

MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING, INC.

Lease and Well No. PFANNENSTIEL D #5

County NESS State KANSAS Date JANUARY 26, 1971

Formation Test No.	<u>1</u>	Total Depth	<u>4344</u>	Elev.	<u>2351 D.F.</u>
Interval Tested	<u>4314</u>	To	<u>4344</u>	Anchor Length	<u>30'</u>
Size Hole	<u>7 7/8</u>	Size Drill Pipe	<u>4 1/2 F.H.</u>	Size Packer	<u>6 3/4</u>
Mud Weight	<u>9.6</u>	Viscosity	<u>37</u>	Water Loss	<u>9.8 c.c.</u>
				Bottom Hole Temp.	<u>116 °F</u>
Chokes: Top	<u>1/2</u>	Bottom	<u>1/2</u>	Ticket No.	<u>11162</u>
Length of Drill Collar		I. D.		Length Flexweight	<u>690</u>
				I. D.	<u>2.76</u>

RECOVERY

GOOD BLOW SURGING SOME ON FIRST OPENING.

90 FEET OF FREE OIL.
90 FEET OF OIL CUT WATERY MUD.
600 FEET OF OIL CUT MUDDY WATER.
120 FEET OF WATER.

Lease and Well No. PFANNENSTIEL D #5 1 18S 24W SE SE
Formation Test No. 1

COMPANY THUNDERBIRD DRILLING, INC. DATE JANUARY 26, 1971

LEASE PFANNENSTIEL WELL NO. D-5 TEST NO. 1 TICKET NO. 11162

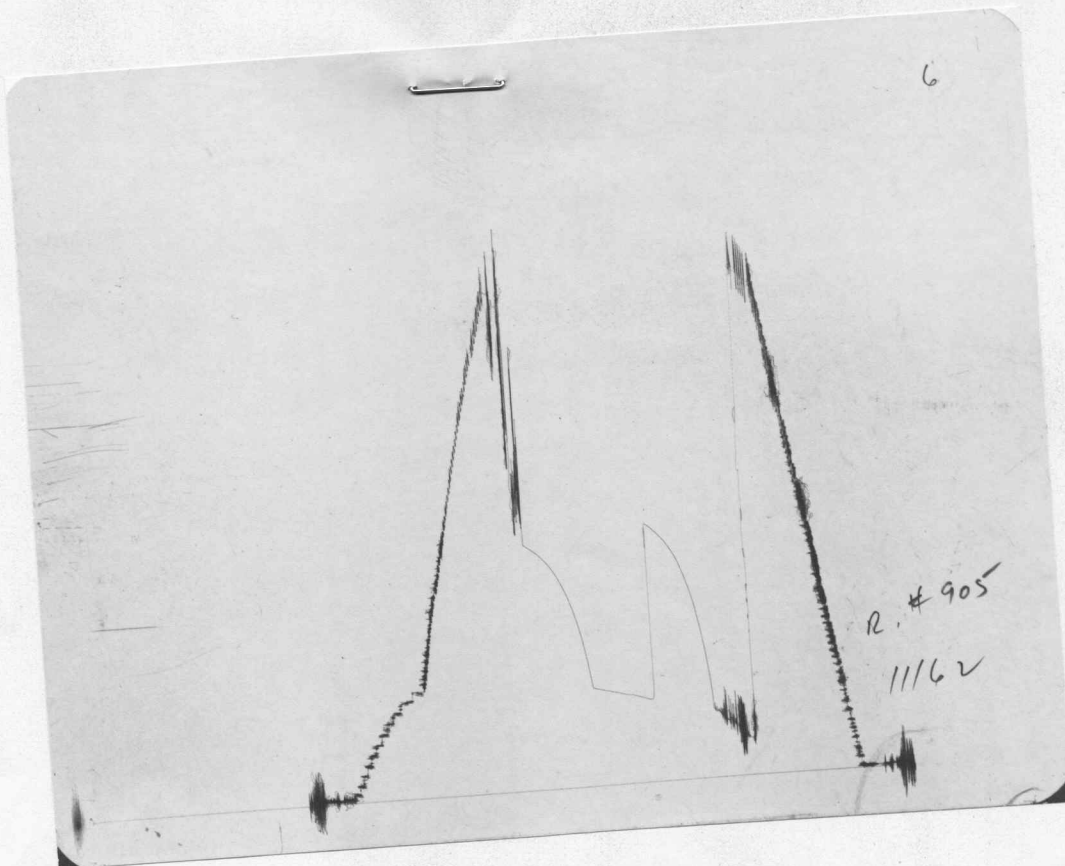
	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2286
INITIAL CLOSED IN PRESSURE	45 MINS.	1147
INITIAL FLOW	30 MINS.	136 to 306
FINAL FLOW	45 MINS.	365 to 433
FINAL CLOSED IN PRESSURE	45 MINS.	1088
FINAL HYDRO MUD PRESSURE		2218

