



## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

115 S. Belmont #12  
Wichita, KS 67208

ATTN: Cory Baker

**Terry "B" #1-1**

**1-11s-25w Trego,KS**

Start Date: 2013.03.27 @ 11:55:30

End Date: 2013.03.27 @ 21:17:00

Job Ticket #: 51699                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.03 @ 16:33:19



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy, LLC  
 115 S. Belmont #12  
 Wichita, KS 67208  
 ATTN: Cory Baker

**1-11s-25w Trego,KS**

**Terry "B" #1-1**

Job Ticket: 51699

**DST#: 1**

Test Start: 2013.03.27 @ 11:55:30

## GENERAL INFORMATION:

Formation: **LKC "C-D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:36:50  
 Time Test Ended: 21:17:00  
 Interval: **3724.00 ft (KB) To 3750.00 ft (KB) (TVD)**  
 Total Depth: 3750.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 66  
 Reference Elevations: 2368.00 ft (KB)  
 2357.00 ft (CF)  
 KB to GR/CF: 11.00 ft

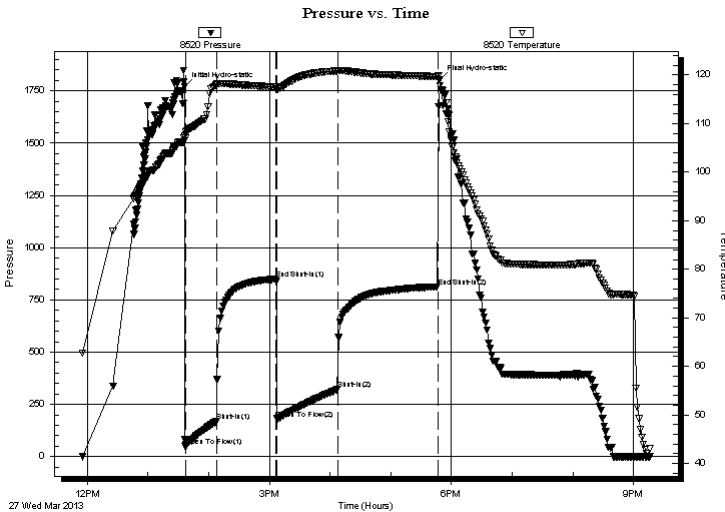
**Serial #: 8520**

**Outside**

Press @ Run Depth: 320.52 psig @ 3727.00 ft (KB)  
 Start Date: 2013.03.27 End Date: 2013.03.27  
 Start Time: 11:55:30 End Time: 21:17:00  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.03.27  
 Time On Btm: 2013.03.27 @ 13:36:30  
 Time Off Btm: 2013.03.27 @ 17:49:00

**TEST COMMENT:** IF-Strong building blow . BOB @ 4 minutes.  
 ISI-Return @ 1 minute. Built to 6 inches.  
 FF-Fair building blow . BOB @ 8 minutes.  
 FSI-Return @ 2 minutes. Built to 6 inches.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1771.82	107.43	Initial Hydro-static
1	47.45	106.99	Open To Flow (1)
31	168.20	118.00	Shut-In(1)
90	850.51	117.50	End Shut-In(1)
91	181.20	117.15	Open To Flow (2)
151	320.52	120.86	Shut-In(2)
250	813.46	119.69	End Shut-In(2)
253	1804.38	117.91	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	40%Oil/30%Water/30%Mud	0.30
882.00	55%Gas/45%Oil	12.12
0.00	378' G.I.P.	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 51699

**DST#: 1**

ATTN: Cory Baker

Test Start: 2013.03.27 @ 11:55:30

## Tool Information

Drill Pipe:	Length: 3618.00 ft	Diameter: 3.80 inches	Volume: 50.75 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 88.00 ft	Diameter: 2.25 inches	Volume: 0.43 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 51.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3724.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			3702.00	
Shut In Tool	5.00			3707.00	
Hydraulic tool	5.00			3712.00	
Safety Joint	3.00			3715.00	
Packer	5.00			3720.00	23.00 Bottom Of Top Packer
Packer	4.00			3724.00	
Stubb	1.00			3725.00	
Perforations	2.00			3727.00	
Recorder	0.00	8354	Inside	3727.00	
Recorder	0.00	8520	Outside	3727.00	
Perforations	20.00			3747.00	
Bullnose	3.00			3750.00	26.00 Bottom Packers & Anchor

**Total Tool Length: 49.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 51699

**DST#: 1**

ATTN: Cory Baker

Test Start: 2013.03.27 @ 11:55:30

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	40%Oil/30%Water/30%Mud	0.295
882.00	55%Gas/45%Oil	12.117
0.00	378' G.I.P.	0.000

Total Length: 942.00 ft      Total Volume: 12.412 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

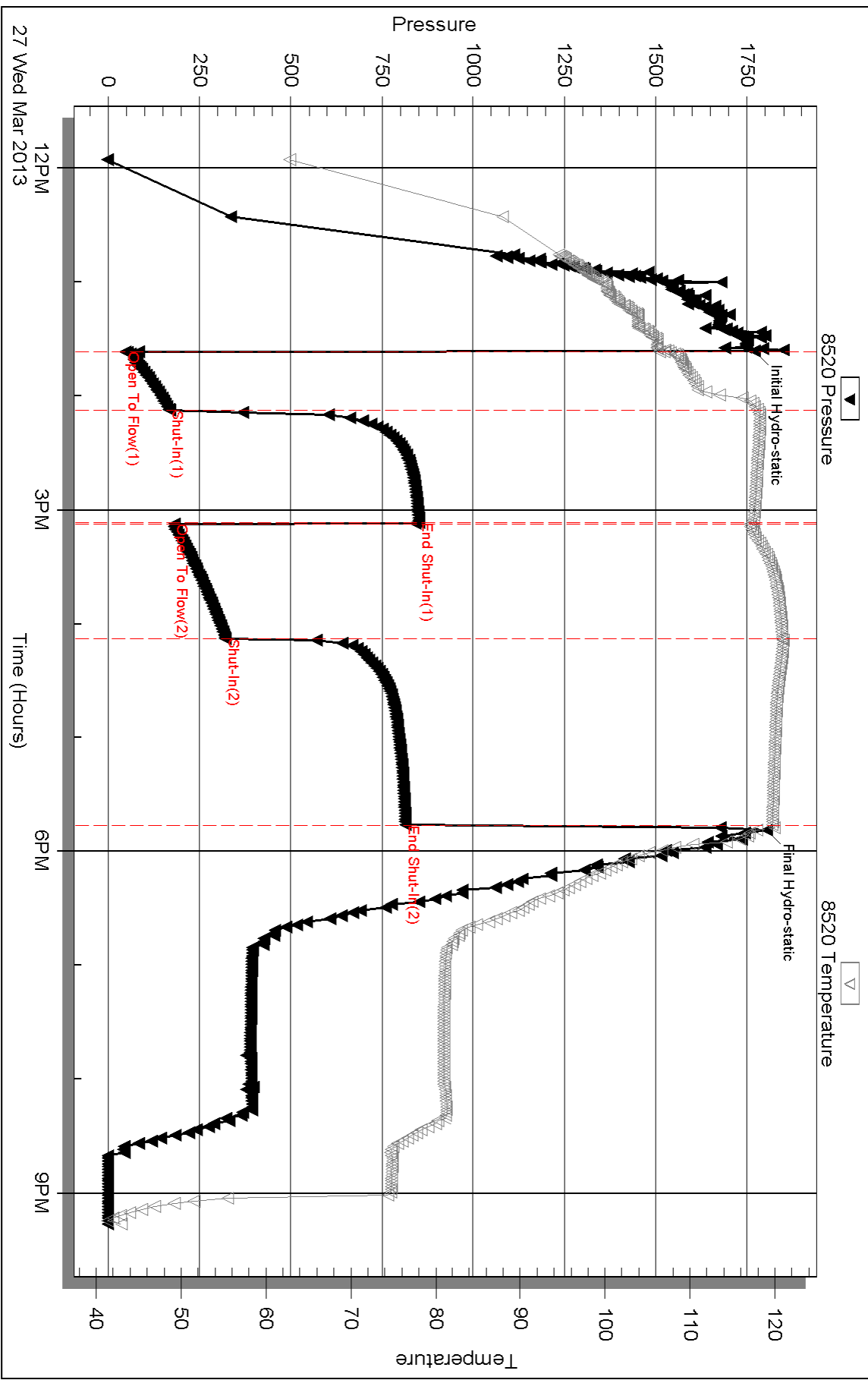
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



