



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Graves Drilling Company, Inc. Lease & Well No. Krampe #2

Elevation 1932 Ground Level Formation Lansing Effective Pay - Ft. Ticket No. 8754

Date 12/4/80 Sec. 15 Twp. 21S Range 14W County Stafford State Kansas

Test Approved by Aden Ratzlaff Western Representative Gene Eberhart

Formation Test No. 1 Interval Tested from 3514 ft. to 3548 ft. Total Depth 3548 ft.

Packer Depth 3509 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3514 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3531 ft. Recorder Number 2774 Cap. 4300

Bottom Recorder Depth (Outside) 3534 ft. Recorder Number 10265 Cap. 4675

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Merckle Drilling Co. Rig #1 Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 48 Weight Pipe Length - I. D. - in.

Weight 9.9 Water Loss 8.4 cc. Drill Pipe Length 3492 I. D. 3.8 in.

Chlorides 39,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number - Anchor Length 34 ft. Size 5 1/2 OD in.

Did Well Flow? No Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Weak one half inch blow during initial flow period. Weak three eights inch blow during final flow period.

Recovered 70 ft. of slightly oil cut mud

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Read Chart #2774

Remarks: -

Time Set Packer(s) 9:17 AM. PM. Time Started Off Bottom 12:10 AM. PM. Maximum Temperature 111°

Initial Hydrostatic Pressure - (A) 1949 P.S.I.

Initial Flow Period 30 Minutes (B) 98 P.S.I. to (C) 76 P.S.I.

Initial Closed In Period 45 Minutes (D) 417 P.S.I.

Final Flow Period 60 Minutes (E) 113 P.S.I. to (F) 92 P.S.I.

Final Closed In Period 39 Minutes (G) 185 P.S.I.

Final Hydrostatic Pressure - (H) 1923 P.S.I.

WESTERN TESTING CO., INC.

