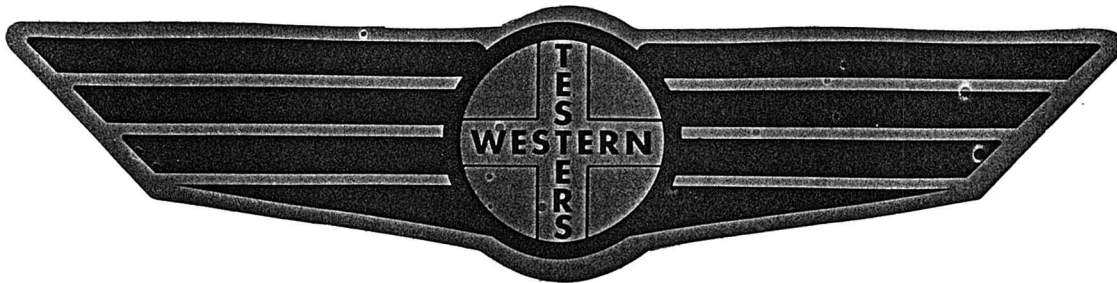


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone ~~913~~800-688-7021

COMPANY THUNDERBIRD DRILLING, INC. LEASE & WELL NO. #1 ZELLNER SEC. 19 TWP. 18S RGE. 35W TEST NO. 1 DATE 12/4/94

DST REPORT

GENERAL INFORMATION

DATE : 12/4/94	TICKET : 20623
CUSTOMER : THUNDERBIRD DRILLING, INC.	LEASE : ZELLNER
WELL : #1 TEST: 1	GEOLOGIST: TODD AIKINS
ELEVATION: 3220GL	FORMATION: LANSING/KS CITY"H&I"
SECTION : 19	TOWNSHIP : 18S
RANGE : 35W COUNTY: WICHITA	STATE : KS
GAUGE SN#: 1562 RANGE : 3900	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4275.00 ft	TO: 4320.00 ft	TVD: 4320.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4290.0 ft	4293.0 ft	
TEMPERATURE: 121.0		
DRILL COLLAR LENGTH: 0.0 ft	I.D.: 0.000 in	
WEIGHT PIPE LENGTH : 270.0 ft	I.D.: 2.750 in	
DRILL PIPE LENGTH : 3985.0 ft	I.D.: 3.800 in	
TEST TOOL LENGTH : 20.0 ft	TOOL SIZE : 5.500 in	
ANCHOR LENGTH : 45.0 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: 4270.0 ft	SIZE: 6.630 in	
PACKER DEPTH: 4275.0 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. : ABERCROMBIE RIG #8	
MUD TYPE : CHEMICAL	VISCOSITY : 49.00 cp
WEIGHT : 8.900 ppg	WATER LOSS: 9.600 cc
CHLORIDES : 5000 ppm	
JARS-MAKE :	SERIAL NUMBER:
DID WELL FLOW?: NO	REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW: STRONG BLOW, OFF BOTTOM OF BUCKET IN 5 MINUTES. FINAL FLOW: STRONG BLOW, OFF BOTTOM OF BUCKET IN 6 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
1.0	100.0	0.0	0.0	0.0	FREE OIL
39.0	7.0	0.0	53.0	40.0	OIL CUT MUDDY WATER
1620.0	1.0	0.0	79.0	20.0	SL OIL CUT SULPHUR WATER
0.0	0.0	0.0	0.0	0.0	RW 2.0 @ 56 DEG. F.
0.0	0.0	0.0	0.0	0.0	CHLORIDES 19,000 PPM

RATE INFORMATION

OIL VOLUME:	0.2615	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	4.4026	STB		
WATER VOLUME:	16.8159	STB		
TOTAL FLUID :	21.4800	STB		
			TOTAL FLOW TIME:	60.0000 min.
			AVERAGE OIL RATE:	8.1440 STB/D
			AVERAGE WATER RATE:	507.3764 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2102.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	90.00	360.00
INITIAL SHUT-IN	60.00		1183.00
FINAL FLOW	30.00	440.00	599.00
FINAL SHUT-IN	60.00		1183.00

