

KELLAHIN, KELLAHIN AND AUBREY

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

W. THOMAS KELLAHIN
KAREN AUBREY

CANDACE HAMANN CALLAHAN

JASON KELLAHIN
OF COUNSEL

RECEIVED

APR 26 1991

OIL CONSERVATION DIVISION

April 26, 1991

Mr. William J. LeMay
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico 87504

HAND DELIVERED

Re: In the Matter of the Hearing
Called by the Division on Its
Own Motion for an Order Creating
and Assigning Discovery Allowables
in Lea County, New Mexico
NMOCD Case No. 10291


Dear Mr. LeMay:

Mitchell Energy Corporation in Case No. 10291
seeks a discovery oil allowable for its Geronimo
Federal Well No. 1 in Unit D of Section 31, T19S, R33E,
which has been opposed by Kaiser-Francis Oil Company.

On behalf of Mitchell Energy Corporation we would
request that this case now set for hearing on May 2,
1991 be continued to the May 16, 1991 hearing to afford
Mitchell the opportunity to conduct additional tests on
the subject well.

Counsel for Kaiser-Francis Oil Company has been
contacted and has no objection to the continuance.

Very truly yours,



W. Thomas Kellahin

WTK/tic

cc: Mark Stephenson
William F. Carr, Esq.

1989/1trt426.031

DISTRICT I

NOMENCLATURE ADVERTISEMENT FOR APRIL, 1991

In the matter of the application of the Oil Conservation Division of the Energy, Minerals and Natural Resources Department upon its own motion for an order for the creation of a new pool and bonus discovery allowable in Lea County, New Mexico, and giving notice to all persons and parties interested in the subject matter thereof, to show cause why such creation and discovery allowable should not be made.

(a) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the South Shoe Bar-Wolfcamp Pool. Further, assign a bonus discovery allowable of approximately 51,240 barrels of oil to the discovery well, the Mobil Exploration and Producing US Inc. Lovington Deep Unit Well No. 3 located in Unit G of Section 1, Township 17 South, Range 35 East. NMPM. The bonus discovery allowable to be retroactive to date of completion, January 26, 1991. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 1: NE/4

(b) ASSIGN a bonus discovery allowable of 37,930 barrels of oil to the Mitchell Energy Corporation Geronimo Federal Well No. 1 located in Unit D of Section 31, Township 19 South, Range 33 East, NMPM, the discovery well for the Geronimo-Delaware Pool. The Geronimo-Delaware Pool was created by Division Order R-9447, effective March 1, 1991.

10291

OIL CONSERVATION DIVISION
RECEIVED

'91 APR 21 AM 9 03

Memo

From
PAUL KAUTZ
Petroleum Geologist

To Mike Stogner

*Attached is a copy of
Mobil's Affidavit of Discovery
filed with our office
in March of 1988*



Oil Conservation Division
PO Box 1980, Hobbs, New Mexico 88241-1980



GARREY CARRUTHERS
GOVERNOR

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

100-24-88
200-24-88

MAR 29 1988

March 28, 1988

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

Mobil Producing TX & NM Inc.
Box 633
Midland, TX 79702

Attn: Mr. M. E. Sweeney

Re: Affidavit of Discovery

Gentlemen:

We have received your affidavit of claim to discovery allowable for a new Wolfcamp Pool in the SW/4 NE/4 of Section 1, T17S, R35E, Lea County, New Mexico, for your Lovington Deep State Well #3-G (located 1874/N & 1980/E), based on the drill stem test of the Wolfcamp interval from 10,210 feet to 10,318 feet conducted March 22, 1988.

As requested in your letter this information will be held confidential for 90 days and after that time will become part of the permanent well record for this well.

It is our understanding you do not anticipate to complete in the Wolfcamp interval until the lower zone has been produced but desire to document the discovery date of a new Wolfcamp Pool in the SW/4 NE/4 of Section 1, T17S, R35E.

If you have further questions concerning this, please feel free to contact us.

Very truly yours,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District I

JS/ED/ed

cc: Mobil Producing, TX & NM Inc.
Box 1800
Hobbs, NM 88240

Mobil Exploration and Producing U.S. Inc.

March 24, 1988

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

New Mexico Oil Conservation Division
1000 West Broadway
Hobbs, New Mexico 88240

Attention: J. T. Sexton
Supervisor, District I

**DISCOVERY ALLOWABLE AFFIDAVIT
UNDESIGNATED WOLFCAMP FIELD (OIL)
LEA COUNTY
NEW MEXICO**

Dear Sir:

In accordance with Rule 509 of the New Mexico Oil Conservation Division, Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing Texas & New Mexico Inc., hereby files this affidavit of claim to Discovery Allowable for a new Wolfcamp Pool in SW/4 of NE/4 of Section 1, T 17 S, R 35 E, Lea County, New Mexico. This claim is based upon a drill stem test of the Wolfcamp Interval in our Lovington Deep State Unit Well No. 3, located 1874' FNL and 1980' FEL of Section 1. A drilling permit was approved for this well on February 10, 1988 to test the South Shoe Bar Upper Penn Pool at a proposed total depth of 11,200'. The well was spudded on February 22, 1988.

On March 17, 1988, the Wolfcamp Interval from 10,210' to 10,318' was tested by means of a packer set in the open hole, with the following result. The interval flowed 12.3 bbls. of gas cut mud, 23.5 bbls. of oil cut mud and 75 bbls. of 41.0 API gravity crude oil over a 169 minute flow interval. The average surface flowing pressure during this interval was 1400 psig. The estimated shut in BHP extrapolated from pressure data was 3390 psig.

In support of this affidavit, please find the following attached:

- 1) copy of certified location plat NMOCD Form C-102;
- 2) partial reproduction of a Welox Spectral Density Dual Spaced Neutron Log, showing the interval which was drill stem tested;
- 3) copy of Halliburton Services Formation Testing Service Report, dated March 22, 1988.

We request that this information be held confidential.

A:M808469A.TLH

To the best of my knowledge, there is no other well producing from the Wolfcamp Zone within a two mile radius of the subject well.

Sincerely,



M. E. Sweeney
Environmental & Regulatory Manager

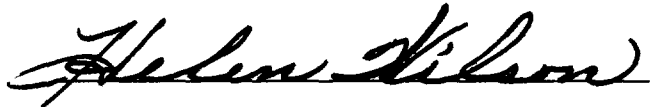
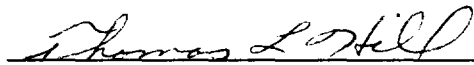
Mobil Exploration & Producing U.S. Inc.
as Agent for
Mobil Producing Texas & New Mexico Inc.

TLH11/hjw

THE STATE OF TEXAS,

County of Midland

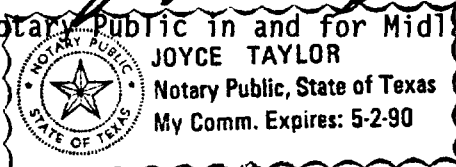
BEFORE ME, the undersigned, a Notary Public in and for said County, State of Texas, on this day personally appeared M. E. Sweeney, to me well known, and who, after being by me duly sworn, deposes and says that the facts stated in this letter are correct and true, and that the documents attached hereto are true copies of the originals, to the best of his belief and knowledge.



SUBSCRIBED AND SWORN TO BEFORE ME, this 22nd day of March A.D. 1988.



Notary Public in and for Midland County, Texas
JOYCE TAYLOR
Notary Public, State of Texas
My Comm. Expires: 5-2-90



A:M808469A.TLH

All distances must be from the outer boundaries of the Section.

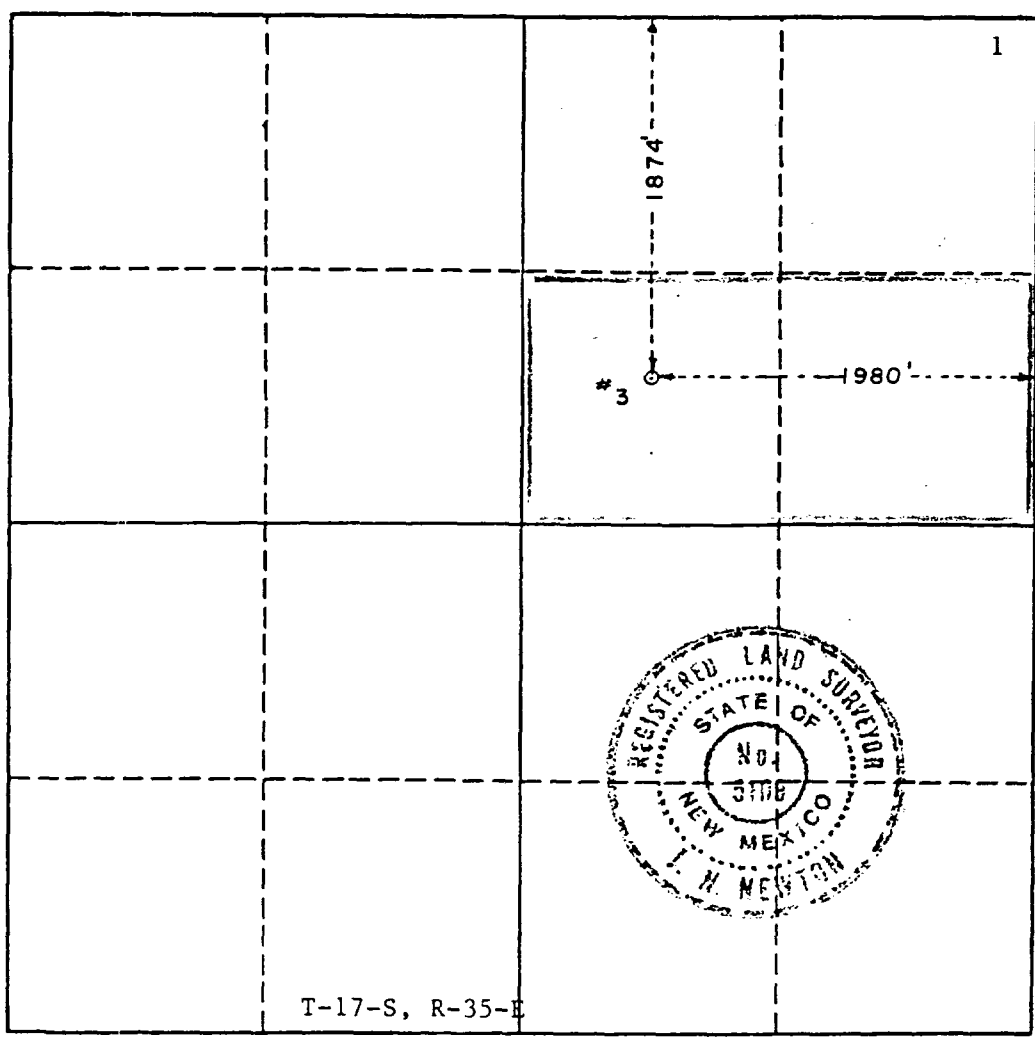
Operator MOBIL EXPLORATION AND PRODUCING U.S.			Lease LOVINGTON DEEP STATE		Well No. 3
Unit Letter G	Section 1	Township 17-S	Range 35-E	County LEA	
Actual Footage Location of Well: 1874 feet from the North line and 1980 feet from the East line					
Ground Level Elev. 3931 feet	Producing Formation Upper Penn	Pool South Shae-ban Undesignated	Dedicated Acreage 80 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

M. E. Sweeney M. E. Sweeney

Name
Manager,
Environmental & Regulatory

Position
Mobil Producing Texas & New Mexico, Inc.
acting by and through its agent

Company
Mobil Exploration & Producing U.S., Inc.

Date
February 9, 1988

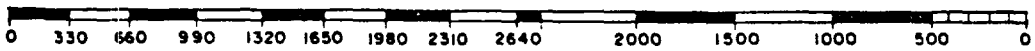
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
January 8, 1988

Registered Professional Engineer
and/or Land Surveyor

J. A. Acosta

Certificate No.
5109





**SPECTRAL DENSITY
DUAL SPACED
NEUTRON LOG**

COMPANY MOBIL PRODUCING TX AND NM INC.

WELL LOVINGTON DEEP STATE NO. 3

FIELD SOUTH SHOE-BAR

COUNTY LEA

API NO. 30-025-30226

LOCATION 1874 FNL RND 1980 FEL

STATE NM
OTHER SERVICES

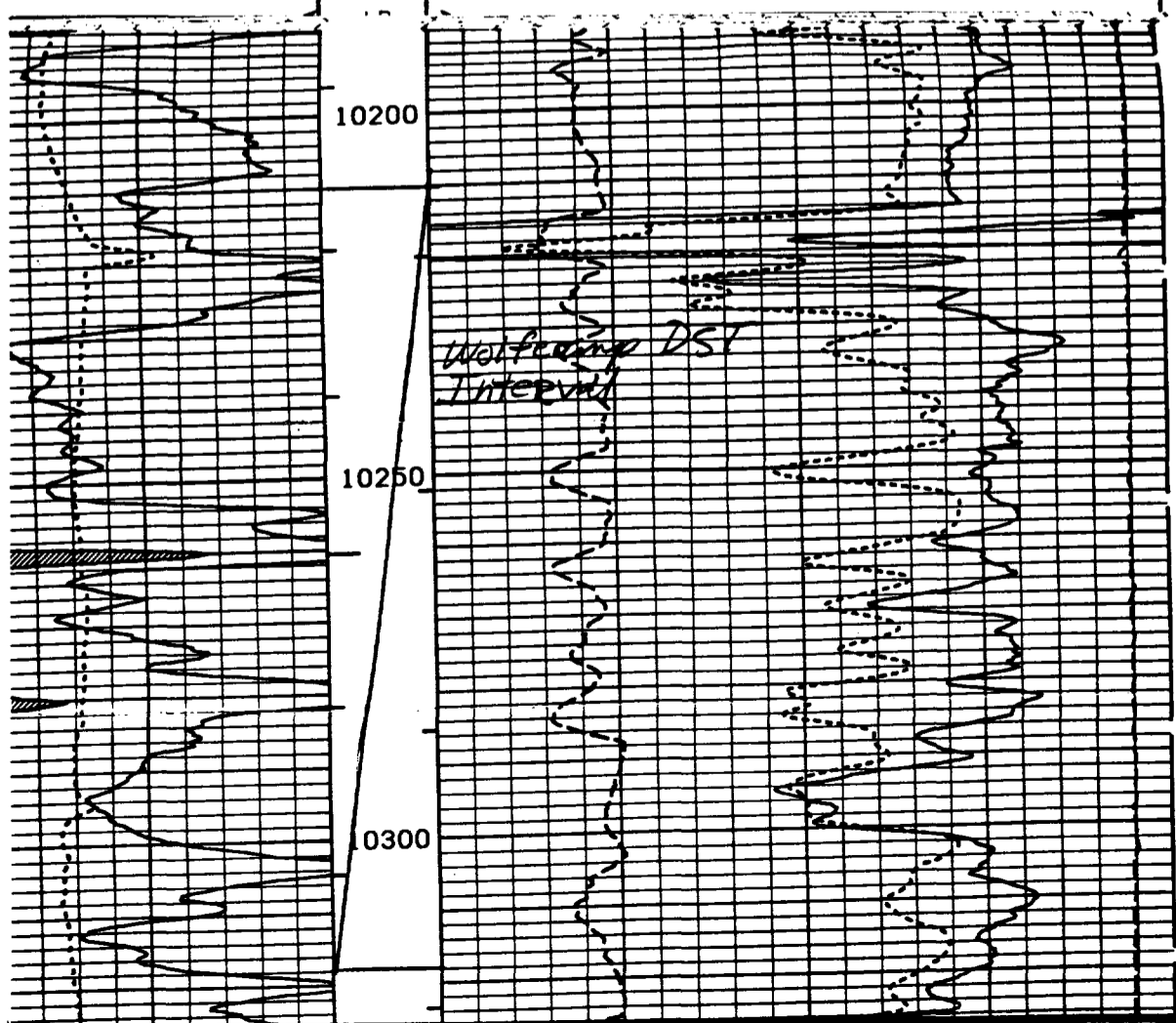
COMPANY _____
WELL _____
FIELD _____
COUNTY _____ ST _____

PERM. DATUM S. L. TWP. 17-S RGE 35-E
LOG MEASURED FROM K.B. ELEV. 3931
DRILLING MEASURED FROM K.B. 17.3FT. ABOVE PERM. DATUM
DATE 3/21/88

DEPTH-DRILLER	TMD			
DEPTH-MELEX	11000			
BIT. LOG INTER.	10995			
CASING-DRILLER	10993			
CASING-MELEX	8.625@5200			
BIT SIZE	5196			
TYPE FLUID IN HOLE	FRESH HUD			
DENS. 1 VISC	8.8 138.0			
PH 1 FLUID LOSS	9.6 19.5			
SOURCE OF SAMPLE	CIRCULATED			
RM # MERS. TEMP.	3.19 @47			
RMF # MERS. TEMP.	1.81 @81			
RMC # MERS. TEMP.	1.86 @82			
SOURCE RMF 1 RMC	MERS 1MERS			
RM # BHT	0.931@161			
TIME SINCE CIRC.	10 HOURS			
TIME ON BOTTOM	1:45 PM			
MAX. REC. TEMP	161 @8 H.			
EQUIP. 1 LOCATION	4551 10985			

PE CORR	-1	B/E	9
DEN CORR.	-0.2	GM/CC	0.8
TENSION	8000	POUNDS	3000
DENSITY	2.0	GM/CC	3.0
NEU POR	30	LIME	-10

P.E.	
QUALITY	-2
Q SHORT	1.5
Q LONG	5
GAMMA	
API	100
CALIPER	
INCHES	16



C-522045TS COP

HALLIBURTON SERVICES
FORMATION TESTING SERVICE REPORT

22-MAR-88

COMPANY NAME: MOBIL

DRILLING CONTRACTOR: MORANCO DRILLING

TICKET NUMBER: 62731000
TEST DATE: 3-17-88

LEASE NAME: LOVINGTON DEEP STATE
WELL NUMBER: 3
TEST NUMBER: 1

JOB TYPE: OPEN HOLE
LEGAL LOCATION: 1-17S-35E
COUNTY: LEA
STATE: NEW MEXICO

HALLIBURTON CAMP: HOBBS
FIELD AREA: S. SHOEBAR

ELEVATION: 3931.0 FEET
NET PAY: 27.0 FEET
HOLE SIZE: 7.9 INCH(ES)
TESTED INTERVAL: 10210.0 FEET - 10318.0 FEET

NOTICE:

THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM TEST 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 CALCULATIONS AND OPINIONS.

