



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

N^o 19303

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation

1560, KB

Formation

Miss

Eff. Pay Ft.

District

Peay

Date

3-15-93

Customer Order No.

COMPANY NAME

Range Oil Co. Inc

ADDRESS

LEASE AND WELL NO.

#1 - Holofo Co

COUNTY

Butler

STATE

Kansas

Sec.

7

Twp.

28

Rge.

8E

Mail Invoice To

Same

Co. Name

#1 F.H.L.C.

Address

No. Copies Requested

Lig

Mail Charts To

Same

Address

No. Copies Requested

Lig

Formation Test No.

1

Interval Tested From

2704

ft. to

2714

ft. Total Depth

2714

ft.

Packer Depth

2699

ft.

Size

6 7/8 in.

Packer Depth

2

ft.

Size

— in.

Packer Depth

2704

ft.

Size

6 7/8 in.

Packer Depth

2

ft.

Size

— in.

Depth of Selective Zone Set

Top Recorder Depth (Inside)

2707

ft.

Recorder Number

3659

Cap.

4000

Bottom Recorder Depth (Outside)

2710

ft.

Recorder Number

1049

Cap.

4250

Below Straddle Recorder Depth

—

ft.

Recorder Number

Cap.

Drilling Contractor

Glaves Drill

Drill Collar Length

365

I. D.

2 1/4

in.

Mud Type

Chen

Viscosity

44

Weight Pipe Length

—

I. D.

—

in.

Weight

9.6

Water Loss

10.4

cc.

Drill Pipe Length

2319

I. D.

3.8

in.

Chlorides

1000

P.P.M.

Test Tool Length

20

ft.

Tool Size

3 1/2 OD

in.

Jars: Make

No

Serial Number

—

Anchor Length

10

ft.

Size

5 1/2 OD

in.

Did Well Flow?

No

Reversed Out

No

Surface Choke Size

3/4

in.

Bottom Choke Size

3/4

in.

Main Hole Size

7 1/8

in.

Tool Joint Size

4 1/2 PH

in.

Blow: Weak steady blow on initial flow period (1 inch to 1 1/2 inch)
Very weak 1/2 inch blow depleting to 1/4 inch blow on final flow

Recovered ft. of

Recovered 15 ft. of

Oil cut mud

3% oil

97% mud

3659 stopped

Recovered ft. of

Recovered ft. of

Recovered ft. of

MAR 16 1993

Chlorides

P.P.M. Sample Jars used

Remarks:

Clock on recorder 3659 stopped

Time On Location

8:45

A.M.
P.M.

Time Pick Up Tool

10:30

A.M.
P.M.

Time Off Location

4:30

A.M.
P.M.

Time Set Packer(s)

11:30

A.M.
P.M.

Time Started Off Bottom

2:30

A.M.
P.M.

Maximum Temperature

100 °F

Initial Hydrostatic Pressure

(A)

1385

P.S.I.

Initial Flow Period

Minutes

30

(B)

32

P.S.I. to (C)

32

P.S.I.

Initial Closed In Period

Minutes

30

(D)

85

P.S.I.

Final Flow Period

Minutes

60

(E)

32

P.S.I. to (F)

32

P.S.I.

Final Closed In Period

Minutes

60

(G)

107

P.S.I.

Final Hydrostatic Pressure

(H)

1385

P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By

Signature of Customer or his authorized representative

Western Representative

Red Dirt - Thank you

FIELD INVOICE

Open Hole Test

\$

Misrun

\$

Straddle Test

\$

Jars

\$

Selective Zone

\$

Safety Joint

\$

Standby

\$

Evaluation

\$

Extra Packer

\$

Circ. Sub.

\$

Mileage

\$

Fluid Sampler

\$

Extra Charts

\$

Insurance

\$

Telecopier

\$

TOTAL

\$

WESTERN TESTING CO., INC.

Pressure Data

Date 2-15-92

Test Ticket No. 19508

Recorder No. 1049

Capacity

Location

Ft.

