



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Tarkio Sand Effective Pay --- Ft. Ticket No. 15475
 Date 3/ 13/82 Sec. 6 Twp. 23S Range 15W County Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 2 Interval Tested from 2855 ft. to 2915 ft. Total Depth 2915 ft.
 Packer Depth 2850 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 2855 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2873 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 2876 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type premix Viscosity 36 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.5 Water Loss 73.6 cc. Drill Pipe Length 2258 I. D. 3.8 in.
 Chlorides 32,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 60 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Weak blow building to strong blow on initial flow period. Strong blow throughout final flow period.

Recovered 120 ft. of muddy water Chlorides 24,000 ppm
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s) 4:15 ~~A.M.~~ P.M. Time Started Off Bottom 7:15 ~~A.M.~~ P.M. Maximum Temperature 98°
 Initial Hydrostatic Pressure (A) 1434 P.S.I.
 Initial Flow Period Minutes 30 (B) 62 P.S.I. to (C) 73 P.S.I.
 Initial Closed In Period Minutes 45 (D) 583 P.S.I.
 Final Flow Period Minutes 60 (E) 88 P.S.I. to (F) 110 P.S.I.
 Final Closed In Period Minutes 48 (G) 524 P.S.I.
 Final Hydrostatic Pressure (H) 1390 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 3/13/82

Test Ticket No. 15475

Recorder No. 13269

Capacity 4375

Location 2873 Ft.

Clock No. --

Elevation --

Well Temperature 98 °F

Point	Pressure			Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1434</u>	P.S.I.	Open Tool	<u>4:15P</u>	<u>M</u>
B First Initial Flow Pressure	<u>62</u>	P.S.I.	First Flow Pressure	<u>30</u>	<u>Mins.30</u> Mins.
C First Final Flow Pressure	<u>73</u>	P.S.I.	Initial Closed-in Pressure	<u>45</u>	<u>Mins.45</u> Mins.
D Initial Closed-in Pressure	<u>583</u>	P.S.I.	Second Flow Pressure	<u>60</u>	<u>Mins.60</u> Mins.
E Second Initial Flow Pressure	<u>88</u>	P.S.I.	Final Closed-in Pressure	<u>45</u>	<u>Mins.48</u> Mins.
F Second Final Flow Pressure	<u>110</u>	P.S.I.			
G Final Closed-in Pressure	<u>524</u>	P.S.I.			
H Final Hydrostatic Mud	<u>1390</u>	P.S.I.			

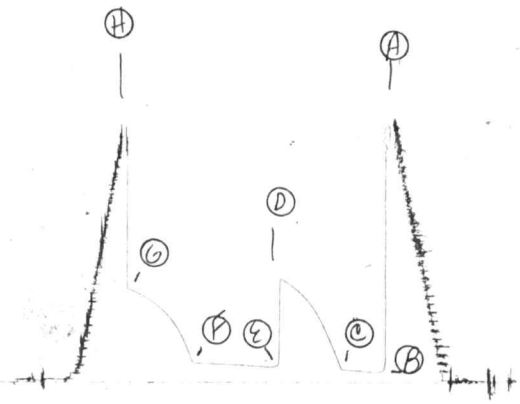
PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Point Minutes	Initial Shut-In	Point Minutes	Second Flow Pressure	Point Minutes	Final Shut-In
	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>16</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
	Press.		Press.		Press.		Press.
P 1 <u>0</u>	<u>62</u>	<u>0</u>	<u>73</u>	<u>0</u>	<u>88</u>	<u>0</u>	<u>110</u>
P 2 <u>5</u>	<u>62</u>	<u>3</u>	<u>115</u>	<u>5</u>	<u>88</u>	<u>3</u>	<u>141</u>
P 3 <u>10</u>	<u>66</u>	<u>6</u>	<u>174</u>	<u>10</u>	<u>88</u>	<u>6</u>	<u>200</u>
P 4 <u>15</u>	<u>68</u>	<u>9</u>	<u>231</u>	<u>15</u>	<u>92</u>	<u>9</u>	<u>253</u>
P 5 <u>20</u>	<u>69</u>	<u>12</u>	<u>284</u>	<u>20</u>	<u>94</u>	<u>12</u>	<u>291</u>
P 6 <u>25</u>	<u>70</u>	<u>15</u>	<u>330</u>	<u>25</u>	<u>96</u>	<u>15</u>	<u>326</u>
P 7 <u>30</u>	<u>73</u>	<u>18</u>	<u>372</u>	<u>30</u>	<u>98</u>	<u>18</u>	<u>355</u>
P 8		<u>21</u>	<u>412</u>	<u>35</u>	<u>100</u>	<u>21</u>	<u>381</u>
P 9		<u>24</u>	<u>447</u>	<u>40</u>	<u>102</u>	<u>24</u>	<u>403</u>
P10		<u>27</u>	<u>474</u>	<u>45</u>	<u>104</u>	<u>27</u>	<u>423</u>
P11		<u>30</u>	<u>498</u>	<u>50</u>	<u>106</u>	<u>30</u>	<u>443</u>
P12		<u>33</u>	<u>520</u>	<u>55</u>	<u>108</u>	<u>33</u>	<u>458</u>
P13		<u>36</u>	<u>537</u>	<u>60</u>	<u>110</u>	<u>36</u>	<u>474</u>
P14		<u>39</u>	<u>552</u>			<u>39</u>	<u>487</u>
P15		<u>42</u>	<u>570</u>			<u>42</u>	<u>500</u>
P16		<u>45</u>	<u>583</u>			<u>45</u>	<u>511</u>
P17						<u>48</u>	<u>524</u>
P18							
P19							
P20							

