

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

2-93-30W

Company Abercrombie Drilling Inc. Lease & Well No. Calverley # 1
Elevation 2984 Derrick Floor Formation Kansas City Effective Pay _____ Ft. Ticket No. 11848
Date 12-8-68 Sec. 2 Twp. 9s Range 30w County Sheridan State Kansas
Test Approved by Jack K. Wharton Western Representative Gerrell Veatch
Formation Test No. 1 O.K. ☒ Misrun _____ Interval Tested From 4028' to 4050' Total Depth 4050'
Size Main Hole 6 1/2 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No Conv. ☒ B.T. _____ Damaged _____ Yes ☒ No
Straddle _____ Yes _____ No ☒ Conv. _____ B.T. _____ Damaged _____ Yes _____ No
Packer Depth 4024 Ft. Size 5 1/2 Packer Depth 4028 Ft. Size 5 1/2
Tool Size 4 1/2" OD Tool Jt. Size 4" 3 1/2" IF Anchor Length 22 Ft. Size 4 1/2" OD
RECORDERS Depth 4040 Ft. Clock No. 6894 Depth 4045 Ft. Clock No. 9725
Top Make Kuster Cap. 4150 No. 2607 Inside _____ Outside _____
Bottom Make Kuter Cap. 4150 No. 969 Inside _____ Outside _____
Below Straddle: Depth _____ Clock No. _____ Inside _____ Outside _____
Top Make _____ Cap. _____ No. _____ Inside _____ Outside _____
Time Set Packer 5:17P M
Tool Open I.F.P. From 5:20 M. to 5:30P M. Hr. 10 Min. From (B) 12 P.S.I. To (C) 12 P.S.I.
Tool Closed I.C.I.P. From 5:30 M. to 6:00P M. Hr. 30 Min. (D) 1112 P.S.I.
Tool Open F.F.P. From 6:00 M. to 6:30P M. Hr. 30 Min. From (E) 23 P.S.I. To (F) 23 P.S.I.
Tool Closed F.C.I.P. From 6:30 M. to 7:00P M. Hr. 30 Min. (G) 1125 P.S.I.
Initial Hydrostatic Pressure (A) 2132 P.S.I. Final Hydrostatic Pressure (H) 2115 P.S.I.
SURFACE Size Choke 3/8 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____
BLOW Weak blow for 7 minutes Bottom Choke Size 3/4 In.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 15 feet thin mud
Reversed Out _____ Yes ☒ No _____ Mud Type gel Viscosity 38 Weight 10 Water Loss 12.8 cc. Maximum Temp. 126 °F
Type Circ. Sub. plug Did Tool Plug? no Jars: Size _____ Make _____ Ser. No. _____
EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where? _____
Length Drill Pipe 2787 ft. I.D. Drill Pipe 2.8 in. Length Weight Pipe 1225 ft. I.D. Weight Pipe 2.8 in. Length Drill Collars _____ ft.
I. D. Drill Collars _____ in. Length D.S.T. Tool 42 ft.
Remarks Slid tool 4 feet to bottom--Flushed tool at 15 minutes on final flow

WESTERN TESTING CO., INC.
Pressure Data

Date 12-8-68 Test Ticket No. 11848
Recorder No. 2607 Capacity 4150 Location 4040 Ft.
Clock No. 6894 Elevation 2934 Derrick Floor Well Temperature 126 °F

