



Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Fry #1 "B"

Company Thunderbird Drilling, Inc. Lease & Well No. _____
 Elevation 2743 Kelly Bushing Kansas City Formation _____ Effective Pay -- Ft. Ticket No. 3153
 Date 1/12/80 Sec. 16 Twp. 27S Range 29W County Gray State Kansas

Test Approved by Benny C. Singleton, Jr. Western Representative Randy Lackey

Formation Test No. 1 Interval Tested from 4321 ft. to 4332 ft. Total Depth 4332 ft.
 Packer Depth 4316 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
 Packer Depth 4321 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
 Depth of Selective Zone Set --

Top Recorder Depth (Inside) 4323 ft. Recorder Number 2608 Cap. 4150 PSI
 Bottom Recorder Depth (Outside) 4326 ft. Recorder Number 3473 Cap. 4000 PSI
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Thunderbird Drilling Drill Collar Length -- I. D. -- in.
 Mud Type starch Viscosity 46 Weight Pipe Length 510 I. D. 2.76 in.
 Weight 9.6 Water Loss 6.8 cc. Drill Pipe Length 3803 I. D. 3.8 in.
 Chlorides 30,000 P.P.M. Test Tool Length 19 ft. Tool Size 5 1/2 in.
 Jars: Make None Serial Number -- Anchor Length 11 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No 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 F H in.

Blow: Very strong throughout Initial Flow Period
Very strong throughout Final Flow Period.

Recovered 870 ft. of gassy oil
 Recovered 120 ft. of froggy oil
 Recovered _____ ft. of 28 Gravity
 Recovered _____ ft. of _____
 Recovered 990 ft. of Total Fluid

Remarks: _____

Time Set Packer(s) 7:15 ~~A.M.~~ P.M. Time Started Off Bottom 10:45 ~~A.M.~~ P.M. Maximum Temperature 116°
 Initial Hydrostatic Pressure (A) 2181 P.S.I.
 Initial Flow Period Minutes 45 (B) 47 P.S.I. to (C) 243 P.S.I.
 Initial Closed In Period Minutes 45 (D) 401 P.S.I.
 Final Flow Period Minutes 60 (E) 285 P.S.I. to (F) 344 P.S.I.
 Final Closed In Period Minutes 60 (G) 410 P.S.I.
 Final Hydrostatic Pressure (H) 2250 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 1/12/80 Test Ticket No. 3153
 Recorder No. 2608 Capacity 4150 Location 4323 Ft.
 Clock No. -- Elevation 2743 Kelly Bushing Well Temperature 116 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2181	P.S.I.	7:15 P	M
B First Initial Flow Pressure	47	P.S.I.	45	Mins. 45 Mins.
C First Final Flow Pressure	243	P.S.I.	45	Mins. 45 Mins.
D Initial Closed-in Pressure	401	P.S.I.	60	Mins. 60 Mins.
E Second Initial Flow Pressure	285	P.S.I.	60	Mins. 60 Mins.
F Second Final Flow Pressure	344	P.S.I.		
G Final Closed-in Pressure	410	P.S.I.		
H Final Hydrostatic Mud	2250	P.S.I.		

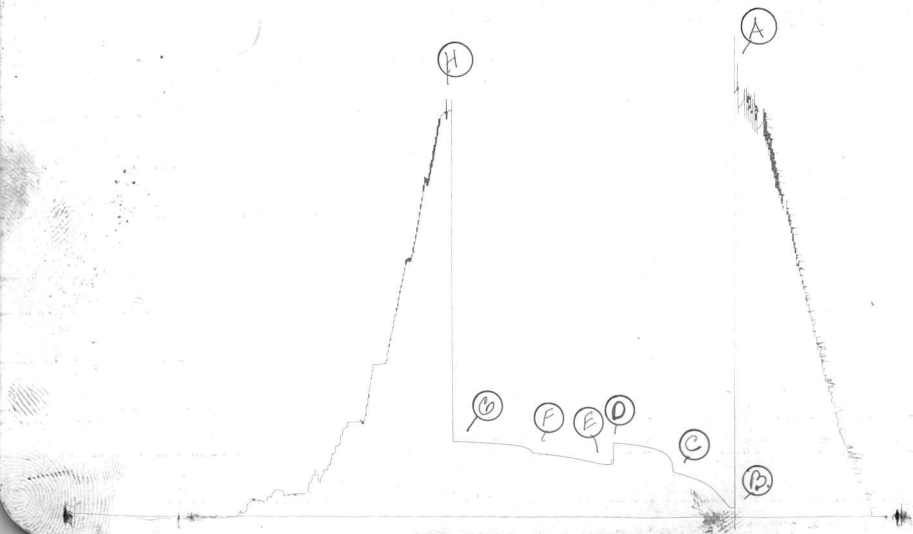
PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
	of <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 47	0	243	0	285	0	344	
P 2	5 60	3	322	5	285	3	368	
P 3	10 100	6	343	10	288	6	379	
P 4	15 139	9	355	15	296	9	383	
P 5	20 173	12	364	20	304	12	387	
P 6	25 191	15	370	25	312	15	390	
P 7	30 204	18	375	30	319	18	392	
P 8	35 218	21	379	35	326	21	394	
P 9	40 231	24	384	40	331	24	395	
P10	45 243	27	388	45	336	27	397	
P11		30	391	50	339	30	399	
P12		33	393	55	342	33	401	
P13		36	395	60	344	36	402	
P14		39	397			39	403	
P15		42	399			42	404	
P16		45	401			45	405	
P17						48	406	
P18						51	407	
P19						54	408	
P20						57	409	
						60	410	

