



INC.

P. O. Box 1599
Wichita, Kansas 67201

Company Sun Range Resources Lease & Well No. Crowley #1
Elevation 1322 Kelly Bush. Formation Kansas City Effective Pay - Ft. Ticket No. 25126
Date 6-29-76 Sec. 14 Twp. 28S Range 5E County Butler State Kansas
Test Approved by Gerald D. Honas Western Representative Roy Pendlay
Formation Test No. 1 O.K. ☒ Misrun ☐ Interval Tested From 2147' to 2165' Total Depth 2165'
Size Main Hole 7 7/8 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No
Top Packer Depth 2142 Ft. Size 6 3/4 Bottom Packer Depth 2147 Ft. Size 6 3/4
Straddle ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No Packer Depth ☐ Ft. Size ☐
Tool Size 5 1/2 OD Tool Joint Size 4 1/2 FH Anchor Length 18 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 2157 Ft. Clock No. 6866 Depth 2160 Ft. Clock No. 6896
Top Make Kuster Cap. 3150 No. 1562 Inside ☒ Outside ☐ Bottom Make Kuster Cap. 4500 No. 3085 Inside ☐ Outside ☒
Below Straddle: Depth ☐ Rec. No. ☐ Clock No. ☐ Inside ☐ Outside ☐ Depth ☐ Ft. Rec. No. ☐ Clock No. ☐ Inside ☐ Outside ☐
Time Set Packer 12:08 A. M.
Tool Open I.F.P. From 12:10A M. to 12:40A M. - Hr. 30 Min. From (B) 9 P.S.I. To (C) 16 P.S.I.
Tool Closed I.C.I.P. From 12:40A M. to 1:10A M. - Hr. 30 Min (D) 552 P.S.I.
Tool Open F.F.P. From 1:10A M. to 2:10A M. - Hr. 60 Min. From (E) 36 P.S.I. To (F) 39 P.S.I.
Tool Closed F.C.I.P. From 2:10A M. to 3:10A M. - Hr. 60 Min. (G) 624 P.S.I.
Initial Hydrostatic Pressure (A) 1042 P.S.I. Final Hydrostatic Pressure (H) 1006 P.S.I. Maximum Temp. 98

INFORMATION

BLOW 1/2" blow on intial flow period. 1/4' blow decreasing to a very weak blow on final flow period.

Did Well Flow ☐ Yes ☒ No Recovery Total Ft. 20' of heavy salty mud, 15' of muddy salt water.

Reversed Out ☐ Yes ☒ No Mud Type Chem Viscosity 40 Weight 9.2 Water Loss ☐ cc. Chlorides ☐

EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint ☐ Jars: Size ☐ In. Make ☐ Ser. No. ☐

Dual Packer ☒ Yes Did Packers Hold? ☒ Yes Did Tool Plug? ☐ No Where? ☐

DRILLING CONTRACTOR White & Ellis Drlg. (#4) Length Drill Pipe? 1989 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 XH In.

Length Weight Pipe ☐ Ft. I.D. Weight Pipe ☐ In. Tool Joint Size ☐ In. Length Drill Collars 138 Ft. I.D. Drill Collars 2 1/2 In.

Tool Joint Size 4 H-90 In. Length D.S.T. Tool 38 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 6-27-76 Test Ticket No. 25126

Recorder No. 1562 Capacity 3150 Location 2157 Ft.

