



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1134623  
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: \_\_\_\_\_



1134623

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <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> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	BEREXCO LLC
Well Name	Ivalee 1-16
Doc ID	1134623

Tops

Name	Top	Datum
Anhydrite	3152	+44
Anhydrite (base)	3182	+14
Foraker	3724	-528
Topeka	3946	-750
Oread	4081	-885
Lansing A	4156	-960
Lansing B	4224	-1028
Lansing C	4280	-1084
Lansing D	4312	-1116
Lansing E	4360	-1164
Lansing F	4404	-1208
Pawnee	4562	-1366
RTD	4730	-1534
LTD	4734	-1538

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



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

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

April 18, 2013

Rodney Reynolds  
BEREXCO LLC  
2020 N. BRAMBLEWOOD  
WICHITA, KS 67206-1094

Re: ACO1  
API 15-023-21361-00-00  
Ivalee 1-16  
SW/4 Sec.16-01S-37W  
Cheyenne County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Rodney Reynolds



## DRILL STEM TEST REPORT

Prepared For: **Berexco LLC.**

2020 N. Bramblewood  
Wichita, KS 67202

ATTN: Bryan Bynog

### **Ivalee #1-16**

#### **16-1s-37w Cheyenne,KS**

Start Date: 2013.04.03 @ 12:25:00

End Date: 2013.04.04 @ 00:32:00

Job Ticket #: 50598                      DST #: 1

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

Printed: 2013.04.09 @ 08:50:44



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.  
 2020 N. Bramblewood  
 Wichita, KS 67202  
 ATTN: Bryan Bynog

**16-1s-37w Cheyenne, KS**  
**Ivaley #1-16**  
 Job Ticket: 50598 **DST#: 1**  
 Test Start: 2013.04.03 @ 12:25:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 16:42:00 Tester: 61  
 Time Test Ended: 00:32:00 Unit No: Chuck Kreuzer  
 Interval: **4175.00 ft (KB) To 4250.00 ft (KB) (TVD)** Reference Elevations: 3196.00 ft (KB)  
 Total Depth: 4250.00 ft (KB) (TVD) 3186.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 10.00 ft

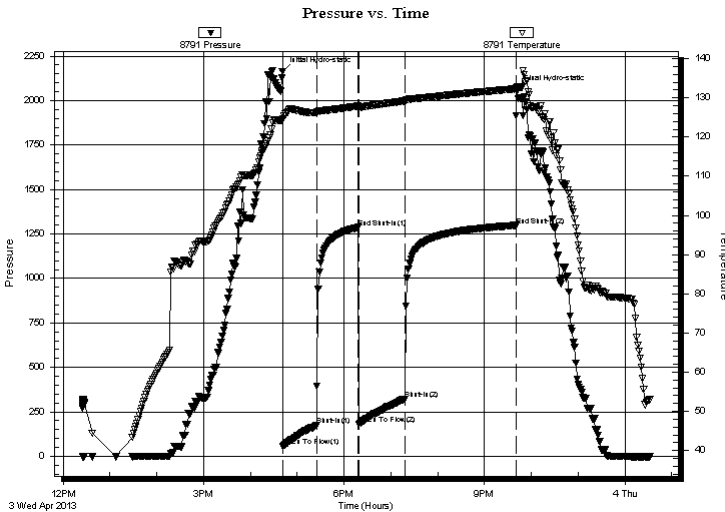
## Serial #: 8791

Inside

Press @ Run Depth: 321.54 psig @ 4176.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.03 End Date: 2013.04.04 Last Calib.: 2013.04.05  
 Start Time: 12:25:01 End Time: 00:32:00 Time On Btm: 2013.04.03 @ 16:41:00  
 Time Off Btm: 2013.04.03 @ 21:41:00

TEST COMMENT: 30 IF - Weak blow built to 4"  
 60 ISI - No return  
 90 FF - Weak blow built to 7"  
 120 FSI - No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2163.96	124.40	Initial Hydro-static
1	57.77	124.60	Open To Flow (1)
44	175.40	126.29	Shut-In(1)
97	1287.04	127.90	End Shut-In(1)
98	180.92	127.60	Open To Flow (2)
157	321.54	129.21	Shut-In(2)
299	1298.26	132.28	End Shut-In(2)
300	2059.87	132.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
300.00	vsocm-2%o33%w 65%m	1.48
300.00	mcw -25%m75%w	1.55

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.  
 2020 N. Bramblewood  
 Wichita, KS 67202  
 ATTN: Bryan Bynog

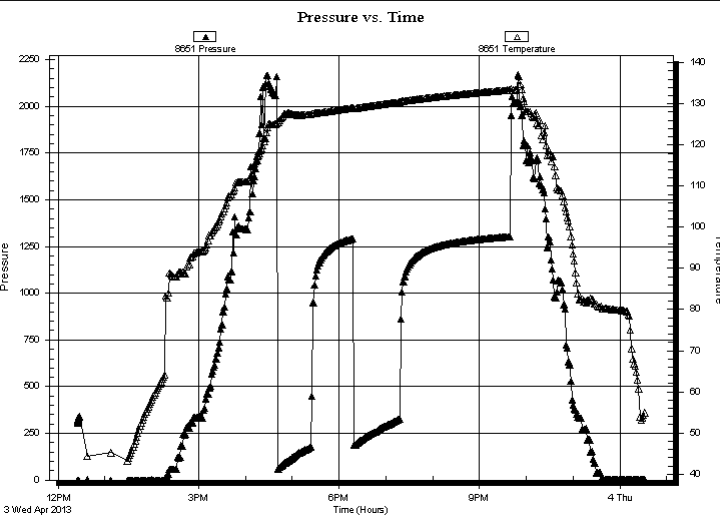
**16-1s-37w Cheyenne,KS**  
**Ivaley #1-16**  
 Job Ticket: 50598 **DST#: 1**  
 Test Start: 2013.04.03 @ 12:25:00

## GENERAL INFORMATION:

Formation: **LKC "A"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:42:00  
 Time Test Ended: 00:32:00  
**Interval: 4175.00 ft (KB) To 4250.00 ft (KB) (TVD)**  
 Total Depth: 4250.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: 61  
 Unit No: Chuck Kreuzter  
 Reference Elevations: 3196.00 ft (KB)  
 3186.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8651 Outside**  
 Press @ Run Depth: psig @ 4176.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.03 End Date: 2013.04.04 Last Calib.: 2013.04.05  
 Start Time: 12:25:01 End Time: 00:31:30 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 30 IF - Weak blow built to 4"  
 60 ISI - No return  
 90 FF - Weak blow built to 7"  
 120 FSI - No return



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

Recovery		
Length (ft)	Description	Volume (bbl)
300.00	vsocm-2%o33%w 65%m	1.48
300.00	mcw -25%m75%w	1.55

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50598

**DST#: 1**

ATTN: Bryan Bynog

Test Start: 2013.04.03 @ 12:25:00

## Tool Information

Drill Pipe:	Length: 3585.00 ft	Diameter: 3.80 inches	Volume: 50.29 bbl	Tool Weight: 2500.00 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: 592.00 ft	Diameter: 2.25 inches	Volume: 2.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 53.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4175.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	103.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			4152.00	
Hydraulic tool	5.00			4157.00	
Jars	5.00			4162.00	
Safety Joint	3.00			4165.00	
Packer	5.00			4170.00	28.00 Bottom Of Top Packer
Packer	5.00			4175.00	
Stubb	1.00			4176.00	
Recorder	0.00	8791	Inside	4176.00	
Recorder	0.00	8651	Outside	4176.00	
Perforations	2.00			4178.00	
change Over Sub	1.00			4179.00	
Drill Pipe	62.00			4241.00	
Change Over Sub	1.00			4242.00	
Perforations	5.00			4247.00	
Bullnose	3.00			4250.00	75.00 Bottom Packers & Anchor

**Total Tool Length: 103.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50598

**DST#: 1**

ATTN: Bryan Bynog

Test Start: 2013.04.03 @ 12:25:00

## 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:

50000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
300.00	vsocm-2%o33%w 65%m	1.475
300.00	mcw -25%m75%w	1.548