TOTAL DEPTH 4344
 PACKER DEPTH 4314
 BT. NO. 905 DEPTH 4339

1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	136		306		365		433
	PARTIAL PLUGGING		442		391		646
	306		654		416		773
			816		433		858
			926				926
			1003				977
			1054				1020
			1096				1054
			1122				1071
			1147				1088
	15 MINUTE INTERVAL	5 MINUTE INTERVAL		15 MINUTE INTERVAL	5 MINUTE INTERVAL		

REMARKS _____

SPECIAL PRESSURE DATA



Tool Open: 1st Flow hr. 30 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 45 min: Shut-in Final hr. 45 min.

	Field Reading	Corrected Reading
(A) Initial Hydrostatic Pressure	<u>2286</u>	<u>2286</u>
(B) Initial 1st Flow Pressure	<u>153</u>	<u>136</u>
(C) Final 1st Flow Pressure	<u>306</u>	<u>306</u>
(D) Initial Shut-in Pressure	<u>1148</u>	<u>1147</u>
(E) Initial 2nd Flow Pressure	<u>355</u>	<u>365</u>
(F) Final 2nd Flow Pressure	<u>434</u>	<u>433</u>
(G) Final Shut-in Pressure	<u>1088</u>	<u>1088</u>
(H) Final Hydrostatic Pressure	<u>2261</u>	<u>2218</u>

11162

MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING, INC.

Lease and Well No. PFANNENSTIEL^D #5

County NESS State KANSAS

Date JANUARY 26, 1971

Formation Test No. 2 Total Depth 4358 Elev. 2351 D.F.
Interval Tested 4352 To 4358 Anchor Length 6'
Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. Size Packer 6 3/4
Mud Weight 9.5 Viscosity 50 Water Loss 13.6 c.c. Bottom Hole Temp. 116 °F
Chokes: Top 1/2 Bottom 1/2 Ticket No. 11163
Length of Drill Collar _____ I. D. _____ Length Flexweight 690 I. D. 2.76

