

Home Office: Great Bend, Kansas

Graves Drilling Company, Inc. P. O. Box 793 Gladstone 3-7903

Miller #1

Company _____ Lease & Well No. _____
Elevation 1923 Kelly Bushings Ticket Number 5917
Date August 1, 1964 Sec. 36 Twp. 22s Range 14w County Stafford State Kansas
Test Approved by Cullen Thomas Western Representative W. M. Nething

Formation Test No. 1 O.K. ☒ Misrun _____ Interval Tested From 3437' to 3528' Total Depth 3528'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No
Packer Depth 3437 Ft. Size 6 3/4 Packer Depth 3432 Ft. Size 6 3/4
Straddle _____ Yes ☒ No _____ Conv. _____ B.T. _____ Damaged _____ Yes _____ No
Packer Depth _____ Ft. Size _____
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H. Anchor Length 91 Ft. Size 5 1/2 O.D. & 4 1/2 D. P.

RECORDERS Depth 3445 Ft. Clock No. 6866 Depth 3447 Ft. Clock No. 143
Top Make Amarada Cap. 3150 No. 1564 Inside Outside Bottom Make Western Cap. 4000 No. 17 Inside Outside
Below Straddle: Depth _____ Clock No. _____ Inside _____ Outside _____
Top Make _____ Cap. _____ No. _____ Inside _____ Outside _____

Time Set Packer 9:05 P M
Tool Open I.F.P. From 9:08 P M to 9:13 P M Hr. 5 Min. From (B) 58 P.S.I. To (C) 66 P.S.I.
Tool Closed I.C.I.P. From 9:13 P M. to 9:43 P M. Hr. 30 Min. (D) 979 P.S.I.
Tool Open F.F.P. From 9:43 P M. to 10:43 P M. Hr. 60 Min. From (E) 114 P.S.I. To (F) 169 P.S.I.
Tool Closed F.C.I.P. From 10:43 P M. to 11:13 P M. Hr. 30 Min. (G) 885 P.S.I.
Initial Hydrostatic Pressure (A) 1857 P.S.I. Final Hydrostatic Pressure (H) 1851 P.S.I.

SURFACE Size Choke 1/2 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____

BLOW Good blow Bottom Choke Size _____ in.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 1500' gas 20' gassy mud 120' oil and gas cut mud,
180' heavily oil and gas cut mud Mud

Reversed Out _____ Yes _____ No _____ Mud Type starch Viscosity 47 Weight 9.9 Maximum Temp. 104 °F
EXTRA EQUIPMENT: Dual Packers dual Safety Joint no Jars: Size no Make _____ Ser. No. _____
Type Circ. Sub. plug Did Tool Plug? no Where? _____ Did Packer Hold? yes
Length Drill Pipe 2487 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 930 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.
I. D. Drill Collars _____ in. Length D. S. T. Tool 111 ft.

Remarks

WESTERN TESTING CO., INC. Pressure Data

Date August 1, 1964 Test Ticket No. 5917
 Recorder No. 1564 Capacity 3150 Location 3445 Ft.
 Clock No. 6866 Elevation 1923 Kelly Bushings Well Temperature 104 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1857</u> P.S.I.	Opened Tool	<u>9:05 P</u> M	
B First Initial Flow Pressure	<u>58</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>66</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>979</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>114</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>169</u> P.S.I.			
G Final Closed-in Pressure	<u>885</u> P.S.I.			
H Final Hydrostatic Mud	<u>1851</u> P.S.I.			

