.50	267.59				16			21
22	26	0145:00	2980.65	-25.16	267.60				16			22
23	26	0150:00	2952.19	-28.46	267.60				16			23
24	26	0155:00	2917.65	-34.54	267.62				16			24
25	26	0200:00	2880.25	-37.40	267.63				16			25
26	26	0205:00	2836.69	-43.56	267.64				16			26
27	26	0210:00	2787.94	-48.75	267.65				16			27
28	26	0215:00	2727.86	-60.08	267.65				16			28
29	26	0220:00	2659.67	-68.19	267.65				16			29
30	26	0225:00	2582.57	-77.10	267.60				16			30
31	26	0230:00	2497.99	-84.58	267.59				24			31
32	26	0235:00	2371.88	-126.11	267.53				32			32
33	26	0240:00	2163.85	-208.03	267.47				32		GAS TO SURFACE	33
34	26	0242:00	2092.23	-71.62	267.40				32			34
35	26	0243:00	2063.27	-28.96	267.41				32			35
36	26	0244:00	2034.37	-28.90	267.42				32			36
37	26	0245:00	1997.58	-36.79	267.42				32			37
38	26	024[illegible]00	1962.97	-34.61	267[illegible]3				32			38

Computer-Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452239

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	11	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	0247:00	1926.77	-36.20	267.44				32			1
2	26	0248:00	1895.88	-30.89	267.45				32			2
3	26	0249:00	1866.45	-29.43	267.46				32			3
4	26	0253:00	1753.73	-112.72	267.46				32			4
5	26	0254:00	1724.39	-29.34	267.61				32			5
6	26	0255:00	1693.97	-30.42	267.63				32			6
7	26	0256:00	1663.21	-30.76	267.66				32			7
8	26	0257:00	1635.06	-28.15	267.67				32			8
9	26	0258:00	1602.62	-32.44	267.73				32			9
10	26	0259:00	1571.59	-31.03	267.77				32			10
11	26	0300:00	1543.78	-27.81	267.82				32			11
12	26	0301:00	1515.59	-28.19	267.87				32			12
13	26	0302:00	1489.73	-25.86	267.92				32			13
14	26	0303:00	1467.19	-22.54	268.00				32			14
15	26	0304:00	1441.47	-25.72	268.02				32			15
16	26	0305:00	1413.75	-27.72	268.00				32			16
17	26	0306:00	1388.44	-25.31	267.96				32			17
18	26	0307:00	1365.75	-22.69	267.96				32			18
19	26	0308:00	1344.84	-20.91	267.91				32			19
20	26	0309:00	1325.92	-18.92	268.02				32			20
21	26	0310:00	1309.87	-16.05	268.12				32			21
22	26	0311:00	1295.44	-14.43	268.19				32			22
23	26	0312:00	1283.19	-12.25	268.28				32			23
24	26	0313:00	1268.58	-14.61	268.33				32			24
25	26	0314:00	1254.52	-14.06	268.36				32			25
26	26	0315:00	1240.66	-13.86	268.40				32			26
27	26	0316:00	1227.05	-13.61	268.44				32			27
28	26	0317:00	1210.98	-16.07	268.46				32			28
29	26	0318:00	1196.15	-14.83	268.50				32			29
30	26	0319:00	1180.73	-15.42	268.53				32			30
31	26	0320:00	1166.57	-14.16	268.57				32			31
32	26	0321:00	1148.84	-17.73	268.55				32			32
33	26	0322:00	1128.78	-20.06	268.55				32			33
34	26	0323:00	1108.86	-19.92	268.58				32			34
35	26	0324:00	1088.97	-19.89	268.60				32			35
36	26	0325:00	1067.14	-21.83	268.61				32			36
37	26	0326:00	1044.69	-22.45	268.63				32			37
38	26	0327:00	1014.07	-30.62	268.63				24			38

Computer-Forms Toppan Printing

452?40

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	12	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	0328:00	985.93	-28.14	268.62				24			1
2	26	0329:00	958.86	-27.07	268.64				24			2
3	26	0330:00	933.44	-25.42	268.64				24			3
4	26	0331:00	908.36	-25.08	268.67				24			4
5	26	0332:00	884.94	-23.42	268.70				24			5
6	26	0333:00	865.98	-18.96	268.71				24			6
7	26	0334:00	845.25	-20.73	268.74				24			7
8	26	0335:00	824.06	-21.19	268.74				24			8
9	26	0336:00	805.03	-19.03	268.76				24			9
10	26	0337:00	785.76	-19.27	268.78				24			10
11	26	0338:00	769.34	-16.42	268.80				24			11
12	26	0339:00	752.72	-16.62	268.83				24			12
13	26	0340:00	738.99	-13.73	268.85				24			13
14	26	0341:00	723.89	-15.10	268.89				24			14
15	26	0342:00	712.83	-11.06	268.92				24			15
16	26	0343:00	700.88	-11.95	268.95				24			16
17	26	0344:00	688.81	-12.07	268.98				24			17
18	26	0345:00	677.16	-11.65	269.00				24			18
19	26	0346:00	663.95	-13.21	268.99				16			19
20	26	0347:00	653.77	-10.18	269.03				16			20
21	26	0348:00	649.09	-4.68	269.08				16			21
22	26	0349:00	646.21	-2.88	269.13				16			22
23	26	0350:00	643.57	-2.64	269.17				16			23
24	26	0351:00	641.36	-2.21	269.20				16			24
25	26	0352:00	637.74	-3.62	269.24				16			25
26	26	0353:00	634.60	-3.14	269.25				16			26
27	26	0354:00	631.77	-2.83	269.27				16			27
28	26	0355:00	629.99	-1.78	269.31				16			28
29	26	0356:00	627.72	-2.27	269.37				16			29
30	26	0357:00	624.73	-2.99	269.41				16			30
31	26	0358:00	622.16	-2.57	269.42				16			31
32	26	0359:00	619.64	-2.52	269.44				16			32
33	26	0400:00	618.12	-1.52	269.48				16			33
34	26	0401:00	615.50	-2.62	269.52				16			34
35	26	0402:00	614.31	-1.19	269.55				16			35
36	26	0403:00	613.42	-.89	269.59				16			36
37	26	0404:00	612.60	-.82	269.65				16			37
38	26	040[illegible]:00	611.51	-1.09	269[illegible]1				16			38

Computer-Forms Toppan Moore

452241

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
A	1	PELICAN NO.5	26/ 3/86	13	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	0406:00	610.30	-1.21	269.75				16			1
2	26	0407:00	609.78	-.52	269.78				16			2
3	26	0408:00	609.07	-.71	269.82				16			3
4	26	0409:00	608.41	-.66	269.86				16			4
5	26	0410:00	607.92	-.49	269.89				16			5
6	26	0411:00	607.68	-.24	269.92				16			6
7	26	0412:00	607.35	-.33	269.97				16			7
8	26	0413:00	607.12	-.23	269.97				16			8
9	26	0414:00	607.16	.04	270.03				16			9
10	26	0415:00	606.77	-.39	270.06				16			10
11	26	0416:00	606.99	.22	270.09				16			11
12	26	0417:00	607.05	.06	270.12				16			12
13	26	0418:00	607.21	.16	270.15				16			13
14	26	0419:00	607.47	.26	270.18				16			14
15	26	0420:00	607.80	.33	270.21				16			15
16	26	0421:00	607.95	.15	270.24				16			16
17	26	0422:00	608.30	.35	270.27				16			17
18	26	0423:00	608.91	.61	270.29				16			18
19	26	0424:00	609.37	.46	270.31				16			19
20	26	0425:00	609.74	.37	270.35				16			20
21	26	0426:00	610.06	.32	270.38				16			21
22	26	0427:00	610.98	.92	270.39				16			22
23	26	0428:00	611.31	.33	270.42				16			23
24	26	0429:00	612.06	.75	270.45				16			24
25	26	0430:00	612.92	.86	270.48				16			25
26	26	0431:00	613.77	.85	270.50				16			26
27	26	0435:00	616.97	3.20	270.60				16			27
28	26	0440:00	621.83	4.86	270.69				16			28
29	26	0445:00	648.60	26.77	270.81				16			29
30	26	0450:00	672.04	23.44	270.89				16			30
31	26	0455:00	690.95	18.91	270.95				16			31
32	26	0500:00	706.36	15.41	271.02				16			32
33	26	0505:00	718.60	12.24	271.09				16			33
34	26	0510:00	728.24	9.64	271.13				16			34
35	26	0515:00	736.58	8.34	271.20				16			35
36	26	0520:00	743.30	6.72	271.25				16			36
37	26	0525:00	750.62	7.32	271.30				16			37
38	26	0530:00	758.35	7.73	271.35				16			38

Computer-Forem Tapper Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452242

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	14	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	0535:00	764.50	6.15	271.39				16			1
2	26	0540:00	770.81	6.31	271.43				16			2
3	26	0545:00	781.12	10.31	271.49				16			3
4	26	0550:00	791.91	10.79	271.50				16			4
5	26	0555:00	803.25	11.34	271.52				16			5
6	26	0600:00	816.60	13.35	271.53				16			6
7	26	0605:00	827.34	10.74	271.63				16			7
8	26	0610:00	837.14	9.80	271.69				16			8
9	26	0614:00	843.84	6.70	271.71				16			9
10	26	0615:00	849.60	5.76	271.71				16			10
11	26	0620:00	852.68	3.08	271.71				16			11
12	26	0625:00	858.11	5.43	271.72				16			12
13	26	0630:00	862.21	4.10	271.72				16			13
14	26	0635:00	864.52	2.31	271.73				16			14
15	26	0640:00	865.83	1.31	271.74				16			15
16	26	0645:00	866.59	.76	271.75				16			16
17	26	0650:00	864.55	-2.04	271.74				16			17
18	26	0655:00	861.68	-2.87	271.75				16			18
19	26	0700:00	855.82	-5.86	271.75				16			19
20	26	0705:00	849.72	-6.10	271.76				16			20
21	26	0710:00	843.38	-6.34	271.79				16			21
22	26	0715:00	840.14	-3.24	271.85				16			22
23	26	0720:00	837.55	-2.59	271.82				16			23
24	26	0725:00	833.83	-3.72	271.76				16			24
25	26	0730:00	829.73	-4.10	271.69				16			25
26	26	0735:00	824.50	-5.23	271.73				16			26
27	26	0740:00	823.60	-.90	271.76				16			27
28	26	0745:00	816.28	-7.32	271.77				16			28
29	26	0750:00	810.85	-5.43	271.77				16			29
30	26	0755:00	807.70	-3.15	271.76				16			30
31	26	0800:00	805.28	-2.42	271.77				16			31
32	26	0805:00	802.60	-2.68	271.78				16			32
33	26	0810:00	800.18	-2.42	271.80				16			33
34	26	0815:00	797.56	-2.62	271.79				16			34
35	26	0820:00	794.69	-2.87	271.78				16			35
36	26	0825:00	794.37	-.32	271.78				16			36
37	26	0830:00	795.40	1.03	271.78				16			37
38	26	083[illegible]:00	796.17	.77	271[illegible]7				16			38

Computer Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452243

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	15	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	0840:00	796.47	.30	271.77				16			1
2	26	0845:00	793.32	-3.15	271.76				16			2
3	26	0850:00	790.03	-3.29	271.76				16			3
4	26	0855:00	789.18	-.85	271.77				16			4
5	26	0900:00	793.29	4.11	271.77				16			5
6	26	0905:00	798.78	5.49	271.77				16			6
7	26	0910:00	803.42	4.64	271.77				16			7
8	26	0915:00	808.51	5.09	271.76				16			8
9	26	0920:00	811.69	3.18	271.75				16			9
10	26	0925:00	815.99	4.30	271.73				16			10
11	26	0930:00	819.87	3.88	271.71				16			11
12	26	0935:00	822.59	2.72	271.69				16			12
13	26	0940:00	825.02	2.43	271.64				16			13
14	26	0945:00	828.40	3.38	271.65				16			14
15	26	0950:00	831.04	2.64	271.71				16			15
16	26	0955:00	833.65	2.61	271.75				16			16
17	26	1000:00	836.29	2.64	271.69				16			17
18	26	1005:00	838.95	2.66	271.66				16			18
19	26	1010:00	841.14	2.19	271.63				16			19
20	26	1015:00	844.25	3.11	271.61				16			20
21	26	1020:00	847.37	3.12	271.61				16			21
22	26	1025:00	850.32	2.95	271.57				16			22
23	26	1030:00	853.72	3.40	271.57				16			23
24	26	1035:00	856.68	2.96	271.56				16			24
25	26	1040:00	859.64	2.96	271.55				16			25
26	26	1045:00	862.94	3.30	271.54				16			26
27	26	1050:00	865.53	2.59	271.52				16			27
28	26	1055:00	869.28	3.75	271.51				16			28
29	26	1100:00	873.51	4.23	271.49				16			29
30	26	1100:00	876.07	2.56	271.49				16			30
31	26	1105:00	876.81	.74	271.48				16			31
32	26	1110:00	880.74	3.93	271.46				16			32
33	26	1115:00	884.57	3.83	271.45				16			33
34	26	1120:00	888.66	4.09	271.45				16			34
35	26	1125:00	892.04	3.38	271.42				16			35
36	26	1130:00	895.32	3.28	271.41				16			36
37	26	1135:00	898.78	3.46	271.39				16			37
38	26	1140:00	902.06	3.28	271.38				16			38

Computer-Forms Toppan Moore

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452244

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	16	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	1145:00	904.74	2.68	271.37				16			1
2	26	1150:00	907.66	2.92	271.35				16			2
3	26	1155:00	911.18	3.52	271.34				16			3
4	26	1200:00	913.87	2.69	271.33				16			4
5	26	1205:00	916.40	2.53	271.32				16			5
6	26	1210:00	917.84	1.44	271.30				16			6
7	26	1215:00	918.55	.71	271.27				16			7
8	26	1220:00	921.88	3.33	271.23				16			8
9	26	1225:00	925.54	3.66	271.23				16			9
10	26	1230:00	931.65	6.11	271.24				16			10
11	26	1235:00	935.79	4.14	271.22				16			11
12	26	1240:00	944.46	8.67	271.26				16			12
13	26	1245:00	949.41	4.95	271.24				16			13
14	26	1250:00	952.78	3.37	271.22				16			14
15	26	1255:00	951.28	-1.50	271.18				16			15
16	26	1300:00	954.21	2.93	271.18				16			16
17	26	1305:00	955.90	1.69	271.17				16			17
18	26	1310:00	958.87	2.97	271.15				16			18
19	26	1315:00	957.87	-1.00	271.12				16			19
20	26	1320:00	974.05	16.18	271.15				16			20
21	26	1325:00	974.68	.63	271.12				16			21
22	26	1330:00	972.92	-1.76	271.11				16			22
23	26	1335:00	971.85	-1.07	271.08				16			23
24	26	1340:00	987.25	15.40	271.12				16			24
25	26	1345:00	988.94	1.69	271.09				16			25
26	26	1350:00	985.17	-3.77	271.06				16			26
27	26	1355:00	980.89	-4.28	271.04				16			27
28	26	1400:00	985.74	4.85	271.06				16			28
29	26	1405:00	993.59	7.85	271.06				16			29
30	26	1410:00	998.19	4.60	271.04				16			30
31	26	1415:00	998.49	.30	271.01				16			31
32	26	1420:00	997.56	-.93	271.00				16			32
33	26	1425:00	1003.95	6.39	271.02				16			33
34	26	1430:00	1001.33	-2.62	270.99				16			34
35	26	1435:00	999.49	-1.84	270.97				16			35
36	26	1440:00	1005.20	5.71	270.97				16			36
37	26	1445:00	1002.66	-2.54	270.95				16			37
38	26	145[illegible]00	995.74	-6.92	270[illegible]2				16			38

Computer-Forms Toppan Moore

452245

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	17	0.

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	1455:00	988.63	-7.11	270.91				16			1
2	26	1500:00	993.22	4.59	270.93				16			2
3	26	1505:00	997.72	4.50	270.93				16			3
4	26	1510:00	1004.72	7.00	270.93				16			4
5	26	1515:00	1008.80	4.08	270.92				0		WELL SHUT IN AT LPR VALVE	5
6	26	1519:40	985.76	-23.04	270.58				0			6
7	26	1523:40	851.78	-133.98	270.58				0			7
8	26	1524:00	801.11	-50.67	269.72				0			8
9	26	1525:00	784.39	-16.72	269.72				0			9
10	26	1526:00	733.92	-50.47	268.38				0			10
11	26	1527:00	688.85	-45.07	268.02				0			11
12	26	1528:00	635.43	-53.42	267.70				0			12
13	26	1529:00	583.68	-51.75	267.49				0			13
14	26	1530:00	539.39	-44.29	267.16				0			14
15	26	1531:00	502.22	-37.17	266.95				0			15
16	26	1532:00	472.71	-29.51	266.76				0			16
17	26	1533:00	445.25	-27.46	266.63				0			17
18	26	1534:00	417.97	-27.28	266.56				0			18
19	26	1535:00	394.47	-23.50	266.47				0			19
20	26	1536:00	379.73	-14.74	266.39				0			20
21	26	1537:00	373.59	-6.14	266.44				0			21
22	26	1538:00	371.17	-2.42	266.51				0			22
23	26	1539:00	370.29	-.88	266.57				0			23
24	26	1540:00	369.15	-1.14	266.62				0			24
25	26	1541:00	368.39	-.76	266.69				0			25
26	26	1542:00	367.10	-1.29	266.73				0			26
27	26	1543:00	365.18	-1.92	266.76				0			27
28	26	1544:00	363.17	-2.01	266.79				0			28
29	26	1545:00	362.16	-1.01	266.81				0			29
30	26	1546:00	363.69	1.53	266.84				0		PULL TOOLS OUT OF HOLE	30
31	26	1547:00	363.52	-.17	266.79				0			31
32	26	1548:00	361.47	-2.05	266.55				0			32
33	26	1549:00	354.15	-7.32	266.20				0			33
34	26	1550:00	629.96	275.81	470.06				0			34
35	26	1551:00	339.51	-290.45	265.39				0		1st GRAD. STOP @ 9200 FT	35
36	26	1552:00	342.61	3.10	265.08				0			36
37	26	1553:00	345.88	3.27	265.04				0			37
38	26	1554:00	350.05	4.17	265.04				0			38

Computer-Forms Toppan Moore

452246

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	18	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	1555:00	354.15	4.10	265.04				0			1
2	26	1556:00	357.74	3.59	265.05				0		RUN TOOLS IN HOLE	2
3	26	1557:00	368.36	10.62	265.17				0			3
4	26	1558:00	385.68	17.32	265.63				0			4
5	26	1559:00	398.09	12.41	266.12				0		2nd GRAD STOP @ 9300 FT	5
6	26	1600:00	399.82	1.73	266.35				0			6
7	26	1601:00	401.09	1.27	266.42				0			7
8	26	1602:00	402.42	1.33	266.46				0			8
9	26	1603:00	403.67	1.25	266.48				0			9
10	26	1604:00	404.36	.69	266.50				0			10
11	26	1605:00	404.52	.16	266.52				0		PULL TOOLS OUT OF HOLE	11
12	26	1606:00	390.30	-14.22	266.51				0		3rd GRAD. STOP @ 9200 FT	12
13	26	1607:00	377.59	-12.71	265.90				0			13
14	26	1608:00	376.86	-.73	265.59				0			14
15	26	1609:00	376.29	-.57	265.50				0		PULL TOOLS OUT OF HOLE	15
16	26	1610:00	375.89	-.40	265.49				0			16
17	26	1611:00	369.23	-6.66	265.34				0			17
18	26	1612:00	354.91	-14.32	264.80				0			18
19	26	1613:00	344.12	-10.79	264.19				0		4th GRAD. STOP @ 9100 FT	19
20	26	1614:00	343.66	-.46	263.83				0			20
21	26	1615:00	342.94	-.72	263.76				0			21
22	26	1616:00	342.36	-.58	263.73				0			22
23	26	1617:00	341.37	-.99	263.70				0			23
24	26	1618:00	340.39	-.98	263.68				0		PULL TOOLS OUT OF HOLE	24
25	26	1619:00	330.38	-10.01	263.58				0			25
26	26	1620:00	317.30	-13.08	338.03				0		5th GRAD. STOP @ 9000 FT	26
27	26	1621:00	308.42	-8.88	262.22				0			27
28	26	1622:00	306.72	-1.70	261.97				0			28
29	26	1623:00	305.94	-.78	261.89				0			29
30	26	1624:00	304.98	-.96	261.85				0			30
31	26	1625:00	304.17	-.81	261.84				0		PULL TOOLS OUT OF HOLE	31
32	26	1626:00	300.26	-3.91	261.82				0			32
33	26	1627:00	288.39	-11.87	261.32				0			33
34	26	1628:00	277.99	-10.40	260.35				0		6th GRAD. STOP @ 8900 FT	34
35	26	1629:00	275.84	-2.15	260.17				0			35
36	26	1630:00	274.88	-.96	260.12				0			36
37	26	1631:00	273.98	-.90	260.08				0			37
38	26	163[illegible]:00	273.08	-.90	260[illegible]3				0			38

Computer-Forms, Toppan Moore

452847

OTIS

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	19	0.

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	1633:00	271.99	-1.09	260.01				0		PULL TOOLS OUT OF HOLE	1
2	26	1634:00	316.63	44.64	468.01				0			2
3	26	1635:00	239.86	-76.77	415.32				0			3
4	26	1636:00	222.11	-17.75	256.78				0			4
5	26	1637:00	202.80	-19.31	255.42				0			5
6	26	1639:00	171.05	-31.75	252.56				0		7th GRAD. STOP @ 8400 FT	6
7	26	1640:00	172.45	1.40	251.97				0			7
8	26	1641:00	174.81	2.36	251.80				0		PULL TOOLS OUT OF HOLE	8
9	26	1643:00	164.68	-10.13	251.18				0			9
10	26	1645:00	164.30	-.38	249.86				0			10
11	26	1646:00	163.67	-.63	249.10				0		8th GRAD. STOP @ 8000 FT	11
12	26	1647:00	163.45	-.22	248.36				0			12
13	26	1648:00	163.79	.34	247.64				0		PULL TOOLS OUT OF HOLE	13
14	26	1649:00	162.89	-.90	247.23				0			14
15	26	1650:00	163.29	.40	246.48				0			15
16	26	1651:00	162.47	-.82	245.59				0			16
17	26	1652:00	161.81	-.66	244.68				0			17
18	26	1653:00	161.18	-.63	243.31				0			18
19	26	1654:00	159.92	-1.26	466.20				0			19
20	26	1655:00	468.81	308.89	466.21				0			20
21	26	1656:00	156.47	-312.34	238.92				0			21
22	26	1657:00	155.26	-1.21	236.88				0		9th GRAD. STOP @ 7000 FT	22
23	26	1700:00	153.57	-1.69	232.30				0			23
24	26	1701:00	154.52	.95	231.23				0			24
25	26	1702:00	156.77	2.25	231.23				0		PULL TOOLS OUT OF HOLE	25
26	26	1703:00	158.79	2.02	229.82				0			26
27	26	1704:00	157.36	-1.43	228.91				0			27
28	26	1705:00	156.65	-.71	227.79				0			28
29	26	1707:00	154.29	-2.36	224.76				0			29
30	26	1708:00	152.88	-1.41	222.99				0			30
31	26	1709:00	152.58	-.30	221.94				0			31
32	26	1710:00	152.16	-.42	220.06				0			32
33	26	1712:00	149.64	-2.52	216.88				0			33
34	26	1713:00	149.04	-.60	214.81				0		10th GRAD. STOP @ 6000 FT	34
35	26	1714:00	149.45	.41	213.58				0			35
36	26	1715:00	150.25	.80	212.84				0			36
37	26	1716:00	151.69	1.44	212.26				0		PULL TOOLS OUT OF HOLE	37
38	26	1720:00	146.76	-4.93	206.58				0			38

Computer-Forms Toppan Moore

452248

SURFACE RECORDING DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
4	1	PELICAN NO.5	26/ 3/86	20	0

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO-AUSTRALIA	PELICAN	BASS STRAIT	DIAMOND M EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
JOHN HARKINS	BOB BEQUETTE	3143-3162.5 M	GRC 63042	2848.4 M

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	26	1725:00	137.30	-9.46	197.23				0			1
2	26	1730:00	136.57	-.73	186.55				0			2
3	26	1735:00	135.51	-1.06	174.43				0			3
4	26	1740:00	131.88	-3.63	162.68				0			4
5	26	1745:00	126.33	-5.55	147.53				0			5
6	26	1755:00	117.72	-8.61	113.38				0			6
7	26	1759:40	114.25	-3.47	93.58				0		TOOLS IN LUBRICATOR	7
8	26	1800:00	111.94	-2.31	90.70				0			8
9	26	1801:00	112.76	.82	89.15				0		END OF TEST	9
10												10
11												11
12												12
13												13
14												14
15												15
16												16
17												17
18												18
19												19
20												20
21												21
22												22
23												23
24												24
25												25
26												26
27												27
28												28
29												29
30												30
31												31
32												32
33												33
34												34
35												35
36												36
37												37
38												38

Computer-Forms Topper Phase

OTIS

'.D READINGS
...GLE STAGE UNIT

OEC-905-A

452249

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST # 5	PELICAN # 5	1440PSI 3PHASE SEPARATOR	30 MAR 82	1	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN			

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
2868 – 2884 M (~~FT.~~)	(FT.)	☐ PIPELINE ☒ FLARE	5'761 (INS)	0-100	☐ UPSTREAM ☒ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1								TEST STRING AND TUBING CONVEYED PERFORATING											1
2								GUN RUN IN THE HOLE											2
3								TEST STRING DISPLACED WITH NITROGEN											3
30 MAR 0525								B. O. P. RAMS CLOSED											4
5 0527			56	1480				PRESSURE UP ANNULUS TO OPEN LPR-N TEST VALVE											5
6 0532		1350	56	1480				BLEED DOWN WELLHEAD PRESSURE											6
7 0543		1350	56	2200				INCREASE ANNULUS PRESSURE TO ACTIVATE PERFORATING GUNS											7
8 0544		1350	56	2200															8
9 0545		1350	56	2400															9
10 0546		1360	56	2500															10
11 0547		1370	56	2500															11
12 0548		1390	56	2500															12
13 0550		1402	58	2500															13
14 0551		1420	58	2500															14
15 0552		1425	59	2500															15
16 0553		1430	59	2500															16
17 0554		1440	59	2520															17

Enclosure No. 10

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452250

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #5	PELICAN #5		30 MAR 86	2	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 0555		1450	59	2500															1
2 0600		1478	59	2520															2
3 0605		1525	59	2520															3
4 0610		1545	59	2520															4
5 0615		1590	58	2520															5
6 0620		1650	59	2520															6
7 0645		1720	59	2520															7
8 0700		1785	59	2510															8
9 0715		1830	59	2510															9
10 0721		1850	59	2510			16	WELL OPENED TO FLARE						ON 16/64"		ADJUSTABLE CHOKE			10
11 0722		1820	59	2510			16												11
12 0723		1750	59	2510			16												12
13 0724		1720	59	2510			16												13
14 0725		1680	59	2510			16												14
15 0726		1650	59	2510			16												15
16 0727		1600	59	2510			16												16
17 0728		1570	59	2500			16												17

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

452251

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #5	PELICAN #5		30 MAR 82	2	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 0729		1540	39	2500			16												1
2 0730		1500	59	2500		—	16	"											2
3 0735		1370	59	2500			16												3
4 0740		1220	57	2500			16												4
5 0745		1100	57	2480			16												5
6 0750		980	57	2480			16												6
7 0755		870	57	2480			16												7
8 0800		770	57	2500			16												8
9 0815		565	58	2500		—	16	"											9
10 0830		370	57	2530			16												10
11 0845		250	59	2540			16												11
12 0850		210	59	2540			16		GAS AT SURFACE										12
13 0900		140	60	2575			16		"										13
14 0915		60	60	2600			16		"										14
15 0930		45	61	2520			16		PRODUCTION LOGGING TOOL RUN IN HOLE										15
16 0938		50	61	2520		—	16	"	FLUID AT SURFACE										16
17 0945		105	62	2580			16												17

OTIS

FLD READINGS
SINGLE STAGE UNIT

OEC-905-A

452252

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST # 5	PELICAN # 5		20/3/84	4	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 1000		110	62	2530			16												1
2 1007		108	63	2530			24		change to 24/64" ADJUSTABLE CHOKE										2
3 1008		100	63	2530			24												3
4 1009		105	63	2530			24												4
5 1010		107	63	2530			24		WATER AT SURFACE										5
6 1015		107	60	2530			24		100% WATER										6
7 1018		150	60	2530			32		change to 32/64 ADJUSTABLE CHOKE										7
8 1019		145	60	2530			32												8
9 1020		150	60	2530			32		CO_2 8%										9
10 1025		100	62	2540			32		muddy water										10
11 1030		45	63	2550			32												11
12 1045		0	64	2560			32												12
13 1100		0	64	2570			32												13
14 1115		10	64	2580			32		mud at surface										14
15 1130		50	63	2520			32												15
16 1145		44	65	2550			32		90% WATER			10% MUD							16
17 1200		26	63	2550			32												17

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

452253

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST# 5	PELICAN# 5		30/3/86	5

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN			

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
2808 - 2884 M (FT.)	(FT.)	☐ PIPELINE ☑ FLARE	5.761 (INS)	100	☑ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 1215		Ø	64	2460			32												1
2 1230		Ø	64	2460			32												2
3 1245		Ø	64	2460			32												3
4 1300		Ø	64	2470			32												4
5 1315		38	60	2480			32		FLUIDS TO SURFACE										5
6 1324		11	62	2480			32		WELL SHUT IN AT CHOKE MANIFOLD										6
7 1335		20	62	2480			–												7
8 1345		28	62	2480			–												8
9 1357		31	63	2480			–												9
10 1405		38	63	2480			–												10
11 1419		40	62	2480			–												11
12 1435		44	62	2480			–												12
13 1445		60	63	2480			–												13
14 1500		72	63	2480			–												14
15 1515		83	62	2490			–												15
16 1530		116	62	2490			–												16
17 1545		160	62	2490			–												17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452254

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO, YR.)	PAGE OF
DST # 5	PELICAN # 5		30/9/86	6

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN			

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
2768 - 2884 m (FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 1430		200	62	2490			–												1
1445		250	62	2470			–												2
1500		305	62	2470			–												3
1515		345	61	2460			–												4
1530		400	61	2450			–												5
1545		445	61	2440			–												6
1600		484	61	2440			–												7
1615		530	60	2430			–												8
1630		555	60	2430			–												9
1645		574	60	2500			–												10
1700		630	59	3500			–												11
1715		645	58	2490			–												12
1730		670	58	2480			–												13
1745		690	57	2470			–												14
1800		710	57	2460			–												15
1815		730	57	2460			–												16
1830		750	56	2460			–												17

OTIS

'LD READINGS
SINGLE STAGE UNIT

OEC-905-A

452255

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST 5	PELICAN 1		30/3/86	7

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA	PELICAN			

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
2868 - 2884 M (FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 1845		760	56	2440			-												1
2 1900		765	56	2430			-												2
3 1915		775	56	2420			-												3
4 1930		782	56	2410			-												4
5 1945		785	56	2520		-	-	-											5
6 1951		790	56	2510			16	opened up to gas flare on						16/64"	adj. choke				6
7 1952		720	56	2510			16	gas to surface.											7
8 1953		620	56	2510			16												8
9 1954		560	54	2510			16												9
10 1955		510	53	2510			16												10
11 1956		450	53	2510			16												11
12 1957		400	52	2510		-	16	-											12
13 1958		360	52	2510			16												13
14 1959		330	52	2510			16												14
15 2000		290	52	2510			16												15
16 2001		240	52	2510			16												16
17 2002		200	52	2510			16												17

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

452256

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #5	PELICAN #5		30 MAR 82	8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR 2003		175	52	2510			16												1
2004		150	52	2510			16												2
2005		120	52	2510			16												3
2010		51	52	2510			16												4
2015		27	52	2520			16												5
2020		15	52	2520			16												6
2025		10	53	2520			16												7
2030		6	54	2540			16												8
2035		5	54	2540			16												9
2040		4	54	2540			16												10
2045		4	55	2540			16												11
2100		2	55	2550			16												12
2115		2	55	2550			16												13
2130		1	55	2550			16												14
2145		1	55	2550			16												15
2200		1	55	2550			16												16
2205		1	55	2550			—		Shut-in at choke manifold										17

452257

OTIS

OTIS

D READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #5	PELICAN 5		31 MAR 88	9	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
30 MAR / 2210		7	54	2560			-												1
2215		10	54	2560			-												2
2230		29	54	2560			-												3
2245		61	54	2560			-												4
2300		90	53	2560			-												5
2315		125	53	2550		-	-	-											6
2330		162	53	2550			-												7
2345		209	53	2550			-												8
31/3/88 / 0000		282	53	2540			-												9
0015		315	53	2520			-												10
0030		340	53	2520			-												11
0045		362	53	2510			-												12
0100		395	52	2500	-	-	-	-											13
0115		415	52	2480			-												14
0130		428	52	2480			-												15
0145		434	52	2480			-												16
0200		440	52	2470			-												17

452258

OTIS

F . D READINGS
S..GLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #5	PELICAN #5		31 MAR 82	10	

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
31 MAR																			
0215		444	52	2470			–												1
2																			
0230		446	51	2460			–												2
3																			
0245		447	51	2460			–												3
4																			
0300		448	51	2460			–												4
5																			
0315		448	51	2450			–												5
6																			
0330		448	51	2450			–												6
7																			
0345		447	50	2450			–												7
8																			
0400		448	50	2450			–												8
9																			
0415		447	50	2440			–		Schlumberger start to pull out of hole										9
10																			
0430		447	50	2440															10
11																			
0445		445	50	2420			–												11
12																			
0500		445	50	2420			–												12
13																			
0515		443	50	2410			–												13
14																			
0530		442	50	2410			–												14
15																			
0545		442	50	2410			–												15
16																			
0600		437	50	2560															16
17																			
0615		437	50	2550															17

OTIS

F[illegible] READINGS
S[illegible]LE STAGE UNIT

OEC-905-A

452259

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #5	PELICAN #5		31 MAR 82	11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
31 MAR 0630		437	50	2550			—												1
2 0633		437	50	2550			8	WELL OPEN TO FLARE ON 8/64 POSITIVE CHOKE						8/64					2
3 0634		410	50	2550			8												3
4 0635		395	50	2550			8												4
5 0636		355	49	2550			8												5
6 0637		349	49	2550			8												6
7 0638		315	49	2550			8												7
8 0639		298	49	2550			8												8
9 0640		283	49	2550			8												9
10 0641		263	49	2550			8												10
11 0642		245	49	2550			8												11
12 0643		218	49	2550			8												12
13 0644		200	49	2550			8												13
14 0645		180	49	2550			8												14
15 0650		132	49	2550			8												15
16 0655		80	49	2550			8												16
17 0700		60	48	2550			8												17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452260

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST 5	POLICAN #5		31 MAR 86	12	15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / CO_2 % H_2S %	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
31 MAR 0705		55	49	2550			8												1
2 0710		44	49	2550			8												2
3 0715		35	49	2550			8												3
4 0720		32	49	2550			8												4
5 0730		24	50	2560			8												5
6 0745		15	50	2560			8		CO2	10%									6
7 0800		12	50	2570			8												7
8 0815		8	50	2580			8												8
9 0830		6	50	2580			8												9
10 0845		6	50	2590			8												10
11 0900		5	50	2550			8												11
12 0915		4	51	2560			8												12
13 0930		4	51	2560			8												13
14 0942		4	51	2560			8		PRODUCTION LOGGING TOOL RUN IN THE HOLE										14
15 0945		16	53	2560			8		OIL TO SURFACE										15
16 0950		17	54	2560			8												16
17 0955		19	55	2560			8												17

OTIS

F READINGS
SINGLE STAGE UNIT

OEC-905-A

452261

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
				13	15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY PPM (%)
1 / 1000		20	56	2560			8												1
2 / 1015		19	56	2560			8	FLOW DIVERTED TO OIL GUNS.											2
3 / 1030		18	57	2560			8			API OIL			49.	AT 60°F					3
4 / 1045		20	57	2570			8												4
5 / 1100		23	56	2570			8		WATER TO SURFACE				BSW	100%. CL 1200					5
6 / 1115		28	55	2570			8												6
7 / 1130		32	55	2570			8												7
8 / 1145		34	55	2570			8												8
9 / 1200		36	55	2570			8			CL. 1200									9
10 / 1215		39	55	2570			8	FLOW DIVERTED TO					STOCK	1.5 INITIAL TANK					10
11 / 1230		41	55	2560			8	CL 1200 PPM						2.0					11
12 / 1245		42	56	2570			8	CL 1200 PPM						2.5					12
13 / 1300		41	56	2570			8	CL 1200 PPM						2.75					13
14 / 1315		39	56	2570			8	CL 1200 PPM.				CO2	25%	3.0					14
15 / 1330		38	57	2570			8	CL 1200 PPM						3.0					15
16 / 1345		42	57	2570			8	CL 1200 PPM						3.5					16
17 / 1400		42	58	2570			8	CL 1200 PPM.				CO2	25%	3.5					17

452262

OTIS

OTIS FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST# 5	PELICAN #5		31/3/86	14	15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR=1) CO_2 % H_2S %	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY PPM (%)
1 / 1415		36	60	2570			8	CL 1200 PPM. PLTOOL START OUT OF HOLE						3.75					1200
2 / 1430		30	60	2570			8							4.0					
3 / 1435		12	60	2560			64	CHANGE CHOKE TO					64/64 "	ADJUSTABLE					
4 / 1436		8	60	2570			64												
5 / 1438		6	60	2570			108	CHANGE CHOKE TO					108/64 "	ADJUSTABLE					
6 / 1439		5	60	2570			108												
7 / 1440		5	60	2570			108												
8 / 1441		4	60	2570			128	CHANGE CHOKE TO					128/64 "	ADJUSTABLE					
9 / 1442		4	58	2570			128												
10 / 1445		4	58	2570			128							4.5					
11 / 1450		4	58	2570			128												
12 / 1455		4	58	2570			128												
13 / 1500		4	59	2570			128	28% CO_2						4.6					
14 / 1515		4	60	2570			128	PRODUCTION LOGGING TOOL AT SURFACE						4.8					
15 / 1530		6	60	2570			128	CL 1200 PPM						4.5					
16 / 1545		6	60	2570			128	CL 1200 PPM						4.75					
17 / 1600		5	59	2570			128							4.75					

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

452263

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO, YR.)	PAGE	OF
DST #5	PELICAN #5		31 MAR 86	15	15

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W/ BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
31MAR 1607		5	59	—			—	BLEED OFF ANNULUS					CLOSING LPR-N						1
1610		0	59	—			—												2
1615		0	59	—			—	START RIGGING DOWN SCHLUMBERGER LUBRICATOR.											3
1620		0	59	—				OPEN MIDDLE PIPE RAMS											4
1630		0	59	—				CLOSE MIDDLE PIPE RAMS.											5
1720		—	—	3000				INCREASE ANNULUS PRESSURE											6
1732		—	—	—				BLEED DOWN ANNULUS											7
1742		—	—	3500				INCREASE ANNULUS PRESSURE. OPEN LPR-M2									BEGIN		8
9								REVERSE CIRCULATING TEST STRING ENDING DST #5											9
10																			10
11																			11
12																			12
13																			13
14																			14
15																			15
16																			16
17																			17

DTI
OTIS

FIELD READINGS
SINGLE STAGE UNIT

DEC 9614-A

= 1HW

452264

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE	PAGE OF
5A-2	PELICAN #5		8-4-86	1 8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	WATER RANGE (BBLS)
AMOCO				

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
2555m - 2560.5m 2542m - 2552m 2552 - 2562m (FI)	(FT.)	☐ PIPELINE ☑ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME	WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK (HOURS)	FLOW OR SHUT-IN DURATION	FLOWING PRESS (PSIG)	TEMP (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS (PSIG)	DIFF PRESS ($\frac{IN}{H_2O}$)	TEMP (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP °F	OIL GRAVITY 60°F °API	BSW %	TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
18:4																		
00 20																		
02:20																		
02:25																		
03.40		690		1900	Open	LPR	N	-										
07'55																		
09:30				1500	Open	LPR	N											
10 00																		
10 20																		
10' 50																		
12:30		650		1500														
12.53		650		"														
13:50		690		"				2220										
13:51		700	56	1450														
13:52		700	"	"														
13:53		700	"	"														
13:54		700	"	"														
13:55		710	"	"														

Close SSLV & bleed off lubricator

Rig up Schlum. perforating guns

Open SSLV - Schlum. RIH to perforate

Schlum unable to pass through bundle carrier

Rig down Schlum - unable to perforate

Rig up OMS W/L & RIH with gauge ring

P.O.O.H OMS gauge ring

Close SSLV and bled off lubricator to rig down W/L.

Rig up Schlum

Open SSLV and pressure test string with N_2

Schlum R.I.H.

Schlum perforate interval 2555m - 2560.5m.

Shut in at choke manifold

Enclosure No. 11

OTIS

FIELD READINGS
SINGLE STAGE UNIT

452265

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
5A	PELICAN #5	3 phase 48"×10' Horizontal Sep.	8-4-56	2 8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBL/D)
Amoco			n/a	n/a

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF. PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W_f	#1 TANK OR METER READING	SALINITY
24 HOUR CLOCK	(HOURS)	(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	($\frac{IN}{H_2O}$)	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	60°F °API	BSW %	#2 TANK OR METER READING (INS OR BBL)	(PPM)	
1																				1
13:56		715	56	1480			2220		Start in at choke manifold.											
2																				2
13:57		718	"	"																
3																				3
13:58		718	"	"																
4																				4
13:59		720	"	"																
5																				5
14:00		720	'	"					Schlum. P.O.H. with perforating guns											
6																				6
14:05		725	58	"																
7																				7
14:10		732	"	"																
8																				8
14:15		738	"	"																
9																				9
14:20		744	59	"																
10																				10
14:25		750	59	"																
11																				11
14:30		754	60	"																
12																				12
14:35		758	"	"																
13																				13
14:40		760	59	1490																
14																				14
14:45		762	58	1500																
15																				15
14:50		765	58	1510																
16																				16
14:55		770	"	1510					Schlum. in lubricator.											
17																				17

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OTIS

OEC-7405-A

452266

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
5A	PELICAN 5A		3-4-86	3	8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HR.-MIN.)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY / 60°F °API	W_f / BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (PPM)
1																			1
15:10		781	57	1520			20/64		Close SSLV & bled off lubricator to change Schlum tool string										2
15:19		—	—	ZERO					Close LPR-N & reopen SSLV -										3
15:30		700	56	ZERO			64 adj.		Bled down tubing pressure through choke manifold										4
15:50		ZERO	"	ZERO					Schlum rig down perf guns & rig up to run PLT										5
17:40		"	"	"					Schlum RIH to establish fluid contact.										6
19:25		ZERO	"	1570					Pressure annulus to open LPR-N										7
19:30		34	50	1570			16 adj.		Open through choke manifold for INITIAL FLOW										8
19:31		28	"	"			"		Flowing gas to flare boom.										9
19:32		26	"	"			"												10
19:33		20	"	"			"												11
19:34		15	"	"			"												12
19:35		13	"	"			"												13
19:36		11	"	"			"												14
19:37		8	"	"			"												15
19:38		6	"	"			"												16
19:39		5	"	"			"												17
17																			

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-9658-A

452267

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (MO., DA., YR.)	PAGE	OF
5A	PELICAN #5		8-1-86	4	8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
Amoco				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

	TIME	WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
	DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (ppm)	
1	19:42	2	50	1570			16/64													1
2	19:45	0	"	"			"			Weak blow at surface										2
3	19:50	0	"	"			"													3
4	19:55	0	"	"			"			"		"		"						4
5	20:00	0	"	"			"													5
6	20:15	0	"	"			"													6
7	20:30	0	"	"			"			"		"		"						7
8	20:45	0	"	"			"			"		"		"						8
9	21:00	0	"	"			"			Intermittent bubble indication at surface.										9
10	21:15	0	"	"			"			"		"		"	"	"		"		10
11	21:30	0	"	"			"			"		"		"	"	"		"		11
12	21:45	0	"	"			"			"		"		"	"	"	"	"		12
13	22:00	0	"	"			"			"		"		"	"	"	"	"		13
14	22:15	0	"	"			"			"		"		"	"	"	"	"		14
15	22:30	0	"	"			"			Weak blow at surface										15
16	22:45	0	"	"			"					"								16
17																				17

452268

OTIS FIELD READINGS
SINGLE STAGE UNIT

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE	PAGE OF
SA	PELICAN #5		8-4-84	3 8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☐ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W_f	TANK OR METER READING	SALINITY
24 HOUR CLOCK		(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN H_2O)	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	60°F °API	BSW (%)	#2 TANK OR METER READING (INS OR BBL)	(PPM)
1																				1
2315	C	49	1550				16	ADJ		WEAK	1200		AT SURFACE							
2																				2
2330	C	49	1550				16	"			"									
3																				3
2345	C	49	1550				"	"			"									
4																				4
0000	C	48	1550				"				"									
5																				5
0015	C	48	1550				"				"									
6																				6
0030	C	48	1550				"				"									
7																				7
0045	C	48	1550				"				"									
8																				8
0100	C	48	1550				"				"									
9																				9
0115	C	48	1550				"				"									
10																				10
0130	C	47	1550				"				"									
11																				11
0145	C	47	1550				"				"									
12																				12
0200	C	48	1550				"				"		Schlumberger	pick-up PLT						
13																				13
0215	C	48	1550				"				"									
14																				14
0230	C	48	1550				"				"									
15																				15
0245	C	47	1550				"				"									
16																				16
0300	C	47	1550				"			Intermittent			bubble	indication at surface						

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OTIS

452269

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
5A	PELICAN #5		9-4-56	6	8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
[illegible]				

INTERVAL TESTED	MID SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W_t	#1 TANK OR METER READING	SALINITY
24 HOUR CLOCK	HRS-MIN	(PSIG)	(°F)	(PSIG)	PSIG	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN H_2O)	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	60°F °API	BSW	#2 TANK OR METER READING (INS OR BBL)	(%)
1																			1
0330		C	47	1550			0	ADJ		WEAK	BLOW	AT	SURFACE						
2																			2
0345		C	47	1550			16	"		NO	BLOW	AT	SURFACE						
3																			3
0400		C	47	1550			4	"		"			"						
4																			4
0415		C	47	1550			"	"		"			"						
5																			5
0430		C	47	1550			"	"		"			"						
6																			6
0445		C	47	1550			"	"		"			"						
7																			7
0500		C	47	1550			"			"			"						
8																			8
0515		C	47	1550			"			"			"						
9																			9
0530		C	47	1550			"	"		"			"						
10																			10
0545		C	47	1550			"			"			"						
11																			11
0600		C	47	1550			"			"			"						
12																			12
0615		C	47	1550			"			"			"						
13																			13
0630		C	47	1550			"			"			"						
14																			14
0645		C	47	1550			"			"			"						
15																			15
0700		C	47	1550			"			"			"						
16																			16
0730		C	47	1550			"	"		"			"						
																			17

452270

OTIS FIELD READINGS
SINGLE STAGE UNIT

OTIS

ORIG. 9684-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
5A	PELICAN - 5		9-4-86	7 8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (PSI)
AMOCO				

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING		
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF PRESS	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W_f	METER	TANK OR METER READING	SALINITY
24 HOUR CLOCK	HOURS	(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN H_2O)	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	60°F °API	BSW	#2 METER (INS)	#2 TANK OR METER READING (INS OR BBL)	(%)
1																				1
08:30		0	47	1550			16 Adj													
2																				2
09:00		"	"	"			"													
3																				3
09:30		"	"	"			"													
4																				4
10:00		"	48	"			"													
5																				5
10:30		"	55				"													
6																				6
10:30		0	-	0			"													
7																				7
11:00																				
8																				8
11:15																				
9																				9
12:21																				
10																				10
12:23		400	-	-			16 Adj													
11																				11
12:25																				
12																				12
12:30																				
13																				13
12:34																				
14																				14
12:44																				
15																				15
12:55																				
16																				16
12:58																				
																				17

Weak blow at surface.

Bleed of annulus press. Close LPR-N Test V/V

Close SSLV & rig down Schlum.

Open SSLV

Shear LPR-M-2 and start rev. circ.

Gas cut mud with trace of condensate to surface

Sample #1 taken

Sample #2 taken

Sample #3 taken

Gas cut muddy water to surface.

Sample #4 taken (formation water Cl- 1500 ppm

Mud returns @ 510 STROKES

452271

OTIS

OTIS

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
5A	Pelican 5		10-8-86	8	8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
Amoco				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF. PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	$\%_f$	#1 TANK OR METER READING	SALINITY
24 HOUR CLOCK	HOURS	(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN H_2O)	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	60°F °API	BSW (%)	#2 TANK OR METER READING (INS OR BBL)	(PPM)
1																			1
14:00									Circulate to mud pits.										
2																			2
16:15									POOH test string - Breakout SSLV										
3																			3
16:40									Break out SSTT - & stack in derrick.										
4									End of DST 5A										4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12
13																			13
14																			14
15																			15
16																			16
																			17

FIELD READING
SINGLE STAGE UNIT

OTIS

DEC-905 A

TEST NO.	WELL NAME OR NUMBER	TEST UNIT DESCRIPTION		PAGE OF
DST #6	PELICAN #6	452272	10 Apr '86	1 1

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	WATER RANGE (BBLS)
Amoco Australia Pet Co.				

INTERVAL TESTED	BHP SURVEY DEPTH	GAS PRODUCED TO	GAS METER RUN SIZE	DIFF. RANGE (INS. H2O)	STATIC TAP LOCATION
(FT.)	(FT.)	☐ PIPELINE ☐ FLARE	(INS)		☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL			GAS METERING				OIL OR CONDENSATE METERING			WATER METERING	
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS	DIFF. PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	TEMP.	GRAVITY	#1 TANK OR DISPOSAL UNIT
24 HOUR CLOCK	(HOURS)	(PSIG)	(°F.)	(PSIG)	(PSIG)	(°F.)	(64ths IN)	(64ths IN)	(INS)	(PSIG)	(INS OR BBLS)	(°F.)	°H2S	#2 TANK OR METER READING (INS OR BBLS)	#2 OIL TEMP. (°F.)	(°API)	#2 TANK OR DISPOSAL UNIT
10-4-86																		
1355					R.I.H. SUBSEA TEST TREE													
2 1540					RIG UP SURFACE TEST TREE													
3 1547					SET PACKER													
4 1600					RIG UP SURFACE EQUIPMENT													
5 1608					PRESSURE TEST TUBING TO 5000 PSI													
6 1650					" " CHOKE MANIFOLD TO 5000 PSI													
7 1720					OPEN SWAB V/V & TIW V/V													
8 1725					CLOSE MIDDLE PIPE RAM & OPEN LPR-N TOOL													
9 1728					OTS RUN IN HOLE WITH GAUGE RING													
10 1805					OTS COMPLETED WIRELINE GAUGE RING RUN													
11 1900					RIG UP SCHLUMBERGER WIRELINE LUBRICATOR													
12 1905					BLED OFF ANNULUS PRESSURE TO CLOSE LPR-N TOOL													
13 1935					PRESSURE TEST SCHLUM. WIRELINE LUBRICATOR TO 5000PSI													
14 1948					PICK UP TEST STRING TO OPEN CIRCULATING PORTS													
15 2000					PUMP N_2 INTO STRING TO DISPLACE WATER (3000 PSI)													
16 2126					CLOSE CIRCULATION PORTS													
17 2127					BLED DOWN TUBING PRESSURE TO 1250 PSI													

Enclosure No. 12

OTIS FIELD READINGS
SIN STAGE NT

OEC-905-A

TEST NO.	WELL NAME & NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
117 #6	Pelican #5	452273	10-4-86	2 / 11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
Amoco Prod. Pet. Co.				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINI
10-4-86																			
2147		closed		middle	rams														
2																			
2150		opened	LPR-N	(Annulus	pressure:	1500 psi)													
3																			
2200		Close	TIW	V/V	&	bleed	off	flow	line	press									
4																			
2355		Pressure up above	TIW	V/V	and	opened	TIW	V/V	(Tbng	pr:	1350	psi)							
5																			
24:00		Schlumberger	RIH	with	perforating	guns													
11-4-86																			
01:26		1350	N/A	1510			N/A		Schlum	perforate	interval.	Shut	in	at	choke	manifold			
7																			
01:27		1430.	-	"			-												
8																			
01:28		1500	-	"			-												
9																			
01:29		1660	-	"			-												
10																			
01:30		1740	-	"			-												
11																			
01:35		2050		"			-												
12																			
01:40		2300		"			-												
13																			
01:45		2460		"					Schlum	POOH	with	perforating	guns						
14																			
01:50		2525		"			"												
15																			
01:55		2570		"			"												
16																			
02:00		2600		"			"												
17																			
02:05		2600		"															

OTIS FIELD READINGS
SIN STAG IT
OEC-905-A

TEST NO.	WELL NAME / NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #6	PELICAN #5	452274		3	11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA PETROLEUM CO.				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☑ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY (60°F °API)	BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (PPM)
11-486																			
0210		2610	-	1520															
2 0215		2610	-	1540															
3 0220		2620	-	1560															
4 0225		2620		1580															
5 0230		2620		1600															
6 0232		2620		1610	SCHLUM. TOOL IN LUBRICATOR														
7 0235					CLOSE TIW V/V & BLED PRESSURE AT CHOKE MANIFOLD														
8 0242					OPEN KILL LINE V/V														
9 0245					R.D. SCHLUM. TOOL & CLOSE CROWN V/V.														
10 0325					OPEN CROWN V/V														
11 0400					R. UP. SCHLUM WIRELINE LUBRICATOR														
12 0605					PRESSURE 2700PSI ON W/L LUBRICATOR TO EQUILIZE ACROSS TIW V/V.														
13 0625		2700	-	1570	OPEN TIW V/V.														
14 0630		2700	-	1570	SCHLUB. R.I.H WITH OTIS H.P. GAUGE														
15 0635		2710	-	1570															
16 0640		2710	-	1570															
17 0645		2710		1570															

OTIS FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

TEST NO.	WELL NAME & NUMBER	TEST UNIT DESCRIPTION	DATE (DAY, MO., YR.)	PAGE OF
DST #6	PELICAN #5	452275	11 APR. 86	4 11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO AUSTRALIA PETROLEUM Co.				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY	FLOW OR SHUT-IN DURATION	TUBING PRESS.	TEMP.	CASING PRESS.	BHP	BHT	MAN. CHOKE	HEATER CHOKE	ORIFICE SIZE	STATIC PRESS.	DIFF PRESS.	TEMP.	GAS GRAVITY (AIR = 1)	#1 TANK OR METER READING	#1 OIL TEMP	OIL GRAVITY	W_f	#1 TANK OR METER READING	SALINI
24 HOUR CLOCK	(HOURS)	(PSIG)	(°F)	(PSIG)	(PSIG)	(°F)	(64th IN)	(64th IN)	(INS)	(PSIG)	(IN_{H_2O})	(°F)	% H_2S	#2 TANK OR METER READING (INS OR BBL)	#2 OIL TEMP (°F)	60°F °API	BSW	#2 TANK OR METER READING (INS OR BBL)	
11-4-86																			
0650		2710	-	1570															
2 0655		2720		1570															
3 0700		2720		1570															
4 0715		2720		1570															
5 0730		2730		1570															
6 0745		2740	55	1560															
7 0800		2740		1560	SCHLUM TOOL AT BOTTOM.														
8 0805		2650		1560	BLED DOWN PRESSURE BY 100 PSI TO CHECK DHSIT LATCHED														
9 0810		2675		1560															
10 0812		2675	55	1560	~~OPEN WELL TO FLOW~~ ON				16/64 ADJ.										
11 0813		2450	55	1560															
12 0814		2370	55	1560															
13 0815		2300	55	1560															
14 0816		2220	55	1560															
15 0817		2170	56	1570															
16 0818		2080	57	1570															
17 0819		1970	62	"															

FIELD READINGS
SINGLE STAGE UNIT

OEC-905-A

NO.	WELL	REMARKS	TEST DESCRIPTION	DATE (DAY, MO., YR.)	PAGE	OF
DST #6	PELICAN #5		452276		5	11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. ($\frac{IN}{H_2O}$)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY ° 60°F °API	W_f BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (PPM)
1 0820		1920	57	1570			16	ADJ											
2 0821		1880	57	1580			"												
3 0822		1830	58	1580			"												
4 0825		1750	58	1590			"		GAS TO SURFACE										
5 0830		1610	58	1590			"		CONDENSATE to surface										
6 0833		1500	65	1510			24	ADJ	CHANGE CHOKE										
7 08:36		1460	65	"			"		Rat hole mud gas cut.										
8 08:40		1535	65	"			24		Surging W.H.P.										
9 08:45		1525	70	1550			"		Gas cut mud.										
10 08:50		1730	76	"			"												
11 08:55		1740	80	"			"												
12 0900		1720	85	1570			24												
13 0905		1720	85	1420			"												
14 0910		1625	83	1420			"												
15 0915		1675	83	1420			"												
16 0920		1675	87	1430			"		Flowing gas & CONDENSATE										
17 07:30		1050	84	1450															

OTIS FIELD READINGS SINGLE TAG TEST

OEC-905-A

TEST NO. DST #6 | WELL NAME & NUMBER PELICAN #5 | TEST UNIT DESCRIPTION 452277 | DATE (DAY, MO., YR.) 11-4-86 | PAGE 6 OF 11

CUSTOMER AMOCO | FIELD | FORMATION | OIL METER SIZE | METER RANGE (BBLS)

INTERVAL TESTED (FT.) | BHP SURVEY DEPTH (FT.) | GAS PRODUCED TO ☐ PIPELINE ☑ FLARE | GAS METER RUN SIZE (INS) | DIFF. RANGE (INS. H_2O) | STATIC PRESSURE TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

	TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
	DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. ($\frac{IN}{H_2O}$)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY @ 60°F °API	W.C. BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY PPM Cl
1	0935		1650	84	1450			24	ADJ					~~CO_2=5%~~						
2	0945		1660	84	1450			"						CO_2=5%						
3	0952		1650	85	1500			24	CHANGE TO POSITIVE CHOKE											
4	1000		1630	87	1480			24	Pos											
5	1015		1620	87	1500			"										0.6 Water Trace Sed.		
6	1030		1620	90	1510			"	DIVERT FLOW THRU SEPARATOR											
7	1045		1620	90	1540			"										30% H_2O Trace Sed		1800
8	1100		1620	91	1540			"		2.250	295	48	50					25% H_2O Trace Sed		
9	1115		1615	92	1450			"		"	"	"	"					25% H_2O "		
10	1130		1615	92	1560			"		"	"	49	"					20% H_2O Trace Sed		2,000
11	1145		1631	94	1500			"		"	"	48	"					15% H_2O Trace Sed		
12	1200		1620	94	1500			"		"	"	49	"	CO_2=2%				15% H_2O Trace Sed		1600
13	1215		1620	95	1520			"		"	"	48	"					20% H_2O Trace Sed.		
14	1230		1620	95	1510			"		"	"	48	"					20% H_2O Trace Sed		
15	1245		1622	95	1520			"		"	295	"	"					20% H_2O Trace Sed		
16	1300		1623	96	1530			"		"	300	"	51	CO_2=7%				15% H_2O		
17	1315		1625	97	1530			"		"	"	"	"					20% H_2O		

SINGLE STAGE UNIT

OEC-905-A

TEST NO. DST #6 | WELL NUMBER PELICAN #5 | TEST DESCRIPTION 452278 | DATE (DAY, MO., YR.) 11-4-86 | PAGE 7 OF 8

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☒ FLARE			☐ UPSTREAM ☐ DOWNSTREA

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERIN	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY 60°F °API	W/C BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALIN
1 1330		1625	97	1530			24	POS.	2.25	300	47	51	CO_2=6%			57.4	15		
2 1345		1625	97	1530			"		"	305	46	51				"			
3 1400		1625	98	1530			"		"	305	46	50				"	15		
4 1415		1625	98	1540			"		"	"	"	"				"			
5 1430		1625	98	1540			"		"	"	"	"	CO_2=6.5%	2.5 BBL TANK INITIAL	60		15		
6 1445		1625	98	1540			"		"	310	45	"	0.82	7.5	"	57.4	15		1500,
7 1500		1625	99	1540			"		"	305	47	"	"	13.0	"	"	15		
8 1515		1625	99	1540			"		"	"	46	"	"	18.5	"	"	15		
9 1530		1625	99	1540			"		"	"	45	51	CO_2=6%	24.0	"	"	15		1600,
10 1545		1625	99	1540			"		"	310	"	52	"	29.5	"	57.4	15		
11 1600		1625	99	1540			"		"	315	44	"	0.82	35.0	"	"	15		
12 1615		1625	100	1540			"		"	320	42	"	"	42.5	"	"	"		
13 1630		1625	100	1540			"		"	320	"	"	CO_2=5.5%	50.0	"	"	15		1600,
14 1645		1610	100	1540			"		"	"	"	"	"	57.5	"	57.4			
15 1700		1625	100	1540			"		"	"	"	"	"	63.0	"	"	15		
16 1715		1625	100	1550			"		"	315	43	"	"	68.0	"	"			
17 1730		1625	100	1550			"		SHUT IN at D.H.S.I.T.	310	44	"	for initial	73.5	buildup.		15	CO_2=6%	CL-16.

FIELD READINGS

OEC-905-A

TEST NO. DST #6 | WELL NAME & NUMBER PELICAN #5 | TEST UNIT DESCRIPTION 452279 | DATE (DAY, MO., YR.) 11-4-56 | PAGE 8 OF 11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
MARCO				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESSURE TAKEN
		☐ PIPELINE ☑ FLARE			☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. (IN H_2O)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY 60°F °API	W_f BSW (%)	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINITY (%)
1 1731		1600	100	1570					Pressure maintained at W.H while SHUT IN										
2 1732		1600	100	"															
3 1733		1600	100	"															
4 1734		1600	100	"															
5 1735		1590	99	"															
6 1736		1580	98	1560															
7 1737		1580	96	1550															
8 1738		1580	95	1540															
9 1739		1580	94	1540															
10 1740		1580	93	1540															
11 1745		1575	95	1530															
12 1800		1550	75	1500															
13 1815		1550	70	1480															
14 1830		1550	65	1440															
15 1845		1550	63	1430															
16 1900		1550	60	1430															
17																			

OIL SINGLE STAGE UNIT

OEC-965-A

TI	D.	LEASE NAME	RUN	TEST NO.	START DATE	AGE
	6	PELICAN #5		452280	11-4-86	9 11

CUSTOMER: AMOCO | FIELD: | FORMATION: | OIL METER SIZE: | METER RANGE (BBLS):

INTERVAL TESTED (FT.): | BHP SURVEY DEPTH (FT.): | GAS PRODUCED TO: ☐ PIPELINE ☑ FLARE | GAS METER RUN SIZE: 5-761 (INS) | DIFF. RANGE (INS H_2O): | STATIC [illegible] TAKEN: ☐ UPSTREAM ☑ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERIN	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF PRESS. ($IN\ H_2O$)	TEMP. (°F)	GAS GRAVITY (AIR = 1) / % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY / @ 60°F °API	BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	SALINI
1																			
23:00		1500	-	1420			NIL		SHUT IN at D.H.S.I.T.					& CHOKE		MANIFOLD			
2																			
23:07		1525	55	1420			"		OPEN D.H.S.I.T.										
3																			
23:08		1575	"	"			"												
4																			
23:09		1725	"	"			"												
5																			
23:10		1825	"	"			"												
6																			
23:11		1875	57	"			16	ADJ	OPEN THROUGH CHOKE MANIFOLD FOR 2ND FLOW										
7																			
23:12		1745	50	"			"												
8																			
23:13		1850	60	"			"												
9																			
23:14		1980	62	"			24	ADJ	INCREASING CHOKE GRADUALLY										
10																			
23:15		2025	64	"			"												
11																			
23:20		2170	65	1440			"		DRY GAS FLOWING BACK										
12																			
23:25		2100	"	1450			"												
13																			
23:30		1475	83	1460			40	ADJ											
14																			
23:35		1350	85	"			"		CONTINUED TO FLARE.										
15																			
23:40		1110	90	1470			48	ADJ											
16																			
23:45		850	92	1480			56	ADJ											
17																			
23:50		600	95	150			68	ADJ											

UIS FIELD READINGS
SINGLE STAGE UNIT

OEC-905 A

ES	NAI	NUM	UNIT	TRIP				
6	Pleasants		452281		11·4·86	10	11	

CUSTOMER: Amoco | FIELD | FORMATION | OIL METER SIZE | METER RANGE (BBLS)

INTERVAL TESTED (FT.) | BHP SURVEY DEPTH (FT.) | GAS PRODUCED TO ☐ PIPELINE ☐ FLARE | GAS METER RUN SIZE (INS) | DIFF. RANGE (INS. H_2O) | STATIC PRESS. TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

TIME		WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF. PRESS. (IN_{H_2O})	TEMP. (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP #2 OIL TEMP (°F)	OIL GRAVITY 60°F °API	BSW %	#1 TANK OR METER READING #2 TANK OR METER READING (INS OR BBL)	SALINITY ppm Cl⁻
1																			
23:55		466	96	1480			96 adj												
2																			
24:00		430	"	"			"												
3 12/4																			
00:15		395	96	1500			"												
4																			
00:30		500	113	1520			"						CO_2=4%				40%	WATER	2500
5																			
00:45		470	115	1510			"		UNSTABLE	WELLHEAD	PRESSURE						60%	"	2500
6																			
01:00		470	115	1500			"						CO_2=6%				75%	"	3000
7																			
01:15		440	118	"			"										60%	"	"
8																			
01:30		470	120	1530			"										65%	"	"
9																			
01:45		495	120	"			"										65%	"	"
10																			
02:00		490	122	1550			"						CO_2=7%				60%	"	"
11																			
02:15		490	123	1570			"										50%	"	"
12																			
02:30		510	124	1600			"						CO_2=9%				55%	"	"
13													0.82	8.0 INITIAL TANK					
02:45		525	125	1500			"		2.750	385	42	100			60	57.4	70%	"	"
14														18.5					
03:00		535	125	"			"		"	380	45	"	CO_2=7%		60		70%	"	"
15														29.5					
03:15		530	125	1500			"		"	380	43	"			"		65%	"	"
16														41.0					
03:30		520	126	"			"		"	380	42	"	CO_2=8%		"		65%	"	"
17														52.5					
03:45		525	127	1510			"		"	375	43	"			"		65%	"	"

FIELD READINGS
SINGLE STAGE

OEC-908-A

DST #6 | PELICAN #5 | 452282 | PAGE 11 | 11

CUSTOMER	FIELD	FORMATION	OIL METER SIZE	METER RANGE (BBLS)
AMOCO				

INTERVAL TESTED (FT.)	BHP SURVEY DEPTH (FT.)	GAS PRODUCED TO ☐ PIPELINE ☐ FLARE	GAS METER RUN SIZE (INS)	DIFF. RANGE (INS. H_2O)	STATIC PRESS. TAKEN ☐ UPSTREAM ☐ DOWNSTREAM

	TIME	WELLHEAD DATA			DOWNHOLE DATA		FLOW CONTROL		GAS METERING					OIL OR CONDENSATE METERING				WATER METERING	
	DAY / 24 HOUR CLOCK	FLOW OR SHUT-IN DURATION (HOURS)	TUBING PRESS. (PSIG)	TEMP. (°F)	CASING PRESS. (PSIG)	BHP (PSIG)	BHT (°F)	MAN. CHOKE (64th IN)	HEATER CHOKE (64th IN)	ORIFICE SIZE (INS)	STATIC PRESS. (PSIG)	DIFF. PRESS. (IN H_2O)	TEMP (°F)	GAS GRAVITY (AIR = 1) % H_2S	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL)	#1 OIL TEMP / #2 OIL TEMP (°F)	OIL GRAVITY 60°F API	% BSW	#1 TANK OR METER READING / #2 TANK OR METER READING (INS OR BBL) SALINI
1	0400		525	129	1520			96		2.750	380	43	100	CO_2=9%	64.0	100		60% WATER	3000
2	0407		675	130	1520	SHUT IN WELL BY DHSIT & CHOKE MANIFOLD													
3	0408		"	-	1510														
4	0409		"	-	"														
5	0410		"	-	"														
6	0415		"	-	"	PRESSURE MAINTAINED AT SURFACE WHILE S.I. DOWNHOLE													
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

OTIS

GAS FLOW RATE CALCULATIONS

OEC—862-B

TEST NUMBER	RATE NUMBER	AREA	WELL NAME OR NUMBER	DATE (DAY, MO, YR)	PAGE OF
6	1	TASMANIA	PELICAN 5	11 - 4 - 86	1 2

CUSTOMER	STANDARD CONDITIONS	ATM. PRESS	P_c =	T_c =	MEAS / EST	GAS SPECIFIC GRAVITY-G
AMOCO	☑ 14.73 psi 60°F ☐ OTHER				☐ / ☐	0.82

METER TYPE	METER RUN SIZE (INCHES)	FLOW RECORDER TYPE	h_w RANGE (INCHES WATER)	STATIC PRESS RANGE (psi)	F_U TABLE PREV. PAGE	$F_g = \sqrt{1/G}$	$C_1 = F_U \times F_g$
DANIELS	5.761	BARTON	100"	1500	24	1.10	26.5036

DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	STATIC PRESSURE P_f (psia)	DIFFERENTIAL PRESSURE h_w (INCHES WATER)	DOWN STREAM GAS TEMP. (°F)	$\sqrt{h_w P_f}$	ORIFICE SIZE d (INCHES)	$C_2 = F_b \times F_{tf} \times F_{pv} \times Y_2$				C_2	C ($C = C_1 \times C_2$)	CORRECTED GAS FLOW RATE $Q_g = C\sqrt{h_w P_f}$ (MMSCF/D)
							F_b	F_{tf}	F_{pv}	Y_2			
11:00		305	48	50	120.99	2.25	1034.5	1.0098	1.0261	1.000	1077.0839	28,546.60	3.453
11:15		305	48	50	〃	〃	〃	〃	〃	〃	〃	〃	〃
11:30		305	49	50	122.24	〃	〃	〃	〃	〃	1077.0839	28,546.60	3.489
11:45		305	48	50	120.99	〃	〃	〃	〃	〃	〃	28,546.60	3.453
12:00		305	49	50	122.24	〃	〃	〃	〃	〃	〃	28,546.60	3.489
12:15		305	48	50	120.99	〃	〃	〃	〃	〃	〃	28,546.60	3.453
12:30		305	48	50	120.99	〃	〃	〃	〃	〃	〃	28,546.60	3.453
12:45		310	48	50	121.98	〃	〃	〃	〃	〃	〃	28,546.60	3.482
13:00		315	48	51	122.96	〃	〃	1.0088	〃	〃	1076.0173	28,518.33	3.506
13:15		315	48	51	122.96	〃	〃	1.0088	〃	〃	〃	〃	3.506
13:30		315	47	51	121.67	〃	〃	〃	〃	〃	〃	〃	3.469
13:45		320	46	51	121.32	〃	〃	〃	〃	〃	〃	〃	3.459
14:00		320	46	50	〃	〃	〃	1.0098	〃	〃	1077.0839	28,546.60	3.452
14:15		320	46	〃	〃	〃	〃	〃	〃	〃	〃	〃	3.452
14:30		320	46	〃	〃	〃	〃	〃	〃	〃	〃	〃	3.452
14:45		325	45	〃	120.93	〃	〃	〃	〃	〃	〃	〃	3.452
15:00		320	47	〃	122.63	〃	〃	〃	〃	〃	〃	〃	3.500
15:15		320	46	〃	121.32	〃	〃	〃	〃	〃	〃	〃	3.452

45228 83

GAS FLOW RATE CALCULATIONS

OEC—862-B

TEST NUMBER	RATE NUMBER	AREA	WELL NAME OR NUMBER	DATE (DAY, MO, YR)	PAGE	OF
6	1	TASMANIA	PELICAN 5	11-4-86	2	2

METER	STANDARD CONDITIONS	ATM. PRESS	P_c =	T_c =	GAS SPECIFIC GRAVITY-G
AMOCO	✓ 14.73 psi 60°F ☐ OTHER			MEAS. ☐ EST. ☐	0.82

TYPE	METER RUN SIZE (INCHES)	FLOW RECORDER TYPE	h_w RANGE (INCHES WATER)	STATIC PRESS RANGE (psi)	F_U TABLE PREV. PAGE	$F_g = \sqrt{1/G}$	$C_1 = F_U \times F_g$
DANIELS	5-761	BARTON	100	1500	24	1.10	26.5036

	FLOW TIME (HOURS)	STATIC PRESSURE P_f (PSIA)	DIFFERENTIAL PRESSURE h_w (INCHES WATER)	DOWN STREAM GAS TEMP. (°F)	$\sqrt{h_w P_f}$	ORIFICE SIZE d (INCHES)	$C_2 = F_b \times F_{tf} \times F_{pv} \times Y_2$				C_2	C ($C = C_1 \times C_2$)	CORRECTED GAS FLOW RATE $Q_g = C\sqrt{h_w P_f}$ (MMSCF/D)	
							F_b	F_{tf}	F_{pv}	Y_2				
10		320	45	51	120.00	2.250	1039.5	1.0088	1.0261	1.000	1076.0173	28516.33	3.422	1
5		325	45	52	120.93	"	"	1.0075	"	"	1074.6307	28481.58	3.444	2
0		330	44	52	120.49	"	"	"	"	"	"	"	3.431	3
5		335	42	52	118.61	"	"	"	"	"	"	"	3.378	4
0		335	42	52	"	"	"	"	"	"	"	"	3.378	5
5		"	"	"	"	"	"	"	"	"	"	"	"	6
0		"	"	"	"	"	"	"	"	"	"	"	"	7
5		330	43	"	119.12	"	"	"	"	"	"	"	3.392	8
0		325	44	"	119.58	"	"	"	"	"	"	"	3.405	9
														10
														11
														12
														13
														14
														15
														16
														17
														18

452284

OIL FLOW RATE CALCULATIONS-TANK SURVEYS

OEC—871-B

TEST NUMBER	RATE NUMBER	AREA	DATE (DAY MO YR)	PAGE	OF
6	1	TASMANIA	11-4-86	1	

CUSTOMER	WELL NAME OR NUMBER	STO GRAVITY (API) @ 60°F	STANDARD CONDITIONS
AMOCO	FLEZICAN	57.4	14.76 PRESS. 60 TEMP.

TANK #1 CAPACITY (BBLS)	TANK #1 INSIDE DIMENSIONS (INCHES)	BBLS PER INCH FOR TANK #1	TANK #2 CAPACITY (BBLS)	TANK #2 INSIDE DIMENSIONS (INCHES)	BBLS PER INCH FOR TANK #2
100 BBL		1.0			

DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	TANK USED (1 or 2)	FIELD OIL TANK READINGS BBL (INCHES)	INCREASE IN TANK READINGS SINCE LAST READING BBL (INCHES)	VOLUME BY TANK SINCE LAST READING V_t (BBLS)	TANK TEMP. (°F)	k FROM ASTM TABLES	BSW (%)	CORRECTED OIL VOLUME $V_o = V_t\, k\, (1 - BSW/100)$ (STO BBLS)	CORRECTED OIL FLOW RATE Q_o (STO BPD)	CORRECTED GAS FLOW RATE FROM GAS FLOW RATE CALC FORM Q_g M (MSCF/D)	GOR (MSCF/STO BBL) / OGR (STO BBL/MMSCF)	
1 14:30			2.5										1 $CO_2 = 6.5\%$
2 14:45			7.5	5.0	5.0	60	1.000	15%	4.25	408	3.452	8,460	2 BSW TAKEN AT CHOKE MAN. C_2 - 1500 ppm
3 15:00			13.0	5.5	5.5	"	"	15	4.67	448	3.500	7,812	3 "
4 15:15			18.5	5.5	5.5	"	"	15	4.67	448	3.452	7,705	4 "
5 15:30			24.0	5.5	5.5	"	"	15	"	448	3.422	7,638	5 C_2 - 1600 ppm CO_2 6.0
6 15:45			29.5	5.5	5.5	"	"	15	"	448	3.444	7,687	6
7 16:00			35.0	5.5	5.5	"	"	"	"	448	3.431	7,658	7
8 16:15			42.5	7.5	7.5	"	"	"	6.37	612	3.378	5,519	8
9 16:30			50.0	7.5	7.5	"	"	"	6.37	612	3.378	5,519	9 C_2 - 1600 ppm CO_2 = 6%
10 16:45			57.5	7.5	7.5	"	"	"	6.37	612	"	5,519	10
11 17:00			63.0	5.5	5.5	"	"	"	4.67	448	"	7,540	11
12 17:15			68.0	5.0	5.0	"	"	"	4.25	408	3.392	8,313	12
13 17:30			73.5	5.5	5.5	"	"	"	4.67	448	3.405	7,600	13 C_2 - 1600 ppm CO_2 = 6%
14													14
15													15
16													16
17													17
18													18

45228

GAS FLOW RATE CALCULATIONS

OIS

DEC -862-B

TEST NUMBER	RATE NUMBER	AREA	WELL NAME OR NUMBER	DATE (DY, MO, YR)	PAGE	OF
6	2	TASMANIA	PELICAN "S"	12-4-86	1	1

CUSTOMER	STANDARD CONDITIONS	ATM. PRESS	P_c =	T_c =		GAS SPECIFIC GRAVITY-G
AMOCO	☑ 14.73 psi 60°F ☐ OTHER				MEAS. ☐ EST. ☐	0.62

METER TYPE	METER RUN SIZE (INCHES)	FLOW RECORDER TYPE	h_w RANGE (INCHES WATER)	STATIC PRESS RANGE (psi)	F_U TABLE PREV. PAGE	$F_g = \sqrt{1/G}$	$C_1 = F_U \times F_g$
DANIELS	5.761	BARTON	100	1500	24	1.1043	26.5306

DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	STATIC PRESSURE P_f (psia)	DIFFERENTIAL PRESSURE h_w (INCHES WATER)	DOWN STREAM GAS TEMP. (°F)	$\sqrt{h_w P_f}$	ORIFICE SIZE d (INCHES)	$C_2 = F_b \times F_{tf} \times F_{pv} \times Y_2$				C_2	C ($C = C_1 \times C_2$)	CORRECTED GAS FLOW RATE $Q_g = C\sqrt{h_w P_f}$ (MMSCF/D)
							F_b	F_{tf}	F_{pv}	Y_2			
1 02:45		400	4.2	100	129.61	2.75	1582.0	0.9636	1.045	1.000	1593.0139	42.2636	5.477
2 03:00		395	4.5	"	133.32	"	1582.00	"	"	"	"	"	5.634
3 03:15		395	4.3	"	130.32	"	"	"	"	"	"	"	5.508
4 03:30		395	4.2	"	128.80	"	"	"	"	"	"	"	5.443
5 03:45		390	4.3	"	129.44	"	"	"	"	"	"	"	5.473
6 04:00		395	4.3	"	130.32	"	"	"	"	"	"	"	5.508
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

4522986

OIL F RATE CULA S-TA ASU NTS

OEC—871-B

TEST NUMBER	RATE NUMBER	AREA	DATE (DAY MO YR)	PAGE OF
6	2	TASMANIA	12-4-86	1 | 1

CUSTOMER	WELL NAME OR NUMBER	STO GRAVITY (API) @ 60°F	STANDARD CONDITIONS
AMOCO	PERICAN #5	37.4	14.73 PRESS 60 TEMP.

TANK #1 CAPACITY (BBLS)	TANK #1 INSIDE DIMENSIONS (INCHES)	BBLS PER INCH FOR TANK #1	TANK #2 CAPACITY (BBLS)	TANK #2 INSIDE DIMENSIONS (INCHES)	BBLS PER INCH FOR TANK #2
100 BBL		1.00			

	DAY / TIME (24 HR CLOCK)	FLOW TIME (HOURS)	TANK USED (1 or 2)	FIELD OIL TANK READINGS (INCHES)	INCREASE IN TANK READINGS SINCE LAST READING (INCHES)	VOLUME BY TANK SINCE LAST READING V_t (BBLS)	TANK TEMP. (°F)	k FROM ASTM TABLES	BSW (%)	CORRECTED OIL VOLUME $V_o = V_t\,k\,(1-BSW/100)$ (STO BBLS)	CORRECTED OIL FLOW RATE Q_o (STO BPD)	CORRECTED GAS FLOW RATE FROM GAS FLOW RATE CALC FORM Q_g (MSCF/D)	☑ GOR (MSCF/STO BBL) ☐ OGR (STO BBL/MMSCF)	
1	02:45			8.0			60	1.000						WATER REDUCTION
2	03:00			18.5	10.5	10.5	"	1.000	70	3.15	302	5.477	18,135	Est. Water Prod. 705 BPD
3	03:15			29.5	11.0	11.0	"	"	65	3.85	369	5.634	15,268	" 686 BPD
4	03:30			41.0	11.5	11.5	"	"	55	5.17	496	5.508	11,104	" 607 BPD
5	03:45			52.5	11.5	11.5	"	"	65	9.02	386	5.473	9,936	" 717 BPD
6	04:00			64.0	11.5	11.5	"	"	60	4.60	441	5.508	12,472	" 662 BPD
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														

4522288-1

SURFACE SAMPLING DATA

OEC-877-B

TEST NO.	RATE NUMBER	AREA	DATE (DAY MO YR)	PAGE
DST #6	1	BASS STRAITS	11/4/86	1 of 3

CUSTOMER	WELL NAME OR NUMBER	FIELD	FORMATION
AMOCO AUSTRALIA	PELICAN #5	PELICAN	

ELEVATION (FEET)	STANDARD CONDITIONS	TIME WELL FLOWING OR SHUT IN BEFORE SAMPLING	INTERVAL TESTED (FEET)
	☐ 14.73 psi 60°F ☐ OTHER PRESS TEMP		2786-2790 M

SAMPLE # 1

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP (°F)	ATMOSPHERIC PRESS (psi)	ATMOS TEMP (°F)	TIME TO TAKE SAMPLE (min)
1330	SS-134	1 gal	VACUUM	-	GAS	SEPARATOR	300	51	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ FT	BOTTOM HOLE TEMP. (°F) @ FT	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_f (c)	OIL W_f (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☒ SEP. COND. (BPD) (MMCF/D)	OGR ☐ STOCK TANK	WATER FLOW RATE (BPD)
1626	97	24	300	51	-	-	-	-	57.4	15	-	20% ~~0.5~~	0.82	1.0261	3.469	-	-

SAMPLE # 2

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP (°F)	ATMOSPHERIC PRESS (psi)	ATMOS TEMP (°F)	TIME TO TAKE SAMPLE (min)
1330	SS-1069	1 gal	VACUUM	-	CONDENSATE	SEPARATOR	300	51	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ FT	BOTTOM HOLE TEMP. (°F) @ FT	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_f (c)	OIL W_f (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☐ SEP. COND. (BPD) (MMCF/D)	OGR ☐ STOCK TANK ☐ SEP. COND.	WATER FLOW RATE (BPD)
1626	97	24	300	51	-	-	-	-	57.4	15	-	20%	0.82	1.0261	-	-	-

SAMPLE # 3

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP (°F)	ATMOSPHERIC PRESS (psi)	ATMOS TEMP (°F)	TIME TO TAKE SAMPLE (min)
1500	SS-818	1 gall	VACUUM	-	GAS	SEPARATOR	305	50	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ FT	BOTTOM HOLE TEMP. (°F) @ FT	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_f (c)	OIL W_f (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☒ SEP. COND. (BPD) (MMCF/D)	☒ OGR ☐ OGR ☒ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)
1626	99	24	305	50	-	-	-	-	57.4	15	-	20%	0.82	1.0261	3.500	7812	-

(a) CONTAINER MAY BE INITIALLY FILLED WITH WATER OR MERCURY (Hg) OR BE EVACUATED (VACUUM).
(b) VOLUME OF WATER OR MERCURY LEFT WITH WELL EFFLUENT SAMPLE.
(c) C_f IS MEASURED CORRECTION FACTOR FOR CORRECTING OIL VOLUME FROM SEP. AND STOCK TANK CONDITIONS. IT INCLUDES WEATHERING FACTOR, W_f, AND METER NONLINEARITY EFFECTS, M...

SAMPLED BY J. PAKIAM

452288

SURFACE SAMPLING DATA

OEC—877-B

TEST NUMBER	RATE NUMBER	AREA	DATE (DAY MO YR.)	PAGE OF
6	1			2 | 3

CUSTOMER	WELL NAME OR NUMBER	FIELD	FORMATION
Amoco	Pearson 5		

ELEVATION (FEET)	STANDARD CONDITIONS	TIME WELL FLOWING OR SHUT IN BEFORE SAMPLING	INTERVAL TESTED (FEET)
	☐ 14.73 psi 60°F ☐ OTHER PRESS. TEMP.		

