

PHILIP'S TESTING COMPANY, INC.

P.O. Box 292, Hays, Kansas 67601
Telephone (913) 628-6458

Test # 1 (KANSAS CITY)

Ticket # 285

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 16 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling Inc.

Company Address: 7701 E. Kellogg

Wichita, Kansas 67218

Company Representative: Ron Nelson

Contractor: Thunderbird Drlg. Rig #2

Interval Tested: 4021-4055'

Internal Recorder - Type: AK-1 Range: 3875 PSI No: 13386 Depth: 4022'

External Recorder - Type: AK-1 Range: 3300 PSI No: 6835 Depth: 4051'

Initial Hydrostatic Mud: 2052 P.S.I.

Initial Flow Pressure 51 To 51 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 188 P.S.I.

Initial Shut-In 30 Min.

Final Flow Pressure 53 To 53 P.S.I.

Final Flow Period 30 Min.

Final Shut-In Pressure 83 P.S.I.

Final Shut-In 30 Min.

Final Hydrostatic Mud 2031 P.S.I.

Blow:

Temperature: 100 Tool Open: 11:25 PM

First Flow: No blow.

Mud Weight 9.5 Viscosity 41

Total Depth: 4055'

Second Flow: No blow.

Anchor Length: 34'

Bottom Packer: 4021'

Remarks: Flushed tool second opening.

Top Packer: 4016'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: --- I.D. ---