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 NEGLIGENCE OR OTHERWISE, IN CONNECTION WITH SUCH CALCULATIONS OR OPINIONS.



TICKET NUMBER: 62731. J
TEST DATE: 3-17-88

EQUIPMENT & HOLE DATA

FORMATION TESTED: LOWER WOLFCAMP
NET PAY: 27.0 FT.
GROSS TESTED FOOTAGE: 108.0 FT.
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFORATIONS:
HOLE/CASING SIZE: 7.9 IN.
ELEVATION: 3931.0 FT.
TOTAL DEPTH: 10318.0 FT.
PACKER DEPTH(S): 10204.9 FT.
10210.0 FT.
FINAL SURFACE CHOKE: 0.37500 IN.
BOTTOM HOLE CHOKE: 0.750 IN.
MUD WEIGHT: 8.70 LB/GAL
MUD VISCOSITY: 32.00 SEC.
ESTIMATED HOLE TEMPERATURE: 0.0 F
ACTUAL HOLE TEMPERATURE: 150.0 F @ 10314.0 FT.

HYDROCARBON PROPERTIES

OIL GRAVITY: 41.0 API @ 60.0 F
GAS/OIL RATIO: 655.0 CU.FT./BBL
GAS GRAVITY:

SAMPLER DATA

SURFACE PRESSURE: 1400.0 PSIG
GAS VOLUME: 4.72 CU.FT.
OIL VOLUME: 1150.0 CC
WATER VOLUME:
MUD VOLUME:
TOTAL LIQUID VOLUME: 1150.0 CC

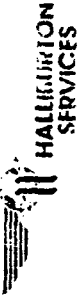
TESTER(S):

E. HAM
N. MANNEY

WITNESS(ES):

JOHNNY GARCIA

BECAUSE THIS REPORT IS BASED ON LOGGING ENGINEERING PRACTICES, BUT BECAUSE OF VARIOUS WELL CONDITIONS AND OTHER INFORMATION WHICH MUST BE RELIED UPON, HALLIBURTON MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE DATA OR OF ANY CALCULATIONS OR OPINIONS EXPRESSED HEREIN. YOU AGREE TO HOLD HALLIBURTON HARMLESS FROM ALL SUCH CLAIMS, DAMAGES, LOSSES OR EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE ASSERTED AGAINST HALLIBURTON.



TICKET NUMBER: 627310
 TEST DATE: 3-17-88



FLUID PROPERTIES FOR RECOVERED MUD AND WATER

SOURCE	RESISTIVITY		CHLORIDES
MUT PIT	0.910 @	66.0 F	3980.0 PPM
TOP OF TOOLS	0.350 @	62.0 F	12000.0 PPM
BOTTOM OF RECOVERY	1.220 @	60.0 F	3000.0 PPM
	0.000 @	0.0 F	0.0 PPM
	0.000 @	0.0 F	0.0 PPM
	0.000 @	0.0 F	0.0 PPM

CUSHION DATA

TYPE	AMOUNT	WEIGHT
	0.0	0.00
	0.0	0.00

RECOVERED (MEASURED FROM TESTER VALVE):

23.5 BBLs OF OIL
 12.3 BBLs OF GAS CUT MUD

REMARKS:

FLOWED 75 BBLs OF OIL DURING DST #1. TOP RECOVERY, MIDDLE RECOVERY, AND SAMPLER WERE OIL.

READINGS ON GAUGE 1516 SHOULD BE CONSIDERED QUESTIONABLE DUE TO STAIR-STEPPING OF GAUGE DURING TEST.

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



TICKET NUMBER: 627315.
 TEST DATE: 3-17-88

TYPE AND SIZE MEASURING DEVICE: POSITIVE CHOKE

TIME	CHOKE SIZE	SURFACE PRESSURE (PSI)	GAS RATE (MCF)	LIQUID RATE (BPD)	REMARKS
3-16-88					
2230					ON LOCATION
2300					PICK UP TOOLS
3-17-88					
0100					TRIP IN HOLE WITH TEST TOOLS
0610	0	0			OPEN TOOL - MANIFOLD CLOSED IN
0615	0	43			PSI INCREASING
0620	0	95			
0625	0	148			PSI INCREASING - CLOSE TOOL
0723	0	178			OPEN TOOL WITH MANIFOLD CLOSED
0728	0	220			PSI INCREASING
0733	0	250			
0738	0	285			
0743	0	310			
0748	0	320			
0752	1/4	360			OPEN ON 1/4 INCH CHOKE
0753	1/4	360			STEADY
0758	1/4	360			PSI INCREASING
0803	1/4	405			PSI INCREASING
0808	1/4	435			
0813	1/4	450			
0817	3/8	480			OPEN ON 3/8 INCH CHOKE
0823	3/8	320			GAS TO SURFACE
0825	1/4	300			OPEN 1/4 INCH CHOKE AND CLOSE
					3/8 INCH CHOKE.
0828	3/8	335			OPEN 3/8 INCH CHOKE AND CLOSE
					1/4 INCH CHOKE.
0833	3/8	210			FLUID TO SURFACE
0838	3/8	220			PSI INCREASING
0843	3/8	260			
0848	3/8	300			
0853	3/8	360			
0858	3/8	380			
0903	3/8	395			
0908	3/8	410			
0913	3/8	410			STEADY
0923	3/8	420			SLIGHT INCREASE
0929	3/8	420			CLOSE CHOKE AND FIX LEAK IN
					FLOWLINE.
0931	3/8	450			REOPEN 3/8 INCH CHOKE
0933	3/8	430			SLIGHT INCREASE
0943	3/8	440			STEADY
1000	3/8	440			STEADY - CLOSE TOOL
1400					TESTER RELEASED FOR NIGHT
3-18-88					
0700					TESTER ON LOCATION
0900					OPEN BYPASS
0920					DROP BAR AND REVERSE OUT
1210					TRIP OUT OF HOLE

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TICKET NUMBER: 62731.0
 TEST DATE: 3-17-88

SUMMARY OF RESERVOIR PARAMETERS
 HORNER METHOD FOR LIQUID WELLS

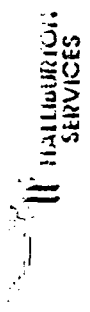
OIL GRAVITY: 41.0 API@ 60.0 F
 WATER SALINITY: 0.0 % SALT
 GAS GRAVITY: 0.700
 FLUID GRADIENT: 0.3554 PSI/FT.
 GAS/OIL RATIO: 655.0 SCF/STB
 FLUID PROPERTIES AT: 3383.0 PSIG
 TEMPERATURE: 150.000 F
 VISCOSITY: 0.568 CP
 NET PAY: 27.0 FT.
 FORMATION VOLUME FACTOR: 1.353 RVOL/SVOL
 POROSITY: 10.0 %
 SYSTEM COMPRESSIBILITY: 0.00001229 VOL/VOL/PSI

 PIPE CAPACITY FACTOR(S): 0.00000 BBL/FT.
 0.00000 BBL/FT.
 0.00000 BBL/FT.
 0.00000 BBL/FT.

GAUGE NUMBER	1496	1496	
GAUGE DEPTH	10315.0	10315.0	
FLOW AND CIP PERIOD	1	2	
PF FINAL FLOW PRESSURE	711.2	2133.0	PSIG
T TOTAL FLOW TIME	15.8	169.4	MIN
P* EXTRAPOLATED PRESSURE	0.0	3383.0	PSIG
ONE CYCLE PRESSURE	0.0	3038.1	PSIG
Q PRODUCTION RATE	0.0	941.9	BPD
KH/U TRANSMISSIBILITY	0.00	600.75	MD-FT./CP
KH FLOW CAPACITY	0.00	341.32	MD-FT.
K PERMEABILITY	0.000	12.642	MD
S SKIN FACTOR	0.000	-2.101	
DR DAMAGE RATIO	0.00	0.66	
Q1 POTENTIAL RATE	0.0	941.9	BPD
RI INVESTIGATION RADIUS	0.0	228.8	FT.

REMARKS:
 THE PRODUCTION RATE WAS CALCULATED USING THE TOTAL RECOVERED FLUID OF 110.8 BBLS DURING THE 169.4 TOTAL MINUTES OF FLOW.
 ALL CALCULATIONS ARE BASED ON 100% OIL RECOVERY.

THIS REPORT IS BASED ON THE DATA PROVIDED TO US BY YOU. WE MAKE NO WARRANTY AS TO THE ACCURACY OF THE DATA OR THE RESULTS OF THE CALCULATIONS. WE WILL NOT BE RESPONSIBLE FOR ANY LOSS OR DAMAGE TO YOUR PROPERTY OR PERSONS OR OTHERS.



TICKET NUMBER: 6273100
 TEST DATE: 3-17-88

SUMMARY OF RESERVOIR PARAMETERS
 HORNER METHOD FOR LIQUID WELLS

OIL GRAVITY: 41.0 API@ 60.0 F
 WATER SALINITY: 0.0 % SALT
 GAS GRAVITY: 0.700
 FLUID GRADIENT: 0.3554 PSI/FT.
 GAS/OIL RATIO: 655.0 SCF/STB
 FLUID PROPERTIES AT: 3383.0 PSIG
 TEMPERATURE: 150.000 F
 VISCOSITY: 0.568 CP
 NET PAY: 27.0 FT.
 FORMATION VOLUME FACTOR: 1.353 RVOL/SVOL
 POROSITY: 10.0 %
 SYSTEM COMPRESSIBILITY: 0.00001229 VOL/VOL/PSI

PIPE CAPACITY FACTOR(S): 0.00000 BBL/FT.
 0.00000 BBL/FT.
 0.00000 BBL/FT.
 0.00000 BBL/FT.

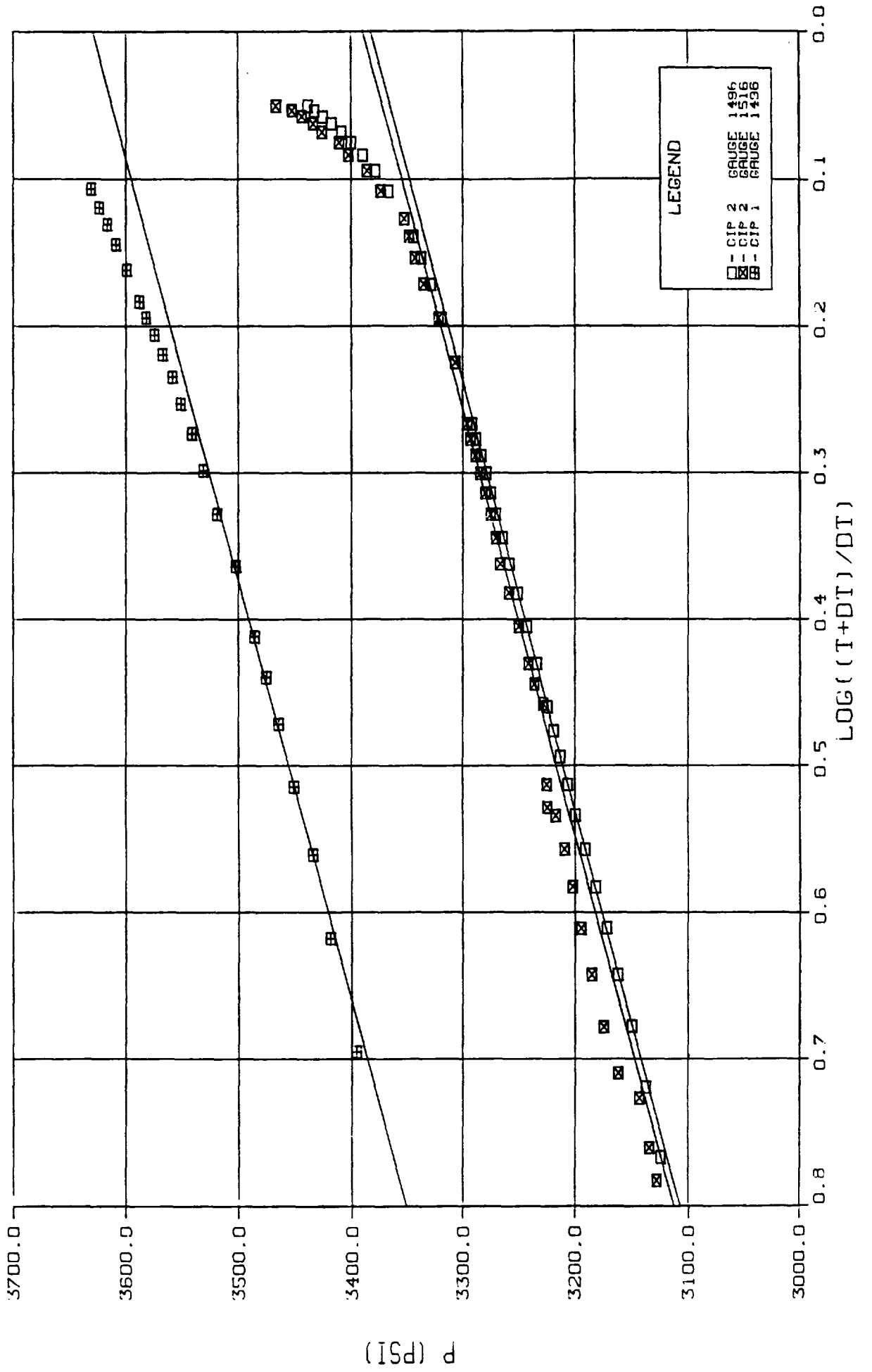
GAUGE NUMBER	1516	1516	
GAUGE DEPTH	10191.6	10191.6	
FLOW AND CIP PERIOD	1	2	
PF FINAL FLOW PRESSURE	705.1	2106.3	PSIG
T TOTAL FLOW TIME	15.8	169.4	MIN
PA EXTRAPOLATED PRESSURE	0.0	3390.0	PSIG
ONE CYCLE PRESSURE	0.0	3042.9	PSIG
Q PRODUCTION RATE	0.0	941.9	BPD
KH/U TRANSMISSIBILITY	0.00	596.96	MD-FT./CP
KH FLOW CAPACITY	0.00	339.17	MD-FT.
K PERMEABILITY	0.000	12.562	MD
S SKIN FACTOR	0.000	-2.012	
DR DAMAGE RATIO	0.00	0.68	
Q1 POTENTIAL RATE	0.0	941.9	BPD
RI INVESTIGATION RADIUS	0.0	228.1	FT.

REMARKS:
 THE PRODUCTION RATE WAS CALCULATED USING THE TOTAL RECOVERED FLUID OF
 110.8 BBL DURING THE 169.4 TOTAL MINUTES OF FLOW.
 ALL CALCULATIONS ARE BASED ON 100% OIL RECOVERY.



