

15-009-24798

12-185-14w

DIAMOND TESTING

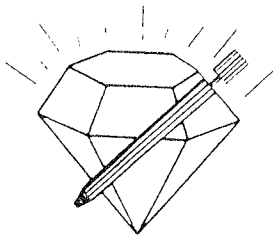
P.O. Box 157

HOISINGTON, KANSAS 67544

(620) 653-7550 • (800) 542-7313
STC 21099.D30

Page 1 of 18 Pages

Company	L. D. Drilling, Inc.		Lease & Well No.	Glass No. 2	
Elevation	1863 KB	Formation	Topeka	Effective Pay	6 Ft. Ticket No. J1536
Date	8-13-04	Sec.	12 Twp. 18S Range 14W	County	Barton State Kansas
Test Approved By	Kim Shoemaker		Diamond Representative	John C. Riedl	
Formation Test No.	1	Interval Tested from	2,962 ft. to	2,988 ft.	Total Depth 2,988 ft.
Packer Depth	2,957 ft.	Size	6 3/4 in.	Packer Depth	-- ft. Size -- in.
Packer Depth	2,962 ft.	Size	6 3/4 in.	Packer Depth	-- ft. Size -- in.
Depth of Selective Zone Set	ft.				
Top Recorder Depth (Inside)	2,965 ft.	Recorder Number	21099	Cap.	5,000 psi
Bottom Recorder Depth (Outside)	2,985 ft.	Recorder Number	11073	Cap.	3,950 psi
Below Straddle Recorder Depth	ft.	Recorder Number		Cap.	psi
Drilling Contractor	Southwind Drilling, Inc. - Rig 1		Drill Collar Length	-- ft.	I.D. -- in.
Mud Type	Chemical	Viscosity	55	Weight Pipe Length	-- ft. I.D. -- in.
Weight	8.9	Water Loss	10.0 cc.	Drill Pipe Length	2,942 ft. I.D. 3 1/2 in.
Chlorides	7,000	P.P.M.		Test Tool Length	20 ft. Tool Size 3 1/2 - IF in.
Jars: Make	Bowen	Serial Number	Not Run	Anchor Length	26 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 secs. Gas to surface in 6 mins. Strong blow back during shut-in. (SEE GAS VOLUME REPORT)				
	2nd Open: Strong blow. Off bottom of bucket in 1 min. Oil to surface in 35 mins.				
Recovered	2,940 ft. of clean gassy oil = 41.748000 bbls. (Grind out: 15%-gas; 85%-oil) Gravity: 31 @ 60°				
Recovered	ft. of				
Recovered	ft. of				
Recovered	ft. of				
Recovered	ft. of				
Remarks					
Time Set Packer(s)	10:45	XXX P.M.	Time Started Off Bottom	1:45	XXX A.M. Maximum Temperature 106°
Initial Hydrostatic Pressure			(A)	1390	P.S.I.
Initial Flow Period	Minutes	30	(B)	173	P.S.I. to (C) 707 P.S.I.
Initial Closed In Period	Minutes	45	(D)	1292	P.S.I.
Final Flow Period	Minutes	45	(E)	713	P.S.I. to (F) 1122 P.S.I.
Final Closed In Period	Minutes	60	(G)	1277	P.S.I.
Final Hydrostatic Pressure			(H)	1345	P.S.I.



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

Page 2 of 18 Pages

FLUID SAMPLE DATA

Company L. D. Drilling, Inc.

Lease & Well No. Glass No. 2

Date 8-13-04 Sec. 12 Twp. 18 S Range 14 W

Formation Test No. 1 Interval Tested From 2,962 ft. to 2,988 ft. Total Depth 2,988 ft.

Formation Topeka

	<u>MUD PIT</u>	<u>RECOVERY</u>
Viscosity	<u>55</u> CP	<u>--</u> CP
Weight	<u>8.9</u>	<u>--</u>
Water Loss	<u>10.0</u> CC	<u>--</u> CC
PH Factor	<u>10.0</u>	<u>--</u>

	<u>RESISTIVITY</u>	<u>CHLORIDE CONTENT</u>
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>1.00</u> @ <u>70</u> °F. <u>6,000</u> ppm	
Mud Pit Sample Filtrate	<u>1.00</u> @ <u>67</u> °F. <u>7,000</u> ppm	

Sample Taken By JOHN C. RIEDL

Witness By Kim Shoemaker

Remarks Pit filtrate triton dish chlorides were 7,000 Ppm

GENERAL INFORMATION

Client Information:

Company: L D DRILLING INC

Contact: L.D. DAVIS

Phone: Fax: e-mail:

Site Information:

Contact: KIM SHOEMAKER

Phone: Fax: e-mail:

Well Information:

Name: GLASS #2

Operator: L D DRILLING INC

Location-Downhole: DST 1 TOPEKA 2962-2988

Location-Surface: S12/18S/14W

Test Information:

Company: DIAMOND TESTING

Representative: JOHN RIEDL

Supervisor: KIM SHOEMAKER

Test Type: CONVENTIONAL Job Number: D30

Test Unit: 2

Start Date: 2004/08/13 Start Time: 21:30:10

End Date: 2004/08/14 End Time: 06:14:40

Report Date: 2004/08/14 Prepared By: JOHN RIEDL

Qualified By: KIM SHOEMAKER

Remarks:

GTS,SIX MINUTES 1ST FLOW OIL TO SURFACE 35 MIN 2ND FLOW
REC. 2940' CLEAN GASSY OIL [31 GRAVITY @60

Oil Well Test - Buildup

Radial Flow Analysis

L.D. DRILLING, INC

TOPEKA 2,962'-2,988'

GLASS #2

12-18s-14w

Analysis Results

Total Sandface Rate ($q_t B_t$)	579.960 bbl/d	Apparent Skin (s')	-3.493
Semilog Slope (m)	64.20	Skin - Damage	-3.493
Gas Permeability (k_g)	0.000 md	Skin - Inclination	
Oil Permeability (k_o)	792.066 md	Skin - Partial Penetration	
Water Permeability (k_w)	0.000 md	Pressure Drop Due to Skin (Δp_s)	-194.84 psi
Flow Capacity (kh)	4752.399 md.ft	Damage Ratio (DR)	0.326
Total Mobility (k/μ_t)	0.42 md/cp	Flow Efficiency (FE)	3.069
Total Transmissivity (kh/μ_t)	2.53 md.ft/cp		

Reservoir Parameters

Net Pay (h)	6.000 ft
Total Porosity (ϕ_t)	12.00 %
Water Saturation (S_w)	20.00 %
Oil Saturation (S_o)	80.00 %
Gas Saturation (S_g)	0.00 %
Wellbore Radius (r_w)	0.30 ft
Formation Temperature (T)	106.0 °F
Formation Compressibility (c_f)	4.508e-6 psi ⁻¹
Total Compressibility (c_t)	1.191e-5 psi ⁻¹

Pressures

Initial Pressure (p_i)	1462.06 psi
Extrapolated Pressure (p^*)	1308.69 psi
Final Flowing Pressure (p_{wfo})	1114.85 psi

Production and Times

Corrected Flow Time (t_c)	1.2972 hr
Cumulative Oil Production	27.571 bbl
Final Oil Rate	509.000 bbl/d