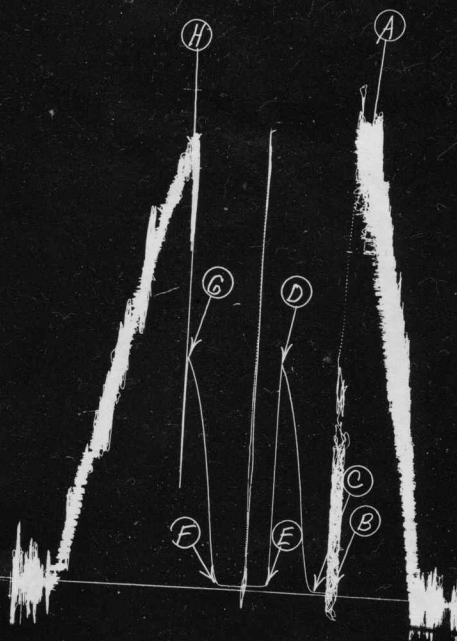
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2132</u> P.S.I.	Opened Tool	<u>5:17P</u> M	
B First Initial Flow Pressure	<u>12</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>12</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>32</u> Mins.
D Initial Closed-in Pressure	<u>1112</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>23</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>23</u> P.S.I.			
G Final Closed-in Pressure	<u>1125</u> P.S.I.			
H Final Hydrostatic Mud	<u>2115</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>11</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>2</u> Min.		final inc. of <u> </u> Min.		final inc. of <u> </u> Min.	
Point Mi.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>12</u>	<u>0</u>	<u>12</u>	<u>0</u>	<u>23</u>	<u>0</u>	<u>23</u>
P 2 <u>5</u>	<u>12</u>	<u>3</u>	<u>23</u>	<u>5</u>	<u>23</u>	<u>3</u>	<u>27</u>
P 3 <u>10</u>	<u>12</u>	<u>6</u>	<u>88</u>	<u>10</u>	<u>23</u>	<u>6</u>	<u>85</u>
P 4		<u>9</u>	<u>211</u>	<u>15</u>	<u>23</u>	<u>9</u>	<u>186</u>
P 5		<u>12</u>	<u>370</u>	<u>20</u>	<u>23</u>	<u>12</u>	<u>366</u>
P 6		<u>15</u>	<u>541</u>	<u>25</u>	<u>23</u>	<u>15</u>	<u>539</u>
P 7		<u>18</u>	<u>697</u>	<u>30</u>	<u>23</u>	<u>18</u>	<u>676</u>
P 8		<u>21</u>	<u>828</u>			<u>21</u>	<u>816</u>
P 9		<u>24</u>	<u>933</u>			<u>24</u>	<u>928</u>
P 10		<u>27</u>	<u>1020</u>			<u>27</u>	<u>1007</u>
P 11		<u>30</u>	<u>1077</u>			<u>30</u>	<u>1071</u>
P 12		<u>32</u>	<u>1112</u>			<u>33</u>	<u>1125</u>
P 13							
P 14							
P 15							
P 16							
P 17							
P 18							
P 19							
P 20							

Abercrombie Drilling, Inc.
Calverley #1

T.K.T. # 11848
Test # 1



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2205	2132	PSI
(B) First Initial Flow Pressure	12	12	PSI
(C) First Final Flow Pressure	16	12	PSI
(D) Initial Closed-in Pressure	1112	1112	PSI
(E) Second Initial Flow Pressure	16	23	PSI
(F) Second Final Flow Pressure	18	23	PSI
(G) Final Closed-in Pressure	1110	1125	PSI
(H) Final Hydrostatic Mud	2195	2115	PSI

2-95-30w



TIGHT HOLE

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Abercrombie Drilling Inc. Lease & Well No. Calverley # 1

Elevation 2934 Derrick Floor Formation Kansas City Effective Pay _____ Ft. Ticket No. 11849

Date 12-9-68 Sec. 2 Twp. 9s Range 30w County Sheridan State Kansas

Test Approved by Jack K. Wharton Western Representative Gerrall Veatch

Formation Test No. 2 O.K. ☒ Misrun _____ Interval Tested From 4137' to 4165' Total Depth 4165'

Size Main Hole 6 1/4 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No Conv. ☒ B.T. _____ Damaged _____ Yes ☒ No

Top Packer Depth 4133 Ft. Size 5 1/2 Packer Depth 4137 Ft. Size 5 1/2

Straddle _____ Yes _____ No ☒ Conv. _____ B.T. _____ Damaged _____ Yes _____ No

Packer Depth _____ Ft. Size _____

Tool Size 4 1/2" OD Tool Jt. Size 4" & 3 1/2" IF Anchor Length 28 Ft. Size 4 1/2" OD

RECORDERS Depth 4155 Ft. Clock No. 6894 Depth 4160 Ft. Clock No. 9725

Top Make Kuster Cap. 4150 No. 2607 Inside _____ Outside _____ Bottom Make Kuster Cap. 4150 No. 969 Inside _____ Outside _____

Below Straddle: Depth _____ Clock No. _____ Inside _____ Outside _____

Top Make _____ Cap. _____ No. _____ Inside _____ Outside _____

Bottom Make _____ Cap. _____ No. _____ Inside _____ Outside _____

Time Set Packer 1:52P M

Tool Open I.F.P. From 1:55 M. to 2:05P M. Hr. 10 Min. From (B) 29 P.S.I. To (C) 29 P.S.I.

Tool Closed I.C.I.P. From 2:05 M. to 2:35P M. Hr. 30 Min. (D) 1261 P.S.I.

Tool Open F.F.P. From 2:35 M. to 3:05P M. Hr. 30 Min. From (E) 31 P.S.I. To (F) 35 P.S.I.