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HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6
 BLANKED OFF: NO
 CLOCK HOUR: 48



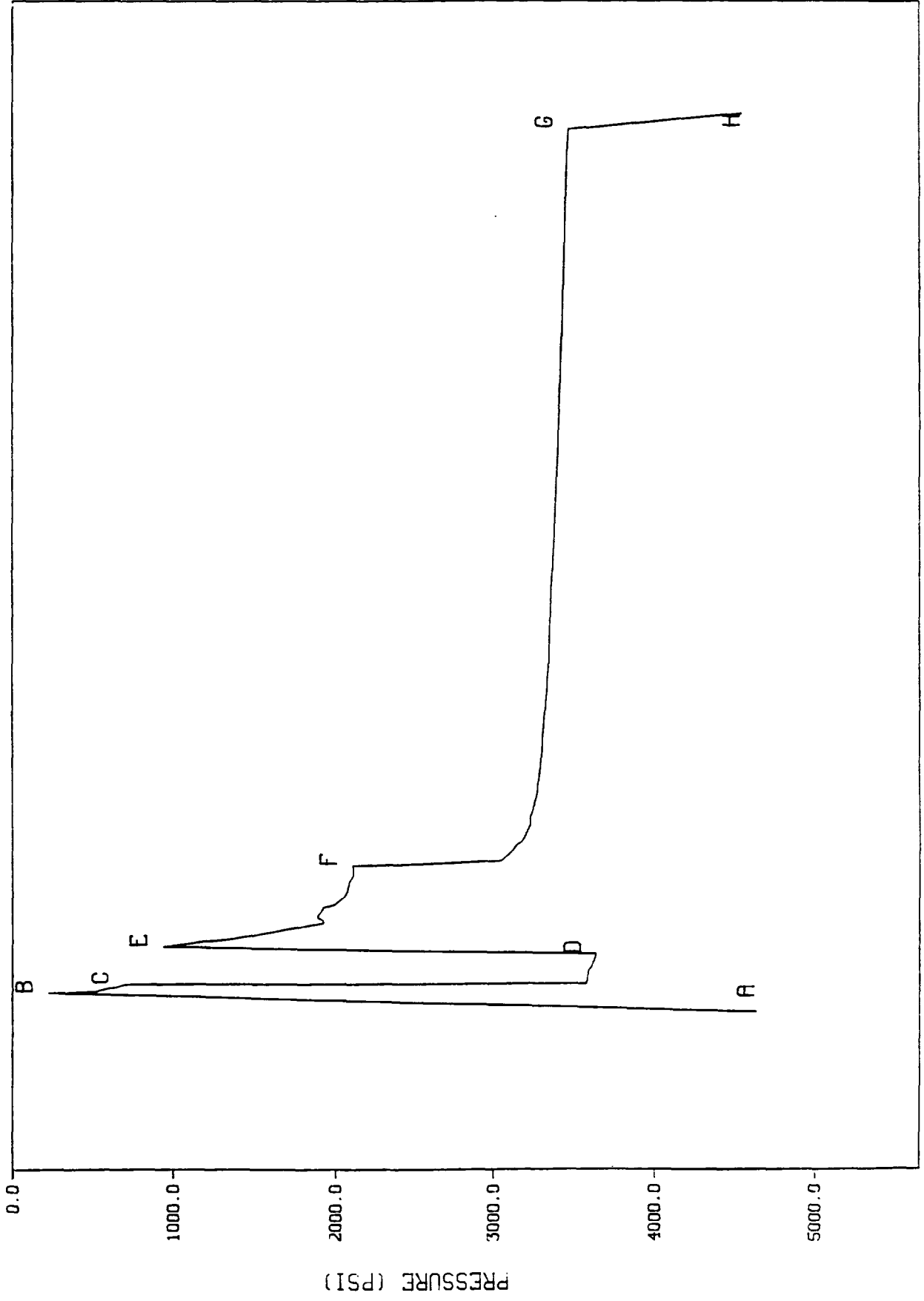
DESCRIPTION	PRESSURE		TIME		TYPE
	REPORTED	CALCULATED	REPORTED	CALCULATED	
A INITIAL HYDROSTATIC	4691	4633.6			
B INITIAL FIRST FLOW	218	226.6			
C FINAL FIRST FLOW	611	705.1	15.0	15.8	F
C INITIAL FIRST CLOSED-IN	611	705.1			
D FINAL FIRST CLOSED-IN	3589	3638.4	58.0	56.8	C
E INITIAL SECOND FLOW	895	942.0			
F FINAL SECOND FLOW	2095	2106.3	157.0	153.6	F
F INITIAL SECOND CLOSED-IN	2095	2106.3			
G FINAL SECOND CLOSED-IN	3435	3466.3	1380.0	1383.8	C
H FINAL HYDROSTATIC	4691	4546.3			

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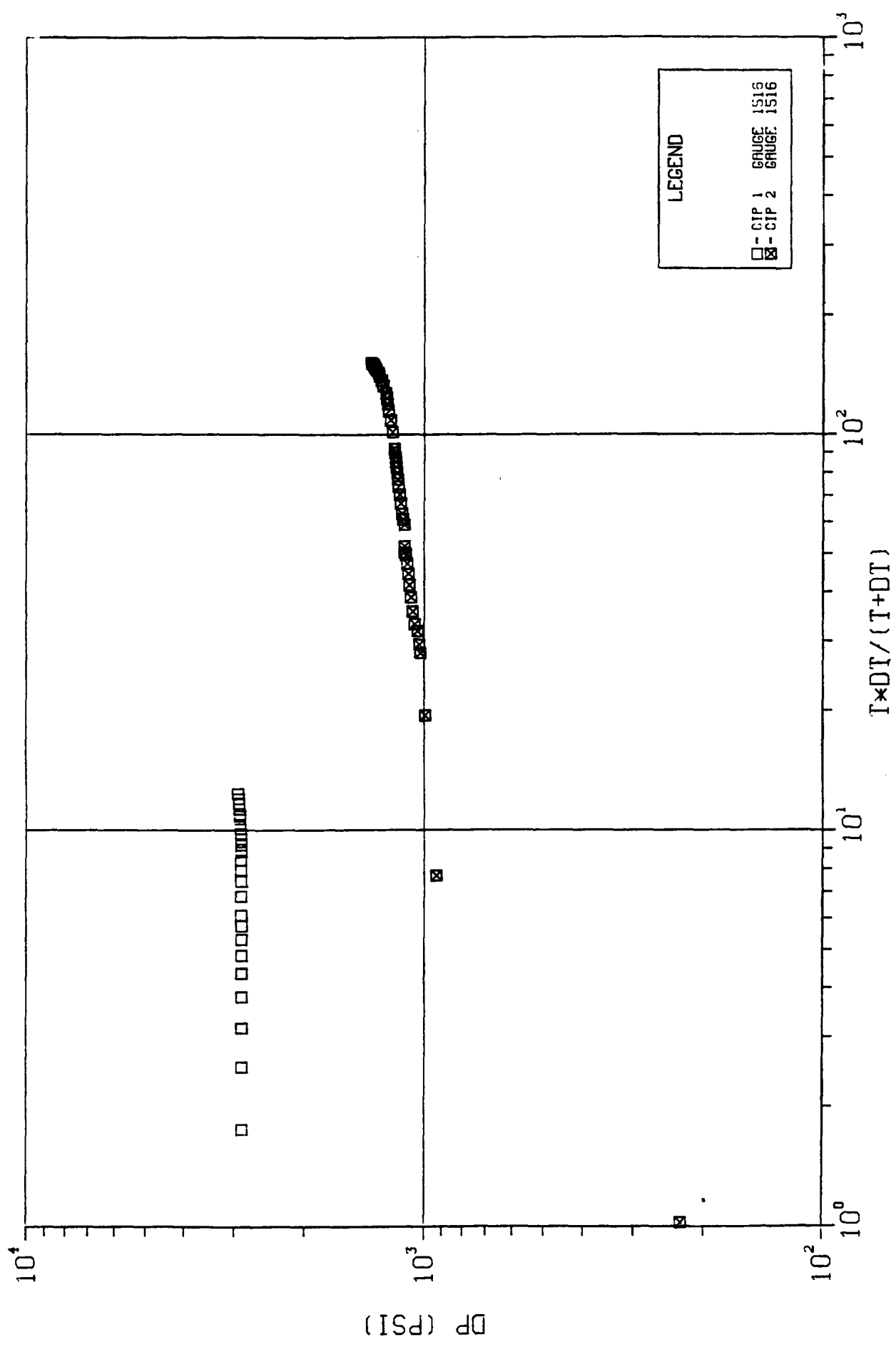


TICKET NUMBER: 62731300
GAUGE NUMBER: 1516

PICTURE REPRESENTS ONLY THE DATA POINTS READ
NOT INTENDED TO REPRODUCE ACTUAL CHART



TIME



HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 20518
 HOUR: 48
 GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6



REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
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FIRST FLOW PERIOD

B	1	0.0	226.6		
	2	3.0	527.2	300.6	
	3	6.0	558.9	31.7	
	4	9.0	603.0	44.1	
	5	12.0	663.8	60.7	
C	6	15.8	705.1	41.3	

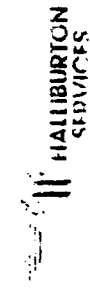
FIRST CLOSED-IN PERIOD

C	1	0.0	705.1		
	2	1.0	3570.6	2865.6	0.9
	3	2.0	3572.6	2867.6	1.8
	4	3.0	3574.1	2869.1	2.5
	5	4.0	3575.9	2870.8	3.2
	6	5.0	3576.6	2871.5	3.8
	7	6.0	3577.7	2872.6	4.4
	8	7.0	3579.2	2874.1	4.8
	9	8.0	3580.3	2875.2	5.3
	10	9.0	3581.6	2876.6	5.7
	11	10.0	3581.8	2876.8	6.1
	12	12.0	3583.4	2878.3	6.8
	13	14.1	3584.7	2879.6	7.4
	14	16.0	3585.4	2880.3	7.9
	15	18.0	3586.2	2881.2	8.4
	16	20.0	3586.2	2881.2	8.8
	17	22.0	3586.2	2881.2	9.2
	18	24.0	3586.2	2881.2	9.5
	19	26.0	3590.6	2885.6	9.8
	20	28.0	3597.0	2892.0	10.1
	21	30.0	3601.4	2896.4	10.3
	22	35.0	3610.6	2905.6	10.9
	23	40.0	3618.1	2913.1	11.3
	24	45.0	3625.4	2920.3	11.7
	25	50.0	3631.3	2926.3	12.0
D	26	56.8	3638.4	2933.3	12.3

SECOND FLOW PERIOD

E	1	0.0	942.0		
	2	5.0	1072.1	130.0	
	3	10.0	1171.2	99.1	

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HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 20518
 HOUR: 48
 GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6



REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
	4	1347.2	176.0		
1	5	1417.3	70.1		
1	6	1467.3	50.0		
1	7	1498.8	31.4		
1	8	1554.7	55.9		
1	9	1596.1	41.5		
1	10	1627.6	31.4		
1	11	1685.5	57.9		
1	12	1728.2	42.8		
1	13	1756.6	28.4		
1	14	1788.3	31.7		
1	15	1833.3	45.0		
1	16	1882.2	48.9		
1	17	1921.5	39.3		
2	18	1921.5	0.0		
	19	1889.8	-31.7		
2	20	1889.8	0.0		
	21	1907.1	17.3		
3	22	1914.9	7.9		
	23	1921.7	6.8		
	24	1992.7	71.0		
	25	2011.2	18.5		
	26	2033.8	22.7		
	27	2053.9	20.0		
	28	2063.4	9.5		
	29	2071.7	8.4		
	30	2076.1	4.4		
	31	2079.4	3.3		
	32	2083.4	4.0		
4	33	2086.1	2.6		
5	34	2091.6	5.5		
	35	2101.5	9.9		
	36	2111.4	9.9		
	37	2111.4	0.0		
	38	2109.2	-2.2		
	39	2107.9	-1.3		
F	40	2106.3	-1.5		

SECOND CLOSED-IN PERIOD

F	1	0.0	2106.3		
1	2	1.0	2335.0	228.7	1.0
1	3	8.0	3036.6	930.3	7.7

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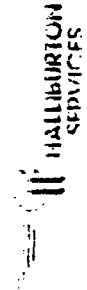
HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 20518
 HOUR: 48
 GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6



REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
1	4	3098.2	991.9	19.4	0.940
1	5	3128.0	1021.7	27.9	0.783
1	6	3134.8	1028.5	29.4	0.761
1	7	3143.4	1037.1	31.8	0.727
1	8	3162.1	1055.8	33.0	0.710
	9	3174.9	1068.6	35.5	0.678
	10	3185.2	1078.9	38.6	0.642
	11	3194.5	1088.2	41.5	0.611
	12	3202.2	1095.9	44.3	0.582
	13	3209.5	1103.2	47.0	0.557
	14	3217.0	1110.7	49.5	0.534
1	15	3224.2	1117.9	50.1	0.529
	16	3224.9	1118.6	52.0	0.513
1	17	3228.2	1121.9	59.0	0.458
	18	3235.9	1129.6	60.9	0.444
	19	3241.4	1135.1	62.9	0.430
	20	3250.0	1143.7	66.7	0.405
	21	3259.0	1152.7	70.3	0.382
	22	3266.7	1160.4	73.5	0.362
	23	3270.7	1164.4	76.6	0.344
	24	3275.1	1168.8	79.5	0.328
	25	3280.0	1173.7	82.3	0.314
	26	3284.4	1178.1	84.8	0.300
	27	3288.8	1182.5	87.3	0.288
	28	3293.0	1186.7	89.6	0.277
	29	3296.5	1190.2	91.7	0.266
	30	3307.3	1201.0	101.0	0.225
	31	3322.0	1215.7	108.2	0.194
	32	3335.5	1229.2	114.1	0.171
	33	3343.2	1236.9	119.0	0.153
	34	3348.5	1242.2	123.1	0.139
	35	3353.1	1246.8	126.5	0.127
	36	3374.0	1267.7	132.1	0.108
	37	3366.4	1280.1	136.4	0.094
	38	3402.4	1296.1	139.8	0.083
	39	3410.8	1304.5	142.5	0.075
	40	3426.4	1320.1	144.8	0.068
	41	3434.2	1327.9	146.8	0.062
	42	3443.9	1337.5	148.4	0.057
	43	3452.4	1346.1	149.9	0.053
0	44	3466.3	1360.0	150.9	0.050

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HALLIBURTON SERVICES

TICKET NUMBER: 62731300
TEST DATE: 3-17-88
CLOCK NUMBER: 20518
HOUR: 48
GAUGE NUMBER: 1516
GAUGE DEPTH: 10191.6

LEGEND:

- 1 STAIR-STEP
- 2 CHOKE CHANGE
- 3 FLOW TO SURFACE
- 4 CLOSED AT SURFACE
- 5 OPENED AT SURFACE

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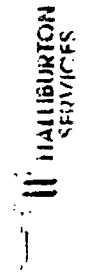


HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0
 BLANKED OFF: YES
 CLOCK HOUR: 48

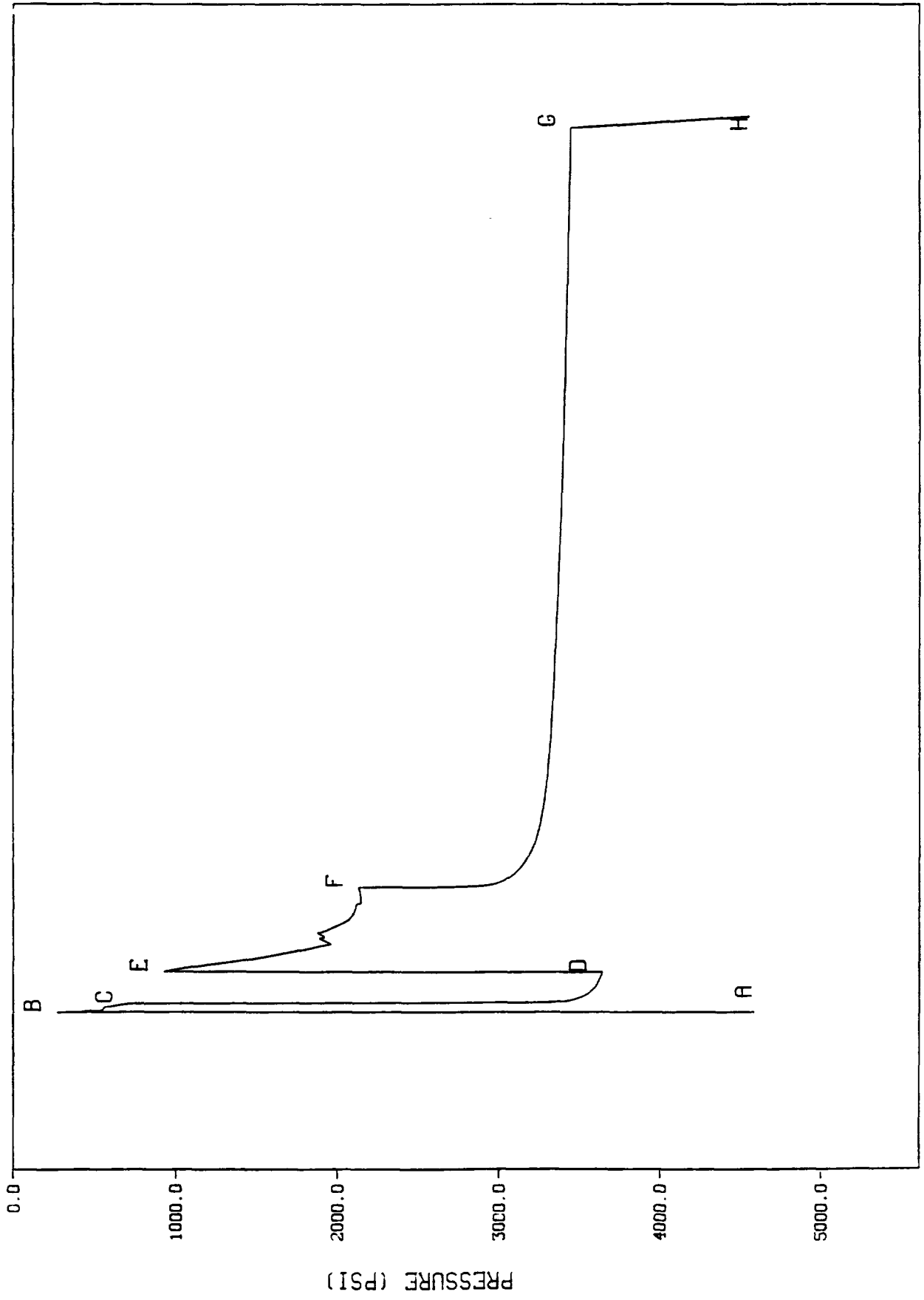
DESCRIPTION	PRESSURE		TIME		
	REPORTED	CALCULATED	REPORTED	CALCULATED	TYPE
A INITIAL HYDROSTATIC	4434	4582.7			
B INITIAL FIRST FLOW	320	270.6			
C FINAL FIRST FLOW	485	711.2	15.0	15.8	F
C INITIAL FIRST CLOSED-IN	485	711.2			
D FINAL FIRST CLOSED-IN	3572	3631.1	58.0	56.8	C
E INITIAL SECOND FLOW	837	926.4			
F FINAL SECOND FLOW	2137	2133.0	157.0	153.6	F
F INITIAL SECOND CLOSED-IN	2137	2133.0			
G FINAL SECOND CLOSED-IN	3373	3438.8	1380.0	1383.8	C
H FINAL HYDROSTATIC	4434	4556.0			