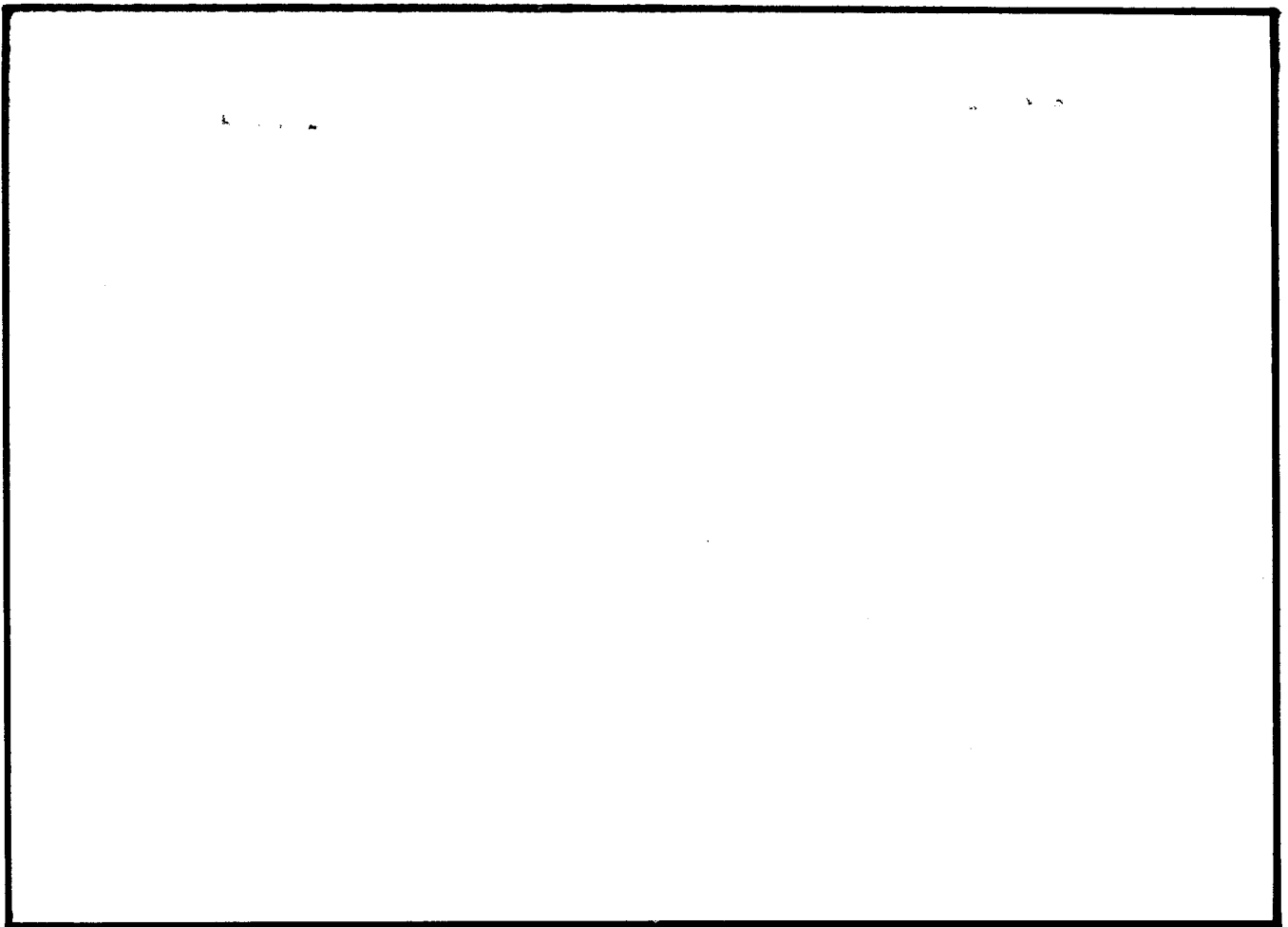
Pressure Data

Date 12-4-80 Test Ticket No. 8754
 Recorder No. 2774 Capacity 4300 Location 3531 Ft.
 Clock No. - Elevation 1932 Ground Level Well Temperature 111 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1949</u> P.S.I.	<u>9:17A</u> M	
B First Initial Flow Pressure	<u>98</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>76</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>417</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>113</u> P.S.I.	<u>45</u> Mins.	<u>39</u> Mins.
F Second Final Flow Pressure	<u>92</u> P.S.I.		
G Final Closed-in Pressure	<u>185</u> P.S.I.		
H Final Hydrostatic Mud	<u>1923</u> P.S.I.		

PRESSURE BREAKDOWN

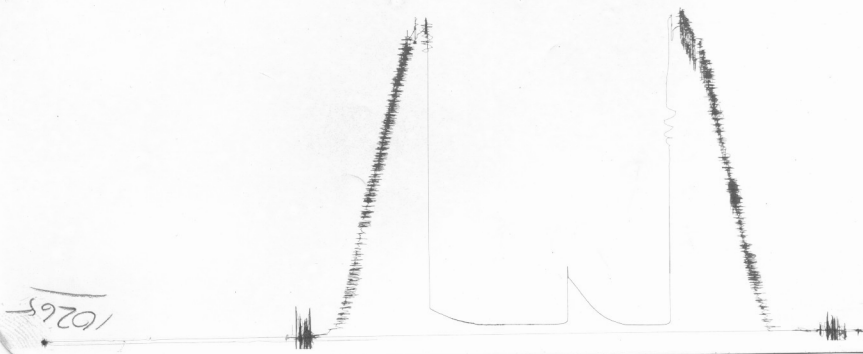
First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>13</u> Inc. of <u>3</u> mins. and a 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>98</u>	<u>0</u>	<u>76</u>	<u>0</u>	<u>113</u>	<u>0</u>	<u>92</u>
P 2 <u>5</u>	<u>78</u>	<u>3</u>	<u>81</u>	<u>5</u>	<u>97</u>	<u>3</u>	<u>93</u>
P 3 <u>10</u>	<u>70</u>	<u>6</u>	<u>89</u>	<u>10</u>	<u>90</u>	<u>6</u>	<u>95</u>
P 4 <u>15</u>	<u>70</u>	<u>9</u>	<u>97</u>	<u>15</u>	<u>88</u>	<u>9</u>	<u>96</u>
P 5 <u>20</u>	<u>72</u>	<u>12</u>	<u>106</u>	<u>20</u>	<u>85</u>	<u>12</u>	<u>100</u>
P 6 <u>25</u>	<u>74</u>	<u>15</u>	<u>118</u>	<u>25</u>	<u>83</u>	<u>15</u>	<u>106</u>
P 7 <u>30</u>	<u>76</u>	<u>18</u>	<u>130</u>	<u>30</u>	<u>81</u>	<u>18</u>	<u>114</u>
P 8		<u>21</u>	<u>146</u>	<u>35</u>	<u>83</u>	<u>21</u>	<u>121</u>
P 9		<u>24</u>	<u>169</u>	<u>40</u>	<u>86</u>	<u>24</u>	<u>129</u>
P10		<u>27</u>	<u>194</u>	<u>45</u>	<u>88</u>	<u>27</u>	<u>141</u>
P11		<u>30</u>	<u>224</u>	<u>50</u>	<u>90</u>	<u>30</u>	<u>152</u>
P12		<u>33</u>	<u>257</u>	<u>55</u>	<u>91</u>	<u>33</u>	<u>161</u>
P13		<u>36</u>	<u>288</u>	<u>60</u>	<u>92</u>	<u>36</u>	<u>174</u>
P14		<u>39</u>	<u>318</u>			<u>39</u>	<u>185</u>
P15		<u>42</u>	<u>351</u>				
P16		<u>45</u>	<u>417</u>				
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

