



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

Company Graves Drilling Co. Lease & Well No. Mowry #1
Elevation 1918 Kelly Bushings Formation Kansas City Effective Pay _____ Ft. Ticket No. 11630
Date 7-22-68 Sec. 31 Twp. 13s Range 15W County Russell State Kansas
Test Approved by R. G. Miller Western Representative Gordon Young
Formation Test No. 1 O.K. ☒ Misrun _____ Interval Tested From 3103' to 3140' Total Depth 3140'
Size Main Hole 7 7/8 Sat Hole _____ Conv. _____ B.T. ☒ Damaged Yes ☒ No Conv. ☒ B.T. _____ Damaged Yes ☒ No
Packer Depth 3098 Ft. Size 6 3/4" Packer Depth 3103 Ft. Size 6 3/4"
Straddle _____ Yes _____ No ☒ Conv. _____ B.T. _____ Damaged _____ Yes _____ No
Packer Depth _____ Ft. Size _____
Tool Size 5 1/2" OD Tool Jt. Size 4 1/2" FH Anchor Length 37 Ft. Size 5 1/2" OD
RECORDERS Depth 3133 Ft. Clock No. 9102 Depth 3136 Ft. Clock No. 6800
Top Make Kuster Cap. 4150 No. 2605 ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 1559 ~~Inside~~ Outside
Below Straddle: Depth _____ Clock No. _____ Inside Depth _____ Ft. Clock No. _____ Outside
Top Make _____ Cap. _____ No. _____ Inside Bottom Make _____ Cap. _____ No. _____ Outside
Time Set Packer 9:35 A. M.
Tool Open I.F.P. From 9:40 M. to 9:50AM. Hr. 10 Min. From (B) 37 P.S.I. To (C) 37 P.S.I.
Tool Closed I.C.I.P. From 9:50 M. to 10:20AM. Hr. 30 Min. (D) 787 P.S.I.
Tool Open F.F.P. From 10:20 M. to 11:20AM. 1 Hr. Min. From (E) 63 P.S.I. To (F) 71 P.S.I.
Tool Closed F.C.I.P. From 11:20M. to 11:50AM. Hr. 30 Min. (G) 211 P.S.I.
Initial Hydrostatic Pressure (A) 1650 P.S.I. Final Hydrostatic Pressure (H) 1621 P.S.I.
SURFACE Size Choke 3/4 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____
BLOW Good Bottom Choke Size 3/4 In.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 165 feet gas in pipe - 165 feet very slight oil and gas
cut mud.
Reversed Out _____ Yes ☒ No _____ Mud Type Starch Viscosity 42 Weight 9.8 Water Loss _____ cc. Maximum Temp. 105 °F
Type Circ. Sub. Plug Did Tool Plug? No Jars: Size _____ Make _____ Ser. No. _____
EXTRA EQUIPMENT: Dual Packers Yes Safety Joint - Did Packer Hold? Yes Where? -
Length Drill Pipe 2458 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 643 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars - ft.
I. D. Drill Collars _____ in. Length D.S.T. Tool 57 ft.
Remarks Slide 3 feet to bottom.

WESTERN TESTING CO., INC.
Pressure Data

Date 7-22-68 Test Ticket No. 11630
Recorder No. 2605 Capacity 4150 Location 3133 Ft.
Clock No. 9102 Elevation 1918 Kelly Bushings Well Temperature 105 °F

