



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1232802  
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: \_\_\_\_\_

1232802

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](mailto: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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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# 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. 965

Date	Sec.	Twp.	Range	County	State	On Location	Finish
10-30-14	31	7	25	Concham	KS		6:30pm
				Location Studley 2 1/2 W R N into			

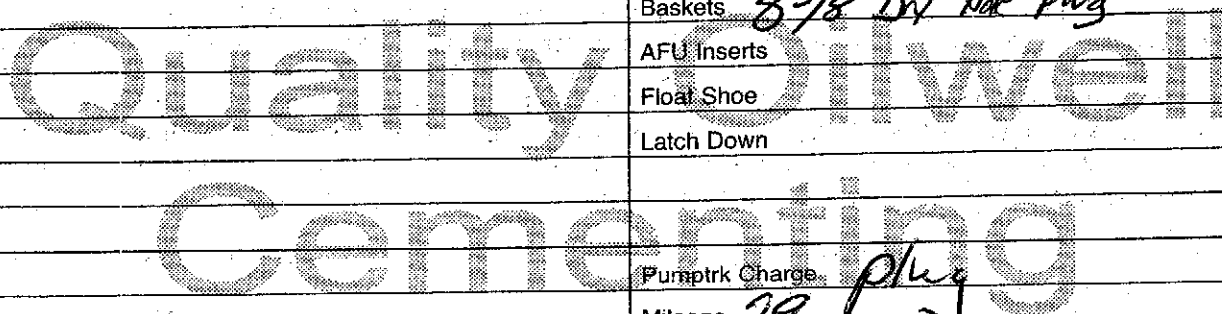
Lease	Well No	Owner	
Davis - HesKett Unit	A 1-31	To Quality Oilwell Cementing, Inc.	
Contractor		You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.	
Type Job		Charge To	
Rotary Plug		Cobalt Energy	
Hole Size	T.D.	Street	
7/8	4000		
Csg.	Depth	City	
4 1/2 DP #11		State	
Tbg. Size	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
		Cement Amount Ordered 255 600/40 4/62 1/2 #10	
Tool	Depth		
Cement Left in Csg.	Shoe Joint		

Meas Line	Displace	
<b>EQUIPMENT</b>		
Pumptrk	No.	Common
5		153
Bulktrk	No.	Poz. Mix
		102
Bulktrk	No.	Gel.
14		9
		Calcium

<b>JOB SERVICES &amp; REMARKS</b>		Hulls
Remarks:		Salt
Rat Hole	305K	Flowseal 56A
Mouse Hole	155K	Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
1st	2170 305K	Handling 264
2nd	1290 1005K	Mileage
3rd	270 505K	
4th	40 105K	

<b>FLOAT EQUIPMENT</b>	
Guide Shoe	
Centralizer	
Baskets	3 5/8 Dry Hole Plug
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	plug	Tax
Mileage	29	Discount
		Total Charge
Signature <i>[Signature]</i>		





## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita KS 67208

ATTN: Terry McLeod

**Davis-Heskett A 1-31**

**31-7s-25w, Graham, KS**

Start Date: 2014.10.28 @ 00:20:00

End Date: 2014.10.28 @ 08:56:15

Job Ticket #: 60944                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.10.31 @ 14:49:15



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60944

**DST#: 1**

Test Start: 2014.10.28 @ 00:20:00

## GENERAL INFORMATION:

Formation: **KC "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:30:00

Time Test Ended: 08:56:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3741.00 ft (KB) To 3820.00 ft (KB) (TVD)**

Reference Elevations: 2997.00 ft (KB)

Total Depth: 3820.00 ft (KB) (TVD)

2992.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

**Serial #: 8934 Outside**

Press@RunDepth: 87.58 psig @ 3751.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.28

End Date: 2014.10.28

Last Calib.: 2014.10.28

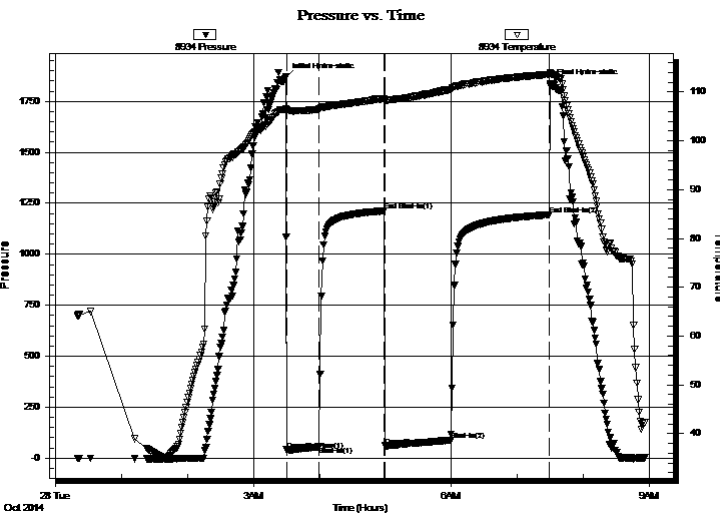
Start Time: 00:20:05

End Time: 08:56:15

Time On Btm: 2014.10.28 @ 03:29:30

Time Off Btm: 2014.10.28 @ 07:30:15

TEST COMMENT: IF-2 1/2" blow  
IS-No blow  
FF-2" blow  
FSI-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1869.30	106.49	Initial Hydro-static
1	40.07	106.09	Open To Flow (1)
31	56.50	106.48	Shut-In(1)
90	1212.60	108.67	End Shut-In(1)
91	60.02	108.37	Open To Flow (2)
150	87.58	110.53	Shut-In(2)
240	1193.56	113.61	End Shut-In(2)
241	1837.85	113.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
140.00	Mud	1.69

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60944

**DST#: 1**

Test Start: 2014.10.28 @ 00:20:00

**GENERAL INFORMATION:**

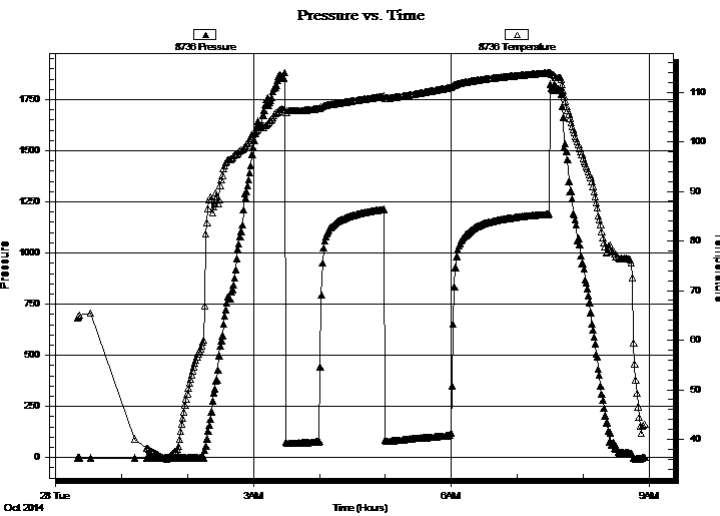
Formation: **KC "C-D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:30:00  
 Time Test Ended: 08:56:15  
 Interval: **3741.00 ft (KB) To 3820.00 ft (KB) (TVD)**  
 Total Depth: 3820.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2997.00 ft (KB)  
 2992.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8736**

**Inside**

Press@RunDepth: psig @ 3751.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.28 End Date: 2014.10.28 Last Calib.: 2014.10.28  
 Start Time: 00:20:05 End Time: 08:56:00 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-2 1/2" blow  
 IS- No blow  
 FF-2" blow  
 FS- No blow



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
140.00	Mud	1.69

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60944

**DST#: 1**

Test Start: 2014.10.28 @ 00:20:00

## Tool Information

Drill Pipe:	Length: 3708.00 ft	Diameter: 3.80 inches	Volume: 52.01 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3741.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	79.00 ft			
Tool Length:	102.00 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			3723.00	
Hydraulic tool	5.00			3728.00	
Safety Joint	3.00			3731.00	
Packer	5.00			3736.00	23.00 Bottom Of Top Packer
Packer	5.00			3741.00	
Stubb	1.00			3742.00	
Perforations	9.00			3751.00	
Recorder	0.00	8736	Inside	3751.00	
Recorder	0.00	8934	Outside	3751.00	
Change Over Sub	1.00			3752.00	
Drill Pipe	63.00			3815.00	
Change Over Sub	1.00			3816.00	
Perforations	1.00			3817.00	
Bullnose	3.00			3820.00	79.00 Bottom Packers & Anchor

