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JAN 05 2004
KCC WICHITA

15-101-21815

7-185-27w

ORIGINAL

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313
STC 21098.D25

Page 1 of 13 Pages

Company L. D. Drilling, Inc. Lease & Well No. Borell No. 1
Elevation 2712 KB Formation Lansing/Kansas City "K" Effective Pay 6 Ft. Ticket No. J1428
Date 11-4-03 Sec. 7 Twp. 18S Range 27W County Lane State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 1 Interval Tested from 4,240 ft. to 4,270 ft. Total Depth 4,270 ft.
Packer Depth 4,235 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Packer Depth 4,240 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,243 ft. Recorder Number Elec. Cap. 5,000 psi
Bottom Recorder Depth (Outside) 4,267 ft. Recorder Number 13556 Cap. 5,475 psi
Below Straddle Recorder Depth ft. Recorder Number Cap. psi

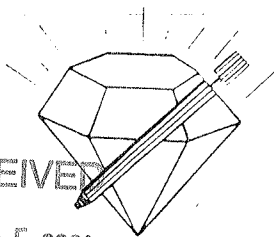
Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.
Mud Type Chemical Viscosity 44 Weight Pipe Length -- ft. I.D. -- in.
Weight 9.0 Water Loss 8.8 cc. Drill Pipe Length 4,220 ft. I.D. 3 1/2 in.
Chlorides 1,600 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.
Jars: Make Bowen Serial Number Not Run Anchor Length 30 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 5 mins. Fair blow back during shut-in.
2nd Open: Strong blow. Off bottom of bucket in 26 mins. Strong blow back during shut-in.

Recovered 1,600 ft. of gas in pipe
Recovered 340 ft. of clean gassy oil = 1.672800 bbls. (Grind out: 10%-gas; 90%-oil) Gravity: 38 @ 60°
Recovered 80 ft. of slightly mud cut gassy oil = .393600 bbls. (Grind out: 5%-mud; 15%-gas; 80%-oil)
Recovered 40 ft. of very slightly oil & gas cut muddy water = .196800 bbls. (Grind out: 2%-oil; 5%-gas; 15%-mud; 78%-water) Chlorides: 38,000 Ppm
Recovered 460 ft. of TOTAL FLUID = 2.263200 bbls.

Remarks _____

Time Set Packer(s) 12:35 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 3:35 ~~P.M.~~ ^{A.M.} Maximum Temperature 126°
Initial Hydrostatic Pressure (A) 2018 P.S.I.
Initial Flow Period Minutes 30 (B) 23 P.S.I. to (C) 100 P.S.I.
Initial Closed In Period Minutes 45 (D) 791 P.S.I.
Final Flow Period Minutes 45 (E) 108 P.S.I. to (F) 183 P.S.I.
Final Closed In Period Minutes 60 (G) 784 P.S.I.
Final Hydrostatic Pressure (H) 1996 P.S.I.



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FLUID SAMPLE DATA

Company L. D. Drilling, Inc.
Lease & Well No. Borell No. 1
Date 11-4-03 Sec. 7 Twp. 18 S Range 27 W
Formation Test No. 1 Interval Tested From 4,240 ft. to 4,270 ft. Total Depth 4,270 ft.
Formation Lansing/Kansas City "K"

Table with 3 columns: Property, MUD PIT, RECOVERY. Rows include Viscosity (44 CP), Weight (9.0), Water Loss (8.8 CC), and PH Factor (10.5).

Table with 3 columns: Sample Type, RESISTIVITY, CHLORIDE CONTENT. Rows include Recovery Water (.19 @ 65 °F, 40,000 ppm), Recovery Mud, Recovery Mud Filtrate, Mud Pit Sample (3.90 @ 65 °F, 1,700 ppm), and Mud Pit Sample Filtrate (3.00 @ 69 °F, 2,000 ppm).

Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 1,600 Ppm.
Recovery water dish chlorides were 38,000 Ppm.

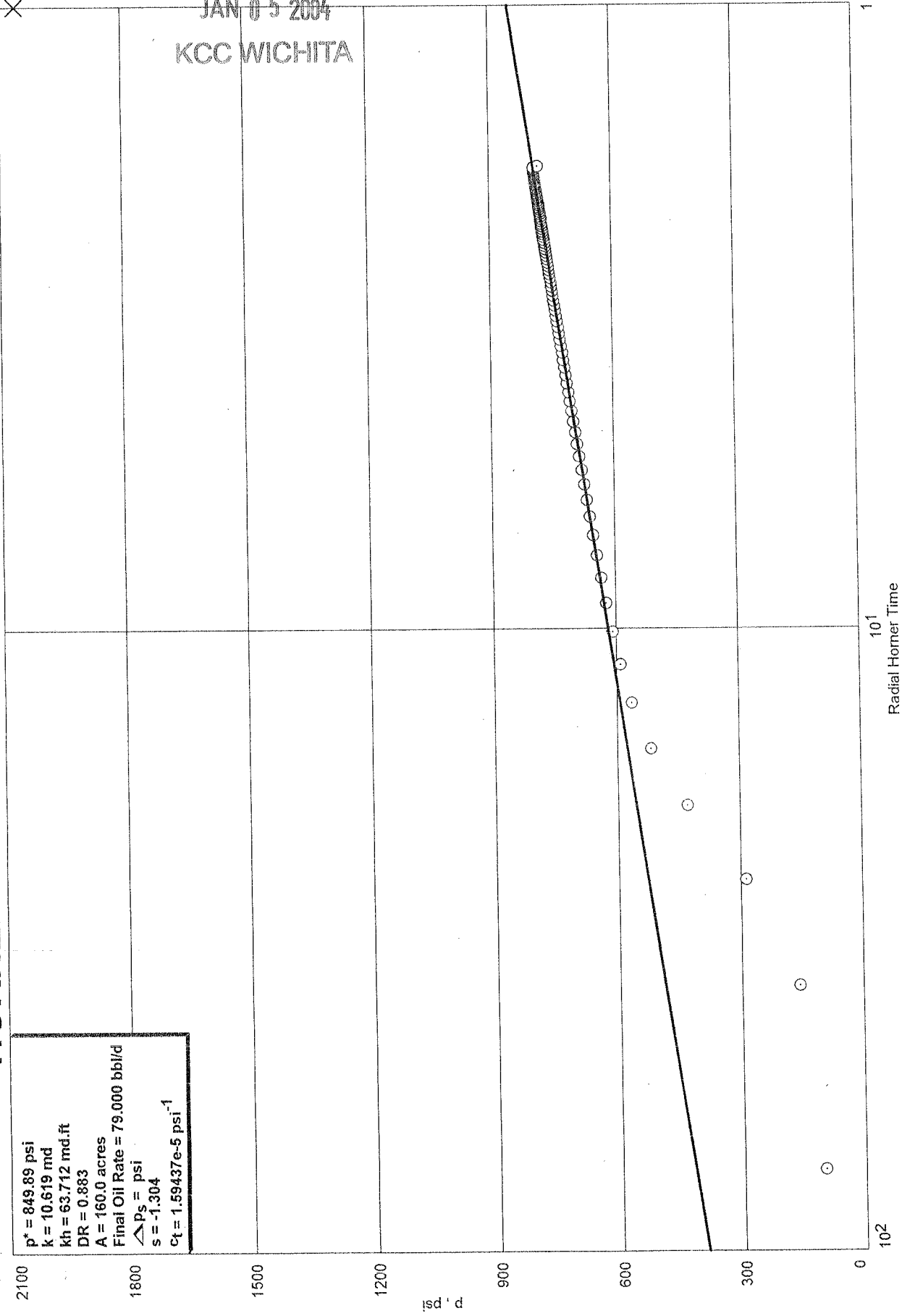
L.D. DRILLING, INC.
BORRELL #1
DST #1 LKC"K" 4240'-4270'

HORNER BORRELL DST #1 INITIAL SHUT IN

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L.D. DRILLING, INC.
 BORRELL #1
 DST #1 LK'K' 4240'-4270'

HORNER BORRELL DST #1 FINAL SHUT IN

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$p^* = 841.52$ psi
 $k = 14.710$ md
 $kh = 88.261$ md.ft
 $DR = 0.927$
 $A = 160.0$ acres
 Final Oil Rate = 79,000 bbl/d
 $\Delta p_s =$ psi
 $s = -1.025$
 $c_t = 1.59437e-5$ psi⁻¹

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L.D. DRILLING, INC

<u>DESCRIPTION</u>	<u>SECOND READING</u>	<u>FIRST READING</u>	<u>PRESSURE CHANGE</u>	<u>PIPE SIZE</u>	<u>FLUID GRADIENT</u>	<u>TIME CHANGE</u>	<u>TOTAL TIME</u>	<u>DAILY PRODUCTION</u>	<u>AVERAGE % OIL</u>	<u>ESTIMATED PRODUCTION</u>
FINAL FLOW PERIOD	174	116	58	0.0103	0.3615	30	1440	79.32282158	1.00	79.323

BORRELL #1 DST #1 LKC "K" 4240'-4270'

Nov 09 03 01:16p

Michael Hudson / DRS

(928) 505-8393

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L.D. Drilling, Inc.
Borrell #1, Dst #1

Comments relative to analysis of the drill stem test that was run by Diamond Testing, Inc.

This analysis is based upon the liquid recovery and equations applicable to liquid recovery tests; radial flow analysis and derivative analysis techniques. It has been assumed, for purposes of this analysis that the tested reservoir system consisted of a single porosity zone 6 feet in thickness with an average porosity of 12 percent. A change in slope equivalent to approximately $-1/2$ is noted on the various diagnostic plots. This type of flow regime is often times associated with spherical flow; perhaps due to the presence of a constant pressure boundary such as a water contact and/or due to the reservoir system being only partially penetrated or the entire system not being completely opened to the tested interval. Therefore, additional type curve matching has been provided using a vertical oil-well model with well-bore storage and exhibiting a spherical flow regime for non-linear regression analysis.

The semi-log plots indicate a maximum initial reservoir pressure of 849 psi and a maximum final reservoir pressure of 846 psi, which is equivalent to a subsurface pressure gradient of 0.199 psi/ft at gauge depth. The difference between the extrapolated initial and final reservoir pressures (3 Psi) is not considered significant.

The Average Production Rate which was used in this analysis has been calculated from analysis of the flow pressure curves using a liquid gradient for the recovered oil of 0.3615 psi/ft.

