WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET Nº 7961

OK

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

Elevation 1353 Kb (Kelly Bushing) Formation Mississippi Eff. Pay ____ Ft.

District Augusta Date 12-16-80 Customer Order No. ____

COMPANY NAME Range Oil Company Inc

ADDRESS 240 Page Court Wichita Ks

LEASE AND WELL NO. Jacobs #1 COUNTY Butler STATE Ks Sec. 6 Twp. 25S Rge. 4E

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

Mail Charts To Same No. Copies Requested 5
Address

Formation Test No. 1 Interval Tested from 2730 ft. to 2740 ft. Total Depth 2740 ft.

Packer Depth 2730 ft. Size 6 3/4 in. Packer Depth ____ ft. Size ____ in.

Packer Depth 2725 ft. Size 6 3/4 in. Packer Depth ____ ft. Size ____ in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 2735 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2740 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor Co Tools #1 Drill Collar Length 90 I. D. ____ in.

Mud Type Chem Viscosity 43 Weight Pipe Length ____ I. D. ____ in.

Weight 10.3 Water Loss 24.3 cc. Drill Pipe Length 2620 I. D. ____ in.

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

Jars: Make NO Serial Number ____ Anchor Length 10 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 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Surge as tool opened NO blow

Recovered 6 ft. of mud

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks: ____

RECEIVED
DEC 17 1980

Time On Location 4:00 A.M./P.M. Time Pick Up Tool 6:30 A.M./P.M. Time Off Location 2:00PM A.M./P.M.

Time Set Packer(s) 8:45 A.M./P.M. Time Started Off Bottom 10:45 A.M./P.M. Maximum Temperature 99°

Initial Hydrostatic Pressure		(A)	1410	P.S.I.		
Initial Flow Period	Minutes 30	(B)	10	P.S.I. to (C)	10	P.S.I.
Initial Closed In Period	Minutes 30	(D)	436	P.S.I.		
Final Flow Period	Minutes 30	(E)	31	P.S.I. to (F)	31	P.S.I.
Final Closed In Period	Minutes 30	(G)	402	P.S.I.		
Final Hydrostatic Pressure		(H)	1410	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 Stephen Kreider
Signature of Customer or his authorized representative

Western Representative Kenny Kirkendall

FIELD INVOICE

Open Hole Test	$ 550.00
Misrun	$ ____
Straddle Test	$ ____
Jars	$ ____
Selective Zone	$ ____
Safety Joint	$ ____
Standby	$ ____
Evaluation	$ ____
Extra Packer	$ ____
Circ. Sub.	$ ____
20 Mileage	$ 15.00
Fluid Sampler	$ ____
Extra Charts	$ ____
Insurance	$ ____
TOTAL	$ 565.00

WESTERN TESTING CO., INC.
Pressure Data

Date 12-16 Test Ticket No. 7961

Recorder No. 2605 Capacity 4150 Location 2735 Ft.

Clock No. ——— Elevation 1353 KB Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1406	P.S.I.	Open Tool 8:45 A M	
B First Initial Flow Pressure	30	P.S.I.	First Flow Pressure 30 Mins.	30 Mins.
C First Final Flow Pressure	16	P.S.I.	Initial Closed-in Pressure 30 Mins.	30 Mins.
D Initial Closed-in Pressure	429	P.S.I.	Second Flow Pressure 30 Mins.	30 Mins.
E Second Initial Flow Pressure	74	P.S.I.	Final Closed-in Pressure 30 Mins.	30 Mins.
F Second Final Flow Pressure	33	P.S.I.		
G Final Closed-in Pressure	407	P.S.I.		
H Final Hydrostatic Mud	1406	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	30
P 2 5	23
P 3 10	19
P 4 15	17
P 5 20	16
P 6 25	16
P 7 30	16
P 8 35	
P 9 40	
P10 45	
P11 50	
P12 55	
P13 60	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	16
3	61
6	216
9	303
12	345
15	375
18	394
21	405
24	417
27	426
30	429
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	74
5	53
10	40
15	36
20	34
25	33
30	33
35	
40	
45	
50	
55	
60	
65	
70	
75	
80	
85	
90	

