



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1217127  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1217127

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Black Diamond Oil, Inc.
Well Name	Glennemeier 1
Doc ID	1217127

All Electric Logs Run

Dual Induction
Sonic
Density/Neutron
Micro

**OPERATOR**

Company: BLACK DIAMOND OIL, INC.  
 Address: P.O. BOX 641  
 HAYS, KS 67601

Contact Geologist: KENNETH VEHIGE  
 Contact Phone Nbr: (785) 625-5891  
 Well Name: GLENNEMEIER #1  
 Location: NE NW SW NW Sec. 4 - 5S - 21W      API: 15-137-20697-00-00  
 Pool:    Field: UNNMAED  
 State: KANSAS    Country: USA

Scale 1:240 Imperial

Well Name: GLENNEMEIER #1  
 Surface Location: NE NW SW NW Sec. 4 - 5S - 21W  
 Bottom Location:  
     API: 15-137-20697-00-00  
 License Number: 7076  
 Spud Date: 4/12/2014                                  Time: 5:15 PM  
     Region: NORTON COUNTY  
 Drilling Completed: 4/18/2014                      Time: 10:06 AM  
 Surface Coordinates: 1630' FNL & 530' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2017.00ft  
 K.B. Elevation: 2022.00ft  
 Logged Interval: 2900.00ft                      To: 3532.00ft  
 Total Depth: 3530.00ft  
 Formation: LANSING - KANSAS CITY, ARBUCKLE  
 Drilling Fluid Type: FRESH WATER / CHEMICAL GEL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: -99.7006099                              Latitude: 39.6494462  
 N/S Co-ord: 1630' FNL  
 E/W Co-ord: 530' FWL

**LOGGED BY**

Company: BIG CREEK CONSULTING, INC.  
 Address: 1909 MAPLE  
 ELLIS, KS 67637  
 Phone Nbr: (785) 259-3737  
 Logged By: Geologist                                  Name: JEFF LAWLER

**CONTRACTOR**

Contractor: WW DRILLING, LLC  
 Rig #: 6  
 Rig Type: MUD ROTART  
 Spud Date: 4/12/2014                                  Time: 5:15 PM  
     TD Date: 4/18/2014                                  Time: 10:06 AM  
 Rig Release: 4/19/2014                                  Time: 3:30 PM

**ELEVATIONS**

K.B. Elevation: 2022.00ft                              Ground Elevation: 2017.00ft  
 K.B. to Ground: 5.00ft


**NOTES**

**WCS**

GLENNEMEIER #1				P&A 10-80				#				#							
A. SCOTT RITCHIE				F&M OIL COMPANY				D G HANSEN				R W SHIELDS & EMPIRE DRG							
NOONE #1				#1 HOCKMAN				TIBBETS #1				SMITH #1							
NW SW SW 5-5-21				NW NW SW 5-5-21				NENE NW 32-4-21				SW SW SW 27-4-21							
KB	2022	GL	2017	KB	2030	LOG	SMPL.	KB	2027	LOG	SMPL.	KB	2130	LOG	SMPL.	KB	2140	LOG	SMPL.
LOG TOPS		SAMPLE TOPS		LOG	LOG	LOG	SMPL.	LOG	LOG	LOG	SMPL.	COMP. CARD	LOG	SMPL.	COMP. CARD	LOG	SMPL.		

FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.	DEPTH	DATUM	CORR.	CORR.
ANHYDRITE TOP	1643	379	1643	379	1645	385	- 6	- 6	1650	377	+ 2	+ 2	1767	363	+ 16	+ 16	1780	360	+ 19	+ 19
BASE	1672	350	1672	350	1672	358	- 8	- 8	1679	348	+ 2	+ 2								
TOPEKA	2984	-962	2982	-960	2983	-953	- 9	- 7	2987	-960	- 2	+ 0	3130	-1000	+ 38	+ 40				
HEEBNER SHALE	3183	-1161	3184	-1162	3182	-1152	- 9	- 10	3184	-1157	- 4	- 5	3305	-1175	+ 14	+ 13	3329	-1189	+ 28	+ 27
TORONTO	3211	-1189	3211	-1189	3209	-1179	- 10	- 10	3210	-1183	- 6	- 6	3331	-1201	+ 12	+ 12	3361	-1221	+ 32	+ 32
LKC	3228	-1206	3226	-1204	3224	-1194	- 12	- 10	3224	-1197	- 9	- 7	3347	-1217	+ 11	+ 13	3377	-1237	+ 31	+ 33
BKC	3414	-1392	3418	-1396	3412	-1382	- 10	- 14	3413	-1386	- 6	- 10	3543	-1413	+ 21	+ 17				
ARBUCKLE	3469	-1447	3468	-1446	3463	-1433	- 14	- 13	3473	-1446	- 1	+ 0	3591	-1461	+ 14	+ 15	3636	-1496	+ 49	+ 50
TOTAL DEPTH	3532	-1510	3530	-1508	3469	-1439	- 71	- 69	3500	-1473	- 37	- 35	3645	-1515	+ 5	+ 7	3670	-1530	+ 20	+ 22
DDTD					3475	-1445														
DDTD					3485	-1455														

### DST #1 TORONTO 3182' - 3220'

	<b>DRILL STEM TEST REPORT</b>	
	Black Diamond Oil	<b>4 5 21w Norton Ks.</b>
	P.O. box 641 Hays Ks 67601	<b>Glennemeier #1</b>
	ATTN: Jeff Lawlor	Job Ticket: 55052 <b>DST#: 1</b> Test Start: 2014.04.15 @ 09:05:00

**GENERAL INFORMATION:**

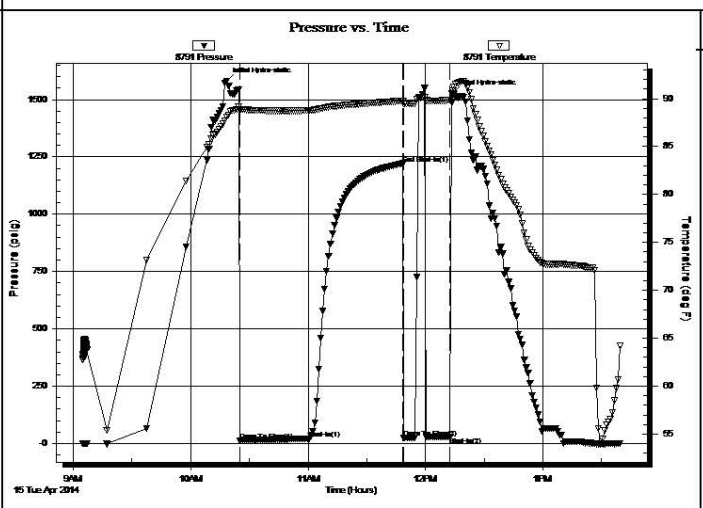
Formation: **Toronto**  
Deviated: No    Whipstock:                      ft (KB)                      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 10:25:00                      Tester: Chuck Kreutzer Jr.  
Time Test Ended: 13:39:30                      Unit No: 61

Interval: **3182.00 ft (KB) To 3220.00 ft (KB) (TVD)**                      Reference Elevations: 2022.00 ft (KB)  
Total Depth: 3220.00 ft (KB) (TVD)                      2017.00 ft (CF)  
Hole Diameter: 7.88 inches    Hole Condition: Good                      KB to GR/CF: 5.00 ft

**Serial #: 8791      Inside**

Press@RunDepth: 21.19 psig @ 3185.00 ft (KB)                      Capacity: 8000.00 psig  
Start Date: 2014.04.15                      End Date: 2014.04.15                      Last Calib.: 2014.04.15  
Start Time: 09:05:01                      End Time: 13:39:30                      Time On Btm: 2014.04.15 @ 10:18:30  
Time Off Btm: 2014.04.15 @ 12:14:00

**TEST COMMENT:** IF: Weak surface blow over 30 mins.  
ISI: No blow back  
FF: No blow . Flushed tool-Pulled tool 10 mins. after wards




PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1581.01	88.07	Initial Hydro-static
7	13.09	88.80	Open To Flow (1)
42	21.19	88.76	Shut-In(1)
90	1221.11	89.77	End Shut-In(1)
91	23.61	89.45	Open To Flow (2)
114	28.93	89.84	Shut-In(2)
116	1527.67	90.79	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	mud with oil specs	0.10

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

**DST #2 LKC C - D 3242' - 3285'**

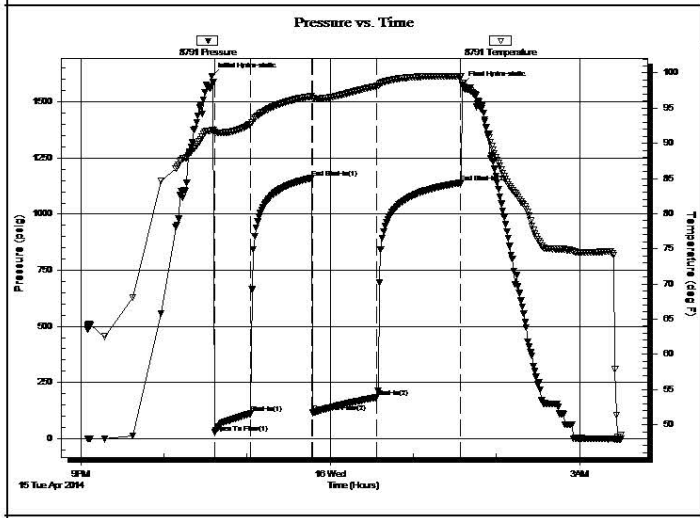
	<b>DRILL STEM TEST REPORT</b>	
	Black Diamond oil P.O.Box 641 Hays Ks 67601 ATTN: Jeff Lowery	<b>4 5 21w Norton Ks.</b>  <b>Glennemeier #1</b> Job Ticket: 55053 <b>DST#: 2</b> Test Start: 2014.04.15 @ 21:05:00

**GENERAL INFORMATION:**

Formation: <b>LKC-C-D</b>	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock:                      ft (KB)	Tester: Chuck Kreutzer Jr.
Time Tool Opened: 21:36:30	Unit No: 61
Time Test Ended: 02:29:30	
<b>Interval: 3242.00 ft (KB) To 3285.00 ft (KB) (TVD)</b>	Reference Elevations: 2022.00 ft (KB)
Total Depth: 3285.00 ft (KB) (TVD)	2017.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good	KB to GR/CF: 5.00 ft

<b>Serial #: 8791</b> <b>Inside</b>	
Press@RunDepth: 183.49 psig @ 3250.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2014.04.15      End Date: 2014.04.16	Last Calib.: 2014.04.16
Start Time: 21:05:01      End Time: 03:29:30	Time On Btm: 2014.04.15 @ 22:34:30
	Time Off Btm: 2014.04.16 @ 01:35:30

**TEST COMMENT:** IF: Fair blow , Built to B.O.B in 12 mins.  
 IS: No blow back  
 FF: Fair blow , Built to B.O.B in 20 mins.  
 FS: No blow back

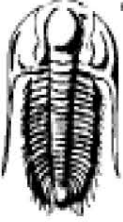


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1614.70	91.85	Initial Hydro-static
2	26.53	91.54	Open To Flow (1)
28	111.17	92.72	Shut-In(1)
72	1160.39	96.69	End Shut-In(1)
73	115.17	96.37	Open To Flow (2)
119	183.49	98.14	Shut-In(2)
180	1139.84	99.53	End Shut-In(2)
181	1576.13	98.53	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
186.00	water-100%	1.50
186.00	MCW-20% m80%w	2.61
62.00	SOCWM-20% o30%w 50% m	0.87

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

**DST #3 LKC E 3285' - 3294'**

 <p><b>TRILOBITE TESTING, INC</b></p>	<b>DRILL STEM TEST REPORT</b>	
	Black Diamond oil P.O.box 641 Hays Ks 67601 ATTN: Jeff Low ery	<b>4 5 21w Norton Ks.</b> <b>Glennemeier #1</b> Job Ticket: 55054 <b>DST#: 3</b> Test Start: 2014.04.16 @ 09:10:00

**GENERAL INFORMATION:**

Formation: **LKC-E**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 10:37:00  
 Time Test Ended: 13:42:30

Interval: **3285.00 ft (KB) To 3294.00 ft (KB) (TVD)**  
 Total Depth: 3294.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

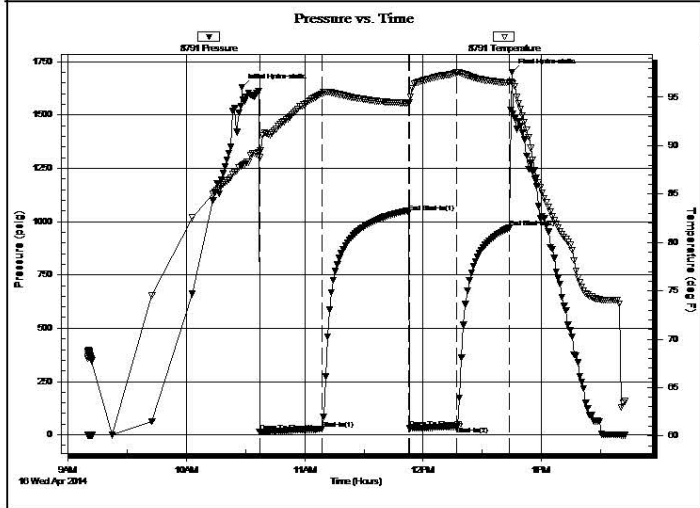
Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreutzer Jr.  
 Unit No: 61

Reference Elevations: 2022.00 ft (KB)  
 2017.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8791      Inside**

Press@RunDepth: 38.46 psig @ 3286.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2014.04.16      End Date: 2014.04.16	Last Calib.: 2014.04.16
Start Time: 09:10:01      End Time: 13:42:30	Time On Btm: 2014.04.16 @ 10:28:00
	Time Off Btm: 2014.04.16 @ 12:45:00

**TEST COMMENT:** IF: Weak blow surface over 30 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back

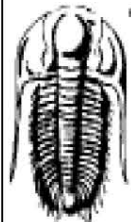


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1628.42	87.92	Initial Hydro-static
9	13.35	88.77	Open To Flow (1)
41	26.60	95.37	Shut-In(1)
85	1041.94	94.39	End Shut-In(1)
85	30.26	94.49	Open To Flow (2)
109	38.46	97.57	Shut-In(2)
136	970.40	96.48	End Shut-In(2)
137	1701.09	96.54	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
25.00	mcw -35% m65%w -Withgood odor	0.12

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

### DST #4 LKC E - F 3286' - 3302'

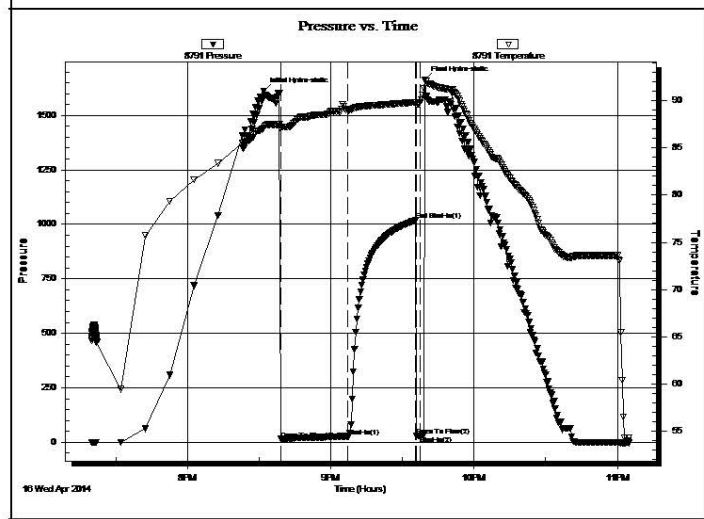
 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>	
	Black Diamond oil P.O.Box 641 Hays Ks 67601 ATTN: Jeff Lowery	<b>4 5 21w Norton Ks.</b> <b>Glennemeier #1</b> Job Ticket: 55055 <b>DST#: 4</b> Test Start: 2014.04.16 @ 19:20:00

**GENERAL INFORMATION:**

Formation: <b>LKC-F</b>	Test Type: Conventional Bottom Hole (Reset)
Deviated: No Whipstock: ft (KB)	Tester: Chuck Kreutzer Jr.
Time Tool Opened: 20:39:00	Unit No: 61
Time Test Ended: 23:05:00	Reference Elevations: 2022.00 ft (KB)
<b>Interval: 3286.00 ft (KB) To 3302.00 ft (KB) (TVD)</b>	2017.00 ft (CF)
Total Depth: 3220.00 ft (KB) (TVD)	KB to GR/CF: 5.00 ft
Hole Diameter: 7.88 inches Hole Condition: Good	

<b>Serial #: 8791</b> <b>Inside</b>	Capacity: 8000.00 psig
Press@RunDepth: 27.19 psig @ 3289.00 ft (KB)	Last Calib.: 2014.04.16
Start Date: 2014.04.16      End Date: 2014.04.16	Time On Btm: 2014.04.16 @ 20:32:00
Start Time: 19:20:01      End Time: 23:05:00	Time Off Btm: 2014.04.16 @ 21:39:30

**TEST COMMENT:** IF: Weak blow, Dead in 1 min  
 IS: No blow back  
 FF: No blow - Flushed and pull



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1611.24	87.13	Initial Hydro-static
7	14.35	87.04	Open To Flow (1)
35	27.19	88.99	Shut-In(1)
64	1017.85	89.84	End Shut-In(1)
64	29.31	89.53	Open To Flow (2)
66	30.33	89.82	Shut-In(2)
68	1664.14	92.22	Final Hydro-static












Recovery		
Length (ft)	Description	Volume (bbl)
5.00	mud	0.02

\* Recovery from multiple tests

Gas Rates			
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)	



### ROCK TYPES

 Cht vari	 Lmst fw<7	 shale, gry	 shale, red
 Congl	 Lmst fw7>	 Carbon Sh	 Ss
 Dolprim	 shale, grn	 Shblk	