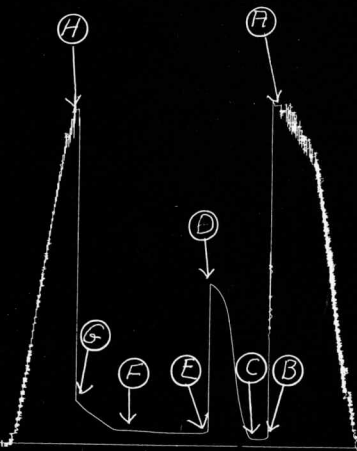
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1650</u> P.S.I.	Opened Tool	<u>9:35 A.</u> M	
B First Initial Flow Pressure	<u>37</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>37</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>787</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>63</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>71</u> P.S.I.			
G Final Closed-in Pressure	<u>211</u> P.S.I.			
H Final Hydrostatic Mud	<u>1621</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 _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>37</u>	<u>0</u>	<u>37</u>	<u>0</u>	<u>63</u>	<u>0</u>	<u>71</u>
P 2 <u>5</u>	<u>37</u>	<u>3</u>	<u>52</u>	<u>5</u>	<u>63</u>	<u>3</u>	<u>71</u>
P 3 <u>10</u>	<u>37</u>	<u>6</u>	<u>107</u>	<u>10</u>	<u>63</u>	<u>6</u>	<u>76</u>
P 4 <u>15</u>		<u>9</u>	<u>191</u>	<u>15</u>	<u>63</u>	<u>9</u>	<u>87</u>
P 5 <u>20</u>		<u>12</u>	<u>319</u>	<u>20</u>	<u>63</u>	<u>12</u>	<u>105</u>
P 6 <u>25</u>		<u>15</u>	<u>466</u>	<u>25</u>	<u>63</u>	<u>15</u>	<u>118</u>
P 7 _____		<u>18</u>	<u>593</u>	<u>30</u>	<u>63</u>	<u>18</u>	<u>131</u>
P 8 _____		<u>21</u>	<u>680</u>	<u>35</u>	<u>63</u>	<u>21</u>	<u>151</u>
P 9 _____		<u>24</u>	<u>729</u>	<u>40</u>	<u>63</u>	<u>24</u>	<u>165</u>
P10 _____		<u>27</u>	<u>760</u>	<u>45</u>	<u>65</u>	<u>27</u>	<u>183</u>
P11 _____		<u>30</u>	<u>787</u>	<u>50</u>	<u>67</u>	<u>30</u>	<u>211</u>
P12 _____				<u>55</u>	<u>69</u>		
P13 _____				<u>60</u>	<u>71</u>		
P14 _____							
P15 _____							
P16 _____							
P17 _____							
P18 _____							
P19 _____							
P20 _____							

JOHN C. GRAVES
MOWRY #1

T.K.T 11630
TEST #1





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

Company Graves Drilling Co., Inc. Lease & Well No. Mowry #1
Elevation 1918 Kelly Bushings Formation Kansas City Effective Pay _____ Ft. Ticket No. 11631
Date 7-23-68 Sec. 31 Twp. 13s Range 15W County Russell State Kansas
Test Approved by Edgar E. Smith Western Representative Gordon Young

Formation Test No. 2 O.K. ☒ Misrun _____ Interval Tested From 3138' to 3190' Total Depth 3190'
Size Main Hole 7 7/8 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No Conv. ☒ B.T. _____ Damaged _____ Yes ☒ No
Packer Depth 3133 Ft. Size 6 3/4 Packer Depth 3138 Ft. Size 6 3/4
Straddle _____ Yes _____ No ☒ Conv. _____ B.T. _____ Damaged _____ Yes _____ No

Packer Depth _____ Ft. Size _____
Tool Size 5 1/2" O B Tool Jt. Size 4 1/2" FH Anchor Length 52 Ft. Size 21'- 5 1/2" OD
Size 31'- 4 1/2" DP

RECORDERS Depth 3182 Ft. Clock No. 9102 Depth 3185 Ft. Clock No. 6800
Top Make Kuster Cap. 4150 No. 2605 ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 1559 ~~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 4:45 A. M

Tool Open I.F.P. From 4:50 M. to 5:00A. M. Hr. 10 Min. From (B) 71 P.S.I. To (C) 71 P.S.I.
Tool Closed I.C.I.P. From 5:00 M. to 5:30A. M. Hr. 30 Min. (D) 904 P.S.I.
Tool Open F.F.P. From 5:30 M. to 6:30A. M. 1 Hr. Min. From (E) 118 P.S.I. To (F) 155 P.S.I.
Tool Closed F.C.I.P. From 6:30 M. to 7:00A. M. Hr. 30 Min. (G) 413 P.S.I.
Initial Hydrostatic Pressure (A) 1740 P.S.I. Final Hydrostatic Pressure (H) 1702 P.S.I.

SURFACE Size Choke 3/4 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____

BLOW Fair increasing to strong Bottom Choke Size 3/4 In.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 90 feet gas in pipe - 360 feet oil and gas cut mud

Reversed Out _____ Yes ☒ No _____ Mud Type Starch Viscosity 37 Weight 9.7 Water Loss 11.8 cc. Maximum Temp. 101 °F
Type Circ. Sub. Plug Did Tool Plug? No Jars: Size _____ Make _____ Ser. No. _____
EXTRA EQUIPMENT: Dual Packers Yes Safety Joint - Did Packer Hold? Yes Where? _____
Length Drill Pipe 2490 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 643 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars - ft.
I. D. Drill Collars - in. Length D.S.T. Tool 72 ft.

