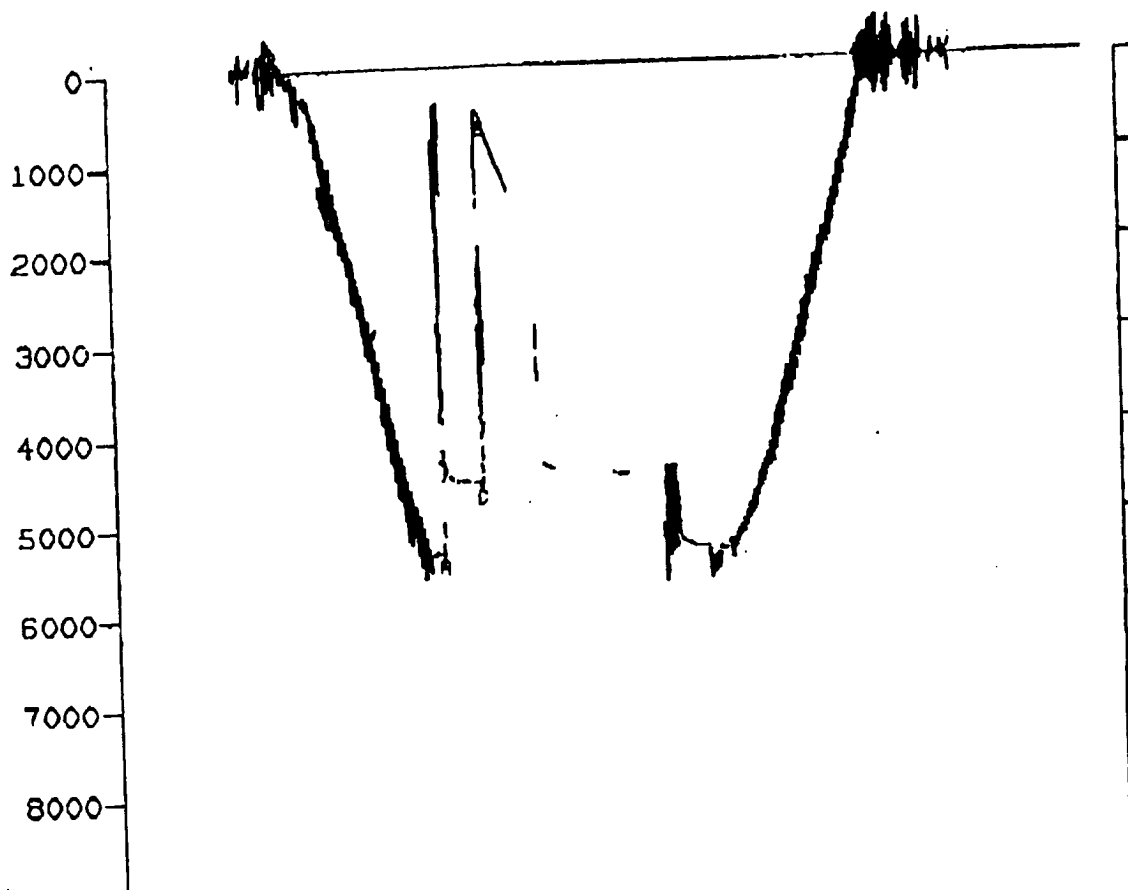


DST REPORT PRODUCED BY WRS...