Total Length: 600.00 ft

Total Volume: 3.023 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

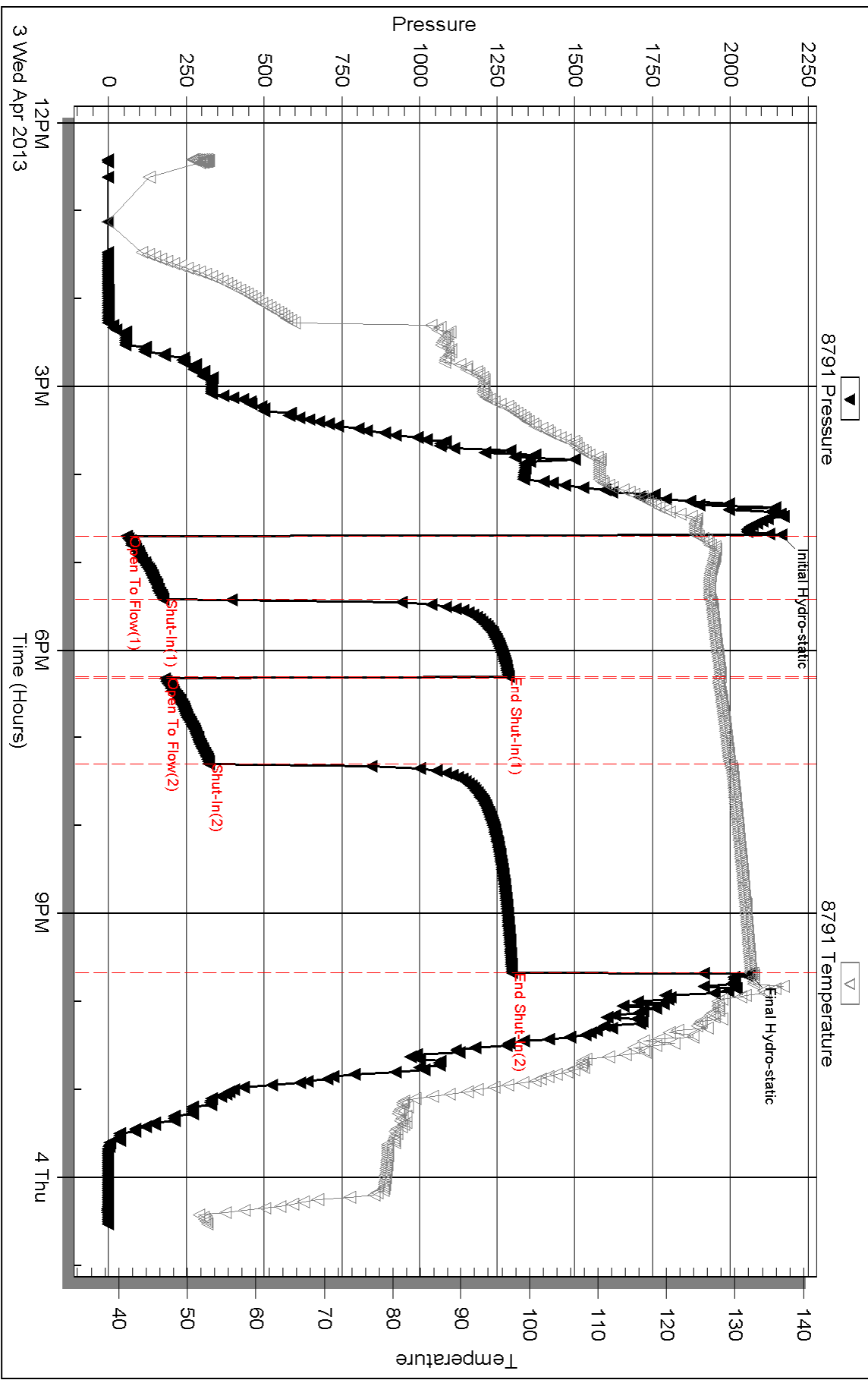
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

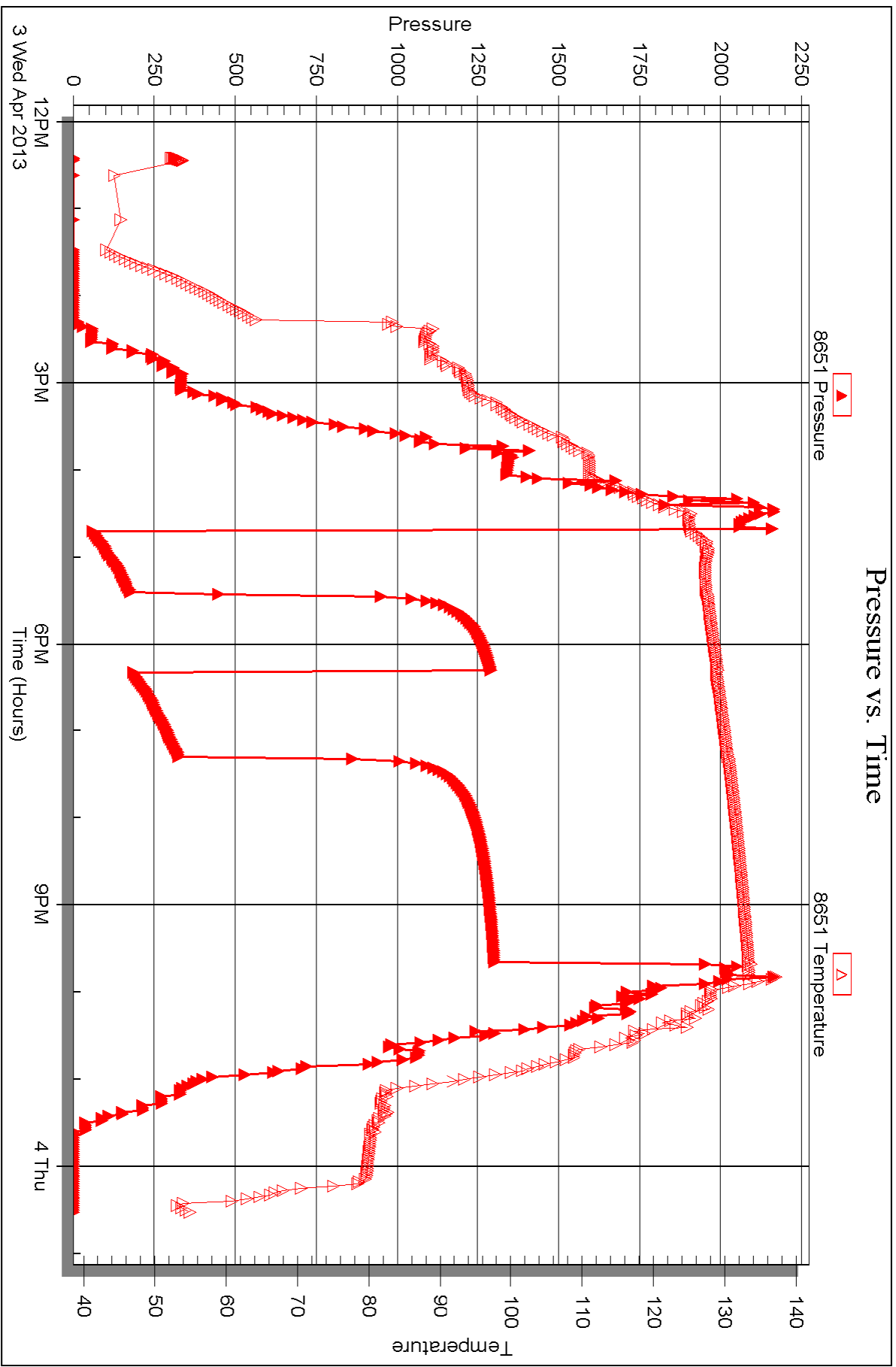


Serial #: 8651

Outside Berexco LLC.

Walee #1-16

DST Test Number: 1





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50598

4/10

Well Name & No. Ivatee #1-16 Test No. 1 Date 4-2-2013  
 Company Berexco LLC. Elevation 3196 KB 3186 GL  
 Address 2020 N. Bramblewood Wichita KS 67206  
 Co. Rep / Geo. Bryan Bynog Rig Berexco  
 Location: Sec. 16 Twp. 1S Rge. 37W Co. Dundy State NE

Interval Tested 4175 4250 Zone Tested LKL-A  
 Anchor Length 75 Drill Pipe Run 3585 Mud Wt. 9.4  
 Top Packer Depth 4170 Drill Collars Run 600 Vis 44  
 Bottom Packer Depth 4175 Wt. Pipe Run -0- WL 7.2  
 Total Depth 4250 Chlorides \_\_\_\_\_ ppm System LCM Trace

Blow Description IF: Weak blow, Built to 4 in. over 30 mins.  
ISI: No blow back  
FF: Weak blow, Built to 7 in over 90 mins.  
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
300	USOCNM		2	33	65
300	mcw			35	25

Rec Total 600 BHT 124 Gravity \_\_\_\_\_ API RW .24 @ 55° F Chlorides 50,000 ppm

(A) Initial Hydrostatic <u>2168</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>23:15</u>
(B) First Initial Flow <u>53</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>00:25</u>
(C) First Final Flow <u>175</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>16:41</u>
(D) Initial Shut-In <u>1287</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>9:40</u>
(E) Second Initial Flow <u>182</u>	<input type="checkbox"/> Hourly Standby	T-Out _____
(F) Second Final Flow <u>322</u>	<input checked="" type="checkbox"/> Mileage <u>78x2=156x1.55</u> 241.80	Comments _____
(G) Final Shut-In <u>1298</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>2079</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1816.80</u>
Final Shut-In <u>120</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1816.80</u>	

Approved By \_\_\_\_\_ Our Representative Chuck Hager

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.



## DRILL STEM TEST REPORT

Prepared For: **Berexco LLC.**

2020 N. Bramblewood  
Wichita, KS 67202

ATTN: Bryan Bynog

### **Ivalee #1-16**

#### **16-1s-37w Cheyenne,KS**

Start Date: 2013.04.04 @ 01:30:00

End Date: 2013.04.04 @ 11:34:30

Job Ticket #: 50599                      DST #: 2

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

Printed: 2013.04.09 @ 08:47:23



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.  
 2020 N. Bramblewood  
 Wichita, KS 67202  
 ATTN: Bryan Bynog

**16-1s-37w Cheyenne,KS**  
**Ivaley #1-16**  
 Job Ticket: 50599 **DST#: 2**  
 Test Start: 2013.04.04 @ 01:30:00

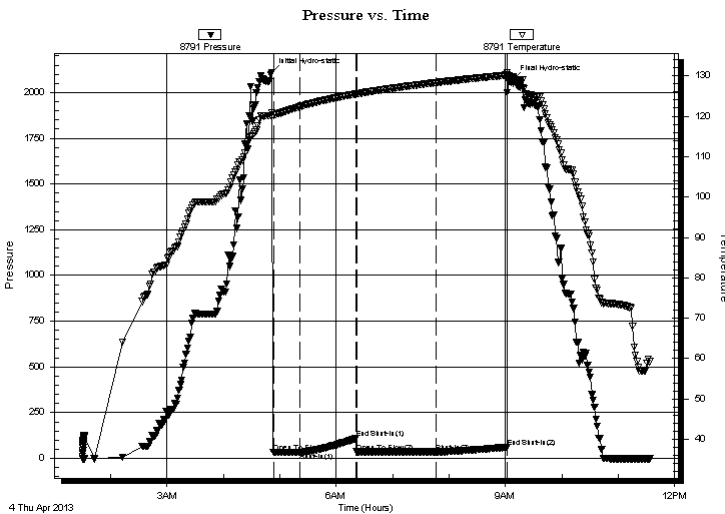
## GENERAL INFORMATION:

Formation: **LKC-C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:53:00  
 Time Test Ended: 11:34:30  
 Interval: **4252.00 ft (KB) To 4310.00 ft (KB) (TVD)**  
 Total Depth: 4310.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: 61  
 Unit No: Chuck Kreuzer  
 Reference Elevations: 3196.00 ft (KB)  
 3186.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8791 Inside**  
 Press @ Run Depth: 35.65 psig @ 4253.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.04.04 End Date: 2013.04.04 Last Calib.: 2013.04.04  
 Start Time: 01:30:01 End Time: 11:34:30 Time On Btm: 2013.04.04 @ 04:51:30  
 Time Off Btm: 2013.04.04 @ 09:08:30

**TEST COMMENT:** IF: Weak Blow , surface blow Died in 16 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2110.20	120.74	Initial Hydro-static
2	32.99	120.31	Open To Flow (1)
30	33.91	122.40	Shut-In(1)
89	107.95	125.50	End Shut-In(1)
90	34.97	125.52	Open To Flow (2)
175	35.65	128.31	Shut-In(2)
250	60.95	130.17	End Shut-In(2)
257	2073.08	129.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud-100%	0.05

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50599

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2013.04.04 @ 01:30:00

### GENERAL INFORMATION:

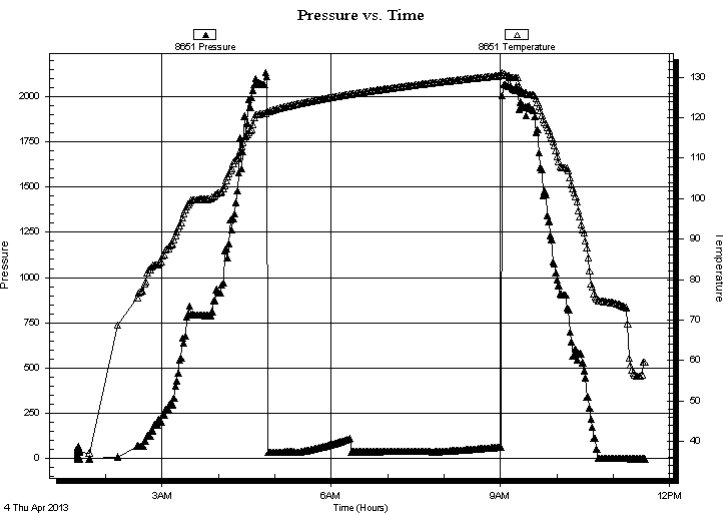
Formation: **LKC-C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:53:00  
 Time Test Ended: 11:34:30  
**Interval: 4252.00 ft (KB) To 4310.00 ft (KB) (TVD)**  
 Total Depth: 4310.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: 61  
 Unit No: Chuck Kreuzer  
 Reference Elevations: 3196.00 ft (KB)  
 3186.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8651**

**Outside**

Press @ Run Depth: psig @ 4253.00 ft (KB)  
 Start Date: 2013.04.04 End Date: 2013.04.04  
 Start Time: 01:30:01 End Time: 11:34:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.04.04  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Weak Blow, surface blow Died in 16 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)
10.00	Mud-100%	0.05

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50599

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2013.04.04 @ 01:30:00

## Tool Information

Drill Pipe:	Length: 3634.00 ft	Diameter: 3.80 inches	Volume: 50.98 bbl	Tool Weight: 2500.00 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: 600.00 ft	Diameter: 2.25 inches	Volume: 2.95 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 53.93 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4252.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

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

Shut In Tool	5.00			4229.00	
Hydraulic tool	5.00			4234.00	
Jars	5.00			4239.00	
Safety Joint	3.00			4242.00	
Packer	5.00			4247.00	28.00 Bottom Of Top Packer
Packer	5.00			4252.00	
Packer - Shale	0.00			4252.00	
Stubb	1.00			4253.00	
Recorder	0.00	8791	Inside	4253.00	
Recorder	0.00	8651	Outside	4253.00	
Perforations	1.00			4254.00	
change Over Sub	1.00			4255.00	
Drill Pipe	31.00			4286.00	
Change Over Sub	1.00			4287.00	
Perforations	20.00			4307.00	
Bullnose	3.00			4310.00	58.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>86.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50599

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2013.04.04 @ 01:30:00

## 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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.16 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud-100%	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

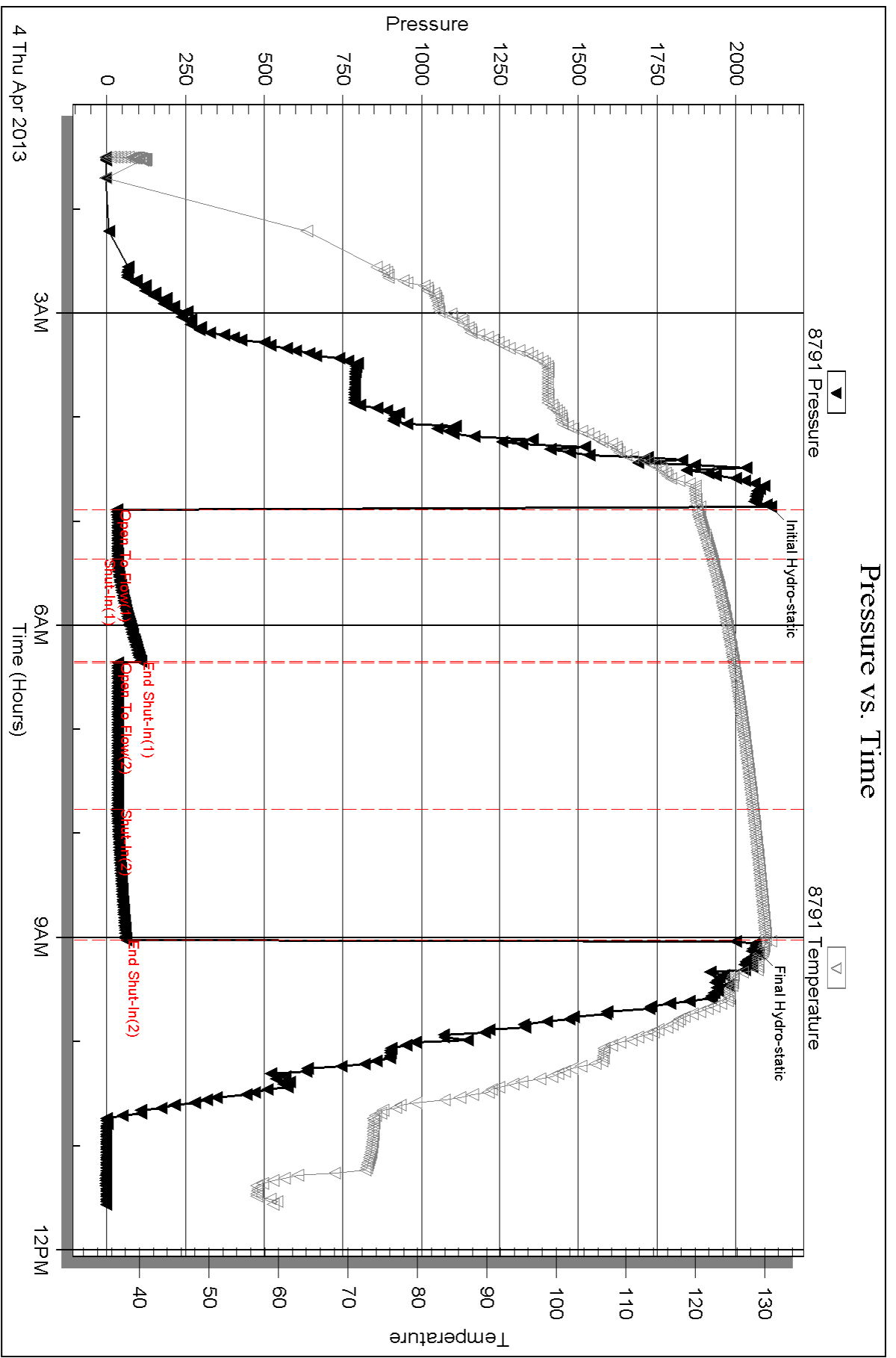
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

