

Home Office: Great Bend, Kansas

P. O. Box 793

Gladstone 3-7903

Company Graves Drilling Company Lease & Well No. Beetz #1
 Elevation 1861' K.B. Ticket Number 2180
 Date 2-28-63 Sec. 32 Twp. 17 Range 13W County Barton State Kansas
 Test Approved by Orvie Howell Western Representative W. M. Nething

Formation Test No. 1 O.K. Misrun Interval Tested From 3110' to 3188' Total Depth 3188'
 Size Main Hole 7 7/8" Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
 Packer Depth 3110 Ft. Size 6 3/4" Packer Depth 3105 Ft. Size 6 3/4"
 Straddle Yes No Conv. B.T. Damaged Yes No
 Tool Size 5 1/2" O.D. Packer Depth 3110 Ft. Size 6 3/4" Tool Jt. Size 4 1/2" F.H. Anchor Length 78 Ft. Size 5 1/2" O.D. & 1 1/2" D.P.

RECORDERS Depth 3123 Ft. Clock No. 6899 Depth 3123 Ft. Clock No. 22
 Top Make Amerada 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 12:03 A M
 Tool Open I.F.P. From 12:06A M to 12:11A M - Hr. 5 Min. From (B) 35 P.S.I. To (C) 35 P.S.I.
 Tool Closed I.C.I.P. From 12:11A M. to 12:41A M. - Hr. 30 Min. (D) 1110 P.S.I.
 Tool Open F.F.P. From 12:41A M. to 1:56A M. 1 Hr. 15 Min. From (E) 40 P.S.I. To (F) 67 P.S.I.
 Tool Closed F.C.I.P. From 1:56A M. to 2:26A M. - Hr. 30 Min. (G) 1030 P.S.I.
 Initial Hydrostatic Pressure (A) 1739 P.S.I. Final Hydrostatic Pressure (H) 1723 P.S.I.

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

BLOW Weak, steady blow 25 mins. - Weak, intermittent blow 50 mins. Bottom Choke Size 3/4 in.
 Did Well Flow Yes No Recovery Total Ft. 90'

90' Watery Mud Mud
 Reversed Out. Yes No Mud Type Starch Viscosity 40 Weight 10.4 Maximum Temp. 99 °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 2175 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 915 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars _____ ft.
 I. D. Drill Collars _____ in. Length D. S. T. Tool 98 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date 2-28-63 Test Ticket No. 2180
 Recorder No. 1564 Capacity 3150# Location 3123 Ft.
 Clock No. 6899 Elevation 1861' K.B. Well Temperature 99 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1739</u> P.S.I.	Opened Tool	<u>12:06</u> A	<u>12:06</u> AM
B First Initial Flow Pressure	<u>35</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>5</u> Mins.
C First Final Flow Pressure	<u>35</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
D Initial Closed-in Pressure	<u>1110</u> P.S.I.	Second Flow Pressure	<u>75</u> Mins.	<u>75</u> Mins.
E Second Initial Flow Pressure	<u>40</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>67</u> P.S.I.			
G Final Closed-in Pressure	<u>1030</u> P.S.I.			
H Final Hydrostatic Mud	<u>1723</u> P.S.I.			

