



Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Graves Drilling Co., Inc. Lease & Well No. Hostetler #1
Elevation 1474 Kelly Bush. Formation Kansas City Effective Pay - Ft. Ticket No. 24215
Date 6-27-75 Sec. 10 Twp. 31S Range 6W County Harper State Kansas
Test Approved by Harold Steincamp Western Representative Forrest Purnell

Formation Test No. 1 O.K. X Misrun - Interval Tested From 3684' to 3707' Total Depth 3707'
Size Main Hole 7 7/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No
Top Packer Depth 3678 Ft. Size 6 3/4 Bottom Packer Depth 3683 Ft. Size 6 3/4
Straddle - Conv. - B.T. - Damaged - Yes - No Packer Depth - Ft. Size -
Tool Size 51.0D Tool Joint Size 4 1/2 FH Anchor Length 23 Ft. Size 51.0D Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.

RECORDERS Depth 3697 Ft. Clock No. 6800 Depth 3700 Ft. Clock No. 6859
Top Make Kuster Cap. 4200 No. 1559 Inside Outside Bottom Make Kuster Cap. 3150 No. 1565 Inside Outside
Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside

Time Set Packer 6:25 P M
Tool Open I.F.P. From 6:30P M. to 6:45P M. - Hr. 15 Min. From (B) 26 P.S.I. To (C) 26 P.S.I.
Tool Closed I.C.I.P. From 6:45P M. to 7:30P M. - Hr. 45 Min (D) 1506 P.S.I.
Tool Open F.F.P. From 7:30P M. to 8:00P M. - Hr. 30 Min. From (E) 36 P.S.I. To (F) 37 P.S.I.
Tool Closed F.C.I.P. From 8:00P M. to 8:30P M. - Hr. 30 Min. (G) 1310 P.S.I.
Initial Hydrostatic Pressure (A) 1926 P.S.I. Final Hydrostatic Pressure (H) 1850 P.S.I. Maximum Temp. 122

INFORMATION

BLOW Weak blow throughout test initial flow period, weak blow for 12 minutes in final flow period.

Did Well Flow - Yes X No Recovery Total Ft. 50' drilling mud.

Reversed Out - Yes X No Mud Type Gel oil Viscosity 36 Weight 9.3 Water Loss - cc. Chlorides 55,000 PPM

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 Graves Drilling Co., Inc. Length Drill Pipe? 3574 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 1/2 In.

Tool Joint Size 4 1/2 = 90 In. Length D.S.T. Tool 45 Ft.

Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 6-27-75 Test Ticket No. 24215
 Recorder No. 1559 Capacity 4200 Location 3697 Ft.
 Clock No. 6800 Elevation 1474 Kelly Bushing Well Temperature 122 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1926</u> P.S.I.	Open Tool	<u>6:25P</u> M	
B First Initial Flow Pressure	<u>26</u> P.S.I.	First Flow Pressure	<u>15</u> Mins.	<u>15</u> Mins.
C First Final Flow Pressure	<u>26</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>42</u> Mins.
D Initial Closed-in Pressure	<u>1506</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>36</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>37</u> P.S.I.			
G Final Closed-in Pressure	<u>1310</u> P.S.I.			
H Final Hydrostatic Mud	<u>1850</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>3</u> Inc.		Breakdown: <u>14</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>10</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>26</u>	<u>0</u>	<u>26</u>	<u>0</u>	<u>36</u>	<u>0</u>	<u>37</u>
P 2 <u>5</u>	<u>26</u>	<u>3</u>	<u>48</u>	<u>5</u>	<u>36</u>	<u>3</u>	<u>50</u>
P 3 <u>10</u>	<u>26</u>	<u>6</u>	<u>200</u>	<u>10</u>	<u>36</u>	<u>6</u>	<u>74</u>
P 4 <u>15</u>	<u>26</u>	<u>9</u>	<u>691</u>	<u>15</u>	<u>36</u>	<u>9</u>	<u>157</u>
P 5		<u>12</u>	<u>1033</u>	<u>20</u>	<u>36</u>	<u>12</u>	<u>353</u>
P 6		<u>15</u>	<u>1213</u>	<u>25</u>	<u>37</u>	<u>15</u>	<u>664</u>
P 7		<u>18</u>	<u>1307</u>	<u>30</u>	<u>37</u>	<u>18</u>	<u>933</u>
P 8		<u>21</u>	<u>1367</u>			<u>21</u>	<u>1105</u>
P 9		<u>24</u>	<u>1408</u>			<u>24</u>	<u>1214</u>
P 10		<u>27</u>	<u>1438</u>			<u>27</u>	<u>1276</u>
P 11		<u>30</u>	<u>1458</u>			<u>30</u>	<u>1310</u>
P 12		<u>33</u>	<u>1474</u>				
P 13		<u>36</u>	<u>1485</u>				
P 14		<u>39</u>	<u>1497</u>				
P 15		<u>42</u>	<u>1506</u>				
P 16							
P 17							
P 18							
P 19							
P 20							