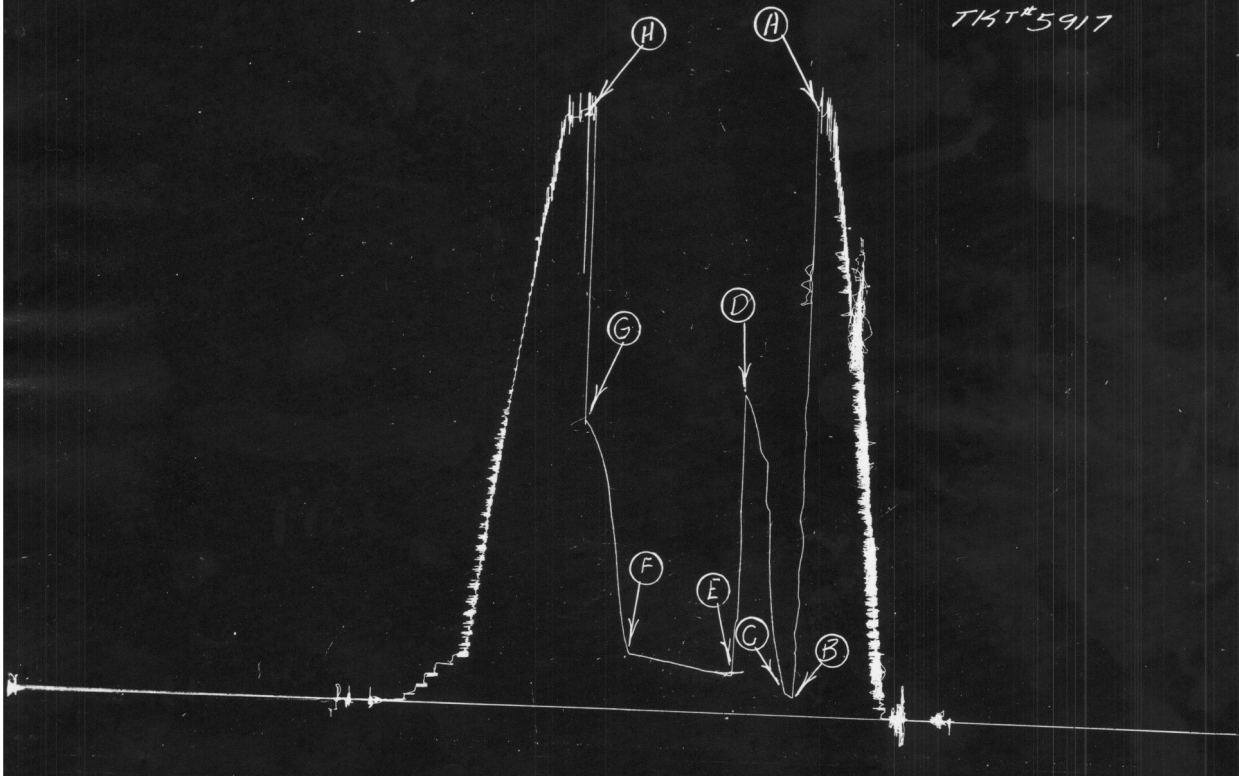
PRESSURE BREAKDOWN

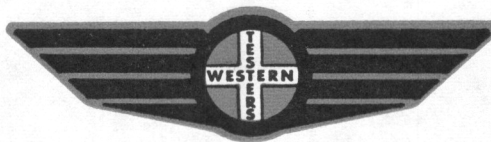
First Flow Press. Breakdown: <u>1</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Initial Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>10</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>58</u>	<u>0</u>	<u>66</u>	<u>0</u>	<u>114</u>	<u>0</u>	<u>169</u>
P 2 <u>5</u>	<u>66</u>	<u>3</u>	<u>130</u>	<u>5</u>	<u>116</u>	<u>3</u>	<u>214</u>
P 3		<u>6</u>	<u>181</u>	<u>10</u>	<u>122</u>	<u>6</u>	<u>290</u>
P 4		<u>9</u>	<u>264</u>	<u>15</u>	<u>125</u>	<u>9</u>	<u>397</u>
P 5		<u>12</u>	<u>375</u>	<u>20</u>	<u>131</u>	<u>12</u>	<u>504</u>
P 6		<u>15</u>	<u>565</u>	<u>25</u>	<u>138</u>	<u>15</u>	<u>626</u>
P 7		<u>18</u>	<u>771</u>	<u>30</u>	<u>142</u>	<u>18</u>	<u>712</u>
P 8		<u>21</u>	<u>815</u>	<u>35</u>	<u>147</u>	<u>21</u>	<u>769</u>
P 9		<u>24</u>	<u>882</u>	<u>40</u>	<u>152</u>	<u>24</u>	<u>815</u>
P 10		<u>27</u>	<u>937</u>	<u>45</u>	<u>158</u>	<u>27</u>	<u>852</u>
P 11		<u>30</u>	<u>979</u>	<u>50</u>	<u>161</u>	<u>30</u>	<u>885</u>
P 12				<u>55</u>	<u>166</u>		
P 13				<u>60</u>	<u>169</u>		
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Graves Drlg. Co. Inc.
Miller #1

Test #1
TKT#5917





Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Graves Drilling Company, Inc. Lease & Well No Miller #1
Elevation 1923 Kelly Bushings Ticket Number 5918
Date August 2, 1964 Sec. 36 Twp. 22s Range 14w County Stafford State Kansas
Test Approved by Cullen Thomas Western Representative W. M. Nething

Formation Test No. 2 O.K. ☒ Misrun _____ Interval Tested From 3531' to 3543' Total Depth 3543'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No _____
Packer Depth 3531 Ft. Size 6 3/4 Packer Depth 3526 Ft. Size 6 3/4
Straddle _____ Yes ☒ No _____ Conv. _____ B.T. _____ Damaged _____ Yes _____ No _____
Packer Depth _____ Ft. Size _____
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H. Anchor Length 12 Ft. Size 5 1/2 O. D.

RECORDERS	Depth <u>3535</u> Ft.	Clock No. <u>6866</u>	Depth <u>3537</u> Ft.	Clock No. <u>143</u>
	Top Make <u>Amarada</u> Cap. <u>3150</u> No. <u>1564</u>	Inside _____ Outside _____	Bottom Make <u>Western</u> Cap. <u>4000</u> No. <u>17</u>	Inside _____ Outside _____
Below Straddle: Depth _____	Clock No. _____	Inside _____ Outside _____	Depth _____	Clock No. _____
Top Make _____	Cap. _____	No. _____	Bottom Make _____	Cap. _____
			No. _____	

Time Set Packer 10:54 A. M
Tool Open I.F.P. From 10:56 A. to 11:02A M Hr. 6 Min. From (B) 38 P.S.I. To (C) 38 P.S.I.
Tool Closed I.C.I.P. From 11:02A M. to 11:32A M. Hr. 30 Min. (D) 1222 P.S.I.
Tool Open F.F.P. From 11:32A M. to 12:32P M. Hr. 60 Min. From (E) 41 P.S.I. To (F) 65 P.S.I.
Tool Closed F.C.I.P. From 12:32P M. to 1:02P M. Hr. 30 Min. (G) 1090 P.S.I.
Initial Hydrostatic Pressure (A) 1902 P.S.I. Final Hydrostatic Pressure (H) 1902 P.S.I.