The calculated Skin Factors indicate no well-bore damage was present at the time of this formation test.

The evaluation criteria used in the drill stem test analysis system indicate this is a good mechanical test and the results obtained in this analysis should be reliable within reasonable limits relative to the assumptions which have been made.

Michael Hudson
Analyst
(928) 505-8389

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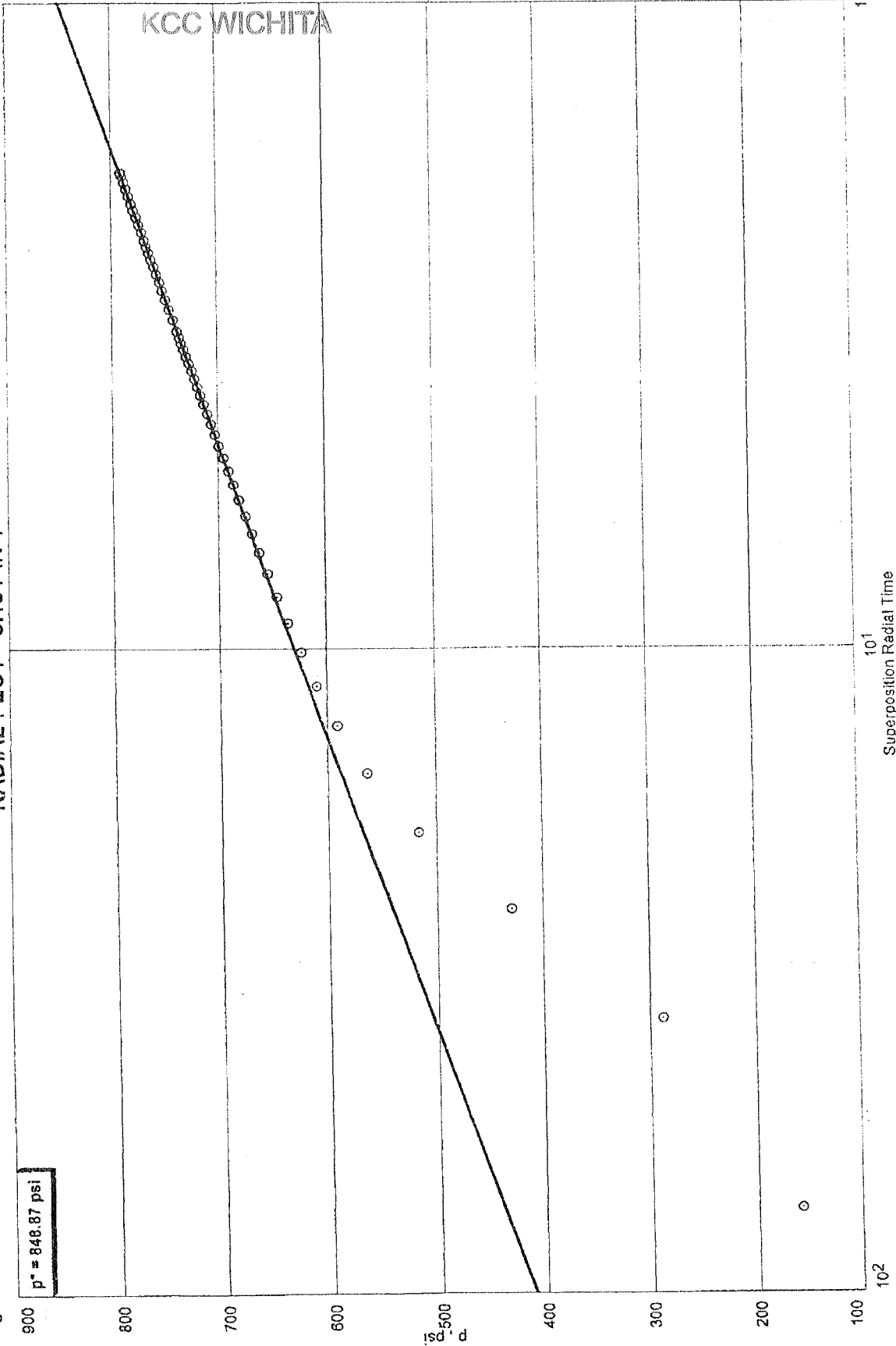
10/31

RADIAL PLOT - SHUT IN 1

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L.D. Drilling Inc
Borrell 1, Dst 1
Gauge 21098

$p^* = 848.87$ psi



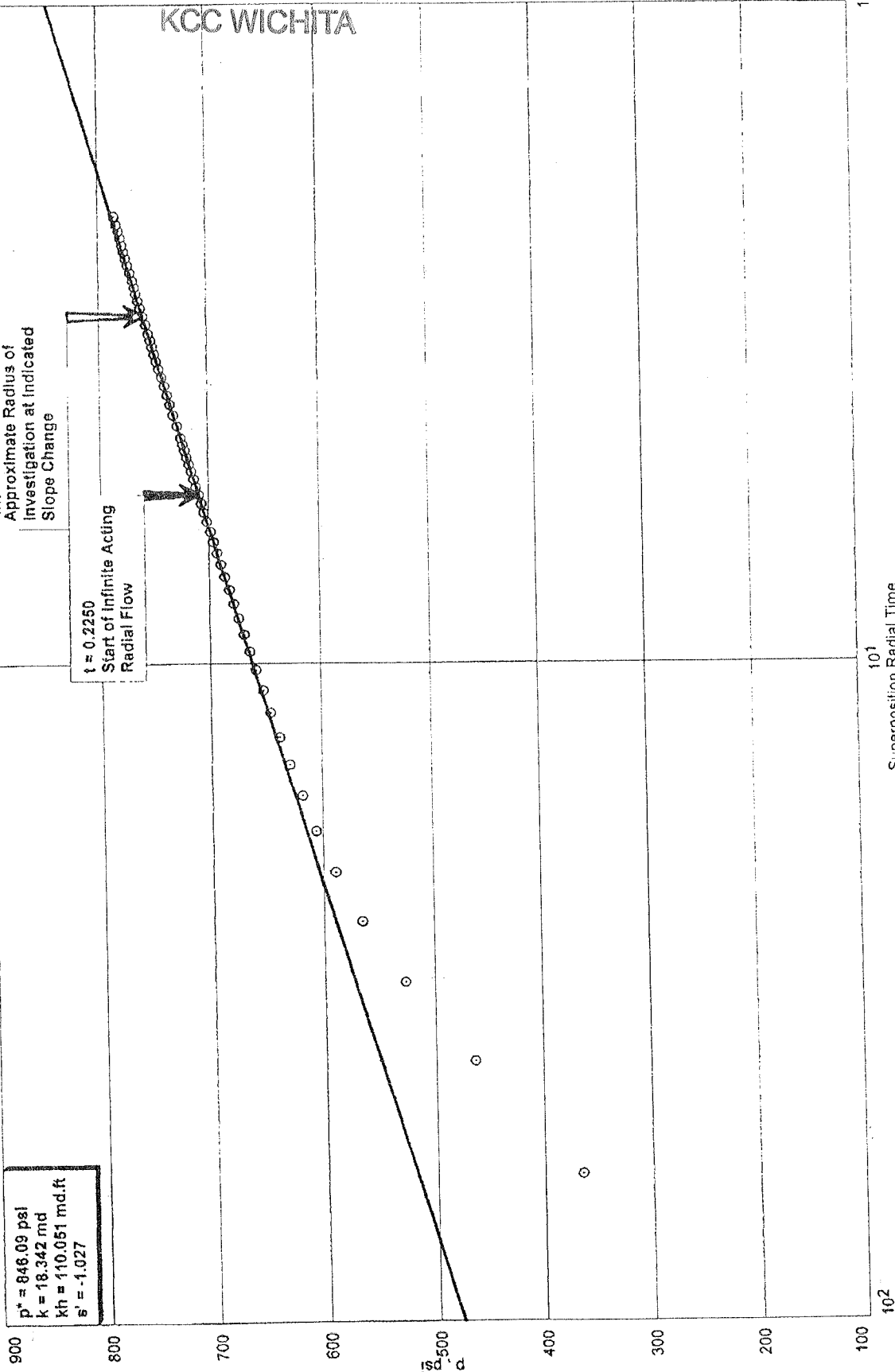
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Page 8

RADIAL PLOT - SHUT IN 2

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L.D. Drilling Inc
Borrell 1, Dst 1
Gauge 21098

