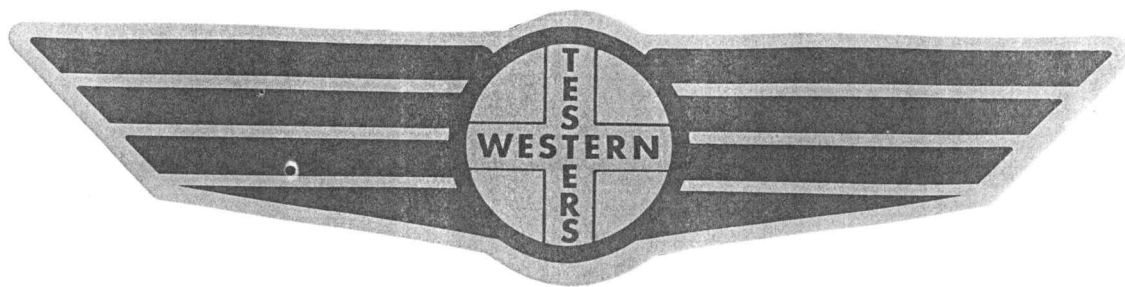


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 7/13/94
CUSTOMER : JACK EXPLORATION, INC.
WELL : #1-16 TEST: 1
ELEVATION: 1379 KB
SECTION : 16
RANGE : 10W COUNTY: BARBER
GAUGE SN#: 13362 RANGE : 4450
TICKET : 19041
LEASE : DIEL
GEOLOGIST: POLLACK
FORMATION: MISSISSIPPI
TOWNSHIP : 34S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4643.00 ft TO: 4700.00 ft TVD: 4700.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
DEPTH OF RECORDERS: 4692.0 ft 4695.0 ft
TEMPERATURE: 124.0
DRILL COLLAR LENGTH: 510.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 4110.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 23.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 57.0 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: 4643.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : EAGLE DRILLING
MUD TYPE : CHEMICAL VISCOSITY : 49.00 cp
WEIGHT : 8.700 ppg WATER LOSS: 9.400 cc
CHLORIDES : 4300 ppm
JARS-MAKE : WTC SERIAL NUMBER: 411
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW. GAS TO SURFACE
IN 4 MINUTES. SEE GAS FLOW CHART.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
140.0	0.0	12.0	0.0	88.0	GAS CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	85.0000	min.
GAS VOLUME:	0.4639	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.6058	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.6058	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2226.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	145.00	123.00
INITIAL SHUT-IN	60.00		1779.00
FINAL FLOW	60.00	112.00	89.00
FINAL SHUT-IN	120.00		1611.00

FINAL HYDROSTATIC PRESSURE: 2170.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2267.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	151.00	140.00
INITIAL SHUT-IN	63.00		1797.00
FINAL FLOW	55.00	146.00	103.00
FINAL SHUT-IN	123.00		1633.00

FINAL HYDROSTATIC PRESSURE: 2187.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 7/13/94	TICKET : 19041
CUSTOMER : JACK EXPLORATION, INC.	LEASE : DIEL
WELL : #1-16 TEST: 1	GEOLOGIST: POLLACK
ELEVATION: 1379 KB	FORMATION: MISSISSIPPI
SECTION : 16	TOWNSHIP : 34S
RANGE : 10W COUNTY: BARBER	STATE : KS
GAUGE SN#: 13362 RANGE : 4450	CLOCK : 12