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P.O. Box 1599

(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Howard Effective Pay --- Ft. Ticket No. 16201
 Date 3/14/82 Sec. 6 Twp. 23S Range 15W County Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 3 Interval Tested from 2970 ft. to 3045 ft. Total Depth 3045 ft.
 Packer Depth 2965 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 2970 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2971 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 2974 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type premix Viscosity 36 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.5 Water Loss N/A cc. Drill Pipe Length 2373 I. D. 3.8 in.
 Chlorides 32,000 P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 75 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Weak blow building to strong blow on initial flow period. Strong blow throughout final flow period.

Recovered 360 ft. of muddy water Chlorides 36,000 ppm
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s) 7:00 ~~P.M.~~ A.M. Time Started Off Bottom 10:00 ~~P.M.~~ A.M. Maximum Temperature 102°
 Initial Hydrostatic Pressure 1500 P.S.I. (A)
 Initial Flow Period 30 Minutes (B) 88 P.S.I. to (C) 108 P.S.I.
 Initial Closed In Period 48 Minutes (D) 942 P.S.I.
 Final Flow Period 60 Minutes (E) 144 P.S.I. to (F) 207 P.S.I.
 Final Closed In Period 48 Minutes (G) 848 P.S.I.
 Final Hydrostatic Pressure 1445 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 3/14/82 Test Ticket No. 16201
 Recorder No. 13269 Capacity 4375 Location 2971 Ft.
 Clock No. - Elevation --- Well Temperature 102 °F

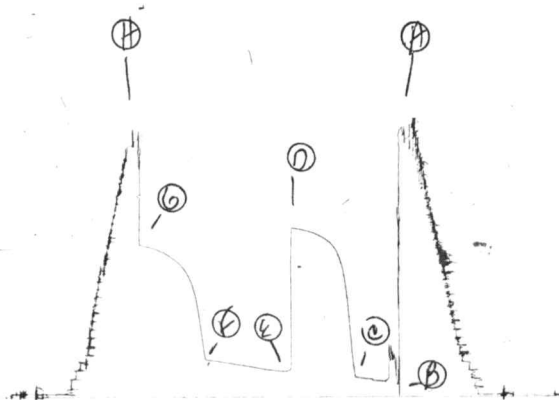
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1500	P.S.I.	7:00A	M
B First Initial Flow Pressure	88	P.S.I.	30	Mins. 30 Mins.
C First Final Flow Pressure	108	P.S.I.	45	Mins. 48 Mins.
D Initial Closed-in Pressure	942	P.S.I.	60	Mins. 60 Mins.
E Second Initial Flow Pressure	144	P.S.I.	45	Mins. 48 Mins.
F Second Final Flow Pressure	207	P.S.I.		
G Final Closed-in Pressure	848	P.S.I.		
H Final Hydrostatic Mud	1445	P.S.I.		

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
	final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	
P 1 0	88	0	108	0	144	0	207	
P 2 5	88	3	269	5	144	3	348	
P 3 10	88	6	513	10	147	6	496	
P 4 15	90	9	683	15	150	9	593	
P 5 20	97	12	770	20	156	12	659	
P 6 25	101	15	820	25	163	15	700	
P 7 30	108	18	850	30	170	18	733	
P 8		21	870	35	176	21	754	
P 9		24	887	40	183	24	772	
P10		27	898	45	189	27	789	
P11		30	909	50	195	30	804	
P12		33	920	55	202	33	813	
P13		36	926	60	207	36	823	
P14		39	930			39	832	
P15		42	936			42	838	
P16		45	941			45	843	
P17		48	942			48	848	
P18								
P19								
P20								

JK # 16201

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(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Lansing-Kansas City Effective Pay --- Ft. Ticket No. 16202
 Date 3/ 15/82 Sec. 6 Twp. 23S Range 15W County. Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 4 Interval Tested from 3544 ft. to 3565 ft. Total Depth 3565 ft.
 Packer Depth 3539 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 3544 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3549 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 3552 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type starch Viscosity 44 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.7 Water Loss - cc. Drill Pipe Length 2947 I. D. 3.8 in.
 Chlorides N/C P.P.M. Test Tool Length 22 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 21 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Initial flow period fair blow building to strong blow. Final flow period strong blow throughout.