FINAL HYDROSTATIC PRESSURE: 2083.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2098.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	86.00	380.00
INITIAL SHUT-IN	57.00		1188.00
FINAL FLOW	30.00	432.00	632.00
FINAL SHUT-IN	57.00		1188.00

FINAL HYDROSTATIC PRESSURE: 2080.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 12/4/94	TICKET : 20623
CUSTOMER : THUNDERBIRD DRILLING, INC.	LEASE : ZELLNER
WELL : #1 TEST: 1	GEOLOGIST: TODD AIKINS
ELEVATION: 3220GL	FORMATION: LANSING/KS CITY"H&I"
SECTION : 19	TOWNSHIP : 18S
RANGE : 35W COUNTY: WICHITA	STATE : KS
GAUGE SN#: 1562 RANGE : 3900	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	86.00	86.00
5.00	134.00	48.00
10.00	192.00	58.00
15.00	253.00	61.00
20.00	305.00	52.00
25.00	353.00	48.00
30.00	380.00	27.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	1131.00	1131.00	11.00
6.00	1150.00	19.00	6.00
9.00	1160.00	10.00	4.33
12.00	1167.00	7.00	3.50
15.00	1171.00	4.00	3.00
18.00	1175.00	4.00	2.67
21.00	1177.00	2.00	2.43
24.00	1179.00	2.00	2.25
27.00	1181.00	2.00	2.11
30.00	1182.00	1.00	2.00
33.00	1184.00	2.00	1.91
36.00	1185.00	1.00	1.83
39.00	1187.00	2.00	1.77
42.00	1187.00	0.00	1.71
45.00	1187.00	0.00	1.67
48.00	1188.00	1.00	1.63
51.00	1188.00	0.00	1.59
54.00	1188.00	0.00	1.56
57.00	1188.00	0.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	432.00	432.00
5.00	447.00	15.00
10.00	486.00	39.00
15.00	528.00	42.00
20.00	562.00	34.00
25.00	598.00	36.00
30.00	632.00	34.00

FINAL SHUT IN

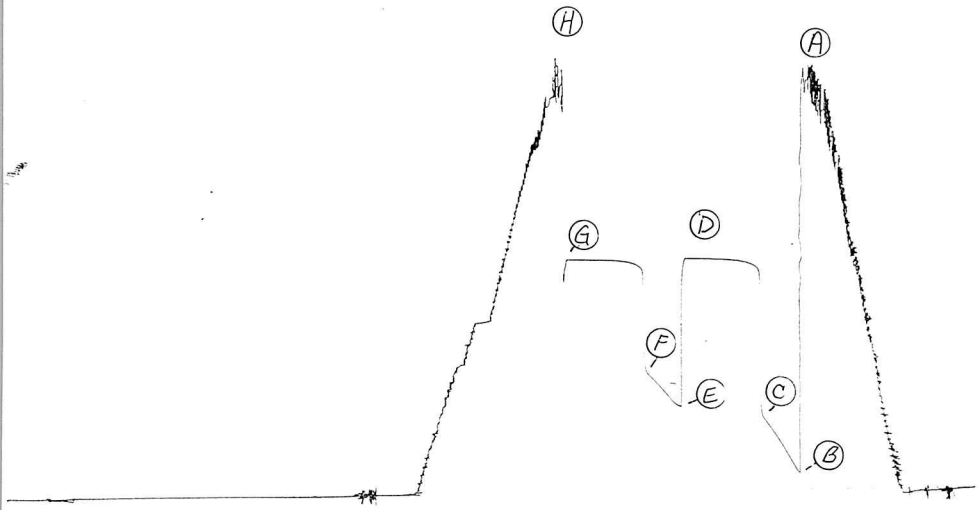
Time (min)	Pressure	Delta P	Horner T
3.00	1147.00	1147.00	11.00
6.00	1161.00	14.00	6.00
9.00	1169.00	8.00	4.33
12.00	1173.00	4.00	3.50
15.00	1177.00	4.00	3.00
18.00	1179.00	2.00	2.67
21.00	1181.00	2.00	2.43
24.00	1182.00	1.00	2.25
27.00	1183.00	1.00	2.11
30.00	1184.00	1.00	2.00
33.00	1184.00	0.00	1.91
36.00	1185.00	1.00	1.83
39.00	1186.00	1.00	1.77
42.00	1186.00	0.00	1.71
45.00	1187.00	1.00	1.67
48.00	1187.00	0.00	1.63
51.00	1188.00	1.00	1.59
54.00	1188.00	0.00	1.56
57.00	1188.00	0.00	1.53