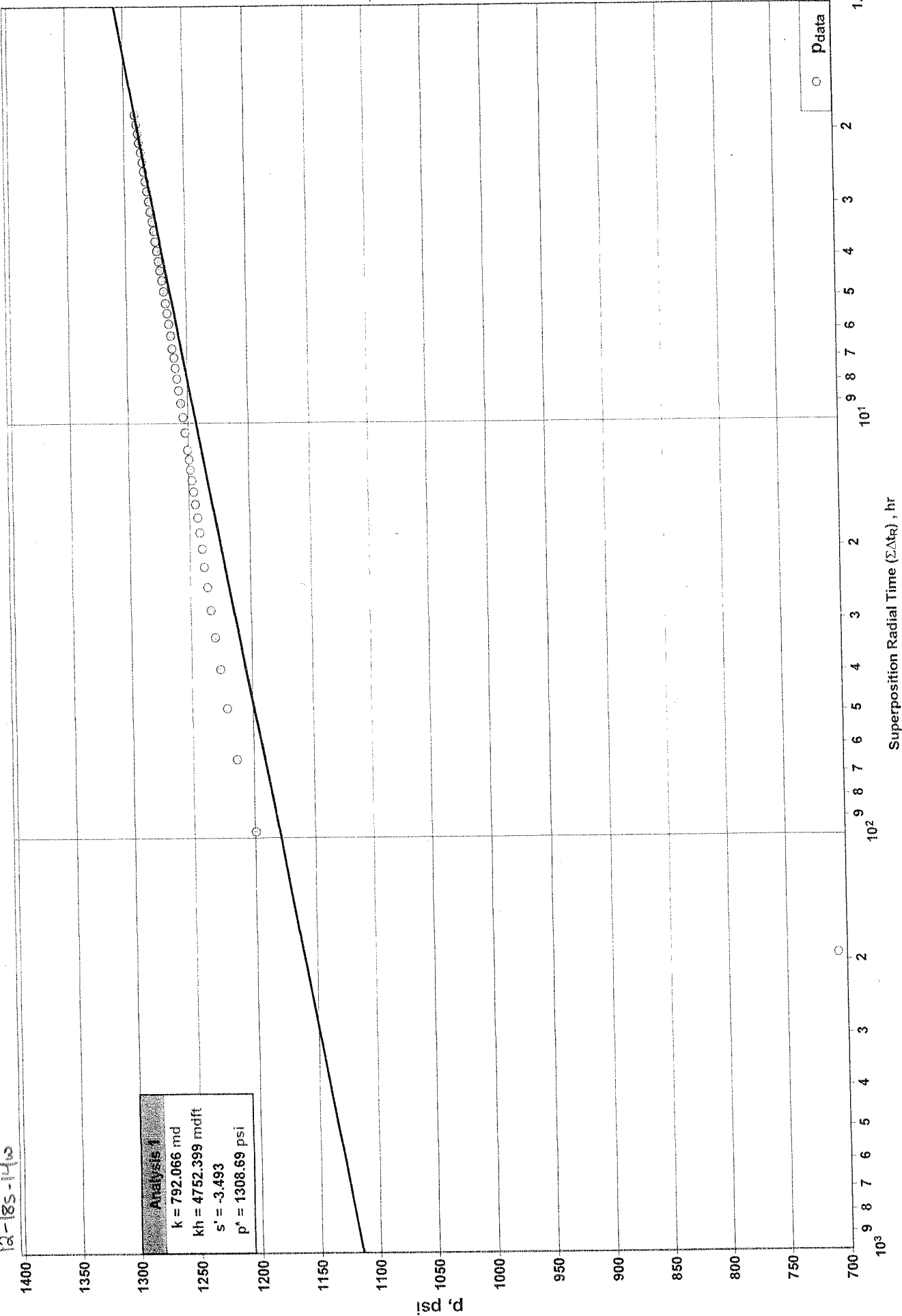
Fluid Properties

Oil Compressibility (c_o)	8.48569e-6 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.139
Oil Viscosity (μ_o)	3.235 cp
Solution Gas Ratio (R_s)	245 scf/bbl
Oil Gravity (γ_o)	31.00 ° API
Gas Gravity (G)	0.650
PVT Reference Pressure (p_{pVT})	1462.06 psi

Diagnostic Analysis 1

Radial

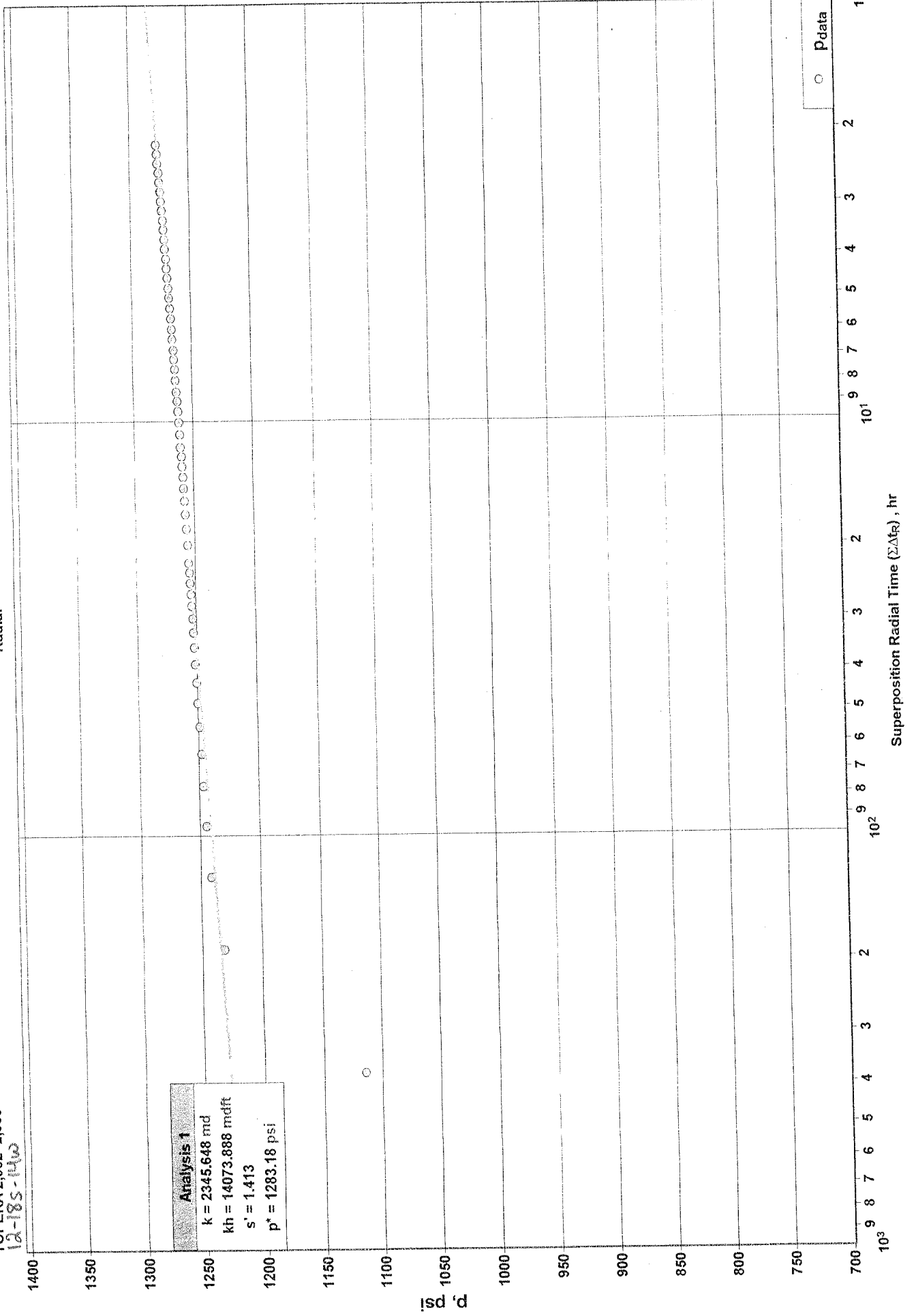
L.D. DRILLING, INC
GLASS #2
TOPEKA 2,962'-2,988'
12-185-1110



Diagnostic Analysis 2

Radial

L.D. DRILLING, INC
GLASS #2
TOPEKA 2,962'-2,988'
12-18S-11W



L.D. DRILLING, INC.

DESCRIPTION	SECOND	FIRST	PRESSURE	PIPE	FLUID	TIME	TOTAL	DAILY	AVERAGE	ESTIMATED
FINAL FLOW	READING	READING	CHANGE	SIZE-ID	GRADIENT	CHANGE	TIME	PROD.	% OIL	PRODUCTION
	1,091	806	285	0.0142	0.382	30	1440	509	1	509