**Total Tool Length: 102.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60944

**DST#: 1**

ATTN: Terry McLeod

Test Start: 2014.10.28 @ 00:20:00

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
140.00	Mud	1.691

Total Length: 140.00 ft

Total Volume: 1.691 bbl

Num Fluid Samples: 0

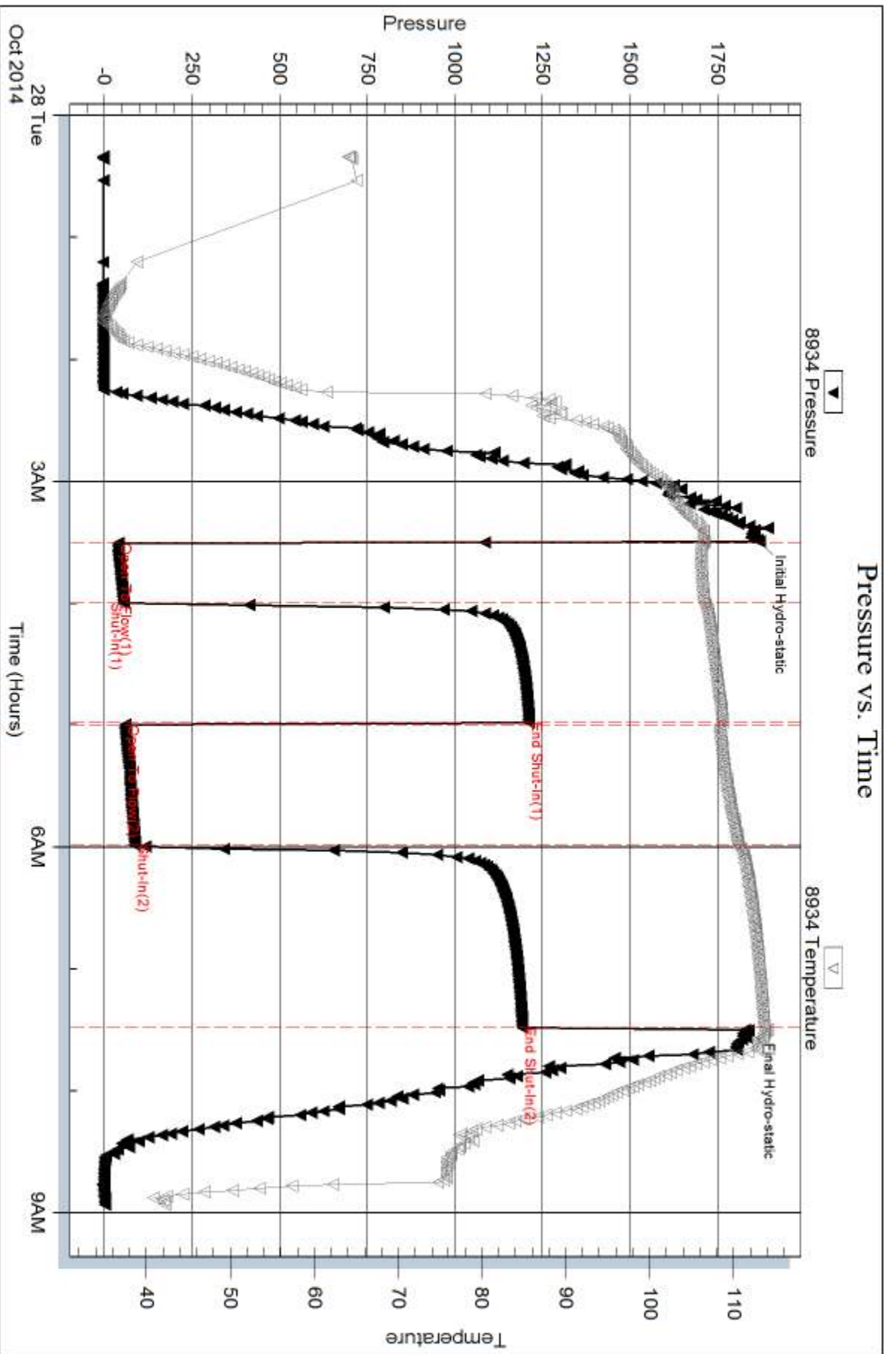
Num Gas Bombs: 0

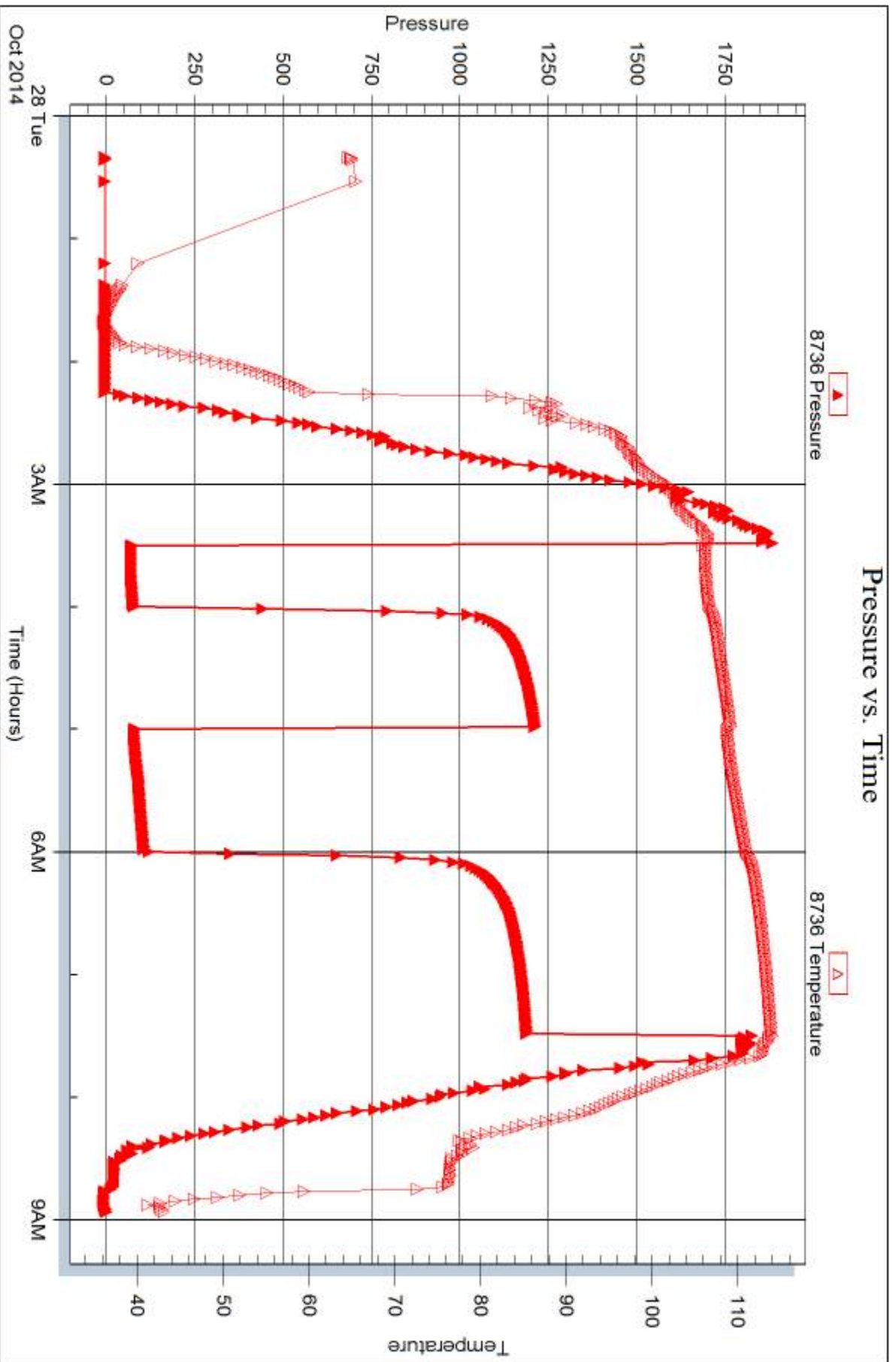
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita KS 67208

ATTN: Terry McLeod

**Davis-Heskett A 1-31**

**31-7s-25w, Graham, KS**

Start Date: 2014.10.28 @ 15:57:00

End Date: 2014.10.28 @ 22:44:45

Job Ticket #: 60945                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.10.31 @ 14:48:50

Cobalt Energy LLC  
31-7s-25w, Graham, KS  
Davis-Heskett A 1-31  
DST # 2  
KC "H"  
2014.10.28



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60945

**DST#: 2**

Test Start: 2014.10.28 @ 15:57:00

## GENERAL INFORMATION:

Formation: **KC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:30

Time Test Ended: 22:44:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3840.00 ft (KB) To 3880.00 ft (KB) (TVD)**

Reference Elevations: 2997.00 ft (KB)

Total Depth: 3880.00 ft (KB) (TVD)

2992.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

**Serial #: 8934 Outside**

Press@RunDepth: 37.84 psig @ 3843.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.28 End Date: 2014.10.28

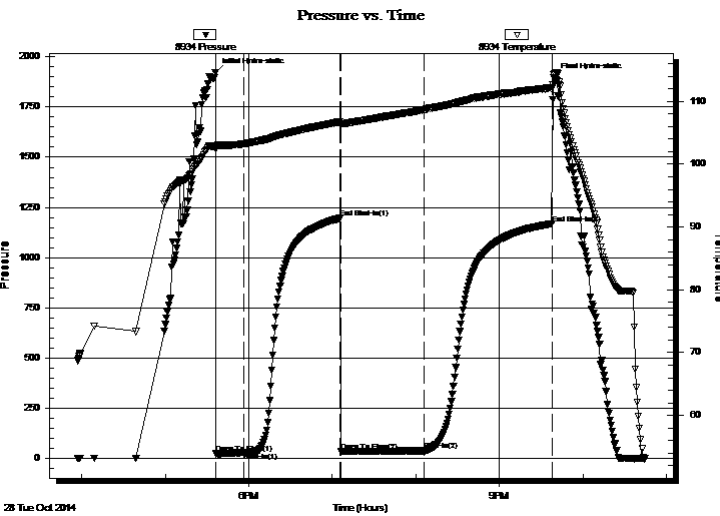
Last Calib.: 2014.10.28

Start Time: 15:57:05 End Time: 22:44:44

Time On Btm: 2014.10.28 @ 17:36:00

Time Off Btm: 2014.10.28 @ 21:39:00

**TEST COMMENT:** IF-1/2in blow died back to 1/4"  
IS-No blow  
FF-very weak surface blow died in 45 min  
FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1922.46	102.61	Initial Hydro-static
1	22.62	102.44	Open To Flow (1)
21	29.72	103.26	Shut-In(1)
90	1195.54	106.73	End Shut-In(1)
90	35.06	106.46	Open To Flow (2)
150	37.84	108.68	Shut-In(2)
242	1168.73	112.20	End Shut-In(2)
243	1898.06	114.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	VSOCM 5%O 95%M	0.43

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60945

**DST#: 2**

ATTN: Terry McLeod

Test Start: 2014.10.28 @ 15:57:00

## GENERAL INFORMATION:

Formation: **KC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:36:30

Time Test Ended: 22:44:45

**Interval: 3840.00 ft (KB) To 3880.00 ft (KB) (TVD)**

Total Depth: 3880.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Reference Elevations: 2997.00 ft (KB)

2992.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8736 Inside**

Press@RunDepth: psig @ 3843.00 ft (KB)

Start Date: 2014.10.28

End Date: 2014.10.28

Start Time: 15:57:23

End Time: 22:44:17

Capacity: 8000.00 psig

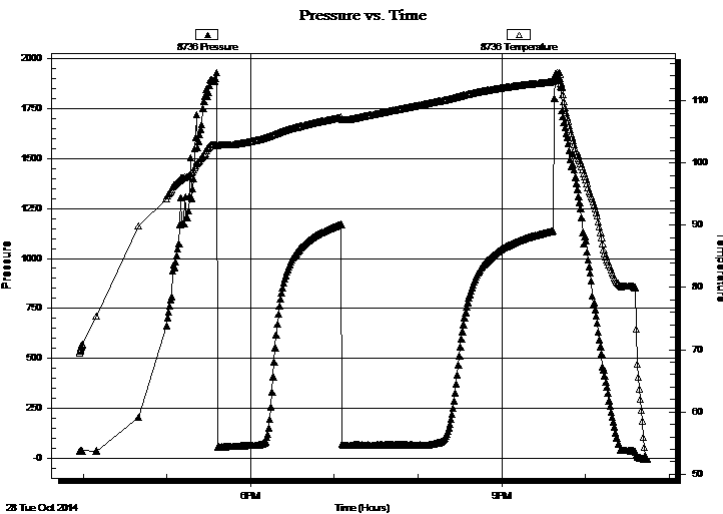
Last Calib.: 2014.10.28

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-1/2in blow died back to 1/4"  
IS-No blow  
FF-very weak surface blow died in 45 min  
FS-No blow

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	VSOCM 5%O 95%M	0.43

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60945

**DST#: 2**

Test Start: 2014.10.28 @ 15:57:00

## Tool Information

Drill Pipe:	Length: 3805.00 ft	Diameter: 3.80 inches	Volume: 53.37 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3840.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 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			3822.00	
Hydraulic tool	5.00			3827.00	
Safety Joint	3.00			3830.00	
Packer	5.00			3835.00	23.00 Bottom Of Top Packer
Packer	5.00			3840.00	
Stubb	1.00			3841.00	
Perforations	2.00			3843.00	
Recorder	0.00	8736	Inside	3843.00	
Recorder	0.00	8934	Outside	3843.00	
Change Over Sub	1.00			3844.00	
Drill Pipe	31.00			3875.00	
Change Over Sub	1.00			3876.00	
Perforations	1.00			3877.00	
Bullnose	3.00			3880.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60945

**DST#: 2**

ATTN: Terry McLeod

Test Start: 2014.10.28 @ 15:57:00

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	VSOCM 5%O 95%M	0.428

Total Length: 50.00 ft      Total Volume: 0.428 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

