



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Graves Drilling Company, Inc.

Youngers #2

Company _____ Lease & Well No. _____
 Elevation _____ Formation Mississippi Effective Pay _____ Ft. Ticket No. 6605
 Date 8/5/80 Sec. 22 Twp. 31S Range 12W County Barber State Kansas
 Test Approved by Frederick W. Stump Western Representative Stuart Stover

Formation Test No. 1 Interval Tested from 4268 ft. to 4335 ft. Total Depth 4335 ft.
 Packer Depth 4263 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 4268 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4273 ft. Recorder Number 11018 Cap. 4425
 Bottom Recorder Depth (Outside) 4276 ft. Recorder Number 11019 Cap. 4500
 Below Straddle Recorder Depth -- ft. Recorder Number - Cap. -

Drilling Contractor Graves Drilling Drill Collar Length 90 I. D. 2 1/4 in.
 Mud Type drispac Viscosity 47 Weight Pipe Length - I. D. - in.
 Weight 9.5 Water Loss N/C cc. Drill Pipe Length 4157 I. D. 4.0 in.
 Chlorides 18,000 P.P.M. Test Tool Length 21 ft. Tool Size 3 1/2 in.
 Jars: Make - Serial Number - Anchor Length 67 ft. Size 4 1/2 in.
 Did Well Flow? - Reversed Out - Surface Choke Size 1/2 in. Bottom Choke Size 1/2 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Good blow off bottom of bucket throughout test.

Recovered 90 ft. of drilling mud with few oil specks
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: _____

| Time Set | Packer(s) | A.M. P.M. | Time Started Off Bottom | A.M. P.M. | Maximum Temperature | ? |
|------------------------------|-------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------|
| | <u>5:20</u> | | <u>8:05</u> | | | |
| Initial Hydrostatic Pressure | | | (A) <u>2226</u> | | <u>P.S.I.</u> | |
| Initial Flow Period | | Minutes <u>15</u> | (B) <u>80</u> | | <u>P.S.I. to (C) 60</u> | <u>P.S.I.</u> |
| Initial Closed In Period | | Minutes <u>39</u> | (D) <u>206</u> | | <u>P.S.I.</u> | |
| Final Flow Period | | Minutes <u>55</u> | (E) <u>88</u> | | <u>P.S.I. to (F) 79</u> | <u>P.S.I.</u> |
| Final Closed In Period | | Minutes <u>39</u> | (G) <u>162</u> | | <u>P.S.I.</u> | |
| Final Hydrostatic Pressure | | | (H) <u>2217</u> | | <u>P.S.I.</u> | |

WESTERN TESTING CO., INC.