Clock No. 6866 Elevation 1322 Kelly Bushing Well Temperature 98 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1042</u> P.S.I.	Open Tool	<u>12:08 A.</u>	<u>M</u>
B First Initial Flow Pressure	<u>9</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>16</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>552</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>36</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>57</u> Mins.
F Second Final Flow Pressure	<u>39</u> P.S.I.			
G Final Closed-in Pressure	<u>624</u> P.S.I.			
H Final Hydrostatic Mud	<u>1006</u> 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>19</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>9</u>	<u>0</u>	<u>16</u>	<u>0</u>	<u>36</u>	<u>0</u>	<u>39</u>
P 2 <u>5</u>	<u>10</u>	<u>3</u>	<u>38</u>	<u>5</u>	<u>31</u>	<u>3</u>	<u>51</u>
P 3 <u>10</u>	<u>11</u>	<u>6</u>	<u>91</u>	<u>10</u>	<u>31</u>	<u>6</u>	<u>83</u>
P 4 <u>15</u>	<u>13</u>	<u>9</u>	<u>164</u>	<u>15</u>	<u>32</u>	<u>9</u>	<u>129</u>
P 5 <u>20</u>	<u>14</u>	<u>12</u>	<u>242</u>	<u>20</u>	<u>33</u>	<u>12</u>	<u>189</u>
P 6 <u>25</u>	<u>15</u>	<u>15</u>	<u>321</u>	<u>25</u>	<u>34</u>	<u>15</u>	<u>256</u>
P 7 <u>30</u>	<u>16</u>	<u>18</u>	<u>379</u>	<u>30</u>	<u>35</u>	<u>18</u>	<u>314</u>
P 8		<u>21</u>	<u>427</u>	<u>35</u>	<u>36</u>	<u>21</u>	<u>367</u>
P 9		<u>24</u>	<u>478</u>	<u>40</u>	<u>36</u>	<u>24</u>	<u>408</u>
P10		<u>27</u>	<u>528</u>	<u>45</u>	<u>37</u>	<u>27</u>	<u>449</u>
P11		<u>30</u>	<u>552</u>	<u>50</u>	<u>38</u>	<u>30</u>	<u>483</u>
P12				<u>55</u>	<u>39</u>	<u>33</u>	<u>509</u>
P13				<u>60</u>	<u>39</u>	<u>36</u>	<u>530</u>
P14						<u>39</u>	<u>547</u>
P15						<u>42</u>	<u>563</u>
P16						<u>45</u>	<u>579</u>
P17						<u>48</u>	<u>592</u>
P18						<u>51</u>	<u>604</u>
P19						<u>54</u>	<u>615</u>
P20						<u>57</u>	<u>624</u>

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(P)

(E)

(C)

(B)



INC.

P. O. Box 1599

Wichita, Kansas 67201

Company Sun Range ResourcesLease & Well No. Crowley #1Elevation 1322 Kelly Bush Formation Mississippi Effective Pay - Ft. Ticker No. 24307Date 7-2-76 Sec. 14 Twp. 28S Range 5E County Butler State KansasTest Approved by Gerald D. Honas Western Representative Bill BakerFormation Test No. 2 O.K. ☒ Misrun ☐ Interval Tested From 2753' to 2768' Total Depth 2768'Size Main Hole 7 7/8 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ NoTop Packer Depth 2748 Ft. Size 6 3/4 Bottom Packer Depth 2753 Ft. Size 6 3/4Straddle ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No Packer Depth ☐ Ft. Size ☐Tool Size 5 1/2 OD Tool Joint Size 4 1/2 FH Anchor Length 15 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.RECORDERS Depth 2759 Ft. Clock No. 8476 Depth 2762 Ft. Clock No. 4964Top Make Kuster Cap. 4200 No. 1559 Inside Inside Bottom Make Kuster Cap. 3200 No. 1564 Inside InsideBelow Straddle: Depth ☐ Rec. No. ☐ Clock No. ☐ Inside ☐ Outside Depth ☐ Ft. Rec. No. ☐ Clock No. ☐ Inside ☐ OutsideTime Set Packer 1:28 A. MTool Open I.F.P. From 1:30A M. to 2:00A M. - Hr. 30 Min. From (B) 55 P.S.I. To (C) 71 P.S.I.Tool Closed I.C.I.P. From 2:00A M. to 2:30A M. - Hr. 30 Min (D) 860 P.S.I.Tool Open F.F.P. From 2:30A M. to 3:30A M. - Hr. 60 Min. From (E) 88 P.S.I. To (F) 109 P.S.I.Tool Closed F.C.I.P. From 3:30A M. to 4:30A M. - Hr. 60 Min. (G) 858 P.S.I.Initial Hydrostatic Pressure (A) 1448 P.S.I. Final Hydrostatic Pressure (H) 1418 P.S.I. Maximum Temp. 109