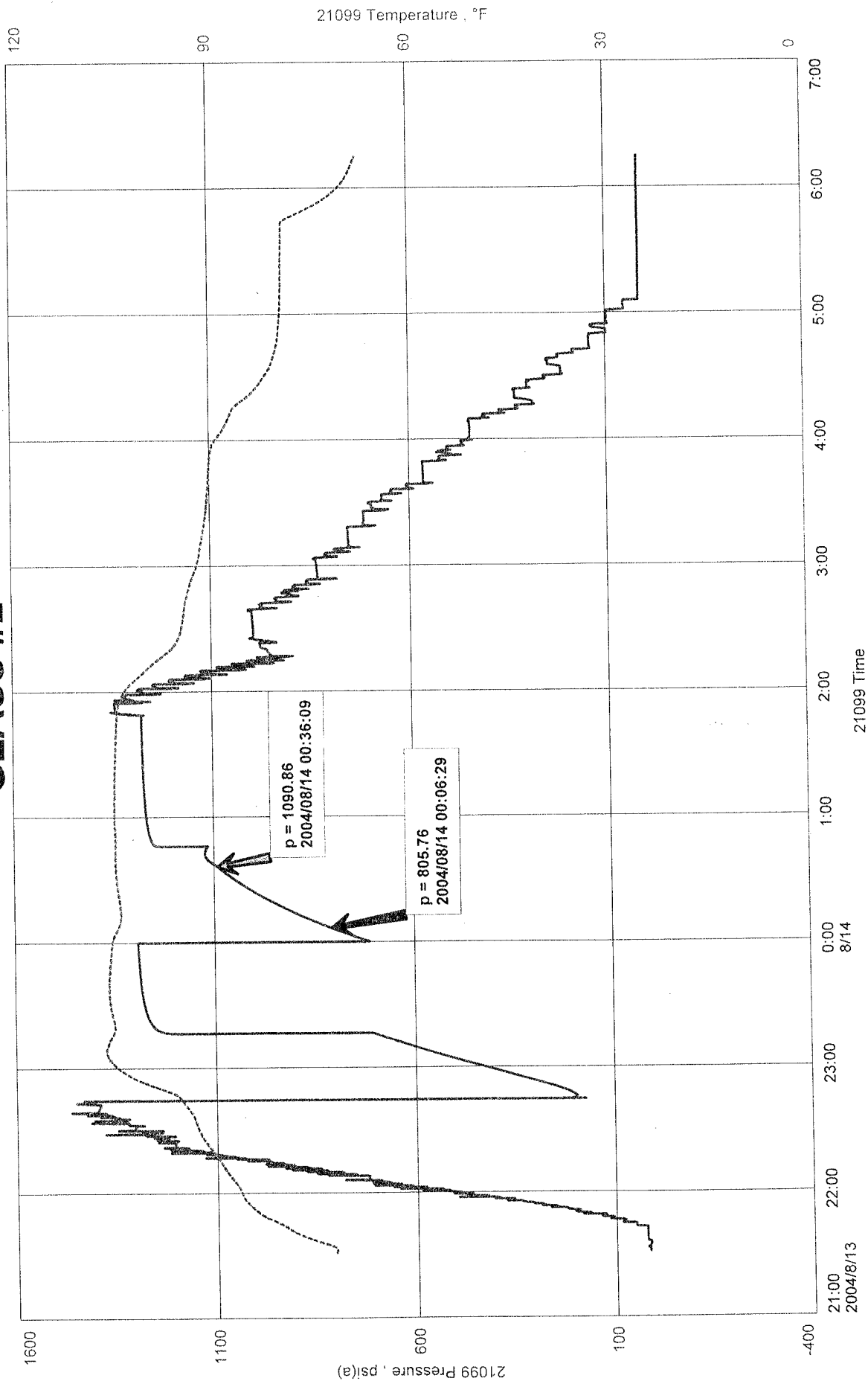
GLASS #2 DST #1 TOPEKA 2,962' - 2,988'
12-185-140

GLASS #2
Formation: DST #1 TOPEKA 2,962' - 2,988'
Pool: WILDCAT

L.D. DRILLING, INC.
DST #1 TOPEKA 2,962' - 2,988'
Start Test Date: 2004/08/13
Final Test Date: 2004/08/14

12-18s-14w

GLASS #2



L.D. Drilling, Inc.
Glass #2, Dst #1

Comments relative to analysis of the drill stem test that was run in the Topeka formation by Diamond Testing.

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 bi-linear flow regime equivalent to approximately $\frac{1}{4}$ slope is noted on the various diagnostic plots. This type of flow regime is often times associated with a decrease in reservoir quality at some distance from the well-bore, and may be indicative of the presence of fracture porosity. A composite oil-well model was used for type-curve matching and non-linear regression analysis.

The semi-log plots indicate a maximum initial reservoir pressure of 1293 psi and a maximum final reservoir pressure of 1278 psi, which is equivalent to a subsurface pressure gradient of 0.431 psi/ft at gauge depth. The difference between the extrapolated initial and final reservoir pressures (15 Psi) is equivalent to approximately 1.2% draw down which is not necessarily considered significant. However, additional well testing or other well data may be necessary to fully determine the extent of the tested reservoir system.

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 0.377 psi/ft.

The calculated Skin Factors indicate slight 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



Glass #2
12-185-14W

Oil Well Test - Buildup

Radial Flow Analysis

Page 11 of 18 Pages

L.D. Drilling, Inc.

Glass #2, Dst #1

Analysis Results

Total Sandface Rate ($q_t B_t$)	822.625 bbl/d	Apparent Skin (s')	4.419
Semilog Slope (m)	15.30	Skin - Damage	4.419
Oil Permeability (k_o)	5155.997 md	Pressure Drop Due to Skin (Δp_s)	58.75 psi
Flow Capacity (kh)	30935.984 md.ft	Damage Ratio (DR)	-4.232
Total Mobility (k/μ_t)	1.77 md/cp	Flow Efficiency (FE)	-0.236
Total Transmissivity (kh/μ_t)	10.63 md.ft/cp		

Reservoir Parameters

Net Pay (h)	6.000 ft
Total Porosity (ϕ_t)	12.00 %
Water Saturation (S_w)	20.00 %
Oil Saturation (S_o)	80.00 %
Gas Saturation (S_g)	0.00 %
Wellbore Radius (r_w)	0.33 ft
Formation Temperature (T)	106.5 °F
Formation Compressibility (c_f)	4.508e-6 psi ⁻¹
Total Compressibility (c_t)	1.182e-5 psi ⁻¹

Fluid Properties

Oil Compressibility (c_o)	8.37556e-6 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.125
Oil Viscosity (μ_o)	3.538 cp
Solution Gas Ratio (R_s)	214 scf/bbl
Oil Gravity (γ_o)	31.00 ° API
Gas Gravity (G)	0.650
PVT Reference Pressure (pp_{VT})	1303.34 psi

Pressures

Initial Pressure (p_i)	1303.34 psi
Extrapolated Pressure (p^*)	1277.93 psi
Final Flowing Pressure (p_{wfo})	1114.20 psi