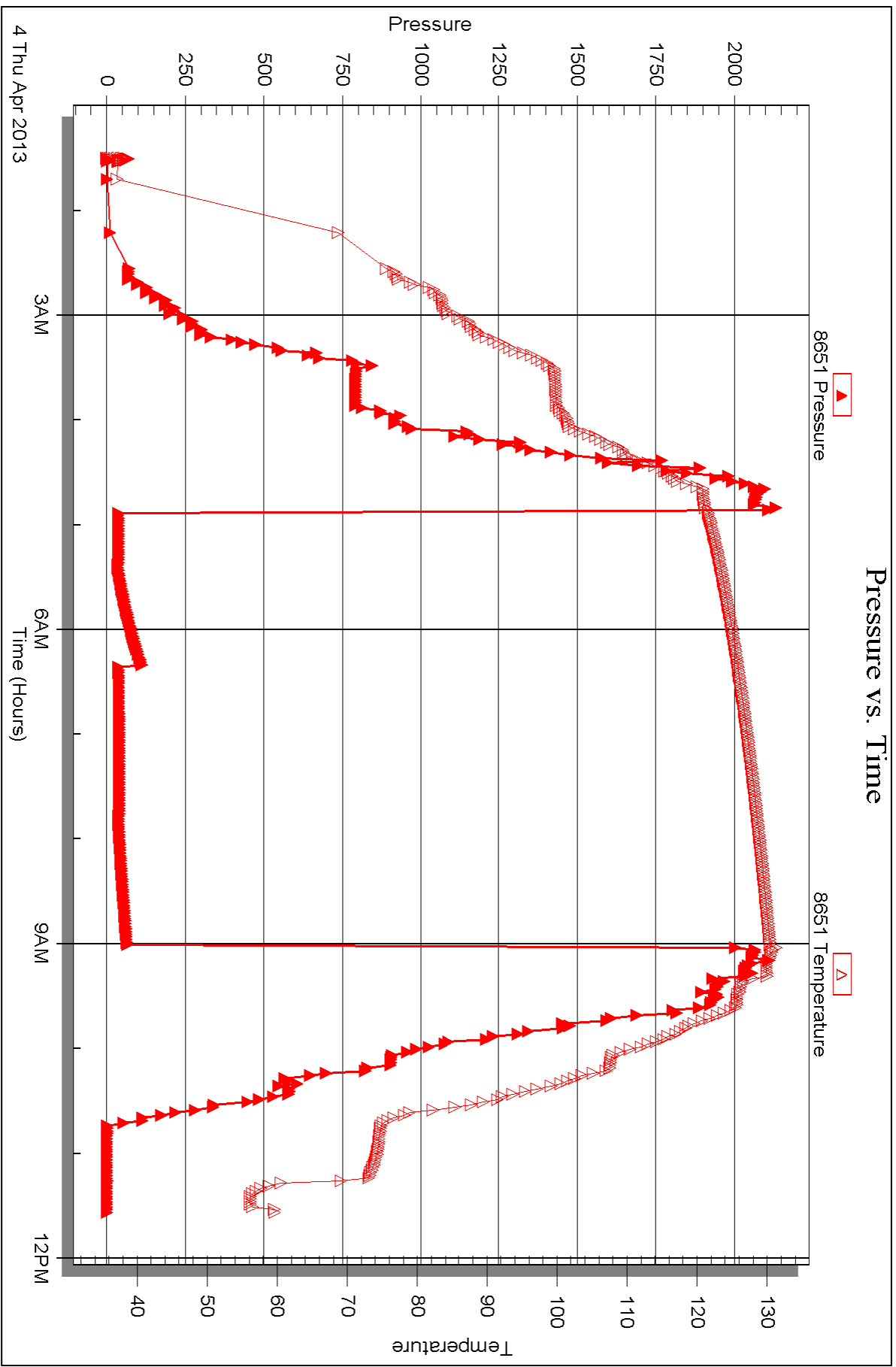


Serial #: 8651

Outside Berexco LLC.

Walee #1-16

DST Test Number: 2





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50599

4/10

Well Name & No. Iva Lee #1-16 Test No. 2 Date 4-4-2013  
 Company Berexco LLC Elevation 3196 KB 3186 GL  
 Address 2020 N. Bramblewood Wichita Ks 67206  
 Co. Rep / Geo. Bryan Byrd Rig Berexco #10  
 Location: Sec. 16 Twp. 15 Rge. 37W Co. Ondy State Ne.

Interval Tested 4252 4310 Zone Tested LKCC  
 Anchor Length 58 Drill Pipe Run 3634 Mud Wt. 9.4  
 Top Packer Depth 4247 Drill Collars Run 592 ft. Vis 44  
 Bottom Packer Depth 4252 Wt. Pipe Run - 0- WL 6.8  
 Total Depth 4310 Chlorides 2200 ppm System LCM trace

Blow Description IF: Weak blow surface, Blow died in 16 mins.

ISF: No blow back over 60 mins.

FF: No blow

FSI: No blow back over 90 mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</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 10 BHT 128 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic	<u>2110</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>1:12</u>
(B) First Initial Flow	<u>33</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>1:30</u>
(C) First Final Flow	<u>34</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>4:53</u>
(D) Initial Shut-In	<u>108</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>9:00</u>
(E) Second Initial Flow	<u>35</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>11:34</u>
(F) Second Final Flow	<u>36</u>	<input checked="" type="checkbox"/> Mileage	<u>78 x 2.006 = 176 x 1.55</u>	Comments	
(G) Final Shut-In	<u>61</u>	<input type="checkbox"/> Sampler	<u>241.80</u>		
(H) Final Hydrostatic	<u>2073</u>	<input type="checkbox"/> Straddle		<input checked="" type="checkbox"/> Ruined Shale Packer	<u>350</u>

Initial Open	<u>30</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>350</u>
Final Flow	<u>60</u>	<input type="checkbox"/> Day Standby		Total	<u>2416.80</u>
Final Shut-In	<u>90</u>	<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>2066.80</u>		

Approved By \_\_\_\_\_ Our Representative Charles Byrd

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.



## DRILL STEM TEST REPORT

Prepared For: **Berexco LLC.**

2020 N. Bramblewood  
Wichita, KS 67202

ATTN: Bryan Bynog

### **Ivalee #1-16**

#### **16-1s-37w Cheyenne,KS**

Start Date: 2013.04.04 @ 23:00:00

End Date: 2013.04.05 @ 10:37:00

Job Ticket #: 50600                      DST #: 3

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

Printed: 2013.04.09 @ 08:44:52



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.  
2020 N. Bramblewood  
Wichita, KS 67202  
ATTN: Bryan Bynog

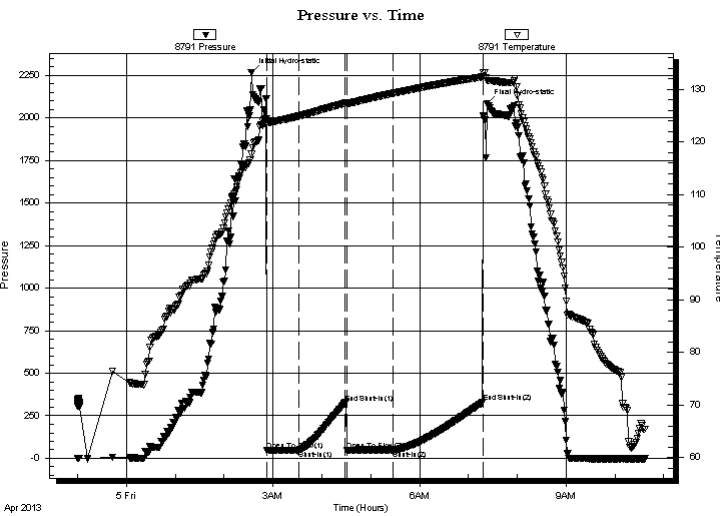
**16-1s-37w Cheyenne,KS**  
**Ivaley #1-16**  
Job Ticket: 50600      **DST#: 3**  
Test Start: 2013.04.04 @ 23:00:00

## GENERAL INFORMATION:

Formation: **LKC-E**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 02:52:30  
Time Test Ended: 10:37:00  
Interval: **4325.00 ft (KB) To 4380.00 ft (KB) (TVD)**  
Total Depth: 4380.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: 61  
Unit No: Chuck Kreuzer  
Reference Elevations: 3196.00 ft (KB)  
3186.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 8791      Inside**  
Press @ RunDepth: 49.86 psig @ 4326.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.04.04      End Date: 2013.04.05      Last Calib.: 2013.04.05  
Start Time: 23:00:01      End Time: 10:37:00      Time On Btm: 2013.04.05 @ 02:33:30  
Time Off Btm: 2013.04.05 @ 07:23:00

**TEST COMMENT:** IF: Weak Blow, Dead in 3 mins.  
IS: No blow back  
FF: No blow  
FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2268.31	117.67	Initial Hydro-static
19	45.18	123.68	Open To Flow (1)
58	46.34	124.88	Shut-In(1)
115	325.64	127.37	End Shut-In(1)
117	48.47	127.30	Open To Flow (2)
174	49.86	129.22	Shut-In(2)
284	328.00	132.37	End Shut-In(2)
290	2085.55	131.65	Final Hydro-static

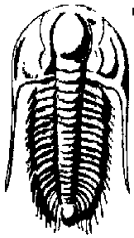
## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud-100%	0.02

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.

**16-1s-37w Cheyenne, KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivalee #1-16**

Job Ticket: 50600

**DST#: 3**

ATTN: Bryan Bynog

Test Start: 2013.04.04 @ 23:00:00

## GENERAL INFORMATION:

Formation: **LKC-E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:52:30

Time Test Ended: 10:37:00

Test Type: Conventional Bottom Hole (Reset)

Tester: 61

Unit No: Chuck Kreuzter

**Interval: 4325.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Total Depth: 4380.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3196.00 ft (KB)

3186.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8651 Outside**

Press@RunDepth: psig @ 4326.00 ft (KB)

Start Date: 2013.04.04

End Date: 2013.04.05

Start Time: 23:00:01

End Time: 10:37:00

Capacity: 8000.00 psig

Last Calib.: 2013.04.05

Time On Btm:

Time Off Btm:

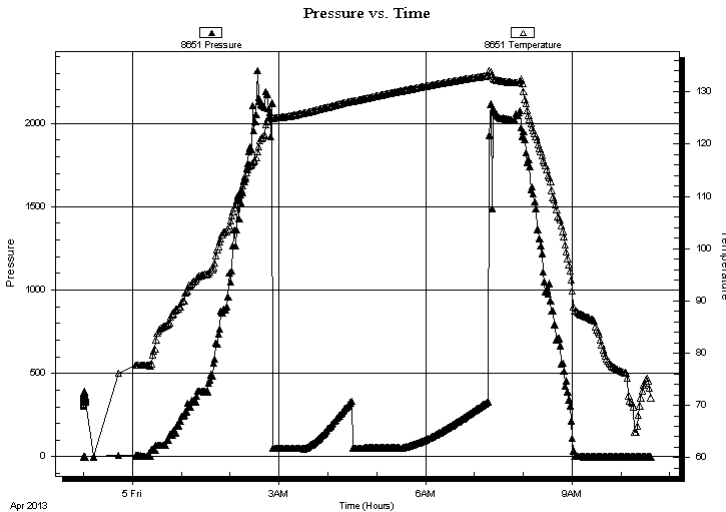
TEST COMMENT: IF: Weak Blow , Dead in 3 mins.

