

15-009-24753

33-20s-14w

DIAMOND TESTING

P.O. Box 157

HOISINGTON, KANSAS 67544

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Company L.D. Drilling, Inc. Lease & Well No. Hahn No. 2

Elevation 1919 KB Formation Chase Effective Pay -- Ft. Ticket No. J1357

Date 4-14-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 1 Interval Tested from 1,746 ft. to 1,800 ft. Total Depth 1,800 ft.

Packer Depth 1,741 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 1,746 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 1,751 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 1,797 ft. Recorder Number 13556 Cap. 5,475 psi

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

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length 180 ft. I.D. 2 1/4 in.

Mud Type Spotted mud on bottom Viscosity -- Weight Pipe Length -- ft. I.D. -- in.

Weight -- Water Loss -- cc. Drill Pipe Length 1,546 ft. I.D. 3 1/2 in.

Chlorides -- P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 54 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket in 10 mins. No blow back during shut-in.

2nd Open: Strong blow. Off bottom of bucket in 25 mins. Weak blow back during shut-in.

Recovered 40 ft. of heavy drilling mud = .196800 bbls.

Recovered -- ft. of --

Recovered -- ft. of --

Recovered -- ft. of --

Recovered -- ft. of --

Remarks --

Time Set Packer(s) 2:47 ~~XXX~~ P.M. Time Started Off Bottom 5:45 ~~XXX~~ P.M. Maximum Temperature 82°

Initial Hydrostatic Pressure (A) 873 P.S.I.

Initial Flow Period Minutes 30 (B) 12 P.S.I. to (C) 17 P.S.I.

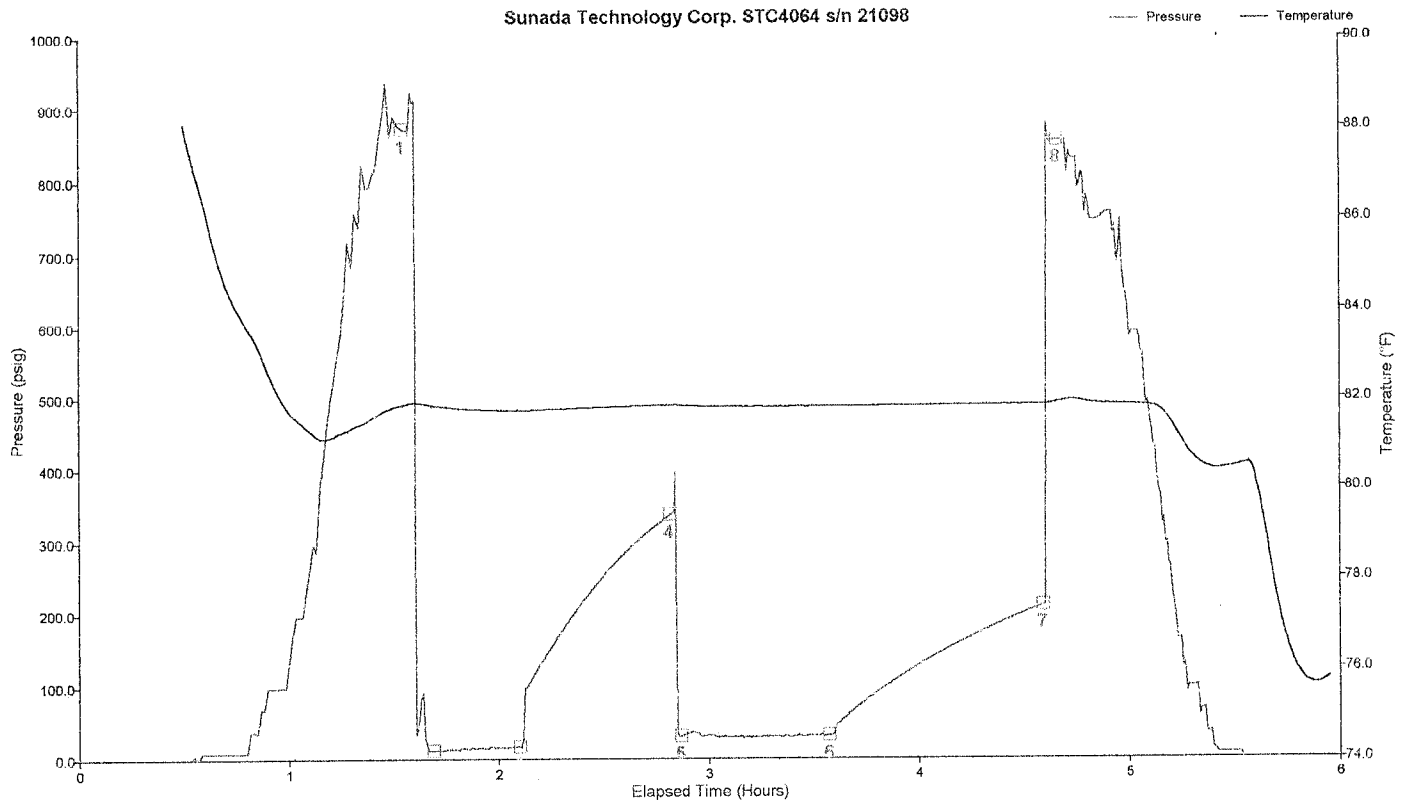
Initial Closed In Period Minutes 45 (D) 338 P.S.I.

Final Flow Period Minutes 45 (E) 31 P.S.I. to (F) 32 P.S.I.

Final Closed In Period Minutes 60 (G) 212 P.S.I.

Final Hydrostatic Pressure (H) 856 P.S.I.

Well LSD: DST 1 CHASE 1746-1800
 Well Name: HAHN 2
 Company: L D DRILLING
 Battery on: Apr 14, 2003 at 13:10:00
 Notes: RECOVERY 40' HVY DRILLING MUD

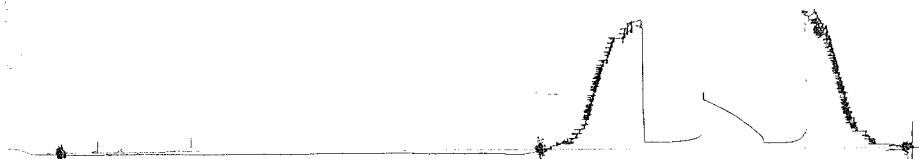


Tag	Pressure	Temperature	Comment
1	872.77 psig	81.86 °F	2003-04-14 14:42:30
2	11.62 psig	81.85 °F	2003-04-14 14:51:30
3	17.22 psig	81.73 °F	2003-04-14 15:16:00
4	338.20 psig	81.85 °F	2003-04-14 15:59:00
5	31.16 psig	81.85 °F	2003-04-14 16:02:00
6	32.01 psig	81.81 °F	2003-04-14 16:44:30
7	212.02 psig	81.85 °F	2003-04-14 17:45:30
8	855.81 psig	81.91 °F	2003-04-14 17:49:30

ROCK #13586 OUTSIDE
LOC 1797

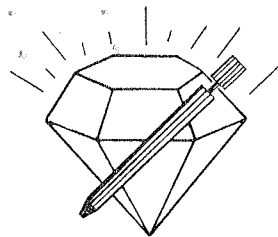
HADN #1 DST #1
CLOCK STOPPED

CLOCK #8622



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	873	873
(B) First Initial Flow Pressure.....	12	12
(C) First Final Flow Pressure	17	17
(D) Initial Closed-in Pressure	338	338
(E) Second Initial Flow Pressure.....	31	31
(F) Second Final Flow Pressure.....	32	32
(G) Final Closed-in Pressure.....	212	212
(H) Final Hydrostatic Mud.....	856	856



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Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2
Elevation 1919 KB Formation Winfield Effective Pay -- Ft. Ticket No. J1358
Date 4-15-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 2 Interval Tested from 1,796 ft. to 1,832 ft. Total Depth 1,832 ft.

Packer Depth 1,791 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 1,796 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 1,801 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 1,829 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length 180 ft. I.D. 2 1/4 in.

Mud Type Spotted mud on bottom Viscosity -- Weight Pipe Length -- ft. I.D. -- in.

Weight -- Water Loss -- cc. Drill Pipe Length 1,596 ft. I.D. 3 1/2 in.

Chlorides -- P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 36 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket in 3 mins. Weak blow back during shut-in.

2nd Open: Strong blow. Off bottom of bucket immediately. Gas to surface in 15 mins. (SEE GAS VOLUME REPORT)

Recovered 70 ft. of slightly gas cut mud = .718200 bbls. (Grind out: 5%-gas; 95%-mud)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks

Time Set Packer(s) 12:50 A.M. Time Started Off Bottom 3:50 A.M. Maximum Temperature 84°

Initial Hydrostatic Pressure (A) 873 P.S.I.

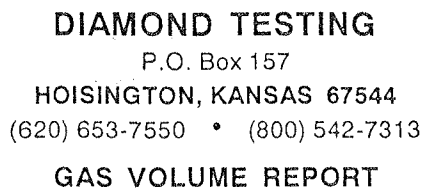
Initial Flow Period Minutes 30 (B) 18 P.S.I. to (C) 35 P.S.I.

Initial Closed In Period Minutes 45 (D) 520 P.S.I.

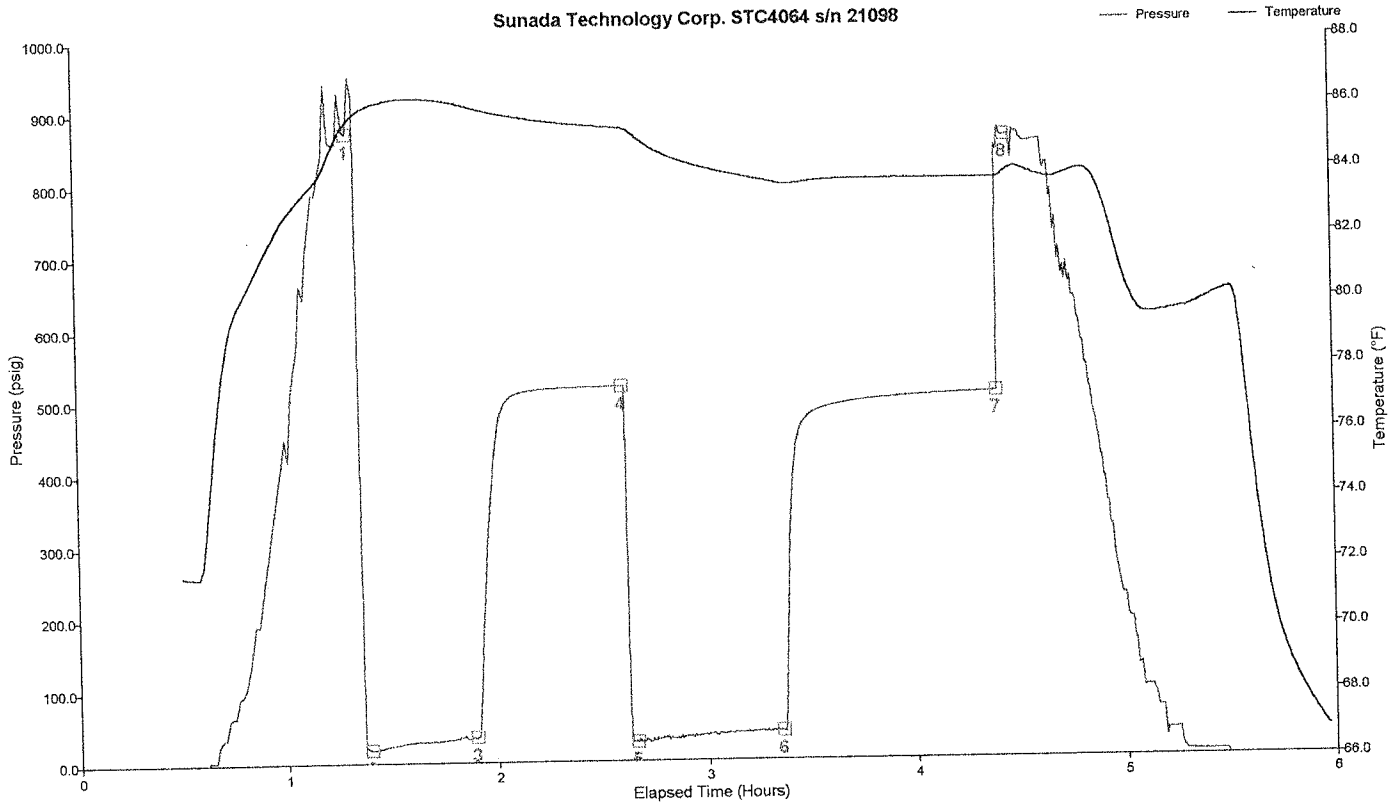
Final Flow Period Minutes 45 (E) 26 P.S.I. to (F) 40 P.S.I.

Final Closed In Period Minutes 60 (G) 508 P.S.I.