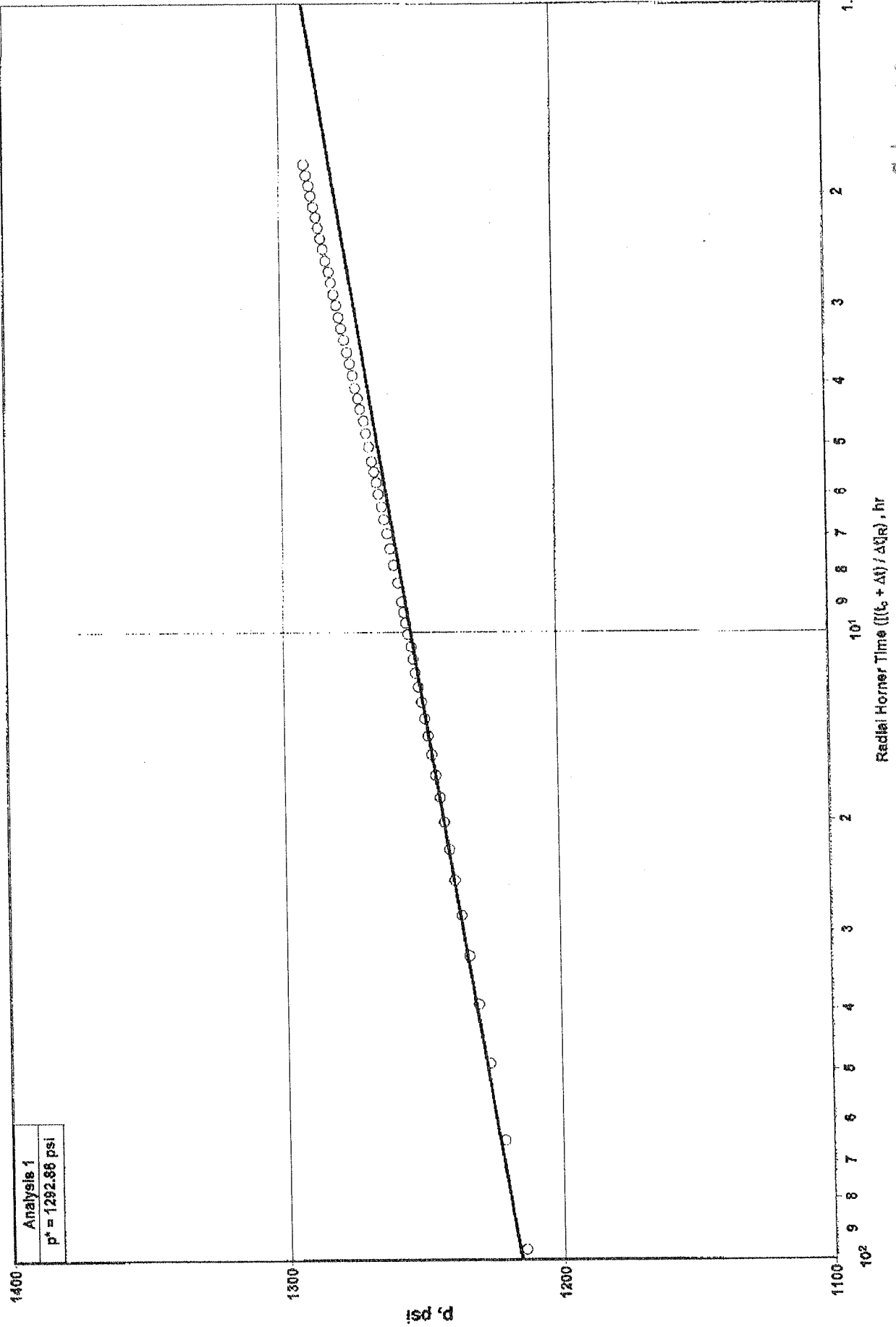
Production and Times

Corrected Flow Time (t_c)	1.2972 hr
Cumulative Oil Production During Test	39.528 bbl
Final Oil Rate	731.310 bbl/d