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	1.000	7 PSIG	385000 SCF/D
20 MIN	MERLA	1.000	7 PSIG	385000 SCF/D
30 MIN	MERLA	1.000	7 PSIG	385000 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	7 PSIG	1.000	7 PSIG	385000 SCF/D
20 MIN	7 PSIG	1.000	7 PSIG	385000 SCF/D
30 MIN	7 PSIG	1.000	7 PSIG	385000 SCF/D
40 MIN	7 PSIG	1.000	7 PSIG	385000 SCF/D
50 MIN	7 PSIG	1.000	7 PSIG	385000 SCF/D
60 MIN	7 PSIG	1.000	7 PSIG	385000 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 7/13/94	TICKET : 19041
CUSTOMER : JACK EXPLORATION, INC.	LEASE : DIEL
WELL : #1-16 TEST: 1	GEOLOGIST: POLLACK
ELEVATION: 1379 KB	FORMATION: MISSISSIPPI
SECTION : 16	TOWNSHIP : 34S
RANGE : 10W COUNTY: BARBER	STATE : KS
GAUGE SN#: 13362 RANGE : 4450	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	151.00	151.00
5.00	151.00	0.00
10.00	149.00	-2.00
15.00	145.00	-4.00
20.00	143.00	-2.00
25.00	141.00	-2.00
30.00	140.00	-1.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	260.00	260.00	11.00
6.00	725.00	465.00	6.00
9.00	1217.00	492.00	4.33
12.00	1529.00	312.00	3.50
15.00	1657.00	128.00	3.00
18.00	1729.00	72.00	2.67
21.00	1757.00	28.00	2.43
24.00	1770.00	13.00	2.25
27.00	1779.00	9.00	2.11
30.00	1783.00	4.00	2.00
33.00	1787.00	4.00	1.91
36.00	1789.00	2.00	1.83
39.00	1790.00	1.00	1.77
42.00	1791.00	1.00	1.71
45.00	1792.00	1.00	1.67
48.00	1793.00	1.00	1.63
51.00	1794.00	1.00	1.59
54.00	1795.00	1.00	1.56
57.00	1796.00	1.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1797.00	1.00	1.50
63.00	1797.00	0.00	1.48

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	146.00	146.00
5.00	146.00	0.00
10.00	128.00	-18.00
15.00	120.00	-8.00
20.00	112.00	-8.00
25.00	108.00	-4.00
30.00	102.00	-6.00
35.00	99.00	-3.00
40.00	99.00	0.00
45.00	99.00	0.00
50.00	103.00	4.00
55.00	103.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	233.00	233.00	19.33
6.00	734.00	501.00	10.17
9.00	1143.00	409.00	7.11
12.00	1361.00	218.00	5.58
15.00	1477.00	116.00	4.67
18.00	1538.00	61.00	4.06
21.00	1566.00	28.00	3.62
24.00	1578.00	12.00	3.29
27.00	1587.00	9.00	3.04
30.00	1593.00	6.00	2.83
33.00	1597.00	4.00	2.67
36.00	1599.00	2.00	2.53
39.00	1601.00	2.00	2.41
42.00	1602.00	1.00	2.31
45.00	1603.00	1.00	2.22
48.00	1604.00	1.00	2.15