SURFACE	Size Choke <u>1/2</u> In.	Max. Press. P.S.I.	Time	Description of Flow
INFORMATION	_____	_____	_____ M.	_____
	_____	_____	_____ M.	_____
	_____	_____	_____ M.	_____

BLOW Weak intermittently blow throughout test Bottom Choke Size 3/4 in.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 70' muddy salt water

Reversed Out _____ Yes ☒ No _____ Mud Type starch Viscosity 45 Weight 98 Maximum Temp. 109 °F

EXTRA EQUIPMENT: Dual Packers dual Safety Joint yes Jars: Size 3 1/2 F. H. Make Bowen Ser. No. 3175
Type Circ. Sub AKK plug Did Tool Plug? no Where? _____ Did Packer Hold? yes
Length Drill Pipe 2576 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 930 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.
I. D. Drill Collars _____ in. Length D. S. T. Tool _____ ft.

Remarks

Flushed tool after 30 minutes. No increase.

WESTERN TESTING CO., INC.

Pressure Data

Date August 2, 1964 Test Ticket No. 5918
 Recorder No. 1564 Capacity 3150 Location 3535 Ft.
 Clock No. 6866 Elevation 1923 Kelly Bushings Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1902</u> P.S.I.	Opened Tool	<u>10:54</u> A M	
B First Initial Flow Pressure	<u>38</u> P.S.I.	First Flow Pressure	<u>6</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>38</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>31</u> Mins.
D Initial Closed-in Pressure	<u>1222</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>41</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>65</u> P.S.I.			
G Final Closed-in Pressure	<u>1090</u> P.S.I.			
H Final Hydrostatic Mud	<u>1902</u> P.S.I.			

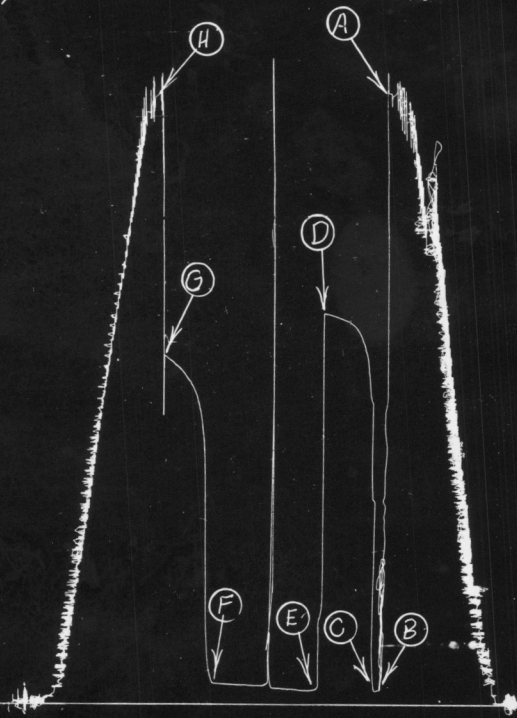
PRESSURE BREAKDOWN

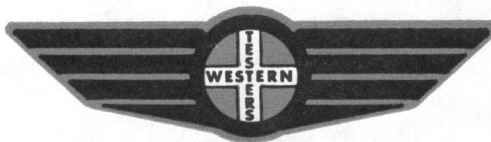
First Flow Press.	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: <u>1</u> Inc.	Breakdown: <u>10</u> Inc.	Breakdown: <u>12</u> Inc.	Breakdown: <u>10</u> Inc.
of <u>5</u> mins. and a	of <u>3</u> mins. and a	of <u>5</u> mins. and a	of <u>3</u> mins. and a
final inc. of <u>0</u> Min.	final inc. of <u>1</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>38</u>	<u>0</u>	<u>38</u>	<u>0</u>	<u>41</u>	<u>0</u>	<u>65</u>
P 2 <u>5</u>	<u>38</u>	<u>3</u>	<u>579</u>	<u>5</u>	<u>42</u>	<u>3</u>	<u>130</u>
P 3		<u>6</u>	<u>1037</u>	<u>10</u>	<u>43</u>	<u>6</u>	<u>407</u>
P 4		<u>9</u>	<u>1131</u>	<u>15</u>	<u>44</u>	<u>9</u>	<u>875</u>
P 5		<u>12</u>	<u>1167</u>	<u>20</u>	<u>48</u>	<u>12</u>	<u>968</u>
P 6		<u>15</u>	<u>1184</u>	<u>25</u>	<u>50</u>	<u>15</u>	<u>1009</u>
P 7		<u>18</u>	<u>1197</u>	<u>30</u>	<u>55</u>	<u>18</u>	<u>1031</u>
P 8		<u>21</u>	<u>1205</u>	<u>35</u>	<u>57</u>	<u>21</u>	<u>1052</u>
P 9		<u>24</u>	<u>1210</u>	<u>40</u>	<u>58</u>	<u>24</u>	<u>1066</u>
P 10		<u>27</u>	<u>1216</u>	<u>45</u>	<u>60</u>	<u>27</u>	<u>1079</u>
P 11		<u>30</u>	<u>1221</u>	<u>50</u>	<u>62</u>	<u>30</u>	<u>1090</u>
P 12		<u>31</u>	<u>1222</u>	<u>55</u>	<u>63</u>		
P 13				<u>60</u>	<u>65</u>		
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Graves Drlg. Co. Inc.
Miller #1

TEST # 2
TKT#5918





Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Graves Drilling Company Lease & Well No. Miller #1
1923 Kelly Bushings
Elevation _____ Ticket Number 5919
Date August 3, 1964 36 Sec. 22s Range 14W County Stafford State Kansas
Test Approved by John S. Miller Western Representative W. M. Nething

Formation Test No. 3 O.K. ☒ Misrun _____ Interval Tested From 3565' to 3604' Total Depth 3604'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged Yes ☒ No Conv. _____ B.T. _____ Damaged Yes ☒ No
Packer Depth 3565 Ft. Size 6 3/4 Packer Depth 3560' Ft. Size 6 3/4
Straddle _____ Yes ☒ No _____ Conv. _____ B.T. _____ Damaged Yes _____ No
Packer Depth _____ Ft. Size _____
Tool Size _____ Tool Jt. Size 4 1/2 F.H. Anchor Length 39 Ft. Size 5 1/2 O. D.