Glass #2
12-18s-14w

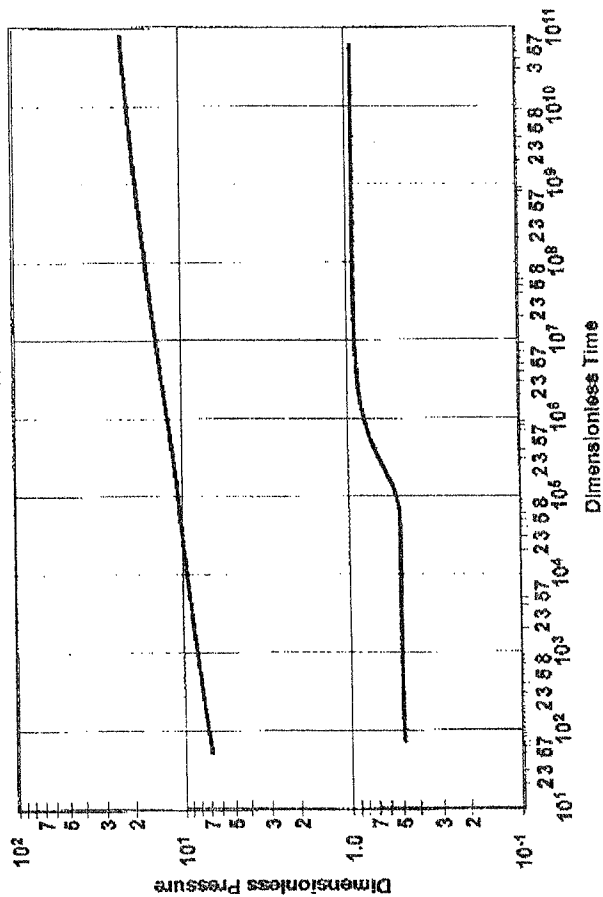
Diagnostic Analysis - Shut in 1

Radial Plot

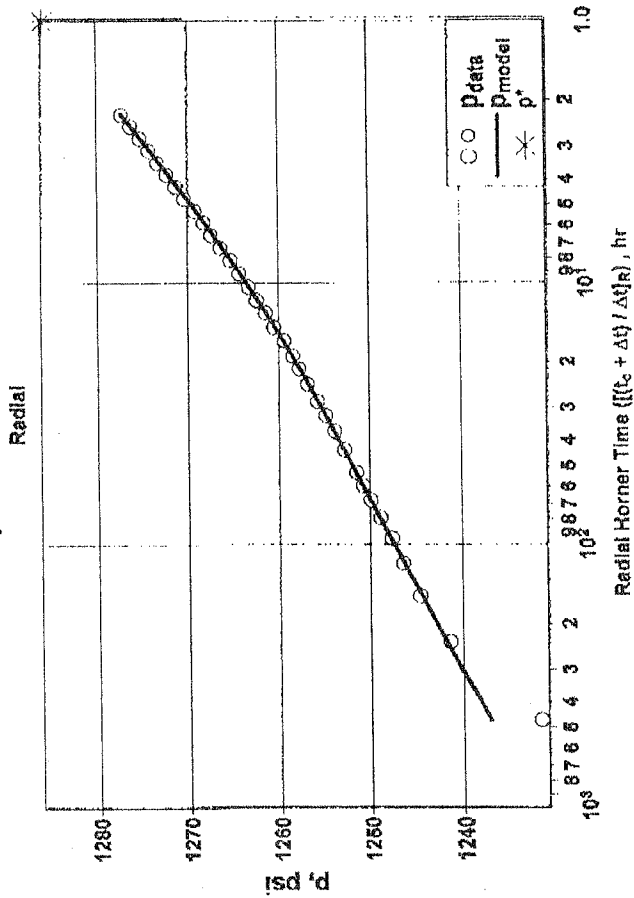


Glass #2
 12-185-14W

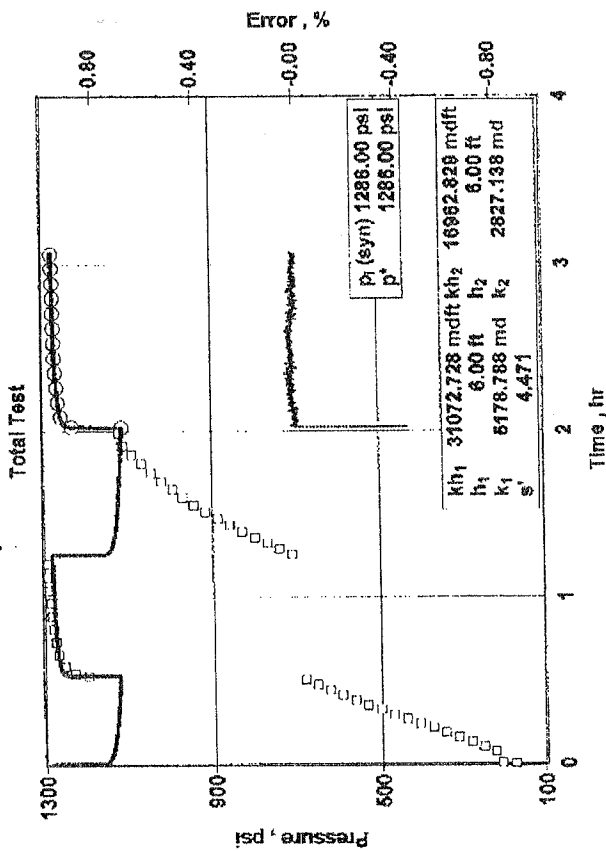
Composite Oil-Well Model



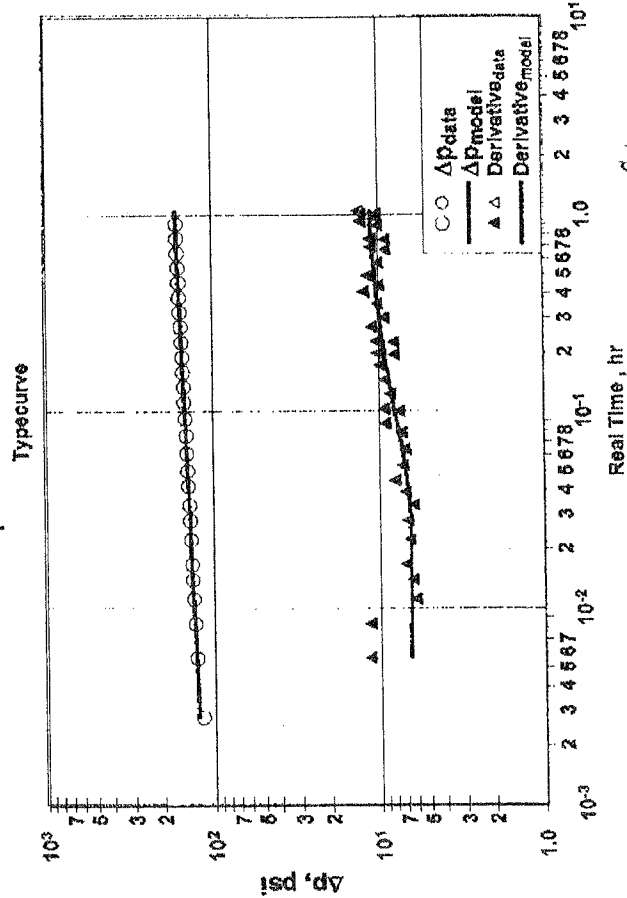
Composite Oil-Well Model



Composite Oil-Well Model



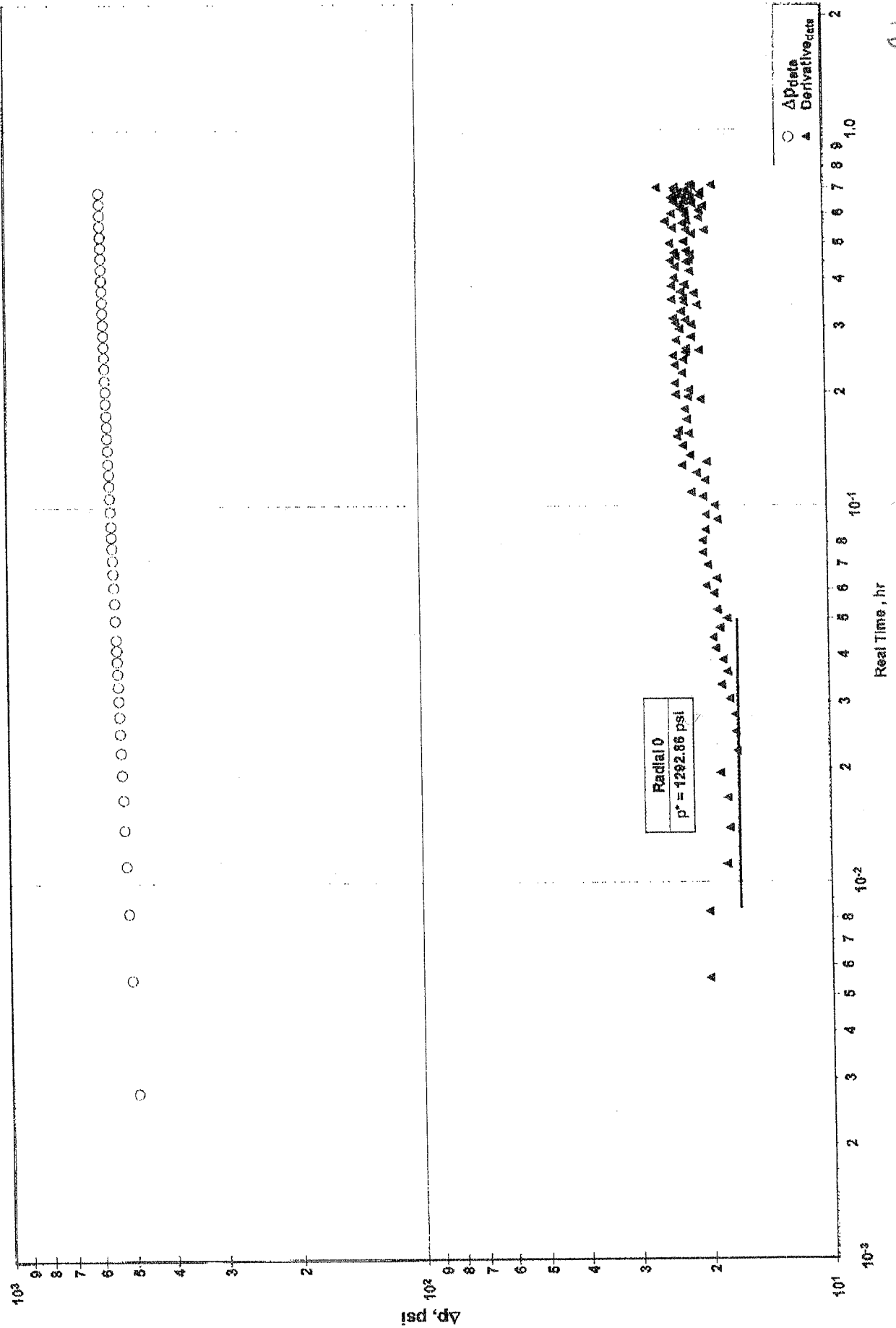
Composite Oil-Well Model



Class #9
12-185-14w

Diagnostic Analysis - Shut in 1

Typecurve



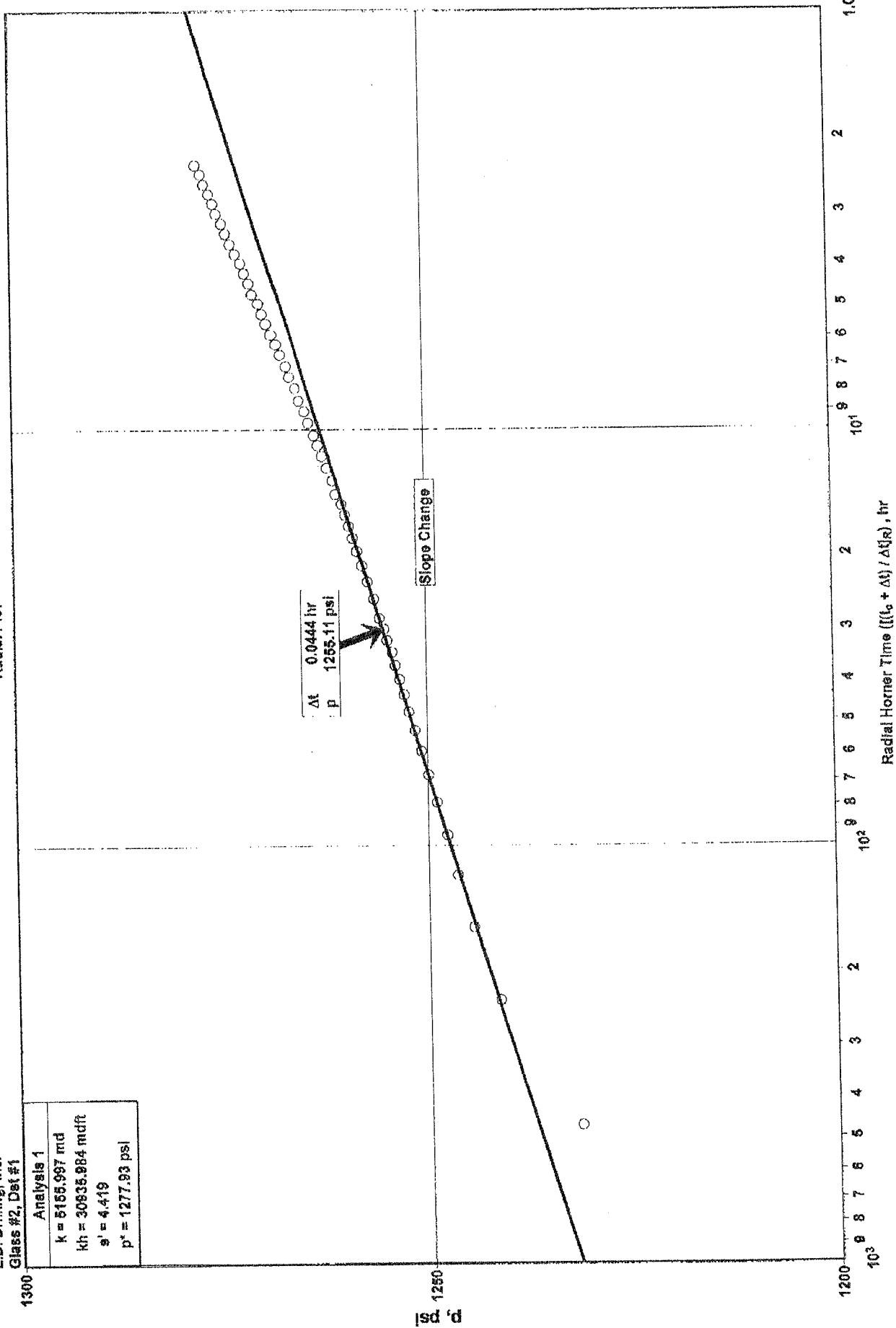
Glass #2
12-185-KW

Diagnostic Analysis - Shut in 2

Radial Plot

L.D. Drilling, Inc.
Glas #2, Def #1

Analysis 1	
k =	5155.997 md
kh =	30835.984 mdft
s' =	4.419
p* =	1277.93 psi



Glas #2
12-185-140

Composite Oil Well Model

L.D. Drilling, Inc.