Wt. Pipe Run: --- I.D. ---

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

5 Feet Total Recovery

Recovered 5 Feet Drilling mud

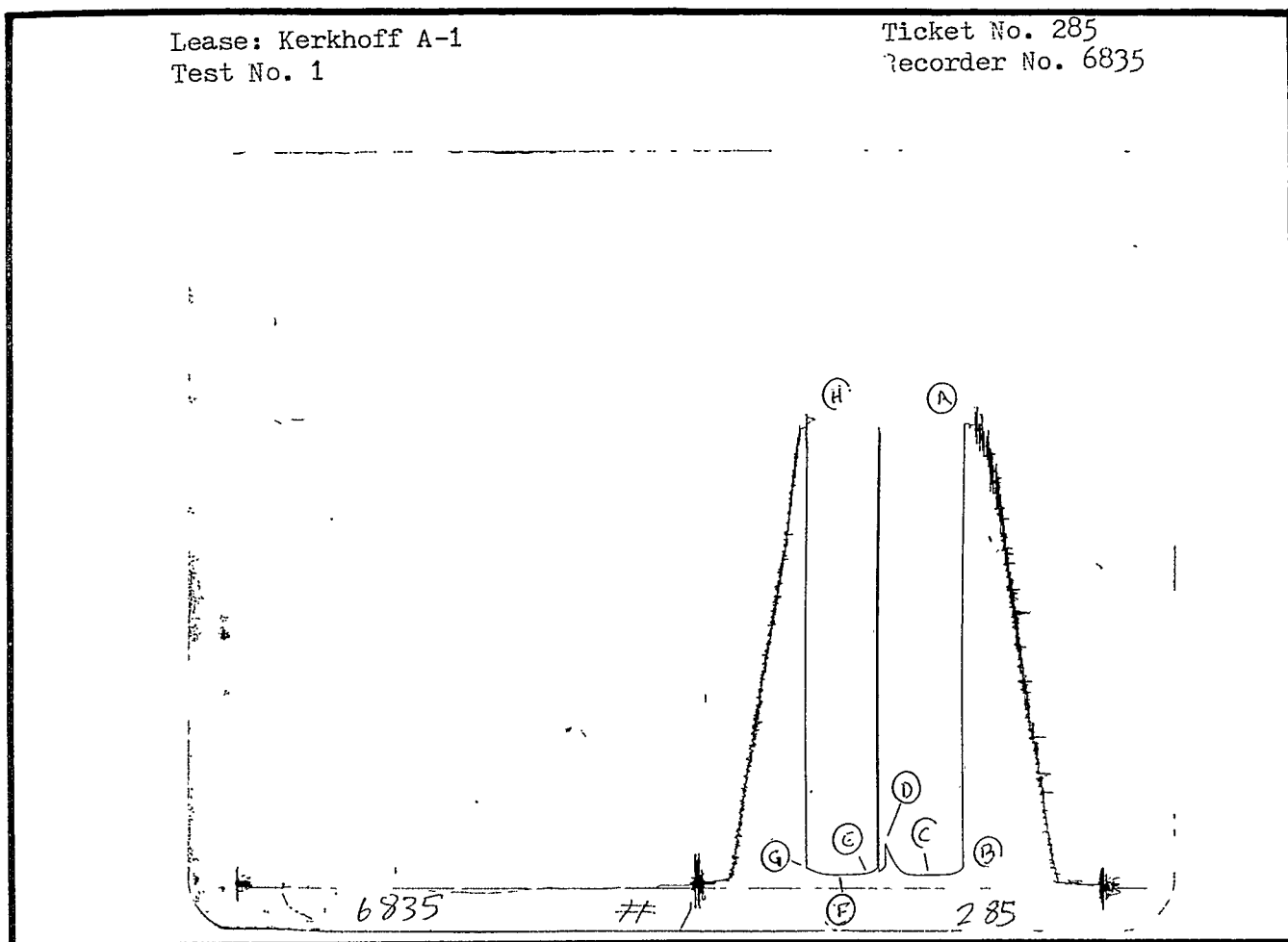
Recovered Feet

Recovered Feet

Recovered Feet

Lease: Kerkhoff A-1
Test No. 1

Ticket No. 285
Recorder No. 6835



Photostat of original recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2045	2052
(B) First Initial Flow Pressure	49	51
(C) First Final Flow Pressure	49	51
(D) Initial Closed-in Pressure	189	188
(E) Second Initial Flow Pressure	49	53
(F) Second Final Flow Pressure	49	53
(G) Final Closed-in Pressure	82	83
(H) Final Hydrostatic Mud	2028	2031

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Test # 2 (KANSAS CITY "I & J"

Ticket # 286

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 17 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling Inc.

Company Address: 7701 E. Kellogg

Wichita, Kansas 67218

Company Representative: Ron Nelson

Contractor: Thunderbird Drilling Rig #2

Interval Tested: 4071-4115'

Internal Recorder - Type: AK-1 Range: 3875 PSI

No: 13386 Depth: 4072'

External Recorder - Type: AK-1 Range: 3300 PSI

No: 6835 Depth: 4111'

Initial Hydrostatic Mud: 2079 P.S.I.

Initial Flow Pressure 61 To 61 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 993 P.S.I.

Initial Shut-In 30 Min.

Final Flow Pressure 68 To 68 P.S.I.

Final Flow Period 30 Min.

Final Shut-In Pressure 988 P.S.I.

Final Shut-In 30 Min.

Final Hydrostatic Mud 2045 P.S.I.

Temperature: 102 Tool Open: _____

Blow:

First Flow: Weak blow, died at 5 minutes.

Mud Weight 9.6 Viscosity 40

Total Depth: 4115'

Second Flow: No blow.

Anchor Length: 44'

Bottom Packer: 4071'

Remarks: Flushed tool second opening.

Top Packer: 4066'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: --- I.D. ---

