



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19826

P. O. BOX 1599 WICHITA, KANSAS 67201
PHONE (316) 262-5861

Elevation 1130 KB Formation FTSoff Eff. Pay Ft.

District Augusta Date 6-1-93 Customer Order No.

COMPANY NAME Range Oil Company Inc.

ADDRESS 125 N Market Suite 1120 Wichita Ks 67202

LEASE AND WELL NO Walker #1 COUNTY Elk STATE Ks Sec 34 Twp 31 Rge 10E

Mail Invoice To Same #1 Walker Co. Name Address No. Copies Requested 1

Mail Charts To Same Address No. Copies Requested 5

Formation Test No DST#1 Interval Tested From 1627 ft. to 1692 ft. Total Depth 1692 ft.

Packer Depth 1622 ft. Size 6 3/8 in. Packer Depth - ft. Size - in.

Packer Depth 1627 ft. Size 6 7/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 1686 ft. Recorder Number 16979 Cap. 4100

Bottom Recorder Depth (Outside) 1689 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Shaws Rig 1 Drill Collar Length 290 I. D. 2.25 in.

Mud Type 85 Chan Viscosity 43 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 120 Drill Pipe Length 1377 I. D. 3.8 in.

Chlorides 700 P.P.M. Test Tool Length 20 ft. Tool Size 5/200 in.

Jars: Make - Serial Number - Anchor Length 65 ft. Size 5/300 in.

Did Well Flow? - Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Very Strong Blow Gas to surface in 15 min on (FFP) See gas report

Recovered 1410 ft. of drilling mud

Recovered 1487 ft. of gas in pipe

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides P.P.M. Sample Jars used Remarks: JUN 01 1993

Time On Location 12:01 A.M. Time Pick Up Tool 6:00 P.M. Time Off Location A.M.

Time Set Packer(s) 7:00 A.M. Time Started Off Bottom 10:00 P.M. Maximum Temperature 970

Initial Hydrostatic Pressure (A) 865 P.S.I.

Initial Flow Period Minutes 30 (B) 75 P.S.I. to (C) 65 P.S.I.

Initial Closed In Period Minutes 30 (D) 595 P.S.I.

Final Flow Period Minutes 60 (E) 75 P.S.I. to (F) 75 P.S.I.

Final Closed In Period Minutes 60 (G) 605 P.S.I.

Final Hydrostatic Pressure (H) 855 P.S.I. 10999

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] Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

Table with 2 columns: Item Name and Price. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.



Nº 3995

GAS FLOW REPORT

Date 5-31-93 Ticket 19826 Company Kange Oil Co
 Well Name and No. Walker 15" #1 Dst No. DST #1 Interval Tested 1627-1692
 County ELK State KS Sec. 34 Twp. 31 Rg. 10E

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
PRE FLOW					
0		<u>1/4</u>	<u>12</u>	<u>H2O</u>	<u>152,000</u>
15		<u>3/4</u>	<u>12</u>		<u>49,300</u>
30		<u>3/4</u>	<u>14</u>		<u>53,300</u>
30		<u>3/4</u>	<u>17</u>		<u>58,500</u>

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
SECOND FLOW					
0		<u>1/4</u>	<u>12</u>		<u>152,000</u>
10		<u>3/4</u>	<u>22</u>		<u>66,600</u>
20		<u>3/4</u>	<u>25</u>		<u>71,000</u>
30		<u>3/4</u>	<u>26</u>		<u>72,400</u>
40		<u>3/4</u>	<u>26</u>		<u>72,400</u>
50		<u>3/4</u>	<u>29</u>		<u>76,500</u>
60		<u>3/4</u>	<u>31</u>		<u>79,000</u>

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME _____
 Authorized by [Signature]

WESTERN TESTING CO., INC.

Pressure Data

Date 6-1-93

Test Ticket No. 19826

Recorder No. _____ Capacity _____ Location _____ Ft.

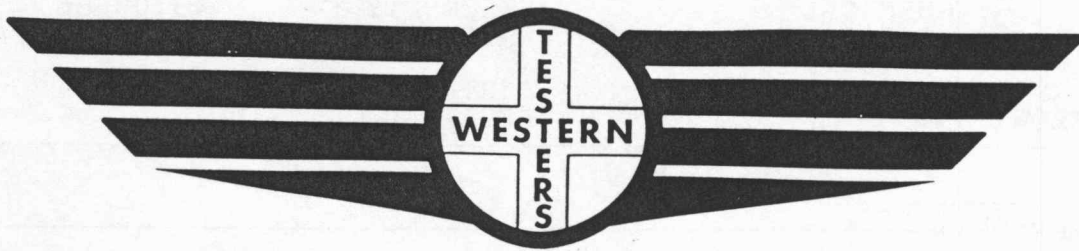
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>856</u> P.S.I.	Open Tool		M
B First Initial Flow Pressure	P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	P.S.I.			
G Final Closed-in Pressure	P.S.I.			
H Final Hydrostatic Mud	<u>834</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>87</u>	0	<u>73</u>	0	<u>81</u>	0	<u>69</u>
P 2 5	<u>77</u>	3	<u>234</u>	5	<u>81</u>	3	<u>186</u>
P 3 10	<u>77</u>	6	<u>276</u>	10	<u>77</u>	6	<u>396</u>
P 4 15	<u>81</u>	9	<u>572</u>	15	<u>71</u>	9	<u>470</u>
P 5 20	<u>73</u>	12	<u>589</u>	20	<u>69</u>	12	<u>585</u>
P 6 25	<u>73</u>	15	<u>595</u>	25		15	<u>590</u>
P 7 30	<u>73</u>	18	<u>601</u>	30		18	<u>591</u>
P 8 35		21	<u>603</u>	35		21	<u>592</u>
P 9 40		24	<u>603</u>	40		24	<u>593</u>
P10 45		27	<u>603</u>	45		27	<u>594</u>
P11 50		30	<u>603</u>	50		30	<u>595</u>
P12 55		33		55		33	<u>596</u>
P13 60		36		60	<u>69</u>	36	<u>597</u>
P14 65		39		65		39	<u>598</u>
P15 70		42		70		42	<u>598</u>
P16 75		45		75		45	<u>599</u>
P17 80		48		80		48	<u>599</u>
P18 85		51		85		51	<u>600</u>
P19 90		54		90		54	<u>600</u>
P20 95		57		95		57	<u>601</u>
100		60		100		60	<u>601</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688-7021**

DST REPORT

GENERAL INFORMATION

DATE : 6/1/93
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : #1 TEST: 1
ELEVATION: 1130 KB
SECTION : 34
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 19826
LEASE : WALKER G
GEOLOGIST: LAUER
FORMATION: FT SCOTT
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 1627.00 ft TO: 1692.00 ft TVD: 1692.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
DEPTH OF RECORDERS: 1686.0 ft 1689.0 ft
TEMPERATURE: 97.0
DRILL COLLAR LENGTH: 290.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1317.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 65.0 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: 1622.0 ft SIZE: 6.630 in
PACKER DEPTH: 1627.0 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 RIG 1
MUD TYPE : CHEMICAL VISCOSITY : 43.00 cp
WEIGHT : 9.500 ppg WATER LOSS: 12.000 cc
CHLORIDES : 700 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - GAS TO SURFACE
IN 15 MINUTES. SEE GAS SHEET ATTACHED.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
140.0	0.0	0.0	0.0	100.0	DRILLING MUD
0.0	0.0	0.0	0.0	0.0	1487 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.6884	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.6884	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 865.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	65.00
INITIAL SHUT-IN	30.00		595.00
FINAL FLOW	60.00	75.00	75.00
FINAL SHUT-IN	60.00		605.00