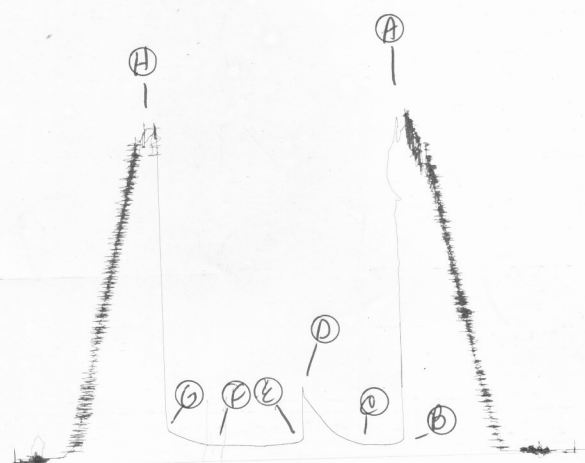
POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1700	1949	PSI
(B) First Initial Flow Pressure	78	98	PSI
(C) First Final Flow Pressure	78	76	PSI
(D) Initial Closed-in Pressure	424	417	PSI
(E) Second Initial Flow Pressure	89	113	PSI
(F) Second Final Flow Pressure	100	92	PSI
(G) Final Closed-in Pressure	167	185	PSI
(H) Final Hydrostatic Mud	1700	1923	PSI

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2774



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Company Graves Drilling Company, Inc. Lease & Well No. Krampe #2

Elevation 1932 Ground Level Formation Kansas City Effective Pay - Ft. Ticker No. 8755

Date 12/5/80 Sec. 15 Twp. 21S Range 14W County Stafford State Kansas

Test Approved by Arden Ratzlaff Western Representative Gene Eberhart

Formation Test No. 2 Interval Tested from 3595 ft. to 3630 ft. Total Depth 3630 ft.

Packer Depth 3590 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3595 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3613 ft. Recorder Number 2774 Cap 4300

Bottom Recorder Depth (Outside) 3616 ft. Recorder Number 10265 Cap 4675

Below Straddle Recorder Depth - ft. Recorder Number - Cap -

Drilling Contractor Merckle Drilling Rig #1 Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 44 Weight Pipe Length - I. D. - in.

Weight 9.8 Water Loss 13.6 cc. Drill Pipe Length 3573 I. D. 3.8 in.

Chlorides 44,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number - Anchor Length 35 ft. Size 5 1/2 OD

Did Well Flow? No Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: * Very weak throughout initial flow period. Weak one half inch blow, decreasing to a few bubbles after fifty minutes of final flow period.

Recovered 66 ft. of slightly oil cut mud

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Read Chart #2774

Remarks: -

Time Set Packer(s) 8:26 A.M. PM Time Started Off Bottom 11:15 A.M. PM Maximum Temperature 114°

Initial Hydrostatic Pressure 2015 P.S.I.

Initial Flow Period 15 Minutes (B) 98 P.S.I. to (C) 73 P.S.I.

Initial Closed In Period 48 Minutes (D) 757 P.S.I.

