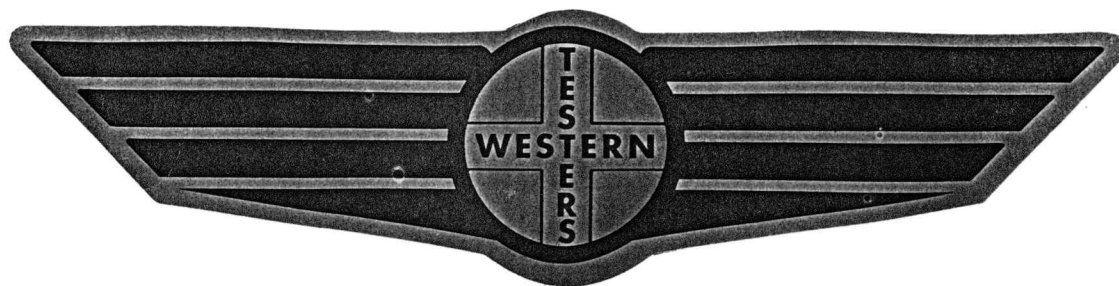


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

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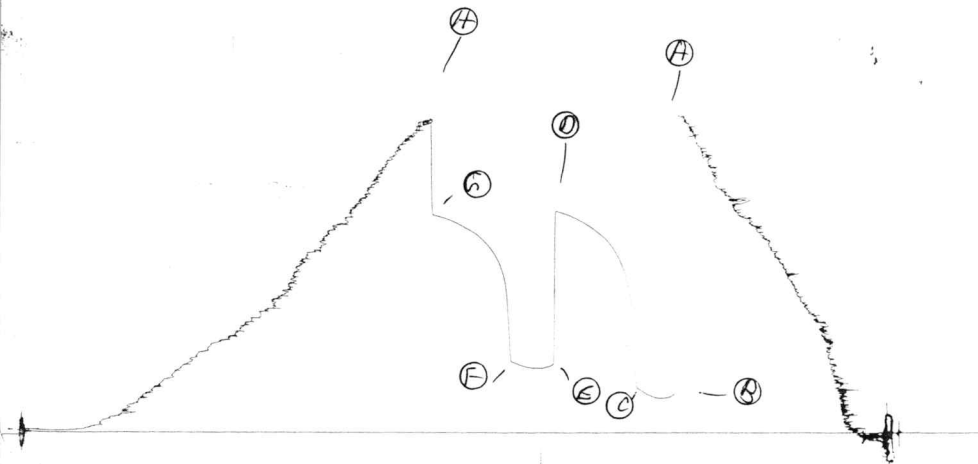
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DST REPORT

GENERAL INFORMATION

DATE	: 9/15/94	TICKET	: 20955
CUSTOMER	: DEUTSCH OIL COMPANY	LEASE	: HARDING
WELL	: #1-2	TEST: 1	GEOLOGIST: DEUTSCH
ELEVATION	: 1780 GL	FORMATION	: KANSAS CITY
SECTION	: 2	TOWNSHIP	: 25S
RANGE	: 11W	COUNTY: STAFFORD	STATE : KS
GAUGE SN#	: 4339	RANGE : 4300	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	3591.00 ft	TO:	3720.00 ft	TVD:	3720.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3590.0 ft		3720.0 ft		
TEMPERATURE:	114.0				
DRILL COLLAR LENGTH:	0.0 ft	I.D.:		0.000 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	3568.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	23.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	129.0 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 :		4.5FH	
PACKER DEPTH:	3586.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3591.0 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. :	DUKE RIG 2	VISCOSITY :	39.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	14.800 cc
WEIGHT :	9.100 ppg	SERIAL NUMBER:	
CHLORIDES :	6000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD OFF BOTTOM OF BUCKET IN 2 1/2
MINUTES. FINAL FLOW PERIOD OFF BOTTOM OF BUCKET
IN 2 1/2 MINUTES - SLOWLY DECREASING TO 8 INCHES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	2640 FT GAS ABOVE FLUID
120.0	6.0	15.0	0.0	79.0	GAS & OIL CUT MUD
300.0	20.0	20.0	0.0	60.0	HEAVY GAS & OIL CUT MUD
300.0	15.0	20.0	30.0	35.0	HVY GAS & OIL C/WTRY MUD
180.0	4.0	2.0	74.0	20.0	SL OIL & GAS C/MUDDY WTR
0.0	0.0	0.0	0.0	0.0	CHLORIDES 74000 PPM