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

Point Minutes	Press.
0	33
3	59
6	176
9	269
12	318
15	347
18	366
21	383
24	396
27	405
30	407
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

TKT # 7961

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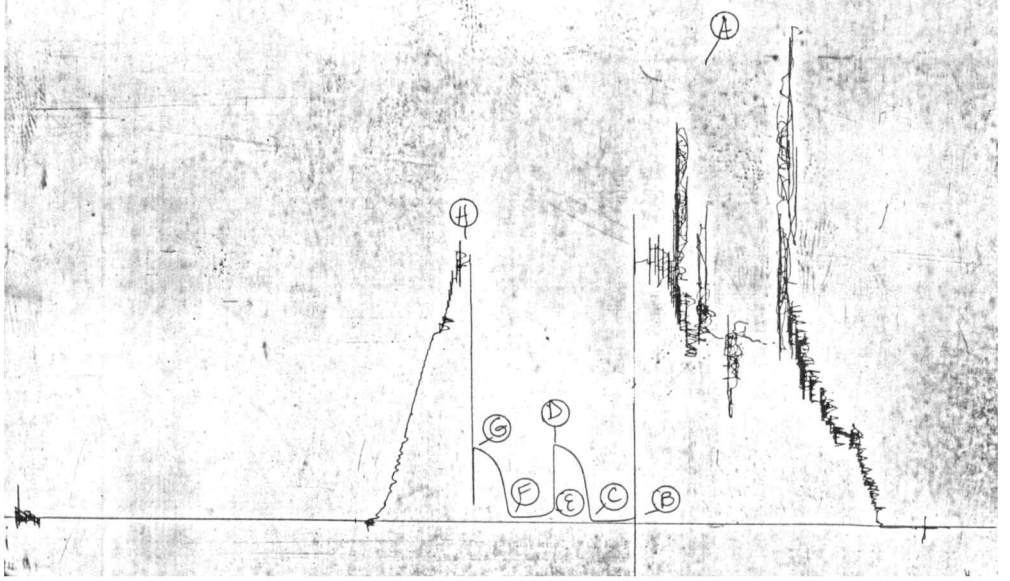

Company Range Oil Company, Inc. Lease & Well No. Jacobs #1

Elevation 1353 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 7961

Date 12-16-80 Sec. 6 Twp. 25S Range 4E County Butler State Kansas

Test Approved by Stephan Kreider Western Representative Kenny Kirkendall

Formation Test No. 1 Interval Tested from 2730 ft. to 2740 ft. Total Depth 2740 ft.

Packer Depth 2730 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2725 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2735 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2740 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor Range Oil Co. Inc. Rig #1 Drill Collar Length 90 I. D. - in.

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

Weight 10.3 Water Loss 21.3 cc. Drill Pipe Length 2620 I. D. - in.

Chlorides - P.P.M. Test Tool Length 20 ft. Tool Size 5½ in.

Jars: Make No Serial Number - Anchor Length 10 ft. Size 5½ in.

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

Main Hole Size 7 7/8 in. Tool Joint Size 4½XH in.

Blow: Surge as tool opened. No blow.

Recovered 6 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:45 A.M. P.M. Time Started Off Bottom 10:45 A.M. ~~P.M.~~ Maximum Temperature 99

Initial Hydrostatic Pressure (A) 1406 P.S.I.

Initial Flow Period Minutes 30 (B) 30 P.S.I. to (C) 16 P.S.I.

Initial Closed In Period Minutes 30 (D) 429 P.S.I.

Final Flow Period Minutes 30 (E) 74 P.S.I. to (F) 33 P.S.I.

Final Closed In Period Minutes 30 (G) 407 P.S.I.

Final Hydrostatic Pressure (H) 1406 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 12-16-80

Recorder No. 2605 Capacity 4150 Test Ticket No. 7961

Clock No. - Elevation 1353 Kelly Bushing Location 2735 Ft.

