



Home Office: Great Bend, Kansas
P. O. Box 793 Gladstone 3-7903

Company Abercrombie Drilling, Inc. Lease & Well No. Rankin #2
Elevation 2276 Kelly Bushings Formation Kansas City Ticker Number 7364
Date July 3, 1966 Sec. 33 Twp. 13s Range 20w County Ellis State Kansas
Test Approved by Jack K. Wharton Western Representative Gerrell Veatch

Formation Test No. 1 O.K. ☒ Misrun ☐ Interval Tested From 3725' to 3770' Total Depth 3770'
Size Main Hole 6 3/4 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged Yes ☒ No ☐ Conv. ☒ B.T. ☐ Damaged Yes ☒ No ☐
Top Packer Depth 3721 Ft. Size 5 1/2 Packer Depth 3725 Ft. Size 5 1/2
Straddle Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged Yes ☐ No ☐

Packer Depth Ft. Size
Tool Size 4 1/2 Tool Jt. Size 3 1/2 IF Anchor Length 45 Ft. Size 4 1/2
RECORDERS Depth 3729 Ft. Clock No. 6799 Depth 3765 Ft. Clock No. 8377
Top Make Kuster Cap. 4150 No. 1558 ~~Inside~~ Outside Bottom Make Kuster Cap. 4150 No. 2608 ~~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 12:18 P M
Tool Open I.F.P. From 12:20 M to 12:25 M Hr. 5 Min. From (B) 43 P.S.I. To (C) 43 P.S.I.
Tool Closed I.C.I.P. From 12:25 M. to 12:55 M. Hr. 30 Min. (D) 642 P.S.I.
Tool Open F.F.P. From 12:55 M. to 1:55 M. Hr. 60 Min. From (E) 39 P.S.I. To (F) 42 P.S.I.
Tool Closed F.C.I.P. From 1:55 M. to 2:25 M. Hr. 30 Min. (G) 62 P.S.I.
Initial Hydrostatic Pressure (A) 2087 P.S.I. Final Hydrostatic Pressure (H) 2072 P.S.I.

SURFACE	Size Choke	Max. Press. P.S.I.	Time	Description of Flow
INFORMATION	<u>3/8</u> In.		<u> </u>	<u> </u>
			<u> </u>	<u> </u>
			<u> </u>	<u> </u>

BLOW Weak for five minutes. Bottom Choke Size 3/4 In.
Did Well Flow Yes ☒ No ☐ Recovery Total Ft. 10' mud

Reversed Out Yes ☒ No ☐ Mud Type gel. Viscosity 43 Weight 9.7 Maximum Temp. Broke °F
EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size Make Ser. No.
Type Circ. Sub. plug Did Tool Plug? no Where? Did Packer Hold? yes
Length Drill Pipe 2565 ft. I.D. Drill Pipe 2.8 in Length Weight Pipe 1080 ft. I.D. Weight Pipe 2.5 in Length Drill Collars 60 ft.
I. D. Drill Collars 2.2 in Length D.S.T. Tool 65 ft.

Remarks

WESTERN TESTING CO., INC.

Pressure Data

Date July 3, 1966

Recorder No. 2608

Capacity 4150

Test Ticket No. 7364

Location 3729 Ft.

Clock No. 8377

Elevation 2276 Kelly Bushings

Well Temperature Thermometer broken °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>2087</u>	P.S.I.
B First Initial Flow Pressure	<u>43</u>	P.S.I.
C First Final Flow Pressure	<u>43</u>	P.S.I.
D Initial Closed-in Pressure	<u>642</u>	P.S.I.
E Second Initial Flow Pressure	<u>39</u>	P.S.I.
F Second Final Flow Pressure	<u>42</u>	P.S.I.
G Final Closed-in Pressure	<u>62</u>	P.S.I.
H Final Hydrostatic Mud	<u>2072</u>	P.S.I.

Opened Tool

First Flow Pressure

Initial Closed-in Pressure

Second Flow Pressure

Final Closed-in Pressure

Time Given	Time Computed
<u>12:18P</u>	<u>M</u>
<u>5</u> Mins.	<u>7</u> Mins.
<u>30</u> Mins.	<u>28</u> Mins.
<u>60</u> Mins.	<u>60</u> Mins.
<u>30</u> Mins.	<u>30</u> Mins.