TAT # 24215

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1559





Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Graves Drilling Co., Inc. Lease & Well No. Hostetler #1
Elevation 1474 Kelly Bush. Formation Kansas City Effective Pay - Ft. Ticket No. 24216
Date 6-28-75 Sec. 10 Twp. 31S Range 6W County Harper State Kansas
Test Approved by Harold Steincamp Western Representative Forrest Purnell
Formation Test No. 2 O.K. X Misrun - Interval Tested From 3790' to 3827' Total Depth 3827'
Size Main Hole 7 7/8 Rat Hole - Conv. - B.T. X Damaged - Yes X No Conv. X B.T. - Damaged - Yes X No
Top Packer Depth 3784 Ft. Size 6 3/4 Bottom Packer Depth 3789 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 37 Ft. Size 5 1/2 OD Surface Choke Size 3/4 In. Bottom Choke Size 3/4 In.
RECORDERS Depth 3817 Ft. Clock No. 6800 Depth 3820 Ft. Clock No. 6859
Top Make Kuster Cap. 4200 No. 1559 Inside Outside Bottom Make Kuster Cap. 3150 No. 1565 Inside Outside
Below Straddle: Depth - Rec. No. - Clock No. - Inside Outside Depth - Ft. Rec. No. - Clock No. - Inside Outside
Time Set Packer 2:25 P M
Tool Open I.F.P. From 2:30P M. to 2:45P M. - Hr. 15 Min. From (B) 52 P.S.I. To (C) 90 P.S.I.
Tool Closed I.C.I.P. From 2:45P M. to 3:30P M. - Hr. 45 Min (D) 1555 P.S.I.
Tool Open F.F.P. From 3:30P M. to 4:30P M. - Hr. 60 Min. From (E) 120 P.S.I. To (F) 230 P.S.I.
Tool Closed F.C.I.P. From 4:30P M. to 5:15P M. - Hr. 45 Min. (G) 1495 P.S.I.
Initial Hydrostatic Pressure (A) 1960 P.S.I. Final Hydrostatic Pressure (H) 1920 P.S.I. Maximum Temp. 128

