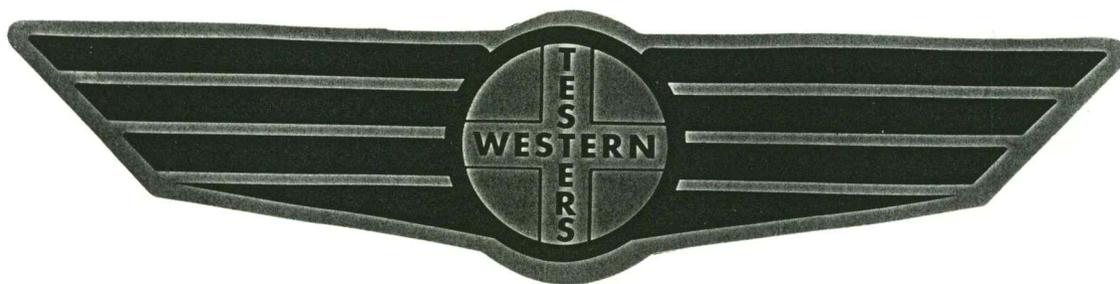


# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

COMPANY OXY USA, INC.

LEASE & WELL NO.

#1 HARBAUGH H

SEC.

27

TWP.

33S

RGE.

14W

TEST NO.

1

DATE

4/12/94

DST REPORT

GENERAL INFORMATION

DATE : 4/12/94  
CUSTOMER : OXY USA, INC.  
WELL : #1 TEST: 1  
ELEVATION: 1726 KB  
SECTION : 27  
RANGE : 14W COUNTY: BARBER  
GAUGE SN#: 1051 RANGE : 4250  
TICKET : 20580  
LEASE : HARBAUGH H  
GEOLOGIST: DERMAN  
FORMATION: MISSISSIPPI  
TOWNSHIP : 33S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4624.00 ft TO: 4739.00 ft TVD: 4739.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS  
DEPTH OF RECORDERS: 4627.0 ft 4630.0 ft  
TEMPERATURE: 124.0  
DRILL COLLAR LENGTH: 118.0 ft I.D.: 2.250 in  
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in  
DRILL PIPE LENGTH : 4478.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 28.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 115.0 ft ANCHOR SIZE: 5.500 in  
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in  
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH  
PACKER DEPTH: 4619.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4624.0 ft SIZE: 6.630 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in  
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : ALLEN DRILLING  
MUD TYPE : CHEMICAL VISCOSITY : 60.00 cp  
WEIGHT : 9.200 ppg WATER LOSS: 8.800 cc  
CHLORIDES : 7000 ppm  
JARS-MAKE : WTC SERIAL NUMBER: 411  
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

STRONG BLOW IN 3 MINUTES ON INITIAL FLOW PERIOD.  
GAS TO SURFACE IN 25 MINUTES.  
SEE GAS SHEET ATTACHED.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
140.0	0.0	10.0	0.0	90.0	GAS CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	100.0000 min.
GAS VOLUME:	0.4991 SCF	AVERAGE OIL RATE:	0.0000 STB/D
MUD VOLUME:	0.8000 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.8000 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2294.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	86.00	86.00
INITIAL SHUT-IN	60.00		516.00
FINAL FLOW	60.00	86.00	86.00
FINAL SHUT-IN	120.00		538.00

FINAL HYDROSTATIC PRESSURE: 2241.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2274.00

Description	Duration	p1	p End
INITIAL FLOW	40.00	117.00	68.00
INITIAL SHUT-IN	54.00		502.00
FINAL FLOW	60.00	84.00	73.00
FINAL SHUT-IN	120.00		508.00

FINAL HYDROSTATIC PRESSURE: 2226.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 4/12/94	TICKET : 20580
CUSTOMER : OXY USA, INC.	LEASE : HARBAUGH H
WELL : #1                      TEST: 1	GEOLOGIST: DERMAN
ELEVATION: 1726 KB	FORMATION: MISSISSIPPI
SECTION : 27	TOWNSHIP : 33S
RANGE : 14W                      COUNTY: BARBER	STATE : KS
GAUGE SN#: 1051                      RANGE : 4250	CLOCK : 12

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
30 MIN	MERLA	0.500	6" WATER	15400 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.500	22" WATER	29400 SCF/D
20 MIN	MERLA	0.500	20" WATER	28000 SCF/D
30 MIN	MERLA	0.500	20" WATER	28000 SCF/D
40 MIN	MERLA	0.500	20" WATER	28000 SCF/D
50 MIN	MERLA	0.500	20" WATER	28000 SCF/D
60 MIN	MERLA	0.500	20" WATER	28000 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4/12/94	TICKET : 20580
CUSTOMER : OXY USA, INC.	LEASE : HARBAUGH H
WELL : #1                      TEST: 1	GEOLOGIST: DERMAN
ELEVATION: 1726 KB	FORMATION: MISSISSIPPI
SECTION : 27	TOWNSHIP : 33S
RANGE : 14W                      COUNTY: BARBER	STATE : KS
GAUGE SN#: 1051                      RANGE : 4250	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	117.00	117.00
5.00	88.00	-29.00
10.00	77.00	-11.00
15.00	72.00	-5.00
20.00	70.00	-2.00
25.00	68.00	-2.00
30.00	68.00	0.00
35.00	68.00	0.00
40.00	68.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	178.00	178.00	14.33
6.00	290.00	112.00	7.67
9.00	349.00	59.00	5.44
12.00	393.00	44.00	4.33
15.00	440.00	47.00	3.67
18.00	458.00	18.00	3.22
21.00	474.00	16.00	2.90
24.00	480.00	6.00	2.67
27.00	485.00	5.00	2.48
30.00	490.00	5.00	2.33
33.00	493.00	3.00	2.21
36.00	495.00	2.00	2.11
39.00	497.00	2.00	2.03
42.00	499.00	2.00	1.95
45.00	501.00	2.00	1.89
48.00	501.00	0.00	1.83
51.00	502.00	1.00	1.78