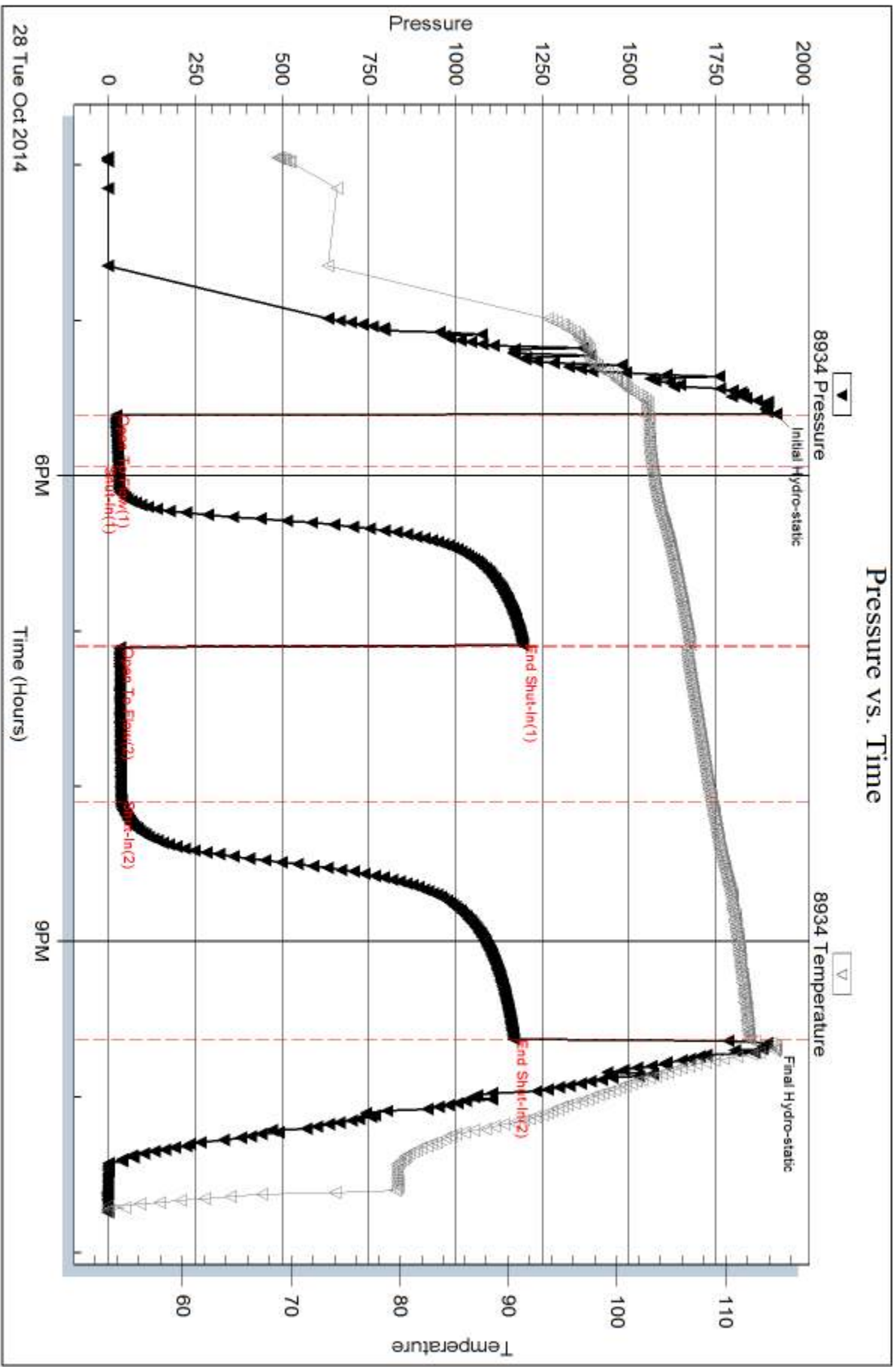
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





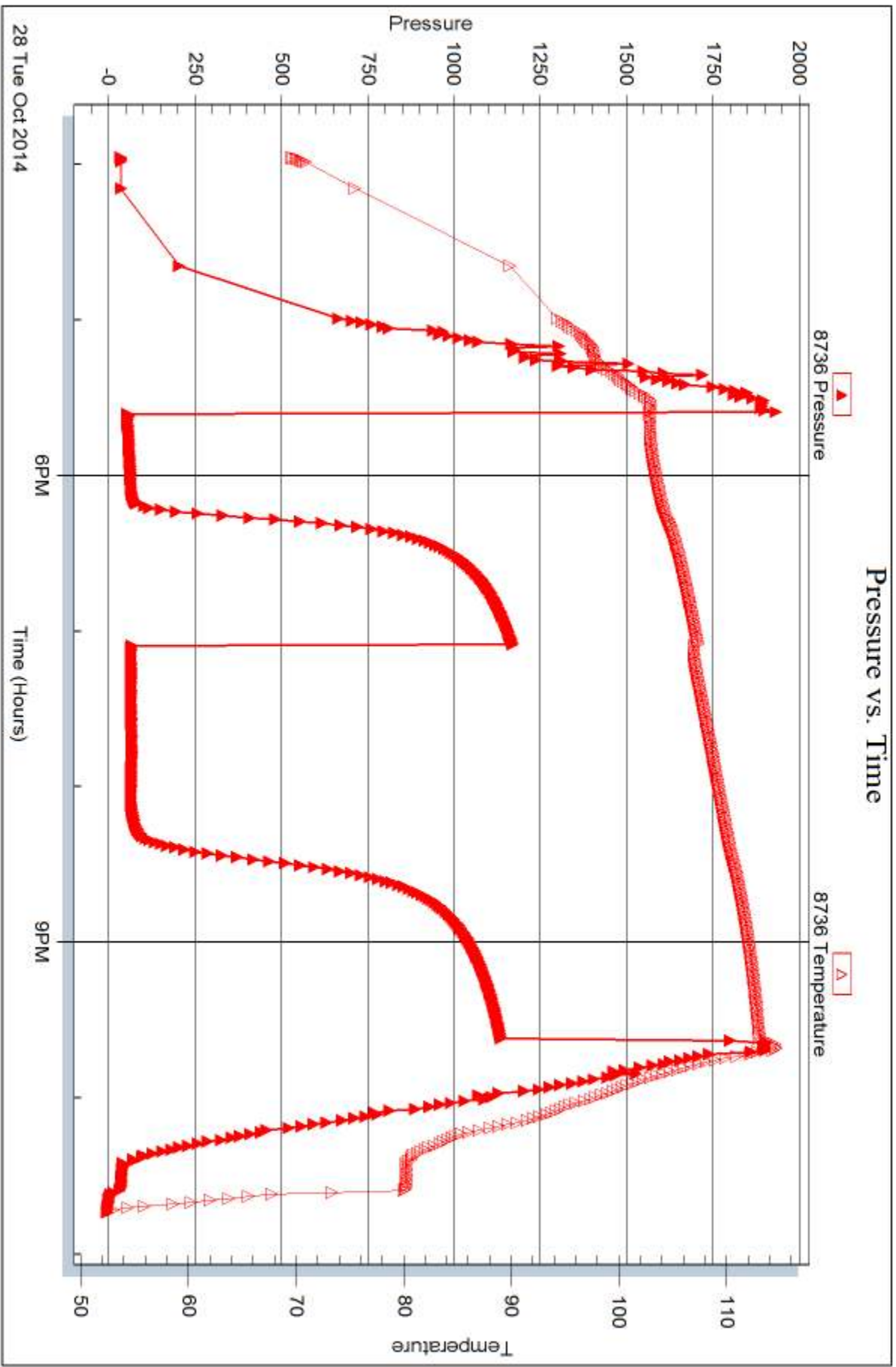
Serial #: 8736

Inside

Cobalt Energy LLC

Davis-Heskett A 1-31

DST Test Number: 2



28 Tue Oct 2014

Trilobite Testing, Inc

Ref. No: 60945

Printed: 2014, 10, 31 @ 14:48:52



## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita KS 67208

ATTN: Terry McLeod

**Davis-Heskett A 1-31**

**31-7s-25w, Graham, KS**

Start Date: 2014.10.29 @ 03:50:00

End Date: 2014.10.29 @ 12:01:00

Job Ticket #: 60946                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.10.31 @ 14:48:25



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60946

**DST#: 3**

Test Start: 2014.10.29 @ 03:50:00

## GENERAL INFORMATION:

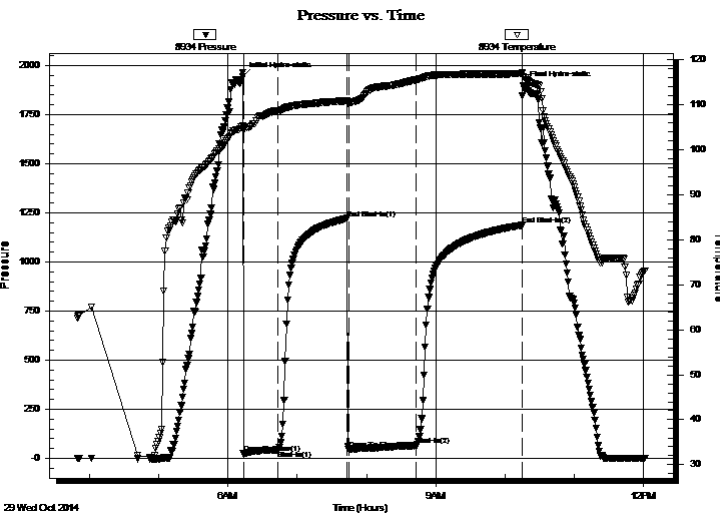
Formation: **KC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:13:30  
 Time Test Ended: 12:01:00  
 Interval: **3873.00 ft (KB) To 3908.00 ft (KB) (TVD)**  
 Total Depth: 3820.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2997.00 ft (KB)  
 2992.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8934

**Outside**

Press@RunDepth: 65.07 psig @ 3883.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29  
 Start Time: 03:50:05 End Time: 12:00:59 Time On Btm: 2014.10.29 @ 06:13:00  
 Time Off Btm: 2014.10.29 @ 10:15:45

TEST COMMENT: IF-3 1/2" blow  
 IS-No blow  
 FF-3" blow  
 FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1944.61	105.27	Initial Hydro-static
1	23.81	104.29	Open To Flow (1)
31	43.08	108.65	Shut-In(1)
91	1221.33	110.83	End Shut-In(1)
92	45.77	110.48	Open To Flow (2)
151	65.07	115.54	Shut-In(2)
242	1186.97	116.84	End Shut-In(2)
243	1895.51	116.24	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	V SOWCM 2%O 25%W 73%M	0.57
30.00	SOCM 10%O 90%M	0.42
15.00	GO 10%G 90%O	0.21
0.00	15ft GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60946