INFORMATION

BLOW Strong blow throughout test.
Did Well Flow - Yes X No Recovery Total Ft. 90' heavy oil & gas cut drilling mud, 300' slightly oil & gas cut muddy salt, (121,000 PPM) , 1824' gas in pipe.
Reversed Out - Yes X No Mud Type Gel oil Viscosity 36 Weight 9.2 Water Loss - cc. Chlorides 60,000 PPM
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 Graves Drilling Co., Inc. Length Drill Pipe? 3682 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 1/2 In.
Tool Joint Size 4 1/2 H-90 In. Length D.S.T. Tool 57 Ft.
Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 6-28-75 Recorder No. 1559 Capacity 4200 Test Ticket No. 24216
 Clock No. 6800 Elevation 1474 Kelly Bushing Location 3817 Ft.
 Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1960</u> P.S.I.	Open Tool	<u>2:25 P</u> M	
B First Initial Flow Pressure	<u>52</u> P.S.I.	First Flow Pressure	<u>15</u> Mins.	<u>15</u> Mins.
C First Final Flow Pressure	<u>90</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1555</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>55</u> Mins.
E Second Initial Flow Pressure	<u>120</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>230</u> P.S.I.			
G Final Closed-in Pressure	<u>1495</u> P.S.I.			
H Final Hydrostatic Mud	<u>1920</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>3</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>52</u>	<u>0</u>	<u>90</u>	<u>0</u>	<u>120</u>	<u>0</u>	<u>230</u>
P 2 <u>5</u>	<u>59</u>	<u>3</u>	<u>1148</u>	<u>5</u>	<u>121</u>	<u>3</u>	<u>960</u>
P 3 <u>10</u>	<u>73</u>	<u>6</u>	<u>1382</u>	<u>10</u>	<u>131</u>	<u>6</u>	<u>1249</u>
P 4 <u>15</u>	<u>90</u>	<u>9</u>	<u>1440</u>	<u>15</u>	<u>144</u>	<u>9</u>	<u>1347</u>
P 5 <u>20</u>		<u>12</u>	<u>1471</u>	<u>20</u>	<u>156</u>	<u>12</u>	<u>1382</u>
P 6		<u>15</u>	<u>1491</u>	<u>25</u>	<u>166</u>	<u>15</u>	<u>1408</u>
P 7		<u>18</u>	<u>1505</u>	<u>30</u>	<u>179</u>	<u>18</u>	<u>1427</u>
P 8		<u>21</u>	<u>1516</u>	<u>35</u>	<u>189</u>	<u>21</u>	<u>1438</u>
P 9		<u>24</u>	<u>1525</u>	<u>40</u>	<u>200</u>	<u>24</u>	<u>1450</u>
P 10		<u>27</u>	<u>1533</u>	<u>45</u>	<u>210</u>	<u>27</u>	<u>1458</u>
P 11		<u>30</u>	<u>1539</u>	<u>50</u>	<u>221</u>	<u>30</u>	<u>1469</u>
P 12		<u>33</u>	<u>1544</u>	<u>55</u>	<u>230</u>	<u>33</u>	<u>1475</u>
P 13		<u>36</u>	<u>1548</u>			<u>36</u>	<u>1481</u>
P 14		<u>39</u>	<u>1553</u>			<u>39</u>	<u>1487</u>
P 15		<u>42</u>	<u>1554</u>			<u>42</u>	<u>1492</u>
P 16		<u>45</u>	<u>1555</u>			<u>45</u>	<u>1495</u>
P 17							
P 18							
P 19							
P 20							

TAT # 2421C

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1559



Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company **Graves Drilling Co., Inc.** Lease & Well No. **Hostetler #1**
Elevation **1474 Kelly Bush.** Formation **Mississippi** Effective Pay **-** Ft. Ticket No. **24217**
Date **6-30-75** Sec. **10** Twp. **31S** Range **6W** County **Harper** State **Kansas**
Test Approved by **Harold Steincamp** Western Representative **Norman Allen**
Formation Test No. **3** O.K. ☒ Misrun ☐ Interval Tested From **4269'** to **4290'** Total Depth **4290'**
Size Main Hole **7 7/8** Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No
Top Packer Depth **4264** Ft. Size **6 3/4** Bottom Packer Depth **4269** 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 **21** Ft. Size **5 1/2 OD** Surface Choke Size **1 1/2** In. Bottom Choke Size **3/4** In.
RECORDERS Depth **4283** Ft. Clock No. **6800** Depth **4286** Ft. Clock No. **6858**
Top Make **Kuster** Cap. **4200** No. **1559** Inside Outside Bottom Make **Kuster** Cap. **3150** No. **1565** Inside Outside
Below Straddle: Depth ☐ Rec. No. ☐ Clock No. ☐ Inside Outside Depth ☐ Ft. Rec. No. ☐ Clock No. ☐ Inside Outside
Time Set Packer **4:42 P** M
Tool Open I.F.P. From **4:45P** M. to **5:00P** M. - Hr. **15** Min. From (B) **48** P.S.I. To (C) **49** P.S.I.
Tool Closed I.C.I.P. From **5:00P** M. to **5:45P** M. - Hr. **45** Min (D) **1502** P.S.I.
Tool Open F.F.P. From **5:45P** M. to **6:45P** M. - Hr. **60** Min. From (E) **45** P.S.I. To (F) **40** P.S.I.
Tool Closed F.C.I.P. From **6:45P** M. to **7:30P** M. - Hr. **45** Min. (G) **1377** P.S.I.
Initial Hydrostatic Pressure (A) **2248** P.S.I. Final Hydrostatic Pressure (H) **2202** P.S.I. Maximum Temp. **137**