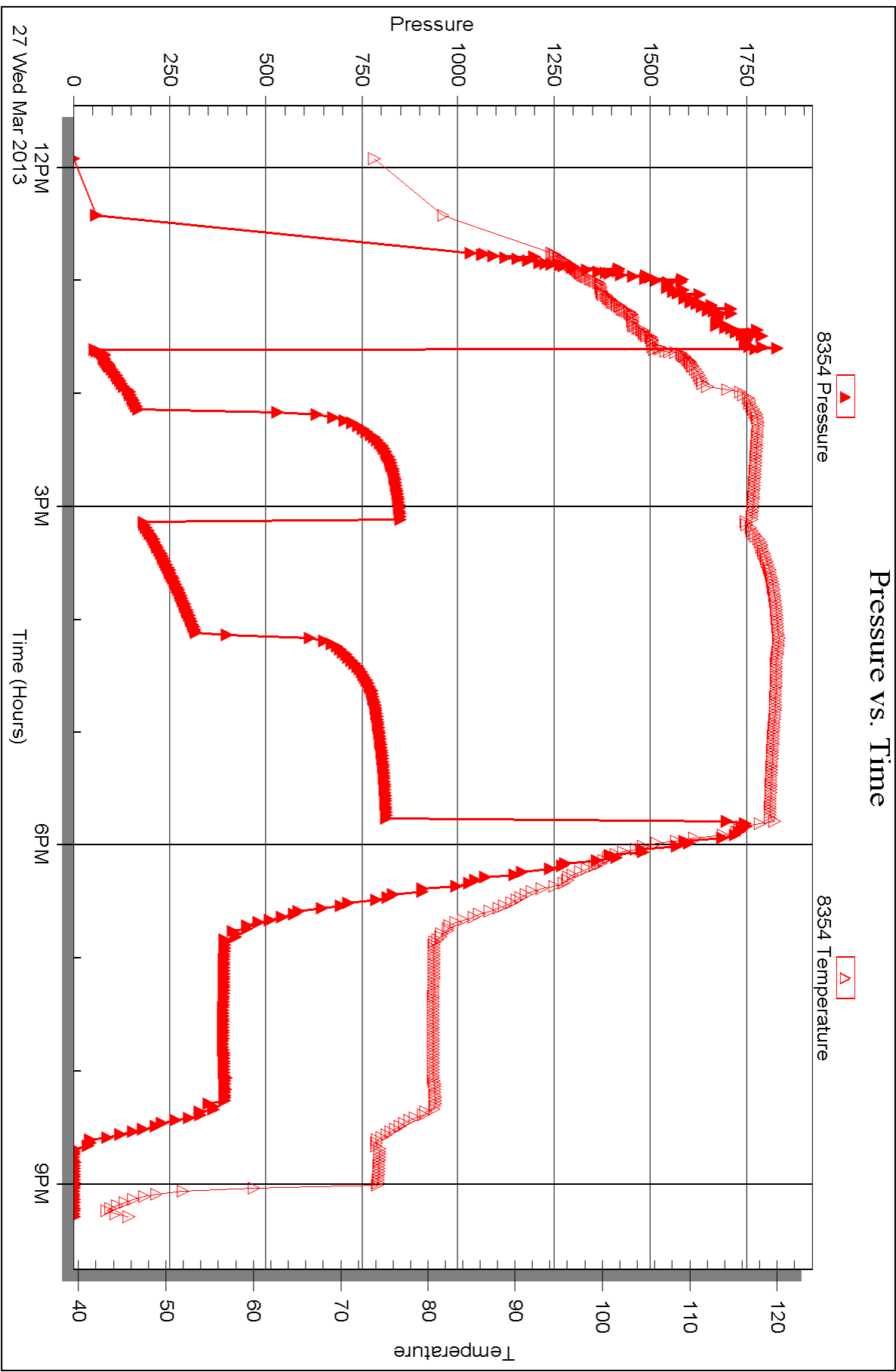
Serial #: 8354

Inside

Cobalt Energy, LLC

Terry "B" #1-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 51699

Printed: 2013.04.03 @ 16:33:22



## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

115 S. Belmont #12  
Wichita, KS 67208

ATTN: Cory Baker

**Terry "B" #1-1**

**1-11s-25w Trego,KS**

Start Date: 2013.03.28 @ 05:46:45

End Date: 2013.03.28 @ 12:58:45

Job Ticket #: 51700                      DST #: 2

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

Printed: 2013.04.03 @ 16:32:38





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy, LLC  
115 S. Belmont #12  
Wichita, KS 67208  
ATTN: Cory Baker

**1-11s-25w Trego,KS**

**Terry "B" #1-1**

Job Ticket: 51700

**DST#: 2**

Test Start: 2013.03.28 @ 05:46:45

## GENERAL INFORMATION:

Formation: **LKC "E-F"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:18:45  
 Time Test Ended: 12:58:45  
 Interval: **3770.00 ft (KB) To 3794.00 ft (KB) (TVD)**  
 Total Depth: 3794.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 66  
 Reference Elevations: 2368.00 ft (KB)  
 2357.00 ft (CF)  
 KB to GR/CF: 11.00 ft