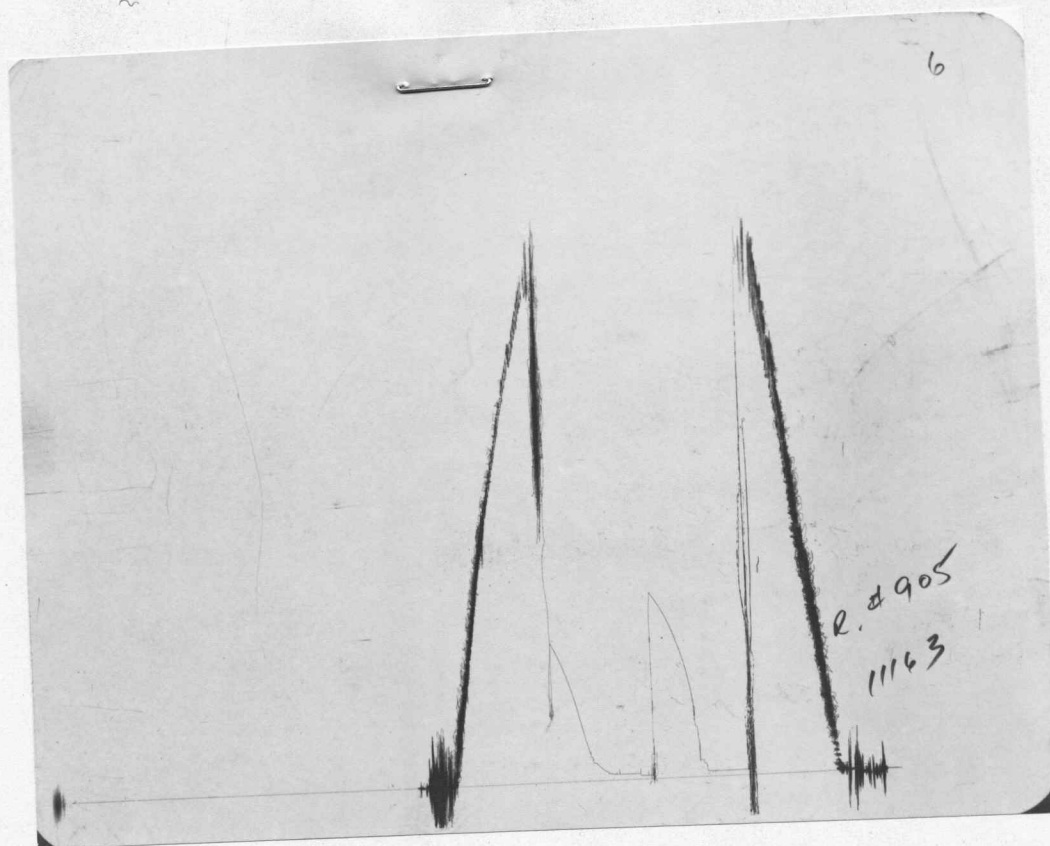
RECOVERY

WEAK BLOW FOR 15 MINUTES.

5 FEET OF MUD.

Lease and Well No. PFANNENSTIEL D #5 1 18S 24W SE SE

Formation Test No. 2



Tool Open: 1st Flow hr. 30 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 30 min: Shut-in Final hr. 45 min.

	Field Reading	Corrected Reading
(A) Initial Hydrostatic Pressure	2295	2337
(B) Initial 1st Flow Pressure	25	24
(C) Final 1st Flow Pressure	25	25
(D) Initial Shut-in Pressure	816	818
(E) Initial 2nd Flow Pressure	25	25
(F) Final 2nd Flow Pressure	30	25
(G) Final Shut-in Pressure	612	654
(H) Final Hydrostatic Pressure	2218	2261

11163

MILLER TESTING COMPANY

Box 547

GREAT BEND, KANSAS

Company THUNDERBIRD DRILLING CO.

Lease and Well No. PFANNENSTIEL D #5

County NESS State KANSAS Date JANUARY 27, 1971

Formation Test No. 3 Total Depth 4363 Elev. 2351 D.F.
Interval Tested 4352 To 4363 Anchor Length 11'
Size Hole 7 7/8 Size Drill Pipe 4 1/2 F.H. Size Packer 6 3/4
Mud Weight 9.5 Viscosity 50 Water Loss 13.8 c.c. Bottom Hole Temp. 118 °F
Chokes: Top 1/2 Bottom 1/2 Ticket No. 11164
Length of Drill Collar I. D. Length Flexweight 690 I. D. 2.76

RECOVERY

WEAK BLOW THROUGHOUT TEST.