RECORDERS Depth 3573 Ft. Clock No. 6866 Depth 3575 Ft. Clock No. 143
Amerada 3150 1564 Inside _____ Outside _____ Bottom Make Western Cap. 4000 No. 17 Inside _____
Top Make _____ Cap. _____ No. _____ Outside _____
Below Straddle: Depth _____ Clock No. _____ Inside _____ Outside _____
Top Make _____ Cap. _____ No. _____ Inside _____ Outside _____

Time Set Packer 4:39 A M
Tool Open I.F.P. From 4:41 A M to 4:46 A M Hr. 5 Min. From (B) 85 P.S.I. To (C) 85 P.S.I.
Tool Closed I.C.I.P. From 4:46 A M. to 5:16 A M. Hr. 30 Min. (D) 1292 P.S.I.
Tool Open F.F.P. From 5:16 A M. to 6:16 A M. Hr. 60 Min. From (E) 125 P.S.I. To (F) 295 P.S.I.
Tool Closed F.C.I.P. From 6:16 A M. to 6:46 A M. Hr. 30 Min. (G) 1195 P.S.I.
Initial Hydrostatic Pressure (A) 1894 P.S.I. Final Hydrostatic Pressure (H) 1883 P.S.I.

SURFACE Size Choke 1/2 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____

Strong blow gas to surface 10 minutes
BLOW _____ Bottom Choke Size 3/4 in.

Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 1260' oil bottom 420' mud cut
35 gravity oil @ 83° Mud

Reversed Out _____ Yes ☒ No _____ Mud Type Starch Viscosity 47 Weight 9.9 Maximum Temp. 108 °F

EXTRA EQUIPMENT: Dual Packers dual Safety Joint _____ Jars: Size 3 1/2 F.H. Make Bowen Ser. No. 3175

Type Circ. Sub. plug Did Tool Plug? no Where? _____ Did Packer Hold? yes

Length Drill Pipe 2610 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 930 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.

I. D. Drill Collars _____ in. Length D. S. T. Tool 64 ft.

Remarks

WESTERN TESTING CO., INC. Pressure Data

Date August 3, 1964 Test Ticket No. 5919
 Recorder No. 1564 Capacity 3150 Location 3573 Fr.
 Clock No. 6866 Elevation 1923 Kelly Bushings Well Temperature 108 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1894</u> P.S.I.	Opened Tool	<u>4:39 A</u> M.	
B First Initial Flow Pressure	<u>85</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>85</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>1292</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>125</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>295</u> P.S.I.			
G Final Closed-in Pressure	<u>1195</u> P.S.I.			
H Final Hydrostatic Mud	<u>1883</u> P.S.I.			