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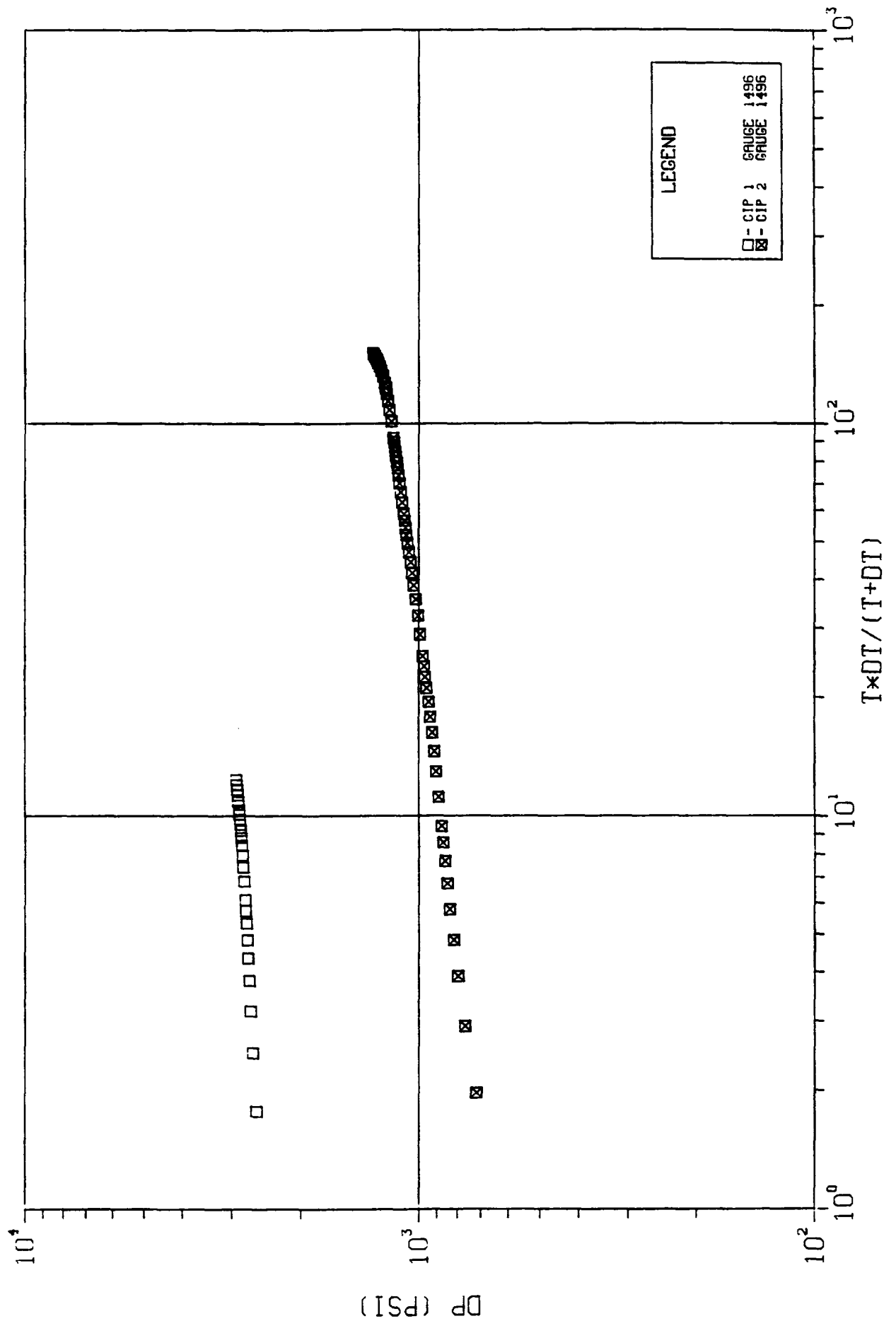


TICKET NUMBER: 62731300
GAUGE NUMBER: 1496

PICTURE REPRESENTS ONLY THE DATA POINTS READ
NOT INTENDED TO REPRODUCE ACTUAL CHART



TIME



HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 17545
 HOUR: 48
 GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0



REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
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FIRST FLOW PERIOD

B	1	0.0	270.6		
	2	3.0	550.6	279.9	
	3	6.0	554.3	3.7	
	4	9.0	560.5	6.2	
	5	12.0	627.9	67.5	
C	6	15.8	711.2	83.3	

FIRST CLOSED-IN PERIOD

C	1	0.0	711.2		
	2	1.0	3178.9	2467.6	1.0
	3	2.0	3307.7	2596.4	1.8
	4	3.0	3361.1	2649.9	2.5
	5	4.0	3396.0	2684.8	3.2
	6	5.0	3419.2	2708.0	3.8
	7	6.0	3434.9	2723.7	4.3
	8	7.0	3451.5	2740.2	4.8
	9	8.0	3464.5	2753.3	5.3
	10	9.0	3475.6	2764.3	5.7
	11	10.0	3485.7	2774.5	6.1
	12	12.0	3502.3	2791.1	6.8
	13	14.0	3518.6	2807.4	7.4
	14	16.0	3531.0	2819.8	7.9
	15	18.0	3541.0	2829.7	8.4
	16	20.0	3550.9	2839.7	8.8
	17	22.0	3558.4	2847.2	9.2
	18	24.0	3567.0	2855.8	9.5
	19	26.0	3574.5	2863.3	9.8
	20	28.0	3581.8	2870.6	10.1
	21	30.1	3588.0	2876.8	10.3
	22	35.0	3599.1	2887.8	10.9
	23	40.0	3609.0	2897.8	11.3
	24	45.0	3616.5	2905.3	11.7
	25	49.9	3623.8	2912.6	12.0
D	26	56.8	3631.1	2919.8	12.3

SECOND FLOW PERIOD

E	1	0.0	926.4		
	2	5.0	1014.3	87.9	
	3	10.0	1132.9	118.6	

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HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 17545
 HOUR: 48
 GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0



REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
	4	1259.0	126.1		
	5	1387.5	128.5		
	6	1506.7	119.2		
	7	1608.5	101.8		
	8	1705.5	96.9		
	9	1799.5	94.1		
	10	1879.5	79.9		
1	11	1960.7	81.3		
	12	1924.2	-36.5		
1	13	1890.3	-33.9		
1	14	1921.3	31.0		
	15	1912.3	-9.1		
2	16	1878.6	-33.6		
	17	1929.3	50.7		
	18	1971.8	42.5		
	19	2012.5	40.7		
	20	2050.3	37.8		
	21	2076.6	26.3		
	22	2092.1	15.5		
	23	2101.9	9.7		
	24	2108.9	7.1		
	25	2114.2	5.3		
	26	2117.4	3.1		
3	27	2120.9	3.5		
4	28	2146.1	25.2		
	29	2147.5	1.3		
	30	2147.5	0.0		
	31	2145.2	-2.2		
	32	2141.9	-3.3		
	33	2136.8	-5.1		
F	34	2133.0	-3.8		

SECOND CLOSED-IN PERIOD

F	1	0.0	2133.0		
	2	1.0	2729.5	596.5	1.0 2.246
	3	2.0	2849.9	716.9	2.0 1.934
	4	3.0	2896.6	763.6	2.9 1.765
	5	4.0	2928.7	795.6	3.9 1.638
	6	5.0	2948.6	815.6	4.8 1.546
	7	6.0	2966.7	833.7	5.8 1.467
	8	7.0	2978.5	845.4	6.7 1.400
	9	8.0	2989.5	856.5	7.7 1.344

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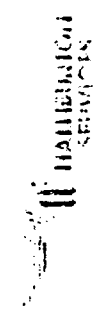
HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 17545
 HOUR: 48
 GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0



REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
10	9.0	2999.0	866.0	8.6	1.297
11	10.0	3007.2	874.2	9.4	1.255
12	12.0	3021.4	888.4	11.2	1.180
13	14.0	3034.0	901.0	13.0	1.116
14	16.0	3045.1	912.0	14.6	1.065
15	18.0	3056.4	923.3	16.3	1.017
16	20.0	3067.0	934.0	17.9	0.977
17	22.0	3076.5	943.5	19.5	0.939
18	24.1	3086.9	953.9	21.1	0.904
19	26.0	3095.7	962.7	22.5	0.876
20	28.0	3102.4	969.4	24.0	0.848
21	30.0	3110.1	977.1	25.5	0.823
22	35.0	3124.7	991.7	29.0	0.767
23	40.0	3137.8	1004.8	32.3	0.719
24	45.0	3150.0	1016.9	35.6	0.678
25	50.0	3162.1	1029.1	38.6	0.642
26	55.0	3172.1	1039.1	41.5	0.610
27	60.0	3182.1	1049.0	44.3	0.582
28	65.0	3191.1	1058.1	47.0	0.557
29	70.0	3199.5	1066.5	49.5	0.534
30	75.0	3206.4	1073.4	52.0	0.513
31	80.0	3213.0	1080.0	54.3	0.494
32	85.0	3218.8	1085.8	56.6	0.476
33	90.0	3224.3	1091.3	58.8	0.460
34	100.0	3233.8	1100.8	62.9	0.430
35	110.0	3242.9	1109.9	66.7	0.405
36	120.0	3250.9	1117.9	70.2	0.382
37	130.0	3258.4	1125.4	73.6	0.362
38	140.0	3264.6	1131.6	76.6	0.344
39	150.0	3270.6	1137.6	79.5	0.328
40	160.0	3275.0	1142.0	82.3	0.314
41	170.0	3279.4	1146.4	84.8	0.300
42	180.0	3283.9	1150.8	87.3	0.288
43	190.0	3288.3	1155.3	89.5	0.277
44	200.0	3292.3	1159.2	91.7	0.266
45	250.0	3307.1	1174.1	101.0	0.225
46	300.0	3319.3	1186.2	108.3	0.194
47	350.0	3329.2	1196.2	114.1	0.171
48	400.0	3337.9	1204.8	119.0	0.153
49	450.0	3344.5	1211.5	123.1	0.139
50	500.0	3353.1	1220.1	126.5	0.127
51	600.0	3367.1	1234.0	132.1	0.108

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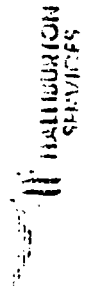


HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88
 CLOCK NUMBER: 17545
 HOUR: 48
 GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT	
	52	700.0	3379.0	1246.0	136.4	0.094
	53	800.0	3389.9	1256.8	139.8	0.083
	54	900.0	3400.3	1267.2	142.5	0.075
	55	1000.0	3408.9	1275.9	144.8	0.068
	56	1100.0	3417.7	1284.7	146.8	0.062
	57	1200.0	3425.5	1292.5	148.4	0.057
	58	1300.0	3432.8	1299.8	149.9	0.053
0	59	1383.8	3438.8	1305.8	150.9	0.050

BECAUSE OF VARIABLE WELL CONDITIONS AND OTHER UNCONTROLLED FACTORS WHICH MUST BE RELIED UPON HALLIBURTON MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE DATA OR OF ANY CALCULATIONS OR OPINIONS THEREON. YOU AGREE TO HOLD HALLIBURTON HARMLESS FROM ALL SUCH LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE.



HALLIBURTON SERVICES

TICKET NUMBER: 62731300
TEST DATE: 3-17-88

CLOCK NUMBER: 17545
HOUR: 48

GAUGE NUMBER: 1496
GAUGE DEPTH: 10315.0







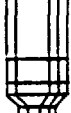













LEGEND:

- 1 CHOKE CHANGE
- 2 FLOW TO SURFACE
- 3 CLOSED AT SURFACE
- 4 OPENED AT SURFACE



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	TOOL EQUIPMENT	O.D.	I.D.	LENGTH	DEPTH
1	 DRILL PIPE	4.500	3.826	7259.0	
1	 DRILL PIPE	4.500	3.640	2325.0	
3	 DRILL COLLARS	6.250	2.250	463.0	
50	 IMPACT REVERSING SUB	6.125	3.135	1.0	10048.1
3	 DRILL COLLARS	6.250	2.250	123.0	
5	 CROSSOVER	5.750	2.500	1.0	
62	 MULTIPLE CIP SAMPLER	5.000	0.750	8.4	10179.5
14	 EXTENSION JOINT	5.000	0.870	5.0	
14	 EXTENSION JOINT	5.000	0.870	5.0	
80	 AP RUNNING CASE	5.000	2.250	4.1	10191.6
15	 JAR	5.000	1.750	5.0	
35	 RTTS SAFETY JOINT	5.000	1.000	2.6	
70	 OPEN HOLE PACKER	7.000	1.530	5.1	10204.9
70	 OPEN HOLE PACKER	7.000	1.530	5.1	10210.0
19	 ANCHOR PIPE SAFETY JOINT	5.750	1.500	4.3	
5	 CROSSOVER	6.000	2.875	1.0	
3	 DRILL COLLARS	6.250	2.250	62.0	
5	 CROSSOVER	5.750	3.125	1.0	
20	 FLUSH JOINT ANCHOR	5.750	3.000	33.0	
81	 BLANKED-OFF RUNNING CASE	5.750	0.000	4.1	10315.0
	TOTAL DEPTH				10318.0



SPECTRAL DENSITY
DUAL SPACED
NEUTRON LOG

COMPANY MOBIL PRODUCING TX AND NM INC.