4522289

SAMPLE # 4

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal.)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
1500	SS-982	1 gal	VACUUM	–	CONDENSATE	SEPARATOR	305	50	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ ft	BOTTOM HOLE TEMP. (°F) @ ft	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_t (c)	OIL W_t (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☒ STOCK TANK ☐ SEP. COND. (BPD) (MMCF/D)	☒ GOR ☐ OGR ☒ STOCK TANK ☐ SEP. COND.	WATER FLOW RATE (BPD)
1625	99	24	305	50	–	–	–	–	57.4	15	1.0	20%	0.82	1.0261	448	7812	–

SAMPLE # 5

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal.)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
1645	SS-1007	1 gal	VACUUM	–	GAS	SEPARATOR	320	52	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ ft	BOTTOM HOLE TEMP. (°F) @ ft	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_t (c)	OIL W_t (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☒ SEP. COND. (BPD) (MMCF/D)	☒ GOR ☐ OGR ☒ STOCK TANK ☐ SEP. COND.	WATER FLOW RATE (BPD)
1610	100	24	320	52	–	–	–	–	57.4	15	–	20%	0.82	1.0261	3.378	5,519	–

SAMPLE # 6

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal.)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
1645	SS-1822	1 gal	VACUUM	–	CONDENSATE	SEPARATOR	320	52	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ ft	BOTTOM HOLE TEMP. (°F) @ ft	OIL GRAVITY (°API)	OIL BSW (%)	OIL C_t (c)	OIL W_t (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☒ STOCK TANK ☐ SEP. COND. (BPD) (MMCF/D)	☐ GOR ☐ OGR ☐ STOCK TANK ☐ SEP. COND.	WATER FLOW RATE (BPD)
1610	100	24	320	52	–	–	–	–	57.4	15	1.0	20%	0.82	1.0261	612	5,519	–

(a) CONTAINER MAY BE INITIALLY FILLED WITH WATER OR MERCURY (Hg) OR BE EVACUATED (VACUUM).
(b) VOLUME OF WATER OR MERCURY LEFT WITH WELL EFFLUENT SAMPLE.
(c) C_t IS MEASURED CORRECTION FACTOR FOR CORRECTING OIL VOLUME FROM SEPARATOR TO STOCK TANK CONDITIONS. IT INCLUDES WEATHERING FACTOR, W_t, AND METER NONLINEARITY EFFECTS, M. $C_t = M \cdot W_t$.

SAMPLED BY: J. PAKIAM

SURFACE SAMPLING DATA

OEC-827-B

TEST NUMBER	RATE NUMBER	AREA	DATE (DAY MO YR.)	PAGE OF
6	2		11-4-86	3 13

CUSTOMER	WELL NAME OR NUMBER	FIELD	FORMATION
AMOCO	PELICAN 5		

ELEVATION (FEET)	STANDARD CONDITIONS	TIME WELL FLOWING OR SHUT IN BEFORE SAMPLING	INTERVAL TESTED (FEET)
	☐ 14.73 psi 60°F ☐ OTHER PRESS. TEMP.		

SAMPLE # 7

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
1700	SS-756	1 gal	VACUUM	-	GAS	SEPARATOR	320	52	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ ft	BOTTOM HOLE TEMP. (°F) @ ft	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_t (c)	OIL W_t (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☒ SEP. COND. (BPD) (MMCF/D)	☐ GOR ☐ GLR ☒ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)
1625	100	24	320	52	-	-	-	-	57.4	15	-	20%	0.82	1.0261	3.378	7,540	-

SAMPLE # 8

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
1700	SS-709	1 gal	VACUUM	-	CONDENSATE	SEPARATOR	320	52	14.73	60	15

FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ ft	BOTTOM HOLE TEMP. (°F) @ ft	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_t (c)	OIL W_t (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☒ STOCK TANK ☐ SEP. COND. (BPD) (MMCF/D)	☒ GOR ☐ GLR ☒ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)
1625	100	24	320	52	-	-	-	-	57.4	15	1.0	20%	0.82	1.0261	448	7,540	-

SAMPLE # 9

TIME TAKEN	CONTAINER #	CONTAINER VOL. (cc) or (gal)	INITIALLY FILLED WITH (a)	VOL. OF FILL REMAINING WITH SAMPLE (b)	SAMPLE TYPE	SAMPLE TAKEN AT	SAMPLING PRESSURE (psig)	SAMPLING TEMP. (°F)	ATMOSPHERIC PRESS. (psi)	ATMOS. TEMP. (°F)	TIME TO TAKE SAMPLE (min.)
1715	A-11011	20 litre	VACUUM	-	GAS	SEPARATOR	315	52	14.73	60	15

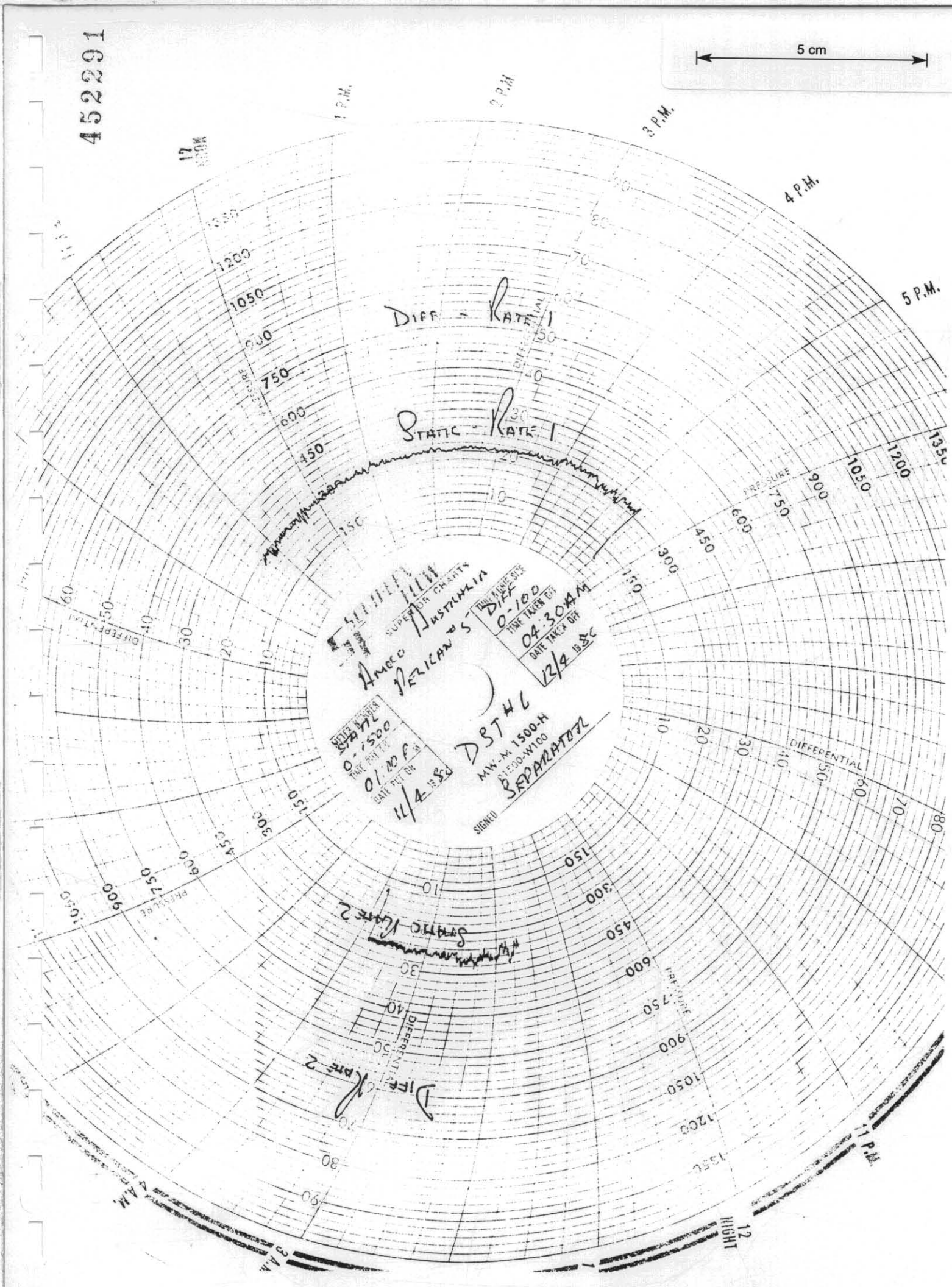
FIELD READINGS AND FACTORS USED

WELL HEAD PRESS. (psig)	WELL HEAD TEMP. (°F)	CHOKE SIZE (64th INCH)	HI STAGE SEP. PRESS. (psig)	HI STAGE SEP. TEMP. (°F)	LO STAGE SEP. PRESS. (psig)	LO STAGE SEP. TEMP. (°F)	BOTTOM HOLE PRESS. (psig) @ ft	BOTTOM HOLE TEMP. (°F) @ ft	OIL GRAVITY @ 60 °F (°API)	OIL BSW (%)	OIL C_t (c)	OIL W_t (c)	GAS GRAVITY (AIR=1)	GAS F_{pv}	TOTAL GAS/OIL FLOW RATE AT ☐ STOCK TANK ☒ SEP. COND. (BPD) (MMCF/D)	☒ GOR ☐ GLR ☒ STOCK TANK ☐ SEP. COND. (MCF/BBL) (BBL/MMCF)	WATER FLOW RATE (BPD)
1625	100	24	315	52	-	-	-	-	57.4	15	-	20%	0.82	1.0261	3.392	8,313	-

(a) CONTAINER MAY BE INITIALLY FILLED WITH WATER OR MERCURY (Hg) OR BE EVACUATED (VACUUM).
(b) VOLUME OF WATER OR MERCURY LEFT WITH WELL EFFLUENT SAMPLE.
(c) C_t IS MEASURED CORRECTION FACTOR FOR CORRECTING OIL VOLUME FROM SEPARATOR TO STOCK TANK CONDITIONS. IT INCLUDES WEATHERING FACTOR, W_t, AND METER NONLINEARITY EFFECTS, M. $C_t = M \cdot W_t$

SAMPLED BY J. PAKIAM

452290


452291
5 cm
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
11 P.M.
12 MIGHT
1 A.M.
2 A.M.
3 A.M.
Diff - Rate 1
Static - Rate 1
Static Rate 2
Diff Rate 2
PRESSURE
DIFFERENTIAL
SUPERIOR CHARTS
AMERICAN INSTRUMENT
METER NUMBER
Diff
0-100
TIME PUT ON
TIME TAKEN OFF
04:30AM
DATE PUT ON
DATE TAKEN OFF
12/4 1956
METER NUMBER
Static
0-1500
TIME PUT ON
01:00 PM
DATE PUT ON
11/4 1956
DST #1
MW-M 1500-H
F1500-W100
SEPARATOR
SIGNED

452292

Enclosure No. 13

OTIS

OTIS ENGINEERING CORPORATION
BOTTOM HOLE PRESSURE
REPORTS

PELICAN # 5 (DST 6)
MARCH 11, 1986

452293

OTIS

P.O. BOX 324, SALE,
VICTORIA, 3850, AUSTRALIA
Telephone (051) 44 3255
Telex: OTISALE
AA55240

JN-ML-180-86

15th April, 1986

Amoco Australia Ltd.,
15 Blue Street,
SYDNEY, N.S.W., 2000.

Dear Sir,

Please find enclosed the final report for the Pelican # 5, B.H.P. Survey.

If there are queries concerning the above, please do not hesitate to contact me.

Otis Engineering Corporation wish to thank you for this opportunity of completing your B.H.P. work with our Electric Line Unit, and hope in the future Amoco Australia will give Otis the opportunity to complete more of your B.H.P. Surveys.

Yours faithfully,

JOHN NICHOLSON,
OTIS ENGINEERING CORPORATION,
AUSTRALIA, NEW ZEALAND & PAPUA NEW GUINEA.

enc.

452294

OTIS

SEQUENCE OF OPERATIONS

OEC—872-B

TEST NUMBER	RIG NAME	PAGE OF
6	EPOCH	1 | 2

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO	PELICAN # 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR
J. HARKINS	J. NICHOLSON

	DATE	TIME	OPERATIONS
1	11/4/86	0530	LUBRICATOR ON.
2		0620	PRESSURE UP TO EQUALIZE PRESSURE ACROSS TREE.
3		0626	R.I.H.
4		0642	COMPUTER ON.
5		0750	LOCATED AND LOCKED IN 'SRO' NIPPLE.
6		0755	SHUT IN TOOL.
7		0805	BLEED OFF 100 PSI. TO TEST D.H.S.I.T.
8		0825	THEN OPEN GAS TO SURFACE.
9		0830	CONDENSATE TO SURFACE.
10		0833	CHANGE CHOKE 24 ADJ.
11		0836	GAS CUT RAT HOLE MUD.
12		0920	FLOWING GAS AND CONDENSATE.
13		0952	CHANGE CHOKE 24 POS.
14		1725	SET UP HORNER PLOT.
15		1729-30	SHUT IN WELL WITH D.H.S.I.T.
16		2306	OPEN D.H.S.I.T. ON 16/64.
17		2314	CHANGE CHOKE 24/64.
18		2330	CHANGE CHOKE 40/64.
19		2345	CHANGE CHOKE 56/64.

452295

OTIS

SEQUENCE OF OPERATIONS

OEC-872-B

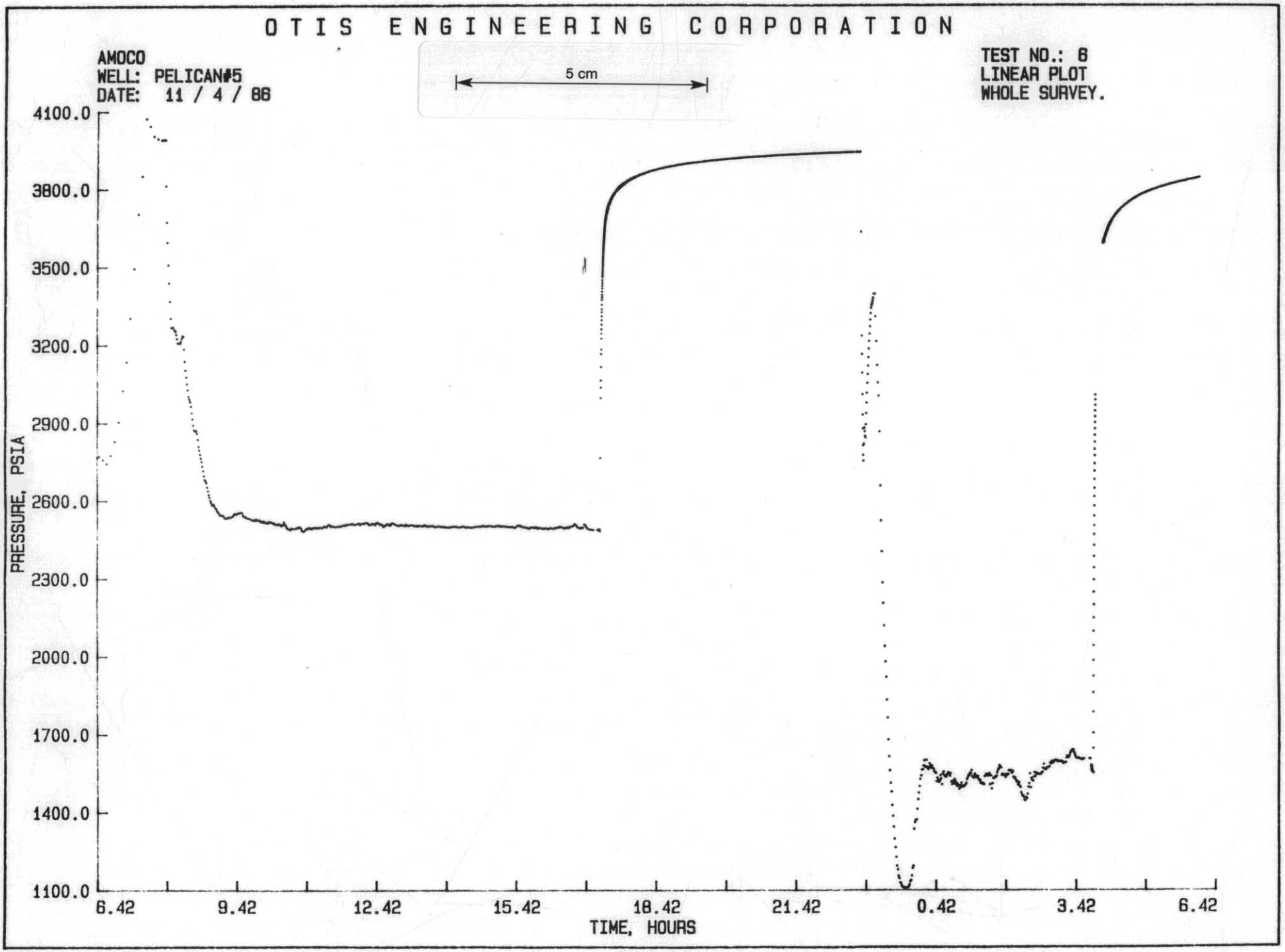
TEST NUMBER	RIG NAME	PAGE OF
6	EPOCH	2 2

CUSTOMER	WELL NAME OR NUMBER	FIELD	AREA
AMOCO	PELICAN # 5	PELICAN	BASS STRAIT

CUSTOMER REPRESENTED BY	OTIS TEST SUPERVISOR
J. HARKINS	J. NICHOLSON

	DATE	TIME	OPERATIONS
1	11/4/86	2350	CHANGE CHOKE TO 68/64.
2		2355	CHANGE CHOKE TO 96/64.
3	12/4/86	0404-55	SHUT IN D.H.S.I.T.
4		0622	SHUT 4PR VALVE.
5		0623	OPEN D.H.S.I.T. TO EQUALIZE.
6		0630	P.O.O.H. WITH H.P. GAUGE. LEFT D.H.S.I.T.
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			

452296


OTIS ENGINEERING CORPORATION
AMOCO
WELL: PELICAN#5
DATE: 11 / 4 / 88
5 cm
TEST NO.: 6
LINEAR PLOT
WHOLE SURVEY.
PRESSURE, PSIA
4100.0
3800.0
3500.0
3200.0
2900.0
2600.0
2300.0
2000.0
1700.0
1400.0
1100.0
6.42
9.42
12.42
15.42
18.42
21.42
0.42
3.42
6.42
TIME, HOURS

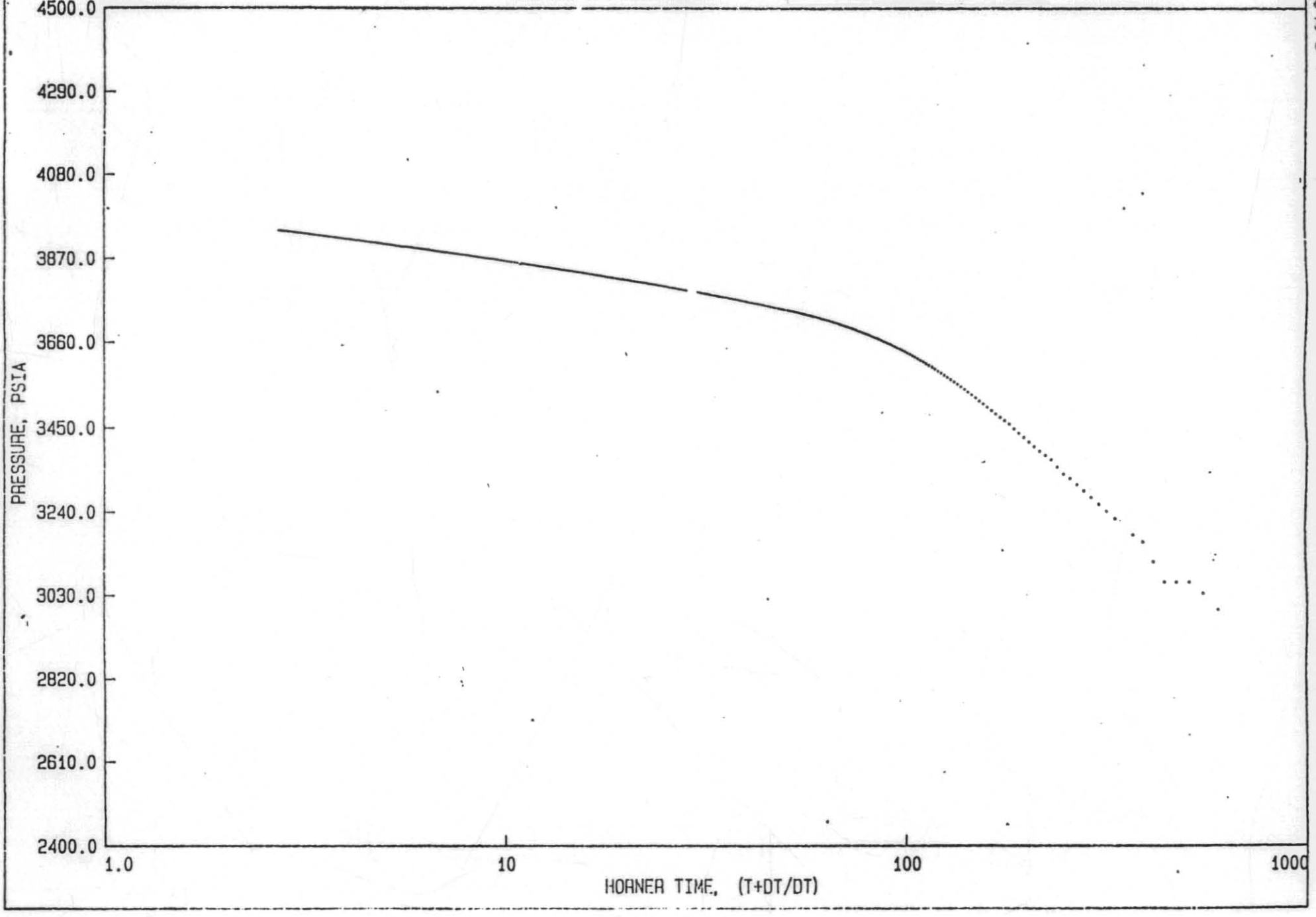
OTIS ENGINEERING CORPORATION

AMOCO
WELL: PELICAN#5
DATE: 11 / 4 / 86

HORNER FLOW TIME (HOURS) = 9.3

5 cm

TEST NO.: 6
HORNER PLOT



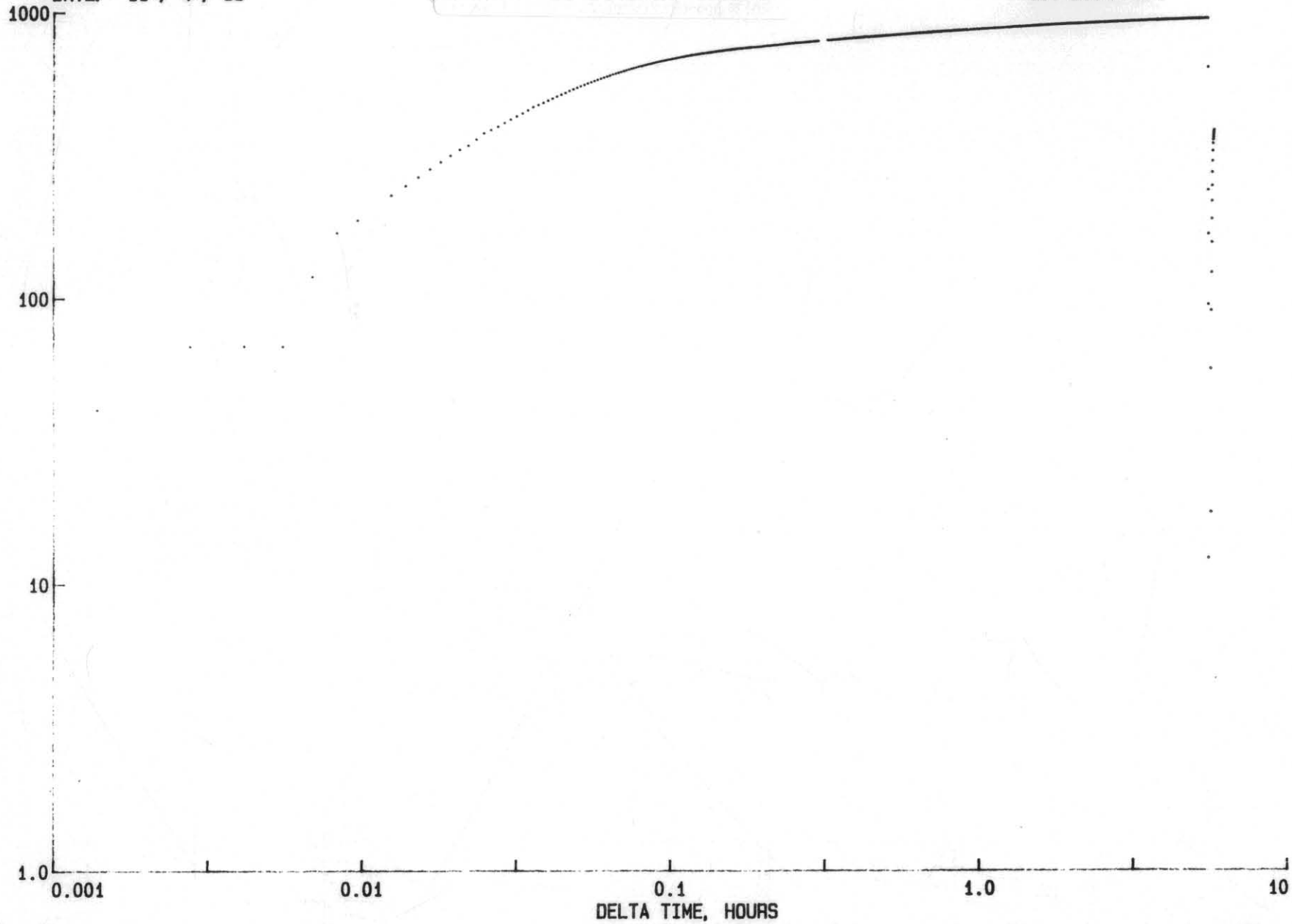
452297

OTIS ENGINEERING CORPORATION

AMOCO
WELL: PELICAN#5
DATE: 11 / 4 / 86

5 cm

TEST NO.: 6
LOGLOG PLOT
1st BUILD UP.



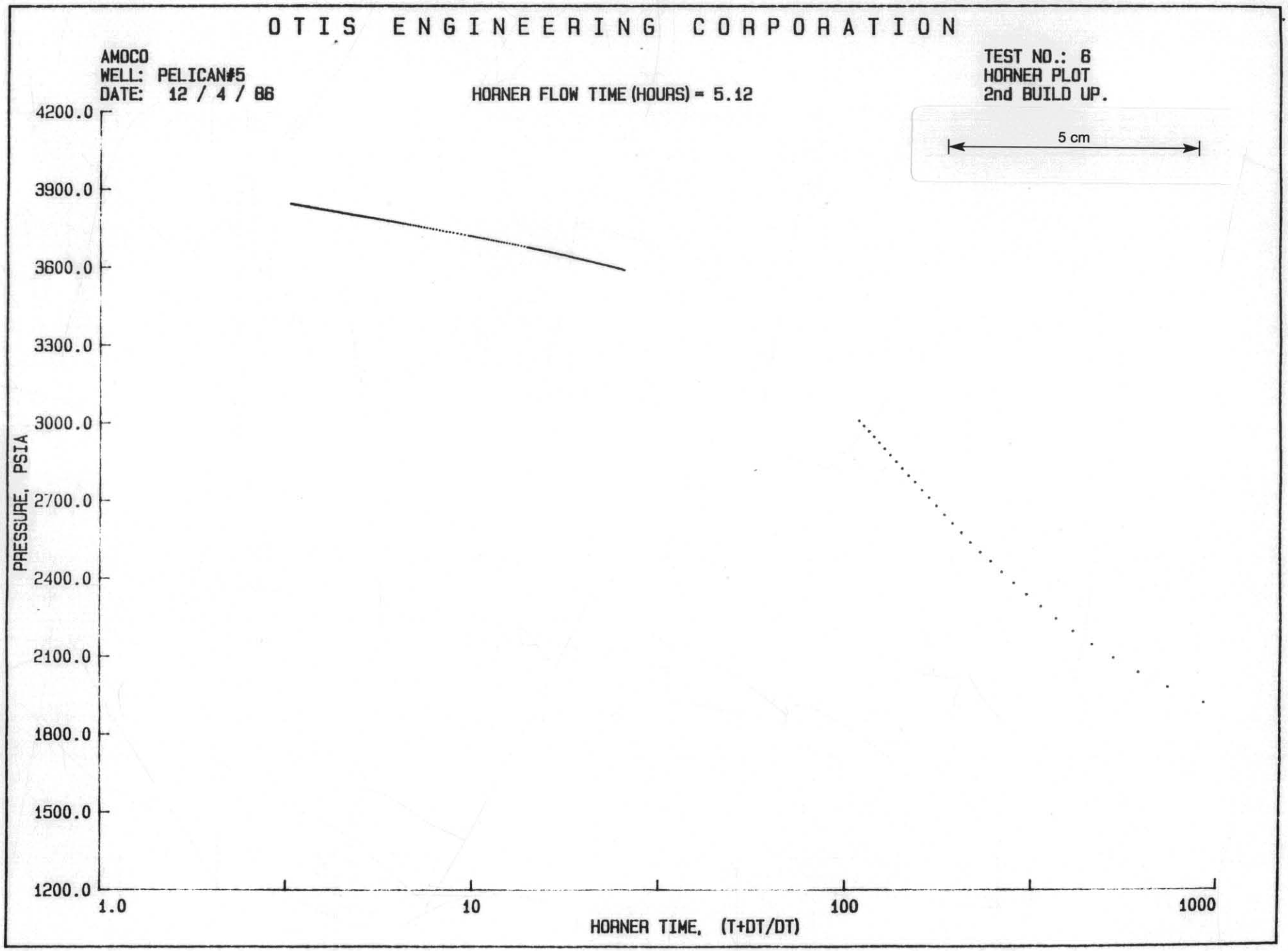
452299

OTIS ENGINEERING CORPORATION

AMOCO
WELL: PELICAN#5
DATE: 12 / 4 / 86

HORNER FLOW TIME (HOURS) = 5.12

TEST NO.: 6
HORNER PLOT
2nd BUILD UP.



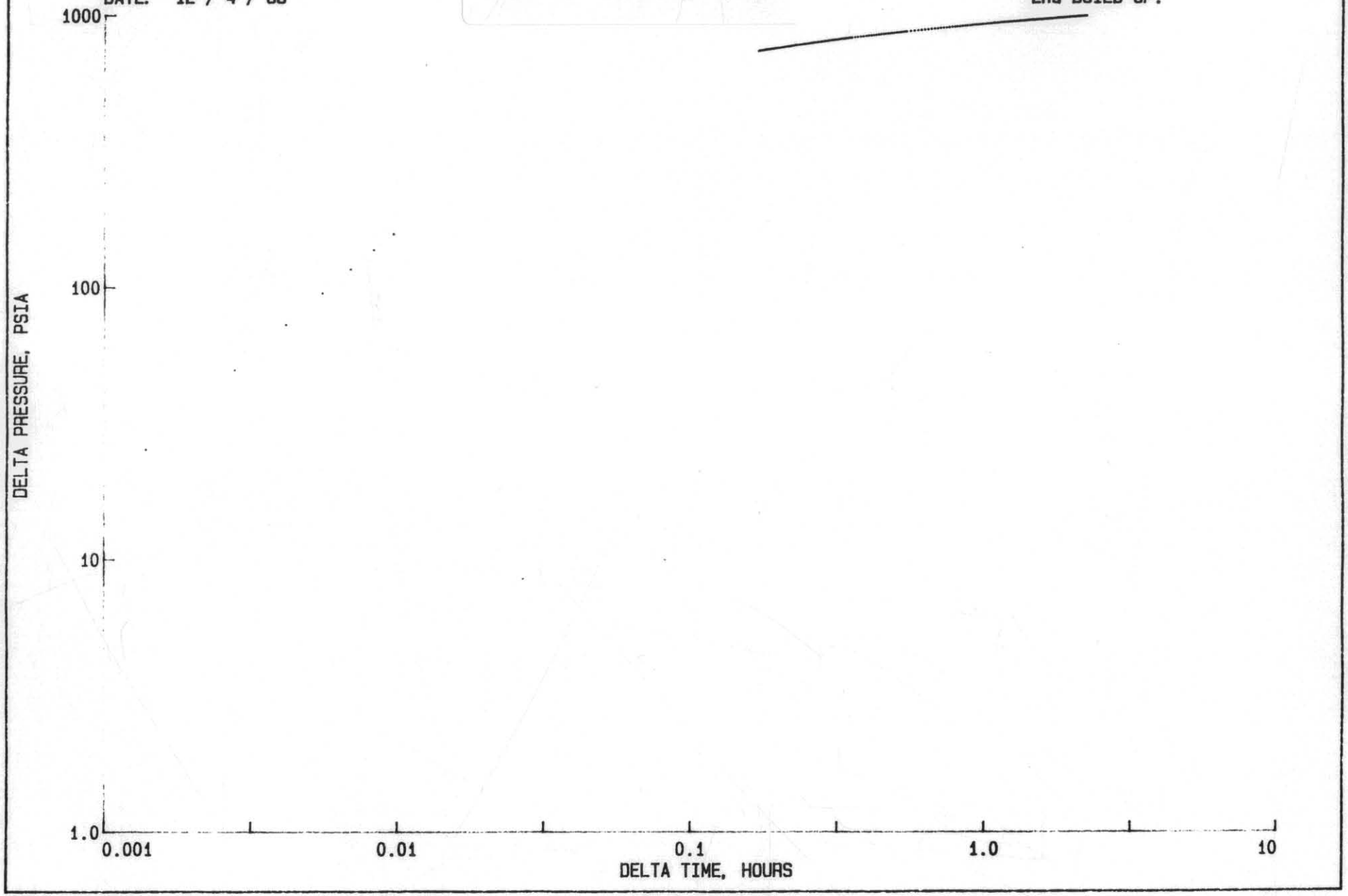
452300

OTIS ENGINEERING CORPORATION

AMOCO
WELL: PELICAN#5
DATE: 12 / 4 / 86

5 cm

TEST NO.: 6
LOGLOG PLOT
2nd BUILD UP.



OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452301

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	1	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN.SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	0642:00	2765.96	2765.96	59.19						COMPUTER ON.	1
2	11	0643:00	2768.04	2.08	58.37							2
3	11	0645:00	2772.40	4.36	57.85							3
4	11	0650:00	2758.20	-14.20	58.18							4
5	11	0655:00	2743.21	-14.99	65.55							5
6	11	0700:00	2776.20	32.99	76.58							6
7	11	0705:00	2830.17	53.97	87.60							7
8	11	0710:00	2905.16	74.99	100.45							8
9	11	0715:00	3026.27	121.11	120.69							9
10	11	0720:00	3136.28	110.01	142.24							10
11	11	0725:00	3304.30	168.02	160.56							11
12	11	0730:00	3495.38	191.08	177.80							12
13	11	0735:00	3704.17	208.79	194.23							13
14	11	0740:00	3851.18	147.01	209.69							14
15	11	0745:00	4072.82	221.64	225.46							15
16	11	0750:00	4043.46	-29.36	235.98						LOCATED SRO.NIPPLE.	16
17	11	0755:00	4004.67	-38.79	239.57						SHUT DHSIT.TO TEST.	17
18	11	0800:00	3993.89	-10.78	240.91							18
19	11	0805:00	3989.95	-3.94	241.44						BLEED OFF 100psiAT SURFACE.	19
20	11	0806:00	3989.66	-.29	241.56							20
21	11	0807:00	3990.05	.39	241.50							21
22	11	0808:00	3990.54	.49	241.49							22
23	11	0809:00	3990.93	.39	241.45							23
24	11	0810:00	3991.33	.40	241.56							24
25	11	0811:00	3812.15	-179.18	241.58				16		OPEN DHSIT.	25
26	11	0812:00	3672.32	-139.83	241.54				16			26
27	11	0813:00	3594.20	-78.12	241.42				16			27
28	11	0814:00	3507.76	-86.44	241.40				16			28
29	11	0815:00	3438.68	-69.08	241.44				16			29
30	11	0816:00	3367.68	-71.00	241.48				16			30
31	11	0817:00	3303.58	-64.10	241.56				16			31
32	11	0818:00	3267.97	-35.61	241.62				16			32
33	11	0819:00	3267.46	-.51	241.92				16			33
34	11	0820:00	3269.48	2.02	242.20				16			34
35	11	0822:00	3258.95	-10.53	242.20				16			35
36	11	0823:00	3253.30	-5.65	242.20				16			36
37	11	0824:00	3241.29	-12.01	244.70				16			37
38	11	0825:00	3225.14	-16.15	245.16				16		GAS TO SURFACE.	38

Computer-Forms Toppan Moore

452302

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	2	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	0826:00	3208.37	-16.77	245.91				16			1
2	11	0828:00	3207.57	-.80	245.91				16			2
3	11	0829:00	3209.01	1.44	245.91				16			3
4	11	0830:00	3214.98	5.97	247.19				16		CONDENSATE TO SURFACE.	4
5	11	0831:00	3226.20	11.22	247.31				16			5
6	11	0832:00	3236.54	10.34	247.46				16			6
7	11	0833:00	3234.08	-2.46	247.50				24		CHANGE CHOKE SIZE.	7
8	11	0834:00	3184.85	-49.23	247.54				24			8
9	11	0835:00	3138.42	-46.43	247.52				24			9
10	11	0836:00	3103.89	-34.53	247.49				24			10
11	11	0837:00	3077.16	-26.73	247.43				24			11
12	11	0838:00	3051.47	-25.69	247.52				24			12
13	11	0839:00	3028.61	-22.86	247.45				24			13
14	11	0840:00	3002.97	-25.64	247.56				24			14
15	11	0841:00	2992.54	-10.43	247.57				24			15
16	11	0842:00	2982.70	-9.84	247.65				24			16
17	11	0843:00	2964.61	-18.09	247.71				24			17
18	11	0844:00	2939.72	-24.89	247.76				24			18
19	11	0845:00	2916.23	-23.49	247.86				24			19
20	11	0846:00	2891.68	-24.55	247.91				24			20
21	11	0847:00	2874.05	-17.63	248.01				24			21
22	11	0848:00	2869.37	-4.68	248.06				24			22
23	11	0849:00	2869.38	.01	248.16				24			23
24	11	0850:00	2871.14	1.76	248.23				24			24
25	11	0851:00	2860.19	-10.95	248.42				24			25
26	11	0852:00	2836.18	-24.01	248.52				24			26
27	11	0853:00	2809.49	-26.69	248.67				24			27
28	11	0854:00	2795.47	-14.02	248.76				24			28
29	11	0855:00	2778.43	-17.04	248.86				24			29
30	11	0856:00	2764.23	-14.20	249.01				24			30
31	11	0857:00	2750.97	-13.26	249.08				24			31
32	11	0858:00	2733.35	-17.62	249.23				24			32
33	11	0859:00	2715.53	-17.82	249.30				24			33
34	11	0900:00	2696.06	-19.47	249.44				24			34
35	11	0901:00	2681.65	-14.41	249.49				24			35
36	11	0902:00	2677.28	-4.37	249.67				24			36
37	11	0903:00	2669.98	-7.30	249.70				24			37
38	11	090[illegible]00	2652.27	-17.71	249[illegible]				24			38

Computer-Forex Toppan Moore

452303

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	3	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P' (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	0905:00	2638.25	-14.02	249.93				24			1
2	11	0906:00	2624.04	-14.21	250.03				24			2
3	11	0907:00	2613.64	-10.40	250.11				24			3
4	11	0908:00	2602.53	-11.11	250.16				24			4
5	11	0909:00	2594.36	-8.17	250.25				24			5
6	11	0910:00	2584.24	-10.12	250.31				24			6
7	11	0911:00	2583.51	-.73	250.41				24			7
8	11	0912:00	2588.33	4.82	250.49				24			8
9	11	0913:00	2583.18	-5.15	250.67				24			9
10	11	0914:00	2575.40	-7.78	250.68				24			10
11	11	0915:00	2572.48	-2.92	250.85				24			11
12	11	0916:00	2569.76	-2.72	250.95				24			12
13	11	0917:00	2561.20	-8.56	251.02				24			13
14	11	0918:00	2557.39	-3.81	251.08				24			14
15	11	0919:00	2554.88	-2.51	251.13				24			15
16	11	0920:00	2547.19	-7.69	251.21				24			16
17	11	0921:00	2545.25	-1.94	251.24				24			17
18	11	0922:00	2544.91	-.34	251.34				24			18
19	11	0923:00	2545.16	.25	251.39				24			19
20	11	0924:00	2544.87	-.29	251.53				24			20
21	11	0925:00	2542.54	-2.33	251.58				24			21
22	11	0926:00	2537.58	-4.96	251.69				24			22
23	11	0927:00	2535.63	-1.95	251.72				24			23
24	11	0928:00	2533.59	-2.04	251.76				24			24
25	11	0929:00	2534.47	.88	251.81				24			25
26	11	0930:00	2534.37	-.10	251.83				24			26
27	11	0931:00	2537.02	2.65	251.91				24			27
28	11	0932:00	2539.54	2.52	251.94				24			28
29	11	0933:00	2537.56	-1.98	252.02				24			29
30	11	0934:00	2536.23	-1.33	252.05				24			30
31	11	0935:00	2539.55	3.32	252.11				24			31
32	11	0936:00	2540.91	1.36	252.15				24			32
33	11	0937:00	2541.40	.49	252.22				24			33
34	11	0938:00	2547.24	5.84	252.20				24			34
35	11	0939:00	2551.63	4.39	252.36				24			35
36	11	0940:00	2549.98	-1.65	252.43				24			36
37	11	0941:00	2549.25	-.73	252.48				24			37
38	11	0942:00	2549.65	.40	252.50				24			38

Computer-Forms Toppan Moore

452304

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	4	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	0943:00	2552.90	3.25	252.52				24			1
2	11	0944:00	2552.52	-.38	252.56				24			2
3	11	0945:00	2554.76	2.24	252.60				24			3
4	11	0946:00	2555.05	.29	252.65				24			4
5	11	0947:00	2556.90	1.85	252.65				24			5
6	11	0948:00	2557.00	.10	252.76				24			6
7	11	0949:00	2556.03	-.97	252.77				24			7
8	11	0950:00	2544.94	-11.09	252.83				24			8
9	11	0951:00	2540.85	-4.09	252.84				24			9
10	11	0952:00	2539.58	-1.27	252.84				24		CHANGE TO POSITIVE CHOKE.	10
11	11	0953:00	2540.66	1.08	252.89				24			11
12	11	0954:00	2536.86	-3.80	252.92				24			12
13	11	0955:00	2535.31	-1.55	252.97				24			13
14	11	0956:00	2534.62	-.69	252.97				24			14
15	11	0957:00	2533.46	-1.16	253.05				24			15
16	11	0958:00	2532.68	-.78	253.05				24			16
17	11	0959:00	2531.91	-.77	253.15				24			17
18	11	1000:00	2529.55	-2.36	253.17				24			18
19	11	1001:00	2528.11	-1.44	253.19				24			19
20	11	1002:00	2525.99	-2.12	253.23				24			20
21	11	1003:00	2527.82	1.83	253.24				24			21
22	11	1004:00	2525.78	-2.04	253.30				24			22
23	11	1005:00	2523.35	-2.43	253.23				24			23
24	11	1006:00	2527.34	3.99	253.38				24			24
25	11	1007:00	2530.36	3.02	253.41				24			25
26	11	1008:00	2525.60	-4.76	253.46				24			26
27	11	1009:00	2526.38	.78	253.49				24			27
28	11	1010:00	2525.50	-.88	253.51				24			28
29	11	1011:00	2527.06	1.56	253.54				24			29
30	11	1012:00	2524.92	-2.14	253.55				24			30
31	11	1013:00	2521.22	-3.70	253.57				24			31
32	11	1014:00	2518.59	-2.63	253.50				24			32
33	11	1015:00	2519.18	.59	253.61				24			33
34	11	1016:00	2522.78	3.60	253.60				24			34
35	11	1017:00	2517.52	-5.26	253.63				24			35
36	11	1018:00	2521.18	3.66	253.63				24			36
37	11	101[illegible]:00	2520.35	-.83	253.64				24			37
38	11	102[illegible]:00	2514.80	-5.55	253.[illegible]				24			38

Computer-Forms Topper Model

452305

OTIS

HI RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	5	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P' (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1021:00	2515.97	1.17	253.65				24			1
2	11	1022:00	2514.12	-1.85	253.67				24			2
3	11	1023:00	2521.52	7.40	253.62				24			3
4	11	1024:00	2518.89	-2.63	253.75				24			4
5	11	1025:00	2517.43	-1.46	253.76				24			5
6	11	1026:00	2520.26	2.83	253.77				24			6
7	11	1027:00	2513.27	-1.99	253.78				24			7
8	11	1028:00	2517.24	-1.03	253.78				24			8
9	11	1029:00	2513.44	-3.80	253.79				24			9
10	11	1030:00	2515.98	2.54	253.77				24			10
11	11	1031:00	2512.28	-3.70	253.82				24			11
12	11	1032:00	2509.75	-2.53	253.79				24			12
13	11	1033:00	2509.75	0.00	253.85				24			13
14	11	1034:00	2507.82	-1.93	253.86				24			14
15	11	1035:00	2512.47	4.65	253.87				24			15
16	11	1036:00	2511.41	-1.06	253.91				24			16
17	11	1037:00	2510.14	-1.27	253.92				24			17
18	11	1038:00	2506.54	-3.60	253.93				24			18
19	11	1039:00	2503.62	-2.92	253.89				24			19
20	11	1040:00	2508.98	5.36	253.97				24			20
21	11	1041:00	2504.98	-4.00	253.99				24			21
22	11	1042:00	2509.76	4.78	254.04				24			22
23	11	1043:00	2519.38	9.62	254.09				24			23
24	11	1044:00	2510.05	-9.33	254.11				24			24
25	11	1045:00	2506.16	-3.89	254.11				24			25
26	11	1046:00	2500.42	-5.74	254.11				24			26
27	11	1047:00	2494.09	-6.33	254.08				24			27
28	11	1048:00	2493.60	-.49	254.00				24			28
29	11	1049:00	2490.97	-2.63	254.07				24			29
30	11	1050:00	2490.47	-.50	254.07				24			30
31	11	1051:00	2487.66	-2.81	254.07				24			31
32	11	1052:00	2495.11	7.45	254.09				24			32
33	11	1053:00	2494.48	-.63	254.11				24			33
34	11	1054:00	2493.21	-1.27	254.14				24			34
35	11	1055:00	2493.70	.49	254.15				24			35
36	11	1058:00	2493.70	0.00	253.95				24			36
37	11	1059:00	2496.52	2.82	254.08				24			37
38	11	1100:00	2497.16	.64	254.14				24			38

Computer-Forms Tucson Arizona

452306

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	6	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1101:00	2496.04	-1.12	254.21				24			1
2	11	1102:00	2497.99	1.95	254.17				24			2
3	11	1103:00	2500.62	2.63	254.30				24			3
4	11	1104:00	2497.45	-3.17	254.32				24			4
5	11	1105:00	2492.49	-4.96	254.31				24			5
6	11	1106:00	2485.14	-7.35	254.32				24			6
7	11	1107:00	2483.10	-2.04	254.32				24			7
8	11	1108:00	2480.86	-2.24	254.33				24			8
9	11	1109:00	2484.37	3.51	254.32				24			9
10	11	1110:00	2487.39	3.02	254.39				24			10
11	11	1111:00	2491.09	3.70	254.36				24			11
12	11	1112:00	2494.89	3.80	254.50				24			12
13	11	1113:00	2494.21	-.68	254.41				24			13
14	11	1114:00	2492.75	-1.46	254.53				24			14
15	11	1115:00	2496.15	3.40	254.50				24			15
16	11	1116:00	2497.61	1.46	254.54				24			16
17	11	1117:00	2492.90	-4.71	254.53				24			17
18	11	1118:00	2495.08	2.18	254.53				24			18
19	11	1119:00	2491.87	-3.21	254.53				24			19
20	11	1120:00	2495.57	3.70	254.53				24			20
21	11	1121:00	2497.32	1.75	254.55				24			21
22	11	1122:00	2494.70	-2.62	254.52				24			22
23	11	1123:00	2497.91	3.21	254.61				24			23
24	11	1124:00	2497.03	-.88	254.62				24			24
25	11	1125:00	2494.60	-2.43	254.62				24			25
26	11	1126:00	2496.14	1.54	254.62				24			26
27	11	1127:00	2497.72	1.58	254.61				24			27
28	11	1128:00	2495.48	-2.24	254.61				24			28
29	11	1129:00	2498.49	3.01	254.57				24			29
30	11	1130:00	2497.76	-.73	254.60				24			30
31	11	1131:00	2497.23	-.53	254.57				24			31
32	11	1132:00	2495.43	-1.80	254.61				24			32
33	11	1133:00	2497.11	1.68	254.58				24			33
34	11	1134:00	2500.63	3.52	254.58				24			34
35	11	1135:00	2502.29	1.66	254.59				24			35
36	11	1136:00	2500.34	-1.95	254.58				24			36
37	11	1137:00	2499.37	-.97	254.59				24			37
38	11	113[illegible]00	2498.40	-.97	254[illegible]				24			38

Computer Forms Toppan Moore

452307

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC 1218 SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY, MO, YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	7	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1139:00	2503.17	4.77	254.60				24		1
2	11	1140:00	2506.57	3.40	254.60				24		2
3	11	1141:00	2508.52	1.95	254.63				24		3
4	11	1142:00	2507.78	-.74	254.63				24		4
5	11	1143:00	2501.81	-5.97	254.63				24		5
6	11	1144:00	2499.96	-1.85	254.62				24		6
7	11	1145:00	2502.58	2.62	254.62				24		7
8	11	1146:00	2502.78	.20	254.65				24		8
9	11	1147:00	2500.44	-2.34	254.61				24		9
10	11	1148:00	2499.76	-.68	254.69				24		10
11	11	1149:00	2499.59	-.17	254.70				24		11
12	11	1150:00	2499.57	-.02	254.69				24		12
13	11	1151:00	2500.35	.78	254.71				24		13
14	11	1152:00	2502.20	1.85	254.72				24		14
15	11	1153:00	2501.23	-.97	254.73				24		15
16	11	1154:00	2500.64	-.59	254.71				24		16
17	11	1155:00	2502.98	2.34	254.76				24		17
18	11	1156:00	2501.52	-1.46	254.69				24		18
19	11	1157:00	2502.30	.78	254.77				24		19
20	11	1158:00	2504.34	2.04	254.80				24		20
21	11	1159:00	2504.93	.59	254.80				24		21
22	11	1200:00	2506.10	1.17	254.82				24		22
23	11	1201:00	2507.66	1.56	254.83				24		23
24	11	1202:00	2503.21	-4.45	254.83				24		24
25	11	1203:00	2506.00	2.79	254.78				24		25
26	11	1204:00	2509.12	3.12	254.77				24		26
27	11	1205:00	2507.95	-1.17	254.87				24		27
28	11	1206:00	2509.41	1.46	254.82				24		28
29	11	1207:00	2509.70	.29	254.90				24		29
30	11	1208:00	2508.93	-.77	254.90				24		30
31	11	1209:00	2510.19	1.26	254.92				24		31
32	11	1210:00	2511.95	1.76	254.92				24		32
33	11	1211:00	2511.36	-.59	254.92				24		33
34	11	1212:00	2509.27	-2.09	254.92				24		34
35	11	1213:00	2507.95	-1.32	254.87				24		35
36	11	1214:00	2509.90	1.95	254.95				24		36
37	11	1215:00	2508.83	-1.07	254.91				24		37
38	11	1216:00	2509.32	.49	254.96				24		38

Computer Forms Topper Pages

452308

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	8	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR:MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1217:00	2510.56	1.24	254.96				24		1
2	11	1218:00	2511.85	1.29	254.96				24		2
3	11	1219:00	2513.31	1.46	254.98				24		3
4	11	1220:00	2512.73	-.58	254.98				24		4
5	11	1221:00	2506.69	-6.04	254.98				24		5
6	11	1222:00	2509.42	2.73	254.92				24		6
7	11	1223:00	2512.44	3.02	255.02				24		7
8	11	1224:00	2512.69	.25	255.02				24		8
9	11	1225:00	2512.63	-.06	255.02				24		9
10	11	1226:00	2510.98	-1.65	255.02				24		10
11	11	1227:00	2514.43	3.45	255.03				24		11
12	11	1228:00	2516.04	1.61	255.06				24		12
13	11	1229:00	2515.55	-.49	255.00				24		13
14	11	1230:00	2515.65	.10	255.07				24		14
15	11	1231:00	2513.41	-2.24	255.08				24		15
16	11	1232:00	2507.48	-5.93	255.10				24		16
17	11	1233:00	2507.67	.19	255.07				24		17
18	11	1234:00	2509.08	1.41	255.07				24		18
19	11	1235:00	2508.45	-.63	255.09				24		19
20	11	1236:00	2510.10	1.65	255.05				24		20
21	11	1237:00	2513.22	3.12	255.14				24		21
22	11	1238:00	2512.35	-.87	255.10				24		22
23	11	1239:00	2509.72	-2.63	255.15				24		23
24	11	1240:00	2507.38	-2.34	255.15				24		24
25	11	1241:00	2511.37	3.99	255.15				24		25
26	11	1242:00	2515.85	4.48	255.17				24		26
27	11	1243:00	2517.22	1.37	255.13				24		27
28	11	1244:00	2514.88	-2.34	255.23				24		28
29	11	1245:00	2512.84	-2.04	255.17				24		29
30	11	1246:00	2511.18	-1.66	255.23				24		30
31	11	1247:00	2507.66	-3.52	255.21				24		31
32	11	1248:00	2509.19	1.53	255.21				24		32
33	11	1249:00	2507.87	-1.32	255.22				24		33
34	11	1250:00	2505.15	-2.72	255.21				24		34
35	11	1251:00	2499.40	-5.75	255.20				24		35
36	11	1252:00	2502.52	3.12	255.21				24		36
37	11	1253:00	2503.74	1.22	255.24				24		37
38	11	1254:00	2506.32	2.58	255.[illegible]				24		38

Computer Forms Topsham Maine

452309

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	9	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN/SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1255:00	2509.92	3.60	255.25				24			1
2	11	1256:00	2510.79	.87	255.26				24			2
3	11	1257:00	2510.41	-.38	255.21				24			3
4	11	1258:00	2506.71	-3.70	255.28				24			4
5	11	1259:00	2504.47	-2.24	255.23				24			5
6	11	1300:00	2506.41	1.94	255.27				24			6
7	11	1301:00	2512.06	5.65	255.26				24			7
8	11	1302:00	2514.20	2.14	255.27				24			8
9	11	1303:00	2513.04	-1.16	255.29				24			9
10	11	1304:00	2511.87	-1.17	255.22				24			10
11	11	1305:00	2510.60	-1.27	255.33				24			11
12	11	1306:00	2507.78	-2.82	255.34				24			12
13	11	1307:00	2508.17	.39	255.35				24			13
14	11	1308:00	2505.54	-2.63	255.35				24			14
15	11	1309:00	2505.15	-.39	255.34				24			15
16	11	1310:00	2503.50	-1.65	255.34				24			16
17	11	1311:00	2504.37	.87	255.24				24			17
18	11	1312:00	2503.60	-.77	255.35				24			18
19	11	1313:00	2505.78	2.18	255.34				24			19
20	11	1314:00	2507.49	1.71	255.34				24			20
21	11	1315:00	2506.81	-.68	255.35				24			21
22	11	1316:00	2505.35	-1.46	255.33				24			22
23	11	1317:00	2504.76	-.59	255.38				24			23
24	11	1318:00	2502.33	-2.43	255.33				24			24
25	11	1319:00	2504.57	2.24	255.38				24			25
26	11	1320:00	2508.68	4.11	255.37				24			26
27	11	1321:00	2504.86	-3.82	255.37				24			27
28	11	1322:00	2503.30	-1.56	255.38				24			28
29	11	1323:00	2503.11	-.19	255.34				24			29
30	11	1324:00	2503.40	.29	255.38				24			30
31	11	1325:00	2505.25	1.85	255.38				24			31
32	11	1326:00	2506.32	1.07	255.41				24			32
33	11	1327:00	2506.13	-.19	255.42				24			33
34	11	1328:00	2505.45	-.68	255.42				24			34
35	11	1329:00	2504.47	-.98	255.41				24			35
36	11	1330:00	2502.63	-1.84	255.34				24			36
37	11	1331:00	2503.02	.39	255.44				24			37
38	11	1332:00	2503.23	.21	255.43				24			38

Computer Forms, Toppan Moore

452310

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	10	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1333:00	2503.50	.27	255.43				24			1
2	11	1334:00	2501.75	-1.75	255.43				24			2
3	11	1335:00	2501.99	.24	255.42				24			3
4	11	1336:00	2502.72	.73	255.42				24			4
5	11	1337:00	2504.09	1.37	255.42				24			5
6	11	1338:00	2502.24	-1.85	255.46				24			6
7	11	1339:00	2502.41	.17	255.46				24			7
8	11	1340:00	2501.85	-.56	255.45				24			8
9	11	1341:00	2501.95	.10	255.45				24			9
10	11	1342:00	2503.70	1.75	255.45				24			10
11	11	1343:00	2502.92	-.78	255.45				24			11
12	11	1344:00	2505.74	2.82	255.45				24			12
13	11	1345:00	2504.38	-1.36	255.46				24			13
14	11	1346:00	2501.65	-2.73	255.47				24			14
15	11	1347:00	2501.85	.20	255.50				24			15
16	11	1348:00	2499.90	-1.95	255.49				24			16
17	11	1349:00	2500.97	1.07	255.48				24			17
18	11	1350:00	2502.24	1.27	255.49				24			18
19	11	1351:00	2502.24	0.00	255.40				24			19
20	11	1352:00	2501.51	-.73	255.51				24			20
21	11	1353:00	2500.97	-.54	255.49				24			21
22	11	1354:00	2502.78	1.81	255.51				24			22
23	11	1355:00	2502.92	.14	255.52				24			23
24	11	1356:00	2502.14	-.78	255.51				24			24
25	11	1357:00	2499.22	-2.92	255.52				24			25
26	11	1358:00	2498.64	-.58	255.46				24			26
27	11	1359:00	2499.71	1.07	255.55				24			27
28	11	1400:00	2500.59	.88	255.55				24			28
29	11	1401:00	2501.76	1.17	255.55				24			29
30	11	1402:00	2500.30	-1.46	255.56				24			30
31	11	1403:00	2500.39	.09	255.58				24			31
32	11	1404:00	2499.62	-.77	255.58				24			32
33	11	1405:00	2499.03	-.59	255.54				24			33
34	11	1406:00	2499.62	.59	255.61				24			34
35	11	1407:00	2498.45	-1.17	255.61				24			35
36	11	1408:00	2500.30	1.85	255.60				24			36
37	11	1409:00	2499.62	-.68	255.60				24			37
38	11	141[illegible]:00	2498.25	-1.37	255.[illegible]				24			38

Computer-Forms Toppan Moore

452311

HI[illegible]RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	11	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR-MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1411:00	2497.67	-.58	255.63				24			1
2	11	1412:00	2496.50	-1.17	255.61				24			2
3	11	1413:00	2497.67	1.17	255.63				24			3
4	11	1414:00	2497.15	-.52	255.62				24			4
5	11	1415:00	2497.96	.81	255.61				24			5
6	11	1416:00	2496.70	-1.26	255.62				24			6
7	11	1417:00	2497.57	.87	255.56				24			7
8	11	1418:00	2498.06	.49	255.65				24			8
9	11	1419:00	2498.61	.55	255.64				24			9
10	11	1420:00	2500.15	1.54	255.64				24			10
11	11	1421:00	2500.40	.25	255.64				24			11
12	11	1422:00	2499.91	-.49	255.64				24			12
13	11	1423:00	2499.52	-.39	255.65				24			13
14	11	1424:00	2500.11	.59	255.56				24			14
15	11	1425:00	2500.30	.19	255.67				24			15
16	11	1426:00	2497.38	-2.92	255.68				24			16
17	11	1427:00	2496.55	-.83	255.66				24			17
18	11	1428:00	2497.19	.64	255.67				24			18
19	11	1429:00	2497.67	.48	255.68				24			19
20	11	1430:00	2498.74	1.07	255.68				24			20
21	11	1431:00	2499.43	.69	255.66				24			21
22	11	1432:00	2499.96	.53	255.71				24			22
23	11	1433:00	2499.84	-.12	255.72				24			23
24	11	1434:00	2500.50	.66	255.71				24			24
25	11	1435:00	2498.94	-1.56	255.72				24			25
26	11	1436:00	2497.48	-1.46	255.71				24			26
27	11	1437:00	2496.41	-1.07	255.71				24			27
28	11	1438:00	2496.22	-.19	255.69				24			28
29	11	1439:00	2497.97	1.75	255.75				24			29
30	11	1440:00	2498.34	.37	255.75				24			30
31	11	1441:00	2496.70	-1.64	255.75				24			31
32	11	1442:00	2496.51	-.19	255.75				24			32
33	11	1443:00	2496.41	-.10	255.72				24			33
34	11	1444:00	2496.41	0.00	255.76				24			34
35	11	1445:00	2495.83	-.58	255.69				24			35
36	11	1446:00	2497.19	1.36	255.77				24			36
37	11	1447:00	2497.35	.16	255.77				24			37
38	11	1448:00	2498.26	.91	255.77				24			38

Computer-Forms Toppan Moore

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

452312

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
	1	PELICAN#5	11/ 4/86	12	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P' (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1449:00	2499.14	.88	255.78				24			1
2	11	1450:00	2499.82	.68	255.76				24			2
3	11	1451:00	2500.02	.20	255.82				24			3
4	11	1452:00	2500.12	.10	255.76				24			4
5	11	1453:00	2499.53	-.59	255.83				24			5
6	11	1454:00	2500.29	.76	255.82				24			6
7	11	1455:00	2500.21	-.08	255.81				24			7
8	11	1456:00	2498.75	-1.46	255.82				24			8
9	11	1457:00	2500.31	1.56	255.81				24			9
10	11	1458:00	2501.09	.78	255.82				24			10
11	11	1459:00	2503.23	2.14	255.76				24			11
12	11	1500:00	2500.80	-2.43	255.85				24			12
13	11	1501:00	2499.98	-.82	255.84				24			13
14	11	1502:00	2501.58	1.60	255.84				24			14
15	11	1503:00	2499.92	-1.66	255.84				24			15
16	11	1504:00	2501.67	1.75	255.84				24			16
17	11	1505:00	2501.58	-.09	255.84				24			17
18	11	1506:00	2499.92	-1.66	255.78				24			18
19	11	1507:00	2502.45	2.53	255.86				24			19
20	11	1508:00	2501.97	-.48	255.86				24			20
21	11	1509:00	2501.72	-.25	255.85				24			21
22	11	1510:00	2500.80	-.92	255.86				24			22
23	11	1511:00	2500.80	0.00	255.86				24			23
24	11	1512:00	2499.14	-1.66	255.86				24			24
25	11	1513:00	2499.83	.69	255.80				24			25
26	11	1514:00	2500.02	.19	255.88				24			26
27	11	1515:00	2501.68	1.66	255.86				24			27
28	11	1516:00	2500.51	-1.17	255.90				24			28
29	11	1517:00	2501.77	1.26	255.89				24			29
30	11	1518:00	2504.01	2.24	255.89				24			30
31	11	1519:00	2501.48	-2.53	255.90				24			31
32	11	1520:00	2500.22	-1.26	255.84				24			32
33	11	1521:00	2502.17	1.95	255.92				24			33
34	11	1522:00	2499.24	-2.93	255.91				24			34
35	11	1523:00	2501.97	2.73	255.92				24			35
36	11	1524:00	2500.70	-1.27	255.83				24			36
37	11	1525.00	2500.32	-.38	255.93				24			37
38	11	152[illegible]00	2500.16	-.16	255[illegible]				24			38

Computer Forms Topper Moore

452313

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	13	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1527:00	2501.09	.93	255.92				24			1
2	11	1528:00	2500.22	-.87	255.93				24			2
3	11	1529:00	2498.56	-1.66	255.93				24			3
4	11	1530:00	2499.00	.44	255.93				24			4
5	11	1531:00	2498.47	-.53	255.87				24			5
6	11	1532:00	2498.56	.09	255.95				24			6
7	11	1533:00	2497.69	-.87	255.92				24			7
8	11	1534:00	2497.98	.29	255.97				24			8
9	11	1535:00	2498.08	.10	255.97				24			9
10	11	1536:00	2497.88	-.20	255.96				24			10
11	11	1537:00	2499.44	1.56	255.97				24			11
12	11	1538:00	2497.88	-1.56	255.93				24			12
13	11	1539:00	2495.45	-2.43	256.00				24			13
14	11	1540:00	2494.48	-.97	255.94				24			14
15	11	1541:00	2496.52	2.04	256.00				24			15
16	11	1542:00	2499.54	3.02	256.00				24			16
17	11	1543:00	2500.91	1.37	256.02				24			17
18	11	1544:00	2503.53	2.62	256.03				24			18
19	11	1545:00	2504.31	.78	256.03				24			19
20	11	1546:00	2501.39	-2.92	256.04				24			20
21	11	1547:00	2503.34	1.95	255.95				24			21
22	11	1548:00	2500.42	-2.92	256.06				24			22
23	11	1549:00	2498.86	-1.56	256.02				24			23
24	11	1550:00	2497.21	-1.65	256.05				24			24
25	11	1551:00	2496.78	-.43	256.03				24			25
26	11	1552:00	2498.37	1.59	256.03				24			26
27	11	1553:00	2497.89	-.48	256.03				24			27
28	11	1554:00	2494.67	-3.22	256.03				24			28
29	11	1555:00	2494.77	.10	256.02				24			29
30	11	1556:00	2493.41	-1.36	256.00				24			30
31	11	1557:00	2494.09	.68	255.91				24			31
32	11	1558:00	2491.66	-2.43	256.02				24			32
33	11	1559:00	2492.18	.52	256.02				24			33
34	11	1600:00	2495.55	3.37	256.02				24			34
35	11	1601:00	2496.38	.83	256.04				24			35
36	11	1602:00	2495.45	-.93	256.03				24			36
37	11	1603:00	2495.75	.30	256.03				24			37
38	11	1604:00	2495.06	-.69	255.96				24			38

Computer-Form Tear-Proof

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

452314

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
5	1	PELICAN#5	11/ 4/86	14	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/7150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1605:00	2493.51	-1.55	256.05				24			1
2	11	1606:00	2495.26	1.75	256.05				24			2
3	11	1607:00	2497.79	2.53	256.07				24			3
4	11	1608:00	2496.24	-1.55	256.08				24			4
5	11	1609:00	2491.85	-4.39	256.07				24			5
6	11	1610:00	2491.76	-.09	256.07				24			6
7	11	1611:00	2494.09	2.33	255.99				24			7
8	11	1612:00	2494.09	0.00	256.50				24			8
9	11	1613:00	2493.63	-.46	256.42				24			9
10	11	1614:00	2493.04	-.59	256.32				24			10
11	11	1615:00	2491.08	-1.76	256.22				24			11
12	11	1616:00	2492.15	1.07	256.15				24			12
13	11	1617:00	2491.96	-.19	256.17				24			13
14	11	1618:00	2490.79	-1.17	256.12				24			14
15	11	1619:00	2492.44	1.65	256.15				24			15
16	11	1620:00	2492.33	-.11	256.15				24			16
17	11	1621:00	2492.00	-.33	256.15				24			17
18	11	1622:00	2491.08	-.92	256.15				24			18
19	11	1623:00	2489.72	-1.36	256.10				24			19
20	11	1624:00	2489.96	.24	256.16				24			20
21	11	1625:00	2492.54	2.58	256.12				24			21
22	11	1626:00	2493.61	1.07	256.15				24			22
23	11	1627:00	2493.42	-.19	256.17				24			23
24	11	1628:00	2491.27	-2.15	256.16				24			24
25	11	1629:00	2491.47	.20	256.17				24			25
26	11	1630:00	2490.69	-.78	256.15				24			26
27	11	1631:00	2492.64	1.95	256.16				24			27
28	11	1632:00	2495.46	2.32	256.15				24			28
29	11	1633:00	2493.22	-2.24	256.20				24			29
30	11	1634:00	2495.44	2.22	256.20				24			30
31	11	1635:00	2496.34	.90	256.20				24			31
32	11	1636:00	2497.90	1.56	256.21				24			32
33	11	1637:00	2495.95	-1.95	256.18				24			33
34	11	1638:00	2500.04	4.09	256.22				24			34
35	11	1639:00	2498.87	-1.17	256.17				24			35
36	11	1640:00	2496.73	-2.14	256.21				24			36
37	11	1641:00	2496.14	-.59	256.20				24			37
38	11	1642:00	2494.39	-1.75	256.[illegible]				24			38

Computer-Form Tapper Power

452315

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	15	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1643:00	2492.44	-1.95	256.19				24			1
2	11	1644:00	2494.49	2.05	256.14				24			2
3	11	1645:00	2494.25	-.24	256.21				24			3
4	11	1646:00	2495.95	1.70	256.17				24			4
5	11	1647:00	2492.93	-3.02	256.21				24			5
6	11	1648:00	2497.27	4.34	256.21				24			6
7	11	1649:00	2493.61	-3.66	256.21				24			7
8	11	1650:00	2493.71	.10	256.21				24			8
9	11	1651:00	2499.36	5.65	256.21				24			9
10	11	1652:00	2500.04	.68	256.22				24			10
11	11	1653:00	2499.07	-.97	256.18				24			11
12	11	1654:00	2500.63	1.56	256.24				24			12
13	11	1655:00	2500.68	.05	256.22				24			13
14	11	1656:00	2506.86	6.18	256.22				24			14
15	11	1657:00	2509.68	2.82	256.22				24			15
16	11	1658:00	2505.79	-3.89	256.23				24			16
17	11	1659:00	2504.28	-1.51	256.23				24			17
18	11	1700:00	2499.36	-4.92	256.15				24			18
19	11	1701:00	2495.27	-4.09	256.22				24			19
20	11	1702:00	2494.69	-.58	256.22				24			20
21	11	1703:00	2493.03	-1.66	256.24				24			21
22	11	1704:00	2492.12	-.91	256.22				24			22
23	11	1705:00	2496.29	4.17	256.22				24			23
24	11	1706:00	2494.30	-1.99	256.22				24			24
25	11	1707:00	2492.93	-1.37	256.22				24			25
26	11	1708:00	2494.69	1.76	256.22				24			26
27	11	1709:00	2507.24	12.55	256.16				24			27
28	11	1710:00	2507.34	.10	256.25				24			28
29	11	1711:00	2503.14	-4.20	256.26				24			29
30	11	1712:00	2498.00	-5.14	256.24				24			30
31	11	1713:00	2493.23	-4.77	256.23				24			31
32	11	1714:00	2489.53	-3.70	256.23				24			32
33	11	1715:00	2488.70	-.83	256.22				24			33
34	11	1716:00	2487.58	-1.12	256.13				24			34
35	11	1717:00	2487.58	0.00	256.22				24			35
36	11	1718:00	2486.80	-.78	256.23				24			36
37	11	1719:00	2486.12	-.68	256.24				24			37
38	11	1720:00	2484.46	-1.66	256.24				24			38

Computer Forms Toppan Moore

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING

452316

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY-MO-YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	16	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDRT	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P" (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1721:00	2485.66	1.20	256.25				24		
2	11	1726:00	2485.73	.07	256.25				24		SET UP HORNER PLOT.
3	11	1727:00	2484.65	-1.08	256.01				24		
4	11	1728:00	2488.06	3.41	256.08				24		
5	11	1729:00	2488.74	.68	256.18				24		
6	11	1729:30	2480.08	-8.66	256.21						SHUT IN WITH DHSIT.
7	11	1730:00	2762.86	282.78	256.15						
8	11	1730:30	2995.32	232.46	256.21						
9	11	1730:35	3036.00	40.68	256.21						
10	11	1730:40	3063.32	27.32	256.21						
11	11	1730:45	3063.32	0.00	256.05						
12	11	1730:50	3063.32	0.00	256.13						
13	11	1730:55	3114.56	51.24	256.13						
14	11	1731.00	3164.82	50.26	256.13						
15	11	1731:05	3182.88	18.06	256.13						
16	11	1731:15	3224.25	41.37	256.13						
17	11	1731:20	3242.54	18.29	256.13						
18	11	1731:25	3260.61	18.07	256.13						
19	11	1731:30	3277.99	17.38	256.13						
20	11	1731:35	3294.60	16.61	256.13						
21	11	1731:40	3310.52	15.92	256.13						
22	11	1731:45	3325.76	15.24	256.13						
23	11	1731:50	3336.70	10.94	255.99						
24	11	1731:55	3354.09	17.39	255.99						
25	11	1732:00	3372.64	18.55	255.99						
26	11	1732:05	3382.81	10.17	255.99						
27	11	1732:10	3393.15	10.34	255.99						
28	11	1732:15	3404.97	11.82	255.99						
29	11	1732:20	3416.41	11.44	255.99						
30	11	1732:25	3427.35	10.94	255.99						
31	11	1732:30	3437.91	10.56	255.99						
32	11	1732:35	3448.71	10.80	255.99						
33	11	1732:40	3460.71	12.00	255.99						
34	11	1732:45	3468.68	7.97	255.99						
35	11	1732:50	3476.95	8.27	255.99						
36	11	1732:55	3485.60	8.65	255.99						
37	11	1733:00	3493.60	8.00	255.99						
38	11	173[illegible]05	3502.02	8.42	255.[illegible]						

Consult-Form Topsar Floor

452317

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	17	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1733:10	3509.70	7.68	255.99						1
2	11	1733:15	3516.82	7.12	255.99						2
3	11	1733:20	3525.29	8.47	255.99						3
4	11	1733:25	3532.23	6.94	255.99						4
5	11	1733:30	3538.88	6.65	255.99						5
6	11	1733:35	3545.33	6.45	255.99						6
7	11	1733:40	3551.49	6.16	255.99						7
8	11	1733:45	3557.46	5.97	255.99						8
9	11	1733:50	3563.32	5.86	255.99						9
10	11	1733:55	3568.90	5.58	255.99						10
11	11	1734:00	3574.37	5.47	255.99						11
12	11	1734:05	3579.56	5.19	255.99						12
13	11	1734:10	3584.64	5.08	255.99						13
14	11	1734:15	3589.63	4.99	255.99						14
15	11	1734:20	3594.42	4.79	255.99						15
16	11	1734:25	3599.11	4.69	255.99						16
17	11	1734:30	3603.71	4.60	255.99						17
18	11	1734:35	3608.01	4.30	255.99						18
19	11	1734:40	3612.32	4.31	255.99						19
20	11	1734:45	3616.33	4.01	255.99						20
21	11	1734:50	3620.24	3.91	255.99						21
22	11	1734:55	3624.05	3.81	255.99						22
23	11	1735:00	3627.77	3.72	255.99						23
24	11	1735:05	3631.29	3.52	255.99						24
25	11	1735:10	3634.71	3.42	255.99						25
26	11	1735:15	3638.04	3.33	255.99						26
27	11	1735:20	3641.27	3.23	255.99						27
28	11	1735:25	3644.30	3.03	255.99						28
29	11	1735:30	3647.33	3.03	255.99						29
30	11	1735:35	3650.26	2.93	255.99						30
31	11	1735:40	3653.10	2.84	255.99						31
32	11	1735:45	3655.74	2.64	255.99						32
33	11	1735:50	3658.48	2.74	255.99						33
34	11	1735:55	3661.02	2.54	255.99						34
35	11	1736:00	3663.47	2.45	255.99						35
36	11	1736:05	3665.91	2.44	255.99						36
37	11	1736:10	3668.26	2.35	255.99						37
38	11	1736:15	3670.61	2.35	255.99						38

Computer Forms Topcat Mgure

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

452318

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	18	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1736:20	3672.76	2.15	255.99							1
2	11	1736:25	3675.01	2.25	255.99							2
3	11	1736:30	3677.07	2.06	255.99							3
4	11	1736:35	3679.22	2.15	255.99							4
5	11	1736:40	3681.18	1.96	255.99							5
6	11	1736:45	3683.23	2.05	255.99							6
7	11	1736:50	3685.19	1.96	255.99							7
8	11	1736:55	3687.14	1.95	255.99							8
9	11	1737:00	3688.90	1.76	255.99							9
10	11	1737:05	3690.57	1.67	255.99							10
11	11	1737:10	3692.33	1.76	255.99							11
12	11	1737:15	3693.99	1.66	255.99							12
13	11	1737:20	3695.65	1.66	255.99							13
14	11	1737:25	3697.22	1.57	255.99							14
15	11	1737:30	3698.78	1.56	255.99							15
16	11	1737:35	3700.25	1.47	255.99							16
17	11	1737:40	3701.72	1.47	255.99							17
18	11	1737:45	3703.19	1.47	255.99							18
19	11	1737:50	3704.80	1.61	255.99							19
20	11	1737:55	3706.17	1.37	255.99							20
21	11	1738:00	3707.49	1.32	255.99							21
22	11	1738:05	3708.75	1.26	255.99							22
23	11	1738:10	3710.08	1.33	255.99							23
24	11	1738:15	3711.36	1.28	255.99							24
25	11	1738:20	3712.56	1.20	255.99							25
26	11	1738:25	3713.80	1.24	255.99							26
27	11	1738:30	3715.03	1.23	255.99							27
28	11	1738:35	3716.12	1.09	255.99							28
29	11	1738:40	3717.32	1.20	255.99							29
30	11	1738:45	3718.50	1.18	255.99							30
31	11	1738:50	3719.54	1.04	255.99							31
32	11	1738:55	3720.80	1.26	255.99							32
33	11	1739:00	3721.78	.98	255.99						OPEN DHSIT.	33
34	11	1739:05	3722.75	.97	255.99							34
35	11	1739:10	3723.73	.98	255.99							35
36	11	1739:15	3724.71	.98	255.99							36
37	11	1739:20	3725.69	.98	255.99							37
38	11	1739:25	3726.67	.98	255.99							38

Computer-Forms Tappan Moore

452319

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC 1218 SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY MO YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	19	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1739:30	3727.65	.98	255.99						1
2	11	1739:35	3728.53	.88	255.99						2
3	11	1739:40	3729.51	.98	255.99						3
4	11	1739:45	3730.39	.88	255.99						4
5	11	1739:50	3731.27	.88	255.99						5
6	11	1739:55	3732.15	.88	255.99						6
7	11	1740:00	3733.03	.88	255.99						7
8	11	1740:05	3733.91	.88	255.99						8
9	11	1740:10	3734.69	.78	255.99						9
10	11	1740:15	3735.57	.88	255.99						10
11	11	1740:20	3736.26	.69	255.99						11
12	11	1740:25	3737.04	.78	255.99						12
13	11	1740:30	3737.72	.68	255.99						13
14	11	1740:35	3738.41	.69	255.99						14
15	11	1740:40	3739.00	.59	255.99						15
16	11	1740:45	3739.68	.68	255.99						16
17	11	1740:50	3740.37	.69	255.99						17
18	11	1741:00	3741.54	1.17	255.99						18
19	11	1741:05	3742.32	.78	255.99						19
20	11	1741:10	3743.01	.69	255.99						20
21	11	1741:15	3743.60	.59	255.99						21
22	11	1741:20	3744.18	.58	255.99						22
23	11	1741:25	3744.77	.59	255.99						23
24	11	1741:30	3745.36	.59	255.99						24
25	11	1741:40	3746.53	1.17	255.99						25
26	11	1741:50	3747.71	1.18	255.99						26
27	11	1742:00	3748.88	1.17	255.99						27
28	11	1742:10	3750.05	1.17	255.99						28
29	11	1742:20	3751.23	1.18	255.99						29
30	11	1742:30	3752.50	1.27	255.99						30
31	11	1742:40	3753.77	1.27	255.99						31
32	11	1742:50	3755.04	1.27	255.99						32
33	11	1743:00	3756.12	1.08	255.99						33
34	11	1743:10	3757.10	.98	255.99						34
35	11	1743:20	3757.98	.88	255.99						35
36	11	1743:30	3758.96	.98	255.99						36
37	11	1743:40	3760.03	1.07	255.99						37
38	11	1743:50	3761.11	1.08	255.99						38

Computer Forms Tappan Maine

452320

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OSC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	20	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1744:00	3762.19	1.08	255.99							1
2	11	1744:10	3763.26	1.07	255.99							2
3	11	1744:20	3764.34	1.08	255.99							3
4	11	1744:30	3765.37	1.03	255.99							4
5	11	1744:40	3766.40	1.03	255.99							5
6	11	1744:50	3767.37	.97	255.99							6
7	11	1745:00	3768.30	.93	255.99							7
8	11	1745:10	3769.23	.93	255.99							8
9	11	1745:20	3770.07	.84	255.99							9
10	11	1745:30	3771.04	.97	255.99							10
11	11	1745:40	3772.17	1.13	255.99							11
12	11	1745:50	3772.95	.78	255.99							12
13	11	1746:00	3773.54	.59	255.99							13
14	11	1746:10	3774.13	.59	255.99							14
15	11	1746:20	3774.81	.68	255.99							15
16	11	1746:30	3775.59	.78	255.99							16
17	11	1746:40	3776.38	.79	255.99							17
18	11	1746:50	3777.16	.78	255.99							18
19	11	1747:00	3778.04	.88	255.99							19
20	11	1747:10	3778.82	.78	255.99							20
21	11	1747:20	3779.80	.98	255.99							21
22	11	1747:30	3780.68	.88	255.99							22
23	11	1747:40	3781.56	.88	255.99							23
24	11	1747:50	3782.25	.69	255.99							24
25	11	1748:00	3783.03	.78	255.99							25
26	11	1748:10	3783.72	.69	255.99							26
27	11	1748:20	3784.40	.68	255.99							27
28	11	1748:30	3785.19	.79	255.99							28
29	11	1748:40	3785.87	.68	255.99							29
30	11	1750:00	3790.60	4.73	255.99							30
31	11	1750:10	3791.16	.56	255.99							31
32	11	1750:20	3791.74	.58	255.99							32
33	11	1750:30	3792.33	.59	255.99							33
34	11	1750:40	3792.92	.59	255.99							34
35	11	1750:50	3793.60	.68	255.99							35
36	11	1751:00	3794.29	.69	255.99							36
37	11	1751:10	3794.87	.58	255.99							37
38	11	175[illegible]20	3795.46	.59	255[illegible]							38

452321

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	21	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR:MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1751:30	3795.95	.49	255.99							1
2	11	1751:40	3796.44	.49	255.99							2
3	11	1751:50	3797.03	.59	255.99							3
4	11	1752:00	3797.71	.68	255.99							4
5	11	1752:10	3798.40	.69	255.99							5
6	11	1752:20	3799.08	.68	255.99							6
7	11	1752:30	3799.77	.69	255.99							7
8	11	1752:40	3800.45	.68	255.99							8
9	11	1752:50	3800.94	.49	255.99							9
10	11	1753:00	3801.43	.49	255.99							10
11	11	1753:10	3801.92	.49	255.99							11
12	11	1753:20	3802.31	.39	255.99							12
13	11	1753:30	3802.70	.39	255.99							13
14	11	1753:40	3803.19	.49	255.99							14
15	11	1753:50	3803.78	.59	255.99							15
16	11	1754:00	3804.27	.49	255.99							16
17	11	1754:10	3804.76	.49	255.99							17
18	11	1754:20	3805.25	.49	255.99							18
19	11	1754:30	3805.64	.39	255.99							19
20	11	1754:40	3806.18	.54	255.99							20
21	11	1754:50	3806.62	.44	255.99							21
22	11	1755:00	3807.06	.44	255.99							22
23	11	1755:10	3807.55	.49	255.99							23
24	11	1755:20	3808.14	.59	255.99							24
25	11	1755:30	3808.67	.53	255.99							25
26	11	1755:40	3809.07	.40	255.99							26
27	11	1755:50	3809.60	.53	255.99							27
28	11	1756:00	3810.04	.44	255.99							28
29	11	1756:10	3810.63	.59	255.99							29
30	11	1756:20	3811.02	.39	255.99							30
31	11	1756:30	3811.27	.25	255.99							31
32	11	1756:40	3811.56	.29	255.99							32
33	11	1756:50	3811.86	.30	255.99							33
34	11	1757:00	3812.20	.34	255.99							34
35	11	1757:10	3812.59	.39	255.99							35
36	11	1757:20	3812.98	.39	255.99							36
37	11	1757:30	3813.47	.49	255.99							37
38	11	1757:40	3813.86	.39	255.99							38