$p^* = 846.09$ psi $k = 18.342$ md $kh = 110.051$ md.ft $s' = -1.027$
--

10¹
Superposition Radial Time

10²

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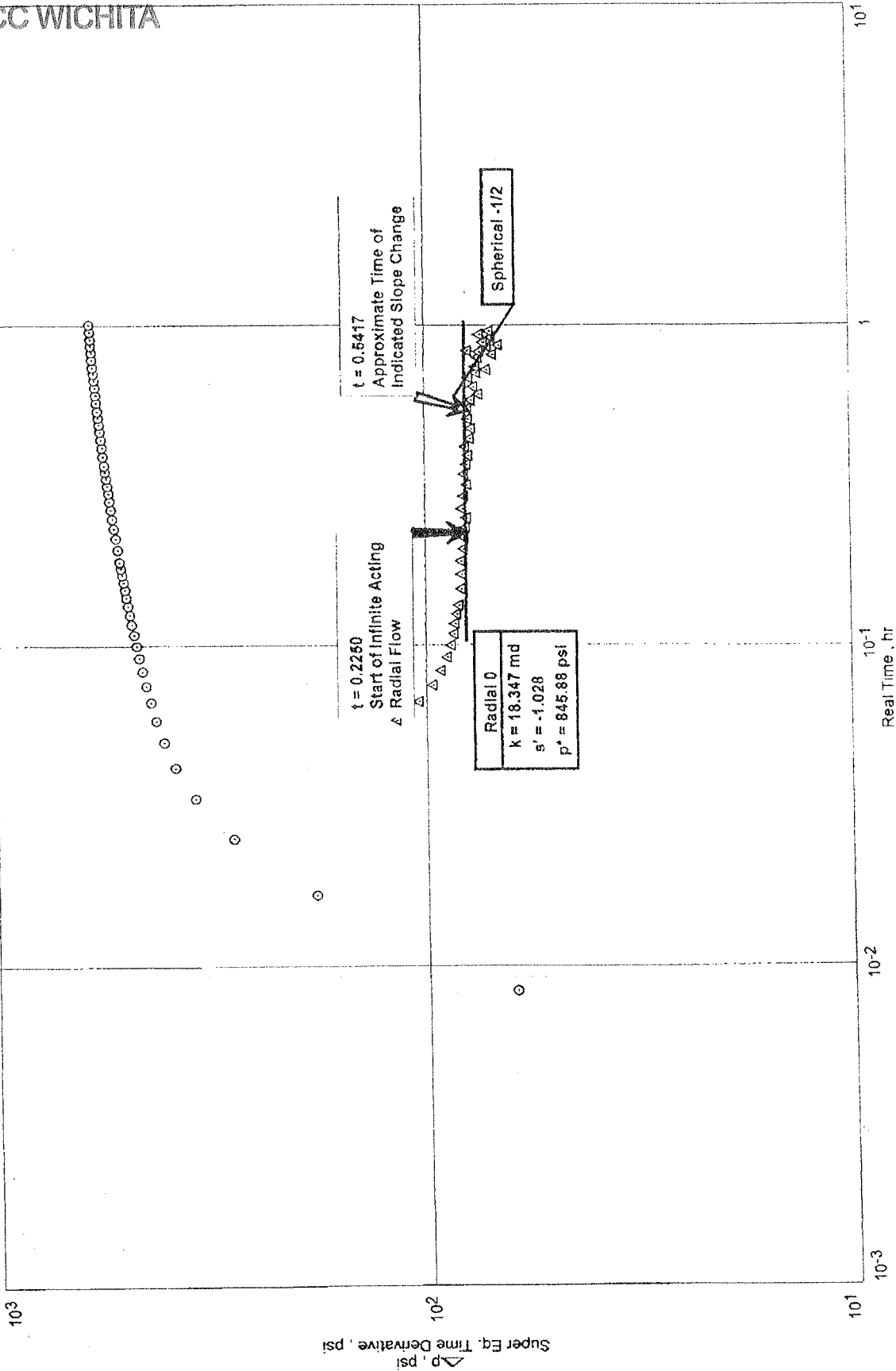
JAN 05 2004

WV

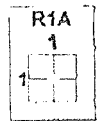
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DERIVATIVE PLOT - SHUT IN 2

L.D. Drilling Inc
Borrell 1, Dst 1
Gauge 21098



Oil Well Test - Buildup Radial Flow Analysis



L.D. Drilling Inc
Borrell 1, Dst 1
Gauge 21098

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Analysis Results

Total Sandface Rate (q_{B1})	75.446 bbl/d	Apparent Skin (s')	-1.027
Semilog Slope (m)	184.46	Skin - Damage	-1.027
Oil Permeability (k_o)	18.342 md	Pressure Drop Due to Skin (Δp_s)	psi
Flow Capacity (kh)	110.051 md.ft	Damage Ratio (DR)	0.800
Total Mobility (k/μ_l)	11.08 md/cp	Flow Efficiency (FE)	1.250
Total Transmissivity (kh/μ_l)	66.51 md.ft/cp		

Reservoir Parameters

Net Pay (h)	6.000 ft
Total Porosity (ϕ_i)	12.00 %
Water Saturation (S_w)	30.00 %
Oil Saturation (S_o)	70.00 %
Gas Saturation (S_g)	0.00 %
Wellbore Radius (r_w)	0.33 ft
Formation Temperature (T)	126.3 °F
Formation Compressibility (c_f)	4.508e-6 psi ⁻¹
Total Compressibility (c_t)	1.592e-5 psi ⁻¹

Pressures

Initial Pressure (p_i)	790.77 psi
Extrapolated Pressure (p^*)	846.09 psi
Ave. Reservoir Press	844.93 psi
Final Flowing Pressure (p_{wfo})	183.23 psi

Production and Times

Corrected Flow Time (t_c)	1.2917 hr
Cumulative Oil Production	3 629 bbl
Final Oil Rate	67.420 bbl/d

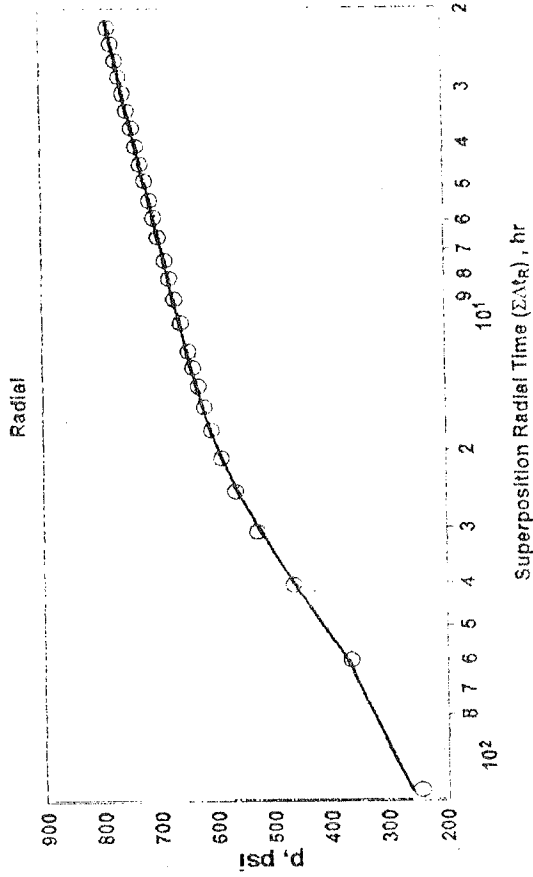
Fluid Properties

Oil Compressibility (c_o)	1.49904e-5 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.119
Oil Viscosity (μ_o)	1.655 cp
Solution Gas Ratio (R_s)	162 scf/bbl
Oil Gravity (γ_o)	38.00 ° API
Gas Gravity (G)	0.650
PVT Reference Pressure (pp_{VT})	841.00 psi

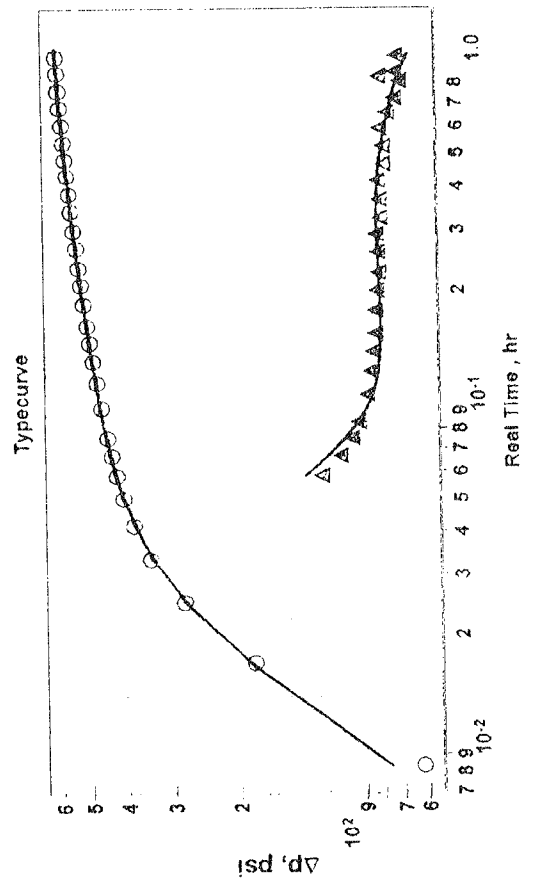
Extended Rates Calculations

Specified Flowing Pressure	183.23 psi
Specified Reservoir Pressure	844.93 psi
Drainage Area	40.0 acres
Stabilized Rate @ Current Skin	42.378 bbl/d
Stabilized Rate @ Skin of 0	36.648 bbl/d
Stabilized Rate @ Skin of -4	77.375 bbl/d
PI / II (Total Liquids - Actual)	0.102 bbl/d/psi
PI / II (Total Liquids - Ideal)	0.082 bbl/d/psi
Stab. PI / II (Total Liquids - Actual)	0.064 bbl/d/psi
Stab. PI / II (Total Liquids - Ideal)	0.051 bbl/d/psi

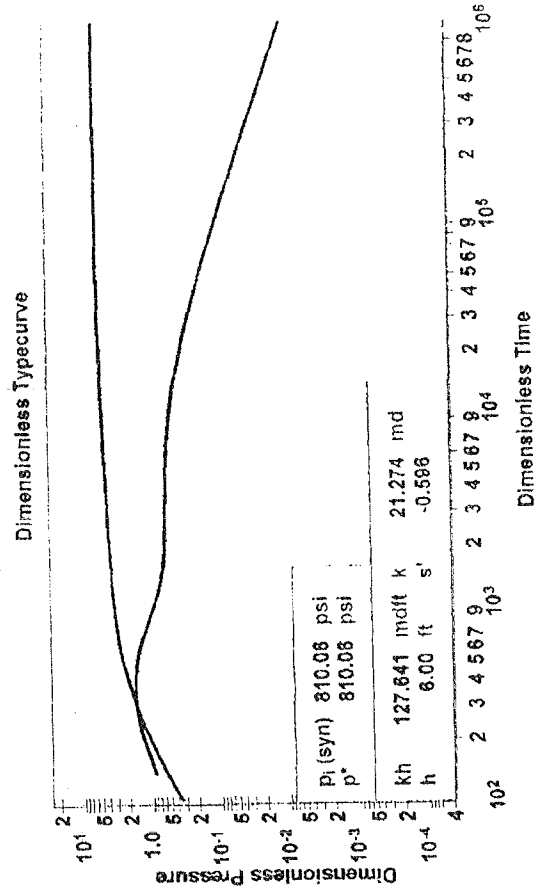
Vertical Oil-Well Model



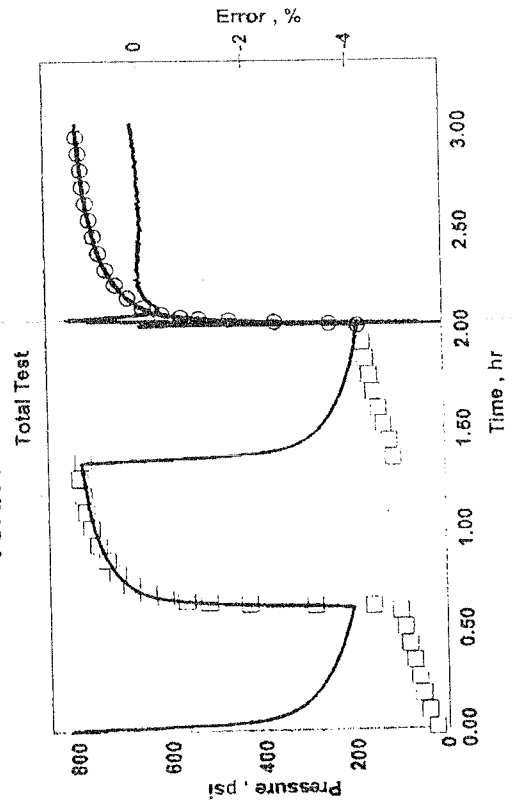
Vertical Oil-Well Model



Vertical Oil-Well Model



Vertical Oil-Well Model



Vertical Oil Well Model

L.D. Drilling Inc
Borrell 1, Dst 1
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Model Parameters