RATE INFORMATION

OIL VOLUME: 1.6747 STB
 GAS VOLUME: 11.1521 SCF
 MUD VOLUME: 5.8322 STB
 WATER VOLUME: 3.1307 STB
 TOTAL FLUID : 10.6376 STB

TOTAL FLOW TIME: 60.0000 min.
 AVERAGE OIL RATE: 145.1042 STB/D
 AVERAGE WATER RATE: 110.1980 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1820.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	215.00	261.00
INITIAL SHUT-IN	60.00		1265.00
FINAL FLOW	30.00	386.00	420.00
FINAL SHUT-IN	60.00		1254.00

FINAL HYDROSTATIC PRESSURE: 1798.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1823.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	226.00	279.00
INITIAL SHUT-IN	63.00		1285.00
FINAL FLOW	30.00	406.00	424.00
FINAL SHUT-IN	60.00		1260.00

FINAL HYDROSTATIC PRESSURE: 1786.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 9/15/94	TICKET	: 20955
CUSTOMER	: DEUTSCH OIL COMPANY	LEASE	: HARDING
WELL	: #1-2	TEST: 1	GEOLOGIST: DEUTSCH
ELEVATION	: 1780 GL	FORMATION:	KANSAS CITY
SECTION	: 2	TOWNSHIP	: 25S
RANGE	: 11W	STATE	: KS
GAUGE SN#	: 4339	CLOCK	: 12
	COUNTY: STAFFORD		
	RANGE : 4300		

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	226.00	226.00
5.00	226.00	0.00
10.00	222.00	-4.00
15.00	223.00	1.00
20.00	238.00	15.00
25.00	258.00	20.00
30.00	279.00	21.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	600.00	600.00	11.00
6.00	819.00	219.00	6.00
9.00	911.00	92.00	4.33
12.00	983.00	72.00	3.50
15.00	1029.00	46.00	3.00
18.00	1070.00	41.00	2.67
21.00	1101.00	31.00	2.43
24.00	1126.00	25.00	2.25
27.00	1148.00	22.00	2.11
30.00	1164.00	16.00	2.00
33.00	1181.00	17.00	1.91
36.00	1199.00	18.00	1.83
39.00	1212.00	13.00	1.77
42.00	1225.00	13.00	1.71
45.00	1237.00	12.00	1.67
48.00	1248.00	11.00	1.63
51.00	1258.00	10.00	1.59
54.00	1265.00	7.00	1.56
57.00	1274.00	9.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
60.00	1280.00	6.00	1.50
63.00	1285.00	5.00	1.48