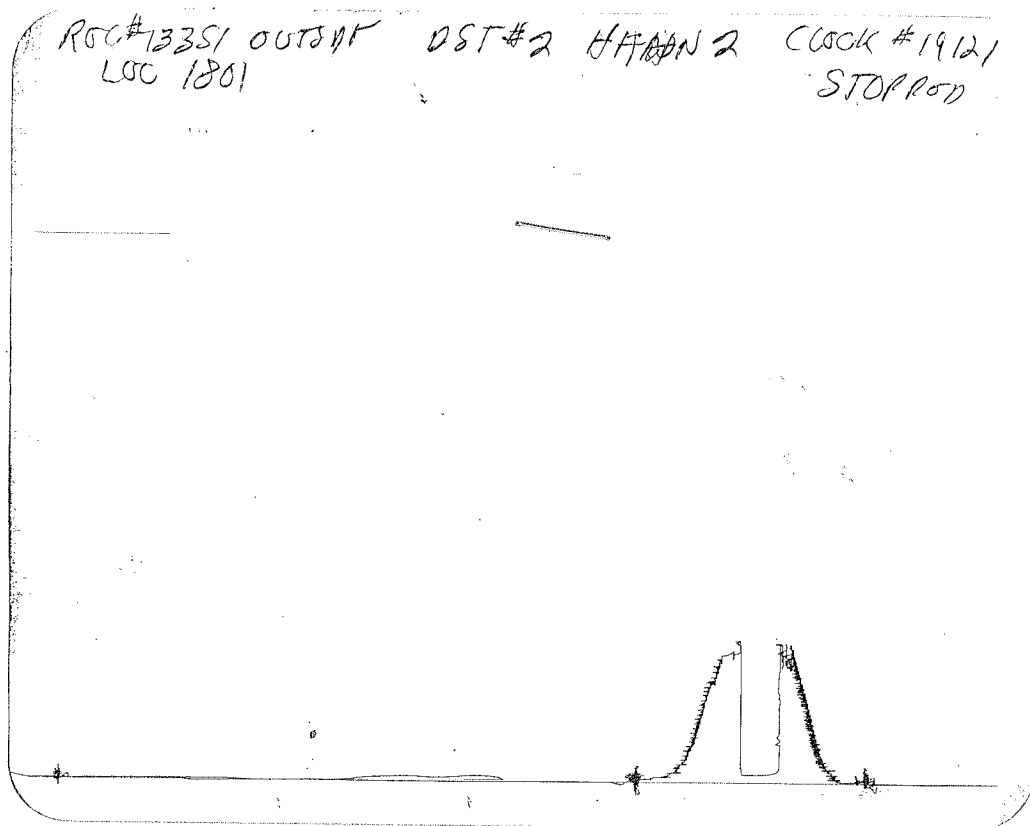
Final Hydrostatic Pressure (H) 862 P.S.I.



Well LSD: DST 2 WINFIELD 1796-1832
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 14, 2003 at 23:30:00
 Notes: REC. 70' SLGCM GTS 15 MINUTES 2ND FLOW

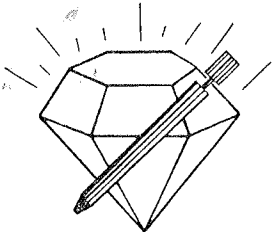


Tag	Pressure	Temperature	Comment
1	872.78 psig	85.56 °F	2003-04-15 00:49:00
2	18.37 psig	86.00 °F	2003-04-15 00:54:00
3	34.76 psig	86.00 °F	2003-04-15 01:24:00
4	519.90 psig	85.32 °F	2003-04-15 02:06:30
5	26.47 psig	85.21 °F	2003-04-15 02:09:30
6	39.81 psig	83.59 °F	2003-04-15 02:51:30
7	507.68 psig	83.69 °F	2003-04-15 03:53:30
8	862.32 psig	83.87 °F	2003-04-15 03:56:30



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	873	873
(B) First Initial Flow Pressure.....	18	18
(C) First Final Flow Pressure	35	35
(D) Initial Closed-in Pressure	520	520
(E) Second Initial Flow Pressure	26	26
(F) Second Final Flow Pressure.....	40	40
(G) Final Closed-in Pressure.....	508	508
(H) Final Hydrostatic Mud	862	862

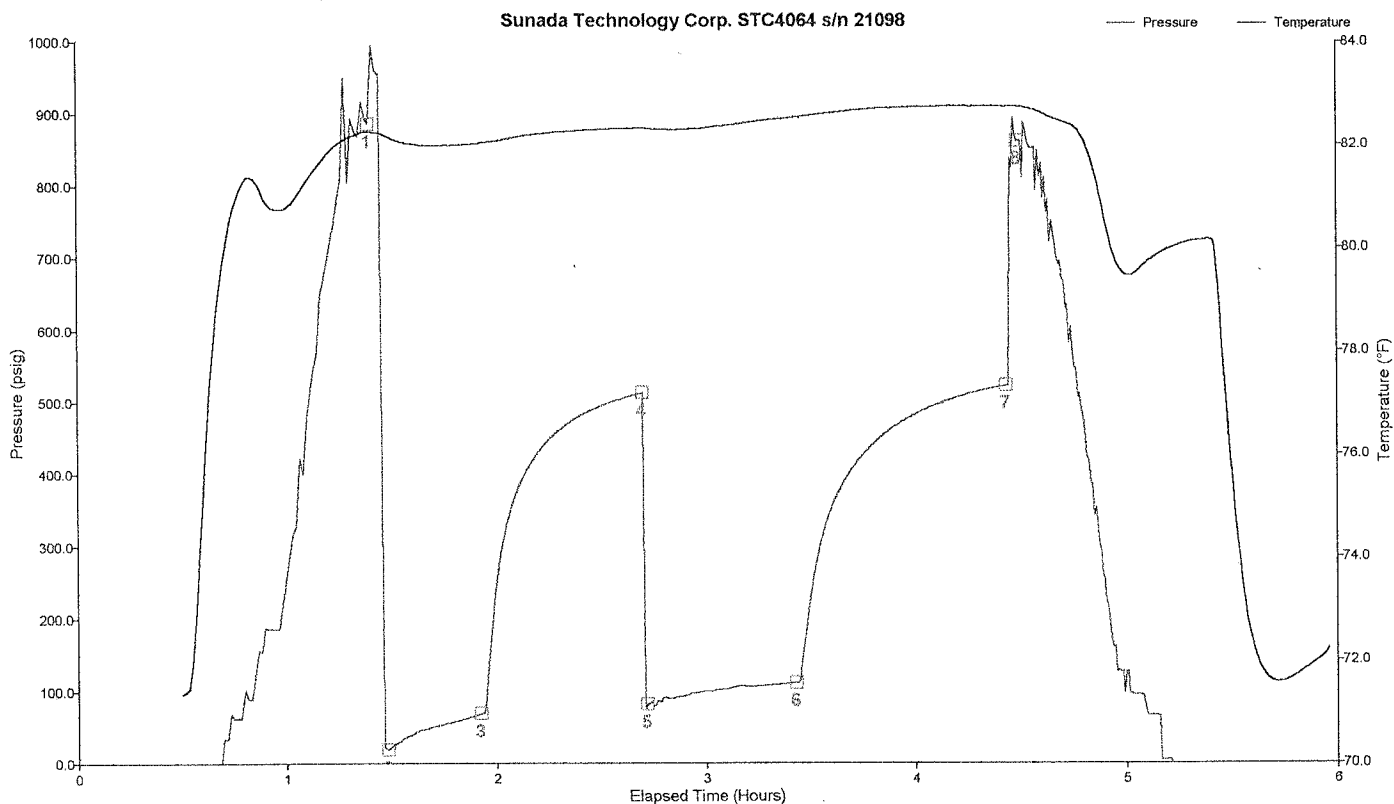


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Company <u>L. D. Drilling, Inc.</u>		Lease & Well No. <u>Hahn No. 2</u>	
Elevation <u>1919 KB</u>	Formation <u>Towanda</u>	Effective Pay <u>--</u> Ft.	Ticket No. <u>J1359</u>
Date <u>4-15-03</u>	Sec. <u>33</u> Twp. <u>20S</u> Range <u>14W</u>	County <u>Barton</u>	State <u>Kansas</u>
Test Approved By <u>Kim B. Shoemaker</u>		Diamond Representative <u>John C. Riedl</u>	
Formation Test No. <u>3</u>	Interval Tested from <u>1,862</u> ft. to <u>1,903</u> ft.	Total Depth <u>1,903</u> ft.	
Packer Depth <u>1,857</u> ft.	Size <u>6 3/4</u> in.	Packer Depth <u>--</u> ft.	Size <u>--</u> in.
Packer Depth <u>1,862</u> ft.	Size <u>6 3/4</u> in.	Packer Depth <u>--</u> ft.	Size <u>--</u> in.
Depth of Selective Zone Set <u> </u> ft.			
Top Recorder Depth (Inside) <u> </u>	<u>1,867</u> ft.	Recorder Number <u>Elec.</u>	Cap. <u>5,000</u> psi
Bottom Recorder Depth (Outside) <u> </u>	<u>1,900</u> ft.	Recorder Number <u>13556</u>	Cap. <u>5,475</u> psi
Below Straddle Recorder Depth <u> </u>	<u> </u> ft.	Recorder Number <u> </u>	Cap. <u> </u> psi
Drilling Contractor <u>Duke Drilling Co., Inc. - Rig 8</u>	Drill Collar Length <u> </u>	<u>180</u> ft.	I.D. <u> </u> <u>2 1/4</u> in.
Mud Type <u>Spotted mud on bottom</u> Viscosity <u>--</u>	Weight Pipe Length <u> </u>	<u>--</u> ft.	I.D. <u> </u> <u>--</u> in.
Weight <u>--</u> Water Loss <u>--</u> cc.	Drill Pipe Length <u> </u>	<u>1,662</u> ft.	I.D. <u> </u> <u>3 1/2</u> in.
Chlorides <u>--</u> P.P.M.	Test Tool Length <u> </u>	<u>20</u> ft.	Tool Size <u> </u> <u>3 1/2 - IF</u> in.
Jars: Make <u>Bowen</u> Serial Number <u>Not Run</u>	Anchor Length <u> </u>	<u>41</u> ft.	Size <u> </u> <u>4 1/2 - FH</u> in.
Did Well Flow? <u>No</u> Reversed Out <u>No</u>	Surface Choke Size <u> </u>	<u>1</u> in.	Bottom Choke Size <u> </u> <u>5/8</u> in.
Main Hole Size <u> </u>		<u>7 7/8</u> in.	Tool Joint Size <u> </u> <u>4 1/2 - XH</u> in.
Blow: 1st Open: Strong blow. Off bottom of bucket in 2 mins. Weak blow back during shut-in.			
2nd Open: Strong blow. Off bottom of bucket in 18 mins. Fair, 3 in., blow back during shut-in.			
Recovered <u>110</u> ft. of slightly gas & water cut mud = .541200 bbls. (Grind out: 5%-gas; 5%-water; 90%-mud)			
Recovered <u>120</u> ft. of slightly gas cut muddy water = .714400 bbls. (Grind out: 5%-gas; 20%-mud; 75%-water)			
Recovered <u>230</u> ft. of TOTAL FLUID = 1.255600 bbls. Chlorides: 63,000 Ppm			
Recovered <u> </u> ft. of <u> </u>			
Recovered <u> </u> ft. of <u> </u>			
Remarks <u> </u>			
Time Set Packer(s) <u>11:40</u>	P.M. <u>A.M.</u>	Time Started Off Bottom <u>2:40</u>	P.M. <u>A.M.</u> Maximum Temperature <u>83°</u>
Initial Hydrostatic Pressure <u> </u>	(A) <u>885</u>	P.S.I.	
Initial Flow Period <u> </u> Minutes <u>30</u>	(B) <u>19</u>	P.S.I. to (C) <u>69</u> P.S.I.	
Initial Closed In Period <u> </u> Minutes <u>45</u>	(D) <u>513</u>	P.S.I.	
Final Flow Period <u> </u> Minutes <u>45</u>	(E) <u>81</u>	P.S.I. to (F) <u>112</u> P.S.I.	
Final Closed In Period <u> </u> Minutes <u>60</u>	(G) <u>523</u>	P.S.I.	
Final Hydrostatic Pressure <u> </u>	(H) <u>862</u>	P.S.I.	