Wt. Pipe Run: --- I.D. ---

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

35 Feet Total Recovery

Recovered 35 Feet Slightly oil specked watery mud

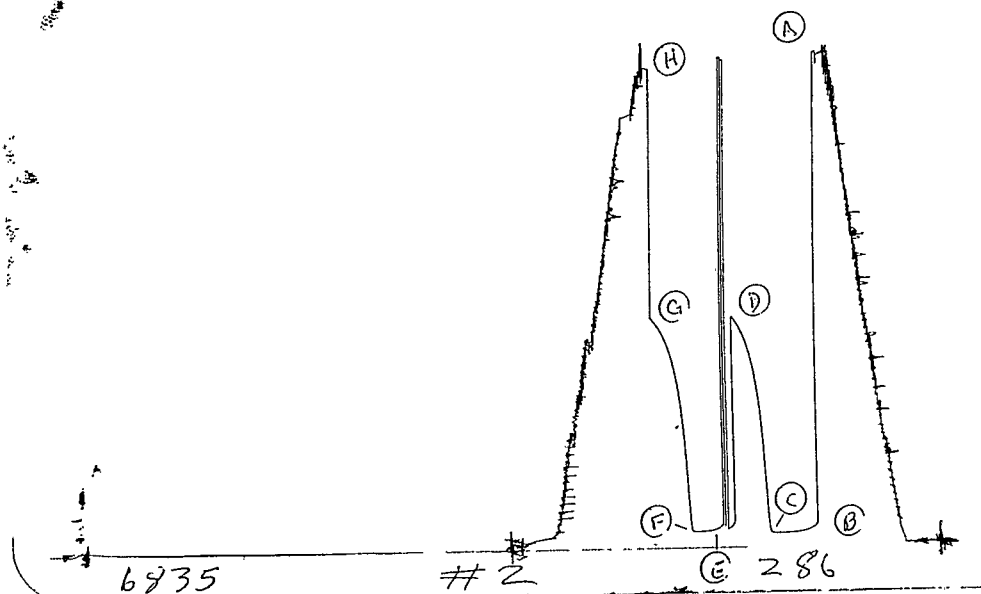
Recovered _____ Feet _____

Recovered _____ Feet _____

Recovered _____ Feet _____

Lease: Kerkhoff A-1
Test No. 2

Ticket No. 286
Recorder No. 6835



Photostat of original recorder chart

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2078	2079	PSI
(B) First Initial Flow Pressure	57	61	PSI
(C) First Final Flow Pressure	57	61	PSI
(D) Initial Closed-in Pressure	993	993	PSI
(E) Second Initial Flow Pressure	66	68	PSI
(F) Second Final Flow Pressure	66	68	PSI
(G) Final Closed-in Pressure	977	988	PSI
(H) Final Hydrostatic Mud	2045	2045	PSI

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Test # 3 (KANSAS CITY "K & L")

Ticket # 287

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 18 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling, Inc.

Company Address: 7701 E. Kellogg

Wichita, Kansas 67218

Company Representative: Ron Nelson

Contractor: Thunderbird Drilling Rig #2

Interval Tested: 4099-4175'

Internal Recorder - Type: AK-1 Range: 3875 PSI No: 13386 Depth: 4100'

External Recorder - Type: AK-1 Range: 3300 PSI No: 6835 Depth: 4171'

Initial Hydrostatic Mud: -- P.S.I.

Initial Flow Pressure -- To -- P.S.I.

Initial Shut-In Pressure -- P.S.I.

Final Flow Pressure -- To -- P.S.I.

Final Shut-In Pressure -- P.S.I.

Final Hydrostatic Mud -- P.S.I.

Temperature: -- Tool Open: 1:25 PM

Mud Weight 9.3 Viscosity 40

Total Depth: 4175'

Anchor Length: 76'

Bottom Packer: 4099'

Top Packer: 4094'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: -- I.D. --

Main Hole Size: 7 7/8"

Feet Total Recovery

Recovered -- Feet --

Recovered -- Feet --

Recovered -- Feet --

Recovered -- Feet --

Initial Flow Period -- Min.

Initial Shut-In -- Min.

Final Flow Period -- Min.

Final Shut-In -- Min.

Blow: --

First Flow: --

Second Flow: --

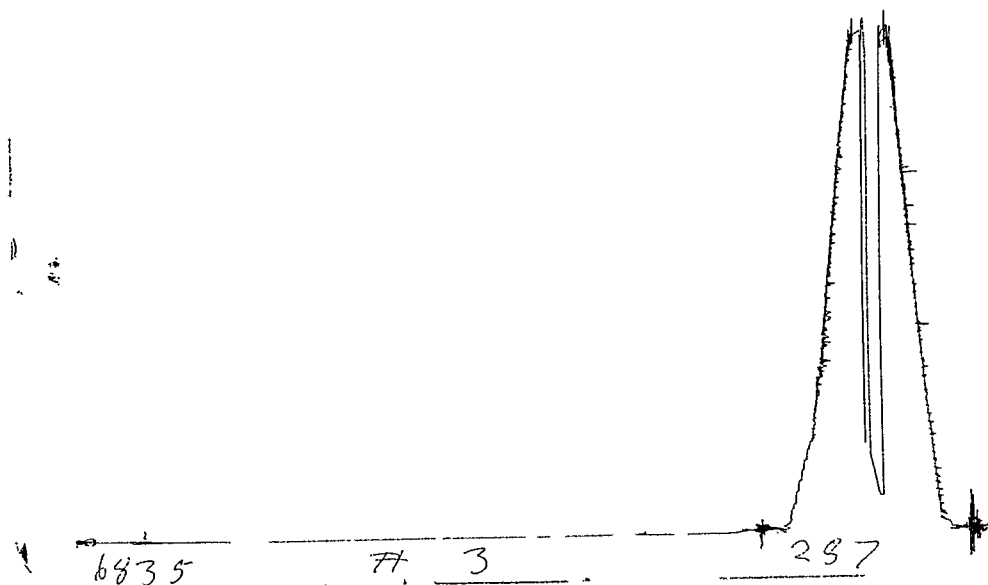
Remarks: MISRUN - Packer Failure

Wt. Pipe Run: --- I.D. ---

Rubber Size: 6 5/8"

