



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET N^o 20203

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

WICHITA, KANSAS 67201

Elevation 11344B

Formation Miss

Eff. Pay _____ Ft.

District Augusta

Date 11-4-93

Customer Order No. _____

COMPANY NAME Range Oil Co

ADDRESS 125 N Market Suite 1120 Wichita Ks 67202

LEASE AND WELL NO Voigtlander 11A5 COUNTY Chautauque STATE KS

Sec. 11 Twp 32S Rge 9E

Mail Invoice To Same

No. Copies Requested _____

Mail Charts To Same

Co. Name #5 Voigtlander A

Address

No. Copies Requested _____

Formation Test No. DST#1 Interval Tested From 2172 ft. to 2190 ft. Total Depth 2190 ft.

Packer Depth 2167 ft. Size 6 5/8 in.

Packer Depth _____ ft. Size _____ in.

Packer Depth 2172 ft. Size 6 5/8 in.

Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 2184 ft.

Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 2187 ft.

Recorder Number 3354 Cap. 4800

Below Straddle Recorder Depth _____ ft.

Recorder Number _____ Cap. _____

Drilling Contractor Offens Ritz

Drill Collar Length 300 I. D. 2.25 in.

Mud Type Chem Viscosity 44

Weight Pipe Length _____ I. D. _____ in.

Weight 9.5 Water Loss 9.2 cc.

Drill Pipe Length 1852 I. D. 3P in.

Chlorides 800 P.P.M.

Test Tool Length 20 ft. Tool Size 5/8 in.

Jars: Make _____ Serial Number _____

Anchor Length 18 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 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Very Weak blow top of bucket thru-out test (FFRFFP)

Recovered 10 ft. of Oil cut mud 50% Oil 50% mud

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

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

Time On Location 8:00 A.M.

Time Pick Up Tool 1:00 A.M.

Time Off Location _____ A.M.

Time Set Packer(s) 02:00 A.M.

Time Started Off Bottom 5:00 A.M.

Maximum Temperature 101°F

Initial Hydrostatic Pressure _____ (A) 1215 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) 75 P.S.I.

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

Final Closed In Period _____ Minutes 60 (G) 75 P.S.I.

Final Hydrostatic Pressure _____ (H) 1205 P.S.I.

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 \$ _____

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 _____

WESTERN TESTING CO., INC.

Pressure Data

DATE

11-4-92
10979

Test Ticket No.

20202

Recorder No.

Capacity

Location

Pt.

Clock No.

Elevation

Well Temperature

°F

Point

Pressure

Time
Given

Time
Computed

A Initial Hydrostatic Mud 1149 P.S.I.
B First Initial Flow Pressure P.S.I.
C First Final Flow Pressure P.S.I.
D Initial Closed-in Pressure P.S.I.
E Second Initial Flow Pressure P.S.I.
F Second Final Flow Pressure P.S.I.
G Final Closed-in Pressure P.S.I.
H Final Hydrostatic Mud 1092 P.S.I.

Open Tool

M

First Flow Pressure

Mins.

Mins.

Initial Closed-in Pressure

Mins.

Mins.

Second Flow Pressure

Mins.

Mins.

Final Closed-in Pressure

Mins.

63 Mins.

PRESSURE BREAKDOWN

First Flow Pressure

Breakdown: Inc.

of mins. and a

final inc. of Min.

Initial Shut-In

Breakdown: Inc.

of mins. and a

final inc. of Min.

Second Flow Pressure

Breakdown: Inc.

of mins. and a

final inc. of Min.