ΔST #1

~~T-2608~~
T-3153

TKT # 3153
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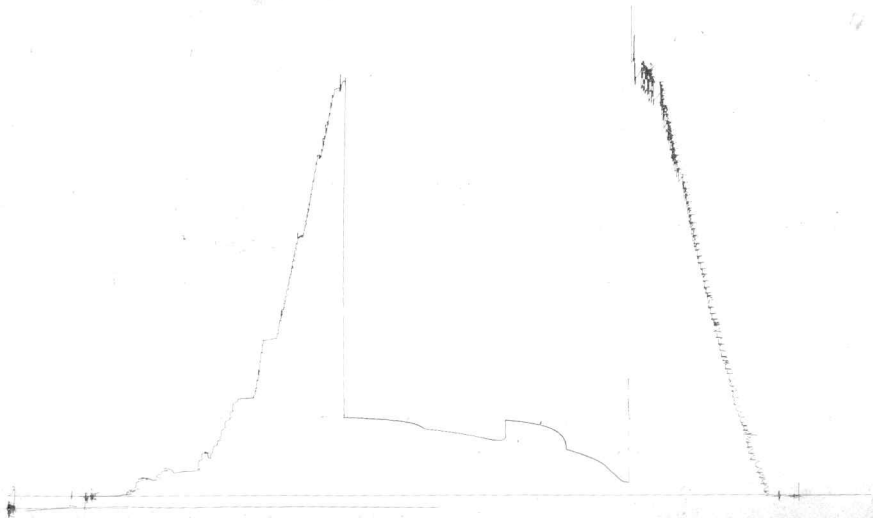


ΔST#1

A-343

B-3153

TRC # 3153
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Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Thunderbird Drilling, Inc. Lease & Well No. Frly #1-B
Elevation 2743 Kelly Bush. Formation Kansas City Effective Pay - Ft. Ticket No. 3154
Date 1-13-80 Sec. 16 Twp. 27S Range 29W County Gray State Kansas
Test Approved by Benny C. Singleton, Jr. Western Representative Randy Lackey

Formation Test No. 2 Interval Tested from 4342 ft. to 4360 ft. Total Depth 4360 ft.
Packer Depth 4337 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 4342 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4351 ft. Recorder Number 2608 Cap. 4150
Bottom Recorder Depth (Outside) 4354 ft. Recorder Number 3473 Cap. 4000
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Thunderbird Drilling, Inc. Drill Collar Length - I. D. - in.
Mud Type Starch Viscosity 46 Weight Pipe Length 510 I. D. 2.76 in.
Weight 9.6 Water Loss 6.8 cc. Drill Pipe Length 3844 I. D. 3.8 in.
Chlorides 30,000 P.P.M. Test Tool Length 19 ft. Tool Size 5 1/2 OD in.
Jars: Make - Serial Number - Anchor Length 18 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 FH in.

Blow: Very weak blow building to fair blow by end of initial flow period. Very weak blow building to a fair blow by end of final flow period.

Recovered 26 ft. of oil
Recovered 240 ft. of salt water (Chlorides: 89,000 PPM)
Recovered ft. of
Recovered ft. of
Recovered 266 ft. of total fluid

Remarks: _____

Time Set Packer(s) 1:15 ~~AM~~ = PM Time Started Off Bottom 4:45 ~~AM~~ = PM Maximum Temperature 116
Initial Hydrostatic Pressure (A) 2275 P.S.I.
Initial Flow Period Minutes 45 (B) 18 P.S.I. to (C) 66 P.S.I.
Initial Closed In Period Minutes 45 (D) 1125 P.S.I.
Final Flow Period Minutes 60 (E) 102 P.S.I. to (F) 137 P.S.I.
Final Closed In Period Minutes 60 (G) 1118 P.S.I.
Final Hydrostatic Pressure (H) 2252 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 1-13-80 Test Ticket No. 3154
 Recorder No. 2608 Capacity 4150 Location 4351 Ft.
 Clock No. - Elevation 2743 Kelly Bushing Well Temperature 116 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2275 P.S.I.	Open Tool	1:15P. M	
B First Initial Flow Pressure	18 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C First Final Flow Pressure	66 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D Initial Closed-in Pressure	1125 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	102 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	137 P.S.I.			
G Final Closed-in Pressure	1118 P.S.I.			
H Final Hydrostatic Mud	2252 P.S.I.			