Computer-Forms, Tucson, Arizona

452322

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	22	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1757:50	3814.25	.39	255.99						1
2	11	1758:00	3814.74	.49	255.99						2
3	11	1758:10	3815.23	.49	255.99						3
4	11	1758:20	3815.72	.49	255.99						4
5	11	1758:30	3816.21	.49	255.99						5
6	11	1758:40	3816.60	.39	255.99						6
7	11	1758:50	3816.90	.30	255.99						7
8	11	1759:00	3817.29	.39	255.99						8
9	11	1759:10	3817.58	.29	255.99						9
10	11	1759:20	3817.87	.29	255.99						10
11	11	1759:30	3818.27	.40	255.99						11
12	11	1759:40	3818.56	.29	255.99						12
13	11	1759:50	3818.95	.39	255.99						13
14	11	1800:00	3819.34	.39	255.99						14
15	11	1800:10	3819.64	.30	255.99						15
16	11	1800:20	3820.03	.39	255.99						16
17	11	1800:30	3820.42	.39	255.99						17
18	11	1800:40	3820.81	.39	255.99						18
19	11	1800:50	3821.20	.39	255.99						19
20	11	1801:00	3821.59	.39	255.99						20
21	11	1801:10	3821.89	.30	255.99						21
22	11	1801:20	3822.28	.39	255.99						22
23	11	1801:30	3822.67	.39	255.99						23
24	11	1801:40	3822.98	.31	255.99						24
25	11	1801:50	3823.36	.38	255.99						25
26	11	1802:00	3823.65	.29	255.99						26
27	11	1802:15	3823.99	.34	255.99						27
28	11	1802:30	3824.58	.59	255.99						28
29	11	1802:45	3825.22	.64	255.99						29
30	11	1803:00	3825.90	.68	255.99						30
31	11	1803:15	3826.54	.64	255.99						31
32	11	1803:30	3827.12	.58	255.99						32
33	11	1803:45	3827.66	.54	255.99						33
34	11	1804:00	3828.05	.39	255.99						34
35	11	1804:15	3828.59	.54	255.99						35
36	11	1804:30	3829.13	.54	255.99						36
37	11	1804:45	3829.57	.44	255.99						37
38	11	1805:00	3830.06	.49	255.99						38

Computer-Forms Toppan Moore

452323

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	23	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1805:15	3830.55	.49	255.99							1
2	11	1805:30	3830.99	.44	255.99							2
3	11	1805:45	3831.48	.49	255.99							3
4	11	1806:00	3832.02	.54	255.99							4
5	11	1806:15	3832.46	.44	255.99							5
6	11	1806:30	3832.95	.49	255.99							6
7	11	1806:45	3833.44	.49	255.99							7
8	11	1807:00	3833.88	.44	255.99							8
9	11	1807:15	3834.32	.44	255.99							9
10	11	1807:30	3834.81	.49	255.99							10
11	11	1807:45	3835.25	.44	255.99							11
12	11	1808:00	3835.74	.49	255.99							12
13	11	1808:15	3836.13	.39	255.99							13
14	11	1808:30	3836.57	.44	255.99							14
15	11	1808:45	3836.96	.39	255.99							15
16	11	1809:00	3837.35	.39	255.99							16
17	11	1809:15	3837.75	.40	255.99							17
18	11	1809:30	3838.14	.39	255.99							18
19	11	1809:45	3838.53	.39	255.99							19
20	11	1810:00	3839.02	.49	255.99							20
21	11	1810:15	3839.31	.29	255.99							21
22	11	1810:30	3839.61	.30	255.99							22
23	11	1810:45	3839.80	.19	255.99							23
24	11	1811:00	3840.19	.39	255.99							24
25	11	1811:15	3840.58	.39	255.99							25
26	11	1811:30	3840.98	.40	255.99							26
27	11	1811:45	3841.37	.39	255.99							27
28	11	1812:00	3841.76	.39	255.99							28
29	11	1812:15	3842.25	.49	255.99							29
30	11	1812:30	3842.44	.19	255.99							30
31	11	1812:45	3842.74	.30	255.99							31
32	11	1813:00	3843.13	.39	255.99							32
33	11	1813:15	3843.52	.39	255.99							33
34	11	1813:30	3843.91	.39	255.99							34
35	11	1813:45	3844.30	.39	255.99							35
36	11	1814:00	3844.60	.30	255.99							36
37	11	1814:15	3845.09	.49	255.99							37
38	11	1814:30	3845.48	.39	255.99							38

Computer-Forms Toppan Moore

452324

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	24	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1814:45	3845.77	.29	255.99						1
2	11	1815:00	3846.07	.30	255.99						2
3	11	1815:15	3846.46	.39	255.99						3
4	11	1815:30	3846.85	.39	255.99						4
5	11	1815:45	3847.24	.39	255.99						5
6	11	1816:00	3847.53	.29	255.99						6
7	11	1816:20	3847.93	.40	255.99						7
8	11	1816:30	3848.61	.68	255.99						8
9	11	1817:00	3848.81	.20	255.99						9
10	11	1817:30	3849.39	.58	255.99						10
11	11	1818:00	3849.98	.59	255.99						11
12	11	1818:30	3850.67	.69	255.99						12
13	11	1819:00	3851.25	.58	255.99						13
14	11	1819:30	3852.04	.79	255.99						14
15	11	1820:00	3852.72	.68	255.99						15
16	11	1820:30	3853.31	.59	255.99						16
17	11	1821:00	3853.99	.68	255.99						17
18	11	1821:30	3854.48	.49	255.99						18
19	11	1822:00	3854.97	.49	255.99						19
20	11	1822:30	3855.56	.59	255.99						20
21	11	1823:00	3856.15	.59	255.99						21
22	11	1823:30	3856.74	.59	255.99						22
23	11	1824:00	3857.32	.58	255.99						23
24	11	1824:30	3858.01	.69	255.99						24
25	11	1825:00	3858.50	.49	255.99						25
26	11	1825:30	3858.99	.49	255.99						26
27	11	1826:00	3857.13	-1.86	255.99						27
28	11	1827:00	3860.65	3.52	255.99						28
29	11	1828:00	3861.63	.98	255.99						29
30	11	1829:00	3862.71	1.08	255.99						30
31	11	1830:00	3863.69	.98	255.99						31
32	11	1831:00	3864.57	.88	255.99						32
33	11	1832:00	3865.35	.78	255.99						33
34	11	1833:00	3866.53	1.18	255.99						34
35	11	1834:00	3867.41	.88	255.99						35
36	11	1835:00	3868.39	.98	255.99						36
37	11	1836:00	3869.36	.97	255.99						37
38	11	1837:00	3870.15	.79	255.99						38

Computer-Forex Tapper Moore

452325

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	25	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1838:00	3870.83	.68	255.99						1
2	11	1839:00	3871.62	.79	255.99						2
3	11	1840:00	3872.30	.68	255.99						3
4	11	1841:00	3873.09	.79	255.99						4
5	11	1842:00	3873.97	.88	255.99						5
6	11	1843:00	3874.75	.78	255.99						6
7	11	1844:00	3875.43	.68	255.99						7
8	11	1845:00	3876.22	.79	255.99						8
9	11	1846:00	3877.05	.83	255.99						9
10	11	1847:00	3877.93	.88	255.99						10
11	11	1848:00	3878.57	.64	255.99						11
12	11	1849:00	3879.25	.68	255.99						12
13	11	1850:00	3879.84	.59	255.99						13
14	11	1851:00	3880.43	.59	255.99						14
15	11	1852:00	3881.02	.59	255.99						15
16	11	1853:00	3881.60	.58	255.99						16
17	11	1854:00	3882.29	.69	255.99						17
18	11	1855:00	3882.88	.59	255.99						18
19	11	1856:00	3883.56	.68	255.99						19
20	11	1857:00	3884.15	.59	255.99						20
21	11	1858:00	3884.74	.59	255.99						21
22	11	1859:00	3885.32	.58	255.99						22
23	11	1900:00	3886.01	.69	255.99						23
24	11	1901:00	3886.60	.59	255.99						24
25	11	1902:00	3887.18	.58	255.99						25
26	11	1903:00	3887.67	.49	255.99						26
27	11	1904:00	3888.36	.69	255.99						27
28	11	1905:00	3888.95	.59	255.99						28
29	11	1906:00	3889.34	.39	255.99						29
30	11	1907:00	3889.92	.58	255.99						30
31	11	1908:00	3890.51	.59	255.99						31
32	11	1909:00	3891.10	.59	255.99						32
33	11	1910:00	3891.69	.59	255.99						33
34	11	1911:00	3892.37	.68	255.99						34
35	11	1912:00	3892.86	.49	255.99						35
36	11	1913:00	3893.35	.49	255.99						36
37	11	1914:00	3893.74	.39	255.99						37
38	11	1915:00	3894.33	.59	255.99						38

Computer-Forms Toppan Moore

452326

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	26	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	1916:00	3894.82	.49	255.99							1
2	11	1917:00	3895.31	.49	255.99							2
3	11	1918:00	3895.80	.49	255.99							3
4	11	1919:00	3896.29	.49	255.99							4
5	11	1920:00	3896.68	.39	255.99							5
6	11	1921:00	3897.17	.49	255.99							6
7	11	1922:00	3897.66	.49	255.99							7
8	11	1923:00	3898.05	.39	255.99							8
9	11	1924:00	3898.54	.49	255.99							9
10	11	1925:00	3899.03	.49	255.99							10
11	11	1926:00	3899.32	.29	255.99							11
12	11	1927:00	3899.72	.40	255.99							12
13	11	1928:00	3900.11	.39	255.99							13
14	11	1929:00	3900.60	.49	255.99							14
15	11	1930:00	3900.99	.39	255.99							15
16	11	1931:00	3901.38	.39	255.99							16
17	11	1932:00	3900.86	-.52	250.08							17
18	11	1933:00	3901.33	.47	250.17							18
19	11	1934:00	3901.72	.39	250.21							19
20	11	1935:00	3902.22	.50	250.23							20
21	11	1936:00	3902.53	.31	250.23							21
22	11	1937:00	3902.90	.37	250.23							22
23	11	1938:00	3903.29	.39	250.24							23
24	11	1939:00	3903.68	.39	250.23							24
25	11	1940:00	3904.17	.49	250.23							25
26	11	1941:00	3904.56	.39	250.22							26
27	11	1942:00	3904.95	.39	250.21							27
28	11	1943:00	3905.34	.39	250.20							28
29	11	1944:00	3905.73	.39	250.19							29
30	11	1945:00	3906.03	.30	250.18							30
31	11	1946:00	3906.42	.39	250.19							31
32	11	1947:00	3906.77	.35	250.17							32
33	11	1948:00	3907.10	.33	250.16							33
34	11	1949:00	3907.49	.39	250.14							34
35	11	1950:00	3907.88	.39	250.13							35
36	11	1951:00	3908.19	.31	250.12							36
37	11	1952:00	3908.56	.37	250.10							37
38	11	195[illegible]0	3908.85	.29	250.[illegible]							38

Computer-Forms Toppan Moore

452327

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	27	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	1954:00	3909.24	.39	250.08						1
2	11	1955:00	3909.63	.39	250.05						2
3	11	1956:00	3909.92	.29	250.03						3
4	11	1957:00	3910.19	.27	250.03						4
5	11	1958:00	3910.50	.31	250.01						5
6	11	1959:00	3910.89	.39	250.00						6
7	11	2000:00	3911.18	.29	250.00						7
8	11	2001:00	3911.48	.30	250.01						8
9	11	2002:00	3911.73	.25	250.00						9
10	11	2003:00	3912.06	.33	249.98						10
11	11	2004:00	3912.25	.19	249.95						11
12	11	2005:00	3912.55	.30	249.94						12
13	11	2006:00	3912.84	.29	249.94						13
14	11	2007:00	3913.19	.35	249.94						14
15	11	2008:00	3913.60	.41	250.41						15
16	11	2009:00	3913.85	.25	250.15						16
17	11	2010:00	3914.13	.28	250.06						17
18	11	2011:00	3914.42	.29	250.00						18
19	11	2012:00	3914.70	.28	249.94						19
20	11	2013:00	3914.89	.19	249.90						20
21	11	2014:00	3915.18	.29	249.87						21
22	11	2015:00	3915.37	.19	249.85						22
23	11	2016:00	3915.60	.23	249.83						23
24	11	2017:00	3915.85	.25	249.81						24
25	11	2018:00	3916.15	.30	249.79						25
26	11	2019:00	3916.44	.29	249.77						26
27	11	2020:00	3916.63	.19	249.77						27
28	11	2021:00	3916.83	.20	249.77						28
29	11	2022:00	3917.08	.25	249.74						29
30	11	2023:00	3917.31	.23	249.73						30
31	11	2024:00	3917.51	.20	249.72						31
32	11	2025:00	3917.80	.29	249.70						32
33	11	2026:00	3918.01	.21	249.70						33
34	11	2027:00	3918.36	.35	249.70						34
35	11	2028:00	3918.67	.31	249.69						35
36	11	2029:00	3918.97	.30	249.68						36
37	11	2030:00	3919.16	.19	249.67						37
38	11	2031:00	3919.46	.30	249.69						38

Computer Forms, Tappan Moore

452328

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	28	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	2032:00	3919.75	.29	249.68						1
2	11	2033:00	3920.04	.29	249.67						2
3	11	2034:00	3920.24	.20	249.65						3
4	11	2035:00	3920.43	.19	249.64						4
5	11	2036:00	3920.55	.12	249.63						5
6	11	2037:00	3920.72	.17	249.62						6
7	11	2038:00	3921.01	.29	249.62						7
8	11	2039:00	3921.21	.20	249.62						8
9	11	2040:00	3921.40	.19	249.61						9
10	11	2041:00	3921.60	.20	249.60						10
11	11	2042:00	3921.79	.19	249.60						11
12	11	2043:00	3921.99	.20	249.58						12
13	11	2044:00	3922.18	.19	249.57						13
14	11	2045:00	3922.47	.29	249.56						14
15	11	2046:00	3922.67	.20	249.58						15
16	11	2047:00	3922.81	.14	249.57						16
17	11	2048:00	3923.06	.25	249.56						17
18	11	2049:00	3923.25	.19	249.54						18
19	11	2050:00	3923.45	.20	249.53						19
20	11	2051:00	3923.64	.19	249.52						20
21	11	2052:00	3923.84	.20	249.54						21
22	11	2053:00	3924.09	.25	249.53						22
23	11	2054:00	3924.23	.14	249.51						23
24	11	2055:00	3924.52	.29	249.48						24
25	11	2056:00	3924.71	.19	249.47						25
26	11	2057:00	3924.91	.20	249.47						26
27	11	2058:00	3925.10	.19	249.45						27
28	11	2059:00	3925.29	.19	249.45						28
29	11	2100:00	3925.49	.20	249.43						29
30	11	2101:00	3925.68	.19	249.42						30
31	11	2102:00	3925.78	.10	249.42						31
32	11	2103:00	3926.03	.25	249.41						32
33	11	2104:00	3926.27	.24	249.40						33
34	11	2105:00	3926.46	.19	249.39						34
35	11	2106:00	3926.65	.19	249.39						35
36	11	2107:00	3926.85	.20	249.37						36
37	11	2108:00	3926.95	.10	249.38						37
38	11	210[illegible]:00	3927.14	.19	249.[illegible]						38

Computer Forms, Tapper Moore

452329

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	29	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	2110:00	3927.24	.10	249.35							1
2	11	2111:00	3927.43	.19	249.34							2
3	11	2112:00	3927.63	.20	249.33							3
4	11	2113:00	3927.82	.19	249.35							4
5	11	2114:00	3927.98	.16	249.34							5
6	11	2115:00	3928.11	.13	249.32							6
7	11	2116:00	3928.31	.20	249.31							7
8	11	2117:00	3928.50	.19	249.30							8
9	11	2118:00	3928.62	.12	249.28							9
10	11	2119:00	3928.79	.17	249.26							10
11	11	2120:00	3928.98	.19	249.25							11
12	11	2121:00	3929.18	.20	249.24							12
13	11	2122:00	3929.37	.19	249.23							13
14	11	2123:00	3929.47	.10	249.22							14
15	11	2124:00	3929.67	.20	249.23							15
16	11	2125:00	3929.76	.09	249.21							16
17	11	2126:00	3929.95	.19	249.20							17
18	11	2127:00	3930.15	.20	249.19							18
19	11	2128:00	3930.35	.20	249.21							19
20	11	2129:00	3930.44	.09	249.20							20
21	11	2130:00	3930.64	.20	249.18							21
22	11	2131:00	3930.73	.09	249.16							22
23	11	2132:00	3930.93	.20	249.16							23
24	11	2133:00	3931.12	.19	249.15							24
25	11	2134:00	3931.22	.10	249.16							25
26	11	2135:00	3931.42	.20	249.16							26
27	11	2136:00	3931.51	.09	249.14							27
28	11	2137:00	3931.70	.19	249.11							28
29	11	2138:00	3931.90	.20	249.10							29
30	11	2139:00	3931.99	.09	249.09							30
31	11	2140:00	3932.13	.14	249.08							31
32	11	2141:00	3932.28	.15	249.07							32
33	11	2142:00	3932.48	.20	249.07							33
34	11	2143:00	3932.58	.10	249.06							34
35	11	2144:00	3932.67	.09	249.04							35
36	11	2145:00	3932.85	.18	249.05							36
37	11	2146:00	3932.96	.11	249.03							37
38	11	2147:00	3933.16	.20	249.01							38

Computer Forms Toppan Moore

452330

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	30	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	11	2148:00	3933.34	.18	249.01						1
2	11	2149:00	3933.45	.11	249.00						2
3	11	2150:00	3933.64	.19	249.00						3
4	11	2151:00	3933.74	.10	248.99						4
5	11	2152:00	3933.94	.20	249.01						5
6	11	2153:00	3934.04	.10	249.00						6
7	11	2154:00	3934.23	.19	248.99						7
8	11	2155:00	3934.32	.09	248.97						8
9	11	2156:00	3934.52	.20	248.96						9
10	11	2157:00	3934.61	.09	248.95						10
11	11	2158:00	3934.75	.14	248.93						11
12	11	2159:00	3934.91	.16	248.94						12
13	11	2200:00	3935.00	.09	248.93						13
14	11	2201:00	3935.20	.20	248.92						14
15	11	2202:00	3935.29	.09	248.91						15
16	11	2203:00	3935.39	.10	248.92						16
17	11	2204:00	3935.59	.20	248.90						17
18	11	2205:00	3935.68	.09	248.89						18
19	11	2206:00	3935.88	.20	248.89						19
20	11	2207:00	3935.97	.09	248.87						20
21	11	2208:00	3936.07	.10	248.87						21
22	11	2209:00	3936.17	.10	248.86						22
23	11	2210:00	3936.36	.19	248.85						23
24	11	2211:00	3936.46	.10	248.85						24
25	11	2212:00	3936.56	.10	248.85						25
26	11	2213:00	3936.76	.20	248.87						26
27	11	2214:00	3936.89	.13	248.86						27
28	11	2215:00	3937.05	.16	248.85						28
29	11	2216:00	3937.14	.09	248.84						29
30	11	2217:00	3937.24	.10	248.83						30
31	11	2218:00	3937.35	.11	248.81						31
32	11	2219:00	3937.53	.18	248.80						32
33	11	2220:00	3937.63	.10	248.80						33
34	11	2221:00	3937.73	.10	248.80						34
35	11	2222:00	3937.82	.09	248.79						35
36	11	2223:00	3937.92	.10	248.80						36
37	11	2224:00	3938.06	.14	248.80						37
38	11	2225:00	3938.21	.15	248.8						38

Computer-Forum Toolpan Mouse

452331

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	31	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	2226:00	3938.31	.10	248.77							1
2	11	2227:00	3938.41	.10	248.77							2
3	11	2228:00	3938.50	.09	248.76							3
4	11	2229:00	3938.60	.10	248.77							4
5	11	2230:00	3938.70	.10	248.76							5
6	11	2231:00	3938.79	.09	248.74							6
7	11	2232:00	3938.89	.10	248.73							7
8	11	2233:00	3939.08	.19	248.71							8
9	11	2234:00	3939.18	.10	248.70							9
10	11	2235:00	3939.28	.10	248.70							10
11	11	2236:00	3939.37	.09	248.70							11
12	11	2237:00	3939.57	.20	248.69							12
13	11	2238:00	3939.62	.05	248.68							13
14	11	2239:00	3939.76	.14	248.68							14
15	11	2240:00	3939.86	.10	248.69							15
16	11	2241:00	3939.96	.10	248.67							16
17	11	2242:00	3940.15	.19	248.66							17
18	11	2243:00	3940.25	.10	248.65							18
19	11	2244:00	3940.34	.09	248.64							19
20	11	2245:00	3940.44	.10	248.64							20
21	11	2246:00	3940.54	.10	248.64							21
22	11	2247:00	3940.64	.10	248.62							22
23	11	2248:00	3940.73	.09	248.62							23
24	11	2249:00	3940.83	.10	248.62							24
25	11	2250:00	3940.93	.10	248.64							25
26	11	2251:00	3941.03	.10	248.62							26
27	11	2252:00	3941.12	.09	248.62							27
28	11	2253:00	3941.22	.10	248.60							28
29	11	2254:00	3941.32	.10	248.59							29
30	11	2255:00	3941.41	.09	248.58							30
31	11	2256:00	3941.51	.10	248.59							31
32	11	2259:00	3941.51	0.00	248.34							32
33	11	2300:00	3941.74	.23	248.34							33
34	11	2301:00	3941.87	.13	248.38							34
35	11	2302:00	3941.98	.11	248.44							35
36	11	2303:00	3942.08	.10	248.47							36
37	11	2304:00	3942.18	.10	248.47							37
38	11	2305:00	3942.28	.10	248.49							38

Computer-Form Tappan Moore

452332

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	32	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	2306:00	3632.79	-309.49	248.42				16		OPEN DHSIT.	1
2	11	2306:30	3233.25	-399.54	247.57				16			2
3	11	2306:45	3162.42	-70.83	247.35				16			3
4	11	2307:00	3090.03	-72.39	246.71				16			4
5	11	2307:15	3007.58	-82.45	246.49				16			5
6	11	2307:30	2927.74	-79.84	246.49				16			6
7	11	2307:45	2874.95	-52.79	245.16				16			7
8	11	2308:00	2810.65	-64.30	245.16				16			8
9	11	2308:15	2772.45	-38.20	244.65				16			9
10	11	2308:30	2750.14	-22.31	244.47				16			10
11	11	2309:00	2816.84	66.70	244.40				16			11
12	11	2309:30	2878.32	61.48	244.63				16			12
13	11	2310:00	2864.22	-14.10	245.01				16			13
14	11	2310:30	2845.83	-18.39	245.47				16			14
15	11	2311:00	2840.30	-5.53	245.89				16			15
16	11	2311:30	2891.58	51.28	246.30				16			16
17	11	2312:00	2935.21	43.63	246.70				16			17
18	11	2312:30	2975.15	39.94	247.18				16			18
19	11	2313:00	3013.10	37.95	247.62				16			19
20	11	2313:30	3051.84	38.74	247.96				16			20
21	11	2314:00	3085.71	33.87	248.35				24		CHANGE CHOKE.	21
22	11	2314:30	3118.12	32.41	248.70				24			22
23	11	2315:00	3151.81	33.69	248.96				24			23
24	11	2315:30	3184.28	32.47	249.28				24			24
25	11	2316:00	3213.52	29.24	249.47				24			25
26	11	2316:30	3242.24	28.72	249.67				24			26
27	11	2317:00	3269.97	27.73	249.84				24			27
28	11	2317:30	3296.06	26.09	250.00				24			28
29	11	2318:00	3321.55	25.49	250.15				24			29
30	11	2318:30	3341.34	19.79	250.29				24			30
31	11	2319:00	3351.65	10.31	250.40				24			31
32	11	2319:30	3358.70	7.05	250.50				24			32
33	11	2320:00	3366.13	7.43	250.59				24			33
34	11	2320:30	3373.56	7.43	250.66				24			34
35	11	2321:00	3380.79	7.23	250.66				24			35
36	11	2322:00	3396.14	15.35	250.80				24			36
37	11	2323:00	3394.82	-1.32	250.88				24			37
38	11	232[illegible]:00	3308.06	-86.76	250.[illegible]				24			38

Computer-Form Tarpon Place

452333

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	11/ 4/86	33	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	11	2325:00	3212.88	-95.18	250.89				24			1
2	11	2326:00	3120.23	-92.65	250.86				24			2
3	11	2327:00	3053.06	-67.17	250.85				24			3
4	11	2328:00	3001.76	-51.30	250.87				24			4
5	11	2329:00	2863.65	-138.11	250.94				24			5
6	11	2330:00	2655.11	-208.54	250.92				40		CHANGE CHOKE.	6
7	11	2331:00	2521.09	-134.02	250.92				40			7
8	11	2332:00	2402.68	-118.41	250.96				40			8
9	11	2333:00	2282.96	-119.72	251.01				40			9
10	11	2334:00	2203.82	-79.14	251.13				40			10
11	11	2335:00	2117.10	-86.72	251.26				40			11
12	11	2336:00	2037.76	-79.34	251.40				40			12
13	11	2337:00	1978.13	-59.63	251.54				40			13
14	11	2338:00	1918.70	-59.43	251.69				40			14
15	11	2339:00	1830.74	-87.96	251.85				40			15
16	11	2340:00	1762.17	-68.57	251.96				40			16
17	11	2341:00	1677.04	-85.13	252.00				40			17
18	11	2342:00	1611.96	-65.08	252.00				40			18
19	11	2343:00	1558.73	-53.23	251.99				40			19
20	11	2344:00	1510.93	-47.80	251.98				40			20
21	11	2345:00	1476.66	-34.27	251.94				56		CHANGE CHOKE.	21
22	11	2346:00	1424.87	-51.79	251.88				56			22
23	11	2347:00	1382.92	-41.95	251.78				56			23
24	11	2348:00	1341.75	-41.17	251.69				56			24
25	11	2349:00	1296.19	-45.56	251.54				56			25
26	11	2350:00	1262.87	-33.32	251.36				68		CHANGE CHOKE.	26
27	11	2351:00	1225.96	-36.91	251.17				68			27
28	11	2352:00	1192.20	-33.76	250.93				68			28
29	11	2353:00	1178.26	-13.94	250.72				68			29
30	11	2354:00	1153.83	-24.43	250.40				68			30
31	11	2355:00	1144.61	-9.22	250.16				96		CHANGE CHOKE.	31
32	11	2356:00	1128.22	-16.39	249.85				96			32
33	11	2357:00	1125.10	-3.12	249.59				96			33
34	11	2358:00	1116.07	-9.03	249.28				96			34
35	11	2359:00	1110.43	-5.64	249.04				96			35
36	12	0001:00	1110.43	0.00	248.31				96			36
37	12	0002:00	1105.80	-4.63	248.31				96			37
38	12	0003:00	1107.81	2.01	247.80				96			38

Computer-Forms Toppan Printing

452334

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	34	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftmDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0004:00	1108.58	.77	247.58				96			1
2	12	0005:00	1109.49	.91	247.35				96			2
3	12	0006:00	1110.38	.89	247.08				96			3
4	12	0007:00	1114.17	3.79	246.85				96			4
5	12	0008:00	1122.03	7.86	246.59				96			5
6	12	0009:00	1133.26	11.23	246.35				96			6
7	12	0010:00	1138.21	4.95	246.19				96			7
8	12	0011:00	1155.35	17.14	245.97				96			8
9	12	0012:00	1184.29	28.94	245.79				96			9
10	12	0013:00	1193.11	8.82	245.57				96			10
11	12	0014:00	1334.82	141.71	245.44				96			11
12	12	0015:00	1360.18	25.36	245.20				96			12
13	12	0016:00	1367.96	7.78	244.93				96			13
14	12	0017:00	1370.15	2.19	244.60				96			14
15	12	0018:00	1410.79	40.64	244.45				96			15
16	12	0019:00	1447.98	37.19	244.38				96			16
17	12	0020:00	1474.13	26.15	244.39				96			17
18	12	0021:00	1498.43	24.30	244.47				96			18
19	12	0022:00	1525.76	27.33	244.51				96			19
20	12	0023:00	1539.91	14.15	244.53				96			20
21	12	0024:00	1561.81	21.90	244.52				96			21
22	12	0025:00	1563.07	1.26	244.39				96			22
23	12	0026:00	1577.41	14.34	244.38				96			23
24	12	0027:00	1597.70	20.29	244.44				96			24
25	12	0028:00	1572.62	-25.08	244.45				96			25
26	12	0029:00	1572.61	-.01	244.54				96			26
27	12	0030:00	1599.21	26.60	244.58				96			27
28	12	0031:00	1570.77	-28.44	244.56				96			28
29	12	0032:00	1563.84	-6.93	244.55				96			29
30	12	0033:00	1570.16	6.32	244.55				96			30
31	12	0034:00	1585.66	15.50	244.56				96			31
32	12	0035:00	1573.05	-12.61	244.47				96			32
33	12	0036:00	1569.56	-3.49	244.43				96			33
34	12	0037:00	1577.41	7.85	244.41				96			34
35	12	0038:00	1566.69	-10.72	244.41				96			35
36	12	0039:00	1564.33	-2.36	244.42				96			36
37	12	0040:00	1553.86	-10.47	244.44				96			37
38	12	004[illegible]00	1552.51	-1.35	244.[illegible]				96			38

Computer-Forms Toppan Moore

452335

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	35	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0042:00	1548.34	-4.17	244.58				96			1
2	12	0043:00	1516.07	-32.27	244.60				96			2
3	12	0044:00	1530.60	14.53	244.68				96			3
4	12	0045:00	1520.04	-10.56	244.76				96			4
5	12	0046:00	1512.96	-7.08	244.86				96			5
6	12	0047:00	1520.42	7.46	244.94				96			6
7	12	0048:00	1540.70	20.28	245.06				96			7
8	12	0049:00	1526.81	-13.89	245.01				96			8
9	12	0050:00	1504.53	-22.28	244.97				96			9
10	12	0051:00	1545.61	41.08	244.90				96			10
11	12	0052:00	1553.94	8.33	244.83				96			11
12	12	0053:00	1540.87	-13.07	244.74				96			12
13	12	0054:00	1535.70	-5.17	244.69				96			13
14	12	0055:00	1533.21	-2.49	244.70				96			14
15	12	0056:00	1541.35	8.14	244.75				96			15
16	12	0057:00	1544.84	3.49	244.74				96			16
17	12	0058:00	1550.60	5.76	244.77				96			17
18	12	0059:00	1547.55	-3.05	244.80				96			18
19	12	0100:00	1537.61	-9.94	244.80				96			19
20	12	0101:00	1548.07	10.46	244.80				96			20
21	12	0102:00	1515.48	-32.59	244.83				96			21
22	12	0103:00	1505.11	-10.37	244.92				96			22
23	12	0104:00	1517.31	12.20	245.07				96			23
24	12	0105:00	1507.37	-9.94	245.16				96			24
25	12	0106:00	1524.82	17.45	245.21				96			25
26	12	0107:00	1516.72	-8.10	245.27				96			26
27	12	0108:00	1503.25	-13.47	245.32				96			27
28	12	0109:00	1508.48	5.23	245.40				96			28
29	12	0110:00	1497.43	-11.05	245.48				96			29
30	12	0111:00	1502.14	4.71	245.55				96			30
31	12	0112:00	1487.54	-14.60	245.59				96			31
32	12	0113:00	1501.59	14.05	245.65				96			32
33	12	0114:00	1493.26	-8.33	245.68				96			33
34	12	0115:00	1511.08	17.82	245.73				96			34
35	12	0116:00	1499.94	-11.14	245.74				96			35
36	12	0117:00	1496.82	-3.12	245.74				96			36
37	12	0118:00	1496.93	.11	245.76				96			37
38	12	0119:00	1501.49	4.56	245.76				96			38

Computer-Forms Toscan Mapes

452336

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	36	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (DF)	HORNER TIME	P' (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	12	0120:00	1503.52	2.03	245.80				96		1
2	12	0121:00	1510.15	6.63	245.84				96		2
3	12	0122:00	1524.93	14.78	245.87				96		3
4	12	0123:00	1531.52	6.59	245.92				96		4
5	12	0124:00	1541.69	10.17	245.99				96		5
6	12	0125:00	1539.85	-1.84	246.05				96		6
7	12	0126:00	1549.63	9.78	246.10				96		7
8	12	0127:00	1547.65	-1.98	246.16				96		8
9	12	0128:00	1560.05	12.40	246.18				96		9
10	12	0129:00	1536.06	-23.99	246.20				96		10
11	12	0130:00	1532.38	-3.68	246.20				96		11
12	12	0131:00	1529.28	-3.10	246.17				96		12
13	12	0132:00	1545.17	15.89	246.17				96		13
14	12	0133:00	1538.99	-6.18	246.14				96		14
15	12	0134:00	1531.71	-7.28	245.99				96		15
16	12	0135:00	1535.45	3.74	245.98				96		16
17	12	0136:00	1536.55	1.10	245.96				96		17
18	12	0137:00	1525.51	-11.04	245.92				96		18
19	12	0138:00	1519.21	-6.30	245.87				96		19
20	12	0139:00	1521.06	1.85	245.82				96		20
21	12	0140:00	1509.61	-11.45	245.77				96		21
22	12	0141:00	1509.63	.02	245.70				96		22
23	12	0142:00	1505.72	-3.91	245.67				96		23
24	12	0143:00	1508.43	2.71	245.63				96		24
25	12	0144:00	1504.59	-3.84	245.61				96		25
26	12	0145:00	1536.28	31.69	245.57				96		26
27	12	0146:00	1540.83	4.55	245.57				96		27
28	12	0147:00	1544.61	3.78	245.62				96		28
29	12	0148:00	1541.16	-3.45	245.66				96		29
30	12	0149:00	1538.54	-2.62	245.70				96		30
31	12	0150:00	1538.60	.06	245.70				96		31
32	12	0151:00	1547.42	8.82	245.71				96		32
33	12	0152:00	1504.45	-42.97	245.68				96		33
34	12	0153:00	1539.47	35.02	245.63				96		34
35	12	0154:00	1488.66	-50.81	245.64				96		35
36	12	0155:00	1508.76	20.10	245.63				96		36
37	12	0156:00	1528.91	20.15	245.65				96		37
38	12	015[illegible]00	1528.33	-.58	245.[illegible]				96		38

Computer-Forms Topper Mass

452337

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	37	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0158:00	1534.14	5.81	245.77				96			1
2	12	0159:00	1532.51	-1.63	245.85				96			2
3	12	0200:00	1537.33	4.82	245.93				96			3
4	12	0201:00	1550.26	12.93	246.01				96			4
5	12	0202:00	1560.68	10.42	246.11				96			5
6	12	0203:00	1566.39	5.71	246.20				96			6
7	12	0204:00	1578.12	11.73	246.26				96			7
8	12	0205:00	1573.00	-5.12	246.29				96			8
9	12	0206:00	1569.39	-3.61	246.28				96			9
10	12	0207:00	1540.52	-28.87	246.23				96			10
11	12	0208:00	1545.36	4.84	246.20				96			11
12	12	0209:00	1540.71	-4.65	246.21				96			12
13	12	0210:00	1541.25	.54	246.24				96			13
14	12	0211:00	1538.95	-2.30	246.17				96			14
15	12	0212:00	1532.28	-6.67	246.15				96			15
16	12	0213:00	1544.49	12.21	246.16				96			16
17	12	0214:00	1541.78	-2.71	246.15				96			17
18	12	0215:00	1544.78	3.00	246.15				96			18
19	12	0216:00	1559.20	14.42	246.16				96			19
20	12	0217:00	1558.37	-.83	246.15				96			20
21	12	0218:00	1556.90	-1.47	246.15				96			21
22	12	0219:00	1559.32	2.42	246.17				96			22
23	12	0220:00	1548.17	-11.15	246.21				96			23
24	12	0221:00	1555.69	7.52	246.21				96			24
25	12	0222:00	1532.67	-23.02	246.18				96			25
26	12	0223:00	1528.31	-4.36	246.16				96			26
27	12	0224:00	1531.02	2.71	246.22				96			27
28	12	0225:00	1521.91	-9.11	246.24				96			28
29	12	0226:00	1514.64	-7.27	246.26				96			29
30	12	0227:00	1516.16	1.52	246.21				96			30
31	12	0228:00	1502.90	-13.26	246.16				96			31
32	12	0229:00	1511.84	8.94	246.15				96			32
33	12	0230:00	1499.44	-12.40	246.09				96			33
34	12	0231:00	1494.50	-4.94	246.05				96			34
35	12	0232:00	1473.67	-20.83	246.04				96			35
36	12	0233:00	1463.67	-10.00	245.99				96			36
37	12	0234:00	1462.05	-1.62	245.94				96			37
38	12	0235:00	1456.53	-5.52	245.92				96			38

Computer Forms Toronto Ontario

452338

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	38	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0236:00	1444.81	-11.72	245.86				96			1
2	12	0237:00	1443.27	-1.54	245.70				96			2
3	12	0238:00	1457.90	14.63	245.56				96			3
4	12	0239:00	1451.16	-6.74	245.47				96			4
5	12	0240:00	1469.15	17.99	245.40				96			5
6	12	0241:00	1495.89	26.74	245.29				96			6
7	12	0242:00	1508.78	12.89	245.11				96			7
8	12	0243:00	1547.55	38.77	244.84				96			8
9	12	0244:00	1493.30	-54.25	244.54				96			9
10	12	0245:00	1528.76	35.46	244.28				96			10
11	12	0246:00	1520.74	-8.02	244.15				96			11
12	12	0247:00	1518.71	-2.03	244.06				96			12
13	12	0248:00	1534.11	15.40	244.04				96			13
14	12	0249:00	1551.95	17.84	243.94				96			14
15	12	0250:00	1535.28	-16.67	243.90				96			15
16	12	0251:00	1546.33	11.05	243.90				96			16
17	12	0252:00	1550.01	3.68	243.86				96			17
18	12	0253:00	1544.10	-5.91	243.80				96			18
19	12	0254:00	1543.72	-.38	243.81				96			19
20	12	0255:00	1546.23	2.51	243.88				96			20
21	12	0256:00	1543.75	-2.48	243.96				96			21
22	12	0257:00	1544.99	1.24	244.01				96			22
23	12	0258:00	1548.65	3.66	244.07				96			23
24	12	0259:00	1552.67	4.02	244.13				96			24
25	12	0300:00	1568.22	15.55	244.18				96			25
26	12	0301:00	1583.72	15.50	244.17				96			26
27	12	0302:00	1563.24	-20.48	244.13				96			27
28	12	0303:00	1562.02	-1.22	244.09				96			28
29	12	0304:00	1564.25	2.23	244.09				96			29
30	12	0305:00	1570.93	6.68	244.08				96			30
31	12	0306:00	1569.96	-.97	244.09				96			31
32	12	0307:00	1571.80	1.84	244.11				96			32
33	12	0308:00	1573.80	2.00	244.12				96			33
34	12	0309:00	1588.27	14.47	244.17				96			34
35	12	0310:00	1584.40	-3.87	244.17				96			35
36	12	0311:00	1593.94	9.54	244.18				96			36
37	12	0312:00	1587.40	-6.54	244.22				96			37
38	12	0313:00	1588.70	1.30	244.				96			38

Computer - Forms Topper Floors

452339

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	39	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP. (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	12	0314:00	1594.18	5.18	244.32				96		1
2	12	0315:00	1597.96	3.78	244.37				96		2
3	12	0316:00	1597.28	-.68	244.40				96		3
4	12	0317:00	1596.40	-.88	244.45				96		4
5	12	0318:00	1598.19	1.79	244.47				96		5
6	12	0319:00	1592.59	-5.60	244.47				96		6
7	12	0320:00	1593.11	.52	244.47				96		7
8	12	0321:00	1594.41	1.30	244.48				96		8
9	12	0322:00	1594.50	.09	244.51				96		9
10	12	0323:00	1592.14	-2.36	244.52				96		10
11	12	0324:00	1594.32	2.18	244.54				96		11
12	12	0325:00	1590.59	-3.73	244.55				96		12
13	12	0326:00	1585.35	-5.24	244.59				96		13
14	12	0327:00	1589.42	4.07	244.59				96		14
15	12	0328:00	1588.26	-1.16	244.63				96		15
16	12	0329:00	1590.05	1.79	244.65				96		16
17	12	0330:00	1607.54	17.49	244.70				96		17
18	12	0331:00	1615.29	7.75	244.68				96		18
19	12	0332:00	1612.48	-2.81	244.65				96		19
20	12	0333:00	1608.77	-3.71	244.59				96		20
21	12	0334:00	1616.27	7.50	244.55				96		21
22	12	0335:00	1626.74	10.47	244.52				96		22
23	12	0336:00	1632.17	5.43	244.48				96		23
24	12	0337:00	1636.22	4.05	244.42				96		24
25	12	0338:00	1638.74	2.52	244.36				96		25
26	12	0339:00	1637.50	-1.24	244.30				96		26
27	12	0340:00	1627.13	-10.37	244.28				96		27
28	12	0341:00	1618.02	-9.11	244.29				96		28
29	12	0342:00	1609.59	-8.43	244.34				96		29
30	12	0343:00	1607.05	-2.54	244.44				96		30
31	12	0344:00	1605.88	-1.17	244.54				96		31
32	12	0345:00	1605.36	-.52	244.63				96		32
33	12	0346:00	1606.57	1.21	244.70				96		33
34	12	0347:00	1604.53	-2.04	244.76				96		34
35	12	0348:00	1602.89	-1.64	244.79				96		35
36	12	0349:00	1602.03	-.86	244.82				96		36
37	12	0350:00	1602.74	.71	244.83				96		37
38	12	0351:00	1600.56	-2.18	244.82				96		38

452340

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	40	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P' (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0352:00	1603.37	2.81	244.81				96			1
2	12	0353:00	1604.82	1.45	244.80				96			2
3	12	0400:00	1604.82	0.00	244.28				96			3
4	12	0401:00	1604.46	-.36	244.27				96			4
5	12	0402:00	1576.54	-27.92	244.33				96			5
6	12	0402:10	1577.12	.58	244.33				96			6
7	12	0402:15	1577.56	.44	244.33				96			7
8	12	0402:20	1578.58	1.02	244.33				96			8
9	12	0402:25	1578.19	-.39	244.33				96			9
10	12	0402:30	1578.09	-.10	244.33				96			10
11	12	0402:35	1576.93	-1.16	244.33				96			11
12	12	0402:40	1573.83	-3.10	244.33				96			12
13	12	0402:45	1568.79	-5.04	244.33				96			13
14	12	0402:50	1562.78	-6.01	244.33				96			14
15	12	0402:55	1559.68	-3.10	244.33				96			15
16	12	0403:00	1557.84	-1.84	244.33				96			16
17	12	0403:05	1557.36	-.48	244.33				96			17
18	12	0403:10	1557.74	.38	244.33				96			18
19	12	0403:15	1558.81	1.07	244.33				96			19
20	12	0404:20	1554.06	-4.75	244.33				96			20
21	12	0404:25	1553.29	-.77	244.33				96			21
22	12	0404:30	1553.00	-.29	244.33				96			22
23	12	0404:35	1552.27	-.73	244.33				96			23
24	12	0404:40	1550.28	-1.99	244.33				96			24
25	12	0404:45	1550.09	-.19	244.33				96			25
26	12	0404:50	1549.60	-.49	244.33				96			26
27	12	0404:55	1644.77	95.17	244.33				96		SHUT IN DHSIT.	27
28	12	0405:00	1703.23	58.46	244.33				96			28
29	12	0405:05	1783.83	80.60	244.33				96			29
30	12	0405:10	1858.21	74.38	244.33				96			30
31	12	0405:15	1921.76	63.55	244.33				96			31
32	12	0405:20	1981.94	60.18	244.33				96			32
33	12	0405:25	2039.40	57.46	244.33				96			33
34	12	0405:30	2094.46	55.06	244.33				96			34
35	12	0405:35	2146.61	52.15	244.33				96			35
36	12	0405:40	2197.03	50.42	244.33				96			36
37	12	0405:45	2246.19	49.16	244.33				96			37
38	12	040[illegible]50	2293.42	47.23	244.[illegible]				96			38

Computer-Forms, Tappan Mass

OTIS

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

452341

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	41	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN:SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0405:55	2339.10	45.68	244.33				96			1
2	12	0406:00	2383.33	44.23	244.33				96			2
3	12	0406:05	2425.82	42.49	244.33				96			3
4	12	0406:10	2466.76	40.94	244.33				96			4
5	12	0406:15	2501.53	34.77	244.33				96			5
6	12	0406:20	2538.31	36.78	244.33				96			6
7	12	0406:25	2577.03	38.72	244.33				96			7
8	12	0406:30	2612.40	35.37	244.33				96			8
9	12	0406:35	2644.63	32.23	244.33				96			9
10	12	0406:40	2679.07	34.44	244.33				96			10
11	12	0406:45	2710.80	31.73	244.33				96			11
12	12	0406:50	2740.01	29.21	244.33				96			12
13	12	0406:55	2770.83	30.82	244.33				96			13
14	12	0407:00	2795.71	24.88	244.33				96			14
15	12	0407:05	2823.17	27.46	244.33				96			15
16	12	0407:10	2849.47	26.30	244.33				96			16
17	12	0407:15	2874.80	25.33	244.33				96			17
18	12	0407:20	2899.15	24.35	244.33				96			18
19	12	0407:25	2922.44	23.29	244.33				96			19
20	12	0407:30	2944.75	22.31	244.33				96			20
21	12	0407:35	2966.29	21.54	244.33				96			21
22	12	0407:40	2986.95	20.66	244.33				96			22
23	12	0407:45	3006.74	19.79	244.33				96			23
24	12	0417:25	3589.49	582.75	244.33				96			24
25	12	0417:30	3591.42	1.93	244.33				96			25
26	12	0417:35	3592.50	1.08	244.33				96			26
27	12	0417:40	3593.46	.96	244.33				96			27
28	12	0417:45	3594.55	1.09	244.33				96			28
29	12	0417:50	3595.48	.93	244.33				96			29
30	12	0417:55	3596.46	.98	244.33				96			30
31	12	0418:00	3597.43	.97	244.33				96			31
32	12	0418:05	3598.41	.98	244.33				96			32
33	12	0418:10	3599.39	.98	244.33				96			33
34	12	0418:15	3600.36	.97	244.33				96			34
35	12	0418:20	3601.34	.98	244.33				96			35
36	12	0418:25	3602.22	.88	244.33				96			36
37	12	0418:30	3603.10	.88	244.33				96			37
38	12	0418:35	3603.98	.88	244.33				96			38

Computer-Form Tocson Ariz

452342

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING.

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	42	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0418:40	3604.86	.88	244.33				96			1
2	12	0418:45	3605.74	.88	244.33				96			2
3	12	0418:50	3606.62	.88	244.33				96			3
4	12	0418:55	3607.50	.88	244.33				96			4
5	12	0419:00	3608.38	.88	244.33				96			5
6	12	0419:10	3610.33	1.95	244.33				96			6
7	12	0419:20	3611.99	1.66	244.33				96			7
8	12	0419:30	3613.56	1.57	244.33				96			8
9	12	0419:40	3615.22	1.66	244.33				96			9
10	12	0419:50	3616.73	1.51	244.33				96			10
11	12	0420:00	3618.29	1.56	244.33				96			11
12	12	0420:10	3619.71	1.42	244.33				96			12
13	12	0420:20	3621.27	1.56	244.33				96			13
14	12	0420:30	3622.84	1.57	244.33				96			14
15	12	0420:40	3624.50	1.66	244.33				96			15
16	12	0420:50	3625.97	1.47	244.33				96			16
17	12	0421:00	3627.53	1.56	244.33				96			17
18	12	0421:10	3628.99	1.46	244.33				96			18
19	12	0421:20	3630.46	1.47	244.33				96			19
20	12	0421:30	3631.73	1.27	244.33				96			20
21	12	0421:40	3633.10	1.37	244.33				96			21
22	12	0421:50	3634.47	1.37	244.33				96			22
23	12	0422:00	3635.83	1.36	244.33				96			23
24	12	0422:10	3637.11	1.28	244.33				96			24
25	12	0422:20	3638.57	1.46	244.33				96			25
26	12	0422:30	3640.04	1.47	244.33				96			26
27	12	0422:40	3641.31	1.27	244.33				96			27
28	12	0422:50	3642.63	1.32	244.33				96			28
29	12	0423:00	3643.95	1.32	244.33				96			29
30	12	0423:10	3645.26	1.31	244.33				96			30
31	12	0423:20	3646.58	1.32	244.33				96			31
32	12	0423:30	3647.76	1.18	244.33				96			32
33	12	0423:40	3648.83	1.07	244.33				96			33
34	12	0423:50	3649.91	1.08	244.33				96			34
35	12	0424:00	3651.08	1.17	244.33				96			35
36	12	0424:10	3652.25	1.17	244.33				96			36
37	12	0424:20	3653.43	1.18	244.33				96			37
38	12	0424:30	3654.60	1.17	244.				96			38

Computer Forms Topper Floors

452343

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	43	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0424:40	3655.67	1.07	244.33				96			1
2	12	0424:50	3656.85	1.18	244.33				96			2
3	12	0425:00	3658.02	1.17	244.33				96			3
4	12	0425:10	3659.09	1.07	244.33				96			4
5	12	0425:20	3659.88	.79	244.33				96			5
6	12	0425:30	3660.85	.97	244.33				96			6
7	12	0425:40	3662.03	1.18	244.33				96			7
8	12	0425:50	3663.00	.97	244.33				96			8
9	12	0426:00	3663.98	.98	244.33				96			9
10	12	0426:10	3664.96	.98	244.33				96			10
11	12	0426:20	3666.03	1.07	244.33				96			11
12	12	0426:30	3666.96	.93	244.33				96			12
13	12	0426:40	3667.94	.98	244.33				96			13
14	12	0426:50	3668.87	.93	244.33				96			14
15	12	0427:00	3669.75	.88	244.33				96			15
16	12	0427:10	3670.63	.88	244.33				96			16
17	12	0427:20	3671.60	.97	244.33				96			17
18	12	0427:30	3672.48	.88	244.33				96			18
19	12	0427:40	3673.36	.88	244.33				96			19
20	12	0427:50	3674.14	.78	244.33				96			20
21	12	0428:00	3675.02	.88	244.33				96			21
22	12	0428:10	3676.00	.98	244.33				96			22
23	12	0428:20	3676.88	.88	244.33				96			23
24	12	0428:30	3677.86	.98	244.33				96			24
25	12	0429:00	3680.50	2.64	244.33				96			25
26	12	0429:30	3682.94	2.44	244.33				96			26
27	12	0430:00	3685.19	2.25	244.33				96			27
28	12	0430:30	3687.53	2.34	244.33				96			28
29	12	0431:00	3689.73	2.20	244.33				96			29
30	12	0431:30	3691.74	2.01	244.33				96			30
31	12	0432:00	3693.79	2.05	244.33				96			31
32	12	0432:30	3695.84	2.05	244.33				96			32
33	12	0433:00	3697.70	1.86	244.33				96			33
34	12	0433:30	3699.65	1.95	244.33				96			34
35	12	0434:00	3701.56	1.91	244.33				96			35
36	12	0434:30	3703.37	1.81	244.33				96			36
37	12	0435:00	3705.23	1.86	244.33				96			37
38	12	0435:30	3707.18	1.95	244.33				96			38

Computer-Forms Toolpak Plus

452344

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	44	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	12	0436:00	3709.14	1.96	244.33				96		1
2	12	0436:30	3710.80	1.66	244.33				96		2
3	12	0437:00	3712.51	1.71	244.33				96		3
4	12	0437:30	3714.07	1.56	244.33				96		4
5	12	0438:00	3715.69	1.62	244.33				96		5
6	12	0438:30	3717.44	1.75	244.33				96		6
7	12	0439:00	3719.01	1.57	244.33				96		7
8	12	0439:30	3720.67	1.66	244.33				96		8
9	12	0440:00	3722.23	1.56	244.33				96		9
10	12	0441:00	3724.87	2.64	244.33				96		10
11	12	0442:00	3727.61	2.74	244.33				96		11
12	12	0443:00	3730.35	2.74	244.33				96		12
13	12	0444:00	3732.84	2.49	244.33				96		13
14	12	0445:00	3735.53	2.69	244.33				96		14
15	12	0446:00	3737.88	2.35	244.33				96		15
16	12	0447:00	3740.17	2.29	244.33				96		16
17	12	0448:00	3742.57	2.40	244.33				96		17
18	12	0449:00	3744.82	2.25	244.33				96		18
19	12	0450:00	3747.02	2.20	244.33				96		19
20	12	0451:00	3749.22	2.20	244.33				96		20
21	12	0452:00	3751.37	2.15	244.33				96		21
22	12	0453:00	3753.42	2.05	244.33				96		22
23	12	0454:00	3755.57	2.15	244.33				96		23
24	12	0455:00	3757.62	2.05	244.33				96		24
25	12	0456:00	3759.48	1.86	244.33				96		25
26	12	0457:00	3761.44	1.96	244.33				96		26
27	12	0458:00	3763.30	1.86	244.33				96		27
28	12	0459:00	3764.96	1.66	244.33				96		28
29	12	0500:00	3766.67	1.71	244.33				96		29
30	12	0501:00	3768.48	1.81	244.33				96		30
31	12	0502:00	3770.24	1.76	244.33				96		31
32	12	0503:00	3771.90	1.66	244.33				96		32
33	12	0504:00	3773.66	1.76	244.33				96		33
34	12	0505:00	3775.32	1.66	244.33				96		34
35	12	0506:00	3776.89	1.57	244.33				96		35
36	12	0507:00	3778.45	1.56	244.33				96		36
37	12	0508:00	3779.82	1.37	244.33				96		37
38	12	050[illegible]00	3781.19	1.37	244.[illegible]				96		38

Computer Forms Topeka Kansas

452345

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218 SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	45	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN/SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P* (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS	
1	12	0510:00	3782.46	1.27	244.33				96			1
2	12	0511:00	3783.73	1.27	244.33				96			2
3	12	0512:00	3785.20	1.47	244.33				96			3
4	12	0513:00	3786.47	1.27	244.33				96			4
5	12	0514:00	3787.74	1.27	244.33				96			5
6	12	0515:00	3789.21	1.47	244.33				96			6
7	12	0516:00	3790.48	1.27	244.33				96			7
8	12	0517:00	3791.65	1.17	244.33				96			8
9	12	0518:00	3792.82	1.17	244.33				96			9
10	12	0519:00	3793.90	1.08	244.33				96			10
11	12	0520:00	3795.07	1.17	244.33				96			11
12	12	0521:00	3796.15	1.08	244.33				96			12
13	12	0522:00	3797.13	.98	244.33				96			13
14	12	0523:00	3798.20	1.07	244.33				96			14
15	12	0524:00	3799.28	1.08	244.33				96			15
16	12	0525:00	3800.45	1.17	244.33				96			16
17	12	0526:00	3801.33	.88	244.33				96			17
18	12	0527:00	3802.31	.98	244.33				96			18
19	12	0528:00	3803.29	.98	244.33				96			19
20	12	0529:00	3804.31	1.02	244.33				96			20
21	12	0530:00	3805.44	1.13	244.33				96			21
22	12	0531:00	3806.61	1.17	244.33				96			22
23	12	0532:00	3807.59	.98	244.33				96			23
24	12	0533:00	3808.57	.98	244.33				96			24
25	12	0534:00	3809.35	.78	244.33				96			25
26	12	0535:00	3810.23	.88	244.33				96			26
27	12	0536:00	3811.11	.88	244.33				96			27
28	12	0537:00	3812.09	.98	244.33				96			28
29	12	0538:00	3813.07	.98	244.33				96			29
30	12	0539:00	3813.95	.88	244.33				96			30
31	12	0540:00	3814.73	.78	244.33				96			31
32	12	0541:00	3815.61	.88	244.33				96			32
33	12	0542:00	3816.39	.78	244.33				96			33
34	12	0543:00	3817.27	.88	244.33				96			34
35	12	0544:00	3818.05	.78	244.33				96			35
36	12	0545:00	3818.79	.74	244.33				96			36
37	12	0546:00	3819.52	.73	244.33				96			37
									96			38

...ten-Forms Toppan Moore

452346

HIGH RESOLUTION DOWNHOLE PRESSURE / TEMPERATURE REPORT

OEC - 1218-SING

TEST #	RUN #	WELL NAME OR NUMBER	DATE (DAY/MO/YR)	PAGE	OF
6	1	PELICAN#5	12/ 4/86	46	38

CUSTOMER	FIELD	AREA	RIG NAME
AMOCO	BASS STRAIT	BASS STRAIT	EPOCH

COMPANY REPRESENTATIVE	OTIS SUPERVISOR	INTERVAL TESTED	INSTRUMENT TYPE AND NUMBER	INSTRUMENT DEPTH
J.HARKINS	J.NICHOLSON	9137/9150ftMDKB	HP 798	8126ft

	DATE	HOUR/MIN SEC (24 HOUR CLOCK)	PRESSURE (PSIA)	DELTA PSI	TEMP (°F)	HORNER TIME	P' (PSIA)	M (PSI/CYCLE)	CHOKE SIZE (64TH INCH)	SURFACE PRESSURE (PSIG)	REMARKS
1	12	0548:00	3820.99	.69	244.33				96		
2	12	0549:00	3821.67	.68	244.33				96		
3	12	0550:00	3822.55	.88	244.33				96		
4	12	0551:00	3823.33	.78	244.33				96		
5	12	0552:00	3824.21	.88	244.33				96		
6	12	0553:00	3825.00	.79	244.33				96		
7	12	0554:00	3825.88	.88	244.33				96		
8	12	0555:00	3826.56	.68	244.33				96		
9	12	0556:00	3827.25	.69	244.33				96		
10	12	0557:00	3827.83	.58	244.33				96		
11	12	0558:00	3828.52	.69	244.33				96		
12	12	0559:00	3829.20	.68	244.33				96		
13	12	0600:00	3829.89	.69	244.33				96		
14	12	0601:00	3830.57	.68	244.33				96		
15	12	0602:00	3831.16	.59	244.33				96		
16	12	0603:00	3831.94	.78	244.33				96		
17	12	0604:00	3832.53	.59	244.33				96		
18	12	0605:00	3833.21	.68	244.33				96		
19	12	0606:00	3834.14	.93	246.97				96		
20	12	0607:00	3834.92	.78	246.97				96		
21	12	0608:00	3835.51	.59	246.97				96		
22	12	0609:00	3836.10	.59	246.97				96		
23	12	0610:00	3836.69	.59	246.97				96		
24	12	0611:00	3837.27	.58	246.97				96		
25	12	0612:00	3837.96	.69	246.97				96		
26	12	0613:00	3838.64	.68	246.97				96		
27	12	0614:00	3839.23	.59	246.97				96		
28	12	0615:00	3839.72	.49	246.97				96		
29	12	0616:00	3840.30	.58	246.97				96		
30	12	0617:00	3840.79	.49	246.97				96		
31	12	0618:00	3841.38	.59	246.97				96		
32	12	0619:00	3842.02	.64	246.97				96		
33	12	0620:00	3842.55	.53	246.97				96		
34	12	0621:00	3843.14	.59	246.97				96		
35	12	0622:00	3843.63	.49	246.97				96		SHUT LPR.POOH.WITH HP
36											
37											
38											

Customer Form Tolerance Proof

452347

Enclosure No. 14

HALLIBURTON

SERVICES

TICKET NO. 34609100

18-APR-86

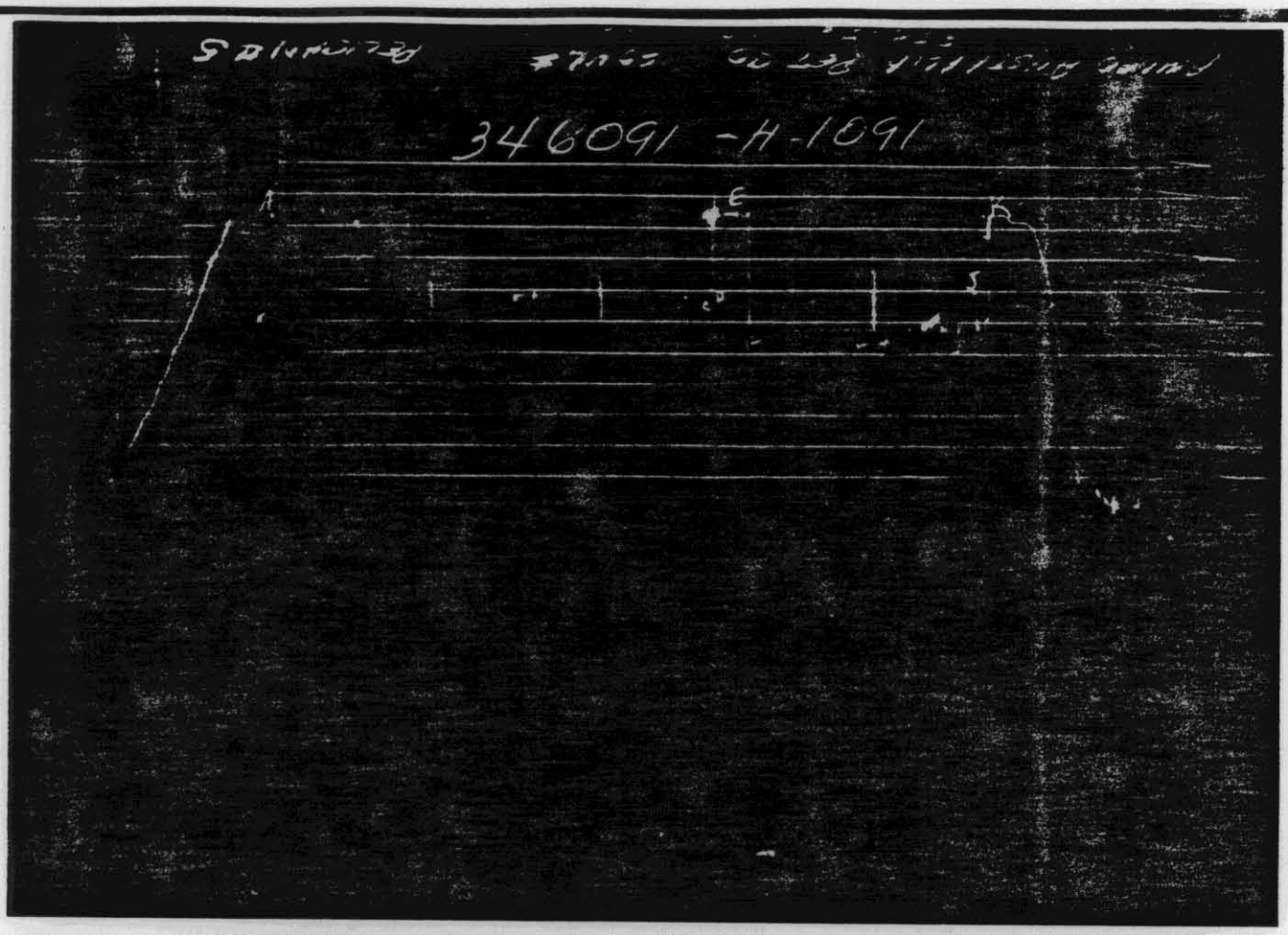
ADELAIDE

FORMATION TESTING SERVICE REPORT

LEGAL LOCATION SEC. - TWP. - RNG.	SEE REMARKS	FIELD AREA	BASS STRAIT	COUNTY	TASMANIA	STATE	AUSTRALIA SM

LEASE NAME: PELICAN — WELL NO.: 5 — TEST NO.: 142 — TESTED INTERVAL: 11595.0 - 12630.1 — LEASE OWNER/COMPANY NAME: AMOCO AUSTRALIA PETROLEUM COMPANY

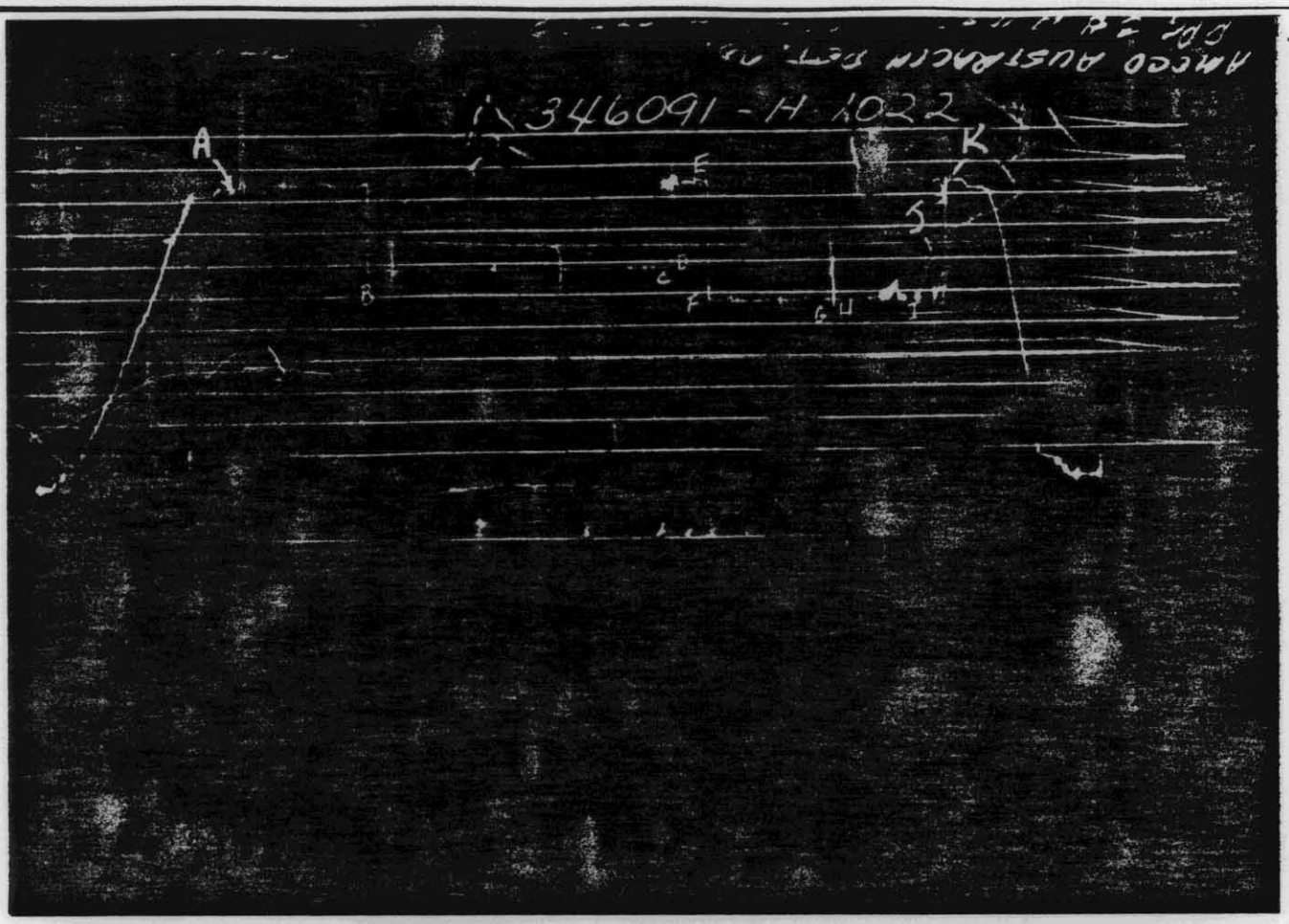
452348



GAUGE NO: 1091 DEPTH: 11587.7 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		9418.9			
B	INITIAL FIRST FLOW		6829.1	1812	1820	F
C	FINAL FIRST FLOW		6837.0			
C	INITIAL FIRST CLOSED-IN		6837.0	20	11	C
D	FINAL FIRST CLOSED-IN		6955.9			
E	HYDROSTATIC		9482.7			
F	INITIAL SECOND FLOW		5794.4	757	756	F
G	FINAL SECOND FLOW		5789.6			
H	INITIAL THIRD FLOW		5789.6	520	520	F
I	FINAL THIRD FLOW		5818.4			
I	INITIAL SECOND CLOSED-IN		5818.4	83	84	C
J	FINAL SECOND CLOSED-IN		7090.6			
K	FINAL HYDROSTATIC		9480.3			

452349



GAUGE NO: 1022 DEPTH: 11587.7 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		9431.8			
B	INITIAL FIRST FLOW		6849.1	1812	1820	F
C	FINAL FIRST FLOW		6847.6			
C	INITIAL FIRST CLOSED-IN		6847.6	20	11	C
D	FINAL FIRST CLOSED-IN		6985.1			
E	HYDROSTATIC		9521.3			
F	INITIAL SECOND FLOW		5795.5	757	756	F
G	FINAL SECOND FLOW		5800.9			
H	INITIAL THIRD FLOW		5800.9	520	520	F
I	FINAL THIRD FLOW		5846.3			
I	INITIAL SECOND CLOSED-IN		5846.3	83	84	C
J	FINAL SECOND CLOSED-IN		7093.9			
K	FINAL HYDROSTATIC		9505.9			

452350

EQUIPMENT & HOLE DATA

FORMATION TESTED: TEST INTERVAL #1
NET PAY (ft): 128.0
GROSS TESTED FOOTAGE: 1635.1
ALL DEPTHS MEASURED FROM: R KELLY BUSHING
CASING PERFS. (ft): SEE REMARKS
HOLE OR CASING SIZE (in): 7.000
ELEVATION (ft): 73.0
TOTAL DEPTH (ft): 13230.1
PACKER DEPTH(S) (ft): 11595
FINAL SURFACE CHOKE (in): 16/64"
BOTTOM HOLE CHOKE (in): 2.187
MUD WEIGHT (lb/gal): 15.80
MUD VISCOSITY (sec): 50
ESTIMATED HOLE TEMP. (°F): _____
ACTUAL HOLE TEMP. (°F): 309 @ 11587.7 ft

TICKET NUMBER: 34609100

DATE: 3-13-86 TEST NO: 1&2

TYPE DST: CASED HOLE W/LPR

HALLIBURTON CAMP: ADELAIDE

TESTER: RON BAKER / GARY ZUNKLE

WITNESS: _____

DRILLING CONTRACTOR: DIAMOND M DRILLING

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: _____
cu.ft. OF GAS: _____
cc OF OIL: _____
cc OF WATER: _____
cc OF MUD: _____
TOTAL LIQUID cc: _____

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): _____ @ °F
GAS/OIL RATIO (cu.ft. per bbl): _____
GAS GRAVITY: _____

CUSHION DATA

TYPE	AMOUNT	WEIGHT
FRESH WATER-BBLS	81.0	8.33

RECOVERED:

81 BBLS. OF FRESH WATER CUSHION (8.33#/GAL)

MEASURED FROM TESTER VALVE

REMARKS:

LEGAL LOCATION: LAT. 40 DEG, 20', 43.259"S AND LONG 145 DEG., 51', 49.971"E

CASING PERFORATIONS FOR DST #1 AT 12047-12136.42' AND DST #2 AT 11834'-11873'.

CALCULATIONS COULD NOT BE PERFORMED DUE TO INSUFFICIENT BUILD-UP OF THE CLOSED IN PRESSURES.....(SEE TOP OF NEXT PAGE FOR ADDITIONAL REMARKS)

452351

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
					ADDITIONAL REMARKS....
					POINTS "B" THRU "G" ARE
					RELATIVE TO DST #1. POINTS
					"H" THRU "J" ARE
					RELATIVE TO DST #2.
					PRODUCTION TEST DATA
3-13-86					
0310					STARTED MAKING UP TOOLS
0335					STARTED RPG-3'S AND RT-7'S
0645					TOOLS IN HOLE
2250					SET PACKER, PRESSURE TESTED
					SURFACE TREE AND LINES TO
					8000 PSI
2320					TEST DOWN TUBING TO 5000 PSI
					ON TOP OF LPR-N BALL
2330					OPENED LPR-N, PUMPED DOWN
					TUBING TO 3000 PSI
2340					CLOSED LPR-N
2345					TESTED TUBING TO 8000 PSI
2355					OPENED LPR-N, RELEASED 3000
					PSI BELOW LPR-N
3-14-86					
0000					CLOSED LPR-N
0139					OPENED LPR-N, RAN GAUGE CUTTER
					THROUGH TEST STRING. TRIPPED
					OUT OF HOLE WITH GAUGE CUTTER.
					RIGGED UP SCHLUMBERGER. RAN IN
					HOLE TO LOG. TRIPPED OUT OF
					HOLE WITH LOG.
0900					CLOSED LPR-N
0930					FILLED SURFACE EQUIPMENT WITH
					WATER. PRESSURE TESTED.
1135					OPENED TOP CIRCULATING VALVE.
					DISPLACED DOWN TUBING WITH
					53 BBLS FRESH WATER
1204		2700			CLOSED TOP CIRCULATING VALVE

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609100

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
1210					RELEASED TUBING PRESSURE
1216					OPENED LPR-N, RELEASED PRESSURE
					BELOW LPR-N
1220					RIGGED UP SCHLUMBERGER, RAN IN
					HOLE WITH 2 1/8" ENER-JET
					PERFORATING GUNS.
1445					FIRED GUNS
1448					VERY SLIGHT SURFACE INDICATION
					WELL IS FLOWING
1456					CLOSED CHOKE MANIFOLD, PULLED
					OUT OF HOLE WITH GUNS
1620					GUNS OUT OF HOLE, CLOSED SUB
					SEA LUBRICATOR VALVE.
1815					OPENED SUB SEA LUBRICATOR VALVE
					RAN IN HOLE WITH 2ND SET OF
					GUNS.
2000		70			
2010		70			UNABLE TO GET GUNS BELOW S.R.O.
					LATCH NIPPLE
2015		70			TRIPPED OUT OF HOLE WITH GUNS
2120					GUNS OUT OF HOLE
2300					RIGGED UP OTIS LUBRICATOR
2316					CLOSED MASTER VALVE
2318					PRESSURE TESTED LUBRICATOR
2351					OPENED MASTER VALVE, RAN IN HOLE
3-15-86					
0145					CLOSED SUB SEA LUBRICATOR VALVE
					RIGGED DOWN OTIS.
0200					RIGGED UP SCHLUMBERGER TO RUN
					GUNS
0345					PRESSURE TESTED LUBRICATOR
0525					OPENED SUB SEA LUBRICATOR VALVE
					RAN IN HOLE WITH GUNS
0732					OPENED CHOKE MANIFOLD
0734					FIRED GUNS, NO SURFACE
					INDICATION WELL IS FLOWING
0744					CLOSED CHOKE MANIFOLD, PULLED

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 34609100
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
					OUT OF HOLE WITH GUNS
0935					CLOSED SUB SEA LUBRICATOR VALVE
1140					OPENED SUB SEA LUBRICATOR VALVE
1210	16/64				OPENED CHOKE MANIFOLD
1742					CLOSED SUB SEA LUBRICATOR
1828					CLOSED LPR-N
1848					OPENED TOP CIRCULATING VALVE
1853					PUMPED 6 BBLS WATER...PACKER
					UNSEATED
1900					RELEASED WATER CUSHION BACK
					TO HALCO UNIT
2105					RESET PACKER
2122					OPENED LPR-N
2130					CLOSED LPR-N
2138					OPENED TOP CIRCULATING VALVE,
					SPOT WATER CUSHION
2212					CLOSED TOP CIRCULATING VALVE
2215					RELEASED TUBING PRESSURE
2220		400			OPENED LPR-N
2227	16/64	600			OPENED CHOKE MANIFOLD
2230	16/64	15			
2300	16/64				
3-16-86					
0007					CLOSED CHOKE MANIFOLD
0045	16/64				OPENED CHOKE MANIFOLD, RAN IN
					HOLE WITH GAUGE CUTTER
0200	16/64				GAUGE CUTTER STUCK AT 11582'
0250	16/64				CLOSED LPR-N TO CUT WIRE
0255	16/64				OPENED LPR-N
0304	16/64				CLOSED LPR-N TO CUT WIRE
0312	16/64				OPENED LPR-N, WIRE NOT CUT
0328	16/64				CLOSED LPR-N, WIRE CUT
0333	16/64				OPENED LPR-N
0400					CLOSED SUB SEA LUBRICATOR VALVE
0505	16/64				OPENED SUB SEA LUBRICATOR VALVE
0633					CLOSED SUB SEA LUBRICATOR VALVE
0650					RIGGED UP PERFORATING GUN FOR

452354

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 34609100
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
					DST #2
0920	16/64				OPENED SUB SEA LUBRICATOR VALVE
1025					CLOSED CHOKE MANIFOLD
1057					PERFORATE FOR DST #2
	16/64				ENDING DST #1....OPENED CHOKE
					MANIFOLD
1107					CLOSED CHOKE MANIFOLD, PULLED
					OUT OF HOLE WITH PERFORATING
					GUNS.
1227					CLOSED SUB SEA LUBRICATOR
1440					OPENED SUB SEA LUBRICATOR
1500		10			RAN IN HOLE WITH GAUGE CUTTER
1530		40			
1600		80			
1630		170			
1700		300			
1723	16/64	460			OPENED CHOKE MANIFOLD
1730	16/64				
1800	16/64				
1825					CLOSED LPR N TO CUT WIRE ON
					STUCK GAUGE CUTTER
1845					OPENED LPR-N
1900					CLOSED LPR N, WIRE NOT CUT
1920					OPENED LPR N
1937					CLOSED LPR N, WIRE CUT, PULLED
					OUT OF HOLE
2100					ATTEMPTED TO FUNCTION LPR-M-2
2200					LPR-M-2 WOULD NOT FUNCTION
					AFTER FOUR ATTEMPTS.
2220					OPENED TOP CIRCULATING VALVE
					AND UNSEATED PACKER, REVERSED
					OUT
3-17-86					
0830					TOOLS OUT OF THE HOLE

452355

TICKET NO: 34609100

CLOCK NO: 0 HOUR: 120

HALLIBURTON SERVICES

GAUGE NO: 1022

DEPTH: 11587.7

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0	6849.1			
	2	60	6843.7	-5.4		
	3	120	6843.7	0.0		
[1]	4	151	6843.7	0.0		
	5	180	6832.0	-11.7		
	6	240	6813.4	-18.7		
	7	300	6813.4	0.0		
[2]	8	303	6813.4	0.0		
[3]	9	356	6924.5	111.2		
[4]	10	357	6822.7	-101.8		
	11	360	6819.6	-3.1		
	12	420	6849.1	29.5		
	13	480	6894.2	45.1		
	14	540	6831.3	-63.0		
	15	600	6831.3	0.0		
	16	660	6831.3	0.0		
	17	720	6839.8	8.6		
	18	780	6843.7	3.9		
	19	840	6838.3	-5.4		
	20	900	6838.3	0.0		
	21	960	6847.6	9.3		
	22	1020	6847.6	0.0		
[5]	23	1069	6870.9	23.3		
	24	1080	6996.7	125.8		
	25	1140	7548.4	551.6		
[6]	26	1142	7545.3	-3.1		
[1]	27	1165	6855.4	-689.9		
	28	1200	6843.7	-11.7		
	29	1260	6826.6	-17.1		
	30	1320	6833.6	7.0		
	31	1380	6839.8	6.2		
	32	1440	6846.0	6.2		
	33	1500	6857.7	11.7		
	34	1560	6878.7	21.0		
	35	1620	6867.0	-11.7		
	36	1680	6863.1	-3.9		
	37	1740	6858.5	-4.7		
	38	1800	6848.4	-10.1		
C	39	1820	6847.6	-0.8		
			FIRST CLOSED-IN			
C	1	0	6847.6			
D	2	11	6985.1	137.5	11.0	2.220
			SECOND FLOW			
F	1	0	5795.5			

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
[3]	2	6	6301.9	506.4		
	3	30	5793.1	-508.7		
	4	60	5791.6	-1.6		
	5	90	5791.6	0.0		
[2]	6	108	5791.6	0.0		
	7	120	5835.3	43.7		
[3]	8	142	5960.3	125.0		
[4]	9	143	5773.6	-186.7		
	10	150	5773.6	0.0		
	11	180	5776.7	3.1		
	12	210	5772.0	-4.7		
	13	240	5777.5	5.5		
	14	270	5777.5	0.0		
	15	300	5780.6	3.1		
	16	330	5781.4	0.8		
	17	360	5792.3	10.9		
	18	390	5793.9	1.6		
	19	420	5800.2	6.2		
	20	450	5793.9	-6.2		
	21	480	5784.5	-9.4		
	22	510	5790.0	5.5		
	23	540	5792.3	2.3		
[5]	24	555	5792.3	0.0		
	25	570	5850.9	58.6		
[6]	26	585	5896.3	45.3		
[4]	27	589	5818.1	-78.1		
	28	600	5818.1	0.0		
	29	630	5818.1	0.0		
	30	660	5818.1	0.0		
	31	690	5815.0	-3.1		
	32	720	5811.1	-3.9		
G	33	756	5800.9	-10.2		
			THIRD FLOW			
H	1	0	5800.9			
	2	30	5802.5	1.6		
	3	60	5799.4	-3.1		
	4	90	5797.0	-2.3		
	5	120	5808.0	10.9		
	6	150	5808.0	0.0		
	7	180	5808.0	0.0		
	8	207	5808.0	0.0		
[5]	9	208	5807.2	-0.8		
[6]	10	221	5911.9	104.7		
[4]	11	222	5833.0	-78.9		
	12	240	5849.4	16.4		
	13	270	5879.1	29.7		
[5]	14	284	5885.3	6.2		
	15	300	5938.4	53.1		
	16	330	6012.7	74.2		

LEGEND:

[1] FIRED GUNS
[2] CLOSED AT SURFACE
[3] OPENED AT SURFACE
[4] END OF BLEED-OFF
[5] APPARENT SURFACE CLOSURE
[6] APPARENT SURFACE OPENING

REMARKS:

TICKET NO: 34609100	GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	DEPTH: 11587.7

HALLIBURTON SERVICES

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
THIRD FLOW - CONTINUED					
	17	360	6172.0	159.4	
[6]	18	385	6326.0	153.9	
[4]	19	386	5888.4	-437.5	
	20	390	5874.4	-14.1	
	21	420	5847.8	-26.6	
	22	450	5847.8	0.0	
	23	480	5851.7	3.9	
	24	510	5858.0	6.2	
I	25	520	5846.3	-11.7	
SECOND CLOSED-IN					
I	1	0	5846.3		
	2	1	5903.3	57.0	1.1 3.466
	3	2	5938.4	92.2	2.0 3.197
	4	3	5975.9	129.7	3.0 3.010
	5	4	5988.5	142.2	4.1 2.880
	6	5	6015.8	169.5	5.1 2.780
	7	6	6039.1	192.8	6.0 2.710
	8	7	6060.1	213.8	7.1 2.640
	9	8	6078.7	232.5	8.0 2.588
	10	9	6107.5	261.3	9.1 2.534
	11	10	6131.6	285.4	10.0 2.493
	12	12	6169.7	323.4	11.9 2.415
	13	14	6211.7	365.4	14.0 2.344
	14	16	6254.4	408.2	16.0 2.288
	15	18	6302.6	456.4	17.9 2.238
	16	20	6334.5	488.3	19.8 2.193
	17	22	6371.0	524.8	21.9 2.150
	18	24	6407.6	561.3	23.9 2.113
	19	26	6434.0	587.8	25.8 2.079
	20	28	6469.0	622.7	27.7 2.048
	21	30	6503.2	656.9	29.7 2.018
	22	35	6588.7	742.5	34.6 1.952
	23	40	6658.7	812.4	39.4 1.895
	24	45	6725.5	879.3	44.5 1.843
	25	50	6787.7	941.5	49.3 1.798
	26	55	6842.1	995.9	54.1 1.758
	27	60	6883.6	1043.3	58.9 1.721
	28	70	6989.0	1142.7	68.5 1.655
	29	80	7081.6	1235.3	78.0 1.599
J	30	84	7093.9	1247.6	82.1 1.577

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$

LEGEND:
[1] FIRED GUNS
[2] CLOSED AT SURFACE
[3] OPENED AT SURFACE
[4] END OF BLEED-OFF
[5] APPARENT SURFACE CLOSURE
[6] APPARENT SURFACE OPENING

REMARKS:

452357

TICKET NO: 34609100

CLOCK NO: 0 HOUR: 120

HALLIBURTON SERVICES

GAUGE NO: 1091

DEPTH: 11587.7

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0	6829.1			
	2	60	6830.7	1.6		
	3	120	6830.7	0.0		
[1]	4	151	6816.5	-14.2		
	5	180	6791.3	-25.2		
	6	240	6785.8	-5.5		
	7	300	6791.3	5.5		
[2]	8	303	6791.3	0.0		
[3]	9	356	6839.4	48.0		
[4]	10	357	6781.9	-57.5		
	11	360	6784.3	2.4		
	12	420	6800.0	15.7		
	13	480	6870.1	70.1		
	14	540	6822.0	-48.0		
	15	600	6818.1	-3.9		
	16	660	6818.1	0.0		
	17	720	6818.1	0.0		
	18	780	6818.1	0.0		
	19	840	6808.7	-9.4		
	20	900	6808.7	0.0		
	21	960	6808.7	0.0		
	22	1020	6808.7	0.0		
[5]	23	1069	6822.8	14.2		
	24	1080	6855.9	33.1		
	25	1140	7529.9	674.0		
[6]	26	1142	7529.9	0.0		
[1]	27	1165	6833.1	-696.9		
	28	1200	6828.3	-4.7		
	29	1260	6801.6	-26.8		
	30	1320	6803.9	2.4		
	31	1380	6811.0	7.1		
	32	1440	6817.3	6.3		
	33	1500	6824.4	7.1		
	34	1560	6848.0	23.6		
	35	1620	6844.1	-3.9		
	36	1680	6837.8	-6.3		
	37	1740	6834.6	-3.1		
	38	1800	6833.1	-1.6		
C	39	1820	6837.0	3.9		
			FIRST CLOSED-IN			
C	1	0	6837.0			
D	2	11	6955.9	118.9	11.0	2.220
			SECOND FLOW			
F	1	0	5794.4			

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
[3]	2	6	6245.7	451.3		
	3	30	5785.6	-460.1		
	4	60	5785.6	0.0		
	5	90	5785.6	0.0		
[2]	6	108	5785.6	0.0		
	7	120	5827.2	41.6		
[3]	8	142	5858.4	31.2		
[4]	9	143	5734.4	-124.0		
	10	150	5743.2	8.8		
	11	180	5756.0	12.8		
	12	210	5750.4	-5.6		
	13	240	5750.4	0.0		
	14	270	5750.4	0.0		
	15	300	5750.4	0.0		
	16	330	5757.6	7.2		
	17	360	5760.0	2.4		
	18	390	5768.0	8.0		
	19	420	5772.8	4.8		
	20	450	5776.0	3.2		
	21	480	5767.2	-8.8		
	22	510	5769.6	2.4		
	23	540	5774.4	4.8		
[5]	24	555	5774.4	0.0		
	25	570	5812.0	37.6		
[6]	26	585	5812.8	0.8		
[4]	27	589	5805.6	-7.2		
	28	600	5803.2	-2.4		
	29	630	5803.2	0.0		
	30	660	5803.2	0.0		
	31	690	5803.2	0.0		
	32	720	5788.0	-15.2		
G	33	756	5789.6	1.6		
			THIRD FLOW			
H	1	0	5789.6			
	2	30	5783.2	-6.4		
	3	60	5783.2	0.0		
	4	90	5783.2	0.0		
	5	120	5788.0	4.8		
	6	150	5789.6	1.6		
	7	180	5792.8	3.2		
[5]	8	208	5793.6	0.8		
[6]	9	221	5870.4	76.8		
[4]	10	222	5809.6	-60.8		
	11	240	5828.8	19.2		
	12	270	5856.8	28.0		
[5]	13	284	5856.8	0.0		
	14	300	5907.2	50.4		
	15	330	5977.6	70.4		
	16	360	6089.0	111.4		

LEGEND:

[1] FIRED GUNS
[2] CLOSED AT SURFACE
[3] OPENED AT SURFACE
[4] END OF BLEED-OFF
[5] APPARENT SURFACE CLOSURE
[6] APPARENT SURFACE OPENING

REMARKS:

ALL READINGS QUESTIONABLE DUE TO STAIR STEPPING.