**DST#: 3**

Test Start: 2014.10.29 @ 03:50:00

## GENERAL INFORMATION:

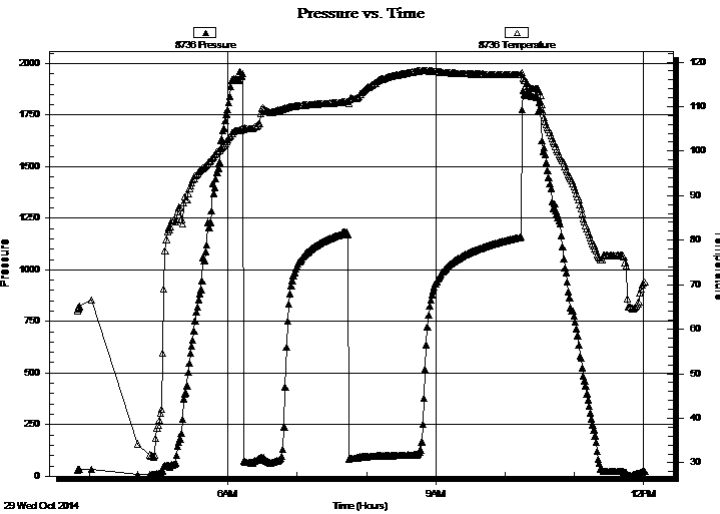
Formation: **KC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:13:30  
 Time Test Ended: 12:01:00  
 Interval: **3873.00 ft (KB) To 3908.00 ft (KB) (TVD)**  
 Total Depth: 3820.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2997.00 ft (KB)  
 2992.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8736

Inside

Press@RunDepth: psig @ 3883.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29  
 Start Time: 03:50:05 End Time: 12:01:14 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF-3 1/2" blow  
 IS-No blow  
 FF-3" blow  
 FS-No blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	V SOWCM 2%O 25%W 73%M	0.57
30.00	SOCM 10%O 90%M	0.42
15.00	GO 10%G 90%O	0.21
0.00	15ft GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60946

**DST#: 3**

Test Start: 2014.10.29 @ 03:50:00

## Tool Information

Drill Pipe:	Length: 3833.00 ft	Diameter: 3.80 inches	Volume: 53.77 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3873.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 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			3855.00	
Hydraulic tool	5.00			3860.00	
Safety Joint	3.00			3863.00	
Packer	5.00			3868.00	23.00 Bottom Of Top Packer
Packer	5.00			3873.00	
Stubb	1.00			3874.00	
Perforations	9.00			3883.00	
Recorder	0.00	8736	Inside	3883.00	
Recorder	0.00	8934	Outside	3883.00	
Perforations	22.00			3905.00	
Bullnose	3.00			3908.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 58.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60946

**DST#: 3**

ATTN: Terry McLeod

Test Start: 2014.10.29 @ 03:50:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

60000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	VSOWCM 2%O 25%W 73%M	0.568
30.00	SOCM 10%O 90%M	0.421
15.00	GO 10%G 90%O	0.210
0.00	15ft GIP	0.000

Total Length: 105.00 ft

Total Volume: 1.199 bbl

Num Fluid Samples: 0

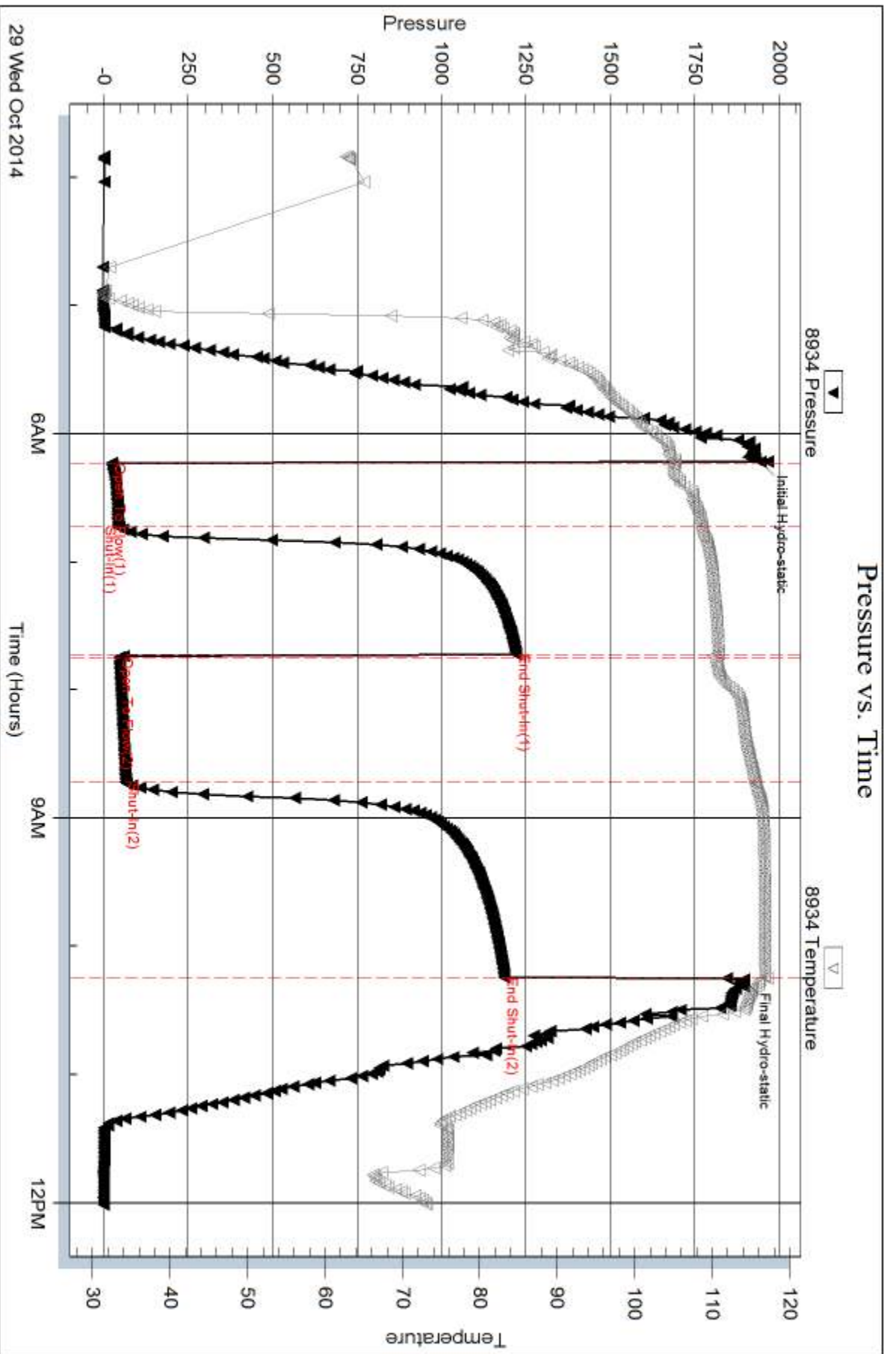
Num Gas Bombs: 0

Serial #:

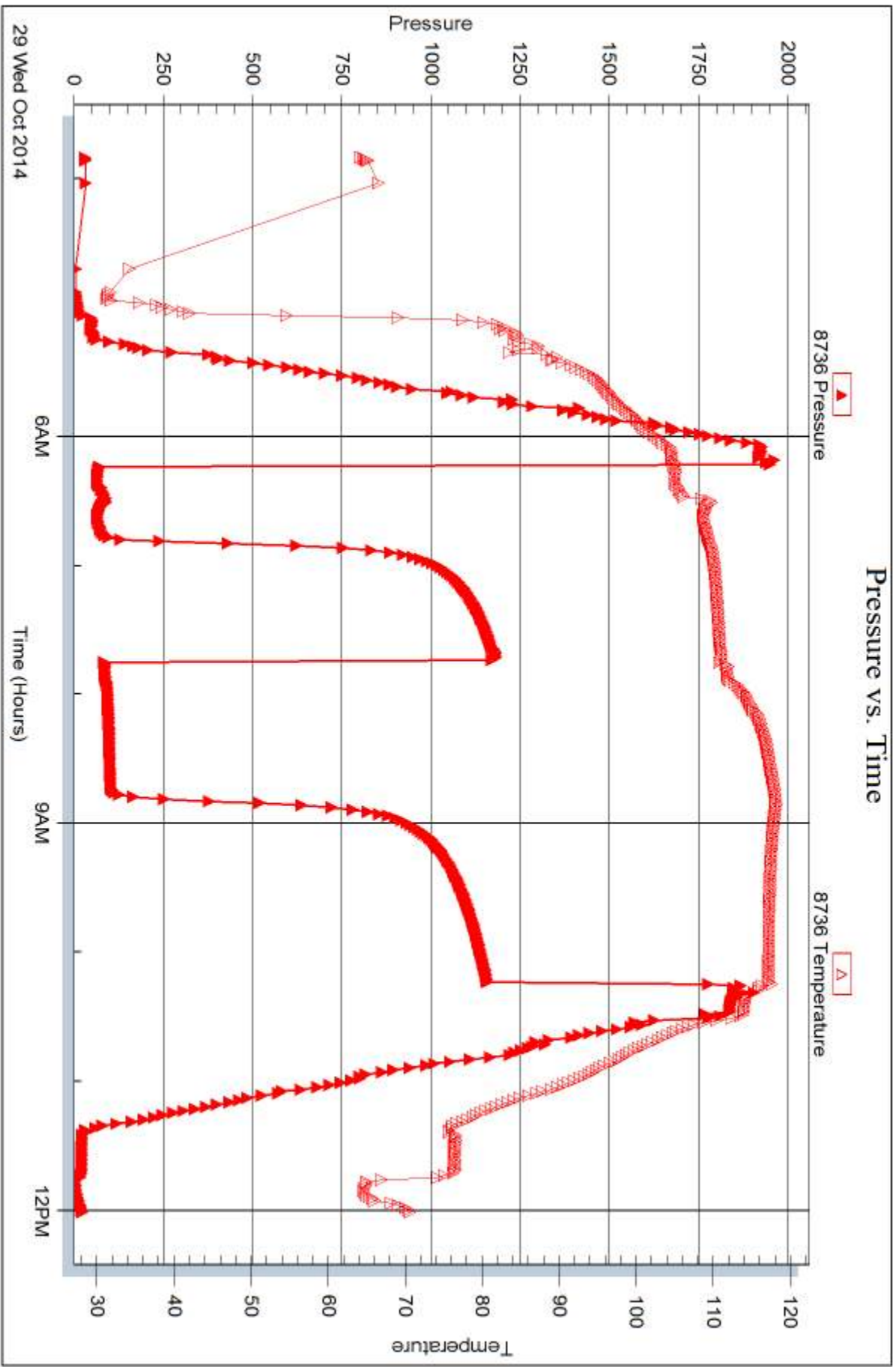
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita KS 67208

ATTN: Terry McLeod

**Davis-Heskett A 1-31**

**31-7s-25w, Graham, KS**

Start Date: 2014.10.29 @ 19:20:00

End Date: 2014.10.30 @ 00:24:15

Job Ticket #: 60947                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.10.31 @ 14:47:56



