

Company Beren Corporation Lease & Well No. Duncan Miller #1  
 Elevation 1677 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 12981  
 Date 9/20/81 Sec. 11 Twp. 31S Range 9W County Harper State Kansas  
 Test Approved by Robert C Lewellyn Western Representative Louis Spencer

Formation Test No. 1 Interval Tested from 4434 ft. to 4461 ft. Total Depth 4461 ft.  
 Packer Depth 4429 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 4434 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -  
 Top Recorder Depth (Inside) 4446 ft. Recorder Number 1560 Cap. 4500  
 Bottom Recorder Depth (Outside) 4449 ft. Recorder Number 11019 Cap. 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Beredco Drill Collar Length 276 I. D. 2.25 in.  
 Mud Type Chemical Viscosity 43 Weight Pipe Length - I. D. - in.  
 Weight 9.3 Water Loss 12.8 cc. Drill Pipe Length 4138 I. D. 3.8 in.  
 Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.  
 Jars: Make - Serial Number - Anchor Length 27 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 3 1/2 in.

Blow: Initial flow period - good - off bottom of bucket in 4 minutes. Final flow period gas to surface 5 minutes into period. See attached sheet for gas measurements.

Recovered 40 ft. of very slightly oil cut mud - 2% oil  
 Recovered 90 ft. of oil cut mud - 25% oil; rest mud  
 Recovered 90 ft. of oil cut mud - 30% oil; rest mud  
 Recovered      ft. of       
 Recovered      ft. of     

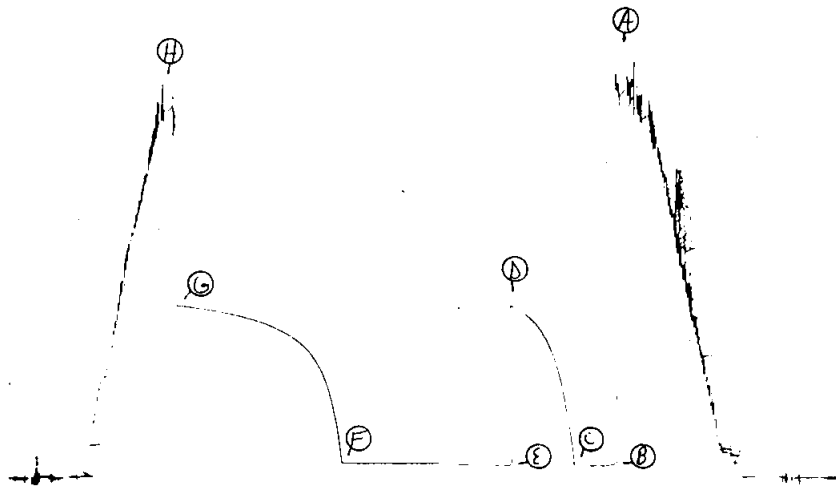
Remarks:     

Time Set Packer(s) 1:00 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 6:15 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 119  
 Initial Hydrostatic Pressure (A) 2287 P.S.I.  
 Initial Flow Period Minutes 30 (B) 72 P.S.I. to (C) 72 P.S.I.  
 Initial Closed In Period Minutes 48 (D) 1014 P.S.I.  
 Final Flow Period Minutes 125 (E) 74 P.S.I. to (F) 87 P.S.I.  
 Final Closed In Period Minutes 120 (G) 1011 P.S.I.  
 Final Hydrostatic Pressure (H) 2186 P.S.I.

TKT # 12981

1560

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## GAS FLOW REPORT

Date 9/20/81 Ticket 12981 Company Beren Corporation  
 Well Name and No. Duncan Miller #1 Dst No. 1 Interval Tested 4434-4461  
 County Harper State Kansas Sec. 11 Twp. 31S Rg. 9W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
<b>PRE FLOW</b>						
			NO GAS			

### SECOND FLOW

	5 Min	1.0 PSIG	¼" Orifice			8,950 C.F.P.D.
	15 Min	1.5 PSIG	¼" Orifice			11,020 C.F.P.D.
	25 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	35 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	45 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	55 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	65 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	75 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	85 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	95 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	105 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	115 Min	2.0 PSIG	¼" Orifice			12,700 C.F.P.D.
	120 Min	2.0 PSIG	¼" Orifice	<b>GAS BOTTLE</b>		12,700 C.F.P.D.

Serial No. \_\_\_\_\_ Date Bottle Filled \_\_\_\_\_ Date to be Invoiced 9/20/81

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 1% per month, equal to 12% 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 Beren Corporation  
 Authorized by Robert C Lewellyn

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

Date 9/20/81 Test Ticket No. 12981  
 Recorder No. 1560 Capacity 4500 Location 4446 Ft.  
 Clock No. - Elevation 1677 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2287</u>	P.S.I.	<u>30</u>	<u>30</u>
B First Initial Flow Pressure	<u>72</u>	P.S.I.	<u>45</u>	<u>48</u>
C First Final Flow Pressure	<u>72</u>	P.S.I.	<u>120</u>	<u>125</u>
D Initial Closed-in Pressure	<u>1014</u>	P.S.I.	<u>120</u>	<u>120</u>
E Second Initial Flow Pressure	<u>74</u>	P.S.I.		
F Second Final Flow Pressure	<u>87</u>	P.S.I.		
G Final Closed-in Pressure	<u>1011</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2186</u>	P.S.I.		

