



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 10861

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

Elevation 1084KB Formation Mamm/Pounce Eff. Pay - Ft.

WICHITA, KANSAS 67201

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

COMPANY NAME Range Oil Co

ADDRESS 240 Page Court 220 W Douglas Wichita, Ks 67202

LEASE AND WELL NO O'Brien #1 COUNTY Cowley STATE Ks Sec 22 Twp 34S3E Rge 3E

Mail Invoice To Same No. Copies Requested 1

Mail Charts To Same #1 O'Brien Address No. Copies Requested 5

Formation Test No. 1 Interval Tested From 2962 ft. to 3030 ft. Total Depth 3030 ft.

Packer Depth 2962 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2957 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2970 ft. Recorder Number 13553 Cap. 4000

Bottom Recorder Depth (Outside) 2973 ft. Recorder Number 3474 Cap. 3000

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

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

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

Weight 9.8 Water Loss 12.8 cc. Drill Pipe Length 2762 I. D. 3.8 in.

Chlorides 2200 P.P.M. Test Tool Length 20 ft. Tool Size 5 200 in.

Jars: Make - Serial Number - Anchor Length 68 ft. Size 5 200 & DR 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 XH in.

Blow: Air thruout test

Recovered 40 ft. of Drilling mud

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides 2500 P.P.M. Sample Jars used 1 Remarks:

Time On Location 8:45 9-1 P.M. Time Pick Up Tool 11:10 A.M.

Time Set Packer(s) 12:30 A.M. Time Started Off Bottom 3:45 P.M.

Maximum Temperature 116

Initial Hydrostatic Pressure (A) 1550 P.S.I.

Initial Flow Period Minutes 30 (B) 65 P.S.I. to (C) 40 P.S.I.

Initial Closed In Period Minutes 45 (D) 215 P.S.I.

Final Flow Period Minutes 60 (E) 65 P.S.I. to (F) 40 P.S.I.

Final Closed In Period Minutes 60 (G) 225 P.S.I.

Final Hydrostatic Pressure (H) 1530 P.S.I. 13553

COMPANY TERMS

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

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

Test Approved By Signature of Customer or his authorized representative

Western Representative Norman Allen

FIELD INVOICE

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

WESTERN TESTING CO., INC.

Pressure Data

Date 9-12

Test Ticket No. 10861

Recorder No. 13553

Capacity _____ Location _____ Ft

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1544</u> P.S.I.		
B First Initial Flow Pressure	<u>31</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>31</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>198</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>35</u> P.S.I.	<u>60</u> Mins.	<u>57</u> Mins.
F Second Final Flow Pressure	<u>35</u> P.S.I.		
G Final Closed-in Pressure	<u>200</u> P.S.I.		
H Final Hydrostatic Mud	<u>1520</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: 16 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.

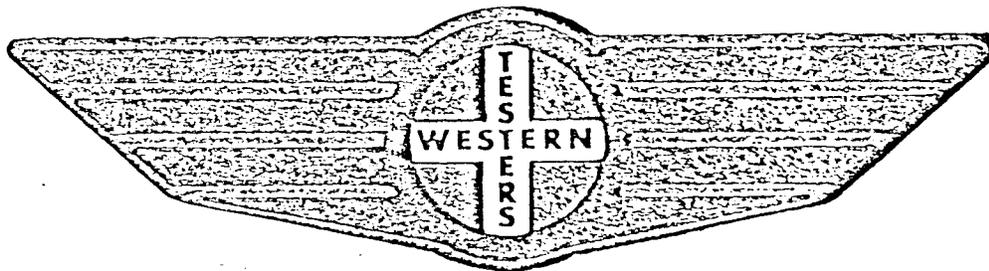
Final Shut-In
Breakdown: 20 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>31</u>	0	<u>31</u>	0	<u>35</u>	0	<u>35</u>
P 2 5		3	<u>35</u>	5		3	<u>39</u>
P 3 10		6	<u>46</u>	10		6	<u>47</u>
P 4 15		9	<u>57</u>	15		9	<u>58</u>
P 5 20		12	<u>70</u>	20		12	<u>67</u>
P 6 25		15	<u>82</u>	25		15	<u>75</u>
P 7 30	<u>31</u>	18	<u>95</u>	30		18	<u>84</u>
P 8 35		21	<u>109</u>	35		21	<u>95</u>
P 9 40		24	<u>121</u>	40		24	<u>104</u>
P10 45		27	<u>131</u>	45		27	<u>113</u>
P11 50		30	<u>143</u>	50		30	<u>123</u>
P12 55		33	<u>156</u>	55		33	<u>132</u>
P13 60		36	<u>167</u>	60	<u>35</u>	36	<u>141</u>
P14 65		39	<u>178</u>	65		39	<u>150</u>
P15 70		42	<u>189</u>	70		42	<u>158</u>
P16 75		45	<u>198</u>	75		45	<u>167</u>
P17 80		48		80		48	<u>175</u>
P18 85		51		85		51	<u>183</u>
P19 90		54		90		54	<u>191</u>
P20 95		57		95		57	<u>200</u>
100		60		100		60	