452358

TICKET NO: 34609100	GAUGE NO: 1091
CLOCK NO: 0 HOUR: 120	DEPTH: 11587.7

HALLIBURTON SERVICES

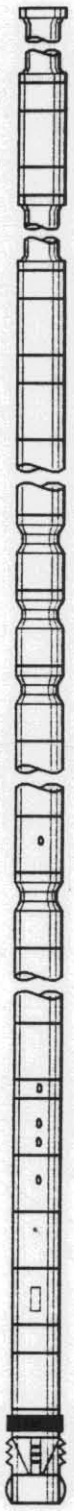
REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
THIRD FLOW - CONTINUED					
[6] 17	385	6265.4	176.4		
[4] 18	386	5872.8	-392.6		
19	390	5857.6	-15.2		
20	420	5824.8	-32.8		
21	450	5828.0	3.2		
22	480	5834.4	6.4		
23	510	5834.4	0.0		
I 24	520	5818.4	-16.0		
SECOND CLOSED-IN					
I 1	0	5818.4			
2	1	5878.4	60.0	1.2	3.403
3	2	5901.6	83.2	2.1	3.160
4	3	5932.0	113.6	3.1	3.005
5	4	5954.4	136.0	4.1	2.875
6	5	5981.6	163.2	5.0	2.788
7	6	6006.3	187.9	6.1	2.704
8	7	6034.6	216.2	7.0	2.644
9	8	6053.5	235.1	7.9	2.591
10	9	6081.1	262.7	9.0	2.536
11	10	6106.3	287.9	9.9	2.494
12	12	6141.7	323.3	11.9	2.415
13	14	6192.1	373.7	14.0	2.344
14	16	6227.6	409.2	16.0	2.287
15	18	6270.9	452.5	18.0	2.236
16	20	6312.6	494.2	19.9	2.191
17	22	6347.2	528.8	21.9	2.150
18	24	6574.0	755.6	23.9	2.113
19	26	6592.1	773.7	25.8	2.079
20	28	6623.6	805.2	27.8	2.047
21	30	6655.1	836.7	29.9	2.015
22	35	6662.2	843.8	34.7	1.951
23	40	6665.4	847.0	39.5	1.894
24	45	6687.4	869.0	44.4	1.843
25	50	6751.2	932.8	49.3	1.798
26	55	6801.6	983.2	54.1	1.756
27	60	6817.3	998.9	58.9	1.721
28	70	6958.3	1139.9	68.5	1.655
29	80	7053.5	1235.1	78.0	1.599
J 30	84	7090.6	1272.2	82.1	1.577

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

LEGEND:
[1] FIRED GUNS
[2] CLOSED AT SURFACE
[3] OPENED AT SURFACE
[4] END OF BLEED-OFF
[5] APPARENT SURFACE CLOSURE
[6] APPARENT SURFACE OPENING

REMARKS:
ALL READINGS QUESTIONABLE DUE TO STAIR STEPPING.

		O.D.	I.D.	LENGTH	DEPTH
4	FLEX WEIGHT.....	5.000	3.000	309.0	
5	CROSSOVER.....	5.000	3.000	3.6	
6	SUB-SEA TEST TREE.....	10.750	3.000	19.3	
5	CROSSOVER.....	6.250	3.000	1.0	
2	TUBING.....	3.500	2.750	10384.4	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.230	2.0	10718.4
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	10721.4
3	DRILL COLLARS.....	4.750	2.312	93.5	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	13.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
8	DRILL COLLARS.....	4.750	2.312	277.9	
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	11148.9
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	370.5	
97	LPR-M2 CIRCULATING SAFETY VALVE.	5.000	2.250	17.4	11534.4
33	DRAIN VALVE.....	5.000	2.250	1.0	
67	LPR-N TESTER VALVE.....	5.000	2.250	16.4	11553.2
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	11574.6
15	JAR.....	4.625	2.250	5.0	
84	BUNDLE CARRIER.....	5.030	2.187	8.0	11587.7
5	CROSSOVER.....	4.750	2.310	1.2	
35	RTTS SAFETY JOINT.....	4.870	2.440	3.3	
71	CASING PACKER.....	5.750	2.400	4.5	11595.0



CONTINUED

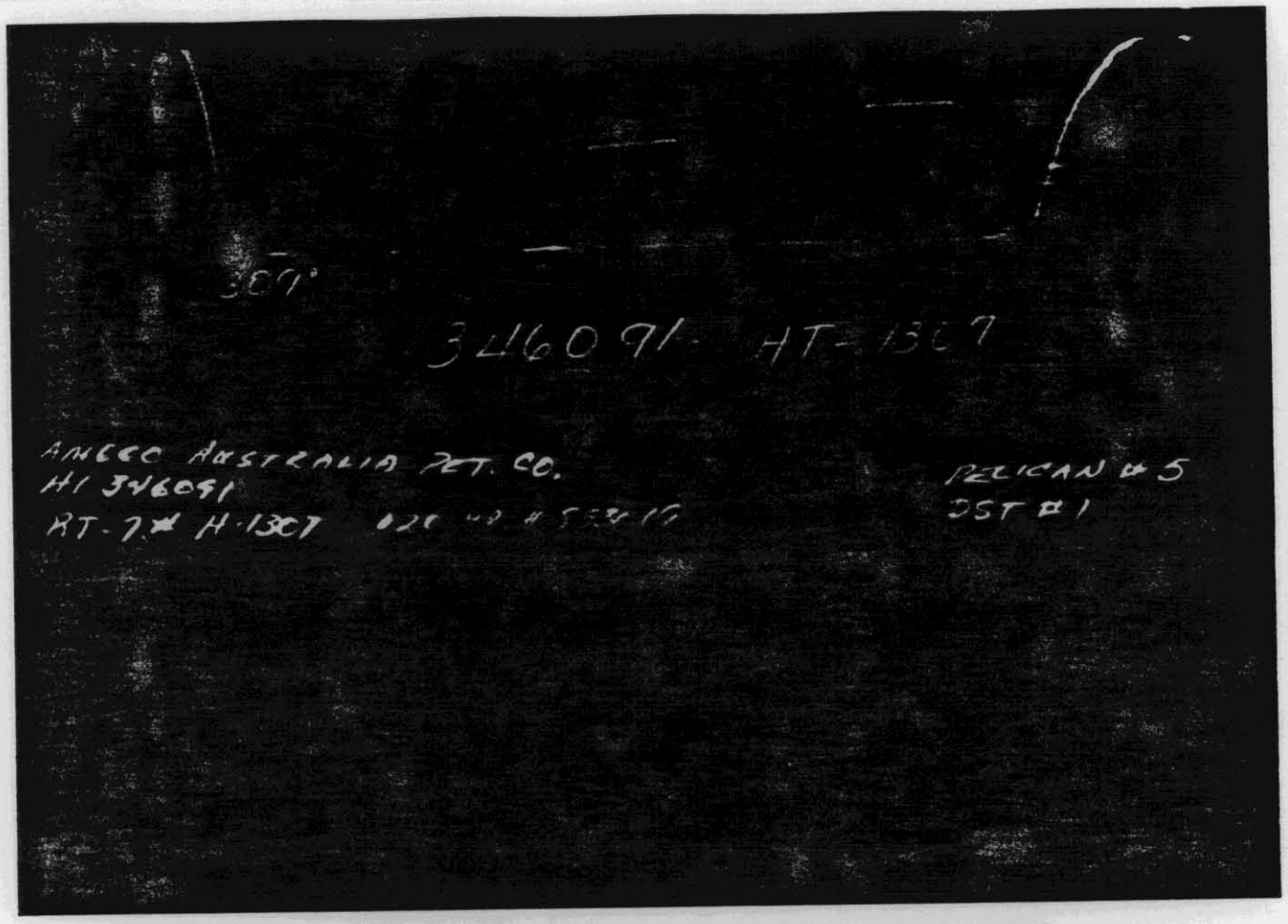
EQUIPMENT DATA

452360

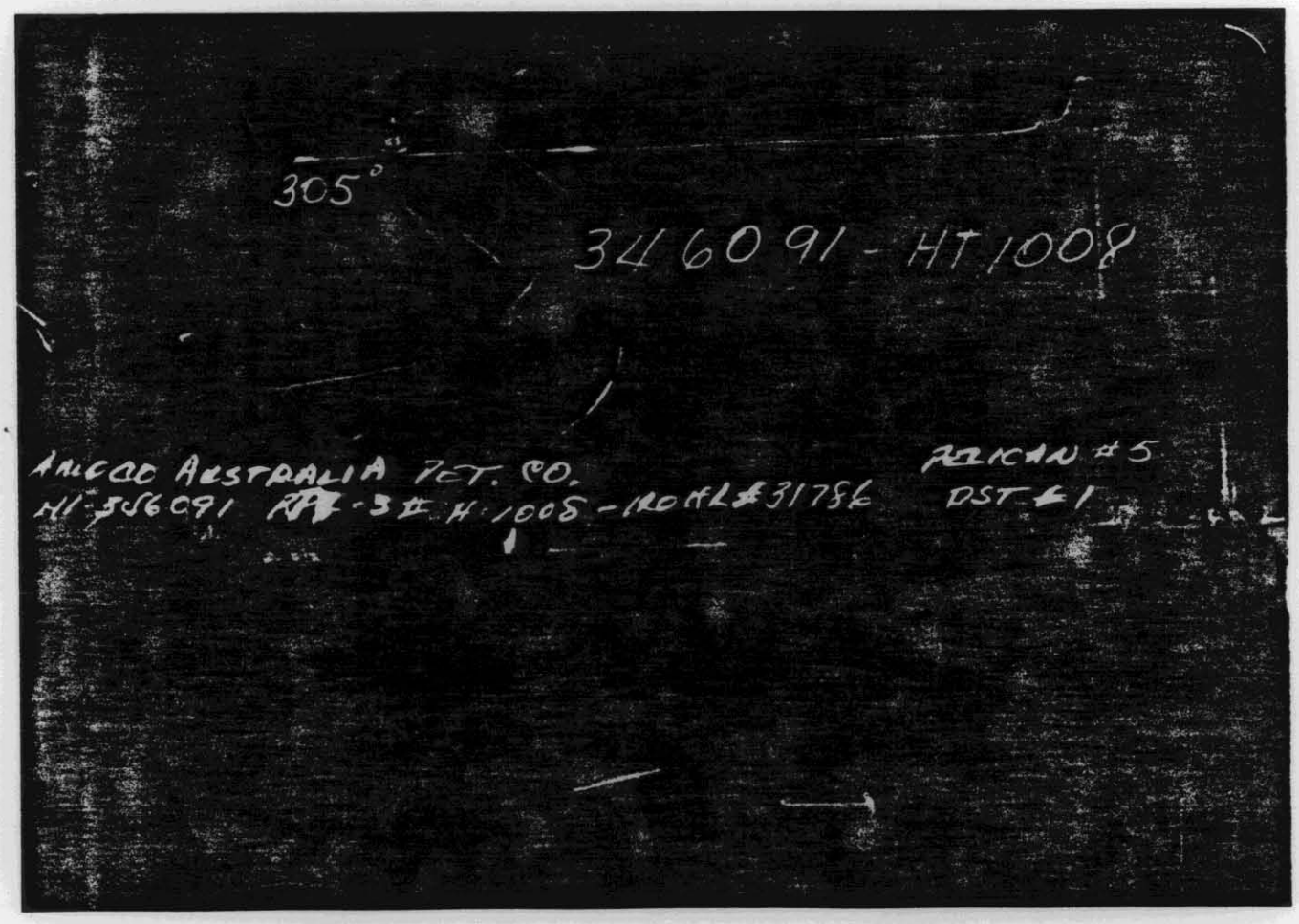
TICKET NO. 34609100

		O.D.	I.D.	LENGTH	DEPTH
5	CROSSOVER.....	4.620	2.250	1.0	
5	CROSSOVER.....	4.750	2.310	1.0	
1	DRILL PIPE.....	3.500	2.764	31.0	
5	CROSSOVER.....	4.750	2.250	1.0	
204	GUIDE SUB.....	5.000	2.750	0.8	
	TOTAL DEPTH				13230.1

EQUIPMENT DATA



EQUATIONS FOR DST GAS WELL ANALYSIS



452362

Enclosure No. 15

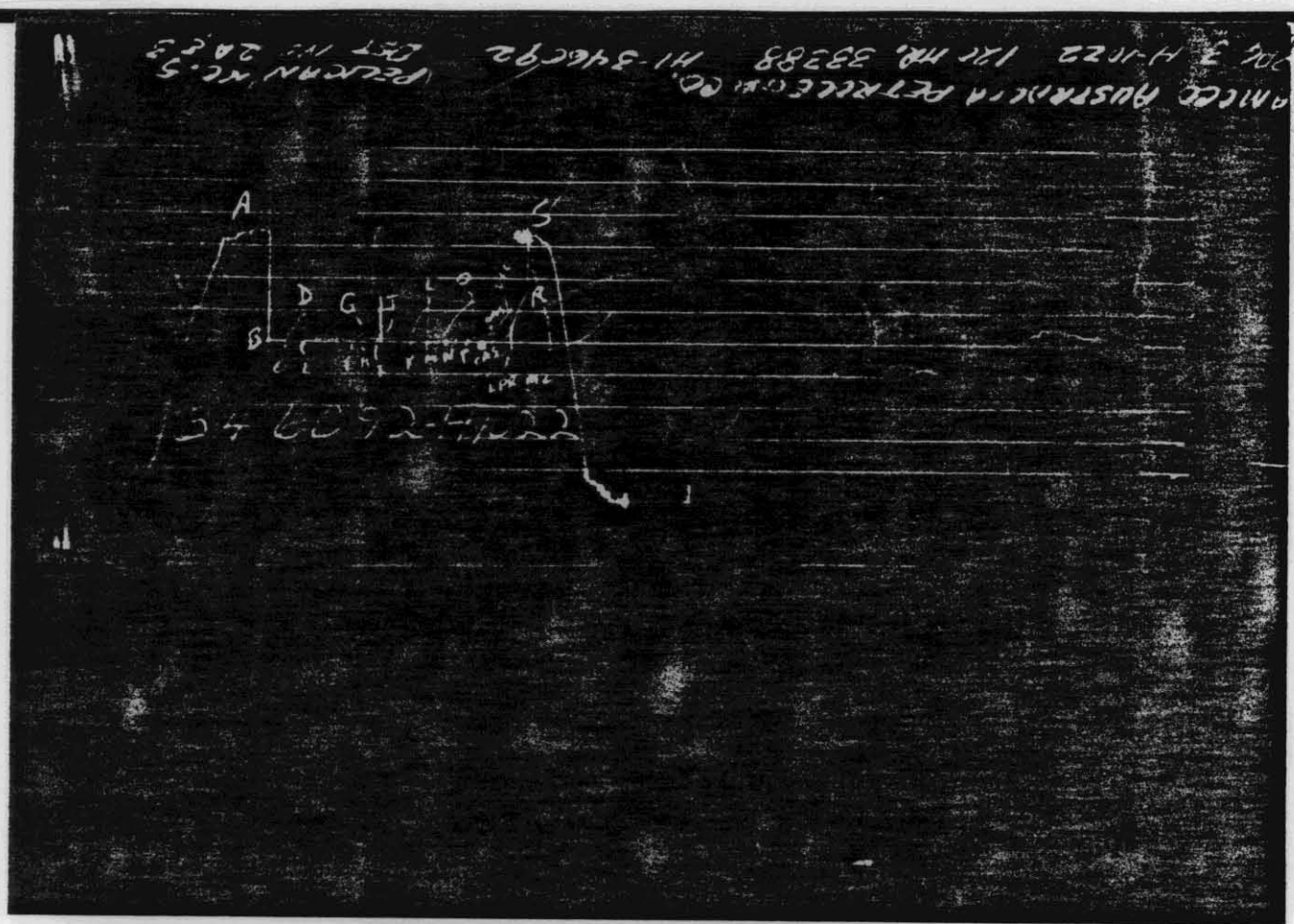
HALLIBURTON
SERVICES

TICKET NO. 34609200
18-APR-86
ADELAIDE

FORMATION TESTING SERVICE REPORT

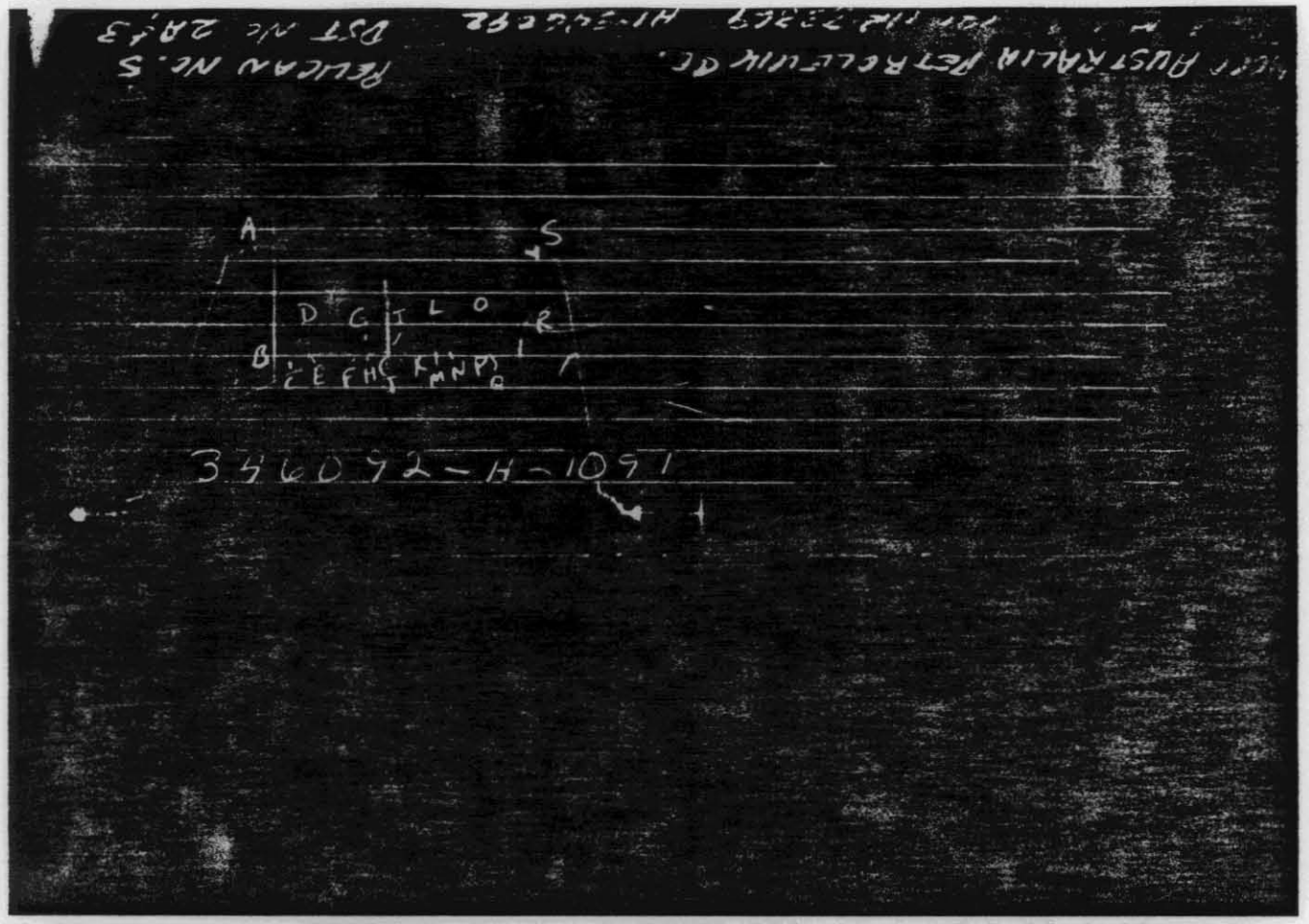
PELICAN LEASE NAME	5 WELL NO.	2HST TEST NO.	11010.8 - 13230.1 TESTED INTERVAL	AMOCO AUSTRALIA PETROLEUM COMPANY LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RNG. SEE REMARKS	FIELD AREA BASS STRAIT	COUNTY TASMANIA	STATE AUSTRALIA OR		

4523663



GAUGE NO: 1022 DEPTH: 11003.5 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	8675	8463.9			
B	INITIAL FIRST FLOW	5208	5082.7	98	100	F
C	FINAL FIRST FLOW	5208	5082.7			
C	INITIAL FIRST CLOSED-IN	5208	5082.7	120	119	C
D	FINAL FIRST CLOSED-IN	6055	5923.3			
E	INITIAL SECOND FLOW	5217	5090.5	270	274	F
F	FINAL SECOND FLOW	5224	5086.6			
F	INITIAL SECOND CLOSED-IN	5224	5086.6	61	78	C
G	FINAL SECOND CLOSED-IN	5440	5313.1			
H	INITIAL THIRD FLOW	5264	5107.7	125	127	F
I	FINAL THIRD FLOW	5264	5137.3			
J	INITIAL FOURTH FLOW		5137.3	159	154	F
K	FINAL FOURTH FLOW		5137.3			
K	INITIAL THIRD CLOSED-IN		5137.3	120	108	C
L	FINAL THIRD CLOSED-IN	6268	6116.2			
M	INITIAL FIFTH FLOW		5175.6	68	74	F
N	FINAL FIFTH FLOW		5172.5			
N	INITIAL FOURTH CLOSED-IN		5172.5	202	198	C
O	FINAL FOURTH CLOSED-IN		6334.1			
P	INITIAL SIXTH FLOW		5168.6	65	54	F
Q	FINAL SIXTH FLOW		5178.8			
Q	INITIAL FIFTH CLOSED-IN		5178.8	324	272	C
R	FINAL FIFTH CLOSED-IN		6569.8			
S	FINAL HYDROSTATIC		8401.1			



GAUGE NO: 1091 DEPTH: 11003.5 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	8500	8477.0			
B	INITIAL FIRST FLOW	5112	5102.4	98	100	F
C	FINAL FIRST FLOW	5112	5144.8			
C	INITIAL FIRST CLOSED-IN	5112	5144.8	120	119	C
D	FINAL FIRST CLOSED-IN	5928	5915.2			
E	INITIAL SECOND FLOW	5104	5087.2	270	274	F
F	FINAL SECOND FLOW	5104	5087.2			
F	INITIAL SECOND CLOSED-IN	5104	5087.2	61	78	C
G	FINAL SECOND CLOSED-IN		5299.2			
H	INITIAL THIRD FLOW	5144	5100.8	125	127	F
I	FINAL THIRD FLOW	5144	5126.4			
J	INITIAL FOURTH FLOW		5126.4	159	154	F
K	FINAL FOURTH FLOW		5120.8			
K	INITIAL THIRD CLOSED-IN		5120.8	120	108	C
L	FINAL THIRD CLOSED-IN	6113	6091.3			
M	INITIAL FIFTH FLOW		5187.2	68	74	F
N	FINAL FIFTH FLOW		5187.2			
N	INITIAL FOURTH CLOSED-IN		5187.2	202	198	C
O	FINAL FOURTH CLOSED-IN		6299.2			
P	INITIAL SIXTH FLOW		5180.8	65	54	F
Q	FINAL SIXTH FLOW		5180.8			
Q	INITIAL FIFTH CLOSED-IN		5180.8	324	272	C
R	FINAL FIFTH CLOSED-IN		6560.6			
S	FINAL HYDROSTATIC		8340.5			

452364

452365

EQUIPMENT & HOLE DATA

FORMATION TESTED: TEST INTERVAL #3
NET PAY (ft): SEE REMARKS
GROSS TESTED FOOTAGE: 2219.3
ALL DEPTHS MEASURED FROM: R. KELLY BUSHING
CASING PERFS. (ft): SEE REMARKS
HOLE OR CASING SIZE (in): 7.000
ELEVATION (ft): 73.0
TOTAL DEPTH (ft): 13230.1
PACKER DEPTH(S) (ft): 11011
FINAL SURFACE CHOKE (in): 16/64
BOTTOM HOLE CHOKE (in): 2.1875
MUD WEIGHT (lb/gal): 15.00
MUD VISCOSITY (sec): _____
ESTIMATED HOLE TEMP. (°F): _____
ACTUAL HOLE TEMP. (°F): 302 @ _____ ft

TICKET NUMBER: 34609200
DATE: 3-19-86 TEST NO: 2A&3
TYPE DST: CASED HOLE W/LPR
HALLIBURTON CAMP: ADELAIDE
TESTER: RON BAKER
WITNESS: ???
DRILLING CONTRACTOR: DIAMOND M. DRILLING COMPANY

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm

SAMPLER DATA

Psig AT SURFACE: _____
cu.ft. OF GAS: _____
cc OF OIL: _____
cc OF WATER: _____
cc OF MUD: _____
TOTAL LIQUID cc: _____

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): _____ @ ___°F
GAS/OIL RATIO (cu.ft. per bbl): _____
GAS GRAVITY: _____

CUSHION DATA

TYPE	AMOUNT	WEIGHT
FRESH H20 (BBLS.	78.0	8.33
_____	_____	_____

RECOVERED:

78 BBLS. (8.33#/GAL) WATER
.0931 BBLS. GAS CUT MUD

MEASURED FROM TESTER VALVE

REMARKS:

(1) LEGAL LOCATION: 40 DEGREES 20, 43.259"S, 145 DEGREES 51', 49.971"E.
(2) CASING PERFS. DST #2A-11850.97 TO 11870.66', CASING PERFS. DST #3-11286.64 TO 11322.73'--THIS IS NET PAY
(3) DST #2A IS POINTS A-I, DST #3 IS J-S
(4) WELL WAS PERFORATED @ POINT I-J
(5) GAUGE #H-1091 STAIRSTEPPING SEVERLY-COULD NOT BE RELIABLY INCREMENTED
(6) TIME REPORTED AND CALCULATED FOR 6TH CIP DOES NOT AGREE

452366

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609200

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-19-86					
1400					STARTED GAUGES-PICKED UP TOOLS
3-20-86					
0315					DRIFT STUCK IN DRILL COLLARS
2030					TOOLS IN HOLE
3-20-86					
0710					SET PACKER, RIGGED UP SURFACE
					EQUIPMENT
0740					PRESSURE TESTED SURFACE
					EQUIPMENT
0800					TEST ON TOP OF LPR-N BALL TO
					5000 PSI
0813					OPENED TOP CIRCULATING VALVE-
					PUMP 78 BBLS. WATER DOWN
					TUBING
0847					CLOSED TOP CIRCULATING VALVE
					RELEASED PRESSURE
0857	16/64	650			OPENED LPR-N * B
0900	16/64				NO BLOW
1035					CLOSED SUB SEA LUBRICATOR C
					VALVE, RIGGED UP SCHLUMBERGER
					P.L.T.
1235	16/64				OPENED SUB SEA LUBRICATOR VALVE,
					RUN IN HOLE WITH P.L.T.
1705					CLOSED SUB SEA LUBRICATOR
					VALVE, END DST 2A
1806	16/64	0			OPENED SUB SEA LUBRICATOR VALVE
2011	16/64	30			PERFORATE ZONE 3440-3451 MT. J
					START DST #3
2020					CLOSED WELL IN AT CHOKE
					MANIFOLD
2025		15			PULLED OUT OF HOLE WITH GUNS
2030		10			
2045		7			
2100		5			
2115		7			GUNS AT SURFACE
2120		7			CLOSED SUB SEA LUBRICATOR VALVE

452367

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 34609200
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
2232					OPENED SUB SEA LUBRICATOR VALVE
2300		20			
2330		430			
3-21-86					
0000		725			
0050	16/64	400			OPENED CHOKE MANIFOLD
0158		1			CLOSED CHOKE MANIFOLD
0200		2			
0230		130			
0300		400			
0330		640			STARTED PRODUCTION LOGGING
					TOOL IN HOLE
0345		730			PRODUCTION LOGGING TOOL STUCK
					AT 3367 METERS
0400		820			
0500		1100			
0520	128/64	1175			OPENED BYPASS ON CHOKE MANIFOLD
0524					CLOSED SURFACE SAFETY VALVE,
					P.L.T., PULLED FREE, STARTED
					OUT OF HOLE WITH P.L.T.
0625					CLOSED SUB SEA LUBRICATOR
0720					OPENED SUB SEA LUBRICATOR
					VALVE
					CLOSED AT CHOKE MANIFOLD
0800		415			
0830		670			
0855		800			CLOSED LPR-N TEST VALVE
0909					FUNCTION LPR-M2, REVERSED OUT
1044					OPENED BYPASS, UNSEATED
					PACKER, PULLED OUT OF HOLE
2100					TOOLS OUT OF HOLE

452368

TICKET NO: 34609200	GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	DEPTH: 11003.5

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0	5082.7			
	2	10	5078.0	-4.7		
	3	20	5078.0	0.0		
	4	30	5078.0	0.0		
	5	40	5078.0	0.0		
	6	50	5078.0	0.0		
	7	60	5078.0	0.0		
	8	70	5078.0	0.0		
	9	80	5078.0	0.0		
	10	90	5078.0	0.0		
C	11	100	5082.7	4.7		
			FIRST CLOSED-IN DS12A			
C	1	0	5082.7			
	2	1	5080.3	-2.3	1.1	1.977
	3	2	5086.6	3.9	1.9	1.712
	4	3	5092.8	10.2	2.9	1.530
	5	4	5099.1	16.4	3.9	1.404
	6	5	5105.3	22.7	4.8	1.320
	7	6	5114.7	32.0	5.6	1.252
	8	7	5121.7	39.1	6.7	1.175
	9	8	5131.1	48.4	7.4	1.127
	10	9	5138.9	56.2	8.2	1.084
	11	10	5149.1	66.4	9.2	1.034
	12	12	5168.6	85.9	10.7	0.969
	13	14	5187.3	104.7	12.3	0.911
	14	16	5209.2	126.6	13.9	0.857
	15	18	5232.7	150.0	15.3	0.814
	16	20	5249.1	166.4	16.7	0.777
	17	22	5264.7	182.0	18.0	0.743
	18	24	5283.4	200.8	19.3	0.712
	19	26	5297.5	214.8	20.6	0.685
	20	28	5313.9	231.3	21.9	0.658
	21	30	5326.4	243.8	23.1	0.635
	22	35	5362.3	279.7	25.9	0.585
	23	40	5394.4	311.7	28.6	0.543
	24	45	5430.3	347.7	31.1	0.507
	25	50	5460.0	377.3	33.3	0.477
	26	55	5486.6	403.9	35.4	0.449
	27	60	5517.0	434.4	37.5	0.425
	28	70	5581.9	499.2	41.2	0.384
	29	80	5631.1	548.4	44.4	0.352
	30	90	5785.0	702.3	47.3	0.324
	31	100	5836.6	753.9	50.0	0.300
	32	110	5886.6	803.9	52.3	0.280
D	33	119	5923.3	840.6	54.2	0.265

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW			
E	1	0	5090.5			
	2	30	5090.5	0.0		
	3	60	5099.1	8.6		
	4	90	5106.1	7.0		
	5	120	5109.2	3.1		
	6	150	5109.2	0.0		
	7	180	5112.3	3.1		
	8	210	5117.0	4.7		
	9	240	5092.0	-25.0		
F	10	274	5086.6	-5.5		
			SECOND CLOSED-IN			
F	1	0	5086.6			
	2	1	5086.6	0.0	1.1	2.547
	3	2	5094.4	7.8	2.3	2.218
	4	3	5094.4	7.8	3.0	2.094
	5	4	5095.2	8.6	4.1	1.965
	6	5	5095.2	8.6	4.9	1.879
	7	6	5102.2	15.6	6.0	1.796
	8	7	5102.2	15.6	6.9	1.737
	9	8	5102.2	15.6	7.9	1.676
	10	9	5102.2	15.6	8.9	1.624
	11	10	5102.2	15.6	9.8	1.583
	12	12	5102.2	15.6	11.8	1.502
	13	14	5102.2	15.6	13.5	1.443
	14	16	5102.2	15.6	15.4	1.384
	15	18	5102.2	15.6	17.2	1.336
	16	20	5103.8	17.2	19.2	1.290
	17	22	5103.8	17.2	20.8	1.255
	18	24	5103.8	17.2	22.7	1.217
	19	26	5103.8	17.2	24.3	1.187
	20	28	5112.3	25.8	26.1	1.156
	21	30	5111.6	25.0	27.8	1.128
	22	35	5125.6	39.1	32.1	1.067
	23	40	5143.6	57.0	36.2	1.014
	24	45	5174.8	88.3	40.2	0.968
	25	50	5193.6	107.0	44.1	0.929
	26	55	5211.6	125.0	47.9	0.892
	27	60	5235.0	148.4	51.8	0.858
G	28	78	5313.1	226.6	64.2	0.765
			THIRD FLOW			
H	1	0	5107.7			
	2	10	5126.4	18.7		
	3	20	5126.4	0.0		
	4	30	5126.4	0.0		

LEGEND:
[1] OPENED AT SURFACE
[2] CLOSED AT SURFACE
[3] DOWNHOLE VALVE CLOSURE
[4] OPEN LPR-M2 VALVE

REMARKS:

452369

TICKET NO: 34609200	GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	DEPTH: 11003.5

HALLIBURTON SERVICES

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
THIRD FLOW - CONTINUED					
5	40	5126.4	0.0		
6	50	5126.4	0.0		
7	60	5126.4	0.0		
8	70	5126.4	0.0		
9	80	5126.4	0.0		
10	90	5126.4	0.0		
11	100	5126.4	0.0		
12	110	5126.4	0.0		
13	120	5138.1	11.7		
I 14	127	5137.3	-0.8		
FOURTH FLOW					
J 1	0	5137.3			
2	10	5126.4	-10.9		
3	20	5126.4	0.0		
4	30	5126.4	0.0		
5	40	5126.4	0.0		
6	50	5129.5	3.1		
7	60	5129.5	0.0		
8	70	5129.5	0.0		
9	80	5131.1	1.6		
10	90	5131.1	0.0		
11	100	5131.1	0.0		
12	110	5131.1	0.0		
13	120	5131.1	0.0		
14	130	5131.1	0.0		
15	140	5131.1	0.0		
16	150	5136.6	5.5		
K 17	154	5137.3	0.8		
THIRD CLOSED-IN					
K 1	0	5137.3			
2	1	5145.2	7.8	1.1	2.790
3	2	5152.2	14.8	2.0	2.522
4	3	5156.9	19.5	3.2	2.314
5	4	5163.9	26.6	4.1	2.206
6	5	5171.7	34.4	5.0	2.119
7	6	5175.6	38.3	6.2	2.025
8	7	5181.9	44.5	6.9	1.978
9	8	5194.4	57.0	7.9	1.916
10	9	5205.3	68.0	9.0	1.862
11	10	5215.5	78.1	9.9	1.822
12	12	5253.0	115.6	11.8	1.745
13	14	5277.2	139.8	13.7	1.680
14	16	5316.3	178.9	15.7	1.620
15	18	5360.0	222.7	17.6	1.571
16	20	5395.6	249.2	19.4	1.527
17	22	5420.2	282.8	21.3	1.487

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
THIRD CLOSED-IN - CONTINUED					
18	24	5451.4	314.1	23.1	1.451
19	26	5485.0	347.7	25.0	1.418
20	28	5513.1	-375.8	26.8	1.388
21	30	5543.6	406.2	28.7	1.357
22	35	5613.9	476.6	33.3	1.294
23	40	5649.1	511.7	37.9	1.237
24	45	5699.8	562.5	42.2	1.191
25	50	5741.3	603.9	46.4	1.149
26	55	5781.9	644.5	50.7	1.111
27	60	5825.6	688.3	55.1	1.075
28	70	5914.7	777.3	63.2	1.015
29	80	5988.1	850.8	71.3	0.963
30	90	6029.3	892.0	79.1	0.917
31	100	6078.9	941.6	86.8	0.877
L 32	108	6116.2	978.8	92.5	0.849
FIFTH FLOW					
M 1	0	5175.6			
2	5	5167.8	-7.8		
3	10	5167.8	0.0		
4	15	5167.8	0.0		
5	20	5167.8	0.0		
6	25	5167.8	0.0		
7	30	5167.8	0.0		
8	35	5170.9	3.1		
9	40	5170.2	-0.8		
10	45	5170.2	0.0		
11	50	5170.2	0.0		
12	55	5170.2	0.0		
13	60	5170.2	0.0		
14	70	5175.6	5.5		
N 15	74	5172.5	-3.1		
FOURTH CLOSED-IN					
N 1	0	5172.5			
2	1	5180.3	7.8	1.1	2.837
3	2	5181.9	9.4	2.0	2.568
4	3	5181.9	9.4	3.0	2.382
5	4	5185.0	12.5	3.9	2.268
6	5	5186.6	14.1	5.1	2.153
7	6	5188.1	15.6	6.0	2.083
8	7	5188.1	15.6	6.9	2.022
9	8	5190.5	18.0	8.1	1.953
10	9	5190.5	18.0	9.0	1.903
11	10	5192.8	20.3	9.7	1.874
12	12	5195.2	22.7	11.8	1.790
13	14	5199.8	27.3	13.9	1.721
14	16	5203.8	31.2	15.7	1.665

LEGEND:
1 OPENED AT SURFACE
2 CLOSED AT SURFACE
3 DOWNHOLE VALVE CLOSURE
4 OPEN LPR-M2 VALVE

REMARKS:

452370

TICKET NO: 34609200		GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	HALLIBURTON SERVICES	DEPTH: 11003.5

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
FOURTH CLOSED-IN - CONTINUED					
15	18	5217.0	44.5	17.6	1.616
16	20	5235.0	62.5	19.5	1.572
17	22	5256.1	83.6	21.2	1.535
18	24	5268.6	96.1	23.4	1.494
19	26	5290.5	118.0	25.1	1.463
20	28	5311.6	139.1	27.0	1.430
21	30	5325.6	153.1	29.0	1.400
22	35	5377.2	204.7	33.5	1.338
23	40	5422.5	250.0	38.0	1.283
24	45	5469.4	296.9	42.5	1.234
25	50	5503.8	331.3	46.9	1.191
26	55	5537.3	364.8	51.1	1.154
27	60	5579.5	407.0	55.4	1.119
28	70	5652.2	479.7	63.9	1.057
29	80	5718.6	546.1	72.1	1.004
30	90	5783.4	610.9	80.2	0.958
31	100	5837.3	664.8	88.1	0.917
32	110	5899.1	726.6	95.6	0.882
33	120	5965.5	793.0	103.1	0.849
34	135	6049.5	877.0	113.9	0.806
35	150	6134.0	961.5	124.5	0.767
36	165	6202.2	1029.7	134.6	0.733
37	180	6264.3	1091.8	144.4	0.703
O 38	198	6334.1	1161.6	155.5	0.671
SIXTH FLOW					
P 1	0	5168.6			
2	5	5181.1	12.5		
3	10	5170.2	-10.9		
4	15	5172.5	2.3		
5	20	5180.3	7.8		
6	25	5179.5	-0.8		
7	30	5179.5	0.0		
8	35	5183.4	3.9		
9	40	5183.4	0.0		
Q 10	54	5178.8	-4.7		
FIFTH CLOSED-IN DST 3					
Q 1	0	5178.8			
2	1	5181.9	3.1	1.1	2.867
3	2	5185.0	6.2	2.0	2.599
4	3	5187.3	8.6	3.0	2.412
5	4	5189.7	10.9	4.1	2.283
6	5	5191.3	12.5	5.0	2.196
7	6	5193.6	14.8	6.0	2.113
8	7	5195.9	17.2	6.9	2.053
9	8	5199.1	20.3	8.0	1.992
10	9	5199.8	21.1	8.9	1.946

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
FIFTH CLOSED-IN - CONTINUED					
11	10	5202.2	29.4	9.7	1.904
12	12	5206.9	28.1	11.8	1.821
13	14	5209.2	30.5	13.9	1.751
14	16	5216.3	37.5	15.8	1.695
15	18	5227.2	48.4	17.8	1.643
16	20	5227.2	48.4	19.7	1.599
17	22	5228.8	50.0	21.3	1.565
18	24	5230.3	51.6	23.3	1.526
19	26	5234.2	55.5	25.1	1.493
20	28	5238.9	60.2	27.1	1.460
21	30	5242.8	64.1	28.9	1.432
22	35	5254.5	75.8	33.6	1.367
23	40	5266.3	87.5	38.1	1.312
24	45	5281.1	102.3	42.6	1.263
25	50	5299.1	120.3	47.1	1.220
26	55	5313.1	134.4	51.4	1.183
27	60	5332.7	153.9	55.7	1.147
[1] 28	65	5353.8	175.0	59.7	1.117
[2] 29	65	5242.8	64.1	59.7	1.117
30	70	5281.9	103.1	64.4	1.084
31	80	5357.7	178.9	72.6	1.032
32	90	5445.9	267.2	80.7	0.986
33	100	5520.2	341.4	88.7	0.945
34	110	5600.6	421.9	96.5	0.909
35	120	5664.7	485.9	104.2	0.875
36	135	5785.8	607.0	115.2	0.832
37	150	5884.2	705.5	125.8	0.794
[3] 38	162	5963.1	784.4	134.4	0.765
39	165	5988.1	809.4	136.3	0.759
[4] 40	178	5146.7	-32.0	144.8	0.733
41	180	5341.3	162.5	146.4	0.728
42	195	5695.9	517.2	156.1	0.700
43	210	5978.0	799.2	165.6	0.674
44	225	6144.1	965.3	174.7	0.651
45	240	6303.1	1124.3	183.7	0.629
46	260	6465.9	1287.1	195.2	0.603
R 47	272	6569.8	1391.1	202.0	0.588

LEGEND:
[1] OPENED AT SURFACE
[2] CLOSED AT SURFACE
[3] DOWNHOLE VALVE CLOSURE
[4] OPEN LPR-M2 VALVE

REMARKS:

452371

TICKET NO. 34609200



		O.D.	I.D.	LENGTH	DEPTH
4	FLEX WEIGHT.....	5.000	3.000	309.0	
5	CROSSOVER.....	5.000	3.000	3.6	
6	SUB-SEA TEST TREE.....	10.750	3.000	19.3	
5	CROSSOVER.....	6.250	3.000	1.0	
2	TUBING.....	3.500	2.764	9824.1	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.230	2.0	10134.2
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	10137.2
3	DRILL COLLARS.....	4.750	2.312	93.5	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	15.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	277.9	
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	10564.7
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	370.5	
97	LPR-M2 CIRCULATING SAFETY VALVE.	5.000	2.250	17.4	10950.3
33	DRAIN VALVE.....	5.000	2.250	1.0	
67	LPR-N TESTER VALVE.....	5.000	2.250	16.4	10969.0
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	10990.4
15	JAR.....	4.625	2.250	5.0	
84	BUNDLE CARRIER.....	5.030	2.187	8.0	11003.5
5	CROSSOVER.....	4.750	2.310	1.2	
35	RTTS SAFETY JOINT.....	4.870	2.440	3.3	
71	CASING PACKER.....	5.750	2.400	4.5	11010.8

CONTINUED

EQUIPMENT DATA

452372

TICKET NO. 34609200

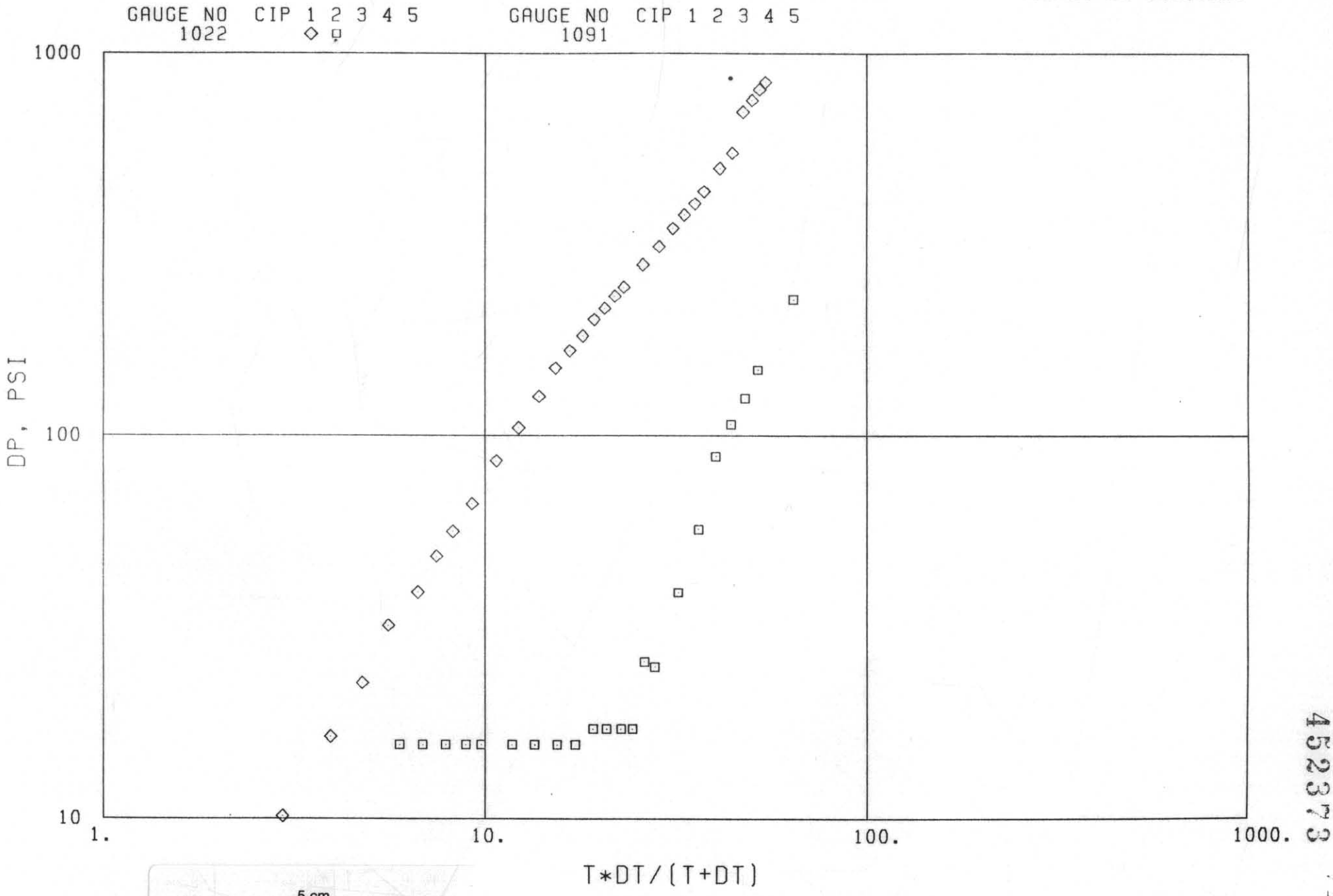
		O.D.	I.D.	LENGTH	DEPTH
5	CROSSOVER.....	4.625	2.250	1.0	
5	CROSSOVER.....	4.750	2.310	1.0	
1	DRILL PIPE.....	3.500	2.764	31.0	
5	CROSSOVER.....	4.750	2.250	1.0	
204	GUIDE SUB.....	5.000	2.750	0.8	



TOTAL DEPTH 13230.1

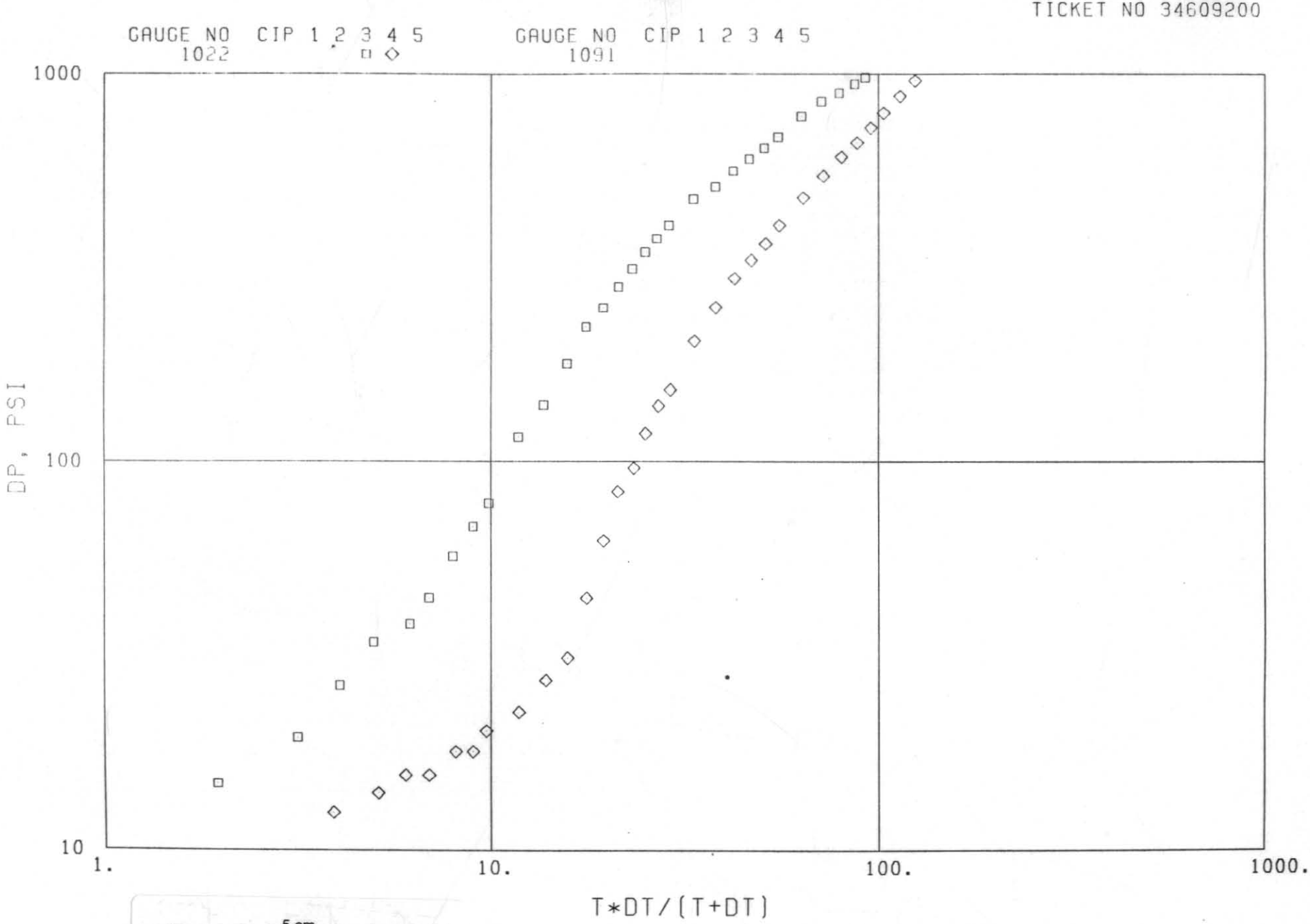
EQUIPMENT DATA

TICKET NO 34609200



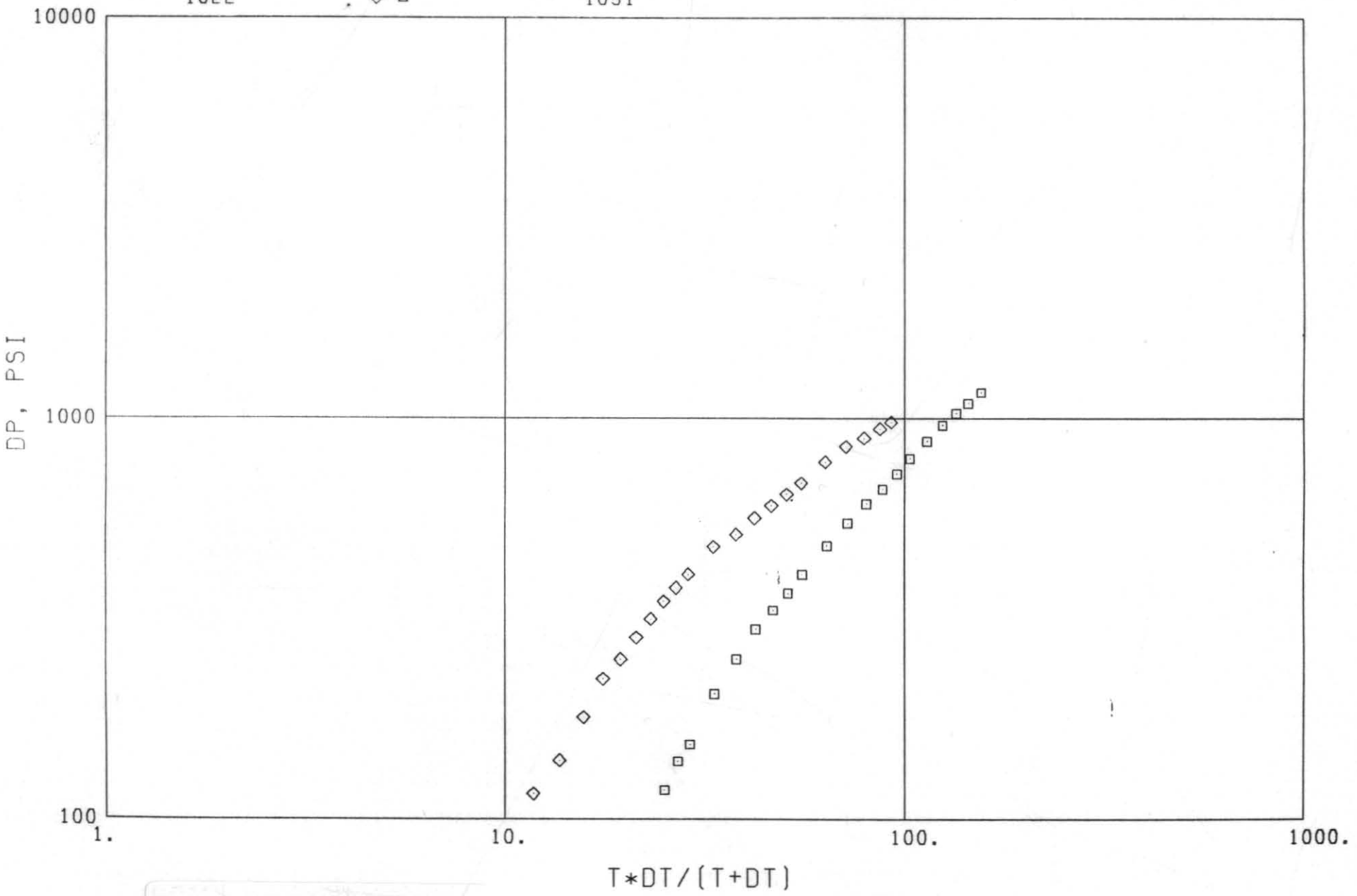
4523273

TICKET NO 34609200



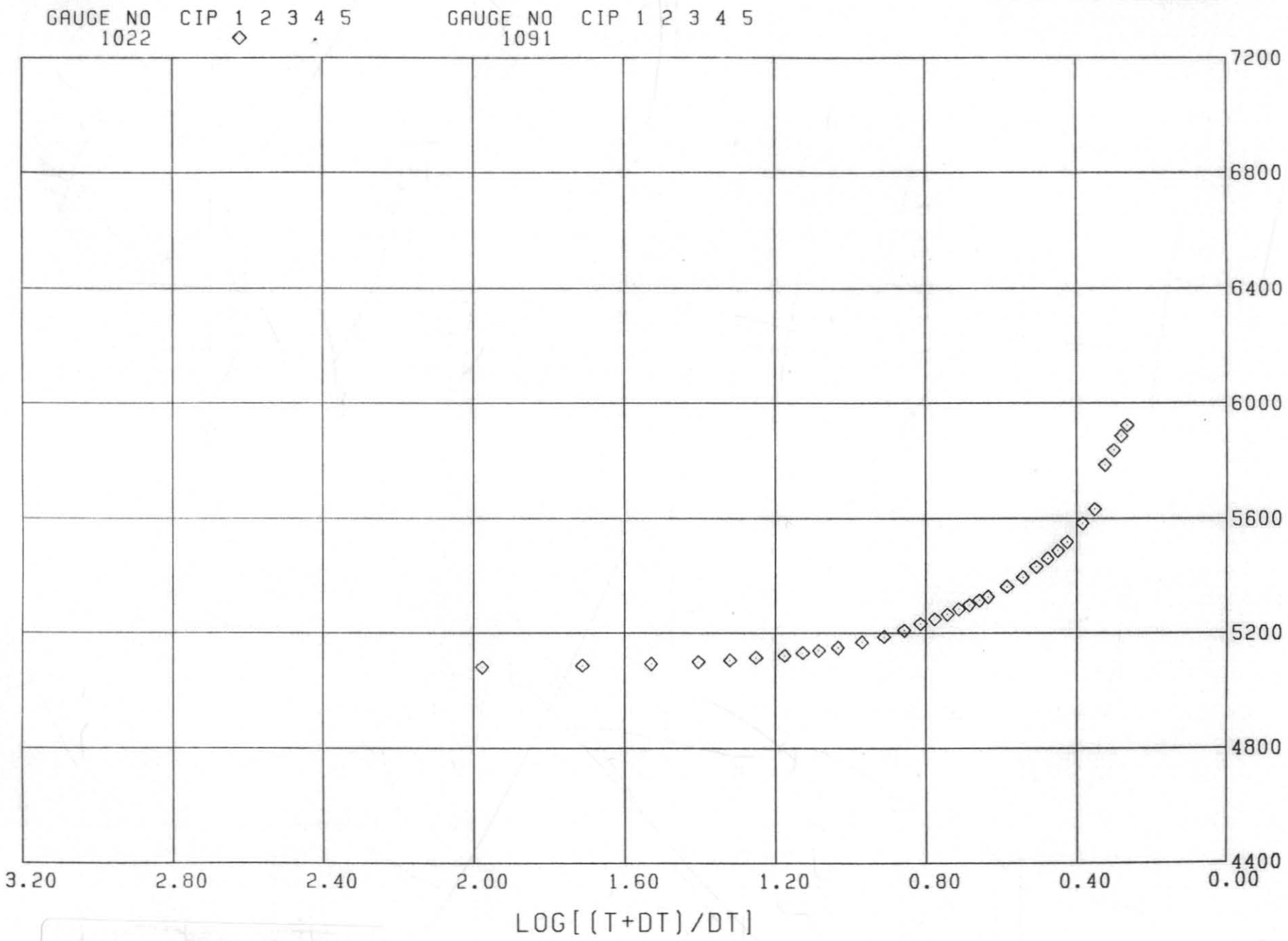
4523274

TICKET NO 34609200



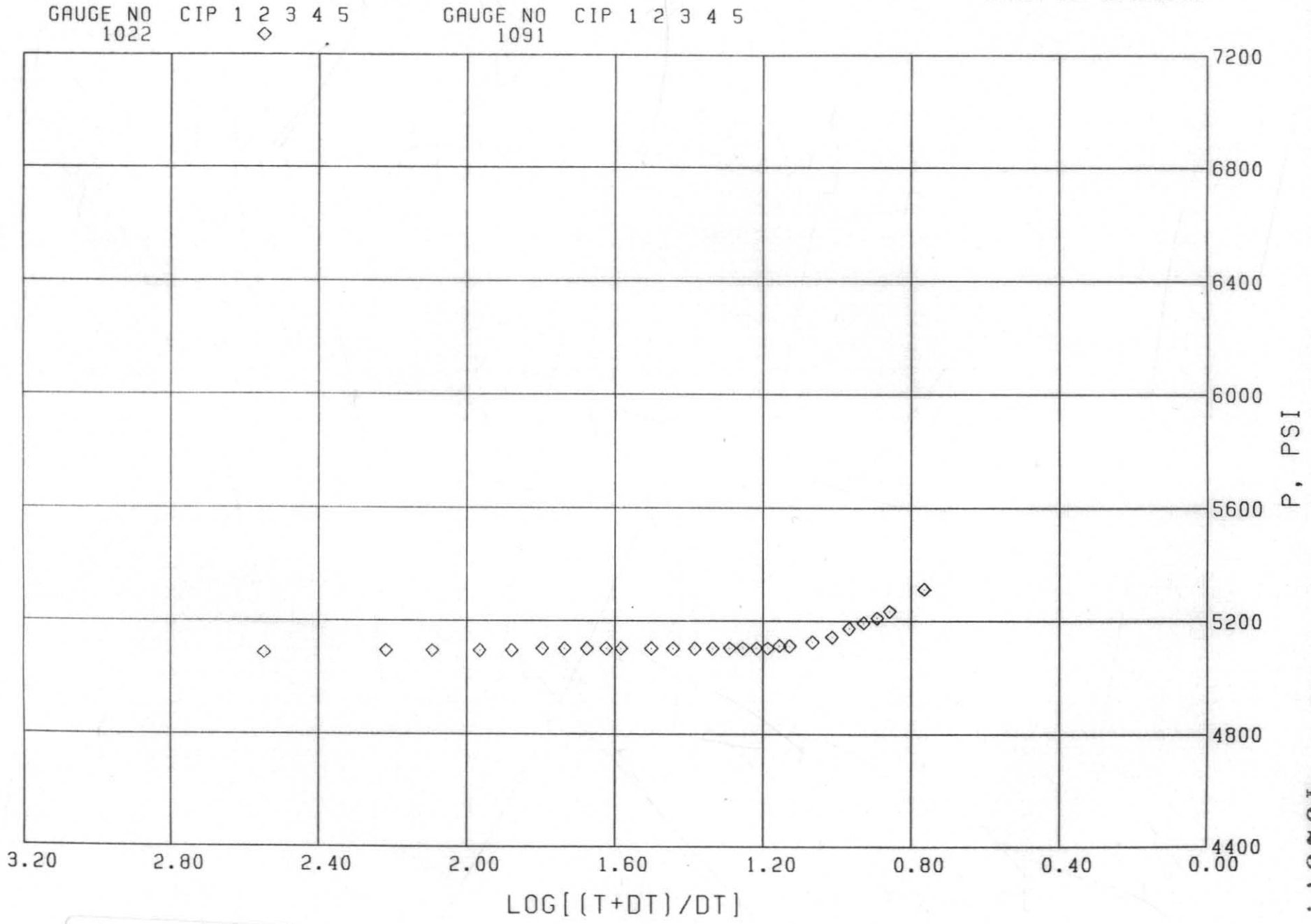
4523758

TICKET NO 34609200



4523376

TICKET NO 34609200



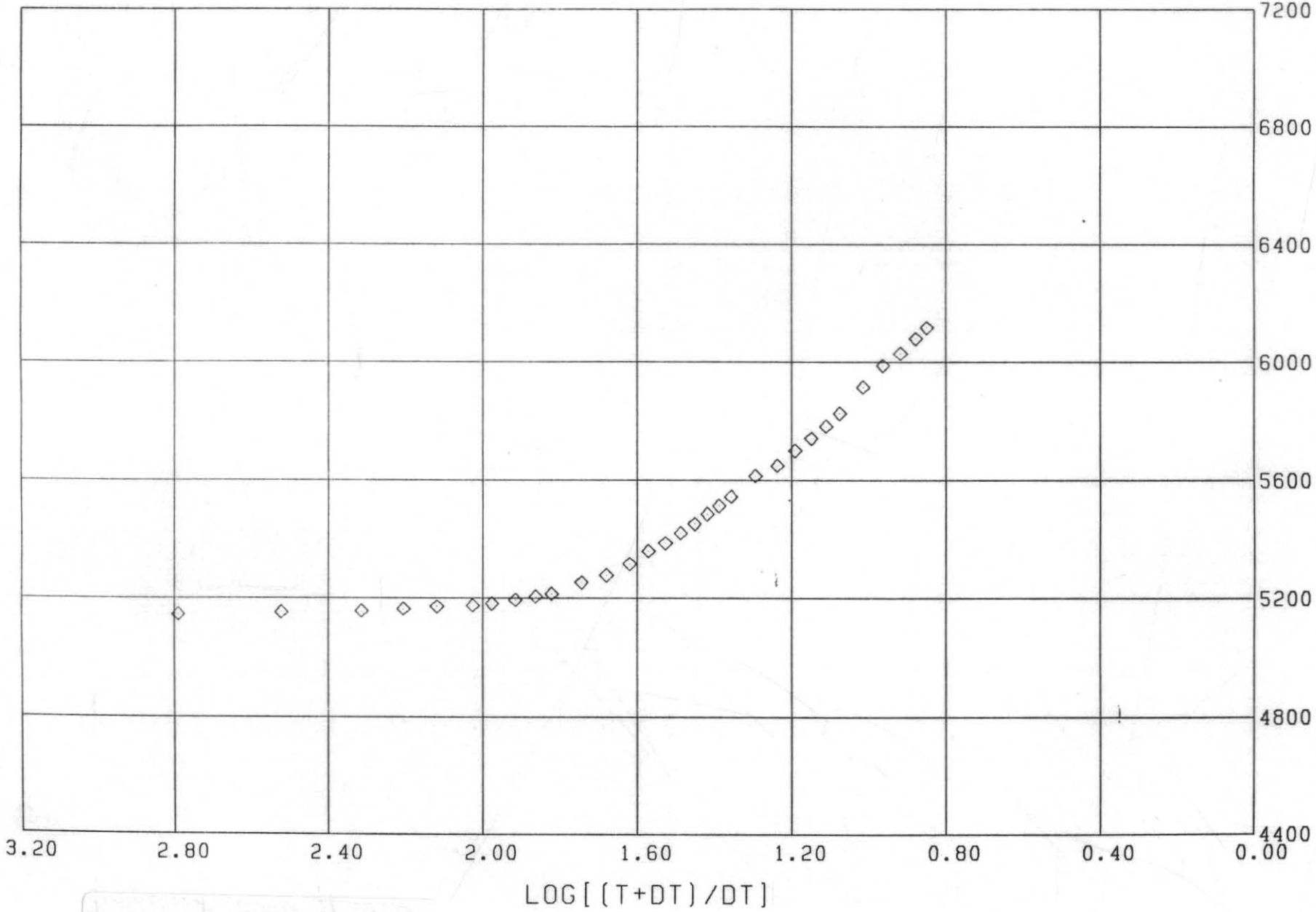
5 cm

4523271

TICKET NO 34609200

GAUGE NO 1022 CIP 1 2 3 4 5 ◇ ·

GAUGE NO 1091 CIP 1 2 3 4 5

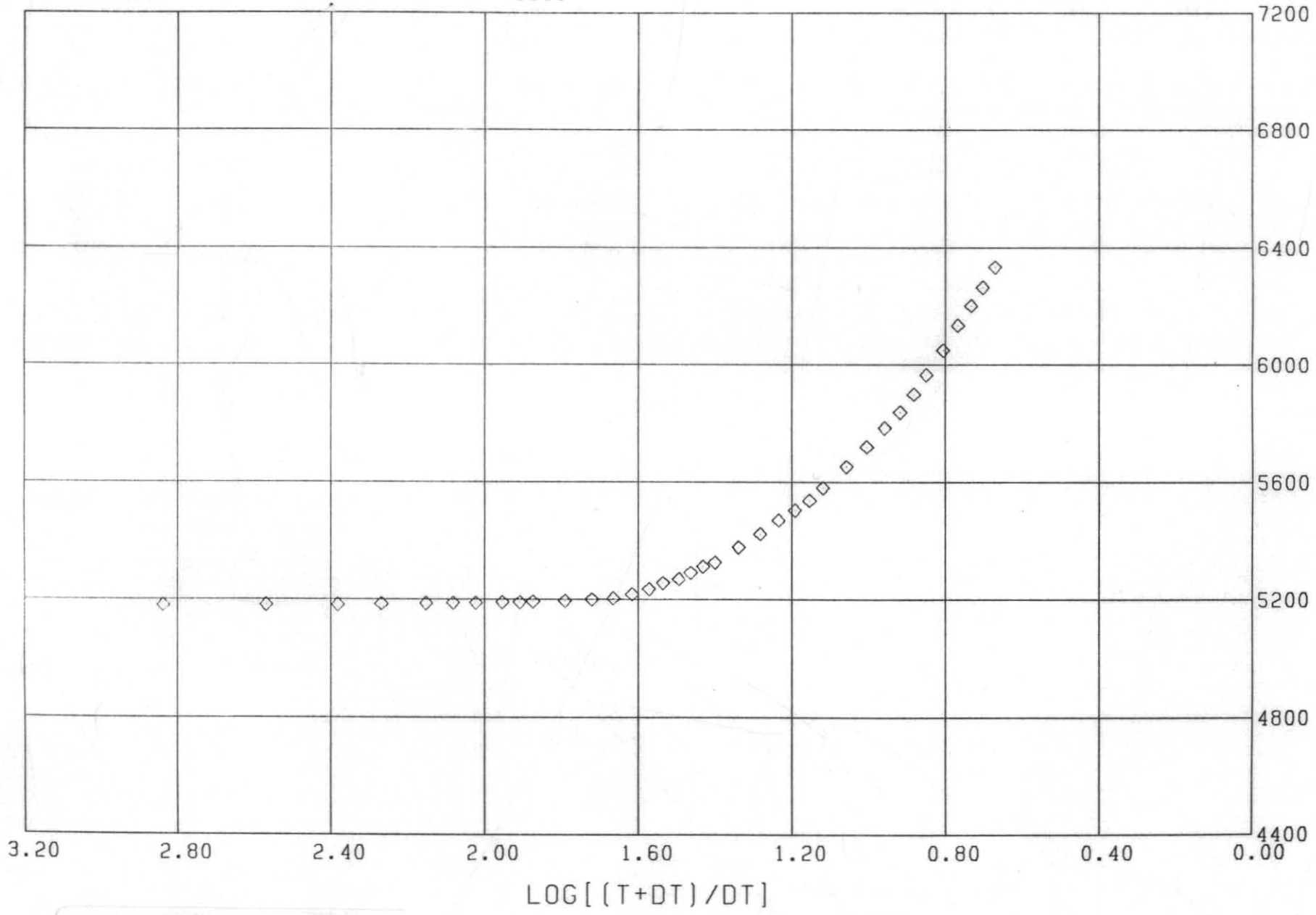


4523278

TICKET NO 34609200

GAUGE NO 1022 CIP 1 2 3 4 5 ◇

GAUGE NO 1091 CIP 1 2 3 4 5



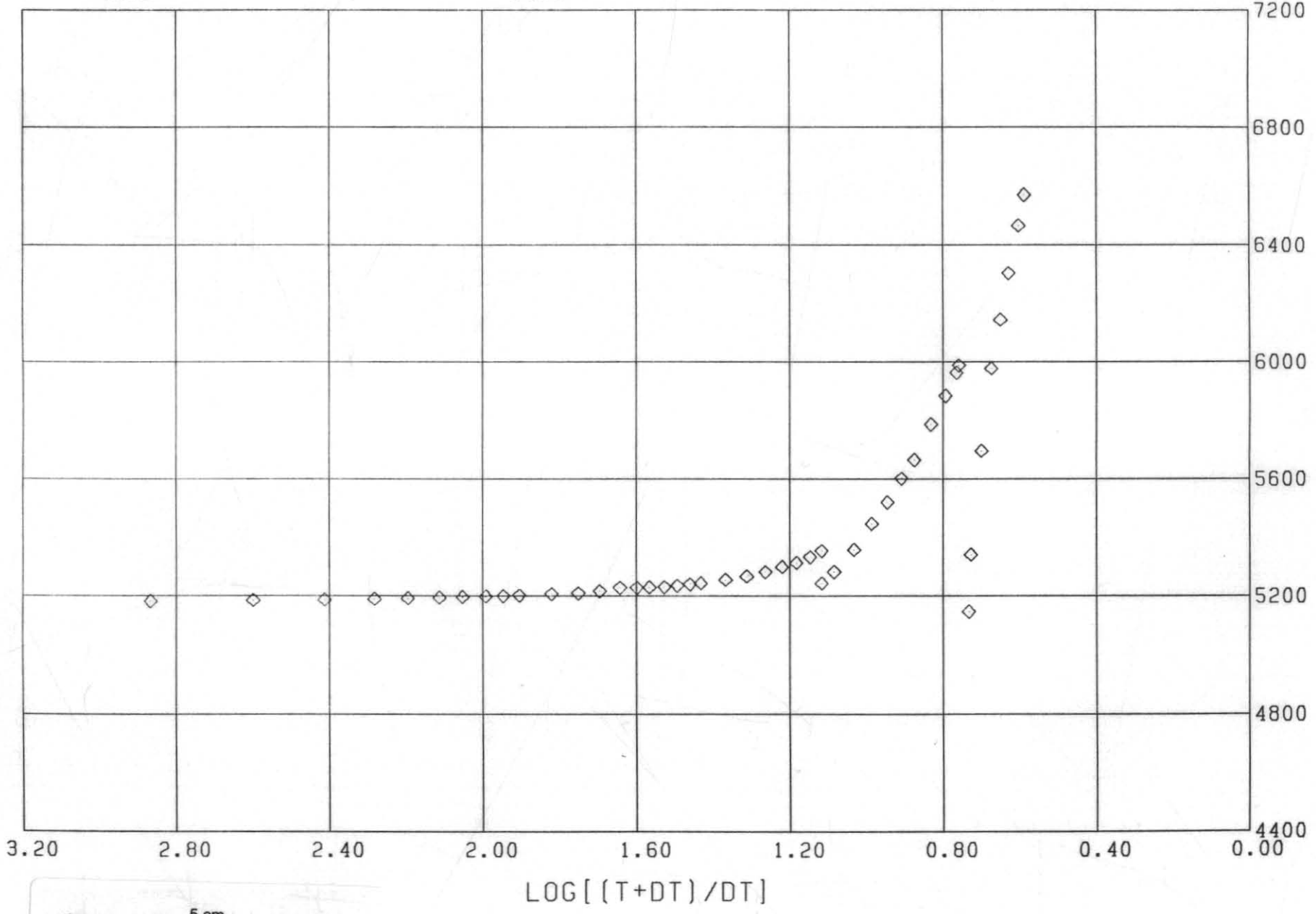
5 cm

4523179

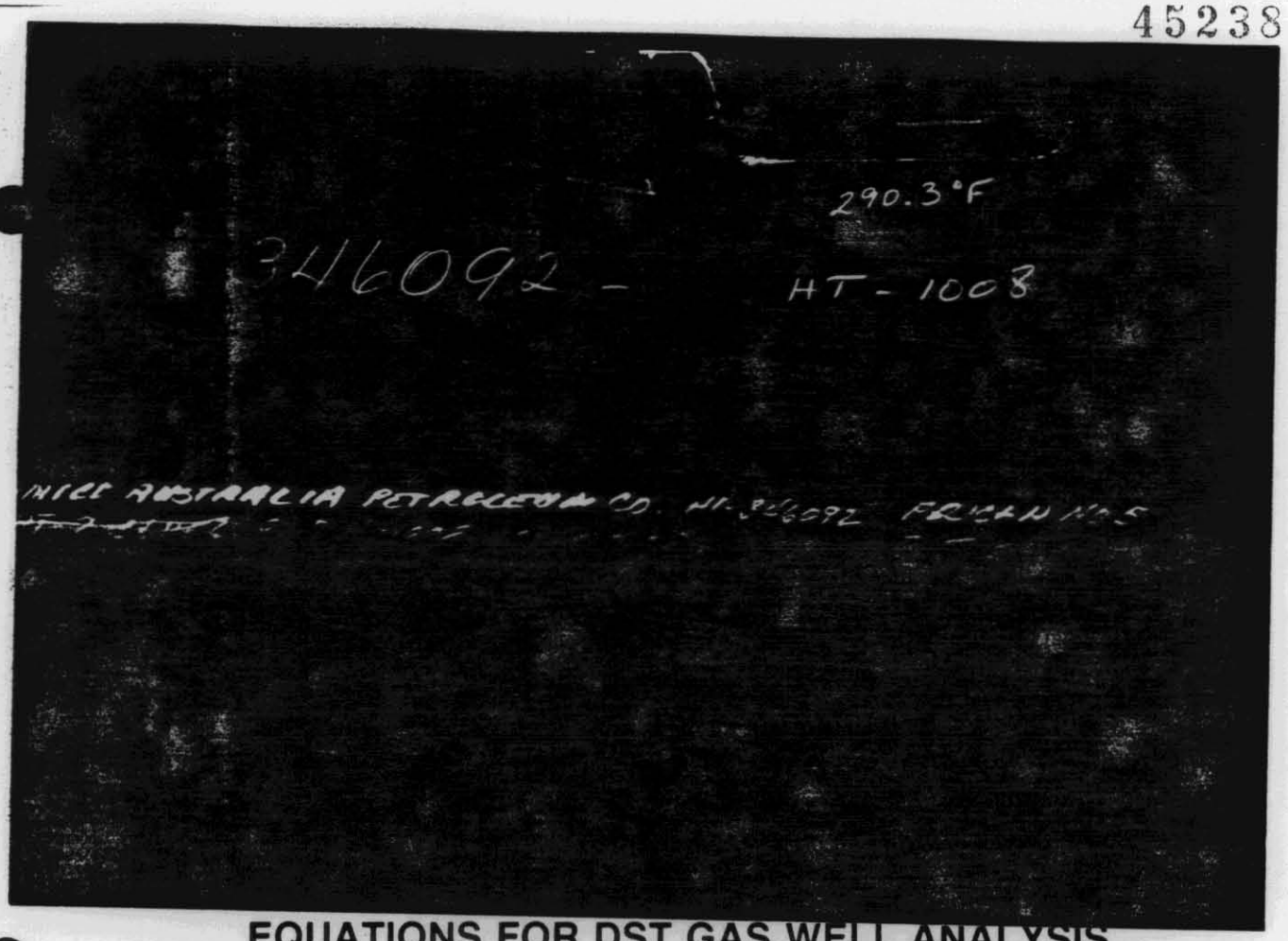
TICKET NO 34609200

GAUGE NO 1022 CIP 1 2 3 4 5 · ◇

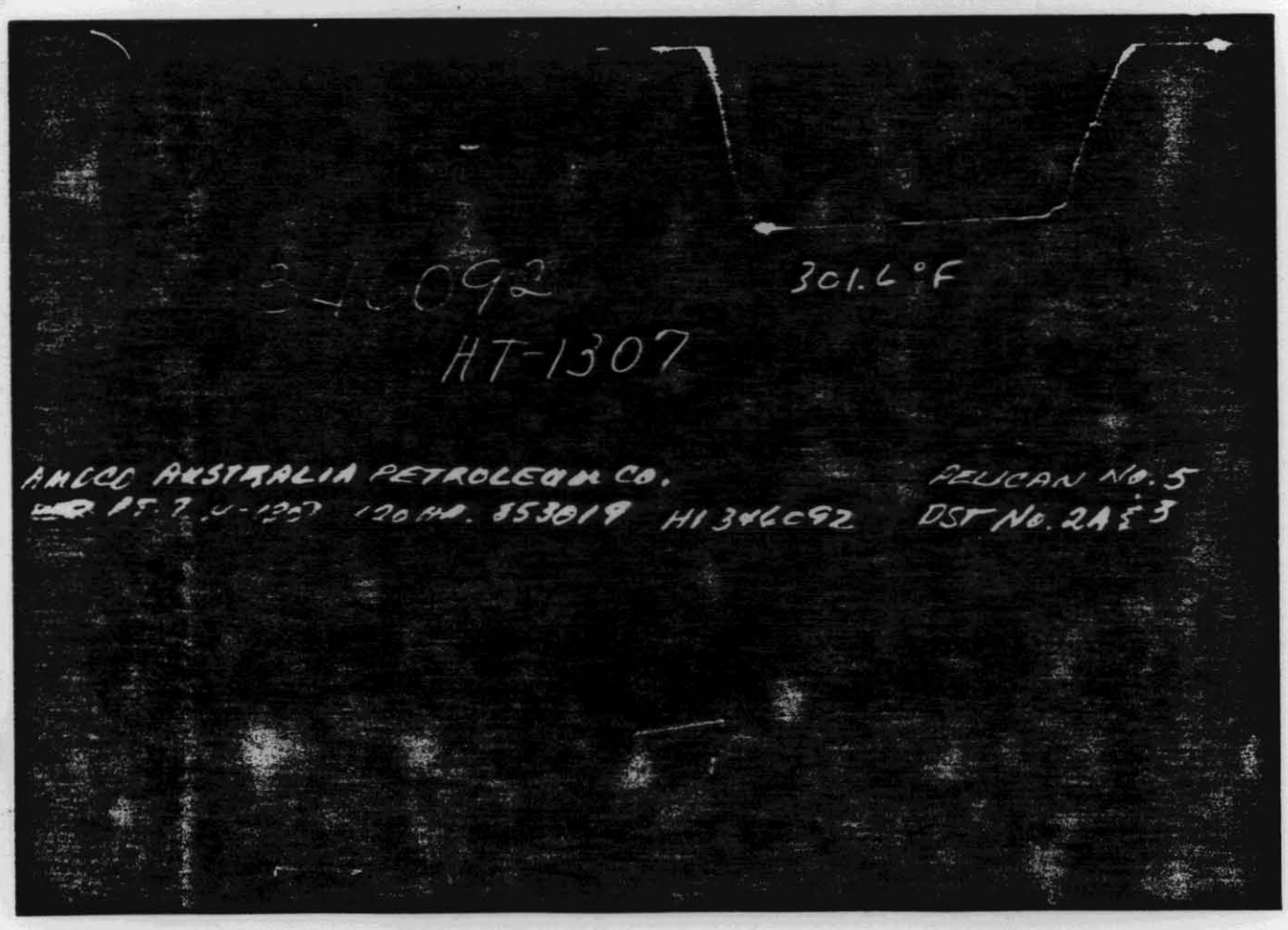
GAUGE NO 1091 CIP 1 2 3 4 5



452380



EQUATIONS FOR DST GAS WELL ANALYSIS



452382

Enclosure No. 16



TICKET NO. 34609300

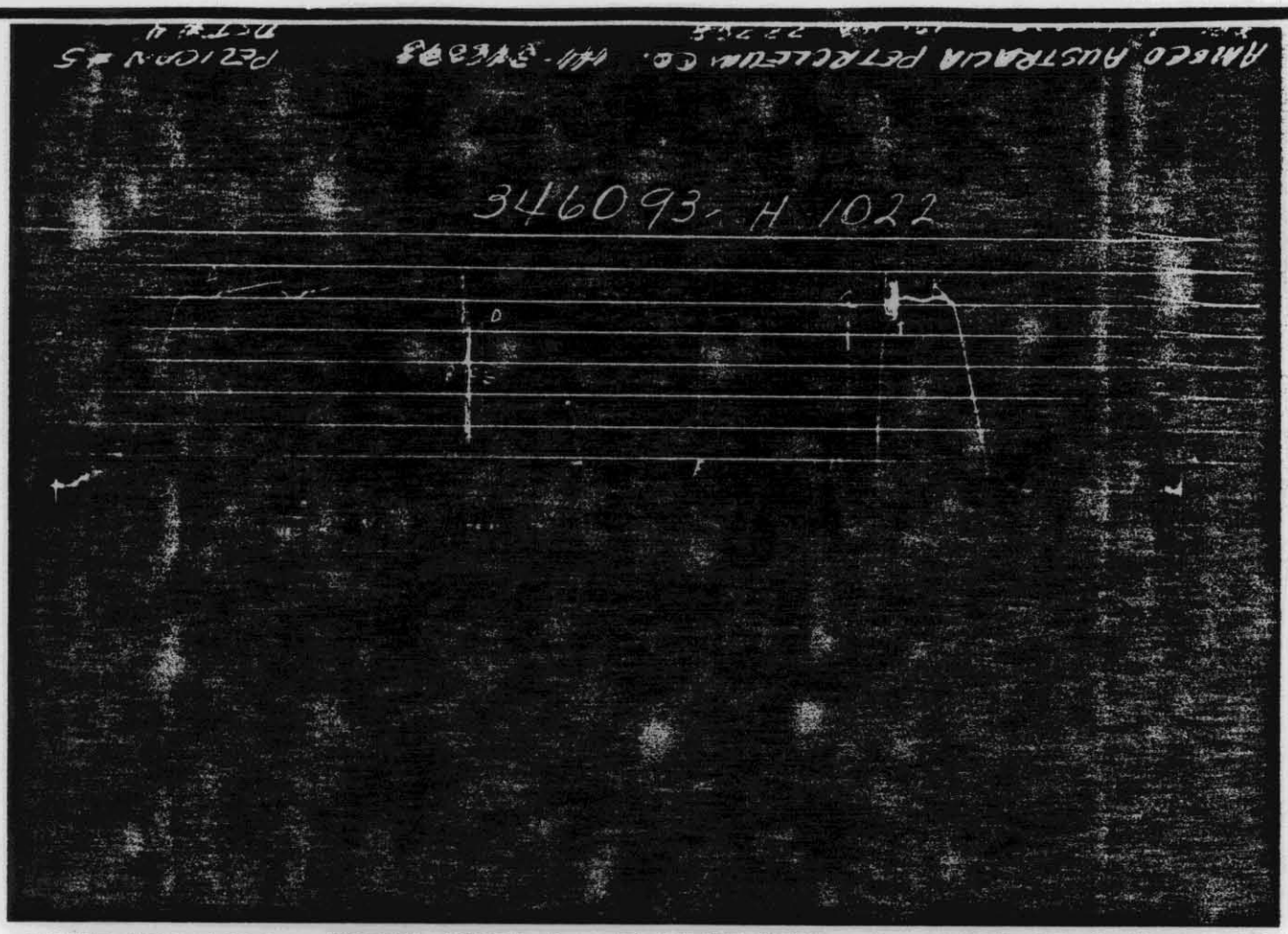
18-APR-86

ADELAIDE

FORMATION TESTING SERVICE REPORT

PELICAN	5	4	10277.6 -	AMOCO AUSTRALIA PETROLEUM COMPANY	
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RNG.	SEE REMARKS	FIELD AREA	BASS STRAIT	COUNTY	TASMANIA	STATE	AUSTRALIA SM

