



WESTERN TESTING CO., INC.
FORMATION TESTING

OK

TICKET No 9062

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

Elevation 1321KB Formation Kansas City Eff. Pay - Ft.

District 13 Augusta Date 12-8-85 Customer Order No. -

COMPANY NAME Range Oil Co. Inc.

ADDRESS 240 Park Court 220 W Douglas Wichita, Ks 67202

LEASE AND WELL NO. Kincaide #1 COUNTY Butler STATE Ks Sec. 28 Twp. 29 Rge. 6E

Mail Invoice To Same #1 KINCAIDE No. Copies Requested 1

Mail Charts To Same No. Copies Requested 5

Formation Test No. 1 Interval Tested From 2014 ft. to 2030 ft. Total Depth 2030 ft.

Packer Depth 2014 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2009 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2022 ft. Recorder Number 13553 Cap. 4000

Bottom Recorder Depth (Outside) 2025 ft. Recorder Number 3474 Cap. 3000

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

Drilling Contractor Range Oil Co. Inc. #2 Drill Collar Length 180 I. D. 2 1/4 in.

Mud Type Chem Viscosity 44 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 12.8 cc. Drill Pipe Length 1814 I. D. 3.8 in.

Chlorides 1700 P.P.M. Test Tool Length 20 ft. Tool Size 5 2/8 in.

Jars: Make - Serial Number - Anchor Length 16 ft. Size 5 2/8 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 X 1 1/4 in.

Blow: 2 each 5 minutes

Recovered ft. of No Fluid Recovered

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

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

Time On Location 1:00 12-8 A.M. Time Pick Up Tool 8:15 A.M.

Time Set Packer(s) 9:00 A.M. Time Started Off Bottom 11:00 A.M.

Initial Hydrostatic Pressure (A) 1000 P.S.I. Time Off Location 2 1/2 P.M.

Initial Flow Period Minutes 30 (B) 20 P.S.I. to (C) 15 P.S.I.

Initial Closed In Period Minutes 30 (D) 15 P.S.I.

Final Flow Period Minutes 30 (E) 15 P.S.I. to (F) 15 P.S.I.

Final Closed In Period Minutes 30 (G) 15 P.S.I.

Final Hydrostatic Pressure (H) 990 P.S.I. 3474

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 Robert Oken Signature of Customer or his authorized representative

Western Representative Norman Allen 0150

FIELD INVOICE

Table with 2 columns: Item, Price. Includes Open Hole Test (\$550), 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 12-8

Test Ticket No. 9062

Recorder No. 3474

Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>991</u> P.S.I.		
B First Initial Flow Pressure	<u>14</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>14</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>14</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>14</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>14</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
G Final Closed-in Pressure	<u>14</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
H Final Hydrostatic Mud	<u>984</u> P.S.I.		

Open Tool _____ M
 First Flow Pressure _____ Mins.
 Initial Closed-in Pressure _____ Mins.
 Second Flow Pressure _____ Mins.
 Final Closed-in Pressure _____ Mins.

Read Outside Chart!

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 7 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 11 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 7 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

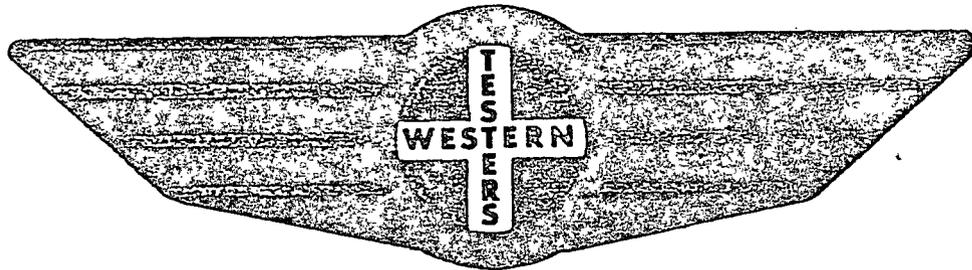
Final Shut-In
 Breakdown: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>14</u>	0	<u>14</u>	0	<u>14</u>	0	<u>14</u>
P 2 5	<u>5</u>	3	<u>5</u>	5	<u>5</u>	3	<u>5</u>
P 3 10	<u>5</u>	6	<u>5</u>	10	<u>5</u>	6	<u>5</u>
P 4 15	<u>14</u>	9	<u>5</u>	15	<u>5</u>	9	<u>5</u>
P 5 20	<u>5</u>	12	<u>5</u>	20	<u>5</u>	12	<u>5</u>
P 6 25	<u>5</u>	15	<u>14</u>	25	<u>5</u>	15	<u>5</u>
P 7 30	<u>14</u>	18	<u>5</u>	30	<u>14</u>	18	<u>5</u>
P 8 35		21	<u>5</u>	35		21	<u>5</u>
P 9 40		24	<u>5</u>	40		24	<u>5</u>
P10 45		27	<u>5</u>	45		27	<u>14</u>
P11 50		30	<u>14</u>	50		30	
P12 55		33		55		33	
P13 60		36		60		36	
P14 65		39		65		39	
P15 70		42		70		42	
P16 75		45		75		45	
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 KINCADE SEC. 28 TWP. 29S RGE. 6E TEST NO. 1 DATE 12/8/85

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/8/85
CUSTOMER: RANGE OIL COMPANY INC.
WELL: 1 TEST: 1
ELEVATION (KB): 1321 FORMATION: KANSAS CITY
SECTION: 28 TOWNSHIP: 29S
RANGE: 6E COUNTY: BUTLER STATE: KANSAS
GAUGE SN #3474 RANGE: 3000 CLOCK: 12

TICKET #9062
LEASE: KINCADE
GEOLOGIST: OLSEN

INTERVAL TEST FROM: 2014 FT TO: 2030 FT TOTAL DEPTH: 2030 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 2014 FT SIZE: 6 3/4 IN PACKER DEPTH: 2009 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG
MUD TYPE: CHEMICAL VISCOSITY: 44
WEIGHT: 9.3 WATER LOSS (CC): 12.8
CHLORIDES (P.P.M.): 1700

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 180 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 1814 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 16 FT SIZE: 5 1/2 OD IN
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 XH IN

BLOW: WEAK BLOW FOR 5 MINUTES.

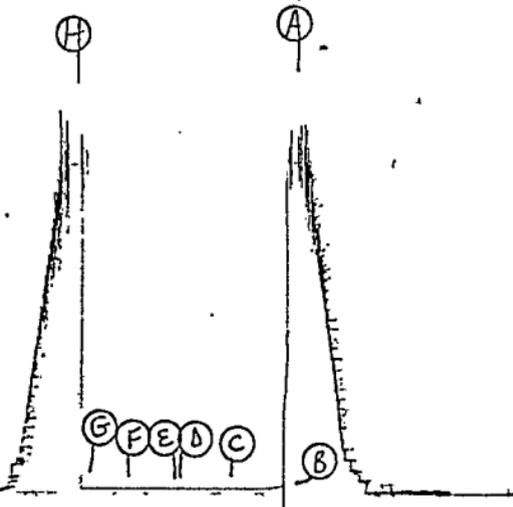
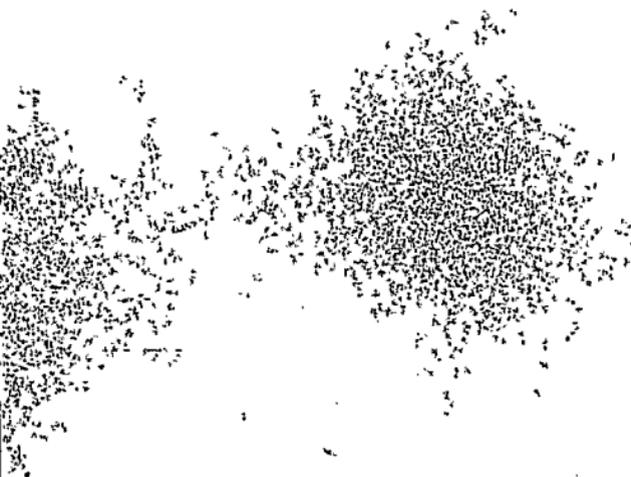
RECOVERED: FT OF: NO FLUID RECOVERED.
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: READ OUTSIDE CHART.

TIME SET PACKER(S): 9:00 AM TIME STARTED OFF BOTTOM: 11:00 AM
WELL TEMPERATURE: 91 °F
INITIAL HYDROSTATIC PRESSURE: (A) 991 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 14 PSI TO (C) 14 PSI
INITIAL CLOSED IN PERIOD MIN: 30 (D) 14 PSI
FINAL FLOW PERIOD MIN: 30 (E) 14 PSI TO (F) 14 PSI
FINAL CLOSED IN PERIOD MIN: 27 (G) 14 PSI
FINAL HYDROSTATIC PRESSURE (H) 984 PSI

TKT # 9062

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3474 DST #1 9062

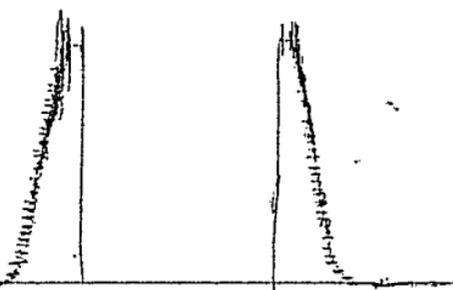
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9062

OST #1

13553





WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 9063

OK

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

Elevation 1321 RB Formation KC Swage Eff. Pay - Ft.

District Augusta Date 12-8-85 Customer Order No. -

COMPANY NAME Range Oil Co Inc.

ADDRESS 240 Page Court 220 N Douglas Wichita, Ks 67202

LEASE AND WELL NO. Kincaide #1 COUNTY Butler STATE Ks Sec. 28 Twp. 29 Rge. 6E

Mail Invoice To Same #1 KINCADE No. Copies Requested 1

Mail Charts To Same No. Copies Requested 5

Formation Test No. 2 Interval Tested From 2165 ft. to 2176 ft. Total Depth 2176 ft.

Packer Depth 2165 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2166 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2168 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 2171 ft. Recorder Number 13553 Cap. 4000

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

Drilling Contractor Range Drilling Co #2 Drill Collar Length 180 I. D. 2 1/4 in.

Mud Type Chem Viscosity 48 Weight Pipe Length - I. D. - in.

Weight 9.7 Water Loss 12.2 cc. Drill Pipe Length 196.5 I. D. 3.8 in.

Chlorides 1700 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 11 ft. Size 5 1/2 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 in.

Blow: Fair thruout test

Recovered 440 ft. of Gas in pipe

Recovered 40 ft. of Very heavy oil & gas cut mud 80% oil 20% mud

Recovered - ft. of -31 Gravity

Recovered - ft. of -

Recovered - ft. of -

Chlorides - P.P.M. Sample Jars used 2 Remarks:

Time On Location 1:00 12-8 A.M. Time Pick Up Tool 9:35 P.M. Time Off Location 12:45 A.M.

Time Set Packer(s) 10:30 P.M. Time Started Off Bottom 1:30 A.M. Maximum Temperature 93

Initial Hydrostatic Pressure (A) 1100 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) 300 P.S.I.