Recovered 185 ft. of salt water Chlorides 83,000 ppm
 Recovered - ft. of -
 Recovered - ft. of -
 Recovered - ft. of -
 Recovered - ft. of -

Remarks: _____

Time Set Packer(s) 2:55 ~~AM~~ P.M. Time Started Off Bottom 5:55 ~~AM~~ P.M. Maximum Temperature 107°
 Initial Hydrostatic Pressure (A) 1870 P.S.I.
 Initial Flow Period Minutes 35 (B) 46 P.S.I. to (C) 65 P.S.I.
 Initial Closed In Period Minutes 45 (D) 767 P.S.I.
 Final Flow Period Minutes 60 (E) 77 P.S.I. to (F) 110 P.S.I.
 Final Closed In Period Minutes 48 (G) 746 P.S.I.
 Final Hydrostatic Pressure (H) 1858 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 3/15/82 Test Ticket No. 16202
 Recorder No. 13269 Capacity 4375 Location 3549 Ft.
 Clock No. --- Elevation ---- Well Temperature 107 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1870</u> P.S.I.	Open Tool	2:55P	M
B First Initial Flow Pressure	<u>46</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>35</u> Mins.
C First Final Flow Pressure	<u>65</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>767</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>77</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>110</u> P.S.I.			
G Final Closed-in Pressure	<u>746</u> P.S.I.			
H Final Hydrostatic Mud	<u>1858</u> P.S.I.			

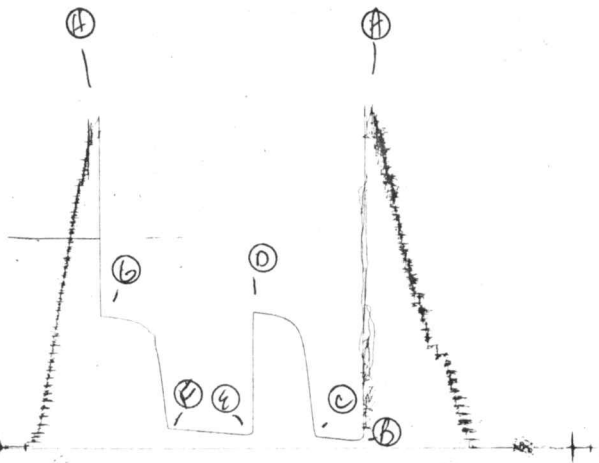
PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In	
	Breakdown: <u>7</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Breakdown: <u>16</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>46</u>	<u>0</u>	<u>65</u>	<u>0</u>	<u>110</u>
P 2	<u>46</u>	<u>3</u>	<u>198</u>	<u>3</u>	<u>267</u>
P 3	<u>46</u>	<u>6</u>	<u>434</u>	<u>6</u>	<u>454</u>
P 4	<u>50</u>	<u>9</u>	<u>580</u>	<u>9</u>	<u>574</u>
P 5	<u>54</u>	<u>12</u>	<u>654</u>	<u>12</u>	<u>650</u>
P 6	<u>58</u>	<u>15</u>	<u>691</u>	<u>15</u>	<u>672</u>
P 7	<u>62</u>	<u>18</u>	<u>713</u>	<u>18</u>	<u>687</u>
P 8	<u>65</u>	<u>21</u>	<u>728</u>	<u>21</u>	<u>704</u>
P 9		<u>24</u>	<u>737</u>	<u>24</u>	<u>713</u>
P10		<u>27</u>	<u>746</u>	<u>27</u>	<u>720</u>
P11		<u>30</u>	<u>752</u>	<u>30</u>	<u>726</u>
P12		<u>33</u>	<u>757</u>	<u>33</u>	<u>729</u>
P13		<u>36</u>	<u>761</u>	<u>36</u>	<u>733</u>
P14		<u>39</u>	<u>763</u>	<u>39</u>	<u>737</u>
P15		<u>42</u>	<u>765</u>	<u>42</u>	<u>740</u>
P16		<u>45</u>	<u>767</u>	<u>45</u>	<u>743</u>
P17				<u>48</u>	<u>746</u>
P18					
P19					
P20					

SB # 16202

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Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Lansing-Kansas City Effective Pay --- Ft. Ticket No. 16203
 Date 3/16/82 Sec. 6 Twp. 23S Range 15W County Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 5 Interval Tested from 3635 ft. to 3665 ft. Total Depth 3665 ft.
 Packer Depth 3630 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 3635 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3636 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 3639 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type starch Viscosity 44 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.7 Water Loss 9.2 cc. Drill Pipe Length 3040 I. D. 3.8 in.
 Chlorides ? P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 30 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Initial flow period fair blow building to strong blow. Final flow period strong blow throughout.