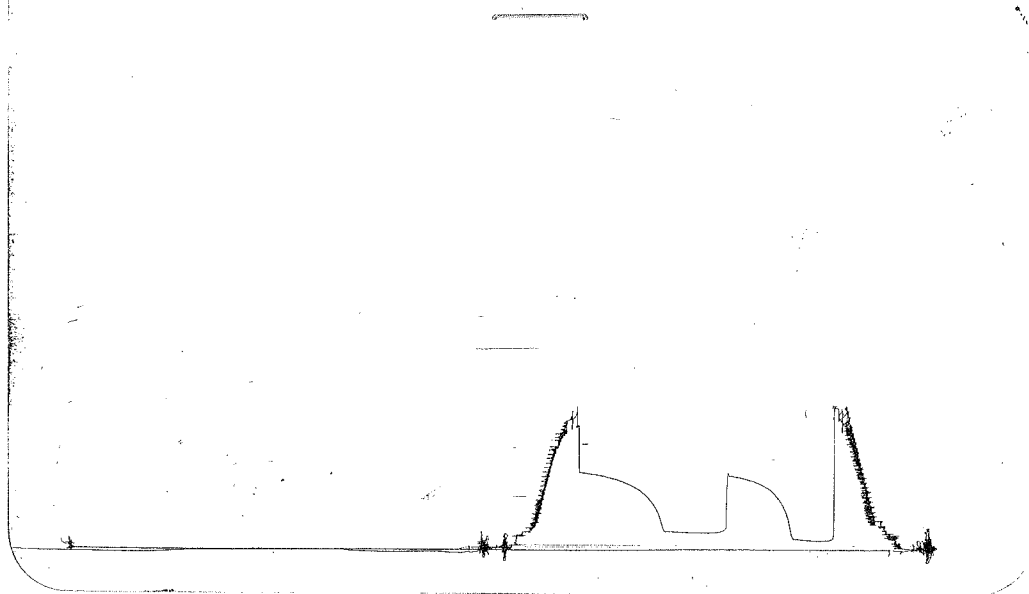
Well LSD: DST 3 TOWANDA 1862-1903
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 15, 2003 at 10:15:00
 Notes: 110' SLG+WCM 120' SLGCMW CHLORIDES 63,000Ppm



Tag	Pressure	Temperature	Comment
1	885.09 psig	82.24 °F	2003-04-15 11:39:00
2	18.55 psig	82.17 °F	2003-04-15 11:44:00
3	68.80 psig	82.03 °F	2003-04-15 12:10:30
4	513.31 psig	82.31 °F	2003-04-15 12:57:00
5	81.41 psig	82.32 °F	2003-04-15 12:58:00
6	111.51 psig	82.53 °F	2003-04-15 13:41:00
7	523.14 psig	82.74 °F	2003-04-15 14:41:00
8	862.02 psig	82.74 °F	2003-04-15 14:44:00

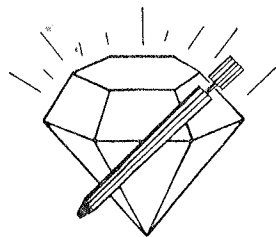
13556 OUTSIDE
LOC 1900

#04N #2 PSI #3 CORP 8622



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Elec. Office Reading
(A) Initial Hydrostatic Mud	885	885
(B) First Initial Flow Pressure	19	19
(C) First Final Flow Pressure	69	69
(D) Initial Closed-in Pressure	513	513
(E) Second Initial Flow Pressure	81	81
(F) Second Final Flow Pressure	112	112
(G) Final Closed-in Pressure	523	523
(H) Final Hydrostatic Mud	862	862



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Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2
Elevation 1919 KB Formation Red Eagle Effective Pay -- Ft. Ticket No. J1360
Date 4-16-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 4 Interval Tested from 2,302 ft. to 2,345 ft. Total Depth 2,345 ft.

Packer Depth 2,297 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 2,302 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 2,307 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 2,342 ft. Recorder Number 13556 Cap. 5,475 psi

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

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length 120 ft. I.D. 2 1/4 in.

Mud Type Spotted mud on bottom Viscosity -- Weight Pipe Length -- ft. I.D. -- in.

Weight -- Water Loss -- cc. Drill Pipe Length 2,162 ft. I.D. 3 1/2 in.

Chlorides -- P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 43 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket immediately. Gas to surface in 1 1/2 mins. (SEE GAS VOLUME REPORT)
2nd Open: Strong blow. Gas to surface throughout.

Recovered 300 ft. of gassy water = 1.922400 bbls. (Chlorides: 105,000 Ppm)

Recovered -- ft. of --

Recovered -- ft. of --

Recovered -- ft. of --

Recovered -- ft. of --

Remarks --

Time Set Packer(s) 2:05 ~~XXX~~ P.M. Time Started Off Bottom 5:05 ~~XXX~~ P.M. Maximum Temperature 89°

Initial Hydrostatic Pressure (A) 1133 P.S.I.

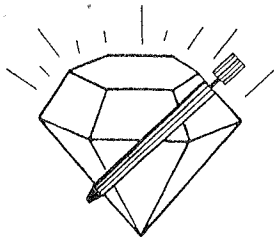
Initial Flow Period Minutes 30 (B) 535 P.S.I. to (C) 601 P.S.I.

Initial Closed In Period Minutes 45 (D) 754 P.S.I.

Final Flow Period Minutes 45 (E) 592 P.S.I. to (F) 614 P.S.I.

Final Closed In Period Minutes 60 (G) 752 P.S.I.

Final Hydrostatic Pressure (H) 1075 P.S.I.



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GAS VOLUME REPORT

Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2
Date 4-16-03 Sec. 33 Twp. 20 S Rge. 14 W Location C W/2 SE County Barton State KS
Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Formation Red Eagle DST No. 4
Remarks: 1st Open: Gas to surface in 1½ mins. Water mist to surface in 10 mins.

Fluid caused erratic flow of gas to surface. Sample taken on 1st shut-in.

INITIAL FLOW

Open Tool: 2:05 p.m.

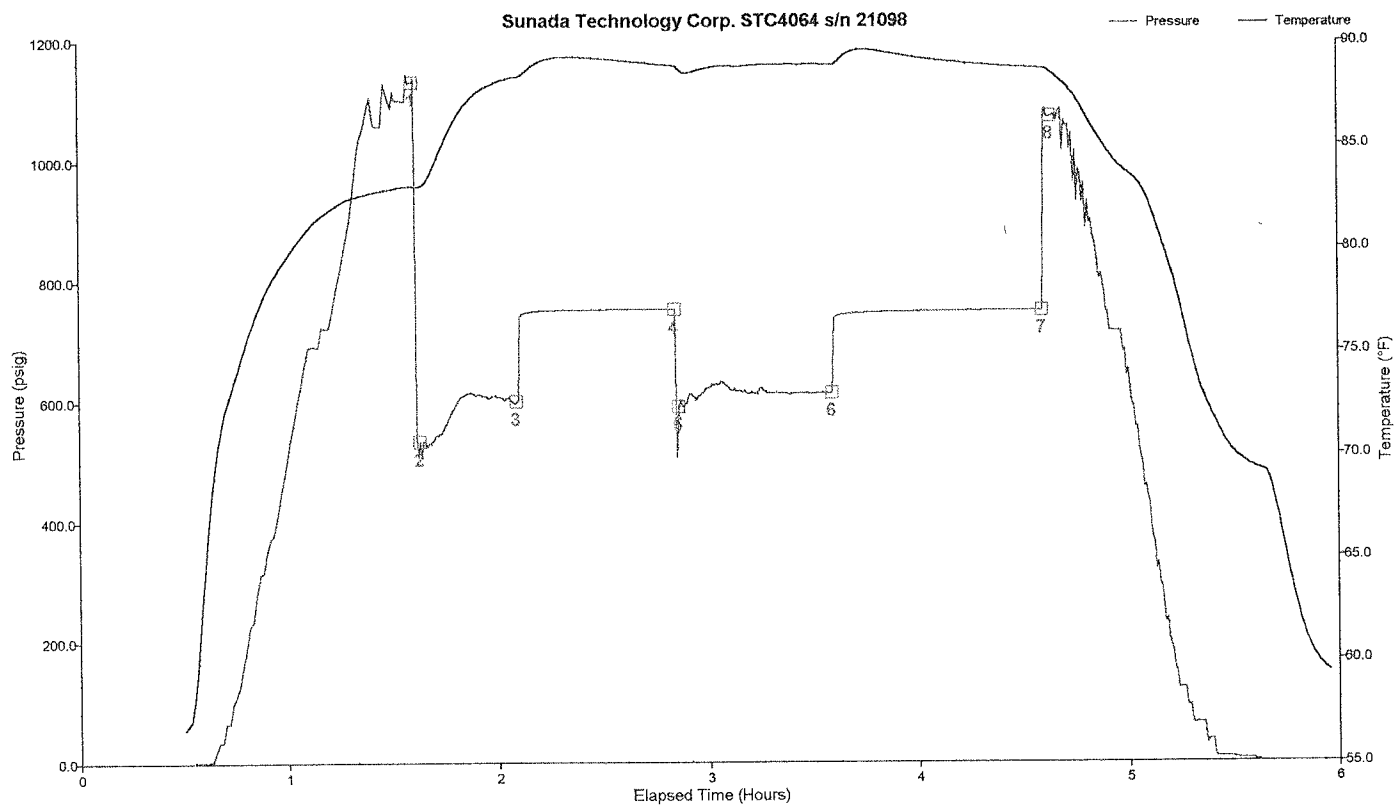
Time O'Clock	Orifice Size	Gauge	CF/D
2:10 p.m.	1 in.	15 psi	60,300
2:15 p.m.	1 in.	22 psi	77,300
2:20 p.m.	1 in.	60 psi	159,600
2:25 p.m.	1 in.	90 psi	224,700
2:30 p.m.	1 in.	86 psi	216,100
2:35 p.m.	1 in.	88 psi	220,400

FINAL FLOW

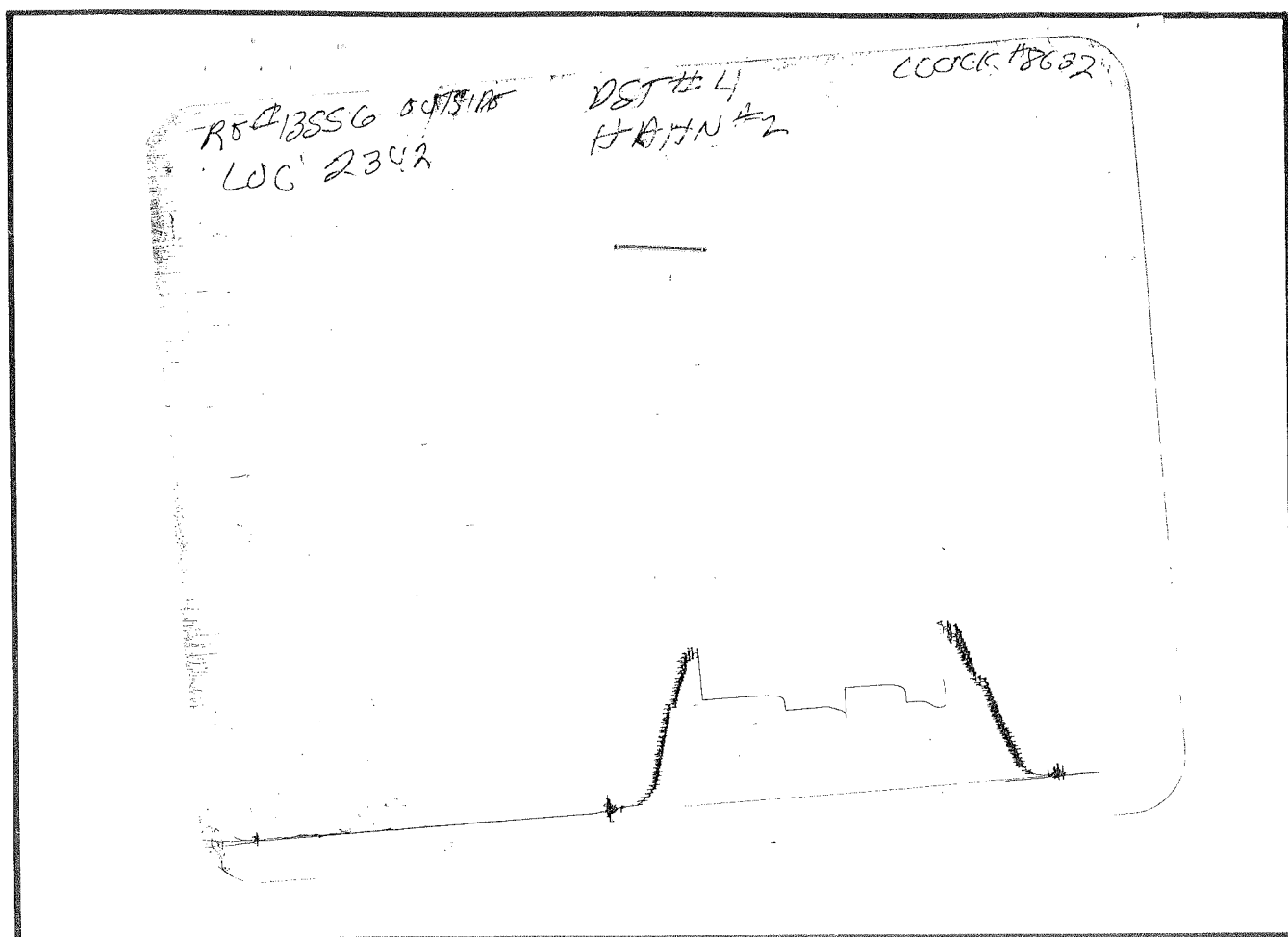
Open Tool: 3:20 p.m.