**PRESSURE BREAKDOWN**

<b>First Flow Pressure</b> Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	<b>Initial Shut-In</b> Breakdown: <u>16</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	<b>Second Flow Pressure</b> Breakdown: <u>25</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	<b>Final Shut-In</b> Breakdown: <u>40</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>72</u>	<u>0</u>	<u>72</u>	<u>0</u>	<u>74</u>	<u>0</u>	<u>87</u>
P 2 <u>5</u>	<u>72</u>	<u>3</u>	<u>236</u>	<u>5</u>	<u>74</u>	<u>3</u>	<u>287</u>
P 3 <u>10</u>	<u>72</u>	<u>6</u>	<u>361</u>	<u>10</u>	<u>74</u>	<u>6</u>	<u>417</u>
P 4 <u>15</u>	<u>72</u>	<u>9</u>	<u>498</u>	<u>15</u>	<u>74</u>	<u>9</u>	<u>518</u>
P 5 <u>20</u>	<u>72</u>	<u>12</u>	<u>599</u>	<u>20</u>	<u>75</u>	<u>12</u>	<u>588</u>
P 6 <u>25</u>	<u>72</u>	<u>15</u>	<u>680</u>	<u>25</u>	<u>76</u>	<u>15</u>	<u>637</u>
P 7 <u>30</u>	<u>72</u>	<u>18</u>	<u>750</u>	<u>30</u>	<u>78</u>	<u>18</u>	<u>676</u>
P 8 _____		<u>21</u>	<u>811</u>	<u>35</u>	<u>79</u>	<u>21</u>	<u>718</u>
P 9 _____		<u>24</u>	<u>849</u>	<u>40</u>	<u>80</u>	<u>24</u>	<u>748</u>
P10 _____		<u>27</u>	<u>887</u>	<u>45</u>	<u>81</u>	<u>27</u>	<u>773</u>
P11 _____		<u>30</u>	<u>914</u>	<u>50</u>	<u>83</u>	<u>30</u>	<u>793</u>
P12 _____		<u>33</u>	<u>941</u>	<u>55</u>	<u>85</u>	<u>33</u>	<u>813</u>
P13 _____		<u>36</u>	<u>964</u>	<u>60</u>	<u>87</u>	<u>36</u>	<u>833</u>
P14 _____		<u>39</u>	<u>982</u>	<u>65</u>	<u>87</u>	<u>39</u>	<u>845</u>
P15 _____		<u>42</u>	<u>998</u>	<u>70</u>	<u>87</u>	<u>42</u>	<u>856</u>
P16 _____		<u>45</u>	<u>1007</u>	<u>75</u>	<u>87</u>	<u>45</u>	<u>869</u>
P17 _____		<u>48</u>	<u>1014</u>	<u>80</u>	<u>87</u>	<u>48</u>	<u>881</u>
P18 _____				<u>85</u>	<u>87</u>	<u>51</u>	<u>892</u>
P19 _____				<u>90</u>	<u>87</u>	<u>54</u>	<u>901</u>
P20 _____				<u>95</u>	<u>87</u>	<u>57</u>	<u>910</u>
				<u>100</u>	<u>87</u>	<u>60</u>	<u>919</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 9/20/81

Test Ticket No. 12981

Order No. 1560

Capacity 4500

Location 4446 Ft.

Block No. - Elevation 1677 Kelly Bushing

Well Temperature 119 °F

Point	Pressure	
Initial Hydrostatic Mud	<u>2287</u>	P.S.I.
First Initial Flow Pressure	<u>72</u>	P.S.I.
First Final Flow Pressure	<u>72</u>	P.S.I.
Initial Closed-in Pressure	<u>1014</u>	P.S.I.
Second Initial Flow Pressure	<u>74</u>	P.S.I.
Second Final Flow Pressure	<u>87</u>	P.S.I.
Final Closed-in Pressure	<u>1011</u>	P.S.I.
Final Hydrostatic Mud	<u>2186</u>	P.S.I.

	Time Given	Time Computed
Open Tool	<u>1:00A</u>	<u>M</u>
First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Initial Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
Second Flow Pressure	<u>120</u> Mins.	<u>125</u> Mins.
Final Closed-in Pressure	<u>120</u> Mins.	<u>120</u> Mins.

PRESSURE BREAKDOWN

Point ns.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	of	Breakdown:	of	Breakdown:	of	Breakdown:	of
	<u>6</u> Inc.	<u>5</u> mins. and a	<u>16</u> Inc.	<u>3</u> mins. and a	<u>25</u> Inc.	<u>5</u> mins. and a	<u>40</u> Inc.	<u>3</u> mins. and a
	<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.	final inc. of
	Press.		Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
1					105	87	63	928
2					110	87	66	934
3					115	87	69	939
4					120	87	72	946
5					125	87	75	954
6							78	959
7							81	965
8							84	970
9							87	973
10							90	980
11							93	984
12							96	988
13							99	991
14							102	996
15							105	999
16							108	1001
17							111	1003
18							114	1005
19							117	1008
20							120	1011