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

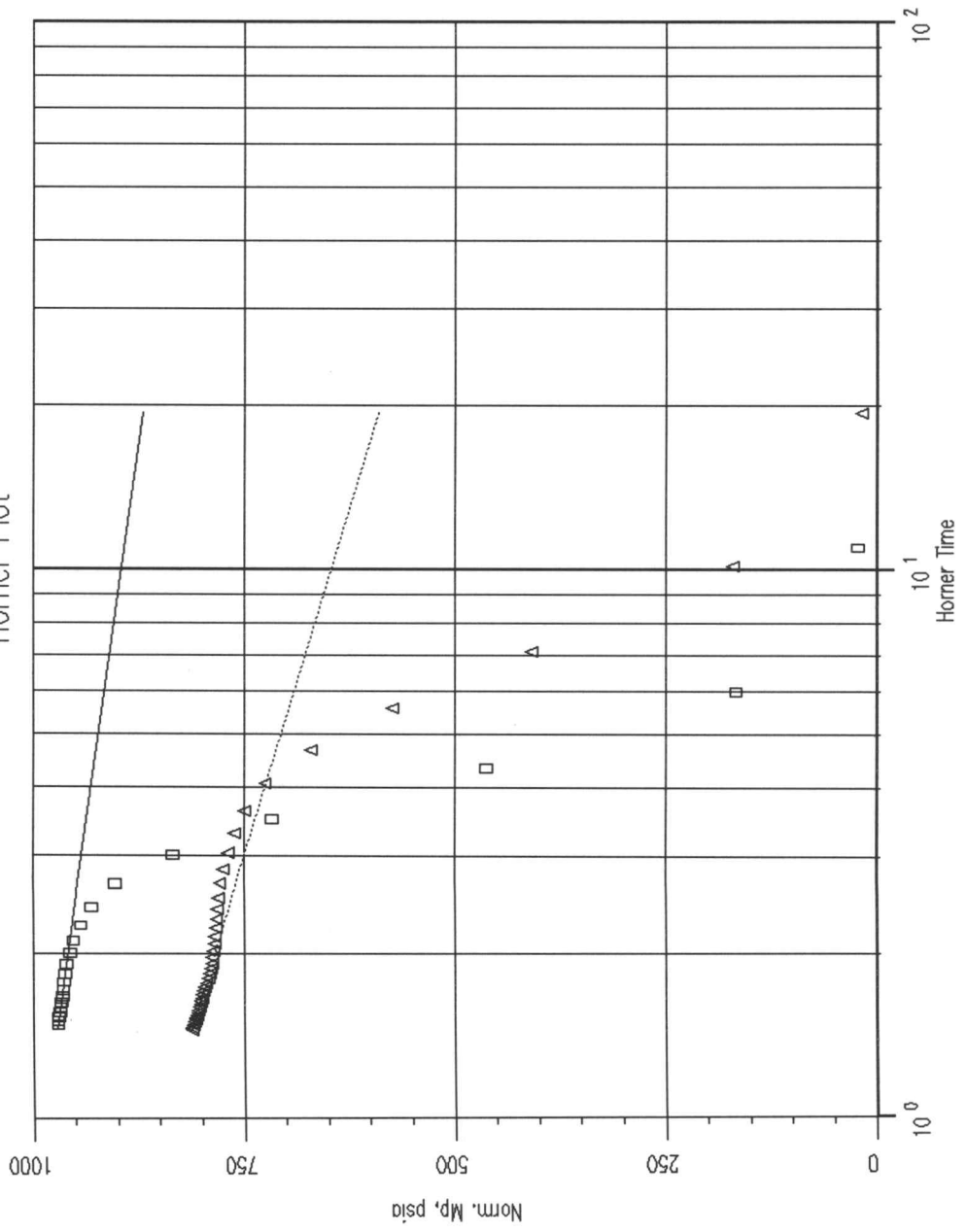
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
51.00	1605.00	1.00	2.08
54.00	1606.00	1.00	2.02
57.00	1607.00	1.00	1.96
60.00	1608.00	1.00	1.92
63.00	1609.00	1.00	1.87
66.00	1611.00	2.00	1.83
69.00	1613.00	2.00	1.80
72.00	1615.00	2.00	1.76
75.00	1617.00	2.00	1.73
78.00	1619.00	2.00	1.71
81.00	1620.00	1.00	1.68
84.00	1621.00	1.00	1.65
87.00	1622.00	1.00	1.63
90.00	1623.00	1.00	1.61
93.00	1624.00	1.00	1.59
96.00	1625.00	1.00	1.57
99.00	1626.00	1.00	1.56
102.00	1627.00	1.00	1.54
105.00	1628.00	1.00	1.52
108.00	1629.00	1.00	1.51
111.00	1630.00	1.00	1.50
114.00	1631.00	1.00	1.48
117.00	1632.00	1.00	1.47
120.00	1633.00	1.00	1.46
123.00	1633.00	0.00	1.45

DATE 7/13/94
 CUSTOMER JACK EXPLORATION, INC.
 WELL #1-16
 ELEVATION 1379 KB
 SECTION 16
 RANGE 10W
 GAUGE SN# 13362

TEST 1
 COUNTY BARBER
 RANGE 4450

TICKET 19041
 LEASE DIEL
 GEOLOGIST POLLACK
 FORMATION MISSISSIPPI
 TOWNSHIP 34S
 STATE KS
 CLOCK 12

Horner Plot



Result

	#1	#2
tp, hrs	0.50	0.92
Slope	-90.47	-196.78
Pstar, psig	1812.35	1666.59
P1hr, psig	969.99	787.80
Skin	8.59	1.12
k, md	1.01	0.46
kh/u, md-ft/cp	940.63	432.48
ri, ft	21.17	19.43
DR, %	2.90	1.20
Drawdown Factor, %		0.091
Drawdown P*		0.080