Time O'Clock	Orifice Size	Gauge	CF/D
3:25 p.m.	1½ in.	38 psi	191,100
3:30 p.m.	1½ in.	50 psi	234,100
3:35 p.m.	1½ in.	60 psi	270,200
3:40 p.m.	1½ in.	62 psi	277,400
3:45 p.m.	1½ in.	60 psi	270,200
3:50 p.m.	1½ in.	60 psi	270,200
3:55 p.m.	1½ in.	60 psi	270,200
4:00 p.m.	1½ in.	60 psi	270,200
4:05 p.m.	1½ in.	60 psi	270,200

Well LSD: DST 4 RED EAGLE 2302-2345
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 16, 2003 at 11:30:00
 Notes: REC. 300' GW GTS 1 1/2 MINUTES STABILIZED @
 2,702 MCF/D

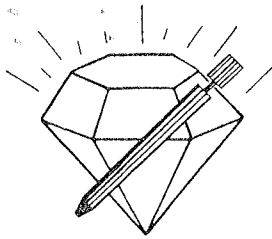


Tag	Pressure	Temperature	Comment
1	1132.62 psig	82.98 °F	2003-04-16 13:06:00
2	534.59 psig	82.98 °F	2003-04-16 13:08:00
3	601.19 psig	88.29 °F	2003-04-16 13:35:30
4	754.33 psig	88.81 °F	2003-04-16 14:20:30
5	592.93 psig	88.69 °F	2003-04-16 14:21:30
6	614.63 psig	88.88 °F	2003-04-16 15:05:30
7	752.00 psig	88.69 °F	2003-04-16 16:05:30
8	1074.65 psig	88.53 °F	2003-04-16 16:08:00



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1133	1133
(B) First Initial Flow Pressure.....	535	535
(C) First Final Flow Pressure	601	601
(D) Initial Closed-in Pressure	754	754
(E) Second Initial Flow Pressure.....	592	593
(F) Second Final Flow Pressure.....	614	615
(G) Final Closed-in Pressure.....	752	752
(H) Final Hydrostatic Mud	1075	1075



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Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2

Elevation 1919 KB Formation Lansing ("A"- "D" Zones) Effective Pay -- Ft. Ticket No. J1361

Date 4-18-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 5 Interval Tested from 3,290 ft. to 3,338 ft. Total Depth 3,338 ft.

Packer Depth 3,285 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 3,290 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 3,294 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 3,335 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 54 Weight Pipe Length -- ft. I.D. -- in.

Weight 8.8 Water Loss 12.0 cc. Drill Pipe Length 3,270 ft. I.D. 3 1/2 in.

Chlorides 9,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 48 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Weak, 2 in., blow. No blow back during shut-in.

2nd Open: Weak, 1 3/4 in., blow. No blow back during shut-in.

Recovered 40 ft. of gas in pipe

Recovered 20 ft. of very slightly gas cut mud = .148000 bbls. (Grind out: 5%-gas; 95%-mud)

Recovered 20 ft. of TOTAL FLUID = .148000 bbls.

Recovered ft. of

Recovered ft. of

Remarks

Time Set Packer(s) 4:50 XXX. P.M. Time Started Off Bottom 6:50 XXX. P.M. Maximum Temperature 96°

Initial Hydrostatic Pressure (A) 1548 P.S.I.

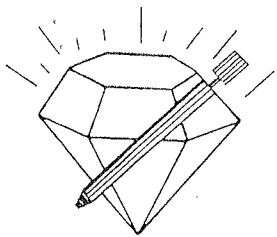
Initial Flow Period Minutes 30 (B) 9 P.S.I. to (C) 10 P.S.I.

Initial Closed In Period Minutes 30 (D) 85 P.S.I.

Final Flow Period Minutes 30 (E) 11 P.S.I. to (F) 14 P.S.I.

Final Closed In Period Minutes 30 (G) 82 P.S.I.

Final Hydrostatic Pressure (H) 1510 P.S.I.



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FLUID SAMPLE DATA

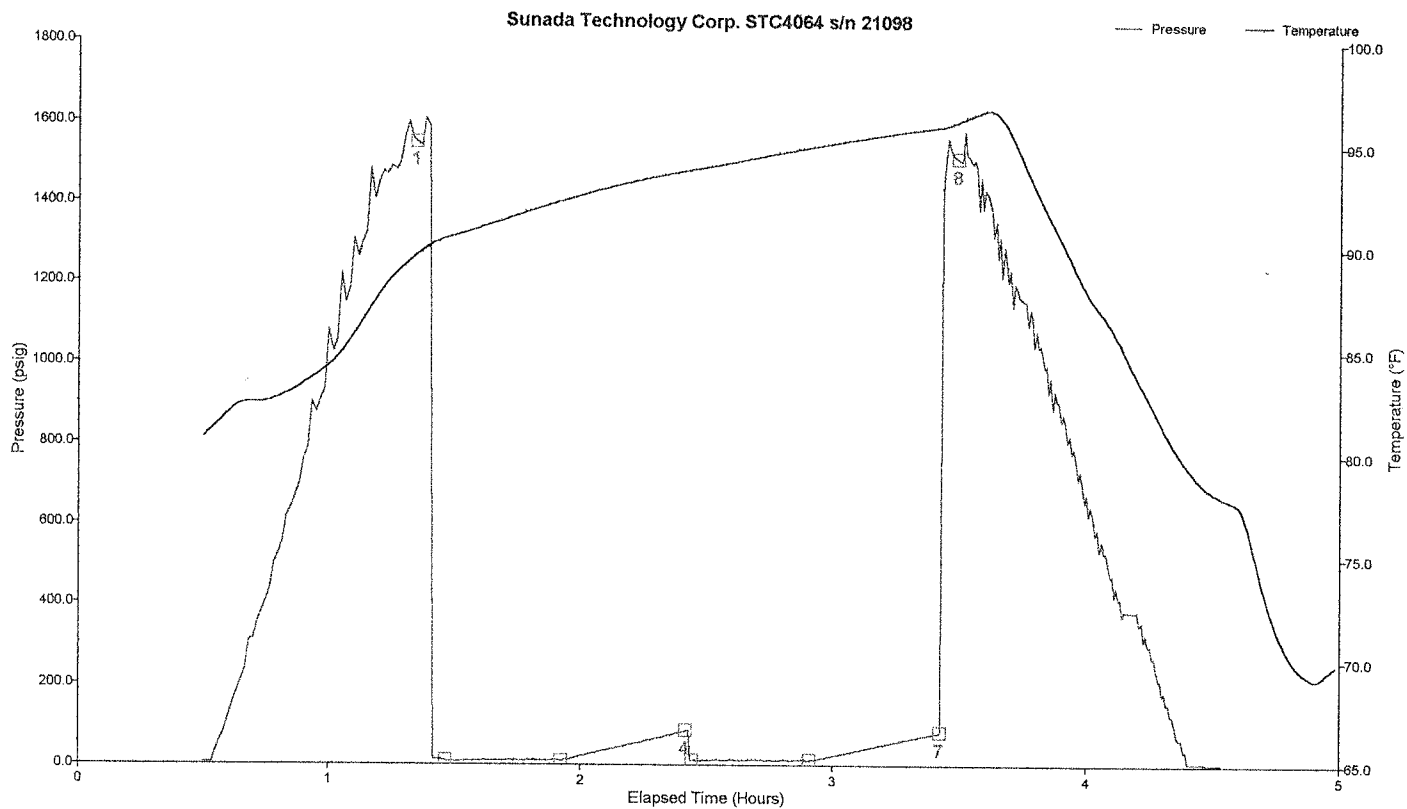
Company L.D. Drilling, Inc.
Lease & Well No. Hahn No. 2
Date 4-18-03 Sec. 33 Twp. 20 S Range 14 W
Formation Test No. 5 Interval Tested From 3,290 ft. to 3,338 ft. Total Depth 3,338 ft.
Formation Lansing ("A"-"D" Zones)

	<u>MUD PIT</u>	<u>RECOVERY</u>
Viscosity	<u>54</u> CP	<u>60</u> CP
Weight	<u>8.8</u>	<u>8.9</u>
Water Loss	<u>12.0</u> CC	<u>10.0</u> CC
PH Factor	<u>11.0</u>	<u>10.5</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>--</u> @ <u>--</u> °F. <u>--</u> ppm	
Recovery Mud	<u>.73</u> @ <u>60</u> °F. <u>9,000</u> ppm	
Recovery Mud Filtrate	<u>.75</u> @ <u>60</u> °F. <u>8,000</u> ppm	
Mud Pit Sample	<u>.78</u> @ <u>65</u> °F. <u>9,000</u> ppm	
Mud Pit Sample Filtrate	<u>.80</u> @ <u>65</u> °F. <u>8,000</u> ppm	

Sample Taken By JOHN C. RIEDL
Witness By Kim B. Shoemaker
Remarks Pit filtrate triton dish chlorides were 9,000 Ppm
Recovery filtrate triton dish chlorides were 8,500 Ppm

Well LSD: DST 5 LANS A/D 3290-3338
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 18, 2003 at 14:25:00
 Notes: RECOVERY 40'GIP 20SLGCM

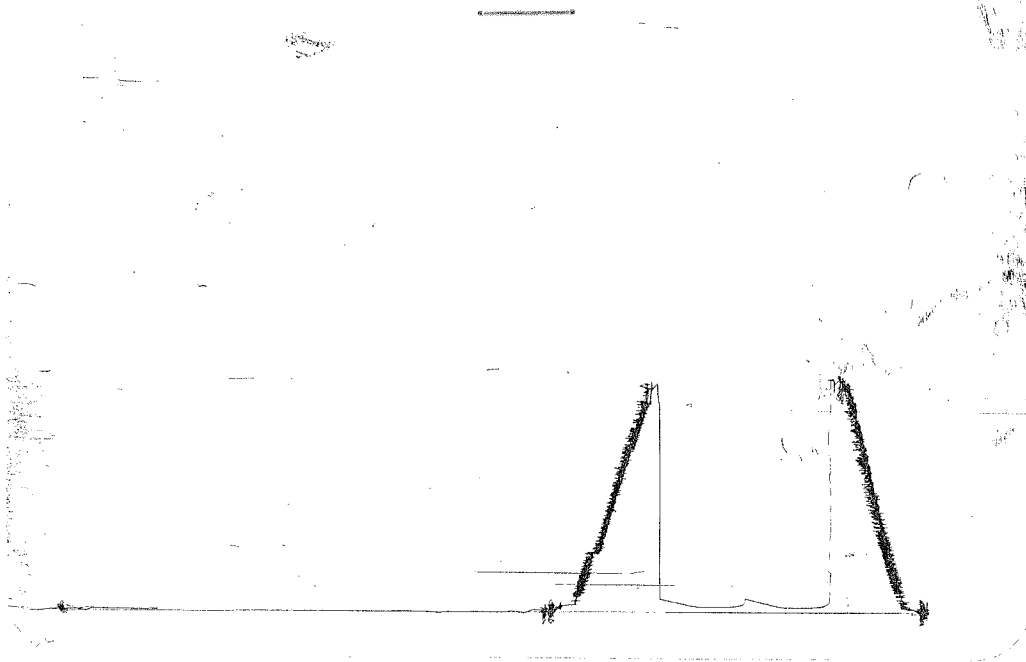


Tag	Pressure	Temperature	Comment
1	1547.55 psig	89.66 °F	2003-04-18 15:46:00
2	9.42 psig	90.46 °F	2003-04-18 15:53:00
3	10.02 psig	92.28 °F	2003-04-18 16:20:30
4	85.46 psig	93.76 °F	2003-04-18 16:50:00
5	10.59 psig	93.82 °F	2003-04-18 16:51:30
6	13.63 psig	94.91 °F	2003-04-18 17:19:30
7	82.20 psig	95.93 °F	2003-04-18 17:50:30
8	1510.42 psig	96.20 °F	2003-04-18 17:54:30

WCA 1358605100
LOC 3335

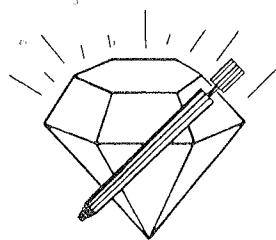
DST #5
HABN #2

CCOCC #8622



This is an actual photograph of recorder chart.

POINT	PRESSURE		Elec.
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1548	1548	PSI
(B) First Initial Flow Pressure.....	9	9	PSI
(C) First Final Flow Pressure	10	10	PSI
(D) Initial Closed-in Pressure	85	85	PSI
(E) Second Initial Flow Pressure	11	11	PSI
(F) Second Final Flow Pressure.....	14	14	PSI
(G) Final Closed-in Pressure	82	82	PSI
(H) Final Hydrostatic Mud	1510	1510	PSI



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Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2

Elevation 1919 KB Formation Lansing/Kansas City "F" Effective Pay -- Ft. Ticket No. J1362

Date 4-19-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 6 Interval Tested from 3,336 ft. to 3,360 ft. Total Depth 3,360 ft.

Packer Depth 3,331 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 3,336 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 3,339 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 3,357 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 52 Weight Pipe Length -- ft. I.D. -- in.

Weight 8.9 Water Loss 12.0 cc. Drill Pipe Length 3,316 ft. I.D. 3 1/2 in.

Chlorides 10,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 24 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow 1st Open: Strong blow. Off bottom of bucket in 3 mins. Weak blow back during shut-in.

2nd Open: Strong blow. Off bottom of bucket in 6 mins. Weak blow back during shut-in.