REVENUE

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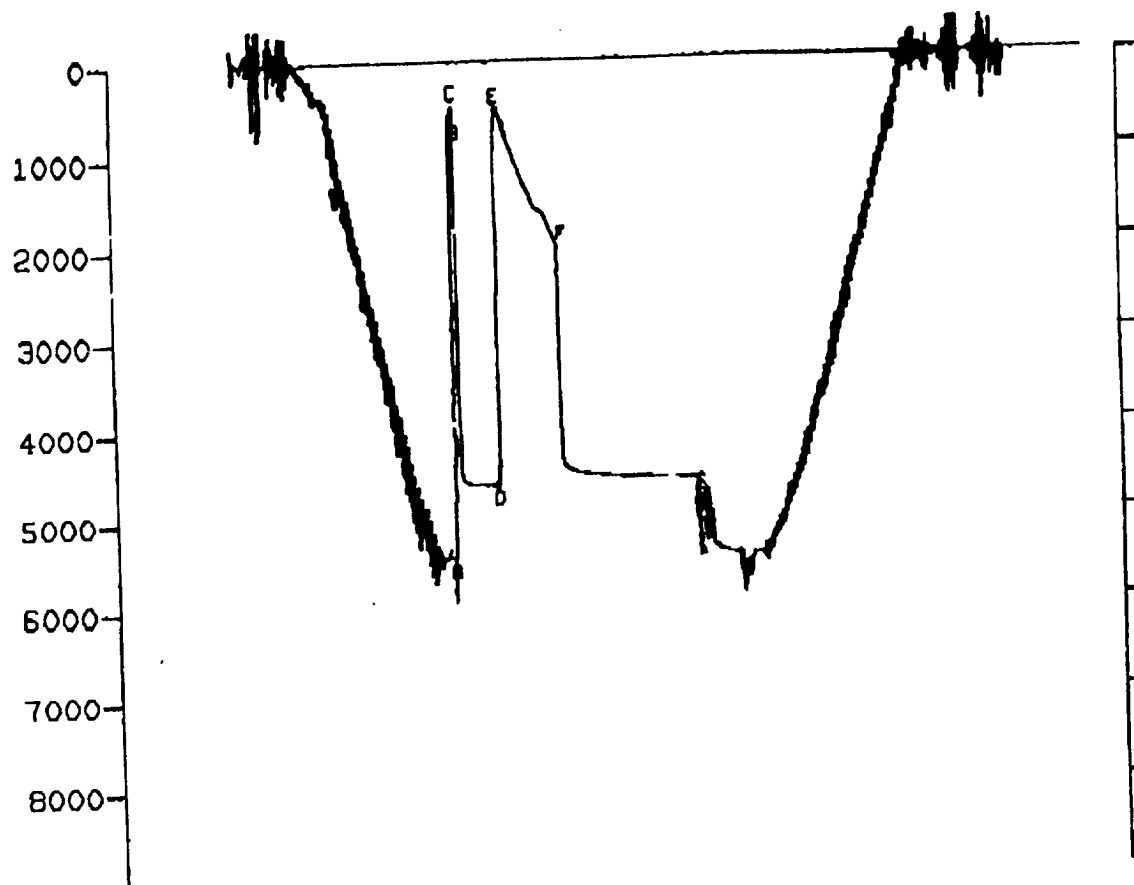
GAUGE NO: 2173 DEPTH: 11440.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		5333.9			
B	INITIAL FIRST FLOW			6.0		F
C	FINAL FIRST FLOW					
C	INITIAL FIRST CLOSED-IN			60.0		C
D	FINAL FIRST CLOSED-IN		4553.5			
E	INITIAL SECOND FLOW		520.3	90.0		F
F	FINAL SECOND FLOW					
F	INITIAL SECOND CLOSED-IN			209.0		C
G	FINAL SECOND CLOSED-IN		4485.5			
H	FINAL HYDROSTATIC					

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ODD NO. 100
OFFICE



GAUGE NO: 2172 DEPTH: 1529.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		5424.9			
B	INITIAL FIRST FLOW		589.4	6.0	4.7	F
C	FINAL FIRST FLOW		453.7			
C	INITIAL FIRST CLOSED-IN		453.7	60.0	60.2	C
D	FINAL FIRST CLOSED-IN		4614.4			
E	INITIAL SECOND FLOW		493.3	90.0	89.5	F
F	FINAL SECOND FLOW		1991.9			
F	INITIAL SECOND CLOSED-IN		1991.9	209.0	209.3	C
G	FINAL SECOND CLOSED-IN		4570.6			
H	FINAL HYDROSTATIC					

EQUIPMENT & HOLE DATA

FORMATION TESTED: STRAWNNET PAY (ft): 72.0GROSS TESTED FOOTAGE: 74.0 SYM PKR TO TDALL DEPTHS MEASURED FROM: KE

CASING PERFS. (ft): _____

HOLE OR CASING SIZE (in): 7.875ELEVATION (ft): 3910.0TOTAL DEPTH (ft): 11532.0PACKER DEPTH(S) (ft): 11453. 11458FINAL SURFACE CHOKE (in): 0.25000BOTTOM HOLE CHOKE (in): 0.750MUD WEIGHT (lb/gal): 9.10MUD VISCOSITY (sec): 34

ESTIMATED HOLE TEMP. (°F): _____

ACTUAL HOLE TEMP. (°F): 170 @ 11528.0 ftTICKET NUMBER: 53892901DATE: 4-16-94 TEST NO: 1TYPE DST: OPEN HOLE

FIELD CAMP: _____

HOBBSTESTER: BILL NUNNALLYWITNESS: GENE STEADHAM

DRILLING CONTRACTOR: _____

ZYADATI: RIG NO 7FLUID PROPERTIES FOR
RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
<u>PIT</u>	<u>0.400 @ 79 °F</u>	<u>9881 ppm</u>
<u>FIRST FLUID CHANGE</u>	<u>0.490 @ 82 °F</u>	<u>7926 ppm</u>
<u>TOP OF TOOLS</u>	<u>0.490 @ 72 °F</u>	<u>7440 ppm</u>
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm