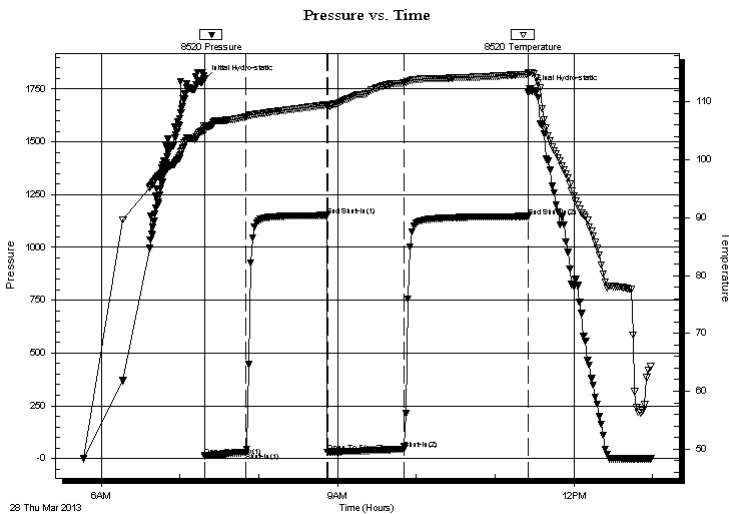
**Serial #: 8520**

**Outside**

Press @ Run Depth: 44.86 psig @ 3773.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.03.28 End Date: 2013.03.28 Last Calib.: 2013.03.28  
 Start Time: 05:46:45 End Time: 12:58:45 Time On Btm: 2013.03.28 @ 07:18:35  
 Time Off Btm: 2013.03.28 @ 11:26:15

**TEST COMMENT:** IF-Very weak building blow . Built to 2&1/2 inches.  
 IS-No Return.  
 FF-Very weak building blow . Built to 2&1/2 inches.  
 FS-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.85	105.91	Initial Hydro-static
1	12.44	104.90	Open To Flow (1)
32	29.30	107.42	Shut-In(1)
94	1151.48	109.51	End Shut-In(1)
94	30.40	109.27	Open To Flow (2)
152	44.86	113.24	Shut-In(2)
247	1146.76	114.75	End Shut-In(2)
248	1749.39	115.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10
20.00	1%Oil/29%Water/70%Mud	0.19

## Gas Rates

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



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

# DRILL STEM TEST REPORT

Cobalt Energy, LLC

**1-11s-25w Trego, KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 51700

**DST#: 2**

ATTN: Cory Baker

Test Start: 2013.03.28 @ 05:46:45

## GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:18:45

Time Test Ended: 12:58:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

**Interval: 3770.00 ft (KB) To 3794.00 ft (KB) (TVD)**

Reference Elevations: 2368.00 ft (KB)

Total Depth: 3794.00 ft (KB) (TVD)

2357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8354**

**Inside**

Press @ RunDepth: psig @ 3773.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.28

End Date: 2013.03.28

Last Calib.: 2013.03.28

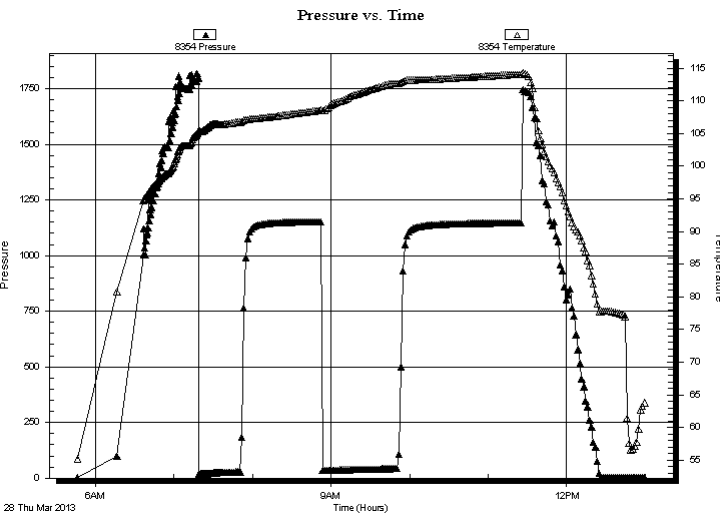
Start Time: 05:46:30

End Time: 12:59:30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Very weak building blow . Built to 2&1/2 inches.  
IS-No Return.  
FF-Very weak building blow . Built to 2&1/2 inches.  
FS-No Return.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10
20.00	1%Oil/29%Water/70%Mud	0.19

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 51700

**DST#: 2**

ATTN: Cory Baker

Test Start: 2013.03.28 @ 05:46:45

## Tool Information

Drill Pipe:	Length: 3739.00 ft	Diameter: 3.80 inches	Volume: 52.45 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 52.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3770.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3748.00	
Shut In Tool	5.00			3753.00	
Hydraulic tool	5.00			3758.00	
Safety Joint	3.00			3761.00	
Packer	5.00			3766.00	23.00 Bottom Of Top Packer
Packer	4.00			3770.00	
Stubb	1.00			3771.00	
Perforations	2.00			3773.00	
Recorder	0.00	8354	Inside	3773.00	
Recorder	0.00	8520	Outside	3773.00	
Perforations	18.00			3791.00	
Bullnose	3.00			3794.00	24.00 Bottom Packers & Anchor

**Total Tool Length: 47.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 51700

**DST#: 2**

ATTN: Cory Baker

Test Start: 2013.03.28 @ 05:46:45

## 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:

14500 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbf

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

Gas Cushion Type:

Resistivity: 0.47 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
20.00	100%Mud	0.098
20.00	1%Oil/29%Water/70%Mud	0.189