### ACCESSORIES

#### MINERAL

\* Sandy

#### FOSSIL










◇ Oolite

#### STRINGER

■ Sandstone  
■ red shale

### OTHER SYMBOLS

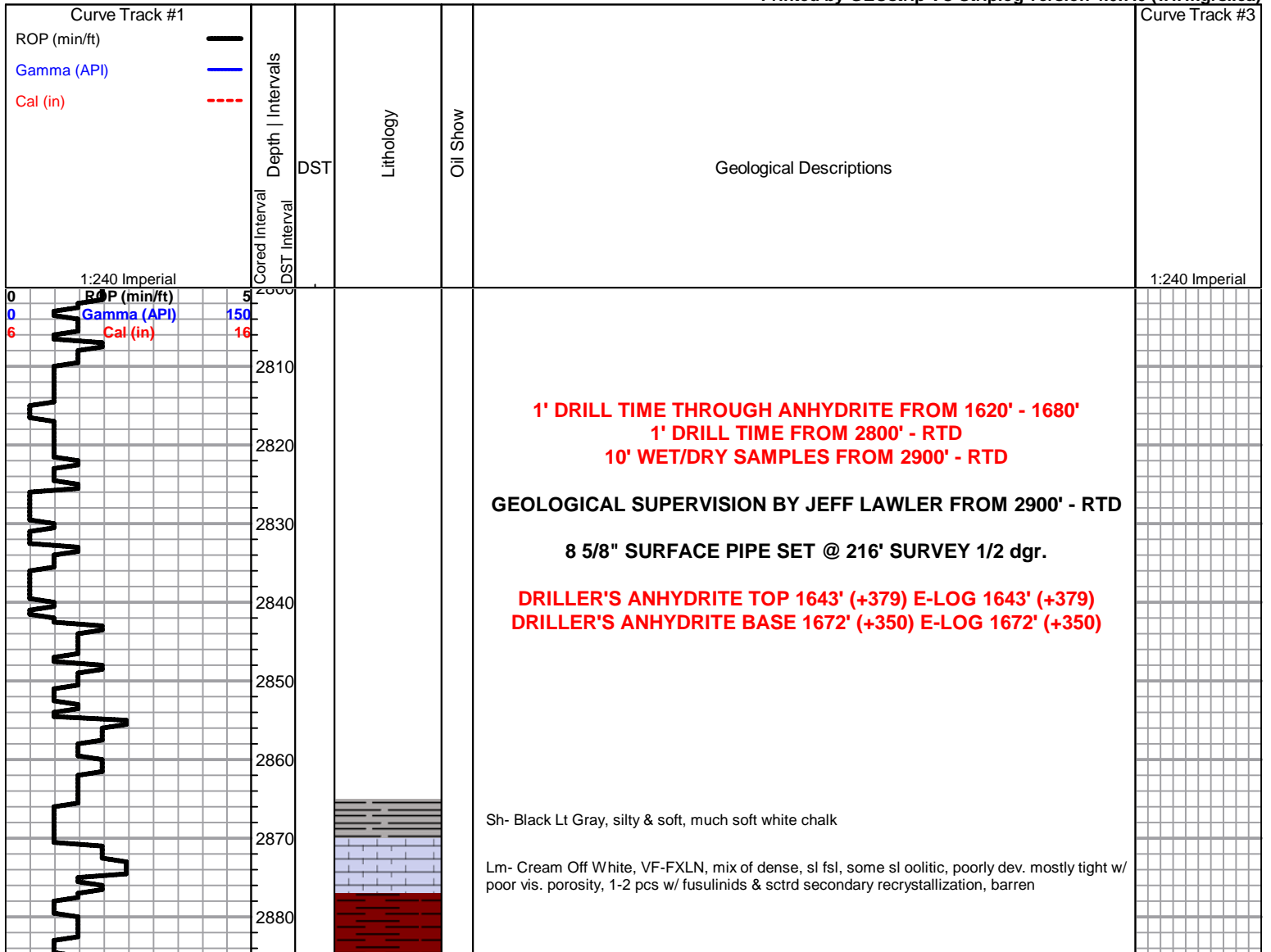
#### MISC

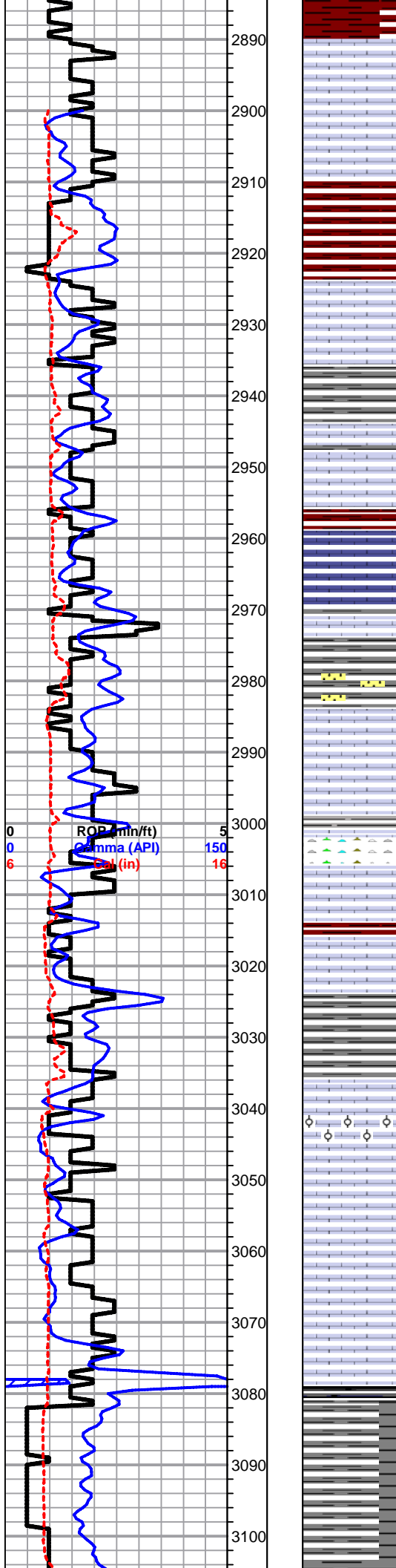
-  Daily Report
-  Digital Photo
-  Document
-  Folder
-  Link
-  Vertical Log File
-  Horizontal Log File
-  Core Log File
-  Drill Cuttings Rpt

#### DST

■ DST Int  
■ DST alt

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)





Lm- Off White Cream, VF-FXLN, dense, well cemented, fsl & some oolitic, poorly dev. w/ dense XLN inter oolite porosity, barren, some tight w/ minimal vis. porosity, few lithified mud matrix w/o vis. porosity

Lm- Cream Tan, VF-FXLN, fsl, some w/ fsl fragments, sctrd-dense XLN porosity, most well cemented, barren, soft white chalk, Sh- Lt Gray, silty & calcareous, some gummy wash

Sh- Maroon Lm Green Gray, gummy argillaceous clumps

Lm- Cream Buff, mix of granular tight sl dolomitic ls w/ poor vis. porosity, & fsl FXLN, dense buff ls w/ sctrd XLN porosity, much soft white chalk

Sh- Gray Maroon, silty & calcareous, gummy wash, gritty & earthy

Lm- Gray Buff Tan, VFXLN, dense, vry well cemented, some sl fsl, tight w/ sctrd micro XLN porosity

Lm- Tan Gray, VF-FXLN Vf Grn, tight mix, some trashy bioclastic w/ fsl frag w/o vis. porosity, rest vry tight w/o vis. porosity, soft siltstone & soft white chalk

Lm- Gray Cream, mostly Vf Grn, mud supported matrix, some fsl & trashy, loosely cemented, few pcs of fsl & sl oolitic, mostly tight w/ poor vis. porosity, barren

Lm- Gray Buff, VFXLN, dense, vry well cemented, sl granular & grainy, no vis. porosity, much soft chalk & gummy lime wash

Ss/Sh- White Gray Mint Green, Vf Grn lime sand, loosely-well cemented Sh- Gummy maroon clumps

**TOPEKA 2982' (-980) E-LOG 2984' (-962)** Lm- Gray w/ Yellow Tint Tan Cream, Fn Grn, chalky mud supported matrix, oolitic, poorly dev. w/ poor porosity, mixed w/ fsl VF-FXLN, fsl, mostly tight w/ micro XLN & sctrd XLN porosity, soft white chalk

Sh- Black Gray, silty & soft, calcareous, gummy wash, abundant soft white chalk

Chert- White/Cream, eroded & reworked chert w/ densely packed fusulinids frag., no vis. porosity

Lm- Cream, VFXLN, massive, sl granular, loosely-well cemented, sl chalky in part, minimal effective porosity, dense recrystallization, barren

Sh- Gray Maroon, silty & soft, gummy wash Ss- Gray, fn grn, sl trashy, most well cemented, granular, barren

Lm- Cream Off White, VF-FXLN, oolitic, ranging from densely packed small oolites w/ sparry cement to FXLN to vry well cemented dense sctrd recrystallization porosity, no effective porosity, barren, few pcs of milky white fresh bedded chert, abundant soft white chalk

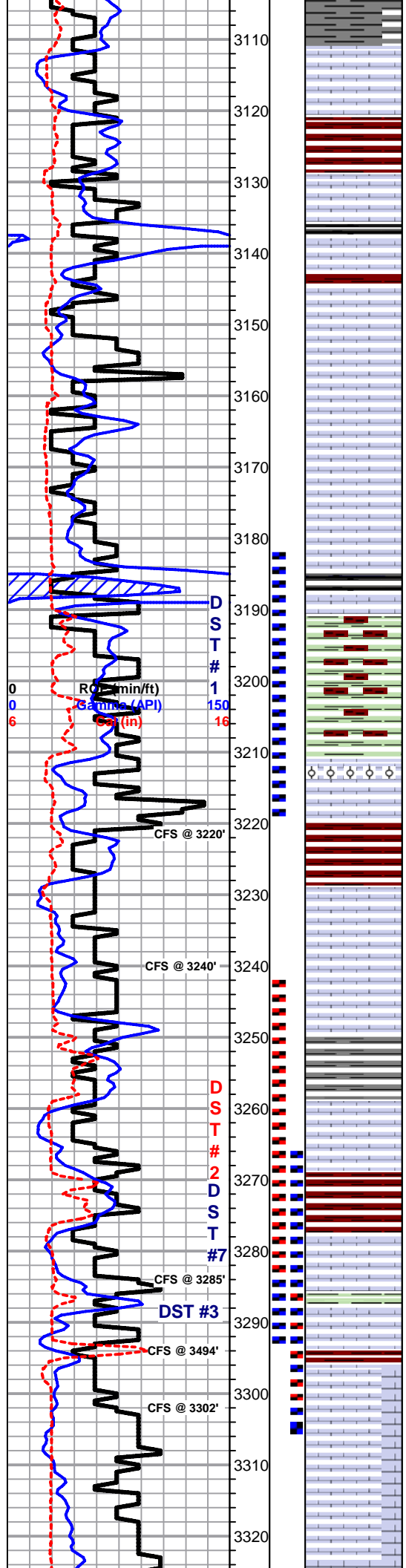
Lm- Cream, VFXLN, massive, dense, vry well cemented dolomitic ls, sub-sucrosic, micro XLN porosity, vry clean, much soft white chalk

Lm- Off White, VF-FXLN, sl fsl, poorly dev, mostly tight w/ micro XLN & XLN porosity, few w/ sctrd recrystallization porosity, vry clean

Lm- A/A w/ buff gray FXLN, bioclastic w/ fsl frag., sctrd XLN porosity, barren

Sh- Black Maroon Gray, fissile, carbonaceous, gritty & earthy, silty gummy lime

Sh- Gray Maroon, sandy gummy lime



Lm- Cream Off White, VF-FXLN, vry densely packed fsl & oolitic, poorly dev. w/ sparry cementation, minimal effective porosity, sctrd recrystallization porosity, barren

Sh- Maroon Gray, gummy wash, sandy lime, silty & calcareous

Sh- Black Maroon White, fissile, carbonaceous, gritty & earthy, dense, much soft white chalk

Lm- Cream Tan, VF-FXLN, fsl & sl oolitic, most poorly dev., some massive & loosely cemented w/ dense XLN porosity, tight fsl w/o effective porosity, all clean, barren, much soft white chalk

Lm- Cream Off White, Crypto-VF-XLN, dense, tight, most w/o vis. porosity, sctrd micro XLN porosity, chalky in part

Lm- Cream Off White, VF-FXLN, dense, sl fsl, tight & poorly dev. w/ minimal vis. porosity, abundant white chalk

Lm- A/A

**HEEBNER 3184' (-1162) E-LOG 3183' (-1161)** Sh- fissile, silty, carbonaceous, gummy gray clumps

Sh- Mint Green Maroon, abundant gummy argillaceous clumps & wash

**TORONTO 3211' (-1189) E-LOG 3211' (-1189)** Lm- White, F-Med XLN, fsl & oolitic, well dev. w/ constant ppt intergranular porosity, few pcs w/ crs recrystallization, SCTRD LT STN, MOD SFO, FR ODR, FR OILY SHEEN, soft white chalk

**40"**- Lm- Cream Tan, VF-FXLN, poorly dev. fsl w/ sctrd XLN porosity, few pcs of milky white fresh bedded chert/cherty ls w/o vis. porosity

**60"**- Lm/Chert- Cream VF-FXLN, sl grainy, vry well cemented w/ sctrd XLN & vry fn ppt porosity, LT SCTRD STN, SL-FR SFO, FR ODR, few pcs of chert w/ dense crs XLN & fn ppt porosity (possible fracturing) & recrystallization, LT SCTRD STN, SL-FR SFO, ODR A/A

**LKC 3226' (-1204) E-LOG 3228' (-1206)** Lm- Buff Cream, VF-FXLN, dense, well cemented, mostly tight w/ minimal vis. porosity, few pcs of oolitic biomicrite w/ sparry replacement cementation, vry sctrd ppt porosity, sl recrystallization w/in, WK SPOTTY STN, NSFO, NO ODR

**40"**- Lm- Cream Off White, VF-XLN, dense, vry well cemented, tight cherty ls mostly w/o vis. porosity, soft white chalk

Lm- Tan, FXLN, well cemented & brittle w/ sctrd XLN recrystallization porosity, tight cherty ls, barren

Sh- Gray Lm Green Maroon, silty & calcareous, dense, gritty & earthy, gummy argillaceous clumps

Lm- White, Med-Crs XLN, mod. well dev., oolitic w/ sctrd to constant ppt inter oolite porosity, SCTRD DRK STN, SFO, FEW W/ GSY BUBBLES UPON CRUSH, FR ODR, HVY OILY SHEEN, some soft white chalk

Lm- FXLN, White Cream, mostly tight, w/ poor vis. porosity, several pcs of milky white frsh bedded chert

Sh- Maroon Lm Green, gritty & earthy, gummy wash

Lm- White, Med XLN, oolitic w/ few small fusulinds, several pcs of well dev. oolitic grainstone w/ constant interoolite porosity throughout, DRK STN, FR SFO, FEW GSY BUBBLES, WK-FR ODR **20"**- Lm- A/A w/ increasing ODR, & VF-XLN, tight w/ minimal vis. porosity & soft white chalk **40"**- Sh- argillaceous lm green clumps

**3294'**- Lm- White Off White, mix of Med XLN, mod. well dev. oolitic ls w/ constant fn ppt porosity throughout, lt sctrd recrystallization w/in por., DRK SCTRD STN, FR SFO, SEVERAL GSY BUBBLES, FR-STRNG SULPHURIC ODR, & VF-FXLN, sl fsl, poorly dev. w/ sctrd micro XLN & XLN porosity, barren, some white chalk, several pcs of milky white bedded chert

**3302'**- Lm- White Cream, Vf Grn VF-FXLN, mostly soft white chalk & mud supported matrix, vry loosely cemented, several pcs of sl fsl & poorly dev. oolitic ls w/ micro XLN & XLN porosity, 3-5 pcs of mod. dev. oolitic ls w/ sctrd fn ppt porosity, SCTRD DRK STN, TR FO, FR-GD SULPHURIC ODR, 2-3 pcs of frosted sl oomoldic, loosely cemented (possible fracturing)

Lm- White Off White, VF-XLN Vf Grn, dense tight mix, minimal vis. porosity, milky white bedded chert

Lm- Cream Tan, VF-XLN, brittle, tight w/ minimal vis. porosity, incr. amount of chert A/A

SHORT TRIP SURVEY +0.72' STRAP 3/4 dgr.

DST #1 TORONTO 3182' - 3220'

30-45-20-0

20' MUD w/ OIL SPOTS

IFP: 13-21#  
FFP: 23-28#  
SIP: 1221-N/A  
HYD: 1581-1527#  
BHT: 90 dgr.

DST #2 LKC C - D 3242' - 3285'

30-45-45-60

434' TOTAL FLUID  
62' SOCWM (20%O, 30%W, 50% M)  
186' MW (80%W, 20%M)  
186' WATER

IFP: 27-111#  
FFP: 115-183#  
SIP: 1160-1140#  
HYD: 1615-1576#  
BHT: 98 dgr.

DST #3 LKC E 3285' - 3294'

30-45-30-30

25' MCW (65%W, 35%M)

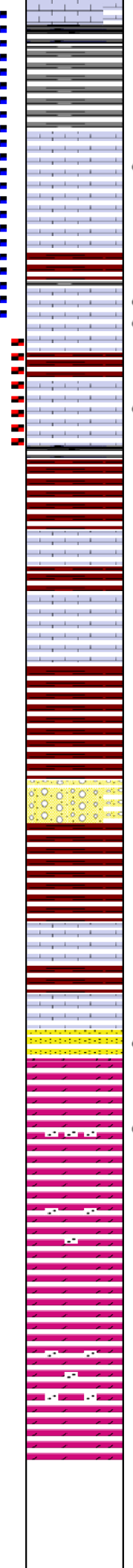
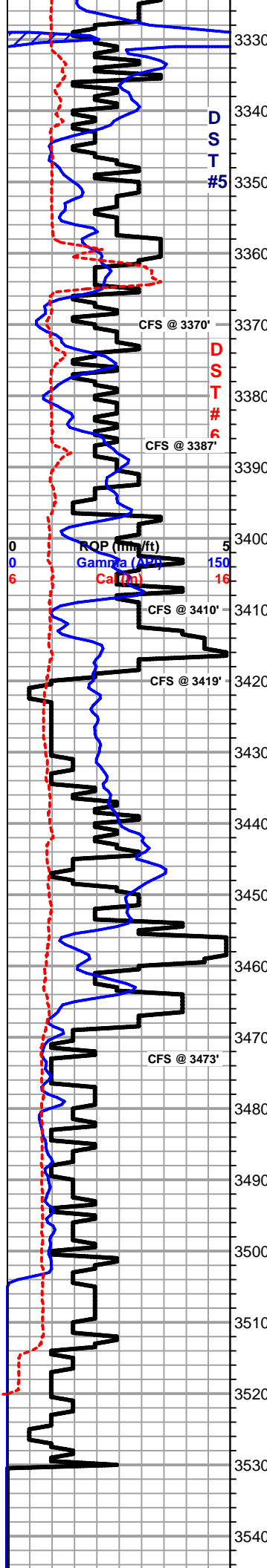
IFP: 13-67#  
FFP: 30-38#  
SIP: 1042-970#  
HYD: 1628-1701#  
BHT: 98 dgr.

DST #4 LKC E & F 3286' - 3302'

30-30-0-0

5' MUD

IFP: 14-27#  
FFP: 29-30#  
SIP: 1018- N/A  
HYD: 1611-1664#  
BHT: 92 dgr.