FINAL HYDROSTATIC PRESSURE: 855.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 856.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	87.00	73.00
INITIAL SHUT-IN	30.00		603.00
FINAL FLOW	60.00	81.00	69.00
FINAL SHUT-IN	60.00		601.00

FINAL HYDROSTATIC PRESSURE: 834.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 6/1/93
 CUSTOMER : RANGE OIL COMPANY, INC.
 WELL : #1 TEST: 1
 ELEVATION: 1130 KB
 SECTION : 34
 RANGE : 10E COUNTY: ELK
 GAUGE SN#: 10979 RANGE : 4100

TICKET : 19826
 LEASE : WALKER G
 GEOLOGIST: LAUER
 FORMATION: FT SCOTT
 TOWNSHIP : 31S
 STATE : KS
 CLOCK : 12

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
15 MIN	MERLA	1.250	12" WATER	152000 SCF/D
20 MIN	MERLA	0.750	12" WATER	49300 SCF/D
25 MIN	MERLA	0.750	14" WATER	53300 SCF/D
30 MIN	MERLA	0.750	17" WATER	58500 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
0 MIN	MERLA	1.250	12" WATER	152000 SCF/D
10 MIN	MERLA	0.750	22" WATER	66600 SCF/D
20 MIN	MERLA	0.750	25" WATER	71000 SCF/D
30 MIN	MERLA	0.750	26" WATER	72400 SCF/D
40 MIN	MERLA	0.750	26" WATER	72400 SCF/D
50 MIN	MERLA	0.750	29" WATER	76500 SCF/D
60 MIN	MERLA	0.750	31" WATER	79000 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 6/1/93	TICKET : 19826
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : WALKER G
WELL : #1 TEST: 1	GEOLOGIST: LAUER
ELEVATION: 1130 KB	FORMATION: FT SCOTT
SECTION : 34	TOWNSHIP : 31S
RANGE : 10E COUNTY: ELK	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	87.00	87.00
5.00	77.00	-10.00
10.00	77.00	0.00
15.00	81.00	4.00
20.00	73.00	-8.00
25.00	73.00	0.00
30.00	73.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	234.00	234.00	0.00
6.00	276.00	42.00	0.00
9.00	572.00	296.00	0.00
12.00	589.00	17.00	0.00
15.00	595.00	6.00	0.00
18.00	601.00	6.00	0.00
21.00	603.00	2.00	0.00
24.00	603.00	0.00	0.00
27.00	603.00	0.00	0.00
30.00	603.00	0.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	81.00	81.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	81.00	0.00
10.00	77.00	-4.00
15.00	71.00	-6.00
20.00	69.00	-2.00
25.00	69.00	0.00
30.00	69.00	0.00
35.00	69.00	0.00
40.00	69.00	0.00
45.00	69.00	0.00
50.00	69.00	0.00
55.00	69.00	0.00
60.00	69.00	0.00

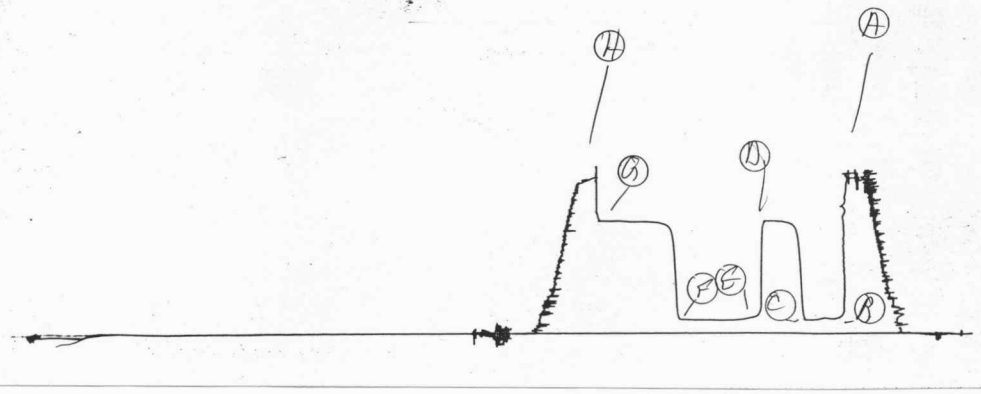
FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	186.00	186.00	0.00
6.00	396.00	210.00	0.00
9.00	470.00	74.00	0.00
12.00	585.00	115.00	0.00
15.00	590.00	5.00	0.00
18.00	591.00	1.00	0.00
21.00	592.00	1.00	0.00
24.00	593.00	1.00	0.00
27.00	594.00	1.00	0.00
30.00	595.00	1.00	0.00
33.00	596.00	1.00	0.00
36.00	597.00	1.00	0.00
39.00	598.00	1.00	0.00
42.00	598.00	0.00	0.00
45.00	599.00	1.00	0.00
48.00	599.00	0.00	0.00
51.00	600.00	1.00	0.00
54.00	600.00	0.00	0.00
57.00	601.00	1.00	0.00
60.00	601.00	0.00	0.00

10979

KT 19826

I

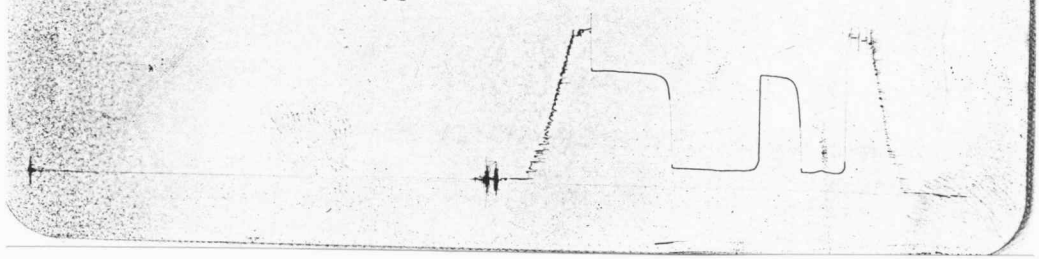


Inside Recorder

335

KT 19826

O



Outside Recorder



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 19827

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

WICHITA, KANSAS 67201

Elevation 11304B Formation Mess Eff. Pay Ft.

District Augusta Date 5-3-93 Customer Order No.

COMPANY NAME Range Oil Co

ADDRESS 125 N Maple Suite 1120 Wichita KS 67202

LEASE AND WELL NO Walkers 111 COUNTY ELK STATE KS Sec. 34 Twp. 31 Rge. 10 E

Mail Invoice To Same Co. Name Address No. Copies Requested

Mail Charts To Same Address No. Copies Requested

Formation Test No. DST02 Interval Tested From 1989 ft. to 2012 ft. Total Depth 2012 ft.

Packer Depth 1984 ft. Size 6 7/8 in. Packer Depth 2012 ft. Size 2 in.

Packer Depth 1989 ft. Size 6 7/8 in. Packer Depth 2012 ft. Size 2 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2006 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 2009 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Shaw Drill Collar Length 270 I. D. 2.25 in.

Mud Type Clean Viscosity 42 Weight Pipe Length I. D. in.