Well Temperature 99 °F

Point	Pressure	
A Initial Hydrostatic Mud	1406	P.S.I.
B First Initial Flow Pressure	30	P.S.I.
C First Final Flow Pressure	16	P.S.I.
D Initial Closed-in Pressure	429	P.S.I.
E Second Initial Flow Pressure	74	P.S.I.
F Second Final Flow Pressure	33	P.S.I.
G Final Closed-in Pressure	407	P.S.I.
H Final Hydrostatic Mud	1406	P.S.I.

	Time Given	Time Computed
Open Tool	8:45A M	
First Flow Pressure	30 Mins.	30 Mins.
Initial Closed-in Pressure	30 Mins.	30 Mins.
Second Flow Pressure	30 Mins.	30 Mins.
Final Closed-in Pressure	30 Mins.	30 Mins.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	30
P 2 5	23
P 3 10	19
P 4 15	17
P 5 20	16
P 6 25	16
P 7 30	16
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	16
3	61
6	216
9	303
12	345
15	375
18	394
21	405
24	417
27	426
30	429

Second Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	74
5	53
10	40
15	36
20	34
25	33
30	33

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

Point Minutes	Press.
0	33
3	59
6	176
9	269
12	318
15	347
18	366
21	383
24	396
27	405
30	407

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No. 7962

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

Kelly Bushing Elevation 1353 Kb Formation Mississippi Eff. Pay ____ Ft.

District Augusta Date 12-16-80 Customer Order No. ____

COMPANY NAME Range Oil Co Inc

ADDRESS 240 Page Court Wichita Ks

LEASE AND WELL NO. Jacobs #1 COUNTY Butler STATE Ks Sec. 6 Twp 25S Rge 4E

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

Mail Charts To Same Address ____ No. Copies Requested 5

Formation Test No. 2 Interval Tested from 2740 ft. to 2760 ft. Total Depth 2760 ft.

Packer Depth 2740 ft. Size 6 3/4 in. Packer Depth ____ ft. Size ____ in.

Packer Depth 2735 ft. Size 6 3/4 in. Packer Depth ____ ft. Size ____ in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 2745 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2749 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor Range Drilling #1 Drill Collar Length 290 I. D. ____ in.

Mud Type Chem Viscosity 43 Weight Pipe Length ____ I. D. ____ in.

Weight 16 Water Loss 16 cc. Drill Pipe Length 2630 I. D. ____ in.

Chlorides 3200 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make NO Serial Number ____ Anchor Length 20 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 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Very weak throughout test

Recovered ____ ft. of NO fluid recovery Hyd tool malfunction

Recovered ____ ft. of

Recovered ____ ft. of

Recovered ____ ft. of

Recovered ____ ft. of

Remarks: NO Charge

RECEIVED
DEC 18 1980

Time On Location 7:00 A.M. P.M. Time Pick Up Tool ____ A.M. P.M. Time Off Location ____ A.M. P.M.

Time Set Packer(s) 7:10 A.M. P.M. Time Started Off Bottom ____ A.M. P.M. Maximum Temperature 99

Initial Hydrostatic Pressure		(A)	1441	P.S.I.	
Initial Flow Period	Minutes 30	(B)	31	P.S.I. to (C)	31 P.S.I.
Initial Closed In Period	Minutes 30	(D)	476	P.S.I.	
Final Flow Period	Minutes 60	(E)	31	P.S.I. to (F)	31 P.S.I.
Final Closed In Period	Minutes 60	(G)	497	P.S.I.	
Final Hydrostatic Pressure		(H)	1441	P.S.I.	

COMPANY TERMS

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

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

Test Approved By ____
Signature of Customer or his authorized representative

Western Representative Kenny Kirkendall

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	$
TOTAL	$

WESTERN TESTING CO., INC.

Pressure Data

Test Ticket No. 7962

Date _____ Location _____ Ft.