Final Flow Period Minutes 60 (E) 35 P.S.I. to (F) 30 P.S.I.

Final Closed In Period Minutes 60 (G) 555 P.S.I.

Final Hydrostatic Pressure (H) 1100 P.S.I. 3474

COMPANY TERMS

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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 Robert A. Allen Signature of Customer or his authorized representative

Western Representative Norman Allen

150

FIELD INVOICE

Table with 2 columns: Item and Amount. Items include Open Hole Test (\$550), 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 12-8

Test Ticket No. 9063

Recorder No. 3474 Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1094</u> P.S.I.		
B First Initial Flow Pressure	<u>17</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>17</u> P.S.I.	<u>30</u> Mins.	<u>27</u> Mins.
D Initial Closed-in Pressure	<u>302</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>26</u> P.S.I.	<u>60</u> Mins.	<u>63</u> Mins.
F Second Final Flow Pressure	<u>29</u> P.S.I.		
G Final Closed-in Pressure	<u>560</u> P.S.I.		
H Final Hydrostatic Mud	<u>1086</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 13 Inc.
of 5 mins. and a
final inc. of 0 Min.

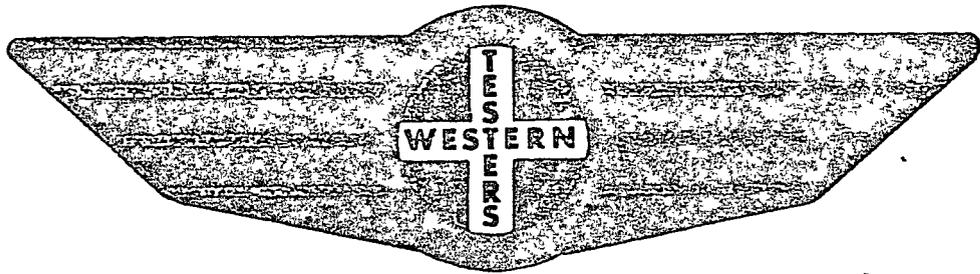
Final Shut-In
Breakdown: 22 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>17</u>	0	<u>17</u>	0	<u>26</u>	0	<u>29</u>
P 2 5	<u>5</u>	3	<u>38</u>	5	<u>5</u>	3	<u>44</u>
P 3 10	<u>5</u>	6	<u>62</u>	10	<u>5</u>	6	<u>61</u>
P 4 15	<u>17</u>	9	<u>90</u>	15	<u>5</u>	9	<u>82</u>
P 5 20	<u>5</u>	12	<u>118</u>	20	<u>5</u>	12	<u>103</u>
P 6 25	<u>5</u>	15	<u>150</u>	25	<u>5</u>	15	<u>125</u>
P 7 30	<u>17</u>	18	<u>181</u>	30	<u>26</u>	18	<u>150</u>
P 8 35		21	<u>220</u>	35	<u>27</u>	21	<u>174</u>
P 9 40		24	<u>257</u>	40	<u>27</u>	24	<u>200</u>
P10 45		27	<u>302</u>	45	<u>28</u>	27	<u>227</u>
P11 50		30		50	<u>28</u>	30	<u>258</u>
P12 55		33		55	<u>29</u>	33	<u>290</u>
P13 60		36		60	<u>29</u>	36	<u>324</u>
P14 65		39		65		39	<u>360</u>
P15 70		42		70		42	<u>393</u>
P16 75		45		75		45	<u>425</u>
P17 80		48		80		48	<u>455</u>
P18 85		51		85		51	<u>485</u>
P19 90		54		90		54	<u>508</u>
P20 95		57		95		57	<u>527</u>
100		60		100		60	<u>546</u>
						<u>63</u>	<u>560</u>

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 KINGCADE SEC. 28 TWP. 29S RGE. 6E TEST NO. 2 DATE 12/8/85

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/8/85
CUSTOMER: RANGE OIL COMPANY INC.
WELL: 1
ELEVATION (KB): 1321
SECTION: 28
RANGE: 6E
GAUGE SN #3474

TEST: 2
FORMATION: KANSAS CITY-SWOPE
TOWNSHIP: 29S
COUNTY: BUTLER
RANGE: 3000

TICKET #9063
LEASE: KINCADE
GEOLOGIST: OLSEN
STATE: KANSAS
CLOCK: 12

INTERVAL TEST FROM: 2165 FT TO: 2176 FT TOTAL DEPTH: 2176 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 2165 FT SIZE: 6 3/4 IN PAKER DEPTH: 2160 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PAKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG
MUD TYPE: CHEMICAL VISCOSITY: 48
WEIGHT: 9.7 WATER LOSS (CC): 12.2
CHLORIDES (P.P.M.): 1700
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 180 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 1965 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 11 FT SIZE: 5 1/2 OD IN
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 XH IN

BLOW: FAIR BLOW THROUGHOUT TEST.

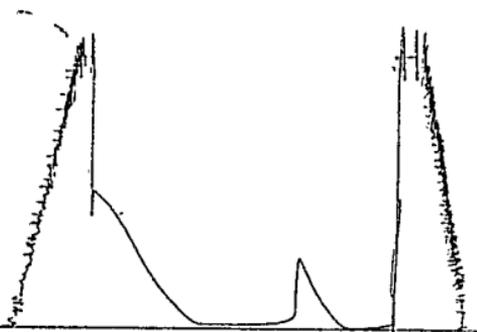
RECOVERED: 440 FT OF: GAS ABOVE FLUID.
RECOVERED: 40 FT OF: VERY HEAVY OIL & GAS CUT MUD.
RECOVERED: FT OF: (80% OIL; 20% MUD)(31 GRAVITY).
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 10:30 PM TIME STARTED OFF BOTTOM: 1:30 AM
WELL TEMPERATURE: 93 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1094 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 17 PSI TO (C) 17 PSI
INITIAL CLOSED IN PERIOD MIN: 27 (D) 302 PSI
FINAL FLOW PERIOD MIN: 60 (E) 26 PSI TO (F) 29 PSI
FINAL CLOSED IN PERIOD MIN: 63 (G) 560 PSI
FINAL HYDROSTATIC PRESSURE (H) 1086 PSI

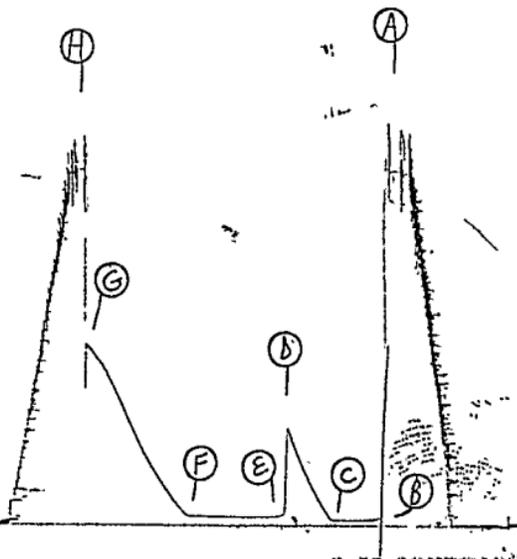
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TKT # 9063

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WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 9064

OK

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

Elevation 1321 KB Formation KC North Eff. Pay - Ft.

District Anawata Date 12-9-85 Customer Order No. -

COMPANY NAME Range Oil Co Inc.

ADDRESS 240 Pass Court 220 W Douglas Wichita, Ks 67202

LEASE AND WELL NO. Kincaide #1 COUNTY Butler STATE Ks Sec 28 Twp 29 Rge 6E

Mail Invoice To Same #1 KINCAIDE No. Copies Requested 1

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 3 Interval Tested From 2203 ft. to 2218 ft. Total Depth 2218 ft.

Packer Depth 2203 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2198 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2210 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 2213 ft. Recorder Number 13553 Cap. 4000

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

Drilling Contractor Range Oil Co Inc. #2 Drill Collar Length 150 I. D. 2 1/4 in.

Mud Type Chem Viscosity 42 Weight Pipe Length - I. D. - in.

Weight 9.5 Water Loss 12- cc. Drill Pipe Length 2033 I. D. 3.8 in.

Chlorides 1700 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number - Anchor Length 15 ft. Size 5 1/2 OD in.

Did Well Flow? No Reversed Out Yes 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 x 1 1/2 in.

Blow: Fair thruout test

Recovered 360 ft. of Slag in mud

Recovered 45 ft. of Oil & old cut mud 20% oil 80% mud.

Recovered 45 ft. of Muddy salt water w trace of oil .18 Res @ 58°F

Recovered - ft. of -

Recovered - ft. of -

Chlorides 71,000 P.P.M. Sample Jars used 3 Remarks:

Time On Location 1:00 12:8 A.M. Time Pick Up Tool 9:15 12:9 A.M. Time Off Location 8:15 A.M. P.M.

Time Set Packer(s) 10:15 A.M. P.M. Time Started Off Bottom 1:15 A.M. P.M. Maximum Temperature 95°

Initial Hydrostatic Pressure (A) 1115 P.S.I.

Initial Flow Period Minutes 30 (B) 35 P.S.I. to (C) 35 P.S.I.

Initial Closed In Period Minutes 30 (D) 705 P.S.I.

Final Flow Period Minutes 60 (E) 55 P.S.I. to (F) 70 P.S.I.

Final Closed In Period Minutes 60 (G) 720 P.S.I.

Final Hydrostatic Pressure (H) 1115 P.S.I. 3474

COMPANY TERMS

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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 Robert Osher Signature of Customer or his authorized representative

Western Representative Norman Allen 150

FIELD INVOICE 550
Open Hole Test \$550
Miscum \$
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 12-9

Test Ticket No. 9064

Recorder No. 3474

Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1113</u> P.S.I.		
B First Initial Flow Pressure	<u>25</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>30</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>691</u> P.S.I.	<u>60</u> Mins.	<u>55</u> Mins.
E Second Initial Flow Pressure	<u>45</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>63</u> P.S.I.		
G Final Closed-in Pressure	<u>709</u> P.S.I.		
H Final Hydrostatic Mud	<u>1093</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

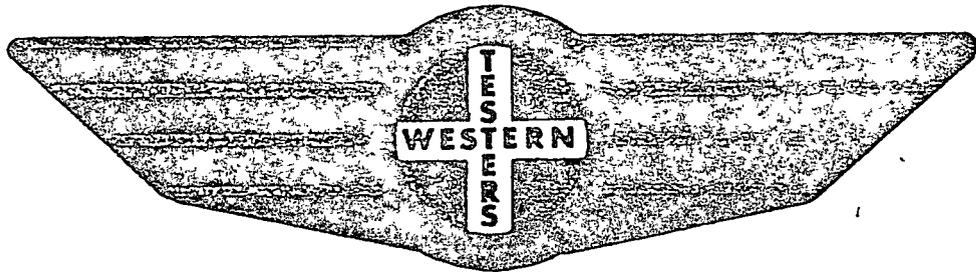
Final Shut-In
Breakdown: 21 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>25</u>	0	<u>30</u>	0	<u>45</u>	0	<u>63</u>
P 2 5	<u>25</u>	3	<u>72</u>	5	<u>45</u>	3	<u>116</u>
P 3 10	<u>25</u>	6	<u>160</u>	10	<u>45</u>	6	<u>189</u>
P 4 15	<u>26</u>	9	<u>293</u>	15	<u>48</u>	9	<u>299</u>
P 5 20	<u>27</u>	12	<u>449</u>	20	<u>49</u>	12	<u>419</u>
P 6 25	<u>29</u>	15	<u>548</u>	25	<u>51</u>	15	<u>502</u>
P 7 30	<u>30</u>	18	<u>606</u>	30	<u>53</u>	18	<u>554</u>
P 8 35		21	<u>642</u>	35	<u>55</u>	21	<u>594</u>
P 9 40		24	<u>666</u>	40	<u>57</u>	24	<u>623</u>
P10 45		27	<u>681</u>	45	<u>60</u>	27	<u>643</u>
P11 50		30	<u>691</u>	50	<u>62</u>	30	<u>657</u>
P12 55		33		55	<u>63</u>	33	<u>668</u>
P13 60		36		60		36	<u>677</u>
P14 65		39		65		39	<u>686</u>
P15 70		42		70		42	<u>690</u>
P16 75		45		75		45	<u>694</u>
P17 80		48		80		48	<u>697</u>
P18 85		51		85		51	<u>700</u>
P19 90		54		90		54	<u>703</u>
P20 95		57		95		57	<u>706</u>
100		60		100		60	<u>709</u>

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY

RANGE OIL COMPANY, INC.

