



Home Office: Wichita, Kansas 67201
P. O. Box 1599 (316) 838-0601

Company Graves Drilling Co. Inc., Etal Lease & Well No. Bumgardner #1
Elevation - Formation Mississippi Effective Pay - Ft. Ticket No. 23914
Date 12-4-75 Sec. 19 Twp. 32S Range 11W County Barber State Kansas
Test Approved by Clyde R. Kuhn Western Representative Guy M. Knipe
Formation Test No. 2 OK ☒ Misrun ☐ Interval Tested From 4291' to 4340' Total Depth 4340'
Size Main Hole 77/8 Rat Hole - Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No
Top Packer Depth 4286 Ft. Size 6 3/4 Bottom Packer Depth 4296 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 49 Ft. Size 5 1/2 OD - 4 1/2 DP Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 4296 Ft. Clock No. 6799 Depth 4299 Ft. Clock No. 8475
Top Make Kuster Cap. 6000 No. 1560 ^{Inside} Outside Bottom Make Kuster Cap. 3150 No. 1564 ^{Inside} Outside
Below Straddle: Depth - Rec. No. - Clock No. - ^{Inside} Outside Depth - Ft. Rec. No. - Clock No. - ^{Inside} Outside
Time Set Packer 11:17 A M
Tool Open I.F.P. From 11:20A M. to 11:35A M. - Hr. 15 Min. From (B) 277 P.S.I. To (C) 432 P.S.I.
Tool Closed I.C.I.P. From 11:35A M. to 12:25P M. - Hr. 45 Min (D) 1560 P.S.I.
Tool Open F.F.P. From 12:25P M. to 1:25 P.M. - Hr. 60 Min. From (E) 444 P.S.I. To (F) 994 P.S.I.
Tool Closed F.C.I.P. From 1:25P.M. to 2:10P.M. - Hr. 45 Min. (G) 1560 P.S.I.
Initial Hydrostatic Pressure (A) 2024 P.S.I. Final Hydrostatic Pressure (H) 2006 P.S.I. Maximum Temp. 120

INFORMATION

BLOW Strong blow throughout test.

Did Well Flow - Yes ☒ No ☐ Recovery Total Fr. 1820' slightly oil and gas cut salt water (1% oil) water-
120,000 P.P.M. chlorides

Reversed Out ☒ Yes ☐ No ☐ Mud Type starch Viscosity 45 Weight 9.6 Water Loss 10-15 cc. Chlorides 72,000 P.P.M.

EXTRA EQUIPMENT: Type Circ. Sub. plug Safety Joint - Jars: Size - In. Make - Ser. No. -

Dual Packer yes Did Packers Hold? yes Did Tool Plug? no Where? -

DRILLING CONTRACTOR Graves Drlg. Co. Length Drill Pipe? 4183 Ft. I.D. Drill Pipe 3.8 In. Tool Joint Size 4 1/2 FH In.

Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 88 Ft. I.D. Drill Collars 2 1/4 In.

Tool Joint Size 4 1/2 H - 90 In. Length D.S.T. Tool 69 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 12-4-75 Test Ticket No. 23914
 Recorder No. 1560 Capacity 6000 Location 4296 Ft.
 Clock No. 6799 Elevation - Well Temperature 120 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	2024 P.S.I.	11:17 A M	
B First Initial Flow Pressure	277 P.S.I.	15 Mins.	10 Mins.
C First Final Flow Pressure	432 P.S.I.	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1560 P.S.I.	60 Mins.	60 Mins.
E Second Initial Flow Pressure	444 P.S.I.	45 Mins.	45 Mins.
F Second Final Flow Pressure	994 P.S.I.		
G Final Closed-in Pressure	1560 P.S.I.		
H Final Hydrostatic Mud	2006 P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>15</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>	277	<u>0</u>	432	<u>0</u>	444	<u>0</u>	994
P 2 <u>5</u>	403	<u>3</u>	1000	<u>5</u>	496	<u>3</u>	1288
P 3 <u>10</u>	432	<u>6</u>	1279	<u>10</u>	578	<u>6</u>	1420
P 4		<u>9</u>	1465	<u>15</u>	654	<u>9</u>	1488
P 5		<u>12</u>	1515	<u>20</u>	698	<u>12</u>	1512
P 6		<u>15</u>	1541	<u>25</u>	739	<u>15</u>	1532
P 7		<u>18</u>	1556	<u>30</u>	786	<u>18</u>	1544
P 8		<u>21</u>	1570	<u>35</u>	830	<u>21</u>	1550
P 9		<u>24</u>	1579	<u>40</u>	868	<u>24</u>	1559
P10		<u>27</u>	1589	<u>45</u>	906	<u>27</u>	1564
P11		<u>30</u>	1591	<u>50</u>	947	<u>30</u>	1570
P12		<u>33</u>	1594	<u>55</u>	979	<u>33</u>	1573
P13		<u>36</u>	1597	<u>60</u>	994	<u>36</u>	1576
P14		<u>39</u>	1598			<u>39</u>	1578
P15		<u>42</u>	1599			<u>42</u>	1579
P16		<u>45</u>	1560			<u>45</u>	1560
P17							
P18							
P19							
P20							