Remarks

WESTERN TESTING CO., INC.
Pressure Data

Date 7-23-68 Test Ticket No. 11631
Recorder No. 2605 Capacity 4150 Location 3182 Ft.
Clock No. 9102 Elevation 1918 Kelly Bushings Well Temperature 101 °F

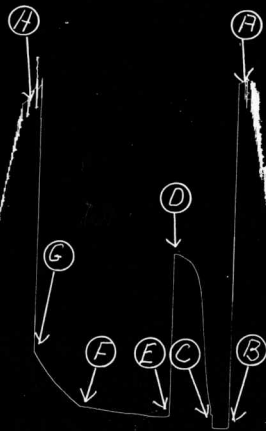
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1740</u> P.S.I.	Opened Tool	<u>4:45</u> A.M.	
B First Initial Flow Pressure	<u>71</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>71</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>904</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>118</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>155</u> P.S.I.			
G Final Closed-in Pressure	<u>413</u> P.S.I.			
H Final Hydrostatic Mud	<u>1702</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>11</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 _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>71</u>	<u>0</u>	<u>71</u>	<u>0</u>	<u>118</u>	<u>0</u>	<u>155</u>
P 2 <u>5</u>	<u>71</u>	<u>3</u>	<u>204</u>	<u>5</u>	<u>118</u>	<u>3</u>	<u>170</u>
P 3 <u>10</u>	<u>71</u>	<u>6</u>	<u>338</u>	<u>10</u>	<u>118</u>	<u>6</u>	<u>185</u>
P 4 <u>15</u>		<u>9</u>	<u>532</u>	<u>15</u>	<u>122</u>	<u>9</u>	<u>204</u>
P 5 <u>20</u>		<u>12</u>	<u>704</u>	<u>20</u>	<u>124</u>	<u>12</u>	<u>224</u>
P 6 <u>25</u>		<u>15</u>	<u>798</u>	<u>25</u>	<u>126</u>	<u>15</u>	<u>235</u>
P 7 _____		<u>18</u>	<u>842</u>	<u>30</u>	<u>129</u>	<u>18</u>	<u>261</u>
P 8 _____		<u>21</u>	<u>873</u>	<u>35</u>	<u>132</u>	<u>21</u>	<u>285</u>
P 9 _____		<u>24</u>	<u>886</u>	<u>40</u>	<u>137</u>	<u>24</u>	<u>310</u>
P10 _____		<u>27</u>	<u>898</u>	<u>45</u>	<u>141</u>	<u>27</u>	<u>344</u>
P11 _____		<u>30</u>	<u>904</u>	<u>50</u>	<u>146</u>	<u>30</u>	<u>374</u>
P12 _____				<u>55</u>	<u>150</u>	<u>33</u>	<u>413</u>
P13 _____				<u>60</u>	<u>155</u>		
P14 _____							
P15 _____							
P16 _____							
P17 _____							
P18 _____							
P19 _____							
P20 _____							