Total Length: 40.00 ft

Total Volume: 0.287 bbf

Num Fluid Samples: 0

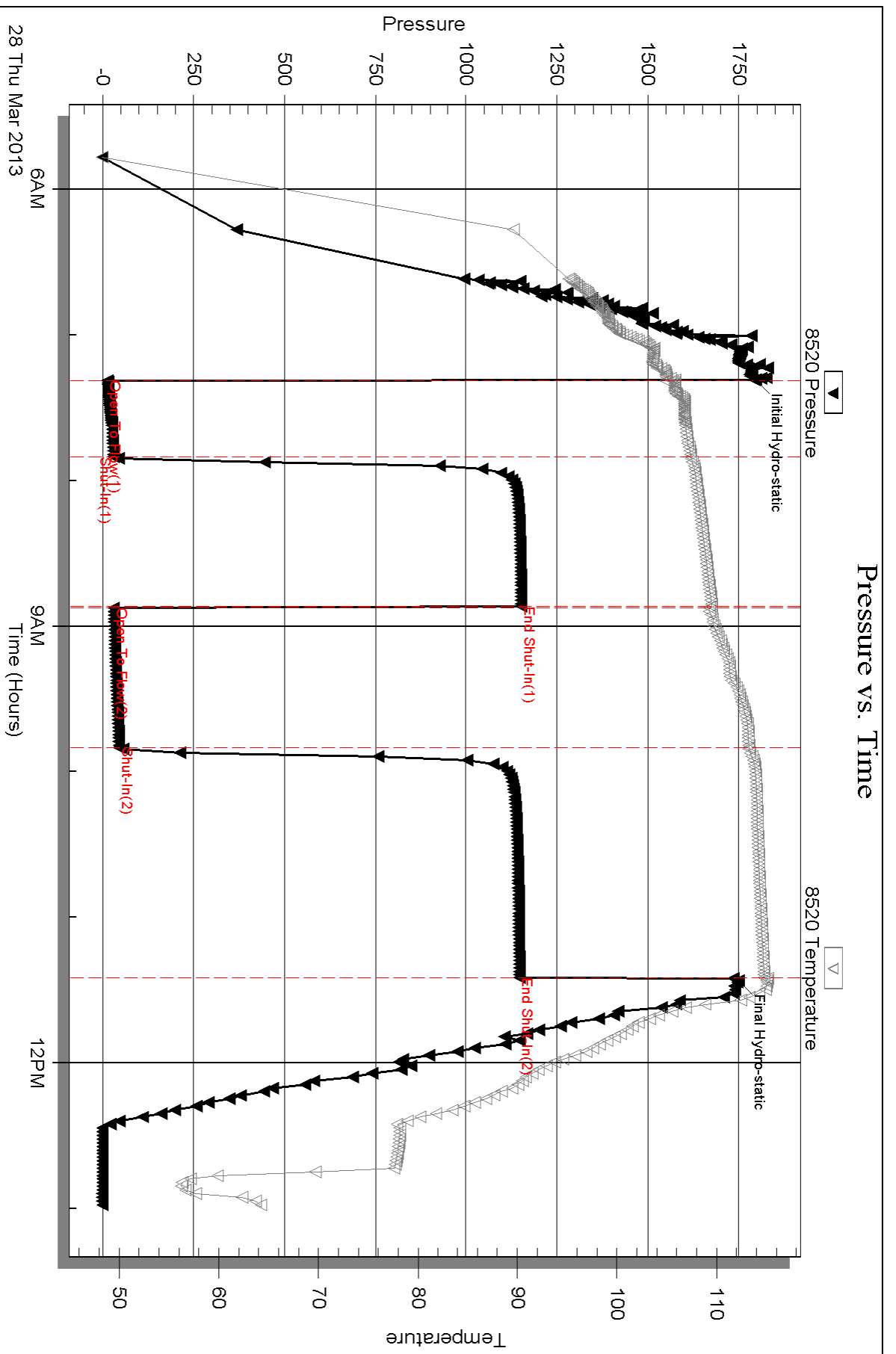
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8354