Oil Permeability (k_o)	21.274 md	Total Transmissivity (kh/μ) _t	77.14 md.ft/cp
Total Mobility (k/μ) _t	12.86 md/cp	Skin (s)	-0.596

Formation Parameters

Net Pay (h)	6.000 ft
Total Porosity (ϕ_t)	12.00 %
Oil Saturation (S_o)	70.00 %
Gas Saturation (S_g)	0.00 %
Water Saturation (S_w)	30.00 %
Wellbore Radius (r_w)	0.33 ft
Formation Temperature (T)	126.3 °F
Formation Compressibility (c_f)	4.508e-6 psi ⁻¹
Total Compressibility (c_t)	1.592e-5 psi ⁻¹
Wellbore Storage Constant Dim. (C_D)	55.00

Fluid Properties

Oil Compressibility (c_o)	1.49904e-5 psi ⁻¹
Gas Compressibility (c_g)	1.31133e-3 psi ⁻¹
Water Compressibility (c_w)	3.07847e-6 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.119
Gas Formation Volume Factor (B_g)	0.003140 bbl/scf
Water Formation Volume Factor (B_w)	1.009
Oil Viscosity (μ_o)	1.655 cp
Gas Viscosity (μ_g)	0.0126 cp
Water Viscosity (μ_w)	0.521 cp
Solution Gas Ratio (R_s)	162 scf/bbl
Oil Gravity (γ_o)	38.00 ° API
Gas Gravity (G)	0.650
PVT Reference Pressure (ppVT)	841.00 psi
Bubble Point Pressure (P_{bp})	841.00 psi

Production and Pressure

$Q_t B_t$	75.446 bbl/d
Final Oil Rate	67.420 bbl/d
Final Flowing Pressure (p_{wfO})	183.23 psi
Final Measured Pressure	784.61 psi
Cumulative Oil Production	3.629 bbl

Synthesis Results

Average Error	-0.04 %
Synthetic Initial Pressure (p_i)	810.06 psi
Extrapolated Pressure at Specified Time	810.06 psi
Pressure Drop Due To Skin (Δp_s)	psi
Flow Efficiency (FE)	1.131
Damage Ratio (DR)	0.884

Forecasts

Forecast Flowing Pressure (P_{flow})	183.23 psi
3 - Month Constant Rate Forecast @ Curr. Skin	60.683 bbl/d
6 - Month Constant Rate Forecast @ Curr. Skin	60.681 bbl/d
Forecast Flow Duration (t_{flow})	12.00 month
Constant Rate Forecast @ Curr. Skin	60.681 bbl/d
PI / II (Total Liquids - Actual)	0.097 bbl/d/psi
Constant Rate Forecast @ Skin=0	54.273 bbl/d
PI / II (Total Liquids - ideal)	0.087 bbl/d/psi
Constant Rate Forecast @ Skin=-4	170.069 bbl/d

Inflow Performance Relationship (I.P.R.)

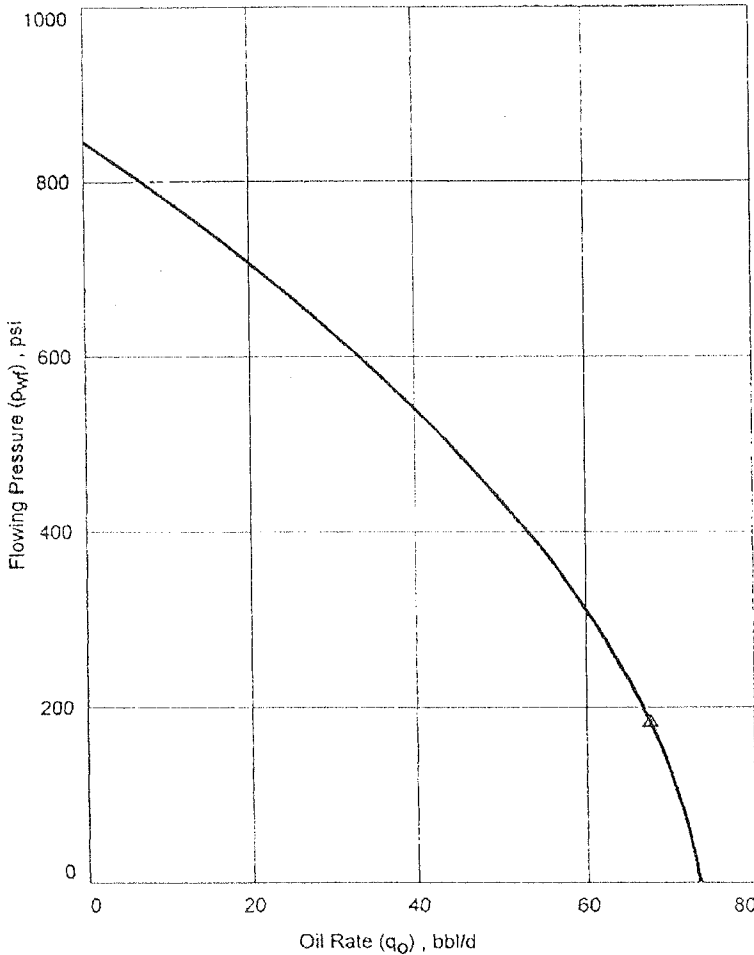
L.D. Drilling Inc
Borrell 1, Dst 1

Test Data

Results

Reservoir Pressure (p_R)	846.00 psi		
Bubble Point Pressure (p_{bp})	841.00 psi	Maximum Oil Rate	73.336 bbl/d
Test Pressure (p_{wf})	183.20 psi	Maximum Water Rate	bbl/d
Oil Test Rate (q_o)	67.420 bbl/d	Maximum Total Rate	bbl/d
Water Test Rate (q_w)	bbl/d		

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Flowing Pressure	Oil Rate	Water Rate	Total Rate
psi	bbl/d	bbl/d	bbl/d
0.00	73.336		
100.00	70.789		
183.20*	67.420		
200.00	66.602		
300.00	60.773		
400.00	53.302		
500.00	44.190		
600.00	33.437		
700.00	21.042		
800.00	7.006		
846.00	0.000		

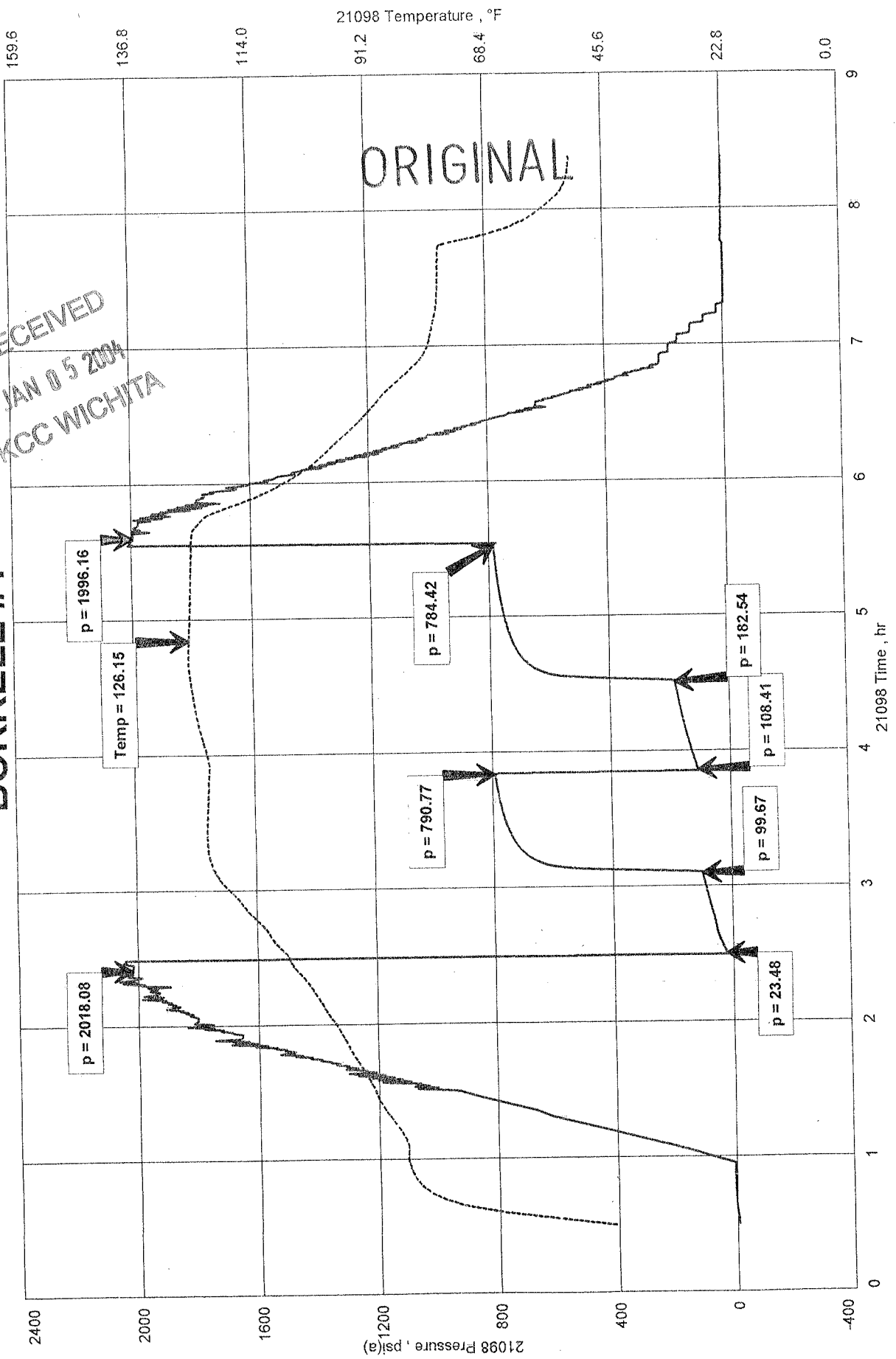
Note : * Test Point
 ** Bubble Point
 Oil IPR based on Vogel's Equation.
 (Quadratic Curve Factor=0.2)