Recovered 80 ft. of gas in pipe

Recovered 100 ft. of slightly oil cut muddy water = .740000 bbls. (Grind out: 2%-oil; 20%-mud; 78%-water)

Recovered 1,070 ft. of very slightly oil cut gassy water = 7.918000 bbls. (Grind out: 1%-oil; 10%-gas; 89%-water)

Recovered 1,170 ft. of TOTAL FLUID = 8.658000 bbls.

Recovered ft. of

Remarks

Time Set Packer(s) 2:38 A.M. Time Started Off Bottom 5:38 A.M. Maximum Temperature 109°

Initial Hydrostatic Pressure (A) 1532 P.S.I.

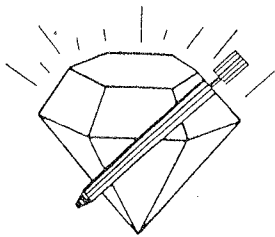
Initial Flow Period Minutes 30 (B) 50 P.S.I. to (C) 319 P.S.I.

Initial Closed In Period Minutes 45 (D) 773 P.S.I.

Final Flow Period Minutes 45 (E) 324 P.S.I. to (F) 541 P.S.I.

Final Closed In Period Minutes 60 (G) 749 P.S.I.

Final Hydrostatic Pressure (H) 1523 P.S.I.



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FLUID SAMPLE DATA

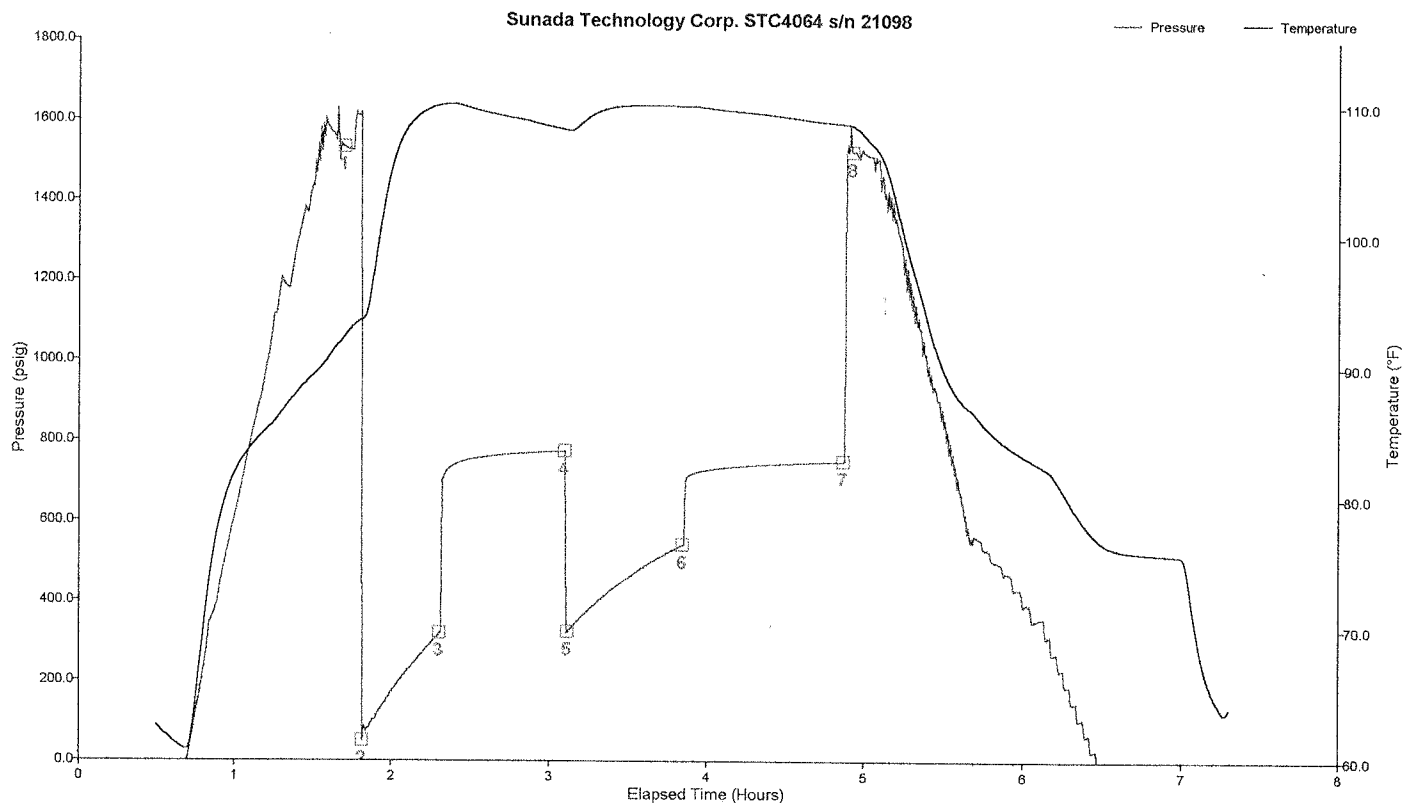
Company L.D. Drilling, Inc.
Lease & Well No. Hahn No. 2
Date 4-19-03 Sec. 33 Twp. 20 S Range 14 W
Formation Test No. 6 Interval Tested From 3,336 ft. to 3,360 ft. Total Depth 3,360 ft.
Formation Lansing/Kansas City "F"

	<u>MUD PIT</u>	<u>RECOVERY</u>	
Viscosity	<u>52</u> CP	<u>--</u> CP	
Weight	<u>8.9</u>	<u>--</u>	
Water Loss	<u>12.0</u> CC	<u>--</u> CC	Water
PH Factor	<u>10.5</u>	<u>--</u>	<u>7.5</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>2.90</u> @ <u>70</u> °F.	<u>25,000</u> ppm
Recovery Mud	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Recovery Mud Filtrate	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Mud Pit Sample	<u>.60</u> @ <u>65</u> °F.	<u>11,000</u> ppm
Mud Pit Sample Filtrate	<u>.61</u> @ <u>67</u> °F.	<u>10,000</u> ppm

Sample Taken By JOHN C. RIEDL
Witness By Kim B. Shoemaker
Remarks Pit filtrate triton dish chlorides were 10,000 Ppm
Recovery water dish chlorides were 26,000 Ppm

Well LSD: DST 6 L/KC 'F' 3336-3360
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 19, 2003 at 00:50:00
 Notes: 80' GIP 100' SLOCMW 1070' VSLOCGW

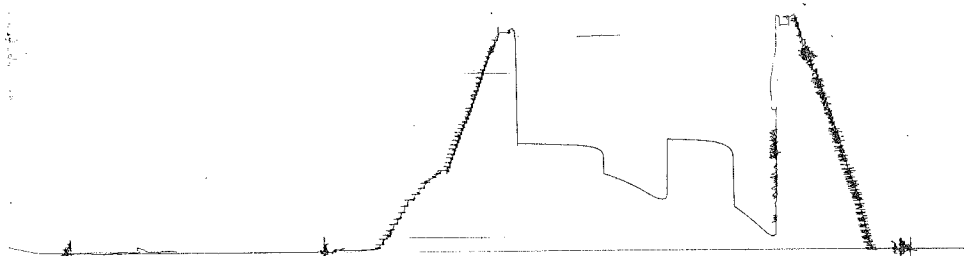


Tag	Pressure	Temperature	Comment
1	1531.54 psig	92.36 °F	2003-04-19 02:32:00
2	49.73 psig	93.65 °F	2003-04-19 02:39:00
3	319.15 psig	110.02 °F	2003-04-19 03:08:30
4	773.18 psig	108.16 °F	2003-04-19 03:56:00
5	323.86 psig	108.11 °F	2003-04-19 03:57:00
6	541.06 psig	109.98 °F	2003-04-19 04:41:00
7	749.09 psig	108.65 °F	2003-04-19 05:42:00
8	1522.76 psig	108.51 °F	2003-04-19 05:45:30

BSC#13 SSG OUTSIDE
LOC. 3357'

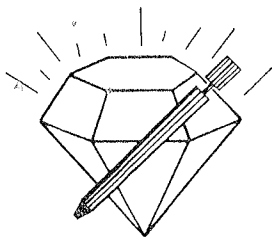
DST #6
HANN #2

CLOCK #8622



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1532	1532
(B) First Initial Flow Pressure.....	50	50
(C) First Final Flow Pressure	319	319
(D) Initial Closed-in Pressure	773	773
(E) Second Initial Flow Pressure.....	324	324
(F) Second Final Flow Pressure.....	541	541
(G) Final Closed-in Pressure.....	749	749
(H) Final Hydrostatic Mud	1523	1523



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Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2
Elevation 1919 KB Formation Lansing/Kansas City "H" Effective Pay -- Ft. Ticket No. J1363
Date 4-19-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 7 Interval Tested from 3,394 ft. to 3,414 ft. Total Depth 3,414 ft.

Packer Depth 3,389 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 3,394 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set -- ft.

Top Recorder Depth (Inside) 3,397 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 3,411 ft. Recorder Number 13556 Cap. 5,475 psi

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

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 52 Weight Pipe Length -- ft. I.D. -- in.

Weight 8.8 Water Loss 11.0 cc. Drill Pipe Length 3,374 ft. I.D. 3 1/2 in.

Chlorides 15,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 20 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket in 4 mins. Weak blow back during shut-in.

2nd Open: Strong blow. Off bottom of bucket in 11 mins. Weak blow back during shut-in.

Recovered 60 ft. of gas in pipe

Recovered 125 ft. of gas & oil cut watery mud = .925000 bbls. (Grind out: 15%-gas; 15%-oil; 10%-water; 60%-mud)

Recovered 370 ft. of slightly oil cut gassy water = 2.738000 bbls. (Grind out: 3%-oil; 10%-gas; 87%-water)

Recovered 370 ft. of gassy water = 2.738000 bbls. (Grind out: 15%-gas; 85%-water) Chlorides: 25,000 Ppm

Recovered 865 ft. of TOTAL FLUID = 6.401000 bbls.

Remarks

Time Set Packer(s) 4:05 ~~AM~~ P.M. Time Started Off Bottom 7:05 ~~AM~~ P.M. Maximum Temperature 109°

Initial Hydrostatic Pressure (A) 1589 P.S.I.

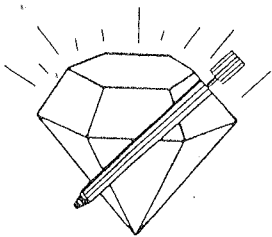
Initial Flow Period Minutes 30 (B) 56 P.S.I. to (C) 201 P.S.I.

Initial Closed In Period Minutes 45 (D) 857 P.S.I.

Final Flow Period Minutes 45 (E) 207 P.S.I. to (F) 377 P.S.I.

Final Closed In Period Minutes 60 (G) 851 P.S.I.

Final Hydrostatic Pressure (H) 1556 P.S.I.



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FLUID SAMPLE DATA

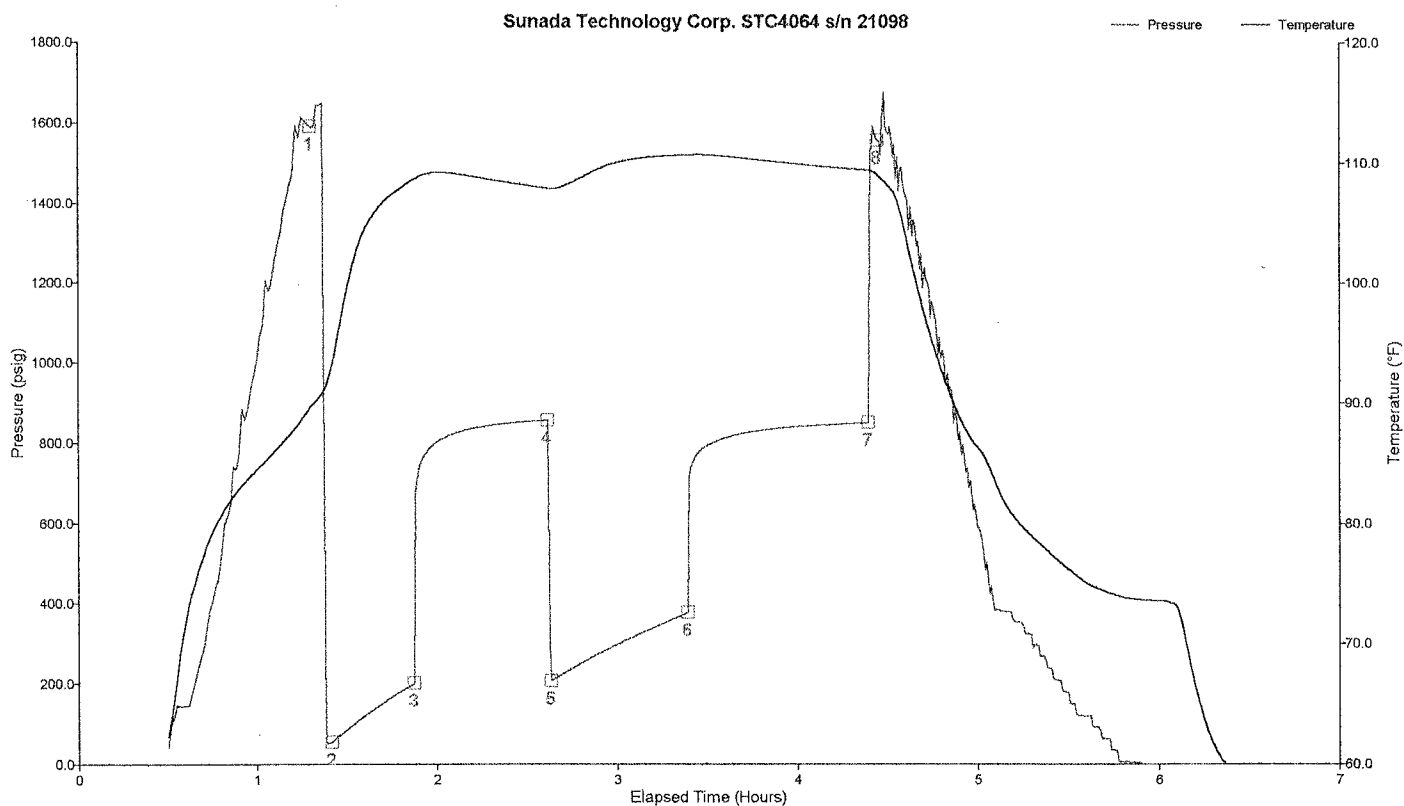
Company L.D. Drilling, Inc.
Lease & Well No. Hahn No. 2
Date 4-19-03 Sec. 33 Twp. 20 S Range 14 W
Formation Test No. 7 Interval Tested From 3,394 ft. to 3,414 ft. Total Depth 3,414 ft.
Formation Lansing/Kansas City "H"