Weight 9.6 Water Loss 12.0 cc. Drill Pipe Length 1699 I. D. 3.8 in.

Chlorides 70 P.P.M. Test Tool Length 50 ft. Tool Size 5 3/4 in.

Jars: Make Serial Number Anchor Length 23 ft. Size 5 3/4 in.

Did Well Flow? Reversed Out Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Very Steady Flow gas to surface in 8 min or less (FIP)

Recovered 70 ft. of Drilling mud

Recovered 1899 ft. of gas in pipe

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

JUN 07 1993

Time On Location Stand-by A.M. P.M. Time Pick Up Tool 8:00 A.M. P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 7:00 A.M. P.M. Time Started Off Bottom 9:00 A.M. P.M. Maximum Temperature 96°F

Initial Hydrostatic Pressure (A) 1010 P.S.I.

Initial Flow Period Minutes 30 (B) 75 P.S.I. to (C) 50 P.S.I.

Initial Closed In Period Minutes 30 (D) 645 P.S.I.

Final Flow Period Minutes 30 (E) 75 P.S.I. to (F) 50 P.S.I.

Final Closed In Period Minutes 30 (G) 645 P.S.I.

Final Hydrostatic Pressure (H) 1000 P.S.I. 10979

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 Tim J. Lauer Signature of Customer or his authorized representative

Western Representative Jeffrey A. Peth

FIELD INVOICE

Table with 2 columns: Item Name and Price. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.



Nº 3997

GAS FLOW REPORT

Date 5-3-93 Ticket 19827 Company Range Oil Co
 Well Name and No. Walker 1" of 4" #1 Dst No. _____ Interval Tested 1989-2012
 County Elk State KS Sec. 34 Twp. 31 Rg. 10E

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
PRE FLOW					
8		1/2	20		311,000
10		1/4	10		138,000
15		1	19		113,000
20		1	20		115,000
30		1	25		129,000

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
SECOND FLOW					
10		1/2	15		270,000
10		1/4	15		170,000
20		1/4	16.5		179,000
30		1/4	18.0		186,000

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME _____
 Authorized by [Signature]

WESTERN TESTING CO., INC.

Pressure Data

Date 6-3-93 Test Ticket No. 19827
 Recorder No. 10979 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1071</u> P.S.I.	Open Tool		M
B First Initial Flow Pressure	<u>69</u> P.S.I.	First Flow Pressure	Mins. <u>50</u>	Mins.
C First Final Flow Pressure	<u>62</u> P.S.I.	Initial Closed-in Pressure	Mins. <u>50</u>	Mins.
D Initial Closed-in Pressure	<u>656</u> P.S.I.	Second Flow Pressure	Mins. <u>50</u>	Mins.
E Second Initial Flow Pressure	<u>69</u> P.S.I.	Final Closed-in Pressure	Mins. <u>50</u>	Mins.
F Second Final Flow Pressure	<u>59</u> P.S.I.			
G Final Closed-in Pressure	<u>651</u> P.S.I.			
H Final Hydrostatic Mud	<u>1030</u> P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown: _____ Inc.	of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: _____ Inc.	of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: _____ Inc.	of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: _____ Inc.	of <u>3</u> mins. and a final inc. of <u>0</u> Min.
	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes
P 1	<u>69</u>	0	<u>62</u>	0	<u>69</u>	0	<u>59</u>	0
P 2	<u>69</u>	5	<u>475</u>	3	<u>69</u>	5	<u>59</u>	3
P 3	<u>72</u>	10	<u>617</u>	6	<u>62</u>	10	<u>62</u>	6
P 4	<u>68</u>	15	<u>637</u>	9	<u>59</u>	15	<u>62</u>	9
P 5	<u>64</u>	20	<u>645</u>	12		20	<u>62</u>	12
P 6	<u>62</u>	25	<u>648</u>	15		25	<u>645</u>	15
P 7	<u>62</u>	30	<u>650</u>	18	<u>59</u>	30	<u>648</u>	18
P 8		35	<u>652</u>	21		35	<u>649</u>	21
P 9		40	<u>654</u>	24		40	<u>650</u>	24
P 10		45	<u>655</u>	27		45	<u>651</u>	27
P 11		50	<u>656</u>	30		50	<u>651</u>	30
P 12		55		33		55		33
P 13		60		36		60		36
P 14		65		39		65		39
P 15		70		42		70		42
P 16		75		45		75		45
P 17		80		48		80		48
P 18		85		51		85		51
P 19		90		54		90		54
P 20		95		57		95		57
		100		60		100		60

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 WALKER G SEC. 34 TWP. 31S RGE. 10E TEST NO. 2 DATE 6/3/93

DST REPORT

GENERAL INFORMATION

DATE : 6/3/93
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : #1 TEST: 2
ELEVATION: 1130 KB
SECTION : 34
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 19827
LEASE : WALKER G
GEOLOGIST: LAUER
FORMATION: MISSISSIPPI
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 1989.00 ft TO: 2012.00 ft TVD: 2012.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
DEPTH OF RECORDERS: 2006.0 ft 2009.0 ft
TEMPERATURE: 96.0
DRILL COLLAR LENGTH: 270.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1699.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 23.0 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: 1984.0 ft SIZE: 6.630 in
PACKER DEPTH: 1989.0 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 RIG 1
MUD TYPE : CHEMICAL VISCOSITY : 42.00 cp
WEIGHT : 9.600 ppg WATER LOSS: 12.000 cc
CHLORIDES : 70 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY STRONG BLOW. GAS TO SURFACE IN 8 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
70.0	0.0	0.0	0.0	100.0	DRILLING MUD
0.0	0.0	0.0	0.0	0.0	1899 FT GAS ABOVE FLUID

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:	0.3442 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.3442 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1010.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	50.00
INITIAL SHUT-IN	30.00		645.00
FINAL FLOW	30.00	75.00	50.00
FINAL SHUT-IN	30.00		645.00

FINAL HYDROSTATIC PRESSURE: 1000.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1071.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	69.00	63.00
INITIAL SHUT-IN	30.00		656.00
FINAL FLOW	30.00	69.00	59.00
FINAL SHUT-IN	30.00		651.00

FINAL HYDROSTATIC PRESSURE: 1030.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 6/3/93	TICKET : 19827
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : WALKER G
WELL : #1	TEST: 2
ELEVATION: 1130 KB	GEOLOGIST: LAUER
SECTION : 34	FORMATION: MISSISSIPPI
RANGE : 10E	TOWNSHIP : 31S
COUNTY: ELK	STATE : KS
GAUGE SN#: 10979	RANGE : 4100
	CLOCK : 12