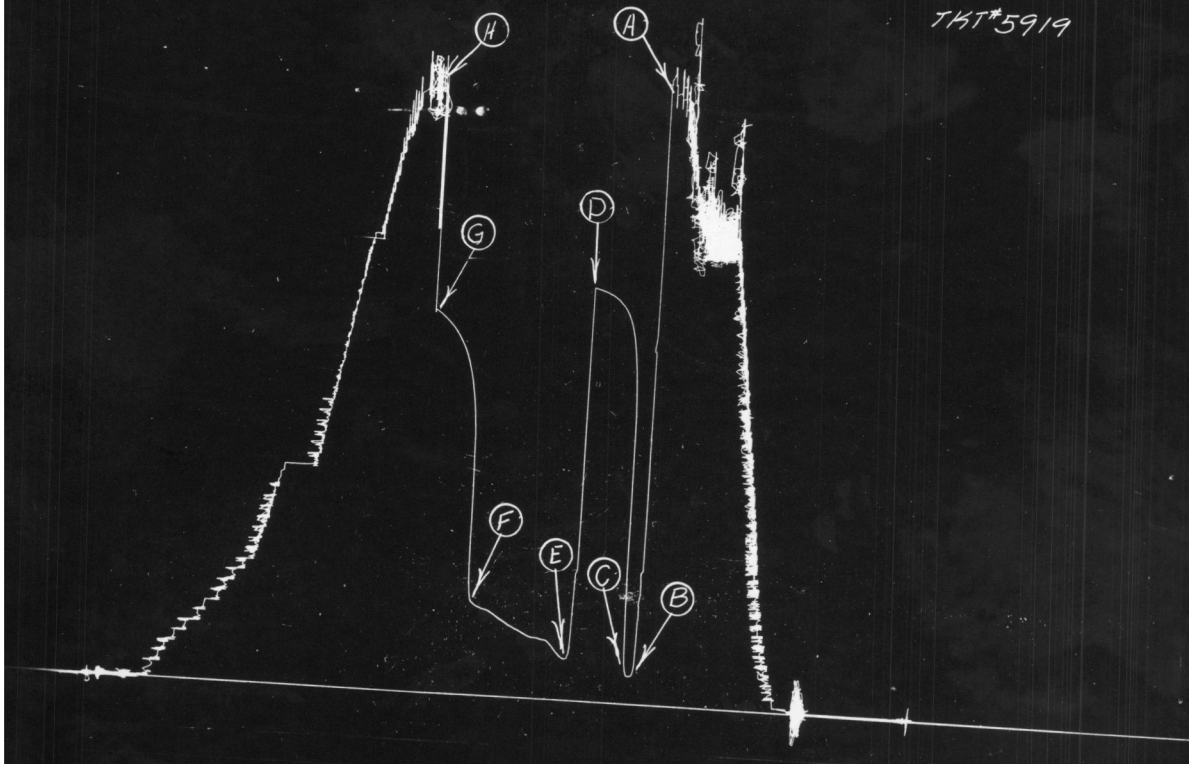
PRESSURE BREAKDOWN

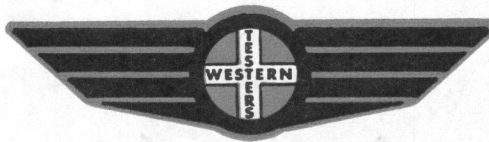
First Flow Press.	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: <u>1</u> Inc.	Breakdown: <u>11</u> Inc.	Breakdown: <u>12</u> Inc.	Breakdown: <u>10</u> Inc.
of <u>5</u> mins. and a	of <u>3</u> mins. and a	of <u>5</u> mins. and a	of <u>3</u> mins. and a
final inc. of <u>0</u> Min.	final 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>85</u>	<u>0</u>	<u>85</u>	<u>0</u>	<u>125</u>	<u>0</u>	<u>295</u>
P 2 <u>5</u>	<u>85</u>	<u>3</u>	<u>278</u>	<u>5</u>	<u>130</u>	<u>3</u>	<u>793</u>
P 3		<u>6</u>	<u>877</u>	<u>10</u>	<u>156</u>	<u>6</u>	<u>943</u>
P 4		<u>9</u>	<u>1120</u>	<u>15</u>	<u>178</u>	<u>9</u>	<u>1015</u>
P 5		<u>12</u>	<u>1189</u>	<u>20</u>	<u>184</u>	<u>12</u>	<u>1075</u>
P 6		<u>15</u>	<u>1230</u>	<u>25</u>	<u>191</u>	<u>15</u>	<u>1105</u>
P 7		<u>18</u>	<u>1254</u>	<u>30</u>	<u>205</u>	<u>18</u>	<u>1134</u>
P 8		<u>21</u>	<u>1265</u>	<u>35</u>	<u>217</u>	<u>21</u>	<u>1154</u>
P 9		<u>24</u>	<u>1276</u>	<u>40</u>	<u>233</u>	<u>24</u>	<u>1172</u>
P 10		<u>27</u>	<u>1282</u>	<u>45</u>	<u>251</u>	<u>27</u>	<u>1186</u>
P 11		<u>30</u>	<u>1287</u>	<u>50</u>	<u>266</u>	<u>30</u>	<u>1195</u>
P 12		<u>33</u>	<u>1292</u>	<u>55</u>	<u>273</u>		
P 13				<u>60</u>	<u>295</u>		
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Graves Drilling Co. Inc.
Miller #1

Test #3
TKT#5919





Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Graves Drilling Company, Inc. Lease & Well No. Miller #1
Elevation 1923 Kelly Bushings Ticket Number 5920
Date August 3, 1964 Sec. 36 Twp. 22s Range 14w County Stafford State Kansas
Test Approved by Cullen Thomas Western Representative W. M. Nething

Formation Test No. 4 O.K. ☒ Misrun _____ Interval Tested From 3602 to 3624 Total Depth 3624'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged Yes ☒ No Conv. _____ B.T. ☒ Damaged Yes ☒ No
Packer Depth 3602 Ft. Size 6 3/4 Packer Depth 3597 Ft. Size 6 3/4
Straddle _____ Yes ☒ No _____ Conv. _____ B.T. _____ Damaged Yes _____ No
Packer Depth _____ Ft. Size _____
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H. Anchor Length 22 Ft. Size 5 1/2 D. P.

RECORDERS Depth 3610 Ft. Clock No. 6866 Depth 3612 Ft. Clock No. 143
Top Make Amarada Cap. 3150 No. 1564 Inside _____ Outside _____ Bottom Make Western Cap. 4000 No. 17 Inside _____ Outside _____
Below Straddle: Depth _____ Clock No. _____ Inside _____ Outside _____ Depth _____ Ft. Clock No. _____ Inside _____ Outside _____
Top Make _____ Cap. _____ No. _____ Inside _____ Outside _____ Bottom Make _____ Cap. _____ No. _____ Inside _____ Outside _____

Time Set Packer 5:37 P M
Tool Open I.F.P. From 5:40 P M to 5:45 P M Hr. 5 Min. From (B) 43 P.S.I. To (C) 43 P.S.I.
Tool Closed I.C.I.P. From 5:45 P M. to 6:15 P M. Hr. 30 Min. (D) 1214 P.S.I.
Tool Open F.F.P. From 6:15 P M. to 7:15 P M. Hr. 60 Min. From (E) 47 P.S.I. To (F) 65 P.S.I.
Tool Closed F.C.I.P. From 7:15 P M. to 7:45 P M. Hr. 30 Min. (G) 649 P.S.I.
Initial Hydrostatic Pressure (A) 1905 P.S.I. Final Hydrostatic Pressure (H) 1888 P.S.I.