	<u>MUD PIT</u>	<u>RECOVERY</u>	
Viscosity	<u>52</u> CP	<u>--</u> CP	
Weight	<u>8.8</u>	<u>--</u>	
Water Loss	<u>11.0</u> CC	<u>--</u> CC	Water
PH Factor	<u>10.0</u>	<u>--</u>	<u>7.5</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>.24</u> @ <u>70</u> °F.	<u>28,000</u> ppm
Recovery Mud	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Recovery Mud Filtrate	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Mud Pit Sample	<u>.55</u> @ <u>65</u> °F.	<u>16,000</u> ppm
Mud Pit Sample Filtrate	<u>.44</u> @ <u>67</u> °F.	<u>18,000</u> ppm

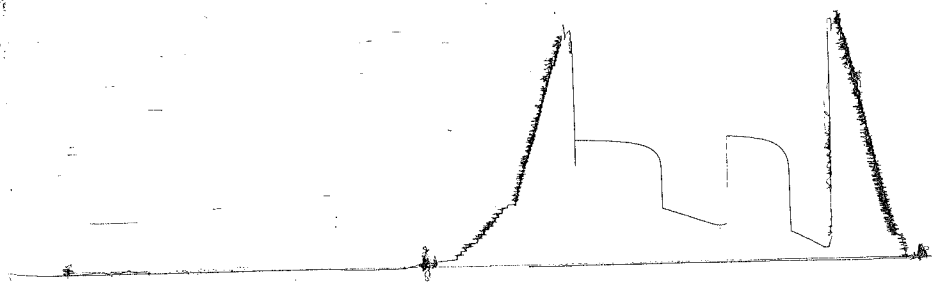
Sample Taken By JOHN C. RIEDL
Witness By Kim B. Shoemaker
Remarks Pit filtrate triton dish chlorides were 15,000 Ppm
Recovery water dish chlorides were 25,000 Ppm

Well LSD: DST 7 L/KC 'H' 3394-3314
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 19, 2003 at 14:40:00
 Notes: REC. 60' GIP 125' O+GCWM 370'SLOCGW 370'GW



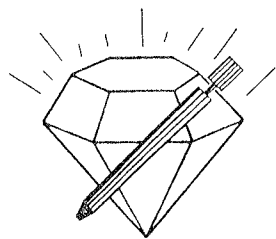
Tag	Pressure	Temperature	Comment
1	1589.27 psig	89.65 °F	2003-04-19 15:58:00
2	55.54 psig	92.97 °F	2003-04-19 16:05:00
3	201.40 psig	108.62 °F	2003-04-19 16:32:30
4	856.56 psig	107.86 °F	2003-04-19 17:17:00
5	207.42 psig	107.83 °F	2003-04-19 17:18:00
6	377.43 psig	110.62 °F	2003-04-19 18:03:30
7	850.78 psig	109.40 °F	2003-04-19 19:04:00
8	1556.29 psig	108.99 °F	2003-04-19 19:07:00

NO. 13886 OUTSIDE DST # 7 CORK # 5622
 LOC. 2411 HAHN # 2



This is an actual photograph of recorder chart.

POINT	PRESSURE		Elec.
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1589	1589	PSI
(B) First Initial Flow Pressure	56	56	PSI
(C) First Final Flow Pressure	201	201	PSI
(D) Initial Closed-in Pressure	857	857	PSI
(E) Second Initial Flow Pressure	207	207	PSI
(F) Second Final Flow Pressure	377	377	PSI
(G) Final Closed-in Pressure	851	851	PSI
(H) Final Hydrostatic Mud	1556	1556	PSI



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Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2

Elevation 1919 KB Formation Lansing/Kansas City ("I"- "K" Zones) Effective Pay -- Ft. Ticket No. J1364

Date 4-20-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 8 Interval Tested from 3,417 ft. to 3,461 ft. Total Depth 3,461 ft.

Packer Depth 3,412 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 3,417 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 3,420 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 3,458 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 50 Weight Pipe Length -- ft. I.D. -- in.

Weight 8.9 Water Loss 12.0 cc. Drill Pipe Length 3,397 ft. I.D. 3 1/2 in.

Chlorides 16,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 44 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow 1st Open: Strong blow. Off bottom of bucket in 9 mins. 2 in. blow back during shut-in.

2nd Open: Strong blow. Off bottom of bucket in 10 mins. 2 in. blow back during shut-in.

Recovered 400 ft. of gas in pipe

Recovered 90 ft. of oil & gas cut mud = .666000 bbls. (Grind out: 30%-oil; 10%-gas; 60%-mud)

Recovered 125 ft. of slightly water & mud cut gassy oil = .925000 bbls. (Grind out: 10%-water; 8%-mud; 20%-gas; 62%-oil)

Recovered 125 ft. of slightly oil & gas cut muddy water = .925000 bbls. (Grind out: 8%-oil; 12%-gas; 30%-mud; 50%-water)

Recovered 340 ft. of TOTAL FLUID = 2.516000 bbls. Chlorides: 28,000 Ppm

Remarks

Time Set Packer(s) 5:30 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 8:30 ~~P.M.~~ ^{A.M.} Maximum Temperature 106°

Initial Hydrostatic Pressure (A) 1623 P.S.I.

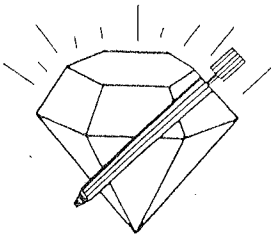
Initial Flow Period Minutes 30 (B) 22 P.S.I. to (C) 71 P.S.I.

Initial Closed In Period Minutes 45 (D) 861 P.S.I.

Final Flow Period Minutes 45 (E) 80 P.S.I. to (F) 139 P.S.I.

Final Closed In Period Minutes 60 (G) 854 P.S.I.

Final Hydrostatic Pressure (H) 1600 P.S.I.



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FLUID SAMPLE DATA

Company L.D. Drilling, Inc.
Lease & Well No. Hahn No. 2
Date 4-20-03 Sec. 33 Twp. 20 S Range 14 W
Formation Test No. 8 Interval Tested From 3,417 ft. to 3,461 ft. Total Depth 3,461 ft.
Formation Lansing/Kansas City ("I"-"K" Zones)

	<u>MUD PIT</u>	<u>RECOVERY</u>	
Viscosity	<u>50</u> CP	<u>--</u> CP	
Weight	<u>8.9</u>	<u>--</u>	
Water Loss	<u>12.0</u> CC	<u>--</u> CC	Water
PH Factor	<u>10.0</u>	<u>--</u>	<u>7.5</u>

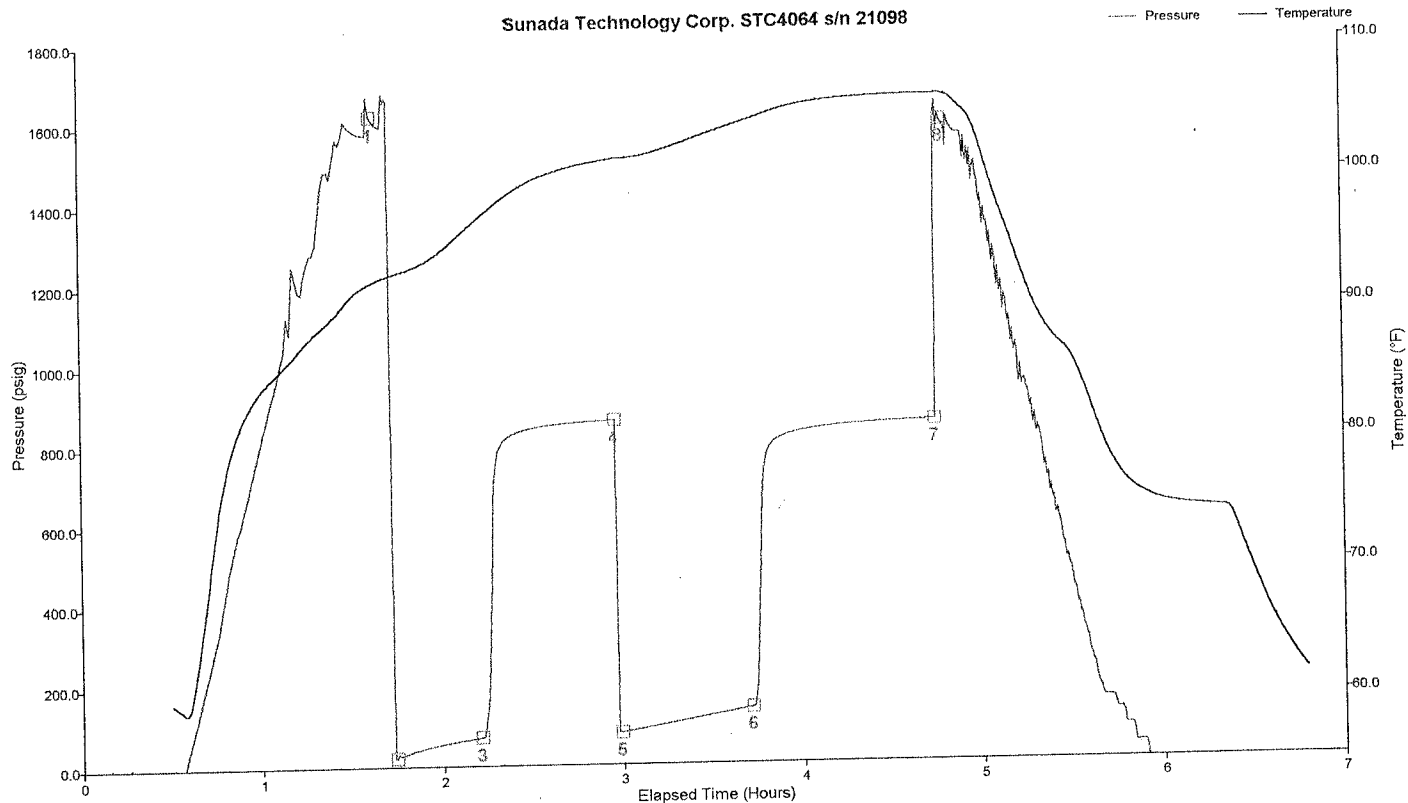
	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
Recovery Water	<u>.24</u> @ <u>70</u> °F.	<u>27,000</u> ppm
Recovery Mud	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Recovery Mud Filtrate	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Mud Pit Sample	<u>.51</u> @ <u>70</u> °F.	<u>13,000</u> ppm
Mud Pit Sample Filtrate	<u>.49</u> @ <u>70</u> °F.	<u>15,000</u> ppm

Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 16,000 Ppm
Recovery water dish chlorides were 28,000 Ppm

Well LSD: DST 8 L/KC 'I,J,K' 3417-3461
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 20, 2003 at 03:45:00
 Notes: REC. 400' GIP 215' OCGM 125' G+OCMW