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
8 MIN	MERLA	1.500	20" WATER	311000 SCF/D
10 MIN	MERLA	1.250	10" WATER	138000 SCF/D
15 MIN	MERLA	1.000	19" WATER	113000 SCF/D
20 MIN	MERLA	1.000	20" WATER	115000 SCF/D
30 MIN	MERLA	1.000	25" WATER	129000 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
0 MIN	MERLA	1.500	15" WATER	270000 SCF/D
10 MIN	MERLA	1.250	15" WATER	170000 SCF/D
20 MIN	MERLA	1.250	16.5" WATER	179000 SCF/D
30 MIN	MERLA	1.250	18" WATER	186000 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 6/3/93	TICKET : 19827
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : WALKER G
WELL : #1 TEST: 2	GEOLOGIST: LAUER
ELEVATION: 1130 KB	FORMATION: MISSISSIPPI
SECTION : 34	TOWNSHIP : 31S
RANGE : 10E COUNTY: ELK	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	69.00	69.00
5.00	69.00	0.00
10.00	72.00	3.00
15.00	68.00	-4.00
20.00	64.00	-4.00
25.00	63.00	-1.00
30.00	63.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	475.00	475.00	0.00
6.00	617.00	142.00	0.00
9.00	637.00	20.00	0.00
12.00	645.00	8.00	0.00
15.00	648.00	3.00	0.00
18.00	650.00	2.00	0.00
21.00	652.00	2.00	0.00
24.00	654.00	2.00	0.00
27.00	655.00	1.00	0.00
30.00	656.00	1.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	69.00	69.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	69.00	0.00
10.00	62.00	-7.00
15.00	59.00	-3.00
20.00	59.00	0.00
25.00	59.00	0.00
30.00	59.00	0.00

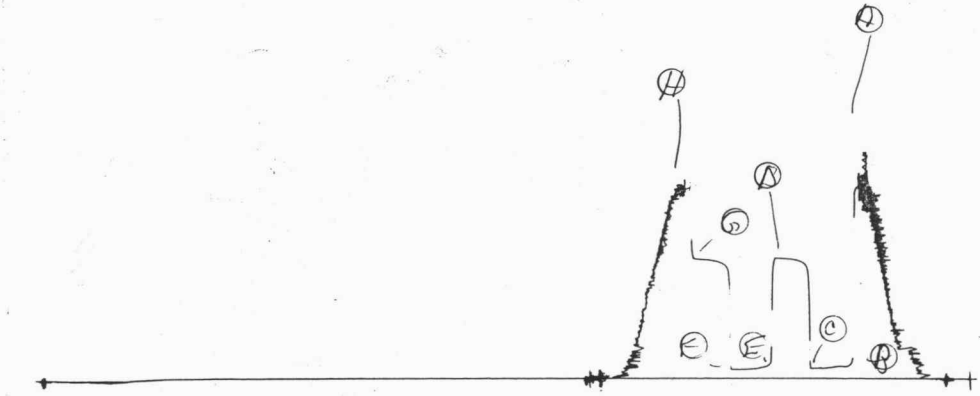
FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	593.00	593.00	0.00
6.00	621.00	28.00	0.00
9.00	632.00	11.00	0.00
12.00	639.00	7.00	0.00
15.00	645.00	6.00	0.00
18.00	648.00	3.00	0.00
21.00	649.00	1.00	0.00
24.00	650.00	1.00	0.00
27.00	651.00	1.00	0.00
30.00	651.00	0.00	0.00

10979

KT 19827

1

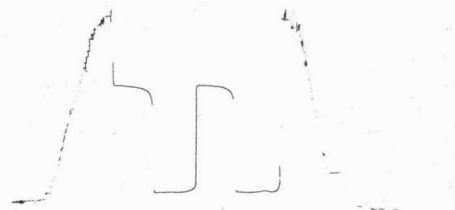


Inside Recorder

3354

KT 19827

0



Outside Recorder



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19828

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 1130 KB Formation Miss Eff. Pay Ft.

District Augusta Date 5-4-93 Customer Order No.

COMPANY NAME Range Oil Co

ADDRESS 125 N Market Suite 1120 Wichita KS 67202

LEASE AND WELL NO. Walker "g" #1 COUNTY Elk STATE KS Sec. 34 Twp. 31 Rge. 10E

Mail Invoice To Same Co. Name Address No. Copies Requested 1

Mail Charts To Same Co. Name Address No. Copies Requested 5

Formation Test No. Dst #3 Interval Tested From 2013 ft. to 2057 ft. Total Depth 2057 ft.

Packer Depth 2008 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 2013 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2051 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 2054 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Slave Rig 1 Drill Collar Length 270 I. D. 2 1/2 in.

Mud Type Charn Viscosity 39 Weight Pipe Length I. D. in.

Weight 9.6 Water Loss 10.4 cc. Drill Pipe Length 1723 I. D. 3.8 in.

Chlorides 1500 P.P.M. Test Tool Length 20 ft. Tool Size 5/8 in.

Jars: Make Serial Number Anchor Length 44 ft. Size 5/8 in.

Did Well Flow? Reversed Out Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 1 1/2 in. Tool Joint Size 4 1/2 FH in.

Blow: Wash to very heavy blow bottom of bucket in 16 min or (FFP) Bottom of bucket in less than 1 min or (FFP)

Recovered 5 ft. of drilly mud NO show

Recovered 900 ft. of 9 1/2 in pipe joint order in pipe

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

JUN 07 1993

Time On Location Stand-by A.M. P.M. Time Pick Up Tool 8:00 A.M. P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 9:00 A.M. P.M. Time Started Off Bottom 12:00 A.M. P.M. Maximum Temperature 100°F

Initial Hydrostatic Pressure (A) 1040 P.S.I.

Initial Flow Period Minutes 30 (B) 30 P.S.I. to (C) 20 P.S.I.

Initial Closed In Period Minutes 30 (D) 30 P.S.I.

Final Flow Period Minutes 60 (E) 30 P.S.I. to (F) 20 P.S.I.

Final Closed In Period Minutes 60 (G) 655 P.S.I.

Final Hydrostatic Pressure (H) 1030 P.S.I. 10979

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] Tim V. Lauer Signature of Customer or his authorized representative

Western Representative [Signature] A. Pittman

FIELD INVOICE

Table with 2 columns: Item Name and Price. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Teletypewriter, and TOTAL.

WESTERN TESTING CO., INC.