LEASE & WELL NO.

#1 KINCADE

SEC. 28

TWP.

29S

RGE. 6E

TEST NO.

3

DATE

12/9/85

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/9/85
CUSTOMER: RANGE OIL COMPANY INC.
WELL: 1 TEST: 3
ELEVATION (KB): 1321 FORMATION: KANSAS CITY-HERTHA
SECTION: 28 TOWNSHIP: 29S
RANGE: 6E COUNTY: BUTLER STATE: KANSAS
GAUGE SN #3474 RANGE: 3000 CLOCK: 12

INTERVAL TEST FROM: 2203 FT TO: 2218 FT TOTAL DEPTH: 2218 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 2203 FT SIZE: 6 3/4 IN PACKER DEPTH: 2198 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG
MUD TYPE: CHEMICAL VISCOSITY: 42
WEIGHT: 9.5 WATER LOSS (CC): 12.0
CHLORIDES (P.P.M.): 1700

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 150 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 2033 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 15 FT SIZE: 5 1/2 OD IN
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 XH IN

BLOW: FAIR BLOW THROUGHOUT TEST.

RECOVERED: 360 FT OF: GAS ABOVE FLUID.
RECOVERED: 45 FT OF: OIL & GAS CUT MUD (20% OIL; 80% MUD).
RECOVERED: 45 FT OF: MUDDY SALT WATER WITH TRACE OF OIL.
RECOVERED: FT OF: RESISTIVITY .18 AT 58 DEGREES.
RECOVERED: FT OF: CHLORIDES 71000 PPM.
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 10:15 AM TIME STARTED OFF BOTTOM: 1:15 PM
WELL TEMPERATURE: 95 °F

INITIAL HYDROSTATIC PRESSURE: (A) 1113 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 25 PSI TO (C) 30 PSI
INITIAL CLOSED IN PERIOD MIN: 30 (D) 691 PSI
FINAL FLOW PERIOD MIN: 55 (E) 45 PSI TO (F) 63 PSI
FINAL CLOSED IN PERIOD MIN: 60 (G) 709 PSI
FINAL HYDROSTATIC PRESSURE (H) 1093 PSI

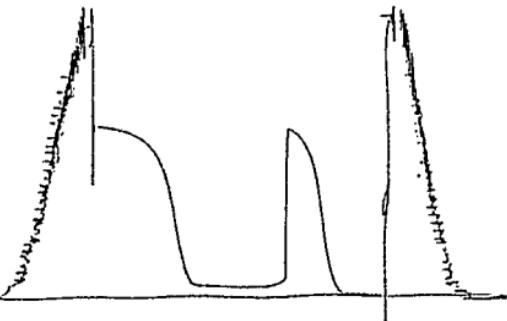
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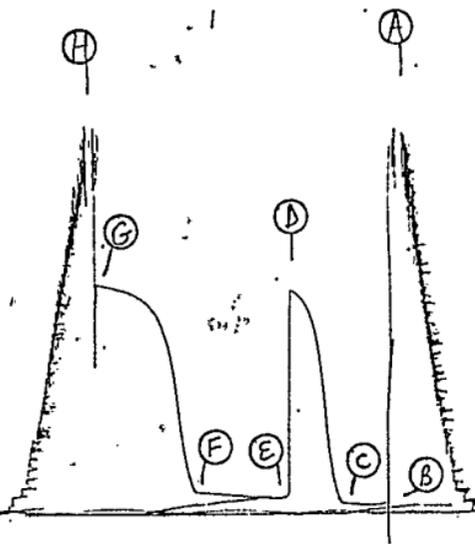
-OST # 3

90641



TKT # 9064

I



DST #3

3474



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 9065

OK

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

Elevation 1321 KB Formation Haystack Rd Eff. Pay - Ft.

040 District 13 Augustus Date 12-10-85 Customer Order No. -

COMPANY NAME Range Oil Co Inc.

ADDRESS 240 Page Court 220 W Douglas Wichita Ks 67202

LEASE AND WELL NO. Kincaid #1 COUNTY Butler STATE Ks Sec 28 Twp 29 Rge. 6E

Mail Invoice To Same #1 KINCAID No. Copies Requested 1

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

Formation Test No. 4 Interval Tested From 2307 ft. to 2336 ft. Total Depth 2336 ft.

Packer Depth 2307 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2302 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2328 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 2331 ft. Recorder Number 13553 Cap. 4000

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

Drilling Contractor Range Oil #2 Drill Collar Length 210 I. D. 2 1/2 in.

Mud Type Chem Viscosity 45 Weight Pipe Length - I. D. - in.

Weight 9.6 Water Loss 12. - cc. Drill Pipe Length 2077 I. D. - in.

Chlorides 1700 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 29 ft. Size 5 1/2 in.

Did Well Flow? Yw Reversed Out Yw 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 x 1 1/2 in.

Blow: Hard thruout test

Recovered 180 ft. of Gas in pipe

Recovered 120 ft. of Muddy saltwater .34 Ker @ 54 F

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides 35,000 P.P.M. Sample Jars used 2 Remarks:

Time On Location 1:00 12:8 A.M. Time Pick Up Tool 10:50 12:9 P.M. Time Off Location 8th A.M.

Time Set Packer(s) 12:01 A.M. Time Started Off Bottom 3:01 A.M. Maximum Temperature 96 P.M.

Initial Hydrostatic Pressure (A) 1175 P.S.I.

Initial Flow Period Minutes 30 (B) 60 P.S.I. to (C) 70 P.S.I.

Initial Closed In Period Minutes 30 (D) 805 P.S.I.

Final Flow Period Minutes 60 (E) 90 P.S.I. to (F) 90 P.S.I.

Final Closed In Period Minutes 60 (G) 665 P.S.I.

Final Hydrostatic Pressure (H) 1175 P.S.I. 3474

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 Norman Allen Signature of Customer or his authorized representative

Western Representative Norman Allen 0150

FIELD INVOICE

Table with 2 columns: Item and Amount. Items include Open Hole Test (\$550), 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 12-10

Test Ticket No. 9065

Recorder No. 3474

Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1165</u> P.S.I.			
B First Initial Flow Pressure	<u>46</u> P.S.I.	First Flow Pressure	<u>30</u> Mins	<u>30</u> Mins.
C First Final Flow Pressure	<u>57</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>795</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins	<u>65</u> Mins.
E Second Initial Flow Pressure	<u>72</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins	<u>54</u> Mins.
F Second Final Flow Pressure	<u>83</u> P.S.I.			
G Final Closed-in Pressure	<u>664</u> P.S.I.			
H Final Hydrostatic Mud	<u>1152</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

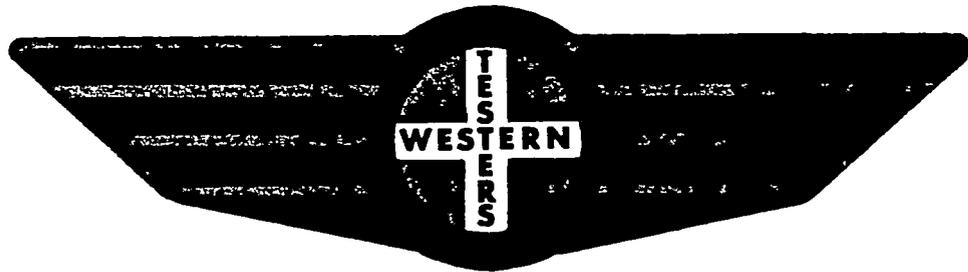
Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 13 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 18 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>46</u>						
P 2 5	<u>46</u>	3	<u>132</u>	5	<u>72</u>	3	<u>102</u>
P 3 10	<u>46</u>	6	<u>453</u>	10	<u>5</u>	6	<u>165</u>
P 4 15	<u>48</u>	9	<u>596</u>	15	<u>5</u>	9	<u>266</u>
P 5 20	<u>51</u>	12	<u>669</u>	20	<u>72</u>	12	<u>346</u>
P 6 25	<u>54</u>	15	<u>712</u>	25	<u>72</u>	15	<u>415</u>
P 7 30	<u>57</u>	18	<u>742</u>	30	<u>72</u>	18	<u>459</u>
P 8 35		21	<u>763</u>	35	<u>73</u>	21	<u>495</u>
P 9 40		24	<u>778</u>	40	<u>75</u>	24	<u>523</u>
P10 45		27	<u>787</u>	45	<u>77</u>	27	<u>549</u>
P11 50		30	<u>795</u>	50	<u>79</u>	30	<u>570</u>
P12 55		33		55	<u>81</u>	33	<u>588</u>
P13 60		36		60	<u>82</u>	36	<u>603</u>
P14 65		39		65	<u>83</u>	39	<u>616</u>
P15 70		42		70		42	<u>629</u>
P16 75		45		75		45	<u>641</u>
P17 80		48		80		48	<u>653</u>
P18 85		51		85		51	<u>660</u>
P19 90		54		90		54	<u>664</u>
P20 95		57		95		<u>60</u>	
100		60		100		<u>60</u>	

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 KINGADE SEC. 28 TWP. 29S RGE. 6E TEST NO. 4 DATE 12/10/85

SUBSURFACE PRESSURE SURVEY

DATE	: 12-10-85	TICKET	: 9065
CUSTOMER	: RANGE OIL COMPANY INC.	LEASE	: KINCADE
WELL	: 1 TEST: 4	GEOLOGIST	: R. OLSEN
ELEVATION	: 1321	FORMATION	: WAYSIDE SAND
SECTION	: 28	TOWNSHIP	: 6E
RANGE	: 6E COUNTY: BUTLER	STATE	: KANSAS
GAUGE SN#	: 3474 RANGE: 3000	CLOCK	: 12