PRESSURE BREAKDOWN

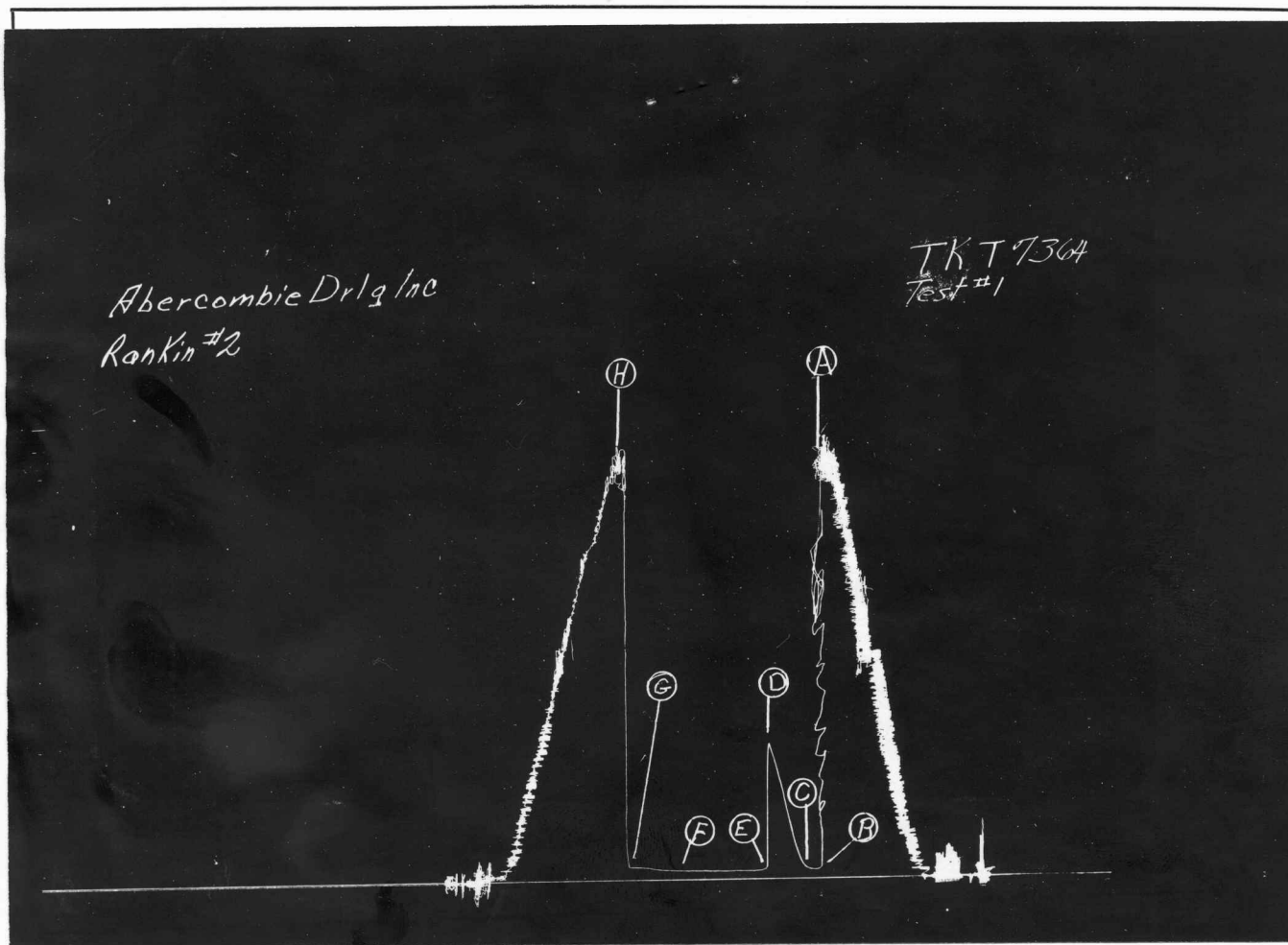
First Flow Press.
Breakdown: 1 Inc.
of 5 mins. and a
final inc. of 2 Min.

Initial Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 1 Min.