Pressure Data

Date 8-4-50

Test Ticket No. 1828

Recorder No. 10929 Capacity _____ Location _____ Fr. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1052</u>	P.S.I.	Open Tool	M
B First Initial Flow Pressure	<u>32</u>	P.S.I.	First Flow Pressure	Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>32</u>	P.S.I.	Initial Closed-in Pressure	Mins. <u>30</u> Mins.
D Initial Closed-in Pressure	<u>408</u>	P.S.I.	Second Flow Pressure	Mins. <u>40</u> Mins.
E Second Initial Flow Pressure	<u>32</u>	P.S.I.	Final Closed-in Pressure	Mins. <u>51</u> Mins.
F Second Final Flow Pressure	<u>32</u>	P.S.I.		
G Final Closed-in Pressure	<u>6600</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1052</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>32</u>	0	<u>32</u>	0	<u>32</u>	0	<u>32</u>
P 2 5	<u>32</u>	3	<u>54</u>	5	<u>32</u>	3	<u>67</u>
P 3 10	<u>32</u>	6	<u>105</u>	10	<u>32</u>	6	<u>142</u>
P 4 15	<u>32</u>	9	<u>157</u>	15	<u>32</u>	9	<u>209</u>
P 5 20	<u>32</u>	12	<u>199</u>	20	<u>32</u>	12	<u>274</u>
P 6 25	<u>32</u>	15	<u>247</u>	25	<u>32</u>	15	<u>341</u>
P 7 30	<u>32</u>	18	<u>292</u>	30	<u>32</u>	18	<u>408</u>
P 8 35	<u>32</u>	21	<u>332</u>	35	<u>32</u>	21	<u>472</u>
P 9 40	<u>32</u>	24	<u>368</u>	40	<u>32</u>	24	<u>537</u>
P10 45	<u>32</u>	27	<u>400</u>	45	<u>32</u>	27	<u>599</u>
P11 50	<u>32</u>	30	<u>408</u>	50	<u>32</u>	30	<u>535</u>
P12 55	<u>32</u>	33	<u>32</u>	55	<u>32</u>	33	<u>559</u>
P13 60	<u>32</u>	36	<u>32</u>	60	<u>32</u>	36	<u>580</u>
P14 65	<u>32</u>	39	<u>32</u>	65	<u>32</u>	39	<u>598</u>
P15 70	<u>32</u>	42	<u>32</u>	70	<u>32</u>	42	<u>614</u>
P16 75	<u>32</u>	45	<u>32</u>	75	<u>32</u>	45	<u>627</u>
P17 80	<u>32</u>	48	<u>32</u>	80	<u>32</u>	48	<u>637</u>
P18 85	<u>32</u>	51	<u>32</u>	85	<u>32</u>	51	<u>645</u>
P19 90	<u>32</u>	54	<u>32</u>	90	<u>32</u>	54	<u>651</u>
P20 95	<u>32</u>	57	<u>32</u>	95	<u>32</u>	57	<u>6600</u>
100	<u>32</u>	60	<u>32</u>	100	<u>32</u>	60	<u>32</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 6/4/93
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : #1 TEST: 3
ELEVATION: 1130 KB
SECTION : 34
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 19828
LEASE : WALKER G
GEOLOGIST: LAUER
FORMATION: MISSISSIPPI
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2013.00 ft TO: 2057.00 ft TVD: 2057.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2051.0 ft 2054.0 ft
TEMPERATURE: 100.0
DRILL COLLAR LENGTH: 270.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1723.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 44.0 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: 2008.0 ft SIZE: 6.630 in
PACKER DEPTH: 2013.0 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 RIG 1
MUD TYPE : CHEMICAL VISCOSITY : 39.00 cp
WEIGHT : 9.600 ppg WATER LOSS: 10.400 cc
CHLORIDES : 1500 ppm
JARS-MAKE :
DID WELL FLOW?: NO SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK TO VERY STRONG BLOW -
BOTTOM OF BUCKET IN 16 MINUTES. FINAL FLOW PERIOD
BOTTOM OF BUCKET IN LESS THAN 1 MINUTE.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
5.0	0.0	0.0	0.0	100.0	DRILLING MUD - NO SHOW
0.0	0.0	0.0	0.0	0.0	900 FT GAS ABOVE FLUID -
0.0	0.0	0.0	0.0	0.0	FAINT ODOR IN PIPE

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.0246	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0246	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1040.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	30.00	20.00
INITIAL SHUT-IN	30.00		395.00
FINAL FLOW	60.00	30.00	20.00
FINAL SHUT-IN	60.00		655.00

FINAL HYDROSTATIC PRESSURE: 1030.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1053.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	32.00	32.00
INITIAL SHUT-IN	30.00		408.00
FINAL FLOW	60.00	32.00	32.00
FINAL SHUT-IN	57.00		660.00

FINAL HYDROSTATIC PRESSURE: 1022.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 6/4/93	TICKET : 19828
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : WALKER G
WELL : #1	TEST: 3
ELEVATION: 1130 KB	GEOLOGIST: LAUER
SECTION : 34	FORMATION: MISSISSIPPI
RANGE : 10E	TOWNSHIP : 31S
COUNTY: ELK	STATE : KS
RANGE : 4100	CLOCK : 12
GAUGE SN#: 10979	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	32.00	32.00
5.00	32.00	0.00
10.00	32.00	0.00
15.00	32.00	0.00
20.00	32.00	0.00
25.00	32.00	0.00
30.00	32.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	54.00	54.00	0.00
6.00	103.00	49.00	0.00
9.00	151.00	48.00	0.00
12.00	199.00	48.00	0.00
15.00	247.00	48.00	0.00
18.00	292.00	45.00	0.00
21.00	332.00	40.00	0.00
24.00	368.00	36.00	0.00
27.00	400.00	32.00	0.00
30.00	408.00	8.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	32.00	32.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	32.00	0.00
10.00	32.00	0.00
15.00	32.00	0.00
20.00	32.00	0.00
25.00	32.00	0.00
30.00	32.00	0.00
35.00	32.00	0.00
40.00	32.00	0.00
45.00	32.00	0.00
50.00	32.00	0.00
55.00	32.00	0.00
60.00	32.00	0.00

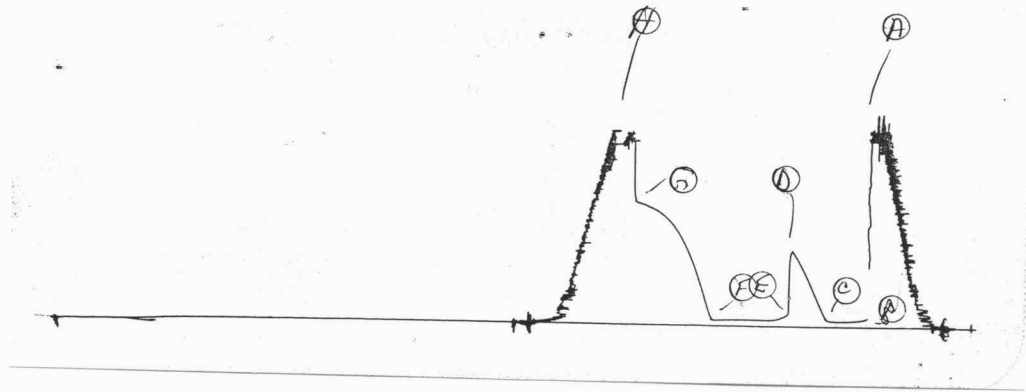
FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	67.00	67.00	0.00
6.00	143.00	76.00	0.00
9.00	209.00	66.00	0.00
12.00	274.00	65.00	0.00
15.00	331.00	57.00	0.00
18.00	388.00	57.00	0.00
21.00	432.00	44.00	0.00
24.00	471.00	39.00	0.00
27.00	509.00	38.00	0.00
30.00	535.00	26.00	0.00
33.00	559.00	24.00	0.00
36.00	580.00	21.00	0.00
39.00	598.00	18.00	0.00
42.00	614.00	16.00	0.00
45.00	627.00	13.00	0.00
48.00	637.00	10.00	0.00
51.00	645.00	8.00	0.00
54.00	651.00	6.00	0.00
57.00	660.00	9.00	0.00

10932

— DK7 19858 —

2

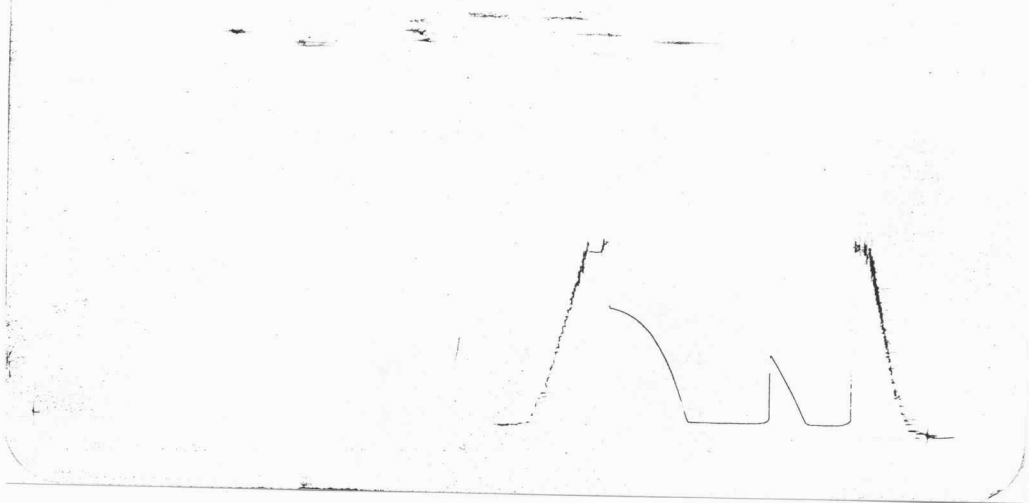


Inside Recorder

3354

— DK7 19858 —

0



Outside Recorder



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19829

P. O. BOX 1599 WICHITA, KANSAS 67201
PHONE (316) 262-5861

Elevation 1130KB Formation Miss Eff. Pay Ft.

