

Company National Development Company Lease & Well No. Hall #1  
 Elevation 1405 Kelly Bushing Formation Cleveland Effective Pay ---- Ft. Ticket No. 5906  
 Date 8/15/80 Sec. 4 Twp. 31S Range 7E County Cowley State Kansas  
 Test Approved by Wayne Merchant Western Representative Kenny Kirkendall

Formation Test No. 1 Interval Tested from 2394 ft. to 2443 ft. Total Depth 2443 ft.  
 Packer Depth 2494 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Packer Depth 2489 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2410 ft. Recorder Number 2605 Cap. 4150  
 Bottom Recorder Depth (Outside) 2443 ft. Recorder Number 10980 Cap. 4200  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Flint Hills Drlg. Rig #1 Drill Collar Length 150 I. D. - in.  
 Mud Type chemical Viscosity 42 Weight Pipe Length - I. D. - in.  
 Weight 9.6 Water Loss 16 cc. Drill Pipe Length 2223 I. D. - in.  
 Chlorides 1,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.  
 Jars: Make No Serial Number - Anchor Length 49 ft. Size 5 1/2 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 4 1/2 Xh in.

Blow: Weak building to fair blow on initial flow period; weak blow throughout final flow period.

Recovered 120 ft. of gas in pipe  
 Recovered 10 ft. of slightly oil and gas cut mud  
 Recovered 60 ft. of very slightly oil cut mud  
 Recovered 60 ft. of mud  
 Recovered      ft. of     

Remarks:     

Time Set Packer(s) 8:00 ~~A.M.~~ P.M. Time Started Off Bottom 10:00 A.M. P.M. Maximum Temperature 104°  
 Initial Hydrostatic Pressure ..... (A) 1217 P.S.I.  
 Initial Flow Period ..... Minutes. 30 (B) 29 P.S.I. to (C) 38 P.S.I.  
 Initial Closed In Period ..... Minutes. 30 (D) 726 P.S.I.  
 Final Flow Period ..... Minutes. 30 (E) 80 P.S.I. to (F) 74 P.S.I.  
 Final Closed In Period ..... Minutes. 30 (G) 703 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 1190 P.S.I.

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

Date 8-15-80 Test Ticket No. 5906  
 Recorder No. 2605 Capacity 4150 Location 2410 Fr.  
 Clock No. ----- Elevation 1405 Kelly Bushing Well Temperature 104 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1217</u> P.S.I.	Open Tool	<u>8:00 P<sub>M</sub></u>	
B First Initial Flow Pressure	<u>29</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>38</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>726</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>80</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>74</u> P.S.I.			
G Final Closed-in Pressure	<u>703</u> P.S.I.			
H Final Hydrostatic Mud	<u>1190</u> P.S.I.			

**PRESSURE BREAKDOWN**

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

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

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

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

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>29</u>	<u>0</u>	<u>38</u>	<u>0</u>	<u>80</u>	<u>0</u>	<u>74</u>
P 2 <u>5</u>	<u>25</u>	<u>3</u>	<u>108</u>	<u>5</u>	<u>74</u>	<u>3</u>	<u>167</u>
P 3 <u>10</u>	<u>25</u>	<u>6</u>	<u>260</u>	<u>10</u>	<u>74</u>	<u>6</u>	<u>290</u>
P 4 <u>15</u>	<u>25</u>	<u>9</u>	<u>391</u>	<u>15</u>	<u>74</u>	<u>9</u>	<u>402</u>
P 5 <u>20</u>	<u>29</u>	<u>12</u>	<u>478</u>	<u>20</u>	<u>74</u>	<u>12</u>	<u>479</u>
P 6 <u>25</u>	<u>34</u>	<u>15</u>	<u>548</u>	<u>25</u>	<u>74</u>	<u>15</u>	<u>543</u>
P 7 <u>30</u>	<u>38</u>	<u>18</u>	<u>601</u>	<u>30</u>	<u>74</u>	<u>18</u>	<u>585</u>
P 8 _____	_____	<u>21</u>	<u>649</u>	_____	_____	<u>21</u>	<u>620</u>
P 9 _____	_____	<u>24</u>	<u>688</u>	_____	_____	<u>24</u>	<u>655</u>
P10 _____	_____	<u>27</u>	<u>707</u>	_____	_____	<u>27</u>	<u>680</u>
P11 _____	_____	<u>30</u>	<u>726</u>	_____	_____	<u>30</u>	<u>703</u>
P12 _____	_____	_____	_____	_____	_____	_____	_____
P13 _____	_____	_____	_____	_____	_____	_____	_____
P14 _____	_____	_____	_____	_____	_____	_____	_____
P15 _____	_____	_____	_____	_____	_____	_____	_____
P16 _____	_____	_____	_____	_____	_____	_____	_____
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____

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