Sh- Black Gray Lm Green Maroon, abundant fissile & carbonaceous, gummy, gritty & earthy

Sh- Abundant argillaceous lt gray clumps

Lm- Off White Lt Gray, VF-FXLN, mix of sl fsl w/ sctrd dev. some med-crs recrystallization & V&F Grn, well cemented, all w/ sctrd fn ppt-ppt porosity, SCTRD DRK STN, FR GSY FO, FR ODR, OILY SHEEN, some soft white chalk

Lm- Lt Gray, FXLN, dense, well cemented, poorly dev, chalky in part, minimal vis. porosity, barren

Sh- Maroon Gray Lm Green, gritty & earthy, gummy wash

Lm- Off White Tan, VF-FXLN, mix of off white sl fsl & sl oolitic, mod. dev. w/ sctrd to consistant fn ppt porosity, & dense vry well cemented cherty ls w/ sctrd ppt porosity, ALL W/ DRK SUB-SAT TO SAT STN, GD GSY FO, MOD ODR, HVY OILY SHEEN, MUCH FREE OIL IN WET CUP

20"- Lm- White Off White, FXLN, oolitic w/ few fusulinids, sctrd vry fn ppt & XLN porosity, some soft white chalk, ALL W/ SCTRD LT STN, TR FO, WK-FR ODR

40"- Lm- decreasing A/A, increasing amount of maroon & gray shale

Sh- Black Maroon, fissile, carbonaceous, gritty & earthy, gummy wash

Lm- White, FXLN, fsl & sl oolitic, poorly dev. most poorly dev. & sl chalky w/ sctrd XLN to poor vis. porosity, some soft white chalk

Lm- Off White Cream, VFXLN, dense, sl fsl, poorly dev. w/ micro XLN porosity, few pcs of crypto XLN w/ recrystallization veins, all well cemented & barren

**BKC 3418' (-1396) E-LOG 3414' (-1392)** Sh- Maroon Lm Green Gray, gummy clumps, gritty & earthy, sandy lime, silty & calcareous

Sh- Maroon, increasing amount of argillaceous clumps

Conglomerate- mix of sl unconsolidated VF-FXLN w/ maroon tint, minimal vis. porosity & dense maroon chert/cherty ls w/o vis. porosity

Lm- A/A w/ shaley oolitic FXLN ls, sctrd XLN porsity, some chalky in part, white VFXLN w/ micro XLN porosity, soft sandy lime

**ARBUCKLE 3468' (-1446) E-LOG 3469' (-1447)** Ss- Clear to Frosted, Fn Grn, mix of poorly sorted rounded to sub-angular qtz. grains in white dolomitic cementation w/o porosity, mostly barren, consolidated & sorted qtz. clusters w/ friable to mod. dolomite cementation, some w/ glauconite, consistant intergranular porosity, DRK SCTRD TO SUB-SAT STN, GD SFO, NO ODR, HVY FO ON TOP OF WET CUP

Dol- Cream Off White Lt Pink, VF-Crs XLN, sub-rounded qtz inclusions, anhedral rhombs, loosely-well cemented, dense XLN to ppt porosity throughtought, lt glauconite spkng & inclusions, mostly barren few pcs w/ SCTRD DRK STN, TR FO, NODR

Dol- A/A some w/ pyrite spkng

Dol- Cream Off White, VF-FXLN, dense, vry well cemented, dense XLN porosity, incr. amount of glauconite speckling, some white/green soft white chalk, 3-4 large (~3-5mm) angular qtz grains

Dol- Pink Lt Salon, VF-FXLN, dense, vry well cemented, poorly dev. w/ micro XLN & XLN porosity, some sl cherty dol w/ glauconite spkng

Dol- Cream Off White Clear to Frosted, Med-Crs XLN, sandy well dev. dol, w/ dense XLN to ppt porosity, vis. euohedral rhombs along with angular to sub-rounded qtz grains, barren, 4-5 large (~4-5+mm) angular grains

Dol- A/A w/ increasing grain size of qtz inclusions w/ decreasing amount of glauconite

**RTD 3530' (-1508) LTD 3532' (-1510) @ 10:06 4/18/2014**

DST #5  
LKC H - I  
3326' - 3370'  
(SEE CHART BELOW)  
30-45-30-45

25' OCM  
(25% O, 75% M)

IFFP: 15-40#  
FFP: 24-31#  
SIP: 883-797#  
HYD: 1635-1625#  
BHT: 95 dgr.

DST #5 L...

DST #6  
LKC J  
3272' - 3287'  
(SEE CHART BELOW)  
30-45-30-45

5' MUD w/ OIL SPOTS

IFFP: 14-15#  
FFP: 15-15#  
SIP: 16-15#  
HYD: 1651-1633#  
BHT: 96 dgr.

DST #7  
(STRADDLE)  
LKC D  
3257' - 3305'  
(SEE CHARTS BELOW)  
30-45-30-45


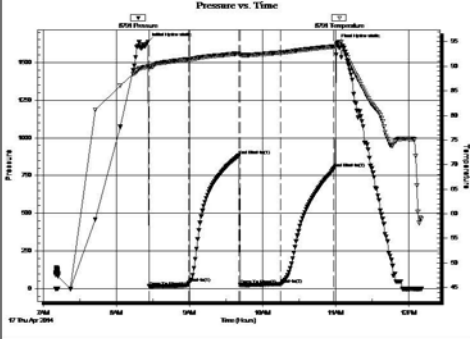
149' MUD (100%)  
1' FREE OIL


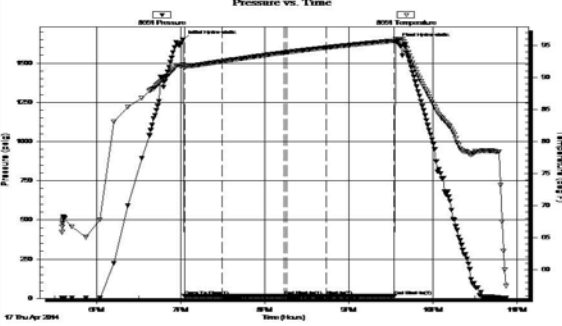
IFFP: 18-49#  
FFP: 53-77#  
SIP: 1082-1071#  
HYD: 1667-1602#  
BHT: 98 dgr.

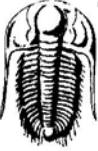
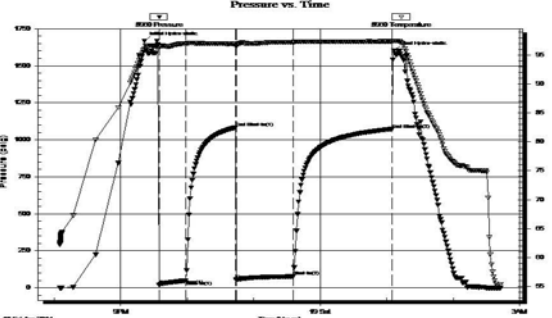
DST #6.jpg  
DST #7 L...  
DST #7 ...

15 STND SHORT TRIP CTCH SURVEY 1/2 dgr.

## DST #5\_LKCH\_I.jpg

	<b>DRILL STEM TEST REPORT</b>			
Black Diamond oil P.O. box 641 Hays Ks 67601  ATTN: Jeff Lowery	<b>4 5 21w Norton Ks.</b>  <b>Glennemeier #1</b> Job Ticket: 55056 <b>DST#: 5</b> Test Start: 2014.04.17 @ 07:10:00			
<b>GENERAL INFORMATION:</b>				
Formation: <b>LKC-HL</b> Deviated: No Whipstock:      ft (KB) Time Tool Opened: 08:26:30 Time Test Ended: 12:10:30		Test Type: Conventional Bottom Hole (Reset) Tester: Chuck Kreuzter Jr. Unit No: 61		
Interval: <b>3326.00 ft (KB) To 3370.00 ft (KB) (TVD)</b> Total Depth: 3370.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good		Reference Elevations: 2022.00 ft (KB) 2017.00 ft (CF) KB to GR/CF: 5.00 ft		
<b>Serial #: 8791      Inside</b>				
Press@RunDepth: 30.69 psig @ 3335.00 ft (KB) Start Date: 2014.04.17      End Date: 2014.04.17 Start Time: 07:10:01      End Time: 12:10:30		Capacity: 8000.00 psig Last Callb.: 2014.04.17 Time On Btm: 2014.04.17 @ 08:25:30 Time Off Btm: 2014.04.17 @ 11:01:00		
<b>TEST COMMENT:</b> IF: Weak blow surface that died in 25 mins. IS: No blow back FF: no blow FSI: No blow, back				
	<b>PRESSURE SUMMARY</b>			
	Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
	0	1635.48	90.01	Initial Hydro-static
	1	14.84	89.77	Open To Flow (1)
	34	39.71	91.41	Shut-In(1)
	75	883.10	92.60	End Shut-In(1)
	76	24.11	92.31	Open To Flow (2)
	109	30.69	92.76	Shut-In(2)
	153	797.25	93.99	End Shut-In(2)
	156	1624.66	94.69	Final Hydro-static
<b>Recovery</b>				
Length (ft)	Description	Volume (bbl)		
25.00	ocm-25%o75% <i>m</i>	0.12		
<b>Gas Rates</b>				
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)	

	<h2 style="margin: 0;">DRILL STEM TEST REPORT</h2>																																					
Black Diamond oil P.O. box 641 Hays Ks 67601  ATTN: Jeff Lowery	4 5 21w Norton Ks.  <b>Glennemeier #1</b> Job Ticket: 55057 <b>DST#: 6</b> Test Start: 2014.04.17 @ 17:35:00																																					
<b>GENERAL INFORMATION:</b> Formation: <b>LKC-J</b> Deviated: No Whipstock      ft (KB) Time Tool Opened: 19:02:30 Time Test Ended: 22:53:00  <b>Interval: 3372.00 ft (KB) To 3387.00 ft (KB) (TVD)</b> Total Depth: 3387.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good																																						
Test Type: Conventional Bottom Hole (Reset) Tester: Chuck Kreuzer Jr. Unit No: 61  Reference Elevations: 2022.00 ft (KB) 2017.00 ft (CF) KB to GR/CF: 5.00 ft																																						
<b>Serial #: 8651      Outside</b> Press@RunDepth: 15.06 psig @ 3374.00 ft (KB)      Capacity: 8000.00 psig Start Date: 2014.04.17      End Date: 2014.04.17      Last Calib.: 2014.04.17 Start Time: 17:35:05      End Time: 22:52:59      Time On Btm: 2014.04.17 @ 19:01:30 Time Off Btm: 2014.04.17 @ 21:34:30																																						
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 <p><b>TRILOBITE TESTING, INC.</b></p>	<p><b>DRILL STEM TEST REPORT</b></p>																																				
<p>Black Diamond oil</p> <p>P.O. box 641 Hays Ks 67601</p> <p>ATTN: Jeff Lowery</p>	<p><b>4 5 21w Norton Ks.</b></p> <p><b>Glennemeier #1</b></p> <p>Job Ticket: 55058      <b>DST#: 7</b></p> <p>Test Start: 2014.04.18 @ 20:05:00</p>																																				
<p><b>GENERAL INFORMATION:</b></p> <p>Formation: <b>LKC-D</b></p> <p>Deviated: No Whipstock      ft (KB)</p> <p>Time Tool Opened: 21:34:30</p> <p>Time Test Ended: 02:43:00</p> <p>Test Type: Conventional Straddle (Reset)</p> <p>Tester: Chuck Kreuzer Jr.</p> <p>Unit No: 61</p> <p>Interval: <b>3267.00 ft (KB) To 3305.00 ft (KB) (TVD)</b></p> <p>Total Depth: 3305.00 ft (KB) (TVD)</p> <p>Hole Diameter: 7.88 inches Hole Condition: Good</p> <p>Reference Elevations: 2022.00 ft (KB)</p> <p>2017.00 ft (CF)</p> <p>KB to GR/CF: 5.00 ft</p>																																					
<p><b>Serial #: 8960      Inside</b></p> <p>Press@RunDepth: 77.02 psig @ 3268.00 ft (KB)</p> <p>Start Date: 2014.04.18      End Date: 2014.04.19</p> <p>Start Time: 20:05:01      End Time: 02:43:00</p> <p>Capacity: 8000.00 psig</p> <p>Last Calib.: 2014.04.19</p> <p>Time On Btm: 2014.04.18 @ 21:21:30</p> <p>Time Off Btm: 2014.04.19 @ 01:06:30</p> <p><b>TEST COMMENT:</b> IF: Weak blow, Built to 2 1/4 in. over 30 mins.          IS: No blow back          FF: Weak blow, Built to 1/8 in. over 45 mins.          FSI: No blow back</p>																																					
	<p style="text-align: center;"><b>PRESSURE SUMMARY</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Time (Min.)</th> <th>Pressure (psig)</th> <th>Temp (deg F)</th> <th>Annotation</th> </tr> </thead> <tbody> <tr><td>0</td><td>1667.83</td><td>96.10</td><td>Initial Hydro-static</td></tr> <tr><td>13</td><td>18.97</td><td>96.43</td><td>Open To Flow (1)</td></tr> <tr><td>37</td><td>49.61</td><td>97.02</td><td>Shut-In(1)</td></tr> <tr><td>82</td><td>1082.49</td><td>97.00</td><td>End Shut-In(1)</td></tr> <tr><td>83</td><td>53.34</td><td>96.55</td><td>Open To Flow (2)</td></tr> <tr><td>134</td><td>77.02</td><td>97.27</td><td>Shut-In(2)</td></tr> <tr><td>223</td><td>1071.68</td><td>97.40</td><td>End Shut-In(2)</td></tr> <tr><td>225</td><td>1602.88</td><td>97.49</td><td>Final Hydro-static</td></tr> </tbody> </table>	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	1667.83	96.10	Initial Hydro-static	13	18.97	96.43	Open To Flow (1)	37	49.61	97.02	Shut-In(1)	82	1082.49	97.00	End Shut-In(1)	83	53.34	96.55	Open To Flow (2)	134	77.02	97.27	Shut-In(2)	223	1071.68	97.40	End Shut-In(2)	225	1602.88	97.49	Final Hydro-static
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<p style="text-align: center;"><b>Recovery</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Length (ft)</th> <th>Description</th> <th>Volume (bbl)</th> </tr> </thead> <tbody> <tr><td>1.00</td><td>free oil on top</td><td>0.00</td></tr> <tr><td>149.00</td><td>mud-100%- With good odor</td><td>0.99</td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table> <p><small>* Recovery from multiple tests</small></p>	Length (ft)	Description	Volume (bbl)	1.00	free oil on top	0.00	149.00	mud-100%- With good odor	0.99													<p style="text-align: center;"><b>Gas Rates</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Choke (inches)</th> <th>Pressure (psig)</th> <th>Gas Rate (Mcft)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Choke (inches)	Pressure (psig)	Gas Rate (Mcft)												
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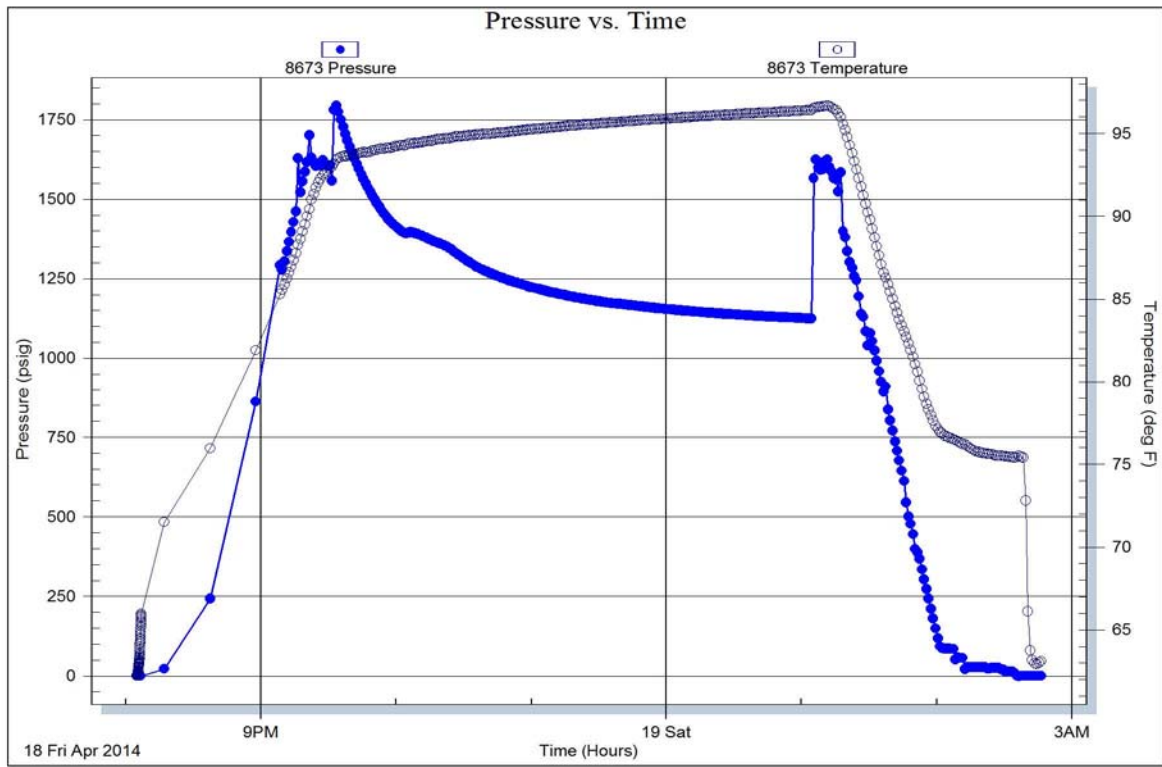
# DST #7\_BTM\_PKR.jpg

Serial #: 8673

Below (Strat) Diamond oil

Glennemeier #1

DST Test Number: 7



Trilobite Testing, Inc

Ref. No: 55058

Printed: 2014.04.19 @ 04:26:45



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 162

Date	4-19-14	Sec.	4	Twp.	5	Range	21	County	Norton	State	KS	On Location		Finish	1:30 PM				
Location								Logan 7W to E 10 Rd SE In											
Lease	Glennemair			Well No.	# 1			Owner											
Contractor	W.W. 6			To Quality Oilwell Cementing, Inc.								You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Type Job	Production Svc			Charge To								Black Diamond							
Hole Size	7 7/8			T.D.	3526			Street											
Csg.	4 1/2			Depth	3513'			City								State			
Tbg. Size				Depth				The above was done to satisfaction and supervision of owner agent or contractor.											
Tool	Port Collar			Depth	1616'			Cement Amount Ordered								180 com 10% Salt 5% Wilson			
Cement Left in Csg.	16.37			Shoe Joint	16.37														
Meas Line				Displace	55 1/2 bbl														
<b>EQUIPMENT</b>								<b>Common</b>											
Pumptrk	No.	Cementer	Matt		Poz. Mix														
Bulktrk	No.	Driver	Doug		Gel.														
Bulktrk	No.	Driver	Brett		Calcium														
<b>JOB SERVICES &amp; REMARKS</b>								<b>Hulls</b>											
Remarks:									Salt										
Rat Hole	30x								Flowseal										
Mouse Hole									Kol-Seal										
Centralizers	- 1, 3, 5, 7, 9, 11, 43								Mud CLR 48 - 500 Gal Mud Flush										
Baskets	- 2, 8, 44								CFL-117 or CD110 CAF 38										
DM or Port Collar	- 44 @ 1616'								Sand										
Mix 500 Gal Mud Flush								Handling											
Plug Rat Hole w/ 30x								Mileage											
Mix 150sx down 4 1/2								4 1/2											
Dropped Plug								<b>FLOAT EQUIPMENT</b>											
Displaced 55 1/2 bbl								Guide Shoe											
Life Pressure 700 lbs								Centralizer - 7 turbos											
Landat @ 1400 lbs								Baskets - 3											
Plug held								AFU Inserts											
								Float Shoe - 1											
								Latch Down - 1											
								Port Collar 1											
								Rubber Plug 1											
								Pumptrk Charge											
								Mileage											
								Tax											
								Discount											
								Total Charge											
Signature								Mal Base											

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 7198

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-12-14	4	5	21	Logan	Ks		6:00 pm
Lease				Location			
Glennemeier				Logan Twp to E10 Rd, SHub			

Well No.	Owner	
1	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Contractor	Charge To	
W.W. 6	Black Diamond	
Type Job	Street	
Surface		
Hole Size	Depth	
12 1/4"	217'	
Csg.	Depth	
8 5/8"	217'	
Tbg. Size	City	
	State	
Tool	The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered
15'	15'	150 Com 3% CC 27.60'
Meas Line	Displace	
	12 3/4	