District Augusta Date 5-9-93 Customer Order No.

COMPANY NAME Range Oil Co

ADDRESS 125 N Market Smith 1120 Wichita KS 67202

LEASE AND WELL NO. Walker #1 COUNTY Elk STATE KS Sec. 34 Twp 31 Rge 10E

Mail Invoice To Same Co. Name Address No. Copies Requested 1

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. AS#4 Interval Tested From 2057 ft. to 2081 ft. Total Depth 2081 ft.

Packer Depth 2052 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 2057 ft. Size 6 7/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2075 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 2078 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Slavs Rig 1 Drill Collar Length 270 I. D. 2.75 in.

Mud Type Chem Viscosity 41 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 10.4 cc. Drill Pipe Length 1767 I. D. 3.8 in.

Chlorides 1500 P.P.M. Test Tool Length 20 ft. Tool Size 5 7/8 in.

Jars: Make - Serial Number - Anchor Length 24 ft. Size 5 1/2 in.

Did Well Flow? - Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 1/2 in. Tool Joint Size 4 1/2 in.

Blow: Slows below to very Slows below 4 min off the bottom of packer on (FP)

Very Slows below on (FP) off the bottom of packer in less than a min.

Recovered 1640 ft. of Gas in pipe

Recovered 200 ft. of drilling mud

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides P.P.M. Sample Jars used - Remarks:

JUN 07 1993

Time On Location Standby A.M. P.M. Time Pick Up Tool 6:00 A.M. P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 7:00 A.M. P.M. Time Started Off Bottom 10:00 A.M. P.M. Maximum Temperature 101°F

Initial Hydrostatic Pressure (A) 1050 P.S.I.

Initial Flow Period Minutes 30 (B) 30 P.S.I. to (C) 30 P.S.I.

Initial Closed In Period Minutes 30 (D) 565 P.S.I.

Final Flow Period Minutes 60 (E) 75 P.S.I. to (F) 85 P.S.I.

Final Closed In Period Minutes 60 (G) 595 P.S.I.

Final Hydrostatic Pressure (H) 1040 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: [Signatures] Signature of Customer or his authorized representative

Western Representative: [Signature]

FIELD INVOICE

Table with 2 columns: Item Name and Price. Items include Open Hole Test, Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.

WESTERN TESTING CO., INC.
Pressure Data

Date 6-4-92

Test Ticket No. 19829

Recorder No. _____ Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1058</u> P.S.I.	Open Tool	M	
B First Initial Flow Pressure	<u>65</u> P.S.I.	First Flow Pressure	Mins. <u>25</u>	Mins.
C First Final Flow Pressure	<u>67</u> P.S.I.	Initial Closed-in Pressure	Mins. <u>30</u>	Mins.
D Initial Closed-in Pressure	<u>595</u> P.S.I.	Second Flow Pressure	Mins. <u>60</u>	Mins.
E Second Initial Flow Pressure	<u>95</u> P.S.I.	Final Closed-in Pressure	Mins. <u>60</u>	Mins.
F Second Final Flow Pressure	<u>119</u> P.S.I.			
G Final Closed-in Pressure	<u>621</u> P.S.I.			
H Final Hydrostatic Mud	<u>1055</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>62</u>	0	<u>67</u>	0	<u>95</u>	0	<u>119</u>
P 2 5	<u>65</u>	3	<u>132</u>	5	<u>97</u>	3	<u>181</u>
P 3 10	<u>65</u>	6	<u>151</u>	10	<u>97</u>	6	<u>272</u>
P 4 15	<u>65</u>	9	<u>255</u>	15	<u>95</u>	9	<u>357</u>
P 5 20	<u>65</u>	12	<u>419</u>	20	<u>97</u>	12	<u>412</u>
P 6 25	<u>67</u>	15	<u>483</u>	25 <u>100</u>	97	15	<u>457</u>
P 7 30		18	<u>522</u>	30	<u>105</u>	18	<u>486</u>
P 8 35		21	<u>549</u>	35	<u>106</u>	21	<u>511</u>
P 9 40		24	<u>572</u>	40	<u>109</u>	24	<u>520</u>
P10 45		27	<u>586</u>	45	<u>113</u>	27	<u>546</u>
P11 50		30	<u>595</u>	50	<u>115</u>	30	<u>560</u>
P12 55		33		55	<u>117</u>	33	<u>570</u>
P13 60		36		60	<u>119</u>	36	<u>585</u>
P14 65		39		65		39	<u>588</u>
P15 70		42		70		42	<u>595</u>
P16 75		45		75		45	<u>602</u>
P17 80		48		80		48	<u>607</u>
P18 85		51		85		51	<u>610</u>
P19 90		54		90		54	<u>616</u>
P19 95		57		95		57	<u>619</u>
100		60		100		60	<u>621</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 6/4/93
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : #1 TEST: 4
ELEVATION: 1130 KB
SECTION : 34
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 19829
LEASE : WALKER G
GEOLOGIST: LAUER
FORMATION: MISSISSIPPI
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2057.00 ft TO: 2081.00 ft TVD: 2081.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2075.0 ft 2078.0 ft
TEMPERATURE: 101.0
DRILL COLLAR LENGTH: 270.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1767.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 24.0 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: 2052.0 ft SIZE: 6.630 in
PACKER DEPTH: 2057.0 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 RIG 1
MUD TYPE : CHEMICAL
WEIGHT : 9.500 ppg
CHLORIDES : 1500 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 41.00 cp
WATER LOSS: 10.400 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW TO VERY STRONG
BLOW- 4 MINUTES OFF BOTTOM OF BUCKET. FINAL FLOW
PERIOD VERY STRONG BLOW - OFF BOTTOM OF BUCKET IN

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

LESS THAN 1 MINUTE.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
220.0	0.0	0.0	0.0	100.0	DRILLING MUD
0.0	0.0	0.0	0.0	0.0	1640 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	85.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	0.0000 STB/D
MUD VOLUME:	1.0818 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	1.0818 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1050.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	30.00	30.00
INITIAL SHUT-IN	30.00		565.00
FINAL FLOW	60.00	75.00	85.00
FINAL SHUT-IN	60.00		595.00

FINAL HYDROSTATIC PRESSURE: 1040.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1058.00

<u>Description</u>	<u>Duration</u>	<u>p1</u>	<u>p End</u>
INITIAL FLOW	25.00	62.00	67.00
INITIAL SHUT-IN	30.00		593.00
FINAL FLOW	60.00	95.00	119.00
FINAL SHUT-IN	60.00		621.00