Final Shut-In

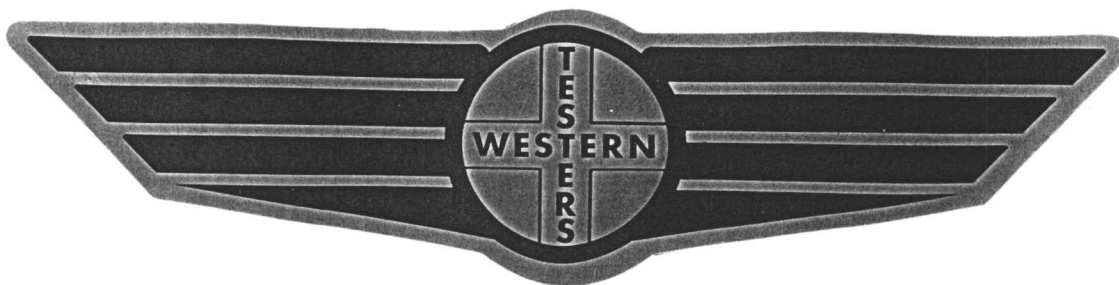
Breakdown: Inc.

of mins. and a

final inc. of Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>22</u>	0	<u>22</u>	0	<u>28</u>	0	<u>28</u>
P 2 5		3	<u>25</u>	5		3	<u>28</u>
P 3 10		6	<u>25</u>	10		6	<u>28</u>
P 4 15		9	<u>25</u>	15		9	<u>29</u>
P 5 20		12	<u>28</u>	20		12	<u>30</u>
P 6 25		15	<u>31</u>	25		15	<u>31</u>
P 7 30	<u>22</u>	18	<u>36</u>	30	<u>28</u>	18	<u>32</u>
P 8 35		21	<u>40</u>	35		21	<u>34</u>
P 9 40		24	<u>43</u>	40		24	<u>35</u>
P 10 45		27	<u>46</u>	45	<u>28</u>	27	<u>36</u>
P 11 50		30	<u>49</u>	50		30	<u>38</u>
P 12 55		33	<u>52</u>	55		33	<u>40</u>
P 13 60		36	<u>54</u>	60	<u>28</u>	36	<u>42</u>
P 14 65		39	<u>56</u>	65		39	<u>44</u>
P 15 70		42		70		42	<u>46</u>
P 16 75		45		75		45	<u>48</u>
P 17 80		48		80		48	<u>50</u>
P 18 85		51		85		51	<u>52</u>
P 19 90		54		90		54	<u>55</u>
P 20 95		57		95		57	<u>57</u>
WTC 100		60		100		60	<u>59</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE	: 12/4/93	TICKET	: 20203
CUSTOMER	: RANGE OIL COMPANY, INC.	LEASE	: VOIGTLANDER A
WELL	: #5	TEST:	1
ELEVATION	: 1134 KB	GEOLOGIST	: BLAIR
SECTION	: 11	FORMATION	: MISSISSIPPI
RANGE	: 9E	TOWNSHIP	: 32S
GAUGE SN#	: 10979	STATE	: KS
		CLOCK	: 12
	COUNTY: CHAUTAUQUA		
	RANGE : 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	2172.00 ft	TO:	2190.00 ft	TVD:	2190.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	2184.0 ft		2187.0 ft		
TEMPERATURE:	101.0				
DRILL COLLAR LENGTH:	300.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	1852.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	18.0 ft	ANCHOR SIZE:		5.500 in	
SURFACE CHOKE SIZE :	0.750 in	BOTTOM CHOKE SIZE:		0.750 in	
MAIN HOLE SIZE :	7.875 in	TOOL JOINT SIZE :		4.5XH	
PACKER DEPTH:	2167.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	2172.0 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 2	VISCOSITY :	44.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	9.200 cc
WEIGHT :	9.500 ppg	SERIAL NUMBER:	
CHLORIDES :	800 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

VERY WEAK BLOW - TOP OF BUCKET THROUGHOUT ON BOTH
FLOW PERIODS.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
10.0	50.0	0.0	0.0	50.0	OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0246	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.7868	STB/D
MUD VOLUME:	0.0246	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0492	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1215.00