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

Final Shut-In
Breakdown: 12 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>43</u>	<u>0</u>	<u>43</u>	<u>0</u>	<u>39</u>	<u>0</u>	<u>42</u>
P 2 <u>5</u>	<u>43</u>	<u>3</u>	<u>54</u>	<u>5</u>	<u>39</u>	<u>3</u>	<u>40</u>
P 3 <u>7</u>	<u>43</u>	<u>6</u>	<u>85</u>	<u>10</u>	<u>39</u>	<u>6</u>	<u>47</u>
P 4		<u>9</u>	<u>137</u>	<u>15</u>	<u>39</u>	<u>9</u>	<u>48</u>
P 5		<u>12</u>	<u>214</u>	<u>20</u>	<u>39</u>	<u>12</u>	<u>52</u>
P 6		<u>15</u>	<u>322</u>	<u>25</u>	<u>39</u>	<u>15</u>	<u>56</u>
P 7		<u>18</u>	<u>408</u>	<u>30</u>	<u>39</u>	<u>18</u>	<u>59</u>
P 8		<u>21</u>	<u>489</u>	<u>35</u>	<u>40</u>	<u>21</u>	<u>60</u>
P 9		<u>24</u>	<u>568</u>	<u>40</u>	<u>40</u>	<u>24</u>	<u>61</u>
P10		<u>27</u>	<u>623</u>	<u>45</u>	<u>41</u>	<u>27</u>	<u>62</u>
P11		<u>28</u>	<u>642</u>	<u>50</u>	<u>41</u>	<u>30</u>	<u>62</u>
P12				<u>55</u>	<u>41</u>		
P13				<u>60</u>	<u>42</u>		
P14							
P15							
P16							
P17							
P18							
P19							
P20							



This is an actual photograph of recorder chart.

POINT

PRESSURE

(A) Initial Hydrostatic Mud	2087	PSI
(B) First Initial Flow Pressure	43	PSI
(C) First Final Flow Pressure	43	PSI
(D) Initial Closed-in Pressure	642	PSI
(E) Second Initial Flow Pressure	39	PSI
(F) Second Final Flow Pressure	42	PSI
(G) Final Closed-in Pressure	62	PSI
(H) Final Hydrostatic Mud	2072	PSI



Home Office: Great Bend, Kansas

P. O. Box 793 Gladstone 3-7903

Abercrombie Drilling, Inc.

Rankin #2

Company _____ Lease & Well No. _____
Elevation 2276 Kelly Bushings Formation Cong. Sand Ticket Number 7365
Date July 4, 1966 Sec. 33 Twp. 13s Range 20w County Ellis State Kansas
Test Approved by Jack K. Wharton Western Representative Gerrell Veatch

Formation Test No. 2 O.K. ☒ Misrun _____ Interval Tested From 3849' to 3890' Total Depth 3890'
Size Main Hole 6 3/4 Rat Hole _____ Conv. ☒ B.T. ☒ Damaged Yes ☒ No ☒ Conv. ☒ B.T. ☒ Damaged Yes ☒ No ☒
Top Packer Depth 3845 Ft. Size 5 1/2 Packer Depth 3849 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 3 1/2 IF Anchor Length 41 Ft. Size 4 1/2 OD
RECORDERS Depth 3853 Ft. Clock No. 6799 Depth 3885 Ft. Clock No. 8377
Top Make Kuster Cap. 4150 No. 1558 Inside Outside Bottom Make Kuster Cap. 4150 No. 2608 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 4:22 P M
Tool Open I.F.P. From 4:25 M to 4:30 M Hr. 5 Min. From (B) 23 P.S.I. To (C) 24 P.S.I.
Tool Closed I.C.I.P. From 4:30 M. to 5:00 M. Hr. 30 Min. (D) 1169 P.S.I.
Tool Open F.F.P. From 5:00 M. to 6:00 M. Hr. 60 Min. From (E) 31 P.S.I. To (F) 42 P.S.I.
Tool Closed F.C.I.P. From 6:00 M. to 6:30 M. Hr. 30 Min. (G) 756 P.S.I.
Initial Hydrostatic Pressure (A) 2203 P.S.I. Final Hydrostatic Pressure (H) 2138 P.S.I.

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

BLOW VERY weak for 10 minutes. Bottom Choke Size 3/4 In.