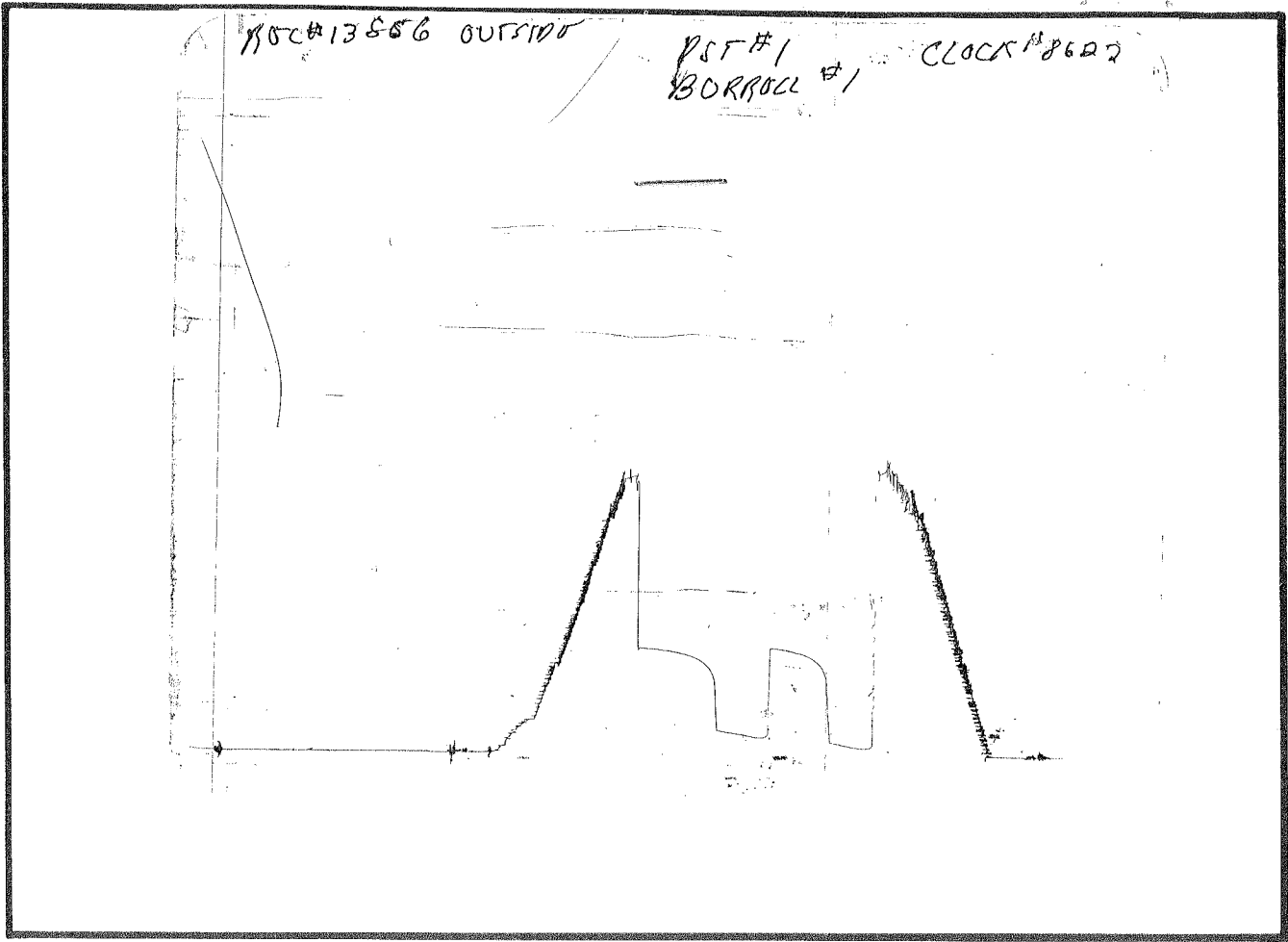
BORRELL #1
Formation: DST #1 LKC "K" 4240'-4270

L.D. DRILLING, INC.
SEC 7-18S-27W, LANE, COUNTY
Start Test Date: 2003/11/04
Final Test Date: 2003/11/05

BORRELL #1

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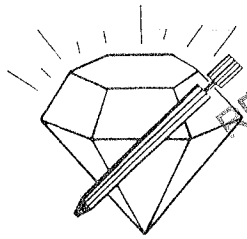




This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2018	2018	PSI
(B) First Initial Flow Pressure.....	23	23	PSI
(C) First Final Flow Pressure	100	100	PSI
(D) Initial Closed-in Pressure	791	791	PSI
(E) Second Initial Flow Pressure.....	108	108	PSI
(F) Second Final Flow Pressure.....	183	183	PSI
(G) Final Closed-in Pressure	784	784	PSI
(H) Final Hydrostatic Mud	1996	1996	PSI

COMPANY _____
 LEASE AND WELL NO. _____
 SEC. _____
 TWP. _____
 RGE. _____
 ECI NO. _____
 DATE _____



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STC 21098.D26

ORIGINAL

Company L. D. Drilling, Inc. Lease & Well No. Borell No. 1

Elevation 2712 KB Formation Lansing/Kansas City "L" Effective Pay --Ft. Ticket No. J1429

Date 11-5-03 Sec. 7 Twp. 18S Range 27W County Lane State Kansas

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

Formation Test No. 2 Interval Tested from 4,273 ft. to 4,303 ft. Total Depth 4,303 ft.

Packer Depth 4,268 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,273 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,276 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,300 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. in.

Mud Type Chemical Viscosity 43 Weight Pipe Length -- ft. I.D. in.

Weight 9.0 Water Loss 8.8 cc. Drill Pipe Length 4,253 ft. I.D. 3 1/2 in.

Chlorides 2,100 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 30 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, 1/2 in., blow decreasing to a surface blow at end.
2nd Open: Very weak blow. Dead in 20 mins.

Recovered 10 ft. of drilling mud with oil specks = .049200 bbls.

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks

Time Set Packer(s) 3:03 ~~XXM~~ P.M. Time Started Off Bottom 5:03 ~~XXM~~ P.M. Maximum Temperature 109°

Initial Hydrostatic Pressure (A) 2051 P.S.I.

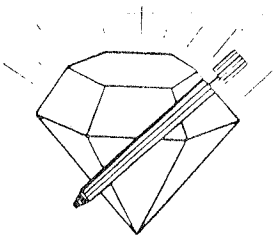
Initial Flow Period Minutes 30 (B) 10 P.S.I. to (C) 12 P.S.I.

Initial Closed In Period Minutes 30 (D) 69 P.S.I.

Final Flow Period Minutes 30 (E) 12 P.S.I. to (F) 14 P.S.I.

Final Closed In Period Minutes 30 (G) 35 P.S.I.

Final Hydrostatic Pressure (H) 2021 P.S.I.



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FLUID SAMPLE DATA

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Lease & Well No. Borell No. 1

Date 11-5-03 Sec. 7 Twp. 18 S Range 27 W

Formation Test No. 2 Interval Tested From 4,273 ft. to 4,303 ft. Total Depth 4,303 ft.

Formation Lansing/Kansas City "L"

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	MUD PIT	RECOVERY
Viscosity	<u>43</u> CP	<u>46</u> CP
Weight	<u>9.0</u>	<u>9.2</u>
Water Loss	<u>8.8</u> CC	<u>8.0</u> CC
PH Factor	<u>10.5</u>	<u>10.0</u>

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Recovery Mud	<u>3.10</u> @ <u>68</u> °F.	<u>2,000</u> ppm
Recovery Mud Filtrate	<u>3.00</u> @ <u>69</u> °F.	<u>2,200</u> ppm
Mud Pit Sample	<u>3.20</u> @ <u>70</u> °F.	<u>2,000</u> ppm
Mud Pit Sample Filtrate	<u>3.00</u> @ <u>70</u> °F.	<u>2,200</u> ppm