WELL LOVINGTON DEEP STATE NO. 3

FIELD SOUTH SHOE BAR

COMPANY _____
WELL _____
FIELD _____
COUNTY _____ ST _____

COUNTY LEA
API NO. 30-025-30226
LOCATION 1874 FNL AND 1900 FEL

STATE NM
OTHER SERVICES

SEC. 1 TWP 17-S RGE 35-E

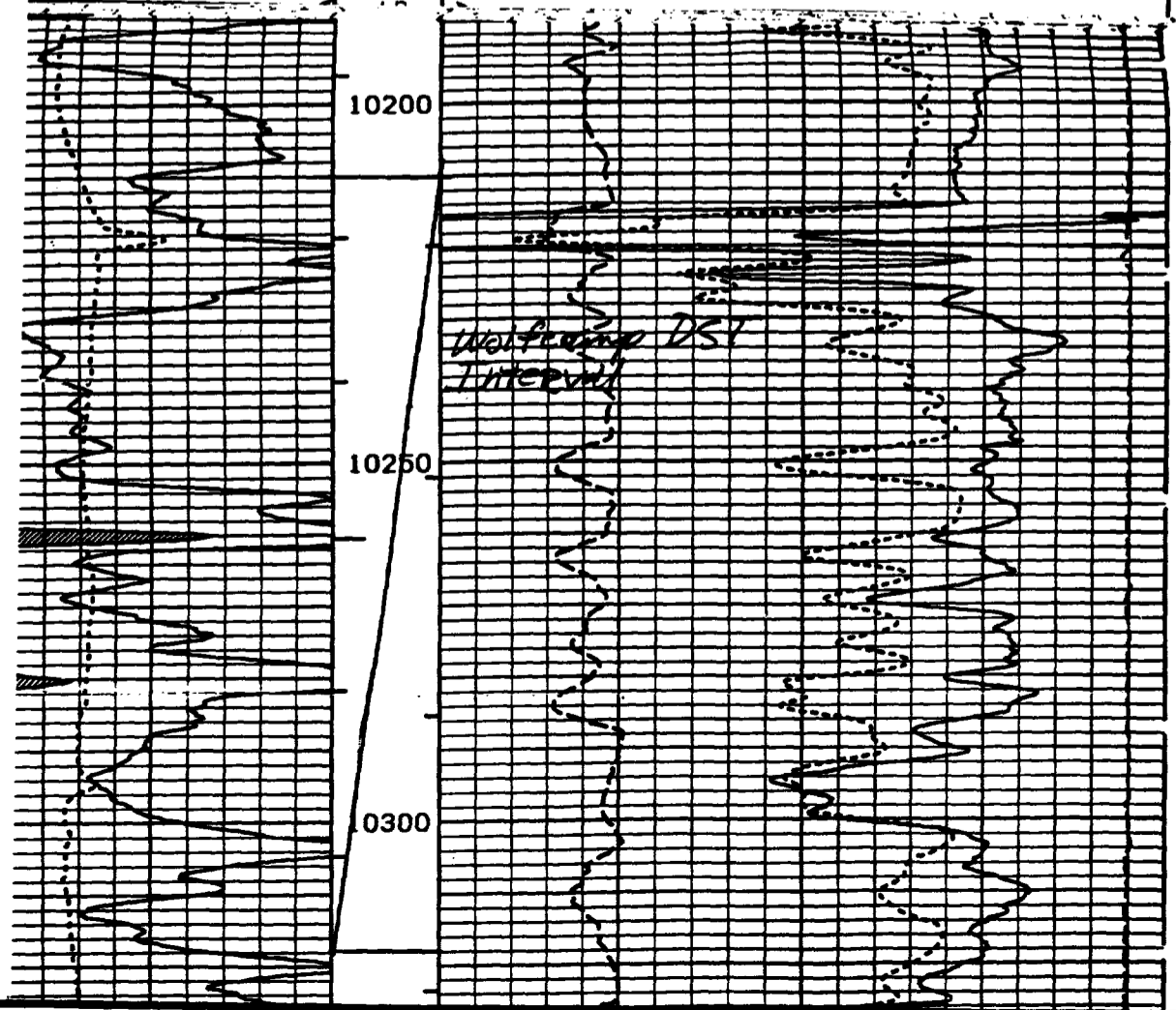
PERMANENT DATUM S. L. ELEV. 3931
LOG MEASURED FROM K. B. 17.3 FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM K. B. ELEV.: K. B. 3948.3
O. F. NA
C. L. 3931

DATE 3/21/88

RUN NO.	TWO
DEPTH-DRILLER	11000
DEPTH-MELEX	10995
BIT LOG INTER.	10993
TOP LOG INTER.	SURFACE
CASING-DRILLER	8.62565200
CASING-MELEX	5196
BIT SIZE	7.875
TYPE FLUID IN HOLE	FRESH MUD
DENS. 1 VISC.	8.8 138.0
PH 1 FLUID LOSS	9.6 19.5
SOURCE OF SAMPLE	CIRCULATED
RH 0 MENS. TEMP.	3.19 47
RHF 0 MENS. TEMP.	1.81 81
RMC 0 MENS. TEMP.	1.86 82
SOURCE RHF 1 RMC	MENS 1MENS
RH 0 BHT	0.931 151
TIME SINCE CIRC.	10 HOURS
TIME ON BOTTOM	1:45 PM
MAX. REC. TEMP.	161 88 H.
EQUIP. 1 LOCATION	4551 1H0988

PE CORR	9
B/E	-1
DEN CORR.	-8.2
GM/CC	0.8
DENSITY	8000
GM/CC	2.0
NEU POR	3.0
LINE	38
TENSION	3000
POUNDS	8000

P.E.	-2
QUALITY	-2
Q SHORT	1.5
Q LONG	5
GAMMA	-0.5
API	100
CALIPER	16
INCHES	16





**SPECTRAL DENSITY
DUAL SPACED
NEUTRON LOG**

COMPANY MOBIL PRODUCING TX AND NM INC.

WELL LOVINGTON DEEP STATE NO. 3

FIELD SOUTH SHOE-BAR

COUNTY LEA
API NO. 30-025-30226
LOCATION 1874 FNL RND 1980 FEL

STATE NM
OTHER SERVICES

COMPANY _____
WELL _____
FIELD _____
COUNTY _____ ST _____

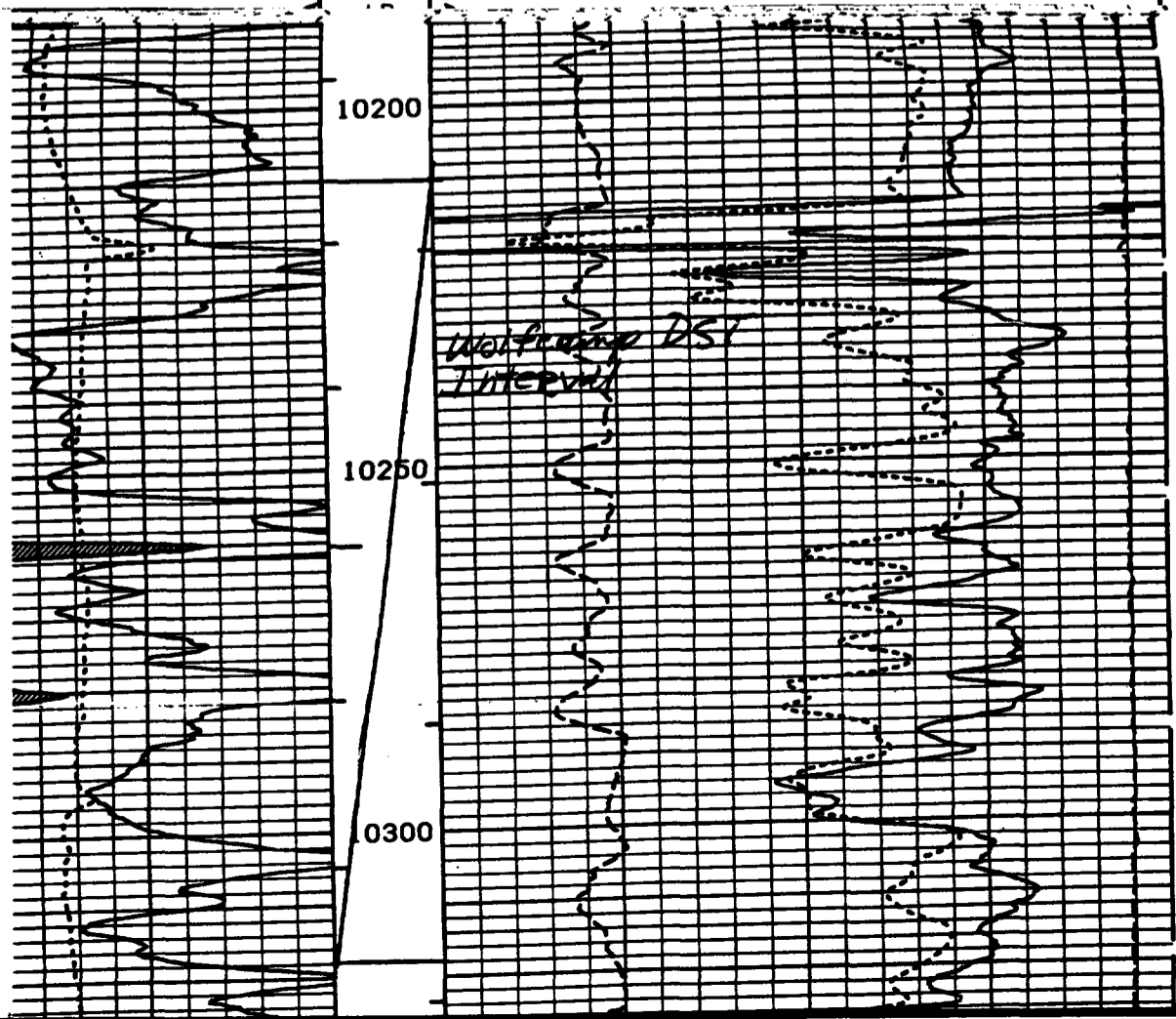
SEC. 1 TWP. 17-S RGE. 35-E

PERMANENT DATUM C. L. ELEV. 3931
LOC MEASURED FROM K.B. 17.3FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM K.B. ELEV.: K.B. 3948.3
DATE 3/21/88 D.F. NO. 51. 3931

RUN NO.	120
DEPTH-DRILLER	11000
DEPTH-MELEX	10995
BITM. LOG INTER.	10993
TOP LOG INTER.	SURFACE
CASING-DRILLER	8.625x5200
CASING-MELEX	5196
BIT SIZE	7.875
TYPE FLUID IN HOLE	FRESH MUD
DENS. 1 VISC	8.8 138.0
PH 1 FLUID LOSS	9.6 19.5
SOURCE OF SAMPLE	CIRCULATED
RH 1 MENS. TEMP.	3.19 47
RNF 1 MENS. TEMP.	1.01 81
RHC 1 MENS. TEMP.	1.86 82
SOURCE RNF 1 RNC	MENS 1 MENS
RM 1 BHT	0.931 161
TIME SINCE CIRC.	10 HOURS
TIME ON BOTTOM	1:45 PM
MAX. REC. TEMP.	161 88. H.
EQUIP. 1 LOCATION	4551 100888

PE CORR	9	TENSION	3000
B/E	-1	POUNDS	9000
DEN CORR.	-0.2	DENSITY	2.0
GM/CC	0.8	GM/CC	3.0
		NEU POR	30
		LINE	-10

P.E.	-2
QUALITY	1.5
Q SHORT	5
Q LONG	100
GAMMA	16
API	
CALIPER	
INCHES	





**SPECTRAL DENSITY
DUAL SPACED
NEUTRON LOG**

COMPANY MOBIL PRODUCING TX AND NM INC.

COMPANY _____
WELL _____
FIELD _____
COUNTY _____ ST _____

WELL LOVINGTON DEEP STATE NO. 3
FIELD SOUTH SHOE-BAR

COUNTY LEA
API NO. 30-025-30226
LOCATION
1874 FNL AND 1980 FEL

SEC. 1 TWP. 17-S RGE. 35-E

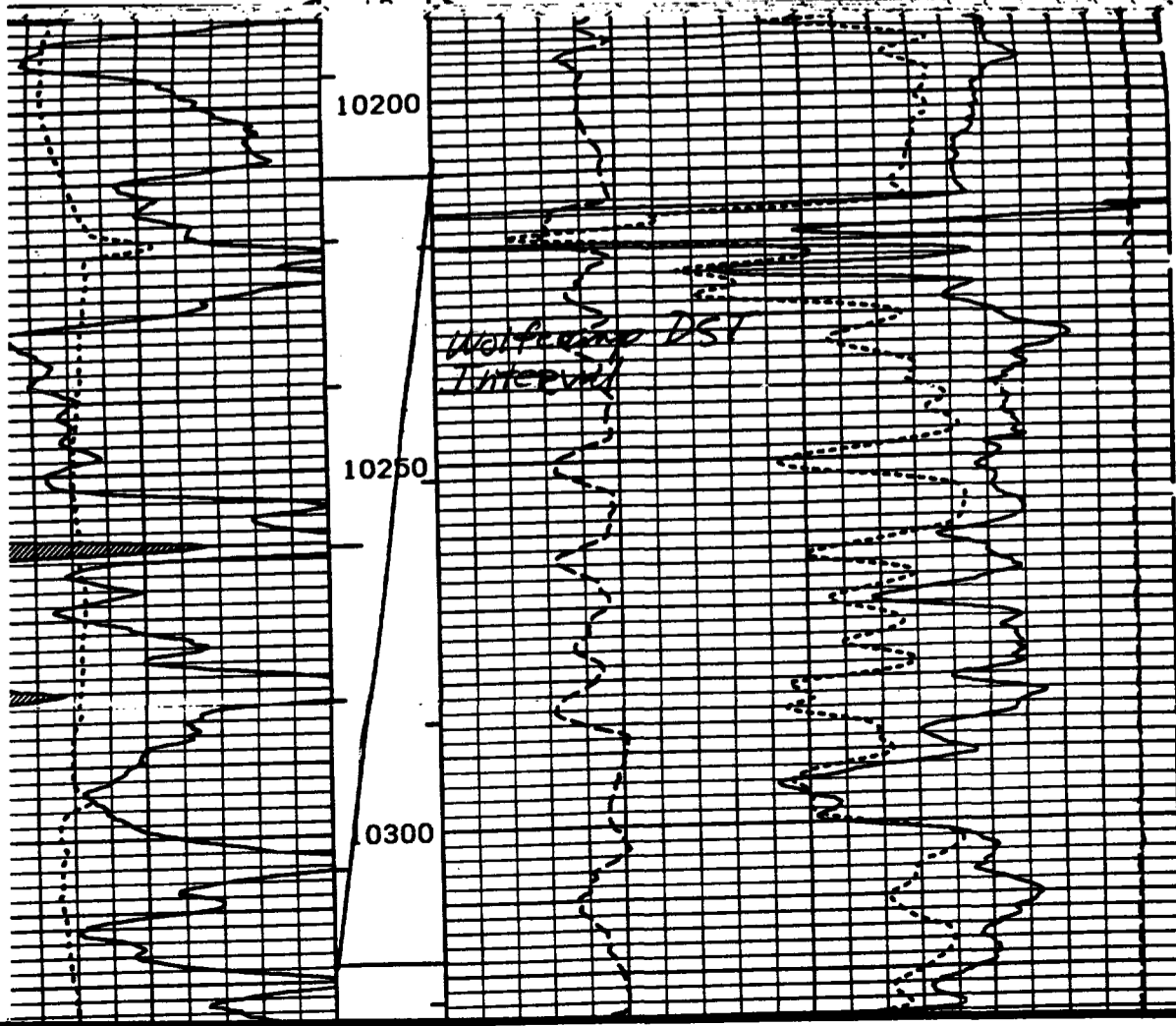
PERM. DATUM G. L. ELEV. 3931
LOG MEASURED FROM K.B. 17.3FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM K.B.
DATE 3/21/88

STATE NM
OTHER SERVICES
DISC
FMS
LSS
ELEV.: K.B. 3948.3
D.F. NR
C.L. 3931

RUN NO.	TWO
DEPTH-DRILLER	11000
DEPTH-HELEX	10995
BTM. LOG INTER.	10993
TOP LOG INTER.	SURFACE
CASING-DRILLER	8.52505200
CASING-HELEX	5196
BIT SIZE	7.875
TYPE FLUID IN HOLE	FRESH MUD
DENS. VISC	8.8 138.0
PH FLUID LOSS	9.6 19.5
SOURCE OF SAMPLE	CIRCULATED
RM MEAS. TEMP.	3.19 047
RNF MEAS. TEMP.	1.81 081
RMC MEAS. TEMP.	1.86 082
SOURCE RNF RMC	MEAS 1MEAS
RM BIT	0.9310161
TIME SINCE CIRC.	10 HOURS
TIME ON BOTTOM	1:45 PM
MAX. REC. TEMP.	161 08. H.
EQUIP. LOCATION	4551 (HOBBBS)

PE CORR	9
B/E	-1
DEN CORR.	0.8
GM/CC	2.8
NEU POR	30
LIME	-10
TENSION	3000
POUNDS	8000
DENSITY	3.0
GM/CC	0.8

P.E.	-2
QUALITY	1.5
SHORT	5
LONG	-5
GAMMA	100
API	16
CALIPER	
INCHES	





**SPECTRAL DENSITY
DUAL SPACED
NEUTRON LOG**

COMPANY MOBIL PRODUCING TX AND NM INC.