FINAL HYDROSTATIC PRESSURE: 1055.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 6/4/93	TICKET : 19829
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : WALKER G
WELL : #1 TEST: 4	GEOLOGIST: LAUER
ELEVATION: 1130 KB	FORMATION: MISSISSIPPI
SECTION : 34	TOWNSHIP : 31S
RANGE : 10E COUNTY: ELK	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	62.00	62.00
5.00	62.00	0.00
10.00	62.00	0.00
15.00	62.00	0.00
20.00	63.00	1.00
25.00	67.00	4.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	132.00	132.00	0.00
6.00	251.00	119.00	0.00
9.00	355.00	104.00	0.00
12.00	429.00	74.00	0.00
15.00	483.00	54.00	0.00
18.00	523.00	40.00	0.00
21.00	549.00	26.00	0.00
24.00	573.00	24.00	0.00
27.00	586.00	13.00	0.00
30.00	593.00	7.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	95.00	95.00
5.00	95.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

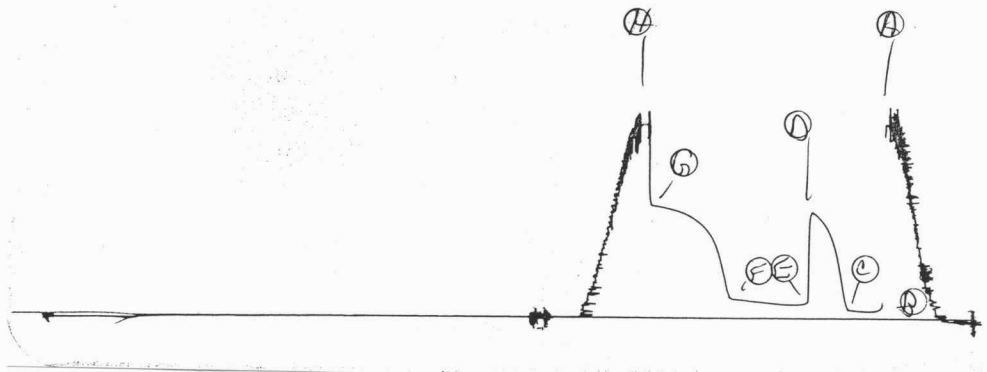
Time (min)	Pressure	Delta P
10.00	95.00	0.00
15.00	95.00	0.00
20.00	97.00	2.00
25.00	100.00	3.00
30.00	103.00	3.00
35.00	106.00	3.00
40.00	109.00	3.00
45.00	113.00	4.00
50.00	115.00	2.00
55.00	117.00	2.00
60.00	119.00	2.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	181.00	181.00	0.00
6.00	272.00	91.00	0.00
9.00	357.00	85.00	0.00
12.00	413.00	56.00	0.00
15.00	457.00	44.00	0.00
18.00	486.00	29.00	0.00
21.00	511.00	25.00	0.00
24.00	530.00	19.00	0.00
27.00	546.00	16.00	0.00
30.00	560.00	14.00	0.00
33.00	570.00	10.00	0.00
36.00	582.00	12.00	0.00
39.00	588.00	6.00	0.00
42.00	595.00	7.00	0.00
45.00	602.00	7.00	0.00
48.00	607.00	5.00	0.00
51.00	610.00	3.00	0.00
54.00	616.00	6.00	0.00
57.00	619.00	3.00	0.00
60.00	621.00	2.00	0.00

62-603

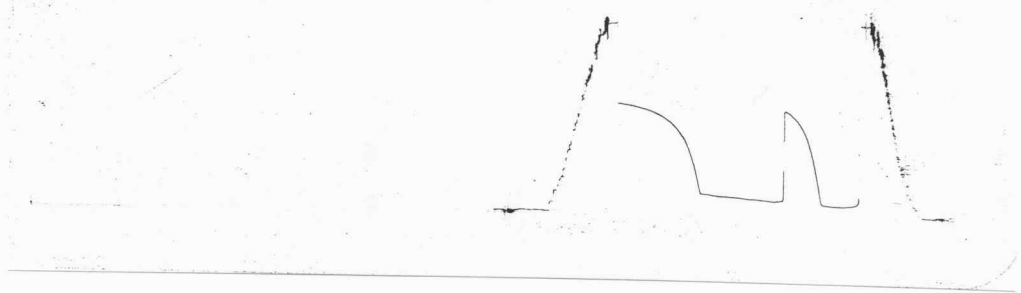
JKT 19819
I



Inside Recorder

3354

JKT 19819
O



Outside Recorder



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N° 19830

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 11304B Formation Prob Eff. Pay _____ Ft

COMPANY NAME Range Prod Co District Cincinnati 4 Date 5/25/93 Customer Order No. _____

ADDRESS 125 N Market Suite 1120 Wichita Ks 67202

LEASE AND WELL NO. Walker #1 COUNTY ELK STATE Ks Sec. 34 Twp. 31 Rgc. 10E

Mail Invoice To Same Co. Name _____ Address _____ No. Copies Requested 1

Mail Charts To Same Address _____ No. Copies Requested 5

Formation Test No. 15745 Interval Tested From 2275 ft. to 2298 ft. Total Depth 2298 ft.

Packer Depth 2270 ft. Size 6 5/8 in. Packer Depth 2 ft. Size 2 in.

Packer Depth 2275 ft. Size 6 7/8 in. Packer Depth 2 ft. Size 2 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 2292 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 2295 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Shivers Rig 1 Drill Collar Length 270 I. D. 2.25 in.

Mud Type Chrom Viscosity 41 Weight Pipe Length _____ I. D. _____ in.

Weight 9.1 Water Loss 9.2 cc. Drill Pipe Length 1985 I. D. 3.8 in.

Chlorides 800 P.P.M. Test Tool Length 20 ft. Tool Size 57200 in.

Jars: Make _____ Serial Number _____ Anchor Length 23 ft. Size 57200 in.

Did Well Flow? _____ Reversed Out _____ Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Very Strong Blow off the Bottom of bucket in 8 min on (FFP)

Recovered 720 ft. of free oil 26° grease at 60°

Recovered 60 ft. of cracked 50% oil 50% sand

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Chlorides _____ P.P.M. Sample Jars used _____ Remarks: _____

JUN 07 1993

Time On Location Standby A.M. _____ P.M. _____ Time Pick Up Tool 2:00 A.M. _____ P.M. _____ Time Off Location _____ A.M. _____ P.M. _____

Time Set Packer(s) 3:00 A.M. _____ P.M. _____ Time Started Off Bottom 6:00 A.M. _____ P.M. _____ Maximum Temperature 105° F

Initial Hydrostatic Pressure _____ (A) 1120 P.S.I.

Initial Flow Period _____ Minutes (B) 10 P.S.I. to (C) 145 P.S.I.

Initial Closed In Period _____ Minutes (D) 815 P.S.I.

Final Flow Period _____ Minutes (E) 175 P.S.I. to (F) 280 P.S.I.

Final Closed In Period _____ Minutes (G) 815 P.S.I.