SURFACE Size Choke 1/2 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____

BLOW Weak intermittently blow flushed tool in 30 minutes Bottom Choke Size 3/4 in.
Did Well Flow Yes ☒ No _____ Recovery Total Ft. 70' slightly oil cut mud

Reversed Out Yes ☒ No _____ Mud Type starch Viscosity 45 Weight 9.7 Maximum Temp. 108 °F
EXTRA EQUIPMENT: Dual Packers dual Safety Joint yes Jars: Size 3 1/2 F. H. Make Bowen Ser. No. 3175
Type Circ. Sub. plug Did Tool Plug? no Where? _____ Did Packer Hold? yes
Length Drill Pipe 2647 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 930 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.
I. D. Drill Collars _____ in. Length D. S. T. Tool 47 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date August 3, 1964 Test Ticket No. 5920
 Recorder No. 1564 Capacity 3150 Location 3610 Ft.
 Clock No. 6866 Elevation 1923 Kelly Bushings Well Temperature 108 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1905</u> P.S.I.	Opened Tool	<u>5:37 P</u> M	
B First Initial Flow Pressure	<u>43</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>43</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>31</u> Mins.
D Initial Closed-in Pressure	<u>1214</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>47</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
F Second Final Flow Pressure	<u>65</u> P.S.I.			
G Final Closed-in Pressure	<u>649</u> P.S.I.			
H Final Hydrostatic Mud	<u>1888</u> P.S.I.			

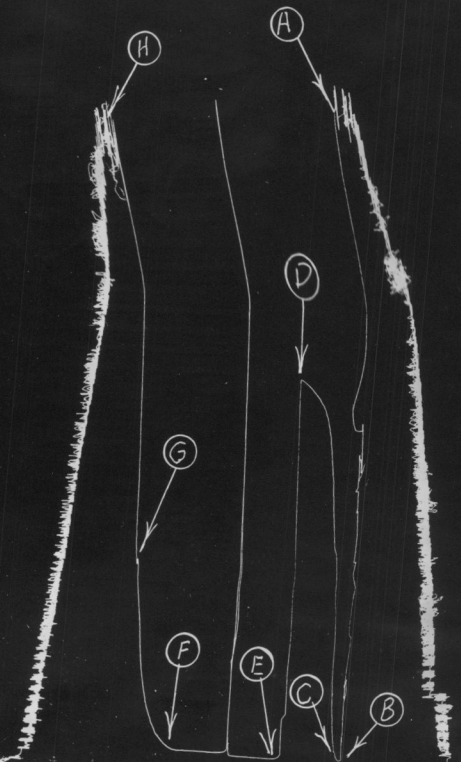
PRESSURE BREAKDOWN

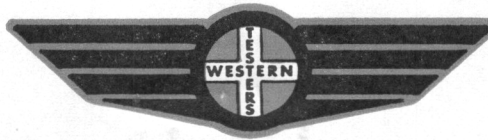
First Flow Press.	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: <u>1</u> Inc.	Breakdown: <u>10</u> Inc.	Breakdown: <u>12</u> Inc.	Breakdown: <u>9</u> Inc.
of <u>5</u> mins. and a	of <u>3</u> mins. and a	of <u>5</u> mins. and a	of <u>3</u> mins. and a
final inc. of <u>0</u> Min.	final inc. of <u>1</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>43</u>	<u>0</u>	<u>43</u>	<u>0</u>	<u>47</u>	<u>0</u>	<u>65</u>
P 2 <u>5</u>	<u>43</u>	<u>3</u>	<u>141</u>	<u>5</u>	<u>47</u>	<u>3</u>	<u>72</u>
P 3		<u>6</u>	<u>345</u>	<u>10</u>	<u>47</u>	<u>6</u>	<u>85</u>
P 4		<u>9</u>	<u>677</u>	<u>15</u>	<u>47</u>	<u>9</u>	<u>103</u>
P 5		<u>12</u>	<u>946</u>	<u>20</u>	<u>48</u>	<u>12</u>	<u>133</u>
P 6		<u>15</u>	<u>1086</u>	<u>25</u>	<u>49</u>	<u>15</u>	<u>169</u>
P 7		<u>18</u>	<u>1132</u>	<u>30</u>	<u>50</u>	<u>18</u>	<u>239</u>
P 8		<u>21</u>	<u>1162</u>	<u>35</u>	<u>60</u>	<u>21</u>	<u>340</u>
P 9		<u>24</u>	<u>1181</u>	<u>40</u>	<u>62</u>	<u>24</u>	<u>500</u>
P 10		<u>27</u>	<u>1197</u>	<u>45</u>	<u>63</u>	<u>27</u>	<u>649</u>
P 11		<u>30</u>	<u>1211</u>	<u>50</u>	<u>63</u>		
P 12		<u>31</u>	<u>1214</u>	<u>55</u>	<u>64</u>		
P 13				<u>60</u>	<u>65</u>		
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Graves Drlg. Co. Inc.
Miller #1

Test #4
TKT#5920





Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Graves Drilling Company, Inc. Lease & Well No. Miller #1
Elevation 1923 Kelly Bushings Ticket Number 5921
Date August 4, 1964 Sec. 36 Twp. 22s Range 14w County Stafford State Kansas
Test Approved by J. S. Miller Western Representative W. M. Nething

Formation Test No. 5 O.K. ☒ Misrun _____ Interval Tested From 3634 to 3700 Total Depth 3700'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged ☒ Yes _____ No _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No _____
Packer Depth 3634 Ft. Size 6 3/4 Packer Depth 3629 Ft. Size 6 3/4
Straddle _____ Yes ☒ No _____ Conv. _____ B.T. _____ Damaged _____ Yes _____ No _____
Tool Size 5 1/2 O. D. Packer Depth _____ Ft. Size _____
Tool Jt. Size 4 1/2 F. H. Anchor Length 66 Ft. Size 5 1/2 O.D. & 4 1/2 D. P.