Recovered 2160 ft. of salt water Chlorides 73,000 ppm
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s) 8:10 A.M. Time Started Off Bottom 11:10 P.M. Maximum Temperature 110°
 Initial Hydrostatic Pressure (A) 1804 P.S.I.
 Initial Flow Period Minutes 35 (B) 128 P.S.I. to (C) 654 P.S.I.
 Initial Closed In Period Minutes 42 (D) 1142 P.S.I.
 Final Flow Period Minutes 65 (E) 711 P.S.I. to (F) 1013 P.S.I.
 Final Closed In Period Minutes 48 (G) 1143 P.S.I.
 Final Hydrostatic Pressure (H) 1761 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 3/16/82 Test Ticket No. 16203
 Recorder No. 13269 Capacity 4375 Location 3636 Ft.
 Clock No. - Elevation --- Well Temperature 110 °F

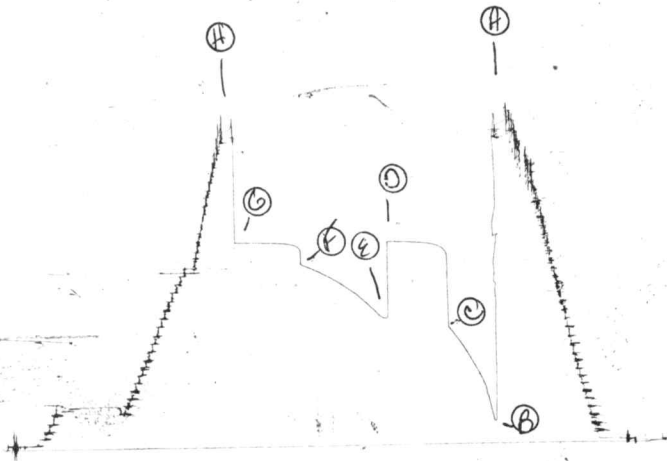
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1804</u> P.S.I.	Open Tool	<u>8:10A</u>	<u>M</u>
B First Initial Flow Pressure	<u>128</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>35</u> Mins.
C First Final Flow Pressure	<u>654</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>42</u> Mins.
D Initial Closed-in Pressure	<u>1142</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>65</u> Mins.
E Second Initial Flow Pressure	<u>711</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
F Second Final Flow Pressure	<u>1013</u> P.S.I.			
G Final Closed-in Pressure	<u>1143</u> P.S.I.			
H Final Hydrostatic Mud	<u>1761</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>7</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>14</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>13</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>16</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>0</u>	<u>654</u>	<u>0</u>	<u>711</u>	<u>0</u>	<u>1013</u>
P 2	<u>5</u>	<u>3</u>	<u>1099</u>	<u>5</u>	<u>717</u>	<u>3</u>	<u>1118</u>
P 3	<u>10</u>	<u>6</u>	<u>1112</u>	<u>10</u>	<u>754</u>	<u>6</u>	<u>1127</u>
P 4	<u>15</u>	<u>9</u>	<u>1121</u>	<u>15</u>	<u>791</u>	<u>9</u>	<u>1133</u>
P 5	<u>20</u>	<u>12</u>	<u>1127</u>	<u>20</u>	<u>825</u>	<u>12</u>	<u>1135</u>
P 6	<u>25</u>	<u>15</u>	<u>1131</u>	<u>25</u>	<u>857</u>	<u>15</u>	<u>1137</u>
P 7	<u>30</u>	<u>18</u>	<u>1133</u>	<u>30</u>	<u>883</u>	<u>18</u>	<u>1138</u>
P 8	<u>35</u>	<u>21</u>	<u>1135</u>	<u>35</u>	<u>909</u>	<u>21</u>	<u>1139</u>
P 9		<u>24</u>	<u>1137</u>	<u>40</u>	<u>930</u>	<u>24</u>	<u>1140</u>
P10		<u>27</u>	<u>1138</u>	<u>45</u>	<u>952</u>	<u>27</u>	<u>1141</u>
P11		<u>30</u>	<u>1139</u>	<u>50</u>	<u>972</u>	<u>30</u>	<u>1142</u>
P12		<u>33</u>	<u>1140</u>	<u>55</u>	<u>989</u>	<u>33</u>	<u>1143</u>
P13		<u>36</u>	<u>1141</u>	<u>60</u>	<u>1003</u>	<u>36</u>	<u>1143</u>
P14		<u>39</u>	<u>1142</u>	<u>65</u>	<u>1013</u>	<u>39</u>	<u>1143</u>
P15		<u>42</u>	<u>1142</u>			<u>42</u>	<u>1143</u>
P16						<u>45</u>	<u>1143</u>
P17						<u>48</u>	<u>1143</u>
P18							
P19							
P20							

Plot # 16203
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47715





Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Simpson Sand Effective Pay --- Ft. Ticket No. 16204
 Date 3/ 17/82 Sec. 6 Twp. 23S Range 15W County Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 6 Interval Tested from 3947 ft. to 3965 ft. Total Depth 3965 ft.
 Packer Depth 3942 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Packer Depth 3947 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 3953 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 3956 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type starch Viscosity 45 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.7 Water Loss 10 cc. Drill Pipe Length 3352 I. D. 3.8 in.
 Chlorides 34,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 18 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Very weak blow died in ten minutes on initial flow period. No blow on final flow period.