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)
5.00	mud-100%	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**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivalee #1-16**

Job Ticket: 50600

**DST#: 3**

ATTN: Bryan Bynog

Test Start: 2013.04.04 @ 23:00:00

## Tool Information

Drill Pipe:	Length: 3710.00 ft	Diameter: 3.80 inches	Volume: 52.04 bbl	Tool Weight: 2500.00 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: 592.00 ft	Diameter: 2.25 inches	Volume: 2.91 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 54.95 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4325.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

## Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4302.00	
Hydraulic tool	5.00			4307.00	
Jars	5.00			4312.00	
Safety Joint	3.00			4315.00	
Packer	5.00			4320.00	28.00 Bottom Of Top Packer
Packer	5.00			4325.00	
Stubb	1.00			4326.00	
Recorder	0.00	8791	Inside	4326.00	
Recorder	0.00	8651	Outside	4326.00	
Perforations	1.00			4327.00	
change Over Sub	1.00			4328.00	
Drill Pipe	31.00			4359.00	
Change Over Sub	1.00			4360.00	
Perforations	17.00			4377.00	
Bullnose	3.00			4380.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 83.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50600

**DST#: 3**

ATTN: Bryan Bynog

Test Start: 2013.04.04 @ 23:00:00

## 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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud-100%	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

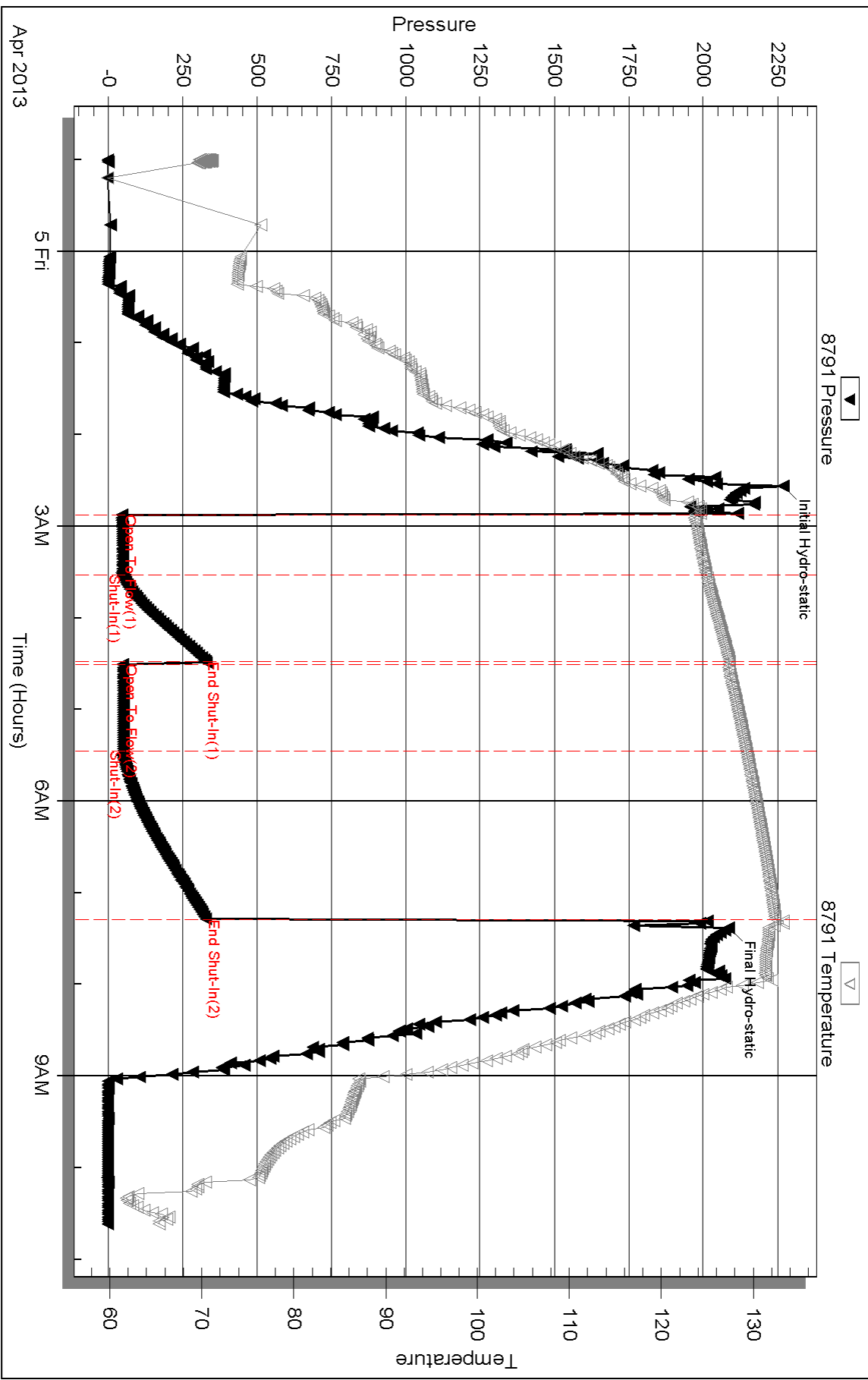
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

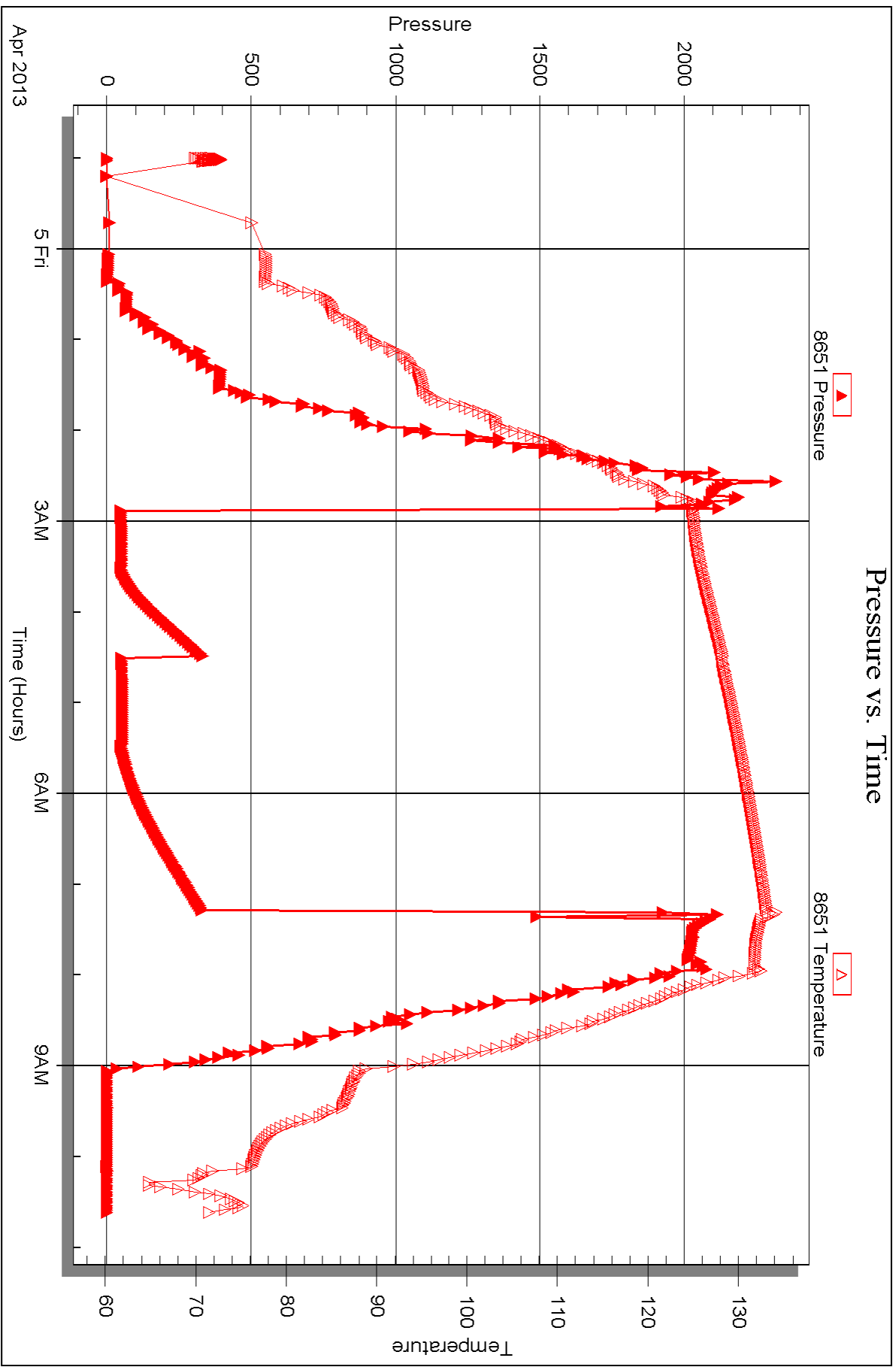


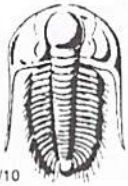
Serial #: 8651

Outside Berexco LLC.

Walee #1-16

DST Test Number: 3





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50600

4/10

Well Name & No. Ivatee #1-16 Test No. 3 Date 4-5-2013  
 Company Berexco LLC. Elevation 3196 KB 3186 GL  
 Address 2020  
 Co. Rep / Geo. Bryan Byng Rig Berexco  
 Location: Sec. 16 Twp. 15 Rge. 37W Co. Dundy State NE

Interval Tested 4325 4380 Zone Tested LKC-E  
 Anchor Length 55 Drill Pipe Run 03700 Mud Wt. 9.3  
 Top Packer Depth 4320 Drill Collars Run 592 Vis 45  
 Bottom Packer Depth 4325 Wt. Pipe Run -0- WL 6.8  
 Total Depth 4380 Chlorides 2400 ppm System LCM 1#

Blow Description IF: Weak blow, OBad in 3 mins.