INTERVAL FROM	: 2307	TO	: 2336	TOTAL DEPTH	: 2336
DEPTH OF SELECTIVE ZONE	:				
PACKER DEPTH	: 2307	SIZE	: 6.75		
PACKER DEPTH	: 2302	SIZE	: 6.75		
PACKER DEPTH	:	SIZE	:		
PACKER DEPTH	:	SIZE	:		

DRILLING CON.	: RANGE DRLG. RIG #2		
MUD TYPE	: CHEMICAL	VISCOSITY	: 45
WEIGHT	: 9.6	WATER LOSS (CC)	: 12.0
CHLORIDES (PPM)	: 1700		
JARS-MAKE	:	SERIAL NUMBER	:
DID WELL FLOW ?	: NO	REVERSED OUT ?	: NO

DRILL COLLAR LENGTH	: 210 FT	I.D. inch	: 2.25
WEIGHT PIPE LENGTH	: 0 FT	I.D. inch	: 0.00
DRILL PIPE LENGTH	: 2077 FT	I.D. inch	: 3.80
TEST TOOL LENGTH	: 20 FT	TOOL SIZE	: 5.50
ANCHOR LENGTH	: 29 FT	ANCHOR SIZE	: 5.50
SURFACE CHOKE SIZE	: .75 IN	BOTTOM CHOKE SIZE	: .75
MAIN HOLE SIZE	: 7 7/8 IN	TOOL JOINT SIZE	: 4 1/2

BLOW COMMENT #1 : FAIR BLOW THROUGHOUT TEST.
 BLOW COMMENT #2 :
 BLOW COMMENT #3 :
 BLOW COMMENT #4 :

RECOVERED	: 180 FT	OF: GAS ABOVE FLUID.	2.5 Barrels
RECOVERED	: 120 FT	OF: MUDDY SALT WATER.	1.7 Barrels
RECOVERED	: 0 FT	OF: CHLORIDES 35000 PPM.	0.0 Barrels
RECOVERED	: 0 FT	OF: RESISTIVITY .34 AT 54 DEGREES.	0.0 Barrels

1s

RECOVERED	: 0 FT	OF: 0.0 Barrels	
RECOVERED	: 0 FT	OF: 0.0 Barrels	
RECOVERED	: 0 FT	OF: 0.0 Barrels	
RECOVERED	: 0 FT	OF: 0.0 Barrels	
RECOVERED	: 0 FT	OF: 0.0 Barrels	
Total Barrels =	4.2	Total Production =	63.8 Bpd

REMARK 1 :
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S)	: 12:01 AM	TIME STARTED OFF BOTTOM	: 3:01 AM
WELL TEMPERATURE	: 96		
INITIAL HYDROSTATIC PRESSURE		(A)	1165
INITIAL FLOW PERIOD	MIN: 30	(B)	46
INITIAL CLOSED IN PERIOD	MIN: 30	(D)	795
FINAL FLOW PERIOD	MIN: 65	(E)	72
FINAL CLOSED IN PERIOD	MIN: 54	(G)	664
FINAL HYDROSTATIC PRESSURE		(H)	1152

Pressure Transient Report

DATA FILE.....
COMPANY.....RANGE OIL COMPANY INC.
DATE OF TEST.....12-10-85
FIELD NAME.....KINCADE
WELL NAME.....1
LOCATION.....BUTLER-KANSAS
JOB NUMBER.....9065
GAUGE NUMBER.....3474
GAUGE DEPTH.....2336

COMMENTS

START UP TIME (mo/da/yr) (hr:min:sec)
 12./10/85. 12.: 1.: 0.

COMPANY : RANGE OIL COMPANY INC.
 WELL : 1 JOB # : 9065
 GAUGE # : 3474 DEPTH : 2336
 MON/DAY : 12/10

FIELD : KINCADE

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS	HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
1	12: 1: 0	0	0.000	46.00	96.0	0.00	19.69
2	12: 6: 0	5	0.083	46.00	96.0	0.00	0.00
3	12:11: 0	10	0.167	46.00	96.0	0.00	0.00
4	12:16: 0	15	0.250	48.00	96.0	2.00	24.09
5	12:21: 0	20	0.333	51.00	96.0	5.00	36.14
6	12:26: 0	25	0.417	54.00	96.0	8.00	35.72
7	12:31: 0	30	0.500	57.00	96.0	11.00	36.14
8	12:34: 0	33	0.550	132.00	96.0	86.00	1505.88
9	12:37: 0	36	0.600	453.00	96.0	407.00	6445.18
10	12:40: 0	39	0.650	596.00	96.0	550.00	2816.00
11	12:43: 0	42	0.700	669.00	96.0	623.00	1465.73
12	12:46: 0	45	0.750	712.00	96.0	666.00	863.37
13	12:49: 0	48	0.800	742.00	96.0	696.00	602.35
14	12:52: 0	51	0.850	763.00	96.0	717.00	421.65
15	12:55: 0	54	0.900	778.00	96.0	732.00	295.38
16	12:58: 0	57	0.950	787.00	96.0	741.00	180.71
17	13: 1: 0	60	1.000	795.00	96.0	749.00	160.63
18	13: 6: 0	65	1.083	72.00	96.0	26.00	-8710.02
19	13:11: 0	70	1.167	72.00	96.0	26.00	0.00
20	13:16: 0	75	1.250	72.00	96.0	26.00	0.00
21	13:21: 0	80	1.333	72.00	96.0	26.00	0.00
22	13:26: 0	85	1.417	72.00	96.0	26.00	0.00
23	13:31: 0	90	1.500	72.00	96.0	26.00	0.00
24	13:36: 0	95	1.583	73.00	96.0	27.00	12.05
25	13:41: 0	100	1.667	75.00	96.0	29.00	23.81
26	13:46: 0	105	1.750	77.00	96.0	31.00	24.09
27	13:51: 0	110	1.833	79.00	96.0	33.00	24.09
28	13:56: 0	115	1.917	81.00	96.0	35.00	23.81
29	14: 1: 0	120	2.000	82.00	96.0	36.00	12.05
30	14: 6: 0	125	2.083	83.00	96.0	37.00	12.05
31	14: 9: 0	128	2.134	102.00	96.0	56.00	374.15
32	14:12: 0	131	2.184	165.00	96.0	119.00	1264.94
33	14:15: 0	134	2.233	266.00	96.0	220.00	2027.92
34	14:18: 0	137	2.283	346.00	96.0	300.00	1606.27
35	14:21: 0	140	2.333	415.00	96.0	369.00	1385.41
36	14:24: 0	143	2.384	459.00	96.0	413.00	866.46
37	14:27: 0	146	2.434	495.00	96.0	449.00	722.82
38	14:30: 0	149	2.483	523.00	96.0	477.00	562.20
39	14:33: 0	152	2.533	549.00	96.0	503.00	522.04
40	14:36: 0	155	2.583	570.00	96.0	524.00	421.65
41	14:39: 0	158	2.634	588.00	96.0	542.00	354.46
42	14:42: 0	161	2.684	603.00	96.0	557.00	301.18
43	14:45: 0	164	2.733	616.00	96.0	570.00	261.02
44	14:48: 0	167	2.783	629.00	96.0	583.00	261.02
45	14:51: 0	170	2.833	641.00	96.0	595.00	240.94
46	14:54: 0	173	2.884	653.00	96.0	607.00	236.31
47	14:57: 0	176	2.934	660.00	96.0	614.00	140.55
48	15: 0: 0	179	2.983	664.00	96.0	618.00	80.31

4kt #9065.

0



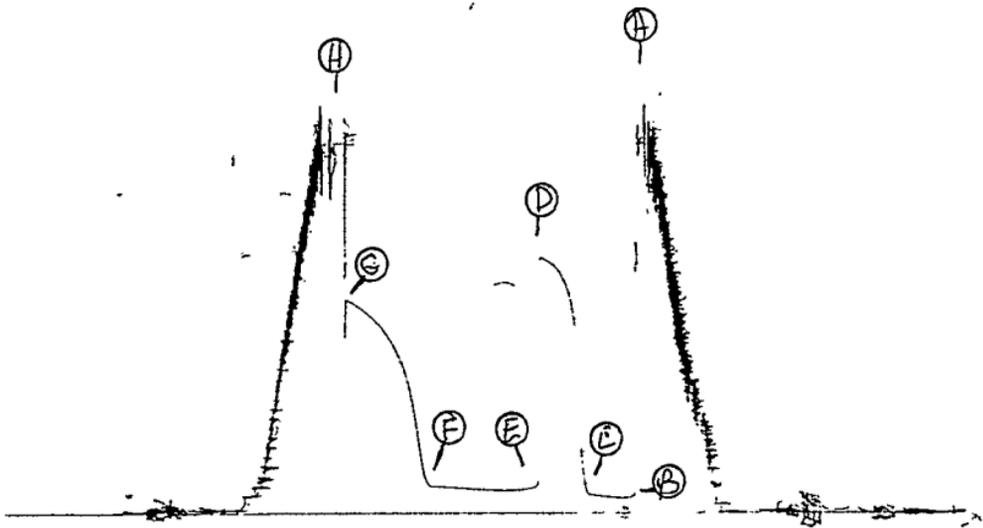
9065

05T#4

13553

Unit # 9065

I



9065

DST # 4

3474



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO: 9066

O.K

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

Elevation 1321 KB Formation Perm Sd. Eff. Pay - Ft.

District Augusta Date 12-10-85 Customer Order No.

COMPANY NAME Range Oil Co. Inc.

ADDRESS 240 Page Court 220 W Douglas Wichita, Ks 67202

LEASE AND WELL NO. Kincaide #1 COUNTY Butler STATE Ks Sec. 28 Twp. 29 Rge. 6E

Mail Invoice To Same #1 KINCAIDE No. Copies Requested 1

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

Formation Test No. 5 Interval Tested From 2356 ft. to 2367 ft. Total Depth 2367 ft.

Packer Depth 2351 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2346 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2359 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 2362 ft. Recorder Number 13553 Cap. 4000

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

Drilling Contractor Range Oil Co. Inc. #2 Drill Collar Length 210 I. D. 2 1/4 in.

Mud Type Chem Viscosity 4.5 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 11.8 cc. Drill Pipe Length 2126 I. D. 3.8 in.

Chlorides 1200 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 00 in.

Jars: Make - Serial Number - Anchor Length 11 ft. Size 5 1/2 00 in.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

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

Blow: Air thru test

Recovered 500 ft. of Salt water (top 200' had trace oil) - 24 Res @ 54°F

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides 44000 P.P.M. Sample Jars used 2 Remarks:

Time On Location 1:00 128 A.M. Time Pick Up Tool 11:55 12:10 P.M. Time Off Location 8th A.M.

Time Set Packer(s) 1:45 A.M. Time Started Off Bottom 4:45 P.M. Maximum Temperature 96

Initial Hydrostatic Pressure (A) 1175 P.S.I.