120 FEET OF MUDDY OIL.

Lease and Well No. PFANNENSTIEL D #5 1 18S 24W SF SE Formation Test No. 3

COMPANY THUNDERBIRD DRILLING, INC. DATE JANUARY 27, 1971

LEASE PFANNENSTIEL WELL NO. D-5 TEST NO. 3 TICKET NO. 11164

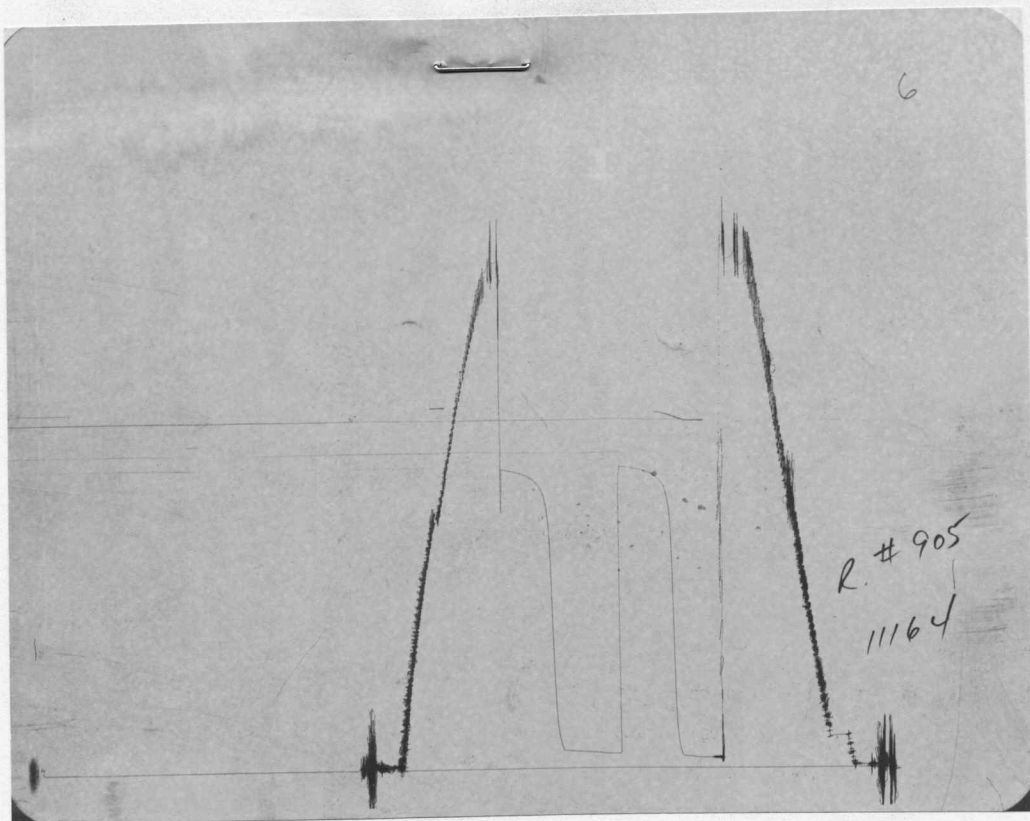
	TIME	PSI
INITIAL HYDRO MUD PRESSURE		2312
INITIAL CLOSED IN PRESSURE	30 MINS.	1334
INITIAL FLOW	45 MINS.	42 to 51
FINAL FLOW	45 MINS.	59 to 76
FINAL CLOSED IN PRESSURE	45 MINS.	1326
FINAL HYDRO MUD PRESSURE		2252

TOTAL DEPTH 4363
 PACKER DEPTH 4352
 BT. NO. 905 DEPTH 4358

1ST FLOW PRESSURE		INITIAL CIP		2ND FLOW PRESSURE		FINAL CIP	
	42		51		59		76
	42		705		61		255
	51		1232		68		1088
			1283		76		1232
			1304				1275
			1316				1292
			1321				1300
			1326				1309
			1331				1317
			1334				1326
	15 MINUTE INTERVAL		5 MINUTE INTERVAL		15 MINUTE INTERVAL		5 MINUTE INTERVAL

REMARKS _____

SPECIAL PRESSURE DATA



Tool Open: 1st Flow hr. 30 mins: Shut-in Initial hr. 45 min: 2nd Flow hr. 45 min: Shut-in Final hr. 45 min.

	Field Reading	Corrected Reading
(A) Initial Hydrostatic Pressure	<u>2312</u>	<u>2312</u>
(B) Initial 1st Flow Pressure	<u>42</u>	<u>42</u>
(C) Final 1st Flow Pressure	<u>51</u>	<u>51</u>
(D) Initial Shut-in Pressure	<u>1330</u>	<u>1334</u>
(E) Initial 2nd Flow Pressure	<u>59</u>	<u>59</u>
(F) Final 2nd Flow Pressure	<u>68</u>	<u>76</u>
(G) Final Shut-in Pressure	<u>1317</u>	<u>1326</u>
(H) Final Hydrostatic Pressure	<u>2303</u>	<u>2252</u>

11164 ~