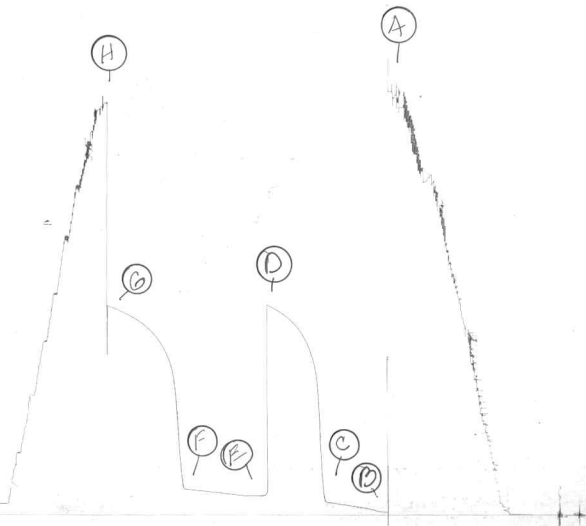
PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	9		15		12		20	
	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 Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	
P 1 0	18	0	66	0	102	0	137	
P 2 5	18	3	208	5	102	3	329	
P 3 10	25	6	549	10	102	6	587	
P 4 15	33	9	754	15	103	9	735	
P 5 20	40	12	839	20	106	12	818	
P 6 25	47	15	899	25	109	15	870	
P 7 30	53	18	942	30	112	18	911	
P 8 35	58	21	979	35	116	21	940	
P 9 40	62	24	1008	40	121	24	967	
P10 45	66	27	1033	45	125	27	990	
P11		30	1053	50	129	30	1008	
P12		33	1067	55	133	33	1027	
P13		36	1081	60	137	36	1043	
P14		39	1095			39	1058	
P15		42	1110			42	1066	
P16		45	1124			45	1079	
P17						48	1086	
P18						51	1093	
P19						54	1102	
P20						57	1111	
						60	1118	

DST #2

T-2608
T-3154

TKT # 3154
I



DST #2

B-347.3
B-315.4

TKT # 315.4
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WESTERN TESTING CO., INC.
Pressure Data

Date 1-14-80 Test Ticket No. 3155
 Recorder No. 2608 Capacity 4150 Location 4386 Ft.
 Clock No. - Elevation 2743 Kelly Bushing Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2297</u> P.S.I.	Open Tool	<u>8:00A.</u> M	
B First Initial Flow Pressure	<u>283</u> P.S.I.	First Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>1265</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1265</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>1269</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>1271</u> P.S.I.			
G Final Closed-in Pressure	<u>1271</u> P.S.I.			
H Final Hydrostatic Mud	<u>2227</u> P.S.I.			

PRESSURE BREAKDOWN

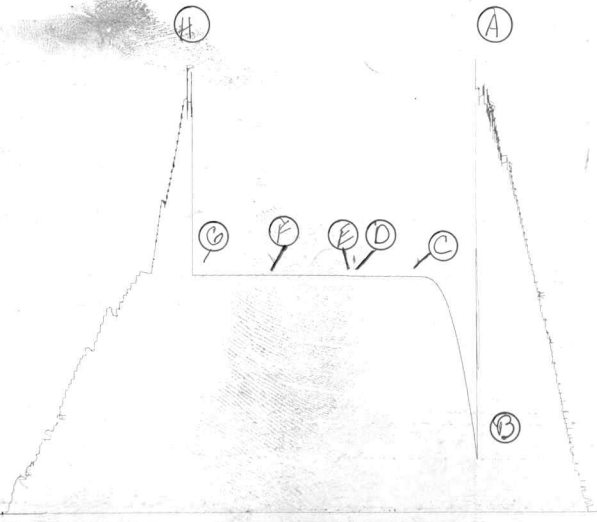
First Flow Pressure Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Initial Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>283</u>	<u>0</u>	<u>1265</u>	<u>0</u>	<u>1269</u>	<u>0</u>	<u>1271</u>
P 2 <u>5</u>	<u>500</u>	<u>3</u>	<u>1265</u>	<u>5</u>	<u>1269</u>	<u>3</u>	<u>1271</u>
P 3 <u>10</u>	<u>716</u>	<u>6</u>	<u>1265</u>	<u>10</u>	<u>1269</u>	<u>6</u>	<u>1271</u>
P 4 <u>15</u>	<u>890</u>	<u>9</u>	<u>1265</u>	<u>15</u>	<u>1269</u>	<u>9</u>	<u>1271</u>
P 5 <u>20</u>	<u>1027</u>	<u>12</u>	<u>1265</u>	<u>20</u>	<u>1269</u>	<u>12</u>	<u>1271</u>
P 6 <u>25</u>	<u>1130</u>	<u>15</u>	<u>1265</u>	<u>25</u>	<u>1269</u>	<u>15</u>	<u>1271</u>
P 7 <u>30</u>	<u>1201</u>	<u>18</u>	<u>1265</u>	<u>30</u>	<u>1269</u>	<u>18</u>	<u>1271</u>
P 8 <u>35</u>	<u>1244</u>	<u>21</u>	<u>1265</u>	<u>35</u>	<u>1269</u>	<u>21</u>	<u>1271</u>
P 9 <u>40</u>	<u>1259</u>	<u>24</u>	<u>1265</u>	<u>40</u>	<u>1269</u>	<u>24</u>	<u>1271</u>
P10 <u>45</u>	<u>1265</u>	<u>27</u>	<u>1265</u>	<u>45</u>	<u>1270</u>	<u>27</u>	<u>1271</u>
P11		<u>30</u>	<u>1265</u>	<u>50</u>	<u>1270</u>	<u>30</u>	<u>1271</u>
P12		<u>33</u>	<u>1265</u>	<u>55</u>	<u>1271</u>	<u>33</u>	<u>1271</u>
P13		<u>36</u>	<u>1265</u>	<u>60</u>	<u>1271</u>	<u>36</u>	<u>1271</u>
P14		<u>39</u>	<u>1265</u>			<u>39</u>	<u>1271</u>
P15		<u>42</u>	<u>1265</u>			<u>42</u>	<u>1271</u>
P16		<u>45</u>	<u>1265</u>			<u>45</u>	<u>1271</u>
P17						<u>48</u>	<u>1271</u>
P18						<u>51</u>	<u>1271</u>
P19						<u>54</u>	<u>1271</u>
P20						<u>57</u>	<u>1271</u>
						<u>60</u>	<u>1271</u>

