

Company Petroleum Energy, Inc. Lease & Well No. Ludwick #2
Elevation 1740 Kelly Bushing Formation Arbuckle Effective Pay - Ft. Ticket No. 12666
Date 11/3/81 Sec. 26 Twp. 19S Range 10W County Rice State Kansas
Test Approved by Jim Musgrove Western Representative Ray Schwager
Formation Test No. 1 Interval Tested from 3232 ft. to 3288 ft. Total Depth 3288 ft.
Packer Depth 3227 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Packer Depth 3232 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3246 ft. Recorder Number 13269 Cap. 4375
Bottom Recorder Depth (Outside) 3249 ft. Recorder Number 13270 Cap. 4375
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor White & Ellis Rig #2 Drill Collar Length 340 I. D. 2.2 in.
Mud Type Starch Viscosity 42 Weight Pipe Length - I. D. - in.
Weight 10.1 Water Loss 9.0 cc. Drill Pipe Length 2870 I. D. 3.8 in.
Chlorides 69,000 P.P.M. Test Tool Length 22 ft. Tool Size 4 1/2 in.
Jars: Make - Serial Number - Anchor Length 56 ft. Size 5 1/2 in.
Did Well Flow? No Reversed Out - Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Weak blow building to strong blow throughout test.

Recovered 70 ft. of gas in pipe
Recovered 290 ft. of oil cut mud
Recovered 180 ft. of heavy oil cut mud - 21% mud; 6% water; 31% oil
Recovered 120 ft. of very heavy oil cut mud - 7% mud; 15% water; 30% oil; 48% gas
Recovered - ft. of (Trace water on bottom filtrate)

Remarks:

read outside chart

Time Set Packer(s) 8:45 A.M. Time Started Off Bottom 11:45 A.M. Maximum Temperature 101
Initial Hydrostatic Pressure (A) 1742 P.S.I.
Initial Flow Period Minutes 45 (B) 146* P.S.I. to (C) 216* P.S.I.
Initial Closed In Period Minutes 45 (D) 1028 P.S.I.
Final Flow Period Minutes 45 (E) 229 P.S.I. to (F) 260 P.S.I.
Final Closed In Period Minutes 45 (G) 1017 P.S.I.
Final Hydrostatic Pressure (H) 1670 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11/3/81 Test Ticket No. 12666
 Recorder No. 13270 Capacity 4375 Location 3249 Ft.
 Clock No. - Elevation 1740 Kelly Bushing Well Temperature 101 °F
 Point Pressure Time Given Time Computed
 A. Initial Hydrostatic Mud 1742 P.S.I. Open Tool 8:45A M
 B. First Initial Flow Pressure 146* P.S.I. First Flow Pressure 45 Mins. 45 Mins.
 C. First Final Flow Pressure 216* P.S.I. Initial Closed-in Pressure 45 Mins. 45 Mins.
 D. Initial Closed-in Pressure 1028 P.S.I. Second Flow Pressure 45 Mins. 45 Mins.
 E. Second Initial Flow Pressure 229 P.S.I. Final Closed-in Pressure 45 Mins. 45 Mins.
 F. Second Final Flow Pressure 260 P.S.I.
 G. Final Closed-in Pressure 1017 P.S.I. *Pressures questionable due to plugging action
 H. Final Hydrostatic Mud 1670 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>15</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 <u>0</u>	<u>146*</u>	<u>0</u>	<u>216*</u>	<u>0</u>	<u>229</u>	<u>0</u>	<u>260</u>
P 2 <u>5</u>	<u>146*</u>	<u>3</u>	<u>624</u>	<u>5</u>	<u>229</u>	<u>3</u>	<u>875</u>
P 3 <u>10</u>	<u>146*</u>	<u>6</u>	<u>902</u>	<u>10</u>	<u>229</u>	<u>6</u>	<u>926</u>
P 4 <u>15</u>	<u>146*</u>	<u>9</u>	<u>939</u>	<u>15</u>	<u>231</u>	<u>9</u>	<u>954</u>
P 5 <u>20</u>	<u>158*</u>	<u>12</u>	<u>963</u>	<u>20</u>	<u>236</u>	<u>12</u>	<u>972</u>
P 6 <u>25</u>	<u>174*</u>	<u>15</u>	<u>979</u>	<u>25</u>	<u>241</u>	<u>15</u>	<u>983</u>
P 7 <u>30</u>	<u>182*</u>	<u>18</u>	<u>992</u>	<u>30</u>	<u>244</u>	<u>18</u>	<u>990</u>
P 8 <u>35</u>	<u>207*</u>	<u>21</u>	<u>1002</u>	<u>35</u>	<u>250</u>	<u>21</u>	<u>995</u>
P 9 <u>40</u>	<u>225*</u>	<u>24</u>	<u>1006</u>	<u>40</u>	<u>256</u>	<u>24</u>	<u>1000</u>
P10 <u>45</u>	<u>216*</u>	<u>27</u>	<u>1012</u>	<u>45</u>	<u>260</u>	<u>27</u>	<u>1003</u>
P11		<u>30</u>	<u>1015</u>			<u>30</u>	<u>1006</u>
P12		<u>33</u>	<u>1018</u>			<u>33</u>	<u>1009</u>
P13		<u>36</u>	<u>1021</u>			<u>36</u>	<u>1012</u>
P14		<u>39</u>	<u>1024</u>			<u>39</u>	<u>1014</u>
P15		<u>42</u>	<u>1026</u>			<u>42</u>	<u>1016</u>
P16		<u>45</u>	<u>1028</u>			<u>45</u>	<u>1017</u>
P17							
P18							
P19							
P20							

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TKT # 12666



13270