Initial Flow Period Minutes 30 (B) 85 P.S.I. to (C) 145 P.S.I.

Initial Closed In Period Minutes 30 (D) 925 P.S.I.

Final Flow Period Minutes 60 (E) 180 P.S.I. to (F) 235 P.S.I.

Final Closed In Period Minutes 60 (G) 885 P.S.I.

Final Hydrostatic Pressure (H) 1160 P.S.I. 3474

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 Robert Chen Signature of Customer or his authorized representative

Western Representative Norman Allen 0150

FIELD INVOICE

Table with 2 columns: Item and Price. Items include Open Hole Test (\$550), 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 12-10

Test Ticket No. 9066

Recorder No. 3474

Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1172</u> P.S.I.	Open Tool		M
B First Initial Flow Pressure	<u>80</u> P.S.I.	First Flow Pressure	<u>30</u> Mins	<u>30</u> Mins.
C First Final Flow Pressure	<u>144</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>927</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>169</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins	<u>60</u> Mins.
F Second Final Flow Pressure	<u>234</u> P.S.I.			
G Final Closed-in Pressure	<u>885</u> P.S.I.			
H Final Hydrostatic Mud	<u>1146</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

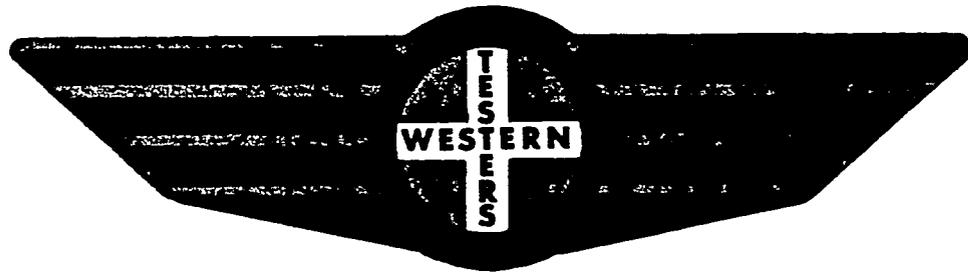
Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>80</u>						
P 2 5	<u>97</u>	3	<u>723</u>	5	<u>169</u>	3	<u>582</u>
P 3 10	<u>115</u>	6	<u>803</u>	10	<u>173</u>	6	<u>732</u>
P 4 15	<u>122</u>	9	<u>844</u>	15	<u>180</u>	9	<u>751</u>
P 5 20	<u>131</u>	12	<u>871</u>	20	<u>188</u>	12	<u>763</u>
P 6 25	<u>138</u>	15	<u>887</u>	25	<u>194</u>	15	<u>784</u>
P 7 30	<u>144</u>	18	<u>900</u>	30	<u>201</u>	18	<u>804</u>
P 8 35		21	<u>909</u>	35	<u>206</u>	21	<u>816</u>
P 9 40		24	<u>918</u>	40	<u>212</u>	24	<u>826</u>
P10 45		27	<u>925</u>	45	<u>218</u>	27	<u>835</u>
P11 50		30	<u>927</u>	50	<u>224</u>	30	<u>846</u>
P12 55		33		55	<u>230</u>	33	<u>852</u>
P13 60		36		60	<u>234</u>	36	<u>858</u>
P14 65		39		65		39	<u>863</u>
P15 70		42		70		42	<u>868</u>
P16 75		45		75		45	<u>872</u>
P17 80		48		80		48	<u>876</u>
P18 85		51		85		51	<u>879</u>
P19 90		54		90		54	<u>881</u>
P20 95		57		95		57	<u>883</u>
100		60		100		60	<u>885</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

SUBSURFACE *PRESSURE SURVEY

DATE : 12-10-85 TICKET : 9066
 CUSTOMER : RANGE OIL COMPANY INC. LEASE : KINCADE
 WELL : 1 TEST: 5 GEOLOGIST : R. OLSEN
 ELEVATION : 1321 FORMATION : PERU SAND
 SECTION : 28 TOWNSHIP : ~~29S~~
 RANGE : 6E COUNTY : BUTLER STATE : KANSAS
 GAUGE SN# : 3474 RANGE : 3000 CLOCK : 12

INTERVAL FROM : 2356 TO : 2367 TOTAL DEPTH : 2367
 DEPTH OF SELECTIVE ZONE :
 PACKER DEPTH : 2351 SIZE : 6.75
 PACKER DEPTH : 2356 SIZE : 6.75
 PACKER DEPTH : SIZE :
 PACKER DEPTH : SIZE :

DRILLING CON. : RANGE DRLG. RIG #2
 MUD TYPE : CHEMICAL VISCOSITY : 45
 WEIGHT : 9.3 WATER LOSS (CC) : 11.8
 CHLORIDES (PPM) : 1200
 JARS-MAKE : SERIAL NUMBER :
 DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 210 FT I.D. inch : 2.25
 WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
 DRILL PIPE LENGTH : 2126 FT I.D. inch : 3.80
 TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
 ANCHOR LENGTH : 11 FT ANCHOR SIZE : 5.50
 SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
 MAIN HOLE SIZE : 7 7/8 IN TOOL JOINT SIZE : 4 1/2

BLOW COMMENT #1 : FAIR BLOW THROUGHOUT TEST.
 BLOW COMMENT #2 :
 BLOW COMMENT #3 :
 BLOW COMMENT #4 :

RECOVERED : 500 FT OF: SALT WATER 7.0 Barrels
 RECOVERED : 0 FT OF: (TOP 200' HAD TRACE OF OIL). 0.0 Barrels
 RECOVERED : 0 FT OF: RESISTIVITY .24 AT 54 DEGREES. 0.0 Barre

1s

RECOVERED : 0 FT OF: CHLORIDES 44000 PPM. 0.0 Barrels
 RECOVERED : 0 FT OF: 0.0 Barrels
 Total Barrels = 7.0 Total Production = 112.2 Bpd

REMARK 1 :
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S) : 1:45 PM TIME STARTED OFF BOTTOM : 4:45 PM
 WELL TEMPERATURE : 96
 INITIAL HYDROSTATIC PRESSURE (A) 1172
 INITIAL FLOW PERIOD MIN: 30 (B) 80 PSI TO (C) : 144
 INITIAL CLOSED IN PERIOD MIN: 30 (D) 927
 FINAL FLOW PERIOD MIN: 60 (E) 169 PSI TO (F) : 234
 FINAL CLOSED IN PERIOD MIN: 60 (G) 885
 FINAL HYDROSTATIC PRESSURE (H) 1146

Pressure Transient Report

DATA FILE.....
COMPANY.....RANGE OIL COMPANY INC.
DATE OF TEST.....12-10-85
FIELD NAME.....KINCADE
WELL NAME.....1
LOCATION.....BUTLER-KANSAS
JOB NUMBER.....9066
GAUGE NUMBER.....3474
GAUGE DEPTH.....2367

COMMENTS

START UP TIME (mo/da/yr) (hr:min:sec)
 12./10/85. 1.: 45.: 0.

COMPANY : RANGE OIL COMPANY INC. • FIELD : KINCADE
 WELL : 1 JOB # : 9066
 GAUGE # : 3474 DEPTH : 2367
 MON/DAY : 12/10

PAGE 1

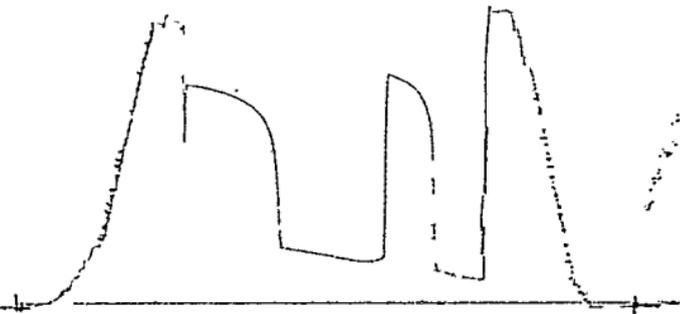
REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (P _o -P _i)	DP/DT Psi/hr
1	1:45: 0	0 0.000	80.00	96.0	0.00	0.00
2	1:50: 0	5 0.083	97.00	96.0	17.00	204.80
3	1:55: 0	10 0.167	115.00	96.0	35.00	214.33
4	2: 0: 0	15 0.250	122.00	96.0	42.00	84.33
5	2: 5: 0	20 0.333	131.00	96.0	51.00	108.42
6	2: 10: 0	25 0.417	138.00	96.0	58.00	83.35
7	2: 15: 0	30 0.500	144.00	96.0	64.00	72.28
8	2: 18: 0	33 0.550	723.00	96.0	643.00	11625.41
9	2: 21: 0	36 0.600	803.00	96.0	723.00	1606.27
10	2: 24: 0	39 0.650	844.00	96.0	764.00	807.38
11	2: 27: 0	42 0.700	871.00	96.0	791.00	542.12
12	2: 30: 0	45 0.750	887.00	96.0	807.00	321.25
13	2: 33: 0	48 0.800	900.00	96.0	820.00	261.02
14	2: 36: 0	51 0.850	909.00	96.0	829.00	180.71
15	2: 39: 0	54 0.900	918.00	96.0	838.00	177.23
16	2: 42: 0	57 0.950	925.00	96.0	845.00	140.55
17	2: 45: 0	60 1.000	927.00	96.0	847.00	40.16
18	2: 50: 0	65 1.083	169.00	96.0	89.00	-9131.67
19	2: 55: 0	70 1.167	173.00	96.0	93.00	47.63
20	3: 0: 0	75 1.250	180.00	96.0	100.00	84.33
21	3: 5: 0	80 1.333	188.00	96.0	108.00	96.38
22	3: 10: 0	85 1.417	194.00	96.0	114.00	71.44
23	3: 15: 0	90 1.500	201.00	96.0	121.00	84.33
24	3: 20: 0	95 1.583	206.00	96.0	126.00	60.24
25	3: 25: 0	100 1.667	212.00	96.0	132.00	71.44
26	3: 30: 0	105 1.750	218.00	96.0	138.00	72.28
27	3: 35: 0	110 1.833	224.00	96.0	144.00	72.28
28	3: 40: 0	115 1.917	230.00	96.0	150.00	71.44
29	3: 45: 0	120 2.000	234.00	96.0	154.00	48.19
30	3: 48: 0	123 2.050	582.00	96.0	502.00	6987.29
31	3: 51: 0	126 2.100	732.00	96.0	652.00	3011.76
32	3: 54: 0	129 2.150	751.00	96.0	671.00	374.15
33	3: 57: 0	132 2.200	763.00	96.0	683.00	240.94
34	4: 0: 0	135 2.250	784.00	96.0	704.00	421.65
35	4: 3: 0	138 2.300	804.00	96.0	724.00	401.57
36	4: 6: 0	141 2.350	816.00	96.0	736.00	240.94
37	4: 9: 0	144 2.400	826.00	96.0	746.00	196.92
38	4: 12: 0	147 2.450	835.00	96.0	755.00	180.71
39	4: 15: 0	150 2.500	846.00	96.0	766.00	220.86
40	4: 18: 0	153 2.550	852.00	96.0	772.00	120.47
41	4: 21: 0	156 2.600	858.00	96.0	778.00	120.47
42	4: 24: 0	159 2.650	863.00	96.0	783.00	98.46
43	4: 27: 0	162 2.700	868.00	96.0	788.00	100.39
44	4: 30: 0	165 2.750	872.00	96.0	792.00	80.31
45	4: 33: 0	168 2.800	876.00	96.0	796.00	80.31
46	4: 36: 0	171 2.850	879.00	96.0	799.00	60.24
47	4: 39: 0	174 2.900	881.00	96.0	801.00	39.38
48	4: 42: 0	177 2.950	883.00	96.0	803.00	40.16
49	4: 45: 0	180 3.000	885.00	96.0	805.00	40.16