DST #3

T-1-608
T-3155

TKT # 3155
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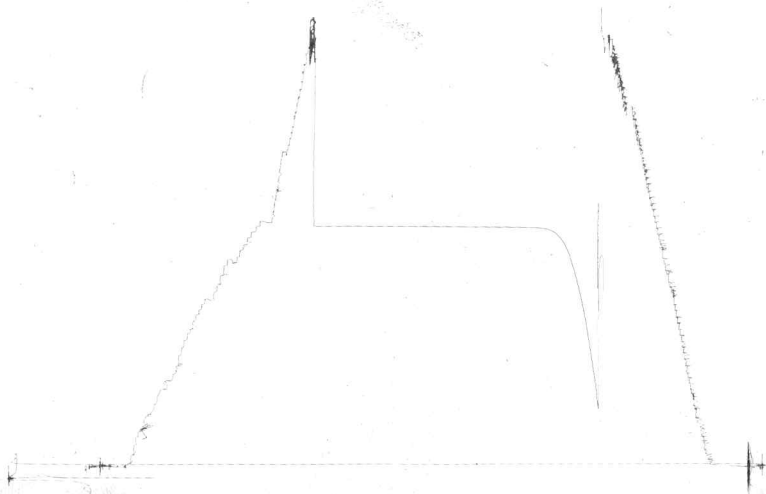


DST#3

B-3773

B-3155

TKT# 3155
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Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Thunderbird Drilling, Inc. Lease & Well No. Fry #1-B
Elevation 2743 Kelly Bush Formation Lansing Effective Pay - Ft. Ticket No. 3156
Date 1-15-80 Sec. 16 Twp. 27S Range 29W County Gray State Kansas
Test Approved by Benny C. Singleton, Jr. Western Representative Randy Lackey

Formation Test No. 4 Interval Tested from 4437 ft. to 4468 ft. Total Depth 4468 ft.
Packer Depth 4432 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 4437 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4459 ft. Recorder Number 2608 Cap. 4150
Bottom Recorder Depth (Outside) 4462 ft. Recorder Number 3473 Cap. 4000
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Thunderbird Drilling, Inc. Drill Collar Length - I. D. - in.
Mud Type Starch Viscosity 43 Weight Pipe Length 510 I. D. 276 in.
Weight 9.5 Water Loss 10.4 cc. Drill Pipe Length 3935 I. D. 3.8 in.
Chlorides 37,000 P.P.M. Test Tool Length 19 ft. Tool Size 5 1/2 OD in.
Jars: Make - Serial Number - Anchor Length 31 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 FH in.

Blow: Very weak blow building to weak by end of initial flow period. Very weak blow throughout final flow period.

Recovered 160 ft. of muddy water
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Remarks: _____

Time Set Packer(s) 1:00 ~~AM~~ P.M. Time Started Off Bottom 4:30 ~~AM~~ P.M. Maximum Temperature 121
Initial Hydrostatic Pressure (A) 2231 P.S.I.
Initial Flow Period Minutes 45 (B) 52 P.S.I. to (C) 53 P.S.I.
Initial Closed In Period Minutes 48 (D) 1255 P.S.I.
Final Flow Period Minutes 60 (E) 92 P.S.I. to (F) 96 P.S.I.
Final Closed In Period Minutes 60 (G) 1224 P.S.I.
Final Hydrostatic Pressure (H) 2198 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 1-15-80 Test Ticket No. 3156
 Recorder No. 2608 Capacity 4150 Location 4459 Ft.
 Clock No. - Elevation 2743 Kelly Bushing Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2231</u> P.S.I.	Open Tool	<u>1:00P.</u> M	
B First Initial Flow Pressure	<u>52</u> P.S.I.	First Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>53</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>48</u> Mins.
D Initial Closed-in Pressure	<u>1255</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>92</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>96</u> P.S.I.			
G Final Closed-in Pressure	<u>1224</u> P.S.I.			
H Final Hydrostatic Mud	<u>2198</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 9 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: 12 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