— BUILD 1
 BUILD 2

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 7/13/94	TICKET : 19041
CUSTOMER : JACK EXPLORATION, INC.	LEASE : DIEL
WELL : #1-16 TEST: 1	GEOLOGIST: POLLACK
ELEVATION: 1379 KB	FORMATION: MISSISSIPPI
SECTION : 16	TOWNSHIP : 34S
RANGE : 10W COUNTY: BARBER	STATE : KS
GAUGE SN#: 13362 RANGE : 4450	CLOCK : 12

Input Data

Porosity 0.120 Rw: 0.328 ft h: 15.000 ft

qg 385000.0 STB

Pvt Data

Evaluation Pressure : 1797.0
 Evaluation Temperature: 124.0

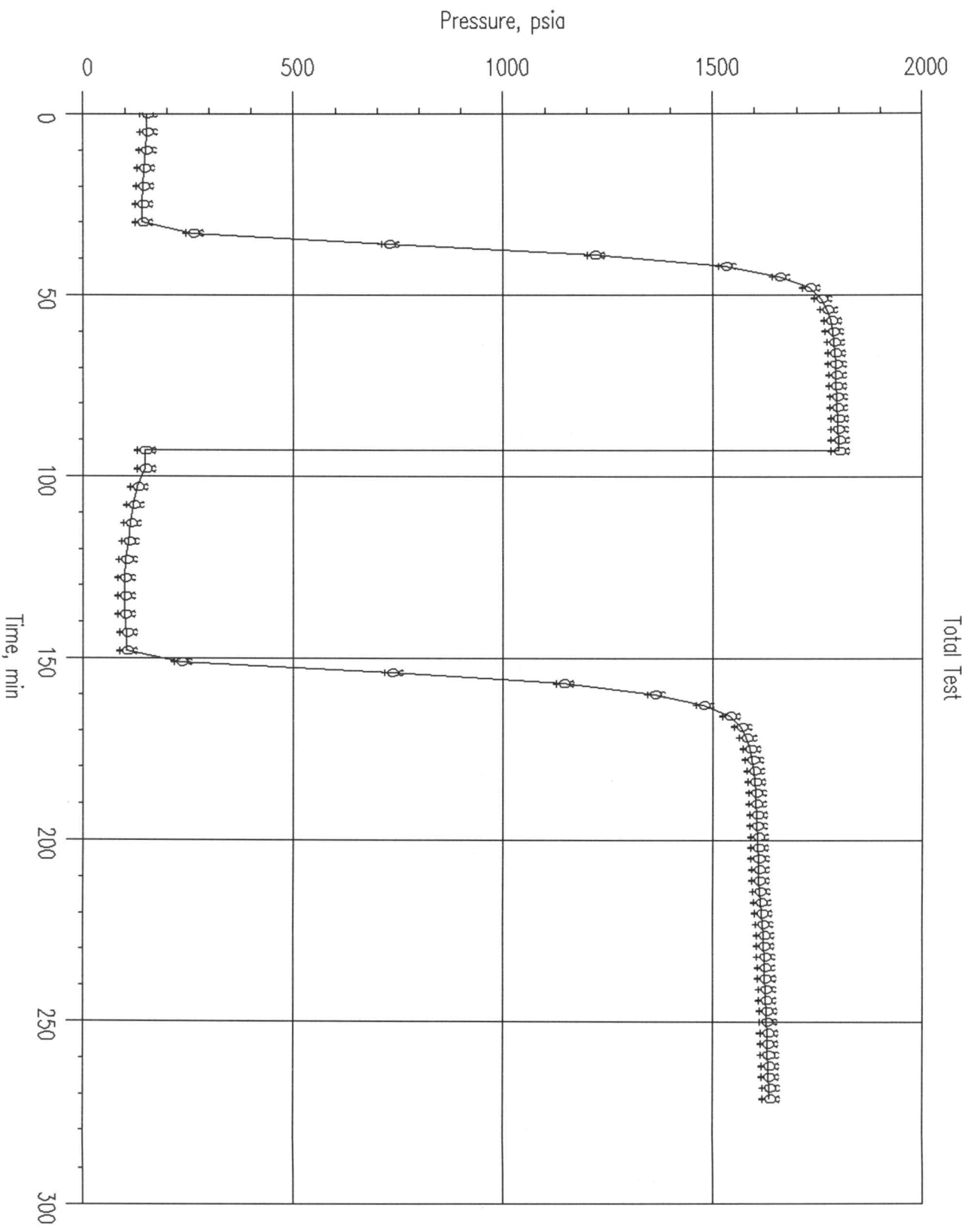
Gas Grav 0.65 API
 Bg 0.001 RBL/STB Vis 0.016 cp Ct 6.1524E-004 1/PSI