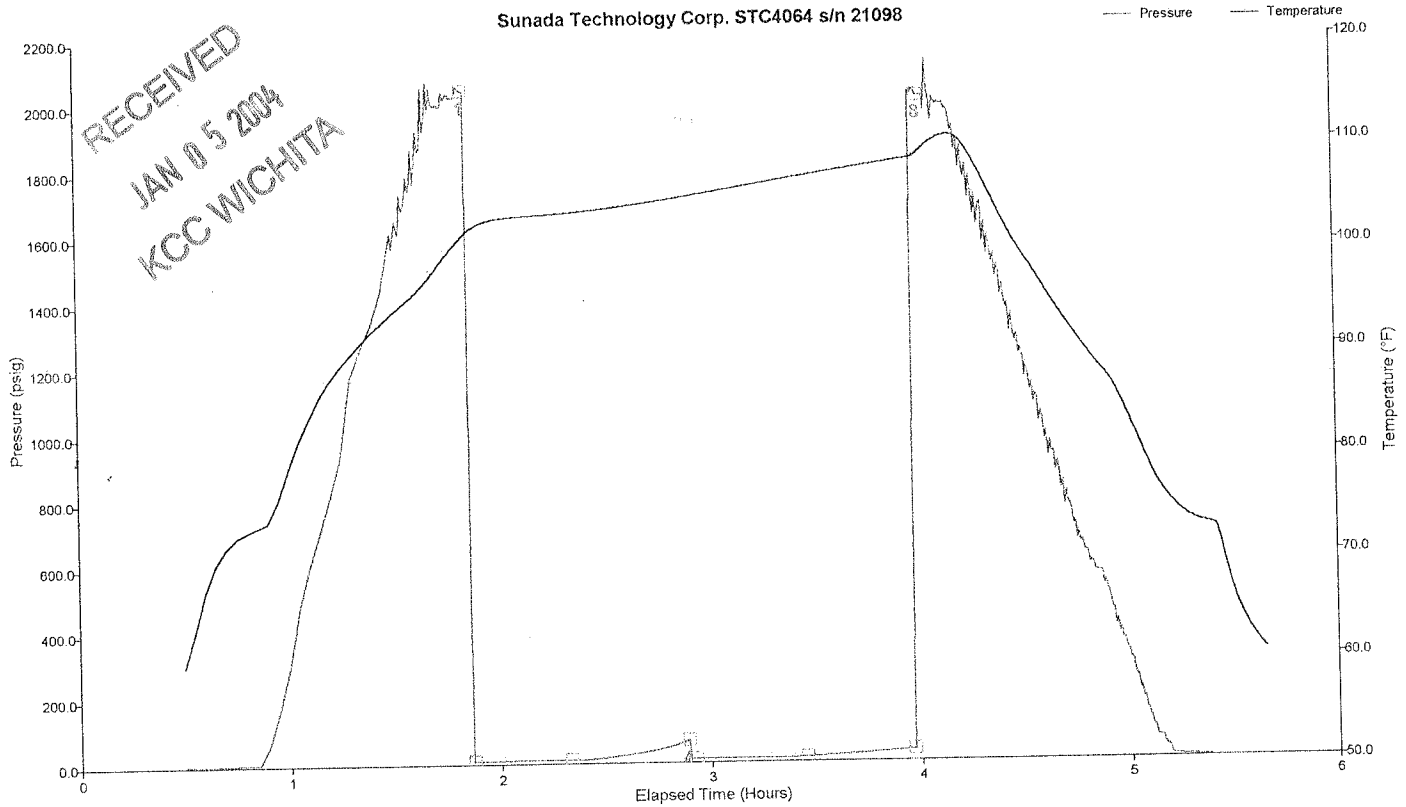
Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 2,100 Ppm.
Recovery filtrate triton dish chlorides were 2,500 Ppm.

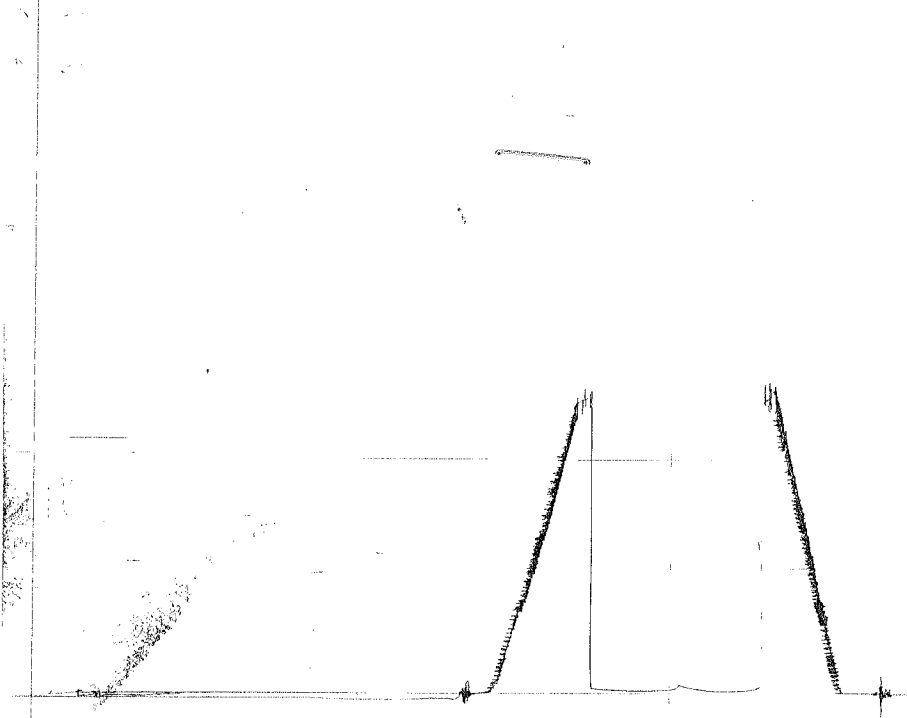
Well LSD: DST 2 LKC "L" 4273-4303
 Well Name: BORRELL 1
 Company: L D DRILLING INC
 Battery on: Nov 5, 2003 at 13:10:00
 Notes: REC. 10' OIL SPECKED MUD

ORIGINAL



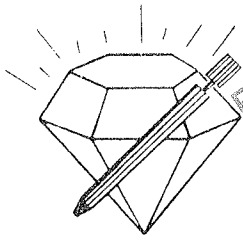
Tag	Pressure	Temperature	Comment
1	2050.52 psig	101.29 °F	2003-11-05 15:01:00
2	9.72 psig	101.75 °F	2003-11-05 15:02:30
3	11.55 psig	103.26 °F	2003-11-05 15:30:00
4	69.03 psig	104.74 °F	2003-11-05 16:03:30
5	12.08 psig	104.85 °F	2003-11-05 16:05:30
6	14.24 psig	106.64 °F	2003-11-05 16:37:30
7	34.63 psig	108.29 °F	2003-11-05 17:08:00
8	2021.41 psig	108.85 °F	2003-11-05 17:11:00

WCC # 13586 OUTSIDE DST #2 BOKRILL #1 CLOCK # 8622



This is an actual photograph of recorder chart.

POINT	PRESSURE Elec.		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2051	2051	PSI
(B) First Initial Flow Pressure.....	10	10	PSI
(C) First Final Flow Pressure	12	12	PSI
(D) Initial Closed-in Pressure	69	69	PSI
(E) Second Initial Flow Pressure	12	12	PSI
(F) Second Final Flow Pressure.....	14	14	PSI
(G) Final Closed-in Pressure.....	35	35	PSI
(H) Final Hydrostatic Mud	2021	2021	PSI



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JAN 05 2004
KCC WICHITA

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313
STC 21098.D27

ORIGINAL

Company L. D. Drilling, Inc. Lease & Well No. Borell No. 1
Elevation 2712 KB Formation Pawnee/Marmaton Effective Pay -- Ft. Ticket No. J1430
Date 11-6-03 Sec. 7 Twp. 18S Range 27W County Lane State Kansas
Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 3 Interval Tested from 4,312 ft. to 4,473 ft. Total Depth 4,473 ft.
Packer Depth 4,307 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Packer Depth 4,312 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,315 ft. Recorder Number Elec. Cap. 5,000 psi
Bottom Recorder Depth (Outside) 4,470 ft. Recorder Number 13556 Cap. 5,475 psi
Below Straddle Recorder Depth ft. Recorder Number Cap. psi

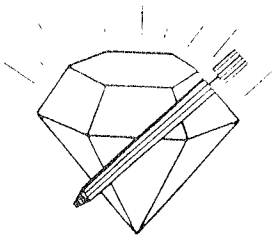
Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.
Mud Type Chemical Viscosity 47 Weight Pipe Length -- ft. I.D. -- in.
Weight 9.1 Water Loss 9.6 cc. Drill Pipe Length 4,292 ft. I.D. 3 1/2 in.
Chlorides 1,900 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.
Jars: Make Bowen Serial Number Not Run Anchor Length 161 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, 1/2 in., blow throughout.
2nd Open: Very weak blow throughout.

Recovered 15 ft. of drilling mud = .073800 bbls.
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Remarks

Time Set Packer(s) 12:53 ^{XXM.} P.M. Time Started Off Bottom 2:53 ^{XXM.} P.M. Maximum Temperature 112°
Initial Hydrostatic Pressure (A) 2104 P.S.I.
Initial Flow Period Minutes 30 (B) 15 P.S.I. to (C) 17 P.S.I.
Initial Closed In Period Minutes 30 (D) 345 P.S.I.
Final Flow Period Minutes 30 (E) 18 P.S.I. to (F) 19 P.S.I.
Final Closed In Period Minutes 30 (G) 175 P.S.I.
Final Hydrostatic Pressure (H) 2044 P.S.I.



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FLUID SAMPLE DATA

Company L. D. Drilling, Inc.

Lease & Well No. Borell No. 1

Date 11-6-03 Sec. 7 Twp. 18 S Range 27 W

Formation Test No. 3 Interval Tested From 4,312 ft. to 4,473 ft. Total Depth 4,473 ft.

Formation Pawnee/Marmaton

	RECEIVED	MUD PIT	RECOVERY
Viscosity	JAN 05 2004	<u>47</u> CP	<u>45</u> CP
Weight	KCC WICHITA	<u>9.1</u>	<u>9.0</u>
Water Loss		<u>9.6</u> CC	<u>9.0</u> CC
PH Factor		<u>10.5</u>	<u>10.0</u>

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Recovery Mud	<u>3.40</u> @ <u>65</u> °F.	<u>1,900</u> ppm
Recovery Mud Filtrate	<u>3.20</u> @ <u>65</u> °F.	<u>2,100</u> ppm
Mud Pit Sample	<u>3.10</u> @ <u>67</u> °F.	<u>2,000</u> ppm
Mud Pit Sample Filtrate	<u>3.10</u> @ <u>67</u> °F.	<u>2,000</u> ppm