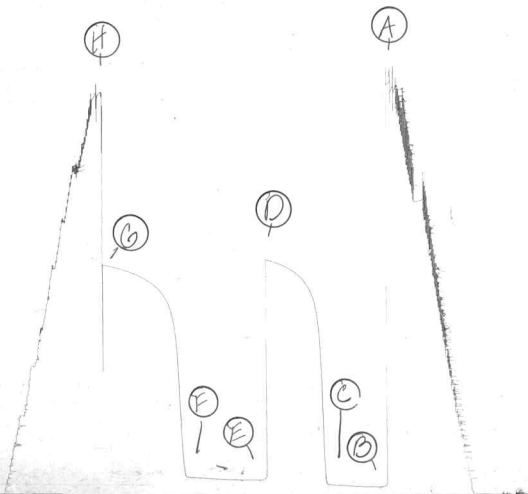
Final Shut-In
 Breakdown: 20 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>52</u>	<u>0</u>	<u>53</u>	<u>0</u>	<u>92</u>	<u>0</u>	<u>96</u>
P 2 <u>5</u>	<u>37</u>	<u>3</u>	<u>310</u>	<u>5</u>	<u>77</u>	<u>3</u>	<u>316</u>
P 3 <u>10</u>	<u>37</u>	<u>6</u>	<u>675</u>	<u>10</u>	<u>77</u>	<u>6</u>	<u>661</u>
P 4 <u>15</u>	<u>40</u>	<u>9</u>	<u>913</u>	<u>15</u>	<u>78</u>	<u>9</u>	<u>892</u>
P 5 <u>20</u>	<u>42</u>	<u>12</u>	<u>1024</u>	<u>20</u>	<u>78</u>	<u>12</u>	<u>986</u>
P 6 <u>25</u>	<u>43</u>	<u>15</u>	<u>1085</u>	<u>25</u>	<u>79</u>	<u>15</u>	<u>1037</u>
P 7 <u>30</u>	<u>46</u>	<u>18</u>	<u>1120</u>	<u>30</u>	<u>79</u>	<u>18</u>	<u>1070</u>
P 8 <u>35</u>	<u>48</u>	<u>21</u>	<u>1149</u>	<u>35</u>	<u>81</u>	<u>21</u>	<u>1095</u>
P 9 <u>40</u>	<u>51</u>	<u>24</u>	<u>1172</u>	<u>40</u>	<u>83</u>	<u>24</u>	<u>1116</u>
P10 <u>45</u>	<u>53</u>	<u>27</u>	<u>1188</u>	<u>45</u>	<u>85</u>	<u>27</u>	<u>1132</u>
P11		<u>30</u>	<u>1203</u>	<u>50</u>	<u>89</u>	<u>30</u>	<u>1145</u>
P12		<u>33</u>	<u>1215</u>	<u>55</u>	<u>93</u>	<u>33</u>	<u>1159</u>
P13		<u>36</u>	<u>1226</u>	<u>60</u>	<u>96</u>	<u>36</u>	<u>1168</u>
P14		<u>39</u>	<u>1234</u>			<u>39</u>	<u>1178</u>
P15		<u>42</u>	<u>1242</u>			<u>42</u>	<u>1188</u>
P16		<u>45</u>	<u>1248</u>			<u>45</u>	<u>1197</u>
P17		<u>48</u>	<u>1255</u>			<u>48</u>	<u>1203</u>
P18						<u>51</u>	<u>1209</u>
P19						<u>54</u>	<u>1215</u>
P20						<u>57</u>	<u>1219</u>
						<u>60</u>	<u>1224</u>

DST#4 →

TKT# 3156
I

T-2608
T-3157



DST#4

B-3473
C-3156

TKT# 3156
0





Home Office: Wichita, Kansas 67201
 P.O. Box 1599 (316) 262-5861

Company Thunderbird Drilling, Inc. Lease & Well No. Fry #1-B
 Elevation 2743 Kelly Bush Formation - Effective Pay - Ft. Ticket No. 3157
 Date 1-16-80 Sec. 16 Twp. 27S Range 29W County Gray State Kansas
 Test Approved by Benny C. Singleton, Jr. Western Representative Randy Lackey

Formation Test No. 5 Interval Tested from 4574 ft. to 4605 ft. Total Depth 4605 ft.
 Packer Depth 4569 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 4574 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3596 ft. Recorder Number 2608 Cap. 4150
 Bottom Recorder Depth (Outside) 3599 ft. Recorder Number 3473 Cap. 4000
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Thunderbird Drilling, Inc. Drill Collar Length - I. D. - in.
 Mud Type Starch Viscosity 36 Weight Pipe Length 510 I. D. 2.76 in.
 Weight 8.9 Water Loss 14.4 cc. Drill Pipe Length 3888 I. D. 3.8 in.
 Chlorides 18,500 P.P.M. Test Tool Length 19 ft. Tool Size 5 1/2 OD in.
 Jars: Make - Serial Number - Anchor Length 31 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 FH in.

Blow: Very weak blow building to strong blow 15 minutes into initial flow period. Very weak blow building to strong blow 11 minutes into final flow period.

Recovered 280 ft. of slightly oil cut muddy water
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s) 4:45 ~~A.M.~~ P.M. Time Started Off Bottom 8:15 ~~A.M.~~ P.M. Maximum Temperature 121
 Initial Hydrostatic Pressure (A) 2241 P.S.I.
 Initial Flow Period Minutes 45 (B) 50 P.S.I. to (C) 73 P.S.I.
 Initial Closed In Period Minutes 45 (D) 1373 P.S.I.
 Final Flow Period Minutes 60 (E) 102 P.S.I. to (F) 146 P.S.I.
 Final Closed In Period Minutes 60 (G) 1367 P.S.I.
 Final Hydrostatic Pressure (H) 2209 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 1-16-80 Test Ticket No. 3157
 Recorder No. 2608 Capacity 4150 Location 3596 Ft.
 Clock No. - Elevation 2743 Kelly Bushing Well Temperature 121 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2241</u> P.S.I.	Open Tool	<u>4:45P.</u> M	
B First Initial Flow Pressure	<u>50</u> P.S.I.	First Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>73</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins.	<u>45</u> Mins.
D Initial Closed-in Pressure	<u>1373</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>102</u> P.S.I.	Final Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
F Second Final Flow Pressure	<u>146</u> P.S.I.			
G Final Closed-in Pressure	<u>1367</u> P.S.I.			
H Final Hydrostatic Mud	<u>2209</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.
Initial Shut-In Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.
Second Flow Pressure Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.
Final Shut-In Breakdown: 20 Inc. of 3 mins. and a final inc. of 0 Min.