Clock No. _____ Elevation _____

Well Temperature _____ °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>1381</u>	P.S.I.
B First Initial Flow Pressure	<u>45</u>	P.S.I.
C First Final Flow Pressure	<u>45</u>	P.S.I.
D Initial Closed-in Pressure	<u>79</u>	P.S.I.
E Second Initial Flow Pressure	<u>45</u>	P.S.I.
F Second Final Flow Pressure	<u>45</u>	P.S.I.
G Final Closed-in Pressure	<u>84</u>	P.S.I.
H Final Hydrostatic Mud	<u>1368</u>	P.S.I.

	Time Given	Time Computed
Open Tool		M
First Flow Pressure		Mins. <u>50</u> Mins.
Initial Closed-in Pressure		Mins. <u>50</u> Mins.
Second Flow Pressure		Mins. <u>60</u> Mins.
Final Closed-in Pressure		Mins. <u>60</u> Mins.

PRESSURE BREAKDOWN

First Flow Pressure

Breakdown: _____ Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	<u>45</u>
P 2 5	
P 3 10	
P 4 15	
P 5 20	
P 6 25	
P 7 30	<u>45</u>
P 8 35	
P 9 40	
P10 45	
P11 50	
P12 55	
P13 60	
P14 65	
P15 70	
P16 75	
P17 80	
P18 85	
P19 90	
P20 95	
100	

Initial Shut-In

Breakdown: _____ Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	<u>45</u>
3	
6	
9	
12	<u>45</u>
15	<u>49</u>
18	<u>55</u>
21	<u>58</u>
24	<u>61</u>
27	<u>67</u>
30	<u>73</u>
33	<u>79</u>
36	
39	
42	
45	
48	
51	
54	
57	
60	

Second Flow Pressure

Breakdown: _____ Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	<u>45</u>
5	
10	
15	
20	
25	
30	
35	
40	
45	
50	
55	
60	<u>45</u>
65	
70	
75	
80	
85	
90	
95	
100	

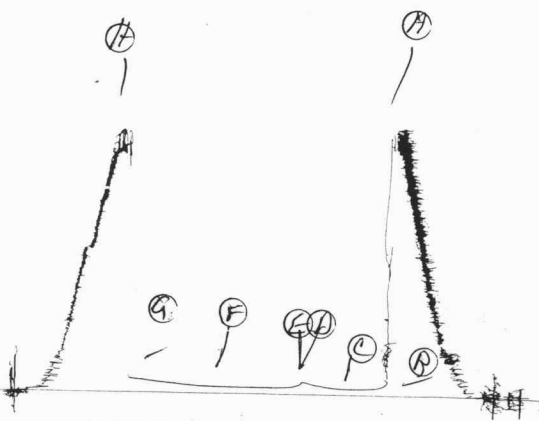
Final Shut-In

Breakdown: _____ Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	<u>45</u>
3	<u>45</u>
6	<u>46</u>
9	<u>46</u>
12	<u>47</u>
15	<u>47</u>
18	<u>48</u>
21	<u>50</u>
24	<u>52</u>
27	<u>54</u>
30	<u>56</u>
33	<u>58</u>
36	<u>60</u>
39	<u>62</u>
42	<u>64</u>
45	<u>66</u>
48	<u>68</u>
51	<u>70</u>
54	<u>73</u>
57	<u>76</u>
60	<u>79</u>
	<u>82</u>
	<u>84</u>

★ JKT 1950

0



JKT 1950

7

3659
057#



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688- 7021

DST REPORT

GENERAL INFORMATION

DATE	: 3/15/93	TICKET	: 19303
CUSTOMER	: RANGE OIL COMPANY, INC.	LEASE	: F.H.L.C.
WELL	: #1	TEST:	: 1
ELEVATION	: 1560 KB	GEOLOGIST	: BLAIR
SECTION	: 9	FORMATION	: MISSISSIPPI
RANGE	: 8E	TOWNSHIP	: 28S
GAUGE SN#	: 1049	STATE	: KS
	COUNTY: BUTLER	CLOCK	: 12
	RANGE : 4250		