Horner Results

	Inital Shut-In	Final Shut-In
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pseudo pressure time	0.50 hrs	0.92 hrs
slope	-90.47	-196.78
pstar	1812.35 psig	1666.59 psig
plhr	969.99 psig	787.80 psig
skin	8.59	1.12
permeability	1.01 md	0.46 md
transmisability	940.63 md-ft/cp	432.48 md-ft/cp
radius of investigation	21.17 ft	19.43 ft
Damage-Ratio	2.9 percent	1.2 percent
Drawdown Factor		0.091 percent
Drawdown P*		0.080 percent

Profile Plot
Total Test

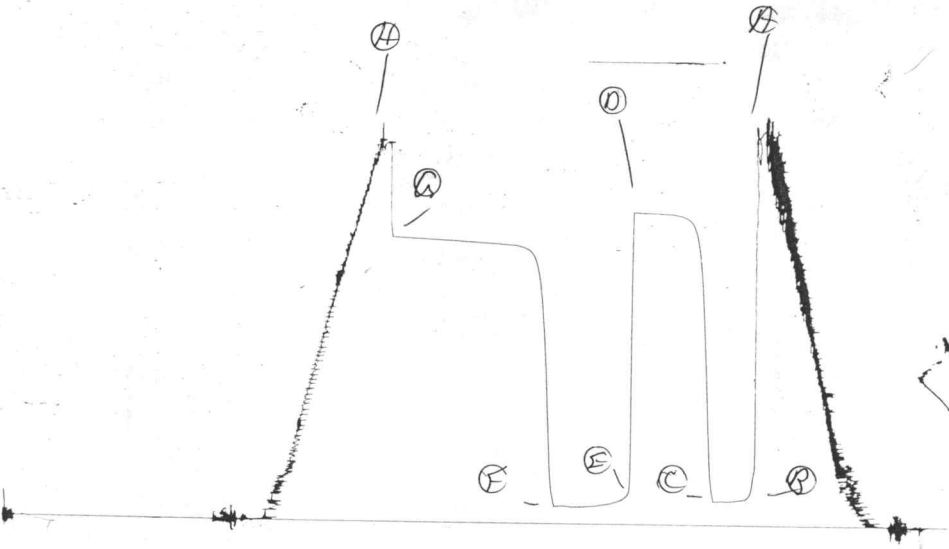


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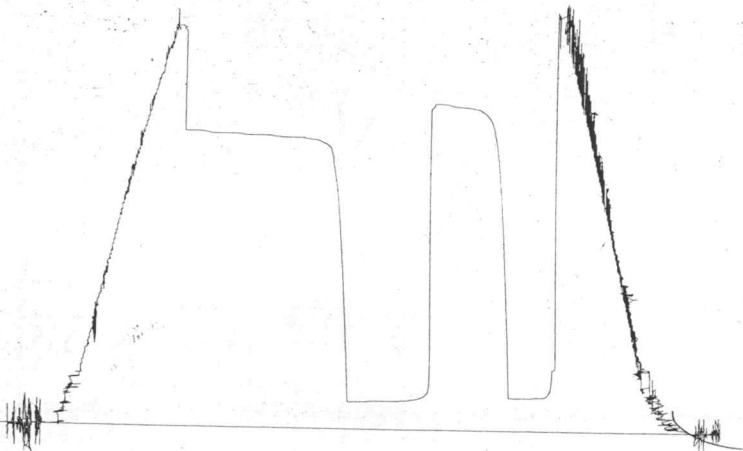