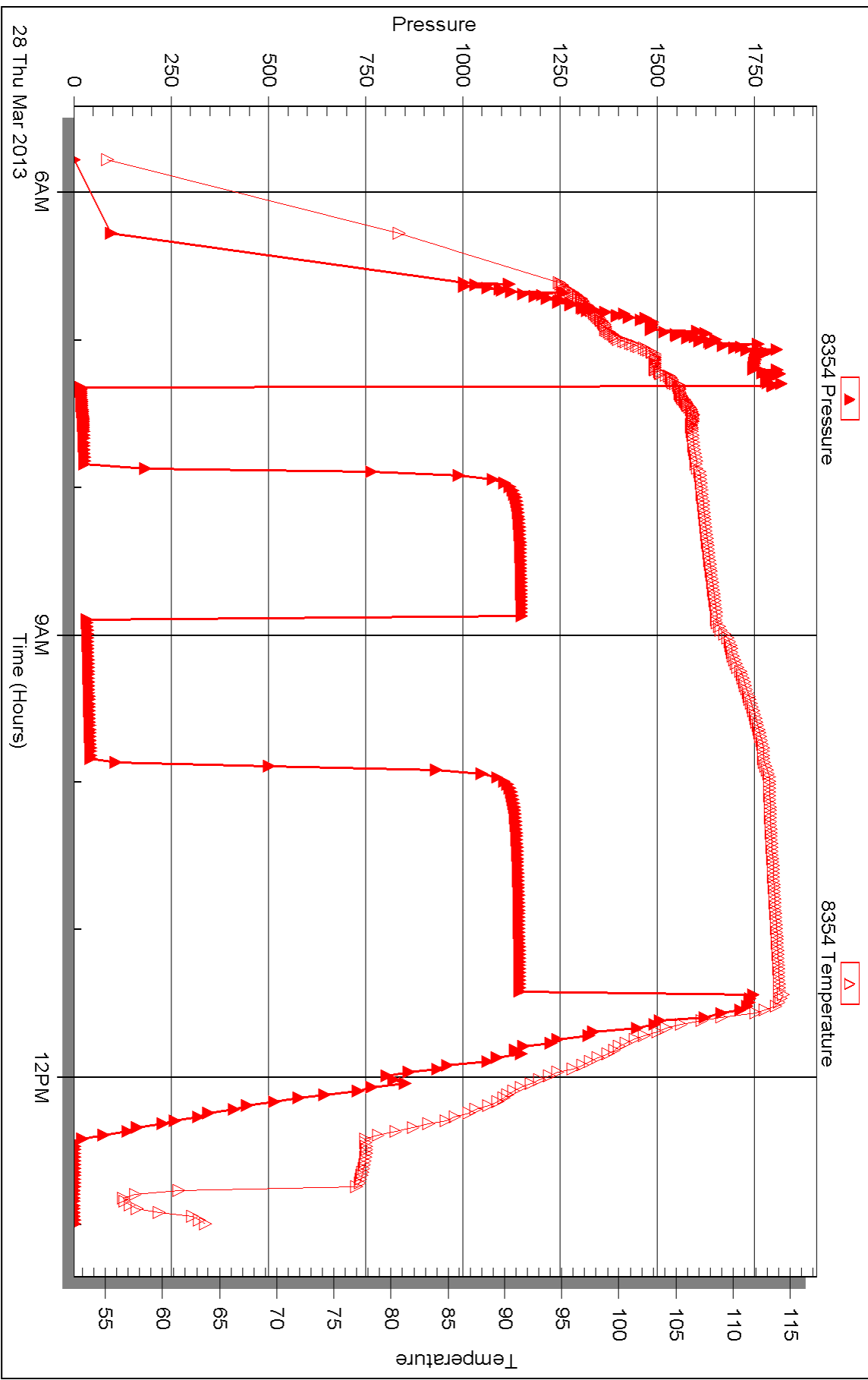
Inside

Cobalt Energy, LLC

Terry "B" #1-1

DST Test Number: 2

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

115 S. Belmont #12  
Wichita, KS 67208

ATTN: Cory Baker

**Terry "B" #1-1**

**1-11s-25w Trego,KS**

Start Date: 2013.03.28 @ 21:43:45

End Date: 2013.03.29 @ 06:54:15

Job Ticket #: 52101                      DST #: 3

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

Printed: 2013.04.03 @ 16:31:50



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

ATTN: Cory Baker

Job Ticket: 52101

**DST#: 3**

Test Start: 2013.03.28 @ 21:43:45

## GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:33:25

Time Test Ended: 06:54:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

**Interval: 3822.00 ft (KB) To 3860.00 ft (KB) (TVD)**

Reference Elevations: 2368.00 ft (KB)

Total Depth: 3860.00 ft (KB) (TVD)

2357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8520 Outside**

Press @ Run Depth: 483.65 psig @ 3825.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.28

End Date: 2013.03.29

Last Calib.: 2013.03.29

Start Time: 21:53:45

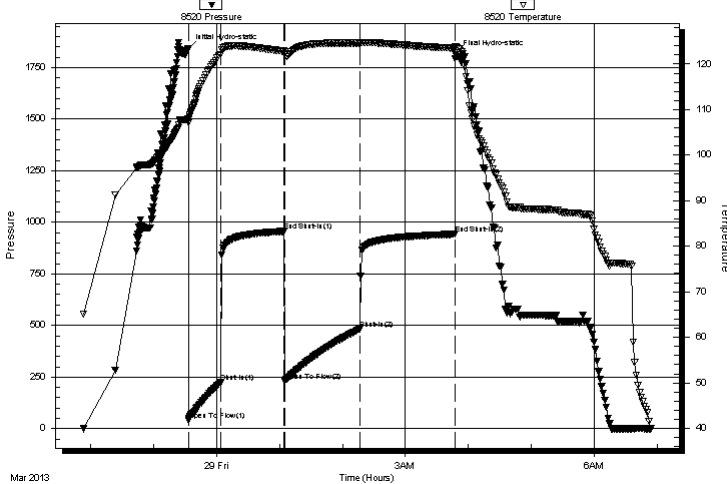
End Time: 06:54:15

Time On Btm: 2013.03.28 @ 23:33:15

Time Off Btm: 2013.03.29 @ 03:47:45

**TEST COMMENT:** IF-Strong building blow . BOB @ 2 minutes.  
ISI-Return @ 15 seconds. BOB @ 8 minutes 30 seconds.  
FF-Strong building blow . BOB @ 5 minutes 30 seconds.  
FSI-Return @ 1 minute. BOB @ 29 minutes.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1841.43	107.91	Initial Hydro-static
1	38.98	107.17	Open To Flow (1)
31	222.99	122.04	Shut-In(1)
91	956.01	122.81	End Shut-In(1)
92	231.24	122.36	Open To Flow (2)
164	483.65	124.63	Shut-In(2)
254	942.97	123.50	End Shut-In(2)
255	1813.98	123.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	2%Oil/83%Water/15%Mud	0.60
62.00	5%Oil/70%Water/30%Mud	0.87
1040.00	25%Gas/75%Oil	14.59
0.00	1353' G.I.P.	0.00

## Gas Rates

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





# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Cobalt Energy, LLC  
 115 S. Belmont #12  
 Wichita, KS 67208  
 ATTN: Cory Baker

**1-11s-25w Trego,KS**  
**Terry "B" #1-1**  
 Job Ticket: 52101 **DST#: 3**  
 Test Start: 2013.03.28 @ 21:43:45

### GENERAL INFORMATION:

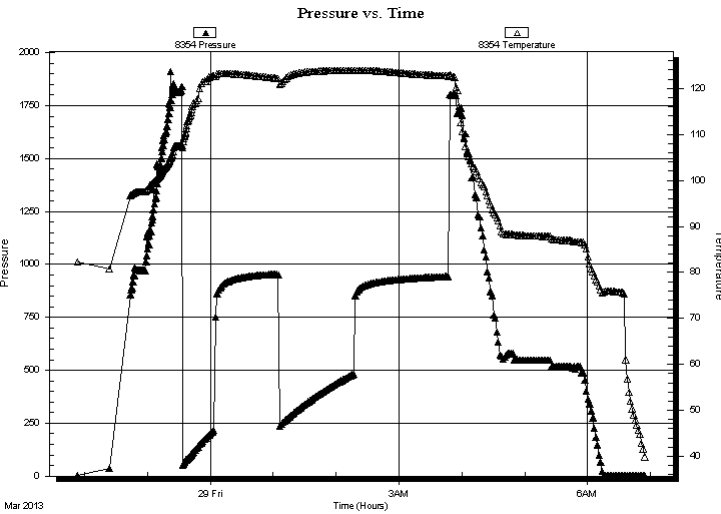
Formation: **LKC "H"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:33:25  
 Time Test Ended: 06:54:15  
**Interval: 3822.00 ft (KB) To 3860.00 ft (KB) (TVD)**  
 Total Depth: 3860.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 66  
 Reference Elevations: 2368.00 ft (KB)  
 2357.00 ft (CF)  
 KB to GR/CF: 11.00 ft

### Serial #: 8354

Inside

Press @ Run Depth: psig @ 3825.00 ft (KB)  
 Start Date: 2013.03.28 End Date: 2013.03.29  
 Start Time: 21:53:30 End Time: 06:54:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.03.29  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-Strong building blow . BOB @ 2 minutes.  
 ISI-Return @ 15 seconds. BOB @ 8 minutes 30 seconds.  
 FF-Strong building blow . BOB @ 5 minutes 30 seconds.  
 FSI-Return @ 1 minute. BOB @ 29 minutes.