Did Well Flow Yes ☒ No _____ Recovery Total Ft. 60' slightly oil cut mud

Reversed Out Yes ☒ No _____ Mud Type gel. Viscosity 42 Weight 9.9 Maximum Temp. Broken °F

EXTRA EQUIPMENT: Dual Packers yes 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 2689 ft. I.D. Drill Pipe 2.8 in Length Weight Pipe 1080 ft. I.D. Weight Pipe 2.5 in. Length Drill Collars 60 ft.

I. D. Drill Collars 2.2 in. Length D.S.T. Tool 61 ft.

Remarks _____

WESTERN TESTING CO., INC.

Pressure Data

Date July 4, 1966 Test Ticket No. 7365
 Recorder No. 1558 Capacity 4150 Location 3853 Ft.
 Clock No. 6799 Elevation 2276 Kelly Bushings Well Temperature Thermometer Broken °F

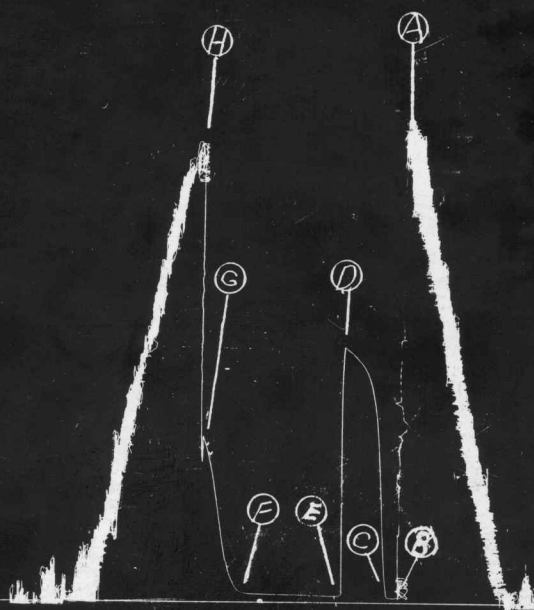
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2203</u> P.S.I.	Opened Tool	<u>4:22 P</u> M	
B First Initial Flow Pressure	<u>23</u> P.S.I.	First Flow Pressure	<u>5</u> Mins.	<u>8</u> Mins.
C First Final Flow Pressure	<u>24</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
D Initial Closed-in Pressure	<u>1169</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>31</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
F Second Final Flow Pressure	<u>42</u> P.S.I.			
G Final Closed-in Pressure	<u>756</u> P.S.I.			
H Final Hydrostatic Mud	<u>2138</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Press.		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>1</u> Inc.		Breakdown: <u>9</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>9</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>3</u> Min.		final inc. of <u>=</u> Min.		final inc. of <u>=</u> Min.		final inc. of <u>=</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>23</u>	<u>0</u>	<u>24</u>	<u>0</u>	<u>31</u>	<u>0</u>	<u>42</u>
P 2 <u>5</u>	<u>23</u>	<u>3</u>	<u>301</u>	<u>5</u>	<u>31</u>	<u>3</u>	<u>54</u>
P 3 <u>8</u>	<u>24</u>	<u>6</u>	<u>689</u>	<u>10</u>	<u>32</u>	<u>6</u>	<u>84</u>
P 4		<u>9</u>	<u>926</u>	<u>15</u>	<u>33</u>	<u>9</u>	<u>139</u>
P 5		<u>12</u>	<u>1035</u>	<u>20</u>	<u>34</u>	<u>12</u>	<u>206</u>
P 6		<u>15</u>	<u>1075</u>	<u>25</u>	<u>34</u>	<u>15</u>	<u>364</u>
P 7		<u>18</u>	<u>1108</u>	<u>30</u>	<u>35</u>	<u>18</u>	<u>529</u>
P 8		<u>21</u>	<u>1129</u>	<u>35</u>	<u>36</u>	<u>21</u>	<u>647</u>
P 9		<u>24</u>	<u>1150</u>	<u>40</u>	<u>37</u>	<u>24</u>	<u>722</u>
P10		<u>27</u>	<u>1169</u>	<u>45</u>	<u>38</u>	<u>27</u>	<u>756</u>
P11				<u>50</u>	<u>39</u>		
P12				<u>55</u>	<u>41</u>		
P13				<u>60</u>	<u>42</u>		
P14							
P15							
P16							
P17							
P18							
P19							
P20							

Abercrombie Drilling Inc
Rankin #2

TKT 7365
Test #2



This is an actual photograph of recorder chart.