Final Hydrostatic Pressure _____ (H) 1110 P.S.I. 10979

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 Tim J. Laver
Signature of Customer or his authorized representative

Western Representative Jeff A. Patton

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 _____ Test Ticket No. 19850
 Recorder No. 10979 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1150</u> P.S.I.	Open Tool	_____ M	_____
B First Initial Flow Pressure	<u>10</u> P.S.I.	First Flow Pressure	_____ Mins.	<u>20</u> Mins.
C First Final Flow Pressure	<u>155</u> P.S.I.	Initial Closed-in Pressure	_____ Mins.	<u>20</u> Mins.
D Initial Closed-in Pressure	<u>821</u> P.S.I.	Second Flow Pressure	_____ Mins.	<u>55</u> Mins.
E Second Initial Flow Pressure	<u>201</u> P.S.I.	Final Closed-in Pressure	_____ Mins.	<u>201</u> Mins.
F Second Final Flow Pressure	<u>194</u> P.S.I.			
G Final Closed-in Pressure	<u>831</u> P.S.I.			
H Final Hydrostatic Mud	<u>1099</u> P.S.I.			

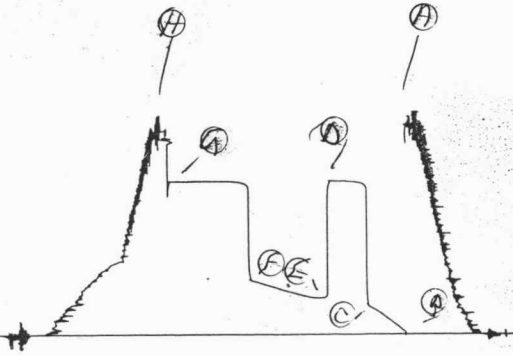
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>10</u>	0	<u>155</u>	0	<u>201</u>	0	<u>194</u>
P 2 5	<u>45</u>	3	<u>799</u>	5	<u>5</u>	3	<u>799</u>
P 3 10	<u>69</u>	6	<u>816</u>	10	<u>201</u>	6	<u>819</u>
P 4 15	<u>94</u>	9	<u>825</u>	15	<u>207</u>	9	<u>824</u>
P 5 20	<u>120</u>	12	<u>825</u>	20	<u>217</u>	12	<u>827</u>
P 6 25	<u>144</u>	15	<u>828</u>	25	<u>225</u>	15	<u>829</u>
P 7 30	<u>155</u>	18	<u>830</u>	30	<u>237</u>	18	<u>830</u>
P 8 35		21	<u>831</u>	35	<u>251</u>	21	<u>831</u>
P 9 40		24	<u>5</u>	40	<u>259</u>	24	<u>5</u>
P10 45		27		45	<u>271</u>	27	
P11 50		30	<u>831</u>	50	<u>284</u>	30	<u>831</u>
P12 55		33		55	<u>294</u>	33	
P13 60		36		60		36	
P14 65		39		65		39	
P15 70		42		70		42	
P16 75		45		75		45	<u>831</u>
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	<u>831</u>

603 831

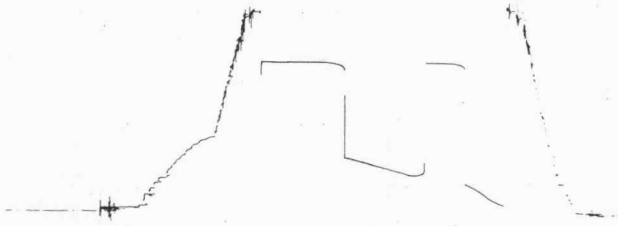
KT 19850

I



KT 19850

O



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688-7021**

DST REPORT

GENERAL INFORMATION

DATE : 6/5/93
CUSTOMER : RANGE OIL COMPANY, INC.
WELL : #1 TEST: 5
ELEVATION: 1130 KB
SECTION : 34
RANGE : 10E COUNTY: ELK
GAUGE SN#: 10979 RANGE : 4100
TICKET : 19830
LEASE : WALKER G
GEOLOGIST: LAUER
FORMATION: ARBUCKLE
TOWNSHIP : 31S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2275.00 ft TO: 2298.00 ft TVD: 2298.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2292.0 ft 2295.0 ft
TEMPERATURE: 105.0
DRILL COLLAR LENGTH: 270.0 ft I.D.: 2.250 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 1985.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 23.0 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: 2270.0 ft SIZE: 6.630 in
PACKER DEPTH: 2275.0 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 RIG 1
MUD TYPE : CHEMICAL
WEIGHT : 9.100 ppg
CHLORIDES : 800 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 41.00 cp
WATER LOSS: 9.200 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY STRONG BLOW - OFF BOTTOM
OF BUCKET IN 8 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
720.0	100.0	0.0	0.0	0.0	FREE OIL
0.0	0.0	0.0	0.0	0.0	26 GRAVITY @ 60 DEGREES F
60.0	50.0	0.0	0.0	50.0	OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	8.3336 STB	TOTAL FLOW TIME:	85.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	143.6808 STB/D
MUD VOLUME:	0.1475 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	8.4812 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1120.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	10.00	145.00
INITIAL SHUT-IN	30.00		815.00
FINAL FLOW	60.00	175.00	280.00
FINAL SHUT-IN	60.00		815.00

FINAL HYDROSTATIC PRESSURE: 1110.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1136.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	10.00	155.00
INITIAL SHUT-IN	30.00		831.00
FINAL FLOW	55.00	201.00	294.00
FINAL SHUT-IN	63.00		831.00

FINAL HYDROSTATIC PRESSURE: 1099.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 6/5/93	TICKET : 19830
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : WALKER G
WELL : #1 TEST: 5	GEOLOGIST: LAUER
ELEVATION: 1130 KB	FORMATION: ARBUCKLE
SECTION : 34	TOWNSHIP : 31S
RANGE : 10E COUNTY: ELK	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	10.00	10.00
5.00	42.00	32.00
10.00	69.00	27.00
15.00	94.00	25.00
20.00	122.00	28.00
25.00	144.00	22.00
30.00	155.00	11.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	799.00	799.00	0.00
6.00	816.00	17.00	0.00
9.00	823.00	7.00	0.00
12.00	825.00	2.00	0.00
15.00	828.00	3.00	0.00
18.00	830.00	2.00	0.00
21.00	831.00	1.00	0.00
24.00	831.00	0.00	0.00
27.00	831.00	0.00	0.00
30.00	831.00	0.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	201.00	201.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	201.00	0.00
10.00	201.00	0.00
15.00	207.00	6.00
20.00	217.00	10.00
25.00	225.00	8.00
30.00	237.00	12.00
35.00	251.00	14.00
40.00	259.00	8.00
45.00	271.00	12.00
50.00	284.00	13.00
55.00	294.00	10.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	799.00	799.00	0.00
6.00	819.00	20.00	0.00
9.00	824.00	5.00	0.00
12.00	827.00	3.00	0.00
15.00	829.00	2.00	0.00
18.00	830.00	1.00	0.00
21.00	831.00	1.00	0.00
24.00	831.00	0.00	0.00
27.00	831.00	0.00	0.00
30.00	831.00	0.00	0.00
33.00	831.00	0.00	0.00
36.00	831.00	0.00	0.00
39.00	831.00	0.00	0.00
42.00	831.00	0.00	0.00
45.00	831.00	0.00	0.00
48.00	831.00	0.00	0.00
51.00	831.00	0.00	0.00
54.00	831.00	0.00	0.00
57.00	831.00	0.00	0.00
60.00	831.00	0.00	0.00
63.00	831.00	0.00	0.00