INFORMATION

BLOW **Strong blow throughout test. Gas to surface in 4 minutes.**

Did Well Flow **Gas** Yes ☐ No ☐ Recovery Total Ft. **Fluid recovery - 70' gas cut mud.**

Reversed Out ☐ Yes ☒ No ☐ Mud Type **Starch** Viscosity **60** Weight **9.6** Water Loss **10.8** cc. Chlorides **51,000 PPM**
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 **Graves Drilling Co.** Length Drill Pipe? **4159** 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 **90** Ft. I.D. Drill Collars **2 1/4** In.
Tool Joint Size **4 1/2 FH** In. Length D.S.T. Tool **41** Ft.

Remarks: **See attached sheet for gas measurements. Gas measurements 242,000 C.F.P.D. at 5:00 PM, then stabilized at 263,000 C.F.P.D. Took gas sample bottle #628.**

WESTERN TESTING CO., INC.

Pressure Data

Date 6-30-75 Test Ticket No. 24217
 Recorder No. 1559 Capacity 4208 Location 4283 Ft.
 Clock No. 6800 Elevation 1474 Kelly Bushing Well Temperature 137 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2248</u> P.S.I.	<u>4:42 P</u>	<u>M</u>
B First Initial Flow Pressure	<u>48</u> P.S.I.	<u>15</u> Mins.	<u>12</u> Mins.
C First Final Flow Pressure	<u>49</u> P.S.I.	<u>45</u> Mins.	<u>42</u> Mins.
D Initial Closed-in Pressure	<u>1502</u> P.S.I.	<u>60</u> Mins.	<u>55</u> Mins.
E Second Initial Flow Pressure	<u>45</u> P.S.I.	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>40</u> P.S.I.		
G Final Closed-in Pressure	<u>1377</u> P.S.I.		
H Final Hydrostatic Mud	<u>2202</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</u> Inc.		Breakdown: <u>14</u> Inc.		Breakdown: <u>11</u> Inc.		Breakdown: <u>16</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>2</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>48</u>	<u>0</u>	<u>49</u>	<u>0</u>	<u>45</u>	<u>0</u>	<u>40</u>
P 2 <u>5</u>	<u>45</u>	<u>3</u>	<u>1286</u>	<u>5</u>	<u>45</u>	<u>3</u>	<u>914</u>
P 3 <u>10</u>	<u>46</u>	<u>6</u>	<u>1387</u>	<u>10</u>	<u>44</u>	<u>6</u>	<u>1098</u>
P 4 <u>12</u>	<u>49</u>	<u>9</u>	<u>1416</u>	<u>15</u>	<u>44</u>	<u>9</u>	<u>1162</u>
P 5		<u>12</u>	<u>1437</u>	<u>20</u>	<u>43</u>	<u>12</u>	<u>1205</u>
P 6		<u>15</u>	<u>1454</u>	<u>25</u>	<u>43</u>	<u>15</u>	<u>1237</u>
P 7		<u>18</u>	<u>1464</u>	<u>30</u>	<u>42</u>	<u>18</u>	<u>1261</u>
P 8		<u>21</u>	<u>1472</u>	<u>35</u>	<u>42</u>	<u>21</u>	<u>1281</u>
P 9		<u>24</u>	<u>1479</u>	<u>40</u>	<u>41</u>	<u>24</u>	<u>1297</u>
P10		<u>27</u>	<u>1484</u>	<u>45</u>	<u>41</u>	<u>27</u>	<u>1312</u>
P11		<u>30</u>	<u>1490</u>	<u>50</u>	<u>40</u>	<u>30</u>	<u>1327</u>
P12		<u>33</u>	<u>1494</u>	<u>55</u>	<u>40</u>	<u>33</u>	<u>1337</u>
P13		<u>36</u>	<u>1498</u>			<u>36</u>	<u>1347</u>
P14		<u>39</u>	<u>1500</u>			<u>39</u>	<u>1357</u>
P15		<u>42</u>	<u>1502</u>			<u>42</u>	<u>1367</u>
P16						<u>45</u>	<u>1372</u>
P17						<u>48</u>	<u>1377</u>
P18							
P19							
P20							

