

Company Range Oil Company, Inc. Lease & Well No. #4 Stewart
Elevation ---- Formation Mississippi Effective Pay --- Ft. Ticket No. 18259
Date 11/ 22 /82 Sec. 19 Twp. 33S Range 10W County Barber State Kansas
Test Approved by Greg D. Bolte Western Representative Jim Wondra

Formation Test No. 1 Interval Tested from 4605 ft. to 4654 ft. Total Depth 4654 ft.
Packer Depth 4600 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Packer Depth 4605 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4611 ft. Recorder Number 13547 Cap. 4225
Bottom Recorder Depth (Outside) 4614 ft. Recorder Number 13552 Cap. 4050
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Range Drilling Rig #2 Drill Collar Length 120 I. D. 2 1/4 in.
Mud Type drispac Viscosity 52 Weight Pipe Length - I. D. - in.
Weight 9.6 Water Loss 11.6 cc. Drill Pipe Length 4464 I. D. 3.8 in.
Chlorides 12,500 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.
Jars: Make - Serial Number - Anchor Length 49 ft. Size 5 1/2 OD in.
Did Well Flow? Yes 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 FH in.

Blow: Strong blow throughout flow periods. Gas to surface in fifteen minutes on final flow period. See attached sheet for gas measurements.

Recovered 200 ft. of gas cut mud (slightly oil cut) 5% oil
Recovered 60 ft. of oil and gas cut mud 40% oil

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 10:30 ~~P.M.~~ A.M. Time Started Off Bottom 2:00 ~~A.M.~~ P.M. Maximum Temperature 125°
Initial Hydrostatic Pressure (A) 2341 P.S.I.
Initial Flow Period Minutes 30 (B) 59 P.S.I. to (C) 61 P.S.I.
Initial Closed In Period Minutes 30 (D) 1217 P.S.I.
Final Flow Period Minutes 60 (E) 66 P.S.I. to (F) 78 P.S.I.
Final Closed In Period Minutes 87 (G) 1548 P.S.I.
Final Hydrostatic Pressure (H) 2341 P.S.I.

GAS FLOW REPORT

Date 11/22/82 Ticket 18259 Company Range Oil Company, Inc.
 Well Name and No. #4 Stewart Dst No. 1 Interval Tested 4605'-4654'
 County Barber State Kansas Sec. 19 Twp. 33S Rg. 10W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
PRE FLOW					

Gas to surface in fifteen minutes. **SECOND FLOW**

20 min.	10" of water	1/2" orifice			19,900 CFPD
30 min.	7" of water	1/2" orifice			16,700 CFPD
40 min.	7" of water	1/2" orifice			16,700 CFPD
50 min.	7" of water	1/2" orifice			16,700 CFPD
60 min.	7" of water	1/2" orifice			16,700 CFPD

GAS BOTTLE

Serial No. --- Date Bottle Filled -- Date to be Invoiced 11/22/82

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 11 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Range Oil Company, Inc.