Recorder No. _____ Capacity _____ Well Temperature _____ °F

Clock No. _____ Elevation _____

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	P.S.I.	Open Tool	M	
B First Initial Flow Pressure	P.S.I.	First Flow Pressure	Mins.	Mins.
C First Final Flow Pressure	P.S.I.	Initial Closed-in Pressure	Mins.	Mins.
D Initial Closed-in Pressure	P.S.I.	Second Flow Pressure	Mins.	Mins.
E Second Initial Flow Pressure	P.S.I.	Final Closed-in Pressure	Mins.	Mins.
F Second Final Flow Pressure	P.S.I.			
G Final Closed-in Pressure	P.S.I.			
H Final Hydrostatic Mud	P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure

Breakdown: _____ Inc.

of 5 mins. and a

final inc. of 0 Min.

Point Mins.	Press.
P 1	
P 2	
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In

Breakdown: _____ Inc.

of 3 mins. and a

final inc. of 0 Min.

Point Minutes	Press.
63	
66	
69	
72	
75	
78	
81	
84	
87	
90	
93	
96	
99	
102	
105	
108	
111	
114	
117	
120	

Second Flow Pressure

Breakdown: _____ Inc.

of 5 mins. and a

final inc. of 0 Min.

Point Minutes	Press.

Final Shut-In

Breakdown: _____ Inc.

of 3 mins. and a

final inc. of 0 Min.

Point Minutes	Press.
63	485
66	487
69	489
72	490
75	491
78	492
81	493
84	
87	
90	
93	
96	
99	
102	
105	
108	
111	
114	
117	
120	

WESTERN TESTING CO., INC.
Pressure Data

Date 12-16 Test Ticket No. 7962

Recorder No. 2605 Capacity 4150 Location 2745 Ft.

Clock No. ——— Elevation 1353 KB Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1440	P.S.I.	Open Tool 7:10 PM	
B First Initial Flow Pressure	23	P.S.I.	First Flow Pressure 30 Mins.	30 Mins.
C First Final Flow Pressure	18	P.S.I.	Initial Closed-in Pressure 30 Mins.	33 Mins.
D Initial Closed-in Pressure	472	P.S.I.	Second Flow Pressure 60 Mins.	60 Mins.
E Second Initial Flow Pressure	44	P.S.I.	Final Closed-in Pressure 60 Mins.	81 Mins.
F Second Final Flow Pressure	16	P.S.I.		
G Final Closed-in Pressure	493	P.S.I.		
H Final Hydrostatic Mud	1392	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	23
P 2 5	21
P 3 10	19
P 4 15	18
P 5 20	
P 6 25	
P 7 30	18
P 8 35	
P 9 40	
P10 45	
P11 50	
P12 55	
P13 60	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	18
3	18
6	18
9	32
12	197
15	303
18	362
21	398
24	424
27	443
30	458
33	472
36	
39	
42	
45	
48	
51	
54	
57	
60	

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

Point Minutes	Press.
0	44
5	25
10	19
15	19
20	18
25	17
30	16
35	
40	
45	
50	
55	
60	16
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 27 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	16
3	16
6	84
9	205
12	282
15	324
18	358
21	382
24	400
27	413
30	426
33	439
36	442
39	455
42	458
45	462
48	466
51	470
54	474
57	478
60	481