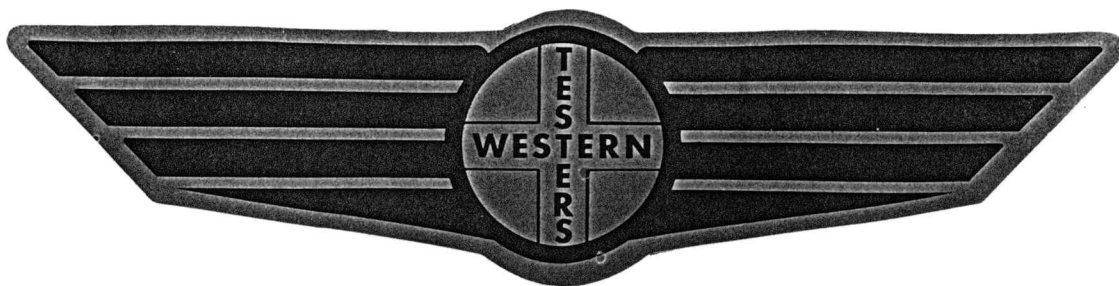
FINAL FLOW

Time (min)	Pressure	Delta P
0.00	406.00	406.00
5.00	406.00	0.00
10.00	389.00	-17.00
15.00	389.00	0.00
20.00	393.00	4.00
25.00	407.00	14.00
30.00	424.00	17.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	761.00	761.00	11.00
6.00	903.00	142.00	6.00
9.00	977.00	74.00	4.33
12.00	1022.00	45.00	3.50
15.00	1059.00	37.00	3.00
18.00	1088.00	29.00	2.67
21.00	1113.00	25.00	2.43
24.00	1135.00	22.00	2.25
27.00	1154.00	19.00	2.11
30.00	1168.00	14.00	2.00
33.00	1181.00	13.00	1.91
36.00	1194.00	13.00	1.83
39.00	1206.00	12.00	1.77
42.00	1218.00	12.00	1.71
45.00	1230.00	12.00	1.67
48.00	1237.00	7.00	1.63
51.00	1245.00	8.00	1.59
54.00	1252.00	7.00	1.56
57.00	1258.00	6.00	1.53
60.00	1260.00	2.00	1.50

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

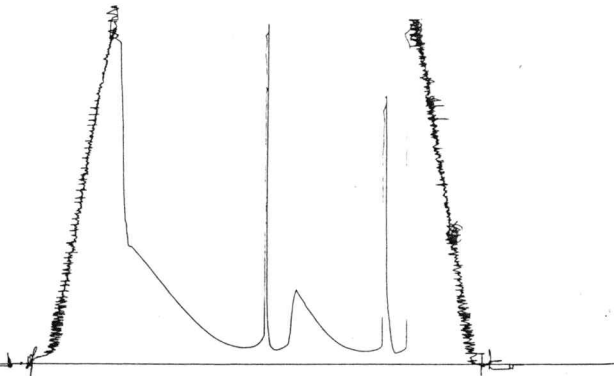
P.O. Box 1599

Phone 1-800-688-7021

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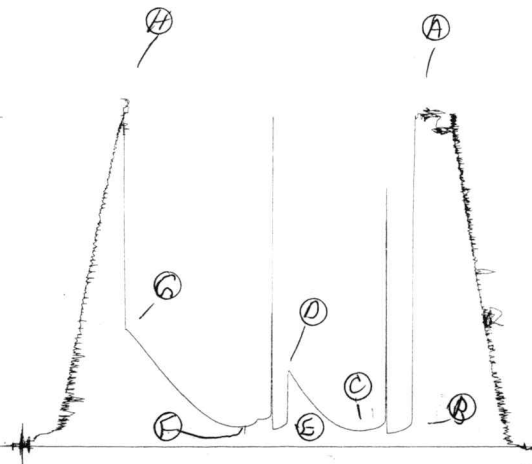
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DST REPORT

GENERAL INFORMATION

DATE	: 9/16/94	TICKET	: 20956
CUSTOMER	: DEUTSCH OIL COMPANY	LEASE	: HARDING
WELL	: #1-2	TEST: 2	GEOLOGIST: DEUTSCH
ELEVATION:	1780 GL	FORMATION:	MISSISSIPPI
SECTION	: 2	TOWNSHIP	: 25S
RANGE	: 11W	COUNTY: STAFFORD	STATE : KS
GAUGE SN#:	4339	RANGE : 4300	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	3806.00 ft	TO:	3856.00 ft	TVD:	3856.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3805.0 ft		3856.0 ft		
TEMPERATURE:	122.0				
DRILL COLLAR LENGTH:	0.0 ft	I.D.:		0.000 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	3783.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	23.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	50.0 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 :		4.5FH	
PACKER DEPTH:	3801.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3806.0 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. :	DUKE RIG 2	VISCOSITY :	0.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	0.000 cc
WEIGHT :	0.000 ppg		
CHLORIDES :	0 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD 3 INCH DECREASING BLOW - DIED
IN 15 MINUTES. FLUSHED TOOL. FINAL FLOW PERIOD
DIED IN 10 MINUTES - FLUSHED TOOL.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
110.0	0.0	2.0	0.0	98.0	SL GAS CUT MUD W/ FEW OIL
0.0	0.0	0.0	0.0	0.0	SPECKS