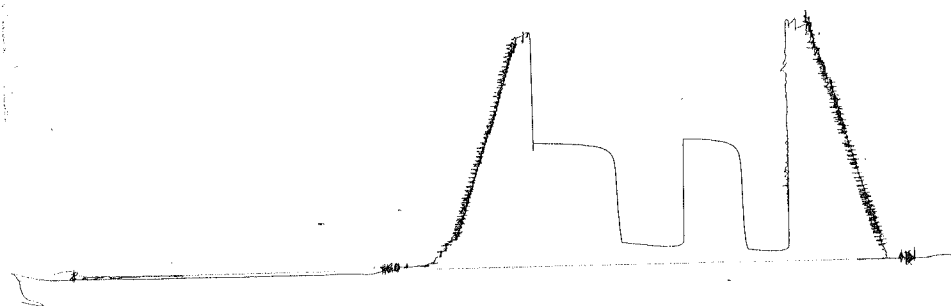


Tag	Pressure	Temperature	Comment
1	1622.62 psig	92.01 °F	2003-04-20 05:22:30
2	21.66 psig	92.62 °F	2003-04-20 05:29:30
3	71.23 psig	96.77 °F	2003-04-20 05:58:00
4	861.16 psig	101.22 °F	2003-04-20 06:43:00
5	79.53 psig	101.25 °F	2003-04-20 06:44:30
6	138.86 psig	104.08 °F	2003-04-20 07:28:00
7	853.57 psig	105.87 °F	2003-04-20 08:29:30
8	1600.24 psig	105.90 °F	2003-04-20 08:32:00

ROC#13556 OUTSIDE
LOC3488'

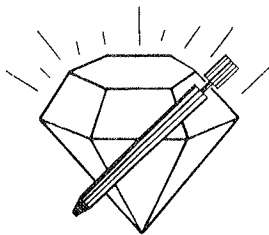
DST #8
H/WIN #2

CLOCK # 8622



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1623	1623
(B) First Initial Flow Pressure	22	22
(C) First Final Flow Pressure	71	71
(D) Initial Closed-in Pressure	861	861
(E) Second Initial Flow Pressure	80	80
(F) Second Final Flow Pressure	139	139
(G) Final Closed-in Pressure	854	854
(H) Final Hydrostatic Mud	1600	1600



DIAMOND TESTING
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(620) 653-7550 • (800) 542-7313

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Page 1 of 7 Pages

Company L. D. Drilling, Inc. Lease & Well No. Hahn No. 2
Elevation 1919 KB Formation Arbuckle Effective Pay 6 Ft. Ticket No. J1365
Date 4-20-03 Sec. 33 Twp. 20S Range 14W County Barton State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 9 Interval Tested from 3,500 ft. to 3,543 ft. Total Depth 3,543 ft.

Packer Depth 3,495 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 3,500 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 3,503 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 3,540 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor Duke Drilling Co., Inc. - Rig 8 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 48 Weight Pipe Length -- ft. I.D. -- in.

Weight 8.9 Water Loss 16.0 cc. Drill Pipe Length 3,480 ft. I.D. 3 1/2 in.

Chlorides 16,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 43 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 - XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket in 1 min. Weak blow back. Dead in 20 mins.

2nd Open: Strong blow. Off bottom of bucket in 1 min.

Recovered 60 ft. of gas in pipe

Recovered 2,800 ft. of clean gassy oil = 20.720000 bbls. (Grind out: 15%-gas; 85%-oil) Gravity: 38 @ 60°

Recovered 2,800 ft. of TOTAL FLUID = 20.720000 bbls.

Recovered ft. of

Recovered ft. of

Remarks

Time Set Packer(s) 8:00 ~~XXM.~~ P.M. Time Started Off Bottom 11:00 ~~XXM.~~ P.M. Maximum Temperature 111°

Initial Hydrostatic Pressure (A) 1664 P.S.I.

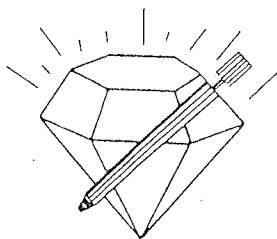
Initial Flow Period Minutes 30 (B) 378 P.S.I. to (C) 727 P.S.I.

Initial Closed In Period Minutes 45 (D) 1157 P.S.I.

Final Flow Period Minutes 45 (E) 787 P.S.I. to (F) 994 P.S.I.

Final Closed In Period Minutes 60 (G) 1158 P.S.I.

Final Hydrostatic Pressure (H) 1634 P.S.I.



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FLUID SAMPLE DATA

Company L.D. Drilling, Inc.

Lease & Well No. Hahn No. 2

Date 4-20-03 Sec. 33 Twp. 20 S Range 14 W

Formation Test No. 9 Interval Tested From 3,500 ft. to 3,543 ft. Total Depth 3,543 ft.

Formation Arbuckle

	MUD PIT	RECOVERY
Viscosity	<u>48</u> CP	<u>--</u> CP
Weight	<u>8.9</u>	<u>--</u>
Water Loss	<u>16.0</u> CC	<u>--</u> CC
PH Factor	<u>10.0</u>	<u>--</u>

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	<u>--</u> @ <u>--</u> °F. <u>--</u> ppm	
Recovery Mud	<u>--</u> @ <u>--</u> °F. <u>--</u> ppm	
Recovery Mud Filtrate	<u>--</u> @ <u>--</u> °F. <u>--</u> ppm	
Mud Pit Sample	<u>.50</u> @ <u>60</u> °F. <u>16,000</u> ppm	
Mud Pit Sample Filtrate	<u>.50</u> @ <u>62</u> °F. <u>15,000</u> ppm	

Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 16,000 Ppm

DIAMOND TESTING
HOISINGTON, KS 67544

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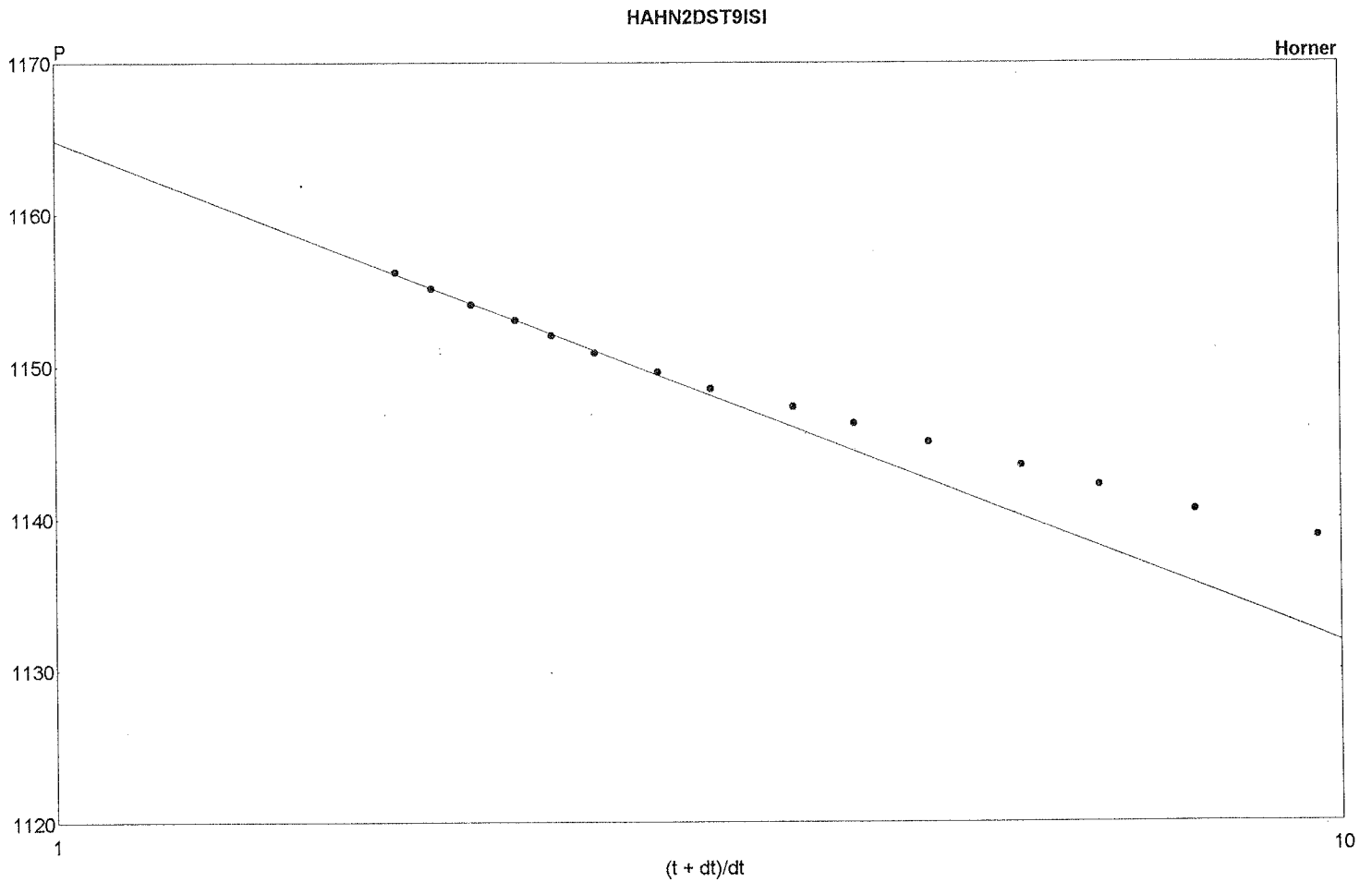
L D DRILLING INC
HAHN 2
DST NO. 9 DATE 4\20\03

T E S T P A R A M E T E R S

DRILLPIPE CAPACITY	0.0142 BBL/FT	HOLE SIZE	7.875 IN
DRILLPIPE LENGTH	3479 FT	PAY THICKNESS	6 FT
WEIGHTPIPE CAPACITY	0.0000 BBL/FT	VISCOSITY	1.00 CP
WEIGHTPIPE LENGTH	0 FT	POROSITY FRACTION	.14
DRILLCOLLAR CAPACITY	0.0000 BBL/FT		
DRILLCOLLAR LENGTH	0 FT		
BOTTOM HOLE TEMP	111 DEG F	COMPRESSIBILITY	.00001 1/PSI
RECORDER NUMBER	21098	1ST FLOW TIME	30 MIN
RECORDER DEPTH	3502	1ST SHUT IN TIME	45 MIN
ELEVATION	1919 FT (KB)	2ND FLOW TIME	45 MIN
DATUM	-1583	2ND SHUT-IN TIME	60 MIN

C A L C U L A T I O N S

EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI)	1165.0
SLOPE (PSI/LOG CYCLE)	33.0
EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI)	1160.0
SLOPE (PSI/LOG CYCLE)	7.6
AVERAGE PRODUCTION RATE (BARRELS/DAY)	337.0
TRANSMISSIBILITY (MD.-FT./CP.)	7234.37
FLOW CAPACITY (MD.-FT.)	7234.37
PERMEABILITY (MD.)	1205.728
PRODUCTIVITY INDEX (BARRELS/DAY/PSI)	1.9824
DAMAGE RATIO	4.1
PRODUCTION RATE WITH DAMAGED REMOVED (BARRELS/DAY)	1384.1
SKIN FACTOR (S)	18.3
PRESSURE DROP DUE TO SKIN (PSI)	120.3
APPROXIMATE RADIUS OF INVESTIGATION (FT.)	372.4
DRAWDOWN FACTOR (%)	0.429
POTENTIOMETRIC SURFACE (FT.)	1119.8



HAHN2DST9ISI

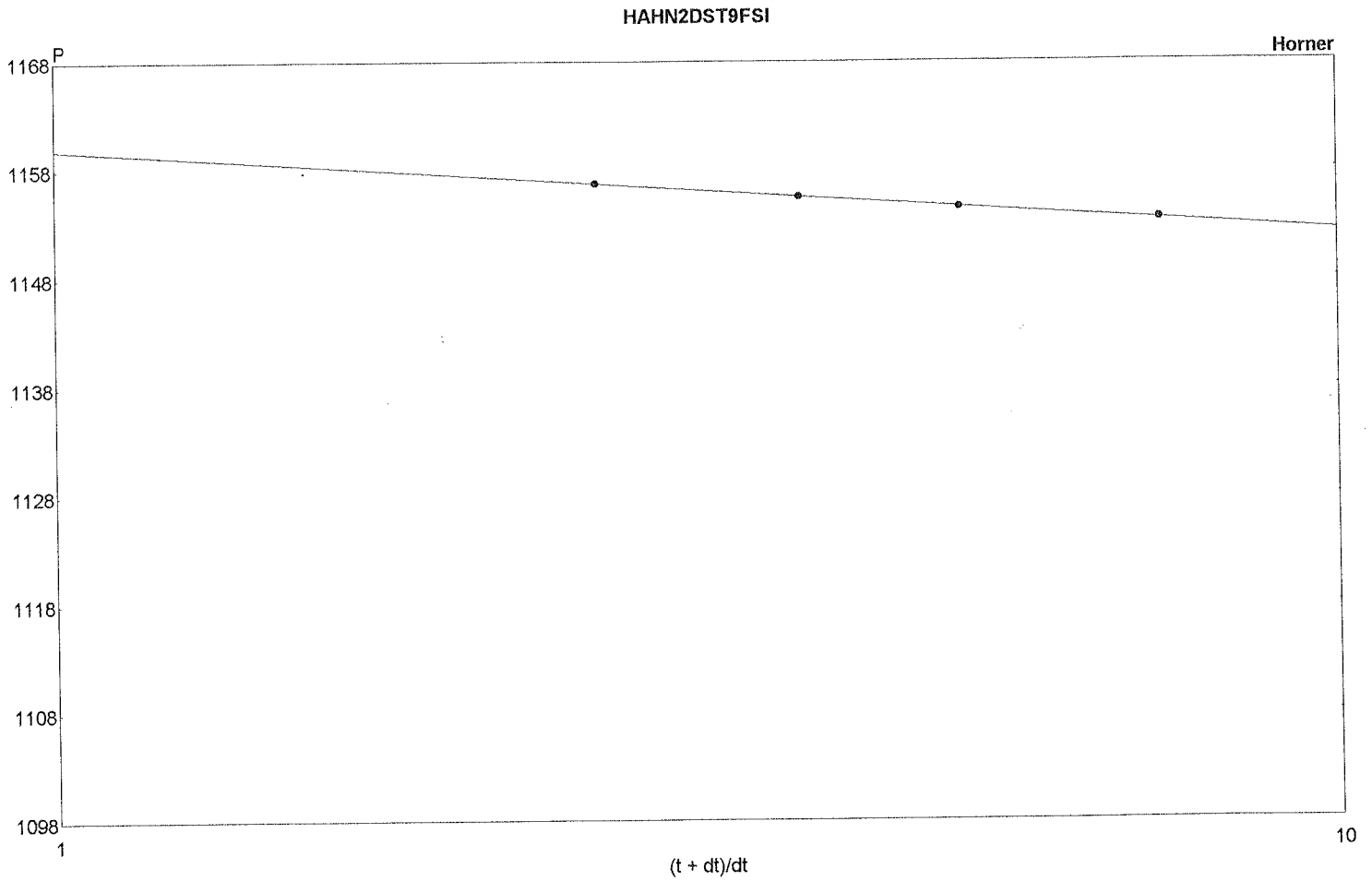
Analysis Results: Horner

Parameters:

Slope = -32.9983
 $m(1 \text{ hr}) = 1159.06$
 Prd Time: = 0.5 hr

Calculated Values:

$kh = 3320.49 \text{ md-ft}$
 $k = 553.415 \text{ md}$
 $Skin = 0.50294$
 $P^* = 1164.9 \text{ psi}$



HAHN2DST9FSI

Analysis Results: Horner

Parameters:

Slope = -7.57443

$m(1 \text{ hr}) = 1157.25$

Prd Time: = 1.25 hr

Calculated Values:

$kh = 14465.8 \text{ md-ft}$

$k = 2410.97 \text{ md}$

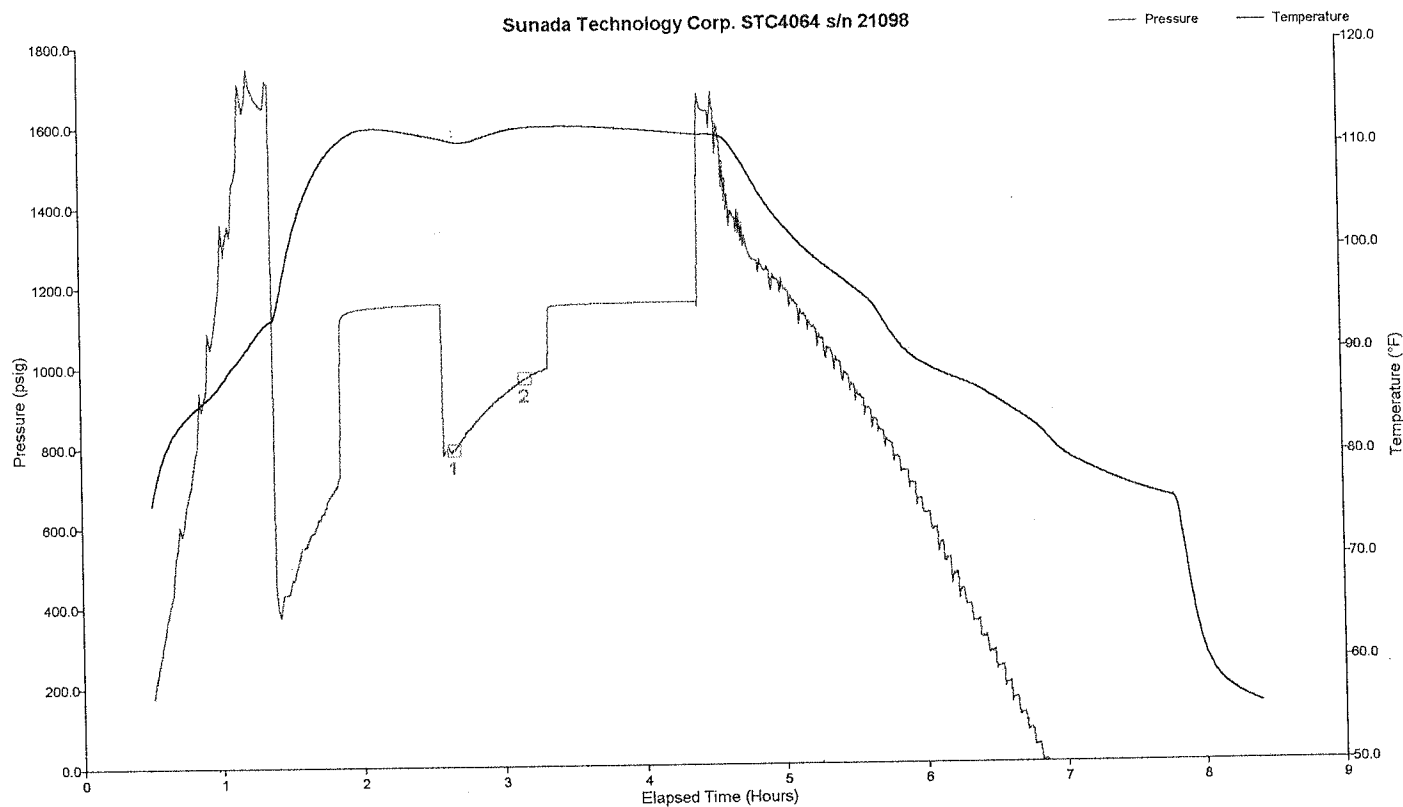
Skin = -0.8777

$P^* = 1159.9 \text{ psi}$

LD DRILLING INC

DESCRIPTION	SECOND	FIRST	PRESSURE	PIPE	FLUID	TIME	TOTAL	DAILY
	READING	READING	CHANGE	SIZE	GRADIENT	CHANGE	TIME	PRODUCTION
FINAL FLOW PERIOD	791	970	179	0.0142	0.362	30	1440	337.0342541

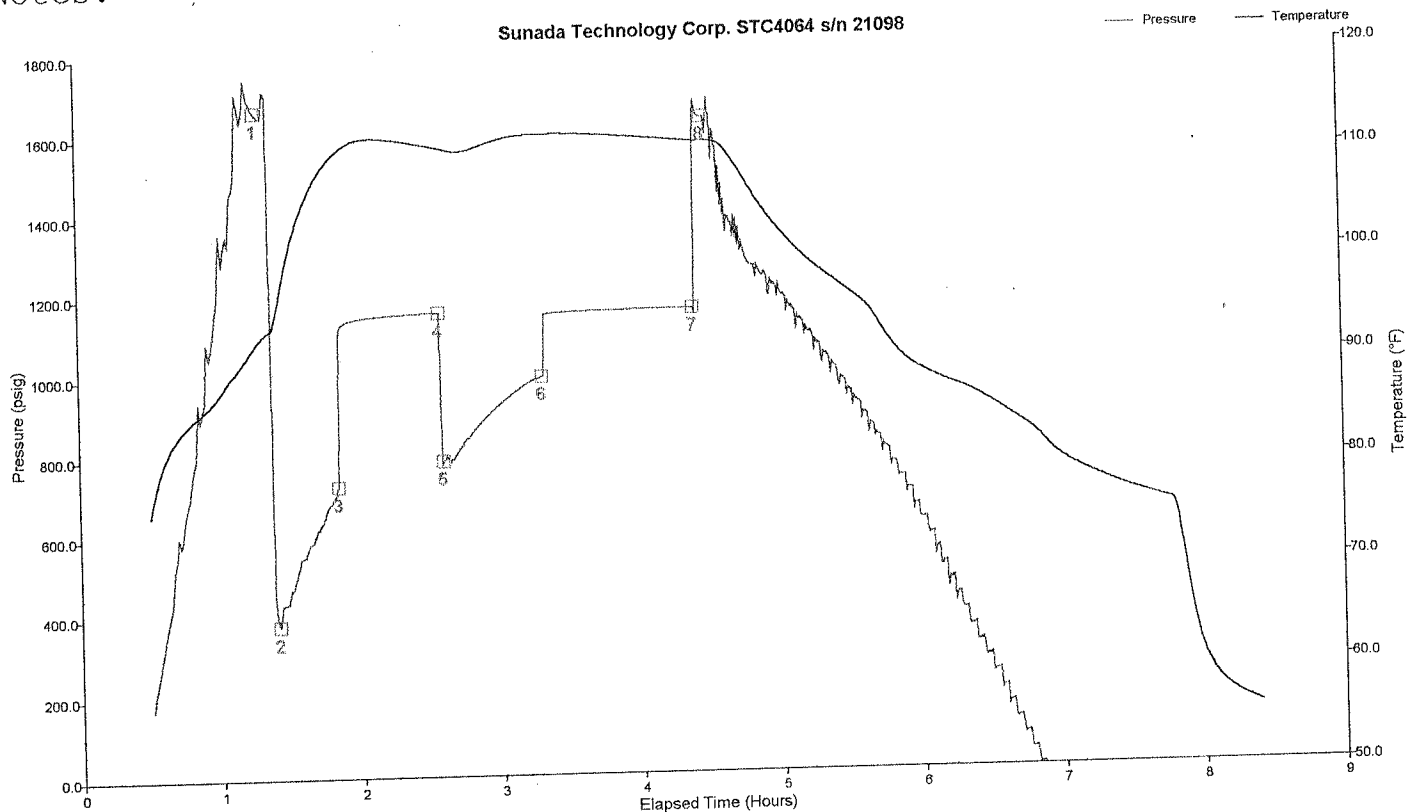
Well LSD: DST 9 ARBUCKLE 3499-3543
Well Name: HAHN 2
Company: L D DRILLING INC
Battery on: Apr 20, 2003 at 18:40:00
Notes: REC. 60' GIP 2800' CLEAN GASSY OIL
30' FLOW PERIOD ISOLATED RESERVOIR ANALYSIS



Tag	Pressure	Temperature	Comment
1	790.82 psig	110.74 °F	2003-04-20 21:20:00
2	969.81 psig	112.08 °F	2003-04-20 21:50:00

Well LSD: DST 9 ARBUCKLE 3500-3543
 Well Name: HAHN 2
 Company: L D DRILLING INC
 Battery on: Apr 20, 2003 at 18:40:00
 Notes: 60' GIP 2800' CLEAN GASSY OIL

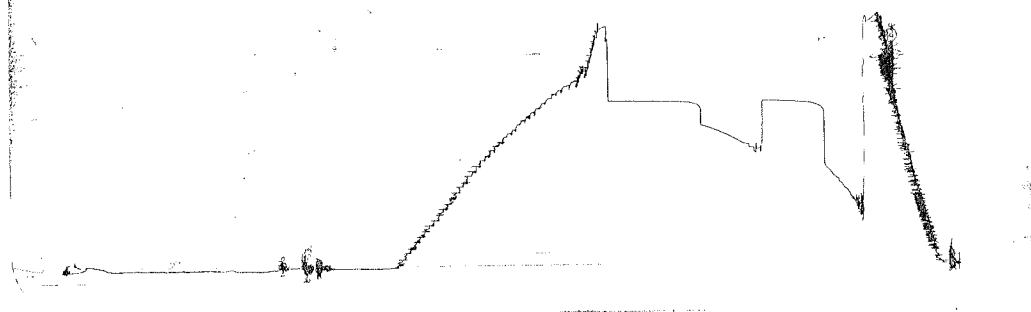
Sunada Technology Corp. STC4064 s/n 21098



Tag	Pressure	Temperature	Comment
1	1664.23 psig	92.47 °F	2003-04-20 19:57:00
2	377.82 psig	95.30 °F	2003-04-20 20:05:00
3	727.37 psig	110.68 °F	2003-04-20 20:31:00
4	1156.91 psig	111.05 °F	2003-04-20 21:15:00
5	787.28 psig	111.00 °F	2003-04-20 21:16:00
6	993.95 psig	112.16 °F	2003-04-20 21:58:30
7	1157.51 psig	111.26 °F	2003-04-20 23:03:30
8	1634.37 psig	111.24 °F	2003-04-20 23:08:00

ROC #13556 OUTSIDE DST #1
 LOC 3540' HAIN #2

CLOCK #8622



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1664	1664
(B) First Initial Flow Pressure	378	378
(C) First Final Flow Pressure	727	727
(D) Initial Closed-in Pressure	1157	1157
(E) Second Initial Flow Pressure	787	787
(F) Second Final Flow Pressure	994	994
(G) Final Closed-in Pressure	1158	1158
(H) Final Hydrostatic Mud	1634	1634