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Skt # 7962
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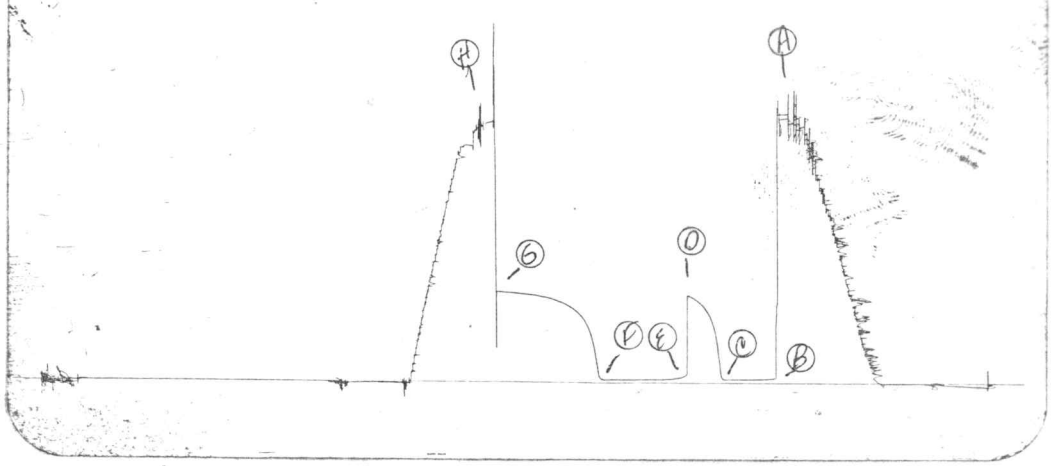

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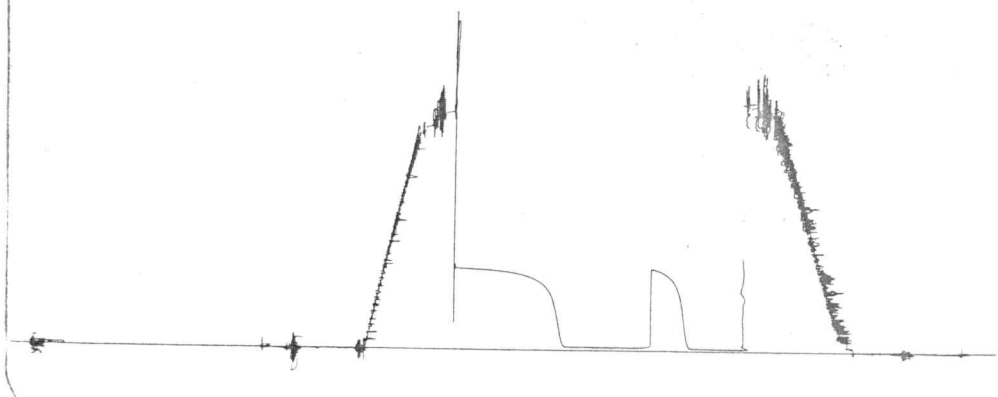

Company Range Oil Company, Inc. Lease & Well No. Jacobs #1

Elevation 1353 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 7962

Date 12-16-80 Sec. 6 Twp. 25S Range 4E County Butler State Kansas

Test Approved by - Western Representative Kenny Kirkendall

Formation Test No. 2 Interval Tested from 2740 ft. to 2760 ft. Total Depth 2760 ft.

Packer Depth 2740 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2735 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2745 ft. Recorder Number 2605 Cap. 4150

Bottom Recorder Depth (Outside) 2749 ft. Recorder Number 1560 Cap. 4500

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

Drilling Contractor Range Drilling Rig #1 Drill Collar Length 90 I. D. - in.

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

Weight 10.0 Water Loss 16.0 cc. Drill Pipe Length 2630 I. D. - in.

Chlorides 3200 P.P.M. Test Tool Length 20 ft. Tool Size 5½ in.

Jars: Make No Serial Number - Anchor Length 20 ft. Size 5½ 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 4½XH in.

Blow: Very weak throughout test.

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: No fluid recovery. Hydraulic tool malfunction. MISRUN

Time Set Packer(s) 7:10 ~~A.M.~~ P.M. Time Started Off Bottom - A.M. P.M. Maximum Temperature 99

Initial Hydrostatic Pressure (A) 1440 P.S.I.

Initial Flow Period Minutes 30 (B) 23 P.S.I. to (C) 18 P.S.I.

Initial Closed In Period Minutes 33 (D) 472 P.S.I.

Final Flow Period Minutes 60 (E) 44 P.S.I. to (F) 16 P.S.I.

Final Closed In Period Minutes 81 (G) 493 P.S.I.

Final Hydrostatic Pressure (H) 1392 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 12-16-80 Test Ticket No. 7962

Recorder No. 2605 Capacity 4150 Location 2745 Ft.