ISF: No blow back

FF: No blow

FST: No blow balls

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

Rec Total 5 BHT 129 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2268</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>23:00</u>
(B) First Initial Flow <u>45</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>23:00</u>
(C) First Final Flow <u>46</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open _____
(D) Initial Shut-In <u>326</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>9:10</u>
(E) Second Initial Flow <u>48</u>	<input type="checkbox"/> Hourly Standby _____	T-Out _____
(F) Second Final Flow <u>50</u>	<input checked="" type="checkbox"/> Mileage <u>78x2 = 156 x 1.55</u> 241.80	Comments _____
(G) Final Shut-In <u>328</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2086</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1816.80</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____

Sub Total 1816.80

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

Our Representative Chad Byng

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.



## DRILL STEM TEST REPORT

Prepared For: **Berexco LLC.**

2020 N. Bramblewood  
Wichita, KS 67202

ATTN: Bryan Bynog

### **Ivalee #1-16**

### **16-1s-37w Cheyenne,KS**

Start Date: 2013.04.06 @ 09:55:00

End Date: 2013.04.06 @ 20:47:00

Job Ticket #: 50651                      DST #: 4

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

Printed: 2013.04.09 @ 08:43:50



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.  
 2020 N. Bramblewood  
 Wichita, KS 67202  
 ATTN: Bryan Bynog

**16-1s-37w Cheyenne, KS**  
**Ivaley #1-16**  
 Job Ticket: 50651      **DST#: 4**  
 Test Start: 2013.04.06 @ 09:55:00

## GENERAL INFORMATION:

Formation: **Pawnee**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 12:56:30  
 Time Test Ended: 20:47:00  
 Interval: **4540.00 ft (KB) To 4580.00 ft (KB) (TVD)**  
 Total Depth: 4580.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: 61  
 Unit No: Chuck Kreuzer  
 Reference Elevations: 3196.00 ft (KB)  
 3186.00 ft (CF)  
 KB to GR/CF: 10.00 ft

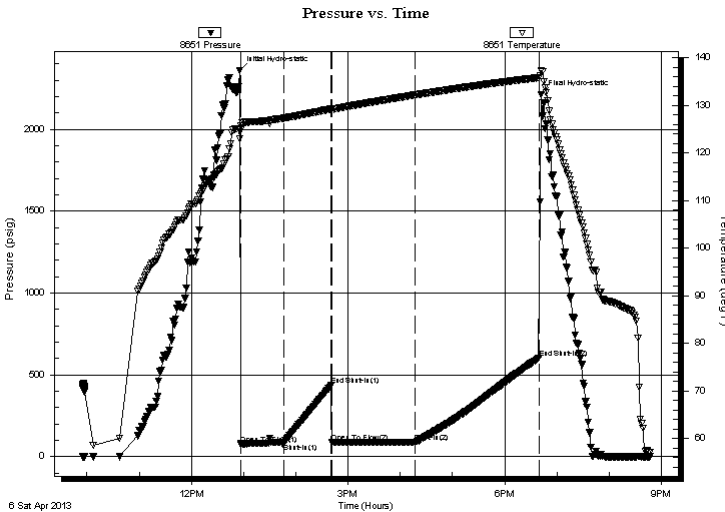
## Serial #: 8651

**Outside**

Press @ Run Depth: 86.50 psig @ 4541.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.04.06      End Date: 2013.04.06      Last Calib.: 2013.04.06  
 Start Time: 09:55:01      End Time: 20:47:00      Time On Btm: 2013.04.06 @ 12:55:30  
 Time Off Btm: 2013.04.06 @ 18:42:00

TEST COMMENT: IF: Weak blow 3" died in 30 mins.  
 IS: No blow back  
 FF: No blow  
 FS: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2360.30	123.00	Initial Hydro-static
1	75.78	124.76	Open To Flow (1)
50	81.63	127.25	Shut-In(1)
105	434.42	129.20	End Shut-In(1)
106	87.95	129.11	Open To Flow (2)
202	86.50	132.15	Shut-In(2)
344	603.77	135.80	End Shut-In(2)
347	2211.85	137.31	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	oil-100%o- on top of tool	0.00
70.00	mud-100%m	0.34

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Berexco LLC.  
2020 N. Bramblewood  
Wichita, KS 67202  
ATTN: Bryan Bynog

**16-1s-37w Cheyenne,KS**

**Ivaley #1-16**

Job Ticket: 50651

**DST#: 4**

Test Start: 2013.04.06 @ 09:55:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:56:30

Time Test Ended: 20:47:00

Test Type: Conventional Bottom Hole (Reset)

Tester: 61

Unit No: Chuck Kreuzer

**Interval: 4540.00 ft (KB) To 4580.00 ft (KB) (TVD)**

Reference Elevations: 3196.00 ft (KB)

Total Depth: 4580.00 ft (KB) (TVD)

3186.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8791**

**Inside**

Press@RunDepth: psig @ 4541.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.06

End Date:

2013.04.06

Last Calib.:

1899.12.30

Start Time: 09:55:01

End Time:

20:47:00

Time On Btm:

Time Off Btm:

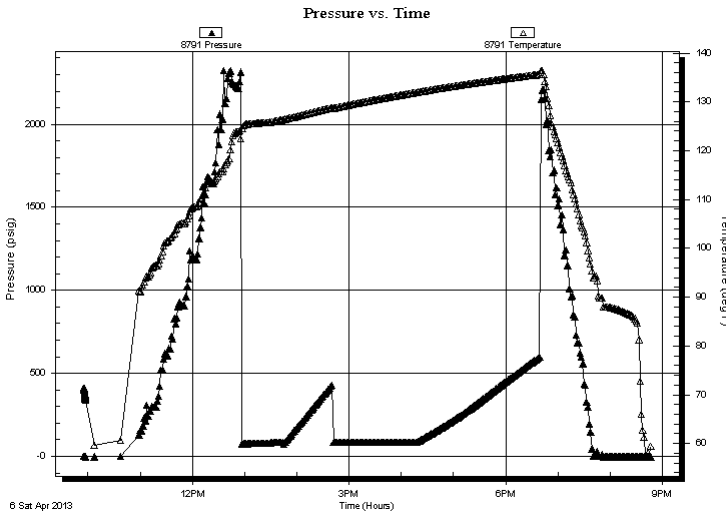
TEST COMMENT: IF: Weak blow 3" died in 30 mins.

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)
1.00	oil-100%- on top of tool	0.00
70.00	mud-100%m	0.34

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50651

**DST#: 4**

ATTN: Bryan Bynog

Test Start: 2013.04.06 @ 09:55:00

## Tool Information

Drill Pipe:	Length: 3925.00 ft	Diameter: 3.80 inches	Volume: 55.06 bbl	Tool Weight: 2500.00 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: 592.00 ft	Diameter: 2.25 inches	Volume: 2.91 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.97 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4540.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments: Had 18' of fill. Put weight on tool, Pushed through. tool didn't open on slide. tool opened. Got to 3".w ithin sec. and then stopped blowing and started to die. After 30 mins. Flushed tool had a few bubbles and then weak surface on and off.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4517.00	
Hydraulic tool	5.00			4522.00	
Jars	5.00			4527.00	
Safety Joint	3.00			4530.00	
Packer	5.00			4535.00	28.00 Bottom Of Top Packer
Packer	5.00			4540.00	
Stubb	1.00			4541.00	
Recorder	0.00	8791	Inside	4541.00	
Recorder	0.00	8651	Outside	4541.00	
Perforations	1.00			4542.00	
change Over Sub	1.00			4543.00	
Drill Pipe	31.00			4574.00	
Change Over Sub	1.00			4575.00	
Perforations	2.00			4577.00	
Bullnose	3.00			4580.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 68.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Berexco LLC.

**16-1s-37w Cheyenne,KS**

2020 N. Bramblewood  
Wichita, KS 67202

**Ivaley #1-16**

Job Ticket: 50651

**DST#: 4**

ATTN: Bryan Bynog

Test Start: 2013.04.06 @ 09:55:00

## 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: 8.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1.00	oil-100%o- on top of tool	0.005
70.00	mud-100%m	0.344

Total Length: 71.00 ft      Total Volume: 0.349 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