4kt #9066
0

9066

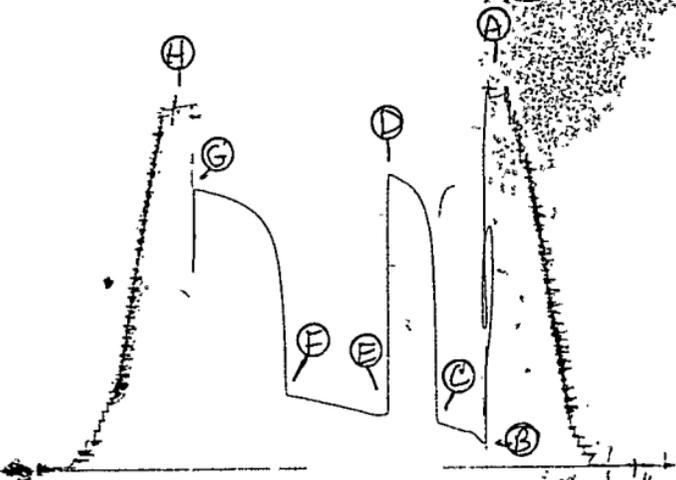
DST # 5

3553



Ybr. # 9066

H



9066

DST # 5

3474



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 9067

OK

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

Elevation 13215B Formation mts Eff. Pay - Ft.

District Augusta Date 12-11-85 Customer Order No. 5

COMPANY NAME Ranso Oil Co Inc.

ADDRESS 240 Page Court, 220 W Douglas Wichita, Ks 67202

LEASE AND WELL NO. Kincaide #1 COUNTY Butler STATE Ks Sec. 28 Twp. 29 Rge. 6E

Mail Invoice To Same #1 KINCAIDE No. Copies Requested 1

Mail Charts To Same No. Copies Requested 5

Formation Test No. 6 Interval Tested From 2705 ft. to 2715 ft. Total Depth 2715 ft.

Packer Depth 2705 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2700 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2707 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 2710 ft. Recorder Number 13553 Cap. 4000

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

Drilling Contractor Ranso Oil Co Inc #2 Drill Collar Length 150 I. D. 2 1/4 in.

Mud Type Chem Viscosity 40 Weight Pipe Length - I. D. - in.

Weight 9.4 Water Loss 12 cc. Drill Pipe Length 2535 I. D. 3.8 in.

Chlorides 1900 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 10 ft. Size - in.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

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

Blow: Air thru out test

Recovered 535 ft. of Gas in pipe

Recovered 105 ft. of Heavy Oil 380 Gravity

Recovered 120 ft. of Muddy gas cut oil 70% oil 30% mud

Recovered 60 ft. of Slightly bit cut muddy saltwater (Sulphur cut) 5% oil 95% water

Recovered - ft. of .42 Res @ 58 F

Chlorides 30,000 P.P.M. Sample Jars used 3 Remarks:

Time On Location 1:00 12-8 A.M. Time Pick Up Tool 5:15 12-11 P.M. Time Off Location 8thly A.M.

Time Set Packer(s) 7:00 P.M. Time Started Off Bottom 10:00 P.M. Maximum Temperature 106

Initial Hydrostatic Pressure (A) 1355 P.S.I.

Initial Flow Period Minutes 30 (B) 35 P.S.I. to (C) 60 P.S.I.

Initial Closed In Period Minutes 30 (D) 790 P.S.I.

Final Flow Period Minutes 60 (E) 90 P.S.I. to (F) 100 P.S.I.

Final Closed In Period Minutes 60 (G) 825 P.S.I.

Final Hydrostatic Pressure (H) 1335 P.S.I. (3474)

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 Robert Olsen Signature of Customer or his authorized representative

Western Representative Norman Allen 0150

FIELD INVOICE table with items: Open Hole Test \$250, Mistrun \$, 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 12-11

Test Ticket No. 9067

Recorder No. 3474

Capacity _____

Location _____

Ft. _____

Clock No. _____ Elevation _____

Well Temperature _____ °F

Point	Pressure	P.S.I.
A Initial Hydrostatic Mud	<u>1348</u>	P.S.I.
B First Initial Flow Pressure	<u>30</u>	P.S.I.
C First Final Flow Pressure	<u>60</u>	P.S.I.
D Initial Closed-in Pressure	<u>777</u>	P.S.I.
E Second Initial Flow Pressure	<u>80</u>	P.S.I.
F Second Final Flow Pressure	<u>98</u>	P.S.I.
G Final Closed-in Pressure	<u>808</u>	P.S.I.
H Final Hydrostatic Mud	<u>1317</u>	P.S.I.

Open Tool	Time Given	M	Time Computed
First Flow Pressure	<u>30</u>	Mins.	<u>30</u> Mins.
Initial Closed-in Pressure	<u>30</u>	Mins.	<u>30</u> Mins.
Second Flow Pressure	<u>60</u>	Mins.	<u>60</u> Mins.
Final Closed-in Pressure	<u>60</u>	Mins.	<u>69</u> Mins.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

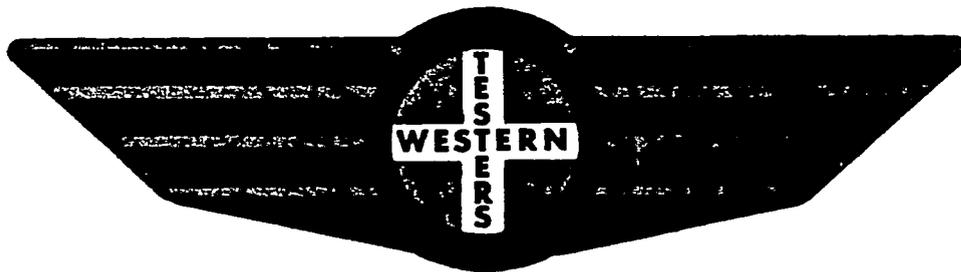
Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 23 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point	Press.	Point	Press.	Point	Press.	Point	Press.
Mins.		Minutes		Minutes		Minutes	
P 1 0	<u>30</u>						
P 2 5	<u>30</u>	3	<u>500</u>	5	<u>80</u>	3	<u>558</u>
P 3 10	<u>32</u>	6	<u>605</u>	10	<u>80</u>	6	<u>626</u>
P 4 15	<u>39</u>	9	<u>660</u>	15	<u>80</u>	9	<u>665</u>
P 5 20	<u>47</u>	12	<u>694</u>	20	<u>80</u>	12	<u>693</u>
P 6 25	<u>54</u>	15	<u>716</u>	25	<u>82</u>	15	<u>711</u>
P 7 30	<u>60</u>	18	<u>735</u>	30	<u>83</u>	18	<u>725</u>
P 8 35		21	<u>750</u>	35	<u>85</u>	21	<u>738</u>
P 9 40		24	<u>762</u>	40	<u>87</u>	24	<u>747</u>
P10 45		27	<u>769</u>	45	<u>91</u>	27	<u>756</u>
P11 50		30	<u>777</u>	50	<u>94</u>	30	<u>763</u>
P12 55		33		55	<u>96</u>	33	<u>770</u>
P13 60		36		60	<u>98</u>	36	<u>777</u>
P14 65		39		65		39	<u>782</u>
P15 70		42		70		42	<u>786</u>
P16 75		45		75		45	<u>790</u>
P17 80		48		80		48	<u>793</u>
P18 85		51		85		51	<u>796</u>
P19 90		54		90		54	<u>799</u>
P20 95		57		95		57	<u>802</u>
100		60		100		60	<u>804</u>
						63	<u>806</u>
						66	<u>807</u>
						69	<u>808</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 KINGADE SEC. 28 TWP. 29S RGE. 6E TEST NO. 6 DATE 12/11/85

SUBSURFACE PRESSURE SURVEY

DATE : 12-11-85 TICKET : 9067
 CUSTOMER : RANGE OIL COMPANY INC. LEASE : KINCADE
 WELL : 1 TEST: 6 GEOLOGIST : R. OLSEN
 ELEVATION : 1321 FORMATION : MISSISSIPPI
 SECTION : 28 TOWNSHIP : 6E
 RANGE : 6E COUNTY : BUTLER STATE : KANSAS
 GAUGE SN# : 3474 RANGE : 3000 CLOCK : 12

INTERVAL FROM : 2705 TO : 2715 TOTAL DEPTH : 2715
 DEPTH OF SELECTIVE ZONE :
 PACKER DEPTH : 2705 SIZE : 6.75
 PACKER DEPTH : 2700 SIZE : 6.75
 PACKER DEPTH : SIZE :
 PACKER DEPTH : SIZE :

DRILLING CON. : RANGE DRLG. RIG #2
 MUD TYPE : CHEMICAL VISCOSITY : 40
 WEIGHT : 9.4 WATER LOSS (CC) : 12
 CHLORIDES (PPM) : 1900
 JARS-MAKE : SERIAL NUMBER :
 DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 150 FT I.D. inch : 2.25
 WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
 DRILL PIPE LENGTH : 2535 FT I.D. inch : 3.80
 TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
 ANCHOR LENGTH : 10 FT ANCHOR SIZE : 5.50
 SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
 MAIN HOLE SIZE : 7 7/8 IN TOOL JOINT SIZE : 4 1/2

BLOW COMMENT #1 : FAIR BLOW THROUGHOUT TEST.
 BLOW COMMENT #2 :
 BLOW COMMENT #3 :
 BLOW COMMENT #4 :

RECOVERED : 555 FT OF: GAS ABOVE FLUID. 7.8 Barrels
 RECOVERED : 105 FT OF: GASSY FREE OIL (38 DEGREES GRAVITY). 1.5
 Barrels
 RECOVERED : 120 FT OF: MUDDY GAS CUT OIL 1.7 Barrels
 RECOVERED : 0 FT OF: (70% OIL; 30% MUD). 0.0 Barrels
 RECOVERED : 60 FT OF: SLIGHTLY OIL CUT MUDDY SALT WATER 0.8 Ba
 rrels
 RECOVERED : 0 FT OF: (SULPHUR CUT; 5% OIL; 95% WATER). 0.0 Ba
 rrels
 RECOVERED : 0 FT OF: RESISTIVITY .42 AT 58 DEGREES. 0.0 Barre
 ls
 RECOVERED : 0 FT OF: CHLORIDES 30000 PPM. 0.0 Barrels
 RECOVERED : 0 FT OF: 0.0 Barrels
 Total Barrels = 11.8 Total Production = 188.5 Bpd

REMARK 1 :
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S) : 7:00 PM TIME STARTED OFF BOTTOM : 10:00 PM
 WELL TEMPERATURE : 106
 INITIAL HYDROSTATIC PRESSURE (A) 1348
 INITIAL FLOW PERIOD MIN: 30 (B) 30 PSI TO (C) : 60
 INITIAL CLOSED IN PERIOD MIN: 30 (D) 777
 FINAL FLOW PERIOD MIN: 60 (E) 80 PSI TO (F) : 98
 FINAL CLOSED IN PERIOD MIN: 69 (G) 808
 FINAL HYDROSTATIC PRESSURE (H) 1317

Pressure Transient Report

DATA FILE.....
COMPANY.....RANGE OIL COMPANY INC.
DATE OF TEST.....12-11-85
FIELD NAME.....KINCADE
WELL NAME.....1
LOCATION.....BUTLER-KANSAS
JOB NUMBER.....9067
GAUGE NUMBER.....3474
GAUGE DEPTH.....2715

COMMENTS

START UP TIME (mo/da/yr) (hr:min:sec)
 12./11/85. 7.: 0.: 0.