Recovered 5 ft. of mud
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set	Packer(s)	Time Started	Off Bottom	Maximum Temperature
2:30	AM P.M.	4:30	AM P.M.	109°
Initial Hydrostatic Pressure		(A)	2002	P.S.I.
Initial Flow Period	Minutes	30	(B)	28 P.S.I. to (C) 28 P.S.I.
Initial Closed In Period	Minutes	30	(D)	31 P.S.I.
Final Flow Period	Minutes	30	(E)	31 P.S.I. to (F) 31 P.S.I.
Final Closed In Period	Minutes	36	(G)	39 P.S.I.
Final Hydrostatic Pressure		(H)	2002	P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 3/17/82 Test Ticket No. 16204
 Recorder No. 13269 Capacity 4375 Location 3953 Ft.
 Clock No. -- Elevation ---- Well Temperature 109° °F

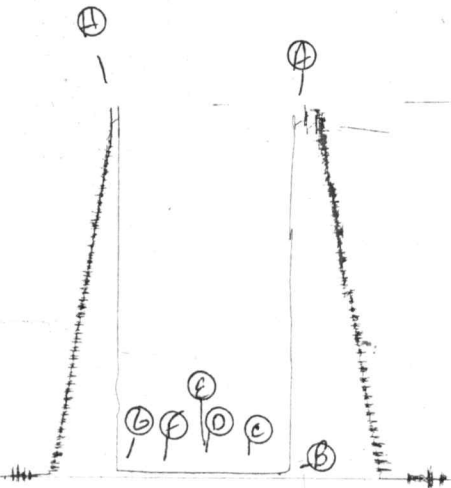
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2002 P.S.I.	Open Tool	2:30P	M
B First Initial Flow Pressure	28 P.S.I.	First Flow Pressure	30	Mins
C First Final Flow Pressure	28 P.S.I.	Initial Closed-in Pressure	30	Mins
D Initial Closed-in Pressure	31 P.S.I.	Second Flow Pressure	30	Mins
E Second Initial Flow Pressure	31 P.S.I.	Final Closed-in Pressure	30	Mins
F Second Final Flow Pressure	31 P.S.I.			
G Final Closed-in Pressure	39 P.S.I.			
H Final Hydrostatic Mud	2002 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In		
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>12</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	0	28	0	28	0	31	0	31
P 2	5	28	3	28	5	31	3	31
P 3	10	28	6	28	10	31	6	31
P 4	15	28	9	29	15	31	9	31
P 5	20	28	12	30	20	31	12	31
P 6	25	28	15	31	25	31	15	31
P 7	30	28	18	31	30	31	18	32
P 8			21	31			21	33
P 9			24	31			24	34
P10			27	31			27	35
P11			30	31			30	37
P12							33	38
P13							36	39
P14								
P15								
P16								
P17								
P18								
P19								
P20								

KA # 16204

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Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Lansing Effective Pay --- Ft. Ticket No. 16205
 Date 3/18/82 Sec. 6 Twp. 23S Range 15W County Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 7 Interval Tested from 3743 ft. to 3797 ft. Total Depth 4050 ft.
 Packer Depth 3738 ft. Size 6 5/8 in. Packer Depth 3797 ft. Size 6 5/8 in.
 Packer Depth 3743 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3744 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 3747 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth 4048 ft. Recorder Number WESTERN Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type starch Viscosity 40 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.4 Water Loss N.C. cc. Drill Pipe Length 3416 I. D. 3.8 in.
 Chlorides N.C. P.P.M. Test Tool Length 25 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 54 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Initial flow period strong blow throughout . Gas to surface in six minutes. See attached sheet for gas measurements.

Recovered 95 ft. of gas cut mud show of oil
 Recovered 190 ft. of oil and gas cut mud 43% mud;6% water;13% oil;38% gas
 Recovered 125 ft. of water and gas cut muddy oil 31% mud;18% water;33% oil;28% gas
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s) 3:30 ~~A.M.~~ P.M. Time Started Off Bottom 7:45 ~~A.M.~~ P.M. Maximum Temperature 106°
 Initial Hydrostatic Pressure 1902 P.S.I. (A)
 Initial Flow Period 30 Minutes (B) 313 P.S.I. to (C) 237 P.S.I.
 Initial Closed In Period 48 Minutes (D) 1322 P.S.I.
 Final Flow Period 125 Minutes (E) 275 P.S.I. to (F) 200 P.S.I.
 Final Closed In Period 63 Minutes (G) 1207 P.S.I.
 Final Hydrostatic Pressure 1870 P.S.I. (H)



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P.O. Box 1599 (316) 262-5861