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
54.00	502.00	0.00	1.74

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	84.00	84.00
5.00	84.00	0.00
10.00	84.00	0.00
15.00	83.00	-1.00
20.00	81.00	-2.00
25.00	79.00	-2.00
30.00	78.00	-1.00
35.00	77.00	-1.00
40.00	76.00	-1.00
45.00	75.00	-1.00
50.00	74.00	-1.00
55.00	73.00	-1.00
60.00	73.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	260.00	260.00	21.00
6.00	339.00	79.00	11.00
9.00	392.00	53.00	7.67
12.00	423.00	31.00	6.00
15.00	445.00	22.00	5.00
18.00	458.00	13.00	4.33
21.00	471.00	13.00	3.86
24.00	480.00	9.00	3.50
27.00	487.00	7.00	3.22
30.00	493.00	6.00	3.00
33.00	498.00	5.00	2.82
36.00	500.00	2.00	2.67
39.00	500.00	0.00	2.54
42.00	501.00	1.00	2.43
45.00	501.00	0.00	2.33
48.00	501.00	0.00	2.25

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

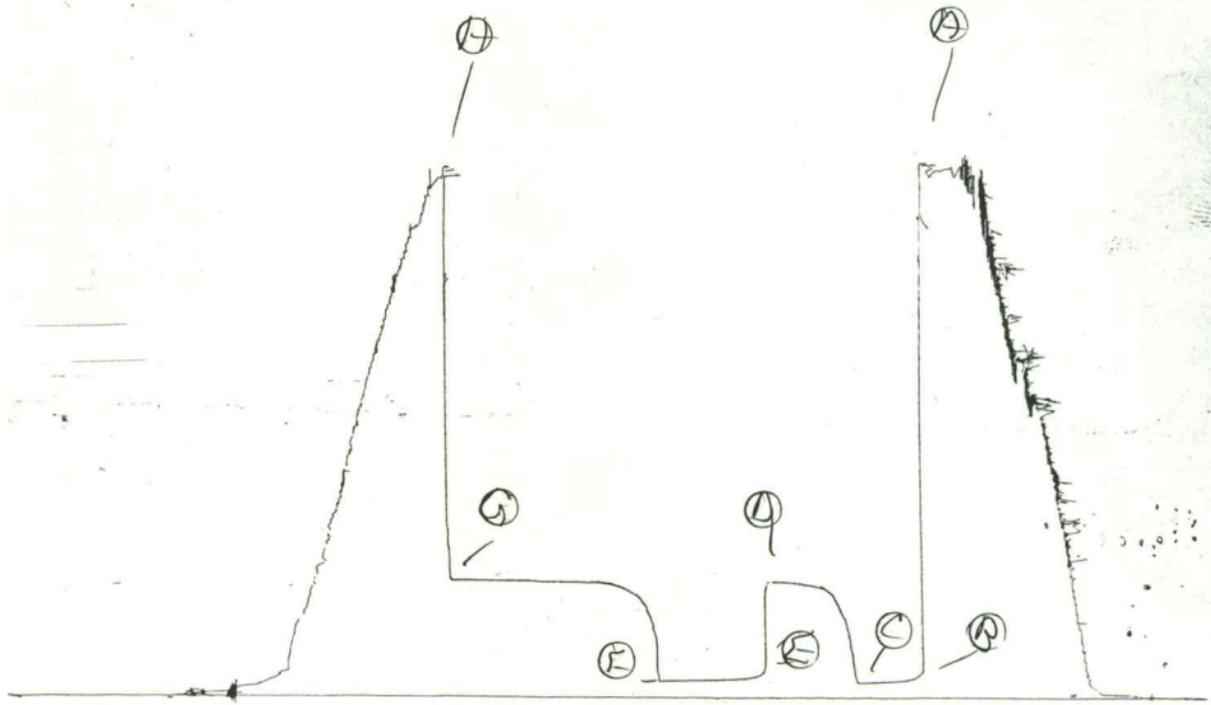
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
51.00	502.00	1.00	2.18
54.00	502.00	0.00	2.11
57.00	502.00	0.00	2.05
60.00	502.00	0.00	2.00
63.00	503.00	1.00	1.95
66.00	503.00	0.00	1.91
69.00	504.00	1.00	1.87
72.00	504.00	0.00	1.83
75.00	505.00	1.00	1.80
78.00	505.00	0.00	1.77
81.00	506.00	1.00	1.74
84.00	506.00	0.00	1.71
87.00	506.00	0.00	1.69
90.00	507.00	1.00	1.67
93.00	507.00	0.00	1.65
96.00	507.00	0.00	1.63
99.00	507.00	0.00	1.61
102.00	507.00	0.00	1.59
105.00	507.00	0.00	1.57
108.00	507.00	0.00	1.56
111.00	508.00	1.00	1.54
114.00	508.00	0.00	1.53
117.00	508.00	0.00	1.51
120.00	508.00	0.00	1.50

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