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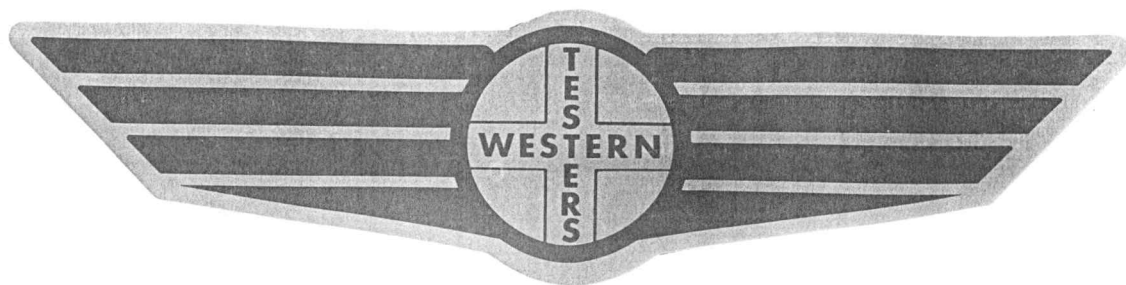
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KT 19041

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FORMATION TEST REPORT



Home Office: Wichita, Kansas 67201

P.O. Box 1599 Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE	: 7/13/94	TICKET	: 19042
CUSTOMER	: JACK EXPLORATION, INC.	LEASE	: DIEL
WELL	: #1-16	TEST:	2
ELEVATION:	1379 KB	GEOLOGIST:	POLLACK
SECTION	: 16	FORMATION:	MISSISSIPPI
RANGE	: 10W	COUNTY:	BARBER
Gauge SN#:	13362	STATE	: KS
		RANGE	: 4450
		CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4700.00 ft	TO:	4735.00 ft	TVD:	4735.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4717.0 ft		4720.0 ft		
TEMPERATURE:	126.0				
DRILL COLLAR LENGTH:	541.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	4136.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	23.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	35.0 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:	4700.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	EAGLE DRILLING	VISCOSITY :	46.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	9.700 cc
WEIGHT :	9.100 ppg		
CHLORIDES :	6500 ppm	SERIAL NUMBER:	411
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW IN 6 MINUTES.
FINAL FLOW PERIOD STRONG BLOW - NO GAS TO SURFACE.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
70.0	1.0	0.0	0.0	99.0	SL OIL SPOTTED MUD
60.0	0.0	0.0	60.0	40.0	MUDDY WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 42000 PPM

RATE INFORMATION

OIL VOLUME:	0.0034 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	8.2614 STB/D
MUD VOLUME:	0.4588 STB	AVERAGE WATER RATE:	7.0812 STB/D
WATER VOLUME:	0.1770 STB		
TOTAL FLUID :	0.6393 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2226.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	58.00	58.00
INITIAL SHUT-IN	60.00		1834.00
FINAL FLOW	30.00	112.00	112.00
FINAL SHUT-IN	60.00		1812.00

FINAL HYDROSTATIC PRESSURE: 2204.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2247.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	60.00	63.00
INITIAL SHUT-IN	60.00		1844.00
FINAL FLOW	30.00	123.00	99.00
FINAL SHUT-IN	69.00		1821.00