Authorized by Greg D. Bolte

WESTERN TESTING CO., INC. **Pressure Data**

Date 11/22/82 Test Ticket No. 18259
 Recorder No. 13547 Capacity 4225 Location 4611 Ft.
 Clock No. -- Elevation --- Well Temperature 125 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2341 P.S.I.	Open Tool	10:30A	M
B First Initial Flow Pressure	59 P.S.I.	First Flow Pressure	30 Mins	30 Mins
C First Final Flow Pressure	61 P.S.I.	Initial Closed-in Pressure	30 Mins	30 Mins
D Initial Closed-in Pressure	1217 P.S.I.	Second Flow Pressure	60 Mins	60 Mins
E Second Initial Flow Pressure	66 P.S.I.	Final Closed-in Pressure	90 Mins	87 Mins
F Second Final Flow Pressure	78 P.S.I.			
G Final Closed-in Pressure	1548 P.S.I.			
H Final Hydrostatic Mud	2341 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>29</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>59</u>	<u>0</u>	<u>61</u>	<u>0</u>	<u>66</u>	<u>0</u>	<u>78</u>
P 2 <u>5</u>	<u>59</u>	<u>3</u>	<u>171</u>	<u>5</u>	<u>66</u>	<u>3</u>	<u>202</u>
P 3 <u>10</u>	<u>59</u>	<u>6</u>	<u>318</u>	<u>10</u>	<u>66</u>	<u>6</u>	<u>345</u>
P 4 <u>15</u>	<u>59</u>	<u>9</u>	<u>481</u>	<u>15</u>	<u>66</u>	<u>9</u>	<u>483</u>
P 5 <u>20</u>	<u>59</u>	<u>12</u>	<u>626</u>	<u>20</u>	<u>68</u>	<u>12</u>	<u>611</u>
P 6 <u>25</u>	<u>60</u>	<u>15</u>	<u>765</u>	<u>25</u>	<u>70</u>	<u>15</u>	<u>744</u>
P 7 <u>30</u>	<u>61</u>	<u>18</u>	<u>889</u>	<u>30</u>	<u>72</u>	<u>18</u>	<u>852</u>
P 8 _____		<u>21</u>	<u>998</u>	<u>35</u>	<u>74</u>	<u>21</u>	<u>955</u>
P 9 _____		<u>24</u>	<u>1090</u>	<u>40</u>	<u>75</u>	<u>24</u>	<u>1044</u>
P10 _____		<u>27</u>	<u>1168</u>	<u>45</u>	<u>76</u>	<u>27</u>	<u>1118</u>
P11 _____		<u>30</u>	<u>1217</u>	<u>50</u>	<u>77</u>	<u>30</u>	<u>1187</u>
P12 _____				<u>55</u>	<u>78</u>	<u>33</u>	<u>1246</u>
P13 _____				<u>60</u>	<u>78</u>	<u>36</u>	<u>1292</u>
P14 _____						<u>39</u>	<u>1336</u>
P15 _____						<u>42</u>	<u>1367</u>
P16 _____						<u>45</u>	<u>1396</u>
P17 _____						<u>48</u>	<u>1424</u>
P18 _____						<u>51</u>	<u>1443</u>
P19 _____						<u>54</u>	<u>1461</u>
P20 _____						<u>57</u>	<u>1474</u>
						<u>60</u>	<u>1491</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 11/22/82

Recorder No. 13547

Capacity 4225

Test Ticket No. 18259
Location 4611 Ft.

Clock No. -- Elevation ---

Well Temperature 125 °F

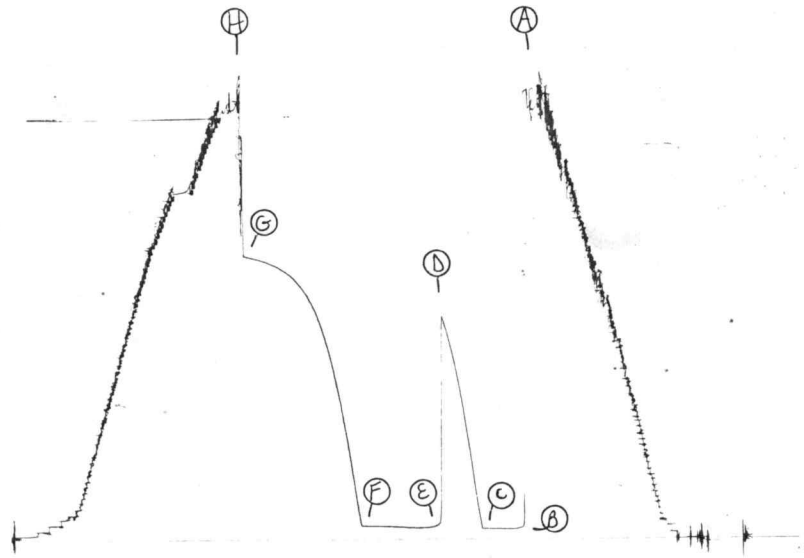
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2341	P.S.I.	10:30A	M
B First Initial Flow Pressure	59	P.S.I.	30	Mins. 30 Mins.
C First Final Flow Pressure	61	P.S.I.	30	Mins. 30 Mins.
D Initial Closed-in Pressure	1217	P.S.I.	60	Mins. 60 Mins.
E Second Initial Flow Pressure	66	P.S.I.	90	Mins. 87 Mins.
F Second Final Flow Pressure	78	P.S.I.		
G Final Closed-in Pressure	1548	P.S.I.		
H Final Hydrostatic Mud	2341	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>29</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1						63	1499
P 2						66	1507
P 3						69	1515
P 4						72	1523
P 5						75	1532
P 6						78	1536
P 7						81	1540
P 8						84	1544
P 9						87	1548
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

TKT # 18259

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Company Range Oil Company, Inc. Lease & Well No. #4 Stewart
 Elevation ---- Formation Mississippi Effective Pay --- Ft. Ticket No. 18260
 Date 11/23 /82 Sec. 19 Twp. 33S Range 10W County Barber State Kansas
 Test Approved by Greg D. Bolte Western Representative Jim Wondra
 Formation Test No. 2 Interval Tested from 4654 ft. to 4684 ft. Total Depth 4684 ft.
 Packer Depth 4649 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 4654 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4673 ft. Recorder Number 13547 Cap. 4225
 Bottom Recorder Depth (Outside) 4654 ft. Recorder Number 13552 Cap. 4050
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor Range Drilling Rig #2 Drill Collar Length 120 I. D. 2 1/4 in.
 Mud Type drispac Viscosity 52 Weight Pipe Length - I. D. - in.
 Weight 9.6 Water Loss 11.6 cc. Drill Pipe Length 4483 I. D. 3.8 in.
 Chlorides 12,500 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.
 Jars: Make - Serial Number - Anchor Length 30 ft. Size 5 1/2 OD 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 FH in.