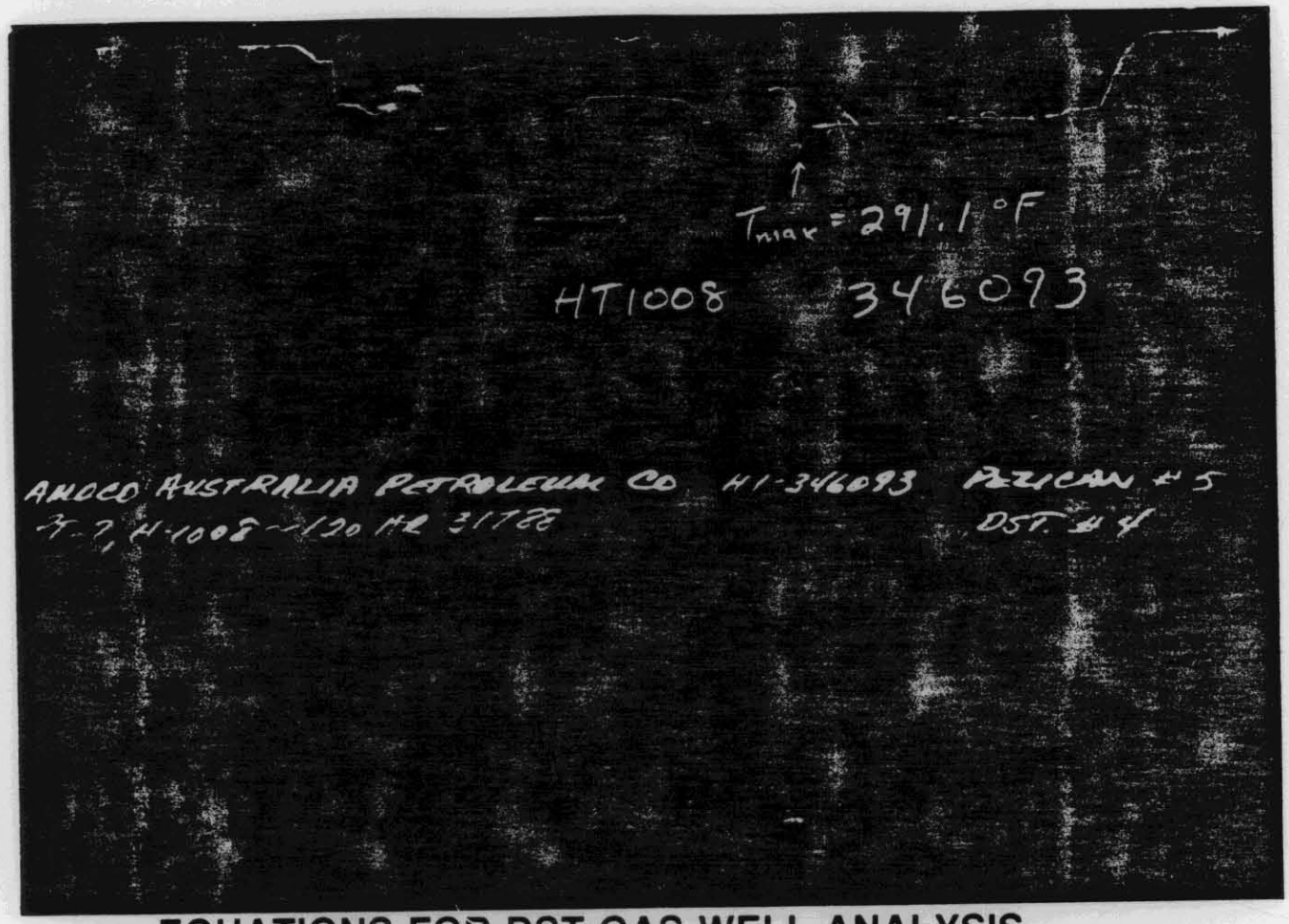
452383



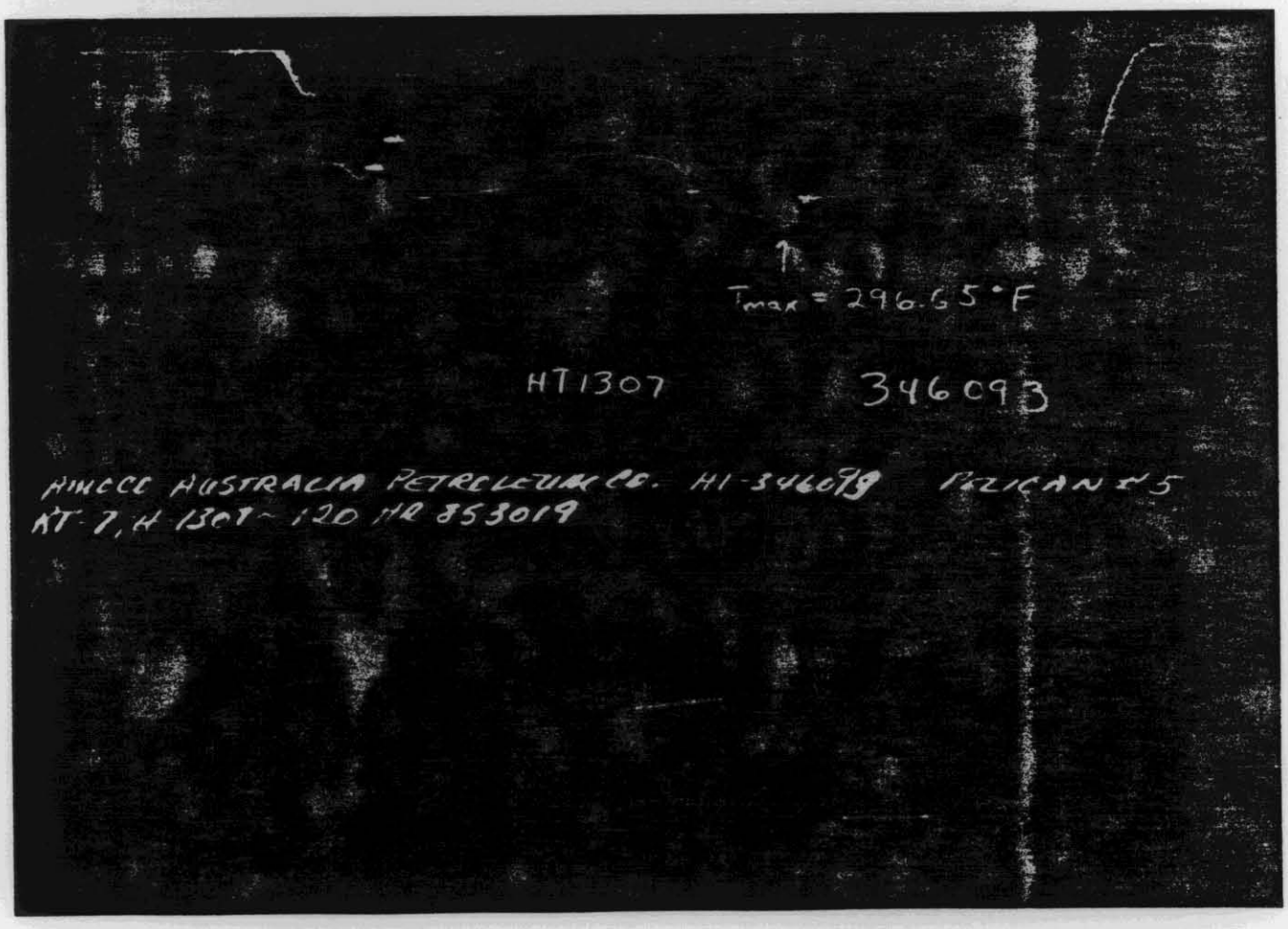
GAUGE NO: 1022 DEPTH: 10256.5 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		6238.8			
B	INITIAL FIRST FLOW		3986.6	24	24	F
C	FINAL FIRST FLOW		3992.9			
C	INITIAL FIRST CLOSED-IN		3992.9	59	55	C
D	FINAL FIRST CLOSED-IN		5326.6			
E	INITIAL SECOND FLOW		4015.0	1308	1310	F
F	FINAL SECOND FLOW		1061.9			
F	INITIAL SECOND CLOSED-IN		1061.9	900	899	C
G	FINAL SECOND CLOSED-IN		5794.5			
H	INITIAL THIRD FLOW		782.5	172	175	F
I	FINAL THIRD FLOW		333.3			
I	INITIAL THIRD CLOSED-IN		333.3	121	110	C
J	FINAL THIRD CLOSED-IN		5586.7			
K	FINAL HYDROSTATIC		6216.3			

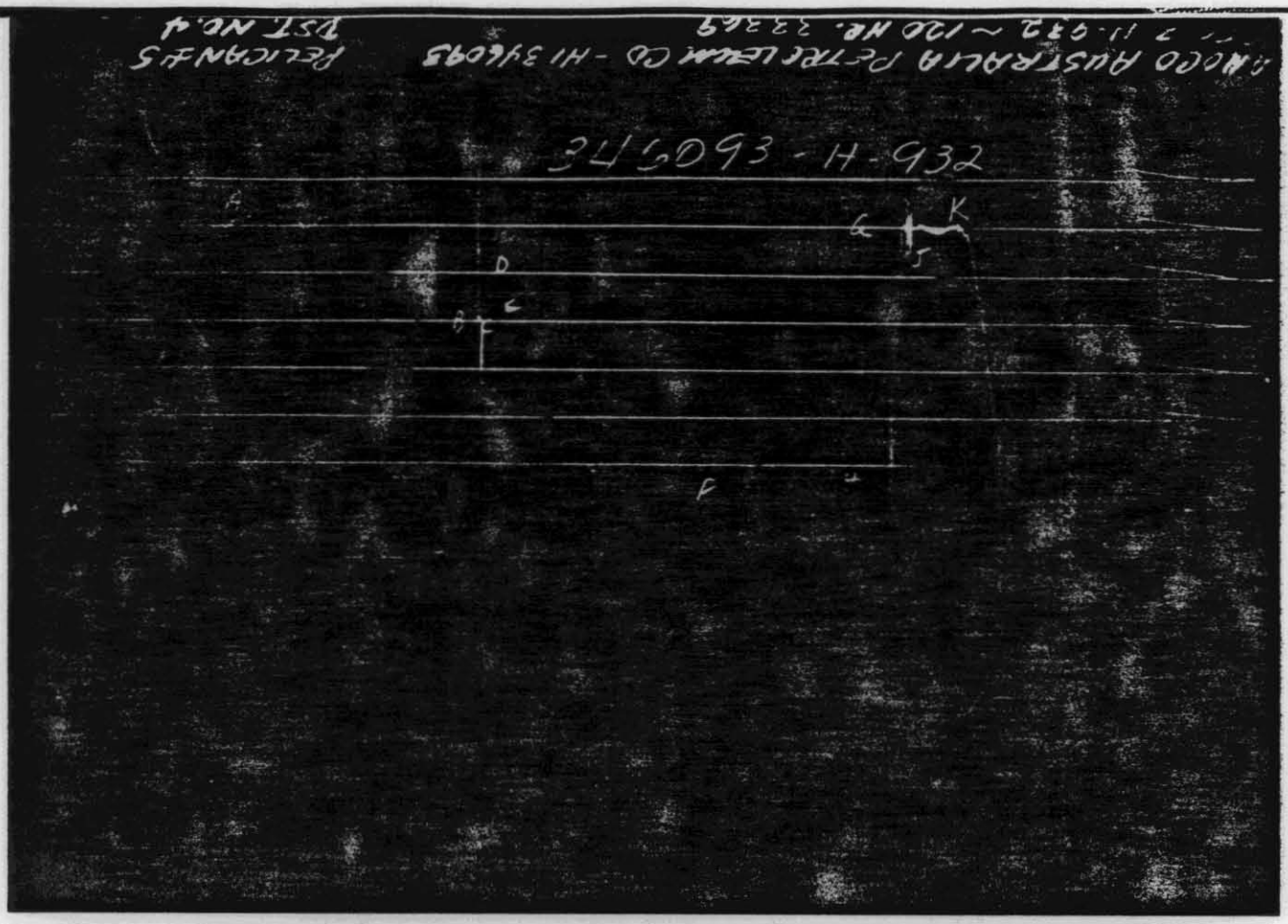
452384



EQUATIONS FOR DST GAS WELL ANALYSIS



4523885



GAUGE NO: 932 DEPTH: 10256.5 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		6146.8			
B	INITIAL FIRST FLOW		3929.5	24	24	F
C	FINAL FIRST FLOW		3936.3			
C	INITIAL FIRST CLOSED-IN		3936.3	59	55	C
D	FINAL FIRST CLOSED-IN		5143.7			
E	INITIAL SECOND FLOW		4149.2	1308	1310	F
F	FINAL SECOND FLOW		967.2			
F	INITIAL SECOND CLOSED-IN		967.2	900	899	C
G	FINAL SECOND CLOSED-IN		5720.5			
H	INITIAL THIRD FLOW		902.7	172	175	F
I	FINAL THIRD FLOW		365.6			
I	INITIAL THIRD CLOSED-IN		365.6	121	110	C
J	FINAL THIRD CLOSED-IN		5513.2			
K	FINAL HYDROSTATIC		6041.1			

452386

EQUIPMENT & HOLE DATA

FORMATION TESTED: TEST INTERVAL NO. 4
NET PAY (ft): 70.5
GROSS TESTED FOOTAGE:
ALL DEPTHS MEASURED FROM: R KELLY BUSHING
CASING PERFS. (ft): 10308.9-10379.44
HOLE OR CASING SIZE (in): 7.000
ELEVATION (ft): 73.0
TOTAL DEPTH (ft):
PACKER DEPTH(S) (ft): 10278
FINAL SURFACE CHOKE (in): 128/64"
BOTTOM HOLE CHOKE (in): 1.750
MUD WEIGHT (lb/gal): 11.80
MUD VISCOSITY (sec): 48
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 297 @ 10256.5 ft

TICKET NUMBER: 34609300

DATE: 3-23-86 TEST NO: 4

TYPE DST: CASED HOLE W LPR

HALLIBURTON CAMP: ADELAIDE

TESTER: RON BAKER, GARY ZUNKEL

WITNESS:

DRILLING CONTRACTOR: DIAMOND M DRILLING COMPANY

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 320.0
cu.ft. OF GAS: 9.406
cc OF OIL:
cc OF WATER:
cc OF MUD:
TOTAL LIQUID cc:

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 51.0 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT
DIESEL - BBLS	64.0	6.80

RECOVERED:

MEASURED FROM TESTER VALVE

REMARKS:

LEGAL LOCATION: LAT. 40 DEGREES, 20', 43.259" S AND LONG. 145 DEGREES, 51', 49.971" E.

READINGS QUESTIONABLE FOR GAUGE NO. 932 DUE TO STAIR STEPPING.

452387

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-23-86					
2230					PICKED UP T.C.P. GUNS
2315					STARTED GAUGES, PICKED UP TOOLS
3-24-86					
0330					TOOLS IN HOLE
1630					RIGGED UP SURFACE EQUIPMENT
1645					SET PACKER, PRESSURE TESTED
					SURFACE EQUIPMENT AND ON TOP OF
					LPR-N BALL TO 5000 PSI. RAN
					IN HOLE WITH CCL. PACKER SET
					16.41 FEET TOO HIGH. RIGGED
					DOWN SURFACE EQUIPMENT.
2150					UNSEATED PACKER, PULLED OUT
					OF HOLE TO PICK UP 16' OF
					TUBING.
3-25-86					
0100					SET PACKER, RIGGED UP SURFACE
					LINES
0130					TESTED SURFACE LINES AND TUBING
					TO 5000 PSI
0200					RAN IN HOLE WITH CCL
0505					RIGGED DOWN CCL
0530					PRESSURE TESTED SURFACE LINES
0550					OPENED TOP CIRCULATING VALVE,
					SPOTTED 64 BBLS. DIESEL
					CUSHION FOR 2300 PSI UNDERBALANCE.
0635					CLOSED TOP CIRCULATING VALVE
0642					RELEASED TUBING PRESSURE
0700					RIGGED UP OTIS LUBRICATOR,
					REPAIRED LEAK IN CHOKE
					MANIFOLD
1100					RAN IN HOLE WITH SRO
1607					OPENED LPR-N
1619	16/64	10			FIRED TCP GUNS C
1631		6			CLOSED CHOKE MANIFOLD
1730	16/64	1350			OPENED CHOKE MANIFOLD D
1735	16/64	2			E

452388

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 34609300
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
1740	16/64				NO SURFACE INDICATION WELL IS
					FLOWING
1745	16/64	1			RAN IN HOLE WITH SRO
1842	16/64	2			FLOWING WELL TO TANK
1900	16/64	2			
1930	16/64	2			
2000	16/64	1			
2030	16/64	1			
2100	16/64				
2230	16/64	2			
2330	16/64	2			
3-26-86					
0130	16/64	3			
0200	16/64	9			
0230	16/64	170			
0233	32/64	250			CHANGED CHOKE SIZE
0235	32/64	320			GAS TO THE SURFACE
0248	32/64	300			RAT HOLE MUD TO SURFACE
0327	24/64	240			CHANGED CHOKE SIZE
0346	16/64	220			CHANGED CHOKE SIZE
0400	16/64	167			
0450	16/64	123			CHANGED TO 16/64" POSITIVE CHOKE
0500	16/64	162			
0600	16/64	218			
0700	16/64	300			
0800	16/64	290			
0900	16/64	245			
1000	16/64	250			
1200	16/64	248			
1315	16/64	244			
1330	16/64	245			
1345	16/64	260			
1400	16/64	265			
1515	16/64	325			
1518	16/64	350			CLOSED LPR-N, BLED DOWN TUBING F
					PRESSURED TO 100 PSI.
3-27-86					

452389

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609300

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
0618	16/64	1420			OPENED LPR-N G
0630	16/64	240			
0640	24/64	180			CHANGED CHOKE SIZE
0645	24/64	273			
0650	64/64	260			CHANGED CHOKE SIZE
0655	128/64	150			CHANGED TO POSITIVE CHOKE
0700	128/64	74			
0730	128/64	35			
0800	128/64	35			
0830	128/64	40			
0900	128/64	35			
0910	128/64				CLOSED LPR-N H
0920					OPENED LPR M-2 REVERSED OUT
1111					OPENED BYPASS
1113					UNSEATED PACKER, PULLED OUT
					OF HOLE

452390

TICKET NO: 34609300	GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	DEPTH: 10256.5

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST FLOW			
B	1	0	3986.6			
C	2	24	3992.9	6.3		
			FIRST CLOSED-IN			
C	1	0	3992.9			
	2	1	4041.7	48.8	1.0	1.372
	3	2	4106.3	113.4	1.8	1.119
	4	3	4163.0	170.1	2.7	0.949
	5	4	4194.5	201.6	3.5	0.836
	6	5	4238.6	245.7	4.1	0.763
	7	6	4295.3	302.4	4.8	0.695
	8	7	4348.0	355.1	5.4	0.647
	9	8	4388.2	395.3	6.0	0.600
	10	9	4448.8	455.9	6.6	0.560
	11	10	4491.3	498.4	7.0	0.531
	12	12	4550.4	557.5	8.0	0.477
	13	14	4604.7	611.8	8.9	0.431
	14	16	4658.3	665.4	9.6	0.396
	15	18	4718.1	725.2	10.3	0.367
	16	20	4773.2	780.3	10.9	0.342
	17	22	4840.2	847.2	11.5	0.319
	18	24	4885.0	892.1	12.0	0.300
	19	26	4933.1	940.2	12.5	0.283
	20	28	4965.4	972.4	12.9	0.268
	21	30	5003.9	1011.0	13.3	0.255
	22	35	5080.5	1087.6	14.2	0.226
	23	40	5153.1	1160.2	15.0	0.203
	24	45	5220.3	1227.4	15.6	0.185
	25	50	5275.0	1282.1	16.2	0.169
D	26	55	5326.6	1333.6	16.7	0.156
			SECOND FLOW			
E	1	0	4015.0			
	2	60	3973.2	-41.7		
	3	120	3909.4	-63.8		
	4	180	3837.0	-72.4		
	5	240	3759.1	-78.0		
	6	300	3674.0	-85.0		
	7	360	3565.4	-108.7		
	8	420	3425.2	-140.2		
	9	480	3218.9	-206.3		
	10	540	2632.8	-586.1		
	11	600	1088.9	-1543.9		
[1]	12	624	703.2	-385.7		
	13	660	658.7	-44.4		
[1]	14	675	666.7	7.9		
	15	720	792.9	126.2		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			SECOND FLOW - CONTINUED			
	16	780	908.7	115.9		
	17	840	898.4	-10.3		
	18	900	855.6	-42.9		
	19	960	862.7	7.1		
	20	1020	901.6	38.9		
	21	1080	938.9	37.3		
	22	1140	977.8	38.9		
	23	1200	1031.7	54.0		
	24	1260	1065.1	33.3		
F	25	1310	1061.9	-3.2		
			SECOND CLOSED-IN			
F	1	0	1061.9			
	2	1	1930.2	868.3	1.1	3.100
	3	2	2265.6	1203.7	2.1	2.800
	4	3	2610.9	1549.0	3.0	2.645
	5	4	2860.2	1798.3	4.1	2.515
	6	5	2997.7	1935.8	5.1	2.415
	7	6	3163.8	2101.9	6.0	2.345
	8	7	3319.7	2257.8	6.9	2.285
	9	8	3467.7	2405.8	8.0	2.224
	10	9	3660.6	2598.7	9.0	2.170
	11	10	3821.3	2759.4	9.9	2.129
	12	12	4050.4	2988.5	12.0	2.046
	13	14	4326.0	3264.1	13.8	1.986
	14	16	4485.8	3423.9	15.8	1.925
	15	18	4600.0	3538.1	17.8	1.876
	16	20	4711.8	3649.9	19.7	1.831
	17	22	4820.5	3758.6	21.7	1.788
	18	24	4905.5	3843.6	23.6	1.752
	19	26	4966.1	3904.2	25.5	1.718
	20	28	5015.6	3953.7	27.4	1.687
	21	30	5078.9	4017.0	29.4	1.656
	22	35	5187.5	4125.6	34.1	1.593
	23	40	5266.4	4204.5	38.9	1.535
	24	45	5323.4	4261.5	43.9	1.483
	25	50	5368.8	4306.8	48.3	1.441
	26	55	5407.0	4345.1	52.9	1.402
	27	60	5443.0	4381.1	57.5	1.366
	28	70	5489.8	4427.9	66.6	1.302
	29	80	5526.6	4464.7	75.5	1.247
	30	90	5553.9	4492.0	84.3	1.199
	31	100	5578.1	4516.2	93.0	1.157
	32	110	5593.8	4531.8	101.6	1.118
	33	120	5607.0	4545.1	110.2	1.083
	34	135	5624.2	4562.3	122.6	1.037
	35	150	5640.6	4578.7	134.8	0.996
	36	165	5652.3	4590.4	146.9	0.958
	37	180	5660.9	4599.0	158.7	0.925
	38	195	5670.3	4608.4	170.2	0.894
	39	210	5677.3	4615.4	181.5	0.866

LEGEND:
[1] CHOKE CHANGE [2] OPENED LPR-M2 [3] CLOSED LPR-M2

REMARKS:

452391

TICKET NO: 34609300

CLOCK NO: 0 HOUR: 120

HALLIBURTON SERVICES

GAUGE NO: 1022

DEPTH: 10256.5

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
40	225	5687.5	4625.6	192.5	0.841
41	240	5690.6	4628.7	203.5	0.817
42	260	5701.6	4639.7	217.7	0.787
43	280	5708.6	4646.7	231.5	0.761
44	300	5714.8	4652.9	245.1	0.736
45	320	5721.9	4660.0	258.1	0.713
46	340	5726.6	4664.7	271.0	0.692
47	360	5733.6	4671.7	283.6	0.673
48	380	5736.7	4674.8	295.7	0.654
49	400	5741.4	4679.5	307.8	0.637
50	420	5746.9	4685.0	319.5	0.621
51	440	5749.2	4687.3	331.0	0.605
52	460	5755.5	4693.6	342.1	0.591
53	480	5758.6	4696.7	353.0	0.577
54	500	5760.2	4698.3	363.8	0.564
55	520	5762.5	4700.6	374.2	0.552
56	540	5764.1	4702.2	384.4	0.540
57	560	5766.4	4704.5	394.5	0.529
58	580	5766.4	4704.5	404.3	0.519
59	600	5770.3	4708.4	413.9	0.508
60	620	5772.7	4710.8	423.3	0.499
61	640	5776.6	4714.7	432.6	0.489
62	660	5777.3	4715.4	441.6	0.480
63	680	5777.3	4715.4	450.4	0.472
64	700	5780.5	4718.6	459.1	0.463
65	720	5784.4	4722.5	467.6	0.455
66	740	5787.5	4725.6	476.0	0.448
67	760	5790.6	4728.7	484.2	0.440
68	780	5790.6	4728.7	492.2	0.433
69	800	5794.5	4732.6	500.1	0.426
70	820	5797.7	4735.8	507.9	0.419
71	840	5797.7	4735.8	515.5	0.413
72	860	5799.2	4737.3	523.0	0.407
73	880	5799.2	4737.3	530.3	0.401
G 74	899	5794.5	4732.6	537.0	0.395
THIRD FLOW					
H 1	0	782.5			
2	10	801.6	19.0		
3	20	816.7	15.1		
4	30	738.1	-78.6		
5	40	619.8	-118.3		
6	50	427.8	-192.1		
7	60	366.7	-61.1		
8	70	341.3	-25.4		
9	80	334.9	-6.3		
10	90	331.0	-4.0		
11	100	330.2	-0.8		
12	110	330.2	0.0		
13	120	330.2	0.0		
14	130	338.1	7.9		

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
THIRD FLOW - CONTINUED					
15	140	338.1	0.0		
16	150	338.9	0.8		
17	160	342.9	4.0		
18	170	342.9	0.0		
I 19	175	333.3	-9.5		
THIRD CLOSED-IN					
I 1	0	333.3			
2	1	1223.0	889.7	1.1	3.154
3	2	1797.6	1464.3	2.1	2.853
4	3	2057.0	1723.7	3.0	2.699
5	4	2443.0	2109.6	4.1	2.569
6	5	2532.8	2199.5	5.0	2.482
[2] 7	5	2532.8	2199.5	5.3	2.456
8	6	1758.7	1425.4	6.0	2.398
9	7	1446.0	1112.7	6.9	2.338
10	8	1088.1	754.8	8.0	2.277
11	9	809.5	476.2	9.0	2.223
12	10	577.8	244.4	9.9	2.182
13	11	566.7	233.3	11.0	2.139
[3] 14	12	566.7	233.3	11.6	2.116
15	12	853.2	519.8	11.9	2.105
16	14	2325.0	1991.7	13.9	2.034
17	16	2805.5	2472.1	15.9	1.978
18	18	3044.9	2711.5	17.8	1.928
19	20	3442.5	3109.2	19.9	1.881
20	22	3619.7	3286.4	21.8	1.841
21	24	3941.7	3608.4	23.7	1.804
22	26	4119.7	3786.4	25.6	1.771
23	28	4308.7	3975.3	27.5	1.740
24	30	4423.6	4090.3	29.4	1.711
25	35	4716.5	4383.2	34.2	1.645
26	40	4933.1	4599.7	39.1	1.587
27	45	5096.1	4762.8	43.8	1.537
28	50	5193.8	4860.4	48.5	1.493
29	55	5289.1	4955.7	53.1	1.453
30	60	5346.1	5012.8	57.8	1.417
31	70	5443.0	5109.6	67.0	1.353
32	80	5502.3	5169.0	76.0	1.298
33	90	5548.4	5215.1	85.0	1.249
34	100	5583.6	5250.3	93.8	1.206
J 35	110	5586.7	5253.4	102.1	1.169

LEGEND:
[1] CHOKE CHANGE [2] OPENED LPR-M2 [3] CLOSED LPR-M2

REMARKS:

452392

TICKET NO: 34609300	GAUGE NO: 932
CLOCK NO: 0 HOUR: 120	DEPTH: 10256.5

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
FIRST FLOW						
B	1	0	3929.5			
C	2	24	3936.3	6.8		
FIRST CLOSED-IN						
C	1	0	3936.3			
[1]	2	4	4087.0	150.7	3.1	0.893
[1]	3	7	4211.9	275.6	5.2	0.659
[1]	4	11	4349.7	413.4	7.5	0.502
[1]	5	17	4512.4	576.1	10.0	0.380
[1]	6	22	4656.5	720.2	11.4	0.320
[1]	7	28	4744.0	807.7	12.8	0.271
[1]	8	35	4898.4	962.1	14.1	0.228
[1]	9	41	4961.7	1025.3	15.0	0.201
[1]	10	47	5061.1	1124.7	15.8	0.179
D	11	55	5143.7	1207.4	16.7	0.156
SECOND FLOW						
E	1	0	4149.2			
[1]	2	41	3993.2	-156.1		
[1]	3	191	3830.5	-162.6		
[1]	4	326	3627.4	-203.2		
[1]	5	428	3399.5	-227.9		
[1]	6	486	3209.5	-190.0		
[1]	7	511	3067.9	-141.6		
[1]	8	528	2768.7	-299.1		
[1]	9	548	2344.3	-424.5		
[1]	10	554	2126.6	-217.7		
[1]	11	562	1882.5	-244.0		
[1]	12	570	1598.4	-284.1		
[1]	13	582	1384.1	-214.3		
[1]	14	595	1151.3	-232.8		
[2]	15	624	844.6	-306.7		
	16	660	841.4	-3.2		
[2]	17	675	841.4	0.0		
	18	720	849.5	8.1		
	19	780	858.1	8.6		
	20	840	858.1	0.0		
	21	900	858.1	0.0		
	22	960	858.1	0.0		
	23	1020	861.8	3.8		
	24	1080	861.8	0.0		
	25	1140	864.5	2.7		
	26	1200	867.2	2.7		
[1]	27	1240	869.4	2.2		
F	28	1310	967.2	97.8		

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
SECOND CLOSED-IN						
F	1	0	967.2			
	2	1	1585.7	618.5	1.0	3.105
	3	2	1991.5	1024.3	2.1	2.804
	4	3	2157.3	1190.1	3.1	2.629
	5	4	2279.2	1312.0	4.0	2.520
	6	5	2402.1	1434.9	5.1	2.420
	7	6	2475.5	1508.3	6.0	2.350
	8	7	2662.5	1695.3	7.0	2.280
	9	8	2799.5	1832.3	8.0	2.220
	10	9	2947.4	1980.2	8.9	2.175
	11	10	3192.6	2225.4	10.0	2.127
	12	12	3444.2	2477.0	11.9	2.051
	13	14	3675.3	2708.1	13.9	1.981
	14	16	3912.6	2945.4	15.8	1.926
	15	18	4035.2	3068.0	17.7	1.876
	16	20	4166.3	3199.1	19.8	1.829
	17	22	4371.0	3403.8	21.7	1.790
	18	24	4447.2	3479.9	23.5	1.753
	19	26	4545.6	3578.4	25.6	1.718
	20	28	4632.1	3664.9	27.4	1.687
	21	30	4717.1	3749.9	29.3	1.658
	22	35	4892.7	3925.5	34.2	1.592
	23	40	5028.4	4061.2	38.8	1.536
	24	45	5133.2	4166.0	43.6	1.486
	25	50	5169.5	4202.3	48.2	1.442
	26	55	5246.8	4279.6	52.8	1.403
	27	60	5289.5	4322.3	57.5	1.366
	28	70	5374.2	4407.0	66.6	1.302
	29	80	5418.9	4451.7	75.6	1.247
	30	90	5459.5	4492.3	84.3	1.199
	31	100	5465.8	4498.6	93.1	1.156
	32	110	5513.2	4546.0	101.7	1.118
	33	120	5517.4	4550.2	110.1	1.084
	34	135	5546.8	4579.6	122.6	1.037
	35	150	5558.4	4591.2	135.0	0.995
	36	165	5574.2	4607.0	146.9	0.958
	37	180	5584.7	4617.5	158.6	0.925
	38	195	5595.3	4628.1	170.1	0.894
	39	210	5604.2	4637.0	181.4	0.866
	40	225	5608.9	4641.7	192.5	0.841
	41	240	5614.7	4647.5	203.5	0.817
	42	260	5625.3	4658.1	217.6	0.788
	43	280	5634.2	4667.0	231.5	0.761
	44	300	5638.4	4671.2	244.9	0.736
	45	320	5644.2	4677.0	258.1	0.713
	46	340	5649.5	4682.3	271.0	0.692
	47	360	5654.7	4687.5	283.5	0.673
	48	380	5660.0	4692.8	295.8	0.654
	49	400	5662.1	4694.9	307.8	0.637
	50	420	5666.8	4699.6	319.5	0.621

LEGEND:
[1] STAIR-STEP
[2] CHOKE CHANGE
[3] OPENED LPR-M2
[4] CLOSED LPR-M2

REMARKS:
ALL READINGS QUESTIONABLE DUE TO STAIR STEPPING

TICKET NO: 34609300

CLOCK NO: 0 HOUR: 120

HALLIBURTON SERVICES

GAUGE NO: 932

DEPTH: 10256.5

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
51	440	5668.9	4701.7	330.9	0.606
52	460	5671.6	4704.4	342.1	0.591
53	480	5677.9	4710.7	353.0	0.577
54	500	5681.1	4713.8	363.8	0.564
55	520	5681.1	4713.8	374.2	0.552
56	540	5684.2	4717.0	384.4	0.540
57	560	5689.5	4722.3	394.5	0.529
58	580	5694.2	4727.0	404.3	0.519
59	600	5696.8	4729.6	413.9	0.508
60	620	5698.9	4731.7	423.3	0.499
61	640	5700.0	4732.8	432.5	0.489
62	660	5704.2	4737.0	441.6	0.480
63	680	5706.8	4739.6	450.5	0.472
64	700	5707.9	4740.7	459.2	0.463
65	720	5708.9	4741.7	467.6	0.455
66	740	5712.6	4745.4	476.0	0.448
67	760	5713.2	4746.0	484.2	0.440
68	780	5716.8	4749.6	492.2	0.433
69	800	5719.5	4752.3	500.2	0.426
70	820	5722.6	4755.4	507.9	0.419
71	840	5725.3	4758.1	515.4	0.413
72	860	5727.4	4760.2	522.9	0.407
73	880	5729.5	4762.3	530.2	0.401
G 74	899	5720.5	4753.3	537.0	0.395
THIRD FLOW					
H 1	0	902.7			
2	10	904.8	2.2		
3	20	796.8	-108.1		
4	30	725.3	-71.5		
5	40	557.5	-167.7		
6	50	462.4	-95.2		
7	60	376.3	-86.0		
8	70	374.2	-2.2		
9	80	373.1	-1.1		
10	90	372.6	-0.5		
11	100	372.6	0.0		
12	110	372.6	0.0		
13	120	372.6	0.0		
14	130	372.6	0.0		
15	140	372.6	0.0		
16	150	372.6	0.0		
17	160	372.6	0.0		
18	170	373.1	0.5		
I 19	175	365.6	-7.5		
THIRD CLOSED-IN					
I 1	0	365.6			

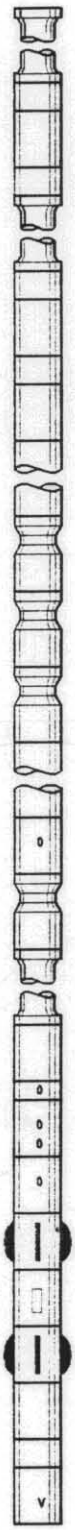
REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
THIRD CLOSED-IN - CONTINUED					
2	1	1832.3	1466.7	1.0	3.186
3	2	1956.6	1591.0	2.1	2.856
4	3	2144.8	1779.2	3.1	2.690
5	4	2234.9	1869.3	4.1	2.570
6	5	2352.6	1987.0	5.0	2.476
[3] 7	5	2354.7	1989.1	5.3	2.453
8	6	2167.2	1801.6	6.0	2.399
9	7	945.2	579.6	7.0	2.334
10	8	703.8	338.2	8.0	2.278
11	9	652.7	287.1	8.9	2.228
12	10	652.7	287.1	9.9	2.183
13	11	641.4	275.8	11.0	2.137
[4] 14	12	597.3	231.7	11.7	2.110
15	12	2008.9	1643.3	12.0	2.100
16	14	2380.7	2015.1	13.9	2.035
17	16	2673.4	2307.8	15.7	1.983
18	18	2964.1	2598.5	17.9	1.926
19	20	3252.1	2886.5	19.8	1.882
20	22	3490.5	3124.9	21.9	1.839
21	24	3698.9	3333.4	23.8	1.803
22	26	3852.1	3486.5	25.5	1.771
23	28	3975.8	3610.2	27.4	1.740
24	30	4204.7	3839.1	29.5	1.709
25	35	4514.0	4148.4	34.3	1.643
26	40	4766.3	4400.7	39.0	1.588
27	45	4932.6	4567.1	43.8	1.537
28	50	5065.3	4699.7	48.4	1.494
29	55	5180.0	4814.4	53.1	1.453
30	60	5266.8	4901.3	57.7	1.418
31	70	5354.2	4988.6	67.0	1.353
32	80	5426.8	5061.3	76.0	1.298
33	90	5472.6	5107.0	85.0	1.249
34	100	5519.5	5153.9	93.8	1.207
J 35	110	5513.2	5147.6	102.1	1.169

LEGEND:
[1] STAIR-STEP
[2] CHOKE CHANGE
[3] OPENED LPR-M2
[4] CLOSED LPR-M2

REMARKS:
ALL READINGS QUESTIONABLE DUE TO STAIR STEPPING

452394

TICKET NO. 34609300



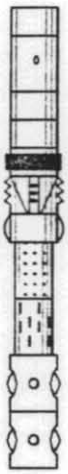
		O.D.	I.D.	LENGTH	DEPTH
4	FLEX WEIGHT.....	5.000	3.000	309.0	
5	CROSSOVER.....	5.000	3.000	3.6	
6	SUB-SEA TEST TREE.....	10.750	3.000	19.3	
5	CROSSOVER.....	6.250	3.000	1.0	
2	TUBING.....	3.500	2.750	9060.0	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.300	2.0	9388.0
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	9391.0
3	DRILL COLLARS.....	4.750	2.312	93.5	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	15.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	277.9	
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	9820.6
10	SLIP JOINT.....	5.000	2.250	13.2	
4	FLEX WEIGHT.....	4.750	2.312	370.5	
97	LPR-M-2 CIRC. SAFETY VALVE.....	5.000	2.250	17.4	10206.1
33	DRAIN VALVE.....	5.000	2.250	1.0	
67	LPR-N TESTER VALVE.....	5.000	2.250	16.4	10224.8
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	10231.0
39	DRAG BLOCK.....	5.875	2.250	2.2	
84	BUNDLE CARRIER.....	5.375	2.187	8.0	10256.5
39	DRAG BLOCK.....	5.875	2.250	2.2	
15	JAR.....	4.625	2.250	5.0	
5	CROSSOVER.....	4.750	2.310	1.0	
16	VR SAFETY JOINT.....	4.625	2.250	4.8	

. CONTINUED

EQUIPMENT DATA

452395

TICKET NO. 34609300

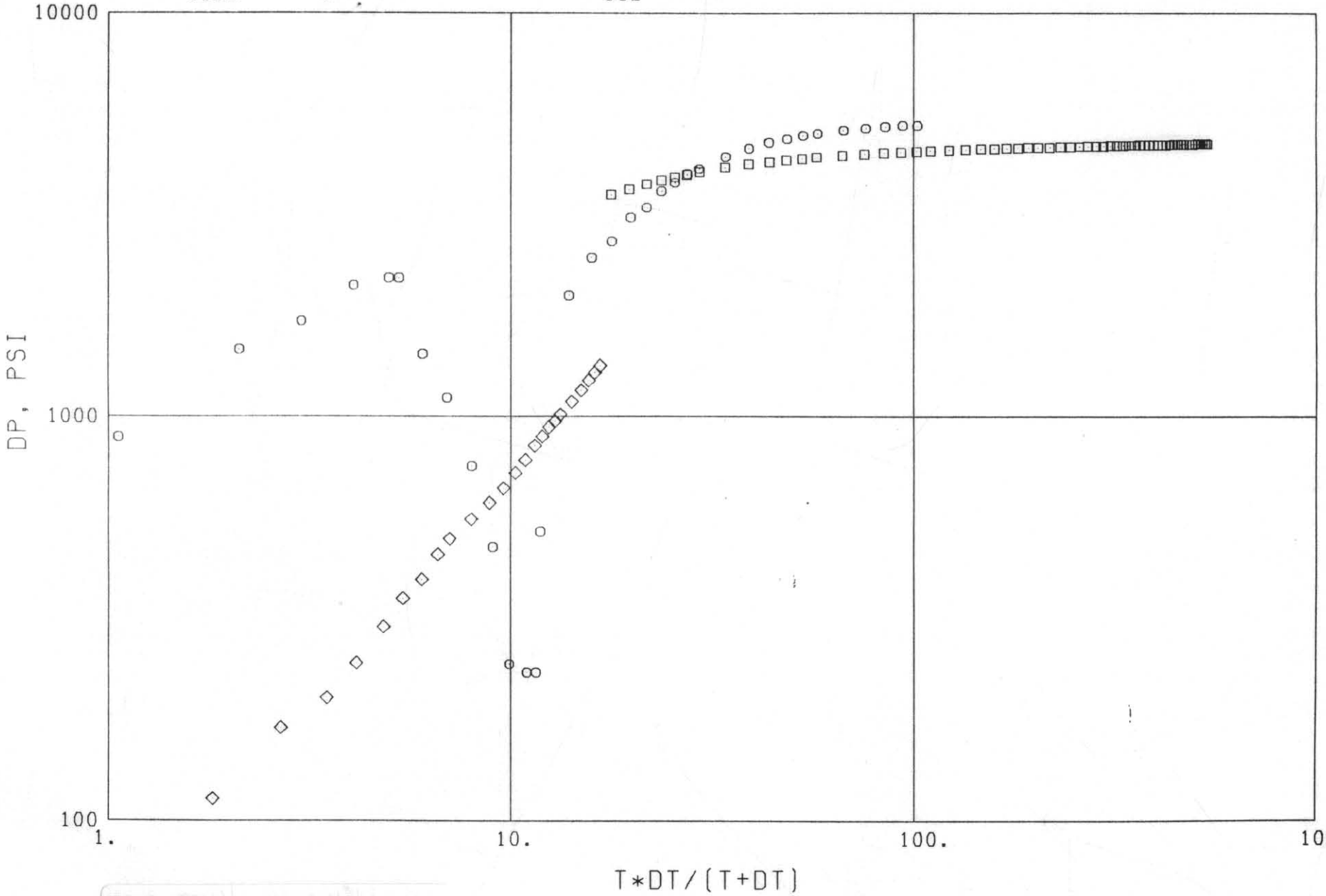


		O.D.	I.D.	LENGTH	DEPTH
5	CROSSOVER.....	4.625	2.310	1.0	
313	PORTED PRESSURE EQUALIZING SUB..	4.750	2.380	3.3	
5	CROSSOVER.....	4.750	2.310	0.8	
5	CROSSOVER.....	4.750	1.750	1.0	
71	CASING PACKER.....	5.750	2.440	3.7	10277.6
21	PERFORATED TAIL PIPE.....	2.875	2.440	5.3	
201	SLOTTED TAILPIPE.....	2.875	2.440	5.9	
40	PERFORATING GUN.....	3.125		2.2	
46	TUBING CONVEYED GUNS.....	5.000		86.5	

TOTAL DEPTH

EQUIPMENT DATA

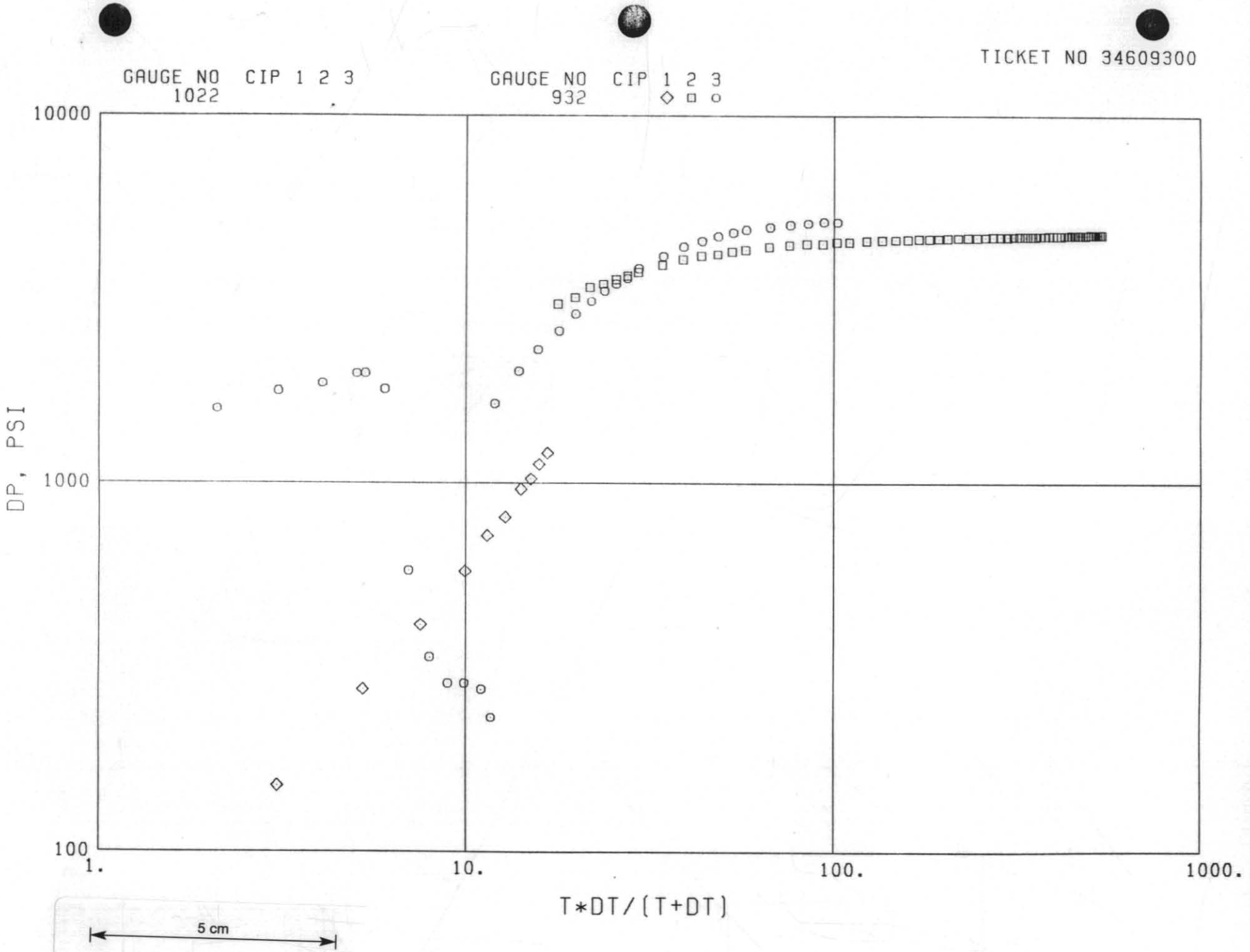
TICKET NO 34609300



5 cm

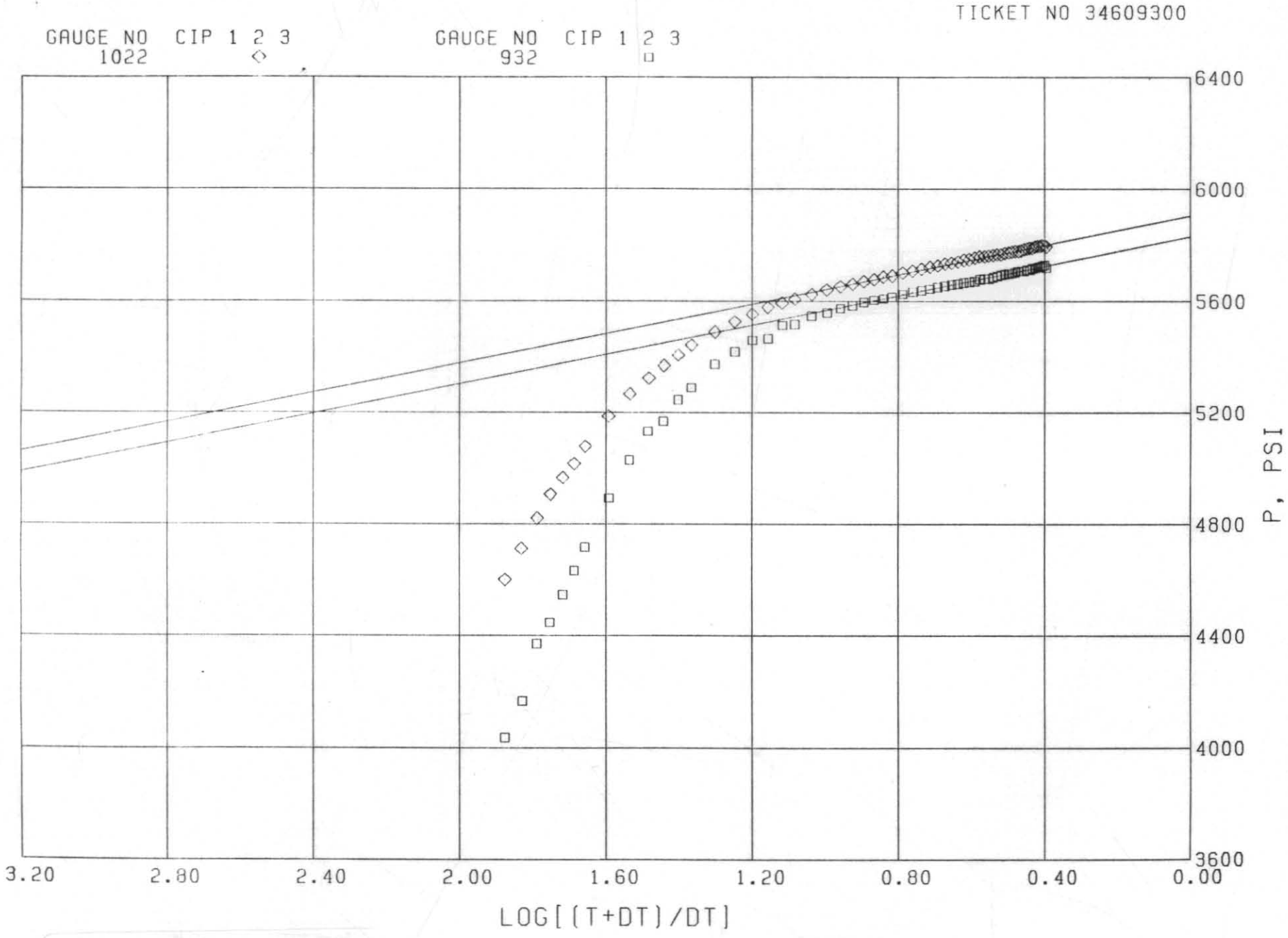
4523396

TICKET NO 34609300



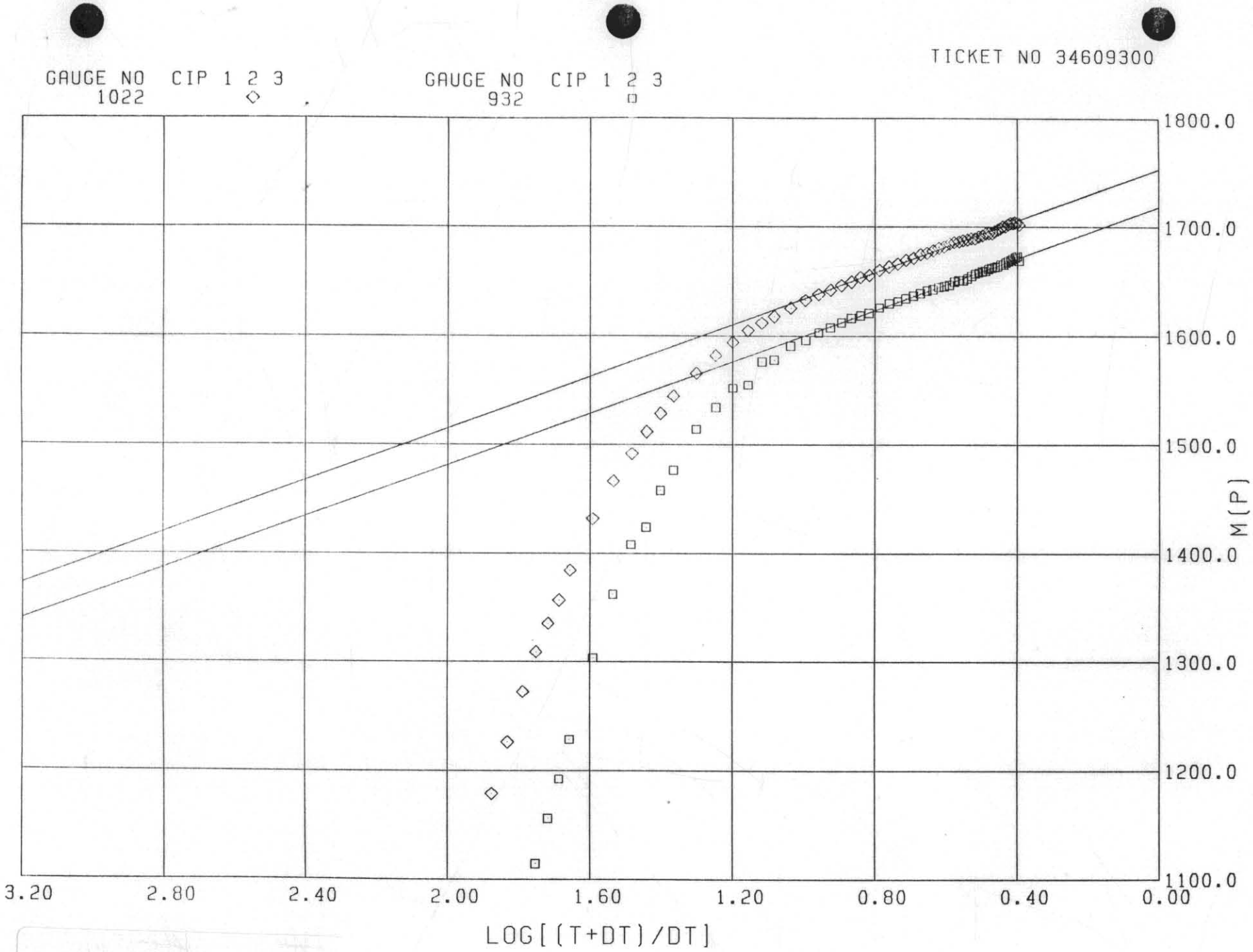
4523921

TICKET NO 34609300

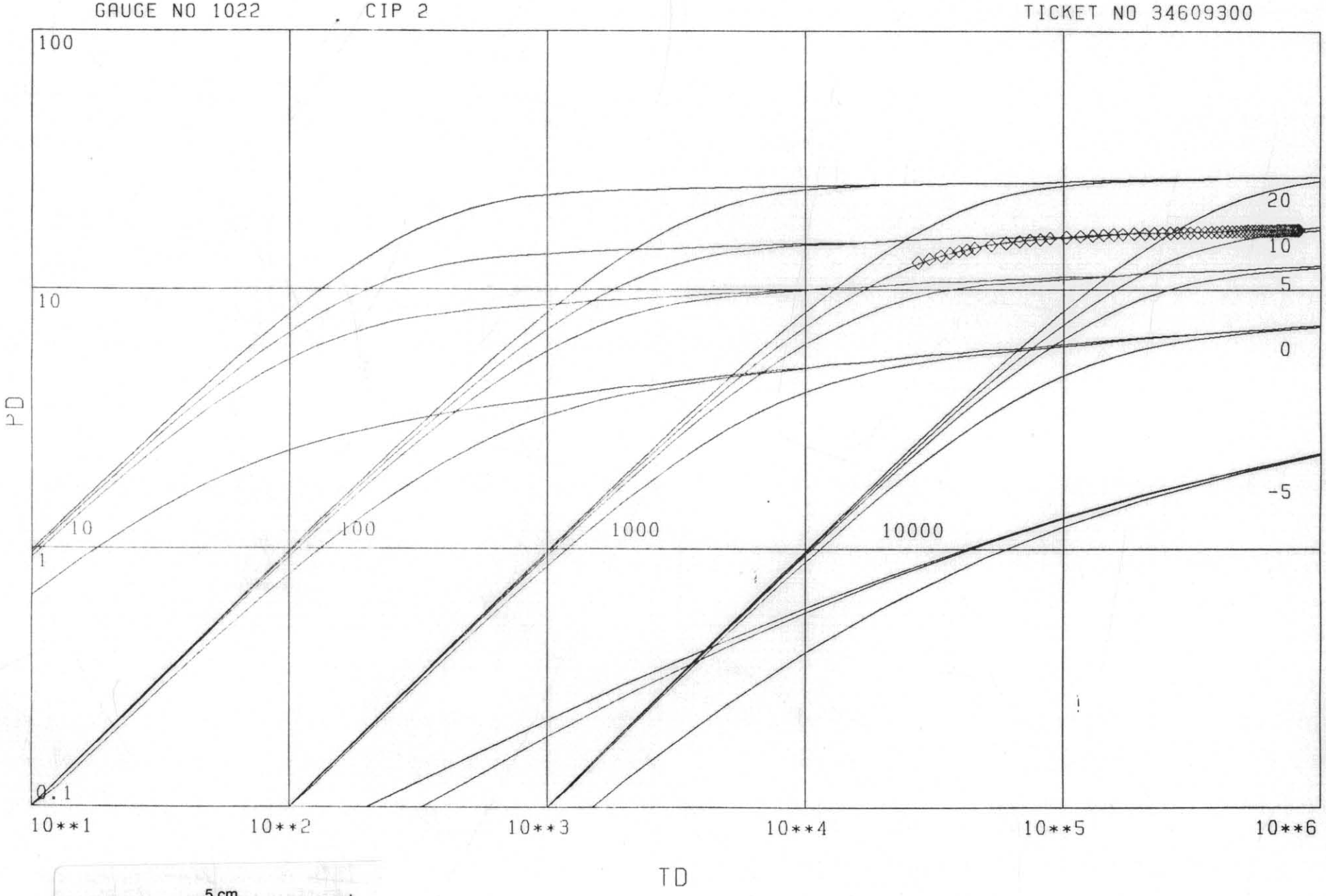


4523398

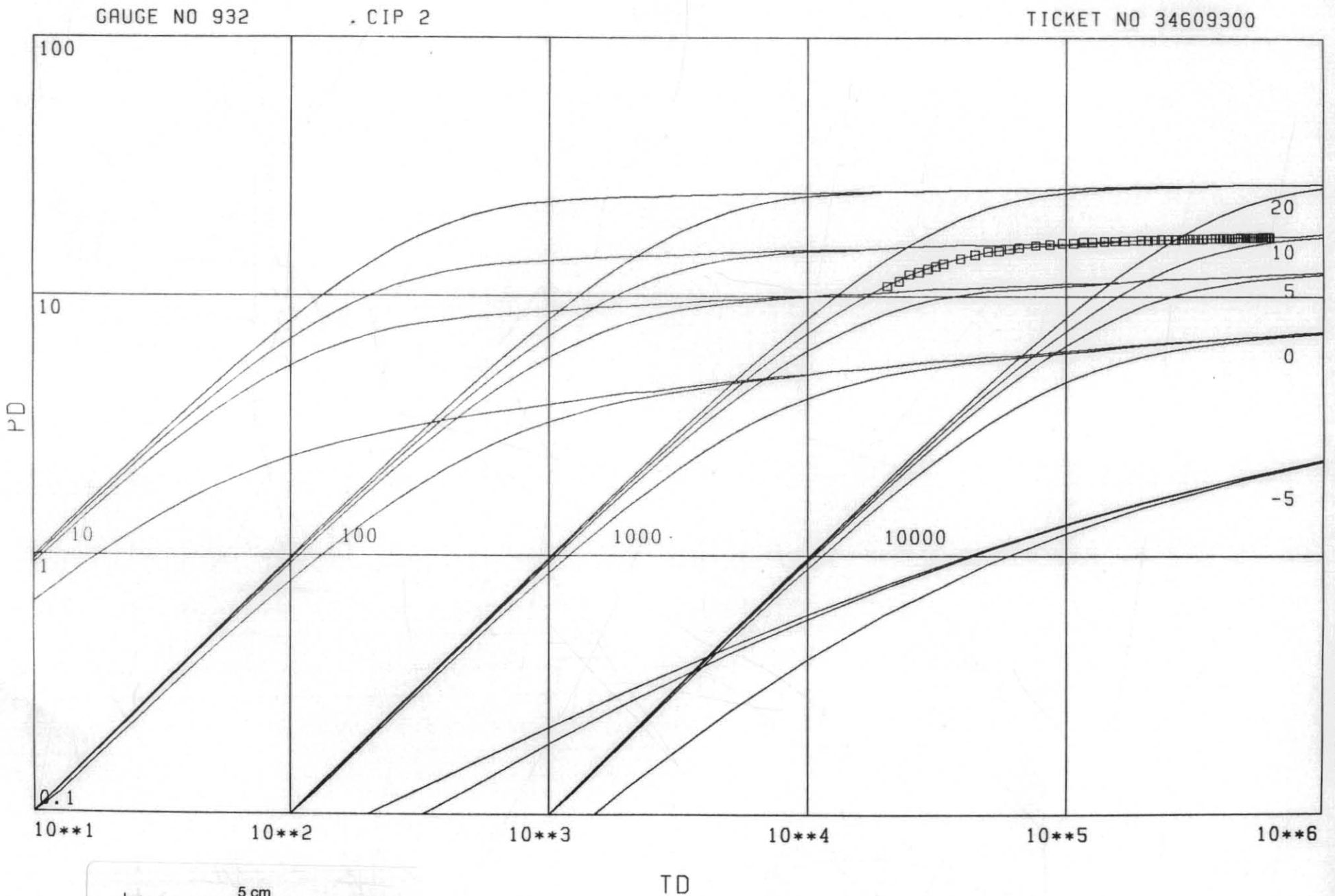
TICKET NO 34609300



4523399


GAUGE NO 1022
CIP 2
TICKET NO 34609300
100
10
1
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD
5 cm

452400


GAUGE NO 932
. CIP 2
TICKET NO 34609300
100
10
1
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD
5 cm

452401

452402

TICKET NUMBER 34609300

SUMMARY OF RESERVOIR PARAMETERS

USING CURVE MATCH METHOD FOR GAS WELLS

GAS GRAVITY	0.600	TEMPERATURE	296.6 °F
NET PAY	70.5 ft	POROSITY	10.0 %
RADIUS OF WELLBORE	0.292 ft	VISCOSITY	0.024 cp
GAS DEVIATION FACTOR	1.105	GAS PROPERTIES AT	5908.1 psig
SYSTEM COMPRESSIBILITY	98.44 $\times 10^{-6}$ vol/vol/psi		

GAUGE NUMBER		1022	932					
GAUGE DEPTH		10256.5	10256.5					
FLOW AND CIP PERIOD		2	2					UNITS
FINAL FLOW PRESSURE	P_f	1061.9	967.2					psig
TOTAL FLOW TIME	t	1334.2	1334.2					min
PRODUCTION RATE	Q	540.0	540.0					MCFD
t_d AT 1 HOUR		88329.	65766.					
P_d AT 100 psi		0.360	0.357					
C_d		21.7	25.0					
SKIN	S	10.0	10.0					
TRANSMISSIBILITY	kh/μ	195.5	194.1					$\frac{md-ft}{cp}$
FLOW CAPACITY	kh	4.63207	4.59923					md-ft
PERMEABILITY	k	0.06567	0.06520					md
DAMAGE RATIO	DR	2.3	2.3					
RADIUS OF INVESTIGATION	r_i	80.1	79.8					ft

REMARKS:

THE LOG-LOG PLOTS OF THE SECOND CLOSED-IN PERIOD DATA WERE SUCCESSFULLY MATCHED ON THE RADIAL FLOW TYPE CURVES ON A SKIN FACTOR CURVE OF 10.0. THE RESULTS OF THESE MATCHES ARE SHOWN ABOVE.

NOTICE: THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM PRESSURE CHARTS, AND ARE FURNISHED YOU FOR YOUR INFORMATION. IN FURNISHING SUCH CALCULATIONS AND EVALUATIONS BASED THEREON, HALLIBURTON IS MERELY EXPRESSING ITS OPINION. YOU AGREE THAT HALLIBURTON MAKES NO WARRANTY EXPRESS OR IMPLIED AS TO THE ACCURACY OF SUCH CALCULATIONS OR OPINIONS, AND THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE, IN CONNECTION WITH SUCH OPINIONS.

452403

Enclosure No. 17

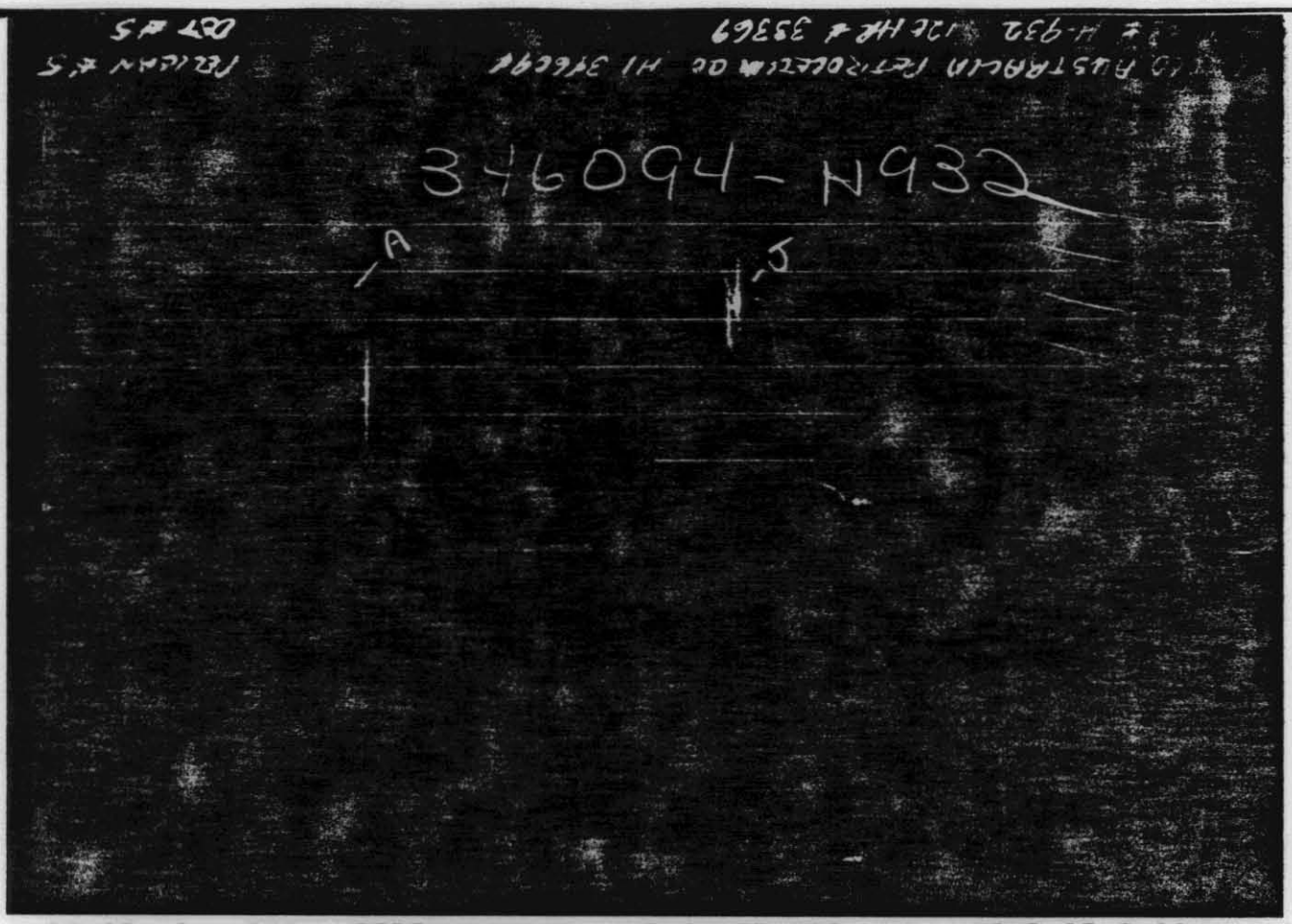
HALLIBURTON
SERVICES

TICKET NO. 34609400
18-APR-86
ADELAIDE

FORMATION TESTING SERVICE REPORT

LEGAL LOCATION SEC. - TWP. - RNG.	SEE REMARKS	FIELD AREA	BASS STRAIT	COUNTY	TASMANIA
WELL NO.	J	TEST NO.	J	TESTED INTERVAL	
LEASE NAME	PELICAN			LEASE OWNER/COMPANY NAME	

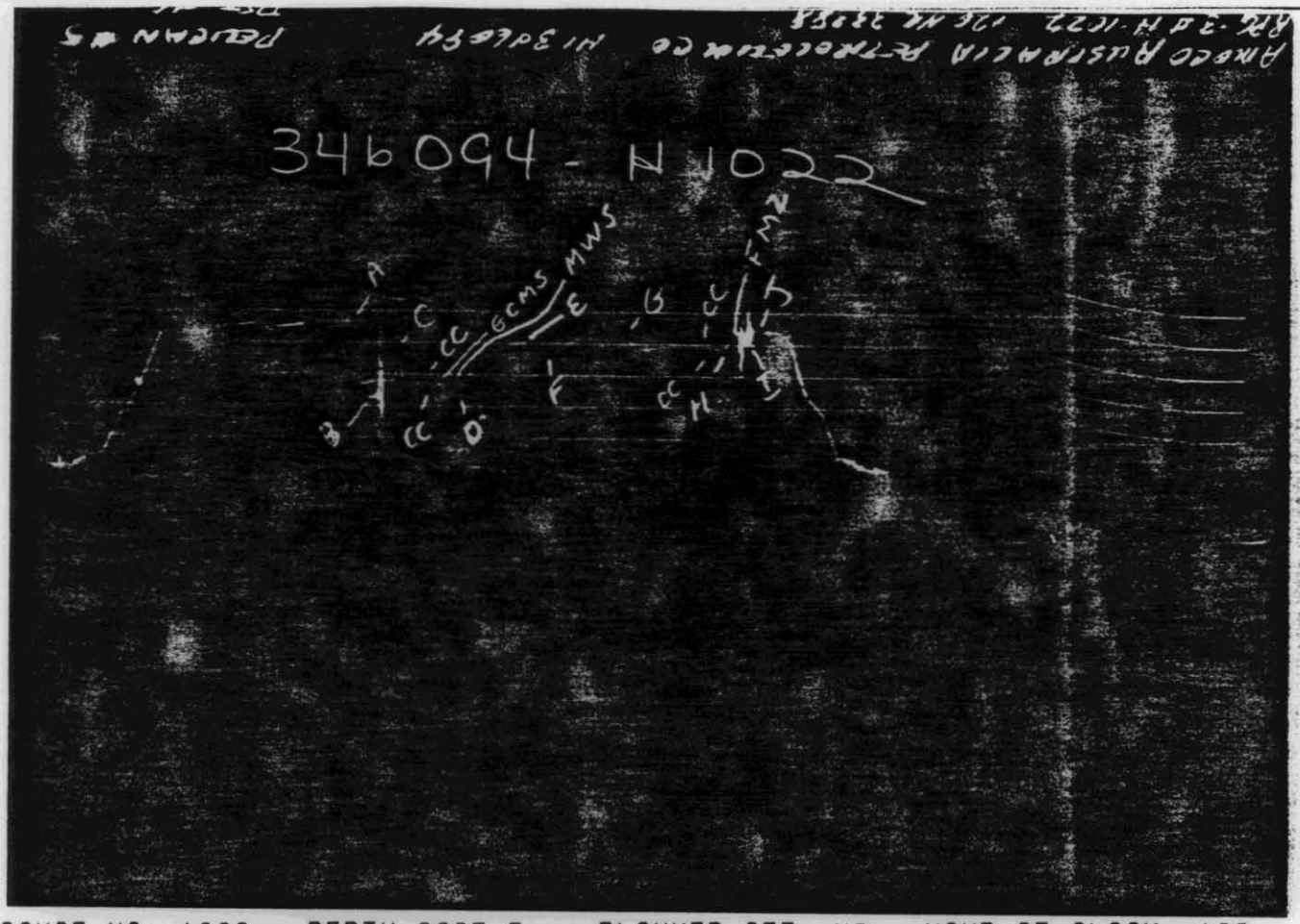
STATE AUSTRALIA PW



GAUGE NO: 932 DEPTH: 9365.5 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4144	4420.2			
B	INITIAL PERFORATE & CIP	2671		114		
C	FINAL PERFORATE & CIP	2442				
C	INITIAL FIRST FLOW	2442		363		F
D	FINAL FIRST FLOW	3794				
D	INITIAL FIRST CLOSED-IN	3794		387		C
E	FINAL FIRST CLOSED-IN	3423				
E	INITIAL SECOND FLOW	3423		134		F
F	FINAL SECOND FLOW	3459				
F	INITIAL SECOND CLOSED-IN	3459		498		C
G	FINAL SECOND CLOSED-IN	3969				
G	INITIAL THIRD FLOW	3969		584		F
H	FINAL THIRD FLOW					
H	INITIAL THIRD CLOSED-IN			146		C
I	FINAL THIRD CLOSED-IN					
J	FINAL HYDROSTATIC	4349	4410.4			

4524405



GAUGE NO: 1022 DEPTH: 9365.5 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4401	4401.6			
B	INITIAL PERFORATE & CIP	3480	1904.8	114	117	
C	FINAL PERFORATE & CIP	2477	3497.6			
C	INITIAL FIRST FLOW	2477	3497.6	363	364	F
D	FINAL FIRST FLOW	3945	2475.8			
D	INITIAL FIRST CLOSED-IN	3945	2475.8	387	385	C
E	FINAL FIRST CLOSED-IN	3284	3947.2			
E	INITIAL SECOND FLOW	3284	3947.2	134	135	F
F	FINAL SECOND FLOW	3535	3538.6			
F	INITIAL SECOND CLOSED-IN	3535	3538.6	498	504	C
G	FINAL SECOND CLOSED-IN	4063	4070.1			
G	INITIAL THIRD FLOW	4063	4070.1	584	573	F
H	FINAL THIRD FLOW	3748	3849.6			
H	INITIAL THIRD CLOSED-IN	3748	3849.6	146	149	C
I	FINAL THIRD CLOSED-IN	3851	4065.4			
J	FINAL HYDROSTATIC	4425	4386.6			

452406

EQUIPMENT & HOLE DATA

FORMATION TESTED: TEST INTERVAL #5
NET PAY (ft): 52.4
GROSS TESTED FOOTAGE: 206.9
ALL DEPTHS MEASURED FROM: R.K.B.
CASING PERFS. (ft): 9409.91-9462.4'
HOLE OR CASING SIZE (in): 9.625
ELEVATION (ft): 73.0
TOTAL DEPTH (ft): 9591.0
PACKER DEPTH(S) (ft): 9384
FINAL SURFACE CHOKE (in): 128/64"
BOTTOM HOLE CHOKE (in): 2.818
MUD WEIGHT (lb/gal): 9.30
MUD VISCOSITY (sec): 40
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): 272 @ 9365.5 ft

TICKET NUMBER: 34609400
DATE: 3-28-86 TEST NO: 5
TYPE DST: CASED HOLE W/APR
HALLIBURTON CAMP: ADELAIDE
TESTER: RON BAKER / GARY ZUNKLE
WITNESS: ???
DRILLING CONTRACTOR: DIAMOND M DRILLING COMPANY

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
REVERSED OUT (REC.)	1.370 @ 60 °F	1100 ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 75.0
cu.ft. OF GAS: 1.454
cc OF OIL:
cc OF WATER: 11356.2
cc OF MUD:
TOTAL LIQUID cc: 11356.2

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 43.0 @ 80°F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT
NITROGEN (SCF)	65250.0	

RECOVERED:

9314.56 FEET (8.5#/GALLON) WATER

MEASURED FROM TESTER VALVE

REMARKS:

(1) LEGAL LOCATION: 46 DEGREES - 21' - 43.258" SOUTH
145 DEGREES - 51' - 49.971" EAST
(2) GAUGE #H-932 INDICATES THE EFFECTS OF SEVERE STAIR-STEPPING READINGS EXCLUDING INITIAL AND FINAL HYDROSTATIC ARE UNAVAILABLE.
(3) TEMPERATURES: HT - 1307 TM = 276.2 DEG. F.
HT-1008 TM = 267 DEG. F.
(4) NOTE: TEMPERATURE SHOWN FOR ACTUAL TEMPERATURE IS AN AVERAGE BETWEEN THE TWO TEMPERATURE RECORDERS.