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
62.00	2%Oil/83%Water/15%Mud	0.60
62.00	5%Oil/70%Water/30%Mud	0.87
1040.00	25%Gas/75%Oil	14.59
0.00	1353' G.I.P.	0.00

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 52101

**DST#: 3**

ATTN: Cory Baker

Test Start: 2013.03.28 @ 21:43:45

## Tool Information

Drill Pipe:	Length: 3800.00 ft	Diameter: 3.80 inches	Volume: 53.30 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 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: 10000.00 lb
			<u>Total Volume: 53.45 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3822.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3800.00	
Shut In Tool	5.00			3805.00	
Hydraulic tool	5.00			3810.00	
Safety Joint	3.00			3813.00	
Packer	5.00			3818.00	23.00 Bottom Of Top Packer
Packer	4.00			3822.00	
Stubb	1.00			3823.00	
Perforations	2.00			3825.00	
Recorder	0.00	8354	Inside	3825.00	
Recorder	0.00	8520	Outside	3825.00	
Perforations	32.00			3857.00	
Bullnose	3.00			3860.00	38.00 Bottom Packers & Anchor

**Total Tool Length: 61.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 52101

**DST#: 3**

ATTN: Cory Baker

Test Start: 2013.03.28 @ 21:43:45

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

16000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.82 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	2%Oil/83%Water/15%Mud	0.596
62.00	5%Oil/70%Water/30%Mud	0.870
1040.00	25%Gas/75%Oil	14.588
0.00	1353' G.I.P.	0.000

Total Length: 1164.00 ft

Total Volume: 16.054 bbl

Num Fluid Samples: 0

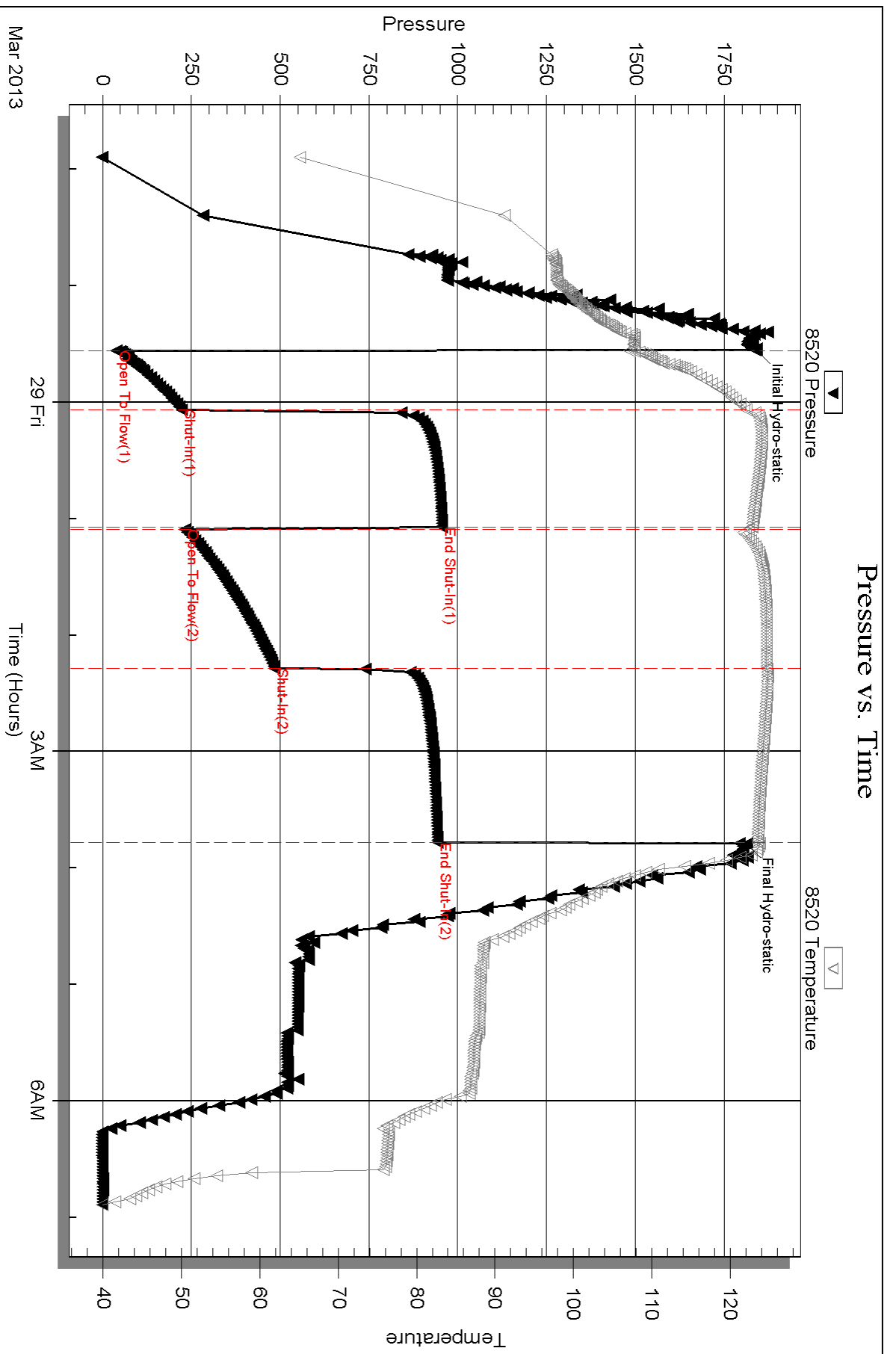
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