FINAL HYDROSTATIC PRESSURE: 2239.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 7/13/94	TICKET : 19042
CUSTOMER : JACK EXPLORATION, INC.	LEASE : DIEL
WELL : #1-16 TEST: 2	GEOLOGIST: POLLACK
ELEVATION: 1379 KB	FORMATION: MISSISSIPPI
SECTION : 16	TOWNSHIP : 34S
RANGE : 10W COUNTY: BARBER	STATE : KS
GAUGE SN#: 13362 RANGE : 4450	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	60.00	60.00
5.00	60.00	0.00
10.00	60.00	0.00
15.00	60.00	0.00
20.00	61.00	1.00
25.00	62.00	1.00
30.00	63.00	1.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	123.00	123.00	11.00
6.00	288.00	165.00	6.00
9.00	834.00	546.00	4.33
12.00	1291.00	457.00	3.50
15.00	1487.00	196.00	3.00
18.00	1592.00	105.00	2.67
21.00	1650.00	58.00	2.43
24.00	1692.00	42.00	2.25
27.00	1725.00	33.00	2.11
30.00	1749.00	24.00	2.00
33.00	1767.00	18.00	1.91
36.00	1783.00	16.00	1.83
39.00	1794.00	11.00	1.77
42.00	1806.00	12.00	1.71
45.00	1813.00	7.00	1.67
48.00	1821.00	8.00	1.63
51.00	1829.00	8.00	1.59
54.00	1837.00	8.00	1.56
57.00	1841.00	4.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1844.00	3.00	1.50

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	123.00	123.00
5.00	104.00	-19.00
10.00	98.00	-6.00
15.00	98.00	0.00
20.00	98.00	0.00
25.00	99.00	1.00
30.00	99.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	159.00	159.00	11.00
6.00	302.00	143.00	6.00
9.00	741.00	439.00	4.33
12.00	1248.00	507.00	3.50
15.00	1441.00	193.00	3.00
18.00	1555.00	114.00	2.67
21.00	1618.00	63.00	2.43
24.00	1663.00	45.00	2.25
27.00	1692.00	29.00	2.11
30.00	1717.00	25.00	2.00
33.00	1739.00	22.00	1.91
36.00	1750.00	11.00	1.83
39.00	1766.00	16.00	1.77
42.00	1778.00	12.00	1.71
45.00	1785.00	7.00	1.67
48.00	1794.00	9.00	1.63
51.00	1800.00	6.00	1.59
54.00	1805.00	5.00	1.56
57.00	1808.00	3.00	1.53
60.00	1815.00	7.00	1.50
63.00	1817.00	2.00	1.48
66.00	1819.00	2.00	1.45

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

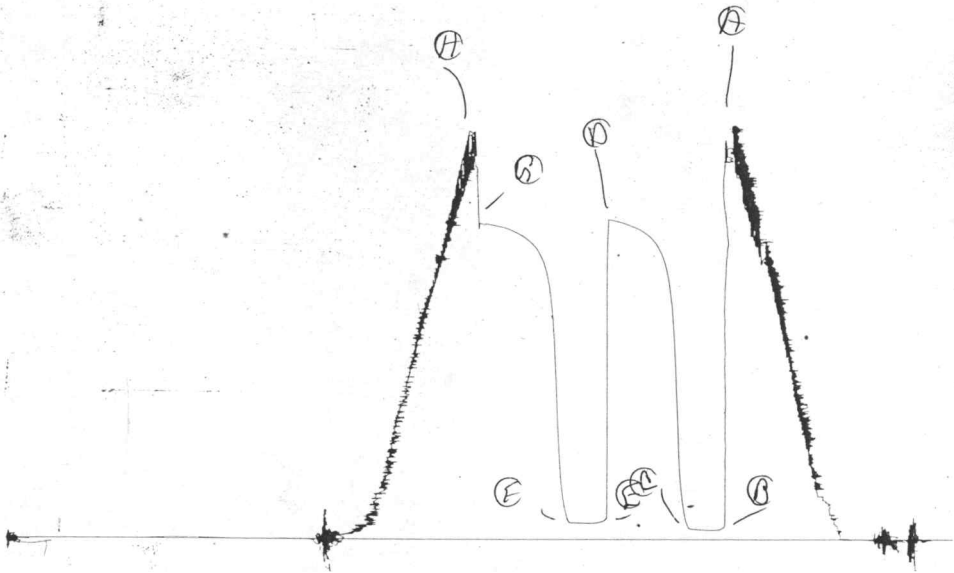
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
69.00	1821.00	2.00	1.43

13562 UST#2

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JK + 19042

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4332 DST # 2

KT 1904

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