Phone 316 262-5861
316 838-0601



P. O. Box 1599
WICHITA, KANSAS 67201

GAS FLOW REPORT

Date **6-30-75** Ticket **24217** Company **Graves Drilling Co., Inc.**
Well Name and No. **Hostetler #1** Dst No. **3** Interval Tested **4269' - 4290'**
County **Harper** State **Kansas** Sec. **10** Twp. **31S** Rg. **6W**

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
PRE FLOW						
5:00 PM		3.0 P.S.I.G.	1" choke			242,000 C.F.P.D.
Tool opened at 4:45 PM on pre-flow. Gas to surface in 4 minutes.						

SECOND FLOW						
5:55 PM	10 min.	4.0 P.S.I.G.	1" choke			283,000 C.F.P.D.
6:05 PM	10 min.	3.5 P.S.I.G.	1" choke			263,000 C.F.P.D.
6:15 PM	10 min.	3.5 P.S.I.G.	1" choke			263,000 C.F.P.D.
6:25 PM	10 min.	3.5 P.S.I.G.	1" choke			263,000 C.F.P.D.
6:35 PM	10 min.	3.5 P.S.I.G.	1" choke			263,000 C.F.P.D.
6:45 PM	10 min.	3.5 P.S.I.G.	1" choke			263,000 C.F.P.D.
Tool opened at 5:45 PM on second flow. All measurements were taken with a 2" merla orifice well tester through a 1" choke.at 10 minute intervals.						

GAS BOTTLE

Serial No. **628** Date Bottle Filled **6-30-75** Date to be Invoiced **6-30-75**

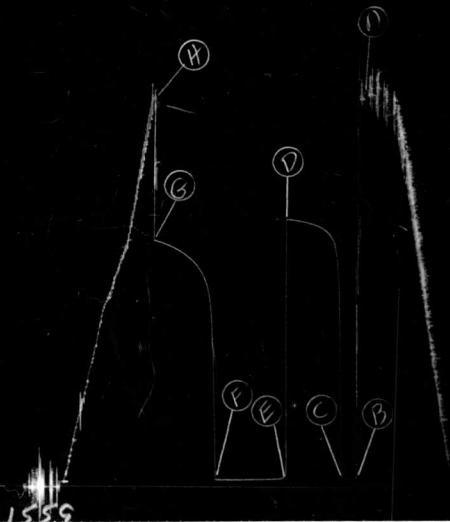
Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By 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 **Graves Drilling Co., Inc.**
Authorized by **Harold Steincamp**

TET # 24217

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Home Office: Great Bend, Kansas