Clock No. -- -- Elevation 1353 Kelly Bushing Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1440	P.S.I.	Open Tool	7:10 PM
B First Initial Flow Pressure	23	P.S.I.	First Flow Pressure	30 Mins. 30 Mins.
C First Final Flow Pressure	18	P.S.I.	Initial Closed-in Pressure	30 Mins. 33 Mins.
D Initial Closed-in Pressure	472	P.S.I.	Second Flow Pressure	60 Mins. 60 Mins.
E Second Initial Flow Pressure	44	P.S.I.	Final Closed-in Pressure	60 Mins. 81 Mins.
F Second Final Flow Pressure	16	P.S.I.		
G Final Closed-in Pressure	493	P.S.I.		
H Final Hydrostatic Mud	1392	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	23
P 2 5	21
P 3 10	19
P 4 15	18
P 5 20	18
P 6 25	18
P 7 30	18
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	18
3	18
6	18
9	32
12	197
15	303
18	362
21	398
24	424
27	443
30	458
33	472

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

Point Minutes	Press.
0	44
5	25
10	19
15	19
20	18
25	17
30	16
35	16
40	16
45	16
50	16
55	16
60	16

Final Shut-In
Breakdown: 27 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	16
3	16
6	84
9	205
12	282
15	324
18	358
21	382
24	400
27	413
30	426
33	439
36	442
39	455
42	458
45	462
48	466
51	470
54	474
57	478
60	481

Cont. on next page

WESTERN TESTING CO., INC.

Pressure Data

Date 12-16-80 Test Ticket No. 7962

Recorder No. 2605 Capacity 4150 Location 2745 Ft.

Clock No. -- -- Elevation 1353 Kelly Bushing Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1440 P.S.I.	Open Tool	7:10 PM	
B First Initial Flow Pressure	23 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	18 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D Initial Closed-in Pressure	472 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	44 P.S.I.	Final Closed-in Pressure	60 Mins.	81 Mins.
F Second Final Flow Pressure	16 P.S.I.			
G Final Closed-in Pressure	493 P.S.I.			
H Final Hydrostatic Mud	1392 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1	
P 2	
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.

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

Point Minutes	Press.

Final Shut-In
Breakdown: 27 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
63	485
66	487
69	489
72	490
75	491
78	492
81	493

OK

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET Nº 7963

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

Kelly. Bushing Elevation 1353 Kb Formation Mississippi Eff. Pay Ft.

District Augusta Date 12-17-80 Customer Order No.

COMPANY NAME Range Oil Co. Inc

ADDRESS 240 Page Court

LEASE AND WELL NO. Jacobs #1 COUNTY Butler STATE Ks Sec. 6 Twp. 25S Rge. 4E

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

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 3 Interval Tested from 2740 ft. to 2760 ft. Total Depth 2760 ft.

Packer Depth 2740 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Packer Depth 2735 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2745 ft. Recorder Number 2605 Cap. 4500

Bottom Recorder Depth (Outside) 2749 ft. Recorder Number 15660 Cap. 4500

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Rig #1

Mud Type Chem Viscosity 43

Weight 10 Water Loss 14 cc.

Chlorides 3200 P.P.M.

Jars: Make NO Serial Number

Did Well Flow? NO Reversed Out

Drill Collar Length 90 I. D. in.

Weight Pipe Length I. D. in.

Drill Pipe Length 2630 I. D. in.

Test Tool Length 20 ft. Tool Size 5 1/2 in.

Anchor Length 20 ft. Size 5 1/2 in. 3/4

Surface Choke Size 3/4 in. Bottom Choke Size in.