COMPANY : RANGE OIL COMPANY INC. FIELD : KINCADE

WELL : 1 JOB # : 9067

GAUGE # : 3474 DEPTH : 2715

MON/DAY : 12/11

PAGE 1

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS	HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
1	7: 0: 0	0	0.000	30.00	106.0	0.00	0.00
2	7: 5: 0	5	0.083	30.00	106.0	0.00	0.00
3	7:10: 0	10	0.167	32.00	106.0	2.00	23.81
4	7:15: 0	15	0.250	39.00	106.0	9.00	84.33
5	7:20: 0	20	0.333	47.00	106.0	17.00	96.38
6	7:25: 0	25	0.417	54.00	106.0	24.00	83.35
7	7:30: 0	30	0.500	60.00	106.0	30.00	72.28
8	7:33: 0	33	0.550	500.00	106.0	470.00	8834.51
9	7:36: 0	36	0.600	605.00	106.0	575.00	2108.24
10	7:39: 0	39	0.650	660.00	106.0	630.00	1083.08
11	7:42: 0	42	0.700	694.00	106.0	664.00	682.67
12	7:45: 0	45	0.750	716.00	106.0	686.00	441.73
13	7:48: 0	48	0.800	735.00	106.0	705.00	381.49
14	7:51: 0	51	0.850	750.00	106.0	720.00	301.18
15	7:54: 0	54	0.900	762.00	106.0	732.00	236.31
16	7:57: 0	57	0.950	769.00	106.0	739.00	140.55
17	8: 0: 0	60	1.000	777.00	106.0	747.00	160.63
18	8: 5: 0	65	1.083	80.00	106.0	50.00	-8396.80
19	8:10: 0	70	1.167	80.00	106.0	50.00	0.00
20	8:15: 0	75	1.250	80.00	106.0	50.00	0.00
21	8:20: 0	80	1.333	80.00	106.0	50.00	0.00
22	8:25: 0	85	1.417	82.00	106.0	52.00	23.81
23	8:30: 0	90	1.500	83.00	106.0	53.00	12.05
24	8:35: 0	95	1.583	85.00	106.0	55.00	24.09
25	8:40: 0	100	1.667	87.00	106.0	57.00	23.81
26	8:45: 0	105	1.750	91.00	106.0	61.00	48.19
27	8:50: 0	110	1.833	94.00	106.0	64.00	36.14
28	8:55: 0	115	1.917	96.00	106.0	66.00	23.81
29	9: 0: 0	120	2.000	98.00	106.0	68.00	24.09
30	9: 3: 0	123	2.050	558.00	106.0	528.00	9236.08
31	9: 6: 0	126	2.100	626.00	106.0	596.00	1365.33
32	9: 9: 0	129	2.150	665.00	106.0	635.00	768.00
33	9:12: 0	132	2.200	693.00	106.0	663.00	562.20
34	9:15: 0	135	2.250	711.00	106.0	681.00	361.41
35	9:18: 0	138	2.300	725.00	106.0	695.00	281.10
36	9:21: 0	141	2.350	738.00	106.0	708.00	261.02
37	9:24: 0	144	2.400	747.00	106.0	717.00	177.23
38	9:27: 0	147	2.450	756.00	106.0	726.00	180.71
39	9:30: 0	150	2.500	763.00	106.0	733.00	140.55
40	9:33: 0	153	2.550	770.00	106.0	740.00	140.55
41	9:36: 0	156	2.600	777.00	106.0	747.00	140.55
42	9:39: 0	159	2.650	782.00	106.0	752.00	98.46
43	9:42: 0	162	2.700	786.00	106.0	756.00	80.31
44	9:45: 0	165	2.750	790.00	106.0	760.00	80.31
45	9:48: 0	168	2.800	793.00	106.0	763.00	60.24
46	9:51: 0	171	2.850	796.00	106.0	766.00	60.24
47	9:54: 0	174	2.900	799.00	106.0	769.00	59.08
48	9:57: 0	177	2.950	802.00	106.0	772.00	60.24
49	10: 0: 0	180	3.000	804.00	106.0	774.00	40.16

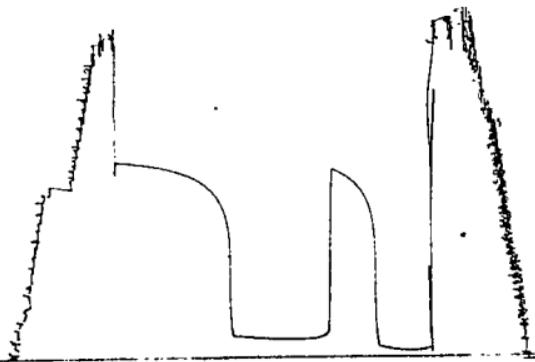
COMPANY : RANGE OIL COMPANY INC.
WELL : 4 JOB # : 9067
GAUGE # : 3474 DEPTH : 2715
MON/DAY : 12/11

FIELD : KINCADE

PAGE 2

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
50	10: 3: 0	183 3.050	806.00	106.0	776.00	40.16
51	10: 6: 0	186 3.100	807.00	106.0	777.00	20.08
52	10: 9: 0	189 3.150	808.00	106.0	778.00	19.69

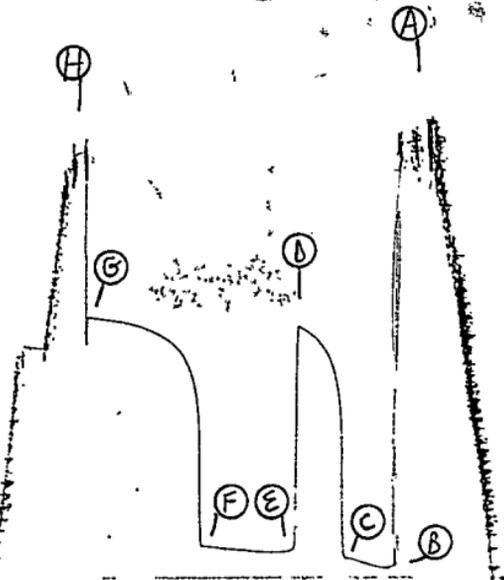
TKT # 9067



13553 DST-6 9067

TKT # 9067

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3474 DST # 6 9067



WESTERN TESTING CO., INC.
FORMATION TESTING

OK

TICKET NO 9068

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

Elevation 1321 KB Formation Anbuchle Eff. Pay Ft.

District Augusta Date 12-13-85 Customer Order No.

COMPANY NAME Range Oil Co. Inc.

ADDRESS 240 Page Court 220 St Douglas Wichita, Ks 67202

LEASE AND WELL NO. Kincaid #1 COUNTY Butler STATE Ks Sec. 28 Twp. 29 Rge. 6E

Mail Invoice To Same No. Copies Requested 1

Co. Name #1 Kincaid Address No. Copies Requested 5

Formation Test No. 7 Interval Tested From 3114 ft. to 3124 ft. Total Depth 3124 ft.

Packer Depth 3114 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3109 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3116 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 3119 ft. Recorder Number 13553 Cap. 4000

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

Drilling Contractor Range Oil Co. Inc #2 Drill Collar Length 150 I. D. 2 1/2 in.

Mud Type Chem Viscosity 50 Weight Pipe Length - I. D. - in.

Weight 9.7 Water Loss 12. - cc. Drill Pipe Length 2944 I. D. 3.8 in.

Chlorides 1700 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 10 ft. Size 5 1/2 in.

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

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

Blow: Strong diminishing to fair @ end of test

Recovered 2100 ft. of Saltwater .54 Res @ 54°F

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides 25000 P.P.M. Sample Jars used 2 Remarks:

Time On Location 1:00 12-8 A.M. Time Pick Up Tool 2:15 12-13 A.M.

Time Set Packer(s) 4:15 P.M. Time Started Off Bottom 7:25 P.M. Time Off Location Standby A.M.

Initial Hydrostatic Pressure (A) 1590 P.S.I. Maximum Temperature 118°

Initial Flow Period Minutes 30 (B) 90 P.S.I. to (C) 455 P.S.I.

Initial Closed In Period Minutes 40 (D) 1165 P.S.I.

Final Flow Period Minutes 60 (E) 490 P.S.I. to (F) 940 P.S.I.

Final Closed In Period Minutes 60 (G) 1165 P.S.I.

Final Hydrostatic Pressure (H) 1575 P.S.I. 3474

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 Robert Olsen Signature of Customer or his authorized representative

Western Representative Norman Allen

FIELD INVOICE

Table with 2 columns: Item and Price. Items include Open Hole Test (\$550), Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub. (\$25), Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.

0/50

WESTERN TESTING CO., INC.