P. O. Box 793 (316) 793-7903

Company **Graves Drilling Co., Inc.** Lease & Well No. **Hostetler #1**
Elevation **1474 Kelly Bush** Formation **Mississippi** Effective Pay **-** Ft. Ticket No. **24218**
Date **7-1-75** Sec. **10** Twp. **31S** Range **6W** County **Harper** State **Kansas**
Test Approved by **Harold Steincamp** Western Representative **Norman Allen**
Formation Test No. **4** O.K. ☒ Misrun ☐ Interval Tested From **4290'** to **4310'** Total Depth **4310'**
Size Main Hole **7 7/8** Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No
Top Packer Depth **4285** Ft. Size **6 3/4** Bottom Packer Depth **4290** 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 **20** Ft. Size **5 1/2 OD** Surface Choke Size **3/4** In. Bottom Choke Size **3/4** In.
RECORDERS Depth **4303** Ft. Clock No. **6800** Depth **4306** Ft. Clock No. **6855**
Top Make **Kuster** Cap. **4200** No. **1559** Inside ☐ Outside ☐ Bottom Make **Kuster** Cap. **3150** No. **1565** Inside ☐ Outside ☐
Below Straddle: Depth ☐ Rec. No. ☐ Clock No. ☐ Inside ☐ Outside ☐ Depth ☐ Ft. Rec. No. ☐ Clock No. ☐ Inside ☐ Outside ☐
Time Set Packer **8:27 A** M
Tool Open I.F.P. From **8:30A** M. to **8:45A** M. - Hr. **15** Min. From (B) **32** P.S.I. To (C) **35** P.S.I.
Tool Closed I.C.I.P. From **8:45A** M. to **9:30A** M. - Hr. **45** Min (D) **1345** P.S.I.
Tool Open F.F.P. From **9:30A** M. to **10:30A** M. - Hr. **60** Min. From (E) **49** P.S.I. To (F) **68** P.S.I.
Tool Closed F.C.I.P. From **10:30A** M. to **11:15A** M. - Hr. **45** Min. (G) **899** P.S.I.
Initial Hydrostatic Pressure (A) **2236** P.S.I. Final Hydrostatic Pressure (H) **2226** P.S.I. Maximum Temp. **137**

INFORMATION

BLOW **Strong diminishing slightly at end of test.**
Did Well Flow ☐ Yes ☒ No Recovery Total Ft. **3000' gas in pipe, 150' oil & gas cut mud, 30' thin gas cut mud.**
Reversed Out ☐ Yes ☒ No Mud Type **Starch** Viscosity **59** Weight **9.7** Water Loss **9.2** cc. Chlorides **50,000 PPM**
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 **Graves Drilling Co., Inc.** Length Drill Pipe? **4180** 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 **90** Ft. I.D. Drill Collars ☐ In.
Tool Joint Size **4 1/2-90** In. Length D.S.T. Tool **40** Ft.
Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 7-1-75 Recorder No. 1559 Capacity 4200 Test Ticket No. 24218
 Clock No. 6800 Elevation 1474 Kelly Bushing Location 4303 Ft.
 Well Temperature 137 °F