Blow: Strong blow throughout flow periods.

Recovered 1300 ft. of gas in pipe
 Recovered 150 ft. of oil and gas cut mud (45% oil)
 Recovered 60 ft. of oily muddy water (5% mud solids; 3% oil; 92% water)
 Recovered 120 ft. of water with scum oil Chlorides 88,000 ppm

Remarks:

Time Set Packer(s) 5:15 A.M. PM Time Started Off Bottom 8:45 A.M. PM Maximum Temperature 125°
 Initial Hydrostatic Pressure (A) 2390 P.S.I.
 Initial Flow Period Minutes 30 (B) 99 P.S.I. to (C) 124 P.S.I.
 Initial Closed In Period Minutes 30 (D) 838 P.S.I.
 Final Flow Period Minutes 60 (E) 148 P.S.I. to (F) 189 P.S.I.
 Final Closed In Period Minutes 84 (G) 938 P.S.I.
 Final Hydrostatic Pressure (H) 2371 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11/23/82 Test Ticket No. 18260
 Recorder No. 13547 Capacity 4225 Location 4673 Ft.
 Clock No. -- Elevation --- Well Temperature 125 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2390 P.S.I.	Open Tool	5:15A	M
B First Initial Flow Pressure	99 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	124 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	838 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	148 P.S.I.	Final Closed-in Pressure	90 Mins.	84 Mins.
F Second Final Flow Pressure	189 P.S.I.			
G Final Closed-in Pressure	938 P.S.I.			
H Final Hydrostatic Mud	2371 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>28</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	99	<u>0</u>	124	<u>0</u>	148	<u>0</u>	189
P 2 <u>5</u>	99	<u>3</u>	229	<u>5</u>	152	<u>3</u>	263
P 3 <u>10</u>	103	<u>6</u>	360	<u>10</u>	157	<u>6</u>	357
P 4 <u>15</u>	109	<u>9</u>	458	<u>15</u>	162	<u>9</u>	407
P 5 <u>20</u>	114	<u>12</u>	553	<u>20</u>	166	<u>12</u>	456
P 6 <u>25</u>	120	<u>15</u>	622	<u>25</u>	168	<u>15</u>	498
P 7 <u>30</u>	124	<u>18</u>	682	<u>30</u>	174	<u>18</u>	536
P 8 _____		<u>21</u>	731	<u>35</u>	177	<u>21</u>	571
P 9 _____		<u>24</u>	771	<u>40</u>	180	<u>24</u>	603
P10 _____		<u>27</u>	808	<u>45</u>	182	<u>27</u>	632
P11 _____		<u>30</u>	838	<u>50</u>	184	<u>30</u>	658
P12 _____				<u>55</u>	186	<u>33</u>	682
P13 _____				<u>60</u>	189	<u>36</u>	705
P14 _____						<u>39</u>	727
P15 _____						<u>42</u>	745
P16 _____						<u>45</u>	763
P17 _____						<u>48</u>	781
P18 _____						<u>51</u>	799
P19 _____						<u>54</u>	816
P20 _____						<u>57</u>	831
						<u>60</u>	845

WESTERN TESTING CO., INC.

Pressure Data

Date 11/23/82 Test Ticket No. 18260
 Recorder No. 13547 Capacity 4225 Location 4673 Ft.
 Clock No. -- Elevation --- Well Temperature 125 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2390	P.S.I.	5:15A	M
B First Initial Flow Pressure	99	P.S.I.	30	30 Mins.
C First Final Flow Pressure	124	P.S.I.	30	30 Mins.
D Initial Closed-in Pressure	838	P.S.I.	60	60 Mins.
E Second Initial Flow Pressure	148	P.S.I.	90	84 Mins.
F Second Final Flow Pressure	189	P.S.I.		
G Final Closed-in Pressure	938	P.S.I.		
H Final Hydrostatic Mud	2371	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>28</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1						63	859
P 2						66	873
P 3						69	886
P 4						72	897
P 5						75	908
P 6						78	918
P 7						81	928
P 8						84	938
P 9							
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

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