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609400

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
3-28-86					
2230					STARTED GAUGES - PICKED UP TOOLS
3-29-86					
0100					TOOLS IN HOLE
1325					SET PACKER
1800					RESET PACKER - RIGGED UP OTIS SRO
					PRESSURE TESTED SURFACE EQUIPMENT
					WITH WATER. PRESSURE TESTED
					SURFACE EQUIPMENT WITH NITROGEN.
2140					OPENED TOP CIRCULATING VALVE
					SRO PORTED AT ROPE SOCKET AND
					FELL DOWN TUBING.
2200					RIGGED DOWN OTIS LUBRICATOR -
					RIGGED UP SCHLUMBERGER LUBRICATOR
3-30-86					
0115					PRESSURE TESTED LUBRICATOR WITH
					NITROGEN.
0230					PUMPED NITROGEN CUSHION
0520					STOPPED PUMPING NITROGEN
					3100 PSI SURFACE PRESSURE
					CLOSED TOP CIRCULATING VALVE
0527		3100			OPENED LPR-N
0530		1400			RELEASED TUBING PRESSURE TO
					1400 PSI.
0542					FIRED T.C.P. GUNS - CHOKE
					MANIFOLD CLOSED - SLIGHT
					INDICATION WELL IS FLOWING.
0600		1445			
0605		1505			
0615		1590			
0630		1650			
0645		1720			
0700		1785			
0715		1830			
0721	16/64"	1850			OPENED CHOKE MANIFOLD
0730	16/64"	1500			
0800	16/64"	790			

452408

TYPE & SIZE MEASURING DEVICE: _____					TICKET NO: 34609400
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
0830	16/64"	390			
0850	16/64"				GAS TO SURFACE
0900	16/64"	140			
0930	16/64"	45			RUN IN HOLE WITH P.L.T.
0945	16/64"	105			RAT HOLE MUD TO SURFACE
1000	16/64"	110			
1008	24/64"				CHANGED CHOKE SIZE
1015	24/64"	125			
1018	32/64"				CHANGED CHOKE SIZE
1030	32/64"	45			
1100	32/64"				
1115	32/64"	5			GAS CUT MUD TO SURFACE
1200	32/64"	25			
1300	32/64"				
1315	32/64"	38			MUDDY WATER TO SURFACE
1324	32/64"	12			CLOSED CHOKE MANIFOLD
1400		116			
1500		305			
1600		489			
1700		620			
1800		710			
1900		765			
1951	16/64"	790			OPENED CHOKE MANIFOLD
1952	16/64"	720			GAS TO SURFACE
2000	16/64"	180			
2030	16/64"	6			
2100	16/64"	2			
2130	16/64"	1			
2205		1			CLOSED CHOKE MANIFOLD
2230		28			
2300		90			
2330		162			
3-31-86					
0000		282			
0100		395			
0200		440			
0300		448			

452409

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609400

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
0400		448			
0623	8/64"	437			OPENED CHOKE MANIFOLD
0700	8/64"	60			
0800	8/64"	12			
0900	8/64"	5			
1000	8/64"	20			
1100	8/64"	23			
1200	8/64"	36			
1300	8/64"	41			
1400	8/64"	42			
1435	64/64"	12			CHANGED CHOKE SIZE
1438	128/64"	6			CHANGED CHOKE SIZE
1500	128/64"	4			
1600	128/64"	5			
1607					CLOSED LPR-N
1730					ATTEMPTED TO FUNCTION LPR-M2
1732					RELEASED ANNULUS PRESSURE
1742					FUNCTION LPR-M2 AND REVERSED
					OUT.
1833					OPENED BYPASS
1835					UNSEAT PACKER - CIRCULATED AND
					CONDITION MUD. PULLED OUT
					OF HOLE.
4-1-86					
0620					TAKE SAMPLE FROM SAMPLE CHAMBER
0900					TOOLS OUT OF HOLE

452410

TICKET NO: 34609400	GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	DEPTH: 9365.5

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			PERFORATE & CIP			
B	1	0	1904.8			
C	2	117	3497.6			
			FIRST FLOW			
C	1	0	3497.6			
	2	30	2714.8	-782.8		
	3	60	2453.1	-261.7		
	4	90	2409.4	-43.7		
	5	120	2473.4	64.1		
	6	150	2708.6	235.2		
[1]	7	166	2789.8	81.2		
	8	180	2532.0	-257.8		
[1]	9	189	2404.7	-127.3		
	10	210	2539.1	134.4		
[2]	11	240	2666.4	127.3		
	12	270	2203.1	-463.3		
	13	300	2311.7	108.6		
	14	330	2510.2	198.4		
[3]	15	349	2597.7	87.5		
D	16	364	2475.8	-121.9		
			FIRST CLOSED-IN			
D	1	0	2475.8			
	2	1	2496.1	20.3	1.2	2.481
	3	2	2507.8	32.0	2.1	2.239
	4	3	2515.6	39.8	3.0	2.085
	5	4	2525.0	49.2	3.9	1.972
	6	5	2535.9	60.2	4.8	1.883
	7	6	2550.8	75.0	5.9	1.787
	8	7	2560.2	84.4	7.1	1.710
	9	8	2568.0	92.2	8.0	1.659
	10	9	2574.2	98.4	9.0	1.606
	11	10	2578.9	103.1	9.8	1.568
	12	12	2594.5	118.8	11.7	1.493
	13	14	2608.6	132.8	13.5	1.430
	14	16	2625.0	149.2	15.3	1.376
	15	18	2636.7	160.9	17.3	1.324
	16	20	2654.7	178.9	19.0	1.282
	17	22	2667.2	191.4	20.9	1.241
	18	24	2685.9	210.2	22.6	1.206
	19	26	2703.1	227.3	24.2	1.177
	20	28	2716.4	240.6	26.1	1.145
	21	30	2726.6	250.8	27.7	1.118
	22	35	2765.6	289.8	31.9	1.057
	23	40	2803.9	328.1	36.2	1.003
	24	45	2843.0	367.2	40.3	0.956

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST CLOSED-IN - CONTINUED			
	25	50	2878.1	402.3	43.9	0.918
	26	55	2910.2	434.4	47.8	0.881
	27	60	2952.3	476.6	51.6	0.849
	28	70	3018.1	542.3	58.8	0.791
	29	80	3087.4	611.6	65.7	0.744
	30	90	3156.7	680.9	72.2	0.702
	31	100	3216.5	740.8	78.5	0.666
	32	110	3278.7	803.0	84.5	0.634
	33	120	3334.6	858.9	90.3	0.605
	34	135	3409.4	933.7	98.5	0.567
	35	150	3476.4	1000.6	106.2	0.535
	36	165	3543.3	1067.5	113.6	0.506
	37	180	3597.6	1121.9	120.5	0.480
	38	195	3648.0	1172.3	126.9	0.457
	39	210	3695.3	1219.5	133.2	0.436
	40	225	3737.0	1261.2	139.0	0.418
	41	240	3773.2	1297.4	144.6	0.401
	42	260	3815.0	1339.2	151.7	0.380
	43	280	3850.4	1374.6	158.3	0.362
	44	300	3885.0	1409.3	164.5	0.345
	45	320	3905.5	1429.7	170.3	0.330
	46	340	3925.2	1449.4	175.8	0.316
	47	360	3940.2	1464.4	181.0	0.303
E	48	385	3947.2	1471.5	187.0	0.289
			SECOND FLOW			
E	1	0	3947.2			
	2	10	3408.7	-538.6		
	3	20	3299.2	-109.4		
	4	30	3290.6	-8.7		
	5	40	3308.7	18.1		
	6	50	3334.6	26.0		
	7	60	3362.2	27.6		
	8	70	3385.8	23.6		
	9	80	3414.2	28.3		
	10	90	3440.2	26.0		
	11	100	3465.4	25.2		
	12	110	3484.3	18.9		
	13	120	3508.7	24.4		
	14	130	3529.9	21.3		
F	15	135	3538.6	8.7		
			SECOND CLOSED-IN			
F	1	0	3538.6			
	2	1	3547.2	8.7	1.2	2.617
	3	2	3548.0	9.4	2.0	2.407
	4	3	3554.3	15.7	3.0	2.221
	5	4	3555.1	16.5	4.0	2.091

LEGEND:
[1] CHOKE CHANGE
[2] GAS CUT MUD TO SURFACE
[3] MUDDY WATER TO SURFACE
[4] FUNCTION M-2

REMARKS:

452411

TICKET NO: 34609400

CLOCK NO: 0 HOUR: 120

HALLIBURTON SERVICES

GAUGE NO: 1022

DEPTH: 9365.5

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
6	5	3556.7	18.1	5.1	1.992
7	6	3559.1	20.5	6.0	1.922
8	7	3563.0	24.4	7.1	1.844
9	8	3563.8	25.2	8.0	1.794
10	9	3567.7	29.1	8.9	1.749
11	10	3569.3	30.7	9.8	1.708
12	12	3572.4	33.9	11.8	1.627
13	14	3578.7	40.2	13.7	1.563
14	16	3586.6	48.0	15.5	1.508
15	18	3593.7	55.1	17.5	1.456
16	20	3598.4	59.8	19.2	1.416
17	22	3601.6	63.0	21.1	1.374
18	24	3607.1	68.5	23.0	1.336
19	26	3610.2	71.7	24.7	1.306
20	28	3615.0	76.4	26.6	1.274
21	30	3622.0	83.5	28.3	1.246
22	35	3633.9	95.3	32.7	1.183
23	40	3647.2	108.7	37.0	1.130
24	45	3663.8	125.2	41.3	1.083
25	50	3680.3	141.7	45.5	1.040
26	55	3697.6	159.1	49.6	1.002
27	60	3714.2	175.6	53.6	0.969
28	70	3744.9	206.3	61.4	0.910
29	80	3786.6	248.0	69.0	0.859
30	90	3822.0	283.5	76.3	0.815
31	100	3858.3	319.7	83.4	0.777
32	110	3896.1	357.5	90.2	0.743
33	120	3928.3	389.8	96.7	0.713
34	135	3966.1	427.6	106.3	0.672
35	150	4006.3	467.7	115.3	0.636
36	165	4033.9	495.3	124.1	0.604
37	180	4058.3	519.7	132.4	0.576
38	195	4078.7	540.2	140.3	0.551
39	210	4091.3	552.8	147.8	0.528
40	225	4094.5	555.9	155.1	0.507
41	240	4097.6	559.1	162.2	0.488
42	260	4097.6	559.1	171.1	0.465
43	280	4097.6	559.1	179.4	0.444
44	300	4097.6	559.1	187.4	0.425
45	320	4097.6	559.1	195.0	0.408
46	340	4097.6	559.1	202.2	0.392
47	360	4097.6	559.1	209.1	0.378
48	380	4097.6	559.1	215.7	0.364
49	400	4097.6	559.1	222.0	0.352
50	420	4090.6	552.0	228.0	0.340
51	440	4090.6	552.0	233.9	0.329
52	460	4082.7	544.1	239.4	0.319
53	480	4078.7	540.2	244.8	0.309
G 54	504	4070.1	531.5	250.7	0.299

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
THIRD FLOW					
G 1	0	4070.1			
2	30	3768.5	-301.6		
3	60	3763.8	-4.7		
4	90	3786.6	22.8		
5	120	3811.0	24.4		
6	150	3834.6	23.6		
7	180	3857.5	22.8		
8	210	3878.0	20.5		
9	240	3878.0	0.0		
10	270	3885.8	7.9		
11	300	3885.8	0.0		
12	330	3885.8	0.0		
13	360	3885.8	0.0		
14	390	3885.8	0.0		
15	420	3881.1	-4.7		
[1] 16	441	3881.1	0.0		
17	450	3892.9	11.8		
[1] 18	480	3871.7	-21.3		
19	510	3837.8	-33.9		
20	540	3842.5	4.7		
H 21	573	3849.6	7.1		
THIRD CLOSED-IN					
H 1	0	3849.6			
2	1	3898.4	48.8	1.1	3.007
3	2	3918.1	68.5	2.1	2.706
4	3	3936.2	86.6	3.0	2.552
5	4	3956.7	107.1	4.1	2.422
6	5	3970.9	121.3	5.0	2.335
7	6	3980.3	130.7	6.0	2.252
8	7	3987.4	137.8	6.9	2.191
9	8	3987.4	137.8	7.9	2.130
10	9	3995.3	145.7	9.0	2.077
11	10	4001.6	152.0	9.9	2.036
12	12	4007.1	157.5	11.9	1.953
13	14	4015.0	165.4	14.0	1.884
14	16	4022.0	172.4	15.8	1.832
15	18	4024.4	174.8	17.8	1.779
16	20	4028.3	178.7	19.7	1.736
17	22	4032.3	182.7	21.6	1.696
18	24	4033.9	184.3	23.6	1.657
19	26	4035.4	185.8	25.5	1.624
20	28	4037.8	188.2	27.5	1.591
21	30	4039.4	189.8	29.2	1.564
22	35	4044.1	194.5	34.0	1.498
23	40	4048.0	198.4	38.6	1.444
24	45	4052.0	202.4	43.2	1.395
25	50	4055.9	206.3	48.0	1.349

LEGEND:
[1] CHOKE CHANGE
[2] GAS CUT MUD TO SURFACE
[3] MUDDY WATER TO SURFACE
[4] FUNCTION M-2

REMARKS:

452412

TICKET NO: 34609400	GAUGE NO: 1022
CLOCK NO: 0 HOUR: 120	DEPTH: 9365.5

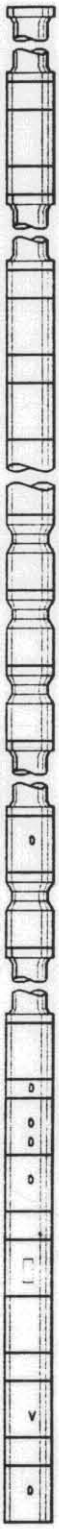
HALLIBURTON SERVICES

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
THIRD CLOSED-IN - CONTINUED					
26	55	4059.1	209.4	52.4	1.311
27	60	4059.1	209.4	56.9	1.275
28	70	4063.8	214.2	65.9	1.211
29	80	4067.7	218.1	74.6	1.158
[4] 30	90	4070.1	220.5	83.1	1.110
31	100	4070.1	220.5	91.6	1.068
32	110	4070.1	220.5	99.9	1.030
33	120	4070.1	220.5	108.0	0.997
34	130	4070.1	220.5	116.0	0.966
35	140	4070.1	220.5	123.9	0.937
I 36	149	4065.4	215.7	130.4	0.915

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

LEGEND:
[1] CHOKE CHANGE
[2] GAS CUT MUD TO SURFACE
[3] MUDDY WATER TO SURFACE
[4] FUNCTION M-2

REMARKS:



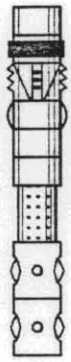
		O.D.	I.D.	LENGTH	DEPTH
4	FLEX WEIGHT.....	5.000	3.000	302.6	
5	CROSSOVER.....	5.000	3.000	3.6	
6	SUB-SEA TEST TREE.....	10.750	3.000	19.3	
5	CROSSOVER.....	6.250	3.000	1.0	
2	TUBING.....	3.500	2.750	8167.5	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.300	2.0	8496.5
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	8499.5
3	DRILL COLLARS.....	4.750	2.312	93.5	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	15.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
	FLEX WEIGHT.....	4.750	2.312	277.9	
57	FUL-FLO HYDRAULIC BYPASS.....	4.625	2.250	7.2	8929.1
10	SLIP JOINT.....	5.000	2.250	13.2	
4	FLEX WEIGHT.....	4.750	2.312	370.5	
97	LPR-M2 CIRCULATING SAFETY VALVE.	5.000	2.250	17.4	9314.6
33	DRAIN VALVE.....	5.000	2.250	1.0	
64	APR-N TESTER.....	5.000	2.250	16.4	9333.3
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	9354.7
5	CROSSOVER.....	8.130	2.600	2.7	
84	BUNDLE CARRIER.....	5.375	2.187	8.0	9365.5
15	JAR.....	4.625	2.250	5.0	
5	CROSSOVER.....	4.750	2.310	1.0	
16	VR SAFETY JOINT.....	4.625	2.250	4.8	
5	CROSSOVER.....	4.625	2.310	1.0	
313	PORTED PRESSURE EQUALIZING SUB..	4.750	2.380	3.3	

CONTINUED

EQUIPMENT DATA

452414

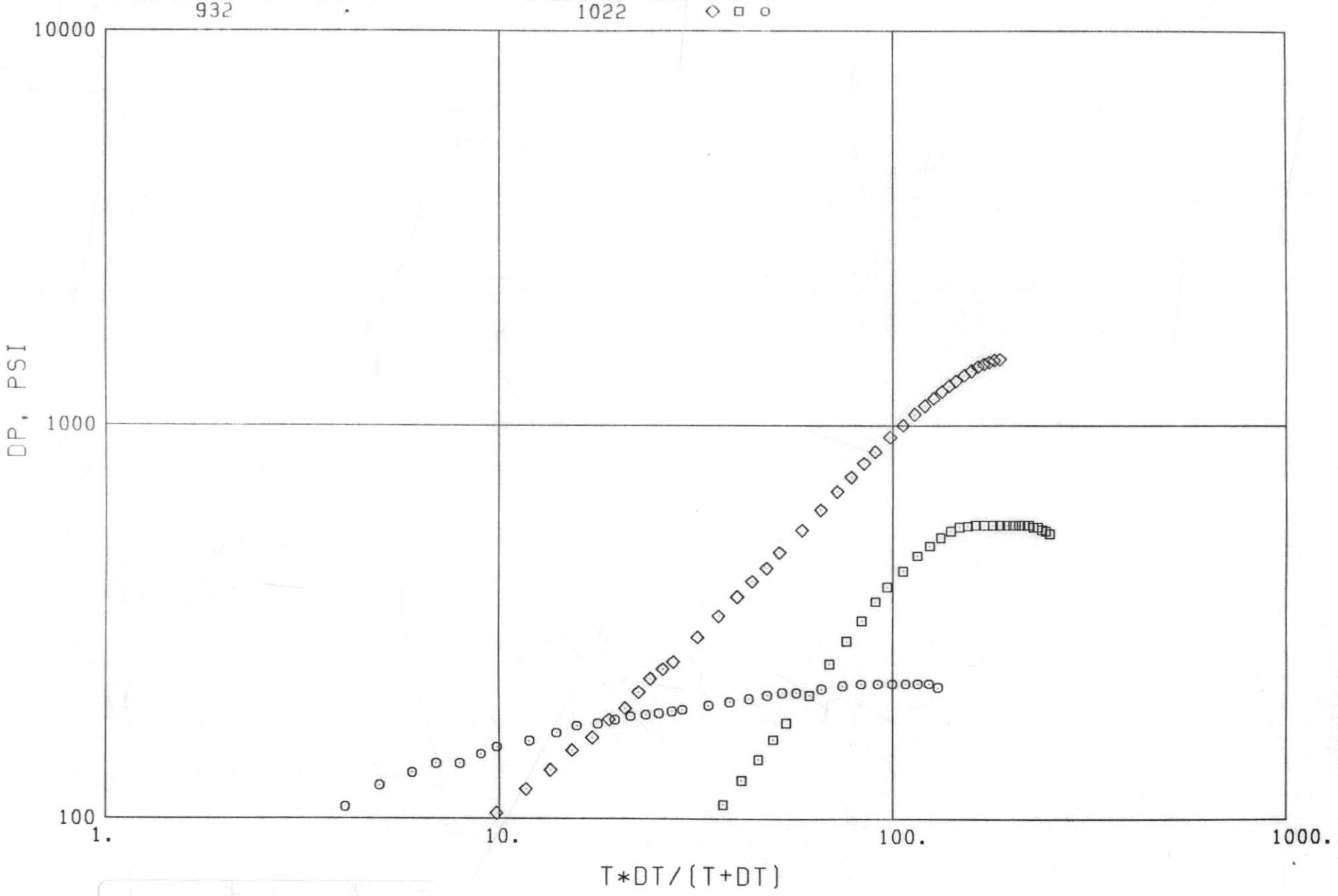
TICKET NO. 34609400



		O.D.	I.D.	LENGTH	DEPTH
5	CROSSOVER.....	4.750	2.310	0.8	
71	CASING PACKER.....	8.150	3.750	5.3	9384.1
5	CROSSOVER.....	6.120	2.310	0.8	
5	CROSSOVER.....	4.750	2.250	1.2	
21	PERFORATED TAIL PIPE.....	2.875		5.9	
40	PERFORATING GUN.....	3.125		4.9	
46	TUBING CONVEYED GUNS.....	5.000		55.3	
	TOTAL DEPTH				9591.0

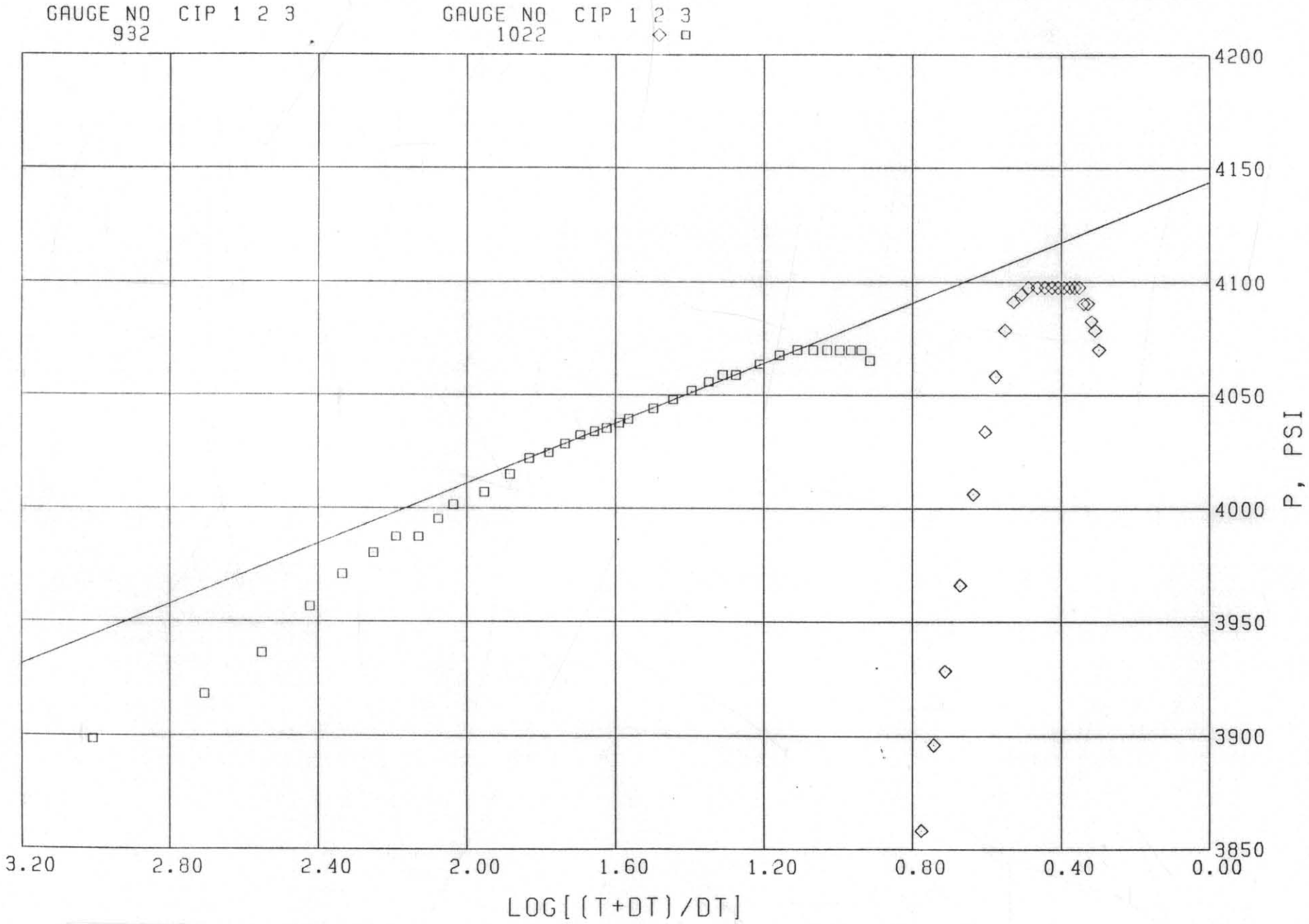
EQUIPMENT DATA

TICKET NO 34609400



4529415

TICKET NO 34609400

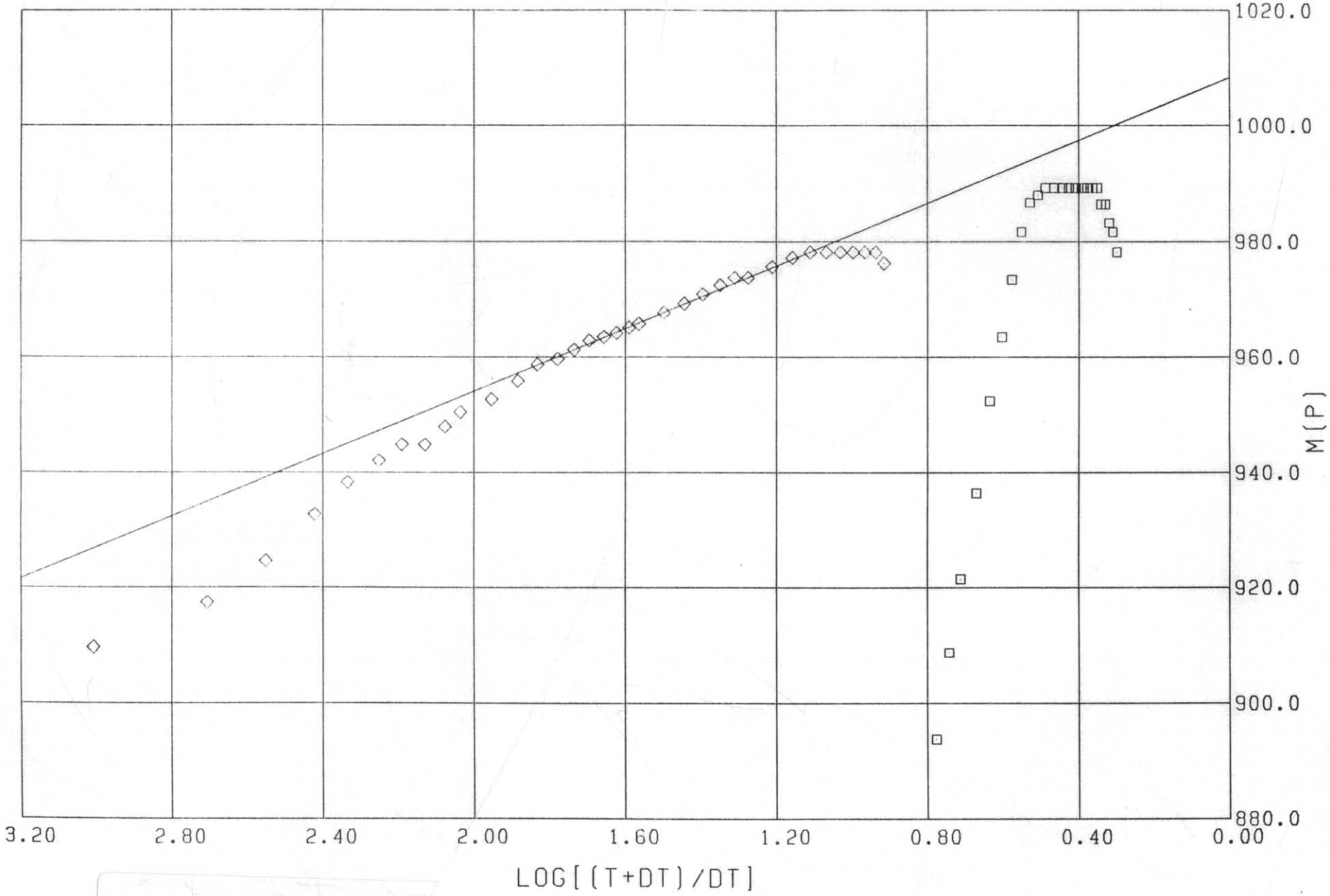


4524416

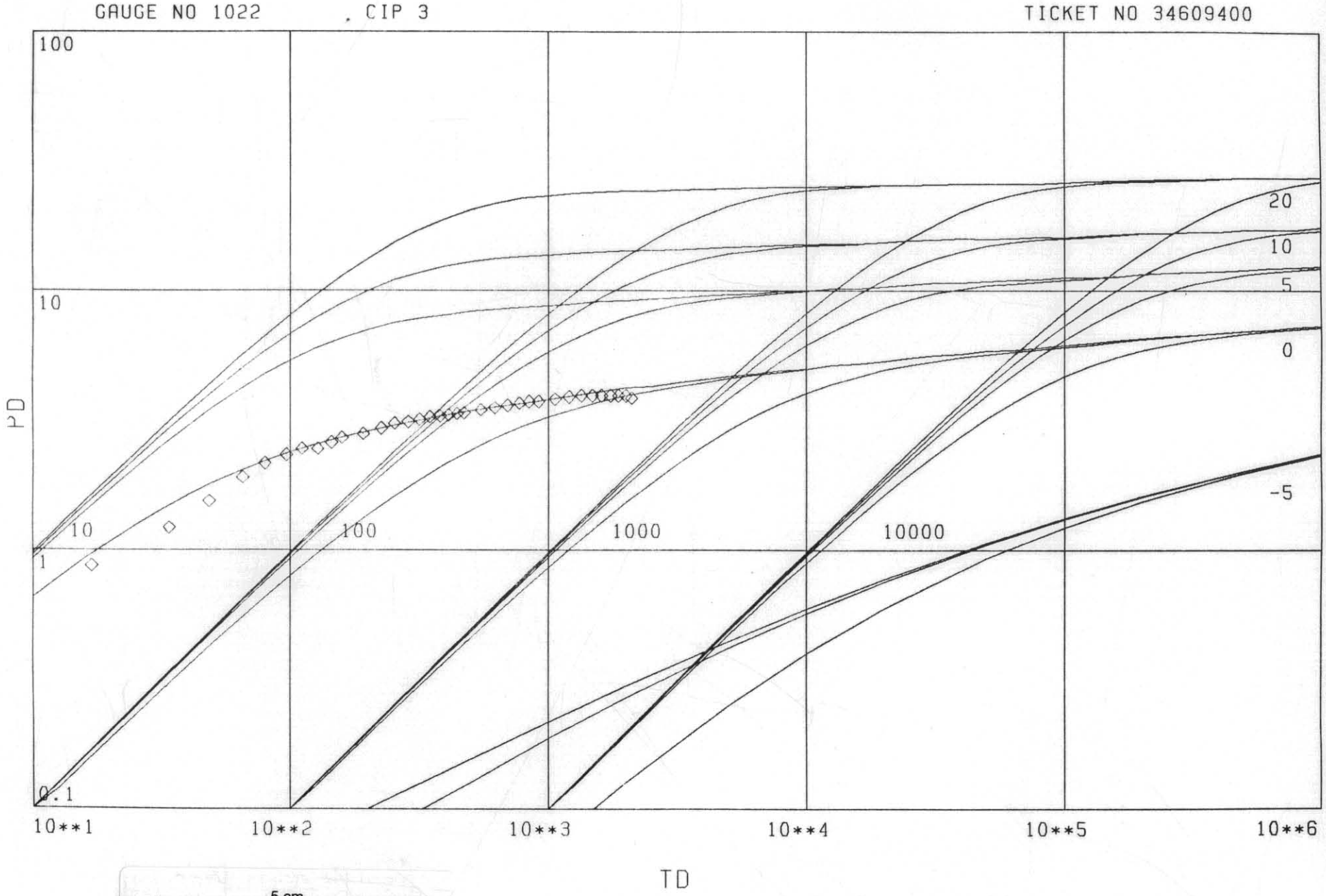
TICKET NO 34609400

GAUGE NO CIP 1 2 3
932

GAUGE NO CIP 1 2 3
1022



45214'


GAUGE NO 1022
. CIP 3
TICKET NO 34609400
100
10
1
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD
5 cm

4524138

452419

TICKET NUMBER 34609400

SUMMARY OF RESERVOIR PARAMETERS

USING HORNER METHOD FOR GAS WELLS

GAS GRAVITY	0.600	TEMPERATURE	271.5 °F
NET PAY	52.4 ft	POROSITY	10.0 %
RADIUS OF WELL BORE	0.401 ft	VISCOSITY	0.020 cp
GAS DEVIATION FACTOR	1.001	GAS PROPERTIES AT	4097.6 psig
SYSTEM COMPRESSIBILITY	164.89 $\times 10^{-6}$ vol/vol/psi		

GAUGE NUMBER	1022						
GAUGE DEPTH	9365.5						
FLOW AND CIP PERIOD	3						UNITS
FINAL FLOW PRESSURE	3849.6						psig
TOTAL FLOW TIME	1071.6						min
CALC. STATIC PRESSURE P^*	4144.7						psig
EXTRAPOLATED PRESSURE $m(P^*)$	1008.3						$\frac{mmpsi^2}{cp}$
ONE CYCLE PRESSURE $m(P_{10})$	981.2						$\frac{mmpsi^2}{cp}$
PRODUCTION RATE Q							MCFD
FLOW CAPACITY kh							md-ft
PERMEABILITY k							md
SKIN FACTOR S							
DAMAGE RATIO DR							
INDICATED RATE MAX AOF_1							MCFD
INDICATED RATE MIN AOF_2							MCFD
THEORETICAL RATE $DR \times AOF_1$							MCFD
THEORETICAL RATE $DR \times AOF_2$							MCFD
RADIUS OF INVESTIGATION r_i							ft

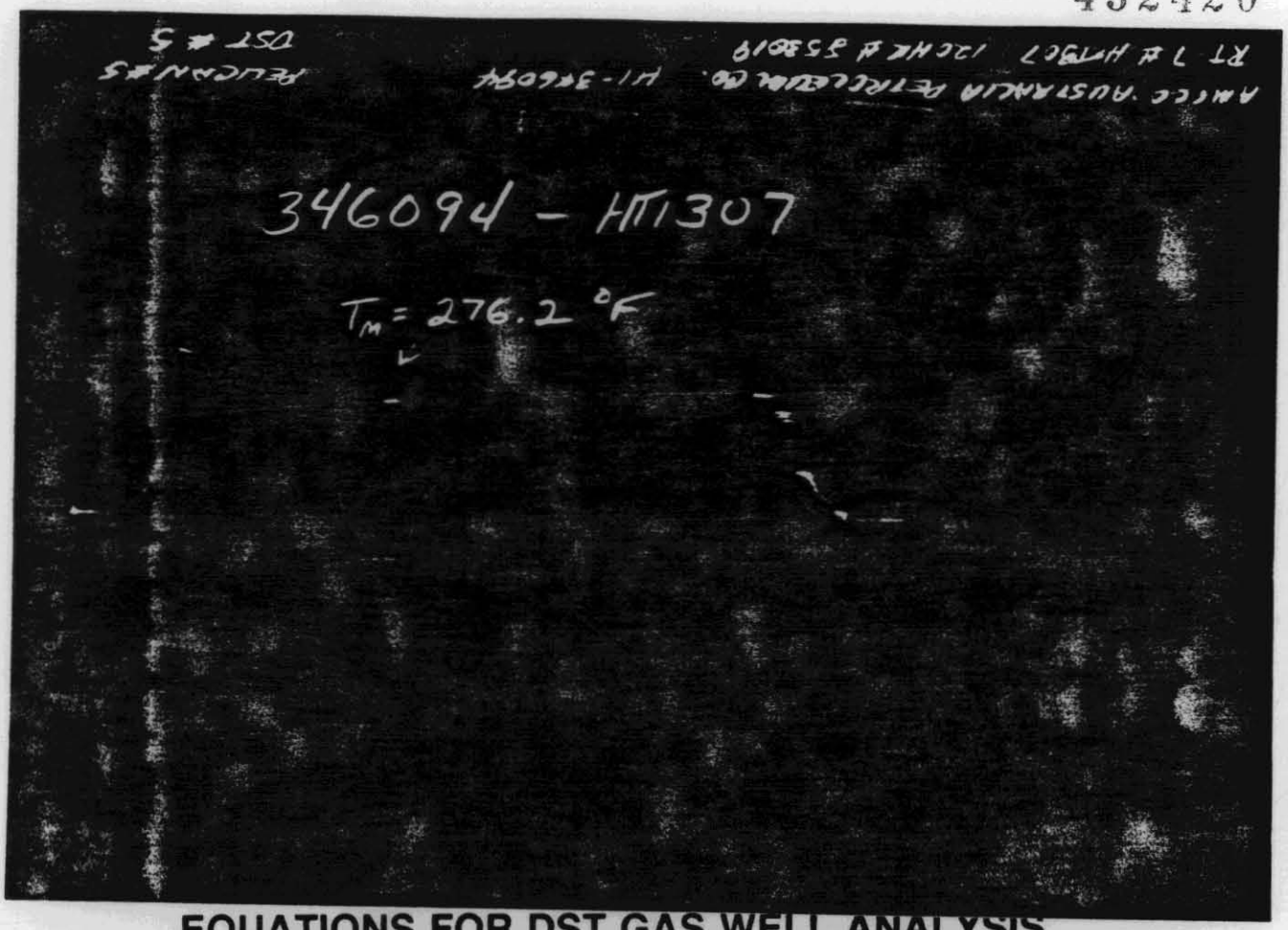
REMARKS: A COMPLETE CALCULATION SERVICE COULD NOT BE PERFORMED AS REQUESTED DUE TO THE LACK OF A STABILIZED GAS FLOW RATE DURING THE TEST PRIOR TO A CLOSED-IN PERIOD.

ALSO, THE LOG-LOG AND SEMILOG, OR HORNER, PLOTS SHOW THE FIRST AND SECOND CLOSED-IN PERIODS TO HAVE INSUFFICIENT TRANSIENT DATA FOR AN ACCURATE ANALYSIS.

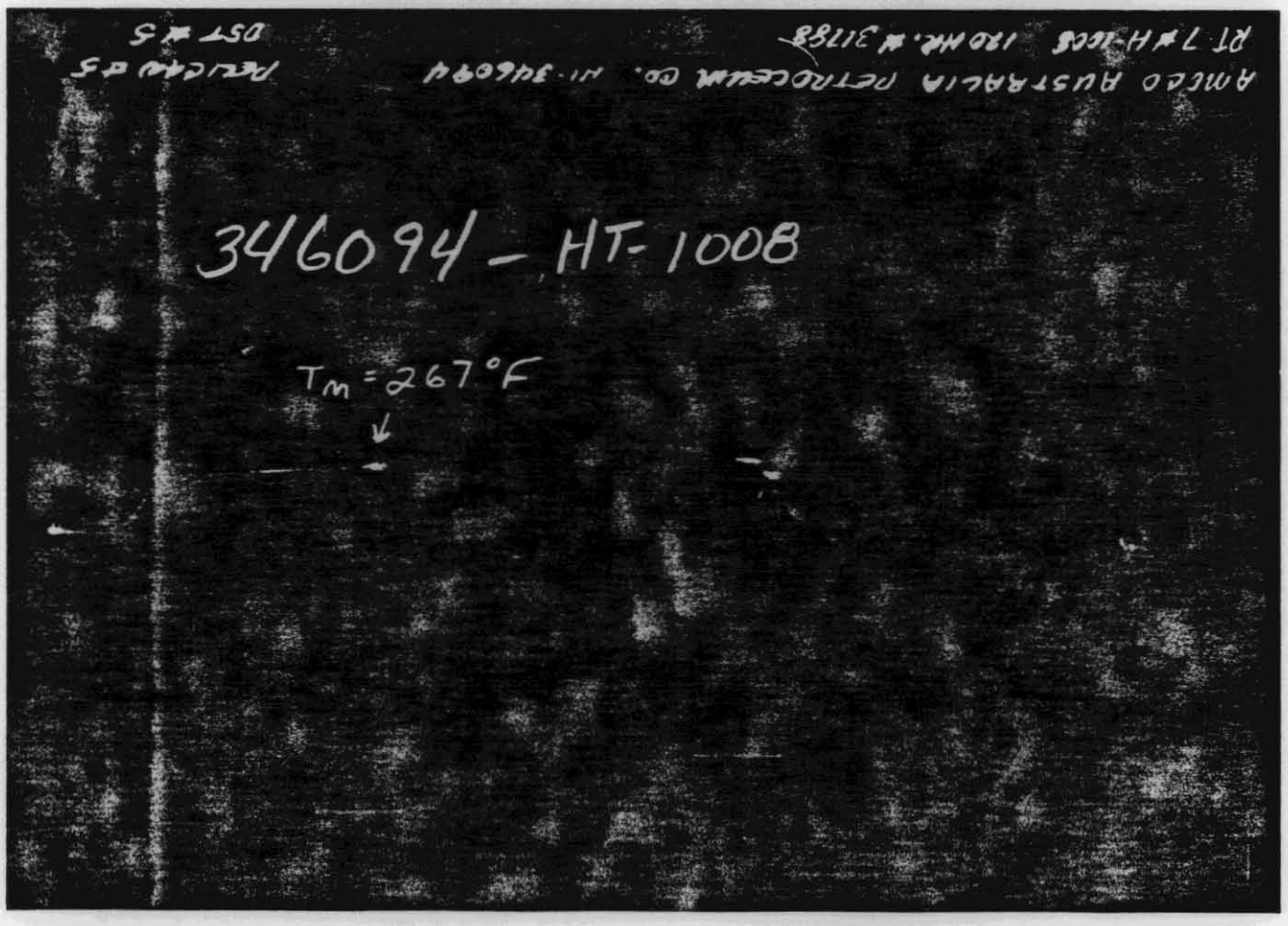
VARIOUS ANALYSIS PLOTS OF THE THIRD CIP ARE ENCLOSED FOR YOUR INSPECTION. A SEMILOG STRAIGHT LINE IS PLACED THROUGH THE DATA ON THE SEMILOG PRESSURE AND PSEUDO-PRESSURE, OR M(P), PLOTS TO SHOW THE DATA WHICH APPEARS TO HAVE TRANSIENT BEHAVIOR AND WOULD BE USEFUL FOR ANALYSIS IF A FLOW RATE WERE AVAILABLE.

THE LOG-LOG PLOT OF THE THIRD CLOSED-IN PERIOD DATA WAS SUCCESSFULLY MATCHED ON THE RADIAL FLOW TYPE CURVES ON A SKIN FACTOR CURVE OF ZERO, INDICATING NO WELLBORE DAMAGE EXISTS. A PLOT IS ENCLOSED SHOWING THIS MATCH.

NOTICE: THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM PRESSURE CHARTS, AND ARE FURNISHED YOU FOR YOUR INFORMATION. IN FURNISHING SUCH CALCULATIONS AND EVALUATIONS BASED THEREON, HALLIBURTON IS MERELY EXPRESSING ITS OPINION. YOU AGREE THAT HALLIBURTON MAKES NO WARRANTY EXPRESS OR IMPLIED AS TO THE ACCURACY OF SUCH CALCULATIONS OR OPINIONS, AND THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE, IN CONNECTION WITH SUCH OPINIONS.



EQUATIONS FOR DST GAS WELL ANALYSIS



452421

Enclosure No. 18

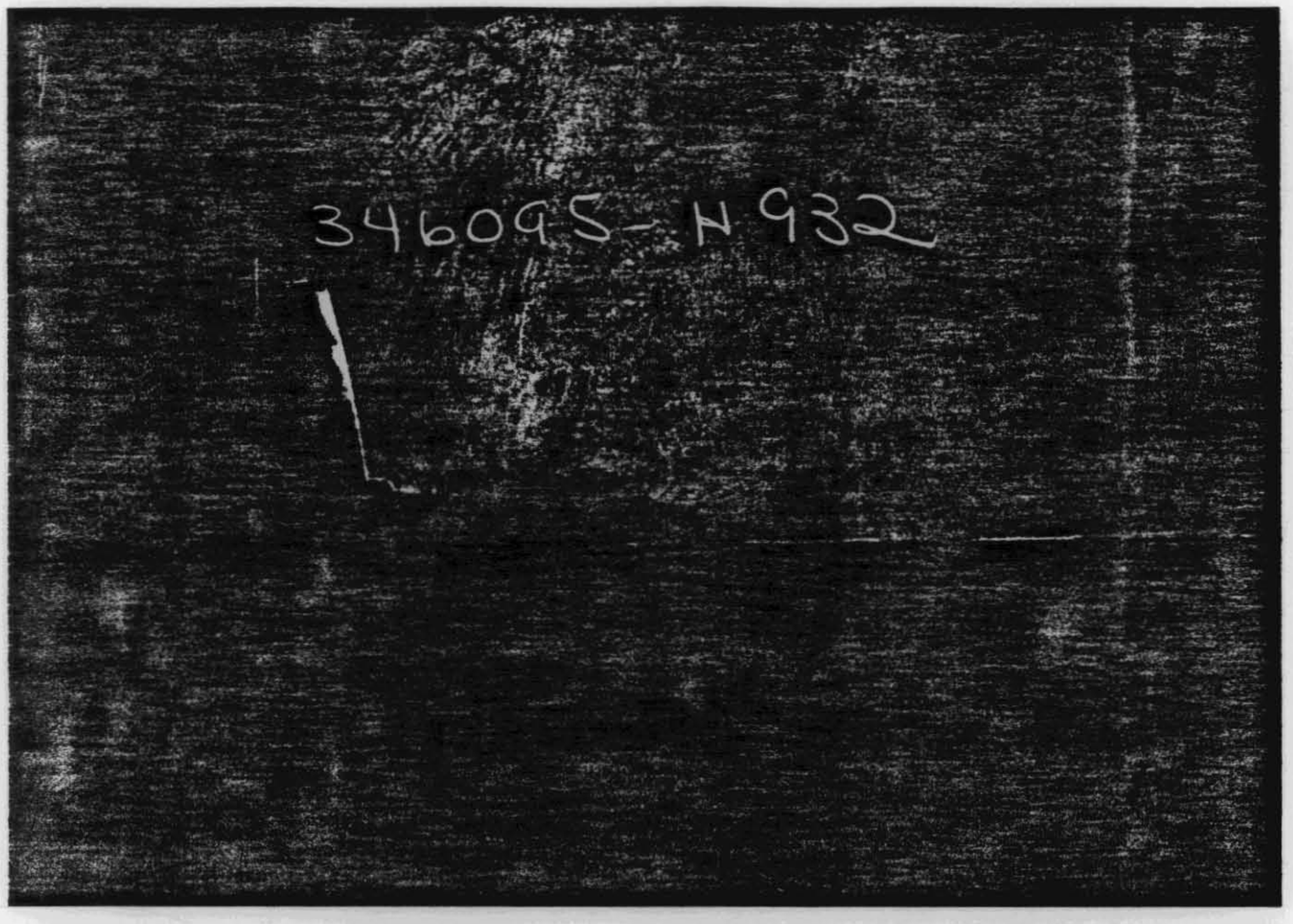


TICKET NO. 34609500
18-APR-86
ADELAIDE

FORMATION TESTING SERVICE REPORT

LEGAL LOCATION SEC. - TWP. - RNG.	SEE REMARKS	FIELD AREA	BASS STRAIT	COUNTY	TASMANIA	STATE	AUSTRALIA PM

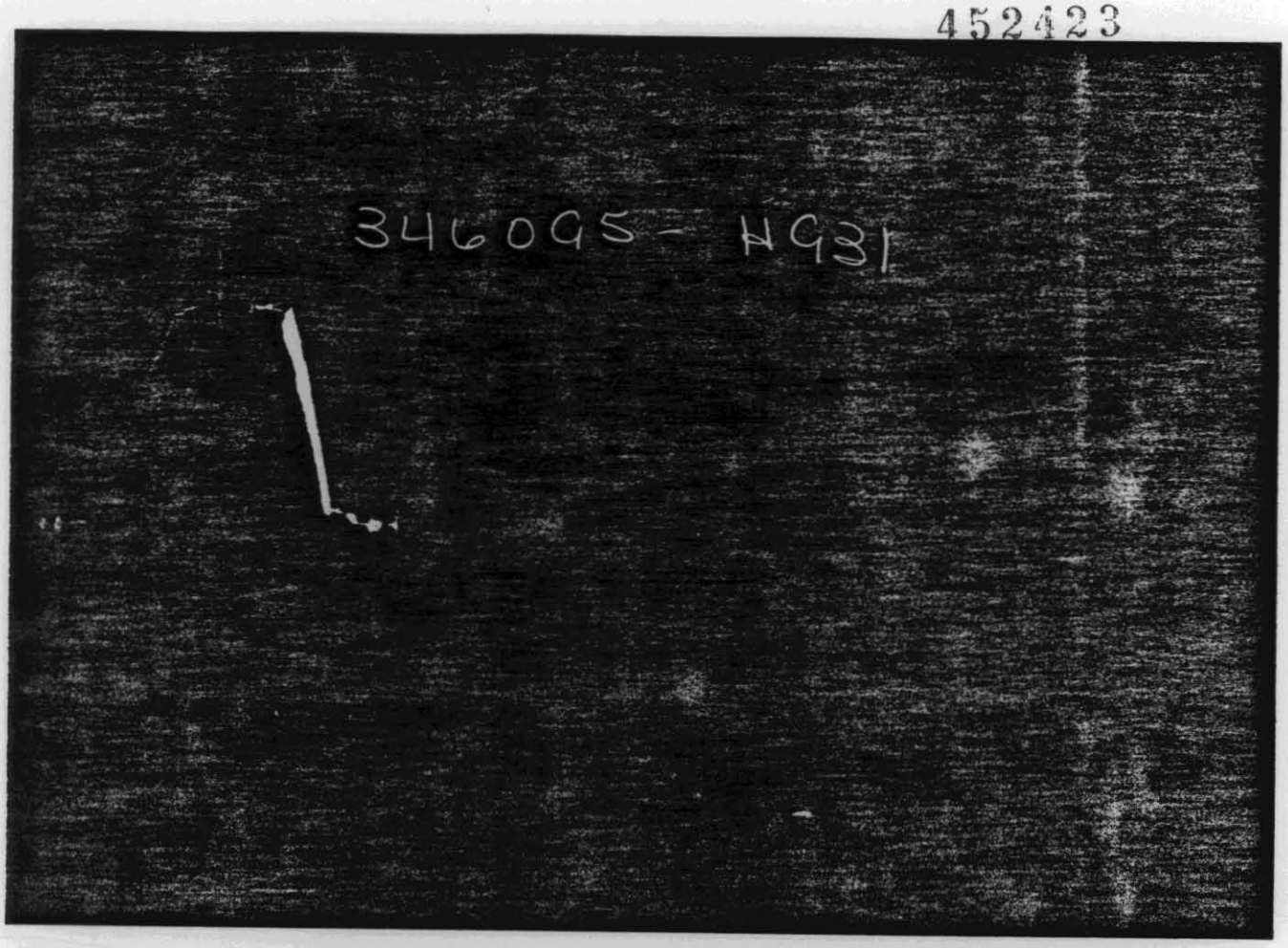
LEASE NAME	PELICAN	WELL NO.	5	TEST NO.	5-H	TESTED INTERVAL	9241.0 - 9539.5	LEASE OWNER/COMPANY NAME	AMOCO AUSTRALIA PETROLEUM COMPANY



GAUGE NO: 932 DEPTH: 9224.1 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	NO READINGS AVAILABLE					

452423



GAUGE NO: 931 DEPTH: 9224.1 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	NO READINGS AVAILABLE					

452424

EQUIPMENT & HOLE DATA

FORMATION TESTED: _____
NET PAY (ft): _____
GROSS TESTED FOOTAGE: 298.5
ALL DEPTHS MEASURED FROM: R.K.B.
CASING PERFS. (ft): _____
HOLE OR CASING SIZE (in): 7.000
ELEVATION (ft): 73.0
TOTAL DEPTH (ft): 9539.5
PACKER DEPTH(S) (ft): 9241
FINAL SURFACE CHOKE (in): _____
BOTTOM HOLE CHOKE (in): 2.187
MUD WEIGHT (lb/gal): 9.30
MUD VISCOSITY (sec): 33
ESTIMATED HOLE TEMP. (°F): _____
ACTUAL HOLE TEMP. (°F): 257 @ 9224.1 ft

TICKET NUMBER: 34609500

DATE: 4-5-86 TEST NO: 5-A

TYPE DST: CASED HOLE W/LPR

HALLIBURTON CAMP:
ADELAIDE

TESTER: RON BAKER/G. ZUNKEL
PAT MC GARRY

WITNESS: ?????

DRILLING CONTRACTOR:
DIAMOND M DRILLING COMPANY

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm
_____	_____ @ ___°F	_____ ppm

SAMPLER DATA

Psig AT SURFACE: _____
cu.ft. OF GAS: _____
cc OF OIL: _____
cc OF WATER: _____
cc OF MUD: _____
TOTAL LIQUID cc: _____

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): _____ @ ___°F
GAS/OIL RATIO (cu.ft. per bbl): _____
GAS GRAVITY: _____

CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

RECOVERED:

NO RECOVERY REPORTED

MEASURED FROM TESTER VALVE

REMARKS:

LEGAL LOCATION: 40 DEGREES - 20' - 43.259" SOUTH
145 DEGREES - 51' - 49.971" EAST

TEST WAS CONDUCTED ON APRIL 5, 1986

MISRUN - FOUND TUBING LEAK DURING PRESSURE TEST.
NEVER COMMENCED TEST

452425

TYPE & SIZE MEASURING DEVICE: _____ TICKET NO: 34609500

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
4-5-86					
1730					STARTED GAUGES - PICKED UP TOOLS
2030					TOOLS IN HOLE
4-6-86					
0826					SET PACKER - RIGGED UP SURFACE
					LINES.
1057					CYCLE OMNI VALVE TO BLANK
					POSITION. PRESSURE TEST SURFACE
					EQUIPMENT.
1130					PRESSURE DOWN TUBING - LEAK
1155					CYCLE OMNI VALVE TO SECOND BLANK
					POSITION - TESTED TUBING - LEAK
1230					RIGGED DOWN SURFACE LINES - UNSET
					PACKER - PICKED UP 25 FEET.
1345					SET PACKER - CLOSED SLIP JOINT
					SAFETY VALVE - RIGGED UP SURFACE
					LINES.
1400					PRESSURE TESTED TUBING TO 5000 PSI
					GOOD
1415					UNSET PACKER - RUN IN HOLE
1455					SET PACKER - RIGGED UP SURFACE
					LINES.
1505					PRESSURE TEST TUBING - LEAK
1520					UNSET PACKER - PULLED OUT OF
					HOLE.
2210					PRESSURE TEST DRILL COLLARS AND
					TEST STRING ON OMNI BALL - LEAKED
4-7-86					
0200					TOOLS OUT OF HOLE

452426

TICKET NO. 34609500

		O.D.	I.D.	LENGTH	DEPTH
4	FLEX WEIGHT.....	5.000	3.000	285.4	
5	CROSSOVER.....	5.000	3.000	3.6	
6	SUB-SEA TEST TREE.....	10.750	3.000	19.3	
5	CROSSOVER.....	6.250	3.000	1.0	
2	TUBING.....	3.500	2.750	8307.0	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.300	2.0	8616.3
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	8619.3
4	FLEX WEIGHT.....	4.750	2.312	92.6	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	15.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	370.8	
97	LPR M-2 CIRCULATING VALVE.....	5.000	2.250	17.4	9135.4
98	OMNI CIRCULATING VALVE.....	5.000	2.250	20.7	9175.5
33	DRAIN VALVE.....	5.000	2.250	1.0	
67	LPR-N TESTER VALVE.....	5.000	2.250	16.4	9194.6
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	9216.0
84	BUNDLE CARRIER.....	5.375	2.187	8.0	9224.1
15	JAR.....	4.625	2.250	5.0	
5	CROSSOVER.....	4.750	2.310	1.0	
16	VR SAFETY JOINT.....	4.625	2.250	4.8	
71	CASING PACKER.....	8.150	3.750	5.3	9241.0
5	CROSSOVER.....	6.120	2.310	0.8	
84	BUNDLE CARRIER.....	5.375	2.187	8.0	9248.9
5	CROSSOVER.....	8.150	2.600	2.7	
2	TUBING.....	3.500	2.764	31.0	

CONTINUED

EQUIPMENT DATA

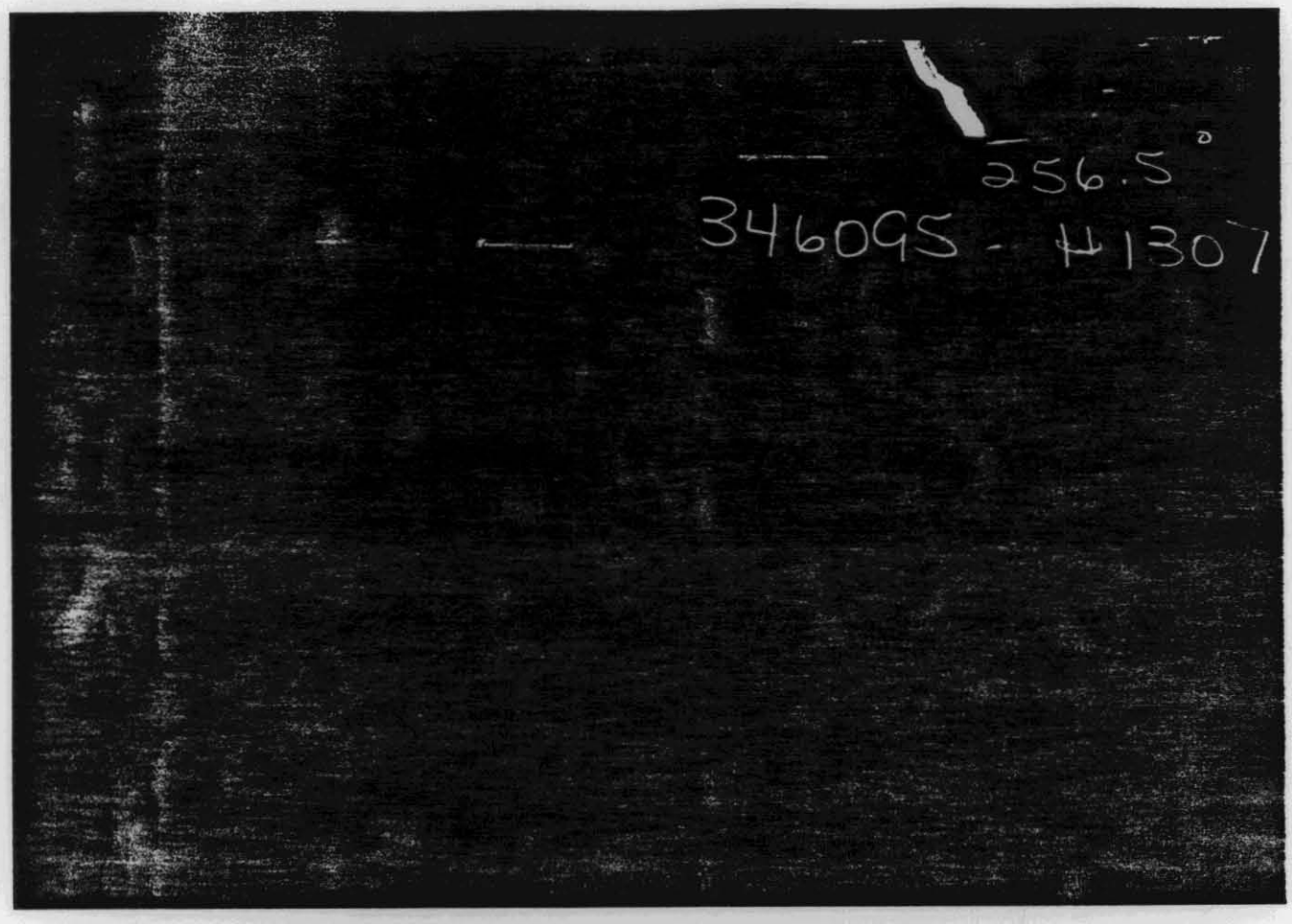
452427

TICKET NO. 34609500

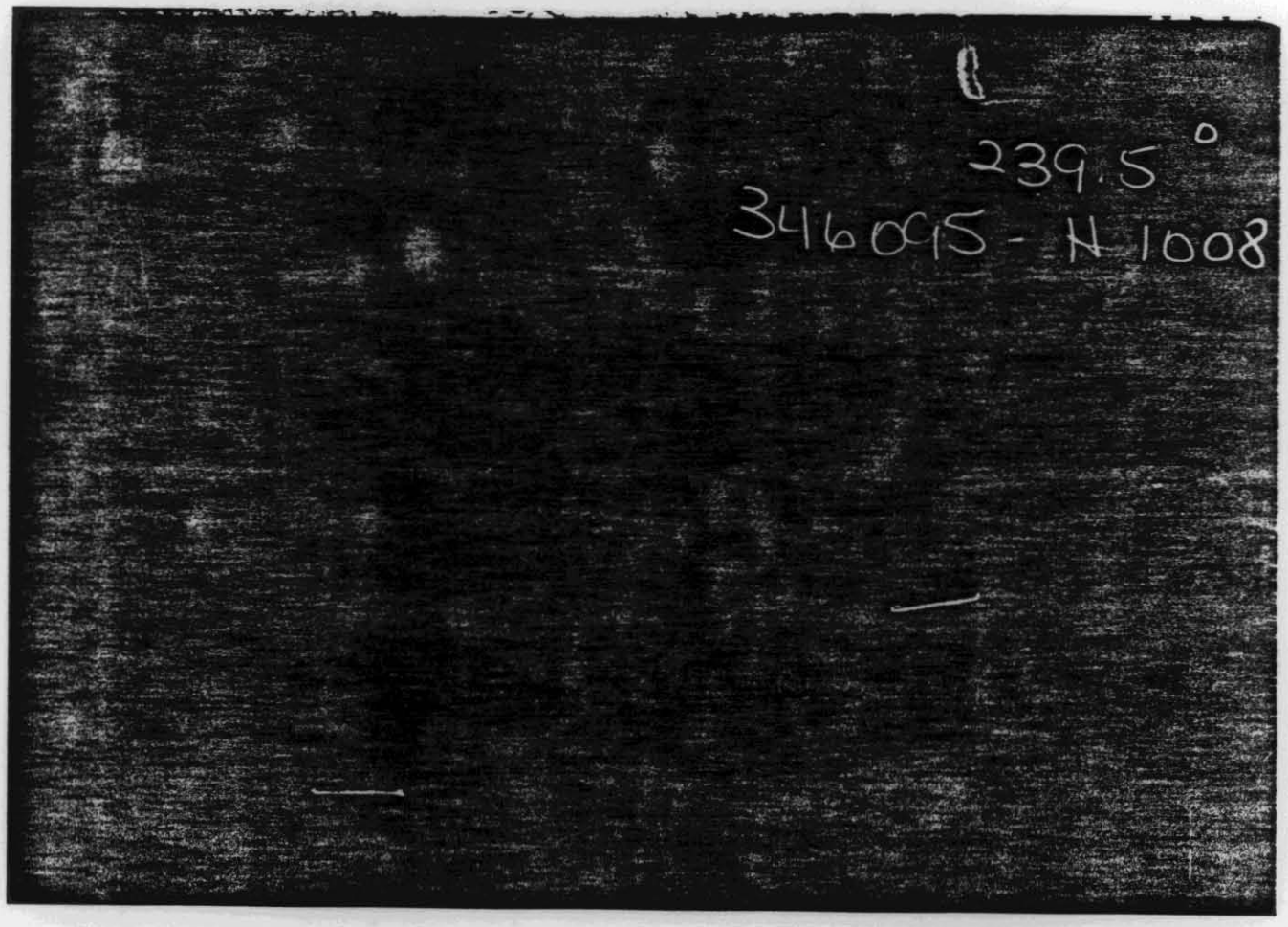
		O.D.	I.D.	LENGTH	DEPTH
5	 CROSSOVER.....	4.750	2.250	1.0	
99	WIRELINE RE-ENTRY GUIDE.....	5.000		0.8	
	TOTAL DEPTH				9539.5

EQUIPMENT DATA

4524428



EQUATIONS FOR DST GAS WELL ANALYSIS



452429

PELICAN	5	5A-2	9235.8 - 9282.0	AMOCO AUSTRALIA PETROLEUM COMPANY
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME

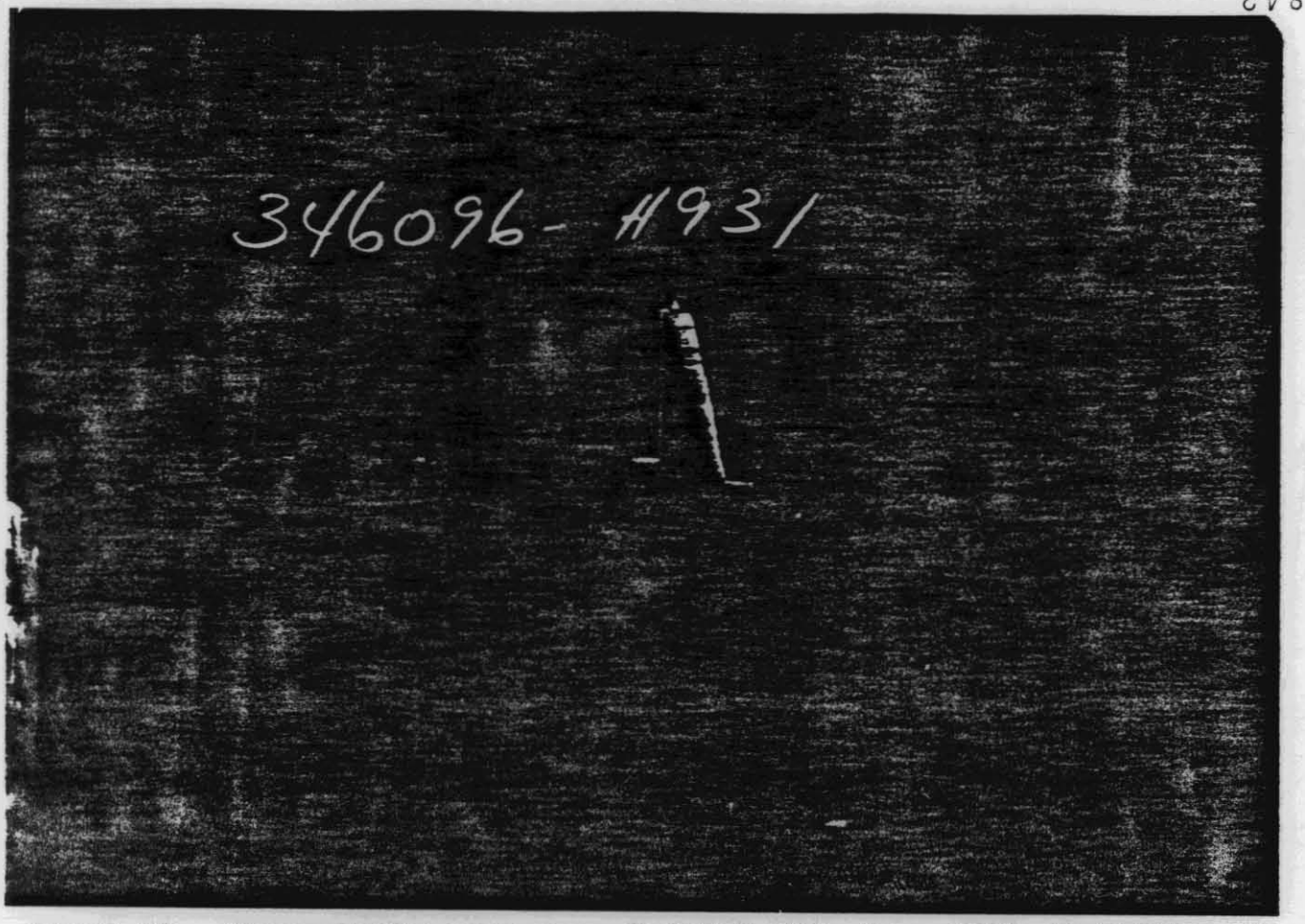
LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE
T-22P (SEE REMARKS)	BASS STRAIT	TASMANIA	AUSTRALIA IC

HALLIBURTON
SERVICES

TICKET NO. 34609600
23-APR-86
ADELAIDE

FORMATION TESTING SERVICE REPORT

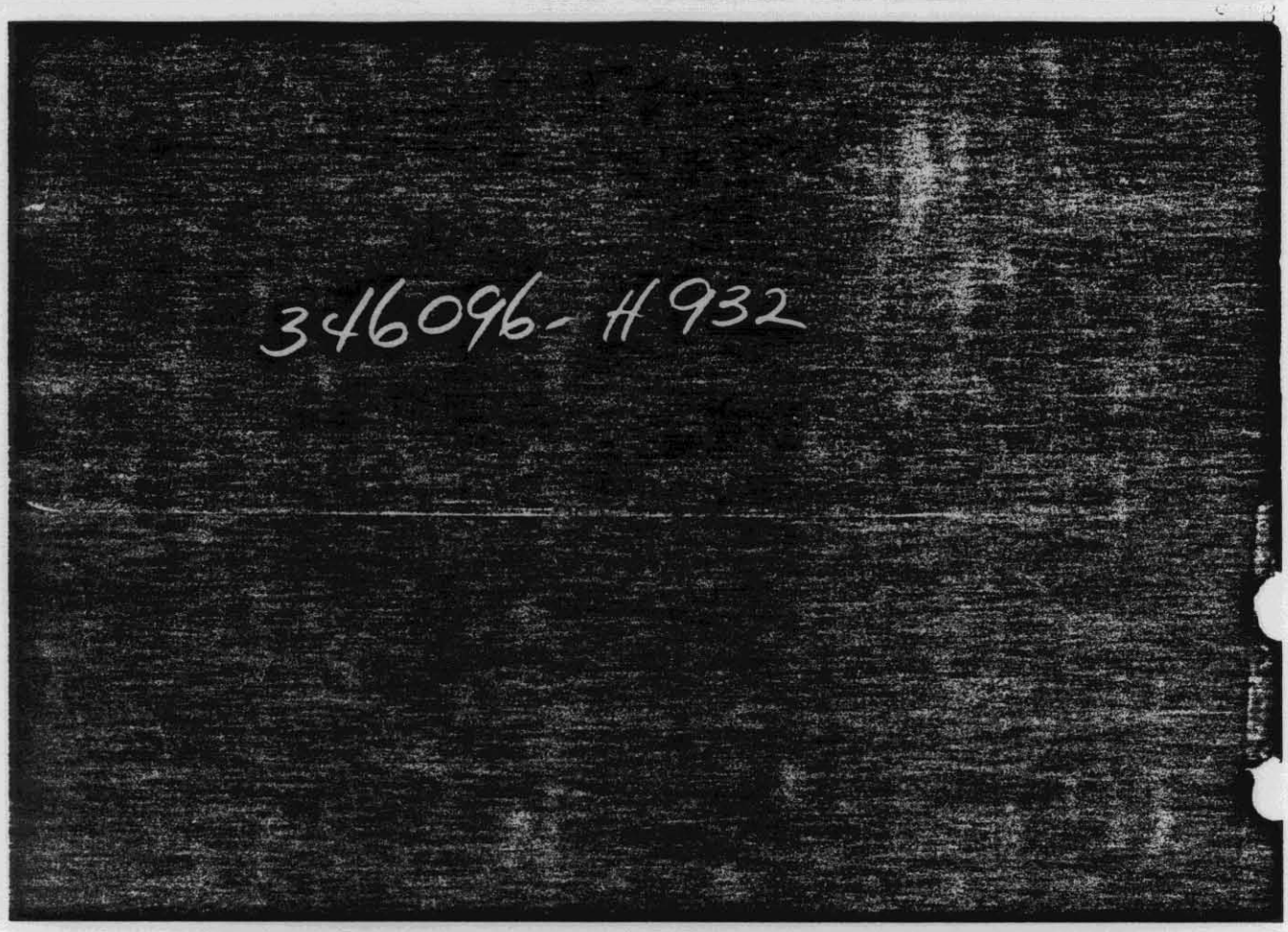
452430



GAUGE NO: 931 DEPTH: 9219.8 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC					
B C	INITIAL FIRST FLOW FINAL FIRST FLOW			93		F
C D	INITIAL FIRST CLOSED-IN FINAL FIRST CLOSED-IN			243		C
E F	INITIAL SECOND FLOW FINAL SECOND FLOW			907		F
F G	INITIAL SECOND CLOSED-IN FINAL SECOND CLOSED-IN			122		C
H	FINAL HYDROSTATIC					

452431



GAUGE NO: 932 DEPTH: 9219.8 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC					
B	INITIAL FIRST FLOW			93		F
C	FINAL FIRST FLOW					
C	INITIAL FIRST CLOSED-IN			243		C
D	FINAL FIRST CLOSED-IN					
E	INITIAL SECOND FLOW			907		F
F	FINAL SECOND FLOW					
F	INITIAL SECOND CLOSED-IN			122		C
G	FINAL SECOND CLOSED-IN					
H	FINAL HYDROSTATIC					

452432

EQUIPMENT & HOLE DATA

FORMATION TESTED: E. VIEW COAL MEASURE
NET PAY (ft): 18.0 (PERFORATIONS)
GROSS TESTED FOOTAGE: 46.1
ALL DEPTHS MEASURED FROM: R. KELLY BUSHING
CASING PERFS. (ft): 9366.79-9384.84'
HOLE OR CASING SIZE (in): 9.625
ELEVATION (ft): 324.8
TOTAL DEPTH (ft): 9281.9
PACKER DEPTH(S) (ft): 9236
FINAL SURFACE CHOKE (in): 16/64"
BOTTOM HOLE CHOKE (in): 2.180
MUD WEIGHT (lb/gal): 9.30
MUD VISCOSITY (sec):
ESTIMATED HOLE TEMP. (°F): 270
ACTUAL HOLE TEMP. (°F): 260 @ 9219.8 ft

TICKET NUMBER: 34609600

DATE: 4-9-86 TEST NO: 5A-2

TYPE DST: CASED HOLE W/LPR

HALLIBURTON CAMP: ADELAIDE

TESTER: J. P. MC GARRY

WITNESS: T. BOWDEN

DRILLING CONTRACTOR: DIAMOND M DRILLING COMPANY

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
FORMATION	@	°F	1500 ppm
	@	°F	ppm
	@	°F	ppm
	@	°F	ppm
	@	°F	ppm
	@	°F	ppm

SAMPLER DATA

Psig AT SURFACE: 400.0
cu.ft. OF GAS: 2.500
cc OF OIL:
cc OF WATER:
cc OF MUD:
TOTAL LIQUID cc:

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT
NITROGEN (PSI)	670.0	

RECOVERED:

NOTE: MUD DISPLACED IN DST STRING WITH NITROGEN CUSHION THROUGH HYDRAULIC CIRCULATING VALVE TO 3200 PSI AND BLED DOWN TO 670 PSI BEFORE PERFORATING INTERVAL, GIVING 3000 PSI UNDERBALANCE ACROSS ZONE.

MEASURED FROM TESTER VALVE

REMARKS:

[1] LEGAL LOCATION: LATITUDE - 40 DEGREES, 20', 43.58"S;
LONGITUDE - 145 DEGREES, 51', 49.21"E.

[2] NO VALID PRESSURE READINGS AVAILABLE - THE STYLUS WAS NOT ENGAGED ON GAUGE #H-932 AND MECHANICAL GAUGE FAILURE PREVENTED GAUGE #H-931 FROM PROPER RECORDING.

452433

TYPE & SIZE MEASURING DEVICE: 1500 PSI SEPARATOR - OTIS					TICKET NO: 34609600
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
4-7-86					
0500					MADE UP TOOLS
0900					RAN IN HOLE WITH TOOLS
1830					RIGGED UP SURFACE EQUIPMENT
1906					SET PACKER - TESTED DST STRING
1940					TO 5000 PSI
2145					TESTED N2 LINE
2155					OPENED TOP HYDRAULIC CIRC. VALVE
2200		3200			DISPLACED MUD TO N2 CUSHION
					IN STRING
2315					CLOSED TOP HYDRAULIC CIRC. VALVE
2324					OPENED LPR-N
2330		670			BLED N2 CUSHION TO 670 PSI
					GIVING 3000 PSI DIFFERENTIAL
4-8-86					
0200					RAN SCHLUMBERGER PERFORATING
					GUNS - PERFORATED WELL
0441		670			CLOSED LPR-N
0503		670			OPENED LPR-N
0733		0			CLOSED LPR-N - BLED NITROGEN
					DOWN TO ZERO
0900					PULLED OUT OF HOLE WITH SCHLUM-
					BERGER
0900					RAN OTIS GAUGE CUTTER
0925					OPENED LPR-N
0926		670			PUMPED NITROGEN CUSHION
1230					RAN IN HOLE WITH PERFORATING
					GUNS
1350					PERFORATED ZONE - OBSERVED WELL
1523		781			CLOSED LPR-N - BLED NITROGEN
					CUSHION TO ZERO - RAN PLT TOOL
1926					OPENED LPR-N - FLOWED WELL
1928	16/64"	34			OPENED THROUGH CHOKE -
1931		28			FLOWING GAS TO FLARE BOOM
1940		4			SAME
1945		0			WEAK BLOW AT SURFACE
2000		0			SAME

452434

TYPE & SIZE MEASURING DEVICE: 1500 PSI SEPARATOR - OTIS					TICKET NO: 34609600
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
2100		0			INTERMITTENT BUBBLE AT SURFACE
2200		0			SAME
2300		0			WEAK BLOW AT SURFACE
2400		0			SAME
4-9-86					
0100	16/64"	0			SAME
0200		0			SCHLUMBERGER PLT
0300		0			WEAK BLOW AT SURFACE
0400		0			SAME
0500		0			NO BLOW AT SURFACE
0600		0			SAME
0700		0			SAME
0800		0			SAME
0900		0			WEAK BLOW AT SURFACE
1000		0			
1033					CLOSED LPR-N - RIGGED DOWN
					SCHLUMBERGER
1221	16/64"	400			OPENED LPR-M2 AND REVERSED OUT
1320					FINISHED REVERSING OUT
1323					OPENED BYPASS
1330					UNSEATED PACKER
1400					CIRCULATED TO MUD PITS
1615					PULLED OUT OF HOLE WITH TOOLS
2400					TOOLS OUT OF HOLE

452435

TICKET NO. 34609600



		O.D.	I.D.	LENGTH	DEPTH
120	WIRELINE LUBRICATOR.....	10.750	2.940	10.8	
1	DRILL PIPE.....	5.000	3.000	212.7	
6	SUB-SEA TEST TREE.....	10.750	2.940	20.0	
5	CROSSOVER.....			1.0	
2	TUBING.....	3.500	2.750	8027.0	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.300	2.0	8355.6
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	8361.4
3	DRILL COLLARS.....	4.750	2.312	92.6	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	15.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	277.9	
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	8786.1
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	370.5	
97	LPR-M2 CIRCULATING SAFETY VALVE.	5.000	2.250	17.4	9187.2
33	DRAIN VALVE.....	5.000	2.250	1.0	
67	LPR-N TESTER VALVE.....	5.000	2.250	16.4	9204.6
59	FUL-FLO HYDRAULIC CIR. VALVE....	5.000	2.250	7.2	9211.8
84	BUNDLE CARRIER.....	5.275	2.187	8.0	9219.8
15	JAR.....	4.625	2.250	5.0	
5	CROSSOVER.....	4.750	2.210	1.0	
16	VR SAFETY JOINT.....	4.625	2.250	4.8	
76	RTTS PACKER.....	8.150	3.750	5.3	9235.8

CONTINUED

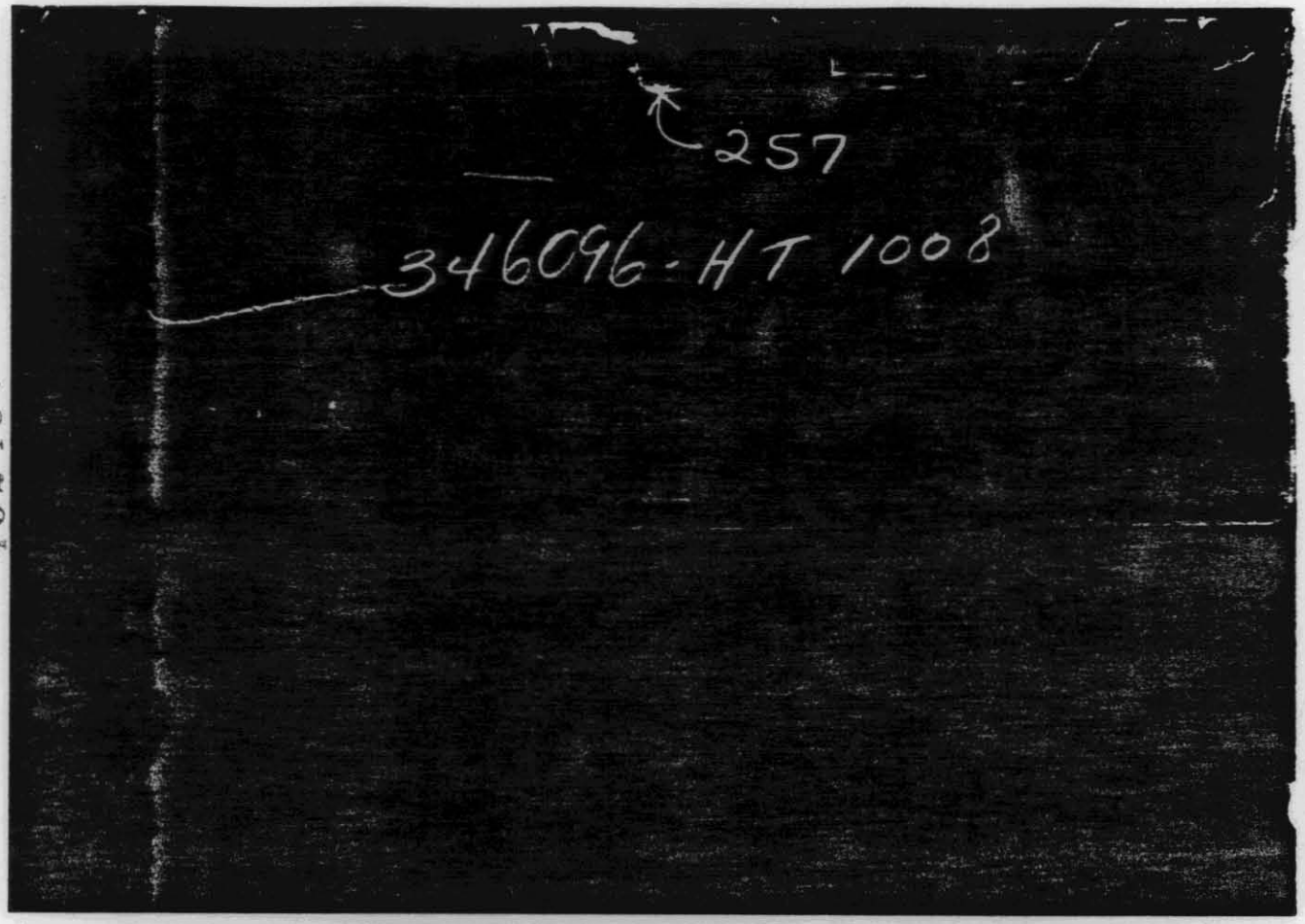
EQUIPMENT DATA

452436

TICKET NO. 34609600

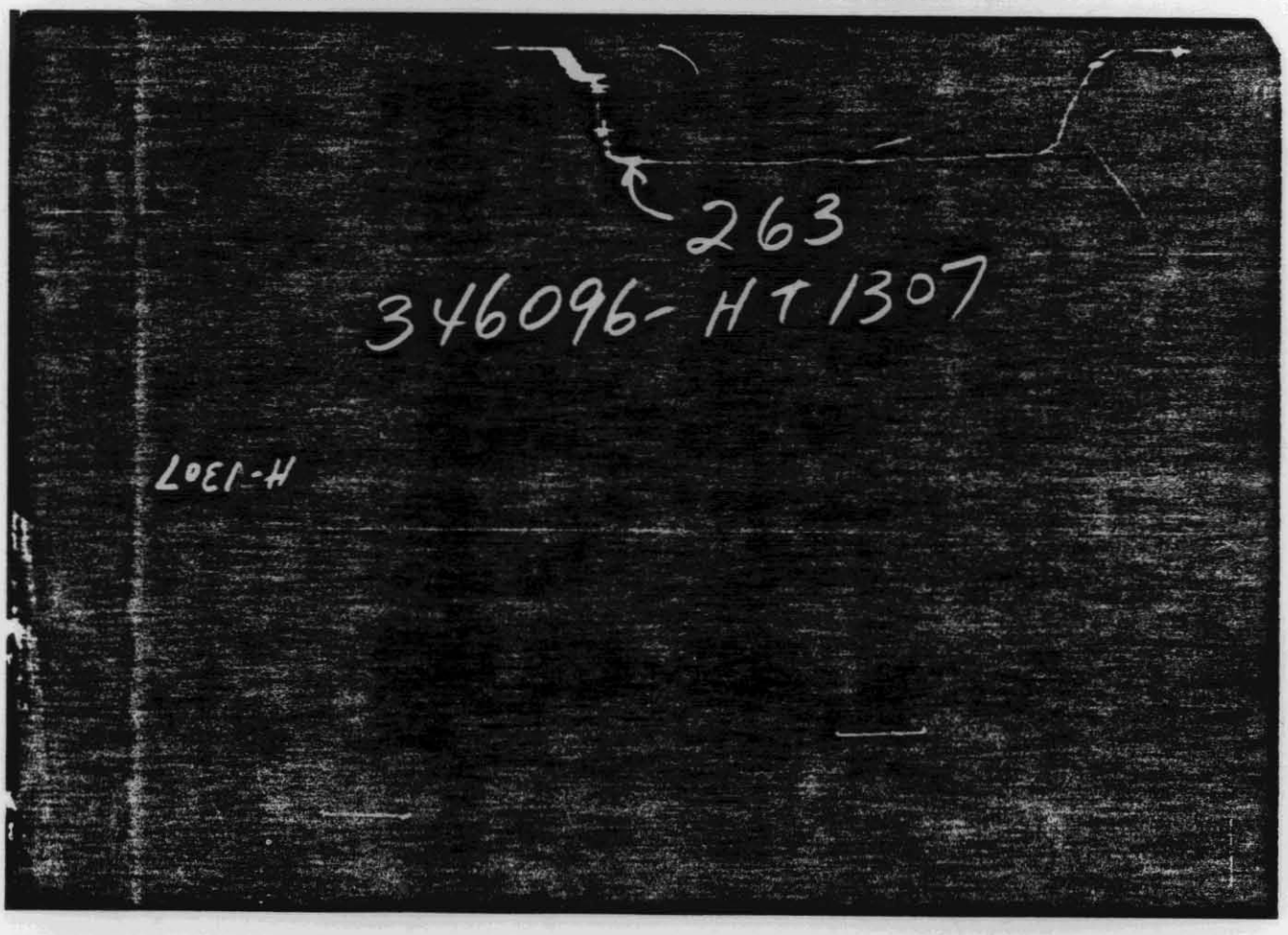
		O.D.	I.D.	LENGTH	DEPTH
5	CROSSOVER.....	6.120	2.310	0.8	
98	EMR BUNDLE CARRIER.....	5.375	2.875	8.0	9244.6
39	DRAG BLOCK.....	8.150	2.600	2.7	
1	DRILL PIPE.....	3.500	2.764	31.0	
5	CROSSOVER.....	4.750	2.250	1.0	
204	GUIDE SUB.....			0.8	
	TOTAL DEPTH				9281.9

EQUIPMENT DATA



452437

EQUATIONS FOR DST GAS WELL ANALYSIS



452438

Enclosure No. 19



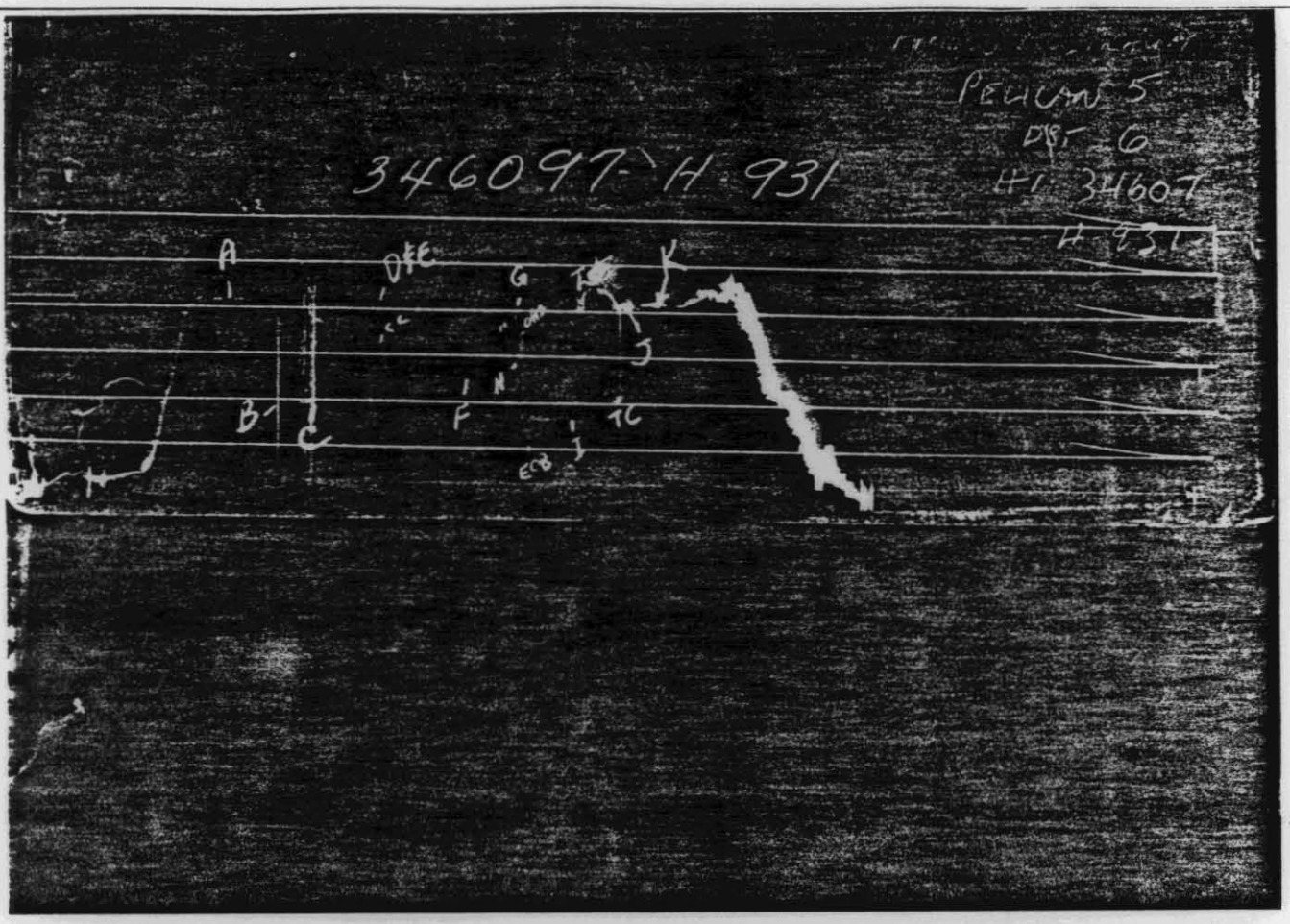
TICKET NO. 34609700
23-APR-86
ADELAIDE

FORMATION TESTING SERVICE REPORT

LEGAL LOCATION SEC. - TWP. - RNG.	FIELD AREA	COUNTY	STATE	LEASE OWNER/COMPANY NAME
I-22P (SEE REMARKS)	BASS STRAIT	TASMANIA	AUSTRALIA SM	AMOCO AUSTRALIA PETROLEUM COMPANY

LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL
PELICAN	5	6	9011.3 -

452439



GAUGE NO: 931 DEPTH: 8997.7 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3990	4187.2			
B	TOOL OPENED	1725	1959.1	216	226	
C	GUNS FIRED	1725	1959.1			
C	GUNS FIRED	1725	1959.1	406	395	
D	OPENED WELL	3845	4063.6			
E	INITIAL FIRST FLOW		4064.1	558	566	F
F	FINAL FIRST FLOW	2350	2565.0			
F	INITIAL FIRST CLOSED-IN	2350	2565.0	337	328	C
G	FINAL FIRST CLOSED-IN	3773	4001.5			
H	INITIAL SECOND FLOW		2899.5	300	304	F
I	FINAL SECOND FLOW	1508	1689.6			
I	INITIAL SECOND CLOSED-IN	1508	1689.6	381	379	C
J	FINAL SECOND CLOSED-IN	3722	3957.7			
K	FINAL HYDROSTATIC	4092	4180.5			

452440



GAUGE NO: 932 DEPTH: 8997.7 BLANKED OFF: NO HOUR OF CLOCK: 120

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC					
B C	TOOL OPENED GUNS FIRED			216		
C D	GUNS FIRED OPENED WELL			406		
E F	INITIAL FIRST FLOW FINAL FIRST FLOW			558		F
F G	INITIAL FIRST CLOSED-IN FINAL FIRST CLOSED-IN			337		C
H I	INITIAL SECOND FLOW FINAL SECOND FLOW			300		F
I J	INITIAL SECOND CLOSED-IN FINAL SECOND CLOSED-IN			381		C
K	FINAL HYDROSTATIC					

452441

EQUIPMENT & HOLE DATA

FORMATION TESTED: E. SANDS
NET PAY (ft): 13.1 (PERFORATIONS)
GROSS TESTED FOOTAGE:
ALL DEPTHS MEASURED FROM: R KELLY BUSHING
CASING PERFS. (ft): 9140.9-9154.0'
HOLE OR CASING SIZE (in): 9.625
ELEVATION (ft): 324.8
TOTAL DEPTH (ft): E.Z.S.V.
PACKER DEPTH(S) (ft): 9011
FINAL SURFACE CHOKE (in): 24/64"
BOTTOM HOLE CHOKE (in): 2.187
MUD WEIGHT (lb/gal): 9.30
MUD VISCOSITY (sec): 41
ESTIMATED HOLE TEMP. (°F): 270
ACTUAL HOLE TEMP. (°F): 253 @ 8997.1 ft

TICKET NUMBER: 34609700

DATE: 4-13-86 TEST NO: 6

TYPE DST: CASED HOLE W/LPR

HALLIBURTON CAMP: ADELAIDE

TESTER: J.P. MC GARRY

WITNESS: T. BOWDEN

DRILLING CONTRACTOR: DIAMOND M DRILLING COMPANY

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY		CHLORIDES
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm
	@ °F		ppm

SAMPLER DATA

Psig AT SURFACE: 1500.0
cu.ft. OF GAS:
cc OF OIL: 2000.0
cc OF WATER:
cc OF MUD:
TOTAL LIQUID cc: 2000.0

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): 57.4 @ 60°F
GAS/OIL RATIO (cu.ft. per bbl): 12472
GAS GRAVITY: 0.820 EST.