Pressure Data

Date 12-13

Test Ticket No. 9068

Recorder No. 3474

Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1578</u> P.S.I.			
B First Initial Flow Pressure	<u>87</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>455</u> P.S.I.	Initial Closed-in Pressure	<u>40</u> Mins.	<u>39</u> Mins.
D Initial Closed-in Pressure	<u>1155</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	455 <u>515</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	_____ Mins.
F Second Final Flow Pressure	<u>930</u> P.S.I.			
G Final Closed-in Pressure	<u>1158</u> P.S.I.			
H Final Hydrostatic Mud	<u>1559</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

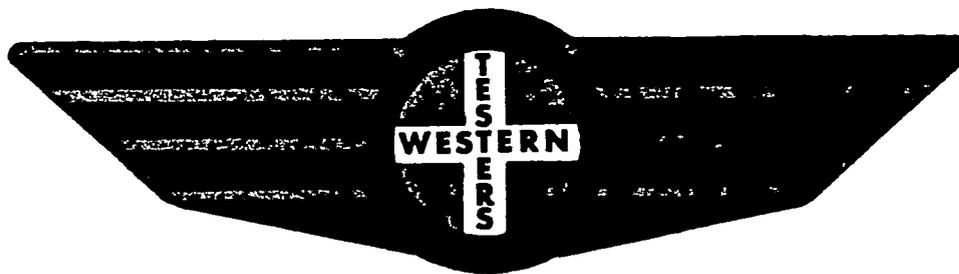
Initial Shut-In
Breakdown: 13 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 21 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>87</u>						
P 2 5	<u>144</u>	3	<u>1141</u>	5	455 <u>515</u>	3	<u>1146</u>
P 3 10	<u>210</u>	6	<u>1150</u>	10	<u>567</u>	6	<u>1151</u>
P 4 15	<u>270</u>	9	<u>1152</u>	15	<u>617</u>	9	<u>1153</u>
P 5 20	<u>338</u>	12	<u>1153</u>	20	<u>666</u>	12	<u>1154</u>
P 6 25	<u>397</u>	15	<u>1154</u>	25	<u>708</u>	15	<u>1155</u>
P 7 30	<u>455</u>	18	<u>✓</u>	30	<u>746</u>	18	<u>1156</u>
P 8 35		21	<u>✓</u>	35	<u>786</u>	21	<u>1157</u>
P 9 40		24	<u>1154</u>	40	<u>823</u>	24	<u>1157</u>
P10 45		27	<u>1155</u>	45	<u>855</u>	27	<u>1157</u>
P11 50		30	<u>1155</u>	50	<u>888</u>	30	<u>1158</u>
P12 55		33	<u>✓</u>	55	<u>915</u>	33	
P13 60		36	<u>✓</u>	60	<u>930</u>	36	
P14 65		39	<u>1155</u>	65		39	
P15 70		42		70		42	
P16 75		45		75		45	
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>63</u>	<u>1158</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY RANGE OIL COMPANY, INC. LEASE & WELL NO. #1 KINGCADE SEC. 28 TWP. 29S RGE. 6E TEST NO. 7 DATE 12/13/85

SUBSURFACE PRESSURE SURVEY

DATE : 12-13-85
 CUSTOMER : RANGE OIL COMPANY INC.
 WELL : 1 TEST: 7
 ELEVATION : 1321
 SECTION : 28
 RANGE : 6E COUNTY : BUTLER
 GAUGE SN# : 3474 RANGE : 3000
 TICKET : 9068
 LEASE : KINCADE
 GEOLOGIST : R. OLSEN
 FORMATION : ARBUCKLE
 TOWNSHIP : 29S
 STATE : KANSAS
 CLOCK : 12

INTERVAL FROM : 3114 TO : 3124 TOTAL DEPTH : 3124
 DEPTH OF SELECTIVE ZONE :
 PACKER DEPTH : 3114 SIZE : 6.75
 PACKER DEPTH : 3109 SIZE : 6.75
 PACKER DEPTH : SIZE :
 PACKER DEPTH : SIZE :

DRILLING CON. : RANGE DRLG. RIG #2
 MUD TYPE : CHEMIOCAL VISCOSITY : 50
 WEIGHT : 9.7 WATER LOSS (CC) : 12.0
 CHLORIDES (PPM) : 1700
 JARS-MAKE : SERIAL NUMBER :
 DID WELL FLOW ? : NO REVERSED OUT ? : YES

DRILL COLLAR LENGTH : 150 FT I.D. inch : 2.25
 WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
 DRILL PIPE LENGTH : 2944 FT I.D. inch : 3.80
 TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
 ANCHOR LENGTH : 10 FT ANCHOR SIZE : 5.50
 SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
 MAIN HOLE SIZE : 7 7/8 IN TOOL JOINT SIZE : 4 1/2

BLOW COMMENT #1 : STRONG BLOW DIMINISHING TO FAIR BLOW AT END OF TEST.
 BLOW COMMENT #2 :
 BLOW COMMENT #3 :
 BLOW COMMENT #4 :

RECOVERED : 2100 FT OF: SALT WATER 28.1 Barrels
 RECOVERED : 0 FT OF: (RESISITIVITY .54 AT 54 DEGREES). 0.0 Ba
 rrels
 RECOVERED : 0 FT OF: CHLORIDES 25000 PPM. 0.0 Barrels
 RECOVERED : 0 FT OF: 0.0 Barrels
 Total Barrels = 28.1 Total Production = 449.4 Bpd

REMARK 1 :
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S) : 4:15 PM TIME STARTED OFF BOTTOM : 7:25 PM
 WELL TEMPERATURE : 118
 INITIAL HYDROSTATIC PRESSURE (A) 1578
 INITIAL FLOW PERIOD MIN: 30 (B) 87 PSI TO (C) : 455
 INITIAL CLOSED IN PERIOD MIN: 39 (D) 1155
 FINAL FLOW PERIOD MIN: 60 (E) 515 PSI TO (F) : 930
 FINAL CLOSED IN PERIOD MIN: 63 (G) 1158
 FINAL HYDROSTATIC PRESSURE (H) 1559

Pressure Transient Report

DATA FILE.....

COMPANY.....RANGE OIL COMPANY INC.

DATE OF TEST.....12-13-85

FIELD NAME.....KINCADE

WELL NAME.....1

LOCATION.....BUTLER-KANSAS

JOB NUMBER.....9068

GAUGE NUMBER.....3474

GAUGE DEPTH.....3124

COMMENTS

START UP TIME (mo/da/yr) (hr:min:sec)
 12./13/85. 4.: 15.: 0.

COMPANY : RANGE OIL COMPANY INC. FIELD : KINCADE
 WELL : 1 JOB # : 9068
 GAUGE # : 3474 DEPTH : 3124
 MON/DAY : 12/13

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
1	4:15: 0	0 0.000	87.00	118.0	0.00	40.16
2	4:20: 0	5 0.083	144.00	118.0	57.00	686.68
3	4:25: 0	10 0.167	210.00	118.0	123.00	785.86
4	4:30: 0	15 0.250	270.00	118.0	183.00	722.82
5	4:35: 0	20 0.333	338.00	118.0	251.00	819.20
6	4:40: 0	25 0.417	397.00	118.0	310.00	702.51
7	4:45: 0	30 0.500	455.00	118.0	368.00	698.73
8	4:48: 0	33 0.550	1141.00	118.0	1054.00	13773.80
9	4:51: 0	36 0.600	1150.00	118.0	1063.00	180.71
10	4:54: 0	39 0.650	1152.00	118.0	1065.00	39.38
11	4:57: 0	42 0.700	1153.00	118.0	1066.00	20.08
12	5: 0: 0	45 0.750	1154.00	118.0	1067.00	20.08
13	5: 3: 0	48 0.800	1154.00	118.0	1067.00	0.00
14	5: 6: 0	51 0.850	1154.00	118.0	1067.00	0.00
15	5: 9: 0	54 0.900	1154.00	118.0	1067.00	0.00
16	5:12: 0	57 0.950	1155.00	118.0	1068.00	20.08
17	5:15: 0	60 1.000	1155.00	118.0	1068.00	0.00
18	5:18: 0	63 1.050	1155.00	118.0	1068.00	0.00
19	5:21: 0	66 1.100	1155.00	118.0	1068.00	0.00
20	5:24: 0	69 1.150	1155.00	118.0	1068.00	0.00
21	5:29: 0	74 1.233	515.00	118.0	428.00	-7710.12
22	5:34: 0	79 1.316	567.00	118.0	480.00	626.45
23	5:39: 0	84 1.400	617.00	118.0	530.00	595.35
24	5:44: 0	89 1.483	666.00	118.0	579.00	590.31
25	5:49: 0	94 1.566	708.00	118.0	621.00	505.98
26	5:54: 0	99 1.650	746.00	118.0	659.00	452.47
27	5:59: 0	104 1.733	786.00	118.0	699.00	481.88
28	6: 4: 0	109 1.816	823.00	118.0	736.00	445.74
29	6: 9: 0	114 1.900	855.00	118.0	768.00	381.02
30	6:14: 0	119 1.983	888.00	118.0	801.00	397.55
31	6:19: 0	124 2.066	915.00	118.0	828.00	325.27
32	6:24: 0	129 2.150	930.00	118.0	843.00	178.60
33	6:27: 0	132 2.200	1146.00	118.0	1059.00	4336.94
34	6:30: 0	135 2.250	1151.00	118.0	1064.00	100.39
35	6:33: 0	138 2.300	1153.00	118.0	1066.00	40.16
36	6:36: 0	141 2.350	1154.00	118.0	1067.00	20.08
37	6:39: 0	144 2.400	1155.00	118.0	1068.00	19.69
38	6:42: 0	147 2.450	1156.00	118.0	1069.00	20.08
39	6:45: 0	150 2.500	1157.00	118.0	1070.00	20.08
40	6:48: 0	153 2.550	1157.00	118.0	1070.00	0.00
41	6:51: 0	156 2.600	1157.00	118.0	1070.00	0.00
42	6:54: 0	159 2.650	1158.00	118.0	1071.00	19.69
43	6:57: 0	162 2.700	1158.00	118.0	1071.00	0.00
44	7: 0: 0	165 2.750	1158.00	118.0	1071.00	0.00
45	7: 3: 0	168 2.800	1158.00	118.0	1071.00	0.00
46	7: 6: 0	171 2.850	1158.00	118.0	1071.00	0.00
47	7: 9: 0	174 2.900	1158.00	118.0	1071.00	0.00
48	7:12: 0	177 2.950	1158.00	118.0	1071.00	0.00
49	7:15: 0	180 3.000	1158.00	118.0	1071.00	0.00

COMPANY : RANGE OIL COMPANY INC. FIELD : KINCADE
WELL : 1 JOB # : 9068
GAUGE # : 3474 DEPTH : 3124
MON/DAY : 12/13

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
50	7:18: 0	183 3.050	1158.00	118.0	1071.00	0.00
51	7:21: 0	186 3.100	1158.00	118.0	1071.00	0.00
52	7:24: 0	189 3.150	1158.00	118.0	1071.00	0.00
53	7:27: 0	192 3.200	1158.00	118.0	1071.00	0.00

4kt. # 9068
○

13553

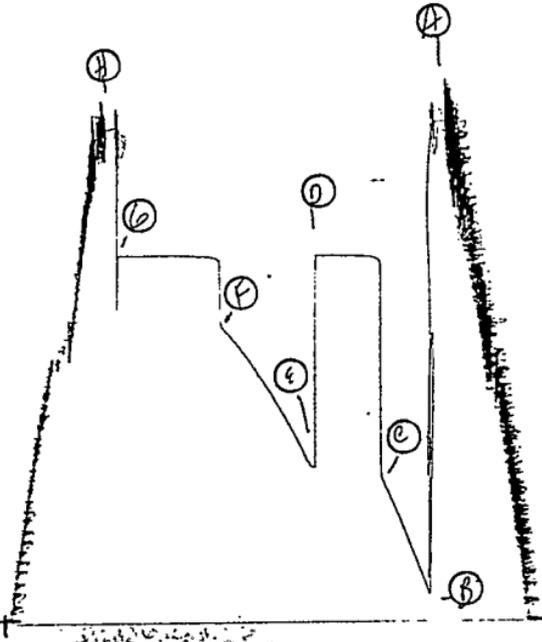
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