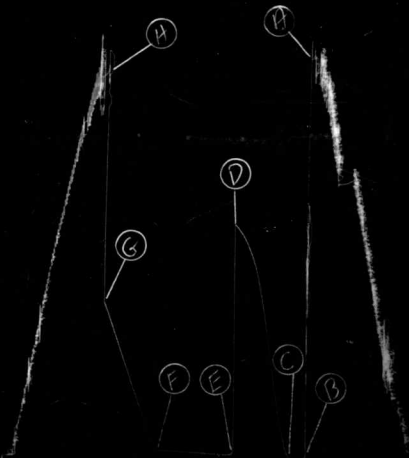
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2236</u>	P.S.I.	<u>8:27A</u> M	
B First Initial Flow Pressure	<u>32</u>	P.S.I.	<u>15</u> Mins.	<u>15</u> Mins.
C First Final Flow Pressure	<u>35</u>	P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1345</u>	P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>49</u>	P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
F Second Final Flow Pressure	<u>68</u>	P.S.I.		
G Final Closed-in Pressure	<u>899</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2226</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>3</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>	<u>32</u>	<u>0</u>	<u>35</u>	<u>0</u>	<u>49</u>	<u>0</u>	<u>68</u>
P 2 <u>5</u>	<u>32</u>	<u>3</u>	<u>109</u>	<u>5</u>	<u>49</u>	<u>3</u>	<u>115</u>
P 3 <u>10</u>	<u>34</u>	<u>6</u>	<u>218</u>	<u>10</u>	<u>50</u>	<u>6</u>	<u>165</u>
P 4 <u>15</u>	<u>35</u>	<u>9</u>	<u>330</u>	<u>15</u>	<u>52</u>	<u>9</u>	<u>221</u>
P 5 <u>20</u>		<u>12</u>	<u>465</u>	<u>20</u>	<u>54</u>	<u>12</u>	<u>277</u>
P 6 <u>25</u>		<u>15</u>	<u>514</u>	<u>25</u>	<u>56</u>	<u>15</u>	<u>335</u>
P 7		<u>18</u>	<u>762</u>	<u>30</u>	<u>60</u>	<u>18</u>	<u>395</u>
P 8		<u>21</u>	<u>891</u>	<u>35</u>	<u>62</u>	<u>21</u>	<u>455</u>
P 9		<u>24</u>	<u>991</u>	<u>40</u>	<u>64</u>	<u>24</u>	<u>511</u>
P10		<u>27</u>	<u>1094</u>	<u>45</u>	<u>65</u>	<u>27</u>	<u>574</u>
P11		<u>30</u>	<u>1164</u>	<u>50</u>	<u>67</u>	<u>30</u>	<u>639</u>
P12		<u>33</u>	<u>1219</u>	<u>55</u>	<u>68</u>	<u>33</u>	<u>703</u>
P13		<u>36</u>	<u>1268</u>	<u>60</u>	<u>68</u>	<u>36</u>	<u>762</u>
P14		<u>39</u>	<u>1301</u>			<u>39</u>	<u>824</u>
P15		<u>42</u>	<u>1329</u>			<u>42</u>	<u>881</u>
P16		<u>45</u>	<u>1346</u>			<u>45</u>	<u>899</u>
P17							
P18							
P19							
P20							

TIT # 24218

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Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company **Graves Drilling Co., Inc.** Lease & Well No. **Hostetler #1**
Elevation **1474 Kelly Bush.** Formation **Mississippi** Effective Pay **-** Ft. Ticket No. **24219**
Date **7-1-75** Sec. **10** Twp. **31S** Range **6W** County **Harper** State **Kansas**
Test Approved by **Harold Steincamp** Western Representative **Norman Allen**
Formation Test No. **5** O.K. ☒ Misrun ☐ Interval Tested From **4310'** to **4319'** Total Depth **4319'**
Size Main Hole **7 7/8** Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No
Top Packer Depth **4125** Ft. Size **6 3/4** Bottom Packer Depth **4130** 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 **9** Ft. Size **5 1/2 OD** Surface Choke Size **3/4** In. Bottom Choke Size **3/4** In.
RECORDERS Depth **4312** Ft. Clock No. **6800** Depth **4315** Ft. Clock No. **6859**
Top Make **Kuster** Cap. **4200** No. **1559** Inside ☐ Outside ☐ Bottom Make **Kuster** Cap. **3150** No. **1565** Inside ☐ Outside ☐
Below Straddle: Depth ☐ Rec. No. ☐ Clock No. ☐ Inside ☐ Outside ☐ Depth ☐ Ft. Rec. No. ☐ Clock No. ☐ Inside ☐ Outside ☐
Time Set Packer **9:43 P** M
Tool Open I.F.P. From **9:45P** M. to **10:00P** M. - Hr. **15** Min. From (B) **14** P.S.I. To (C) **25** P.S.I.
Tool Closed I.C.I.P. From **10:00P** M. to **10:30P** M. - Hr. **30** Min (D) **1436** P.S.I.
Tool Open F.F.P. From **10:30P** M. to **11:30P** M. - Hr. **60** Min. From (E) **36** P.S.I. To (F) **54** P.S.I.
Tool Closed F.C.I.P. From **11:30P** M. to **12:15A** M. - Hr. **45** Min. (G) **1431** P.S.I.
Initial Hydrostatic Pressure (A) **2270** P.S.I. Final Hydrostatic Pressure (H) **2215** P.S.I. Maximum Temp. **137**