Glass #2, Dst #1

12-185-146

Model Parameters

Formation Parameters

Region 1

Region 2

Total Mobility (k/μ) ₁	1463.64 md/cp
Permeability (k) ₁	5178.788 md
Net Pay (h) ₁	6.00 ft
Total Porosity (ϕ) ₁	12.00 %
Viscosity (μ) ₁	3.538 cp
Total Compressibility (c) ₁	1.182e-5 psi ⁻¹
Skin (s)	4.471

Total Mobility (k/μ) ₂	799.01 md/cp
Permeability (k) ₂	2827.138 md
Net Pay (h) ₂	6.00 ft
Total Porosity (ϕ) ₂	12.00 %
Viscosity (μ) ₂	3.538 cp
Total Compressibility (c) ₂	1.182e-5 psi ⁻¹

Oil Saturation (S_o)	80.00 %
Gas Saturation (S_g)	0.00 %
Water Saturation (S_w)	20.00 %
Wellbore Radius (r_w)	0.33 ft
Formation Temperature (	106.5 °F

Production and Pressure

$Q_i B_i$	822.625 bbl/d
Final Oil Rate	731.310 bbl/d
Final Flowing Pressure (p_{wfo})	1114.20 psi
Final Measured Pressure	1277.39 psi
Cumulative Oil Production During Test	39.528 bbl

Fluid Properties

Oil Compressibility (c_o)	8.37556e-6 psi ⁻¹
Gas Compressibility (c_g)	8.85702e-4 psi ⁻¹
Water Compressibility (c_w)	3.05815e-6 psi ⁻¹
Oil Formation Volume Factor (B_o)	1.125
Gas Formation Volume Factor (B_g)	0.001812 bbl/scf
Water Formation Volume Factor (B_w)	1.003
Oil Viscosity (μ_o)	3.538 cp
Gas Viscosity (μ_g)	0.0137 cp
Water Viscosity (μ_w)	0.633 cp
Solution Gas Ratio (R_s)	214 scf/bbl
Oil Gravity (γ_o)	31.00 ° API
Gas Gravity (γ_g)	0.650
PVT Reference Pressure (p_{pvr})	1303.34 psi
Bubble Point Pressure (P_{bp})	1303.34 psi

Forecasts

Forecast Flowing Pressure (P_{flow})	1114.20 psi
3 - Month Constant Rate Forecast @ Curr. Skin	476.207 bbl/d
6 - Month Constant Rate Forecast @ Curr. Skin	461.518 bbl/d
Forecast Flow Duration (t_{flow})	12.00 month
Constant Rate Forecast @ Curr. Skin	447.747 bbl/d
PI / II (Total Liquids - Actual)	2.687 bbl/d/psi
Constant Rate Forecast @ Skin=0	567.317 bbl/d
PI / II (Total Liquids - Ideal)	3.432 bbl/d/psi
Constant Rate Forecast @ Skin=-4	745.625 bbl/d

Synthesis Results

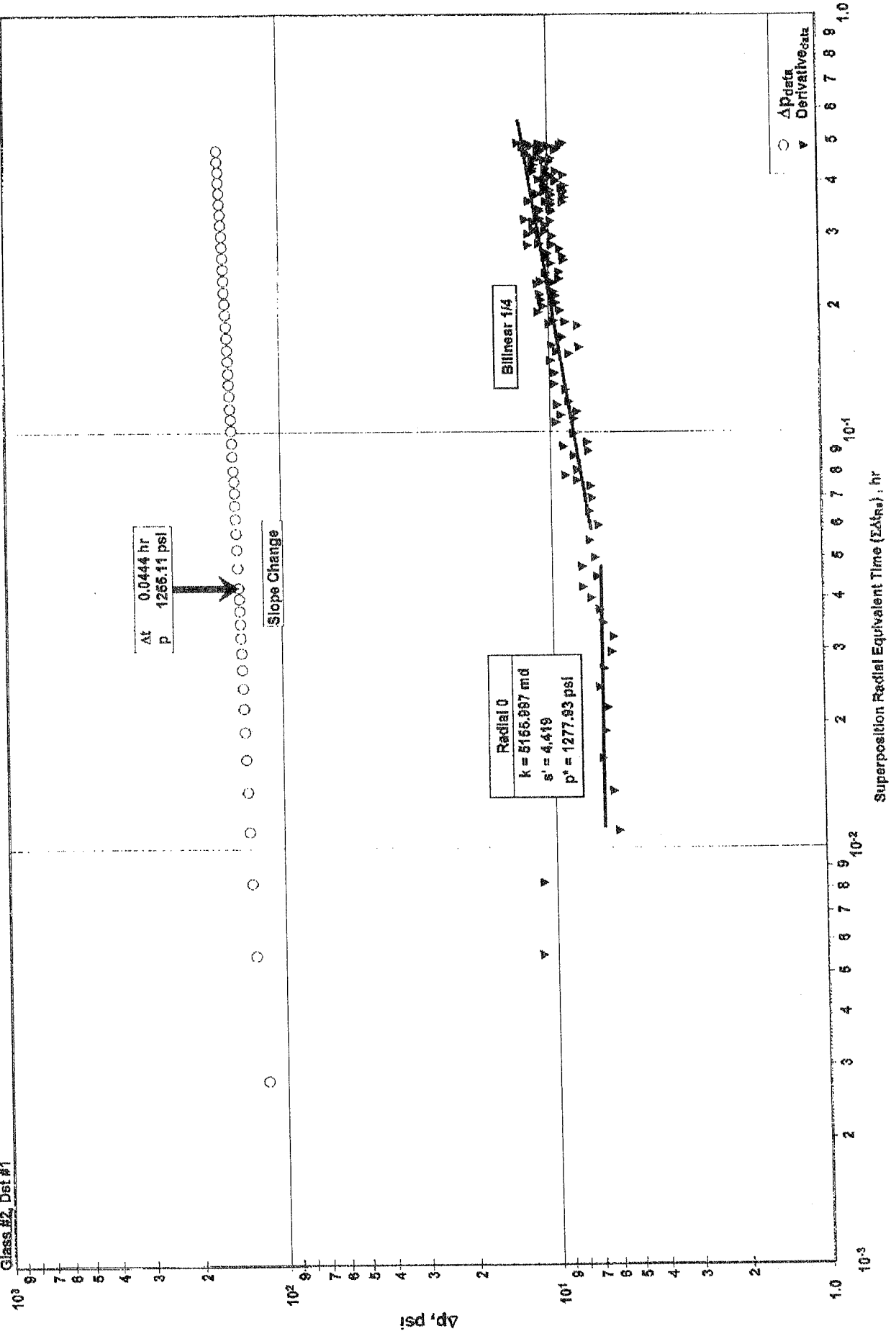
Average Error	1.86e-3 %
Synthetic Initial Pressure (p_i)	1286.00 psi
Extrapolated Pressure at Specified Time	1286.00 psi
Pressure Drop Due To Skin (Δp_s)	59.14 psi
Flow Efficiency (FE)	0.656
Damage Ratio (DR)	1.525