CUSHION DATA

TYPE	AMOUNT	WEIGHT
NITROGEN (PSI)	1200.0	

RECOVERED:

NOTE: 3050 PSI NITROGEN CUSHION USED TO DISPLACE MUD OUT OF DST STRING AND BLED DOWN TO 1200 PSI BEFORE PERFORATING WELL, GIVING 2000 PSI UNDERBALANCE ACROSS ZONE.

MEASURED FROM TESTER VALVE

REMARKS:

(1) LEGAL LOCATION: LAT. 40 DEG., 20', 43.58" SOUTH AND LONG 145 DEGREES, 51', 49.21" EAST

(2) RPG-3 #932 HAD CLOCK JAMMED...NO AVAILABLE READINGS.

(3) IT APPEARS THE STYLUS ON GAUGE # H-931 MAY HAVE SLIPPED WHEN GUNS FIRED AND READINGS MAY BE SOMEWHAT QUESTIONABLE.

TYPE & SIZE MEASURING DEVICE: 1500 PSI SEPARATOR OTIS					TICKET NO: 34609700
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
4-10-86					
0330					MADE UP TOOLS
1542					LAND OUT DST STRING
1545					SET PACKER
1610					PRESSURE TESTED DST STRING
1630					RAN IN HOLE OTIS SLICK LINE
1724					OPENED LPR-N
1904					CLOSED LPR-N
1949					OPENED TOP HYDRAULIC CIRC.
					VALVE TO DISPLACE MUD IN
					DST STRING WITH NITROGEN
					CUSHION
1955					PUMPED NITROGEN CUSHION
2130		3050			NITROGEN CUSHION IN PLACE
2135					BLED DOWN NITROGEN CUSHION
					TO GET UNDER BALANCE OF 2000 PSI
2145		1200			
2150					OPENED LPR-N
					RAN IN HOLE WITH SCHLUMBERGER
					PERFORATION GUN
4-11-86					
0126		1350			PERFORATED WELL - INTERVAL
					9140.9 TO 9154.0 FT.
					CLOSED AT CHOKE, OBSERVED WELL
					HEAD PRESSURE
0130		1740			TUBING PRESSURE INCREASING
0140		2300			SAME
0150		2525			SAME
0200		2600			SAME
0210		2610			SAME
0220		2620			SAME
0230		2620			SAME
					RIGGED DOWN SCHLUMBERGER
0630					RAN IN HOLE WITH OTIS H.P. GAUGE
0640		2710			OBSERVED WELL HEAD PSI
0700		2720			SAME
0800		2740			SAME

452443

TYPE & SIZE MEASURING DEVICE: 1500 PSI SEPARATOR OTIS					TICKET NO: 34609700
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
0812	16/64	2645			OPENED WELL ON 16/64" ADJ. CHOKE
0813	16/64	2450			
0814	16/64	2370			
0815	16/64	2300			
0816	16/64	2220			
0817	16/64	2170			
0818	16/64	2080			
0819	16/64	1970			
0820	16/64	1920			
0821	16/64	1880			
0822	16/64	1830			
0825	16/64	1750			GAS TO THE SURFACE
0830	16/64	1610			CONDENSATE TO SURFACE
0833	24/64	1500			OPEN TO 24/64" CHOKE
0836	24/64	1460			RAT HOLE MUD, GAS CUT
0845	24/64	1535			SURGING
0900	24/64	1720			FLOWING GAS & CONDENSATE
1000	24/64	1630			CHANGED TO POSITIVE CHOKE
					(5% CO2)
1100	24/64	1620			FLOWING WELL
1200	24/64	1620			SAME
1300	24/64	1623			20% WATER, TRACE OF SEDIMENTS
					(7% CO2)
1400	24/64	1625	3,452		CONDENSATE GRAVITY 57.4@ 60
					DEG. F.
1500	24/64	1625			
1600	24/64	1625	3,431		GAS GRAVITY .82
1700	24/64	1625			SAME
1730	24/64	1625	3,405	448	SHUT IN WELL AT DOWN HOLE,
					SHUT IN TOOL FOR PRESSURE
					BUILD UP.
2307					OPENED DOWN HOLE SHUT IN TOOL
					CHOKE CLOSED
2311	16/64				OPENED AT CHOKE WITH 16/64"
					ADJ. FOR SECOND FLOW
2314	24/64	1980			ADJUSTABLE CHOKE
2330	40/64	1475			SAME

452444

TYPE & SIZE MEASURING DEVICE: 1500 PSI SEPARATOR OTIS | TICKET NO: 34609700

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
2340	48/64	1110			SAME
2345	56/64	850			SAME
2350	68/64	600			SAME
2355	98/64	466			SAME
4-12-86					
0015	98/64	395			CO2= 4%, 40% WATER, 2500 PPM
0100	98/64	470			CO2= 6%, 75% WATER
0200	98/64	490			CO2= 7%, 60% WATER
0300	98/64	535	5,634	302	CO2= 7%, 70% WATER, 705 BPD
0400	98/64	525	5,508	441	CO2= 9%, 60% WATER, 662 BPD
0407	98/64	675			SHUT IN WELL AT DOWN HOLE
					SHUT IN TOOL AND AT CHOKE
					MANIFOLD
0624		675			CLOSED LPR-N TESTER VALVE
					UNLATCH OTIS DOWN HOLE SHUT-IN
					TOOL
					PULLED OUT OF THE HOLE
					RIGGED DOWN OTIS LUBRICATOR
0931					OPENED LPR-N
0934					OPENED LPR-M-2 CIRCULATING
					VALVE 2900 PSI
					REVERSED OUT DST CONTENTS TO
					FLARE
0952					MUD AT SURFACE
0955					REVERSED TO PITS AND DEGASER
1028					OPENED BYPASS
1033					UNSEATED PACKER
1035					CIRCULATED AND CONDITIONED MUD
2200					PULLED OUT OF THE HOLE
4-13-86					
					LAID OUT DST TOOLS
1200					JOB COMPLETED

452445

TICKET NO: 34609700	GAUGE NO: 931
CLOCK NO: 31786 HOUR: 120	DEPTH: 8997.7

HALLIBURTON SERVICES

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			BEFORE PERFORATING			
B	1	0	1959.1			
C	2	226	1959.1			
			WELL CLOSED IN			
C	1	0	1959.1			
D	2	395	4063.6			
			FIRST FLOW			
E	1	0	4064.1			
[1]	2	20	3290.7	-773.4		
	3	30	3056.2	-234.5		
	4	60	2689.3	-366.8		
	5	90	2605.6	-83.8		
	6	120	2601.0	-4.6		
	7	150	2581.2	-19.8		
	8	180	2560.4	-20.8		
	9	210	2569.5	9.1		
	10	240	2576.6	7.1		
	11	270	2580.2	3.6		
	12	300	2575.1	-5.1		
	13	330	2575.1	0.0		
	14	360	2571.6	-3.6		
	15	390	2571.6	0.0		
	16	420	2573.6	2.0		
	17	450	2571.1	-2.5		
	18	480	2566.5	-4.6		
	19	510	2566.5	0.0		
	20	540	2567.0	0.5		
F	21	566	2565.0	-2.0		
			FIRST CLOSED-IN			
F	1	0	2565.0			
	2	1	3577.8	1012.9	0.9	2.801
	3	2	3626.8	1061.8	2.1	2.434
	4	3	3704.6	1139.7	3.3	2.238
	5	4	3732.0	1167.0	4.0	2.150
	6	5	3754.6	1189.7	5.0	2.050
	7	6	3775.3	1210.3	6.1	1.970
	8	7	3785.6	1220.6	6.9	1.911
	9	8	3796.4	1231.4	8.0	1.852
	10	9	3804.1	1239.1	9.0	1.800
	11	10	3811.9	1246.9	9.8	1.760
	12	12	3820.1	1255.1	11.7	1.684
	13	14	3832.5	1267.5	13.7	1.616

REF		MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t+\Delta t}$	$\log \frac{t+\Delta t}{\Delta t}$
			FIRST CLOSED-IN - CONTINUED			
	14	16	3844.8	1279.9	15.6	1.561
	15	18	3847.4	1282.4	17.5	1.509
	16	20	3852.6	1287.6	19.5	1.463
	17	22	3858.2	1293.3	21.2	1.427
	18	24	3864.9	1300.0	23.1	1.389
	19	26	3871.1	1306.2	24.9	1.357
	20	28	3879.4	1314.4	26.6	1.327
	21	30	3881.4	1316.5	28.5	1.297
	22	35	3892.3	1327.3	33.1	1.233
	23	40	3899.5	1334.5	37.4	1.180
	24	45	3908.2	1343.3	41.7	1.133
	25	50	3915.5	1350.5	46.0	1.090
	26	55	3922.7	1357.7	50.2	1.053
	27	60	3928.4	1363.4	54.6	1.016
	28	70	3936.6	1371.6	62.4	0.958
	29	80	3943.3	1378.3	70.1	0.907
	30	90	3950.0	1385.0	77.7	0.863
	31	100	3958.2	1393.3	85.0	0.823
	32	110	3959.3	1394.3	92.1	0.788
	33	120	3961.9	1396.9	99.1	0.757
	34	135	3965.5	1400.5	109.0	0.715
	35	150	3970.1	1405.1	118.6	0.679
	36	165	3974.7	1409.8	127.9	0.646
	37	180	3977.8	1412.9	136.7	0.617
	38	195	3985.1	1420.1	145.1	0.591
	39	210	3987.1	1422.1	153.2	0.567
	40	225	3989.2	1424.2	161.1	0.546
	41	240	3991.2	1426.3	168.6	0.526
	42	260	3994.8	1429.9	178.2	0.502
	43	280	3997.9	1433.0	187.4	0.480
	44	300	4000.0	1435.0	196.1	0.460
	45	320	4002.6	1437.6	204.4	0.442
G	46	328	4001.5	1436.6	207.7	0.435
			SECOND FLOW			
H	1	0	2899.5			
[2]	2	10	3457.2	557.7		
	3	15	3163.9	-293.3		
	4	30	1997.4	-1166.5		
	5	45	1436.8	-560.6		
	6	60	1238.9	-197.9		
[3]	7	64	1232.1	-6.7		
	8	75	1563.7	331.6		
	9	90	1717.6	153.9		
	10	105	1684.5	-33.2		
	11	120	1652.8	-31.6		
	12	135	1653.4	0.5		
	13	150	1667.4	14.0		
	14	165	1666.3	-1.0		
	15	180	1679.3	13.0		

LEGEND:
[1] CHOKE CHANGE
[2] OPENED AT SURFACE
[3] END OF BLEED-OFF
[4] TOOL OPENED
[5] TOOL CLOSED

REMARKS:

TICKET NO: 34609700

CLOCK NO: 31786 HOUR: 120

HALLIBURTON SERVICES

GAUGE NO: 931

DEPTH: 8997.7

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND FLOW - CONTINUED				
16	195	1670.5	-8.8		
17	210	1610.4	-60.1		
18	225	1672.5	62.2		
19	240	1695.9	23.3		
20	255	1718.1	22.3		
21	270	1750.3	32.1		
22	285	1726.4	-23.8		
I 23	304	1689.6	-36.8		
	SECOND CLOSED-IN				
I 1	0	1689.6			
2	1	3408.2	1718.6	1.0	2.920
3	2	3488.1	1798.5	1.9	2.652
4	3	3531.4	1841.8	3.0	2.465
5	4	3564.9	1875.3	4.0	2.336
6	5	3586.1	1896.4	5.4	2.211
7	6	3600.5	1910.9	6.1	2.155
8	7	3616.5	1926.9	7.0	2.096
9	8	3627.8	1938.2	8.0	2.036
10	9	3643.3	1953.7	8.9	1.991
11	10	3655.2	1965.5	9.9	1.944
12	12	3673.2	1983.6	11.9	1.862
13	14	3685.1	1995.4	13.8	1.799
14	16	3698.5	2008.8	15.7	1.743
15	18	3717.5	2027.9	17.7	1.691
16	20	3729.4	2039.7	19.6	1.648
17	22	3738.7	2049.0	21.9	1.600
18	24	3750.0	2060.4	23.4	1.570
19	26	3756.2	2066.5	25.4	1.535
20	28	3768.6	2078.9	27.1	1.507
21	30	3778.9	2089.2	29.1	1.476
22	35	3794.3	2104.7	33.6	1.413
23	40	3809.3	2119.6	38.3	1.356
24	45	3820.6	2131.0	42.8	1.308
25	50	3827.8	2138.2	47.4	1.264
26	55	3835.1	2145.4	51.9	1.225
27	60	3842.3	2152.6	56.1	1.191
28	70	3852.1	2162.4	64.8	1.128
29	80	3863.4	2173.8	73.4	1.074
30	90	3873.7	2184.1	81.7	1.027
31	100	3880.9	2191.3	90.0	0.986
32	110	3887.6	2198.0	97.7	0.950
33	120	3892.8	2203.1	105.5	0.916
34	135	3904.1	2214.5	117.1	0.871
35	150	3913.4	2223.8	127.8	0.833
36	165	3922.7	2233.0	138.9	0.797
37	180	3925.8	2236.1	149.4	0.765
38	195	3931.4	2241.8	159.5	0.737
39	210	3936.6	2247.0	169.2	0.711
40	225	3941.2	2251.6	178.8	0.687

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
	SECOND CLOSED-IN - CONTINUED				
41	240	3946.9	2257.3	188.1	0.665
42	260	3946.9	2257.3	200.3	0.638
43	280	3951.0	2261.4	211.9	0.614
44	300	3956.7	2267.1	223.1	0.591
45	320	3961.9	2272.2	234.0	0.570
[4] 46	323	3961.9	2272.2	235.5	0.568
[5] 47	331	2092.4	402.7	239.9	0.560
48	340	3933.5	2243.9	244.5	0.551
49	360	3947.4	2257.8	254.8	0.533
J 50	379	3957.7	2268.1	263.8	0.518

LEGEND:
[1] CHOKE CHANGE
[2] OPENED AT SURFACE
[3] END OF BLEED-OFF
[4] TOOL OPENED
[5] TOOL CLOSED

REMARKS:

452447

TICKET NO. 34609700



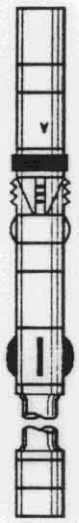
		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE.....	5.000	4.276		
97	T.I.W. VALVE.....				
1	DRILL PIPE.....	5.000	4.276		
97	T.I.W. VALVE.....				
1	DRILL PIPE.....	6.250	4.276		
6	SUB-SEA TEST TREE.....	10.750	2.940	20.0	
5	CROSSOVER.....			1.0	
2	TUBING.....	3.500	2.750	7802.2	
5	CROSSOVER.....	4.750	2.750	1.0	
65	SURFACE READ OUT VALVE.....	4.625	2.300	2.0	8133.6
5	CROSSOVER.....	4.750	2.750	1.0	
93	FUL-FLO SAFETY VALVE.....	5.000	2.250	4.8	8139.3
3	DRILL COLLARS.....	4.750	2.312	92.6	
10	SLIP JOINT.....	5.000	2.250	18.2	
10	SLIP JOINT.....	5.000	2.250	15.7	
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	277.9	
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	8564.0
10	SLIP JOINT.....	5.000	2.250	13.2	
3	DRILL COLLARS.....	4.750	2.312	370.5	
98	LPR-M2 SAFETY CIRC. VALVE.....	5.000	2.250	17.4	8947.7
33	DRAIN VALVE.....	5.000	2.250	1.0	
67	LPR-N TESTER VALVE.....	5.000	2.250	16.4	8968.1
59	FUL-FLO HYDRAULIC CIR. VALVE....	4.625	2.250	7.2	8989.7
84	BUNDLE CARRIER.....	5.375	2.187	8.0	8997.7

CONTINUED

EQUIPMENT DATA

452448

TICKET NO. 34609700

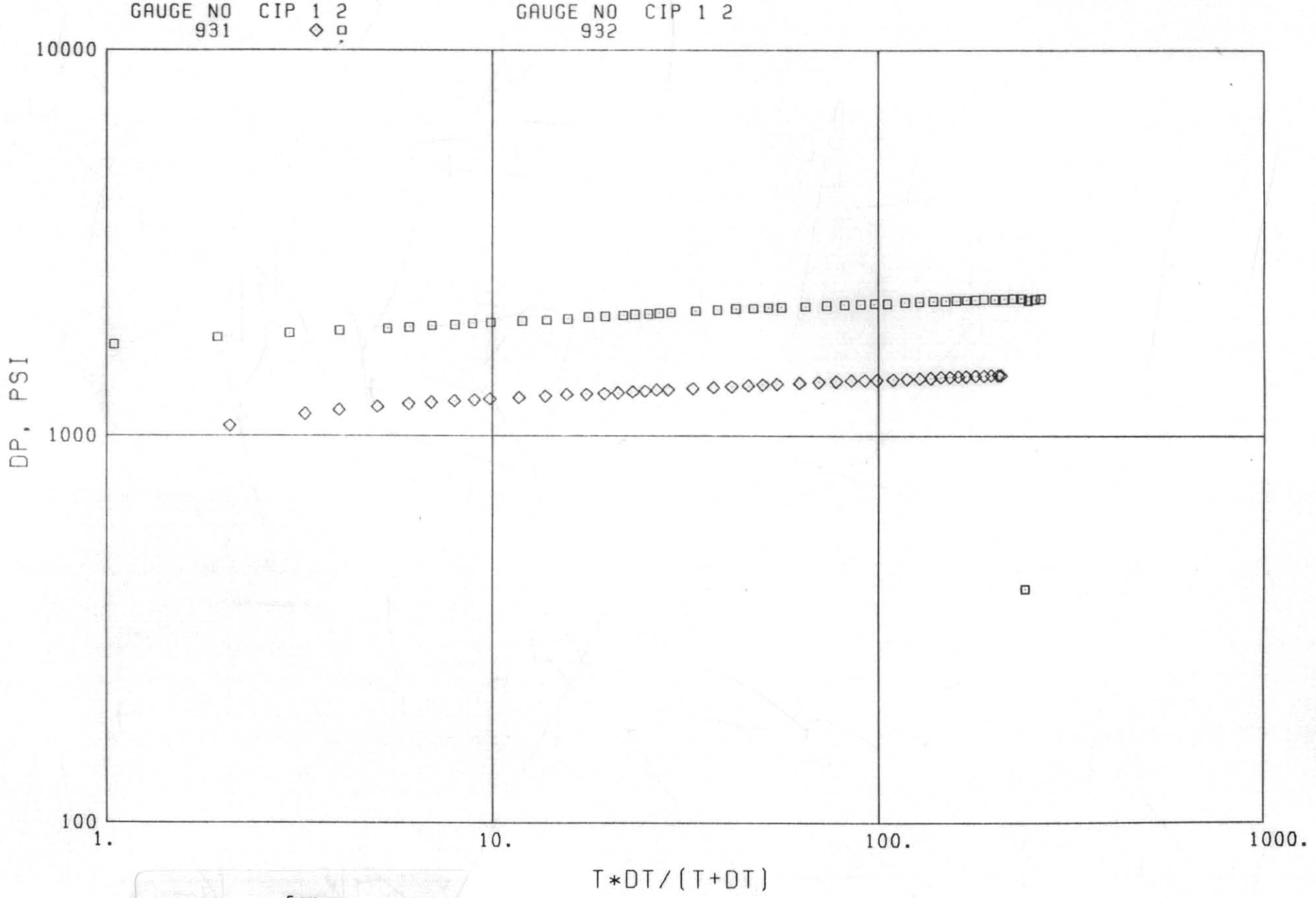


		O.D.	I.D.	LENGTH	DEPTH
15	JAR.....	4.625	2.250	5.0	
5	CROSSOVER.....	4.750	2.310	1.0	
16	VR SAFETY JOINT.....	4.625	2.250	4.8	
76	RTTS PACKER.....	8.150	3.750	5.3	9011.3
5	CROSSOVER.....	6.120	2.310	0.8	
99	EMR BUNDLE CARRIER.....	5.375	2.187	8.0	9022.5
39	DRAG BLOCK.....	8.150	2.600	2.7	
1	DRILL PIPE.....	3.500	2.764	31.0	
5	CROSSOVER.....	4.750	2.250	1.0	
204	GUIDE SUB.....			0.8	

TOTAL DEPTH

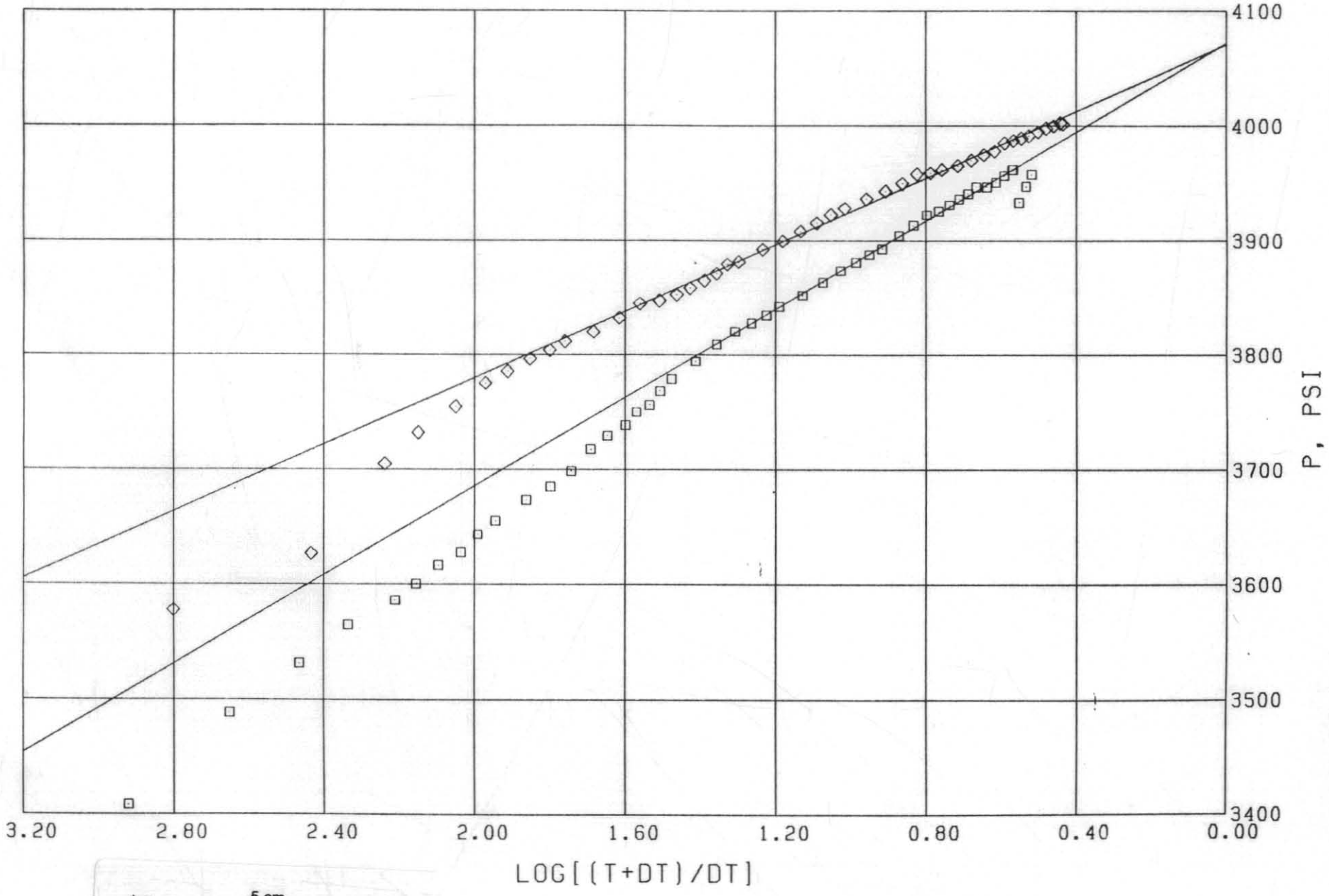
EQUIPMENT DATA

TICKET NO 34609700



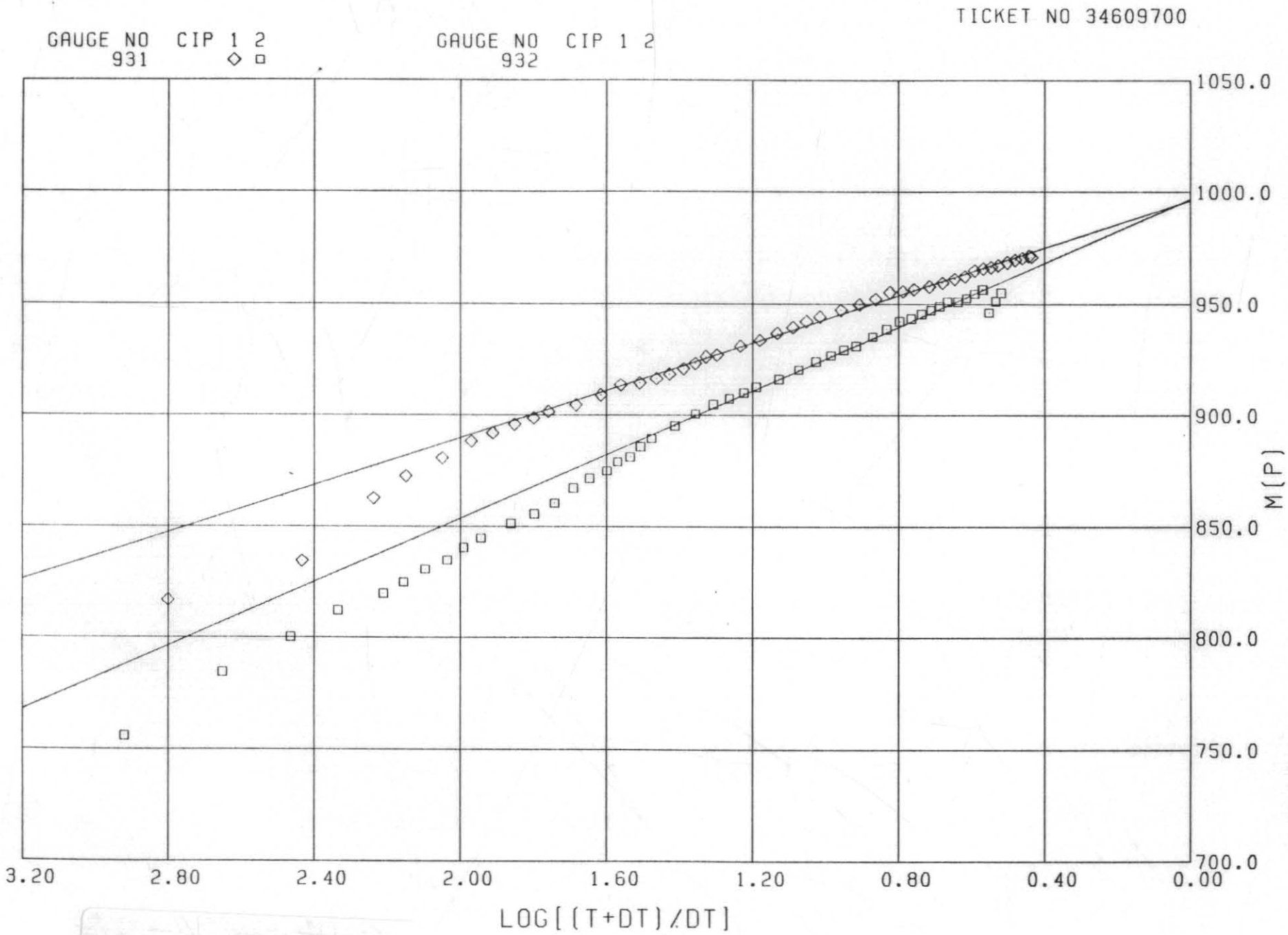
4529149

TICKET NO 34609700

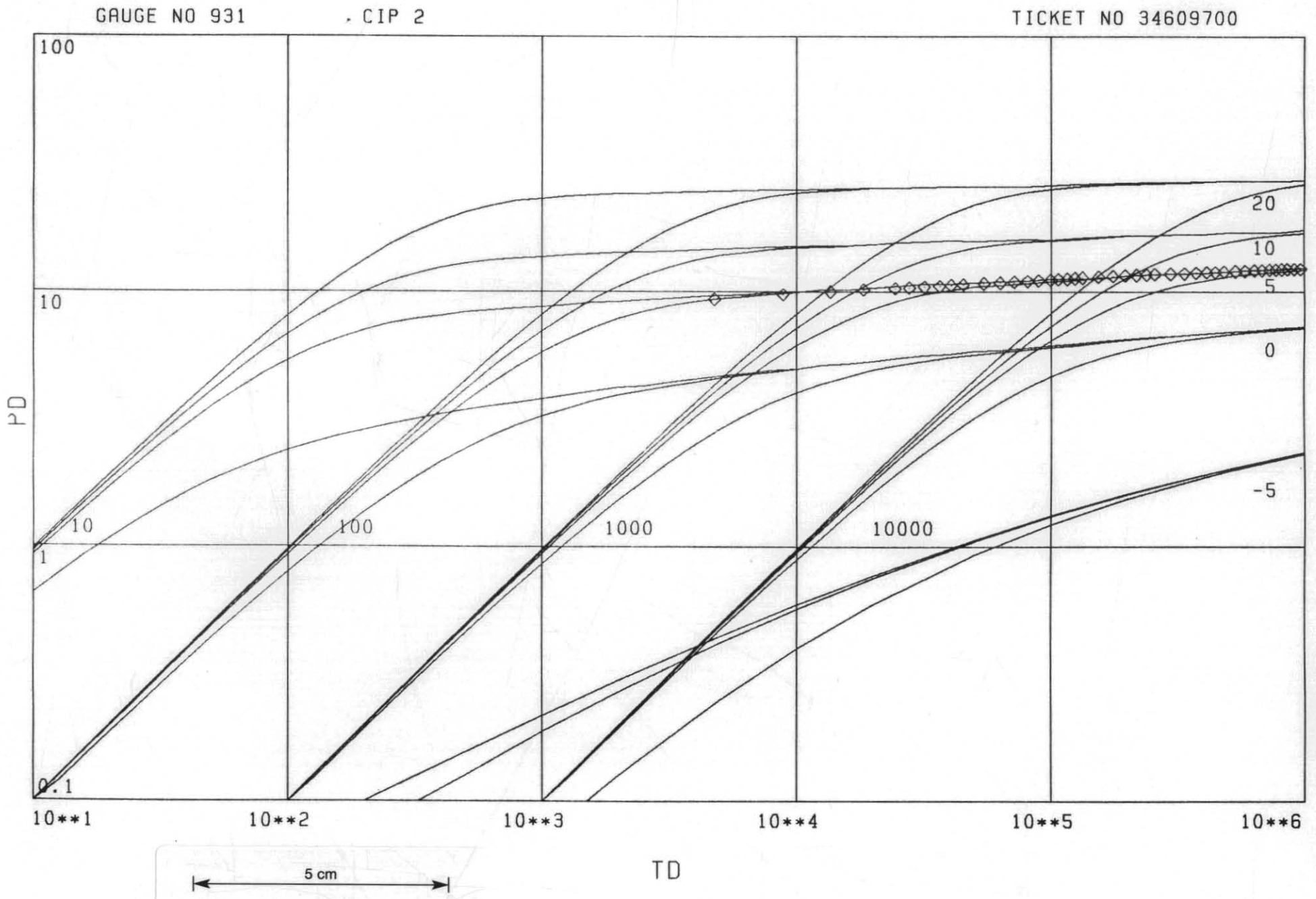


4524500

TICKET NO 34609700



4524451


GAUGE NO 931
. CIP 2
TICKET NO 34609700
100
10
1
0.1
PD
20
10
5
0
-5
10
100
1000
10000
10**1
10**2
10**3
10**4
10**5
10**6
TD
5 cm

4524592

452453

TICKET NUMBER 34609700

SUMMARY OF RESERVOIR PARAMETERS

USING HORNER METHOD FOR GAS WELLS

GAS GRAVITY	0.820	TEMPERATURE	253.0 °F
NET PAY	13.1 ft	POROSITY	10.0 %
RADIUS OF WELL BORE	0.401 ft	VISCOSITY	0.024 cp
GAS DEVIATION FACTOR	0.926	GAS PROPERTIES AT	4072.0 psig

SYSTEM COMPRESSIBILITY 145.72 $\times 10^{-6}$ vol/vol/psi

GAUGE NUMBER	931	931					
GAUGE DEPTH	8997.7	8997.7					
FLOW AND CIP PERIOD	1	2					UNITS
FINAL FLOW PRESSURE	2565.0	1689.6					psig
TOTAL FLOW TIME	566.0	870.1					min
CALC. STATIC PRESSURE P^*	4070.1	4071.6					psig
EXTRAPOLATED PRESSURE $m(P^*)$	996.3	996.9					$\frac{mmpsi^2}{cp}$
ONE CYCLE PRESSURE $m(P_{10})$	943.1	925.3					$\frac{mmpsi^2}{cp}$
PRODUCTION RATE Q		5508.0					MCFD
FLOW CAPACITY kh		89.7373					md-ft
PERMEABILITY k		6.85017					md
SKIN FACTOR S		5.6					
DAMAGE RATIO DR		1.8					
INDICATED RATE MAX AOF_1		7047.5					MCFD
INDICATED RATE MIN AOF_2		6230.4					MCFD
THEORETICAL RATE $DR \times AOF_1$		12747.3					MCFD
THEORETICAL RATE $DR \times AOF_2$		11269.3					MCFD
RADIUS OF INVESTIGATION r_i		540.8					ft

REMARKS:

NOTICE: THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM PRESSURE CHARTS, AND ARE FURNISHED YOU FOR YOUR INFORMATION. IN FURNISHING SUCH CALCULATIONS AND EVALUATIONS BASED THEREON, HALLIBURTON IS MERELY EXPRESSING ITS OPINION. YOU AGREE THAT HALLIBURTON MAKES NO WARRANTY EXPRESS OR IMPLIED AS TO THE ACCURACY OF SUCH CALCULATIONS OR OPINIONS, AND THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE, IN CONNECTION WITH SUCH OPINIONS.

452454

TICKET NUMBER 34609700

SUMMARY OF RESERVOIR PARAMETERS

USING CURVE MATCH METHOD FOR GAS WELLS

GAS GRAVITY 0.820 — TEMPERATURE 253.0 °F

NET PAY 13.1 ft — POROSITY 10.0 %

RADIUS OF WELLBORE 0.401 ft — VISCOSITY 0.024 cp

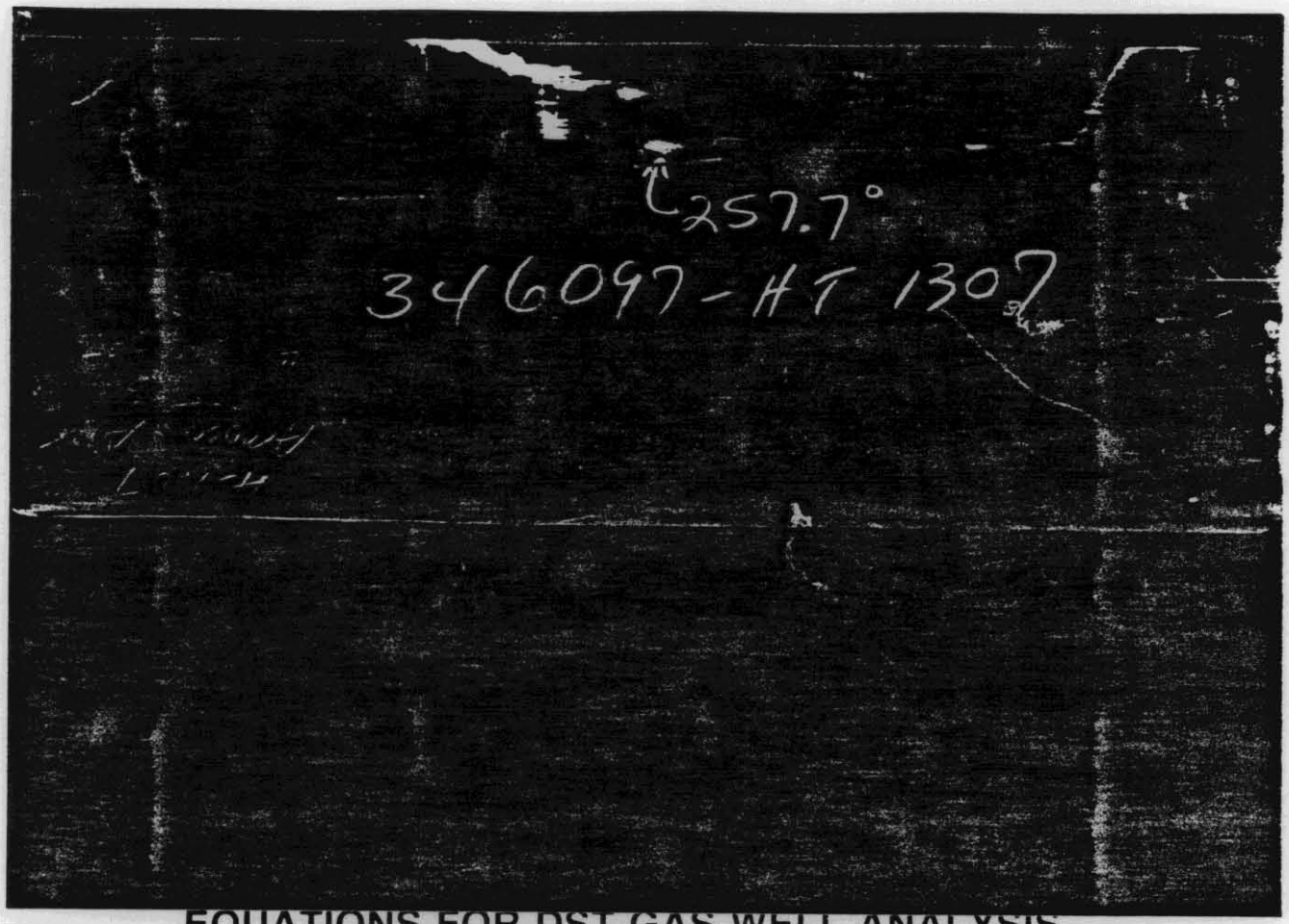
GAS DEVIATION FACTOR 0.926 — GAS PROPERTIES AT 4072.0 psig

SYSTEM COMPRESSIBILITY 145.72 $\times 10^{-6}$ vol/vol/psi

GAUGE NUMBER		931	931					
GAUGE DEPTH		8997.7	8997.7					
FLOW AND CIP PERIOD		1	2					UNITS
FINAL FLOW PRESSURE	P_f	2565.0	1689.6					psig
TOTAL FLOW TIME	t	566.0	870.1					min
PRODUCTION RATE	Q		5508.0					MCFD
t_d AT 1 HOUR			255808.					
P_d AT 100 psi			0.543					
C_d			55.3					
SKIN	S		5.0					
TRANSMISSIBILITY	kh/μ		3446.6					$\frac{md-ft}{cp}$
FLOW CAPACITY	kh		82.2602					md-ft
PERMEABILITY	k		6.27940					md
DAMAGE RATIO	DR		1.6					
RADIUS OF INVESTIGATION	r_i		517.8					ft

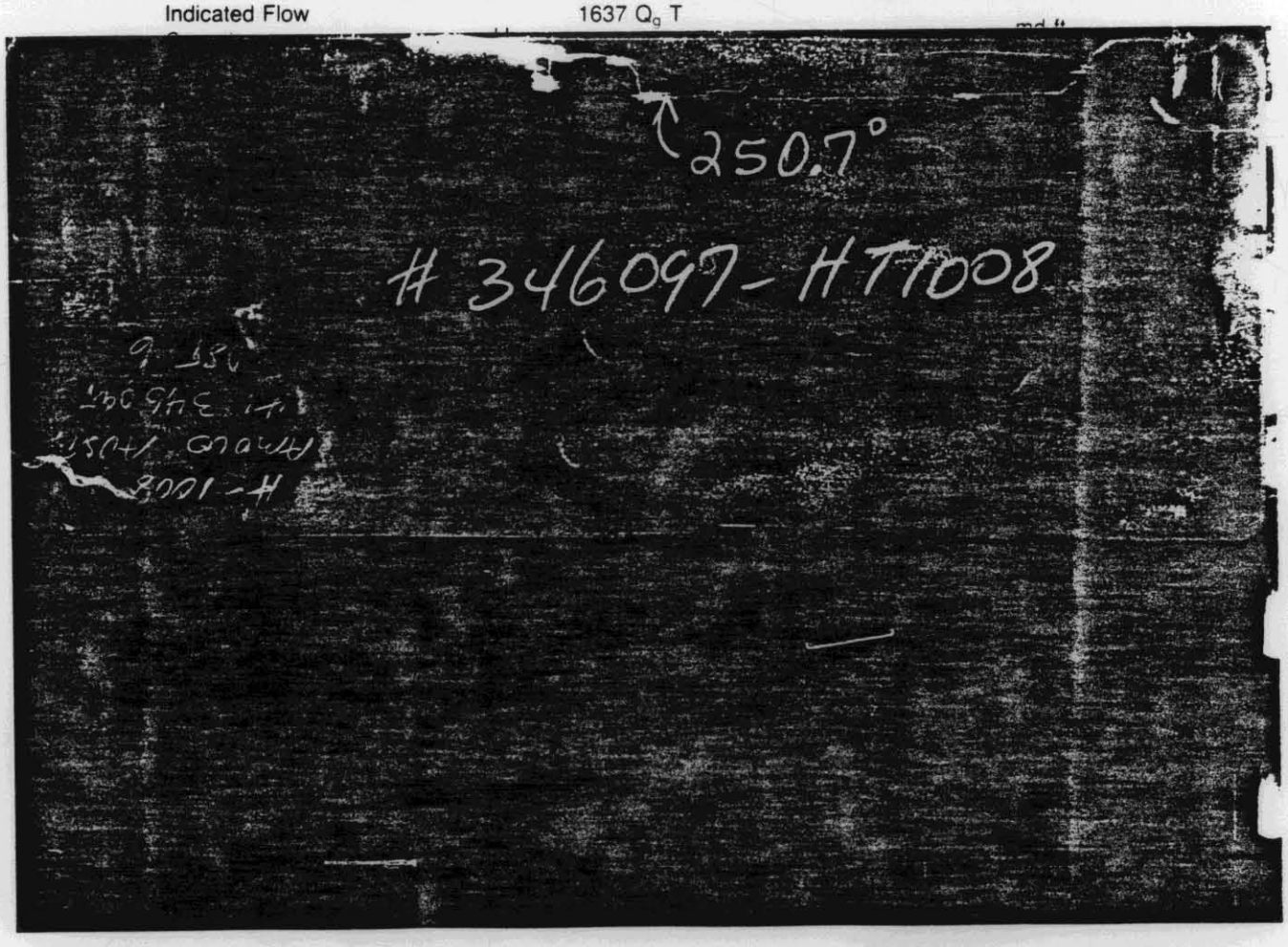
REMARKS:

NOTICE: THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM PRESSURE CHARTS, AND ARE FURNISHED YOU FOR YOUR INFORMATION. IN FURNISHING SUCH CALCULATIONS AND EVALUATIONS BASED THEREON, HALLIBURTON IS MERELY EXPRESSING ITS OPINION. YOU AGREE THAT HALLIBURTON MAKES NO WARRANTY EXPRESS OR IMPLIED AS TO THE ACCURACY OF SUCH CALCULATIONS OR OPINIONS, AND THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE, IN CONNECTION WITH SUCH OPINIONS.



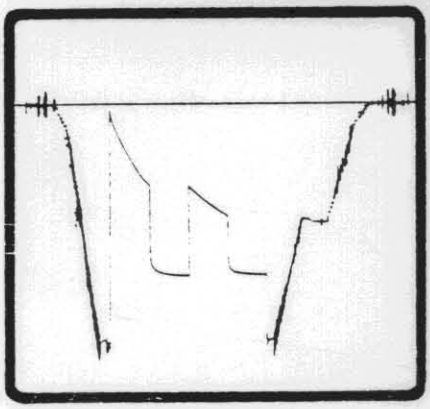
EQUATIONS FOR DST GAS WELL ANALYSIS

Indicated Flow $1637\ Q_g\ T$ md-ft



452456 Enclosure No. 20

FORMATION TESTING SERVICE REPORT



ECHO MEMORY GAUGE DATA

LEASE:	Pelican	WELL #:	5
TEST:	6	DATE:	10th April, 1986
EMR:	61775	EPG:	63148

HALLIBURTON SERVICES

Duncan, Oklahoma 73536

A Halliburton Company

452457

Halliburton Services
Drill Stem Testing

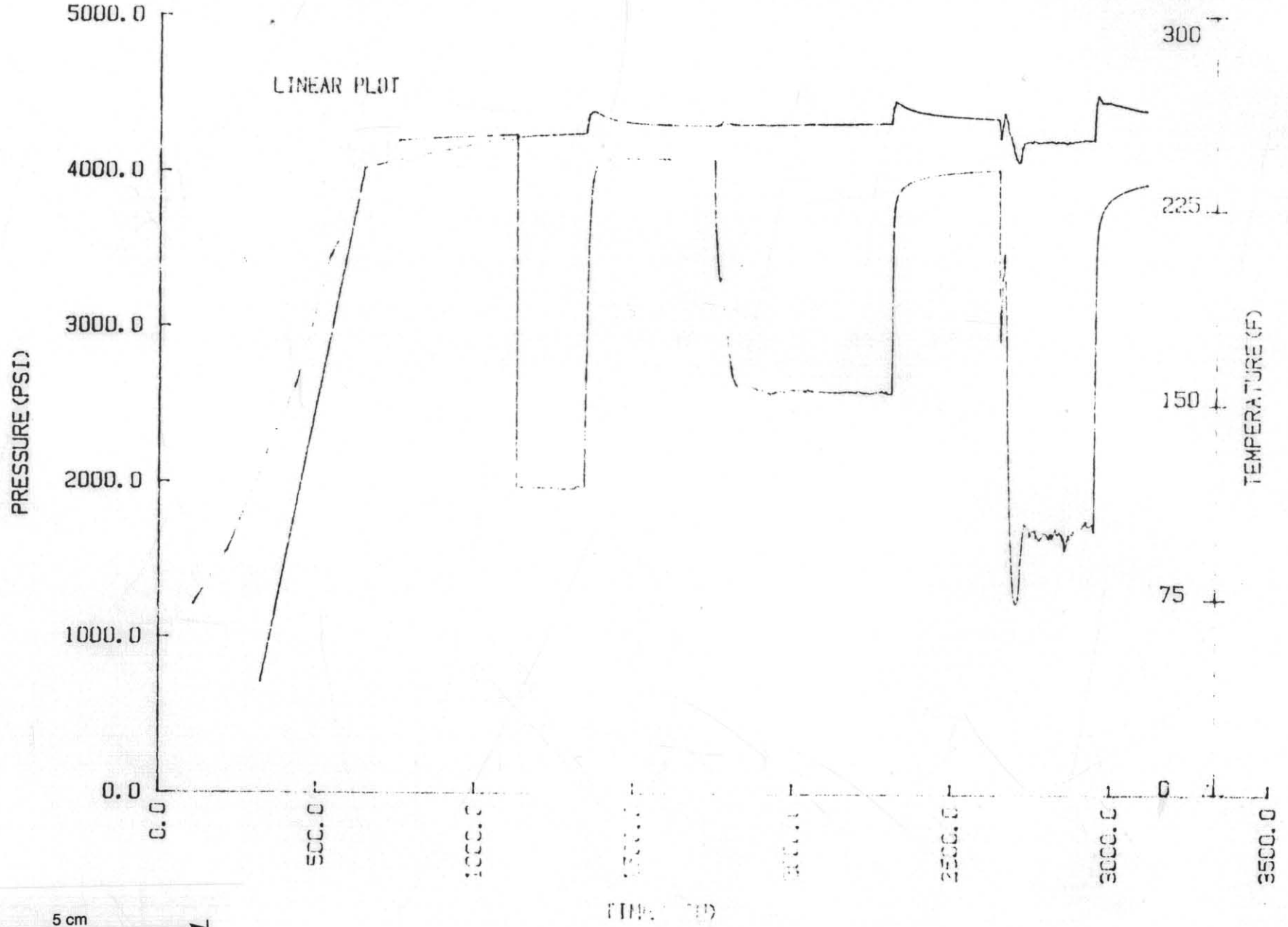
Owner: AMOCO PETROLEUM
Lease: PELICAN #5
Well # 5
Ticket # 230333
Date: 10 / 4 / 88
E.M.R. 61775 E.P.G. 63148
Test # 6
Start Time : 03:02:00

PLOTS

4524458

Lease Name: PELICAN #1 — Ticket no. 1 — Date 10 / 4 / 86

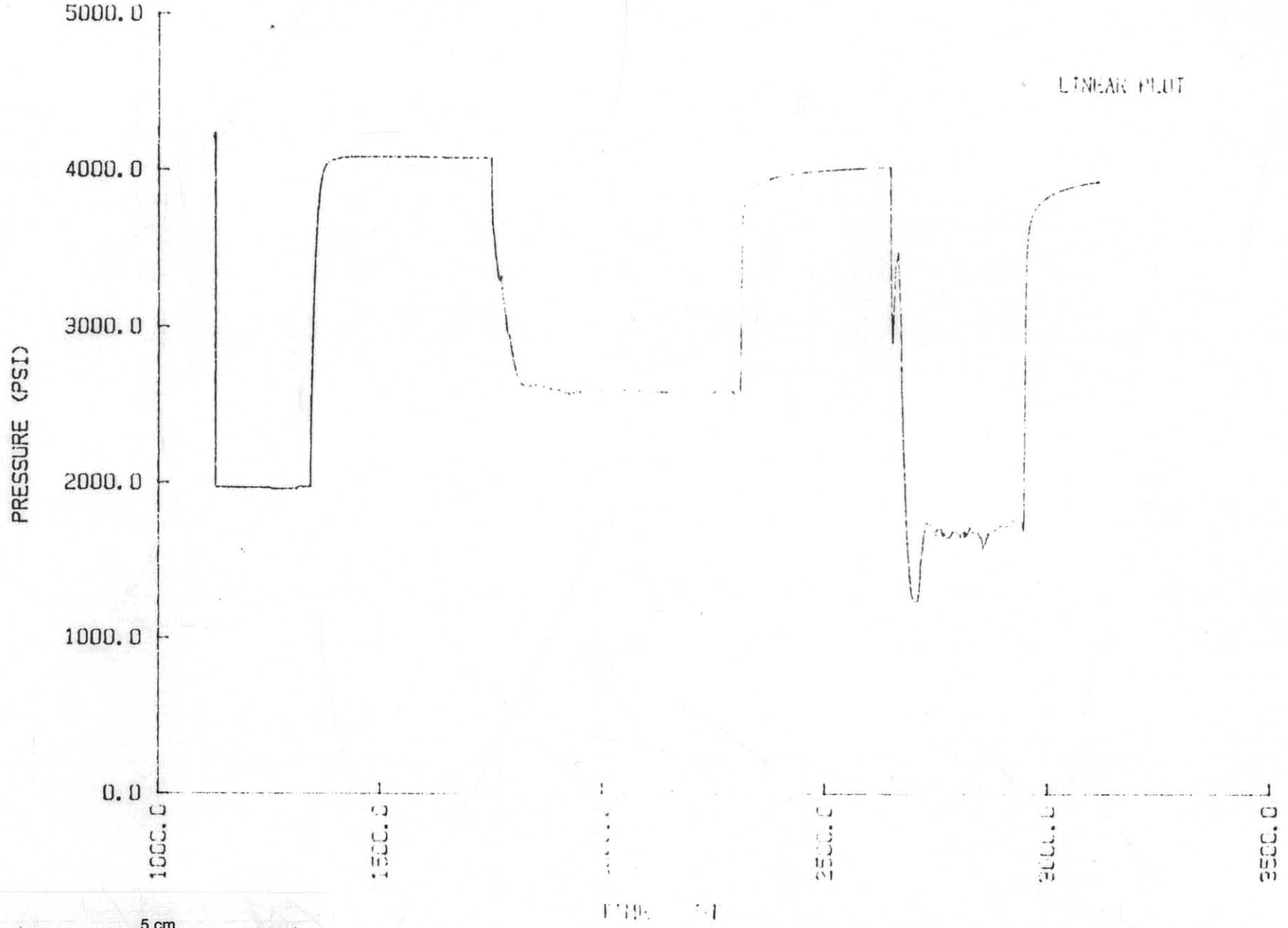
Lease Owner: AMOCO PETROLEUM — Start Time 03:02:08



452459

Lease Name PELICAN #5 Test no. 1 Date 12/ 6/ 86

Lease Owner AMOCO PETROLEUM Serial 0214-67, PI-1 Start Time 09:02:03



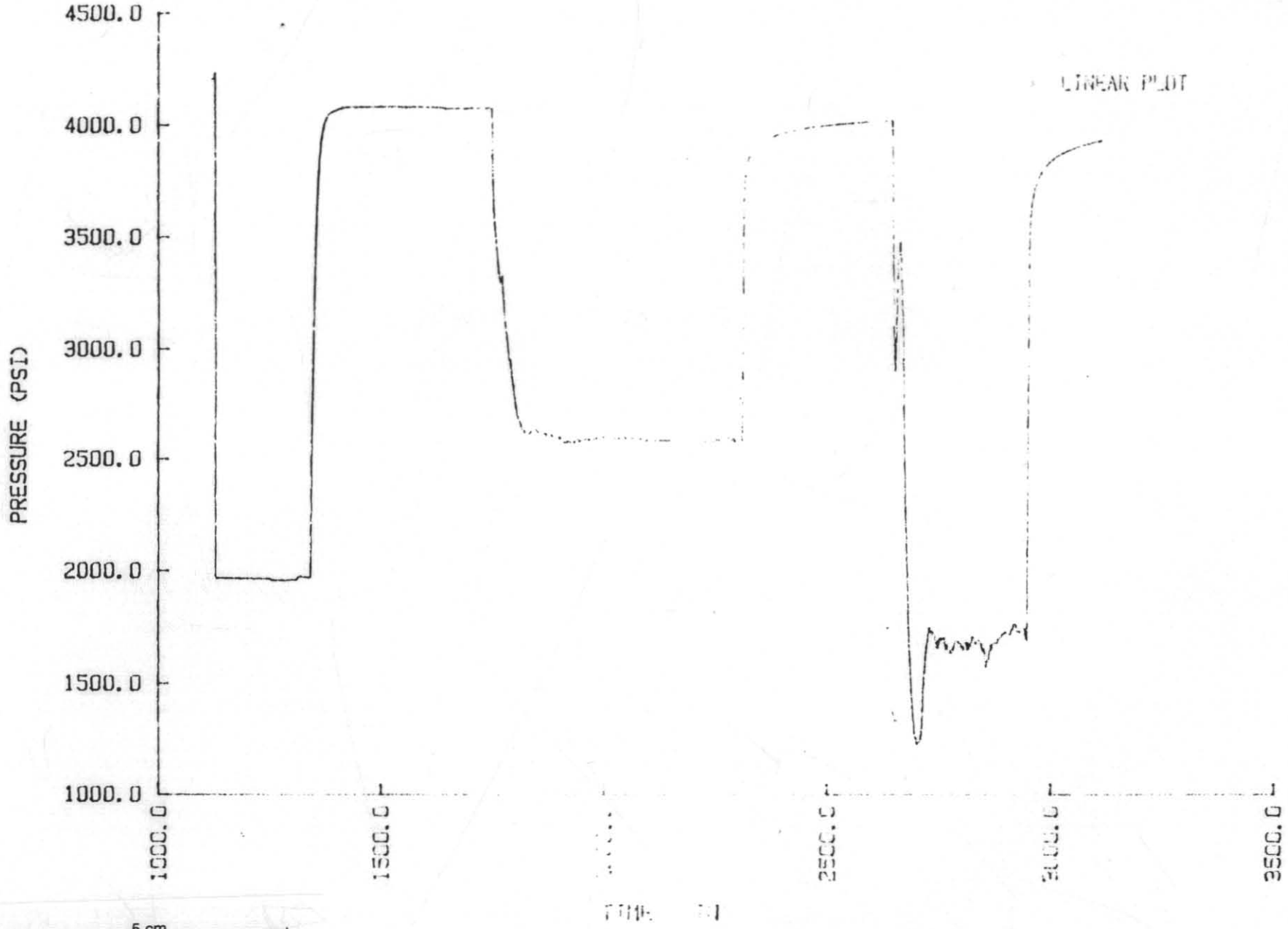
5 cm

452460

Lease Name PELICAN #5 Well no. Ticket no. 1 Date 10 / 4 / 86

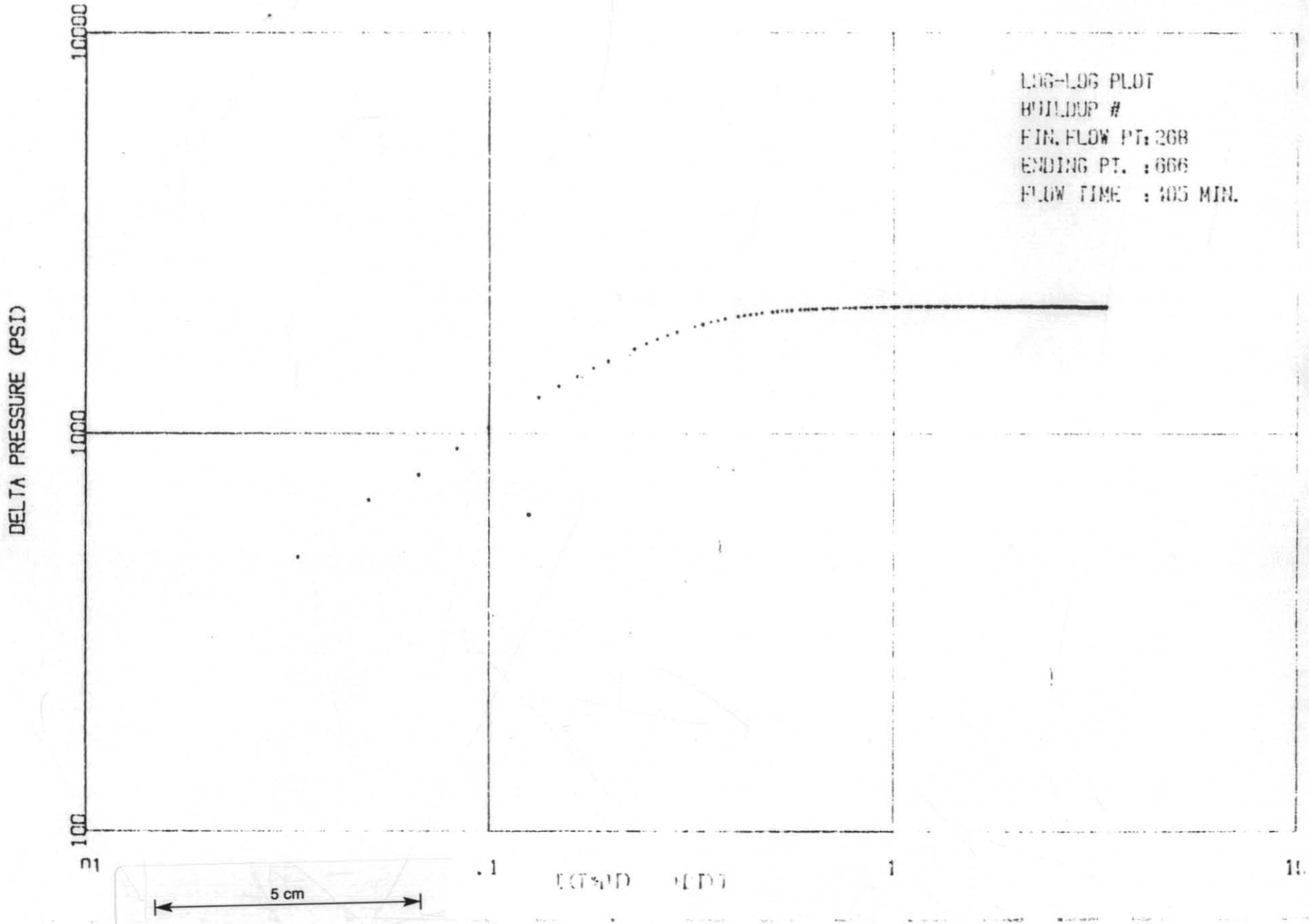
Lease Owner AMOCO PETROLEUM Test no. Zone Tested Start Time 03:02:00

LINEAR PLOT



452461

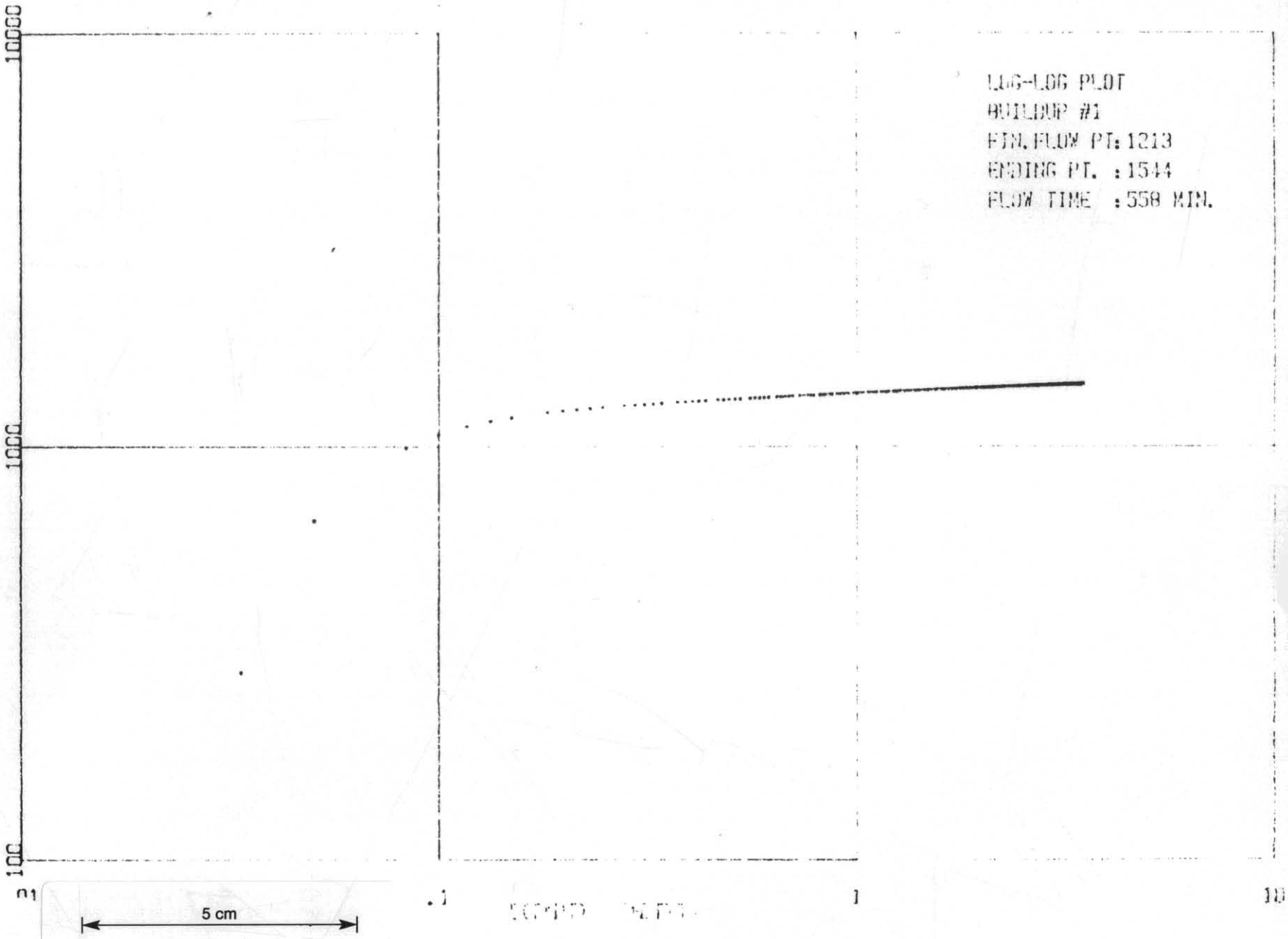
Lease Name PELICAN #5 | Test no. 1 | Date 10/4/86
Lease Owner AMOCO PETROLEUM | Strap. no. 6214 | Start Time 03:02:00



452462

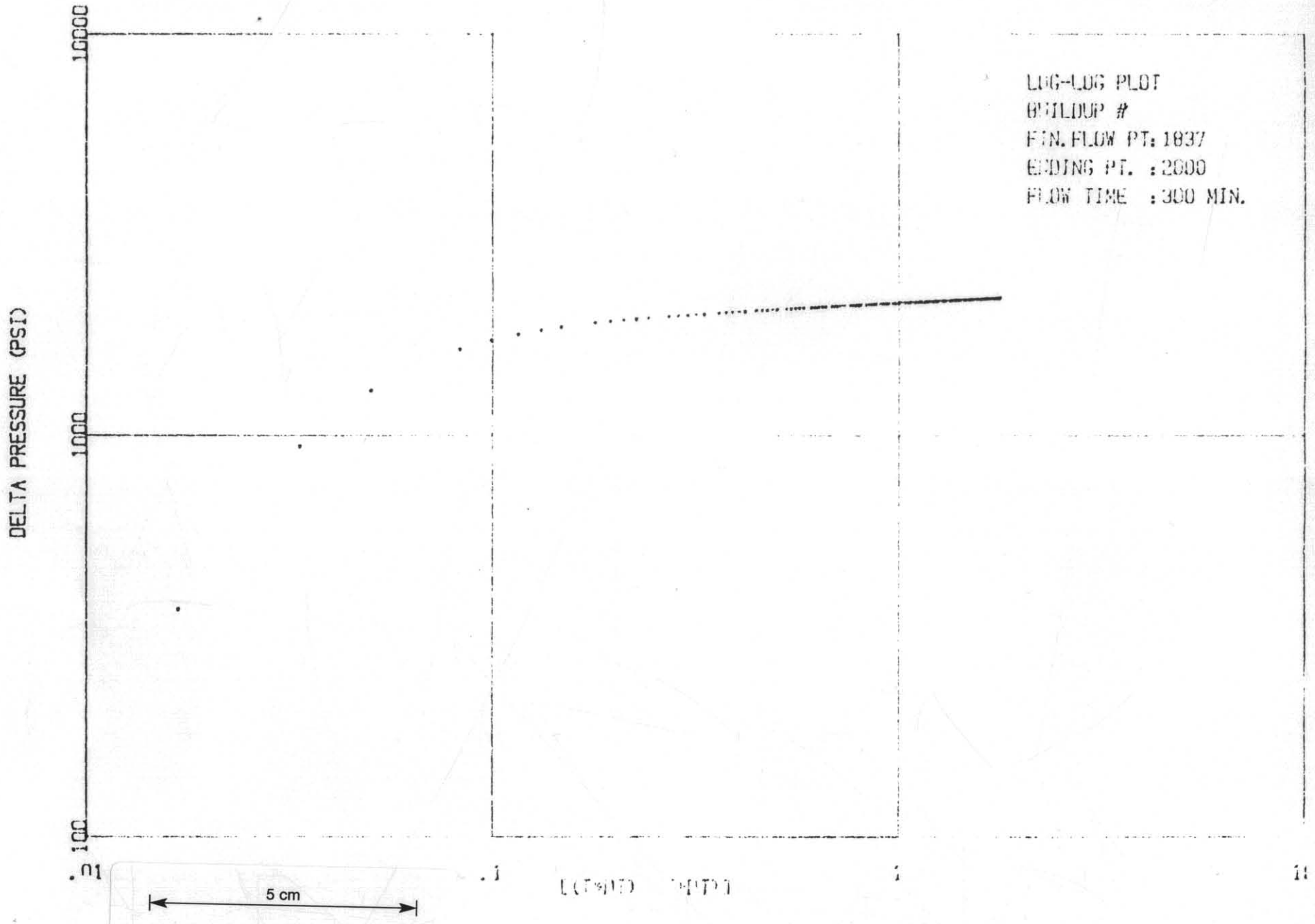
Lease Name PELICAN #5 Well no. Ticket no. 1 Date 10/4/86

Lease Owner AMOCO PETROLEUM Zone no. Page no. 03149 Start Time 03:00:00



452463

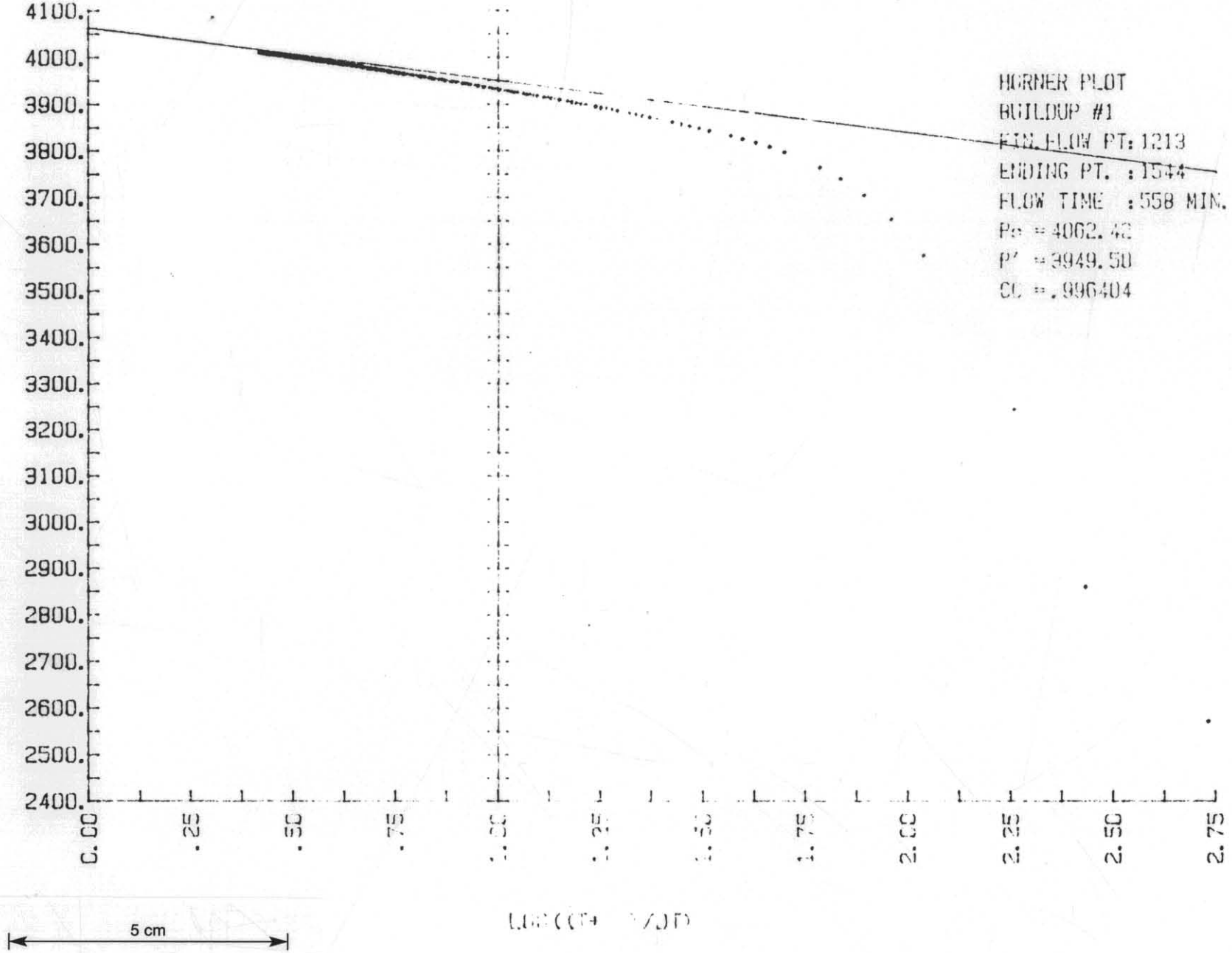
Lease Name PELICAN #5 Well no. 1 Fract no. 1 Date 10/4/86
Lease Owner AMOCO PETROLEUM Test no. 1 Page no. 0310 Start Time 03:02:00



452464

Lease Name PELICAN #5 — Ticket no. 1 — Date 10/4/86

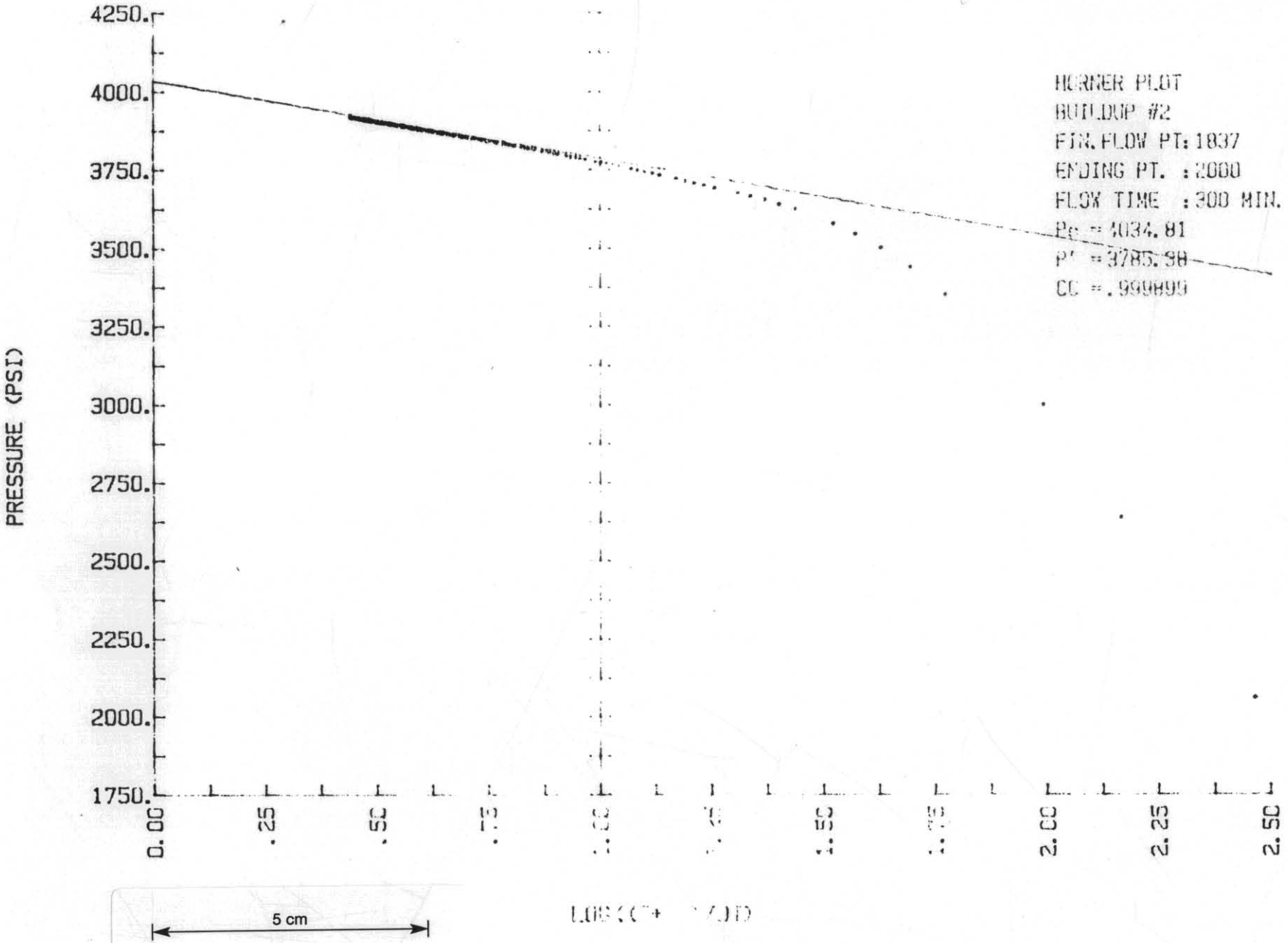
Lease Owner AMOCO PETROLEUM — Start Time 03:02:00



452465

Lease Name PELICAN #5 — Ticket no. [illegible] — Date 10/4/86

Lease Owner AMOCO PETROLEUM — Gage no. 03148 — Start Time 03:02:00



452466

Halliburton Services
Drill Stem Testing

Owner: AMOCO PETROLEUM
Lease: PELICAN #5
Well # 5
Ticket # 250549
Date: 10 / 4 / 86
E. M. R. 61775 E. P. G. 63148
Test # 6
Start Time : 03: 02: 00

DATA

Gauge Depth 9022 ft

DST SEQUENCE LOG (FROM OTIS)