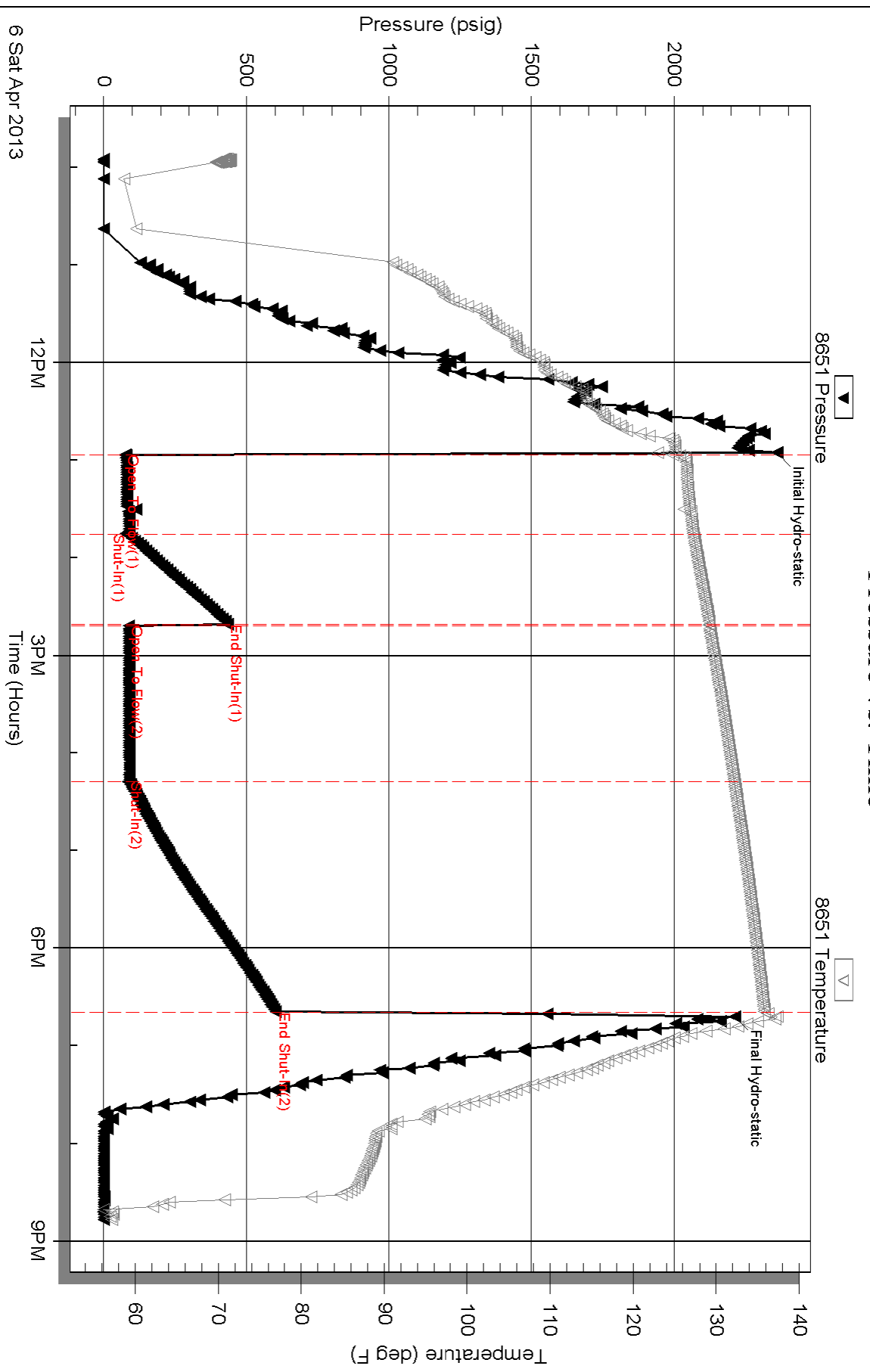
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time



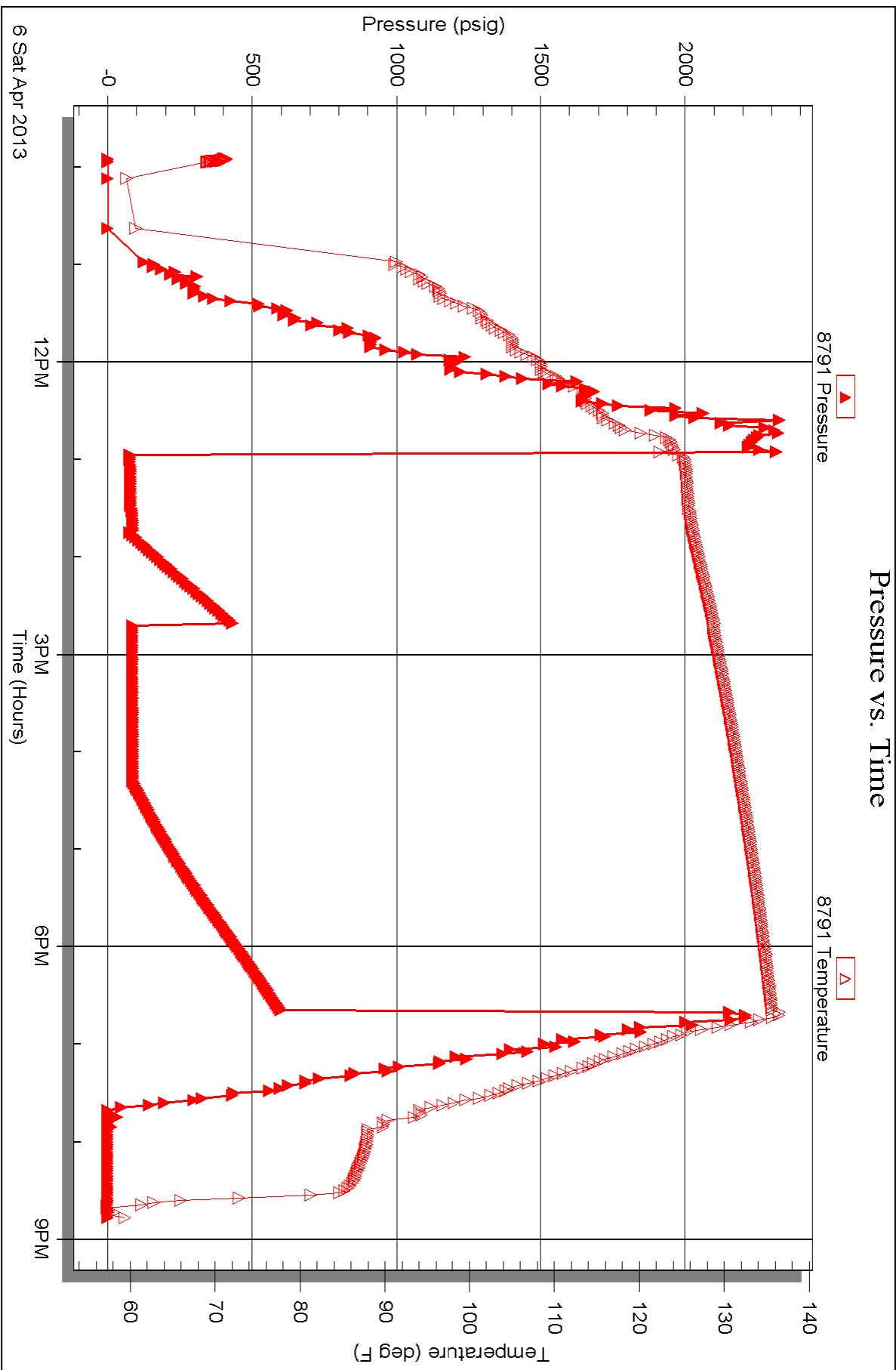
Serial #: 8791

Inside

Berexco LLC.

Walee #1-16

DST Test Number: 4





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50651

Well Name & No. IValee#1-16 Test No. 4 Date 04-06-13  
 Company Berexco LLC Elevation 3196 KB 3186 GL  
 Address 1  
 Co. Rep / Geo. Bryan Bynog Rig Berexco #10  
 Location: Sec. 16 Twp. 15 Rge. 3W Co. Dundy State Ne

Interval Tested 4540 4580 Zone Tested Pawnee  
 Anchor Length 40 Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.4  
 Top Packer Depth 4535 Drill Collars Run 592 Vis 50  
 Bottom Packer Depth 4540 Wt. Pipe Run -0- WL 8.6  
 Total Depth 4580 Chlorides 2400 ppm System LCM none

Blow Description Had 18 ft. fill, put weight on tool, pushed through, without opening tool on slip  
IF: 3 in. blow in 3 min. Blow did not build, started to die, flushed tool after 30 mins. Weak surface blow for 10 min  
FSI: No blow back  
FF: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
70	Mud				100%
1	oil		100%		

Rec Total 71 BHT 132 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic	<u>2360</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>9:40</u>
(B) First Initial Flow	<u>76</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>9:55</u>
(C) First Final Flow	<u>82</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>12:56</u>
(D) Initial Shut-In	<u>434</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>18:20</u>
(E) Second Initial Flow	<u>88</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>20:47</u>
(F) Second Final Flow	<u>87</u>	<input checked="" type="checkbox"/> Mileage	<u>241.80</u>	Comments	
(G) Final Shut-In	<u>604</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2112</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Refined Shale Packer	
Initial Open	<u>45</u>	<input type="checkbox"/> Shale Packer		<input checked="" type="checkbox"/> Ruined Packer	<u>320</u>
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>90</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>320</u>
Final Shut-In	<u>120</u>	<input type="checkbox"/> Day Standby		Total	<u>2136.80</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1816.80</u>		

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

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.

**BEREXCO, LLC.  
IVALEE # 1-16  
SWSW SECTION 16 1S-37W  
CHEYENNE COUNTY, KANSAS**

**GEOLOGIST  
WILLIAM B. BYNOG**

## RESUME

OPERATOR: BEREXCO, LLC.