**EQUIPMENT**

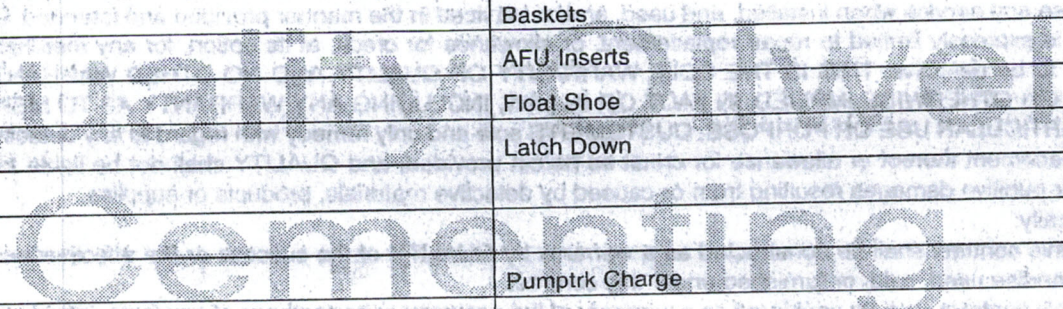
Pumptrk	No.	Cementer		Common
16		Helper	Billy	Poz. Mix
Bulktrk	No.	Driver	Heath	Gel.
9		Driver		Calcium
Bulktrk	No.	Driver	Rick	Hulls
9		Driver		Salt

**JOB SERVICES & REMARKS**

Remarks:	Flowseal
Cement did Circulate	Kol-Seal
Rat Hole	Mud CLR 48
Mouse Hole	CFL-117 or CD110 CAF 38
Centralizers	Sand
Baskets	Handling
D/V or Port Collar	Mileage

**FLOAT EQUIPMENT**

Guide Shoe
Centralizer
Baskets
AFU Inserts
Float Shoe
Latch Down



Pumptrk Charge	Tax
Mileage	Discount
	Total Charge
X Signature	
M.A.R. [Signature]	



## DRILL STEM TEST REPORT

Prepared For: **Black Diamond Oil**

PO Box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

### **4 5s 21w Norton KS**

Start Date: 2014.04.15 @ 09:05:00

End Date: 2014.04.15 @ 13:39:30

Job Ticket #: 55052                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 15:03:49



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55052

**DST#: 1**

ATTN: Jeff Lawler

Test Start: 2014.04.15 @ 09:05:00

## GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:25:00

Time Test Ended: 13:39:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3182.00 ft (KB) To 3220.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3220.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 21.19 psig @ 3185.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.15

End Date: 2014.04.15

Last Calib.: 2014.04.15

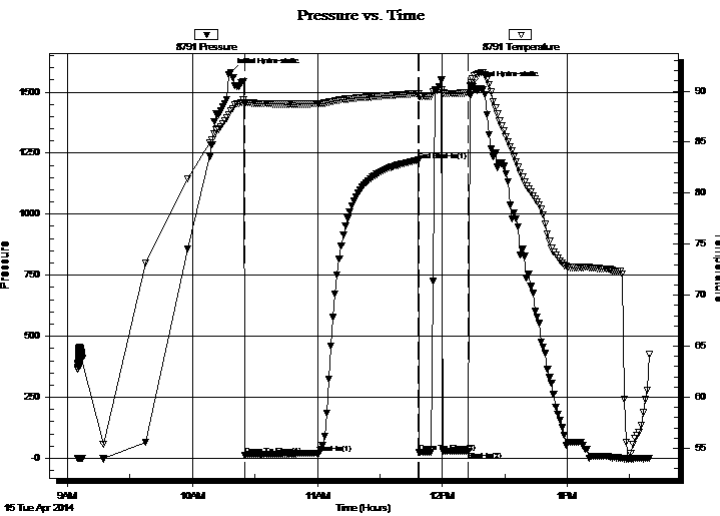
Start Time: 09:05:01

End Time: 13:39:30

Time On Btm: 2014.04.15 @ 10:18:30

Time Off Btm: 2014.04.15 @ 12:14:00

**TEST COMMENT:** IF: Weak surface blow over 30 mins.  
IS: No blow back  
FF: No blow. Flushed tool - Pulled tool 10 mins. afterwards



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1581.01	88.07	Initial Hydro-static
7	13.09	88.80	Open To Flow (1)
42	21.19	88.76	Shut-In(1)
90	1221.11	89.77	End Shut-In(1)
91	23.61	89.45	Open To Flow (2)
114	28.93	89.84	Shut-In(2)
116	1527.67	90.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud with oil specs	0.10

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55052

**DST#: 1**

ATTN: Jeff Lawler

Test Start: 2014.04.15 @ 09:05:00

## Tool Information

Drill Pipe:	Length: 3053.00 ft	Diameter: 3.80 inches	Volume: 42.83 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 38000.00 lb
			<u>Total Volume: 43.43 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3182.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3167.00	
Hydraulic tool	5.00			3172.00	
Packer	5.00			3177.00	20.00 Bottom Of Top Packer
Packer	5.00			3182.00	
Stubb	1.00			3183.00	
Perforations	2.00			3185.00	
Recorder	0.00	8791	Inside	3185.00	
Recorder	0.00	8651	Outside	3185.00	
Change Over Sub	1.00			3186.00	
Blank Spacing	30.00			3216.00	
Change Over Sub	1.00			3217.00	
Bullnose	3.00			3220.00	38.00 Bottom Packers & Anchor

**Total Tool Length: 58.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55052

**DST#: 1**

ATTN: Jeff Lawler

Test Start: 2014.04.15 @ 09:05:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 750.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud w ith oil specs	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

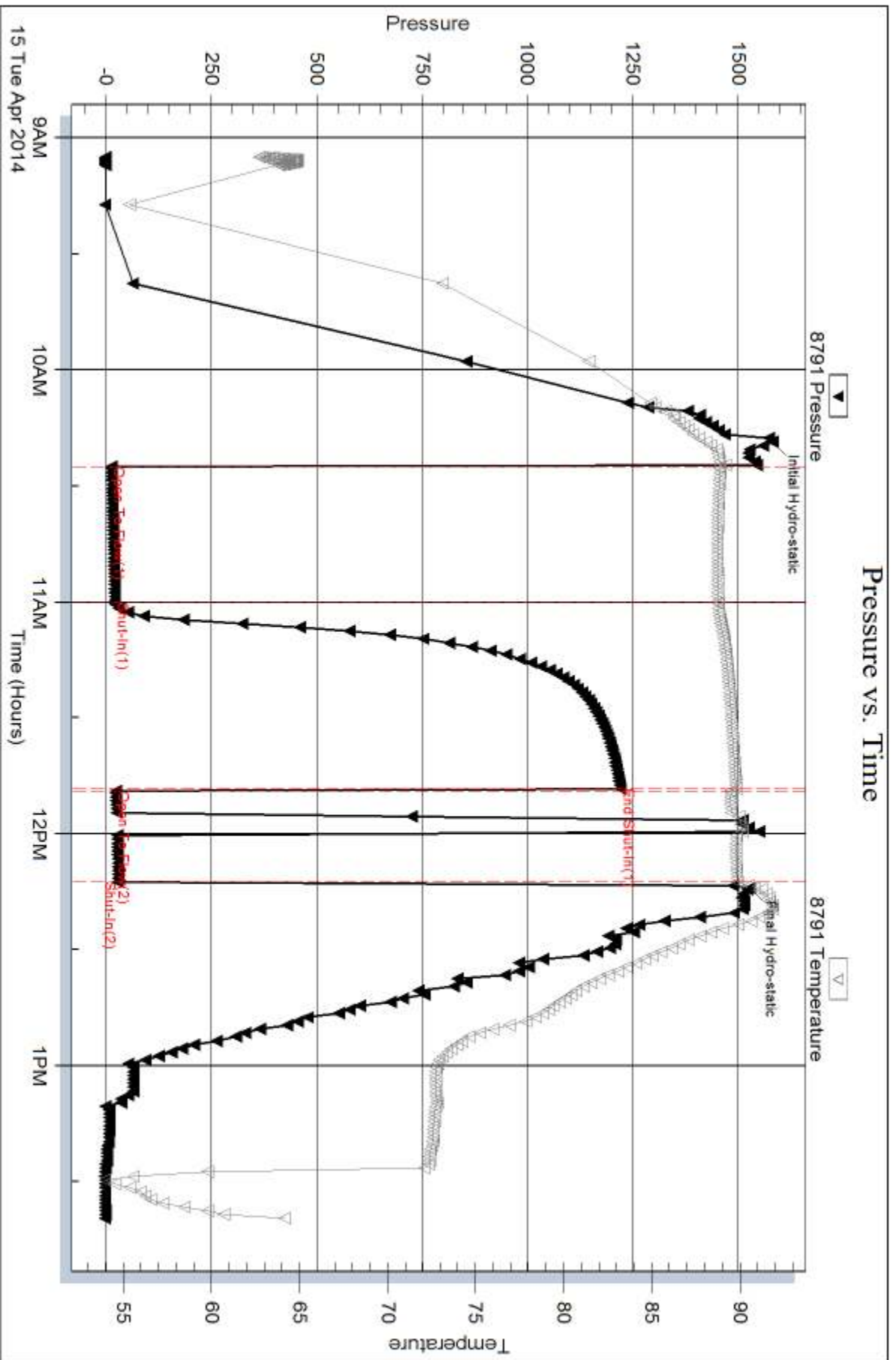
Inside

Black Diamond Oil

Glennmeier #1

DST Test Number: 1

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Black Diamond Oil**

PO Box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

### **4 5s 21w Norton KS**

Start Date: 2014.04.15 @ 21:05:00

End Date: 2014.04.16 @ 02:29:30

Job Ticket #: 55053                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 15:03:24





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55053

**DST#: 2**

ATTN: Jeff Lawler

Test Start: 2014.04.15 @ 21:05:00

## GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:36:30

Time Test Ended: 02:29:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3242.00 ft (KB) To 3285.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3285.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 183.49 psig @ 3250.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.15

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 21:05:01

End Time:

03:29:30

Time On Btm:

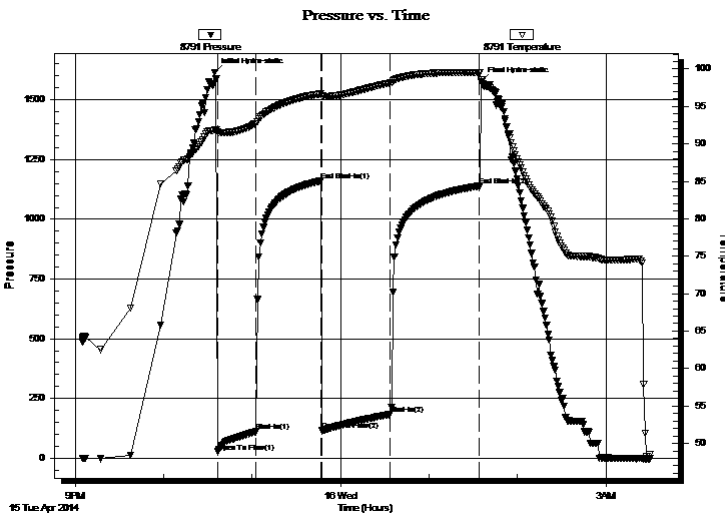
2014.04.15 @ 22:34:30

Time Off Btm:

2014.04.16 @ 01:35:30

**TEST COMMENT:** IF: Fair blow , Built to B.O.B in 12 mins.  
IS: No blow back  
FF: Fair blow , Built to B.O.B in 20 mins.  
FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1614.70	91.85	Initial Hydro-static
2	26.53	91.54	Open To Flow (1)
28	111.17	92.72	Shut-In(1)
72	1160.39	96.69	End Shut-In(1)
73	115.17	96.37	Open To Flow (2)
119	183.49	98.14	Shut-In(2)
180	1139.84	99.53	End Shut-In(2)
181	1576.13	98.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
186.00	water-100%	1.50
186.00	MCW-20% m80%w	2.61
62.00	SOCWM-20% o30%w 50%m	0.87

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55053

**DST#: 2**

ATTN: Jeff Lawler

Test Start: 2014.04.15 @ 21:05:00

## Tool Information

Drill Pipe:	Length: 31013.00 ft	Diameter: 3.80 inches	Volume: 435.03 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume: 435.63 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	27913.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3242.00 ft			Final	38000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	43.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3227.00	
Hydraulic tool	5.00			3232.00	
Packer	5.00			3237.00	20.00 Bottom Of Top Packer
Packer	5.00			3242.00	
Stubb	1.00			3243.00	
Perforations	7.00			3250.00	
Recorder	0.00	8791	Inside	3250.00	
Recorder	0.00	8651	Outside	3250.00	
Change Over Sub	1.00			3251.00	
Blank Spacing	30.00			3281.00	
Change Over Sub	1.00			3282.00	
Bullnose	3.00			3285.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55053

**DST#: 2**

ATTN: Jeff Lawler

Test Start: 2014.04.15 @ 21:05:00

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 49.00 sec/qt  
Water Loss: 7.96 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 750.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	water-100%	1.498
186.00	MCW-20% <del>m</del> 80%w	2.609
62.00	SOCWM-20% <del>o</del> 30%w 50% <del>m</del>	0.870

Total Length: 434.00 ft      Total Volume: 4.977 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

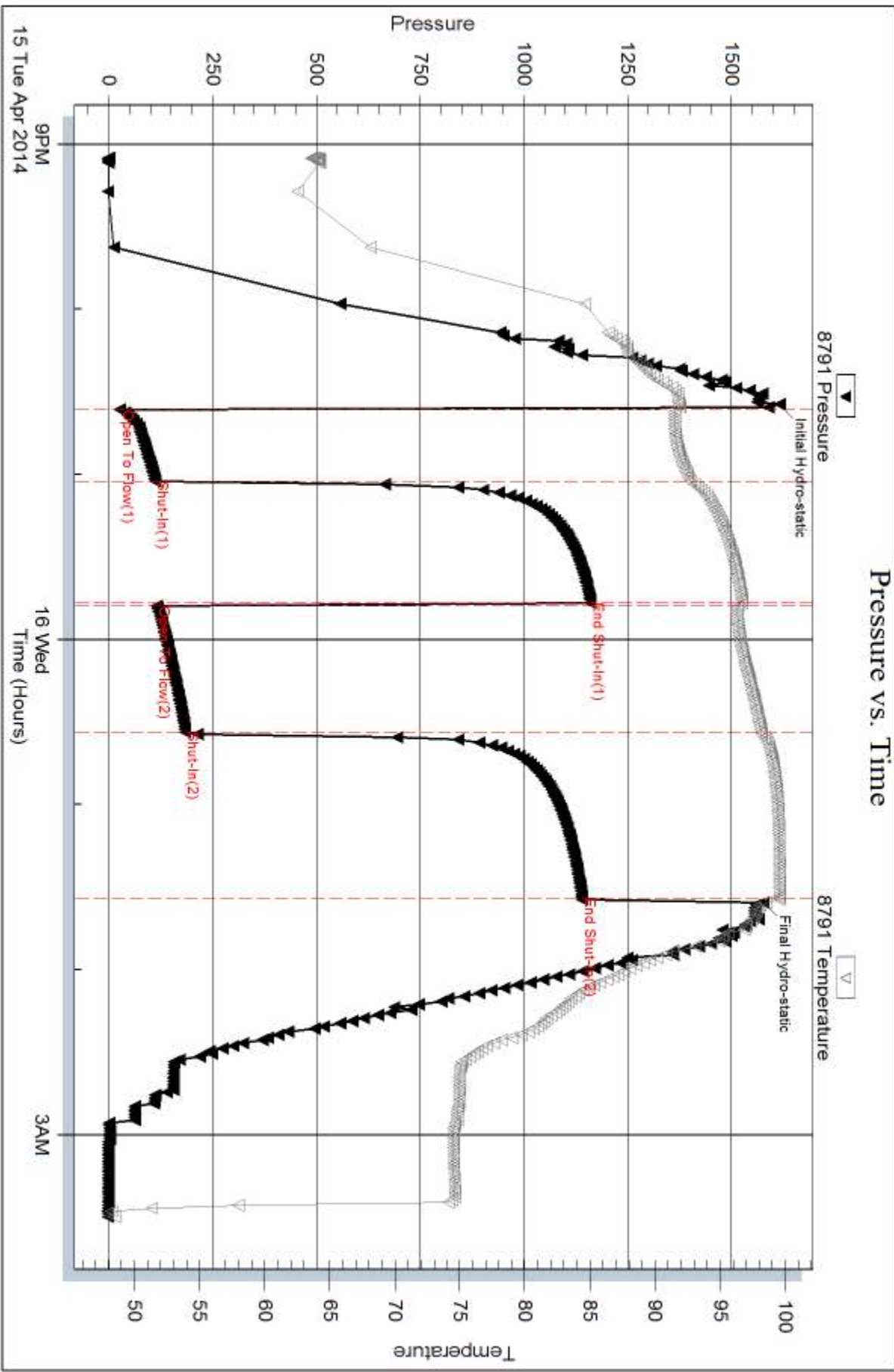
Serial #: 8791

Inside

Black Diamond Oil

Glennmeier #1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Black Diamond Oil**

PO Box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

#### **4 5s 21w Norton KS**

Start Date: 2014.04.16 @ 09:10:00

End Date: 2014.04.16 @ 13:42:30

Job Ticket #: 55054                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 15:02:50



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55054

**DST#: 3**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 09:10:00

## GENERAL INFORMATION:

Formation: **LKC-E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:37:00

Time Test Ended: 13:42:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3285.00 ft (KB) To 3294.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3294.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 38.46 psig @ 3286.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.16

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 09:10:01

End Time:

13:42:30

Time On Btm:

2014.04.16 @ 10:28:00

Time Off Btm:

2014.04.16 @ 12:45:00

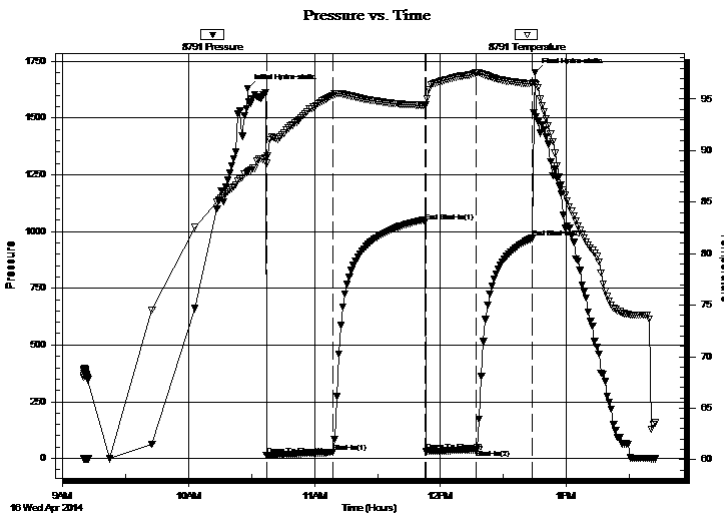
TEST COMMENT: IF: Weak blow surface over 30 mins.