GAS FLOW REPORT

Date 3/18/82 Ticket 16205 Company Abercrombie Drilling Company
 Well Name and No. Zook #1 Dst No. 7 Interval Tested 3743'-3797'
 County Pawnee State Kansas Sec. 6 Twp. 23S Rg. 15W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
Gas to surface in six minutes. PRE FLOW						Used 60 lb. Gauge
	10 min.	14.0 PSIG	1 1/4" orifice			980,000 CFPD
	15 min.	12.0 PSIG	1 1/4" orifice			893,000 CFPD
	20 min.	11.0 PSIG	1 1/4" orifice			847,000 CFPD
	25 min.	10.0 PSIG	1 1/4" orifice			802,000 CFPD
	30 min.	9.0 PSIG	1 1/4" orifice			754,000 CFPD

SECOND FLOW

	5 min.	13.0 PSIG	1 1/4" orifice			937,000 CFPD
	10 min.	12.0 PSIG	1 1/4" orifice			893,000 CFPD
	15 min.	11.0 PSIG	1 1/4" orifice			847,000 CFPD
	20 min.	10.0 PSIG	1 1/4" orifice			802,000 CFPD
	25 min.	10.0 PSIG	1 1/4" orifice			802,000 CFPD
	30 min.	9.0 PSIG	1 1/4" orifice			754,000 CFPD
	35 min.	8.0 PSIG	1 1/4" orifice			700,000 CFPD
	40 min.	8.0 PSIG	1 1/4" orifice			700,000 CFPD
	45 min.	8.0 PSIG	1 1/4" orifice			700,000 CFPD
	50 min.	7.0 PSIG	1 1/4" orifice			653,000 CFPD
	55 min.	6.0 PSIG	1 1/4" orifice			599,000 CFPD
	60 min.	6.0 PSIG	1 1/4" orifice			599,000 CFPD
	65 min.	6.0 PSIG	1 1/4" orifice			599,000 CFPD

GAS BOTTLE

Serial No. 15183 Date Bottle Filled 3/18/82 Date to be Invoiced 3/18/82

CONTINUED NEXT PAGE

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1% per month, equal to 12% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Abercrombie Drilling Company

Authorized by R. H. White



Home Office: Wichita, Kansas 67201

P.O. Box 1599 (316) 262-5861

PAGE TWO OF TWO PAGES

GAS FLOW REPORT

Date 3/18/82 Ticket 16205 Company Abercrombie Drilling Company
 Well Name and No. Zook #1 Dst No. 7 Interval Tested 3743'-3797'
 County Pawnee State Kansas Sec. 6 Twp. 23S Rg. 15W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
PRE FLOW					
					USED 60 lb. gauge

SECOND FLOW					
70 min.	6.0 PSIG	1 1/4" orifice			599,000 CFPD
75 min.	6.0 PSIG	1 1/4" orifice			599,000 CFPD
80 min.	5.5 PSIG	1 1/4" orifice			571,000 CFPD
85 min.	5.5 PSIG	1 1/4" orifice			571,000 CFPD
90 min.	14.0 PSIG	1" orifice			577,000 CFPD
95 min.	14.0 PSIG	1" orifice			577,000 CFPD
100 min.	13.0 PSIG	1" orifice			552,000 CFPD
105 min.	12.0 PSIG	1" orifice			526,000 CFPD
110 min.	12.0 PSIG	1" orifice			526,000 CFPD
115 min.	11.0 PSIG	1" orifice			499,000 CFPD
120 min.	11.0 PSIG	1" orifice			499,000 CFPD

GAS BOTTLE

Serial No. 15183 Date Bottle Filled 3/18/82 Date to be Invoiced 3/18/82

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Abercrombie Drilling Company

Authorized by R. H. White

WESTERN TESTING CO., INC.
Pressure Data

Date 3/18/82 Test Ticket No. 16205
 Recorder No. 13269 Capacity 4375 Location 3744 Ft.
 Clock No. - Elevation ---- Well Temperature 106 °F

Point	Pressure		Open Tool	Time Given	Time Computed
				3:30P	M
A Initial Hydrostatic Mud	1902	P.S.I.		30	30
B First Initial Flow Pressure	313	P.S.I.	First Flow Pressure	45	48
C First Final Flow Pressure	237	P.S.I.	Initial Closed-in Pressure	120	125
D Initial Closed-in Pressure	1322	P.S.I.	Second Flow Pressure	60	63
E Second Initial Flow Pressure	275	P.S.I.	Final Closed-in Pressure		
F Second Final Flow Pressure	200	P.S.I.			
G Final Closed-in Pressure	1207	P.S.I.			
H Final Hydrostatic Mud	1870	P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure	Point Minutes	Initial Shut-In	Point Minutes	Second Flow Pressure	Point Minutes	Final Shut-In
	Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>16</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>25</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Breakdown: <u>21</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
	Press.		Press.		Press.		Press.
P 1	0	0	0	0	0	0	0
P 2	5	313	3	237	5	3	200
P 3	10	284	6	998	10	6	800
P 4	15	256	9	1184	15	9	937
P 5	20	247	12	1224	20	12	998
P 6	25	239	15	1250	25	15	1039
P 7	30	238	18	1265	30	18	1064
P 8		237	21	1280	35	21	1086
P 9			24	1289	40	24	1103
P10			27	1296	45	27	1116
P11			30	1304	50	30	1131
P12			33	1309	55	33	1142
P13			36	1312	60	36	1149
P14			39	1316	65	39	1160
P15			42	1318	70	42	1169
P16			45	1320	75	45	1175
P17			48	1322	80	48	1181
P18					85	48	1186
P19					90	51	1192
P20					95	54	1197
					100	57	1202
						60	1203
						63	1205
							1202
							1205
							1207

WESTERN TESTING CO., INC.