Lease: Kerkhoff A-1
Test No. 3

Ticket No. 287
Recorder No. 6835



Photostat of original recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	--	--
(B) First Initial Flow Pressure	--	--
(C) First Final Flow Pressure	--	--
(D) Initial Closed-in Pressure	--	--
(E) Second Initial Flow Pressure	--	--
(F) Second Final Flow Pressure	--	--
(G) Final Closed-in Pressure	--	--
(H) Final Hydrostatic Mud	--	--

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Test # 4 (KANSAS CITY "K & L")

Ticket # 288

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 18 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling, Inc.

Company Address: 7701 E. Kellogg

Wichita, Kansas 67218

Company Representative: Ron Nelson

Contractor: Thunderbird Drilling Rig 2

Interval Tested: 4085-4175'

Internal Recorder - Type: AK-1 Range: 3875 PSI No: 13386 Depth: 4086'

External Recorder - Type: AK-1 Range: 3300 PSI No: 6835 Depth: 4171'

Initial Hydrostatic Mud: -- P.S.I.

Initial Flow Pressure -- To -- P.S.I.

Initial Flow Period -- Min.

Initial Shut-In Pressure -- P.S.I.

Initial Shut-In -- Min.

Final Flow Pressure -- To -- P.S.I.

Final Flow Period -- Min.

Final Shut-In Pressure -- P.S.I.

Final Shut-In -- Min.

Final Hydrostatic Mud -- P.S.I.

Temperature: -- Tool Open: --

Blow:

First Flow: --

Mud Weight 9.3 Viscosity 40

Total Depth: 4175'

Second Flow: --

Anchor Length: 90'

Bottom Packer: 4085'

Remarks: MISRUN-Packer Failure

Top Packer: 4080'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: -- I.D. --

Wt. Pipe Run: -- I.D. --

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

-- Feet Total Recovery

Recovered -- Feet --

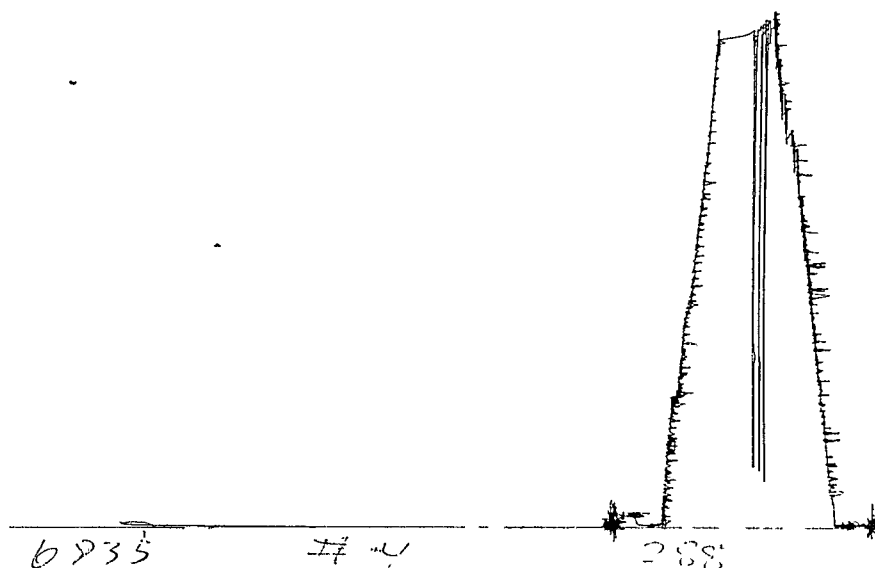
Recovered -- Feet --

Recovered -- Feet --

Recovered -- Feet --

Lease: Kerkhoff A-1
Test No. 4

Ticket No. 288
Recorder No. 6835



Photostat of original recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	--	--
(B) First Initial Flow Pressure	--	--
(C) First Final Flow Pressure	--	--
(D) Initial Closed-in Pressure	--	--
(E) Second Initial Flow Pressure	--	--
(F) Second Final Flow Pressure	--	--
(G) Final Closed-in Pressure	--	--
(H) Final Hydrostatic Mud	--	--

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Test # 5 (KANSAS CITY "K & L")

Ticket # 289

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 18 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling Inc.