IS: No blow back

FF: No blow

FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1628.42	87.92	Initial Hydro-static
9	13.35	88.77	Open To Flow (1)
41	26.60	95.37	Shut-In(1)
85	1041.94	94.39	End Shut-In(1)
85	30.26	94.49	Open To Flow (2)
109	38.46	97.57	Shut-In(2)
136	970.40	96.48	End Shut-In(2)
137	1701.09	96.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	mcw -35% m65% w -With good odor	0.12

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55054

**DST#: 3**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 09:10:00

## GENERAL INFORMATION:

Formation: **LKC-E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:37:00

Time Test Ended: 13:42:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

**Interval: 3285.00 ft (KB) To 3294.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3294.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8651 Outside**

Press@RunDepth: psig @ 3286.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.16

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 09:10:05

End Time:

13:42:59

Time On Btm:

Time Off Btm:

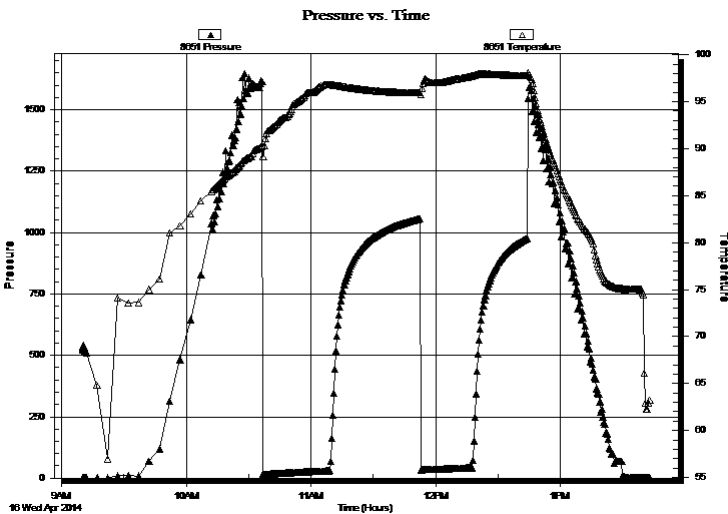
TEST COMMENT: IF: Weak blow surface over 30 mins.

IS: No blow back

FF: No blow

FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	mcw -35% m65% w -With good odor	0.12

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55054

**DST#: 3**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 09:10:00

## Tool Information

Drill Pipe:	Length: 3176.00 ft	Diameter: 3.80 inches	Volume: 44.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 38000.00 lb
			<u>Total Volume: 45.15 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3285.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	29.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3270.00	
Hydraulic tool	5.00			3275.00	
Packer	5.00			3280.00	20.00 Bottom Of Top Packer
Packer	5.00			3285.00	
Stubb	1.00			3286.00	
Recorder	0.00	8791	Inside	3286.00	
Recorder	0.00	8651	Outside	3286.00	
Perforations	5.00			3291.00	
Bullnose	3.00			3294.00	9.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>29.00</b>				





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55054

**DST#: 3**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 09:10:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 750.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	mcw -35%m65%w -Withgood odor	0.123

Total Length: 25.00 ft      Total Volume: 0.123 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

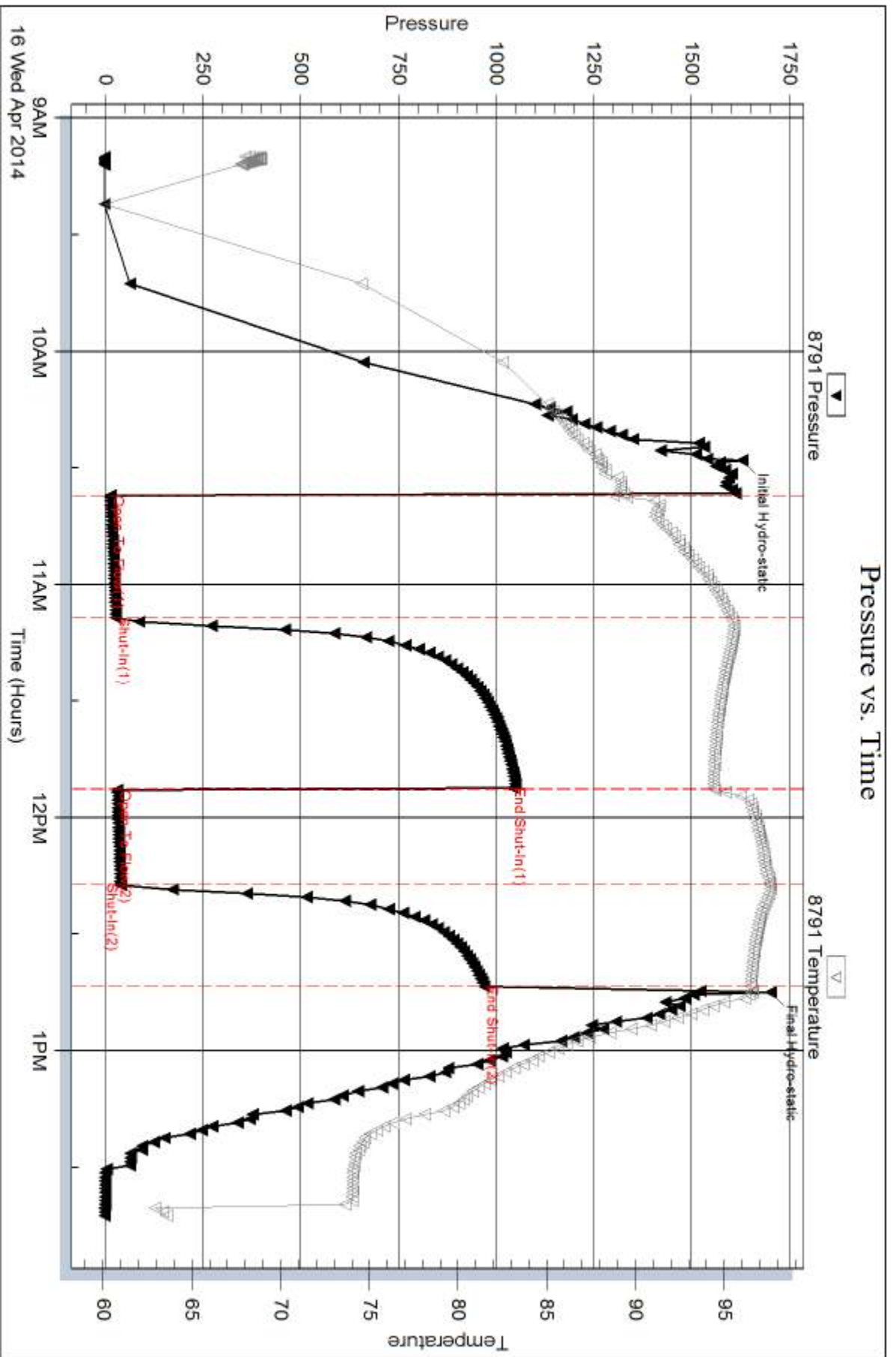
Serial #: 8791

Inside

Black Diamond Oil

Glennmeier #1

DST Test Number: 3

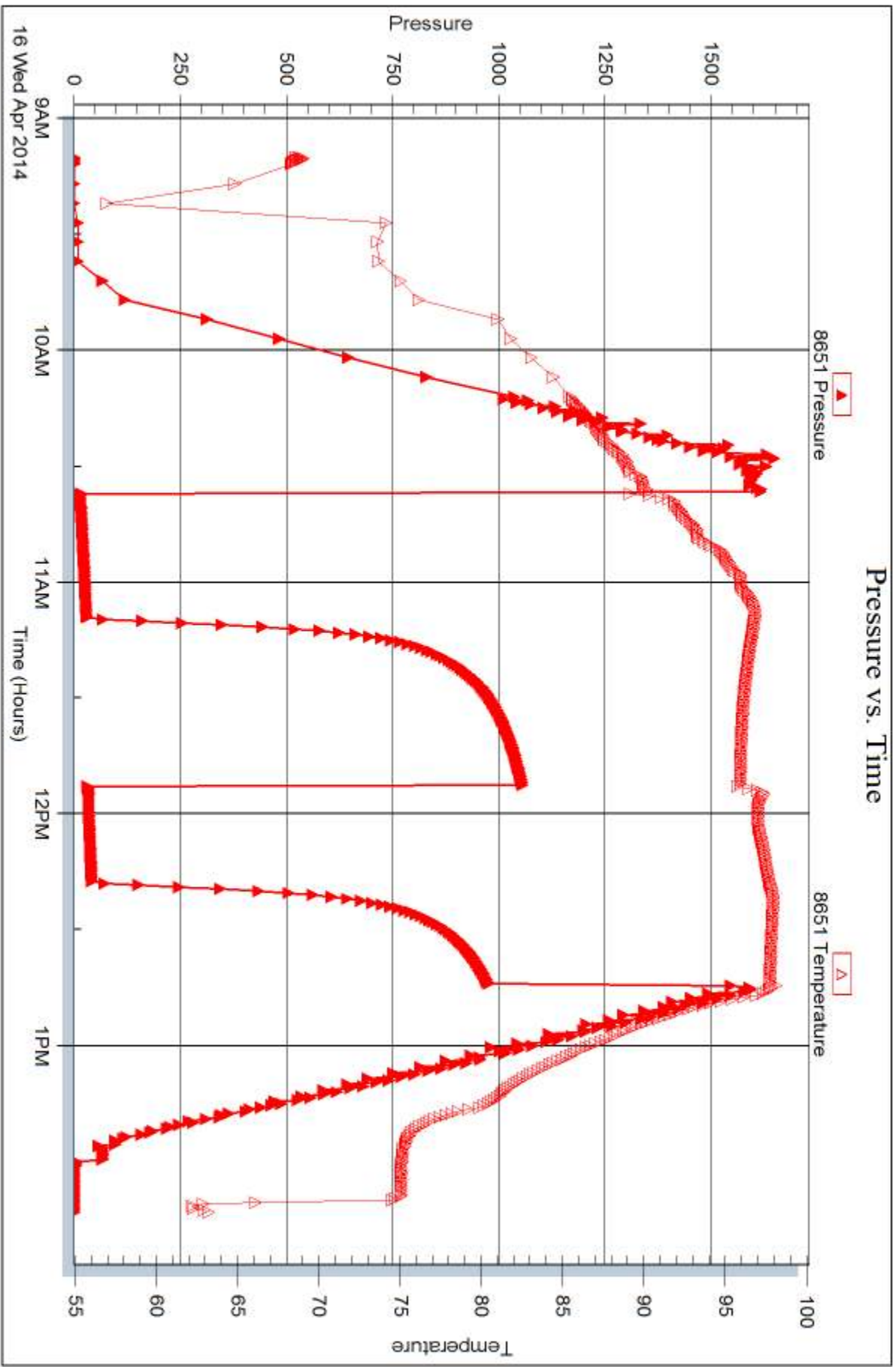


Serial #: 8651

Outside Black Diamond Oil

Glennmeier #1

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Black Diamond Oil**

PO Box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

#### **4 5s 21w Norton KS**

Start Date: 2014.04.16 @ 19:20:00

End Date: 2014.04.16 @ 23:05:00

Job Ticket #: 55055                      DST #: 4

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 15:02:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55055

**DST#: 4**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 19:20:00

## GENERAL INFORMATION:

Formation: **LKC F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:39:00

Time Test Ended: 23:05:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3286.00 ft (KB) To 3302.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3220.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 27.19 psig @ 3289.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.16

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 19:20:01

End Time:

23:05:00

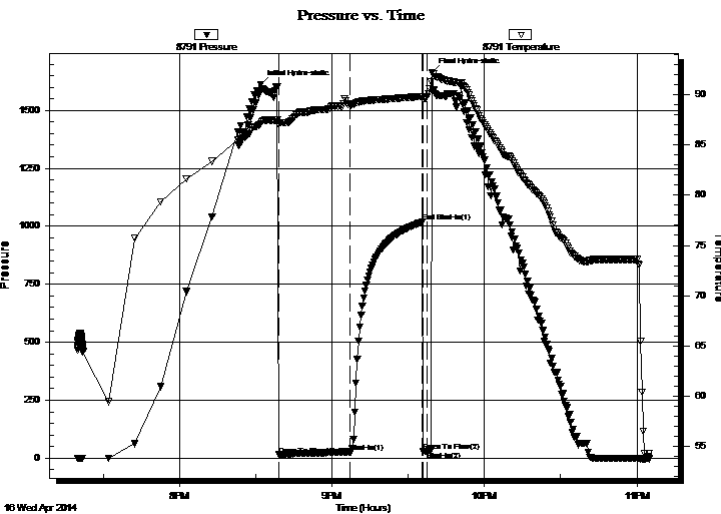
Time On Btm:

2014.04.16 @ 20:32:00

Time Off Btm:

2014.04.16 @ 21:39:30

**TEST COMMENT:** IF: Weak blow, Dead in 1 min  
IS: No blow back  
FF: No blow - Flushed and pull



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1611.24	87.13	Initial Hydro-static
7	14.35	87.04	Open To Flow (1)
35	27.19	88.99	Shut-In(1)
64	1017.85	89.84	End Shut-In(1)
64	29.31	89.53	Open To Flow (2)
66	30.33	89.82	Shut-In(2)
68	1664.14	92.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.02

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

ATTN: Jeff Lawler

Job Ticket: 55055

**DST#: 4**

Test Start: 2014.04.16 @ 19:20:00

## GENERAL INFORMATION:

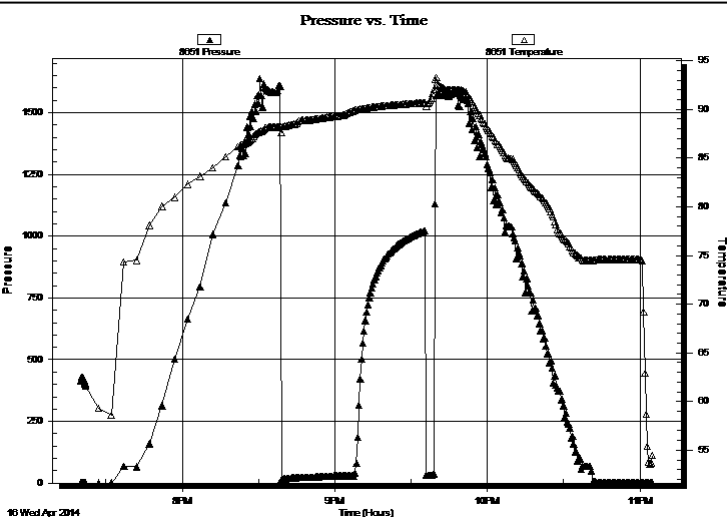
Formation: **LKC F**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:39:00  
 Time Test Ended: 23:05:00  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Interval: **3286.00 ft (KB) To 3302.00 ft (KB) (TVD)**  
 Reference Elevations: 2022.00 ft (KB)  
 Total Depth: 3220.00 ft (KB) (TVD) 2017.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

## Serial #: 8651

Outside

Press@RunDepth: psig @ 3289.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.04.16 End Date: 2014.04.16 Last Calib.: 2014.04.16  
 Start Time: 19:20:05 End Time: 23:05:00 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: Weak blow, Dead in 1 min  
 IS: No blow back  
 FF: No blow - Flushed and pull



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.02

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55055

**DST#: 4**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 19:20:00

## Tool Information

Drill Pipe:	Length: 3176.00 ft	Diameter: 3.80 inches	Volume: 44.55 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	38000.00 lb
			<u>Total Volume: 45.15 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3286.00 ft			Final	35000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	16.00 ft				
Tool Length:	36.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3271.00	
Hydraulic tool	5.00			3276.00	
Packer	5.00			3281.00	20.00 Bottom Of Top Packer
Packer	5.00			3286.00	
Stubb	1.00			3287.00	
Perforations	2.00			3289.00	
Recorder	0.00	8791	Inside	3289.00	
Recorder	0.00	8651	Outside	3289.00	
Perforations	10.00			3299.00	
Bullnose	3.00			3302.00	16.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>36.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55055

**DST#: 4**

ATTN: Jeff Lawler

Test Start: 2014.04.16 @ 19:20:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 750.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8791