562
Dist #1
Top

Ticket # 20623

(5)

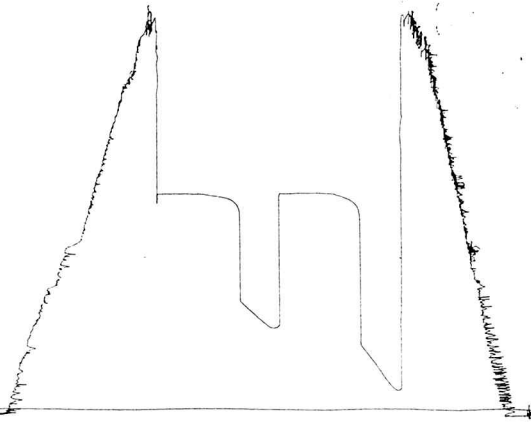
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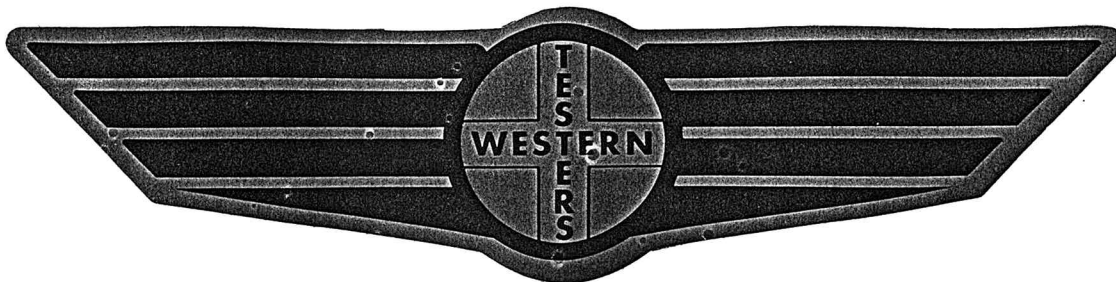
2403
DST #1
Bottom

Ticket # 20623

0



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

COMPANY THUNDERBIRD DRILLING, INC. LEASE & WELL NO. #1 ZELLNER SEC. 19 TWP. 18S RGE. 35W TEST NO. 2 DATE 12/5/94

DST REPORT

GENERAL INFORMATION

DATE	: 12/5/94	TICKET	: 20624
CUSTOMER	: THUNDERBIRD DRILLING, INC.	LEASE	: ZELLNER
WELL	: #1	TEST: 2	GEOLOGIST: TODD AIKINS
ELEVATION:	3220GL	FORMATION:	MARMATON
SECTION	: 19	TOWNSHIP	: 18S
RANGE	: 35W	COUNTY: WICHITA	STATE : KS
GAUGE SN#:	1562	RANGE : 3900	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4585.00 ft	TO:	4645.00 ft	TVD:	4645.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4595.0 ft		4598.0 ft		
TEMPERATURE:	128.0				
DRILL COLLAR LENGTH:	0.0 ft	I.D.:		0.000 in	
WEIGHT PIPE LENGTH :	270.0 ft	I.D.:		2.750 in	
DRILL PIPE LENGTH :	4295.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	60.0 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:	4580.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	4585.0 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. :	ABERCROMBIE RIG #8	VISCOSITY :	49.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.000 cc
WEIGHT :	9.200 ppg	SERIAL NUMBER:	
CHLORIDES :	3000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW: VERY WEAK SURFACE BLOW.
FINAL FLOW: NO BLOW.
31 FEET OF DRILL PIPE IN ANCHOR.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
10.0	0.0	0.0	0.0	100.0	MUD
0.0	0.0	0.0	0.0	0.0	CHLORIDES 3,100 PPM