452467

DATE/TIME	TUBING PRESSURE (PSI)	EVENT OR COMMENT
10/4/86		
13:55		R.I.H. SUBSEA TEST TREE
15:40		RIG UP SURFACE TEST TREE
15:41		SET PACKER
16:00		RIG UP SURFACE EQUIPMENT
16:08		PRESSURE TEST TUBING TO 5000 PSI
16:50		PRESSURE TEST CHOKE MANIFOLD TO 5000 PSI
17:20		OPEN SWAB VALVE AND TIW VALVE
17:25		CLOSE MIDDLE PIPE RAM & OPEN LPR-N TOOL
17:28		OTIS RUN IN HOLE WITH GAUGE RING
18:05		OTIS COMPLETED WIRELINE GAUGE RING RUN
19:00		RIG UP SCHLUMBERGER WIRELINE LUBRICATOR
19:05		BLED OFF ANNULUS PRESSURE TO CLOSE LPR-N TOOL
19:35		PRESSURE TEST SCHLUMBERGER WIRELINE LUBRICATOR TO 5000 PSI
19:48		PICK UP TEST STRING TO OPEN CIRCULATING PORTS
20:00		PUMP N2 INTO STRING TO DISPLACE WATER (3000 PSI)
21:26		CLOSE CIRCULATION PORTS
21:27		BLED DOWN TUBING PRESSURE TO 1250 PSI
21:47		CLOSED MIDDLE RAMS
21:50		OPENED LPR-N (ANNULUS PRESSURE: 1500 PSI
22:00		CLOSE TIW VALVE & BLEED OFF FLOW LINE PRESSURE
23:55		PRESSURE ABOVE TIW VALVE AND OPENED TIW VALVE (TUBING PRESSURE: 1350 PSI)
24:00		SCHLUMBERGER R.I.H. WITH PERFORATING GUNS
11/4/86		
01:26	1350	SCHLUMBERGER PERFORATED INTERVAL - SHUT AT CHOKE MANIFOLD
02:32	2620	SCHLUMBERGER TOOL IN LUBRICATOR
02:35		CLOSE TIW VALVE & BLED PRESSURE AT CHOKE MANIFOLD
02:42		OPEN KILL LINE VALVE
02:45		RIG DOWN SCHLUMBERGER TOOL & CLOSE CROWN VALVE

DST SEQUENCE LOG (FROM OTIS)

452468

DATE/TIME	TUBING PRESSURE (PSI)	EVENT OR COMMENT
11/4/86		
03:25		OPEN CROWN VALVE
04:00		RIG UP SCHLUMBERGER WIRELINE LUBRICATOR
06:05		PRESSURE 2700 PSI ON WIRELINE LUBRICATOR TO EQUALIZE ACROSS TIW VALVE
06:25	2700	OPEN TIW VALVE
06:30	2700	SCHLUMBERGER R.I.H. WITH OTIS H.P. GAUGE
08:00	2740	OTIS TOOL AT BOTTOM
08:05	2650	BLED DOWN PRESSURE BY 100 PSI TO CHECK BHSIT LATCHED
08:10	2675	
08:12	2675	WELL FLOWING ON 16/64 ADJUSTABLE CHOKE
08:25	1750	GAS TO SURFACE
08:30	1610	CONDENSATE TO SURFACE
08:33	1500	CHANGE CHOKE TO 24/64"
08:36	1460	RAT HOLE MUD GAS CUT
08:40	1535	SURGING W.H.P.
08:45	1525	GAS CUT MUD
09:20	1675	FLOWING GAS & CONDENSATE
09:52	1650	CHANGE TO POSITIVE CHOKE
10:30	1620	DIVERT FLOW THRU SEPARATOR
17:30	1625	SHUT IN AT BHSIT FOR INITIAL BUILDUP
23:07	1525	OPEN BHSIT
23:11	1875	OPEN THROUGH CHOKE MANIFOLD FOR 2ND FLOW - ON 16/64" CHOKE
23:14	1980	INCREASING CHOKE GRADUALLY TO 24/64"
23:20	2170	DRY GAS FLOWING BACK
23:30	1475	OPEN CHOKE TO 40/64"
23:35	1350	CONDENSATE & GAS
23:40	1110	OPEN CHOKE TO 48/64"
23:45	850	OPEN CHOKE TO 56/64"
23:50	600	OPEN CHOKE TO 68/64"
23:55	466	CHOKE ON 96/64"
12/4/86		
04:07	675	SHUT IN WELL BY BHSIT & CHOKE MANIFOLD

NUMBER	TIME	PSI/DEG.F	
1	0:04:50:00	72.11	T
2	0:06:38:00	92.83	T
3	0:08:26:00	704.74	
4	0:10:14:00	157.31	T
5	0:12:02:00	206.98	T
6	0:13:50:00	4020.24	
7	0:15:38:00	251.63	T
8	0:17:26:00	252.50	T
9	0:19:14:00	4162.45	
10	0:21:02:00	253.73	T
11	0:21:03:01	253.73	T
12	0:21:04:02	4208.36	
13	0:21:05:03	4208.69	
14	0:21:06:04	4209.03	
15	0:21:07:06	4209.32	
16	0:21:08:07	4209.61	
17	0:21:09:08	253.77	T
18	0:21:10:09	4209.87	
19	0:21:11:10	4210.21	
20	0:21:12:12	4210.42	
21	0:21:13:13	4191.35	
22	0:21:14:14	4191.97	
23	0:21:15:15	253.79	T
24	0:21:16:16	4192.90	
25	0:21:17:18	4193.23	
26	0:21:18:19	4193.53	
27	0:21:19:20	4193.74	
28	0:21:20:21	4194.07	
29	0:21:21:22	253.81	T
30	0:21:22:24	4194.33	
31	0:21:23:25	4194.37	
32	0:21:24:26	4194.79	
33	0:21:25:27	4198.34	
34	0:21:26:28	4198.68	
35	0:21:27:30	253.84	T
36	0:21:28:31	4199.44	
37	0:21:29:32	4199.85	
38	0:21:30:33	4200.27	
39	0:21:31:34	4200.65	
40	0:21:32:36	4201.07	
41	0:21:33:37	253.88	T
42	0:21:34:38	4201.83	
43	0:21:35:39	4202.25	
44	0:21:36:40	4202.62	
45	0:21:37:42	4203.00	
46	0:21:38:43	4203.33	
47	0:21:39:44	253.91	T
48	0:21:40:45	4204.14	
49	0:21:41:46	4204.47	
50	0:21:42:48	4204.85	
51	0:21:43:49	4205.27	
52	0:21:44:50	4205.60	
53	0:21:45:51	253.94	T
54	0:21:46:52	4206.36	
55	0:21:47:54	4206.74	
56	0:21:48:55	4207.16	
57	0:21:49:56	4229.96	
58	0:21:50:57	1967.52	
59	0:21:51:58	252.90	T
60	0:21:53:00	1964.37	
61	0:21:54:01	1964.14	
62	0:21:55:02	1964.14	
63	0:21:56:03	1964.26	
64	0:21:57:04	1964.29	
65	0:21:58:06	252.75	T
66	0:21:59:07	1964.29	
67	0:22:00:08	1964.33	
68	0:22:01:09	1964.40	
69	0:22:02:10	1964.40	
70	0:22:03:12	1964.48	
71	0:22:04:13	252.86	T
72	0:22:05:14	1964.28	
73	0:22:06:15	1964.13	
74	0:22:07:16	1964.17	
75	0:22:08:18	1964.25	
76	0:22:09:19	1964.25	
77	0:22:10:20	252.98	T
78	0:22:11:21	1964.20	
79	0:22:12:22	1964.15	
80	0:22:13:24	1964.05	
81	0:22:14:25	1964.01	
82	0:22:15:25	1964.05	
83	0:22:16:27	253.09	T
84	0:22:17:28	1963.97	
85	0:22:18:30	1963.89	
86	0:22:19:31	1963.85	
87	0:22:20:32	1963.85	
88	0:22:21:33	1963.85	
89	0:22:22:34	253.18	T
90	0:22:23:36	1963.84	
91	0:22:24:37	1963.84	
92	0:22:25:38	1963.80	
93	0:22:26:39	1963.76	
94	0:22:27:40	1963.68	
95	0:22:28:42	253.25	T
96	0:22:29:43	1963.63	
97	0:22:30:44	1963.63	
98	0:22:31:45	1963.55	
99	0:22:32:46	1963.47	
100	0:22:33:48	1963.47	
101	0:22:34:49	253.32	T
102	0:22:35:50	1963.42	
103	0:22:36:51	1963.38	
104	0:22:37:52	1963.30	
105	0:22:38:54	1963.26	
106	0:22:39:55	1963.14	
107	0:22:40:56	253.39	T
108	0:22:41:57	1963.01	
109	0:22:42:58	1962.97	
110	0:22:44:00	1962.89	
111	0:22:45:01	1962.81	
112	0:22:46:02	1962.74	
113	0:22:47:03	253.44	T
114	0:22:48:04	1962.68	
115	0:22:49:06	1962.64	

NUMBER	TIME	PSI/DEG.F	
16	0:22:50:07	1962.60	
17	0:22:51:08	1962.60	
118	0:22:52:09	1962.60	
119	0:22:53:10	253.52	T
120	0:22:54:12	1962.54	
121	0:22:55:13	1962.51	
122	0:22:56:14	1962.54	
123	0:22:57:15	1962.54	
124	0:22:58:16	1962.54	
125	0:22:59:18	253.52	T
126	0:23:00:19	1962.54	
127	0:23:01:20	1962.51	
128	0:23:02:21	1962.47	
129	0:23:03:22	1962.43	
130	0:23:04:24	1962.47	
131	0:23:05:25	253.56	T
132	0:23:06:26	1962.44	
133	0:23:07:27	1962.40	
134	0:23:08:28	1962.40	
135	0:23:09:30	1962.32	
136	0:23:10:31	1962.32	
137	0:23:11:32	253.61	T
138	0:23:12:33	1962.34	
139	0:23:13:34	1962.30	
[illegible]	[illegible]	1962.30	
[illegible]	[illegible]	1962.22	
142	0:23:16:38	1962.15	
143	0:23:17:39	253.66	T
44	0:23:18:40	1962.12	
45	0:23:19:42	1962.16	
146	0:23:20:43	1962.12	
147	0:23:21:44	1962.12	
148	0:23:22:45	1962.08	
149	0:23:23:46	253.70	T
150	0:23:24:48	1961.98	
151	0:23:25:49	1962.02	
152	0:23:26:50	1961.90	
153	0:23:27:51	1961.90	
154	0:23:28:52	1961.94	
155	0:23:29:54	253.74	T
156	0:23:30:55	1961.92	
157	0:23:31:56	1961.99	
158	0:23:32:57	1961.95	
159	0:23:33:58	1961.92	
160	0:23:35:00	1961.92	
161	0:23:36:01	253.78	T
162	0:23:37:02	1961.85	
163	0:23:38:03	1961.85	
164	0:23:39:04	1961.77	
165	0:23:40:06	1961.77	
166	0:23:41:07	1961.69	
167	0:23:42:08	253.81	T
168	0:23:43:09	1961.63	
169	0:23:44:10	1961.59	
170	0:23:45:12	1961.63	
171	0:23:46:13	1961.59	
172	0:23:47:14	1961.59	
73	0:23:48:15	253.85	T

NUMBER	TIME	PSI/DEG.F	
174	0:23:49:16	1961.72	
175	0:23:50:18	1961.80	
176	0:23:51:19	1961.76	
177	0:23:52:20	1961.80	
178	0:23:53:21	1961.80	
179	0:23:54:22	253.89	T
180	0:23:55:24	1957.79	
181	0:23:56:25	1956.70	
182	0:23:57:26	1955.72	
183	0:23:58:27	1954.98	
184	0:23:59:28	1954.56	
185	1:00:00:30	253.91	T
186	1:00:01:31	1954.41	
187	1:00:02:32	1954.29	
188	1:00:03:33	1954.25	
189	1:00:04:34	1954.25	
190	1:00:05:36	1954.09	
191	1:00:06:37	253.94	T
192	1:00:07:38	1953.91	
193	1:00:08:39	1953.95	
194	1:00:09:40	1953.95	
195	1:00:10:42	1953.91	
196	1:00:11:43	1953.99	
197	1:00:12:44	253.98	T
198	1:00:13:45	1954.16	
199	1:00:14:46	1954.27	
200	1:00:15:48	1954.27	
201	1:00:16:49	1954.35	
202	1:00:17:50	1954.35	
203	1:00:18:51	254.02	T
204	1:00:19:52	1954.50	
205	1:00:20:54	1954.64	
206	1:00:21:55	1954.67	
207	1:00:22:56	1954.75	
208	1:00:23:57	1954.75	
209	1:00:24:58	254.05	T
210	1:00:26:00	1954.92	
211	1:00:27:01	1954.96	
212	1:00:28:02	1955.07	
213	1:00:29:03	1955.11	
214	1:00:30:04	1955.23	
215	1:00:31:05	254.09	T
216	1:00:32:07	1955.63	
217	1:00:33:08	1955.75	
218	1:00:34:09	1955.83	
219	1:00:35:10	1956.02	
220	1:00:36:12	1956.10	
221	1:00:37:13	254.11	T
222	1:00:38:14	1956.58	
223	1:00:39:15	1956.61	
224	1:00:40:16	1956.61	
225	1:00:41:18	1956.73	
226	1:00:42:19	1956.81	
227	1:00:43:20	254.15	T
228	1:00:44:21	1957.02	
229	1:00:45:22	1957.17	
230	1:00:46:24	1957.33	
231	1:00:47:25	1957.37	

NUMBER	TIME	PSI/DEG.F	
2	1:00:48:26	1957.48	
233	1:00:49:27	254.18	T
234	1:00:50:28	1957.65	
235	1:00:51:30	1957.77	
236	1:00:52:31	1957.81	
237	1:00:53:32	1958.63	
238	1:00:54:33	1958.51	
239	1:00:55:34	254.19	T
240	1:00:56:36	1966.12	
241	1:00:57:37	1969.63	
242	1:00:58:38	1969.82	
243	1:00:59:39	1971.93	
244	1:01:00:40	1973.53	
245	1:01:01:42	254.23	T
246	1:01:02:43	1974.75	
247	1:01:03:44	1974.67	
248	1:01:04:45	1970.69	
249	1:01:05:46	1970.26	
250	1:01:06:48	1969.99	
251	1:01:07:49	254.27	T
252	1:01:08:50	1967.62	
253	1:01:09:51	1968.72	
254	1:01:10:52	1967.94	
255	1:01:11:54	1970.16	
256	1:01:12:55	1969.89	
257	1:01:13:56	254.29	T
258	1:01:14:57	1969.31	
259	1:01:15:58	1968.10	
260	1:01:17:00	1968.10	
261	1:01:18:01	1969.89	
262	1:01:19:02	1969.70	
263	1:01:20:03	254.35	T
264	1:01:21:04	1968.04	
265	1:01:22:06	1968.23	
266	1:01:23:07	1968.58	
267	1:01:24:08	1968.31	
268	1:01:25:09	1967.96	
269	1:01:26:10	254.38	T
270	1:01:27:12	2463.97	
271	1:01:28:13	2660.50	
272	1:01:29:14	2769.13	
273	1:01:30:15	2898.32	
274	1:01:31:16	3016.11	
275	1:01:32:18	259.76	T
276	1:01:33:19	3217.35	
277	1:01:34:20	3300.97	
278	1:01:35:21	3380.49	
279	1:01:36:22	3448.24	
280	1:01:37:24	3511.09	
281	1:01:38:25	261.83	T
282	1:01:39:26	3622.99	
283	1:01:40:27	3671.36	
284	1:01:41:28	3715.12	
285	1:01:42:30	3754.56	
286	1:01:43:31	3790.37	
287	1:01:44:32	262.68	T
288	1:01:45:33	3850.83	
289	1:01:46:34	3876.20	

NUMBER	TIME	PSI/DEG.F	
290	1:01:47:36	3897.85	
291	1:01:48:37	3918.77	
292	1:01:49:38	3935.07	
293	1:01:50:39	262.84	T
294	1:01:51:40	3962.95	
295	1:01:52:42	3973.20	
296	1:01:53:43	3983.54	
297	1:01:54:44	3991.60	
298	1:01:55:45	4001.86	
299	1:01:56:46	262.63	T
300	1:01:57:48	4014.52	
301	1:01:58:49	4020.29	
302	1:01:59:50	4025.45	
303	1:02:00:51	4030.15	
304	1:02:01:52	4034.14	
305	1:02:02:54	262.22	T
306	1:02:03:55	4041.05	
307	1:02:04:56	4043.76	
308	1:02:05:57	4046.25	
309	1:02:06:58	4048.17	
310	1:02:08:00	4050.08	
311	1:02:09:01	261.73	T
312	1:02:10:02	4052.78	
313	1:02:11:03	4054.57	
314	1:02:12:04	4055.74	
315	1:02:13:05	4056.70	
316	1:02:14:07	4058.03	
317	1:02:15:08	261.30	T
318	1:02:16:09	4060.10	
319	1:02:17:10	4060.97	
320	1:02:18:12	4061.35	
321	1:02:19:13	4062.10	
322	1:02:20:14	4063.18	
323	1:02:21:15	260.88	T
324	1:02:22:16	4065.56	
325	1:02:23:18	4066.51	
326	1:02:24:19	4067.30	
327	1:02:25:20	4068.10	
328	1:02:26:21	4068.80	
329	1:02:27:22	260.68	T
330	1:02:28:24	4070.20	
331	1:02:29:25	4070.99	
332	1:02:30:26	4071.66	
333	1:02:31:27	4072.24	
334	1:02:32:28	4072.45	
335	1:02:33:30	260.42	T
336	1:02:34:31	4073.71	
337	1:02:35:32	4074.25	
338	1:02:36:33	4074.63	
339	1:02:37:34	4075.13	
340	1:02:38:36	4075.54	
341	1:02:39:37	260.18	T
342	1:02:40:38	4076.23	
343	1:02:41:39	4076.56	
344	1:02:42:40	4076.93	
345	1:02:43:42	4077.18	
346	1:02:44:43	4077.48	
347	1:02:45:44	259.92	T

NUMBER	TIME	PSI/DEG.F	
348	1:02:46:45	4077.99	
349	1:02:47:46	4078.28	
350	1:02:48:48	4078.44	
351	1:02:49:49	4078.65	
352	1:02:50:50	4078.82	
353	1:02:51:51	259.69	T
354	1:02:52:52	4079.21	
355	1:02:53:54	4079.42	
356	1:02:54:55	4079.55	
357	1:02:55:56	4079.84	
358	1:02:56:57	4079.80	
359	1:02:57:58	259.48	T
360	1:02:59:00	4079.95	
361	1:03:00:01	4079.91	
362	1:03:01:02	4080.15	
363	1:03:02:03	4080.15	
364	1:03:03:04	4080.07	
365	1:03:04:06	259.33	T
366	1:03:05:07	4079.82	
367	1:03:06:08	4079.74	
368	1:03:07:09	4079.78	
369	1:03:08:10	4079.82	
370	1:03:09:12	4079.86	
371	1:03:10:13	259.15	T
372	1:03:11:14	4079.98	
373	1:03:12:15	4080.02	
374	1:03:13:16	4080.15	
375	1:03:14:18	4079.90	
6	1:03:15:19	4079.65	
377	1:03:16:20	258.99	T
378	1:03:17:21	4079.56	
379	1:03:18:22	4079.31	
380	1:03:19:24	4079.48	
381	1:03:20:25	4079.64	
382	1:03:21:26	4079.85	
383	1:03:22:27	258.89	T
384	1:03:23:28	4079.91	
385	1:03:24:30	4079.86	
386	1:03:25:31	4079.78	
387	1:03:26:32	4079.66	
388	1:03:27:33	4079.70	
389	1:03:28:34	258.78	T
390	1:03:29:36	4079.00	
391	1:03:30:37	4078.84	
392	1:03:31:38	4079.13	
393	1:03:32:39	4079.46	
394	1:03:33:40	4079.67	
395	1:03:34:42	258.68	T
396	1:03:35:43	4079.52	
397	1:03:36:44	4079.68	
398	1:03:37:45	4079.47	
399	1:03:38:46	4079.39	
400	1:03:39:48	4079.35	
401	1:03:40:49	258.57	T
402	1:03:41:50	4079.03	
403	1:03:42:51	4078.98	
4	1:03:43:52	4078.78	
405	1:03:44:54	4078.61	

NUMBER	TIME	PSI/DEG.F	
406	1:03:45:55	4079.07	
407	1:03:46:56	258.47	T
408	1:03:47:57	4079.04	
409	1:03:48:58	4079.29	
410	1:03:50:00	4079.04	
411	1:03:51:01	4079.21	
412	1:03:52:02	4079.29	
413	1:03:53:03	258.37	T
414	1:03:54:04	4079.10	
415	1:03:55:06	4079.14	
416	1:03:56:07	4079.22	
417	1:03:57:08	4079.56	
418	1:03:58:09	4079.89	
419	1:03:59:10	258.29	T
420	1:04:00:12	4080.45	
421	1:04:01:13	4080.53	
422	1:04:02:14	4080.62	
423	1:04:03:15	4080.66	
424	1:04:04:16	4080.91	
425	1:04:05:18	258.21	T
426	1:04:06:19	4080.55	
427	1:04:07:20	4080.47	
428	1:04:08:21	4080.30	
429	1:04:09:22	4080.39	
430	1:04:10:24	4080.43	
431	1:04:11:25	258.12	T
432	1:04:12:26	4080.53	
433	1:04:13:27	4080.53	
434	1:04:14:28	4080.57	
435	1:04:15:30	4080.57	
436	1:04:16:31	4080.53	
437	1:04:17:32	258.05	T
438	1:04:18:33	4080.55	
439	1:04:19:34	4080.43	
440	1:04:20:36	4080.51	
441	1:04:21:37	4080.47	
442	1:04:22:38	4080.47	
443	1:04:23:39	257.98	T
444	1:04:24:40	4080.49	
445	1:04:25:42	4080.45	
446	1:04:26:43	4080.45	
447	1:04:27:44	4080.28	
448	1:04:28:45	4080.12	
449	1:04:29:46	257.91	T
450	1:04:30:48	4079.85	
451	1:04:31:49	4079.85	
452	1:04:32:50	4079.68	
453	1:04:33:51	4079.64	
454	1:04:34:52	4079.55	
455	1:04:35:54	257.90	T
456	1:04:36:55	4079.47	
457	1:04:37:56	4079.63	
458	1:04:38:57	4079.80	
459	1:04:39:58	4079.84	
460	1:04:41:00	4079.68	
461	1:04:42:01	257.90	T
462	1:04:43:02	4079.30	
463	1:04:44:03	4079.09	

NUMBER	TIME	PSI/DEG.F	
4	1:04:45:04	4078.93	
5	1:04:46:06	4078.76	
466	1:04:47:07	4078.59	
467	1:04:48:08	257.83	T
468	1:04:49:09	4078.16	
469	1:04:50:10	4077.95	
470	1:04:51:12	4077.74	
471	1:04:52:13	4077.45	
472	1:04:53:14	4076.87	
473	1:04:54:15	257.77	T
474	1:04:55:16	4077.48	
475	1:04:56:18	4077.81	
476	1:04:57:19	4078.06	
477	1:04:58:20	4078.27	
478	1:04:59:21	4078.39	
479	1:05:00:22	257.76	T
480	1:05:01:24	4078.51	
481	1:05:02:25	4078.51	
482	1:05:03:26	4078.39	
483	1:05:04:27	4078.18	
484	1:05:05:28	4078.14	
485	1:05:06:30	257.73	T
486	1:05:07:31	4078.26	
487	1:05:08:32	4078.21	
488	1:05:09:33	4078.25	
489	1:05:10:34	4078.30	
490	1:05:11:36	4078.55	
491	1:05:12:37	257.71	T
492	1:05:13:38	4079.71	
3	1:05:14:39	4079.83	
4	1:05:15:40	4079.67	
495	1:05:16:42	4079.62	
496	1:05:17:43	4079.50	
497	1:05:18:44	257.68	T
498	1:05:19:45	4079.32	
499	1:05:20:46	4079.20	
500	1:05:21:48	4079.07	
501	1:05:22:49	4079.07	
502	1:05:23:50	4079.03	
503	1:05:24:51	257.65	T
504	1:05:25:52	4078.82	
505	1:05:26:54	4078.78	
506	1:05:27:55	4078.65	
507	1:05:28:56	4078.61	
508	1:05:29:57	4078.53	
509	1:05:30:58	257.62	T
510	1:05:32:00	4078.27	
511	1:05:33:01	4078.18	
512	1:05:34:02	4078.18	
513	1:05:35:03	4078.14	
514	1:05:36:04	4078.10	
515	1:05:37:06	257.60	T
516	1:05:38:07	4077.93	
517	1:05:39:08	4077.80	
518	1:05:40:09	4077.64	
519	1:05:41:10	4077.55	
520	1:05:42:12	4077.39	
21	1:05:43:13	257.57	T

NUMBER	TIME	PSI/DEG.F	
522	1:05:44:14	4077.09	
523	1:05:45:15	4076.88	
524	1:05:46:16	4076.71	
525	1:05:47:18	4076.63	
526	1:05:48:19	4076.55	
527	1:05:49:20	257.55	T
528	1:05:50:21	4076.41	
529	1:05:51:22	4076.33	
530	1:05:52:24	4076.16	
531	1:05:53:25	4076.12	
532	1:05:54:26	4076.00	
533	1:05:55:27	257.52	T
534	1:05:56:28	4075.87	
535	1:05:57:30	4075.78	
536	1:05:58:31	4075.70	
537	1:05:59:32	4075.66	
538	1:06:00:33	4075.62	
539	1:06:01:34	257.50	T
540	1:06:02:36	4075.49	
541	1:06:03:37	4075.53	
542	1:06:04:38	4075.45	
543	1:06:05:39	4075.45	
544	1:06:06:40	4075.40	
545	1:06:07:42	257.48	T
546	1:06:08:43	4075.27	
547	1:06:09:44	4075.27	
548	1:06:10:45	4075.19	
549	1:06:11:46	4075.19	
550	1:06:12:48	4075.40	
551	1:06:13:49	257.46	T
552	1:06:14:50	4075.35	
553	1:06:15:51	4075.31	
554	1:06:16:52	4075.23	
555	1:06:17:54	4075.14	
556	1:06:18:55	4075.02	
557	1:06:19:56	257.44	T
558	1:06:20:57	4074.80	
559	1:06:21:58	4074.72	
560	1:06:23:00	4074.76	
561	1:06:24:01	4074.68	
562	1:06:25:02	4073.01	
563	1:06:26:03	257.42	T
564	1:06:27:04	4070.42	
565	1:06:28:06	4070.59	
566	1:06:29:07	4070.55	
567	1:06:30:08	4070.63	
568	1:06:31:09	4070.80	
569	1:06:32:10	257.40	T
570	1:06:33:12	4070.96	
571	1:06:34:13	4071.13	
572	1:06:35:14	4071.13	
573	1:06:36:15	4071.25	
574	1:06:37:16	4071.29	
575	1:06:38:18	257.41	T
576	1:06:39:19	4071.25	
577	1:06:40:20	4071.25	
578	1:06:41:21	4071.17	
579	1:06:42:22	4071.17	

NUMBER	TIME	PSI/DEG.F	
580	1:06:43:24	4071.17	
581	1:06:44:25	257.41	T
582	1:06:45:26	4071.09	
583	1:06:46:27	4071.09	
584	1:06:47:28	4071.05	
585	1:06:48:30	4071.09	
586	1:06:49:31	4071.05	
587	1:06:50:32	257.41	T
588	1:06:51:33	4070.92	
589	1:06:52:34	4070.88	
590	1:06:53:36	4070.84	
591	1:06:54:37	4070.92	
592	1:06:55:38	4070.88	
593	1:06:56:39	257.41	T
594	1:06:57:40	4070.80	
595	1:06:58:42	4070.75	
596	1:06:59:43	4070.75	
597	1:07:00:44	4070.75	
598	1:07:01:45	4070.75	
599	1:07:02:46	257.40	T
600	1:07:03:48	4070.84	
601	1:07:04:49	4070.92	
602	1:07:05:50	4071.00	
603	1:07:06:51	4071.04	
604	1:07:07:52	4071.13	
605	1:07:08:54	257.39	T
606	1:07:09:55	4071.33	
607	1:07:10:56	4071.54	
608	1:07:11:57	4071.67	
609	1:07:12:58	4071.92	
610	1:07:14:00	4072.04	
611	1:07:15:01	257.38	T
612	1:07:16:02	4071.70	
613	1:07:17:03	4071.62	
614	1:07:18:04	4071.58	
615	1:07:19:06	4071.54	
616	1:07:20:07	4071.70	
617	1:07:21:08	257.36	T
618	1:07:22:09	4071.74	
619	1:07:23:10	4071.74	
620	1:07:24:12	4071.66	
621	1:07:25:13	4073.45	
622	1:07:26:14	4072.16	
623	1:07:27:15	257.36	T
624	1:07:28:16	4072.78	
625	1:07:29:18	4072.57	
626	1:07:30:19	4072.87	
627	1:07:31:20	4071.82	
628	1:07:32:21	4071.28	
629	1:07:33:22	257.33	T
630	1:07:34:24	4069.90	
631	1:07:35:25	4069.44	
632	1:07:36:26	4070.07	
633	1:07:37:27	4069.11	
634	1:07:38:28	4069.69	
635	1:07:39:30	257.32	T
636	1:07:40:31	4070.86	
637	1:07:41:32	4073.31	

NUMBER	TIME	PSI/DEG.F	
638	1:07:42:33	4073.98	
639	1:07:43:34	4074.77	
640	1:07:44:36	4075.23	
641	1:07:45:37	257.33	T
642	1:07:46:38	4071.77	
643	1:07:47:39	4075.07	
644	1:07:48:40	4072.36	
645	1:07:49:42	4072.07	
646	1:07:50:43	4072.07	
647	1:07:51:44	257.32	T
648	1:07:52:45	4071.69	
649	1:07:53:46	4069.81	
650	1:07:54:48	4071.44	
651	1:07:55:49	4071.06	
652	1:07:56:50	4071.15	
653	1:07:57:51	257.31	T
654	1:07:58:52	4072.77	
655	1:07:59:54	4073.06	
656	1:08:00:55	4073.18	
657	1:08:01:56	4073.31	
658	1:08:02:57	4073.31	
659	1:08:03:58	257.32	T
660	1:08:05:00	4073.27	
661	1:08:06:01	4073.31	
662	1:08:07:02	4073.35	
663	1:08:08:03	4073.35	
664	1:08:09:04	4073.40	
665	1:08:10:06	257.31	T
666	1:08:11:07	4073.35	
667	1:08:12:08	3858.72	
668	1:08:13:09	3749.30	
669	1:08:14:10	3660.96	
670	1:08:15:12	3612.10	
671	1:08:16:13	257.41	T
672	1:08:17:14	3562.85	
673	1:08:18:15	3538.58	
674	1:08:19:16	3510.82	
675	1:08:20:18	3476.82	
676	1:08:21:19	3445.22	
677	1:08:22:20	257.74	T
678	1:08:23:21	3390.01	
679	1:08:24:22	3366.12	
680	1:08:25:24	3343.15	
681	1:08:26:25	3321.53	
682	1:08:27:26	3299.56	
683	1:08:28:27	257.71	T
684	1:08:29:28	3287.92	
685	1:08:30:30	3292.76	
686	1:08:31:31	3302.36	
687	1:08:32:32	3313.26	
688	1:08:33:33	3321.44	
689	1:08:34:34	259.12	T
690	1:08:35:36	3245.20	
691	1:08:36:37	3208.68	
692	1:08:37:38	3176.94	
693	1:08:38:39	3145.32	
694	1:08:39:40	3114.09	
695	1:08:40:42	258.25	T

NUMBER	TIME	PSI/DEG.F	
76	1:08:41:43	3071.20	
97	1:08:42:44	3065.71	
698	1:08:43:45	3047.71	
699	1:08:44:46	3018.43	
700	1:08:45:48	2990.67	
701	1:08:46:49	258.18	T
702	1:08:47:50	2945.85	
703	1:08:48:51	2948.26	
704	1:08:49:52	2950.44	
705	1:08:50:54	2943.76	
706	1:08:51:55	2931.98	
707	1:08:52:56	258.62	T
708	1:08:53:57	2889.36	
709	1:08:54:58	2870.18	
710	1:08:56:00	2850.64	
711	1:08:57:01	2835.17	
712	1:08:58:02	2827.47	
713	1:08:59:03	258.28	T
714	1:09:00:04	2785.28	
715	1:09:01:06	2771.92	
716	1:09:02:07	2756.32	
717	1:09:03:08	2744.77	
718	1:09:04:09	2733.86	
719	1:09:05:10	257.97	T
720	1:09:06:12	2702.69	
721	1:09:07:13	2690.72	
722	1:09:08:14	2683.23	
723	1:09:09:15	2672.89	
724	1:09:10:16	2670.14	
35	1:09:11:18	257.84	T
726	1:09:12:19	2662.21	
727	1:09:13:20	2656.83	
728	1:09:14:21	2653.36	
729	1:09:15:22	2648.82	
730	1:09:16:24	2640.73	
731	1:09:17:25	257.81	T
732	1:09:18:26	2631.32	
733	1:09:19:27	2624.43	
734	1:09:20:28	2626.54	
735	1:09:21:30	2623.16	
736	1:09:22:31	2624.87	
737	1:09:23:32	257.79	T
738	1:09:24:33	2617.26	
739	1:09:25:34	2610.77	
740	1:09:26:36	2608.74	
741	1:09:27:37	2607.67	
742	1:09:28:38	2606.43	
743	1:09:29:39	257.65	T
744	1:09:30:40	2607.10	
745	1:09:31:42	2608.77	
746	1:09:32:43	2611.44	
747	1:09:33:44	2611.68	
748	1:09:34:45	2611.84	
749	1:09:35:46	257.76	T
750	1:09:36:48	2617.01	
751	1:09:37:49	2619.47	
752	1:09:38:50	2621.74	
53	1:09:39:51	2620.19	

NUMBER	TIME	PSI/DEG.F	
754	1:09:40:52	2620.55	
755	1:09:41:54	257.83	T
756	1:09:42:55	2627.82	
757	1:09:43:56	2631.60	
758	1:09:44:57	2631.60	
759	1:09:45:58	2632.88	
760	1:09:47:00	2630.97	
761	1:09:48:01	257.91	T
762	1:09:49:02	2629.92	
763	1:09:50:03	2631.23	
764	1:09:51:04	2621.39	
765	1:09:52:06	2620.80	
766	1:09:53:07	2618.89	
767	1:09:54:08	257.78	T
768	1:09:55:09	2613.75	
769	1:09:56:10	2613.67	
770	1:09:57:12	2611.72	
771	1:09:58:13	2611.48	
772	1:09:59:14	2611.80	
773	1:10:00:15	257.84	T
774	1:10:01:16	2606.84	
775	1:10:02:18	2607.64	
776	1:10:03:19	2606.76	
777	1:10:04:20	2605.73	
778	1:10:05:21	2610.27	
779	1:10:06:22	257.93	T
780	1:10:07:24	2609.90	
781	1:10:08:25	2610.53	
782	1:10:09:25	2610.06	
783	1:10:10:27	2610.26	
784	1:10:11:28	2604.09	
785	1:10:12:30	257.87	T
786	1:10:13:31	2598.90	
787	1:10:14:32	2600.13	
788	1:10:15:33	2604.78	
789	1:10:16:34	2602.99	
790	1:10:17:36	2605.46	
791	1:10:18:37	257.92	T
792	1:10:19:38	2595.05	
793	1:10:20:39	2599.87	
794	1:10:21:40	2598.75	
795	1:10:22:42	2606.07	
796	1:10:23:43	2599.19	
797	1:10:24:44	257.88	T
798	1:10:25:45	2594.72	
799	1:10:26:46	2595.88	
800	1:10:27:48	2594.32	
801	1:10:28:49	2592.61	
802	1:10:29:50	2593.49	
803	1:10:30:51	257.83	T
804	1:10:31:52	2588.62	
805	1:10:32:54	2587.79	
806	1:10:33:55	2587.83	
807	1:10:34:56	2592.96	
808	1:10:35:57	2589.58	
809	1:10:36:58	257.84	T
810	1:10:38:00	2584.05	
811	1:10:39:01	2590.69	

NUMBER	TIME	PSI/DEG.F	
12	1:10:40:02	2586.68	
813	1:10:41:03	2586.44	
814	1:10:42:04	2596.18	
815	1:10:43:06	257.98	T
816	1:10:44:07	2590.81	
817	1:10:45:08	2582.86	
818	1:10:46:09	2576.54	
819	1:10:47:10	2574.35	
820	1:10:48:12	2569.30	
821	1:10:49:13	257.60	T
822	1:10:50:14	2569.34	
823	1:10:51:15	2574.67	
824	1:10:52:16	2572.88	
825	1:10:53:18	2567.99	
826	1:10:54:19	2569.22	
827	1:10:55:20	257.75	T
828	1:10:56:21	2572.69	
829	1:10:57:22	2567.25	
830	1:10:58:24	2571.58	
831	1:10:59:25	2574.60	
832	1:11:00:26	2577.30	
833	1:11:01:27	257.86	T
834	1:11:02:28	2574.31	
835	1:11:03:30	2577.85	
836	1:11:04:31	2573.24	
837	1:11:05:32	2566.56	
838	1:11:06:33	2561.52	
839	1:11:07:34	257.53	T
840	1:11:08:36	2563.87	
841	1:11:09:37	2562.04	
842	1:11:10:38	2566.25	
843	1:11:11:39	2571.98	
844	1:11:12:40	2572.02	
845	1:11:13:42	257.86	T
846	1:11:14:43	2574.59	
847	1:11:15:44	2576.18	
848	1:11:16:45	2571.89	
849	1:11:17:46	2566.72	
850	1:11:18:48	2569.39	
851	1:11:19:49	257.81	T
852	1:11:20:50	2575.65	
853	1:11:21:51	2578.67	
854	1:11:22:52	2582.49	
855	1:11:23:54	2584.56	
856	1:11:24:55	2581.02	
857	1:11:25:56	257.91	T
858	1:11:26:57	2575.20	
859	1:11:27:58	2578.11	
860	1:11:29:00	2580.81	
861	1:11:30:01	2579.94	
862	1:11:31:02	2576.76	
863	1:11:32:03	257.83	T
864	1:11:33:04	2582.38	
865	1:11:34:06	2582.46	
866	1:11:35:07	2584.76	
867	1:11:36:08	2584.96	
868	1:11:37:09	2580.87	
869	1:11:38:10	257.89	T

NUMBER	TIME	PSI/DEG.F	
870	1:11:39:12	2579.69	
871	1:11:40:13	2586.69	
872	1:11:41:14	2590.75	
873	1:11:42:15	2585.50	
874	1:11:43:16	2580.81	
875	1:11:44:18	257.90	T
876	1:11:45:19	2586.18	
877	1:11:46:20	2585.90	
878	1:11:47:21	2583.87	
879	1:11:48:22	2580.61	
880	1:11:49:24	2583.55	
881	1:11:50:25	257.94	T
882	1:11:51:26	2582.37	
883	1:11:52:27	2580.22	
884	1:11:53:28	2581.06	
885	1:11:54:30	2583.33	
886	1:11:55:31	2582.45	
887	1:11:56:32	257.96	T
888	1:11:57:33	2585.32	
889	1:11:58:34	2585.20	
890	1:11:59:36	2584.92	
891	1:12:00:37	2586.83	
892	1:12:01:38	2586.00	
893	1:12:02:39	258.00	T
894	1:12:03:40	2585.53	
895	1:12:04:42	2588.64	
896	1:12:05:43	2593.53	
897	1:12:06:44	2594.36	
898	1:12:07:45	2594.84	
899	1:12:08:46	258.10	T
900	1:12:09:48	2593.46	
901	1:12:10:49	2594.75	
902	1:12:11:50	2594.19	
903	1:12:12:51	2593.44	
904	1:12:13:52	2591.09	
905	1:12:14:54	258.03	T
906	1:12:15:55	2592.90	
907	1:12:16:56	2594.21	
908	1:12:17:57	2596.72	
909	1:12:18:58	2595.44	
910	1:12:20:00	2589.44	
911	1:12:21:01	258.02	T
912	1:12:22:02	2593.41	
913	1:12:23:03	2595.44	
914	1:12:24:04	2594.01	
915	1:12:25:06	2589.20	
916	1:12:26:07	2594.21	
917	1:12:27:08	258.10	T
918	1:12:28:09	2598.49	
919	1:12:29:10	2597.81	
920	1:12:30:12	2594.47	
921	1:12:31:13	2587.55	
922	1:12:32:14	2585.05	
923	1:12:33:15	257.99	T
924	1:12:34:16	2589.23	
925	1:12:35:18	2591.14	
926	1:12:36:19	2593.60	
927	1:12:37:20	2592.37	

NUMBER	TIME	PSI/DEG.F	
928	1:12:38:21	2590.38	
29	1:12:39:22	258.14	T
930	1:12:40:24	2591.50	
931	1:12:41:25	2592.06	
932	1:12:42:26	2593.09	
933	1:12:43:27	2591.42	
934	1:12:44:28	2589.95	
935	1:12:45:30	258.12	T
936	1:12:46:31	2583.90	
937	1:12:47:32	2590.34	
938	1:12:48:33	2589.03	
939	1:12:49:34	2586.37	
940	1:12:50:36	2584.22	
941	1:12:51:37	258.10	T
942	1:12:52:38	2582.18	
943	1:12:53:39	2589.90	
944	1:12:54:40	2591.89	
945	1:12:55:42	2590.89	
946	1:12:56:43	2590.50	
947	1:12:57:44	258.13	T
948	1:12:58:45	2580.01	
949	1:12:59:46	2580.48	
950	1:13:00:48	2587.44	
951	1:13:01:49	2591.22	
952	1:13:02:50	2595.60	
953	1:13:03:51	258.22	T
954	1:13:04:52	2599.84	
955	1:13:05:54	2599.60	
956	1:13:06:55	2593.04	
57	1:13:07:56	2591.65	
58	1:13:08:57	2590.14	
959	1:13:09:58	258.14	T
960	1:13:11:00	2586.73	
961	1:13:12:01	2588.88	
962	1:13:13:02	2588.68	
963	1:13:14:03	2590.83	
964	1:13:15:04	2590.47	
965	1:13:16:06	258.15	T
966	1:13:17:07	2589.60	
967	1:13:18:08	2588.68	
968	1:13:19:09	2584.79	
969	1:13:20:10	2581.25	
970	1:13:21:12	2582.96	
971	1:13:22:13	258.12	T
972	1:13:23:14	2586.41	
973	1:13:24:15	2588.08	
974	1:13:25:16	2590.38	
975	1:13:26:18	2591.38	
976	1:13:27:19	2590.54	
977	1:13:28:20	258.15	T
978	1:13:29:21	2588.24	
979	1:13:30:22	2588.28	
980	1:13:31:24	2587.21	
981	1:13:32:25	2585.74	
982	1:13:33:26	2584.07	
983	1:13:34:27	258.12	T
984	1:13:35:28	2586.64	
95	1:13:36:30	2585.53	

NUMBER	TIME	PSI/DEG.F	
986	1:13:37:31	2584.34	
987	1:13:38:32	2582.91	
988	1:13:39:33	2584.78	
989	1:13:40:34	258.13	T
990	1:13:41:36	2585.21	
991	1:13:42:37	2587.80	
992	1:13:43:38	2587.64	
993	1:13:44:39	2585.69	
994	1:13:45:40	2584.62	
995	1:13:46:42	258.13	T
996	1:13:47:43	2584.14	
997	1:13:48:44	2585.69	
998	1:13:49:45	2585.49	
999	1:13:50:46	2584.10	
1000	1:13:51:48	2583.86	
1001	1:13:52:49	258.11	T
1002	1:13:53:50	2583.14	
1003	1:13:54:51	2583.30	
1004	1:13:55:52	2581.99	
1005	1:13:56:54	2580.12	
1006	1:13:57:55	2578.85	
1007	1:13:58:56	258.09	T
1008	1:13:59:57	2582.06	
1009	1:14:00:58	2582.50	
1010	1:14:02:00	2584.09	
1011	1:14:03:01	2584.41	
1012	1:14:04:02	2585.36	
1013	1:14:05:03	258.22	T
1014	1:14:06:04	2582.02	
1015	1:14:07:06	2581.63	
1016	1:14:08:07	2582.06	
1017	1:14:09:08	2583.57	
1018	1:14:10:09	2582.56	
1019	1:14:11:10	258.19	T
1020	1:14:12:12	2581.06	
1021	1:14:13:13	2579.51	
1022	1:14:14:14	2581.26	
1023	1:14:15:15	2580.07	
1024	1:14:16:16	2580.38	
1025	1:14:17:18	258.20	T
1026	1:14:18:19	2580.07	
1027	1:14:19:20	2581.46	
1028	1:14:20:21	2582.69	
1029	1:14:21:22	2582.06	
1030	1:14:22:24	2580.82	
1031	1:14:23:25	258.23	T
1032	1:14:24:26	2581.47	
1033	1:14:25:27	2578.13	
1034	1:14:26:28	2578.45	
1035	1:14:27:30	2579.08	
1036	1:14:28:31	2580.00	
1037	1:14:29:32	258.24	T
1038	1:14:30:33	2581.47	
1039	1:14:31:34	2581.63	
1040	1:14:32:36	2582.15	
1041	1:14:33:37	2581.39	
1042	1:14:34:38	2580.52	
1043	1:14:35:39	258.25	T

NUMBER	TIME	PSI/DEG.F	
14	1:14:36:40	2578.69	
45	1:14:37:42	2579.09	
1046	1:14:38:43	2579.97	
1047	1:14:39:44	2579.17	
1048	1:14:40:45	2578.33	
1049	1:14:41:46	258.25	T
1050	1:14:42:48	2577.62	
1051	1:14:43:49	2577.42	
1052	1:14:44:50	2579.05	
1053	1:14:45:51	2578.65	
1054	1:14:46:52	2577.86	
1055	1:14:47:54	258.26	T
1056	1:14:48:55	2582.16	
1057	1:14:49:56	2583.11	
1058	1:14:50:57	2583.87	
1059	1:14:51:58	2584.10	
1060	1:14:53:00	2584.26	
1061	1:14:54:01	258.33	T
1062	1:14:55:02	2582.38	
1063	1:14:56:03	2582.57	
1064	1:14:57:04	2581.26	
1065	1:14:58:06	2585.00	
1066	1:14:59:07	2586.39	
1067	1:15:00:08	258.34	T
1068	1:15:01:09	2585.24	
1069	1:15:02:10	2583.33	
1070	1:15:03:12	2584.13	
1071	1:15:04:13	2584.17	
1072	1:15:05:14	2583.49	
73	1:15:06:15	258.34	T
1074	1:15:07:16	2586.00	
1075	1:15:08:18	2584.45	
1076	1:15:09:19	2583.17	
1077	1:15:10:20	2583.41	
1078	1:15:11:21	2583.02	
1079	1:15:12:22	258.34	T
1080	1:15:13:24	2583.14	
1081	1:15:14:25	2583.14	
1082	1:15:15:26	2580.87	
1083	1:15:16:27	2583.45	
1084	1:15:17:28	2584.65	
1085	1:15:18:30	258.39	T
1086	1:15:19:31	2584.54	
1087	1:15:20:32	2584.94	
1088	1:15:21:33	2583.47	
1089	1:15:22:34	2584.50	
1090	1:15:23:36	2582.75	
1091	1:15:24:37	258.39	T
1092	1:15:25:38	2582.39	
1093	1:15:26:39	2584.38	
1094	1:15:27:40	2585.26	
1095	1:15:28:42	2581.48	
1096	1:15:29:43	2579.37	
1097	1:15:30:44	258.36	T
1098	1:15:31:45	2580.08	
1099	1:15:32:46	2581.51	
1100	1:15:33:48	2580.60	
01	1:15:34:49	2580.75	

NUMBER	TIME	PSI/DEG.F	
1102	1:15:35:50	2580.16	
1103	1:15:36:51	258.40	T
1104	1:15:37:52	2581.29	
1105	1:15:38:54	2579.10	
1106	1:15:39:55	2580.97	
1107	1:15:40:56	2585.38	
1108	1:15:41:57	2588.44	
1109	1:15:42:58	258.53	T
1110	1:15:44:00	2589.88	
1111	1:15:45:01	2587.29	
1112	1:15:46:02	2586.34	
1113	1:15:47:03	2584.83	
1114	1:15:48:04	2586.02	
1115	1:15:49:06	258.43	T
1116	1:15:50:07	2580.06	
1117	1:15:51:08	2580.54	
1118	1:15:52:09	2584.00	
1119	1:15:53:10	2579.90	
1120	1:15:54:12	2578.23	
1121	1:15:55:13	258.40	T
1122	1:15:56:14	2578.38	
1123	1:15:57:15	2577.95	
1124	1:15:58:16	2575.52	
1125	1:15:59:18	2575.68	
1126	1:16:00:19	2575.36	
1127	1:16:01:20	258.40	T
1128	1:16:02:21	2575.40	
1129	1:16:03:22	2573.57	
1130	1:16:04:24	2576.06	
1131	1:16:05:25	2578.18	
1132	1:16:06:26	2579.46	
1133	1:16:07:27	258.49	T
1134	1:16:08:29	2575.91	
1135	1:16:09:30	2574.24	
1136	1:16:10:31	2575.47	
1137	1:16:11:32	2575.27	
1138	1:16:12:33	2577.93	
1139	1:16:13:34	258.46	T
1140	1:16:14:36	2573.51	
1141	1:16:15:37	2573.99	
1142	1:16:16:38	2574.31	
1143	1:16:17:39	2573.55	
1144	1:16:18:40	2574.55	
1145	1:16:19:42	258.46	T
1146	1:16:20:43	2573.03	
1147	1:16:21:44	2572.91	
1148	1:16:22:45	2572.84	
1149	1:16:23:46	2571.92	
1150	1:16:24:48	2573.51	
1151	1:16:25:49	258.45	T
1152	1:16:26:50	2574.98	
1153	1:16:27:51	2578.20	
1154	1:16:28:52	2573.43	
1155	1:16:29:54	2571.28	
1156	1:16:30:55	2578.08	
1157	1:16:31:56	258.52	T
1158	1:16:32:57	2582.91	
1159	1:16:33:58	2584.54	

NUMBER	TIME	PSI/DEG.F	
1160	1:16:35:00	2584.90	
61	1:16:36:01	2581.08	
1162	1:16:37:02	2582.75	
1163	1:16:38:03	258.54	T
1164	1:16:39:04	2584.07	
1165	1:16:40:06	2583.20	
1166	1:16:41:07	2580.77	
1167	1:16:42:08	2575.96	
1168	1:16:43:09	2579.26	
1169	1:16:44:10	258.47	T
1170	1:16:45:12	2583.34	
1171	1:16:46:13	2578.68	
1172	1:16:47:14	2581.86	
1173	1:16:48:15	2581.35	
1174	1:16:49:16	2580.07	
1175	1:16:50:18	258.55	T
1176	1:16:51:19	2586.26	
1177	1:16:52:20	2583.80	
1178	1:16:53:21	2581.81	
1179	1:16:54:22	2583.92	
1180	1:16:55:24	2586.54	
1181	1:16:56:25	258.62	T
1182	1:16:57:26	2592.13	
1183	1:16:58:27	2593.29	
1184	1:16:59:28	2588.39	
1185	1:17:00:30	2582.83	
1186	1:17:01:31	2583.98	
1187	1:17:02:32	258.53	T
1188	1:17:03:33	2575.36	
89	1:17:04:34	2577.59	
90	1:17:05:36	2580.21	
1191	1:17:06:37	2576.59	
1192	1:17:07:38	2578.54	
1193	1:17:08:39	258.60	T
1194	1:17:09:40	2588.15	
1195	1:17:10:42	2585.09	
1196	1:17:11:43	2583.54	
1197	1:17:12:44	2581.19	
1198	1:17:13:45	2576.34	
1199	1:17:14:46	258.54	T
1200	1:17:15:48	2569.24	
1201	1:17:16:49	2571.79	
1202	1:17:17:50	2569.76	
1203	1:17:18:51	2569.16	
1204	1:17:19:52	2568.61	
1205	1:17:20:54	258.54	T
1206	1:17:21:55	2570.95	
1207	1:17:22:56	2568.57	
1208	1:17:23:57	2567.14	
1209	1:17:24:58	2568.41	
1210	1:17:26:00	2572.07	
1211	1:17:27:01	258.60	T
1212	1:17:28:02	2566.80	
1213	1:17:29:03	2572.88	
1214	1:17:30:04	2574.71	
1215	1:17:31:06	2862.67	
1216	1:17:32:07	3246.18	
1217	1:17:33:08	264.61	T

NUMBER	TIME	PSI/DEG.F	
1218	1:17:34:09	3577.58	
1219	1:17:35:10	3655.06	
1220	1:17:36:12	3706.98	
1221	1:17:37:13	3741.91	
1222	1:17:38:14	3766.45	
1223	1:17:39:15	267.01	T
1224	1:17:40:16	3799.30	
1225	1:17:41:18	3810.62	
1226	1:17:42:19	3819.79	
1227	1:17:43:20	3827.64	
1228	1:17:44:21	3834.38	
1229	1:17:45:22	266.68	T
1230	1:17:46:24	3845.64	
1231	1:17:47:25	3850.64	
1232	1:17:48:26	3855.32	
1233	1:17:49:27	3859.74	
1234	1:17:50:28	3863.80	
1235	1:17:51:30	266.29	T
1236	1:17:52:31	3870.75	
1237	1:17:53:32	3874.02	
1238	1:17:54:33	3877.12	
1239	1:17:55:34	3880.14	
1240	1:17:56:36	3883.12	
1241	1:17:57:37	265.76	T
1242	1:17:58:38	3888.43	
1243	1:17:59:39	3890.91	
1244	1:18:00:40	3893.31	
1245	1:18:01:42	3895.59	
1246	1:18:02:43	3897.83	
1247	1:18:03:44	265.21	T
1248	1:18:04:45	3901.84	
1249	1:18:05:46	3903.87	
1250	1:18:06:48	3905.73	
1251	1:18:07:49	3907.56	
1252	1:18:08:50	3909.25	
1253	1:18:09:51	264.81	T
1254	1:18:10:52	3912.45	
1255	1:18:11:54	3913.98	
1256	1:18:12:55	3915.56	
1257	1:18:13:56	3917.01	
1258	1:18:14:57	3918.46	
1259	1:18:15:58	264.46	T
1260	1:18:17:00	3921.09	
1261	1:18:18:01	3922.41	
1262	1:18:19:02	3923.66	
1263	1:18:20:03	3924.98	
1264	1:18:21:04	3926.23	
1265	1:18:22:06	264.18	T
1266	1:18:23:07	3928.55	
1267	1:18:24:08	3929.67	
1268	1:18:25:09	3930.70	
1269	1:18:26:10	3931.82	
1270	1:18:27:12	3932.86	
1271	1:18:28:13	263.91	T
1272	1:18:29:14	3934.85	
1273	1:18:30:15	3935.85	
1274	1:18:31:16	3936.80	
1275	1:18:32:18	3937.75	

NUMBER	TIME	PSI/DEG.F	
1276	1:18:33:19	3938.71	
1277	1:18:34:20	263.67	T
1278	1:18:35:21	3940.46	
1279	1:18:36:22	3941.29	
1280	1:18:37:24	3942.20	
1281	1:18:38:25	3943.07	
1282	1:18:39:26	3943.86	
1283	1:18:40:27	263.45	T
1284	1:18:41:28	3945.41	
1285	1:18:42:30	3946.20	
1286	1:18:43:31	3946.99	
1287	1:18:44:32	3947.78	
1288	1:18:45:33	3948.53	
1289	1:18:46:34	263.27	T
1290	1:18:47:36	3949.96	
1291	1:18:48:37	3950.67	
1292	1:18:49:38	3951.33	
1293	1:18:50:39	3952.00	
1294	1:18:51:40	3952.74	
1295	1:18:52:42	263.08	T
1296	1:18:53:43	3954.02	
1297	1:18:54:44	3954.68	
1298	1:18:55:45	3955.30	
1299	1:18:56:46	3955.92	
1300	1:18:57:48	3956.55	
1301	1:18:58:49	262.92	T
1302	1:18:59:50	3957.79	
03	1:19:00:51	3958.41	
04	1:19:01:52	3958.91	
1305	1:19:02:54	3959.49	
1306	1:19:03:55	3960.11	
1307	1:19:04:56	262.77	T
1308	1:19:05:57	3961.15	
1309	1:19:06:58	3961.73	
1310	1:19:08:00	3962.27	
1311	1:19:09:01	3962.81	
1312	1:19:10:02	3963.30	
1313	1:19:11:03	262.62	T
1314	1:19:12:04	3964.30	
1315	1:19:13:06	3964.79	
1316	1:19:14:07	3965.33	
1317	1:19:15:08	3965.83	
1318	1:19:16:09	3966.37	
1319	1:19:17:10	262.46	T
1320	1:19:18:12	3967.28	
1321	1:19:19:13	3967.78	
1322	1:19:20:14	3968.23	
1323	1:19:21:15	3968.65	
1324	1:19:22:16	3969.15	
1325	1:19:23:18	262.37	T
1326	1:19:24:19	3970.03	
1327	1:19:25:20	3970.49	
1328	1:19:26:21	3970.91	
1329	1:19:27:22	3971.36	
1330	1:19:28:24	3971.82	
1331	1:19:29:25	262.24	T
32	1:19:30:26	3972.61	
1433	1:19:31:27	3973.07	

NUMBER	TIME	PSI/DEG.F	
1334	1:19:32:28	3973.52	
1335	1:19:33:30	3973.98	
1336	1:19:34:31	3974.36	
1337	1:19:35:32	262.14	T
1338	1:19:36:33	3975.20	
1339	1:19:37:34	3975.61	
1340	1:19:38:36	3975.99	
1341	1:19:39:37	3976.40	
1342	1:19:40:38	3976.82	
1343	1:19:41:39	262.03	T
1344	1:19:42:40	3977.66	
1345	1:19:43:42	3978.03	
1346	1:19:44:43	3978.45	
1347	1:19:45:44	3978.82	
1348	1:19:46:45	3979.19	
1349	1:19:47:46	261.94	T
1350	1:19:48:48	3979.83	
1351	1:19:49:49	3980.20	
1352	1:19:50:50	3980.58	
1353	1:19:51:51	3980.91	
1354	1:19:52:52	3981.24	
1355	1:19:53:54	261.83	T
1356	1:19:54:55	3981.96	
1357	1:19:55:56	3982.25	
1358	1:19:56:57	3982.58	
1359	1:19:57:58	3982.92	
1360	1:19:59:00	3983.25	
1361	1:20:00:01	261.74	T
1362	1:20:01:02	3983.69	
1363	1:20:02:03	3984.10	
1364	1:20:03:04	3984.51	
1365	1:20:04:06	3984.80	
1366	1:20:05:07	3985.09	
1367	1:20:06:08	261.66	T
1368	1:20:07:09	3985.69	
1369	1:20:08:10	3985.98	
1370	1:20:09:12	3986.31	
1371	1:20:10:13	3986.56	
1372	1:20:11:14	3986.85	
1373	1:20:12:15	261.58	T
1374	1:20:13:16	3987.41	
1375	1:20:14:18	3987.66	
1376	1:20:15:19	3987.95	
1377	1:20:16:20	3988.16	
1378	1:20:17:21	3988.36	
1379	1:20:18:22	261.50	T
1380	1:20:19:24	3988.84	
1381	1:20:20:25	3989.13	
1382	1:20:21:26	3989.34	
1383	1:20:22:27	3989.59	
1384	1:20:23:28	3989.84	
1385	1:20:24:30	261.43	T
1386	1:20:25:31	3990.27	
1387	1:20:26:32	3990.44	
1388	1:20:27:33	3990.69	
1389	1:20:28:34	3990.94	
1390	1:20:29:36	3991.23	
1391	1:20:30:37	261.35	T

NUMBER	TIME	PSI/DEG.F	
92	1:20:31:38	3991.66	
93	1:20:32:39	3991.87	
1394	1:20:33:40	3992.12	
1395	1:20:34:42	3992.33	
1396	1:20:35:43	3992.58	
1397	1:20:36:44	261.28	T
1398	1:20:37:45	3993.01	
1399	1:20:38:46	3993.26	
1400	1:20:39:48	3993.51	
1401	1:20:40:49	3993.76	
1402	1:20:41:50	3993.97	
1403	1:20:42:51	261.20	T
1404	1:20:43:52	3994.36	
1405	1:20:44:54	3994.57	
1406	1:20:45:55	3994.82	
1407	1:20:46:56	3995.07	
1408	1:20:47:57	3995.23	
1409	1:20:48:58	261.21	T
1410	1:20:50:00	3995.69	
1411	1:20:51:01	3995.94	
1412	1:20:52:02	3996.11	
1413	1:20:53:03	3996.32	
1414	1:20:54:04	3996.57	
1415	1:20:55:06	261.16	T
16	1:20:56:07	3996.97	
17	1:20:57:08	3997.14	
1418	1:20:58:09	3997.34	
1419	1:20:59:10	3997.59	
1420	1:21:00:12	3997.76	
21	1:21:01:13	261.08	T
1422	1:21:02:14	3998.11	
1423	1:21:03:15	3998.32	
1424	1:21:04:16	3998.52	
1425	1:21:05:18	3998.73	
1426	1:21:06:19	3998.90	
1427	1:21:07:20	261.02	T
1428	1:21:08:21	3999.30	
1429	1:21:09:22	3999.46	
1430	1:21:10:24	3999.63	
1431	1:21:11:25	3999.84	
1432	1:21:12:26	4000.04	
1433	1:21:13:27	260.97	T
1434	1:21:14:28	4000.36	
1435	1:21:15:30	4000.53	
1436	1:21:16:31	4000.74	
1437	1:21:17:32	4000.90	
1438	1:21:18:33	4001.07	
1439	1:21:19:34	260.92	T
1440	1:21:20:36	4001.39	
1441	1:21:21:37	4001.55	
1442	1:21:22:38	4001.72	
1443	1:21:23:39	4001.88	
1444	1:21:24:40	4002.09	
1445	1:21:25:42	260.87	T
1446	1:21:26:43	4002.37	
1447	1:21:27:44	4002.54	
1448	1:21:28:45	4002.74	
49	1:21:29:46	4002.87	

NUMBER	TIME	PSI/DEG.F	
1450	1:21:30:48	4003.03	
1451	1:21:31:49	260.82	T
1452	1:21:32:50	4003.31	
1453	1:21:33:51	4003.52	
1454	1:21:34:52	4003.64	
1455	1:21:35:54	4003.81	
1456	1:21:36:55	4003.93	
1457	1:21:37:56	260.78	T
1458	1:21:38:57	4004.25	
1459	1:21:39:58	4004.38	
1460	1:21:41:00	4004.55	
1461	1:21:42:01	4004.71	
1462	1:21:43:02	4004.88	
1463	1:21:44:03	260.73	T
1464	1:21:45:04	4005.12	
1465	1:21:46:06	4005.28	
1466	1:21:47:07	4005.41	
1467	1:21:48:08	4005.57	
1468	1:21:49:09	4005.74	
1469	1:21:50:10	260.69	T
1470	1:21:51:12	4006.06	
1471	1:21:52:13	4006.18	
1472	1:21:53:14	4006.31	
1473	1:21:54:15	4006.47	
1474	1:21:55:16	4006.60	
1475	1:21:56:18	260.66	T
1476	1:21:57:19	4006.84	
1477	1:21:58:20	4007.01	
1478	1:21:59:21	4007.17	
1479	1:22:00:22	4007.30	
1480	1:22:01:24	4007.38	
1481	1:22:02:25	260.62	T
1482	1:22:03:26	4007.66	
1483	1:22:04:27	4007.78	
1484	1:22:05:28	4007.91	
1485	1:22:06:30	4008.03	
1486	1:22:07:31	4008.20	
1487	1:22:08:32	260.58	T
1488	1:22:09:33	4008.40	
1489	1:22:10:34	4008.56	
1490	1:22:11:36	4008.65	
1491	1:22:12:37	4008.81	
1492	1:22:13:38	4008.90	
1493	1:22:14:39	260.55	T
1494	1:22:15:40	4009.22	
1495	1:22:16:42	4009.34	
1496	1:22:17:43	4009.43	
1497	1:22:18:44	4009.59	
1498	1:22:19:45	4009.72	
1499	1:22:20:46	260.52	T
1500	1:22:21:48	4009.96	
1501	1:22:22:49	4010.08	
1502	1:22:23:50	4010.21	
1503	1:22:24:51	4010.29	
1504	1:22:25:52	4010.41	
1505	1:22:26:54	260.48	T
1506	1:22:27:55	4010.65	
1507	1:22:28:56	4010.78	

NUMBER	TIME	PSI/DEG.F	
48	1:22:29:57	4010.86	
1509	1:22:30:58	4010.99	
1510	1:22:32:00	4011.11	
1511	1:22:33:01	260.45	T
1512	1:22:34:02	4011.31	
1513	1:22:35:03	4011.44	
1514	1:22:36:04	4011.56	
1515	1:22:37:06	4011.68	
1516	1:22:38:07	4011.77	
1517	1:22:39:08	260.41	T
1518	1:22:40:09	4012.01	
1519	1:22:41:10	4012.13	
1520	1:22:42:12	4012.21	
1521	1:22:43:13	4012.34	
1522	1:22:44:14	4012.42	
1523	1:22:45:15	260.38	T
1524	1:22:46:16	4012.66	
1525	1:22:47:18	4012.79	
1526	1:22:48:19	4012.87	
1527	1:22:49:20	4012.95	
1528	1:22:50:21	4013.08	
1529	1:22:51:22	260.36	T
1530	1:22:52:24	4013.24	
1531	1:22:53:25	4013.36	
1532	1:22:54:26	4013.45	
1533	1:22:55:27	4013.57	
1534	1:22:56:29	4013.66	
1535	1:22:57:30	260.33	T
36	1:22:58:31	4013.81	
1537	1:22:59:32	4013.94	
1538	1:23:00:33	4014.06	
1539	1:23:01:34	4014.10	
1540	1:23:02:36	4014.23	
1541	1:23:03:37	260.30	T
1542	1:23:04:38	4014.39	
1543	1:23:05:39	4014.47	
1544	1:23:06:40	4014.59	
1545	1:23:07:42	3369.98	
1546	1:23:08:43	3091.14	
1547	1:23:09:44	252.61	T
1548	1:23:10:45	2958.60	
1549	1:23:11:46	2894.39	
1550	1:23:12:48	2943.55	
1551	1:23:13:49	3027.21	
1552	1:23:14:50	3105.35	
1553	1:23:15:51	257.97	T
1554	1:23:16:52	3248.06	
1555	1:23:17:54	3311.30	
1556	1:23:18:55	3370.02	
1557	1:23:19:56	3411.70	
1558	1:23:20:57	3431.99	
1559	1:23:21:58	262.62	T
1560	1:23:23:00	3471.01	
1561	1:23:24:01	3476.24	
1562	1:23:25:02	3399.51	
1563	1:23:26:03	3304.78	
64	1:23:27:04	3211.34	
1565	1:23:28:06	260.21	T

NUMBER	TIME	PSI/DEG.F	
1566	1:23:29:07	3082.10	
1567	1:23:30:08	2945.59	
1568	1:23:31:09	2734.47	
1569	1:23:32:10	2603.90	
1570	1:23:33:12	2480.01	
1571	1:23:34:13	255.04	T
1572	1:23:35:14	2275.75	
1573	1:23:36:15	2188.29	
1574	1:23:37:16	2115.75	
1575	1:23:38:18	2053.28	
1576	1:23:39:19	1986.17	
1577	1:23:40:20	253.74	T
1578	1:23:41:21	1818.79	
1579	1:23:42:22	1749.74	
1580	1:23:43:24	1688.99	
1581	1:23:44:25	1643.61	
1582	1:23:45:26	1606.27	
1583	1:23:46:27	250.93	T
1584	1:23:47:28	1516.91	
1585	1:23:48:30	1473.27	
1586	1:23:49:31	1431.14	
1587	1:23:50:32	1395.47	
1588	1:23:51:33	1363.40	
1589	1:23:52:34	247.61	T
1590	1:23:53:36	1318.64	
1591	1:23:54:37	1301.83	
1592	1:23:55:38	1270.58	
1593	1:23:56:39	1256.24	
1594	1:23:57:40	1252.43	
1595	1:23:58:42	244.95	T
1596	1:23:59:43	1234.44	
1597	2:00:00:44	1230.41	
1598	2:00:01:45	1224.06	
1599	2:00:02:46	1225.00	
1600	2:00:03:48	1231.43	
1601	2:00:04:49	243.50	T
1602	2:00:05:50	1233.48	
1603	2:00:06:51	1233.60	
1604	2:00:07:52	1236.11	
1605	2:00:08:54	1246.60	
1606	2:00:09:55	1261.35	
1607	2:00:10:56	243.64	T
1608	2:00:11:57	1298.07	
1609	2:00:12:58	1335.86	
1610	2:00:14:00	1380.32	
1611	2:00:15:01	1479.22	
1612	2:00:16:02	1491.78	
1613	2:00:17:03	249.19	T
1614	2:00:18:04	1546.46	
1615	2:00:19:06	1573.37	
1616	2:00:20:07	1605.04	
1617	2:00:21:08	1634.63	
1618	2:00:22:09	1659.30	
1619	2:00:23:10	251.02	T
1620	2:00:24:12	1686.44	
1621	2:00:25:13	1712.77	
1622	2:00:26:14	1718.65	
1623	2:00:27:15	1734.52	

NUMBER	TIME	PSI/DEG.F	
1624	2:00:28:16	1744.94	
1625	2:00:29:18	251.45	T
1626	2:00:30:19	1714.34	
1627	2:00:31:20	1733.38	
1628	2:00:32:21	1716.74	
1629	2:00:33:22	1711.21	
1630	2:00:34:24	1728.20	
1631	2:00:35:25	251.61	T
1632	2:00:36:26	1726.62	
1633	2:00:37:27	1720.24	
1634	2:00:38:28	1720.62	
1635	2:00:39:30	1708.86	
1636	2:00:40:31	1703.33	
1637	2:00:41:32	251.54	T
1638	2:00:42:33	1688.89	
1639	2:00:43:34	1659.99	
1640	2:00:44:36	1679.96	
1641	2:00:45:37	1666.01	
1642	2:00:46:38	1656.05	
1643	2:00:47:39	251.40	T
1644	2:00:48:40	1687.29	
1645	2:00:49:42	1657.39	
1646	2:00:50:43	1673.19	
1647	2:00:51:44	1692.44	
1648	2:00:52:45	1701.21	
1649	2:00:53:46	252.04	T
1650	2:00:54:48	1700.73	
1651	2:00:55:49	1680.01	
1652	2:00:56:50	1684.99	
1653	2:00:57:51	1695.16	
1654	2:00:58:52	1700.61	
1655	2:00:59:54	251.79	T
1656	2:01:00:55	1683.94	
1657	2:01:01:56	1700.41	
1658	2:01:02:57	1679.61	
1659	2:01:03:58	1646.94	
1660	2:01:05:00	1650.45	
1661	2:01:06:01	251.29	T
1662	2:01:07:02	1670.30	
1663	2:01:08:03	1662.34	
1664	2:01:09:04	1650.37	
1665	2:01:10:06	1649.59	
1666	2:01:11:07	1646.81	
1667	2:01:12:08	251.38	T
1668	2:01:13:09	1636.81	
1669	2:01:14:10	1632.06	
1670	2:01:15:12	1644.06	
1671	2:01:16:13	1649.58	
1672	2:01:17:14	1648.66	
1673	2:01:18:15	251.45	T
1674	2:01:19:16	1633.36	
1675	2:01:20:18	1649.65	
1676	2:01:21:19	1645.94	
1677	2:01:22:20	1655.71	
1678	2:01:23:21	1661.35	
1679	2:01:24:22	251.61	T
1680	2:01:25:24	1680.17	
1681	2:01:26:25	1677.51	

NUMBER	TIME	PSI/DEG.F	
1682	2:01:27:26	1687.59	
1683	2:01:28:27	1683.96	
1684	2:01:29:28	1676.81	
1685	2:01:30:30	251.46	T
1686	2:01:31:31	1676.80	
1687	2:01:32:32	1684.65	
1688	2:01:33:33	1683.99	
1689	2:01:34:34	1677.77	
1690	2:01:35:36	1678.70	
1691	2:01:36:37	251.77	T
1692	2:01:37:38	1676.63	
1693	2:01:38:39	1666.74	
1694	2:01:39:40	1664.50	
1695	2:01:40:42	1658.24	
1696	2:01:41:43	1658.24	
1697	2:01:42:44	251.60	T
1698	2:01:43:45	1645.18	
1699	2:01:44:46	1650.89	
1700	2:01:45:48	1670.55	
1701	2:01:46:49	1675.30	
1702	2:01:47:50	1681.29	
1703	2:01:48:51	251.94	T
1704	2:01:49:52	1678.04	
1705	2:01:50:54	1671.08	
1706	2:01:51:55	1666.56	
1707	2:01:52:56	1649.07	
1708	2:01:53:57	1680.67	
1709	2:01:54:58	251.42	T
1710	2:01:56:00	1651.72	
1711	2:01:57:01	1669.53	
1712	2:01:58:02	1664.12	
1713	2:01:59:03	1667.75	
1714	2:02:00:04	1663.04	
1715	2:02:01:06	251.24	T
1716	2:02:02:07	1678.51	
1717	2:02:03:08	1684.96	
1718	2:02:04:09	1694.28	
1719	2:02:05:10	1707.54	
1720	2:02:06:12	1703.48	
1721	2:02:07:13	251.71	T
1722	2:02:08:14	1681.13	
1723	2:02:09:15	1684.88	
1724	2:02:10:16	1680.01	
1725	2:02:11:18	1669.89	
1726	2:02:12:19	1674.26	
1727	2:02:13:20	251.37	T
1728	2:02:14:21	1673.84	
1729	2:02:15:22	1681.99	
1730	2:02:16:24	1688.21	
1731	2:02:17:25	1692.58	
1732	2:02:18:26	1691.03	
1733	2:02:19:27	251.64	T
1734	2:02:20:28	1682.04	
1735	2:02:21:30	1678.14	
1736	2:02:22:31	1675.93	
1737	2:02:23:32	1666.43	
1738	2:02:24:33	1673.77	
1739	2:02:25:34	251.45	T

NUMBER	TIME	PSI/DEG.F	
1740	2:02:26:36	1645.51	
41	2:02:27:37	1639.53	
1742	2:02:28:38	1638.06	
1743	2:02:29:39	1650.61	
1744	2:02:30:40	1637.83	
1745	2:02:31:42	251.26	T
1746	2:02:32:43	1624.46	
1747	2:02:33:44	1589.10	
1748	2:02:34:45	1572.19	
1749	2:02:35:46	1592.03	
1750	2:02:36:48	1592.69	
1751	2:02:37:49	250.82	T
1752	2:02:38:50	1604.61	
1753	2:02:39:51	1595.05	
1754	2:02:40:52	1597.33	
1755	2:02:41:54	1622.74	
1756	2:02:42:55	1644.27	
1757	2:02:43:56	251.57	T
1758	2:02:44:57	1638.34	
1759	2:02:45:58	1671.31	
1760	2:02:47:00	1671.04	
1761	2:02:48:01	1651.81	
1762	2:02:49:02	1658.91	
1763	2:02:50:03	251.25	T
1764	2:02:51:04	1672.48	
1765	2:02:52:06	1675.46	
1766	2:02:53:07	1680.10	
1767	2:02:54:08	1683.77	
1768	2:02:55:09	1677.47	
1769	2:02:56:10	251.47	T
1770	2:02:57:12	1679.12	
1771	2:02:58:13	1675.11	
1772	2:02:59:14	1675.69	
1773	2:03:00:15	1678.54	
1774	2:03:01:16	1694.86	
1775	2:03:02:18	251.95	T
1776	2:03:03:19	1694.43	
1777	2:03:04:20	1693.19	
1778	2:03:05:21	1690.88	
1779	2:03:06:22	1701.16	
1780	2:03:07:24	1702.05	
1781	2:03:08:25	251.85	T
1782	2:03:09:26	1703.88	
1783	2:03:10:27	1712.50	
1784	2:03:11:28	1720.43	
1785	2:03:12:30	1718.11	
1786	2:03:13:31	1717.61	
1787	2:03:14:32	251.98	T
1788	2:03:15:33	1721.48	
1789	2:03:16:34	1725.77	
1790	2:03:17:36	1726.70	
1791	2:03:18:37	1727.01	
1792	2:03:19:38	1721.79	
1793	2:03:20:39	252.08	T
1794	2:03:21:40	1721.05	
1795	2:03:22:42	1723.06	
1796	2:03:23:43	1719.65	
1797	2:03:24:44	1721.71	

NUMBER	TIME	PSI/DEG.F	
1798	2:03:25:45	1716.13	
1799	2:03:26:46	252.10	T
1800	2:03:27:48	1718.50	
1801	2:03:28:49	1714.67	
1802	2:03:29:50	1714.63	
1803	2:03:30:51	1727.63	
1804	2:03:31:52	1737.89	
1805	2:03:32:54	252.43	T
1806	2:03:33:55	1740.25	
1807	2:03:34:56	1738.50	
1808	2:03:35:57	1753.06	
1809	2:03:36:58	1757.75	
1810	2:03:38:00	1761.78	
1811	2:03:39:01	252.52	T
1812	2:03:40:02	1764.79	
1813	2:03:41:03	1757.20	
1814	2:03:42:04	1751.35	
1815	2:03:43:06	1735.09	
1816	2:03:44:07	1730.05	
1817	2:03:45:08	252.02	T
1818	2:03:46:09	1727.37	
1819	2:03:47:10	1730.08	
1820	2:03:48:12	1727.34	
1821	2:03:49:13	1727.80	
1822	2:03:50:14	1728.07	
1823	2:03:51:15	252.20	T
1824	2:03:52:16	1728.05	
1825	2:03:53:18	1728.53	
1826	2:03:54:19	1731.58	
1827	2:03:55:20	1733.08	
1828	2:03:56:21	1737.42	
1829	2:03:57:22	252.33	T
1830	2:03:58:24	1740.79	
1831	2:03:59:25	1740.14	
1832	2:04:00:26	1744.40	
1833	2:04:01:27	1732.66	
1834	2:04:02:28	1717.73	
1835	2:04:03:30	252.16	T
1836	2:04:04:31	1697.25	
1837	2:04:05:32	1689.51	
1838	2:04:06:33	2064.84	
1839	2:04:07:34	2643.02	
1840	2:04:08:36	3003.58	
1841	2:04:09:37	266.41	T
1842	2:04:10:38	3355.14	
1843	2:04:11:39	3444.21	
1844	2:04:12:40	3506.30	
1845	2:04:13:42	3550.40	
1846	2:04:14:43	3583.03	
1847	2:04:15:44	269.65	T
1848	2:04:16:45	3628.97	
1849	2:04:17:46	3645.12	
1850	2:04:18:48	3658.64	
1851	2:04:19:49	3669.99	
1852	2:04:20:50	3680.10	
1853	2:04:21:51	268.26	T
1854	2:04:22:52	3697.06	
1855	2:04:23:54	3704.96	

NUMBER	TIME	PSI/DEG.F	
56	2:04:24:55	3711.92	
57	2:04:25:56	3718.26	
1858	2:04:26:57	3725.26	
1859	2:04:27:58	266.92	T
1860	2:04:29:00	3737.48	
1861	2:04:30:01	3743.25	
1862	2:04:31:02	3748.45	
1863	2:04:32:03	3753.19	
1864	2:04:33:04	3757.85	
1865	2:04:34:06	266.96	T
1866	2:04:35:07	3766.44	
1867	2:04:36:08	3770.44	
1868	2:04:37:09	3774.28	
1869	2:04:38:10	3777.87	
1870	2:04:39:12	3781.33	
1871	2:04:40:13	267.02	T
1872	2:04:41:14	3787.95	
1873	2:04:42:15	3791.01	
1874	2:04:43:16	3793.98	
1875	2:04:44:18	3796.83	
1876	2:04:45:19	3799.60	
1877	2:04:46:20	267.04	T
1878	2:04:47:21	3804.93	
1879	2:04:48:22	3807.40	
1880	2:04:49:24	3809.84	
1881	2:04:50:25	3812.15	
1882	2:04:51:26	3814.38	
1883	2:04:52:27	266.92	T
1884	2:04:53:28	3818.69	
35	2:04:54:30	3820.71	
1886	2:04:55:31	3822.78	
1887	2:04:56:32	3824.84	
1888	2:04:57:33	3826.70	
1989	2:04:58:34	266.54	T
1890	2:04:59:36	3830.38	
1891	2:05:00:37	3832.20	
1892	2:05:01:38	3834.02	
1893	2:05:02:39	3835.80	
1894	2:05:03:40	3837.45	
1895	2:05:04:42	266.24	T
1896	2:05:05:43	3840.67	
1897	2:05:06:44	3842.11	
1898	2:05:07:45	3843.77	
1899	2:05:08:46	3845.46	
1900	2:05:09:48	3846.91	
1901	2:05:10:49	266.06	T
1902	2:05:11:50	3849.75	
1903	2:05:12:51	3851.11	
1904	2:05:13:52	3852.43	
1905	2:05:14:54	3853.80	
1906	2:05:15:55	3855.08	
1907	2:05:16:56	265.97	T
1908	2:05:17:57	3857.53	
1909	2:05:18:58	3858.78	
1910	2:05:20:00	3860.02	
1911	2:05:21:01	3861.22	
1912	2:05:22:02	3862.37	
13	2:05:23:03	265.82	T

NUMBER	TIME	PSI/DEG.F	
1914	2:05:24:04	3864.56	
1915	2:05:25:06	3865.68	
1916	2:05:26:07	3866.76	
1917	2:05:27:08	3867.87	
1918	2:05:28:09	3868.91	
1919	2:05:29:10	265.63	T
1920	2:05:30:12	3870.96	
1921	2:05:31:13	3871.95	
1922	2:05:32:14	3872.95	
1923	2:05:33:15	3873.94	
1924	2:05:34:16	3874.93	
1925	2:05:35:18	265.44	T
1926	2:05:36:19	3876.78	
1927	2:05:37:20	3877.73	
1928	2:05:38:21	3878.64	
1929	2:05:39:22	3879.55	
1930	2:05:40:24	3880.42	
1931	2:05:41:25	265.25	T
1932	2:05:42:26	3882.18	
1933	2:05:43:27	3883.01	
1934	2:05:44:29	3883.88	
1935	2:05:45:30	3884.75	
1936	2:05:46:31	3885.54	
1937	2:05:47:32	265.05	T
1938	2:05:48:33	3887.13	
1939	2:05:49:34	3887.96	
1940	2:05:50:36	3888.79	
1941	2:05:51:37	3889.53	
1942	2:05:52:38	3890.32	
1943	2:05:53:39	264.87	T
1944	2:05:54:40	3891.79	
1945	2:05:55:42	3892.50	
1946	2:05:56:43	3893.25	
1947	2:05:57:44	3893.99	
1948	2:05:58:45	3894.79	
1949	2:05:59:46	264.69	T
1950	2:06:00:48	3896.05	
1951	2:06:01:49	3896.75	
1952	2:06:02:50	3897.42	
1953	2:06:03:51	3898.12	
1954	2:06:04:52	3898.78	
1955	2:06:05:54	264.50	T
1956	2:06:06:55	3900.01	
1957	2:06:07:56	3900.67	
1958	2:06:08:57	3901.33	
1959	2:06:09:58	3902.00	
1960	2:06:11:00	3902.62	
1961	2:06:12:01	264.33	T
1962	2:06:13:02	3903.77	
1963	2:06:14:03	3904.39	
1964	2:06:15:04	3904.97	
1965	2:06:16:06	3905.55	
1966	2:06:17:07	3906.21	
1967	2:06:18:08	264.16	T
1968	2:06:19:09	3907.28	
1969	2:06:20:10	3907.86	
1970	2:06:21:12	3908.44	
1971	2:06:22:13	3909.06	

NUMBER	TIME	PSI/DEG F	
1972	2:06:23:14	3909.60	
1973	2:06:24:15	264.03	T
4	2:06:25:16	3910.18	
1975	2:06:26:18	3910.85	
1976	2:06:27:19	3911.51	
1977	2:06:28:20	3912.13	
1978	2:06:29:21	3912.71	
1979	2:06:30:22	263.89	T
1980	2:06:31:24	3913.75	
1981	2:06:32:25	3914.20	
1982	2:06:33:26	3914.78	
1983	2:06:34:27	3915.32	
1984	2:06:35:28	3915.82	
1985	2:06:36:30	263.77	T
1986	2:06:37:31	3916.78	
1987	2:06:38:32	3917.23	
1988	2:06:39:33	3917.77	
1989	2:06:40:34	3918.23	
1990	2:06:41:36	3918.68	
1991	2:06:42:37	263.67	T
1992	2:06:43:38	3919.61	
1993	2:06:44:39	3920.10	
1994	2:06:45:40	3920.52	
1995	2:06:46:42	3920.93	
1996	2:06:47:43	3921.35	
1997	2:06:48:44	263.58	T
1998	2:06:49:45	3922.23	
1999	2:06:50:46	3922.69	
2000	2:06:51:48	3923.10	