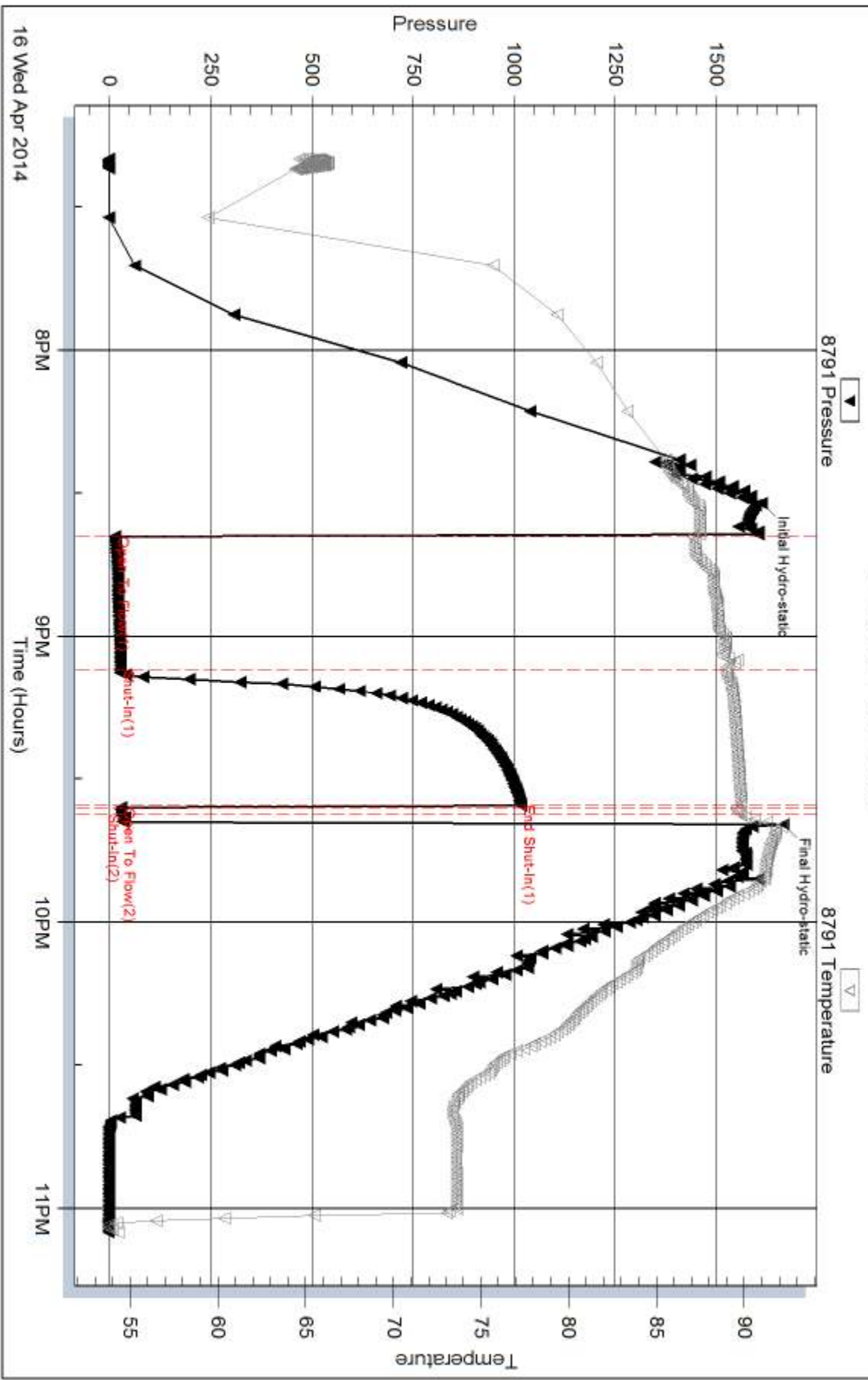
Inside

Black Diamond Oil

Glennmeier #1

DST Test Number: 4

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 55055

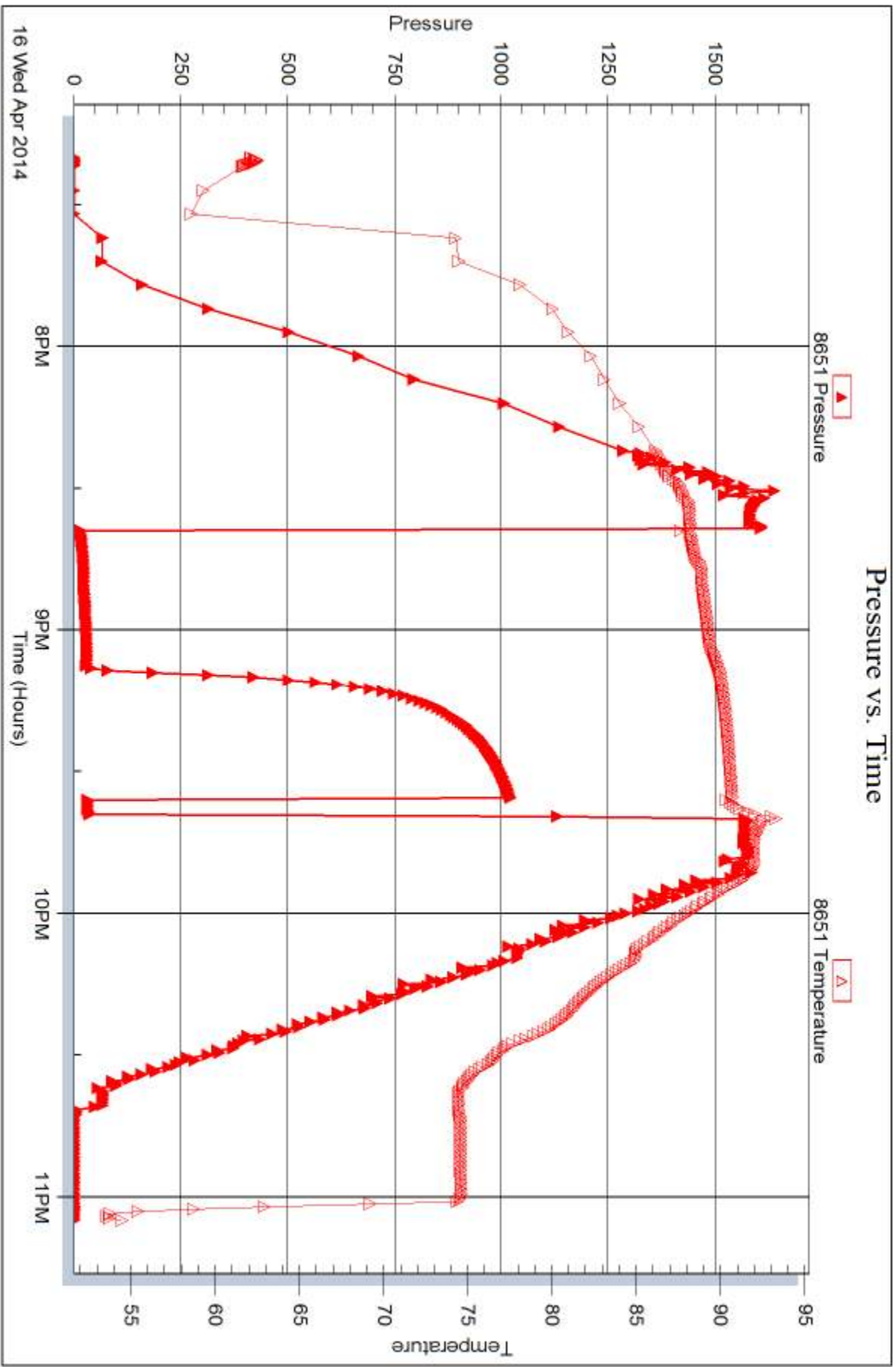
Printed: 2014.04.23 @ 15:02:26

Serial #: 8651

Outside Black Diamond Oil

Glennmeier #1

DST Test Number: 4



Tribble Testing, Inc

Ref. No: 55055

Printed: 2014.04.23 @ 15:02:26



## DRILL STEM TEST REPORT

Prepared For: **Black Diamond Oil**

PO Box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

### **4 5s 21w Norton KS**

Start Date: 2014.04.17 @ 07:10:00

End Date: 2014.04.17 @ 12:10:30

Job Ticket #: 55056                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 15:01:44



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55056

**DST#: 5**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 07:10:00

## GENERAL INFORMATION:

Formation: **LKC H-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:26:30

Time Test Ended: 12:10:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3326.00 ft (KB) To 3370.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3370.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: 30.69 psig @ 3335.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.17

End Date:

2014.04.17

Last Calib.: 2014.04.17

Start Time: 07:10:01

End Time:

12:10:30

Time On Btm: 2014.04.17 @ 08:25:30

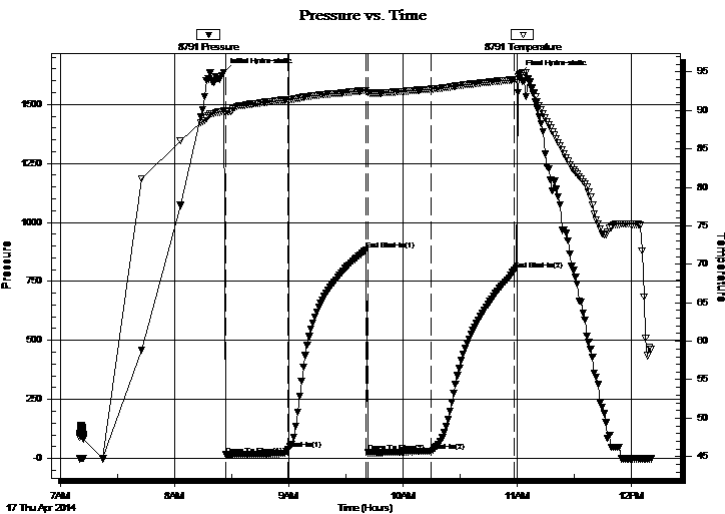
Time Off Btm: 2014.04.17 @ 11:01:00

TEST COMMENT: IF: Weak blow surface that died in 25 mins.

IS: No blow back

FF: no blow

FS: No blow, back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1635.48	90.01	Initial Hydro-static
1	14.84	89.77	Open To Flow (1)
34	39.71	91.41	Shut-In(1)
75	883.10	92.60	End Shut-In(1)
76	24.11	92.31	Open To Flow (2)
109	30.69	92.76	Shut-In(2)
153	797.25	93.99	End Shut-In(2)
156	1624.66	94.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	ocm-25%o75%m	0.12

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55056

**DST#: 5**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 07:10:00

## GENERAL INFORMATION:

Formation: **LKC H-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:26:30

Time Test Ended: 12:10:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3326.00 ft (KB) To 3370.00 ft (KB) (TVD)**

Total Depth: 3370.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2022.00 ft (KB)

2017.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8651**

**Outside**

Press@RunDepth: psig @ 3335.00 ft (KB)

Start Date: 2014.04.17

End Date:

2014.04.17

Start Time: 07:10:05

End Time:

12:10:29

Capacity: 8000.00 psig

Last Calib.:

2014.04.17

Time On Btm:

Time Off Btm:

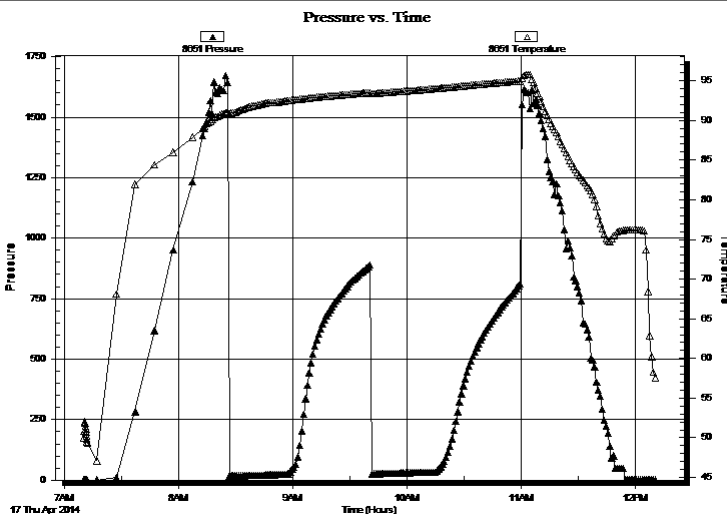
TEST COMMENT: IF: Weak blow surface that died in 25 mins.

IS: No blow back

FF: no blow

FS: No blow, back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
-------------	-----------------	--------------	------------

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	ocm-25%o75%m	0.12

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
----------------	-----------------	------------------

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55056

**DST#: 5**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 07:10:00

## Tool Information

Drill Pipe:	Length: 3208.00 ft	Diameter: 3.80 inches	Volume: 45.00 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 45.60 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 37000.00 lb
Depth to Top Packer:	3326.00 ft			Final 37000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3311.00	
Hydraulic tool	5.00			3316.00	
Packer	5.00			3321.00	20.00 Bottom Of Top Packer
Packer	5.00			3326.00	
Stubb	1.00			3327.00	
Perforations	8.00			3335.00	
Recorder	0.00	8791	Inside	3335.00	
Recorder	0.00	8651	Outside	3335.00	
Change Over Sub	1.00			3336.00	
Blank Spacing	30.00			3366.00	
Change Over Sub	1.00			3367.00	
Bullnose	3.00			3370.00	44.00 Bottom Packers & Anchor

**Total Tool Length: 64.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55056

**DST#: 5**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 07:10:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	ocm-25%o75%m	0.123

Total Length: 25.00 ft      Total Volume: 0.123 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

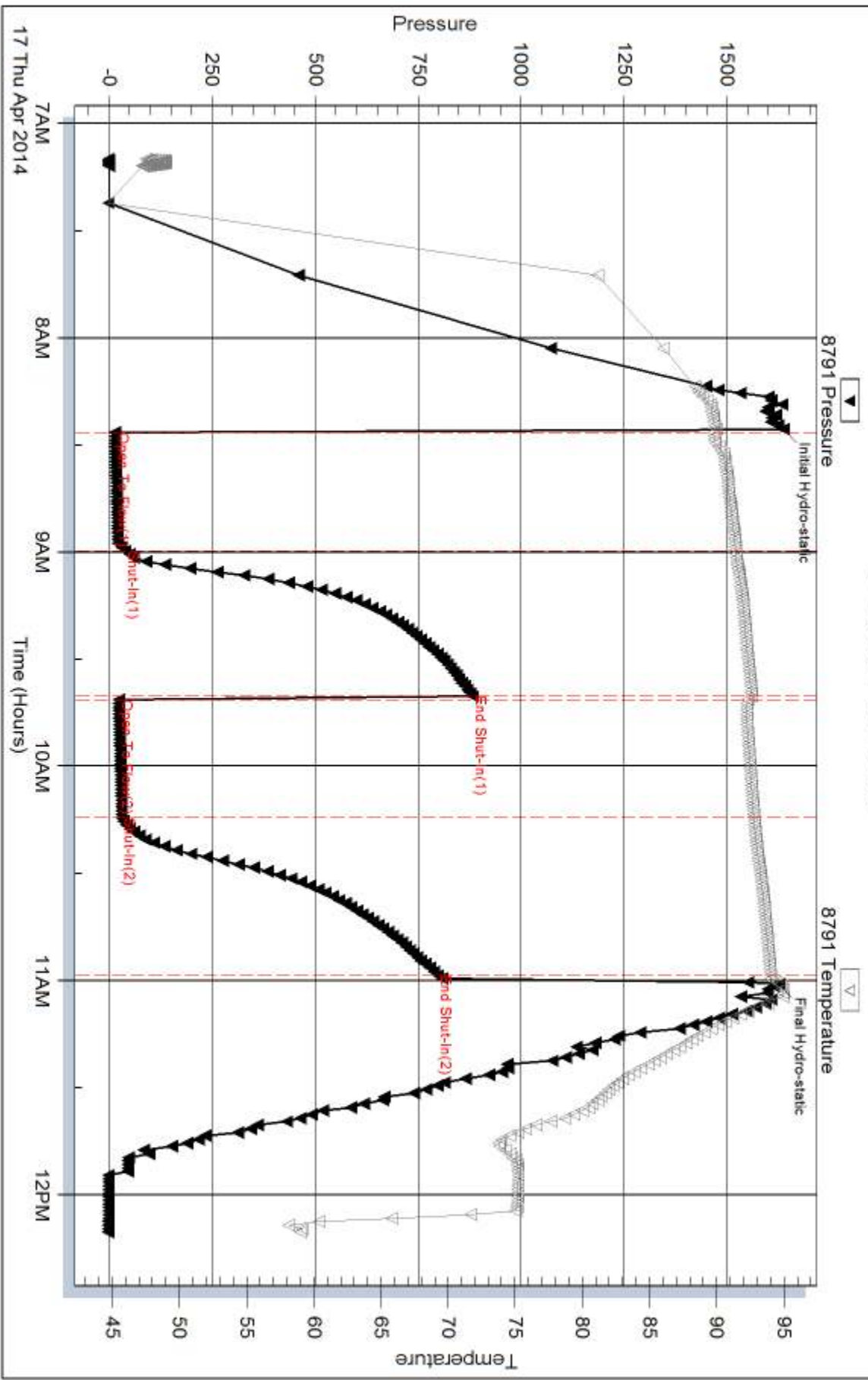
Inside

Black Diamond Oil

Glennmeier #1

DST Test Number: 5

### Pressure vs. Time



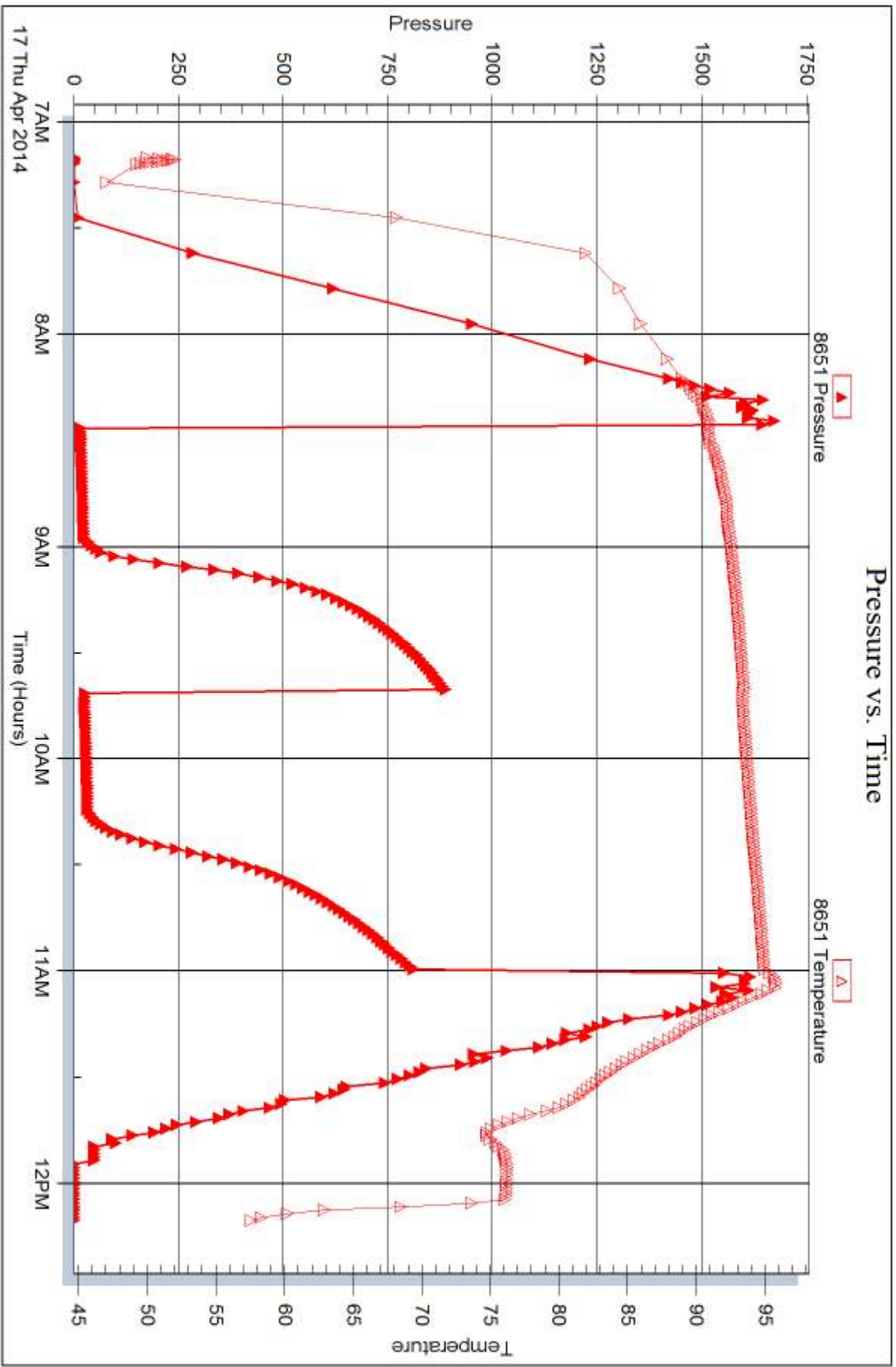


Serial #: 8651

Outside Black Diamond Oil

Glennmeier #1

DST Test Number: 5





## DRILL STEM TEST REPORT

Prepared For: **Black Diamond Oil**

PO Box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

### **4 5s 21w Norton KS**

Start Date: 2014.04.17 @ 17:35:00

End Date: 2014.04.17 @ 22:53:00

Job Ticket #: 55057                      DST #: 6

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 15:01:01



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55057

**DST#: 6**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 17:35:00

## GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:02:30

Time Test Ended: 22:53:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3372.00 ft (KB) To 3387.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3387.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8651 Outside**

Press@RunDepth: 15.06 psig @ 3374.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.17

End Date:

2014.04.17

Last Calib.:

2014.04.17

Start Time: 17:35:05

End Time:

22:52:59

Time On Btm:

2014.04.17 @ 19:01:30

Time Off Btm:

2014.04.17 @ 21:34:30

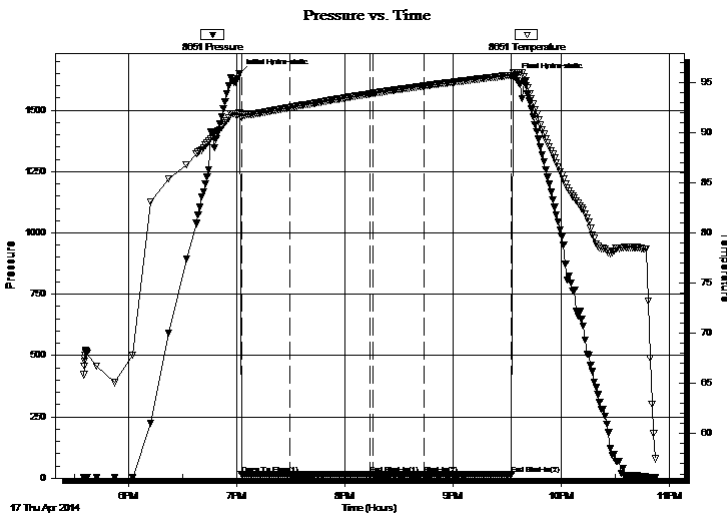
TEST COMMENT: IF: Weak blow Died in 20 mins.