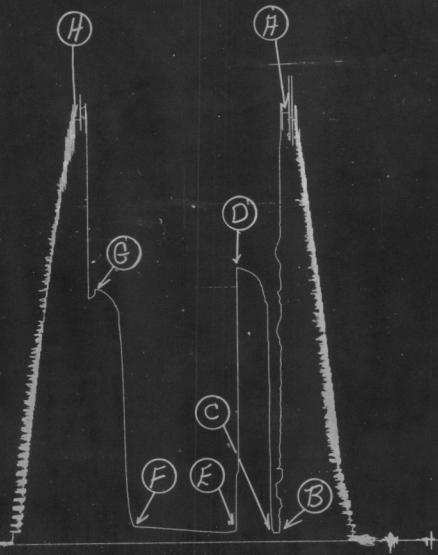
PRESSURE BREAKDOWN

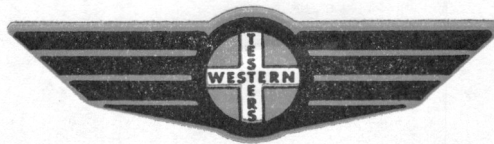
First Flow Press. Breakdown: <u>1</u> Inc. of <u>5</u> mins. and a final inc. of <u>-</u> Min.	Initial Shut-In Breakdown: <u>9</u> Inc. of <u>3</u> mins. and a final inc. of <u>-</u> Min.	Second Flow Pressure Breakdown: <u>15</u> Inc. of <u>5</u> mins. and a final inc. of <u>-</u> Min.	Final Shut-In Breakdown: <u>10</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>35</u>	<u>0</u> <u>35</u>	<u>0</u> <u>40</u>	<u>0</u> <u>67</u>			
P 2	<u>5</u> <u>35</u>	<u>3</u> <u>448</u>	<u>5</u> <u>40</u>	<u>3</u> <u>111</u>			
P 3		<u>6</u> <u>970</u>	<u>10</u> <u>40</u>	<u>6</u> <u>242</u>			
P 4		<u>9</u> <u>1037</u>	<u>15</u> <u>41</u>	<u>9</u> <u>601</u>			
P 5		<u>12</u> <u>1072</u>	<u>20</u> <u>43</u>	<u>12</u> <u>874</u>			
P 6		<u>15</u> <u>1086</u>	<u>25</u> <u>44</u>	<u>15</u> <u>965</u>			
P 7		<u>18</u> <u>1094</u>	<u>30</u> <u>46</u>	<u>18</u> <u>990</u>			
P 8		<u>21</u> <u>1102</u>	<u>35</u> <u>49</u>	<u>21</u> <u>1008</u>			
P 9		<u>24</u> <u>1107</u>	<u>40</u> <u>51</u>	<u>24</u> <u>1022</u>			
P 10		<u>27</u> <u>1110</u>	<u>45</u> <u>54</u>	<u>27</u> <u>1026</u>			
P 11			<u>50</u> <u>56</u>	<u>30</u> <u>1030</u>			
P 12			<u>55</u> <u>58</u>				
P 13			<u>60</u> <u>62</u>				
P 14			<u>65</u> <u>63</u>				
P 15			<u>70</u> <u>65</u>				
P 16			<u>75</u> <u>67</u>				
P 17							
P 18							
P 19							
P 20							

Graves Drlg. Co.
Beetz # 1

Test # 1
T.K.T. # 2180





Home Office: Great Bend, Kansas

P. O. Box 793

Gladstone 3-7903

Company Graves Drilling Co. Lease & Well No. Boots #1
 Elevation 1861 K. B. Ticket Number 2181
 Date 3-1-63 Sec. 32 Twp. 17 Range 13W County Barton State Kan-As
 Test Approved by Orvie Howell Western Representative W. B. Nothing

Formation Test No. 2 O.K. Misrun Interval Tested From 3252 to 3325 Total Depth 3325
 Size Main Hole 7 7/8 Rat Hole Conv. B.T. Damaged Yes No Conv. B.T. Damaged Yes No
 Packer Depth 3252 Ft. Size 6 3/4 Packer Depth 3267 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 P. H. Anchor Length 73 Ft. Size 5 1/2 O.D. X 4 1/2 D.P.

RECORDERS	Depth <u>3265</u> Ft	Clock No. <u>6899</u>	Depth <u>3267</u> Ft.	Clock No. <u>22</u>
	Top Make <u>Amerada</u> Cap. <u>3150</u>	No. <u>1564</u>	Bottom Make <u>H. T. C.</u> Cap. <u>1000</u>	No. <u>17</u>
		Inside <u> </u>		Inside <u> </u>
		Outside <u> </u>		Outside <u> </u>
Below Straddle:	Depth <u> </u>	Clock No. <u> </u>	Depth <u> </u> Ft.	Clock No. <u> </u>
	Top Make <u> </u> Cap. <u> </u>	No. <u> </u>	Bottom Make <u> </u> Cap. <u> </u>	No. <u> </u>
		Inside <u> </u>		Inside <u> </u>
		Outside <u> </u>		Outside <u> </u>

Time Set Packer 11:22 p. M
 Tool Open I.F.P. From 11:22 p. M to 11:30 p. M Hr. 5 Min. From (B) 44 P.S.I. To (C) 44 P.S.I.
 Tool Closed I.C.I.P. From 11:30 p. M. to 12:00 a. M. Hr. 30 Min. (D) 749 P.S.I.
 Tool Open F.F.P. From 12:00 a. M. to 1:30 a. M. 1 Hr. 30 Min. From (E) 52 P.S.I. To (F) 52 P.S.I.
 Tool Closed F.C.I.P. From 1:30 a. M. to 2:00 a. M. Hr. 30 Min. (G) 319 P.S.I.
 Initial Hydrostatic Pressure (A) 1810 P.S.I. Final Hydrostatic Pressure (H) 1804 P.S.I.

