



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

Company Graves Drilling Company, Lease & Well No. Curtis #1  
 Elevation 1936 Kelly Bushings Formation Kansas City Ticker Number 6913  
 Date June 14, 1966 Sec. 25 Twp. 22s Range 14w County Stafford State Kansas  
 Test Approved by George A. McCaleb Western Representative W. M. Nething

Formation Test No. 1 O.K.  Misrun \_\_\_\_\_ Interval Tested From 3588' to 3610' Total Depth 3610'  
 Size Main Hole 7 7/8 Rat Hole \_\_\_\_\_ Conv. \_\_\_\_\_ B.T.  Damaged Yes  No Conv. \_\_\_\_\_ B.T.  Damaged Yes  No  
 Packer Depth 3588 Ft. Size 6 3/4 Packer Depth 3583 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 22 Ft. Size 5 1/2 OD  
 RECORDERS Depth 3596 Ft. Clock No. 6800 Depth 3599 Ft. Clock No. 4964  
 Top Make Amerada Cap. 4150 No. 2604 Inside Outside Bottom Make Amerada Cap. 4250 No. 1051 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 10:37 A M  
 Tool Open I.F.P. From 10:39 M to 10:44 M Hr. 5 Min. From (B) 17 P.S.I. To (C) 17 P.S.I.  
 Tool Closed I.C.I.P. From 10:44 M. to 11:14 M. Hr. 30 Min. (D) 32 P.S.I.  
 Tool Open F.F.P. From 11:14A M. to 11:44 M. Hr. 30 Min. From (E) 19 P.S.I. To (F) 29 P.S.I.  
 Tool Closed F.C.I.P. From 11:44 M. to 12:14 M. Hr. 30 Min. (G) 46 P.S.I.  
 Initial Hydrostatic Pressure (A) 1909 P.S.I. Final Hydrostatic Pressure (H) 1901 P.S.I.

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

BLOW Weak blow 6 minutes; flushed tool, weak blow 5 minutes. Bottom Choke Size 3/4 In.  
 Did Well Flow Yes  No \_\_\_\_\_ Recovery Total Ft. 15' oil specked mud

Mud \_\_\_\_\_  
 Reversed Out Yes  No Mud Type starch Viscosity 47 Weight 9.9 Maximum Temp. 105 °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 3058 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 510 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars \_\_\_\_\_ ft.  
 I. D. Drill Collars \_\_\_\_\_ in. Length D.S.T. Tool 42 ft.

Remarks \_\_\_\_\_

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date June 14, 1966 Test Ticket No. 6913  
 Recorder No. 2604 Capacity 4150 Location 3596 Ft.  
 Clock No. 6800 Elevation 1936 Kelly Bushings Well Temperature 105 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1909</u>	P.S.I.	<u>10:39 A M</u>	
B First Initial Flow Pressure	<u>17</u>	P.S.I.	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>17</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>32</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>19</u>	P.S.I.	<u>30</u> Mins.	<u>21</u> Mins.
F Second Final Flow Pressure	<u>29</u>	P.S.I.		
G Final Closed-in Pressure	<u>46</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1901</u>	P.S.I.		

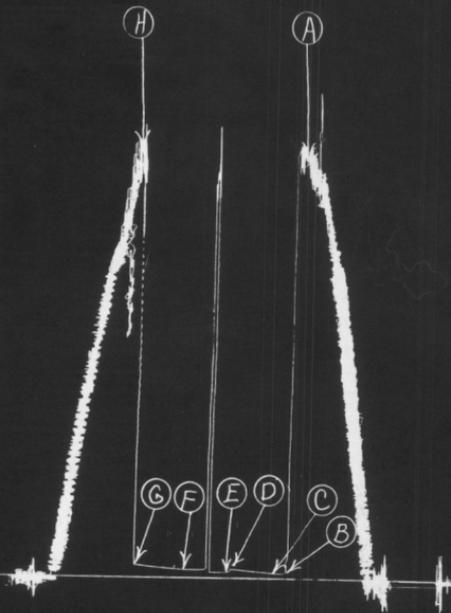
**PRESSURE BREAKDOWN**

<b>First Flow Press.</b> Breakdown: <u>1</u> Inc. of <u>5</u> mins. and a final inc. of <u>=</u> Min.	<b>Initial Shut-In</b> Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>=</u> Min.	<b>Second Flow Pressure</b> Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>=</u> Min.	<b>Final Shut-In</b> Breakdown: <u>7</u> Inc. of <u>3</u> mins. and a final inc. of <u>=</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>17</u>	<u>0</u>	<u>17</u>	<u>0</u>	<u>19</u>	<u>0</u>	<u>29</u>
P 2 <u>5</u>	<u>17</u>	<u>3</u>	<u>17</u>	<u>5</u>	<u>19</u>	<u>3</u>	<u>29</u>
P 3		<u>6</u>	<u>17</u>	<u>10</u>	<u>19</u>	<u>6</u>	<u>29</u>
P 4		<u>9</u>	<u>18</u>	<u>15</u>	<u>19</u>	<u>9</u>	<u>29</u>
P 5		<u>12</u>	<u>20</u>	<u>20</u>	<u>29</u>	<u>12</u>	<u>34</u>
P 6		<u>15</u>	<u>22</u>	<u>25</u>	<u>29</u>	<u>15</u>	<u>39</u>
P 7		<u>18</u>	<u>24</u>	<u>30</u>	<u>29</u>	<u>18</u>	<u>42</u>
P 8		<u>21</u>	<u>25</u>	<u>35</u>	<u>29</u>	<u>21</u>	<u>46</u>
P 9		<u>24</u>	<u>28</u>	<u>40</u>	<u>29</u>		
P10		<u>27</u>	<u>29</u>	<u>45</u>	<u>29</u>		
P11		<u>30</u>	<u>32</u>	<u>50</u>	<u>29</u>		
P12				<u>55</u>	<u>29</u>		
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