INFORMATION

BLOW Weak blow throughout test.Did Well Flow - Yes ☒ No ☐ Recovery Total Ft. 125' of salty drilling mud.Reversed Out - Yes ☒ No ☐ Mud Type Chem Viscosity 46 Weight 9.6 Water Loss 14.6 cc. Chlorides 1800 P.P.M.EXTRA EQUIPMENT: Type Circ. Sub. Pin Safety Joint ☐ Jars: Size ☐ In. Make ☐ Ser. No. ☐Dual Packer Yes Did Packers Hold? Yes Did Tool Plug? No Where? =DRILLING CONTRACTOR White & Ellis Drlg. (Rig #4) Length Drill Pipe? 2586 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 XH In.Length Weight Pipe ☐ Ft. I.D. Weight Pipe ☐ In. Tool Joint Size ☐ In. Length Drill Collars 182 Ft. I.D. Drill Collars 2 1/4 In.Tool Joint Size H-90 In. Length D.S.T. Tool 35 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 7/2/76 Test Ticket No. 24307
 Recorder No. 1559 Capacity 4200 Location 2759 Ft.
 Clock No. 8476 Elevation 1322 Kelly Bushing Well Temperature 109 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1448</u> P.S.I.	<u>1:28</u> A M	
B First Initial Flow Pressure	<u>55</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>71</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>860</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>88</u> P.S.I.	<u>60</u> Mins.	<u>72</u> Mins.
F Second Final Flow Pressure	<u>109</u> P.S.I.		
G Final Closed-in Pressure	<u>858</u> P.S.I.		
H Final Hydrostatic Mud	<u>1418</u> 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>24</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>55</u>	<u>0</u>	<u>71</u>	<u>0</u>	<u>88</u>	<u>0</u>	<u>109</u>
P 2 <u>5</u>	<u>52</u>	<u>3</u>	<u>469</u>	<u>5</u>	<u>84</u>	<u>3</u>	<u>190</u>
P 3 <u>10</u>	<u>55</u>	<u>6</u>	<u>646</u>	<u>10</u>	<u>58</u>	<u>6</u>	<u>364</u>
P 4 <u>15</u>	<u>59</u>	<u>9</u>	<u>727</u>	<u>15</u>	<u>87</u>	<u>9</u>	<u>544</u>
P 5 <u>20</u>	<u>62</u>	<u>12</u>	<u>767</u>	<u>20</u>	<u>90</u>	<u>12</u>	<u>631</u>
P 6 <u>25</u>	<u>67</u>	<u>15</u>	<u>795</u>	<u>25</u>	<u>92</u>	<u>15</u>	<u>698</u>
P 7 <u>30</u>	<u>71</u>	<u>18</u>	<u>815</u>	<u>30</u>	<u>94</u>	<u>18</u>	<u>730</u>
P 8		<u>21</u>	<u>830</u>	<u>35</u>	<u>97</u>	<u>21</u>	<u>756</u>
P 9		<u>24</u>	<u>842</u>	<u>40</u>	<u>100</u>	<u>24</u>	<u>775</u>
P10		<u>27</u>	<u>852</u>	<u>45</u>	<u>102</u>	<u>27</u>	<u>789</u>
P11		<u>30</u>	<u>860</u>	<u>50</u>	<u>105</u>	<u>30</u>	<u>802</u>
P12				<u>55</u>	<u>107</u>	<u>33</u>	<u>810</u>
P13				<u>60</u>	<u>109</u>	<u>36</u>	<u>819</u>
P14						<u>39</u>	<u>827</u>
P15						<u>42</u>	<u>833</u>
P16						<u>45</u>	<u>839</u>
P17						<u>48</u>	<u>843</u>
P18						<u>51</u>	<u>847</u>
P19						<u>54</u>	<u>852</u>
P20						<u>57</u>	<u>855</u>
						<u>60</u>	<u>858</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 7/2/76 Test Ticket No. 24307
 Recorder No. 1559 Capacity 4200 Location 2759 Ft.
 Clock No. 8476 Elevation 1322 Kelly Bushing Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1448 P.S.I.	Open Tool	1:28 A M	
B First Initial Flow Pressure	55 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	71 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	860 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	88 P.S.I.	Final Closed-in Pressure	60 Mins.	72 Mins.
F Second Final Flow Pressure	109 P.S.I.			
G Final Closed-in Pressure	858 P.S.I.			
H Final Hydrostatic Mud	1418 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>24</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.	
P 1						63	861
P 2						66	864
P 3						69	866
P 4						72	868
P 5							
P 6							
P 7							
P 8							
P 9							
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

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