Pressure Data

Date 3/18/82

Test Ticket No. 16205

Recorder No. 13269

Capacity 4375 Location 3744 Ft.

Clock No. - Elevation ----

Well Temperature 106 °F

Point	Pressure			Time Given	Time Computed
				3:30P	M
A. Initial Hydrostatic Mud	<u>1902</u> P.S.I.	Open Tool		<u>30</u>	<u>30</u> Mins.
B. First Initial Flow Pressure	<u>313</u> P.S.I.	First Flow Pressure		<u>45</u>	<u>48</u> Mins.
C. First Final Flow Pressure	<u>237</u> P.S.I.	Initial Closed-in Pressure		<u>120</u>	<u>125</u> Mins.
D. Initial Closed-in Pressure	<u>1322</u> P.S.I.	Second Flow Pressure		<u>60</u>	<u>63</u> Mins.
E. Second Initial Flow Pressure	<u>275</u> P.S.I.	Final Closed-in Pressure			
F. Second Final Flow Pressure	<u>200</u> P.S.I.				
G. Final Closed-in Pressure	<u>1207</u> P.S.I.				
H. Final Hydrostatic Mud	<u>1870</u> P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 6 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 16 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 25 Inc.
of 5 mins. and a
final inc. of 0 Min.

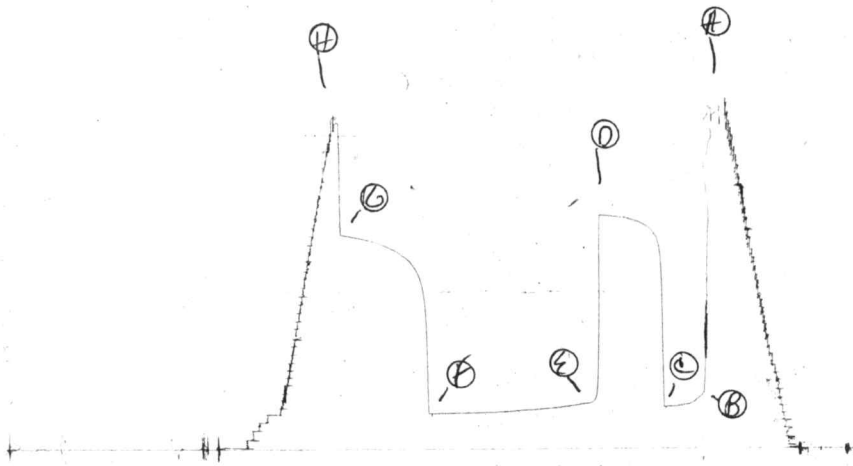
Final Shut-In
Breakdown: 21 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 2				<u>110</u>	<u>201</u>		
P 3				<u>115</u>	<u>200</u>		
P 4				<u>120</u>	<u>200</u>		
P 5				<u>125</u>	<u>200</u>		
P 6							
P 7							
P 8							
P 9							
P10							
P11							
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

JK # 16205

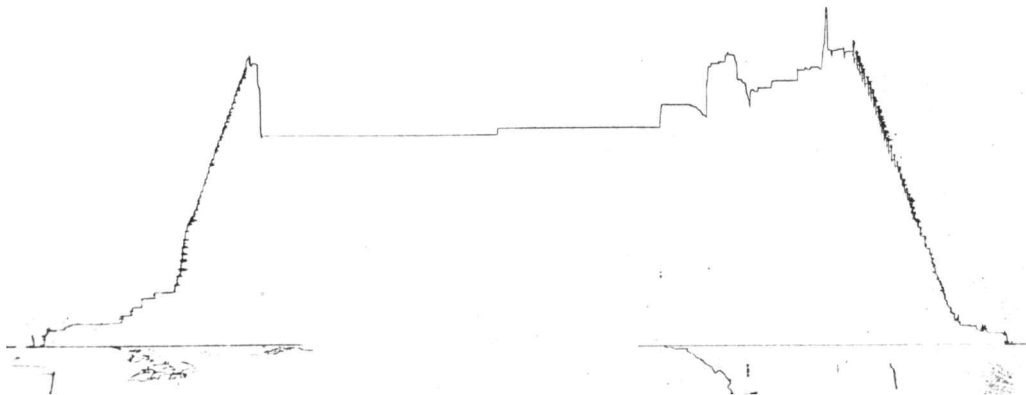
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13269