COMPANY _____
WELL _____
FIELD _____
COUNTY _____ ST _____

WELL LOVINGTON DEEP STATE NO. 3
FIELD SOUTH SHOE-BAR

COUNTY LEA
API NO. 30-025-30226
LOCATION 1874 FNL AND 1980 FEL

SEC. 1 TWP. 17-S RCE 35-E

PERMANENT DATUM C. L. ELEV. 3931
LOG MEASURED FROM K. B. 17.3 FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM K. B.
DATE 3/21/88

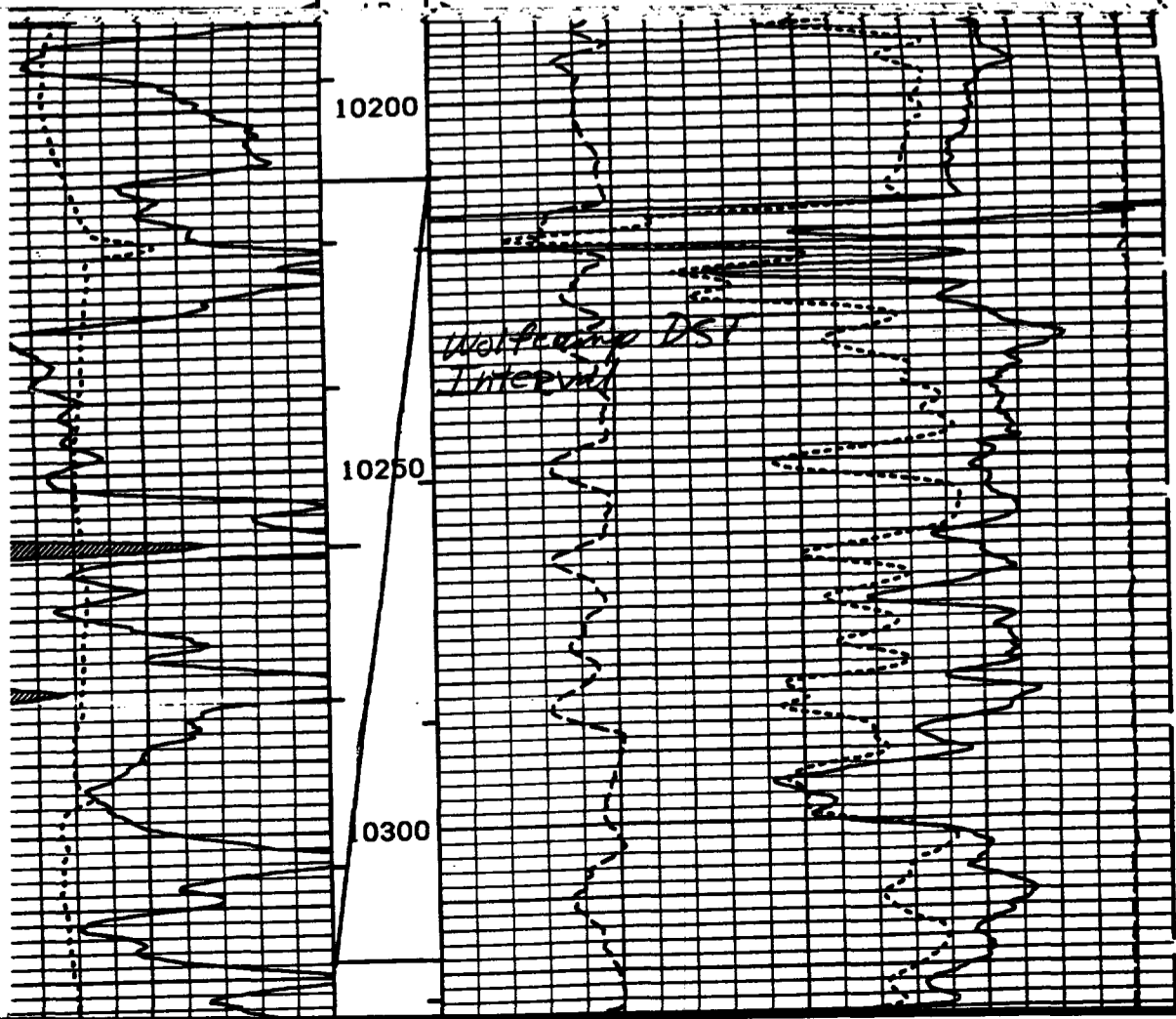
STATE NM
OTHER SERVICES
DIGL
FMS
LSS

ELEV.: K. B. 3948.3
D. F. NR
C. L. 3931

RUN NO.	TWO
DEPTH-DRILLER	11000
DEPTH-WELEX	10995
BIM. LOG INTER.	10993
TOP LOG INTER.	SURFACE
CASING-DRILLER	8.62505200
CASING-WELEX	5196
BIT SIZE	7.875
TYPE FLUID IN HOLE	FRESH MUD
DENS. 1 VISC	8.8 138.0
PH 1 FLUID LOSS	9.6 19.5
SOURCE OF SAMPLE	CIRCULATED
RH 1 MENS. TEMP.	3.19 647
RNF 1 MENS. TEMP.	1.81 681
RHC 1 MENS. TEMP.	1.86 682
SOURCE RNF 1 RNC	MENS 1 MENS
RH 1 BHT	0.931 151
TIME SINCE CIRC.	10 HOURS
LINE ON BOTTOM	1:45 PM
MAX REC. TEMP	161 68 H
EQUIP. 1 LOCATION	4551 10088

PE CORR	9
B/E	-1
DEN CORR.	0.8
GM/CC	8000
TENSION	3000 POUNDS
DENSITY	2.0 GM/CC
NEU POR	3.0
LIME	30 -10

P.E.	-2
QUALITY	-2
Q SHORT	1.5
Q LONG	5
GAMMA	100
API	100
CALIPER	16
INCHES	16





SPECTRAL DENSITY
DUAL SPACED
NEUTRON LOG

COMPANY MOBIL PRODUCING TX AND NM INC.

WELL LOVINGTON DEEP STATE NO. 3

FIELD SOUTH SHOE-BAR

COUNTY LEA
API NO. 30-025-30226
LOCATION
1874 FNL AND 1980 FEL

COMPANY
WELL
FIELD
COUNTY

SEC. 1 TWP. 17-S RGE. 35-E

PERMANENT DATUM C. L. ELEV. 3931
LOG MEASURED FROM K. B. 17.3 FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM K. B.
DATE 3/21/88

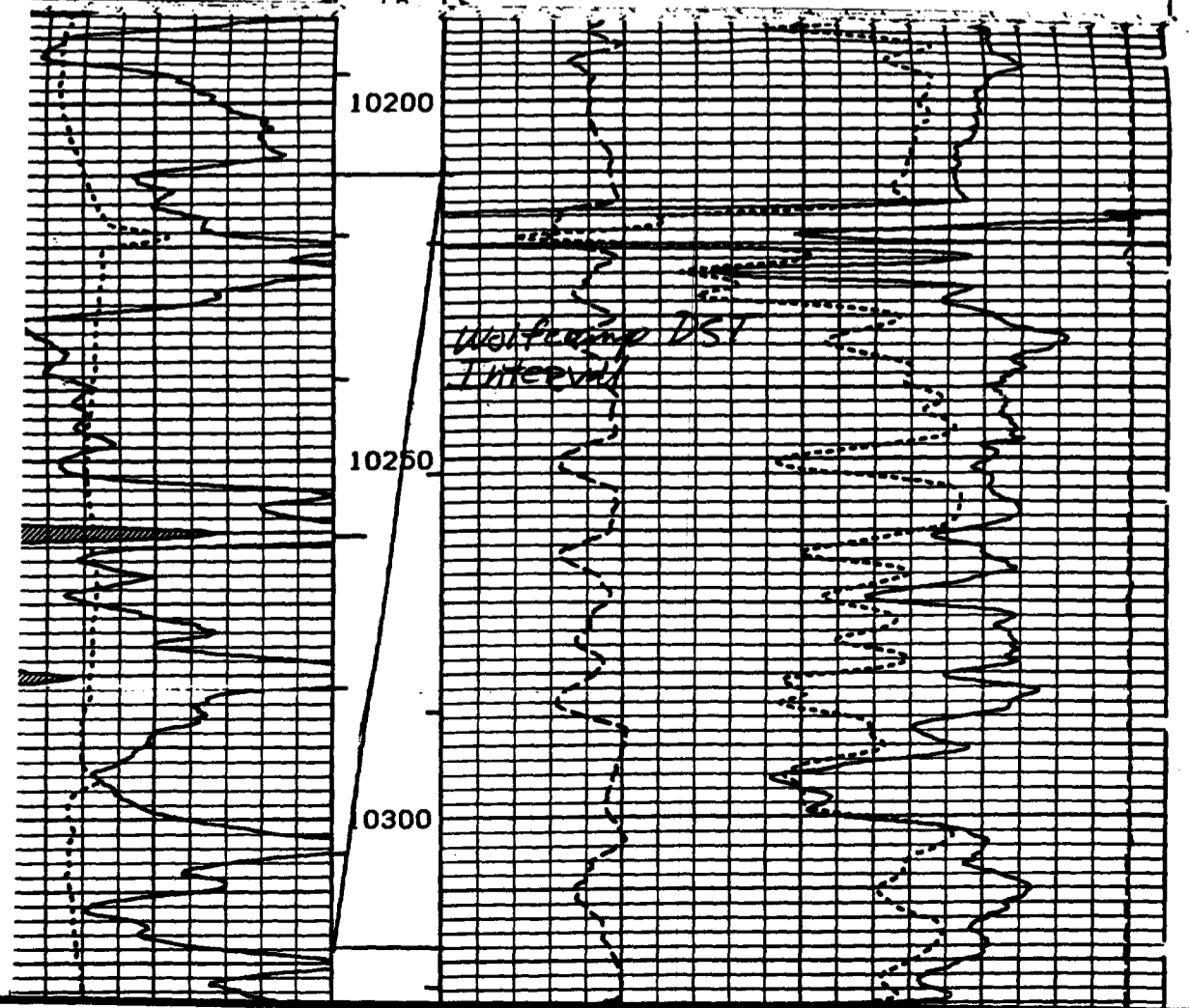
STATE NM
OTHER SERVICES
DIGL
FMS
LSS

ELEV.: K. B. 3948.3
D. F. NA
C. L. 3931

DEPTH-DRILLER	11000
DEPTH-HELEX	10995
BIT. LOG INTER.	10993
TOP LOG INTER.	SURFACE
CASING-DRILLER	8.62505200
CASING-HELEX	5196
BIT SIZE	7.875
TYPE FLUID IN HOLE	FRESH MUD
DENS. VISC.	8.8 138.0
PH FLUID LOSS	9.6 19.5
SOURCE OF SAMPLE	CIRCULATED
RM MEAS. TEMP.	3.19 847
RMC MEAS. TEMP.	1.81 881
RNC MEAS. TEMP.	1.06 882
SOURCE RMC RNC	MEAS 1 MEAS
RM RMT	0.931 181
TIME SINCE CIRC.	10 HOURS
TIME ON BOTTOM	1:45 PM
RA. REC. TEMP.	181 88 M.
EQUIP. LOCATION	4851 HOURS

PE CORR	-1	B/E	9
DEN CORR.	-0.2	GM/CC	0.8
DENSITY	2.8	GM/CC	3.8
NEU POR	30	LIME	-18
TENSION	8000	POUNDS	3000

P.E.	-2
QUALITY	1.5
Q SHORT	5
Q LONG	5
GAMMA	100
API	16
CALIPER	16
INCHES	16



HALLIBURTON SERVICES

FORMATION TESTING SERVICE REPORT

22-MAR-88

COMPANY NAME: MOBIL

DRILLING CONTRACTOR: MORANCO DRILLING

TICKET NUMBER: 62731300

TEST DATE: 3-17-88

LEASE NAME: LOVINGTON DEEP STATE

WELL NUMBER: 3

TEST NUMBER: 1

JOB TYPE: OPEN HOLE

LEGAL LOCATION: 1-17S-35E

COUNTY: LEA

STATE: NEW MEXICO

HALLIBURTON CAMP: HOBBS

FIELD AREA: S. SHOEBAR

ELEVATION: 3931.0 FEET

NET PAY: 27.0 FEET

MOLE SIZE: 7.9 INCH(ES)

TESTED INTERVAL: 10210.0 FEET - 10318.0 FEET

NOTICE:

THESE CALCULATIONS ARE BASED UPON INFORMATION FURNISHED BY YOU AND TAKEN FROM DRILL STEM TEST 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 CALCULATIONS AND OPINIONS.

TICKET NUMBER: 62731300
TEST DATE: 3-17-88

EQUIPMENT & HOLE DATA

FORMATION TESTED: LOWER WOLFCAMP
NET PAY: 27.0 FT.
GROSS TESTED FOOTAGE: 108.0 FT.
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFORATIONS:
HOLE/CASING SIZE: 7.9 IN.
ELEVATION: 3931.0 FT.
TOTAL DEPTH: 10318.0 FT.
PACKER DEPTH(S): 10204.9 FT.
10210.0 FT.
FINAL SURFACE CHOKE: 0.37500 IN.
BOTTOM HOLE CHOKE: 0.750 IN.
MUD WEIGHT: 8.70 LB/GAL
MUD VISCOSITY: 32.00 SEC.
ESTIMATED HOLE TEMPERATURE: 0.0 F
ACTUAL HOLE TEMPERATURE: 150.0 F @ 10314.0 FT.

HYDROCARBON PROPERTIES

OIL GRAVITY: 41.0 API @ 60.0 F
GAS/OIL RATIO: 655.0 CU.FT./BBL
GAS GRAVITY:

SAMPLER DATA

SURFACE PRESSURE: 1400.0 PSIG
GAS VOLUME: 4.72 CU.FT.
OIL VOLUME: 1150.0 CC
WATER VOLUME:
MUD VOLUME:
TOTAL LIQUID VOLUME: 1150.0 CC

TESTER(S):

E. HAM
N. MANNEY

WITNESS(ES):

JOHNNY GARCIA

TICKET NUMBER: 42731300
TEST DATE: 3-17-83

FLUID PROPERTIES FOR RECOVERED MUD AND WATER

SOURCE	RESISTIVITY	CHLORIDES
MUT PIT	0.910 @ 66.0 F	3980.0 PPM
TOP OF TOOLS	0.350 @ 62.0 F	12000.0 PPM
BOTTOM OF RECOVERY	1.220 @ 60.0 F	3000.0 PPM
	0.000 @ 0.0 F	0.0 PPM
	0.000 @ 0.0 F	0.0 PPM
	0.000 @ 0.0 F	0.0 PPM

CUSHION DATA

TYPE	AMOUNT	WEIGHT
	0.0	0.00
	0.0	0.00

RECOVERED (MEASURED FROM TESTER VALVE):

23.5 BBLs OF OIL
12.3 BBLs OF GAS CUT MUD

REMARKS:

FLOWED 75 BBLs OF OIL DURING DST #1. TOP RECOVERY, MIDDLE RECOVERY AND SAMPLER WERE OIL.
1
READINGS ON GAUGE 1516 SHOULD BE CONSIDERED QUESTIONABLE DUE TO REVERSE-STEPPING OF GAUGE DURING TEST.