SAMPLER DATA

P_{sig} AT SURFACE: _____

cu.ft. OF GAS: _____

cc OF OIL: 950.0cc OF WATER: 600.0

cc OF MUD: _____

TOTAL LIQUID cc: 1550.0

HYDROCARBON PROPERTIES

DIL GRAVITY (°API): 43.8 @ 50 °F

GAS/OIL RATIO (cu.ft. per bbl): _____

GAS GRAVITY: _____

CUSHION DATA

TYPE AMOUNT WEIGHT

RECOVERED:

TOTAL RECOVERY OF 50 BBLs OF OIL
(17 BBLs OF OIL TO SURFACE ON SECOND FLOW AND 33
BBLs REVERSED OUT)
GAS TO SURFACE

MEASURED FROM
TESTER VALVE

REMARKS:

WELL INFORMATION IS TIGHT HOLE.
TESTER REPORTED SAMPLER HAD NO PRESSURE WHEN BROKEN DOWN - TOP OF
SAMPLER WASHED OUT WITH BLOW OUT OF OIL AND GAS.
THE TEST WAS MECHANICALLY SUCCESSFUL.
COMPLETE PROCESSING OF GAUGE #2173 CHART WAS NOT POSSIBLE DUE TO FAINT
TRANSMISSION OF THE CHART AS PER THE KWIK DATA SERVICE.

TYPE & SIZE MEASURING DEVICE: 6" POSITIVE CHOKE					TICKET NO: 53992921
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
4-16-94					ON LOCATION
0030					PICK UP TOOLS
0110					MAKE UP TOOLS
0140					START IN HOLE WITH TOOLS
0245					OPEN TOOL ON BUBBLE HOSE WITH
0542	BH				1/2" BLOW IN BUCKET
0543		6 02			
0547		48			SWITCH TO PSI
0548		55			CLOSE TOOL - BLEED PSI OFF
					DRILL PIPE
0656					GAS TO SURFACE
0748	BH	5			OPEN TOOL ON BUBBLE HOSE
0749		10			
0750		20			
0752	1/4	40			ON 1/4 CHOKE
0754		55			
0756		80			
0758		110			
0800		120			
0805		140			
0810		170			
0820		210			
0830		245			
0840		270			
0848	3/8	290			ON 3/8 CHOKE
0849		255			
0855		200			
0900	1/4	150			DIL TO SURFACE
					BACK ON 1/4 CHOKE
0904		200			
0910		240			
0915		270			
0918		300			CLOSE TOOL
1247					OPEN BYPASS
1250					PULL 30' OFF BOTTOM
1253					DROP BAR

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SPRINGS
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P.6/14

[illegible]

TICKET NO: 53892901

CLOCK NO: 16511 HOUR: 24

GAUGE NO: 2172

DEPTH: 11523.0

REF	MINUTES	PRESSURE	AP	$\frac{2 \times \Delta P}{\Delta t}$	$\log \frac{2 \times \Delta P}{\Delta t}$
FIRST FLOW					
B 1	0.0	589.4			
2	1.0	520.8	-68.6		
3	2.0	490.1	-30.5		
4	3.0	476.6	-13.5		
5	4.0	463.1	-13.5		
C 6	4.7	453.7	-9.4		
FIRST CLOSED-IN					
C 1	0.0	453.7		0.8	0.756
2	1.0	1611.1	1157.4	1.4	0.525
3	2.0	2159.7	1706.0	1.8	0.409
4	3.0	3928.5	3474.8	2.2	0.337
5	4.0	4486.9	4033.1	2.4	0.288
6	5.0	4536.8	4082.9	2.5	0.251
7	6.0	4557.9	4104.2	2.6	0.223
8	7.0	4566.9	4113.2	3.0	0.201
9	8.0	4574.4	4120.7	3.1	0.182
10	9.0	4581.6	4127.9	3.2	0.167
11	10.0	4584.3	4130.6	3.4	0.144
12	12.0	4589.5	4135.8	3.5	0.126
13	14.0	4594.8	4141.0	3.5	0.112
14	16.0	4598.8	4145.1	3.7	0.101
15	18.0	4600.6	4146.8	3.8	0.082
16	20.0	4602.3	4148.6	3.9	0.084
17	22.0	4604.1	4150.3	3.9	0.078
18	24.0	4605.8	4152.1	4.0	0.072
19	26.0	4607.2	4153.4	4.0	0.067
20	28.0	4608.1	4154.3	4.1	0.063
21	30.0	4608.9	4155.2	4.1	0.055
22	35.0	4611.1	4157.4	4.2	0.048
23	40.0	4614.7	4161.0	4.3	0.043
24	45.0	4614.1	4160.3	4.3	0.039
25	50.0	4615.0	4161.2	4.3	0.035
26	55.0	4615.9	4162.1	4.4	0.033
D 27	60.2	4614.4	4160.7		
SECOND FLOW					
E 1	0.0	493.3			
2	4.0	509.2	15.9		
3	8.0	553.7	84.5		
4	12.0	696.8	103.1		
5	16.0	772.8	76.0		
6	20.0	860.9	88.1		
7	24.0	941.7	80.8		
8	28.0	1022.9	81.2		
9	32.0	1097.6	74.7		
10	36.0	1174.1	76.5		
11	40.0	1246.6	72.4		