12-185-146

L.D. Drilling, Inc.
Glass #2, Det #1

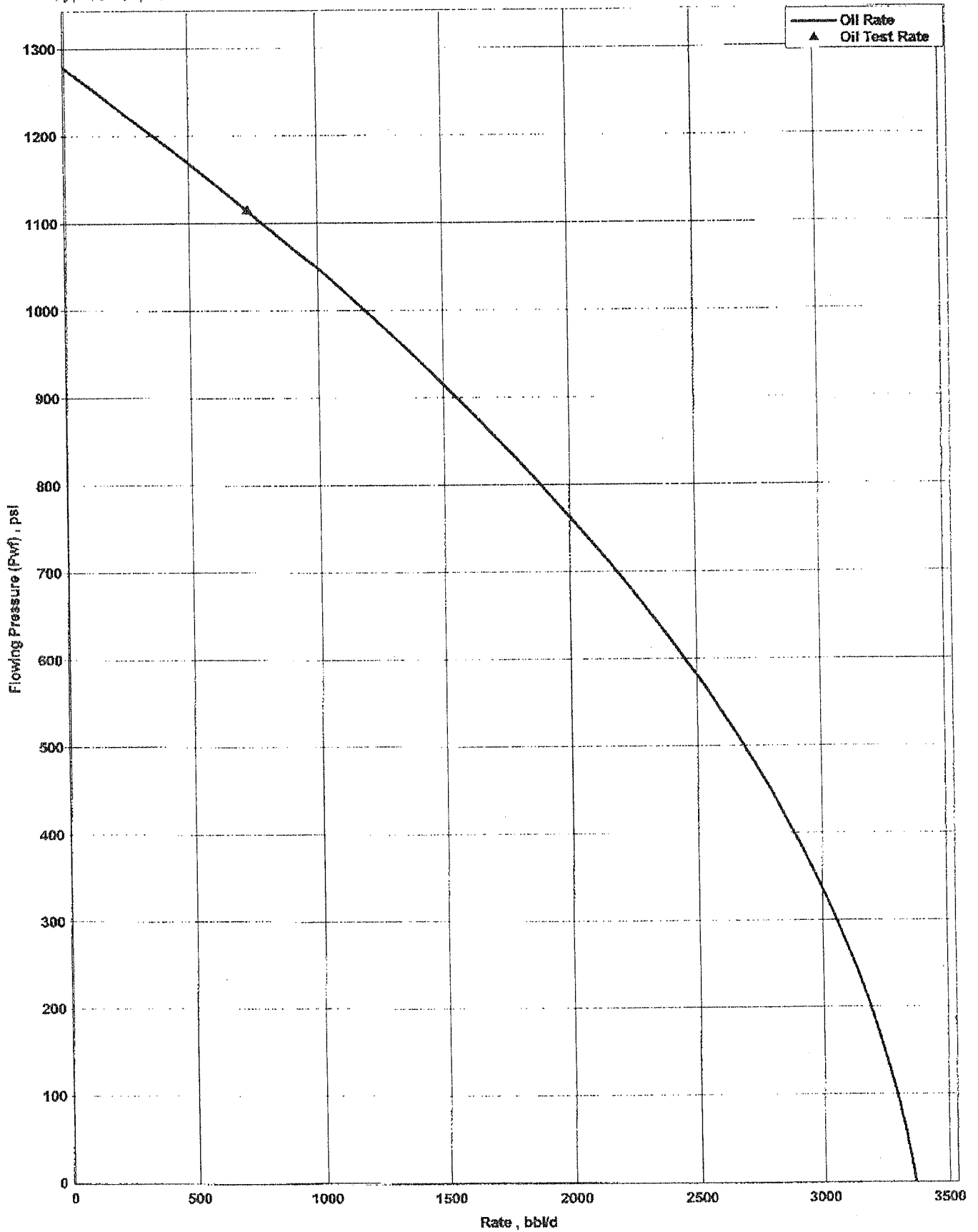
Diagnostic Analysis - Shut In 2

Typecurve



12-18-14 us

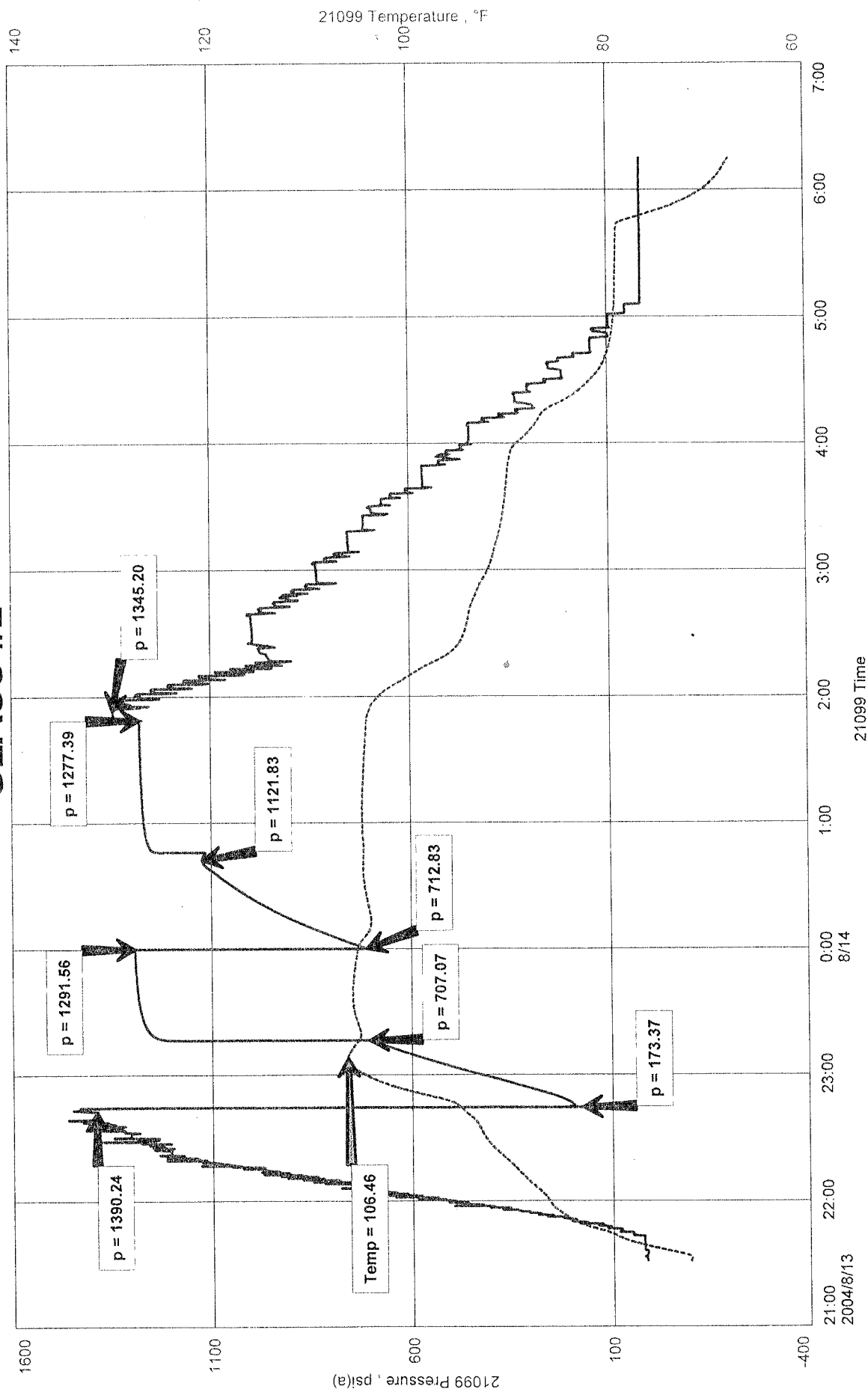
Liquid I.P.R. 1



GLASS #2
Formation: TOPEKA
Job Number: D30

LD DRILLING INC
DST 1 TOPEKA 2962-2988
Start Test Date: 2004/08/13
Final Test Date: 2004/08/14

12-188-1410
GLASS #2

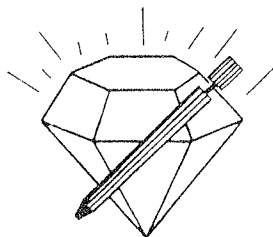


10041087 OUTSIDE DST #1 GLASS #2 CLOG #
L.D DRILLING INC



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Elec. Office Reading
(A) Initial Hydrostatic Mud	1390	1390
(B) First Initial Flow Pressure	173	173
(C) First Final Flow Pressure	707	707
(D) Initial Closed-in Pressure	1292	1292
(E) Second Initial Flow Pressure	713	713
(F) Second Final Flow Pressure	1122	1122
(G) Final Closed-in Pressure	1277	1277
(H) Final Hydrostatic Mud	1345	1345



DIAMOND TESTING

P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313
STC 21099.D31

Page 1 of 3 Pages

Company L. D. Drilling, Inc. Lease & Well No. Glass No. 2
Elevation 1863 KB Formation Arbuckle Effective Pay -- Ft. Ticket No. J1537
Date 8-15-04 Sec. 12 Twp. 18S Range 14W County Barton State Kansas
Test Approved By Kim Shoemaker Diamond Representative John C. Riedl

Formation Test No. 2 Interval Tested from 3,305 ft. to 3,340 ft. Total Depth 3,340 ft.
Packer Depth 3,300 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Packer Depth 3,305 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.
Depth of Selective Zone Set -- ft.

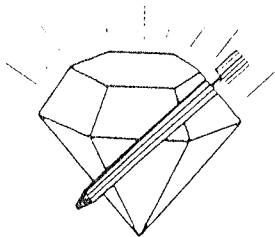
Top Recorder Depth (Inside) 3,308 ft. Recorder Number 21099 Cap. 5,000 psi
Bottom Recorder Depth (Outside) 3,337 ft. Recorder Number 11073 Cap. 3,950 psi
Below Straddle Recorder Depth -- ft. Recorder Number -- Cap. -- psi

Drilling Contractor Southwind Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.
Mud Type Chemical Viscosity 46 Weight Pipe Length -- ft. I.D. -- in.
Weight 9.0 Water Loss 10.0 cc. Drill Pipe Length 3,285 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 35 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. Slowly building to 5 ins. No blow back during shut-in.
2nd Open: Fair blow. Slowly building to 4 ins. No blow back during shut-in.