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.1733 SCF	AVERAGE OIL RATE:	0.0000 STB/D
MUD VOLUME:	1.5120 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	1.5120 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1896.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	125.00	90.00
INITIAL SHUT-IN	60.00		454.00
FINAL FLOW	30.00	136.00	125.00
FINAL SHUT-IN	90.00		689.00

FINAL HYDROSTATIC PRESSURE: 1896.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1902.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	131.00	105.00
INITIAL SHUT-IN	63.00		445.00
FINAL FLOW	30.00	138.00	120.00
FINAL SHUT-IN	93.00		684.00

FINAL HYDROSTATIC PRESSURE: 1874.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 9/16/94	TICKET	: 20956
CUSTOMER	: DEUTSCH OIL COMPANY	LEASE	: HARDING
WELL	: #1-2	TEST:	2
ELEVATION:	1780 GL	GEOLOGIST:	DEUTSCH
SECTION	: 2	FORMATION:	MISSISSIPPI
RANGE	: 11W	TOWNSHIP	: 25S
GAUGE SN#:	4339	STATE	: KS
		CLOCK	: 12
		COUNTY:	STAFFORD
		RANGE	: 4300

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	131.00	131.00
5.00	110.00	-21.00
10.00	98.00	-12.00
15.00	82.00	-16.00
20.00	149.00	67.00
25.00	115.00	-34.00
30.00	105.00	-10.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	100.00	100.00	0.00
6.00	97.00	-3.00	0.00
9.00	95.00	-2.00	0.00
12.00	97.00	2.00	0.00
15.00	99.00	2.00	0.00
18.00	105.00	6.00	0.00
21.00	113.00	8.00	0.00
24.00	120.00	7.00	0.00
27.00	133.00	13.00	0.00
30.00	146.00	13.00	0.00
33.00	165.00	19.00	0.00
36.00	184.00	19.00	0.00
39.00	208.00	24.00	0.00
42.00	235.00	27.00	0.00
45.00	258.00	23.00	0.00
48.00	288.00	30.00	0.00
51.00	315.00	27.00	0.00
54.00	350.00	35.00	0.00
57.00	384.00	34.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
60.00	418.00	34.00	0.00
63.00	445.00	27.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	138.00	138.00
5.00	115.00	-23.00
10.00	105.00	-10.00
15.00	165.00	60.00
20.00	160.00	-5.00
25.00	134.00	-26.00
30.00	120.00	-14.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	118.00	118.00	0.00
6.00	118.00	0.00	0.00
9.00	118.00	0.00	0.00
12.00	118.00	0.00	0.00
15.00	124.00	6.00	0.00
18.00	129.00	5.00	0.00
21.00	138.00	9.00	0.00
24.00	149.00	11.00	0.00
27.00	160.00	11.00	0.00
30.00	179.00	19.00	0.00
33.00	197.00	18.00	0.00
36.00	213.00	16.00	0.00
39.00	234.00	21.00	0.00
42.00	255.00	21.00	0.00
45.00	276.00	21.00	0.00
48.00	298.00	22.00	0.00
51.00	322.00	24.00	0.00
54.00	348.00	26.00	0.00
57.00	370.00	22.00	0.00
60.00	399.00	29.00	0.00
63.00	426.00	27.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
66.00	454.00	28.00	0.00
69.00	482.00	28.00	0.00
72.00	510.00	28.00	0.00
75.00	540.00	30.00	0.00
78.00	569.00	29.00	0.00
81.00	597.00	28.00	0.00
84.00	624.00	27.00	0.00
87.00	650.00	26.00	0.00
90.00	671.00	21.00	0.00
93.00	684.00	13.00	0.00