Tool Closed F.C.I.P. From 3:05M to 3:35P M. Hr. 30 Min. (G) 1172 P.S.I.

Initial Hydrostatic Pressure (A) 2223 P.S.I. Final Hydrostatic Pressure (H) 2223 P.S.I.

SURFACE Size Choke 3/8 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____

INFORMATION _____ M. _____

_____ M. _____

_____ M. _____

BLOW Weak blow for 5 minutes Bottom Choke Size 3/4 In.

Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 10 feet drilling mud with few specks oil

Reversed Out _____ Yes ☒ No _____ Mud Type gel Viscosity 43 Weight 10.1 Water Loss 10 cc. Maximum Temp. 128 °F

Type Circ. Sub. plug Did Tool Plug? no Jars: Size _____ Make _____ Ser. No. _____

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where? _____

Length Drill Pipe 2742 ft. I.D. Drill Pipe 2.8 in. Length Weight Pipe 1225 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars 150 ft.

I. D. Drill Collars 2.5 in. Length D.S.T. Tool 48 ft.

Remarks Flushed tool at 15 minutes on final flow

WESTERN TESTING CO., INC.

Pressure Data

Date 12-9-68

Test Ticket No. 11849

Recorder No. 2607 Capacity 4150 Location 4155 Ft.

Clock No. 6894 Elevation 2934 ~~Ket~~ Derrick Floor Well Temperature 128 °F

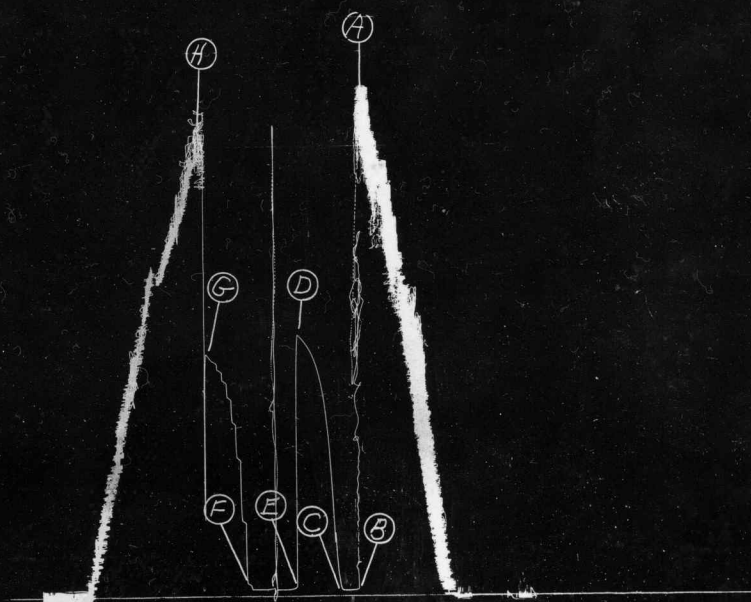
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2223</u> P.S.I.	Open Tool	<u>1:52P</u> M	
B First Initial Flow Pressure	<u>29</u> P.S.I.	First Flow Pressure	<u>10</u> Mins.	<u>10</u> Mins.
C First Final Flow Pressure	<u>29</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1261</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>31</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>35</u> P.S.I.			
G Final Closed-in Pressure	<u>1172</u> P.S.I.			
H Final Hydrostatic Mud	<u>2223</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>2</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 _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>29</u>	<u>0</u>	<u>29</u>	<u>0</u>	<u>31</u>	<u>0</u>	<u>35</u>
P 2 <u>5</u>	<u>29</u>	<u>3</u>	<u>152</u>	<u>5</u>	<u>31</u>	<u>3</u>	<u>61</u>
P 3 <u>10</u>	<u>29</u>	<u>6</u>	<u>413</u>	<u>10</u>	<u>31</u>	<u>6</u>	<u>360</u>
P 4 _____		<u>9</u>	<u>718</u>	<u>15</u>	<u>31</u>	<u>9</u>	<u>666</u>
P 5 _____		<u>12</u>	<u>899</u>	<u>20</u>	<u>35</u>	<u>12</u>	<u>834</u>
P 6 _____		<u>15</u>	<u>1035</u>	<u>25</u>	<u>35</u>	<u>15</u>	<u>949</u>
P 7 _____		<u>18</u>	<u>1121</u>	<u>30</u>	<u>35</u>	<u>18</u>	<u>1035</u>
P 8 _____		<u>21</u>	<u>1175</u>			<u>21</u>	<u>1085</u>
P 9 _____		<u>24</u>	<u>1211</u>			<u>24</u>	<u>1129</u>
P10 _____		<u>27</u>	<u>1238</u>			<u>27</u>	<u>1144</u>
P11 _____		<u>30</u>	<u>1261</u>			<u>30</u>	<u>1172</u>
P12 _____							
P13 _____							
P14 _____							
P15 _____							
P16 _____							
P17 _____							
P18 _____							
P19 _____							
P20 _____							