REF	MINUTES	PRESSURE	AP	$\frac{2 \times \Delta P}{\Delta t}$	$\log \frac{2 \times \Delta P}{\Delta t}$
SECOND FLOW - CONTINUED					
12	44.0	1317.8	71.3		
13	48.0	1391.7	73.8		
14	52.0	1464.4	72.7		
15	56.0	1531.1	66.7		
16	60.0	1587.9	56.9		
17	64.0	1600.0	12.0		
18	68.0	1613.7	13.7		
19	72.0	1643.0	29.3		
20	76.0	1724.0	81.0		
21	80.0	1796.9	72.9		
22	84.0	1873.9	77.0		
23	88.0	1952.7	78.7		
F 24	89.5	1991.9	39.2		
SECOND CLOSED-IN					
F 1	0.0	1991.9		1.0	1.975
2	1.0	3866.6	1874.9	2.0	1.569
3	2.0	4134.6	2142.8	2.9	1.511
4	3.0	4319.5	2328.0	3.8	1.390
5	4.0	4375.5	2393.6	4.7	1.298
6	5.0	4404.4	2412.6	5.6	1.223
7	6.0	4424.4	2422.5	6.5	1.150
8	7.0	4423.1	2431.2	7.4	1.107
9	8.0	4431.8	2439.9	8.2	1.060
10	9.0	4438.4	2445.6	9.0	1.016
11	10.0	4444.2	2452.4	10.5	0.947
12	12.0	4453.2	2461.3	12.2	0.886
13	14.0	4460.0	2458.1	13.7	0.836
14	16.0	4466.8	2474.9	15.1	0.795
15	18.0	4473.6	2481.7	16.5	0.757
16	20.0	4479.2	2487.4	17.8	0.720
17	22.0	4487.7	2495.8	19.1	0.690
18	24.0	4490.9	2498.0	20.4	0.658
19	26.0	4493.8	2501.9	21.6	0.640
20	28.0	4496.8	2504.9	22.8	0.617
21	30.0	4499.7	2507.8	25.5	0.567
22	35.0	4507.1	2515.2	28.1	0.525
23	40.0	4513.5	2521.6	30.5	0.491
24	45.0	4518.6	2526.7	32.7	0.460
25	50.0	4523.7	2531.8	34.7	0.430
26	55.0	4528.2	2536.3	35.7	0.410
27	60.0	4531.9	2540.0	40.2	0.370
28	70.0	4538.9	2547.1	43.3	0.338
29	80.0	4544.2	2552.3	46.0	0.310
30	90.0	4548.8	2556.9	48.5	0.280
31	100.0	4552.9	2561.1	50.8	0.265
32	110.0	4556.5	2564.6	52.8	0.250
33	120.0	4559.4	2567.5	55.5	0.230
34	135.0	4563.3	2571.4	57.9	0.210
35	150.0	4567.6	2575.8	60.0	0.198
36	165.0	4571.0	2579.1	61.9	0.188
37	180.0	4573.0	2581.1		

REMARKS:

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TICKET NO: 53892901

CLOCK NO: 16511 HOUR: 24

GAUGE NO: 2172

DEPTH: 11529.0

REF	MINUTES	PRESSURE	AP	$\frac{2x}{t} \frac{h}{ft}$	$\log \frac{2x}{t} \frac{h}{ft}$
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SECOND CLOSED-IN - CONTINUED