WELL NAME & NUMBER: IVALEE # 1-16

LOCATION: SWSW SECTION 16 1S-37W

COUNTY: CHEYENNE

STATE: KANSAS

SPUD DATE: 3-28-2013 COMPLETION DATE: 4-8-2012

ELEVATIONS: GL: 3185' KB:3196'

CONTRACTOR: BEREDCO RIG 10

LOGS: LOG TECH TYPES: RAG, MICROLOG

WELLSITE ENGINEER: NONE

MUD COMPANY: MORGAN MUD

MUD TYPE & ENGINEER: FRESH CHEMICAL

GEOLOGIST: WILLIAM B.BYNOG

HOLE SIZE: 7 7/8

MUD LOGGING BY: NONE

DRILL STEM TEST COMPANY: TRILOBITE

DRILL STEM TEST: DST #1 4175-4250, DST # 2 4252-4310,  
DST #3 4325-4380, and DST #4 45440-  
4580

WELL STATUS: P & A

Ivalee # 1-16 Sample Descriptions

ANHYDRITE 3151(+45) S

3152(+44) L

BASE 3186(+10) S

3182(+14) L

3500-3606 SHALE red,soft,very argillaceous

3606-32 LIMESTONE pale gray,fair,.very sandy,argillaceous,poor porosity,no shows

3632-80 SHALE as above

3680-3700 LIMESTONE as above

3700-24 SHALE red,very soft,very argillaceous

FORAKER

3724-58 LIMESTONE off white,slightly hard,fossils, chalky in part,pn porosity,no shows

3758-70 LIMESTONE off white,firm,very sandy,chalky,poor vis porosity,no shows

## Ivalee # 1-16 Sample Descriptions

3770-3864 Shale red,firm,very argillaceous with thin LIMESTONE pale gray,hard,blocky, dense,no shows

3864-72 LIMESTONE off white,pale gray,slightly hard,oolitic,chalky in part,poor intg porosity, spotty dead black stain

3872-3900 LIMESTONE buff,very hard,dense,blocky, slightly fossils,very rare black dead stain

3900-10 LIMESTONE white,firm,oolitic, chalky in part.poor porosity,spotty dead black stain,no live oil

3910-46 SHALE red,soft,very argillaceous with very thin LIMESTONE white,hard,slightly oolitic,poor intg porosity,spotty thick black tar stain,good cut,no free oil

TOPEKA

3946 60 LIMESTONE pale gray,very hard,dense,poor porosity,trace dead black stain with stringers SHALE as above

3960-75 SHALE as above

3975-4000 LIMESTONE white,slightly hard,blocky,dense, chalky in part,poor porosity,no shows

4000-25 SHALE as above

4025-40 LIMESTONE off white,firm,oolitic,good oomoldic porosity,no shows



Ivalee # 1-16 Sample Descriptions

4040-81 SHALE red,firm,silty,

OREAD

4081-97 LIMESTONE white,pale gray,firm, chalky in part,slightly fossils,poor porosity,trace dead black stain,no free oil

4097-4120 LIMESTONE pale gray,very hard,dense, crptoxln,chalky in part,no shows

4120-56 SHALE red,black,dark green,firm, fissile,slightly carbonaceous

A

4156-88 LIMESTONE buff,very hard,dense, crptoxln,blocky,no shows

4188-98 SANDSTONE white,friable,clay fled, poor porosity,no shows

4198-4224 SHALE as above

B

4224-34 GRAINSTONE white, soft,very fossils,chalky in part,fair to good intg and vuggy porosity,spotty to even live brown stain,very good milky cut,good show free oil

4234-50 LIMESTONE pale gray,buff,very hard,dense,poor porosity,no shows

Ivaley # 1-16 Sample Descriptions

4250-80 SHALE red,firm,argillaceous

C

4280-86 GRAINSTONE white, firm,very fossils,chalky in part,poor to fair intg and vuggy porosity,spotty live brown stain, good cut,fair show free oil

4286-4298 LIMESTONE pale gray,buff,very hard,dense,no shows

4298-4212 SHALE red,very soft,very argillaceous

D

4312-36 LIMESTONE pale gray,very hard,dense,chalky in part, poor porosity,trace black dead stain

4336-60 SHALE as above

E

4360-66 LIMESTONE white,firm,slightly oolitic, very chalky,poor pinpoint vuggy porosity,spotty live brown stain,good cut,no free oil

4366-74 LIMESTONE pale gray,hard,dense, blocky,no shows

4374 to SHALE red,firm,fissile,very argillaceous

F

## Ivaley # 1-16 Sample Descriptions

4404-30 LIMESTONE pale gray, buff, very hard, dense, blocky, slightly fossils, poor porosity, no shows with thin SHALE as above

4430-50 SHALE red, green, firm, becoming very silty

4450-60 LIMESTONE as above, dense, no shows

4460-4512 SHALE as above with thin LIMESTONE as above

4512-42 LIMESTONE buff, pale gray, hard, sandy in part, poor porosity, no shows

4542-62 SHALE red, green, gray, firm, blocky

PAWNEE

4562-70 GRAINSTONE white, buff, slightly hard, very oolitic, poor to fair intg vuggy porosity, spotty live brown stain, very good milky cut, good show free oil

4570-90 LIMESTONE buff, very hard, dense, blocky, no shows

4590-4644 SHALE red, green, dark gray, firm, blocky, argillaceous with thin LIMESTONE buff, pale gray, very hard, dense

4644-60 LIMESTONE buff, very hard, dense, crptoxln, no shows

## Ivalee # 1-16 Sample Descriptions

4660-4706 SHALE and LIMESTONE as above,dense,no shows

4706-20 SANDSTONE translucent,white,friable,vg m sorted,fair intg porosity,no shows

4720-30 SHALE red,very soft,very argillaceous, sandy in part

RTD 4730'

LTD 4734'

# ALLIED OIL & GAS SERVICES, LLC 058981

Federal Tax I.D.# 20-5975604

EMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Oakley

DATE <u>3-28-13</u>	SEC <u>16</u>	TWP. <u>13</u>	RANGE <u>27W</u>	CALLED OUT	ON LOCATION	JOB START <u>9:20 AM</u>	JOB FINISH <u>10:00 AM</u>
WELL # <u>1-16</u>	LOCATION <u>Birdcity 17N 3E 25</u>			COUNTY <u>Cherokee</u>	STATE <u>KS</u>		
OLD OR <u>NEW</u> (Circle one)				<u>W INTO</u>			

CONTRACTOR Beredco 10

TYPE OF JOB surface

BOLE SIZE 12 1/4 T.D. 318'

CASING SIZE 8 3/8 DEPTH 307'

PIPE SIZE DEPTH

RILL PIPE DEPTH

COLL DEPTH

RES. MAX MINIMUM

WEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 18,160 BOL

EQUIPMENT

PUMP TRUCK CEMENTER Andrew Forslund

431 HELPER Dave Retzlaff

TRUCK DRIVER Kevin Ryan

TRUCK DRIVER

OWNER same

CEMENT

AMOUNT ORDERED 225 sks com

396a 26 gel

COMMON <u>225 sks</u>	@ <u>17.90</u>	<u>4022.50</u>
POZMIX	@	
GEL <u>4 sks</u>	@ <u>23.40</u>	<u>93.60</u>
CHLORIDE <u>8 sks</u>	@ <u>64.00</u>	<u>512.00</u>
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING <u>244.125 cu/ft</u>	@ <u>2.48</u>	<u>605.45</u>
MILEAGE <u>2.62 topmile</u>	@ <u>11.219</u>	<u>29.39</u>
TOTAL		<u>4622.52</u>

REMARKS:

Cement did circulate

thank you

CHARGE TO: Beredco

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB 307'

PUMP TRUCK CHARGE \_\_\_\_\_ 1572.25

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 50 miles @ 7.20 385.00

MANIFOLD head @ 225.10 N/C

light vehicle @ 4.40 N/C

TOTAL 1897.25

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____

TOTAL \_\_\_\_\_

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

DATE 3-28-13

PRINTED NAME Randy Blankenship

SIGNATURE Randy Blankenship

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 8,574.77

DISCOUNT 2400.93 IF PAID IN 30 DAYS

6,173.83 Net.

# ALLIED OIL & GAS SERVICES, LLC 060232

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999

SOUTHLAKE, TEXAS 76092

SERVICE POINT

*DeKlay, TX*

DATE <i>4-8-13</i>	SEC. <i>16</i>	TWP. <i>1</i>	RANGE <i>37</i>	CALLED OUT	ON LOCATION <i>10:00 am</i>	JOB START <i>4:30 pm</i>	JOB FINISH <i>5:30 pm</i>
LEASE <i>Footee</i>	WELL# <i>1-16</i>	LOCATION <i>Bird City, 14N, 34E, 1Y2N</i>		COUNTY <i>Cheyenne</i>		STATE <i>KS</i>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)				<i>W info</i>			

CONTRACTOR *Beredco 10*

TYPE OF JOB *PTA*

HOLE SIZE *7 7/8* T.D. *4734'*

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE *3/4"* DEPTH *3160'*

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT *41.38661*

OWNER *Some*

CEMENT AMOUNT ORDERED *220SK 6440 4'logel*  
*1/2" float seal*

COMMON	<i>192SK</i>	@ <i>12.90</i>	<i>2362.80</i>
POZMIX	<i>88SK</i>	@ <i>9.25</i>	<i>822.80</i>
GEL	<i>8SK</i>	@ <i>23.90</i>	<i>187.20</i>
CHLORIDE		@	
ASC		@	
<i>float seal</i>	<i>55#</i>	@ <i>2.97</i>	<i>163.35</i>
HANDLING	<i>236.28813</i>	@ <i>2.48</i>	<i>585.97</i>
MILEAGE	<i>9.87/mi x 50 x 2.60</i>		<i>1283.10</i>
			<b>TOTAL <i>5405.22</i></b>

REMARKS:

*Mix 25SK 3160'*  
*Mix 100SK 2385'*  
*Mix 40SK 370'*  
*Mix 10SK 40' w/plug*  
*Mix 15SK M.H.*  
*Mix 30SK R.U.*

*Franky*

CHARGE TO: *Berexco, Inc*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB	<i>3160'</i>		
PUMP TRUCK CHARGE			<i>2600.47</i>
EXTRA FOOTAGE		@	
MILEAGE <i>MTHD</i>	<i>50</i>	@ <i>7.70</i>	<i>385.00</i>
MANIFOLD		@	
<i>MTHD</i>	<i>50</i>	@ <i>4.90</i>	<i>245.00</i>
			<b>TOTAL <i>2983.47</i></b>

PLUG & FLOAT EQUIPMENT

<i>wooden plug</i>	@	<i>187.64</i>
	@	
	@	
	@	
	@	
		<b>TOTAL <i>187.64</i></b>

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (if Any) \_\_\_\_\_

TOTAL CHARGES *2498.33*

DISCOUNT *2,379.53* IF PAID IN 30 DAYS

**6,118.79 Net.**

PRINTED NAME *Myle Solinas*

SIGNATURE *Myle Solinas*