HALLIBURTON SERVICES

TICKET NUMBER: 62721000
 TEST DATE: 3-17-68

CLOCK NUMBER: 20518
 HOUR: 48

GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
-----------	--------------------	--------------------	----	---------------------------	--------------------------

FIRST FLOW PERIOD

B	1	0.0	226.6		
	2	3.0	527.2	300.6	
	3	6.0	558.9	31.7	
	4	9.0	603.0	44.1	
	5	12.0	663.8	60.7	
C	6	15.8	705.1	41.3	

FIRST CLOSED-IN PERIOD

C	1	0.0	705.1		
	2	1.0	3570.6	2865.6	0.9
	3	2.0	3572.6	2867.6	1.8
	4	3.0	3574.1	2869.1	2.5
	5	4.0	3575.9	2870.8	3.2
	6	5.0	3576.6	2871.5	3.8
	7	6.0	3577.7	2872.6	4.4
	8	7.0	3579.2	2874.1	4.8
	9	8.0	3580.3	2875.2	5.3
	10	9.0	3581.6	2876.6	5.7
	11	10.0	3581.8	2876.8	6.1
	12	12.0	3583.4	2878.3	6.8
	13	14.1	3584.7	2879.6	7.4
	14	16.0	3585.4	2880.3	7.9
	15	18.0	3586.2	2881.2	8.4
	16	20.0	3586.2	2881.2	8.8
	17	22.0	3586.2	2881.2	9.2
	18	24.0	3586.2	2881.2	9.5
	19	26.0	3590.6	2885.6	9.8
	20	28.0	3597.0	2892.0	10.1
	21	30.0	3601.4	2896.4	10.3
	22	35.0	3610.6	2905.6	10.9
	23	40.0	3618.1	2913.1	11.3
	24	45.0	3625.4	2920.3	11.7
	25	50.0	3631.3	2926.3	12.0
D	26	56.8	3638.4	2933.3	12.3

SECOND FLOW PERIOD

E	1	0.0	942.0		
	2	5.0	1072.1	130.0	
	3	10.0	1171.2	99.1	

HALLIBURTON SERVICES

TICKET NUMBER: 62791300
 TEST DATE: 3-17-88

CLOCK NUMBER: 20516
 HOUR: 48

GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T*DT) ----- (T+DT)	(T+DT) LOG----- DT
	4	15.0	1347.2	176.0	
1	5	19.0	1417.3	70.1	
1	6	21.1	1467.3	50.0	
1	7	22.8	1498.8	31.4	
1	8	25.8	1554.7	55.9	
1	9	27.7	1596.1	41.5	
1	10	30.3	1627.6	31.4	
1	11	33.1	1685.5	57.9	
1	12	35.1	1728.2	42.8	
1	13	36.8	1756.6	28.4	
1	14	38.6	1788.3	31.7	
1	15	41.2	1833.3	45.0	
1	16	43.3	1882.2	48.9	
1	17	45.3	1921.5	39.3	
2	18	50.0	1921.5	0.0	
	19	55.0	1889.8	-31.7	
2	20	60.0	1889.8	0.0	
	21	65.0	1907.1	17.3	
3	22	70.0	1914.9	7.9	
	23	75.0	1921.7	6.8	
	24	80.0	1992.7	71.0	
	25	85.0	2011.2	18.5	
	26	90.0	2033.8	22.7	
	27	95.0	2053.9	20.0	
	28	100.0	2063.4	9.5	
	29	105.0	2071.7	8.4	
	30	110.0	2076.1	4.4	
	31	115.0	2079.4	3.3	
	32	120.0	2083.4	4.0	
4	33	123.0	2086.1	2.6	
5	34	125.0	2091.6	5.5	
	35	130.0	2101.5	9.9	
	36	135.0	2111.4	9.9	
	37	140.0	2111.4	0.0	
	38	145.0	2109.2	-2.2	
	39	150.0	2107.9	-1.3	
F	40	153.6	2106.3	-1.5	

SECOND CLOSED-IN PERIOD

F	1	0.0	2106.3			
	1	2	2335.0	228.7	1.0	2.219
	1	3	3036.6	930.3	7.7	1.344

HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88

CLOCK NUMBER: 20518
 HOUR: 48

GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT	
1	4	22.0	3098.2	991.9	19.4	0.940
1	5	33.4	3128.0	1021.7	27.9	0.783
1	6	35.6	3134.8	1028.5	29.4	0.761
1	7	39.1	3143.4	1037.1	31.8	0.727
1	8	41.1	3162.1	1055.9	33.0	0.710
	9	45.0	3174.9	1068.6	35.5	0.678
	10	50.0	3185.2	1078.9	38.6	0.642
	11	55.0	3194.5	1088.2	41.5	0.611
	12	60.0	3202.2	1095.9	44.3	0.582
	13	65.0	3209.5	1103.2	47.0	0.557
	14	70.0	3217.0	1110.7	49.5	0.534
1	15	71.2	3224.2	1117.9	50.1	0.529
	16	75.0	3224.9	1118.6	52.0	0.513
1	17	90.5	3228.2	1121.9	59.0	0.458
	18	95.0	3235.9	1129.6	60.9	0.444
	19	100.0	3241.4	1135.1	62.9	0.430
	20	110.0	3250.0	1143.7	66.7	0.405
	21	120.0	3259.0	1152.7	70.3	0.382
	22	130.0	3266.7	1160.4	73.5	0.362
	23	140.0	3270.7	1164.4	76.6	0.344
	24	150.0	3275.1	1168.8	79.5	0.328
	25	160.0	3280.0	1173.7	82.3	0.314
	26	170.0	3284.4	1178.1	84.8	0.300
	27	180.0	3288.8	1182.5	87.3	0.288
	28	190.0	3293.0	1186.7	89.6	0.277
	29	200.0	3296.5	1190.2	91.7	0.266
	30	250.0	3307.3	1201.0	101.0	0.225
	31	300.0	3322.0	1215.7	108.2	0.194
	32	350.0	3335.5	1229.2	114.1	0.171
	33	400.0	3343.2	1236.9	119.0	0.153
	34	450.0	3348.5	1242.2	123.1	0.139
	35	500.0	3353.1	1246.8	126.5	0.127
	36	600.0	3374.0	1267.7	132.1	0.108
	37	700.0	3386.4	1280.1	136.4	0.094
	38	800.0	3402.4	1296.1	139.8	0.083
	39	900.0	3410.8	1304.5	142.5	0.075
	40	1000.0	3426.4	1320.1	144.8	0.068
	41	1100.0	3434.2	1327.9	146.8	0.062
	42	1200.0	3443.9	1337.5	148.4	0.057
	43	1300.0	3452.4	1346.1	149.9	0.053
G	44	1383.8	3466.3	1360.0	150.9	0.050

HALLIBURTON SERVICES

TICKET NUMBER: 62791300
TEST DATE: 3-17-88

CLOCK NUMBER: 20518
HOUR: 48

GAUGE NUMBER: 1516
GAUGE DEPTH: 10191.6

LEGEND:

- 1 STAIR-STEP
- 2 CHOKE CHANGE
- 3 FLOW TO SURFACE
- 4 CLOSED AT SURFACE
- 5 OPENED AT SURFACE

HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88

CLOCK NUMBER: 17545
 HOUR: 48

GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
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FIRST FLOW PERIOD

B	1	0.0	270.6		
	2	3.0	350.6	279.9	
	3	6.0	554.3	3.7	
	4	9.0	560.5	6.2	
	5	12.0	627.9	67.5	
C	6	15.8	711.2	83.3	

FIRST CLOSED-IN PERIOD

C	1	0.0	711.2		
	2	1.0	3178.9	2467.6	1.0
	3	2.0	3307.7	2596.4	1.8
	4	3.0	3361.1	2649.9	2.5
	5	4.0	3396.0	2684.8	3.2
	6	5.0	3419.2	2708.0	3.8
	7	6.0	3434.9	2723.7	4.3
	8	7.0	3451.5	2740.2	4.8
	9	8.0	3464.5	2753.3	5.3
	10	9.0	3475.6	2764.3	5.7
	11	10.0	3485.7	2774.5	6.1
	12	12.0	3502.3	2791.1	6.8
	13	14.0	3518.6	2807.4	7.4
	14	16.0	3531.0	2819.8	7.9
	15	18.0	3541.0	2829.7	8.4
	16	20.0	3550.9	2839.7	8.8
	17	22.0	3559.4	2847.2	9.2
	18	24.0	3567.0	2855.8	9.5
	19	26.0	3574.5	2863.3	9.8
	20	28.0	3581.8	2870.6	10.1
	21	30.1	3589.0	2876.8	10.3
	22	35.0	3599.1	2887.8	10.9
	23	40.0	3609.0	2897.8	11.3
	24	45.0	3616.5	2905.3	11.7
	25	49.9	3623.8	2912.6	12.0
D	26	56.8	3631.1	2919.8	12.3

SECOND FLOW PERIOD

E	1	0.0	926.4		
	2	5.0	1014.3	87.9	
	3	10.0	1132.9	118.6	

HALLICURTON SERVICES

TICKET NUMBER: 62721300
 TEST DATE: 3-17-88

CLOCK NUMBER: 17545
 HOUR: 48

GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT
	4	1259.0	126.1		
	5	1387.5	128.5		
	6	1506.7	119.2		
	7	1608.5	101.8		
	8	1705.5	96.9		
	9	1799.5	94.1		
	10	1879.5	79.9		
1	11	1960.7	81.3		
	12	1924.2	-36.5		
1	13	1890.3	-33.9		
1	14	1921.3	31.0		
	15	1912.3	-9.1		
2	16	1878.6	-33.6		
	17	1929.3	50.7		
	18	1971.8	42.5		
	19	2012.5	40.7		
	20	2050.3	37.8		
	21	2076.6	26.3		
	22	2092.1	15.5		
	23	2101.9	9.7		
	24	2108.9	7.1		
	25	2114.3	5.3		
	26	2117.4	3.1		
3	27	2120.9	3.5		
4	28	2146.1	25.2		
	29	2147.5	1.3		
	30	2147.5	0.0		
	31	2145.2	-2.2		
	32	2141.9	-3.3		
	33	2136.8	-5.1		
F	34	2133.0	-3.6		

SECOND CLOSED-IN PERIOD

F	1	0.0	2133.0		
	2	1.0	2729.5	596.5	1.0 2.246
	3	2.0	2849.9	716.9	2.0 1.934
	4	3.0	2896.6	763.6	2.9 1.765
	5	4.0	2928.7	795.6	3.9 1.638
	6	5.0	2948.6	815.6	4.8 1.546
	7	6.0	2966.7	833.7	5.8 1.467
	8	7.0	2978.5	845.4	6.7 1.400
	9	8.0	2989.5	856.5	7.7 1.344

HALLIDAY-ION SERVICES

TICKET NUMBER: 82731300
 TEST DATE: 3-17-88

CLOCK NUMBER: 17545
 HOUR: 48

GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T*DT) ----- (T+DT)	(T+DT) LOG----- DT
10	9.0	3000.0	866.0	8.6	1.297
11	10.0	3007.2	874.2	9.4	1.255
12	12.0	3021.4	888.4	11.2	1.180
13	14.0	3034.0	901.0	13.0	1.116
14	16.0	3045.1	912.0	14.6	1.065
15	18.0	3056.4	922.3	16.3	1.017
16	20.0	3067.0	934.0	17.9	0.977
17	22.0	3076.5	943.5	19.5	0.939
18	24.1	3086.9	953.9	21.1	0.904
19	26.0	3095.7	962.7	22.5	0.876
20	28.0	3102.4	969.4	24.0	0.848
21	30.0	3110.1	977.1	25.5	0.823
22	35.0	3124.7	991.7	29.0	0.767
23	40.0	3137.8	1004.8	32.3	0.719
24	45.0	3150.0	1016.9	35.6	0.678
25	50.0	3162.1	1029.1	38.6	0.642
26	55.0	3172.1	1039.1	41.5	0.610
27	60.0	3182.1	1049.0	44.3	0.582
28	65.0	3191.1	1058.1	47.0	0.557
29	70.0	3199.5	1066.5	49.5	0.534
30	75.0	3206.4	1073.4	52.0	0.513
31	80.0	3213.0	1080.0	54.3	0.494
32	85.0	3218.8	1085.8	56.6	0.476
33	90.0	3224.3	1091.3	58.8	0.460
34	100.0	3233.8	1100.8	62.9	0.430
35	110.0	3242.9	1109.9	66.7	0.405
36	120.0	3250.9	1117.9	70.2	0.382
37	130.0	3258.4	1125.4	73.6	0.362
38	140.0	3264.6	1131.6	76.6	0.344
39	150.0	3270.6	1137.6	79.5	0.328
40	160.0	3275.0	1142.0	82.3	0.314
41	170.0	3279.4	1146.4	84.8	0.300
42	180.0	3283.9	1150.8	87.3	0.288
43	190.0	3288.3	1155.3	89.5	0.277
44	200.0	3292.3	1159.2	91.7	0.266
45	250.0	3307.1	1174.1	101.0	0.225
46	300.0	3319.3	1186.2	108.3	0.194
47	350.0	3329.2	1196.2	114.1	0.171
48	400.0	3337.9	1204.9	119.0	0.153
49	450.0	3344.5	1211.5	123.1	0.139
50	500.0	3353.1	1220.1	126.5	0.127
51	600.0	3367.1	1234.0	132.1	0.108

HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88

CLOCK NUMBER: 17545
 HOUR: 48

GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0

REFERENCE	TIME (MINUTES)	PRESSURE (PSI)	DP	(T+DT) ----- (T+DT)	(T+DT) LOG----- DT	
	52	700.0	3379.0	1246.0	136.4	0.094
	53	800.0	3389.9	1256.8	139.8	0.083
	54	900.0	3400.3	1267.2	142.5	0.075
	55	1000.0	3408.9	1275.9	144.8	0.068
	56	1100.0	3417.7	1284.7	146.8	0.062
	57	1200.0	3425.5	1292.5	148.4	0.057
	58	1300.0	3432.8	1299.8	149.9	0.053
0	59	1383.8	3438.8	1305.8	150.9	0.050

HALLIBURTON SERVICES

TICKET NUMBER: 62731300
TEST DATE: 3-17-88

CLOCK NUMBER: 17545
HOUR: 48

GAUGE NUMBER: 1496
GAUGE DEPTH: 10315.0

LEGEND:

- 1 CHOKE CHANGE
- 2 FLOW TO SURFACE
- 3 CLOSED AT SURFACE
- 4 OPENED AT SURFACE

HALLIBURTON SERVICES

TICKET NUMBER: 62731300
 TEST DATE: 3-17-88

GAUGE NUMBER: 1516
 GAUGE DEPTH: 10191.6

BLANKED OFF: NO
 CLOCK HOUR: 48

DESCRIPTION	PRESSURE		TIME		TYPE
	REPORTED	CALCULATED	REPORTED	CALCULATED	
A INITIAL HYDROSTATIC	4691	4633.6			
B INITIAL FIRST FLOW	218	226.6			
C FINAL FIRST FLOW	611	705.1	15.0	15.8	F
C INITIAL FIRST CLOSED-IN	611	705.1			
D FINAL FIRST CLOSED-IN	3589	3638.4	58.0	56.8	C
E INITIAL SECOND FLOW	895	942.0			
F FINAL SECOND FLOW	2095	2106.3	157.0	153.6	F
F INITIAL SECOND CLOSED-IN	2095	2106.3			
G FINAL SECOND CLOSED-IN	3435	3466.3	1380.0	1383.8	C
H FINAL HYDROSTATIC	4691	4546.3			

HALLIBURTON SERVICES

TICKET NUMBER: 52731300
 TEST DATE: 3-17-88

GAUGE NUMBER: 1496
 GAUGE DEPTH: 10315.0

BLANKED OFF: YES
 CLOCK HOUR: 48

DESCRIPTION	PRESSURE		TIME		TYPE
	REPORTED	CALCULATED	REPORTED	CALCULATED	
A INITIAL HYDROSTATIC	4434	4582.7			
B INITIAL FIRST FLOW	220	270.6			
C FINAL FIRST FLOW	485	711.2	15.0	15.8	F
C INITIAL FIRST CLOSED-IN	485	711.2			
D FINAL FIRST CLOSED-IN	3572	3631.1	58.0	56.8	C
E INITIAL SECOND FLOW	937	926.4			
F FINAL SECOND FLOW	2137	2133.0	157.0	153.6	F
F INITIAL SECOND CLOSED-IN	2137	2133.0			
G FINAL SECOND CLOSED-IN	3373	3439.8	1260.0	1383.8	C
H FINAL HYDROSTATIC	4434	4556.0			

TICKET NUMBER: 62731300
TEST DATE: 3-17-88

TYPE AND SIZE MEASURING DEVICE: POSITIVE CHOKE

TIME	CHOKE SIZE	SURFACE PRESSURE (PSI)	GAS RATE (MCF)	LIQUID RATE (BPD)	REMARKS
3-16-88					
2230					ON LOCATION
2300					PICK UP TOOLS
3-17-88					
0100					TRIP IN HOLE WITH TEST TOOLS
0610	0	0			OPEN TOOL - MANIFOLD CLOSED IN
0615	0	43			PSI INCREASING
0620	0	95			
0625	0	148			PSI INCREASING - CLOSE TOOL
0723	0	178			OPEN TOOL WITH MANIFOLD CLOSED
0728	0	220			PSI INCREASING
0733	0	250			
0738	0	285			
0743	0	310			
0748	0	320			
0752	1/4	360			OPEN ON 1/4 INCH CHOKE
0753	1/4	360			STEADY
0758	1/4	360			PSI INCREASING
0803	1/4	405			PSI INCREASING
0808	1/4	435			
0813	1/4	450			
0817	3/8	480			OPEN ON 3/8 INCH CHOKE
0823	3/8	320			GAS TO SURFACE
0825	1/4	300			OPEN 1/4 INCH CHOKE AND CLOSE 3/8 INCH CHOKE.
0828	3/8	335			OPEN 3/8 INCH CHOKE AND CLOSE 1/4 INCH CHOKE.
0833	3/8	210			FLUID TO SURFACE
0838	3/8	220			PSI INCREASING
0843	3/8	260			
0848	3/8	300			
0853	3/8	360			
0858	3/8	380			
0903	3/8	395			
0908	3/8	410			
0913	3/8	410			STEADY
0923	3/8	420			SLIGHT INCREASE
0929	3/8	420			CLOSE CHOKE AND FIX LEAK IN FLOWLINE.
0931	3/8	450			REOPEN 3/8 INCH CHOKE
0933	3/8	430			SLIGHT INCREASE
0943	3/8	440			STEADY
1000	3/8	440			STEADY - CLOSE TOOL
1400					TESTER RELEASED FOR NIGHT
3-18-88					
0700					TESTER ON LOCATION
0900					OPEN BYPASS
0920					DROP BAR AND REVERSE OUT
1210					TRIP OUT OF HOLE

TICKET NUMBER: 42731300

TEST DATE: 3-17-98

SUMMARY OF RESERVOIR PARAMETERS
MORSE METHOD FOR LIQUID WELLS

OIL GRAVITY: 41.0 API@ 60.0 F
WATER SALINITY: 0.0 % SALT
GAS GRAVITY: 0.700
FLUID GRADIENT: 0.3554 PSI/FT.
GAS/OIL RATIO: 655.0 SCF/STB
FLUID PROPERTIES AT: 3383.0 PSIG
TEMPERATURE: 150.000 F
VISCOSITY: 0.568 CP
NET PAY: 27.0 FT.
FORMATION VOLUME FACTOR: 1.353 RUOL/SUOL
POROSITY: 10.0 %
SYSTEM COMPRESSIBILITY: 0.00001229 VOL/VOL/PSI

PIPE CAPACITY FACTOR(S): 0.00000 BBL/FT.
0.00000 BBL/FT.
0.00000 BBL/FT.
0.00000 BBL/FT.