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

Company _____
UNITED OIL COMPANY'S AND _____
Lease & Well No. _____
DEC. _____
TWP. _____
R. _____

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 9-12-85	TICKET #10861
CUSTOMER: RANGE OIL COMPANY INC.	LEASE: O'BRIEN
WELL: 1	TEST: 1
ELEVATION (KB): 1084	GEOLOGIST: S.M. KREIDLER
SECTION: 22	FORMATION: MARMATON/PAWHEE
RANGE: 3E	TOWNSHIP: 34S
GAUGE SN #13553	COUNTY: COWLEY
	STATE: KANSAS
	RANGE: 4000
	CLOCK: 12

INTERVAL TEST FROM: 2962 FT TO: 3030 FT TOTAL DEPTH: 3030 FT
 DEPTH OF SELECTIVE ZONE: FT
 PACKER DEPTH: 2962 FT SIZE: 6 3/4 IN PACKER DEPTH: 2957 FT SIZE: 6 3/4 IN
 PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RANGE DRLG. RIG #2
 MUD TYPE: CHEMICAL VISCOSITY: 41
 WEIGHT: 9.8 WATER LOSS (CC): 12.8
 CHLORIDES (P.P.M.): 2200
 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: 2762 FT I.D.: 3.8 IN
 TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN
 ANCHOR LENGTH: 68 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: 40	FT	OF: DRILLING MUD.
RECOVERED:	FT	OF: CHLORIDES 2500 PPM.
RECOVERED:	FT	OF:

REMARKS:

TIME SET PACKER(S): 12:30 AM	TIME STARTED OFF BOTTOM: 3:45 AM
WELL TEMPERATURE: 116 °F	
INITIAL HYDROSTATIC PRESSURE:	(A) 1544 PSI
INITIAL FLOW PERIOD MIN: 30	(B) 31 PSI TO (C) 31 PSI
INITIAL CLOSED IN PERIOD MIN: 45	(D) 198 PSI
FINAL FLOW PERIOD MIN: 60	(E) 35 PSI TO (F) 35 PSI
FINAL CLOSED IN PERIOD MIN: 57	(G) 200 PSI
FINAL HYDROSTATIC PRESSURE	(H) 1520 PSI

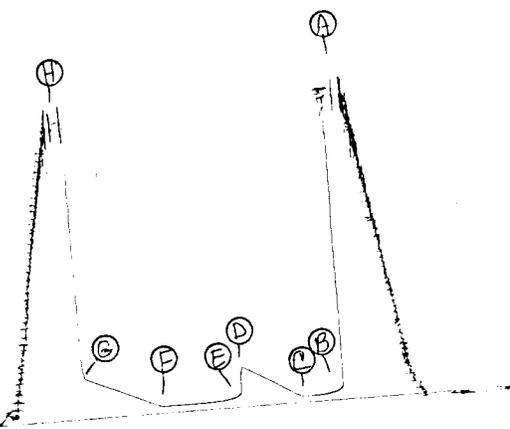
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