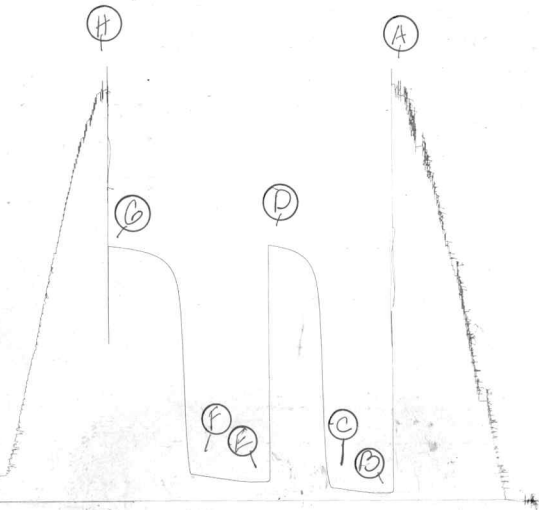
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>0</u> 50	<u>0</u> 73	<u>0</u> 102	<u>0</u> 146			
P 2	<u>5</u> 40	<u>3</u> 164	<u>5</u> 102	<u>3</u> 454			
P 3	<u>10</u> 40	<u>6</u> 502	<u>10</u> 102	<u>6</u> 781			
P 4	<u>15</u> 40	<u>9</u> 961	<u>15</u> 104	<u>9</u> 1083			
P 5	<u>20</u> 44	<u>12</u> 1178	<u>20</u> 106	<u>12</u> 1190			
P 6	<u>25</u> 50	<u>15</u> 1248	<u>25</u> 110	<u>15</u> 1242			
P 7	<u>30</u> 56	<u>18</u> 1282	<u>30</u> 116	<u>18</u> 1271			
P 8	<u>35</u> 60	<u>21</u> 1307	<u>35</u> 122	<u>21</u> 1292			
P 9	<u>40</u> 67	<u>24</u> 1323	<u>40</u> 127	<u>24</u> 1307			
P10	<u>45</u> 73	<u>27</u> 1336	<u>45</u> 133	<u>27</u> 1317			
P11		<u>30</u> 1344	<u>50</u> 137	<u>30</u> 1325			
P12		<u>33</u> 1350	<u>55</u> 141	<u>33</u> 1331			
P13		<u>36</u> 1356	<u>60</u> 146	<u>36</u> 1336			
P14		<u>39</u> 1362		<u>39</u> 1342			
P15		<u>42</u> 1367		<u>42</u> 1348			
P16		<u>45</u> 1373		<u>45</u> 1352			
P17				<u>48</u> 1355			
P18				<u>51</u> 1358			
P19				<u>54</u> 1361			
P20				<u>57</u> 1364			
				<u>60</u> 1367			

DST#5

T-2608

T-3157

TRK # 3157
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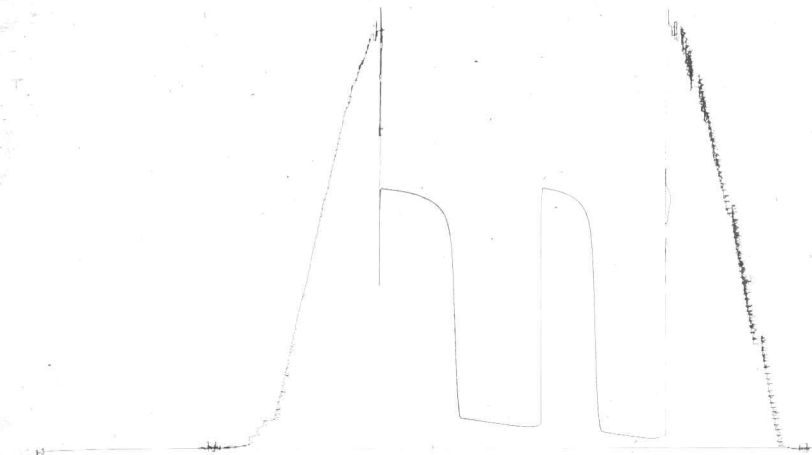
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B-3157

TRK # 3157

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Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Thunderbird Drilling, Inc.

Lease & Well No. Fry #1-B

Elevation 2743 Kelly Bush. Formation Marmaton Effective Pay - Ft. Ticket No. 3158

Date 1-16-80 Sec. 16 Twp. 27S Range 29W County Gray State Kansas

Test Approved by Benny C. Singleton, Jr. Western Representative Randy Lackey

Formation Test No. 6 Interval Tested from 4677 ft. to 4766 ft. Total Depth 4766 ft.

Packer Depth 4672 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4677 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4757 ft. Recorder Number 2608 Cap. 4150

Bottom Recorder Depth (Outside) 4760 ft. Recorder Number 3473 Cap. 4000

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

Drilling Contractor Thunderbird Drilling, Inc. Drill Collar Length - I. D. - in.

Mud Type Starch Viscosity 37 Weight Pipe Length 510 I. D. 2.76 in.

Weight 9.0 Water Loss 12.8 cc. Drill Pipe Length 4227 I. D. 3.8 in.

Chlorides 20,500 P.P.M. Test Tool Length 19 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number - Anchor Length 89 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 FH in.

Blow: Very weak blow building to strong blow 16 minutes into initial flow period. Very weak blow building to strong blow 18 minutes into final flow period.

Recovered 800 ft. of water Chlorides: 138,000 PPM

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 11:00 ~~AM~~ PM Time Started Off Bottom 2:30 ~~AM~~ PM Maximum Temperature 122

Initial Hydrostatic Pressure (A) 2382 P.S.I.