38	195.0	4575.7	2583.8	63.5	0.171
G 39	209.3	4570.6	2578.8	65.0	0.161

REF	MINUTES	PRESSURE	AP	$\frac{2x}{t} \frac{h}{ft}$	$\log \frac{2x}{t} \frac{h}{ft}$
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REMARKS:

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OFFICE

		O.D.	I.D.	LENGTH	DEPTH
1		4.500	3.640	1858.0	
1		4.500	3.826	7470.0	
1		4.500	3.640	1305.0	
3		6.250	2.250	647.0	
50		6.000	2.750	1.0	11294.0
3		6.250	2.250	124.0	
5		5.813	2.313	1.0	
62		5.000	0.750	9.0	11428.0
14		5.000	0.870	5.0	
14		5.000	0.870	5.0	
80		5.000	2.250	4.0	11440.0
15		5.000	1.750	5.0	
16		5.000	1.000	3.0	
70		7.000	1.530	5.0	11453.0
70		7.000	1.530	5.0	11458.0
19		5.750	1.500	4.0	
5		5.750	2.500	1.0	
3		6.250	2.250	31.0	
5		5.750	2.500	1.0	
20		5.750	3.000	30.0	
81		5.750		4.0	11529.0
TOTAL DEPTH					11532.0

EQUIPMENT DATA

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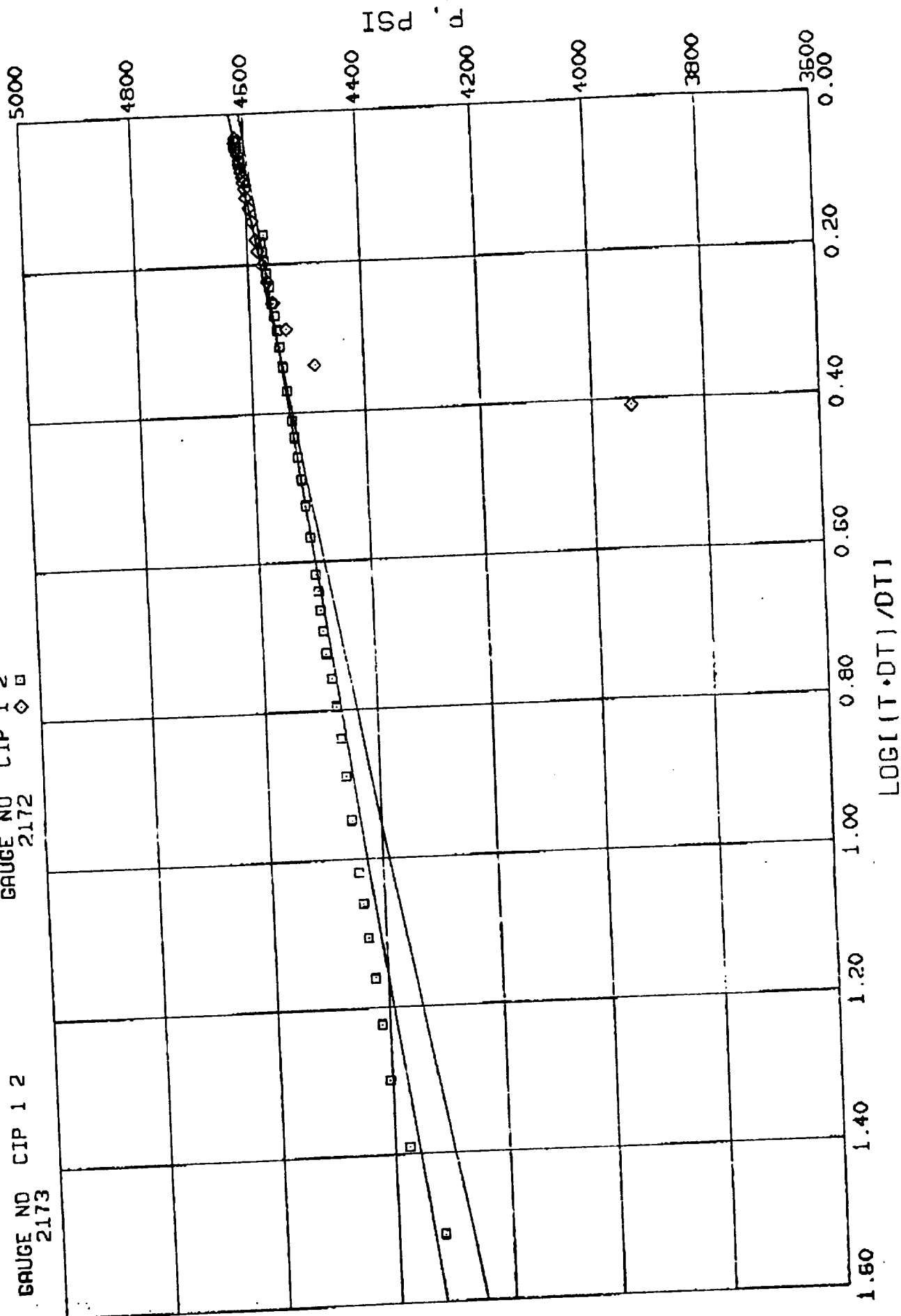
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COBS
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TICKET NO 53892901