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Company Graves Drilling Co., Inc. and ETAL Lease & Well No. Bumgarner-1
Elevation 1449 Kelly Bushing Formation Snyderville Sand Effective Pay - Ft. Ticket No. 23913
Date 12-1-75 Sec. 19 Twp. 32S Range 11W County Barber State Kansas
Test Approved by Fredrick W. Stump Western Representative Tom Arnhold
Formation Test No. 1 OK X Misrun - Interval Tested From 3526' to 3568' Total Depth 3568'
Size Main Hole 77/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No
Top Packer Depth 3521 Ft. Size 6 3/4 Bottom Packer Depth 3526 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 42 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 3531 Ft. Clock No. 6799 Depth 3534 Ft. Clock No. 8475
Top Make Kuster Cap. 6000 No. 1560 Inside Bottom Make Kuster Cap. 6600 No. 1564 Inside
Below Straddle: Depth - Rec. No. - Clock No. - Inside Depth - Ft. Rec. No. - Clock No. - Inside
Time Set Packer 7:42 P M
Tool Open I.F.P. From 7:45P M. to 8:05P M. - Hr. 20 Min. From (B) 61 P.S.I. To (C) 80 P.S.I.
Tool Closed I.C.I.P. From 8:05P M. to 8:50P M. - Hr. 45 Min (D) 1365 P.S.I.
Tool Open F.F.P. From 8:50P M. to 9:50P M. - Hr. 60 Min. From (E) 99 P.S.I. To (F) 146 P.S.I.
Tool Closed F.C.I.P. From 9:50P M. to 10:35P M. - Hr. 45 Min. (G) 1293 P.S.I.
Initial Hydrostatic Pressure (A) 1759 P.S.I. Final Hydrostatic Pressure (H) 1753 P.S.I. Maximum Temp. 103

INFORMATION

BLOW Fair blow throughout test.
Did Well Flow - Yes X No - Recovery Total Ft. 240' muddy water
Reversed Out - Yes X No - Mud Type starch Viscosity 37 Weight 9.0 Water Loss 10 cc. Chlorides 61,000 P.P.M.
EXTRA EQUIPMENT: Type Circ. Sub. 4 1/2 FH Safety Joint - Jars: Size - In. Make - Ser. No. -
Dual Packer yes Did Packers Hold? yes Did Tool Plug? no Where? ----
DRILLING CONTRACTOR Graves Drllg. Co. Length Drill Pipe? 3436 Ft. I.D. Drill Pipe 4 In. Tool Joint Size 4 1/2 FH In.
Length Weight Pipe - Ft. I.D. Weight Pipe - In. Tool Joint Size - In. Length Drill Collars 92 Ft. I.D. Drill Collars 2 1/4 In.
Tool Joint Size 4 1/2 H-90 In. Length D.S.T. Tool 60 Ft.
Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 12-1-75 Test Ticket No. 23913

Recorder No. 1569 Capacity 6000 Location 3531 Ft.

Clock No. 6799 Elevation 1449 Kelly Bushing Well Temperature 103 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1759</u> P.S.I.	<u>7:42P M</u>	
B First Initial Flow Pressure	<u>61</u> P.S.I.	<u>20</u> Mins.	<u>20</u> Mins.
C First Final Flow Pressure	<u>80</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1365</u> P.S.I.	<u>60</u> Mins.	<u>55</u> Mins.
E Second Initial Flow Pressure	<u>99</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>146</u> P.S.I.		
G Final Closed-in Pressure	<u>1293</u> P.S.I.		
H Final Hydrostatic Mud	<u>1753</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>4</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>11</u> Inc.		Breakdown: <u>15</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>61</u>	<u>0</u>	<u>80</u>	<u>0</u>	<u>99</u>	<u>0</u>	<u>146</u>
P 2 <u>5</u>	<u>53</u>	<u>3</u>	<u>892</u>	<u>5</u>	<u>99</u>	<u>3</u>	<u>856</u>
P 3 <u>10</u>	<u>61</u>	<u>6</u>	<u>1109</u>	<u>10</u>	<u>102</u>	<u>6</u>	<u>1035</u>
P 4 <u>15</u>	<u>73</u>	<u>9</u>	<u>1180</u>	<u>15</u>	<u>108</u>	<u>9</u>	<u>1106</u>
P 5 <u>20</u>	<u>80</u>	<u>12</u>	<u>1226</u>	<u>20</u>	<u>113</u>	<u>12</u>	<u>1147</u>
P 6		<u>15</u>	<u>1259</u>	<u>25</u>	<u>117</u>	<u>15</u>	<u>1179</u>
P 7		<u>18</u>	<u>1282</u>	<u>30</u>	<u>123</u>	<u>18</u>	<u>1200</u>
P 8		<u>21</u>	<u>1300</u>	<u>35</u>	<u>127</u>	<u>21</u>	<u>1218</u>
P 9		<u>24</u>	<u>1315</u>	<u>40</u>	<u>132</u>	<u>24</u>	<u>1234</u>
P10		<u>27</u>	<u>1323</u>	<u>45</u>	<u>137</u>	<u>27</u>	<u>1245</u>
P11		<u>30</u>	<u>1188</u>	<u>50</u>	<u>140</u>	<u>30</u>	<u>1256</u>
P12		<u>33</u>	<u>1195</u>	<u>55</u>	<u>146</u>	<u>33</u>	<u>1268</u>
P13		<u>36</u>	<u>1350</u>			<u>36</u>	<u>1276</u>
P14		<u>39</u>	<u>1356</u>			<u>39</u>	<u>1284</u>
P15		<u>42</u>	<u>1361</u>			<u>42</u>	<u>1290</u>
P16		<u>45</u>	<u>1365</u>			<u>45</u>	<u>1293</u>
P17							
P18							
P19							
P20							