WELL INFORMATION

PERFORATION INTERVAL FROM:	2704.00 ft	TO:	2714.00 ft	TVD:	2714.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	2707.0 ft		2710.0 ft		
TEMPERATURE:	100.0				
DRILL COLLAR LENGTH:	365.0 ft	I.D.:	2.250 in		
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in		
DRILL PIPE LENGTH :	2319.0 ft	I.D.:	3.800 in		
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :	5.500 in		
ANCHOR LENGTH :	10.0 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:	2699.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	2704.0 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. :	GLAVES DRILLING	VISCOSITY :	44.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	10.400 cc
WEIGHT :	9.600 ppg		
CHLORIDES :	1000 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK STEADY BLOW - 1 TO 1/2 INCH BLOW. FINAL FLOW PERIOD VERY WEAK 1/2 INCH BLOW - DEPLEATING TO 1/4 INCH BLOW.

COMMENTS (CONTINUED)

Comment

READ OUTSIDE CHART.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
15.0	3.0	0.0	0.0	97.0	OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0022 STB		
GAS VOLUME:	0.0000 SCF	TOTAL FLOW TIME:	90.0000 min.
MUD VOLUME:	0.0715 STB	AVERAGE OIL RATE:	1.1802 STB/D
WATER VOLUME:	0.0000 STB	AVERAGE WATER RATE:	0.0000 STB/D
TOTAL FLUID :	0.0738 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1385.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	32.00	32.00
INITIAL SHUT-IN	30.00		85.00
FINAL FLOW	60.00	32.00	32.00
FINAL SHUT-IN	60.00		107.00

FINAL HYDROSTATIC PRESSURE: 1385.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1381.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	45.00	45.00
INITIAL SHUT-IN	33.00		79.00
FINAL FLOW	60.00	45.00	45.00
FINAL SHUT-IN	66.00		84.00

FINAL HYDROSTATIC PRESSURE: 1368.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 3/15/93	TICKET	: 19303
CUSTOMER	: RANGE OIL COMPANY, INC.	LEASE	: F.H.L.C.
WELL	: #1	TEST:	1
ELEVATION:	1560 KB	GEOLOGIST:	BLAIR
SECTION	: 9	FORMATION:	MISSISSIPPI
RANGE	: 8E	TOWNSHIP	: 28S
GAUGE SN#:	1049	STATE	: KS
	COUNTY: BUTLER	CLOCK	: 12
	RANGE : 4250		

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	45.00	45.00
5.00	45.00	0.00
10.00	45.00	0.00
15.00	45.00	0.00
20.00	45.00	0.00
25.00	45.00	0.00
30.00	45.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	45.00	45.00	0.00
6.00	45.00	0.00	0.00
9.00	45.00	0.00	0.00
12.00	45.00	0.00	0.00
15.00	49.00	4.00	0.00
18.00	55.00	6.00	0.00
21.00	58.00	3.00	0.00
24.00	61.00	3.00	0.00
27.00	67.00	6.00	0.00
30.00	73.00	6.00	0.00
33.00	79.00	6.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	45.00	45.00
5.00	45.00	0.00
10.00	45.00	0.00
15.00	45.00	0.00
20.00	45.00	0.00
25.00	45.00	0.00
30.00	45.00	0.00
35.00	45.00	0.00
40.00	45.00	0.00
45.00	45.00	0.00
50.00	45.00	0.00
55.00	45.00	0.00
60.00	45.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	45.00	45.00	0.00
6.00	46.00	1.00	0.00
9.00	46.00	0.00	0.00
12.00	47.00	1.00	0.00
15.00	47.00	0.00	0.00
18.00	48.00	1.00	0.00
21.00	50.00	2.00	0.00
24.00	52.00	2.00	0.00
27.00	54.00	2.00	0.00
30.00	56.00	2.00	0.00
33.00	58.00	2.00	0.00
36.00	60.00	2.00	0.00
39.00	62.00	2.00	0.00
42.00	64.00	2.00	0.00
45.00	66.00	2.00	0.00
48.00	68.00	2.00	0.00
51.00	70.00	2.00	0.00
54.00	73.00	3.00	0.00
57.00	76.00	3.00	0.00
60.00	79.00	3.00	0.00
63.00	82.00	3.00	0.00
66.00	84.00	2.00	0.00