GAUGE NO CIP 1 2
2172

GAUGE NO CIP 1 2
2173



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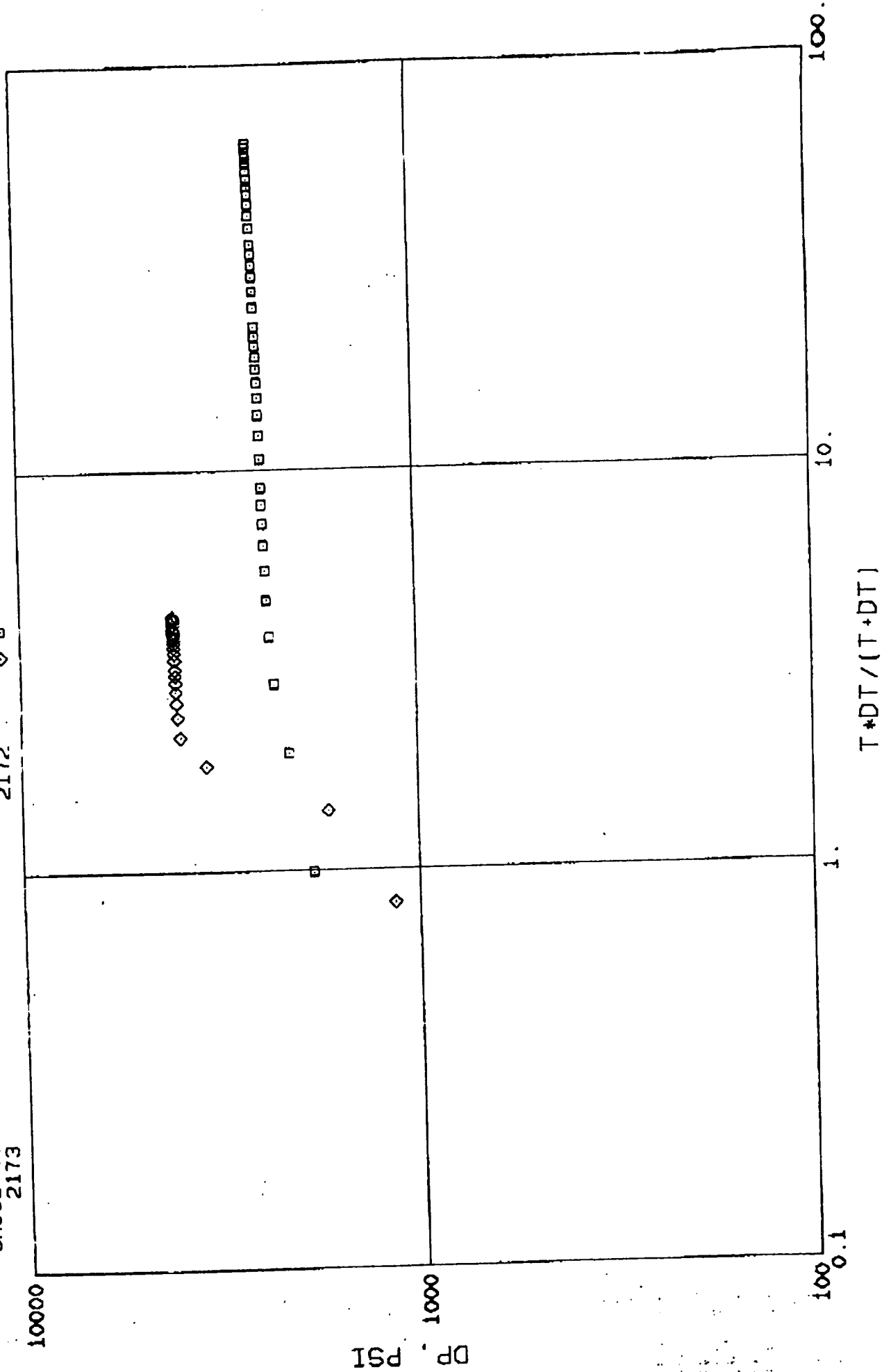
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TICKET NO 53892901