IS: No blow back

FF: No blow

FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.87	91.93	Initial Hydro-static
1	14.36	91.48	Open To Flow (1)
28	14.89	92.48	Shut-In(1)
73	16.01	93.85	End Shut-In(1)
74	14.68	93.89	Open To Flow (2)
103	15.06	94.63	Shut-In(2)
151	15.24	95.70	End Shut-In(2)
153	1632.86	95.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud with oil specs	0.02

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55057

**DST#: 6**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 17:35:00

## Tool Information

Drill Pipe:	Length: 3241.00 ft	Diameter: 3.80 inches	Volume: 45.46 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume: 46.06 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial	38000.00 lb
Depth to Top Packer:	3372.00 ft			Final	38000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	35.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3357.00	
Hydraulic tool	5.00			3362.00	
Packer	5.00			3367.00	20.00 Bottom Of Top Packer
Packer	5.00			3372.00	
Stubb	1.00			3373.00	
Perforations	1.00			3374.00	
Recorder	0.00	8791	Inside	3374.00	
Recorder	0.00	8651	Outside	3374.00	
Perforations	10.00			3384.00	
Bullnose	3.00			3387.00	15.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>35.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Black Diamond Oil

**4 5s 21w Norton KS**

PO Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55057

**DST#: 6**

ATTN: Jeff Lawler

Test Start: 2014.04.17 @ 17:35:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud w ith oil specs	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

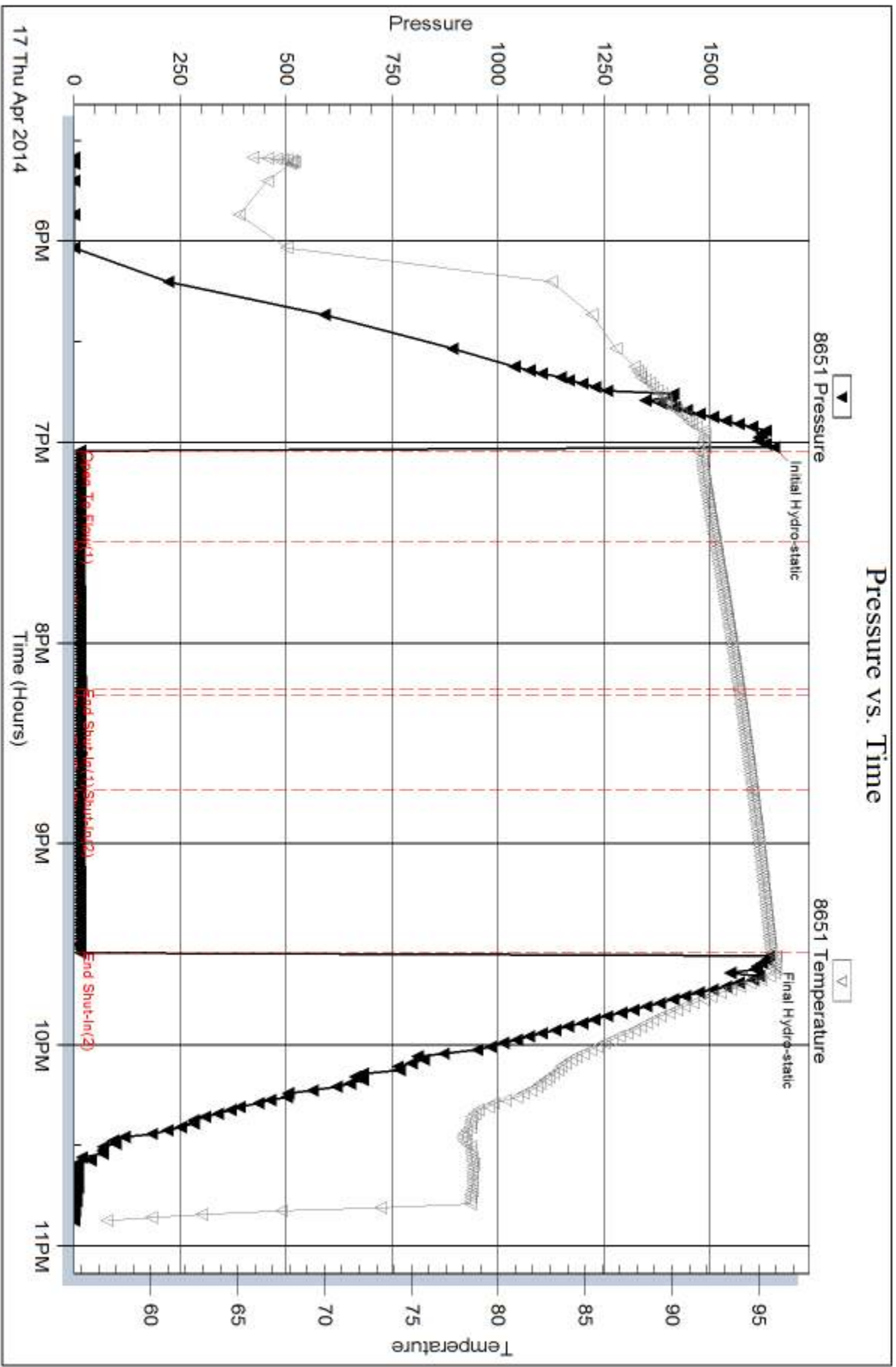
Recovery Comments:

Serial #: 8651

Outside Black Diamond Oil

Geonemeier #1

DST Test Number: 6





## DRILL STEM TEST REPORT

Prepared For: **Black Diamond oil**

P.O.box 641  
Hays KS 67601

ATTN: Jeff Lawler

### **Glennemeier #1**

### **4 5 21w Norton KS**

Start Date: 2014.04.18 @ 20:05:00

End Date: 2014.04.19 @ 02:43:00

Job Ticket #: 55058                      DST #: 7

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.23 @ 14:59:09



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond oil

**4 5 21w Norton KS**

P.O. box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55058

**DST#: 7**

ATTN: Jeff Lawler

Test Start: 2014.04.18 @ 20:05:00

## GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:34:30

Time Test Ended: 02:43:00

Test Type: Conventional Straddle (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

**Interval: 3267.00 ft (KB) To 3305.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3305.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8960**

**Inside**

Press@RunDepth: 77.02 psig @ 3268.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.18

End Date:

2014.04.19

Last Calib.:

2014.04.19

Start Time: 20:05:01

End Time:

02:43:00

Time On Btm:

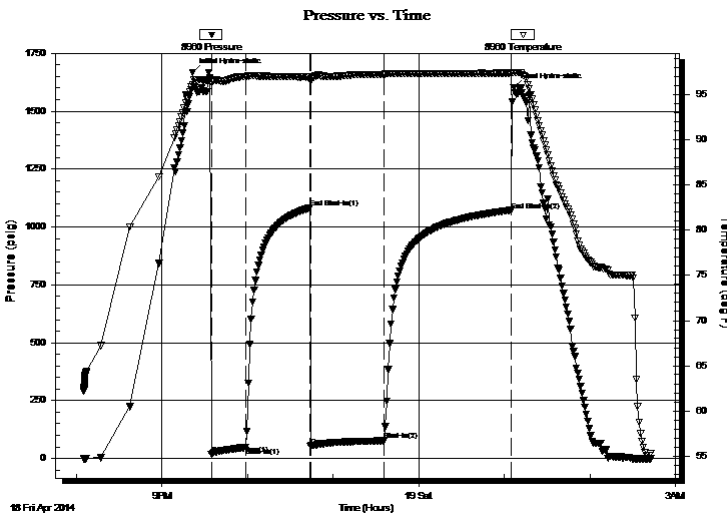
2014.04.18 @ 21:21:30

Time Off Btm:

2014.04.19 @ 01:06:30

**TEST COMMENT:** IF: Weak blow, Built to 2 1/4" over 30 mins.  
IS: No blow back  
FF: Weak blow, Built to 1/8" over 45 mins.  
FS: No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1667.83	96.10	Initial Hydro-static
13	18.97	96.43	Open To Flow (1)
37	49.61	97.02	Shut-In(1)
82	1082.49	97.00	End Shut-In(1)
83	53.34	96.55	Open To Flow (2)
134	77.02	97.27	Shut-In(2)
223	1071.68	97.40	End Shut-In(2)
225	1602.88	97.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil on top	0.00
149.00	mud-100%- With good odor	0.99

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)





**TRILOBITE**  
**TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond oil

**4 5 21w Norton KS**

P.O.Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55058

**DST#: 7**

ATTN: Jeff Lawler

Test Start: 2014.04.18 @ 20:05:00

## GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:34:30

Time Test Ended: 02:43:00

Test Type: Conventional Straddle (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

**Interval: 3267.00 ft (KB) To 3305.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3305.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8651 Outside**

Press@RunDepth: psig @ 3268.00 ft (KB)

Start Date: 2014.04.18

End Date: 2014.04.19

Capacity: 8000.00 psig

Last Calib.: 2014.04.19

Start Time: 20:05:05

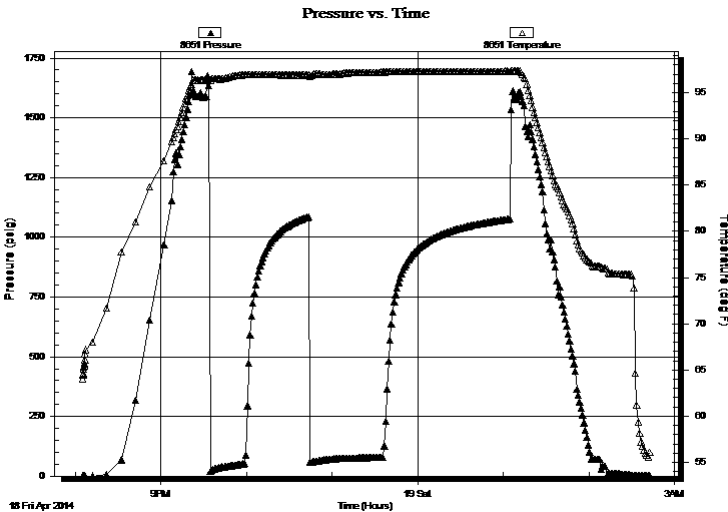
End Time: 02:42:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Weak blow , Built to 2 1/4" over 30 mins.  
IS: No blow back  
FF: Weak blow , Built to 1/8" over 45 mins.  
FS: No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil on top	0.00
149.00	mud-100%- With good odor	0.99

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Black Diamond oil

**4 5 21w Norton KS**

P.O.Box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55058

**DST#: 7**

ATTN: Jeff Lawler

Test Start: 2014.04.18 @ 20:05:00

## GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:34:30

Time Test Ended: 02:43:00

Test Type: Conventional Straddle (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

**Interval: 3267.00 ft (KB) To 3305.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3305.00 ft (KB) (TVD)

2017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8673 Below (Straddle)**

Press@RunDepth: psig @ 3306.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.18

End Date: 2014.04.19

Last Calib.: 2014.04.19

Start Time: 20:05:01

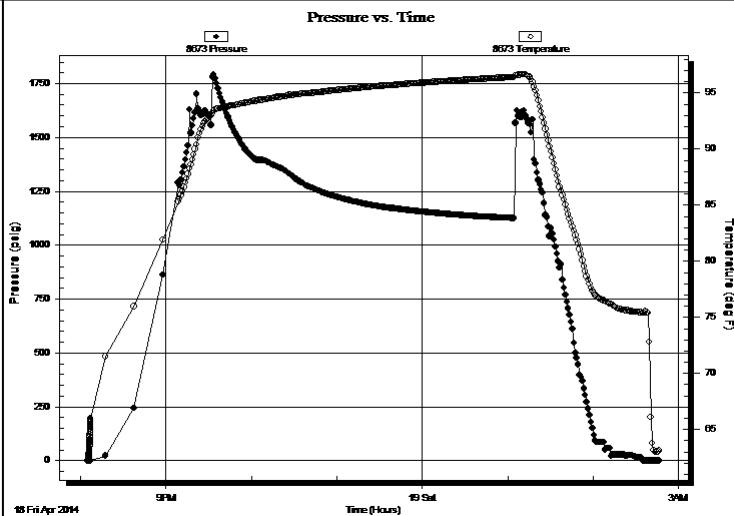
End Time: 02:46:30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Weak blow, Built to 2 1/4" over 30 mins.  
IS: No blow back  
FF: Weak blow, Built to 1/8" over 45 mins.  
FS: No blow back.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil on top	0.00
149.00	mud-100%- With good odor	0.99

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Black Diamond oil

**4 5 21w Norton KS**

P.O.box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55058

**DST#: 7**

ATTN: Jeff Lawler

Test Start: 2014.04.18 @ 20:05:00

## Tool Information

Drill Pipe:	Length: 3136.00 ft	Diameter: 3.80 inches	Volume: 43.99 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 44.59 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3267.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	3305.00 ft			
Interval between Packers:	38.00 ft			
Tool Length:	296.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Shut In Tool	5.00			3242.00	
Sampler	2.00			3244.00	
Hydraulic tool	5.00			3249.00	
Jars	5.00			3254.00	
Safety Joint	3.00			3257.00	
Packer	5.00			3262.00	30.00 Bottom Of Top Packer
Packer	5.00			3267.00	
Packer - Shale	0.00			3267.00	
Stubb	1.00			3268.00	
Recorder	0.00	8960	Inside	3268.00	
Recorder	0.00	8651	Outside	3268.00	
Perforations	32.00			3300.00	
Blank Off Sub	1.00			3301.00	
Blank Spacing	4.00			3305.00	38.00 Tool Interval
Packer	1.00			3306.00	
Packer - Shale	0.00			3306.00	
Recorder	0.00	8673	Below	3306.00	
Change Over Sub	1.00			3307.00	
Blank Spacing	219.00			3526.00	
Change Over Sub	1.00			3527.00	
Perforations	3.00			3530.00	
Bullnose	3.00			3533.00	228.00 Bottom Packers & Anchor

**Total Tool Length: 296.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Black Diamond oil

**4 5 21w Norton KS**

P.O.box 641  
Hays KS 67601

**Glennemeier #1**

Job Ticket: 55058

**DST#: 7**

ATTN: Jeff Lawler

Test Start: 2014.04.18 @ 20:05:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	free oil on top	0.005
149.00	mud-100%- With good odor	0.988

Total Length: 150.00 ft      Total Volume: 0.993 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