GAUGE NUMBER	1516	1516
GAUGE DEPTH	10191.6	10191.6
FLOW AND CIP PERIOD	1	2

PF FINAL FLOW PRESSURE	705.1	2106.3	PSIG
T TOTAL FLOW TIME	15.8	169.4	MIN
P* EXTRAPOLATED PRESSURE	0.0	3390.0	PSIG
ONE CYCLE PRESSURE	0.0	3042.9	PSIG

Q PRODUCTION RATE	0.0	941.9	BPD
KH/U TRANSMISSIBILITY	0.00	596.96	MD-FT./CP
KH FLOW CAPACITY	0.00	339.17	MD-FT.
K PERMEABILITY	0.000	12.562	MD
S SKIN FACTOR	0.000	-2.012	
DR DAMAGE RATIO	0.00	0.68	
Q1 POTENTIAL RATE	0.0	941.9	BPD
RI INVESTIGATION RADIUS	0.0	228.1	FT.

REMARKS:

THE PRODUCTION RATE WAS CALCULATED USING THE TOTAL RECOVERED FLUID OF 110.8 BBL DURING THE 169.4 TOTAL MINUTES OF FLOW.
ALL CALCULATIONS ARE BASED ON 100% OIL RECOVERY.

3-17-98

TICKET NUMBER: 62731300
TEST DATE: 3-17-88

SUMMARY OF RESERVOIR PARAMETERS
HORNER METHOD FOR LIQUID WELLS

OIL GRAVITY: 41.0 API@ 60.0 F
WATER SALINITY: 0.0 % SALT
GAS GRAVITY: 0.700
FLUID GRADIENT: 0.3554 PSI/FT.
GAS/OIL RATIO: 655.0 SCF/STB
FLUID PROPERTIES AT: 3383.0 PSIG
TEMPERATURE: 150.000 F
VISCOSITY: 0.568 CP
NET PAY: 27.0 FT.
FORMATION VOLUME FACTOR: 1.353 RVOL/SVOL
POROSITY: 10.0 %
SYSTEM COMPRESSIBILITY: 0.00001229 VOL/VOL/PSI

PIPE CAPACITY FACTOR(S): 0.00000 BBL/FT.
0.00000 BBL/FT.
0.00000 BBL/FT.
0.00000 BBL/FT.

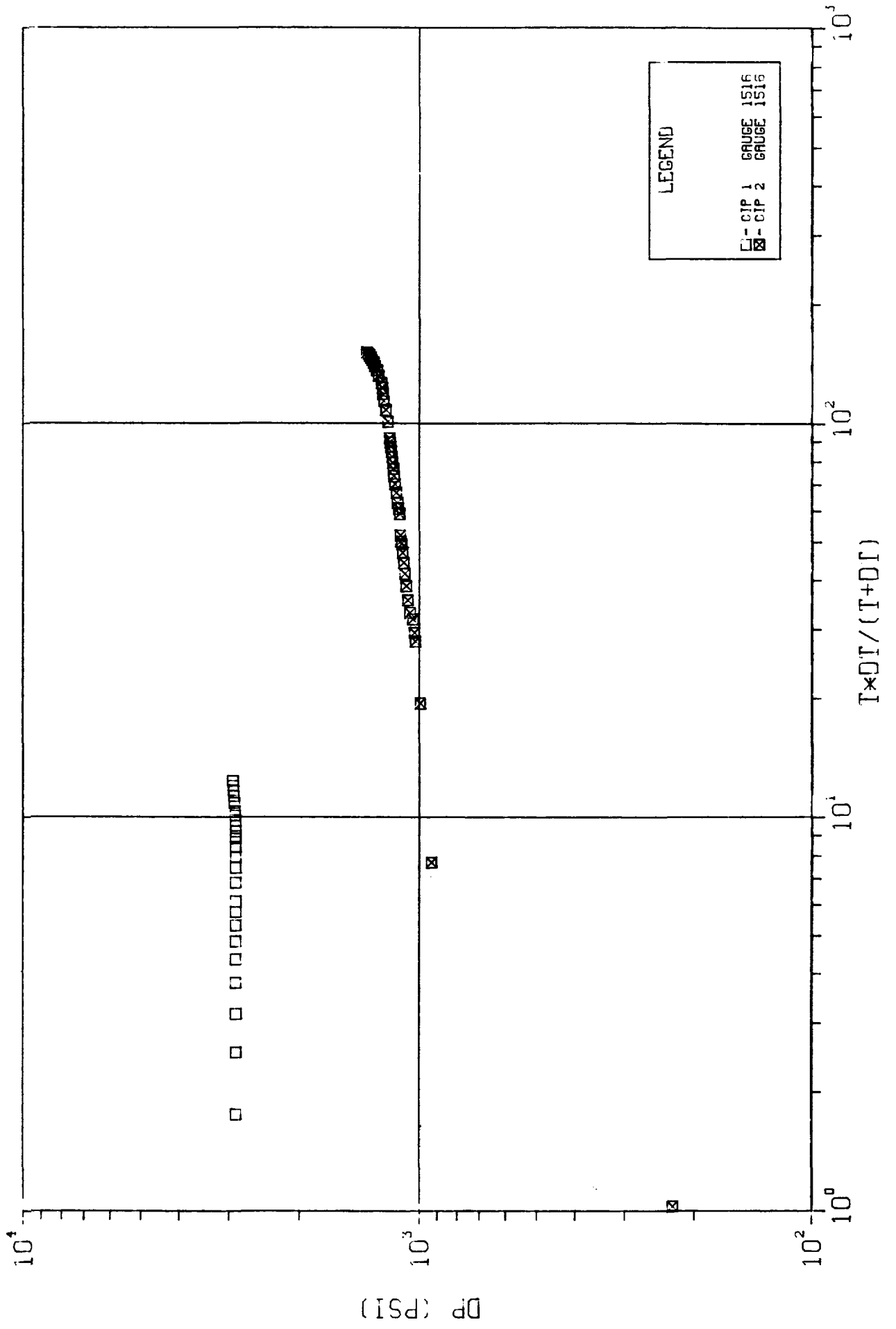
GAUGE NUMBER	1496	1496
GAUGE DEPTH	10315.0	10315.0
FLOW AND CIP PERIOD	1	2

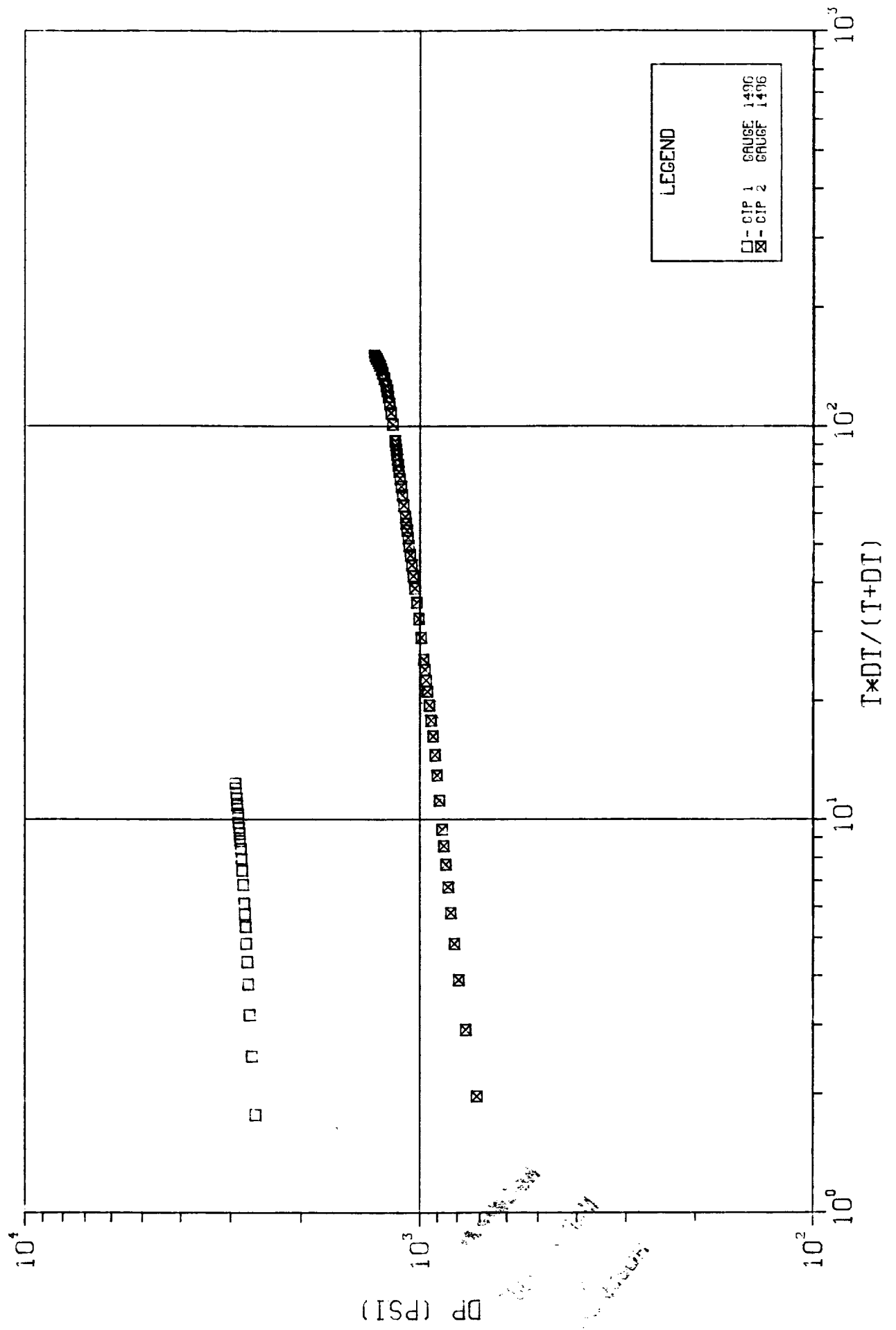
PF FINAL FLOW PRESSURE	711.2	2133.0	PSIG
T TOTAL FLOW TIME	15.8	169.4	MIN
P* EXTRAPOLATED PRESSURE	0.0	3383.0	PSIG
ONE CYCLE PRESSURE	0.0	3038.1	PSIG

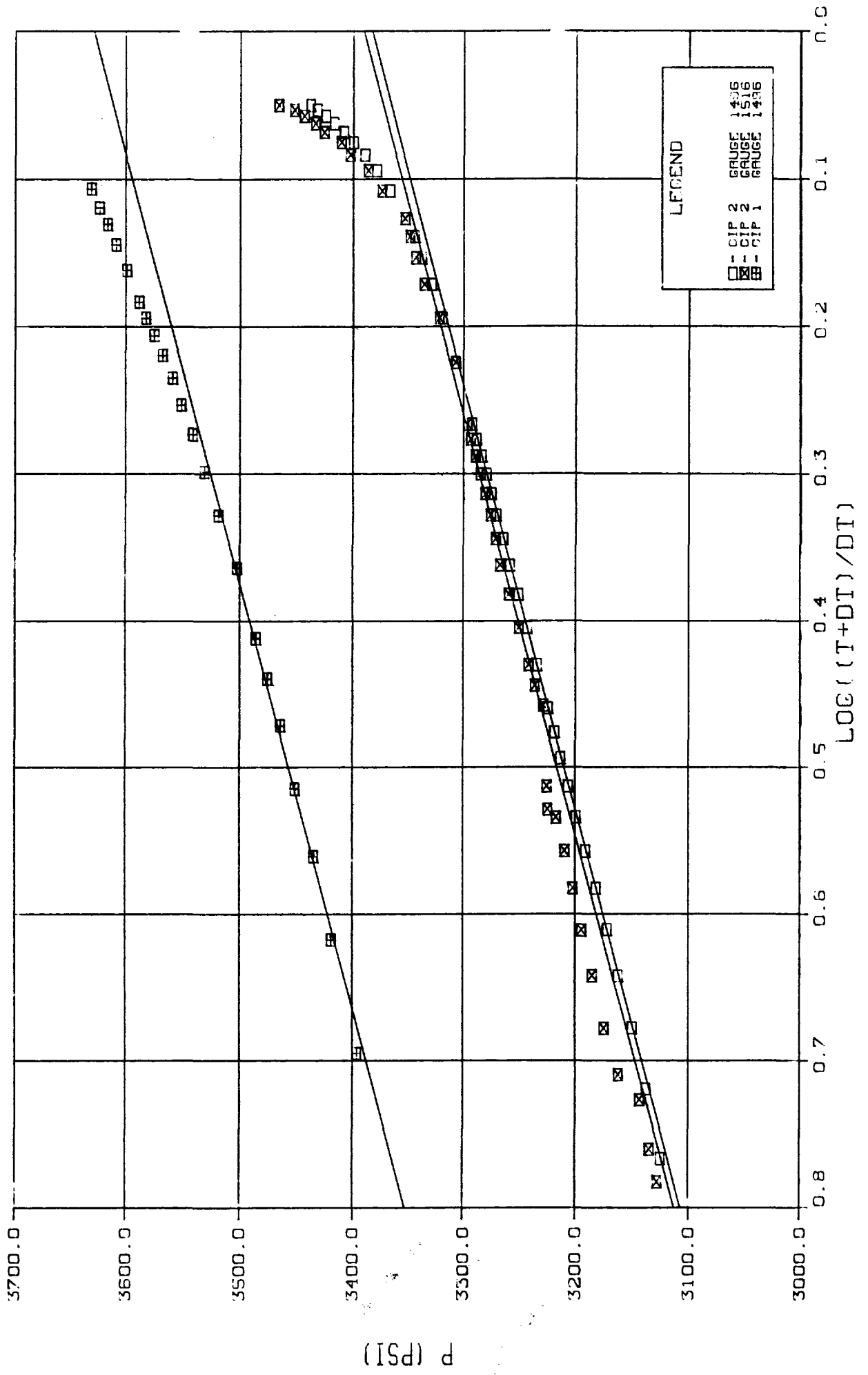
Q PRODUCTION RATE	0.0	941.9	BPD
KH/U TRANSMISSIBILITY	0.00	600.75	MD-FT./CP
KH FLOW CAPACITY	0.00	341.32	MD-FT.
K PERMEABILITY	0.000	12.642	MD
S SKIN FACTOR	0.000	-2.101	
DR DAMAGE RATIO	0.00	0.66	
Q1 POTENTIAL RATE	0.0	941.9	BPD
RI INVESTIGATION RADIUS	0.0	228.8	FT.

REMARKS:

THE PRODUCTION RATE WAS CALCULATED USING THE TOTAL RECOVERD FLUID OF 110.0 BBL DURING THE 169.4 TOTAL MINUTES OF FLOW.
ALL CALCULATIONS ARE BASED ON 100% OIL RECOVERY.







TOOL EQUIPMENT

O.D.

I.D.

LENGTH

DEPTH

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE	4.500	3.826	7259.0	
1	DRILL PIPE	4.500	3.640	2325.0	
3	DRILL COLLARS	6.250	2.250	463.0	
50	IMPACT REVERSING SUB	6.125	3.135	1.0	10048.1
3	DRILL COLLARS	6.250	2.250	123.0	
5	CROSSOVER	5.750	2.500	1.0	
62	MULTIPLE CIP SAMPLER	5.000	0.750	8.4	10173.5
14	EXTENSION JOINT	5.000	0.870	5.0	
14	EXTENSION JOINT	5.000	0.870	5.0	
80	RP RUNNING CASE	5.000	2.250	4.1	10191.6
15	JAR	5.000	1.750	5.0	
35	RITS SAFETY JOINT	5.000	1.000	2.8	
70	OPEN HOLE PACKER	7.000	1.530	5.1	10204.9
70	OPEN HOLE PACKER	7.000	1.530	5.1	10210.0
19	ANCHOR PIPE SAFETY JOINT	5.750	1.500	4.3	
5	CROSSOVER	6.000	2.875	1.0	
3	DRILL COLLARS	6.250	2.250	62.0	
5	CROSSOVER	5.750	3.125	1.0	
20	FLUSH JOINT ANCHOR	5.750	3.000	33.0	
81	BLANKED-OFF RUNNING CASE	5.750	0.000	4.1	10315.0
	TOTAL DEPTH				10318.0



10/11/1964
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