Company Address: 7701 E. Kellogg

Wichita, Kansas 67218

Company Representative: Ron Nelson

Contractor: Thunderbird Drilling Rig #2 Interval Tested: 4073-4175'

Internal Recorder - Type: AK-1 Range: 3875 PSI No: 13386 Depth: 4077'

External Recorder - Type: AK-1 Range: 3300 PSI No: 6835 Depth: 4171'

Initial Hydrostatic Mud: -- P.S.I.

Initial Flow Pressure -- To -- P.S.I. Initial Flow Period -- Min.

Initial Shut-In Pressure -- P.S.I. Initial Shut-In -- Min.

Final Flow Pressure -- To -- P.S.I. Final Flow Period -- Min.

Final Shut-In Pressure -- P.S.I. Final Shut-In -- Min.

Final Hydrostatic Mud -- P.S.I.

Temperature: -- Tool Open: -- Blow: --

Mud Weight 9.3 Viscosity 40 First Flow: --

Total Depth: 4175' Second Flow: --

Anchor Length: 102'

Bottom Packer: 4073' Remarks: MIS:UN-Packer Failure

Top Packer: 4071'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: -- I.D. -- Wt. Pipe Run: -- I.D. --

Main Hole Size: 7 7/8" Rubber Size: 6 5/8"

-- Feet Total Recovery

Recovered -- Feet

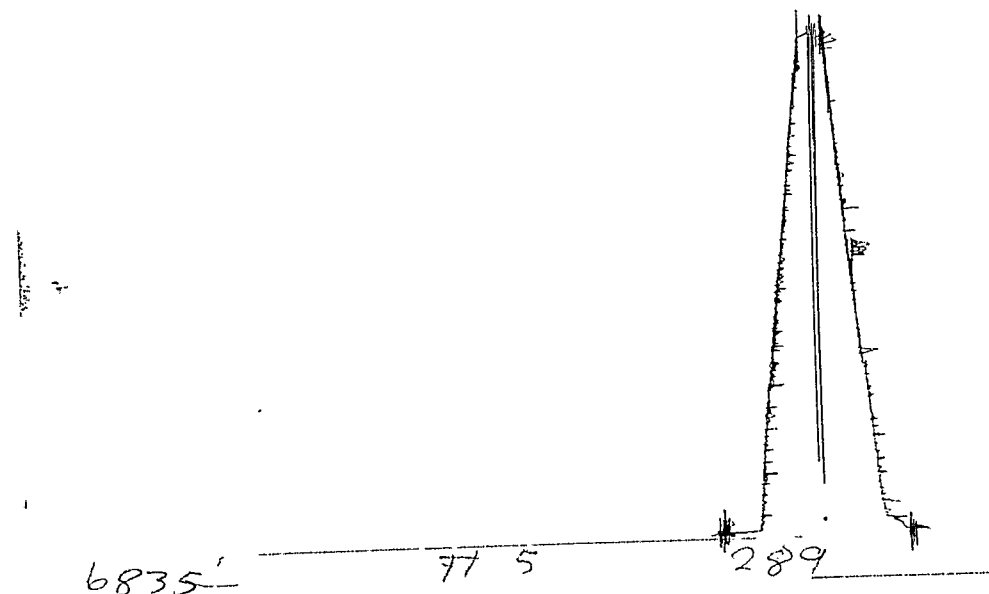
Recovered -- Feet

Recovered -- Feet

Recovered -- Feet

Lease: Kerkhoff A-1
Test No. 5

Ticket No. 289
Recorder No. 6835



Photostat of original recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	--	--
(B) First Initial Flow Pressure	--	--
(C) First Final Flow Pressure	--	--
(D) Initial Closed-in Pressure	--	--
(E) Second Initial Flow Pressure	--	--
(F) Second Final Flow Pressure	--	--
(G) Final Closed-in Pressure	--	--
(H) Final Hydrostatic Mud	--	--

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Test # 6 (KANSAS CITY "K & L")

Ticket # 290

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 19 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling Inc.