INFORMATION

Fair blow throughout test.
BLOW ☐ ☒ **490' gas in pipe, 90' oil & gas cut mud, 60' muddy water.**
Did Well Flow. ☐ Yes ☒ No Recovery Total Ft. ☐
Reversed Out ☐ Yes ☒ No Mud Type **Starch** Viscosity **59** Weight **9.7** Water Loss **9.2** cc. Chlorides **50,000 PPM**
EXTRA EQUIPMENT: Type Circ. Sub. **pin** Safety Joint ☐ Jars: Size ☐ In. Make ☐ Ser. No. ☐
Dual Packer ☒ Did Packers Hold? ☒ Did Tool Plug? ☒ Where? ☐
DRILLING CONTRACTOR **Graves Drilling Co., Inc.** Length Drill Pipe? **4200** 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 **90** Ft. I.D. Drill Collars **2 1/2** In.
Tool Joint Size **4 1/2 H-90** In. Length D.S.T. Tool **29** Ft.
Remarks:

WESTERN TESTING CO., INC.

Pressure Data

Date 7-1-75 Recorder No. 1559 Capacity 4200 Test Ticket No. 24219
 Clock No. 6800 Elevation 1474 Kelly Bushing Location 4312 Ft.
 Well Temperature 137 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2270</u>	P.S.I.	<u>9:43 P</u>	<u>M</u>
B First Initial Flow Pressure	<u>14</u>	P.S.I.	<u>15</u>	<u>15</u> Mins.
C First Final Flow Pressure	<u>25</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1436</u>	P.S.I.	<u>60</u>	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>36</u>	P.S.I.	<u>45</u>	<u>45</u> Mins.
F Second Final Flow Pressure	<u>54</u>	P.S.I.		
G Final Closed-in Pressure	<u>1431</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2215</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>3</u> Inc.		Breakdown: <u>10</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>	<u>14</u>	<u>0</u>	<u>25</u>	<u>0</u>	<u>36</u>	<u>0</u>	<u>54</u>
P 2 <u>5</u>	<u>16</u>	<u>3</u>	<u>173</u>	<u>5</u>	<u>36</u>	<u>3</u>	<u>184</u>
P 3 <u>10</u>	<u>18</u>	<u>6</u>	<u>594</u>	<u>10</u>	<u>37</u>	<u>6</u>	<u>387</u>
P 4 <u>15</u>	<u>25</u>	<u>9</u>	<u>985</u>	<u>15</u>	<u>38</u>	<u>9</u>	<u>704</u>
P 5		<u>12</u>	<u>1178</u>	<u>20</u>	<u>40</u>	<u>12</u>	<u>960</u>
P 6		<u>15</u>	<u>1282</u>	<u>25</u>	<u>42</u>	<u>15</u>	<u>1111</u>
P 7		<u>18</u>	<u>1339</u>	<u>30</u>	<u>44</u>	<u>18</u>	<u>1200</u>
P 8		<u>21</u>	<u>1379</u>	<u>35</u>	<u>46</u>	<u>21</u>	<u>1253</u>
P 9		<u>24</u>	<u>1409</u>	<u>40</u>	<u>48</u>	<u>24</u>	<u>1297</u>
P10		<u>27</u>	<u>1429</u>	<u>45</u>	<u>50</u>	<u>27</u>	<u>1328</u>
P11		<u>30</u>	<u>1436</u>	<u>50</u>	<u>51</u>	<u>30</u>	<u>1353</u>
P12				<u>55</u>	<u>53</u>	<u>33</u>	<u>1376</u>
P13				<u>60</u>	<u>54</u>	<u>36</u>	<u>1393</u>
P14						<u>39</u>	<u>1409</u>
P15						<u>42</u>	<u>1420</u>
P16						<u>45</u>	<u>1431</u>
P17							
P18							
P19							
P20							

TAT # 24219

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