ABERCROMBIE DRILLING INC.
CALVERLEY #1

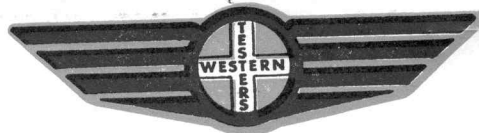
T.K.T 11849
TEST #2



This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2235	2223	PSI
(B) First Initial Flow Pressure	29	29	PSI
(C) First Final Flow Pressure	29	29	PSI
(D) Initial Closed-in Pressure	1259	1261	PSI
(E) Second Initial Flow Pressure	29	31	PSI
(F) Second Final Flow Pressure	35	35	PSI
(G) Final Closed-in Pressure	1165	1172	PSI
(H) Final Hydrostatic Mud	2225	2223	PSI

2-95-30W



TIGHT HOLE

Home Office: Great Bend, Kansas
P. O. Box 793 (316) 793-7903

Company Abercrombie Drilling Inc. Lease & Well No. Galverley # 1
Elevation 2934 Derrick Floor Formation Kansas City Effective Pay _____ Ft. Ticket No. 11850
Date 12-10-68 Sec. 2 Twp. 9s Range 30W County Sheridan State Kansas
Test Approved by Jack D. Wharton Western Representative Gerrell Veatch
Formation Test No. 3 O.K. ☒ Misrun _____ Interval Tested From 4160' to 4210' Total Depth 4210'
Size Main Hole 6 1/4 Rat Hole _____ Conv. _____ B.T. ☒ Damaged _____ Yes ☒ No Conv. ☒ B.T. _____ Damaged _____ Yes ☒ No
Top Packer Depth 4156 Ft. Size 5 1/2 OD Packer Depth 4160 Ft. Size 5 1/2
Straddle _____ Yes _____ No ☒ Conv. _____ B.T. _____ Damaged _____ Yes _____ No
Packer Depth _____ Ft. Size _____
Tool Size 4 1/2" OD Tool Jt. Size 4" 3 1/2" IF Anchor Length 50 Ft. Size 4 1/2" OD
RECORDERS Depth 4175 Ft. Clock No. 6894 Depth 4180 Ft. Clock No. 9725
Top Make Kuster Cap. 4150 No. 2607 Inside _____ Outside _____ Bottom Make Kuster Cap. 4150 No. 969 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 4:07A M
Tool Open I.F.P. From 4:10 M. to 4:25A M. Hr. 15 Min. From (B) 46 P.S.I. To (C) 46 P.S.I.
Tool Closed I.C.I.P. From 4:25 M. to 4:55A M. Hr. 30 Min. (D) 143 P.S.I.
Tool Open F.F.P. From 4:55 M. to 5:55A M. Hr. 60 Min. From (E) 52 P.S.I. To (F) 52 P.S.I.
Tool Closed F.C.I.P. From 5:55 M. to 6:25A M. Hr. 30 Min. (G) 65 P.S.I.
Initial Hydrostatic Pressure (A) 2263 P.S.I. Final Hydrostatic Pressure (H) 2246 P.S.I.
SURFACE Size Choke 3/8 In. Max. Press. P.S.I. _____ Time _____ Description of Flow _____
INFORMATION _____ M. _____
_____ M. _____
_____ M. _____
BLOW Weak blow for 10 minutes Bottom Choke Size 3/4 In.
Did Well Flow _____ Yes ☒ No _____ Recovery Total Ft. 10 feet drilling mud
Reversed Out _____ Yes ☒ No _____ Mud Type gel Viscosity 43 Weight 10.2 Water Loss 12 cc. Maximum Temp 128 °F
Type Circ. Sub. plug Did Tool Plug? no Jars: Size _____ Make _____ Ser. No. _____
EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Did Packer Hold? yes Where? _____
Length Drill Pipe 2765 ft. I.D. Drill Pipe 2.8 in. Length Weight Pipe 1225 ft. I.D. Weight Pipe 2.7 in. Length Drill Collars 150 ft.
I. D. Drill Collars 2.5 in. Length D.S.T. Tool 70 ft.
Remarks _____

WESTERN TESTING CO., INC.