Final Flow Period 60 Minutes (E) 107 P.S.I. to (F) 92 P.S.I.

Final Closed In Period 39 Minutes (G) 199 P.S.I.

Final Hydrostatic Pressure 1978 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 12-5-80

Test Ticket No. 8755

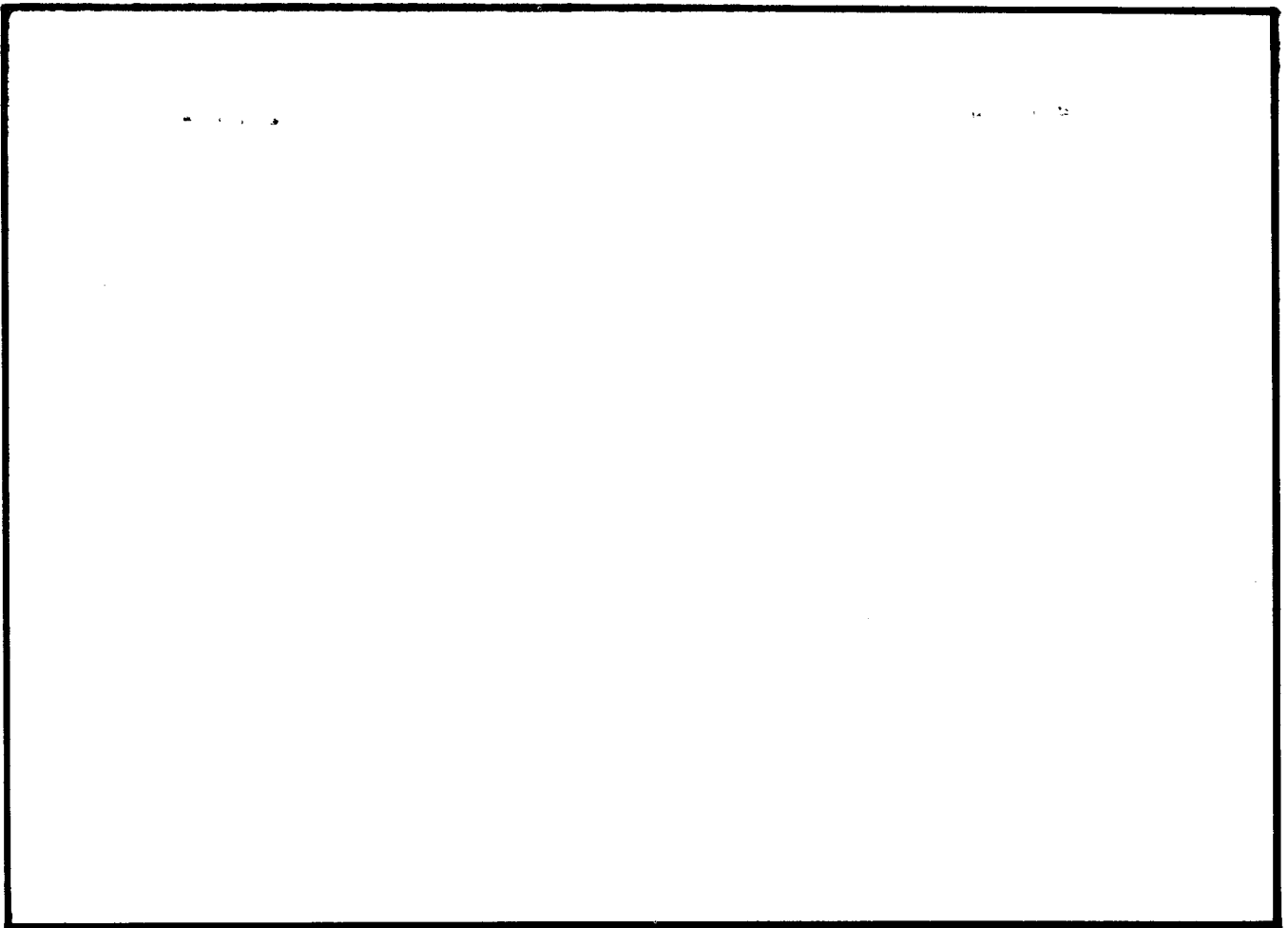
Recorder No. 2774 Capacity 4300 Location 3613 Ft.