Initial Flow Period Minutes 45 (B) 85 P.S.I. to (C) 270 P.S.I.

Initial Closed In Period Minutes 45 (D) 1288 P.S.I.

Final Flow Period Minutes 60 (E) 304 P.S.I. to (F) 427 P.S.I.

Final Closed In Period Minutes 60 (G) 1257 P.S.I.

Final Hydrostatic Pressure (H) 2347 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 1-16-80 Test Ticket No. 3158
 Recorder No. 2608 Capacity 4150 Location 4757 Ft.
 Clock No. - Elevation 2743 Kelly Bushing Well Temperature 122 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2382	P.S.I.	11:00P.	M
B First Initial Flow Pressure	85	P.S.I.	45	45
C First Final Flow Pressure	270	P.S.I.	45	45
D Initial Closed-in Pressure	1288	P.S.I.	60	60
E Second Initial Flow Pressure	304	P.S.I.	60	60
F Second Final Flow Pressure	427	P.S.I.		
G Final Closed-in Pressure	1257	P.S.I.		
H Final Hydrostatic Mud	2347	P.S.I.		

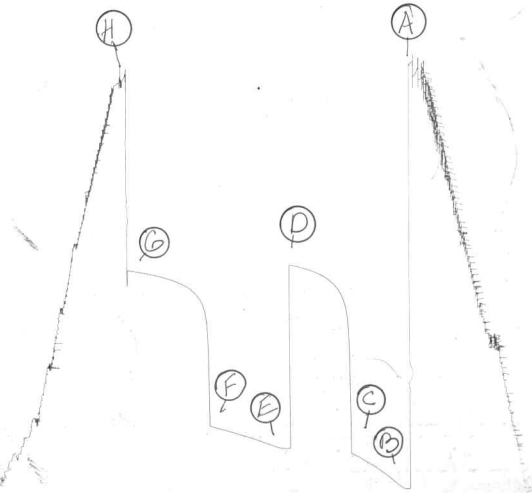
PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	of <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.	
	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes
P 1	85	0	270	0	304	0	427	0
P 2	89	3	812	3	312	3	969	3
P 3	116	6	1060	6	326	6	1060	6
P 4	146	9	1122	9	339	9	1108	9
P 5	173	12	1159	12	352	12	1132	12
P 6	198	15	1186	15	364	15	1153	15
P 7	220	18	1207	18	375	18	1170	18
P 8	241	21	1221	21	387	21	1182	21
P 9	262	24	1234	24	398	24	1195	24
P10	270	27	1244	27	408	27	1205	27
P11		30	1253	30	416	30	1211	30
P12		33	1260	33	422	33	1218	33
P13		36	1267	36	427	36	1225	36
P14		39	1274	39		39	1231	39
P15		42	1281	42		42	1236	42
P16		45	1288	45		45	1240	45
P17						48	1244	48
P18						51	1248	51
P19						54	1251	54
P20						57	1254	57
						60	1257	60

DST #6

T-2608
T-3158

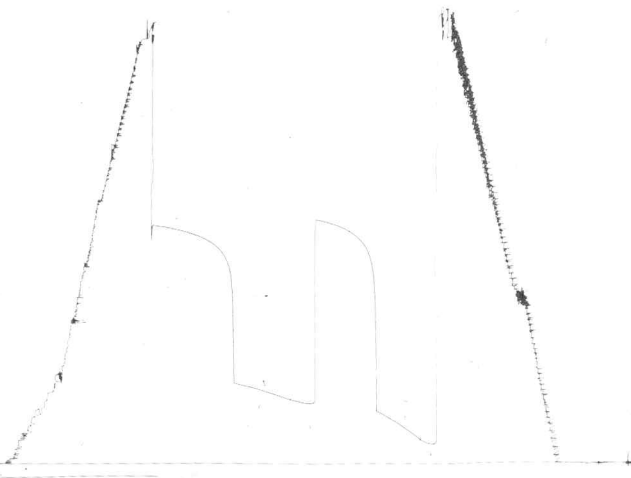
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DST#6

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8-3158

TR# 3158
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Home Office: Wichita, Kansas 67201

P.O. Box 1599

(316) 262-5861

Company Thunderbird Drilling, Inc. Lease & Well No. Fry #1-B
 Elevation 2743 Kelly Bush Formation Mississippi Effective Pay - Ft. Ticket No. 3159
 Date 1-19-80 Sec. 16 Twp. 27S Range 29W County Gray State Kansas
 Test Approved by Benny C. Singleton, Jr. Western Representative Randy Lackey

Formation Test No. 7 Interval Tested from 5024 ft. to 5053 ft. Total Depth 5053 ft.
 Packer Depth 5019 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 5024 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 5045 ft. Recorder Number 2608 Cap. 4150
 Bottom Recorder Depth (Outside) 5048 ft. Recorder Number 3473 Cap. 4000
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Thunderbird Drilling, Inc. Drill Collar Length - I. D. - in.
 Mud Type Starch Viscosity 42 Weight Pipe Length 510 I. D. 2.76 in.
 Weight 9.3 Water Loss 6.8 cc. Drill Pipe Length 4503 I. D. 3.8 in.
 Chlorides 23,500 P.P.M. Test Tool Length 19 ft. Tool Size 5 1/2 OD in.
 Jars: Make - Serial Number - Anchor Length 29 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 FH in.

Blow: Very weak blow building to strong blow, 26 minutes into initial flow period. Strong blow throughout final flow period.