JK # 16205

Below Straddle





Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Abercrombie Drilling Company Lease & Well No. Zook #1
 Elevation --- Formation Lansing Effective Pay --- Ft. Ticket No. 16206
 Date 3/19/82 Sec. 6 Twp. 23S Range 15W County Pawnee State Kansas
 Test Approved by R. H. White Western Representative Ray Schwager

Formation Test No. 8 Interval Tested from 3672 ft. to 3698 ft. Total Depth 4050 ft.
 Packer Depth 3667 ft. Size 6 5/8 in. Packer Depth 3698 ft. Size 6 5/8 in.
 Packer Depth 3672 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3673 ft. Recorder Number 13269 Cap. 4375
 Bottom Recorder Depth (Outside) 3676 ft. Recorder Number 13270 Cap. 4375
 Below Straddle Recorder Depth 4048- ft. Recorder Number WESTERN Cap. -

Drilling Contractor Abercrombie Drlg. Rig #5 Drill Collar Length - I. D. - in.
 Mud Type starch Viscosity 40 Weight Pipe Length 575 I. D. 2.7 in.
 Weight 9.4 Water Loss N.C. cc. Drill Pipe Length 3404 I. D. 3.8 in.
 Chlorides N/C P.P.M. Test Tool Length 25 ft. Tool Size 5 1/2 in.
 Jars: Make - Serial Number - Anchor Length 26 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out Yes Surface Choke Size 5/8 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: Initial flow period strong blow throughout. Final flow period fair blow building to strong blow.

Recovered 1200 ft. of salt water Chlorides 73,000 ppm
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s)	<u>2:23</u>	<u>A.M.</u> P.M.	Time Started Off Bottom	<u>5:23</u>	<u>A.M.</u> P.M.	Maximum Temperature	<u>110°</u>
Initial Hydrostatic Pressure			(A)	<u>1865</u>	P.S.I.		
Initial Flow Period	Minutes	<u>30</u>	(B)	<u>103</u>	P.S.I. to (C)	<u>211</u>	P.S.I.
Initial Closed In Period	Minutes	<u>48</u>	(D)	<u>1147 *</u>	P.S.I.		
Final Flow Period	Minutes	<u>60</u>	(E)	<u>264</u>	P.S.I. to (F)	<u>452</u>	P.S.I.
Final Closed In Period	Minutes	<u>48</u>	(G)	<u>1123</u>	P.S.I.		
Final Hydrostatic Pressure			(H)	<u>1833</u>	P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 3/19/82 Test Ticket No. 16206
 Recorder No. 13269 Capacity 4375 Location 3673 Ft.
 Clock No. -- Elevation --- Well Temperature 110 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1865	P.S.I.	2:23A	M
B First Initial Flow Pressure	103	P.S.I.	30	30
C First Final Flow Pressure	211	P.S.I.	45	48
D Initial Closed-in Pressure	1147 *	P.S.I.	60	60
E Second Initial Flow Pressure	264	P.S.I.	45	48
F Second Final Flow Pressure	452	P.S.I.		
G Final Closed-in Pressure	1123	P.S.I.		
H Final Hydrostatic Mud	1833	P.S.I.		

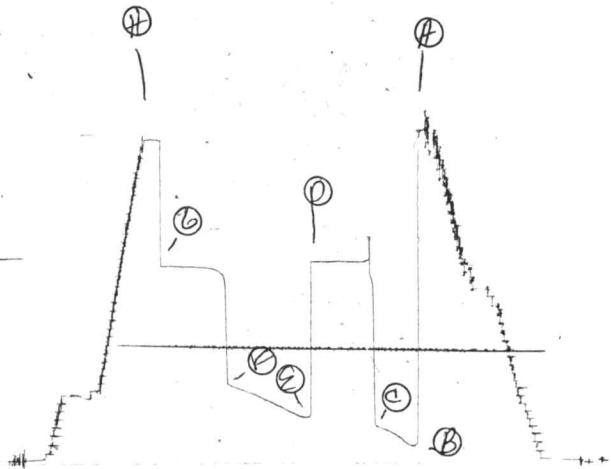
* PRESSURES WUESTIONABLE DUE TO TOOL BEING PICKED UP TOO HIGH

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>16</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>16</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 0	103	0	211	0	264	0	452
P 2 5	103	3	865	5	264	3	1033
P 3 10	126	6	1162*	10	274	6	1083
P 4 15	156	9	1149*	15	292	9	1099
P 5 20	180	12	1145*	20	312	12	1107
P 6 25	195	15	1145*	25	330	15	1112
P 7 30	211	18	1145*	30	350	18	1114
P 8		21	1145*	35	366	21	1116
P 9		24	1146*	40	388	24	1118
P10		27	1147*	45	402	27	1119
P11		30	1148*	50	416	30	1120
P12		33	1147*	55	432	33	1121
P13		36	1147*	60	452	36	1122
P14		39	1147*			39	1123
P15		42	1147*			42	1123
P16		45	1147*			45	1123
P17		48	1147*			48	1123
P18							
P19							
P20							

TK # 16206
I

13269



JK # 16206
Below Straddle