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

ATTN: Terry McLeod

Job Ticket: 60947

**DST#: 4**

Test Start: 2014.10.29 @ 19:20:00

## GENERAL INFORMATION:

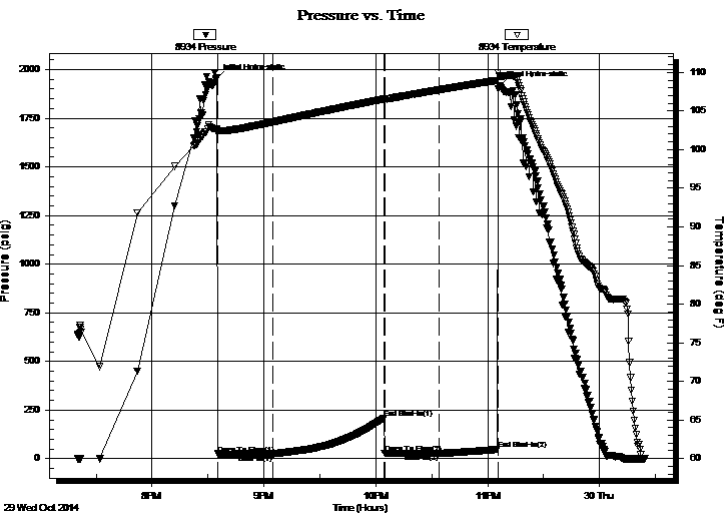
Formation: **KC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:35:15  
 Time Test Ended: 00:24:15  
 Interval: **3904.00 ft (KB) To 3955.00 ft (KB) (TVD)**  
 Total Depth: 3955.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2997.00 ft (KB)  
 2992.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8934

**Outside**

Press@RunDepth: 27.71 psig @ 3918.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.29 End Date: 2014.10.30 Last Calib.: 2014.10.30  
 Start Time: 19:20:05 End Time: 00:24:14 Time On Btm: 2014.10.29 @ 20:34:30  
 Time Off Btm: 2014.10.29 @ 23:06:45

TEST COMMENT: IF-3/4" blow  
 IS-No blow  
 FF-No blow  
 FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1953.99	102.64	Initial Hydro-static
1	24.65	102.41	Open To Flow (1)
31	24.75	103.57	Shut-In(1)
90	208.31	106.54	End Shut-In(1)
91	27.88	106.48	Open To Flow (2)
120	27.71	107.73	Shut-In(2)
151	48.24	108.98	End Shut-In(2)
153	1915.42	109.51	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)



# DRILL STEM TEST REPORT

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60947

**DST#: 4**

ATTN: Terry McLeod

Test Start: 2014.10.29 @ 19:20:00

## GENERAL INFORMATION:

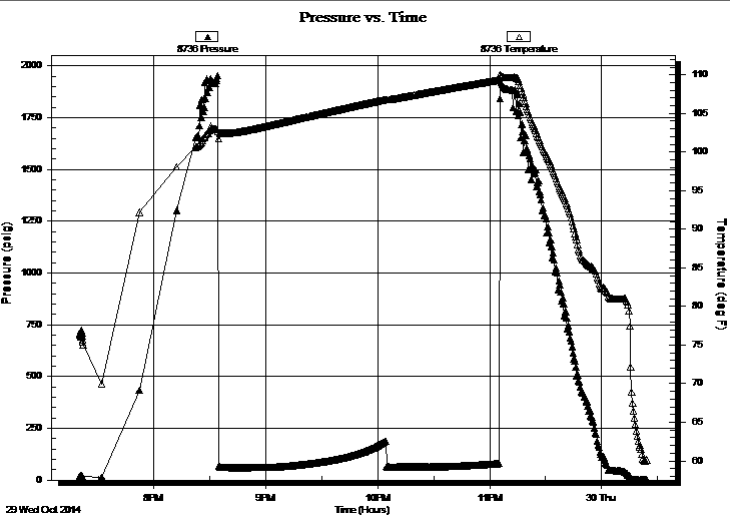
Formation: **KC**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 20:35:15  
 Tester: Brett Dickinson  
 Time Test Ended: 00:24:15  
 Unit No: 59  
 Interval: **3904.00 ft (KB) To 3955.00 ft (KB) (TVD)**  
 Reference Elevations: 2997.00 ft (KB)  
 Total Depth: 3955.00 ft (KB) (TVD)  
 2992.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 5.00 ft

## Serial #: 8736

**Inside**

Press@RunDepth: psig @ 3918.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.10.29 End Date: 2014.10.30 Last Calib.: 2014.10.30  
 Start Time: 19:20:05 End Time: 00:24:14 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF-3/4" blow  
 IS- No blow  
 FF- No blow  
 FS- No blow



## PRESSURE SUMMARY

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

## 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

**TOOL DIAGRAM**

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60947

**DST#: 4**

ATTN: Terry McLeod

Test Start: 2014.10.29 @ 19:20:00

## Tool Information

Drill Pipe:	Length: 3868.00 ft	Diameter: 3.80 inches	Volume: 54.26 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3904.00 ft			Final	51000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	51.00 ft				
Tool Length:	74.00 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			3886.00	
Hydraulic tool	5.00			3891.00	
Safety Joint	3.00			3894.00	
Packer	5.00			3899.00	23.00 Bottom Of Top Packer
Packer	5.00			3904.00	
Stubb	1.00			3905.00	
Perforations	13.00			3918.00	
Recorder	0.00	8736	Inside	3918.00	
Recorder	0.00	8934	Outside	3918.00	
Change Over Sub	1.00			3919.00	
Drill Pipe	31.00			3950.00	
Change Over Sub	1.00			3951.00	
Perforations	1.00			3952.00	
Bullnose	3.00			3955.00	51.00 Bottom Packers & Anchor

**Total Tool Length: 74.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Cobalt Energy LLC

**31-7s-25w, Graham, KS**

PO Box 8037  
Wichita KS 67208

**Davis-Heskett A 1-31**

Job Ticket: 60947

**DST#: 4**

ATTN: Terry McLeod

Test Start: 2014.10.29 @ 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: 5.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 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

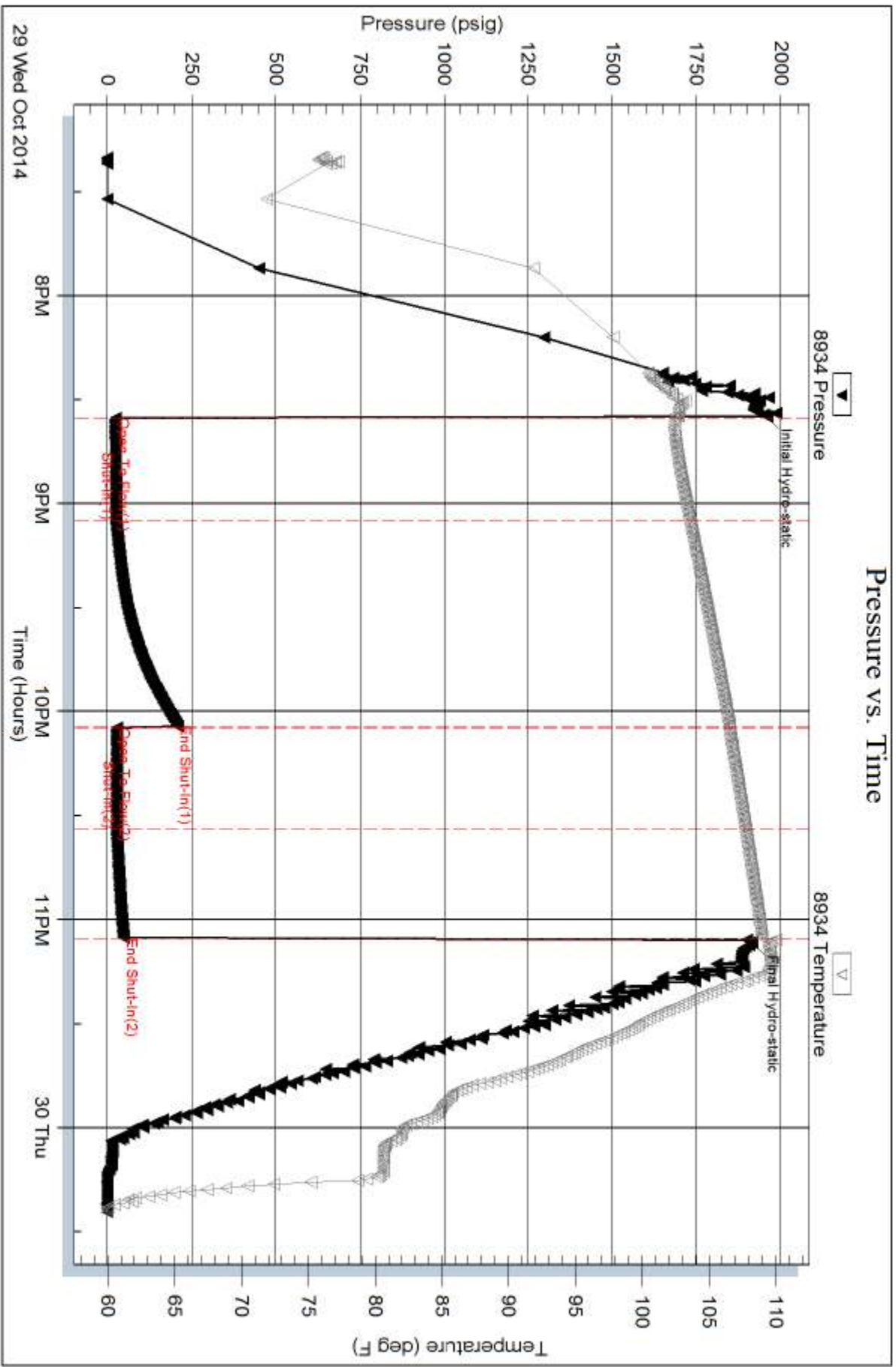
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