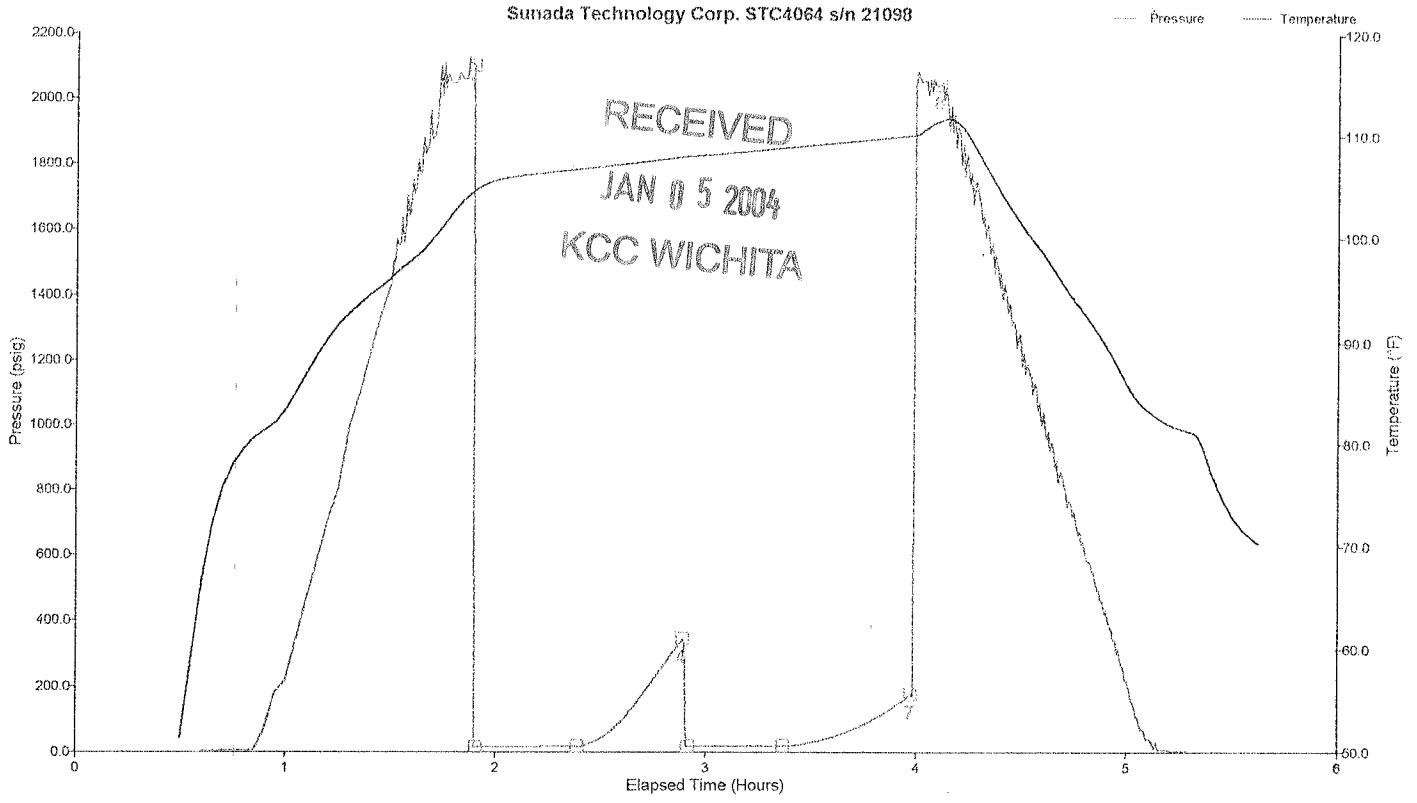
Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

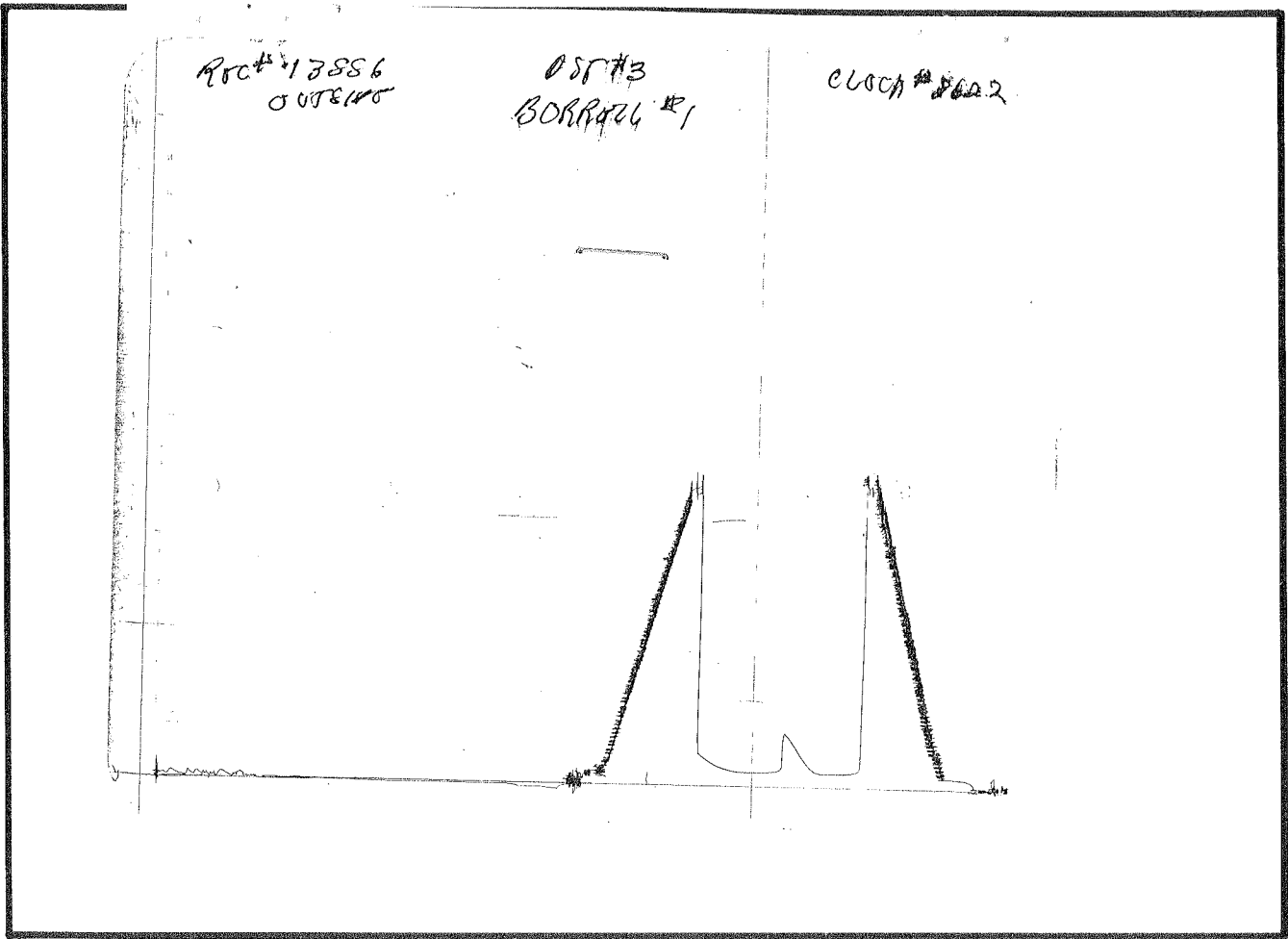
Remarks Pit filtrate triton dish chlorides were 1,900 Ppm.
Recovery filtrate triton dish chlorides were 2,100 Ppm.

Well LSD: DST 3 PAWNEE, MARMATON 4312-4473
 Well Name: BORRELL 1
 Company: L D DRILLING INC
 Battery on: Nov 6, 2003 at 11:00:00
 Notes: REC. 15' DRILLING MUD

ORIGINAL

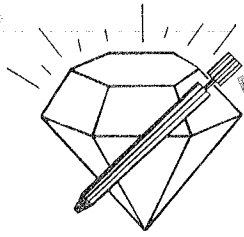


Tag	Pressure	Temperature	Comment
1	2103.69 psig	104.53 °F	2003-11-06 12:53:30
2	14.76 psig	104.78 °F	2003-11-06 12:54:30
3	17.41 psig	106.69 °F	2003-11-06 13:23:30
4	345.45 psig	107.93 °F	2003-11-06 13:53:30
5	17.89 psig	107.98 °F	2003-11-06 13:55:00
6	18.88 psig	108.84 °F	2003-11-06 14:22:00
7	174.90 psig	110.08 °F	2003-11-06 14:58:30
8	2043.89 psig	111.54 °F	2003-11-06 15:06:30



This is an actual photograph of recorder chart.

POINT	PRESSURE		Elec. Office Reading	PSI
	Field Reading			
(A) Initial Hydrostatic Mud	2104	2104		PSI
(B) First Initial Flow Pressure	15	15		PSI
(C) First Final Flow Pressure	17	17		PSI
(D) Initial Closed-in Pressure	345	345		PSI
(E) Second Initial Flow Pressure	18	18		PSI
(F) Second Final Flow Pressure	19	19		PSI
(G) Final Closed-in Pressure	175	175		PSI
(H) Final Hydrostatic Mud	2044	2044		PSI



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STC 21098.D28

ORIGINAL

Company L. D. Drilling, Inc. Lease & Well No. Borell No. 1

Elevation 2712 KB Formation Fort Scott/Cherokee/Johnson Effective Pay -- Ft. Ticket No. J1431

Date 11-7-03 Sec. 7 Twp. 18S Range 27W County Lane State Kansas

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

Formation Test No. 4 Interval Tested from 4,470 ft. to 4,555 ft. Total Depth 4,555 ft.

Packer Depth 4,465 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,470 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,473 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,552 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 46 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.1 Water Loss 9.0 cc. Drill Pipe Length 4,450 ft. I.D. 3 1/2 in.

Chlorides 2,200 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 85 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: Good blow. Gradually building throughout to 6 ins. at end. No blow back during shut-in.

2nd Open: Strong blow. 12 ins. off bottom of bucket in 5 mins. Remaining strong throughout. No blow back during shut-in.

Recovered 360 ft. of gas in pipe

Recovered 45 ft. of gas & oil cut mud = .221400 bbls. (Grind out: 10%-gas; 30%-oil; 2%-water; 58%-mud)

Recovered 45 ft. of TOTAL FLUID = .221400 bbls.

Recovered ft. of

Recovered ft. of

Remarks

Time Set Packer(s) 5:19 ~~P.M.~~ A.M. Time Started Off Bottom 8:19 ~~P.M.~~ A.M. Maximum Temperature 118°

Initial Hydrostatic Pressure (A) 2149 P.S.I.

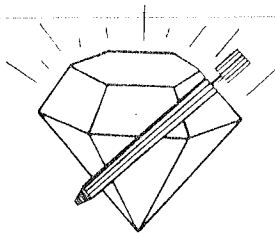
Initial Flow Period Minutes 30 (B) 12 P.S.I. to (C) 17 P.S.I.

Initial Closed In Period Minutes 45 (D) 717 P.S.I.

Final Flow Period Minutes 45 (E) 20 P.S.I. to (F) 26 P.S.I.

Final Closed In Period Minutes 60 (G) 653 P.S.I.

Final Hydrostatic Pressure (H) 2139 P.S.I.



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
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FLUID SAMPLE DATA

Company L. D. Drilling, Inc.