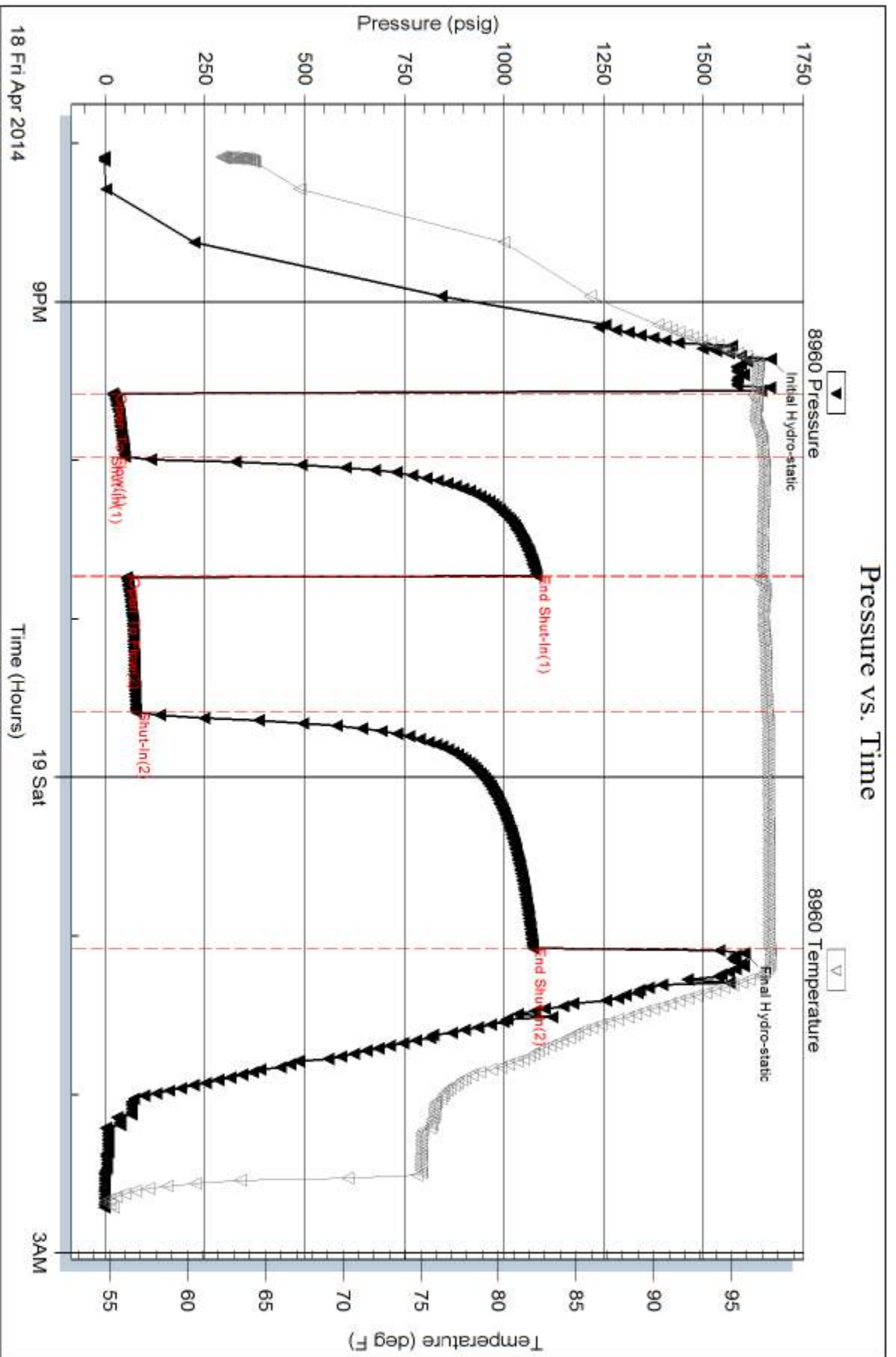
Serial #: 8960

Inside

Black Diamond oil

Glennmeier #1

DST Test Number: 7

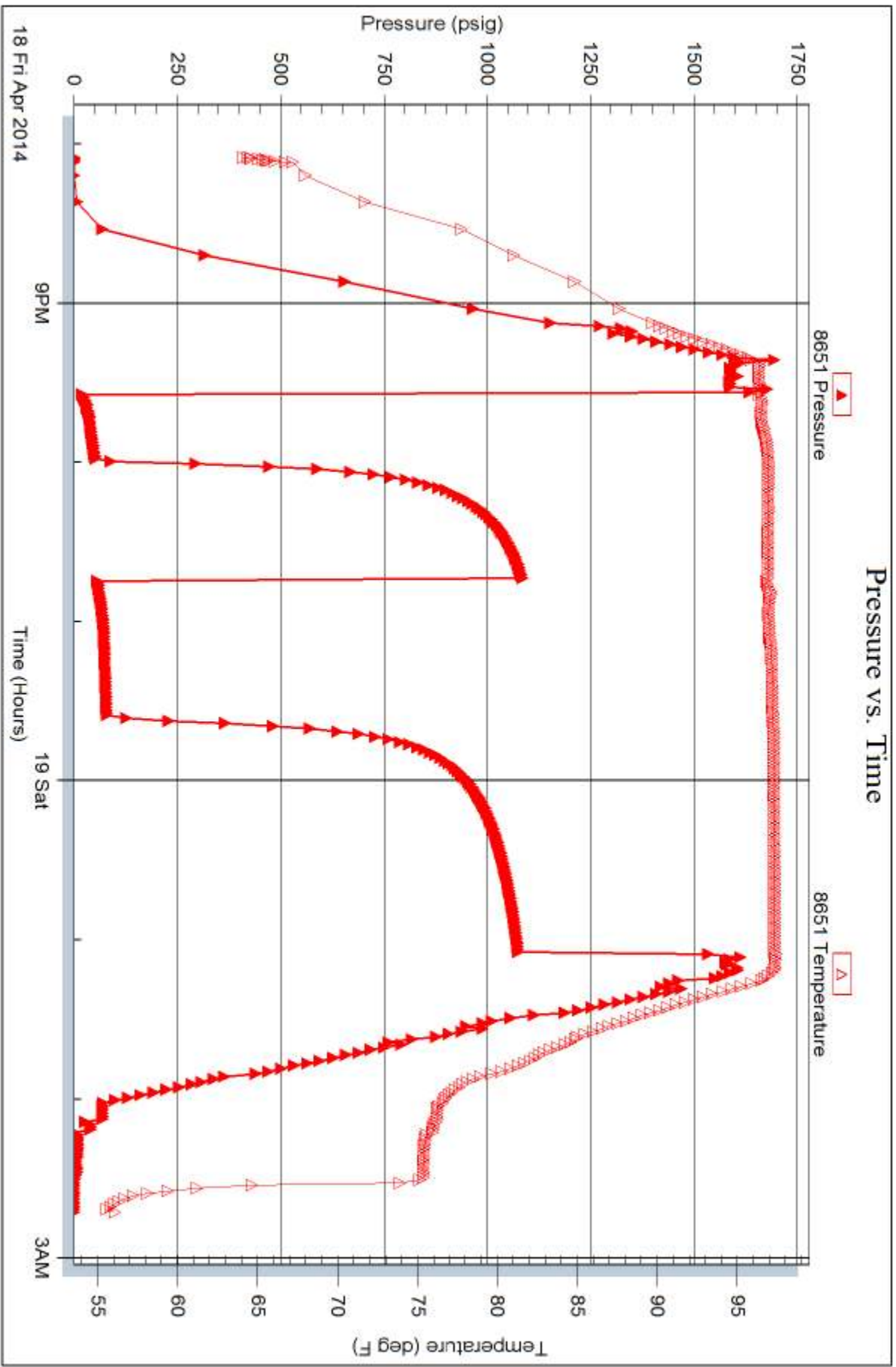


Serial #: 8651

Outside Black Diamond oil

Glennmeier #1

DST Test Number: 7

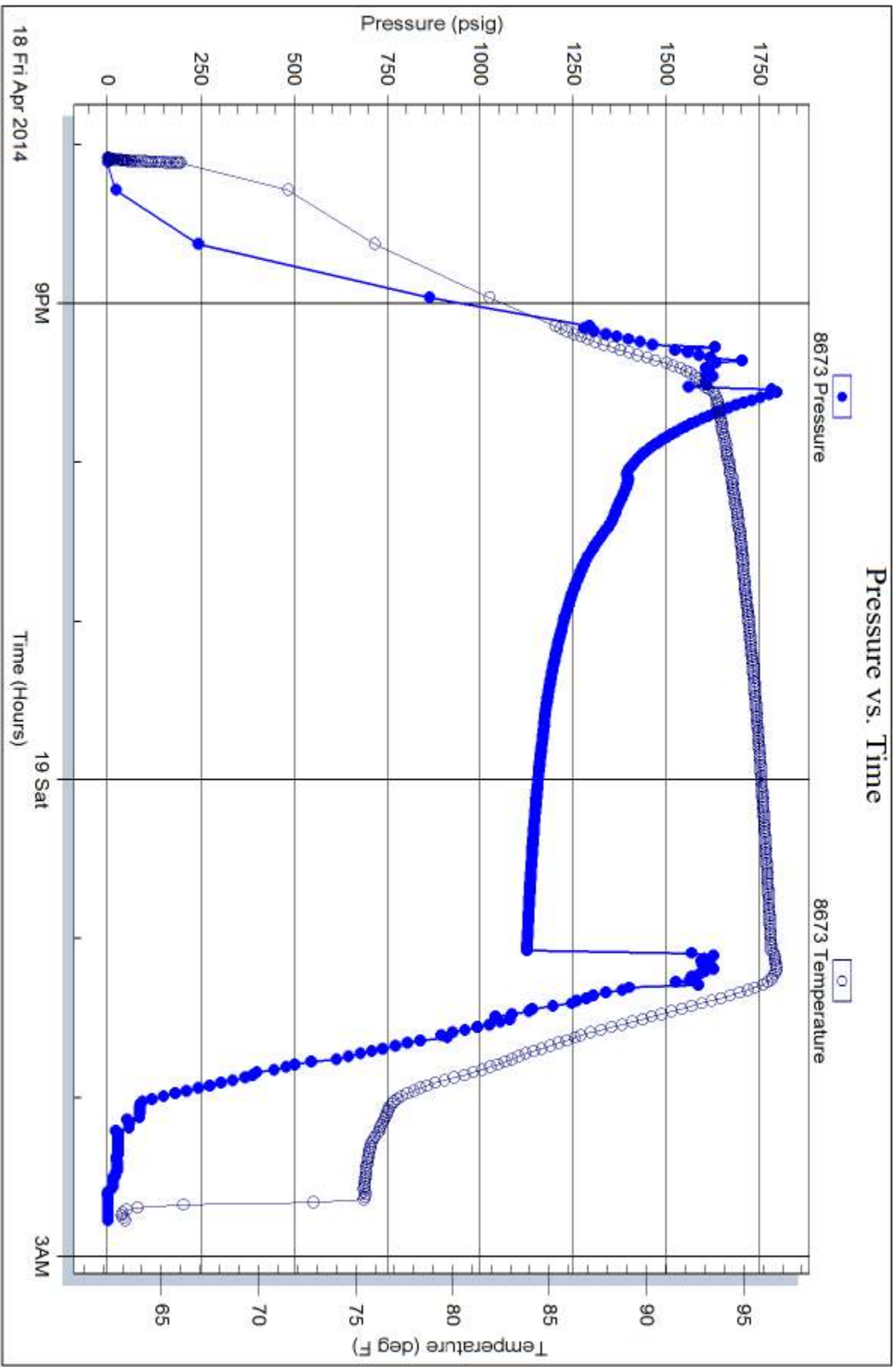


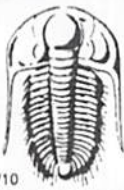
Serial #: 8673

Below (Stratfield) Diamond oil

Glennmeier #1

DST Test Number: 7





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55052**

Well Name & No. Glennemer #1 Test No. 1 Date 4-15-14  
 Company Black Diamond Oil, Inc. Elevation 3022 KB 2017 GL  
 Address P.O. Box 641 Hays Ks. 67601  
 Co. Rep / Geo. JEFF Lowery Rig WV#6  
 Location: Sec. 4 Twp. 5 Rge. 21W Co. Norton State Ks

Interval Tested 3182 3220 Zone Tested Toronto  
 Anchor Length 38 Drill Pipe Run 3053 Mud Wt. 9.2  
 Top Packer Depth 3177 Drill Collars Run 122 Vis 49  
 Bottom Packer Depth 3182 Wt. Pipe Run -0' WL 8  
 Total Depth 3220 Chlorides 750 ppm System LCM 2#

Blow Description IF: Weak blow, over 30 mins surface.

ISF: No blow back.

FF: Flushed tool - pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>mud with oil speck.</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 90 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1581  Test 1150 T-On Location 8:30  
 (B) First Initial Flow 13  Jars \_\_\_\_\_ T-Started 9:05  
 (C) First Final Flow 21  Safety Joint \_\_\_\_\_ T-Open 10:25  
 (D) Initial Shut-In 1221  Circ Sub \_\_\_\_\_ T-Pulled 12:50  
 (E) Second Initial Flow 24  Hourly Standby \_\_\_\_\_ T-Out 13:39  
 (F) Second Final Flow 29  Mileage 60x2=120x1.55 186 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1528  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Final Flow \_\_\_\_\_  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1336  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1336

Approved By \_\_\_\_\_

Our Representative Chris Myers

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55053**

Well Name & No. Glennemier #1 Test No. 2 Date 4-15-2014  
 Company Black Diamond Oil, Inc Elevation 2022 KB 2017 GL  
 Address P.O. Box 641 Hays Ks 67601  
 Co. Rep / Geo. Jeff Lowery Rig wn #6  
 Location: Sec. 4 Twp. 5 Rge. 21w Co. Norton State Ks

Interval Tested 3242 3285 Zone Tested LKC-C-D  
 Anchor Length 43 Drill Pipe Run 3103 Mud Wt. 9.2  
 Top Packer Depth 3237 Drill Collars Run 122 Vis 49  
 Bottom Packer Depth 3242 Wt. Pipe Run -0- WL 8  
 Total Depth 3285 Chlorides 750 ppm System LCM 2#

Blow Description IF: Fair blow, Built to B.O.B in 12 min.  
ISI: No blow back  
FF: Fair blow, built to B.O.B in 20 mins.  
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>socwm</u>		<u>20</u>	<u>30</u>	<u>50</u>
<u>186</u>	<u>MACW</u>			<u>80</u>	<u>20</u>
<u>186</u>	<u>water</u>			<u>100</u>	

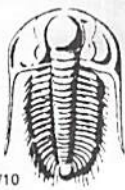
Rec Total 434 BHT 98 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1615  Test 1150 T-On Location 20:40  
 (B) First Initial Flow 27  Jars \_\_\_\_\_ T-Started 21:05  
 (C) First Final Flow 111  Safety Joint \_\_\_\_\_ T-Open 22:36  
 (D) Initial Shut-In 1160  Circ Sub \_\_\_\_\_ T-Pulled 1:35  
 (E) Second Initial Flow 115  Hourly Standby \_\_\_\_\_ T-Out 3:29  
 (F) Second Final Flow 183  Mileage 60x2=120x1.55= 186 Comments \_\_\_\_\_  
 (G) Final Shut-In 1140  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1576  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1336  
 Final Flow 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 60 Sub Total 1336

Approved By \_\_\_\_\_

Our Representative Chubky

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55054**

Well Name & No. Glennemair #1 Test No. 3 Date 4-16-2014  
 Company Black Diamond oil, Inc. Elevation 2022 KB 2017 GL  
 Address P.O. Box 641 Hays Ks. 67601  
 Co. Rep / Geo. JEFF Lower 4 Rig WW#6  
 Location: Sec. 4 Twp. 5 Rge. 21 W Co. Norton State Ks

Interval Tested 3285 3294 Zone Tested LKC-E  
 Anchor Length 9ft Drill Pipe Run 3176 Mud Wt. 9.2  
 Top Packer Depth 3280 Drill Collars Run 122 Vis 49  
 Bottom Packer Depth 3285 Wt. Pipe Run -0- WL 8  
 Total Depth 3294 Chlorides 750 ppm System LCM 2#

Blow Description IF: Work surface over 30 mts.

ISI: No blow back

FF: No blow

FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>mcw with good odor</u>			<u>65</u>	<u>35</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 98 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1628  Test 1150 T-On Location 8:40  
 (B) First Initial Flow 13  Jars \_\_\_\_\_ T-Started 9:10  
 (C) First Final Flow 67  Safety Joint \_\_\_\_\_ T-Open 10:37  
 (D) Initial Shut-In 1642  Circ Sub \_\_\_\_\_ T-Pulled 12:50  
 (E) Second Initial Flow 30  Hourly Standby \_\_\_\_\_ T-Out 13:42  
 (F) Second Final Flow 38  Mileage 60 x 2 = 120 x 1.55 = 186 Comments noted  
 (G) Final Shut-In 970  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1701  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 30

Sub Total 1336

MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_

Our Representative Chris Rogers

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55055**

4/10

Well Name & No. Glennemer #1 Test No. 4 Date 4-16-2014  
 Company Black Diamond oil, Inc. Elevation 2022 KB 2017 GL  
 Address P.O. Box 641 Hays KS 67601  
 Co. Rep / Geo. Jeff Lower Rig ww#6  
 Location: Sec. 4 Twp. 5 Rge. 21w Co. Norton State Ks

Interval Tested 3286 3302 Zone Tested LKC-F  
 Anchor Length 16 Drill Pipe Run 3176 Mud Wt. 9.2  
 Top Packer Depth 3281 Drill Collars Run 122 Vis 49  
 Bottom Packer Depth 3286 Wt. Pipe Run -0- WL 8'  
 Total Depth 3302 Chlorides 750 ppm System LCM 2#

Blow Description IF: Weak blow died in 1min.  
IS: No blow back  
FF: No blow, flush and pulled tool

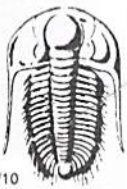
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 98 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1611  Test 1150 T-On Location 18:45  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 19:20  
 (C) First Final Flow 27  Safety Joint \_\_\_\_\_ T-Open 20:39  
 (D) Initial Shut-In 1618  Circ Sub \_\_\_\_\_ T-Pulled 21:50  
 (E) Second Initial Flow 29  Hourly Standby \_\_\_\_\_ T-Out 23:05  
 (F) Second Final Flow 30  Mileage 60x 2 = 120 x 1.55 = 186 Comments none!  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1664  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1336  
 Final Flow \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_ Sub Total 1336

Approved By \_\_\_\_\_ Our Representative Chad [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55056**

Well Name & No. Glennemore #1 Test No. 5 Date 4-17-2014  
 Company Black Diamond Oil, Inc Elevation 2022 KB2017 GL  
 Address P.O. Box 641 Hays KS 67601  
 Co. Rep / Geo. Jeff Lowler Rig WWT# 6  
 Location: Sec. 4 Twp. 5 Rge. 21w Co. Norton State Ks

Interval Tested 3326 3370 Zone Tested LRC - H-L  
 Anchor Length 44 Drill Pipe Run 3208 Mud Wt. 9.2  
 Top Packer Depth 3321 Drill Collars Run 122 Vis 50  
 Bottom Packer Depth 3326 Wt. Pipe Run -0 WL 9.6  
 Total Depth 3370 Chlorides 500 ppm System LCM 2#

Blow Description IF: Weak blow, Surface over 25 mins.  
FSI: No blow back  
FF: No blow  
FFI: No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>0cm</u>		<u>25</u>		<u>75</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 98 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1635</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>6:30</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars _____	T-Started <u>7:10</u>
(C) First Final Flow <u>40</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>8:26</u>
(D) Initial Shut-In <u>883</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>11:00</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:10</u>
(F) Second Final Flow <u>31</u>	<input checked="" type="checkbox"/> Mileage <u>50x2 = 120x1.55</u> <u>186</u>	Comments <u>normal</u>
(G) Final Shut-In <u>797</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1625</u>	<input type="checkbox"/> Straddle _____	
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Day Standby _____	Total <u>1336</u>
Final Flow <u>30</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
Final Shut-In <u>45</u>		

Sub Total 1336

Approved By \_\_\_\_\_ Our Representative Chub [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55057**

Well Name & No. Glennemeir #1 Test No. 6 Date 4-17-14  
 Company Black Diamond Oil Inc Elevation 2022 KB 2017 GL  
 Address P.O. Box 641 Hays KS 67601  
 Co. Rep / Geo. Jeff Lowler Rig ww#6  
 Location: Sec. 4 Twp. 5 Rge. 21W Co. Norton State KS

Interval Tested 3372 3387 Zone Tested LKC-5  
 Anchor Length 15 Drill Pipe Run 3241 Mud Wt. 9.2  
 Top Packer Depth 3367 Drill Collars Run 122 Vis 50  
 Bottom Packer Depth 3372 Wt. Pipe Run -0- WL 9.6  
 Total Depth 3387 Chlorides 500 ppm System LCM 2#

Blow Description IF: Weak blow Dead in 20 mins.

ISF: No blow back

FF: No blow

FSE: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud oil specs</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 98 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1657  Test 1150 T-On Location 17:30  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 17:35  
 (C) First Final Flow 15  Safety Joint \_\_\_\_\_ T-Open 14:02  
 (D) Initial Shut-In 16  Circ Sub \_\_\_\_\_ T-Pulled 14:00  
 (E) Second Initial Flow 15  Hourly Standby \_\_\_\_\_ T-Out 22:53  
 (F) Second Final Flow 15  Mileage 60x2=120x1.55 186 Comments initial  
 (G) Final Shut-In 15  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1633  Straddle \_\_\_\_\_

Initial Open \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_

Initial Shut-In \_\_\_\_\_  Ruined Packer \_\_\_\_\_

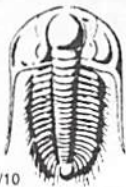
Final Flow \_\_\_\_\_  Extra Packer \_\_\_\_\_

Final Shut-In \_\_\_\_\_  Extra Recorder \_\_\_\_\_

Sub Total 1336  Day Standby \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chad King

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55058**

5460 8673  
8651 8673

Well Name & No. Glenneneier #1 Test No. 7 Date 4-18-14  
 Company Black Diamond oil INC Elevation 2022 KB 2017 GL  
 Address P.O. BOX 641 Hays Ks. 67601  
 Co. Rep / Geo. JEFF Lowery Rig ww#6  
 Location: Sec. 4 Twp. 5 Rge. 21w Co. Norton State Ks

Interval Tested 3267 3305 Zone Tested LKC-0  
 Anchor Length 38 Drill Pipe Run 3136 Mud Wt. 9.2  
 Top Packer Depth 3262 Drill Collars Run 122 Vis 50  
 Bottom Packer Depth 3305 Wt. Pipe Run 0 WL 9.6  
 Total Depth 3531 Chlorides 500 ppm System LCM 2#

Blow Description IF: Weak blow, Built to 2 1/4 in. over 30  
ISI: No blow back  
FF: Weak blow, Built to 1/8 in. over 45 mins.  
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>Feet of mud with 1 ft. free oil on top Good order</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT 98 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1668  Test 1150 T-On Location 17:30  
 (B) First Initial Flow 19  Jars \_\_\_\_\_ T-Started 20:05  
 (C) First Final Flow 50  Safety Joint \_\_\_\_\_ T-Open 21  
 (D) Initial Shut-In 1082  Circ Sub \_\_\_\_\_ T-Pulled 103  
 (E) Second Initial Flow 53  Hourly Standby \_\_\_\_\_ T-Out 2:43  
 (F) Second Final Flow 77  Mileage 60x2 = 120x1.55 186  
 (G) Final Shut-In 1072  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1603  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer X.2 500  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 2436  
 Final Flow 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 90 Sub Total 2436

Approved By \_\_\_\_\_ Our Representative Chet Hays

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Conservation Division  
266 N. Main St., Ste. 220  
Wichita, KS 67202-1513



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Shari Feist Albrecht, Chair  
Jay Scott Emler, Commissioner  
Pat Apple, Commissioner

Sam Brownback, Governor

October 01, 2014

Kenneth Vehige  
Black Diamond Oil, Inc.  
PO BOX 641  
HAYS, KS 67601-0641

Re: ACO-1  
API 15-137-20697-00-00  
Glennemeier 1  
NW/4 Sec.04-05S-21W  
Norton County, Kansas

Dear Kenneth Vehige:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 04/12/2014 and the ACO-1 was received on September 25, 2014 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department