Company Address: 7702 E. Kellogg
Wichita, Kansas 67218

Company Representative: Don Nelson

Contractor: Thunderbird Drilling Rig #2

Interval Tested: 4012-4215'

Internal Recorder - Type: AK-1 Range: 3875 PSI No: 13386 Depth: 4013'

External Recorder - Type: AK-1 Range: 3300 PSI No: 6835 Depth: 4211'

Initial Hydrostatic Mud: 2155 P.S.I.

Initial Flow Pressure 192 To 602 P.S.I.

Initial Shut-In Pressure 1082 P.S.I.

Final Flow Pressure 676 To 841 P.S.I.

Final Shut-In Pressure 1082 P.S.I.

Final Hydrostatic Mud 2116 P.S.I.

Temperature: 105 Tool Open: 2:25 PM

Mud Weight 9.6 Viscosity 47

Total Depth: 4215'

Anchor Length: 203'

Bottom Packer: 4012'

Top Packer: 4007'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: -- I.D. --

Main Hole Size: 7 7/8"

Initial Flow Period 45 Min.

Initial Shut-In 45 Min.

Final Flow Period 30 Min.

Final Shut-In 45 Min.

Blow:

First Flow: Strong 5" blow.

Second Flow: Fair 4" blow.

Remarks: Weak 1" blow on shut-ins.

Wt. Pipe Run: -- I.D. --

Rubber Size: 6 5/8"

1470 Feet Total Recovery

Recovered 420 Feet Oil specked muddy salt water

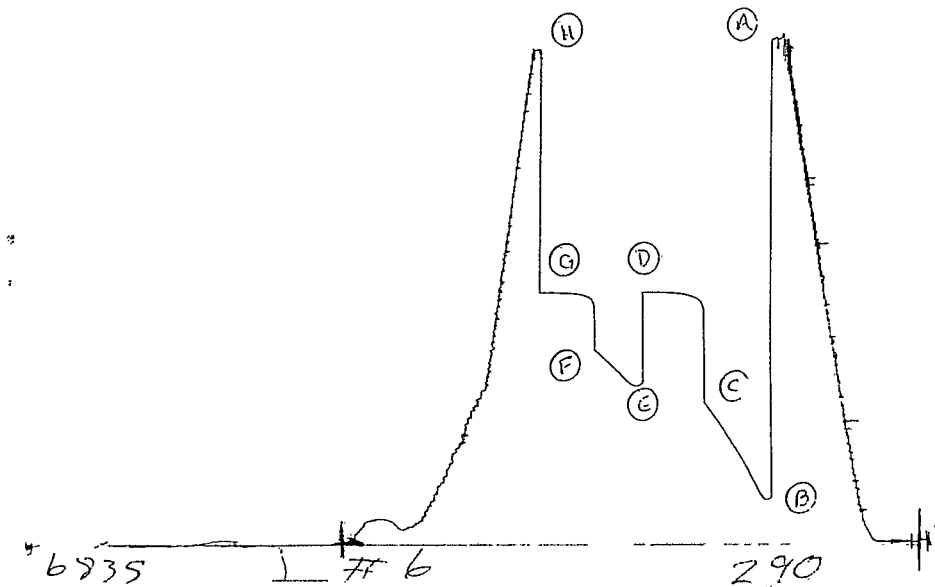
Recovered 720 Feet Gassy salt water

Recovered 30 Feet Gassy slightly oil cut mud

Recovered 300 Feet Drilling mud

Lease Kerkhoff A-1
Test No. 6

Ticket No. 290
Recorder No. 6835



Photostat of original recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2153	2155 PSI
(B) First Initial Flow Pressure	189	192 PSI
(C) First Final Flow Pressure	601	602 PSI
(D) Initial Closed-in Pressure	1075	1082 PSI
(E) Second Initial Flow Pressure	674	676 PSI
(F) Second Final Flow Pressure	838	841 PSI
(G) Final Closed-in Pressure	1075	1082 PSI
(H) Final Hydrostatic Mud	2111	2116 PSI

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Test # 7 (MAMMATION)

Ticket # 291

Lease Name: Kerkhoff A-1

Location: Sec. 16 Twp. 16 Rng. 29

County Lane St. Kansas

Date: 20 Feb. 1982

Elevation: 2741 KB

Tester: Marc Weber

Company: Thunderbird Drilling Inc.