Clock No. - Elevation 1932 Ground Level Well Temperature 114 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2015</u> P.S.I.	Open Tool	<u>8:26A</u> M	
B First Initial Flow Pressure	<u>98</u> P.S.I.	First Flow Pressure	<u>15</u> Mins.	<u>15</u> Mins.
C First Final Flow Pressure	<u>73</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
D Initial Closed-in Pressure	<u>757</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>107</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>39</u> Mins.
F Second Final Flow Pressure	<u>92</u> P.S.I.			
G Final Closed-in Pressure	<u>199</u> P.S.I.			
H Final Hydrostatic Mud	<u>1978</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>16</u> Inc.		Breakdown: <u>12</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>98</u>	<u>0</u>	<u>73</u>	<u>0</u>	<u>107</u>	<u>0</u>	<u>92</u>
P 2 <u>5</u>	<u>79</u>	<u>3</u>	<u>75</u>	<u>5</u>	<u>94</u>	<u>3</u>	<u>98</u>
P 3 <u>10</u>	<u>74</u>	<u>6</u>	<u>83</u>	<u>10</u>	<u>88</u>	<u>6</u>	<u>103</u>
P 4 <u>15</u>	<u>73</u>	<u>9</u>	<u>99</u>	<u>15</u>	<u>87</u>	<u>9</u>	<u>105</u>
P 5		<u>12</u>	<u>122</u>	<u>20</u>	<u>86</u>	<u>12</u>	<u>109</u>
P 6		<u>15</u>	<u>147</u>	<u>25</u>	<u>86</u>	<u>15</u>	<u>114</u>
P 7		<u>18</u>	<u>187</u>	<u>30</u>	<u>85</u>	<u>18</u>	<u>122</u>
P 8		<u>21</u>	<u>234</u>	<u>35</u>	<u>85</u>	<u>21</u>	<u>129</u>
P 9		<u>24</u>	<u>306</u>	<u>40</u>	<u>85</u>	<u>24</u>	<u>138</u>
P10		<u>27</u>	<u>393</u>	<u>45</u>	<u>85</u>	<u>27</u>	<u>147</u>
P11		<u>30</u>	<u>612</u>	<u>50</u>	<u>87</u>	<u>30</u>	<u>157</u>
P12		<u>33</u>	<u>649</u>	<u>55</u>	<u>89</u>	<u>33</u>	<u>167</u>
P13		<u>36</u>	<u>682</u>	<u>60</u>	<u>92</u>	<u>36</u>	<u>181</u>
P14		<u>39</u>	<u>707</u>			<u>39</u>	<u>199</u>
P15		<u>42</u>	<u>728</u>				
P16		<u>45</u>	<u>746</u>				
P17		<u>48</u>	<u>757</u>				
P18							
P19							
P20							

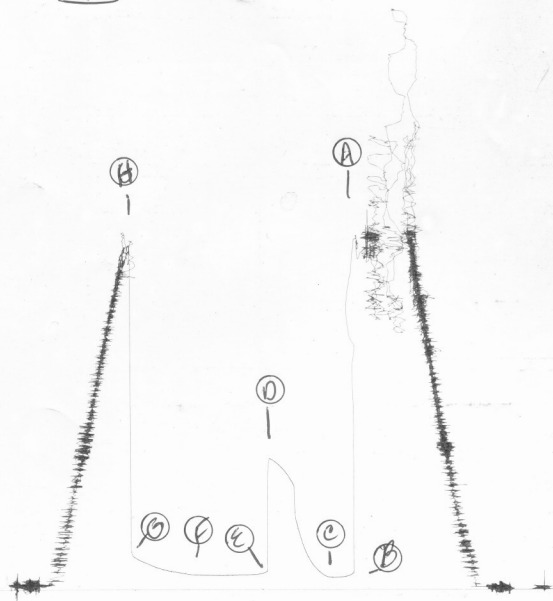


This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2010	2015
(B) First Initial Flow Pressure	78	98
(C) First Final Flow Pressure	78	73
(D) Initial Closed-in Pressure	754	757
(E) Second Initial Flow Pressure	100	107
(F) Second Final Flow Pressure	89	92
(G) Final Closed-in Pressure	178	199
(H) Final Hydrostatic Mud	1978	1978

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