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

BLOW Fair Blow Through Out Test Bottom Choke Size 3/4 in.
 Did Well Flow Yes No Recovery Total Ft. 90' 480' Gas
90' Heavily Oil and Gas Cut Mud
 Reversed Out Yes No Mud Type Starch Viscosity 37 Weight 10.1 Maximum Temp. 102 °F
 EXTRA EQUIPMENT: Dual Packers Dual Safety Joint Jars: Size Make Ser. No.
 Type Circ. Sub. Plug Did Tool Plug? No Where? Did Packer Hold? Yes
 Length Drill Pipe 2317 ft. I.D. Drill Pipe 3.8 in. Length Weight Pipe 915 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars ft.
 I. D. Drill Collars in. Length D. S. T. Tool 93 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date 3-1-63 Test Ticket No. 2181
 Recorder No. 1564 Capacity 3150 Location 3265 Ft.
 Clock No. 6899 Elevation 1861 K. B. Well Temperature 102 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1810</u> P.S.I.	Opened Tool		M
B First Initial Flow Pressure	<u>44</u> P.S.I.	First Flow Pressure	<u>11:25 p.p.</u> Mins.	
C First Final Flow Pressure	<u>44</u> P.S.I.	Initial Closed-in Pressure	<u>5</u> Mins.	<u>5</u> Mins.
D Initial Closed-in Pressure	<u>749</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>52</u> P.S.I.	Final Closed-in Pressure	<u>90</u> Mins.	<u>86</u> Mins.
F Second Final Flow Pressure	<u>72</u> P.S.I.		<u>30</u>	<u>32</u>
G Final Closed-in Pressure	<u>319</u> P.S.I.			
H Final Hydrostatic Mud	<u>1804</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.
 Breakdown: 1 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 17 Inc.
 of 5 mins. and a
 final inc. of 1 Min.

Final Shut-In
 Breakdown: 10 Inc.
 of 3 mins. and a
 final inc. of 2 Min.

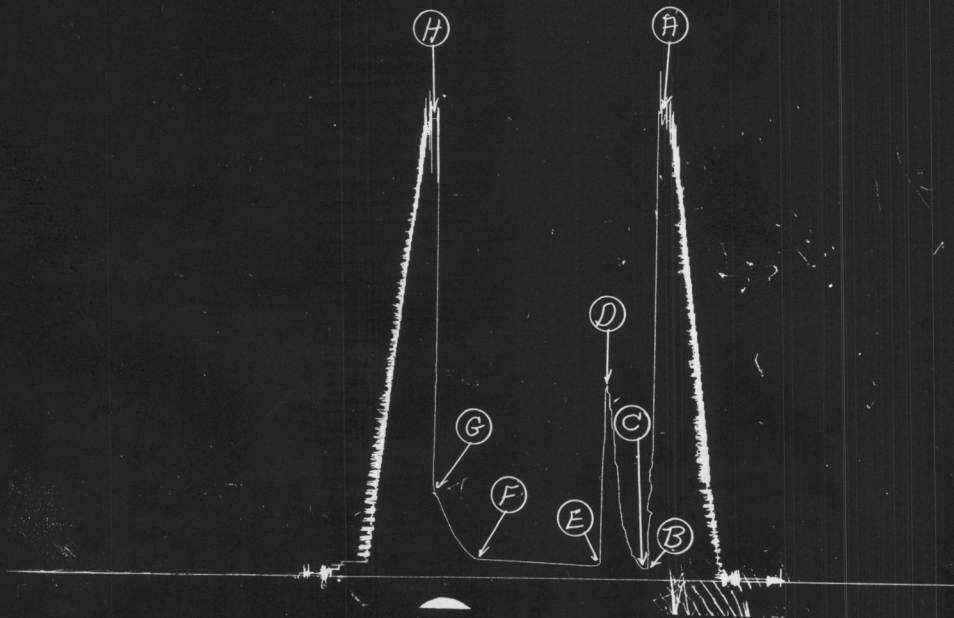
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>44</u>	<u>0</u>	<u>44</u>	<u>0</u>	<u>52</u>	<u>0</u>	<u>72</u>
P 2	<u>44</u>	<u>3</u>	<u>63</u>	<u>5</u>	<u>54</u>	<u>3</u>	<u>74</u>
P 3		<u>6</u>	<u>89</u>	<u>10</u>	<u>55</u>	<u>6</u>	<u>83</u>
P 4		<u>9</u>	<u>122</u>	<u>15</u>	<u>56</u>	<u>9</u>	<u>97</u>
P 5		<u>12</u>	<u>166</u>	<u>20</u>	<u>58</u>	<u>12</u>	<u>116</u>
P 6		<u>15</u>	<u>206</u>	<u>25</u>	<u>59</u>	<u>15</u>	<u>134</u>
P 7		<u>18</u>	<u>300</u>	<u>30</u>	<u>61</u>	<u>18</u>	<u>159</u>
P 8		<u>21</u>	<u>446</u>	<u>35</u>	<u>62</u>	<u>21</u>	<u>188</u>
P 9		<u>24</u>	<u>581</u>	<u>40</u>	<u>63</u>	<u>24</u>	<u>222</u>
P10		<u>27</u>	<u>666</u>	<u>45</u>	<u>64</u>	<u>27</u>	<u>253</u>
P11		<u>30</u>	<u>749</u>	<u>50</u>	<u>65</u>	<u>30</u>	<u>287</u>
P12				<u>55</u>	<u>66</u>	<u>32</u>	<u>319</u>
P13				<u>60</u>	<u>67</u>		
P14				<u>65</u>	<u>68</u>		
P15				<u>70</u>	<u>69</u>		
P16				<u>75</u>	<u>70</u>		
P17				<u>80</u>	<u>71</u>		
P18				<u>85</u>	<u>72</u>		
P19				<u>86</u>	<u>72</u>		
P20							