Company Address: 7701 E. Kellogg

Wichita, Kansas 67218

Company Representative: Ron Nelson

Contractor: Thunderbird Drilling Rig #2

Interval Tested: 4228-4302'

Internal Recorder - Type: AK-1 Range: 3875 PSI No: 13386 Depth: 4229'

External Recorder - Type: AK-1 Range: 3300 PSI No: 6835' Depth: 4302'

Initial Hydrostatic Mud: 2198 P.S.I.

Initial Flow Pressure 74 To 74 P.S.I.

Initial Flow Period 30 Min.

Initial Shut-In Pressure 946 P.S.I.

Initial Shut-In 30 Min.

Final Flow Pressure 88 To 88 P.S.I.

Final Flow Period 30 Min.

Final Shut-In Pressure 986 P.S.I.

Final Shut-In 30 Min.

Final Hydrostatic Mud 2177 P.S.I.

Blow:

Temperature: 104 Tool Open: 1:35 PM

First Flow: Weak, steady blow.

Mud Weight 9.4 Viscosity 46

Total Depth: 4302'

Second Flow: Weak, steady blow.

Anchor Length: 74'

Bottom Packer: 4228'

Remarks:

Top Packer: 4223'

Surface Choke: 1"

Bottom Choke: 3/4"

Drill Pipe Size: 4 1/2" XH

Collars Run: -- I.D. --

Wt. Pipe Run: -- I.D. --

Main Hole Size: 7 7/8"

Rubber Size: 6 5/8"

100 Feet Total Recovery

Recovered 2 Feet Free oil

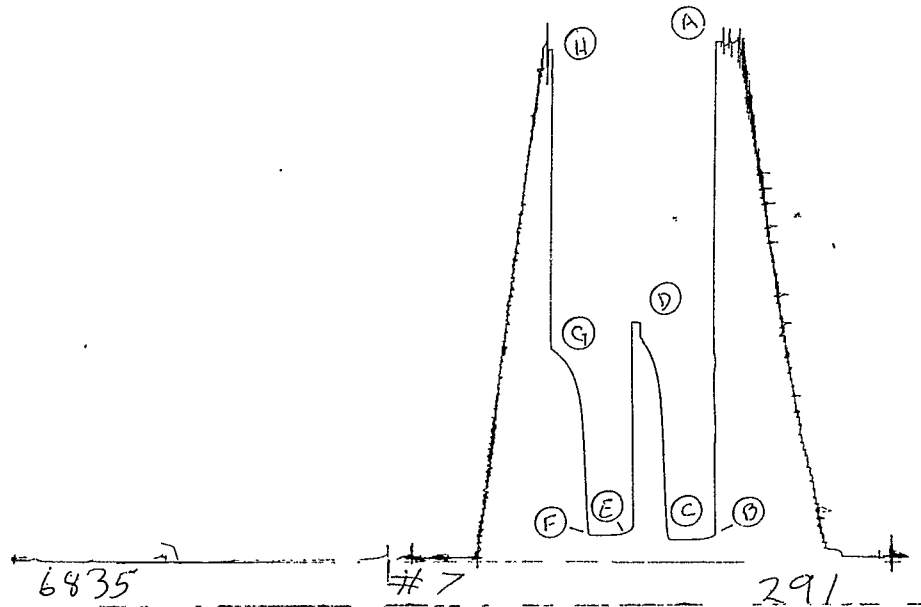
Recovered 98 Feet Gassy oil-cut mud. Grind out = 10% gas, 40% oil, 50% mud

Recovered Feet

Recovered Feet

Lease: Kerkhoff A-1
Test No. 7

Ticket No. 291
Recorder No. 6839



Photostat of original recorder chart

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	2195	2198
(B) First Initial Flow Pressure	74	74
(C) First Final Flow Pressure	74	74
(D) Initial Closed-in Pressure	944	946
(E) Second Initial Flow Pressure	90	88
(F) Second Final Flow Pressure	99	88
(G) Final Closed-in Pressure	895	896
(H) Final Hydrostatic Mud	2170	2177