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2172

GAUGE NO CIP 1 2
2173



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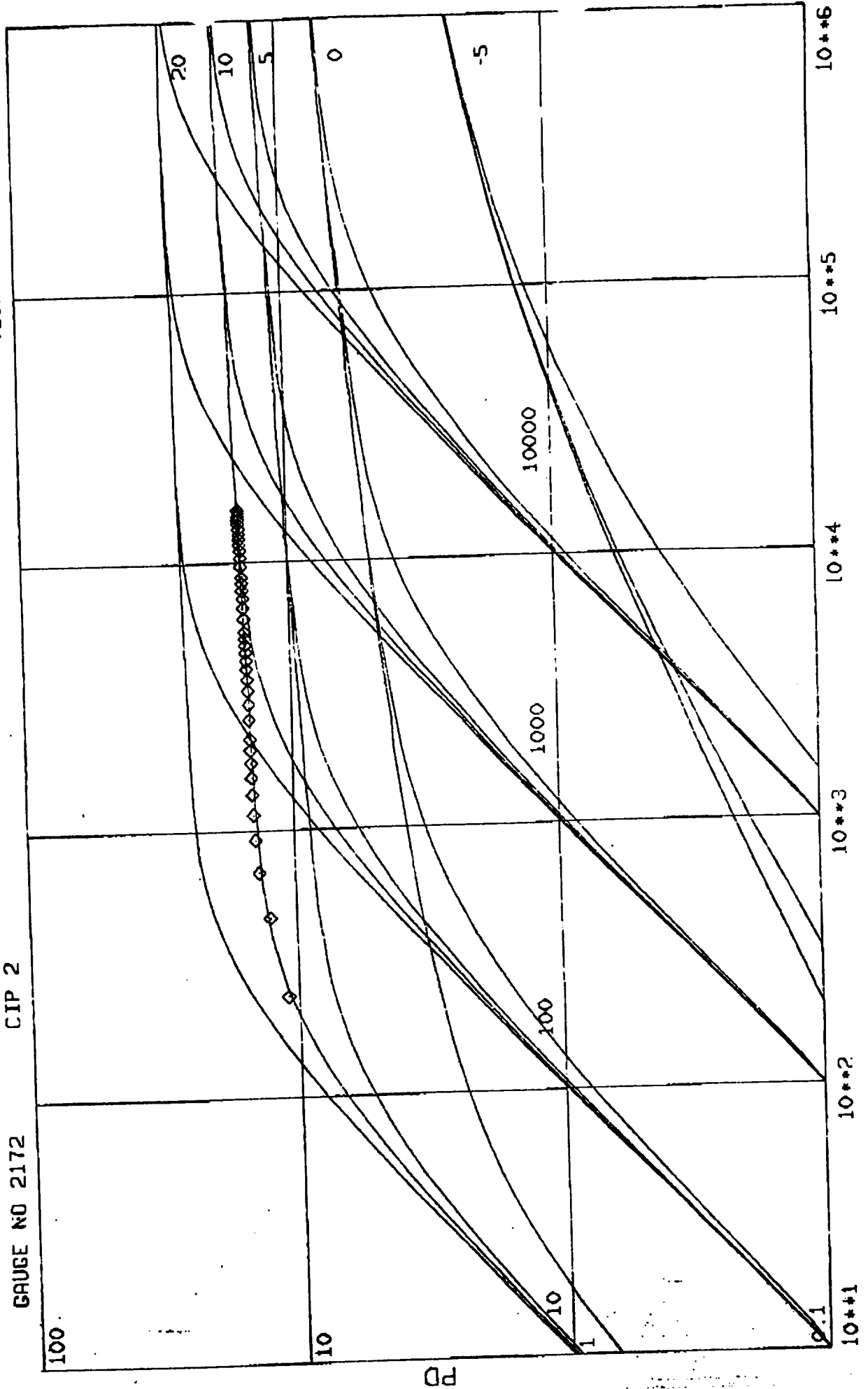
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TICKET NO 53892901

CIP 2

GAUGE NO 2172



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U.S. HOUSE
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SUMMARY OF RESERVOIR PARAMETERS USING HORNER METHOD FOR LIQUID WELLS

OIL GRAVITY		GAS GRAVITY		GAS/OIL RATIO		TEMPERATURE		NET PAY		POROSITY		PIPE CAPACITY FACTORS	
43.8	°API @ 60 °F	0.700		1477.0	SCF/STB	170.0	°F	72.0	ft	10.0	%		