Graves Drlg. Co.

Betz # 1

Test # 2

T.H.O. # 2181



WESTERN TESTING CO., INC.

Pressure Data

Date 3-1-63 Test Ticket No. 2182
 Recorder No. 1564 Capacity 3150 Location 3343 Ft.
 Clock No. 6377 Elevation 1861 K. B. Well Temperature 103 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1806</u> P.S.I.	Opened Tool		M
B First Initial Flow Pressure	<u>38</u> P.S.I.	First Flow Pressure	<u>6:31 p.</u> Mins.	Mins.
C First Final Flow Pressure	<u>38</u> P.S.I.	Initial Closed-in Pressure	<u>5</u> Mins.	<u>5</u> Mins.
D Initial Closed-in Pressure	<u>38</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>1072</u> P.S.I.	Final Closed-in Pressure	<u>90</u> Mins.	<u>90</u> Mins.
F Second Final Flow Pressure	<u>41</u> P.S.I.		<u>30</u>	<u>30</u>
G Final Closed-in Pressure	<u>69</u> P.S.I.			
H Final Hydrostatic Mud	<u>1042</u> P.S.I.			
	<u>1780</u>			

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>18</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>38</u>	<u>0</u>	<u>38</u>	<u>0</u>	<u>41</u>	<u>0</u>	<u>69</u>
P 2	<u>38</u>	<u>3</u>	<u>880</u>	<u>5</u>	<u>42</u>	<u>3</u>	<u>145</u>
P 3		<u>6</u>	<u>1009</u>	<u>10</u>	<u>44</u>	<u>6</u>	<u>384</u>
P 4		<u>9</u>	<u>1041</u>	<u>15</u>	<u>46</u>	<u>9</u>	<u>819</u>
P 5		<u>12</u>	<u>1055</u>	<u>20</u>	<u>47</u>	<u>12</u>	<u>968</u>
P 6		<u>15</u>	<u>1060</u>	<u>23</u>	<u>48</u>	<u>15</u>	<u>1011</u>
P 7		<u>18</u>	<u>1064</u>	<u>30</u>	<u>50</u>	<u>18</u>	<u>1025</u>
P 8		<u>21</u>	<u>1066</u>	<u>35</u>	<u>51</u>	<u>21</u>	<u>1033</u>
P 9		<u>24</u>	<u>1069</u>	<u>40</u>	<u>53</u>	<u>24</u>	<u>1036</u>
P10		<u>27</u>	<u>1071</u>	<u>45</u>	<u>55</u>	<u>27</u>	<u>1041</u>
P11		<u>30</u>	<u>1072</u>	<u>50</u>	<u>56</u>	<u>30</u>	<u>11042</u>
P12				<u>53</u>	<u>58</u>		
P13				<u>60</u>	<u>59</u>		
P14				<u>65</u>	<u>60</u>		
P15				<u>70</u>	<u>62</u>		
P16				<u>75</u>	<u>64</u>		
P17				<u>80</u>	<u>65</u>		
P18				<u>85</u>	<u>67</u>		
P19				<u>90</u>	<u>69</u>		
P20							

Graves Drng. Co.

Beetz #1

Test #3

T.K.T. # 2182