POINT	PRESSURE
(A) Initial Hydrostatic Mud	2203 PSI
(B) First Initial Flow Pressure	23 PSI
(C) First Final Flow Pressure	24 PSI
(D) Initial Closed-in Pressure	1169 PSI
(E) Second Initial Flow Pressure	31 PSI
(F) Second Final Flow Pressure	42 PSI
(G) Final Closed-in Pressure	756 PSI
(H) Final Hydrostatic Mud	2138 PSI

Home Office: Great Bend, Kansas
P. O. Box 793 GLadstone 3-7903

Company Abercrombie Drilling, Inc. Lease & Well No. Rankin #2
Elevation 2276 Kelly Bushings Formation Arbuckle Ticket Number 7367
Date July 5, 1966 Sec. 33 Twp. 13s Range 20w County Ellis State Kansas
Test Approved by Jack K. Wharton Western Representative Gerrell Veatch

Formation Test No. 4 O.K. ☒ Misrun ☐ Interval Tested From 3911' to 3915' Total Depth 3915'

Size Main Hole 6 3/4 Rat Hole ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No ☐ Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No ☐

Top Packer Depth 3907 Ft. Size 5 1/2 Packer Depth 3911 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	3 1/2 IF
Anchor Length	4	Ft.	Size
RECORDERS	Depth 3901	Ft.	Clock No. 6799
Depth 3904	Ft.	Clock No. 109	
A.P. Top Make Kuster	Cap. 4150	No. 1558	Inside AP
Bottom Make Western	Cap. 4000	No. 26	Inside
Below Straddle: Depth	Clock No.	Inside	Outside
Top Make	Cap.	No.	Inside
Bottom Make	Cap.	No.	Outside

Time Set Packer _____ 11:18 P _____ M

Tool Open I.F.P. From 11:20 M to 11:30 M Hr. 10 Min. From (B) _____ 20 _____ P.S.I. To (C) _____ 37 _____ P.S.I.

Tool Closed I.C.I.P. From 11:30 M. to 12:00 M. Hr. 30 Min. (D) _____ 1118 _____ P.S.I.

Tool Open F.F.P. From 12:00 M. to 1:00 M. Hr. 60 Min. From (E) _____ 75 _____ P.S.I. To (F) _____ 284 _____ P.S.I.

Tool Closed F.C.I.P. From 1:00 M. to 1:30 M. Hr. 30 Min. (G) _____ 1068 _____ P.S.I.

Initial Hydrostatic Pressure (A) _____ 2216 _____ P.S.I. Final Hydrostatic Pressure (H) _____ 2186 _____ P.S.I.

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

BLOW Fair to weak throughout test. Bottom Choke Size 3/4 In.

Did Well Flow_____Yes X No Recovery Total Ft._____630' salt water

Reversed Out ☐ Yes ☐ No Mud Type gel Viscosity 43 Weight 9.9 Maximum Temp. _____ °F

EXTRA EQUIPMENT: Dual Packers yes Safety Joint no Jars: Size _____ Make _____ Ser. No. _____

Type Circ. Sub. plug Did Tool Plug? no Where? _____ Did Packer Hold? yes

Length Drill Pipe 2746 ft. I.D. Drill Pipe 2.8 in Length Weight Pipe 1080 ft. I.D. Weight Pipe 2.5 in. Length Drill Collars 60 ft.

I. D. Drill Collars 2.2 in. Length D.S.T. Tool 29 ft.

Remarks	Both recorders above packer.
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WESTERN TESTING CO., INC.