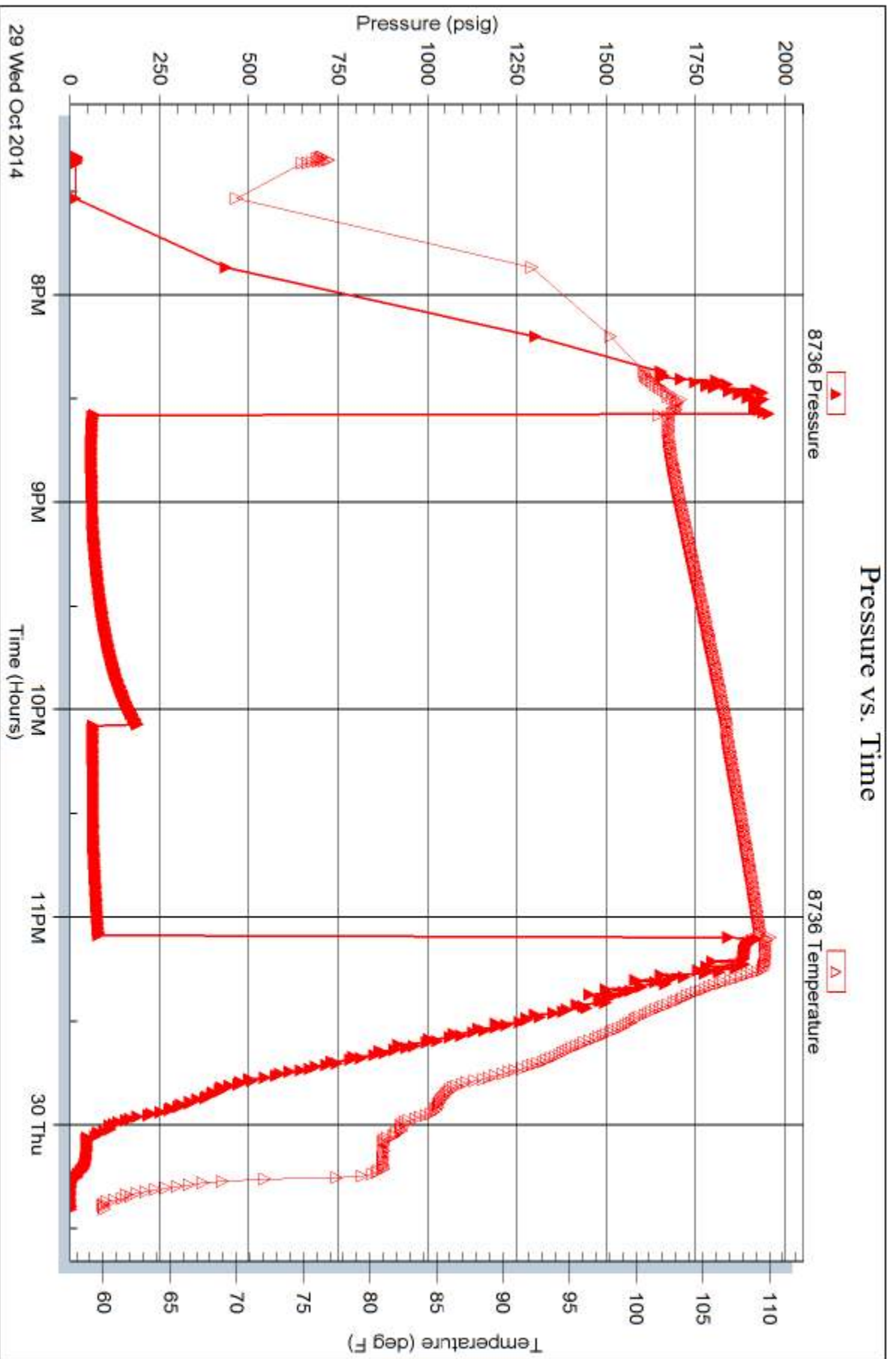
Serial #: 8736

Inside

Cobalt Energy LLC

Davis-Heskett A 1-31

DST Test Number: 4

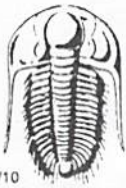


Tribble Testing, Inc

Ref. No: 60947

Printed: 2014, 10, 31 @ 14:47:57





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60944

Well Name & No. Davis-Heskett Unit A Well #1-31 Test No. 1 Date 10/27/14  
 Company Cobalt Energy LLC Elevation 2997 KB 2992 GL  
 Address PO Box 8037 Wichita KS 67208  
 Co. Rep / Geo. Terry Mcleod Rig Martin #16  
 Location: Sec. 31 Twp. 7s Rge. 25w Co. Graham State KS

Interval Tested 3741-3820 Zone Tested KC  
 Anchor Length 79 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.8  
 Top Packer Depth 3736 Drill Collars Run 30 Vis 49  
 Bottom Packer Depth 3741 Wt. Pipe Run — WL 6.0  
 Total Depth 3820 Chlorides 900 ppm System LCM 2#

Blow Description FF-2 1/2 in blow  
ISI - No blow  
FF - 2 in blow  
FSL - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>140</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 140 BHT 114 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,869  Test 1150 T-On Location 23:45  
 (B) First Initial Flow 40  Jars \_\_\_\_\_ T-Started 00:20  
 (C) First Final Flow 57  Safety Joint 75 T-Open 3:30  
 (D) Initial Shut-In 1,213  Circ Sub \_\_\_\_\_ T-Pulled 7:30  
 (E) Second Initial Flow 60  Hourly Standby \_\_\_\_\_ T-Out 8:57  
 (F) Second Final Flow 88  Mileage 157rt 243.35 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,194  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,838  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Ruined Packer \_\_\_\_\_  
 Final Flow 60  Extra Copies \_\_\_\_\_  
 Final Shut-In 90  Sub Total 0  
 Sub Total 1468.35 Total 1468.35  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1468.35

Approved By \_\_\_\_\_ Our Representative Brett D. Dierman

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. 60945

4/10

Well Name & No. Davis-Hegkett Unit A #1-31 Test No. 2 Date 10/28/14  
 Company Cobalt Energy LLC Elevation 2997 KB 2992 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Terry Mclead Rig Murfin #16  
 Location: Sec. 31 Twp. 7s Rge. 25w Co. Graham State KS

Interval Tested 3840-3880 Zone Tested KC "H"  
 Anchor Length 40 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.8  
 Top Packer Depth 3835 Drill Collars Run 30 Vis 49  
 Bottom Packer Depth 3840 Wt. Pipe Run - WL 6.0  
 Total Depth 3880 Chlorides 900 ppm System LCM 2#  
 Blow Description IF - 1/2 in blow died back to 1/4 in  
ISI - No blow  
FF - Very weak surface blow died in 45 min  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>VSOCAL</u>	<u>5</u>		<u>95</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 50 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1,922</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>15:45</u>
(B) First Initial Flow <u>23</u>	<input type="checkbox"/> Jars _____	T-Started <u>15:57</u>
(C) First Final Flow <u>30</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>17:35</u>
(D) Initial Shut-In <u>1,196</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>21:35</u>
(E) Second Initial Flow <u>35</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>22:45</u>
(F) Second Final Flow <u>38</u>	<input checked="" type="checkbox"/> Mileage <u>157.7</u> <u>243.35</u>	Comments _____
(G) Final Shut-In <u>1,169</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1,898</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>1468.35</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1468.35</u>	

Approved By \_\_\_\_\_ Our Representative Beth Dickinson

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. 60946

4/10

Well Name & No. Davis - Heskett Unit A #1-31 Test No. 3 Date 10/29/14  
 Company Cobalt Energy LLC Elevation 2997 KB 2992 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Terry McLeod Rig Murfin #16  
 Location: Sec. 31 Twp. 7s Rge. 25w Co. Graham State KS

Interval Tested 3873 - 3908 Zone Tested AC  
 Anchor Length 35 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.8  
 Top Packer Depth 3868 Drill Collars Run 30 Vis 49  
 Bottom Packer Depth 3873 Wt. Pipe Run - WL 6.0  
 Total Depth 3908 Chlorides 900 ppm System LCM 2#  
 Blow Description IF - 3 1/2 in blow  
ISI - No blow  
FF - 3 in blow  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>60</u>	<u>10</u>	<u>90</u>		
<u>30</u>	<u>50cm</u>		<u>10</u>		<u>90</u>
<u>60</u>	<u>4504cm</u>		<u>2</u>	<u>25</u>	<u>73</u>
____	<u>15# GIP</u>				
____	____				

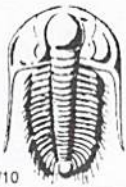
Rec Total 105 BHT \_\_\_\_\_ Gravity 32 API RW 15 @ 60 ° F Chlorides 60000 ppm  
 (A) Initial Hydrostatic 1945  Test 1150 T-On Location 3:00  
 (B) First Initial Flow 24  Jars \_\_\_\_\_ T-Started 3:50  
 (C) First Final Flow 43  Safety Joint 75 T-Open 6:12  
 (D) Initial Shut-In 1,221  Circ Sub \_\_\_\_\_ T-Pulled 10:12  
 (E) Second Initial Flow 46  Hourly Standby \_\_\_\_\_ T-Out 12:00  
 (F) Second Final Flow 65  Mileage 157.1 243.35 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,187  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,896  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1468.35

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Sub Total 1468.35  
 Total \_\_\_\_\_  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Butt Deems

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60947

4/10

Well Name & No. Paris-Heskett #1-31 Test No. 4 Date 10/29/14  
 Company Cobalt Energy LLC Elevation 2997 KB 2992 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. \_\_\_\_\_ Rig Martin #16  
 Location: Sec. 31 Twp. 7s Rge. 25w Co. Graham State KS

Interval Tested 3904-3955 Zone Tested AC  
 Anchor Length 51 Drill Pipe Run \_\_\_\_\_ Mud Wt. \_\_\_\_\_  
 Top Packer Depth 3899 Drill Collars Run 30 Vis \_\_\_\_\_  
 Bottom Packer Depth 3904 Wt. Pipe Run - WL \_\_\_\_\_  
 Total Depth 3955 Chlorides \_\_\_\_\_ ppm System LCM \_\_\_\_\_  
 Blow Description IF - 3/4 in blow  
ISI - No blow  
FF - No blow  
FST - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</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 5 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1,954</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>19:10</u>
(B) First Initial Flow <u>25</u>	<input type="checkbox"/> Jars _____	T-Started <u>19:30 20</u>
(C) First Final Flow <u>25</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:42</u>
(D) Initial Shut-In <u>208</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>23:12</u>
(E) Second Initial Flow <u>28</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>00:30</u>
(F) Second Final Flow <u>28</u>	<input checked="" type="checkbox"/> Mileage <u>157.1</u> 243.35	Comments _____
(G) Final Shut-In <u>48</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1,915</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1468.35</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1468.35</u>	

Approved By \_\_\_\_\_ Our Representative Bruce D. ...

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# ALLIED OIL & GAS SERVICES, LLC 064336

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dakley, KS

DATE <u>10-24-14</u>	SEC <u>31</u>	TWP <u>7</u>	RANGE <u>25</u>	CALLED OUT	ON LOCATION <u>5:30 pm</u>	JOB START <u>1:00 pm</u>	JOB FINISH <u>7:30 pm</u>
LEASE <u>Deals H&amp;S East Unit A</u>	WELL # <u>1-31</u>	LOCATION <u>Stedley, 2601, 1 E. North</u>			COUNTY <u>Graham</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one) <u>NEW</u>							

CONTRACTOR <u>Marfin 16</u>	OWNER <u>same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>218'</u>
CASING SIZE <u>8 7/8</u>	DEPTH <u>212.21</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG <u>1.51</u>	
PERFS.	
DISPLACEMENT <u>13.2 bbl</u>	

EQUIPMENT		CEMENT	
PUMP TRUCK # <u>422</u>	CEMENTER <u>harane S. wadant</u>	AMOUNT ORDERED <u>165 sfcs com 380cc</u>	
BULK TRUCK # <u>818/287</u>	HELPER <u>Wayne McGlyth</u>	<u>2 bags</u>	
BULK TRUCK #	DRIVER <u>George Grant</u>	COMMON <u>165 sfcs @ 17.90</u>	<u>2953.50</u>
BULK TRUCK #	DRIVER <u>Shawn Tatro</u>	POZMIX @	
		GEL <u>310# @ .50</u>	<u>155.00</u>
		CHLORIDE <u>465# @ 1.10</u>	<u>511.50</u>
		ASC @	
		Material Tank @	<u>3.625.00</u>
		(1086.00 / 30%)	
		HANDLING <u>178.42 sfcs @ 2.48</u>	<u>442.48</u>
		MILEAGE <u>8.14 hrs X 60 X 2.95</u>	<u>1343.10</u>
		TOTAL	

REMARKS:  
Mix 165 sfcs cement  
Displace with water  
Calmat did circulate

Thank you

CHARGE TO: Asphalt Energy

STREET \_\_\_\_\_

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

SERVICE

DEPTH OF JOB 212.21'

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE @

MILEAGE MTHW 60 @ 7.70 462.00

MANIFOLD swage 60 @ 4.90 294.00

MTCU @

(1289.64 / 30%) TOTAL 4,298.83

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.

PRINTED NAME AFD

SIGNATURE [Signature]

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

TOTAL CHARGES 7,918.83

DISCOUNT 2,375.64 (30%) IF PAID IN 30 DAYS

5,543.18 Net.