Pressure Data

Date 12-10-68 Test Ticket No. 11850
 Recorder No. 2607 Capacity 4150 Location 4175 Ft.
 Clock No. 6894 Elevation 2934 Derrick 1 floor Well Temperature 128 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2263</u> P.S.I.	Open Tool	<u>4:07A</u> M	
B First Initial Flow Pressure	<u>46</u> P.S.I.	First Flow Pressure	<u>15</u> Mins.	<u>15</u> Mins.
C First Final Flow Pressure	<u>46</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>29</u> Mins.
D Initial Closed-in Pressure	<u>143</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>52</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>52</u> P.S.I.			
G Final Closed-in Pressure	<u>65</u> P.S.I.			
H Final Hydrostatic Mud	<u>2246</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 3 Inc.
 of 5 mins. and a
 final inc. of Min.

Initial Shut-In
 Breakdown: 9 Inc.
 of 3 mins. and a
 final inc. of Min.

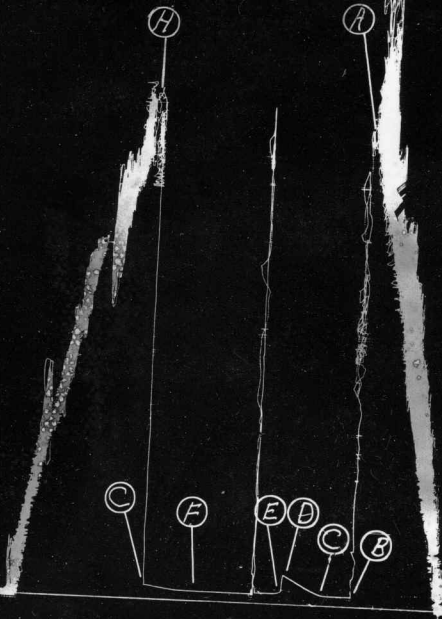
Second Flow Pressure
 Breakdown: 12 Inc.
 of 5 mins. and a
 final inc. of Min.

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

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>46</u>	<u>0</u>	<u>46</u>	<u>0</u>	<u>52</u>	<u>0</u>	<u>52</u>
P 2 <u>5</u>	<u>46</u>	<u>3</u>	<u>46</u>	<u>5</u>	<u>52</u>	<u>3</u>	<u>52</u>
P 3 <u>10</u>	<u>46</u>	<u>6</u>	<u>52</u>	<u>10</u>	<u>52</u>	<u>6</u>	<u>52</u>
P 4 <u>15</u>	<u>46</u>	<u>9</u>	<u>63</u>	<u>15</u>	<u>52</u>	<u>9</u>	<u>52</u>
P 5 <u> </u>	<u> </u>	<u>12</u>	<u>73</u>	<u>20</u>	<u>52</u>	<u>12</u>	<u>52</u>
P 6 <u> </u>	<u> </u>	<u>15</u>	<u>86</u>	<u>25</u>	<u>52</u>	<u>15</u>	<u>52</u>
P 7 <u> </u>	<u> </u>	<u>18</u>	<u>97</u>	<u>30</u>	<u>52</u>	<u>18</u>	<u>54</u>
P 8 <u> </u>	<u> </u>	<u>21</u>	<u>109</u>	<u>35</u>	<u>52</u>	<u>21</u>	<u>56</u>
P 9 <u> </u>	<u> </u>	<u>24</u>	<u>122</u>	<u>40</u>	<u>52</u>	<u>24</u>	<u>59</u>
P10 <u> </u>	<u> </u>	<u>27</u>	<u>133</u>	<u>45</u>	<u>52</u>	<u>27</u>	<u>61</u>
P11 <u> </u>	<u> </u>	<u>29</u>	<u>143</u>	<u>50</u>	<u>52</u>	<u>30</u>	<u>65</u>
P12 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>55</u>	<u>52</u>	<u> </u>	<u> </u>
P13 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>60</u>	<u>52</u>	<u> </u>	<u> </u>
P14 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P15 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P16 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P17 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P18 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P19 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
P20 <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

ABERCROMBIE DRILLING INC.
CALVERLEY #1

T.K.T 11850
TEST #3



This is an actual photograph of recorder chart.

POINT	PRESSURE		PSI
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2245	2263	PSI
(B) First Initial Flow Pressure	50	46	PSI
(C) First Final Flow Pressure	52	46	PSI
(D) Initial Closed-in Pressure	148	143	PSI
(E) Second Initial Flow Pressure	52	52	PSI
(F) Second Final Flow Pressure	54	52	PSI
(G) Final Closed-in Pressure	73	65	PSI
(H) Final Hydrostatic Mud	2235	2246	PSI