Recovered 10 ft. of free oil = .142000 bbls.
Recovered 160 ft. of oil specked sulfur water = 2.272000 bbls. (Chlorides: 24,000 Ppm)
Recovered 170 ft. of TOTAL FLUID = 2.414000 bbls.
Recovered -- ft. of --
Recovered -- ft. of --
Remarks --

Time Set Packer(s) 7:32 ~~A.M.~~ ~~P.M.~~ Time Started Off Bottom 10:32 ~~XXXI.~~ ~~P.M.~~ Maximum Temperature 107°
Initial Hydrostatic Pressure (A) 1595 P.S.I.
Initial Flow Period Minutes 30 (B) 29 P.S.I. to (C) 62 P.S.I.
Initial Closed In Period Minutes 35 (D) 1079 P.S.I.
Final Flow Period Minutes 45 (E) 65 P.S.I. to (F) 109 P.S.I.
Final Closed In Period Minutes 70 (G) 1084 P.S.I.
Final Hydrostatic Pressure (H) 1551 P.S.I.



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

Page 2 of 3 Pages

FLUID SAMPLE DATA

Company L. D. Drilling, Inc.

Lease & Well No. Glass No. 2

Date 8-15-04 Sec. 12 Twp. 18 S Range 14 W

Formation Test No. 2 Interval Tested From 3,305 ft. to 3,340 ft. Total Depth 3,340 ft.

Formation Arbuckle

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

	RESISTIVITY	CHLORIDE CONTENT
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>.65</u> @ <u>58</u> °F.	<u>10,000</u> ppm
Mud Pit Sample Filtrate	<u>.68</u> @ <u>56</u> °F.	<u>10,000</u> ppm

Sample Taken By JOHN C. RIEDL

Witness By Kim Shoemaker

Remarks Pit filtrate triton dish chlorides were 10,000 Ppm
Recovery water dish chlorides were 24,000 Ppm

GENERAL INFORMATION

Client Information:

Company: L D DRILLING INC

Contact: L.D. DAVIS

Phone: Fax: e-mail:

Site Information:

Contact: KIM SHOEMAKER

Phone: Fax: e-mail:

Well Information:

Name: GLASS #2

Operator: L D DRILLING INC

Location-Downhole: DST 3305-3340

Location-Surface: S12/18S/14W

Test Information:

Company: DIAMOND TESTING

Representative: JOHN RIEDL

Supervisor: KIM SHOEMAKER

Test Type: CONVENTIONAL Job Number: D31

Test Unit: 2

Start Date: 2004/08/15 Start Time: 06:17:00

End Date: 2004/08/15 End Time: 12:42:00

Report Date: 2004/08/15 Prepared By: JOHN RIEDL

Qualified By: KIM SHOEMAKER

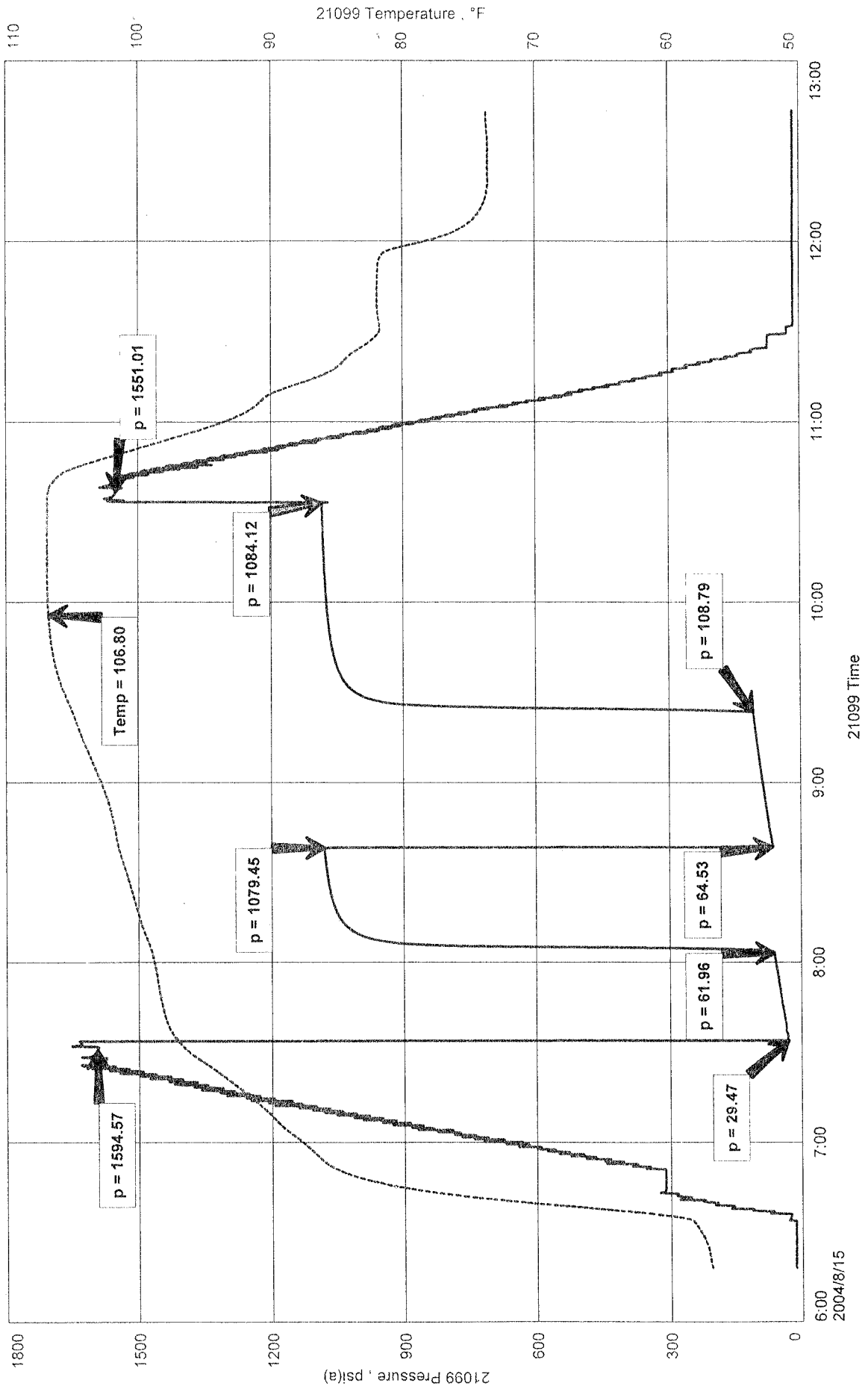
Remarks:

RECOVERY 10' FREE OIL 160' OIL SPECKED SULFUR WATER [24,000Ppm]

GLASS #2
Formation: ARBUCKLE
Job Number: D31

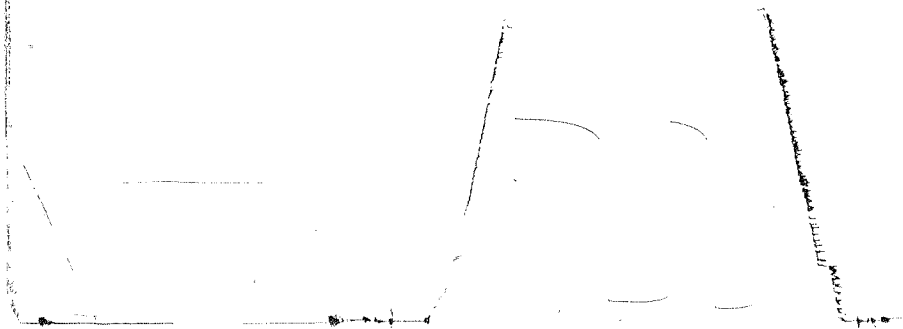
L D DRILLING INC
DST# 3305-3340
Start Test Date: 2004/08/15
Final Test Date: 2004/08/15

12-18s-14w
GLASS #2



LOG 0075 005100 ROT #10007
OSTM2

60000000
40 00100000



This is an actual photograph of recorder chart.

POINT	PRESSURE		Elec.
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	1595	1595	PSI
(B) First Initial Flow Pressure.....	29	29	PSI
(C) First Final Flow Pressure	62	62	PSI
(D) Initial Closed-in Pressure	1079	1079	PSI
(E) Second Initial Flow Pressure.....	65	65	PSI
(F) Second Final Flow Pressure.....	109	109	PSI
(G) Final Closed-in Pressure	1084	1084	PSI
(H) Final Hydrostatic Mud	1551	1551	PSI