RECORDERS	Depth <u>3642</u>	Ft	Clock No. <u>6866</u>	Depth <u>3644</u>	Ft.	Clock No. <u>143</u>
	Top Make <u>Amarada</u>	Cap. <u>3150</u>	No. <u>1564</u> Inside	Bottom Make <u>Western</u>	Cap. <u>4000</u>	No. <u>17</u> Inside
			Outside			Outside
Below Straddle:	Depth _____	Clock No. _____	Inside	Depth _____	Ft.	Clock No. _____
			Outside			Outside
	Top Make _____	Cap. _____	No. _____ Inside	Bottom Make _____	Cap. _____	No. _____ Inside
			Outside			Outside

Time Set Packer 12:15P M
Tool Open I.F.P. From 12:18P M to 12:26P M Hr. 8 Min. From (B) 35 P.S.I. To (C) 35 P.S.I.
Tool Closed I.C.I.P. From 12:26 P.M. to 12:56 P.M. Hr. 30 Min. (D) 665 P.S.I.
Tool Open F.F.P. From 12:56 P M. to 1:26 P M. Hr. 30 Min. From (E) 40 P.S.I. To (F) 46 P.S.I.
Tool Closed F.C.I.P. From 1:26 P M. to 1:56 P M. Hr. 30 Min. (G) 150 P.S.I.
Initial Hydrostatic Pressure (A) 1921 P.S.I. Final Hydrostatic Pressure (H) 1900 P.S.I.

SURFACE	Size Choke <u>1/2</u> In.	Max. Press. P.S.I.	Time	Description of Flow
INFORMATION	_____	_____	_____ M.	_____
	_____	_____	_____ M.	_____
	_____	_____	_____ M.	_____

BLOW Weak blow 4 minutes flushed tool weak blow 2 minutes Bottom Choke Size 3/4 in.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 15' mud with few speck oil

Reversed Out _____ Yes ☒ No _____ Mud Type starch Viscosity 48 Weight 9.7 Maximum Temp. 107 °F
EXTRA EQUIPMENT: Dual Packers dual Safety Joint yes Jars: Size 3 1/2 F.H. Make Bowen Ser. No. 3175
Type Circ. Sub. plug Did Tool Plug? no Where? _____ Did Packer Hold? yes
Length Drill Pipe 2679 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 930 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.
I. D. Drill Collars _____ in. Length D. S. T. Tool 91 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date August 4, 1964 Test Ticket No. 5921
 Recorder No. 1564 Capacity 3150 Location 3642 Ft.
 Clock No. 6866 Elevation 1923 Kelly Bushings Well Temperature 107 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1921</u> P.S.I.	Opened Tool	<u>12:15 P M</u>	
B First Initial Flow Pressure	<u>35</u> P.S.I.	First Flow Pressure	<u>8</u> Mins.	<u>7</u> Mins.
C First Final Flow Pressure	<u>35</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>665</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>40</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
F Second Final Flow Pressure	<u>46</u> P.S.I.			
G Final Closed-in Pressure	<u>150</u> P.S.I.			
H Final Hydrostatic Mud	<u>1900</u> P.S.I.			

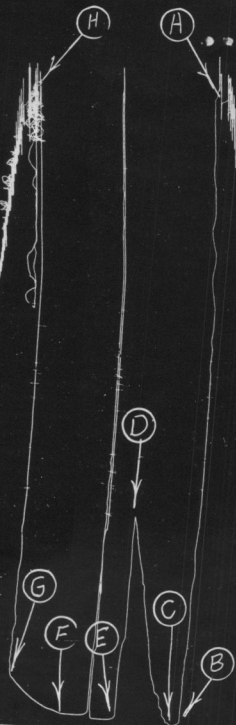
PRESSURE BREAKDOWN

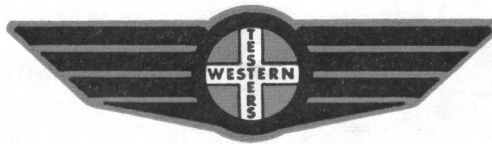
First Flow Press. Breakdown: <u>1</u> Inc. of <u>5</u> mins. and a final inc. of <u>2</u> Min.	Initial Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>9</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>35</u>	<u>0</u>	<u>35</u>	<u>0</u>	<u>40</u>	<u>0</u>	<u>46</u>
P 2 <u>5</u>	<u>35</u>	<u>3</u>	<u>51</u>	<u>5</u>	<u>40</u>	<u>3</u>	<u>55</u>
P 3 <u>7</u>	<u>35</u>	<u>6</u>	<u>86</u>	<u>10</u>	<u>40</u>	<u>6</u>	<u>60</u>
P 4		<u>9</u>	<u>125</u>	<u>15</u>	<u>40</u>	<u>9</u>	<u>71</u>
P 5		<u>12</u>	<u>177</u>	<u>20</u>	<u>46</u>	<u>12</u>	<u>80</u>
P 6		<u>15</u>	<u>241</u>	<u>25</u>	<u>46</u>	<u>15</u>	<u>91</u>
P 7		<u>18</u>	<u>322</u>	<u>30</u>	<u>46</u>	<u>18</u>	<u>103</u>
P 8		<u>21</u>	<u>404</u>			<u>21</u>	<u>117</u>
P 9		<u>24</u>	<u>493</u>			<u>24</u>	<u>136</u>
P 10		<u>27</u>	<u>573</u>			<u>27</u>	<u>150</u>
P 11		<u>30</u>	<u>665</u>				
P 12							
P 13							
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Graves Drlg. Co. Inc.
Miller #1

Test # 5
TKT#5921





Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Graves Drilling Co., Inc. Lease & Well No. Miller #1
Elevation 1923 Kelly Bushings Ticket Number 5922
Date August 5, 1964 Sec. 36 Twp. 22S Range 14W County Stafford State Kansas
Test Approved by Gullen Thomas Western Representative W. M. Nething

Formation Test No. 6 O.K. ☒ Misrun _____ Interval Tested From 3823 to 3828 Total Depth 3828'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No _____
Packer Depth 3823 Ft. Size 6 3/4 Packer Depth 3818 Ft. Size 6 3/4
Straddle _____ Yes ☒ No _____ Conv. _____ B.T. _____ Damaged _____ Yes _____ No _____
Packer Depth _____ Ft. Size _____
Tool Size 5 1/2 O. D. Tool Jt. Size 4 1/2 F. H. Anchor Length 5 Ft. Size 5 1/2 O. D.