Lease & Well No. Borell No. 1

Date 11-7-03 Sec. 7 Twp. 18 S Range 27 W

Formation Test No. 4 Interval Tested From 4,470 ft. to 4,555 ft. Total Depth 4,555 ft.

Formation Fort Scott/Cherokee/Johnson

	<u>MUD PIT</u>	<u>RECOVERY</u>
Viscosity	<u>46</u> CP	<u>--</u> CP
Weight	<u>9.1</u>	<u>--</u>
Water Loss	<u>9.0</u> CC	<u>10.0</u> CC
PH Factor	<u>10.5</u>	<u>10.0</u>

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	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	<u>--</u> @ <u>--</u> °F.	<u>--</u> ppm
Recovery Mud	<u>2.70</u> @ <u>70</u> °F.	<u>2,300</u> ppm
Recovery Mud Filtrate	<u>2.60</u> @ <u>70</u> °F.	<u>2,400</u> ppm
Mud Pit Sample	<u>3.40</u> @ <u>55</u> °F.	<u>2,200</u> ppm
Mud Pit Sample Filtrate	<u>3.40</u> @ <u>57</u> °F.	<u>2,000</u> ppm

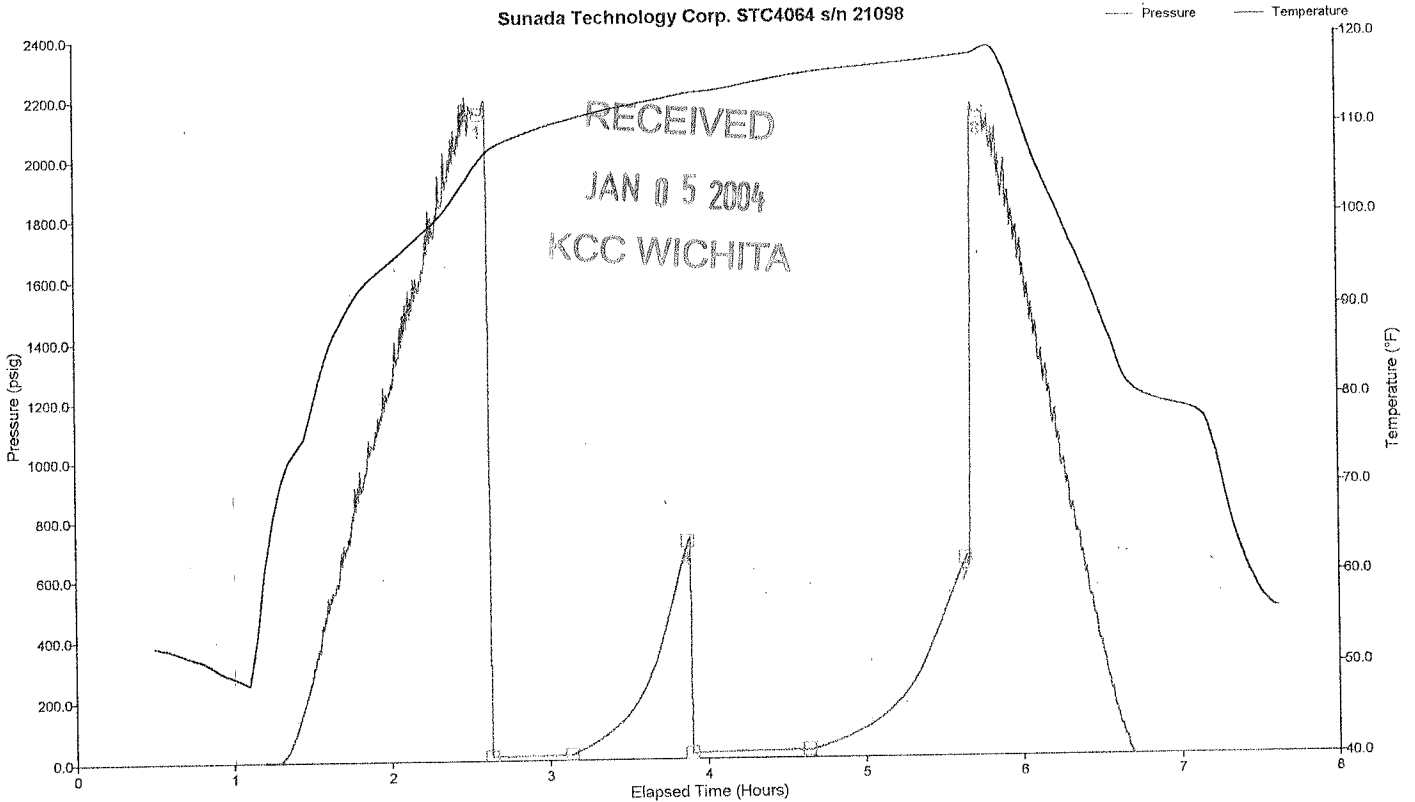
Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

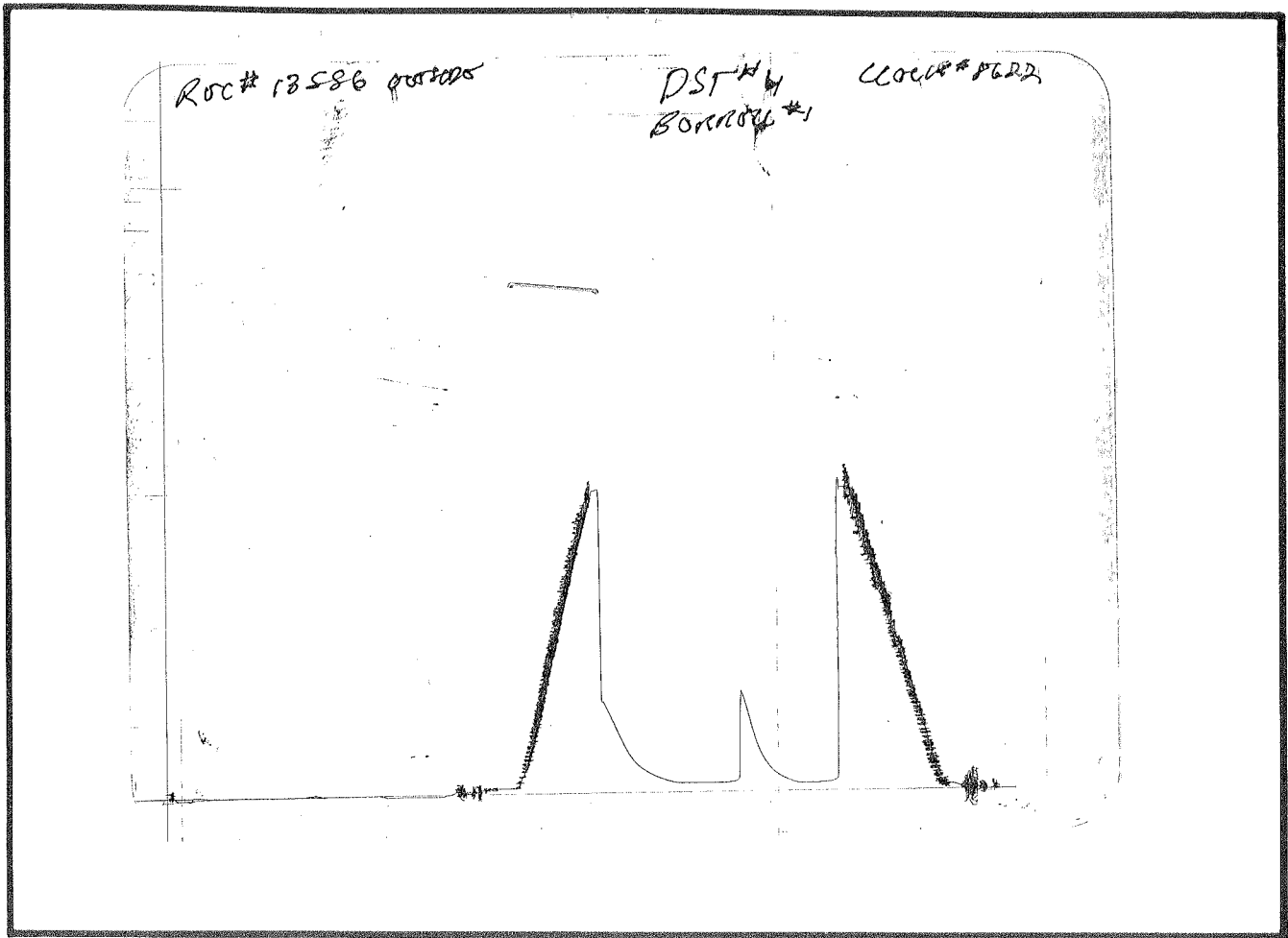
Remarks Pit filtrate triton dish chlorides were 2,200 Ppm.
Recovery filtrate triton dish chlorides were 2,500 Ppm.

Well LSD: DST 4 FORT SCOTT CHEROKEE +JOHNSON
 Well Name: BORRELL 1
 Company: L D DRILLING INC
 Battery on: Nov 7, 2003 at 02:40:00
 Notes: REC. 360' GIP 45' G+OCM

ORIGINAL



Tag	Pressure	Temperature	Comment
1	2148.76 psig	106.55 °F	2003-11-07 05:14:30
2	12.32 psig	107.62 °F	2003-11-07 05:18:00
3	17.41 psig	110.95 °F	2003-11-07 05:48:30
4	716.55 psig	113.72 °F	2003-11-07 06:33:00
5	20.23 psig	113.78 °F	2003-11-07 06:34:00
6	26.28 psig	115.91 °F	2003-11-07 07:18:30
7	653.28 psig	117.77 °F	2003-11-07 08:18:30
8	2139.29 psig	118.27 °F	2003-11-07 08:24:00



This is an actual photograph of recorder chart.

POINT	PRESSURE		Elec. Office Reading	PSI
	Field Reading			
(A) Initial Hydrostatic Mud	2149	2149		PSI
(B) First Initial Flow Pressure.....	12	12		PSI
(C) First Final Flow Pressure	17	17		PSI
(D) Initial Closed-in Pressure	717	717		PSI
(E) Second Initial Flow Pressure.....	20	20		PSI
(F) Second Final Flow Pressure.....	26	26		PSI
(G) Final Closed-in Pressure.....	653	653		PSI
(H) Final Hydrostatic Mud.....	2139	2139		PSI