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	0.0000 STB/D
MUD VOLUME:	0.0735 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.0735 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2260.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	60.00	60.00
INITIAL SHUT-IN	30.00		210.00
FINAL FLOW	30.00	66.00	66.00
FINAL SHUT-IN	30.00		80.00

FINAL HYDROSTATIC PRESSURE: 2250.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2300.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	54.00	54.00
INITIAL SHUT-IN	39.00		226.00
FINAL FLOW	30.00	55.00	55.00
FINAL SHUT-IN	24.00		80.00

FINAL HYDROSTATIC PRESSURE: 2274.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 12/5/94	TICKET : 20624
CUSTOMER : THUNDERBIRD DRILLING, INC.	LEASE : ZELLNER
WELL : #1 TEST: 2	GEOLOGIST: TODD AIKINS
ELEVATION: 3220GL	FORMATION: MARMATON
SECTION : 19	TOWNSHIP : 18S
RANGE : 35W COUNTY: WICHITA	STATE : KS
GAUGE SN#: 1562 RANGE : 3900	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	54.00	54.00
5.00	54.00	0.00
10.00	54.00	0.00
15.00	54.00	0.00
20.00	54.00	0.00
25.00	54.00	0.00
30.00	54.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	54.00	54.00	0.00
6.00	54.00	0.00	0.00
9.00	57.00	3.00	0.00
12.00	61.00	4.00	0.00
15.00	65.00	4.00	0.00
18.00	71.00	6.00	0.00
21.00	80.00	9.00	0.00
24.00	96.00	16.00	0.00
27.00	113.00	17.00	0.00
30.00	141.00	28.00	0.00
33.00	171.00	30.00	0.00
36.00	203.00	32.00	0.00
39.00	226.00	23.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	55.00	55.00
5.00	55.00	0.00
10.00	55.00	0.00
15.00	55.00	0.00
20.00	55.00	0.00
25.00	55.00	0.00
30.00	55.00	0.00

FINAL SHUT IN

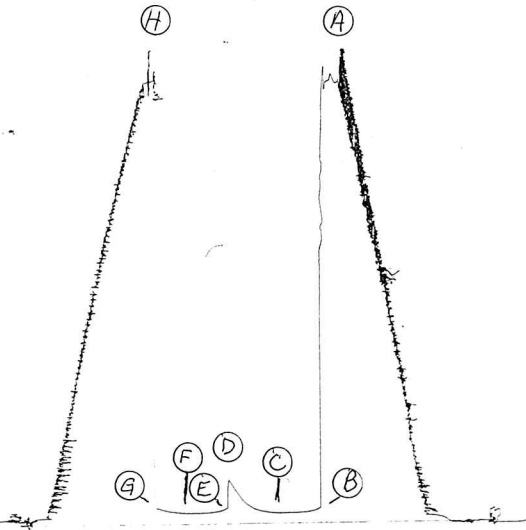
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	55.00	55.00	0.00
6.00	57.00	2.00	0.00
9.00	59.00	2.00	0.00
12.00	63.00	4.00	0.00
15.00	68.00	5.00	0.00
18.00	72.00	4.00	0.00
21.00	76.00	4.00	0.00
24.00	80.00	4.00	0.00

1562
DS#2
TOP

Ticket # 20624

5

I



2603
D54 #2
Bottom

Ticket # 20624