**GEOLOGIST'S REPORT**  
 DRILLING TIME AND SAMPLE LOG

OPERATOR Cobalt Energy, LLC  
 LEASE Davis-Heskett Unit Well No. A-1-31  
 FIELD \_\_\_\_\_  
 LOCATION 335' FSL + 316' FEL  
 SEC. 31 TWP. 7S RGE. 25 W  
 COUNTY Graham STATE Kansas

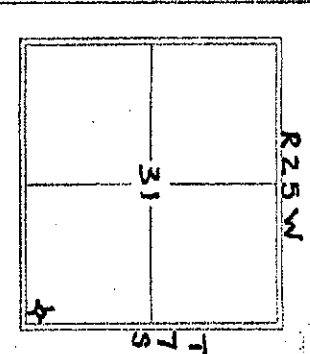
CONTRACTOR Murfin Drly. Co. Rig-11  
 COMM. 10-24-2014 COMP. 10-30-2014  
 RTD. 4000' LOG TD 4000'  
 SAMPLES SAVED FROM \_\_\_\_\_ TO \_\_\_\_\_ RTD  
 DRILLING TIME KEPT FROM \_\_\_\_\_ TO \_\_\_\_\_ RTD  
 SAMPLES EXAMINED FROM \_\_\_\_\_ TO \_\_\_\_\_ RTD  
 GEOLOGICAL SUPERVISION FROM 3625' TO RTD.  
 MUD UP 3090' TYPE MUD chemical

FORMATION	TOP	LOG	DATUM	TOP	SAMPLE	DATUM	STRUCT.
							COMP.
<i>Abeydrite</i>	2158'	+336	2156'	+338			-6
<i>Base Abeydrite</i>	2190'	+304	2187'	+307			-7
<i>Abeiner sh</i>	3693'	-1199	3696'	-1202			-5
<i>Lansing</i>	3727'	-1232	3730'	-1236			-1
<i>Huncie Creek</i>	3845'	-1351	3847'	-1353			-2
<i>Stark Shale</i>	3904'	-1410	3907'	-1413			-
<i>Boise Kans. Gty</i>	3999'	-1455	3998'	-1454			-4

ELEVATION  
 KB 2494'  
 DF \_\_\_\_\_  
 GL 2489'  
 Measurements Are All  
 From KB.

CASING RECORD  
 SURFACE 8 5/8 @ 217' of  
16.5 SX  
 PRODUCTION none

ELECTRICAL SURVEYS  
 Pioneer Wireline  
 Dual Induction  
 Density - Neutron  
 Sonic-log  
 Micro-log



REFERENCE WELL FOR STRUCTURAL COMPARISON  
Sec. 31-7S-25W, 2494' KB Chief drly co. Davis No. 1, 1/2 N.E. Se

DATE	DEPTH	NO.	SIZE	TYPE	DEPTH OUT	FEET	REMARKS
10-24-2014	meter	A	Reel	RR	12 1/4	218	218
10-25-2014	665' set surf	1	HTC	OR-rose	7 7/8	4000	3182 N/A
10-26-2014	2600' drlg						
10-27-2014	3500' dst 1	1					
10-28-2014	3820' dst 2	2					
10-29-2014	3908' dst 3	3					
10-30-2014	4000' Logging	4					

FORMATION	DEPTH	DESCRIPTION OF SEAM	LOG NUMBER
<i>Lansing "C"</i>	3160-3765	Limestone, Cream to white, fine grain, light grey, No free oil & No odor. Or, No odor. No free oil & No odor.	dst-1
<i>Lansing "F"</i>	3810-3815	Lime stone, Cream, reddish, 5 pieces per tray w/ 8 pcs per tray w/ light brown spots in floor, red color.	dst-1-1
<i>Lansing "H"</i>	3860-3865	Lime stone, Cream, light tan, in tray as per sample ship + STD in fine oil pipe. 81-gal. Lime stone, Cream - some fine grain in some w/ 8 pcs per tray w/ light brown spots in floor.	dst-2
<i>Lansing "J"</i>	3885-3900	Shale, Cream to white, fine grain, 2-3 pieces/tray w/ burn stain in trace of. 1 pc	dst-3
<i>Lansing "K"</i>	3914-3920	w/ biobly free oil, No odor	dst-4

No.	Interval	IPZ/
1	3741-3820	40
2	3840-3880	25
3	3873-3908	24
4	3904-3955	25

UNIT AND REMARKS  
 Unit A, 1-31  
 10-30-2014

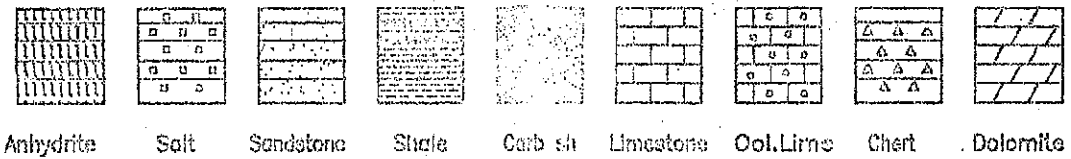
DRILL STEM TESTS

Interval	FP/Time	ISF/Time	FP/Time	ISF/Time	SP-GR	REMARKS
3741-3820	40-57 30"	1213 60"	10-88 60"	1194 90"	1867 1838	140' Muddy water N.S.
3840-3880	23-30 30"	1196 60"	35-38 60"	1169 90"	1922 1898	50' V.S.O.C.M 5% OIL
3873-3908	24-43 30"	1221 60"	46-65 60"	1187 90"	1945 1896	15' GIP 15' 6.01 90% oil 30' 5.0cm 10% oil 60' V.S.O.C.M 2% oil
3904-3955	25-25 30"	208 60"	28-28 30"	48 30"	1954 1915	5' mud N.S.

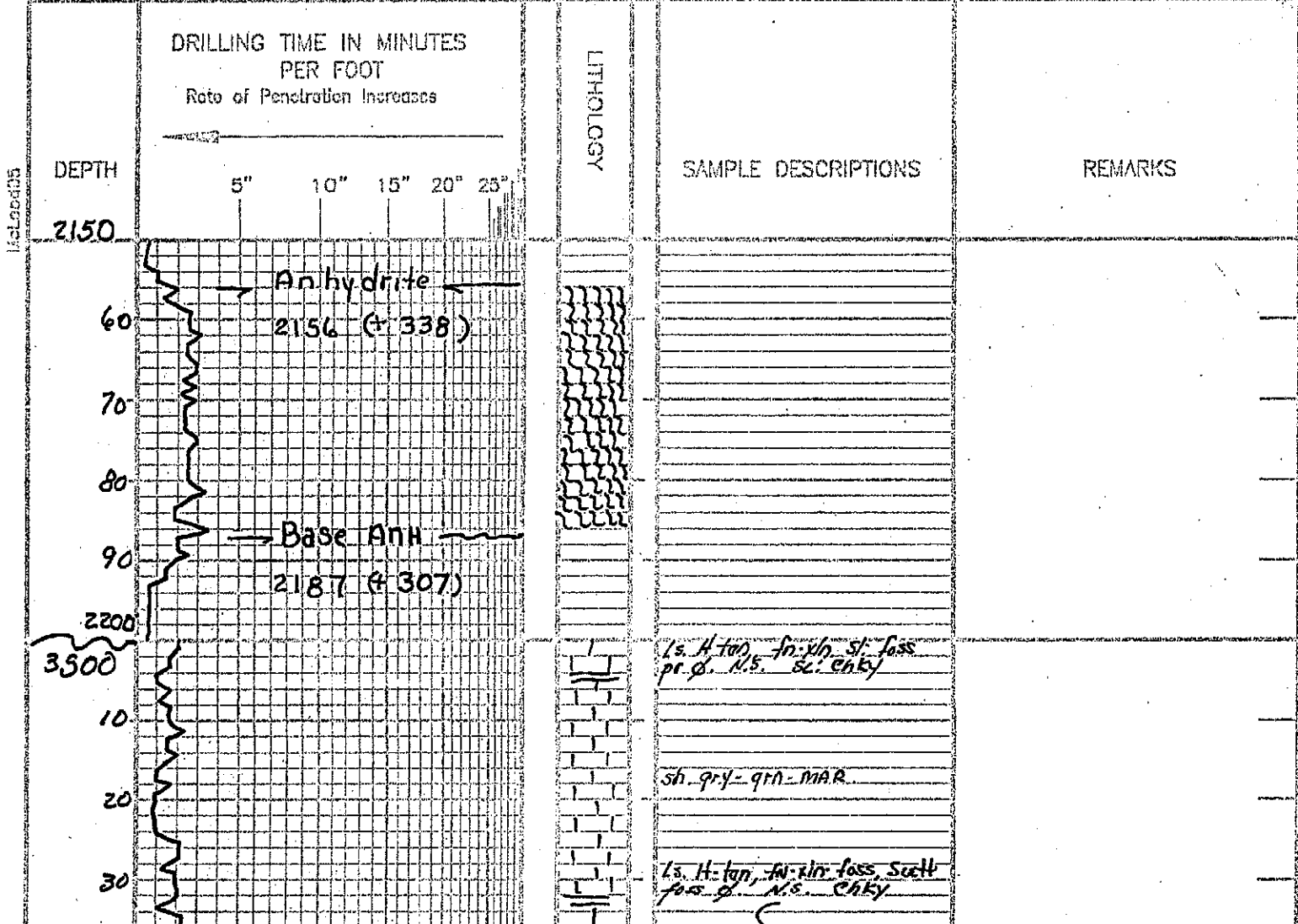
It A. 1-31 was declared dry and abandoned on 30-2-1914

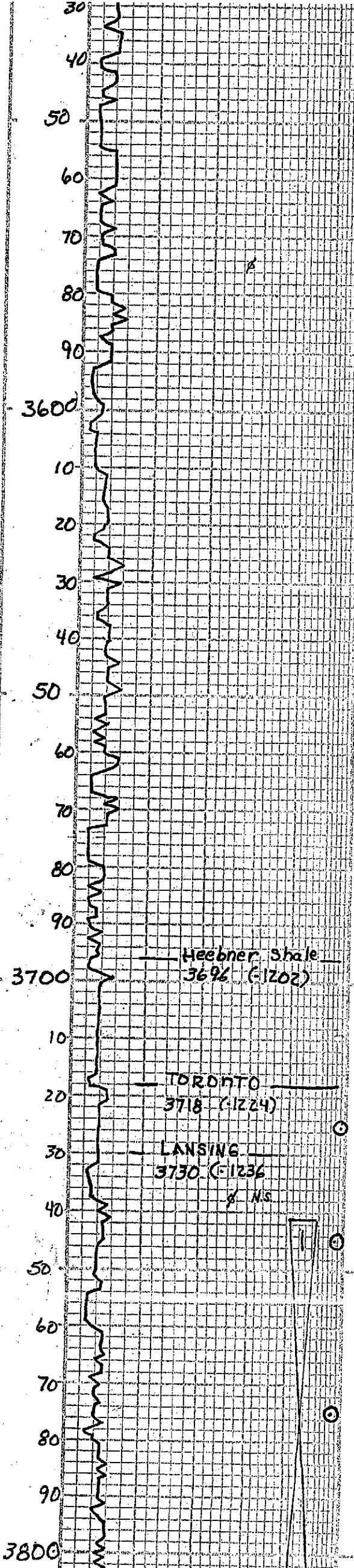
Respectfully  
J. M. Cook

LEGEND



SCALE " = 100'





ls. tan. fr. xln. foss w/ fair foss. chky. N.S.

shly

15. lt. tan. fr. xln. foss w/ fair foss. chky. N.S.

ls. lt. tan. - crm. fr. xln. foss. + chky. N.S.

sh. blk carb.

shales, varicolored

ls. crm. fr. xln. foss w/ fair foss. chky. N.S.

ls. crm. wh. - gry. fr. xln. foss w/ fr. chky. N.S.

sh. blk-mar.

ls. crm. lt. brn. fr. xln. sl. chky. foss. N.S.

ls. crm. - gry. fr. xln. foss fr. chky. N.S.

sh. blk carb.

ls. tan. fr. xln. sl. foss tight. rx, NVP. N.S.

sh. gry's - mar.

ls. crm. fr. xln. foss w/ fr. fr. foss. fr. N.S. chky.

sh. blk - gry - grn.

ls. crm. wh. - ool. w/ fr. med. ool. fr. N.S. - v. chky. No odor.

ls. crm. xln. sl. ool. w/ pr. ool. fr. N.S. No odor, chky.

ls. crm. fr. xln. sl. foss N.S. chky.

sh. varicolored.

ls. crm. wh. fr. xln. tight rx. pr. w/ fr. fr. xln. suet. NVP. N.S. No odor.

sh. gry's - mar.

ls. wh. crm. gry. fr. xln. tight rx. NVP. N.S. chky.

shly. gry - red - mar.

ls. crm. gry. fr. xln. chky. N.S.

sh. gry - mar.