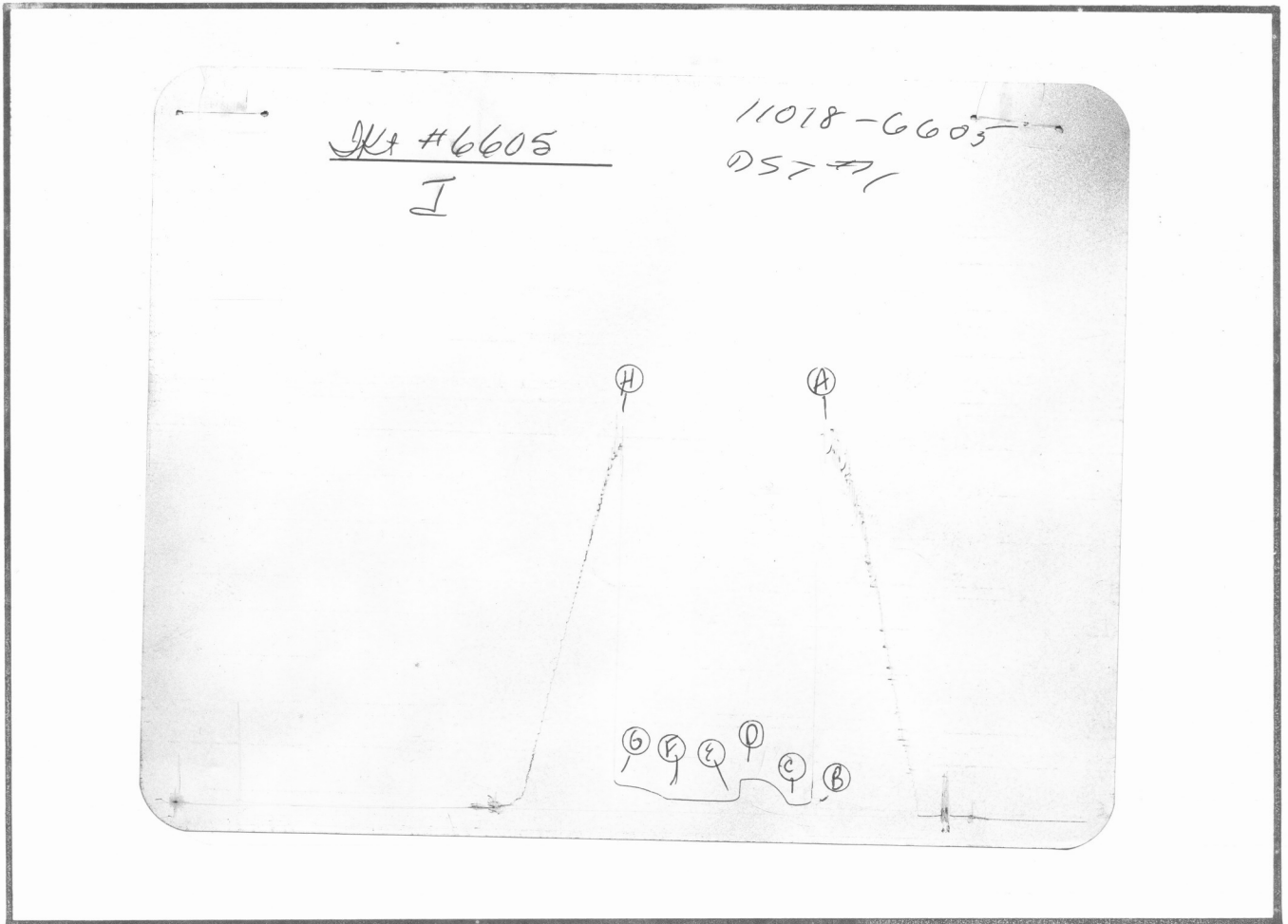
Pressure Data

Date 8/5/80 Test Ticket No. 6605
 Recorder No. 11018 Capacity 4425 Location 4273 Ft.
 Clock No. - Elevation --- Well Temperature -- °F

| Point | Pressure | | Time Given | Time Computed |
|--------------------------------|--------------------|----------------------------|-----------------|-----------------|
| A Initial Hydrostatic Mud | <u>2226</u> P.S.I. | Open Tool | <u>5:20A</u> M | |
| B First Initial Flow Pressure | <u>80</u> P.S.I. | First Flow Pressure | <u>15</u> Mins. | <u>15</u> Mins. |
| C First Final Flow Pressure | <u>60</u> P.S.I. | Initial Closed-in Pressure | <u>45</u> Mins. | <u>39</u> Mins. |
| D Initial Closed-in Pressure | <u>206</u> P.S.I. | Second Flow Pressure | <u>60</u> Mins. | <u>55</u> Mins. |
| E Second Initial Flow Pressure | <u>88</u> P.S.I. | Final Closed-in Pressure | <u>45</u> Mins. | <u>39</u> Mins. |
| F Second Final Flow Pressure | <u>79</u> P.S.I. | | | |
| G Final Closed-in Pressure | <u>162</u> P.S.I. | | | |
| H Final Hydrostatic Mud | <u>2217</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>13</u> Inc. | | Breakdown: <u>11</u> Inc. | | Breakdown: <u>13</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>80</u> | <u>0</u> <u>60</u> | <u>0</u> <u>88</u> | <u>0</u> <u>79</u> | <u>0</u> <u>89</u> | <u>0</u> <u>89</u> | <u>0</u> <u>89</u> |
| P 2 | <u>5</u> <u>66</u> | <u>3</u> <u>91</u> | <u>5</u> <u>78</u> | <u>3</u> <u>102</u> | <u>3</u> <u>102</u> | <u>3</u> <u>102</u> | <u>3</u> <u>102</u> |
| P 3 | <u>10</u> <u>60</u> | <u>6</u> <u>127</u> | <u>10</u> <u>76</u> | <u>6</u> <u>113</u> | <u>6</u> <u>113</u> | <u>6</u> <u>113</u> | <u>6</u> <u>113</u> |
| P 4 | <u>15</u> <u>60</u> | <u>9</u> <u>149</u> | <u>15</u> <u>76</u> | <u>9</u> <u>120</u> | <u>9</u> <u>120</u> | <u>9</u> <u>120</u> | <u>9</u> <u>120</u> |
| P 5 | | <u>12</u> <u>169</u> | <u>20</u> <u>76</u> | <u>12</u> <u>129</u> | <u>12</u> <u>129</u> | <u>12</u> <u>129</u> | <u>12</u> <u>129</u> |
| P 6 | | <u>15</u> <u>187</u> | <u>25</u> <u>76</u> | <u>15</u> <u>135</u> | <u>15</u> <u>135</u> | <u>15</u> <u>135</u> | <u>15</u> <u>135</u> |
| P 7 | | <u>18</u> <u>198</u> | <u>30</u> <u>76</u> | <u>18</u> <u>141</u> | <u>18</u> <u>141</u> | <u>18</u> <u>141</u> | <u>18</u> <u>141</u> |
| P 8 | | <u>21</u> <u>207</u> | <u>35</u> <u>77</u> | <u>21</u> <u>147</u> | <u>21</u> <u>147</u> | <u>21</u> <u>147</u> | <u>21</u> <u>147</u> |
| P 9 | | <u>24</u> <u>213</u> | <u>40</u> <u>78</u> | <u>24</u> <u>150</u> | <u>24</u> <u>150</u> | <u>24</u> <u>150</u> | <u>24</u> <u>150</u> |
| P10 | | <u>27</u> <u>213</u> | <u>45</u> <u>79</u> | <u>27</u> <u>153</u> | <u>27</u> <u>153</u> | <u>27</u> <u>153</u> | <u>27</u> <u>153</u> |
| P11 | | <u>30</u> <u>213</u> | <u>50</u> <u>79</u> | <u>30</u> <u>155</u> | <u>30</u> <u>155</u> | <u>30</u> <u>155</u> | <u>30</u> <u>155</u> |
| P12 | | <u>33</u> <u>213</u> | <u>55</u> <u>79</u> | <u>33</u> <u>156</u> | <u>33</u> <u>156</u> | <u>33</u> <u>156</u> | <u>33</u> <u>156</u> |
| P13 | | <u>36</u> <u>212</u> | | <u>36</u> <u>162</u> | <u>36</u> <u>162</u> | <u>36</u> <u>162</u> | <u>36</u> <u>162</u> |
| P14 | | <u>39</u> <u>206</u> | | <u>39</u> <u>162</u> | <u>39</u> <u>162</u> | <u>39</u> <u>162</u> | <u>39</u> <u>162</u> |
| P15 | | | | | | | |
| P16 | | | | | | | |
| P17 | | | | | | | |
| P18 | | | | | | | |
| P19 | | | | | | | |
| P20 | | | | | | | |



