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

Elevation 1176 Kelly Bushing Formation Kansas City Effective Pay -- Ft. Ticket No. 1823

Date 12/27/78 Sec. 11 Twp. 33S Range 3E County Cowley State Kansas

Test Approved by Stephen M. Kneidler Western Representative Roger Emmons/Will K. Hager

Formation Test No. 1 Interval Tested from 2830 ft. to 2842 ft. Total Depth 2842 ft.

Packer Depth 2825 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2830 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2834 ft. Recorder Number 1561 Cap. 3200

Bottom Recorder Depth (Outside) 2837 ft. Recorder Number 3085 Cap. 4500

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

Drilling Contractor Range Drilling Company Drill Collar Length 120 I. D. 2¼ in.

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

Weight 9.9 Water Loss 14.6 cc. Drill Pipe Length 2690 I. D. 3.8 in.

Chlorides 2,600 P.P.M. Test Tool Length 32' in. Tool Size 4½ in.

Jars: Make -- Serial Number -- Anchor Length 12 ft. Size 4½ 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 3½ IF in.

Blow: Fair throughout initial opening. Fair increasing to strong on final opening.

Recovered 35 ft. of oil cut mud

Recovered 115 ft. of salt water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

CHARTS READ OFF #3085

Time Set Packer(s) 2:45 ~~A.M.~~ ~~P.M.~~ Time Started Off Bottom 5:35 ~~A.M.~~ ~~P.M.~~ Maximum Temperature 109

Initial Hydrostatic Pressure			(A) 1459 P.S.I.			
Initial Flow Period	Minutes 30	(B) 13 P.S.I.	to (C) 47 P.S.I.			
Initial Closed In Period	Minutes 30	(D) 967 P.S.I.				
Final Flow Period	Minutes 45	(E) 66 P.S.I.	to (F) 82 P.S.I.			
Final Closed In Period	Minutes 60	(G) 972 P.S.I.				
Final Hydrostatic Pressure			(H) 1422 P.S.I.			

WESTERN TESTING CO., INC.
Pressure Data

Date 12/27/78 Test Ticket No. 1823

Recorder No. 1561 Capacity 3200 Location 2834 Ft.

Clock No. - Elevation 1176 Kelly Bushing Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1459 P.S.I.	Open Tool	2:45A M	
B First Initial Flow Pressure	13 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	47 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	967 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E Second Initial Flow Pressure	66 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	82 P.S.I.			
G Final Closed-in Pressure	972 P.S.I.			
H Final Hydrostatic Mud	1422 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	13
P 2 5	17
P 3 10	25
P 4 15	31
P 5 20	38
P 6 25	42
P 7 30	47
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	47
3	52
6	130
9	286
12	736
15	905
18	938
21	951
24	957
27	961
30	967

Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	66
5	66
10	69
15	70
20	72
25	72
30	75
35	77
40	80
45	82

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

Point Minutes	Press.
0	82
3	121
6	283
9	549
12	856
15	919
18	938
21	948
24	954
27	959
30	960
33	961
36	963
39	964
42	965
45	966
48	968
51	969
54	970
57	971
60	972

TBt # 1823
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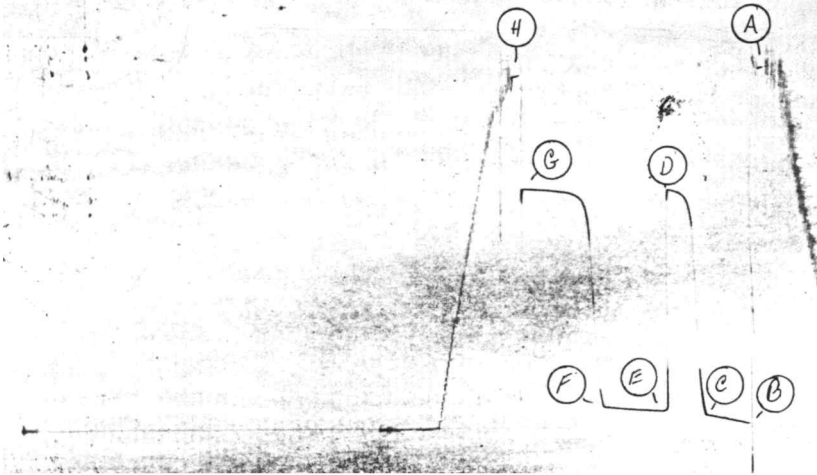

Company Range Oil Company, Inc. Lease & Well No. Cadwell #1

Elevation 1176 Kelly Bushing Formation Mississippi Effective Pay -- Ft. Ticket No. 1834

Date 12/29/78 Sec. 11 Twp. 33S Range 3E County Cowley State Kansas

Test Approved by Stephen M. Kreidler Western Representative Tim Wilson

Formation Test No. 2 Interval Tested from 3276' ft. to 3300' ft. Total Depth 3300' ft.

Packer Depth 3271 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3276 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set --

Top Recorder Depth (Inside) 3293 ft. Recorder Number 1559 Cap. 4200

Bottom Recorder Depth (Outside) 3296 ft. Recorder Number 1558 Cap. 4200

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

Drilling Contractor Range Oil Company #1 Drill Collar Length 127 I. D. 2¼ in.

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

Weight 9.7 Water Loss 11.2 cc. Drill Pipe Length 3130 I. D. 3.8 in.

Chlorides 3,200 P.P.M. Test Tool Length 43' in. Tool Size 5½ in.

Jars: Make -- Serial Number -- Anchor Length 24' 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 4½FH in.

Blow: Strong throughout test.

Recovered 120 ft. of drilling mud

Recovered 240 ft. of watery drilling mud

Recovered ft. of

Recovered ft. of

Recovered 360 ft. of Total fluid.

Remarks:

Time Set Packer(s) 9:33 ~~A.M.~~ ~~P.M.~~ Time Started Off Bottom 12?35 ~~A.M.~~ P.M. Maximum Temperature 119

Initial Hydrostatic Pressure ..... (A) 1717 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 125 P.S.I. to (C) 125 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 1309 P.S.I.

Final Flow Period ..... Minutes 60 (E) 161 P.S.I. to (F) 157 P.S.I.

Final Closed In Period ..... Minutes 60 (G) 873 P.S.I.

Final Hydrostatic Pressure ..... (H) 1673 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 12/29/78 Test Ticket No. 1834

Recorder No. 1559 Capacity 4200 Location 3293 Ft.

Clock No. -- Elevation 1176 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1717 P.S.I.	Open Tool	9:33A M	
B First Initial Flow Pressure	125 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	125 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1309 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	161 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	157 P.S.I.			
G Final Closed-in Pressure	873 P.S.I.			
H Final Hydrostatic Mud	1673 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	125
P 2 5	119
P 3 10	117
P 4 15	117
P 5 20	121
P 6 25	123
P 7 30	125
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	125
3	322
6	569
9	764
12	906
15	1075
18	1192
21	1238
24	1267
27	1284
30	1309

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

Point Minutes	Press.
0	161
5	148
10	144
15	144
20	150
25	155
30	155
35	155
40	155
45	157
50	157
55	157
60	157

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

Point Minutes	Press.
0	157
3	261
6	403
9	504
12	581
15	633
18	673
21	704
24	732
27	756
30	777
33	791
36	804
39	816
42	827
45	835
48	845
51	852
54	860
57	866
60	873

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