JOHN C. GRAVES
MOWRY #1

T.K.T 11631
TEST #2





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

Company Graves Drilling Co., Inc. Lease & Well No. Mowry #1
Elevation 1918 Kelly Bushings Location Kansas City Effective Pay _____ Ft. Ticket No. 11632
Date 7-24-68 Sec. 31 Twp. 13s Range 15W County Russell State Kansas
Test Approved by E. E. Smith Western Representative Gordon Young
Formation Test No. 3 O.K. ☒ Misrun _____ Interval Tested From 3226' to 3274' Total Depth 3274'
Size Main Hole 7 7/8 Bat Hole _____ Conv. _____ B.T. ☒ Damaged ☒ Yes _____ No Conv. ☒ B.T. _____ Damaged _____ Yes ☒ No
Packer Depth 3221 Ft. Size 6 3/4" Packer Depth 3226 Ft. Size 6 3/4"
Straddle _____ Yes _____ No ☒ Conv. _____ B.T. _____ Damaged _____ Yes _____ No
Packer Depth _____ Ft. Size _____
Tool Size 5 1/2" OD Tool Jt. Size 4 1/2" FH Anchor Length 48 Ft. Size 5 1/2" OD
RECORDERS Depth 3266 Ft. Clock No. 9102 Depth 3269 Ft. Clock No. 6800
Top Make Kuster Cap. 4150 No. 2605 ~~Inside~~ Outside Bottom Make Kuster Cap. 4200 No. 1559 ~~Inside~~ Outside
Below Straddle: Depth _____ Clock No. _____ Inside Depth _____ Ft. Clock No. _____ Outside
Top Make _____ Cap. _____ No. _____ Inside Bottom Make _____ Cap. _____ No. _____ Outside
Time Set Packer 12:35 A. M
Tool Open I.F.P. From 12:40 M. to 12:50A M. Hr. 10 Min. From (B) 52 P.S.I. To (C) 52 P.S.I.
Tool Closed I.C.I.P. From 12:50 M. to 1:20A M. Hr. 30 Min. (D) 59 P.S.I.
Tool Open F.F.P. From 1:20 M. to 1:50A M. Hr. 30 Min. From (E) 52 P.S.I. To (F) 57 P.S.I.
Tool Closed F.C.I.P. From 1:50 M. to 2:20A M. Hr. 30 Min. (G) 57 P.S.I.
Initial Hydrostatic Pressure (A) 1796 P.S.I. Final Hydrostatic Pressure (H) 1761 P.S.I.
SURFACE Size Choke 3/4 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____
BLOW Very weak Bottom Choke Size 3/4 In.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 15feet mud
Reversed Out _____ Yes ☒ No _____ Mud Type Starch Viscosity 39 Weight 9.6 Water Loss 10.4 cc. Maximum Temp. 103 °F
Type Circ. Sub. Plug Did Tool Plug? No Jars: Size _____ Make _____ Ser. No. _____
EXTRA EQUIPMENT: Dual Packers Yes Safety Joint - Did Packer Hold? Yes Where? -
Length Drill Pipe 2584 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 643 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars - ft.
I. D. Drill Collars - in. Length D.S.T. Tool 68 ft.
Remarks Open fool final flow period - No blow - Flush tool 15 minutes - No blow

WESTERN TESTING CO., INC.

Pressure Data

Date 7-24-68 Test Ticket No. 11632
 Recorder No. 2605 Capacity 4150 Location 3266 Ft.
 Clock No. 9102 Elevation 1918 Kelly Bushings Well Temperature 103 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1796</u> P.S.I.	<u>12:35 A.</u> M	
B First Initial Flow Pressure	<u>52</u> P.S.I.	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>52</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>59</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>52</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>57</u> P.S.I.		
G Final Closed-in Pressure	<u>57</u> P.S.I.		
H Final Hydrostatic Mud	<u>1761</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>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> </u> Min.		final inc. of <u> </u> Min.		final inc. of <u> </u> Min.		final inc. of <u> </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>52</u>	<u>0</u>	<u>52</u>	<u>0</u>	<u>57</u>
P 2 <u>5</u>	<u>52</u>	<u>3</u>	<u>52</u>	<u>5</u>	<u>52</u>	<u>3</u>	<u>57</u>
P 3 <u>10</u>	<u>52</u>	<u>6</u>	<u>52</u>	<u>10</u>	<u>52</u>	<u>6</u>	<u>57</u>
P 4 <u> </u>	<u> </u>	<u>9</u>	<u>52</u>	<u>15</u>	<u>52</u>	<u>9</u>	<u>57</u>
P 5 <u> </u>	<u> </u>	<u>12</u>	<u>52</u>	<u>20</u>	<u>57</u>	<u>12</u>	<u>57</u>
P 6 <u> </u>	<u> </u>	<u>15</u>	<u>52</u>	<u>25</u>	<u>57</u>	<u>15</u>	<u>57</u>
P 7 <u> </u>	<u> </u>	<u>18</u>	<u>52</u>	<u>30</u>	<u>57</u>	<u>18</u>	<u>57</u>
P 8 <u> </u>	<u> </u>	<u>21</u>	<u>52</u>	<u> </u>	<u> </u>	<u>21</u>	<u>57</u>
P 9 <u> </u>	<u> </u>	<u>24</u>	<u>55</u>	<u> </u>	<u> </u>	<u>24</u>	<u>57</u>
P 10 <u> </u>	<u> </u>	<u>27</u>	<u>57</u>	<u> </u>	<u> </u>	<u>27</u>	<u>57</u>
P 11 <u> </u>	<u> </u>	<u>30</u>	<u>59</u>	<u> </u>	<u> </u>	<u>30</u>	<u>57</u>
P 12 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 13 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 14 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 15 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 16 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 17 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 18 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 19 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P 20 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

JOHN C. GRAVES
MOWRY #1

T.K.T 11632
TEST #3