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

FINAL HYDROSTATIC PRESSURE: 1205.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1111.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	22.00	22.00
INITIAL SHUT-IN	39.00		56.00
FINAL FLOW	60.00	28.00	28.00
FINAL SHUT-IN	63.00		61.00

FINAL HYDROSTATIC PRESSURE: 1092.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 12/4/93	TICKET : 20203
CUSTOMER : RANGE OIL COMPANY, INC.	LEASE : VOIGTLANDER A
WELL : #5	GEOLOGIST: BLAIR
ELEVATION: 1134 KB	FORMATION: MISSISSIPPI
SECTION : 11	TOWNSHIP : 32S
RANGE : 9E	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: CHAUTAUQUA	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	22.00	22.00
5.00	22.00	0.00
10.00	22.00	0.00
15.00	22.00	0.00
20.00	22.00	0.00
25.00	22.00	0.00
30.00	22.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	22.00	22.00	0.00
6.00	22.00	0.00	0.00
9.00	23.00	1.00	0.00
12.00	28.00	5.00	0.00
15.00	31.00	3.00	0.00
18.00	36.00	5.00	0.00
21.00	40.00	4.00	0.00
24.00	43.00	3.00	0.00
27.00	46.00	3.00	0.00
30.00	49.00	3.00	0.00
33.00	52.00	3.00	0.00
36.00	54.00	2.00	0.00
39.00	56.00	2.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

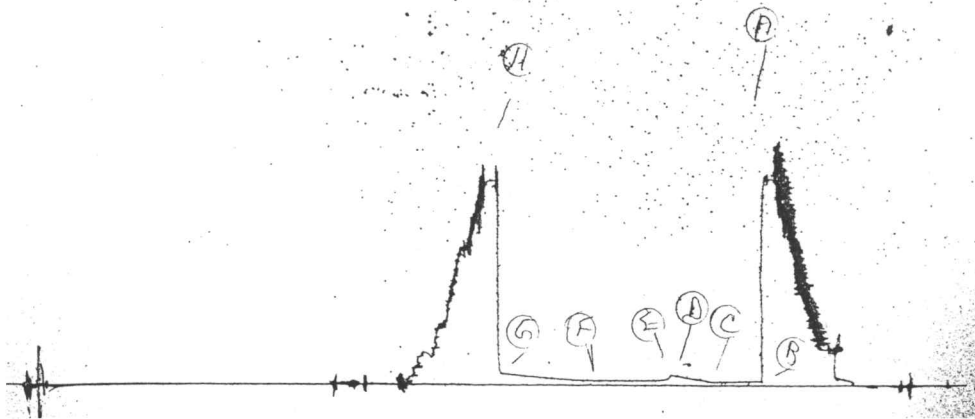
Time (min)	Pressure	Delta P
0.00	28.00	28.00
5.00	28.00	0.00
10.00	28.00	0.00
15.00	28.00	0.00
20.00	28.00	0.00
25.00	28.00	0.00
30.00	28.00	0.00
35.00	28.00	0.00
40.00	28.00	0.00
45.00	28.00	0.00
50.00	28.00	0.00
55.00	28.00	0.00
60.00	28.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	28.00	28.00	0.00
6.00	29.00	1.00	0.00
9.00	30.00	1.00	0.00
12.00	31.00	1.00	0.00
15.00	32.00	1.00	0.00
18.00	33.00	1.00	0.00
21.00	34.00	1.00	0.00
24.00	35.00	1.00	0.00
27.00	36.00	1.00	0.00
30.00	38.00	2.00	0.00
33.00	40.00	2.00	0.00
36.00	42.00	2.00	0.00
39.00	44.00	2.00	0.00
42.00	46.00	2.00	0.00
45.00	48.00	2.00	0.00
48.00	50.00	2.00	0.00
51.00	52.00	2.00	0.00
54.00	53.00	1.00	0.00
57.00	57.00	4.00	0.00
60.00	59.00	2.00	0.00
63.00	61.00	2.00	0.00

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