DST No. 4 3904'-3955'

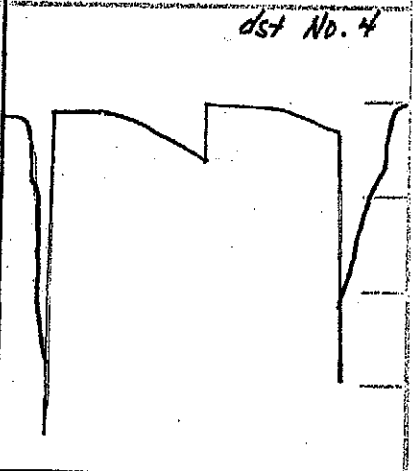
wk blow 3/4" 1st open  
No blow 2nd open  
30" 60" 30" 30"

Rec: 5' mud

SIP: 208\* - 48\*

FP: 25\* - 25\* + 28\* - 28\*

HP: 1954\* - 1915\*



DST No. 1 3741'-3820'

wk - 2 1/2" blow 1st open  
wk - 2" blow tot 2nd open  
30" 60" 60" 90"

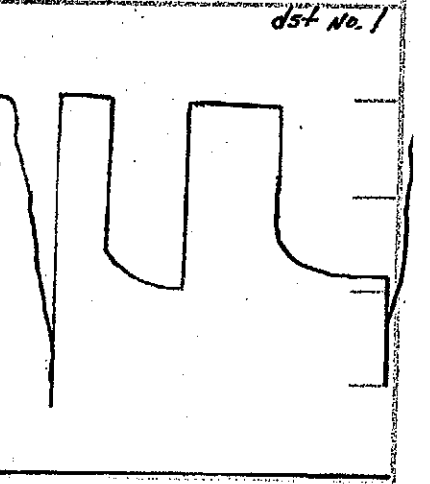
Rec: 140' mud, n.s.

SIP: 1213\* - 1194\*

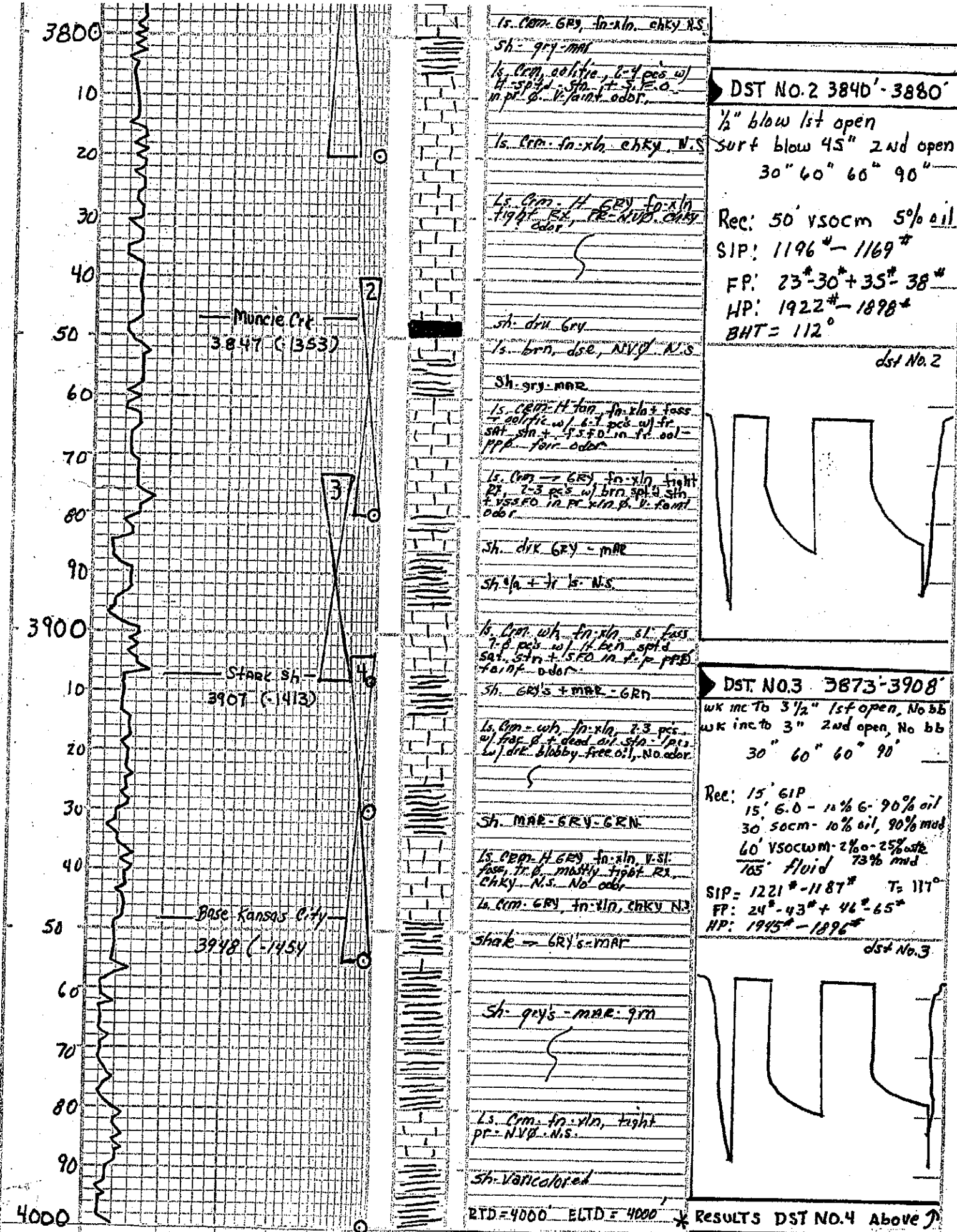
FP: 40\* - 57\* + 60\* - 88\*

HP: 1869\* - 1838\*

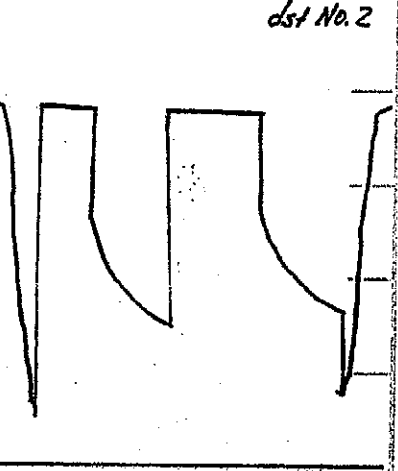
BHT = 114°



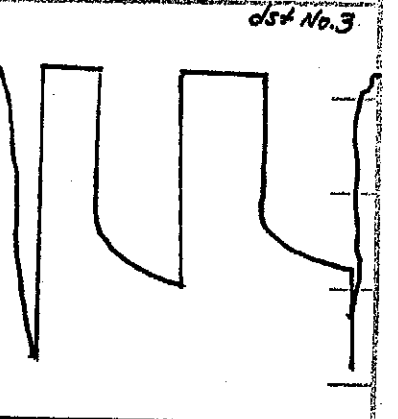




**DST NO. 2 3840' - 3880'**  
 1/2" blow 1st open  
 surf blow 45" 2nd open  
 30" 60" 60" 90"  
 Rec: 50' vsocm 5% oil  
 SIP: 1196<sup>#</sup> - 1169<sup>#</sup>  
 FP: 23<sup>#</sup> - 30<sup>#</sup> + 35<sup>#</sup> - 38<sup>#</sup>  
 HP: 1922<sup>#</sup> - 1898<sup>#</sup>  
 BHT = 112<sup>o</sup>



**DST NO. 3 3873' - 3908'**  
 wk mc to 3 1/2" 1st open, No bb  
 wk inc to 3" 2nd open, No bb  
 30" 60" 60" 90"  
 Rec: 15' 6IP  
 15' 6.0 - 10% 6 - 90% oil  
 30' 50cm - 10% oil, 90% mud  
 60' vsocwm - 2% oil - 25% water  
 105' fluid 73% mud  
 SIP: 1221<sup>#</sup> - 1187<sup>#</sup> T<sub>2</sub> 117<sup>o</sup>  
 FP: 24<sup>#</sup> - 43<sup>#</sup> + 46<sup>#</sup> - 65<sup>#</sup>  
 HP: 1945<sup>#</sup> - 1896<sup>#</sup>



RESULTS DST NO. 4 Above

DEPTH	DRILLING TIME Minutes/Foot	LITHOLOGY	SAMPLE DESCRIPTIONS	REMARKS
3800			ls. com. GR, fn. xln. chky. N.S.	
10			sh. gry-mar	
20			ls. com. calcif. 2-4 pcs w/	
30			ls. com. fn. xln. chky. N.S.	
40			ls. com. H GR, fn. xln.	
50			sh. dk. gry	
60			ls. brn. dse, NVQ. N.S.	
70			sh. gry-mar	
80			ls. com. H GR, fn. xln. fass	
90			sh. dk. gry - mar	
3900			ls. com. wh. fn. xln. sl. fass	
10			sh. gry's + mar - GRN	
20			ls. com. wh. fn. xln. 2-3 pcs	
30			sh. mar - gry - GRN	
40			ls. com. H GR, fn. xln. v. sl.	
50			ls. com. GR, fn. xln. chky. N.S.	
60			shak - gry's - mar	
70			sh. gry's - mar. grn	
80			ls. com. fn. xln. tight	
90			sh. varicolored	
4000			RTD = 4000' ELTD = 4000'	

COMPANY Cobalt Energy LLC.  
 LEASE Davis-Heskett Unit "A" 1-31  
 LOCATION 335' E.S. 1/4 314' E.S. SEC. 31. TWP. 7S. RNG. 25.W.  
 COUNTY Graham STATE Kansas  
 ELEVATION: 2494' K.B.