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

Blow: Very weak blow first flow, NO blow second flow

Recovered 5 ft. of Drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

RECEIVED
DEC 18 1980

Time On Location A.M. P.M. Time Pick Up Tool A.M. P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 11:00 A.M. P.M. Time Started Off Bottom 1:00 A.M. P.M. Maximum Temperature 90

Initial Hydrostatic Pressure			(A)	1462	P.S.I.	
Initial Flow Period	Minutes 30		(B)	31	P.S.I. to (C)	31 P.S.I.
Initial Closed In Period	Minutes 30		(D)	487	P.S.I.	
Final Flow Period	Minutes 30		(E)	31	P.S.I. to (F)	31 P.S.I.
Final Closed In Period	Minutes 30		(G)	455	P.S.I.	
Final Hydrostatic Pressure			(H)	1462	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 Stephen Kreidler
Signature of Customer or his authorized representative

Western Representative Kenny Kuklendahl

FIELD INVOICE

Open Hole Test	$ 550.00
Misrun	$
Straddle Test	$
Jars	$
Selective Zone	$
Safety Joint	$
Standby	$
Evaluation	$
Extra Packer	$
Circ. Sub.	$
Mileage	$
Fluid Sampler	$
Extra Charts	$
Insurance	$
TOTAL	$ 550.00

WESTERN TESTING CO., INC.
Pressure Data

Date 12-17 Test Ticket No. 7963

Recorder No. 2605 Capacity 4150 Location 2745 Ft.

Clock No. —— Elevation 1353 KB Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1456 P.S.I.	Open Tool	11:00 AM	
B First Initial Flow Pressure	21 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	23 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	484 P.S.I.	Second Flow Pressure	30 Mins.	35 Mins.
E Second Initial Flow Pressure	48 P.S.I.	Final Closed-in Pressure	30 Mins.	27 Mins.
F Second Final Flow Pressure	25 P.S.I.			
G Final Closed-in Pressure	458 P.S.I.			
H Final Hydrostatic Mud	1456 P.S.I.			

* Pressures questionable due to plugging action.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	21
P 2 5	21
P 3 10	22
P 4 15	23
P 5 20	(
P 6 25	)
P 7 30	23
P 8 35	
P 9 40	
P10 45	
P11 50	
P12 55	
P13 60	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
0	23
3	90
6	239
9	324
12	381
15	411
18	436
21	455
24	469
27	475
30	484
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

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

Point Minutes	Press.
0	48
5	99*
10	74*
15	55*
20	42*
25	32
30	25
35	25
40	
45	
50	
55	
60	
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	25
3	227
6	303
9	353
12	383
15	407
18	425
21	439
24	449
27	458
30	
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

WTC - 4

2605

JK# 7963

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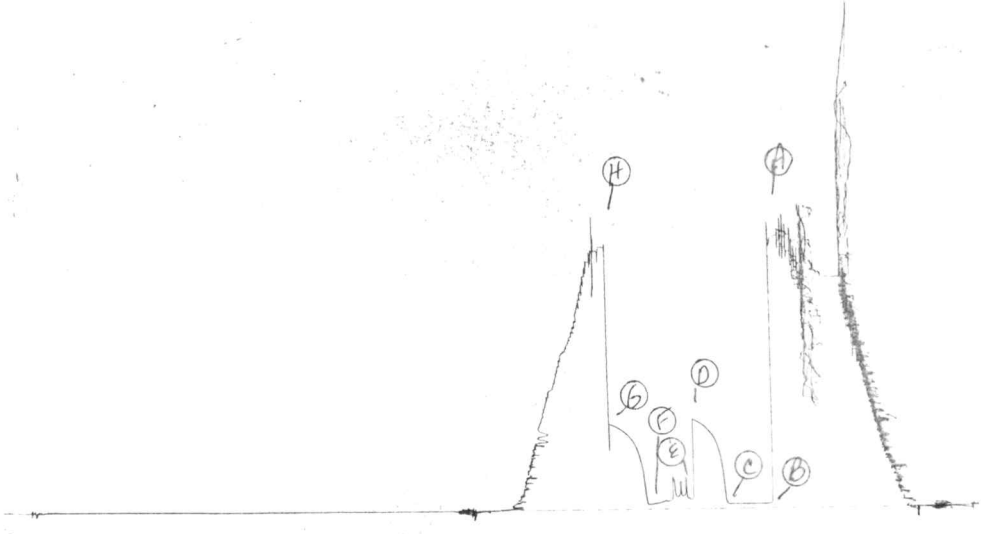