This is an actual photograph of recorder chart.

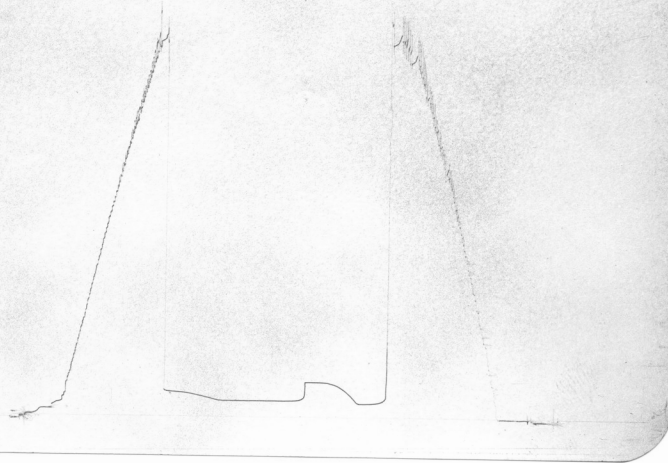
| POINT | PRESSURE | | |
|--|---------------|----------------|-----|
| | Field Reading | Office Reading | |
| (A) Initial Hydrostatic Mud | 2211 | 2226 | PSI |
| (B) First Initial Flow Pressure | 66 | 80 | PSI |
| (C) First Final Flow Pressure | 66 | 60 | PSI |
| (D) Initial Closed-in Pressure | 200 | 206 | PSI |
| (E) Second Initial Flow Pressure | 77 | 88 | PSI |
| (F) Second Final Flow Pressure | 77 | 79 | PSI |
| (G) Final Closed-in Pressure | 166 | 162 | PSI |
| (H) Final Hydrostatic Mud | 2211 | 2217 | PSI |

SKT # 6605

0

11019-6605

OST # 1



NOMENCLATURE

| | | |
|-----------------------|--|-----------|
| b | = Approximate Radius of Investigation | Feet |
| b¹ | = Approximate Radius of Investigation (Net Pay Zone h ¹) | Feet |
| D.R. | = Damage Ratio | — |
| EI | = Elevation | Feet |
| GD | = B.T. Gauge Depth (From Surface Reference) | Feet |
| h | = Interval Tested | Feet |
| h¹ | = Net Pay Thickness | Feet |
| K | = Permeability | md |
| K¹ | = Permeability (From Net Pay Zone h ¹) | md |
| m | = Slope Extrapolated Pressure Plot (Psi ² /cycle Gas) | psi/cycle |
| OF¹ | = Maximum Indicated Flow Rate | MCF/D |
| OF² | = Minimum Indicated Flow Rate | MCF/D |
| OF³ | = Theoretical Open Flow Potential with/Damage Removed Max. | MCF/D |
| OF⁴ | = Theoretical Open Flow Potential with/Damage Removed Min. | MCF/D |
| P^S | = Extrapolated Static Pressure | Psig. |
| P^F | = Final Flow Pressure | Psig. |
| P^{DT} | = Potentiometric Surface (Fresh Water*) | Feet |
| Q | = Average Adjusted Production Rate During Test | bbls/day |
| Q¹ | = Theoretical Production w/Damage Removed | bbls/day |
| Q^g | = Measured Gas Production Rate | MCF/D |
| R | = Corrected Recovery | bbls |
| r^w | = Radius of Well Bore | Feet |
| t | = Flow Time | Minutes |
| t^o | = Total Flow Time | Minutes |
| T | = Temperature Rankine | °R |
| Z | = Compressibility Factor | — |
| u | = Viscosity Gas or Liquid | CP |
| Log | = Common Log | |

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.