Pressure Data

Date July 5, 1966 Test Ticket No. 7367
 Recorder No. 1558 Capacity 4150 Location 3901 Ft.
 Clock No. 6799 Elevation 2276 Kelly Bushings Well Temperature == °F

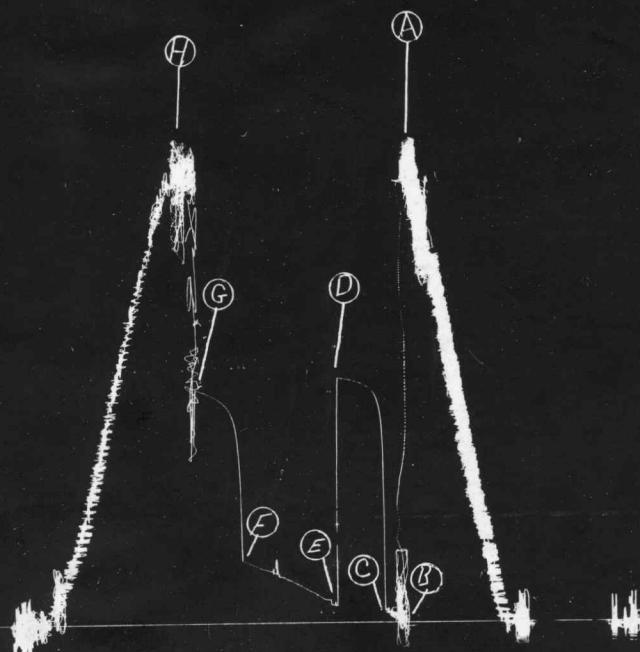
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2216	P.S.I.	11:18 P	M
B First Initial Flow Pressure	20	P.S.I.	10	Mins. 10Mins.
C First Final Flow Pressure	37	P.S.I.	30	Mins. 30Mins.
D Initial Closed-in Pressure	1118	P.S.I.	60	Mins. 58Mins.
E Second Initial Flow Pressure	75	P.S.I.	30	Mins. 29Mins.
F Second Final Flow Pressure	284	P.S.I.		
G Final Closed-in Pressure	1068	P.S.I.		
H Final Hydrostatic Mud	2186	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>11</u> Inc.		Breakdown: <u>9</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>=</u> Min.		final inc. of <u>3</u> Min.		final inc. of <u>2</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>20</u>	<u>0</u>	<u>37</u>	<u>0</u>	<u>75</u>	<u>0</u>	<u>284</u>
P 2 <u>5</u>	<u>29</u>	<u>3</u>	<u>895</u>	<u>5</u>	<u>100</u>	<u>3</u>	<u>728</u>
P 3 <u>10</u>	<u>37</u>	<u>6</u>	<u>1035</u>	<u>10</u>	<u>118</u>	<u>6</u>	<u>895</u>
P 4		<u>9</u>	<u>1064</u>	<u>15</u>	<u>127</u>	<u>9</u>	<u>966</u>
P 5		<u>12</u>	<u>1081</u>	<u>20</u>	<u>158</u>	<u>12</u>	<u>995</u>
P 6		<u>15</u>	<u>1092</u>	<u>25</u>	<u>172</u>	<u>15</u>	<u>1016</u>
P 7		<u>18</u>	<u>1100</u>	<u>30</u>	<u>196</u>	<u>18</u>	<u>1031</u>
P 8		<u>21</u>	<u>1106</u>	<u>35</u>	<u>215</u>	<u>21</u>	<u>1043</u>
P 9		<u>24</u>	<u>1110</u>	<u>40</u>	<u>236</u>	<u>24</u>	<u>1054</u>
P10		<u>27</u>	<u>1114</u>	<u>45</u>	<u>231</u>	<u>27</u>	<u>1062</u>
P11		<u>30</u>	<u>1118</u>	<u>50</u>	<u>260</u>	<u>29</u>	<u>1068</u>
P12				<u>55</u>	<u>271</u>		
P13				<u>58</u>	<u>284</u>		
P14							
P15							
P16							
P17							
P18							
P19							
P20							

Abercombie Drilling Inc
Rankin #2

TKT 7367
Test #4



This is an actual photograph of recorder chart.

POINT	PRESSURE
(A) Initial Hydrostatic Mud	2216 PSI
(B) First Initial Flow Pressure	20 PSI
(C) First Final Flow Pressure	37 PSI
(D) Initial Closed-in Pressure	1118 PSI
(E) Second Initial Flow Pressure	75 PSI
(F) Second Final Flow Pressure	284 PSI
(G) Final Closed-in Pressure	1068 PSI
(H) Final Hydrostatic Mud	2186 PSI