Company: Range Oil Company, Inc. | Lease & Well No.: Jacobs #1

Elevation: 1353 Kelly Bushing | Formation: Mississippi | Effective Pay: - Ft. | Ticket No.: 7963

Date: 12-17-80 | Sec.: 6 | Twp.: 25S | Range: 4E | County: Butler | State: Kansas

Test Approved by: Stephen Kreidler | Western Representative: Kenny Kirkendall

Formation Test No.: 3 | Interval Tested from: 2740 ft. to: 2760 ft. | Total Depth: 2760 ft.

Packer Depth: 2740 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Packer Depth: 2735 ft. | Size: 6 3/4 in. | Packer Depth: - ft. | Size: - in.

Depth of Selective Zone Set: -

Top Recorder Depth (Inside): 2745 ft. | Recorder Number: 2605 | Cap.: 4150

Bottom Recorder Depth (Outside): 2749 ft. | Recorder Number: 1560 | Cap.: 4500

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

Drilling Contractor: Range Drilling Rig #1 | Drill Collar Length: 90 | I. D.: - in.

Mud Type: Chemical | Viscosity: 43 | Weight Pipe Length: - | I. D.: - in.

Weight: 10.0 | Water Loss: 16.0 cc. | Drill Pipe Length: 2630 | I. D.: - in.

Chlorides: 3200 P.P.M. | Test Tool Length: 20 ft. | Tool Size: 5½ in.

Jars: Make: - | Serial Number: - | Anchor Length: 20 ft. | Size: 5½ in.

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

Main Hole Size: 7 7/8 in. | Tool Joint Size: 4½XH in.

Blow: Very weak blow initial flow period. No blow final flow period.

Recovered: 5 ft. of drilling mud

Recovered: ____ ft. of

Recovered: ____ ft. of

Recovered: ____ ft. of

Recovered: ____ ft. of

Remarks:

Time Set Packer(s): 11:00 ~~A.M.~~ ~~P.M.~~ | Time Started Off Bottom: 1:00 ~~A.M.~~ P.M. | Maximum Temperature: 99

Initial Hydrostatic Pressure			(A) 1456	P.S.I.		
Initial Flow Period	Minutes 30	(B) 21	P.S.I. to	(C) 23	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 484	P.S.I.			
Final Flow Period	Minutes 35	(E) 48	P.S.I. to	(F) 25	P.S.I.	
Final Closed In Period	Minutes 27	(G) 458	P.S.I.			
Final Hydrostatic Pressure			(H) 1456	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 12-17-80 Test Ticket No. 7963

Recorder No. 2605 Capacity 4150 Location 2745 Ft.

Clock No. - Elevation 1353 Kelly Bushing Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1456 P.S.I.	Open Tool	11:00A M	
B First Initial Flow Pressure	21 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	23 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	484 P.S.I.	Second Flow Pressure	30 Mins.	35 Mins.
E Second Initial Flow Pressure	48 P.S.I.	Final Closed-in Pressure	30 Mins.	27 Mins.
F Second Final Flow Pressure	25 P.S.I.	*Pressures questionable due to plugging action.		
G Final Closed-in Pressure	458 P.S.I.			
H Final Hydrostatic Mud	1456 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 6 Inc.		Breakdown: 10 Inc.		Breakdown: 7 Inc.		Breakdown: 9 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	21	0	23	0	48	0	24
P 2 5	21	3	90	5	99*	3	227
P 3 10	22	6	239	10	74*	6	303
P 4 15	23	9	324	15	55*	9	353
P 5 20	23	12	381	20	42*	12	383
P 6 25	23	15	411	25	32	15	407
P 7 30	23	18	436	30	25	18	425
P 8		21	455	35	25	21	439
P 9		24	469			24	449
P10		27	475			27	458
P11		30	484				
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							