Recovered 120 ft. of gas and oil cut mud.
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s)	<u>4:00</u>	==P.M.	A.M.	Time Started Off Bottom	<u>7:30</u>	==P.M.	A.M.	Maximum Temperature	<u>127</u>
Initial Hydrostatic Pressure			(A)	<u>2481</u>			P.S.I.		
Initial Flow Period		Minutes	<u>45</u>	(B)	<u>52</u>		P.S.I. to (C)	<u>42</u>	P.S.I.
Initial Closed In Period		Minutes	<u>48</u>	(D)	<u>214</u>		P.S.I.		
Final Flow Period		Minutes	<u>60</u>	(E)	<u>77</u>		P.S.I. to (F)	<u>67</u>	P.S.I.
Final Closed In Period		Minutes	<u>63</u>	(G)	<u>731</u>		P.S.I.		
Final Hydrostatic Pressure			(H)	<u>2473</u>			P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 1-19-80 Test Ticket No. 3159
 Recorder No. 2608 Capacity 4150 Location 5045 Ft.
 Clock No. - Elevation 2743 Kelly Bushing Well Temperature 127 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2481</u> P.S.I.	4:00A. M	
B First Initial Flow Pressure	<u>52</u> P.S.I.	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>42</u> P.S.I.	<u>45</u> Mins.	<u>48</u> Mins.
D Initial Closed-in Pressure	<u>214</u> P.S.I.	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>77</u> P.S.I.	<u>60</u> Mins.	<u>63</u> Mins.
F Second Final Flow Pressure	<u>67</u> P.S.I.		
G Final Closed-in Pressure	<u>731</u> P.S.I.		
H Final Hydrostatic Mud	<u>2473</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>9</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Initial Shut-In Breakdown: <u>16</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>21</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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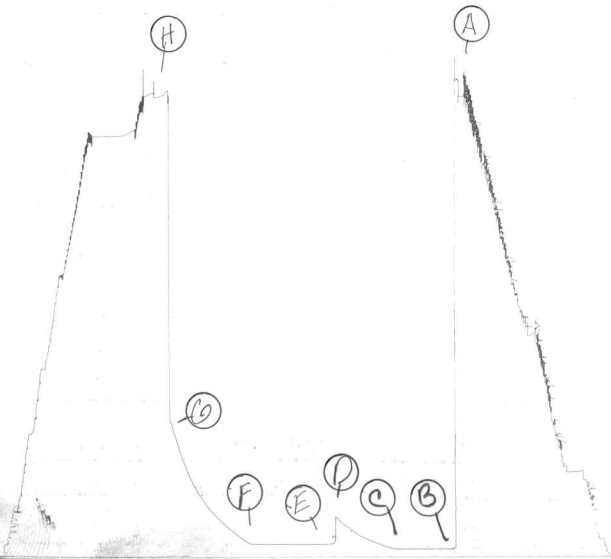
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>52</u>	<u>0</u>	<u>42</u>	<u>0</u>	<u>77</u>	<u>0</u>	<u>67</u>
P 2 <u>5</u>	<u>42</u>	<u>3</u>	<u>44</u>	<u>5</u>	<u>67</u>	<u>3</u>	<u>73</u>
P 3 <u>10</u>	<u>42</u>	<u>6</u>	<u>48</u>	<u>10</u>	<u>67</u>	<u>6</u>	<u>83</u>
P 4 <u>15</u>	<u>42</u>	<u>9</u>	<u>56</u>	<u>15</u>	<u>67</u>	<u>9</u>	<u>100</u>
P 5 <u>20</u>	<u>42</u>	<u>12</u>	<u>62</u>	<u>20</u>	<u>67</u>	<u>12</u>	<u>116</u>
P 6 <u>25</u>	<u>42</u>	<u>15</u>	<u>71</u>	<u>25</u>	<u>67</u>	<u>15</u>	<u>135</u>
P 7 <u>30</u>	<u>42</u>	<u>18</u>	<u>79</u>	<u>30</u>	<u>67</u>	<u>18</u>	<u>154</u>
P 8 <u>35</u>	<u>42</u>	<u>21</u>	<u>87</u>	<u>35</u>	<u>67</u>	<u>21</u>	<u>177</u>
P 9 <u>40</u>	<u>42</u>	<u>24</u>	<u>98</u>	<u>40</u>	<u>67</u>	<u>24</u>	<u>198</u>
P10 <u>45</u>	<u>42</u>	<u>27</u>	<u>108</u>	<u>45</u>	<u>67</u>	<u>27</u>	<u>218</u>
P11		<u>30</u>	<u>121</u>	<u>50</u>	<u>67</u>	<u>30</u>	<u>243</u>
P12		<u>33</u>	<u>133</u>	<u>55</u>	<u>67</u>	<u>33</u>	<u>268</u>
P13		<u>36</u>	<u>152</u>	<u>60</u>	<u>67</u>	<u>36</u>	<u>297</u>
P14		<u>39</u>	<u>166</u>			<u>39</u>	<u>327</u>
P15		<u>42</u>	<u>183</u>			<u>42</u>	<u>360</u>
P16		<u>45</u>	<u>202</u>			<u>45</u>	<u>400</u>
P17		<u>48</u>	<u>214</u>			<u>48</u>	<u>462</u>
P18						<u>51</u>	<u>494</u>
P19						<u>54</u>	<u>545</u>
P20						<u>57</u>	<u>607</u>
						<u>60</u>	<u>669</u>
						<u>63</u>	<u>731</u>

DST# 7

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