Graves DrLg. Co. Inc.  
Curtis #1

T.K.T. #6913  
Test # 1





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

Company Graves Drilling Company, Inc. Lease & Well No. Curtis #1  
Elevation 1936 Kelly Bushings Formation Kansas City Ticket Number 6914  
Date June 12, 1966 Sec. 25 Twp. 22s Range 14w County Stafford State Kansas  
Test Approved by George A. McCaleb Western Representative W. M. Nething

Formation Test No. 2 O.K.  Misrun \_\_\_\_\_ Interval Tested From 3626' to 3647' Total Depth 3647'  
Size Main Hole 7 7/8 Rat Hole \_\_\_\_\_ Conv. \_\_\_\_\_ B.T.  Damaged Yes  No Conv. \_\_\_\_\_ B.T.  Damaged Yes  No  
Packer Depth 3626 Ft. Size 6 3/4 Packer Depth 3621 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 21 Ft. Size 5 1/2 OD  
RECORDERS Depth 3634 Ft. Clock No. 6800 Depth 3637 Ft. Clock No. 4964  
Top Make Amerada Cap. 4150 No. 2604 Inside Outside Bottom Make Amerada Cap. 4250 No. 1051 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 8:52 P M  
Tool Open I.F.P. From 8:55 M to 9:00 M Hr. 5 Min. From (B) \_\_\_\_\_ P.S.I. To (C) 4 P.S.I.  
Tool Closed I.C.I.P. From 9:00 M. to 9:30 M. Hr. 30 Min. (D) 1137 P.S.I.  
Tool Open F.F.P. From 9:30 M. to 10:00 M. Hr. 30 Min. From (E) 8 P.S.I. To (F) 8 P.S.I.  
Tool Closed F.C.I.P. From 10:00 M. to 10:30 M. Hr. 30 Min. (G) 1056 P.S.I.  
Initial Hydrostatic Pressure (A) 1907 P.S.I. Final Hydrostatic Pressure (H) 1894 P.S.I.

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

BLOW Weak blow 5 minutes. Flushed tool, weak blow 3 minutes. Bottom Choke Size 3/4 In.  
Did Well Flow Yes  No \_\_\_\_\_ Recovery Total Ft. 10' mud

Mud \_\_\_\_\_  
Reversed Out Yes  No \_\_\_\_\_ Mud Type starch Viscosity 46 Weight 9.9 Maximum Temp. 107 °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 3096 ft. I.D. Drill Pipe 3.8 in Length Weight Pipe 510 ft. I.D. Weight Pipe 2.7 in Length Drill Collars \_\_\_\_\_ ft.  
I. D. Drill Collars \_\_\_\_\_ in. Length D.S.T. Tool 41 ft.

Remarks \_\_\_\_\_

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date June 14, 1966 Test Ticket No. 6914  
 Recorder No. 2604 Capacity 4150 Location 3634 Ft.  
 Clock No. 6800 Elevation 1936 Kelly Bushings Well Temperature 107 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1907</u> P.S.I.	Opened Tool	<u>8:55 P.M.</u>	<u>8:55</u>
B First Initial Flow Pressure	<u>4</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>4</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1137</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>8</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>8</u> P.S.I.			
G Final Closed-in Pressure	<u>1056</u> P.S.I.			
H Final Hydrostatic Mud	<u>1894</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>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>4</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>8</u>	<u>0</u>	<u>8</u>
P 2	<u>4</u>	<u>3</u>	<u>249</u>	<u>5</u>	<u>8</u>	<u>3</u>	<u>53</u>
P 3		<u>6</u>	<u>757</u>	<u>10</u>	<u>8</u>	<u>6</u>	<u>191</u>
P 4		<u>9</u>	<u>983</u>	<u>15</u>	<u>8</u>	<u>9</u>	<u>455</u>
P 5		<u>12</u>	<u>1050</u>	<u>20</u>	<u>8</u>	<u>12</u>	<u>694</u>
P 6		<u>15</u>	<u>1096</u>	<u>25</u>	<u>8</u>	<u>15</u>	<u>865</u>
P 7		<u>18</u>	<u>1108</u>	<u>30</u>	<u>8</u>	<u>18</u>	<u>941</u>
P 8		<u>21</u>	<u>1119</u>	<u>35</u>	<u>8</u>	<u>21</u>	<u>985</u>
P 9		<u>24</u>	<u>1129</u>	<u>40</u>	<u>8</u>	<u>24</u>	<u>1018</u>
P10		<u>27</u>	<u>1133</u>	<u>45</u>	<u>8</u>	<u>27</u>	<u>1041</u>
P11		<u>30</u>	<u>1137</u>	<u>50</u>	<u>8</u>	<u>30</u>	<u>1056</u>
P12				<u>55</u>	<u>8</u>		
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

Graves DrLg. Co. Inc.  
Curtis #1

T.K.T. #6914  
Test #2