RECORDERS Depth 3808 Ft. Clock No. 6866 Depth 3825 Ft. Clock No. 143
Top Make Amarada Cap. 3150 No. 1564 Inside _____ Outside _____ Bottom Make Western Cap. 4000 No. 17 Inside _____ Outside _____
Below Straddle: Depth _____ Clock No. _____ Inside _____ Outside _____ Depth _____ Ft. Clock No. _____ Inside _____ Outside _____
Top Make _____ Cap. _____ No. _____ Inside _____ Outside _____ Bottom Make _____ Cap. _____ No. _____ Inside _____ Outside _____

Time Set Packer 7:03 P M
Tool Open I.F.P. From 7:05 P M to 7:15 P M Hr. 10 Min. From (B) 43 P.S.I. To (C) 52 P.S.I.
Tool Closed I.C.I.P. From 7:15 P M. to 7:45 P M. Hr. 30 Min. (D) 1255 P.S.I.
Tool Open F.F.P. From 7:45 P M. to 8:45 P M. Hr. 60 Min. From (E) 69 P.S.I. To (F) 161 P.S.I.
Tool Closed F.C.I.P. From 8:45 P M. to 9:15 P M. Hr. 30 Min. (G) 1254 P.S.I.
Initial Hydrostatic Pressure (A) 2019 P.S.I. Final Hydrostatic Pressure (H) 2011 P.S.I.

SURFACE Size Choke 1/2 In. Max. Press. P.S.I. Time Description of Flow
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____

BLOW Weak to fair blow Bottom Choke Size 3/4 in.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 20' oil cut mud 300' sulphur water

Reversed Out _____ Yes ☒ No _____ Mud Type starch Viscosity 48 Weight 9.5 Maximum Temp. 114 °F
EXTRA EQUIPMENT: Dual Packers dual Safety Joint yes Jars: Size 3 1/2 F.H. Make Bowen Ser. No. 3175
Type Circ. Sub. plug Did Tool Plug? _____ Where? _____ Did Packer Hold? yes
Length Drill Pipe 2863 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 930 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.
I. D. Drill Collars _____ in. Length D. S. T. Tool 35 ft.

Remarks Slid tool 5 feet. Some plugging in anchor.

WESTERN TESTING CO., INC.

Pressure Data

Date August 5, 1964 Test Ticket No. 5922
 Recorder No. 1564 Capacity 3150 Location 3808 Ft.
 Clock No. 6866 Elevation 1923 Kelly Bushings Well Temperature 114 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2019</u> P.S.I.	Opened Tool	<u>7:03P</u> M	
B First Initial Flow Pressure	<u>43</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>52</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1255</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>69</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>161</u> P.S.I.			
G Final Closed-in Pressure	<u>1254</u> P.S.I.			
H Final Hydrostatic Mud	<u>2011</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.	Initial Shut-In	Second Flow Pressure	Final Shut-In
Breakdown: <u>2</u> Inc.	Breakdown: <u>10</u> Inc.	Breakdown: <u>12</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>43</u>	<u>0</u>	<u>52</u>	<u>0</u>	<u>69</u>	<u>0</u>	<u>161</u>
<u>5</u>	<u>44</u>	<u>3</u>	<u>1195</u>	<u>5</u>	<u>70</u>	<u>3</u>	<u>1172</u>
P 2 <u>10</u>	<u>52</u>	<u>6</u>	<u>1238</u>	<u>10</u>	<u>79</u>	<u>6</u>	<u>1229</u>
P 3		<u>9</u>	<u>1249</u>	<u>15</u>	<u>88</u>	<u>9</u>	<u>1241</u>
P 4		<u>12</u>	<u>1254</u>	<u>20</u>	<u>100</u>	<u>12</u>	<u>1246</u>
P 5		<u>15</u>	<u>1255</u>	<u>25</u>	<u>111</u>	<u>15</u>	<u>1249</u>
P 6		<u>18</u>	<u>1255</u>	<u>30</u>	<u>122</u>	<u>18</u>	<u>1251</u>
P 7		<u>21</u>	<u>1255</u>	<u>35</u>	<u>130</u>	<u>21</u>	<u>1252</u>
P 8		<u>24</u>	<u>1255</u>	<u>40</u>	<u>141</u>	<u>24</u>	<u>1253</u>
P 9		<u>27</u>	<u>1255</u>	<u>45</u>	<u>145</u>	<u>27</u>	<u>1254</u>
P 10		<u>30</u>	<u>1255</u>	<u>50</u>	<u>150</u>	<u>30</u>	<u>1254</u>
P 11				<u>55</u>	<u>156</u>		
P 12				<u>60</u>	<u>161</u>		
P 13							
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Graves Drlg Co. Inc.
Miller #1

TEST # 40
THT # 5922