WATER SALINITY		FLUID GRADIENT		FLUID PROPERTIES AT		VISCOSITY		FMT VOL FACTOR		SYSTEM COMPRESSIBILITY		bbl/ft	
0.0	% SALT	0.3438	psi/ft	4624.0	psig	0.269	cp	1.779	Rvol/Svol	20.02	$\times 10^{-6}$ vol/vol/psi		

PIPE CAPACITY FACTORS									
GAUGE NUMBER		2172	2172						UNITS
GAUGE DEPTH		11529.0	11529.0						
FLOW AND CIP PERIOD		1	2						
FINAL FLOW PRESSURE	P_f	453.7	1991.9						psig
TOTAL FLOW TIME	t	4.7	94.2						min
EXTRAPOLATED PRESSURE	P^*	4624.0	4606.7						psig
ONE CYCLE PRESSURE		4389.7	4428.0						psig
PRODUCTION RATE	Q		754.0						BPD
TRANSMISSIBILITY	kh/μ		1237.1						$\frac{md-ft}{cp}$
FLOW CAPACITY	kh		333.004						md-ft
PERMEABILITY	k		4.52506						md
SKIN FACTOR	S		11.2						
DAMAGE RATIO	DR		3.0						
POTENTIAL RATE	Q_1		2311.7						BPD
RADIUS OF INVESTIGATION	r_i		117.5						ft

REMARKS: CALCULATED RESULTS ARE EFFECTIVE TO 100% OIL PRODUCTION. THE RATE WAS DETERMINED BASED ON THE REPORTED 50 BBL'S OF OIL RECOVERY IN THE CALCULATED TOTAL FLOW TIME OF 94.24 MINUTES:

$$[50 \text{ BBLS} / 94.24 \text{ MINUTES}] \times [1440 \text{ MINUTES} / \text{DAY}] = 764 \text{ BBLS/DAY.}$$

NOTICE

BECAUSE OF THE UNCERTAINTY OF VARIABLE WELL CONDITIONS AND THE NECESSITY OF RELYING ON FACTS AND SUPPORTING SERVICES FURNISHED BY OTHERS, MRS. J. J. HARRIS IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA FURNISHED BY HER. HER PERSONNEL WILL USE THEIR BEST EFFORTS IN GATHERING SUCH INFORMATION AND THEIR BEST JUDGMENT IN INTERPRETING IT BUT CUSTOMER AGREES THAT MRS. J. J. HARRIS SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING FROM THE USE OF SUCH INFORMATION EXCEPT WHEN DUE TO MRS. J. J. HARRIS NEGLIGENCE OR WILLFUL MISCONDUCT IN THE PREPARATION OF FURNISHING OF INFORMATION.

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OFFICE**

SUMMARY OF RESERVOIR PARAMETERS USING CURVE MATCH METHOD FOR LIQUID WELLS

PIPE CAPACITY FACTORS									
GAUGE NUMBER		2172							
GAUGE DEPTH		11529.0							
FLOW AND CIP PERIOD		2							UNITS
FINAL FLOW PRESSURE	P_f	1991.9							psig
TOTAL FLOW TIME	t	94.2							min
PRODUCTION RATE	Q	764.0							BPD
t_d AT 1 HOUR		8829.							
P_d AT 100 psi		0.585							
C_d		29.0							
SKIN	S	10.0							md-ft
TRANSMISSIBILITY	kh/μ	1122.4							cp
FLOW CAPACITY	kh	302.116							md-ft
PERMEABILITY	k	4.19506							md
DAMAGE RATIO	DR	2.9							
POTENTIAL RATE	Q_1	2193.5							BPD
RADIUS OF INVESTIGATION	r_i	111.9							ft

NOTICE :

BECAUSE OF THE UNCERTAINTY OF VARIABLE WELL CONDITIONS AND THE NECESSITY OF RELYING ON FACTS AND SUPPORTING SERVICES FURNISHED BY OTHERS, HAS IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA FURNISHED BY HAS HAS PERSONNEL WILL USE THEIR BEST EFFORTS IN GATHERING SUCH INFORMATION AND THEIR BEST JUDGMENT IN INTERPRETING IT AND CUSTOMER AGENCIES HAS PERSONNEL WILL USE THEIR BEST EFFORTS IN GATHERING SUCH INFORMATION AND THEIR BEST JUDGMENT IN INTERPRETING IT HAS HAS NO RESPONSIBILITY OR LIABILITY FOR ANY DAMAGES ARISING FROM THE USE OF SUCH INFORMATION EXCEPT WHERE THE USER HAS GROSS NEGLIGENCE OR

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