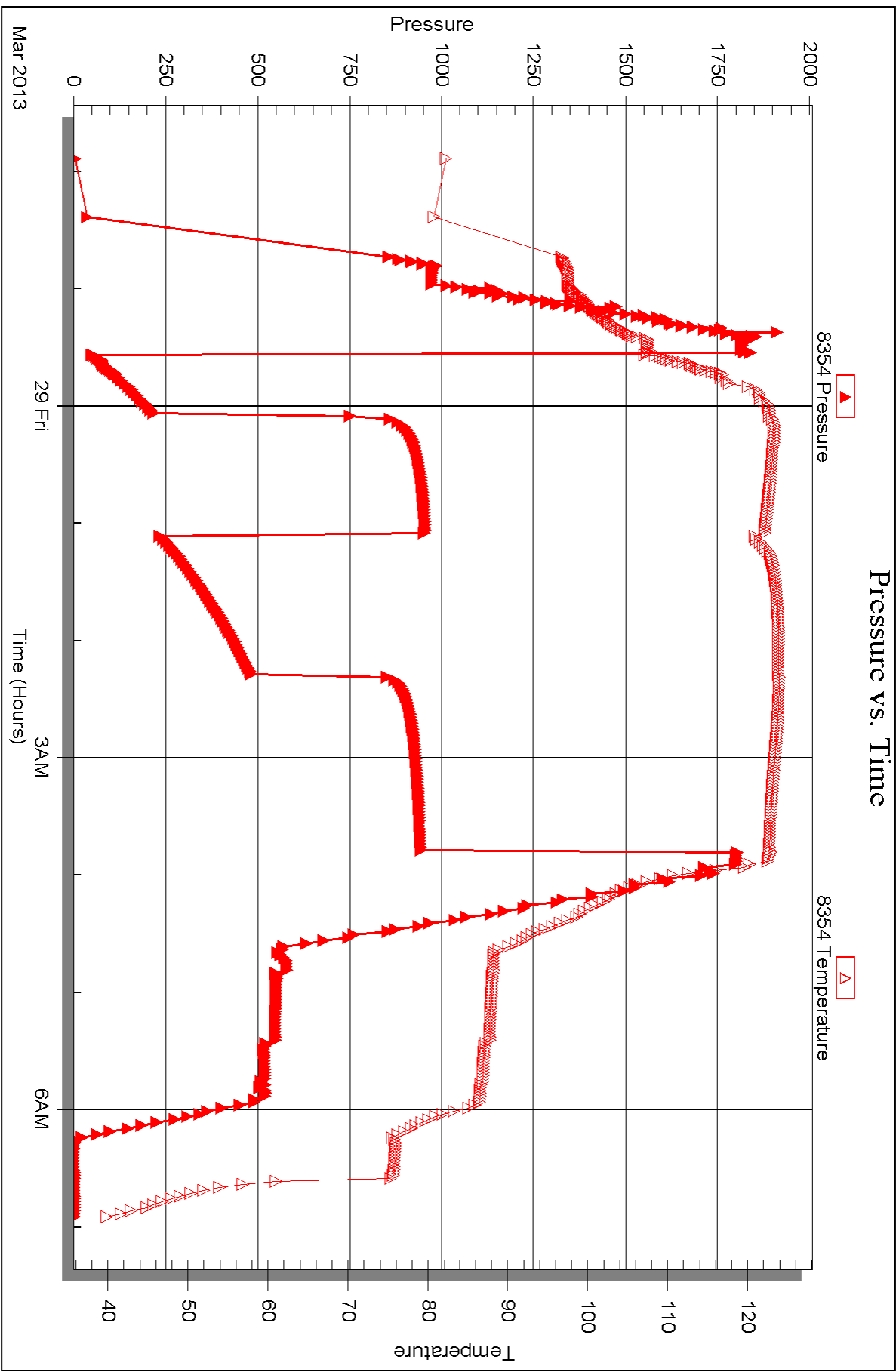
Serial #: 8354

Inside

Cobalt Energy, LLC

Terry "B" #1-1

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

115 S. Belmont #12  
Wichita, KS 67208

ATTN: Cory Baker

**Terry "B" #1-1**

**1-11s-25w Trego,KS**

Start Date: 2013.03.29 @ 15:24:30

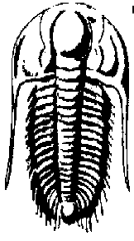
End Date: 2013.03.30 @ 00:58:30

Job Ticket #: 52102                      DST #: 4

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

Printed: 2013.04.03 @ 16:30:42

Cobalt Energy, LLC  
1-11s-25w Trego,KS  
Terry "B" #1-1  
DST # 4  
LKC "I-J"  
2013.03.29



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 52102

**DST#: 4**

ATTN: Cory Baker

Test Start: 2013.03.29 @ 15:24:30

### GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:40

Time Test Ended: 00:58:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

**Interval: 3860.00 ft (KB) To 3900.00 ft (KB) (TVD)**

Reference Elevations: 2368.00 ft (KB)

Total Depth: 3900.00 ft (KB) (TVD)

2357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8520**

**Outside**

Press @ Run Depth: 496.98 psig @ 3863.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.29

End Date: 2013.03.30

Last Calib.: 2013.03.30

Start Time: 15:24:30

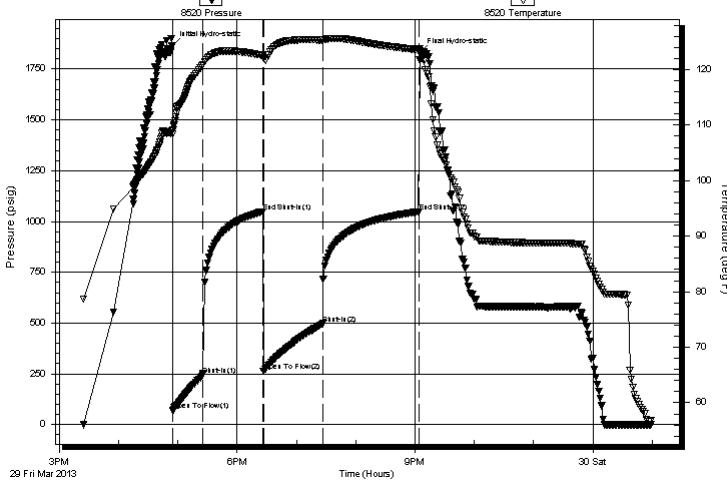
End Time: 00:58:30

Time On Btm: 2013.03.29 @ 16:54:20

Time Off Btm: 2013.03.29 @ 21:05:00

**TEST COMMENT:** IF-Strong building blow . BOB @ 1 minute 45 seconds.  
ISI-Return @ 15 seconds. BOB @ 11 minutes 30 seconds.  
FF-Strong building blow . BOB @ 2 minutes.  
FSI-Return @ 30 seconds. BOB @ 31 minutes.

Pressure vs. Time



### PRESSURE SUMMARY

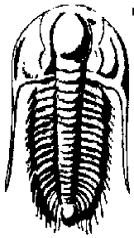
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1866.22	108.94	Initial Hydro-static
1	69.08	108.34	Open To Flow (1)
31	243.39	120.81	Shut-In(1)
92	1048.51	122.55	End Shut-In(1)
93	261.77	122.15	Open To Flow (2)
153	496.98	125.31	Shut-In(2)
250	1047.11	123.58	End Shut-In(2)
251	1830.49	123.45	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
124.00	15%Gas/45%Oil/40%Mud	1.47
1149.00	30%Gas/70%Oil	16.12
0.00	550' G.I.P.	0.00

### Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Cobalt Energy, LLC

**1-11s-25w Trego, KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 52102

**DST#: 4**

ATTN: Cory Baker

Test Start: 2013.03.29 @ 15:24:30

**GENERAL INFORMATION:**

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:54:40

Time Test Ended: 00:58:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

**Interval: 3860.00 ft (KB) To 3900.00 ft (KB) (TVD)**

Reference Elevations: 2368.00 ft (KB)

Total Depth: 3900.00 ft (KB) (TVD)

2357.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 8354 Inside**

Press @ Run Depth: psig @ 3863.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.29

End Date:

2013.03.30

Last Calib.:

2013.03.30

Start Time: 15:24:15

End Time:

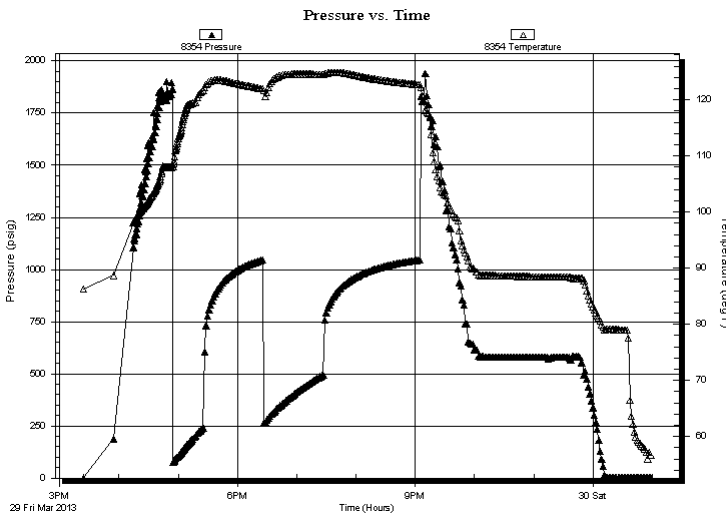
00:59:15

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Strong building blow . BOB @ 1 minute 45 seconds.  
ISI-Return @ 15 seconds. BOB @ 11 minutes 30 seconds.  
FF-Strong building blow . BOB @ 2 minutes.  
FSI-Return @ 30 seconds. BOB @ 31 minutes.

**PRESSURE SUMMARY**



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

**Recovery**

Length (ft)	Description	Volume (bbl)
124.00	15%Gas/45%Oil/40%Mud	1.47
1149.00	30%Gas/70%Oil	16.12
0.00	550' G.I.P.	0.00

**Gas Rates**

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 52102

**DST#: 4**

ATTN: Cory Baker

Test Start: 2013.03.29 @ 15:24:30

## Tool Information

Drill Pipe:	Length: 3831.00 ft	Diameter: 3.80 inches	Volume: 53.74 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 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:	10000.00 lb
			<u>Total Volume: 53.89 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	63000.00 lb
Depth to Top Packer:	3860.00 ft			Final	66000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3838.00	
Shut In Tool	5.00			3843.00	
Hydraulic tool	5.00			3848.00	
Safety Joint	3.00			3851.00	
Packer	5.00			3856.00	23.00 Bottom Of Top Packer
Packer	4.00			3860.00	
Stubb	1.00			3861.00	
Perforations	2.00			3863.00	
Recorder	0.00	8354	Inside	3863.00	
Recorder	0.00	8520	Outside	3863.00	
Perforations	34.00			3897.00	
Bullnose	3.00			3900.00	40.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy, LLC

**1-11s-25w Trego,KS**

115 S. Belmont #12  
Wichita, KS 67208

**Terry "B" #1-1**

Job Ticket: 52102

**DST#: 4**

ATTN: Cory Baker

Test Start: 2013.03.29 @ 15:24:30

## 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:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	15%Gas/45%Oil/40%Mud	1.466
1149.00	30%Gas/70%Oil	16.117
0.00	550' G.I.P.	0.000

Total Length: 1273.00 ft      Total Volume: 17.583 bbl

Num Fluid Samples: 0

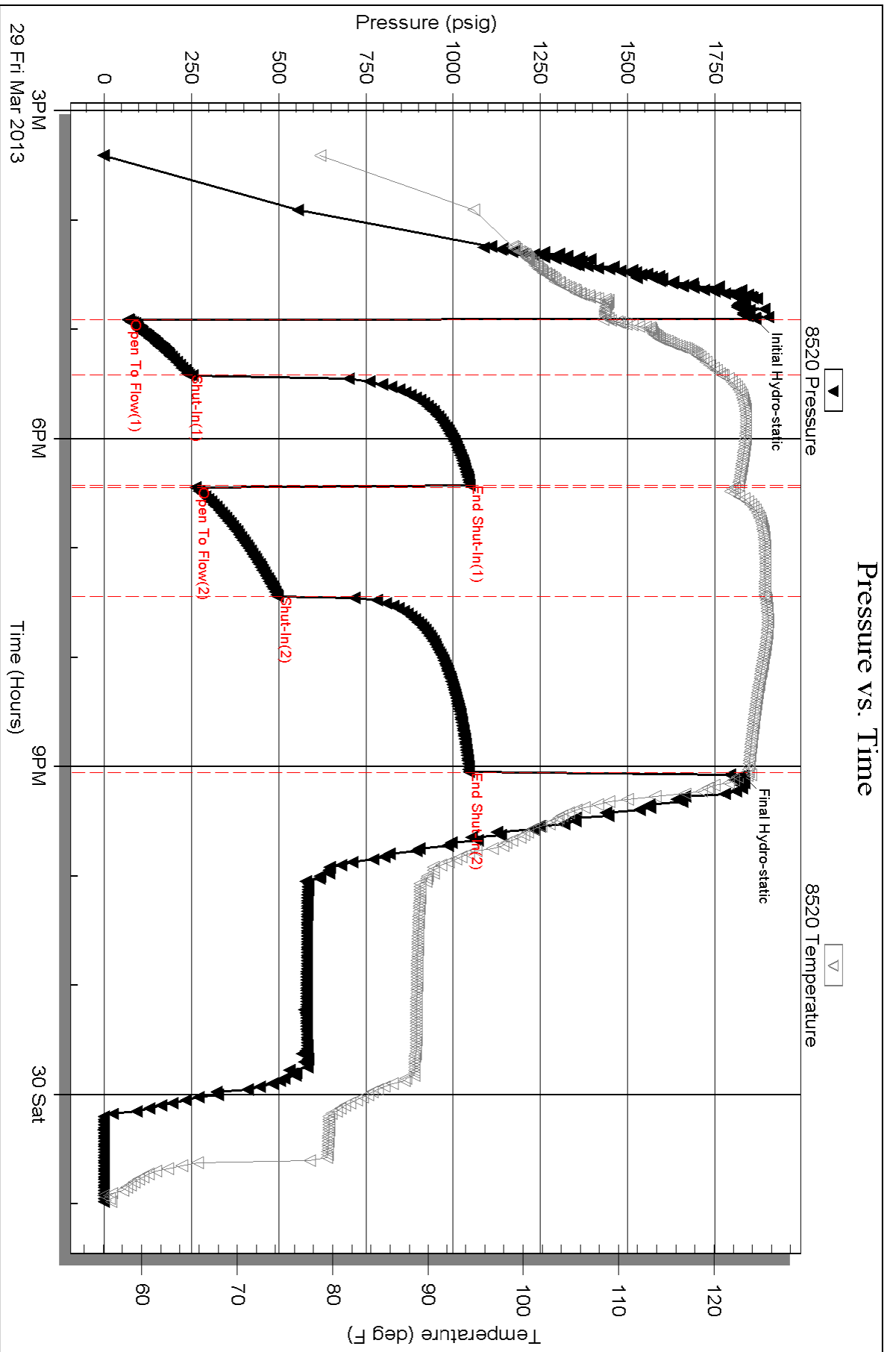
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



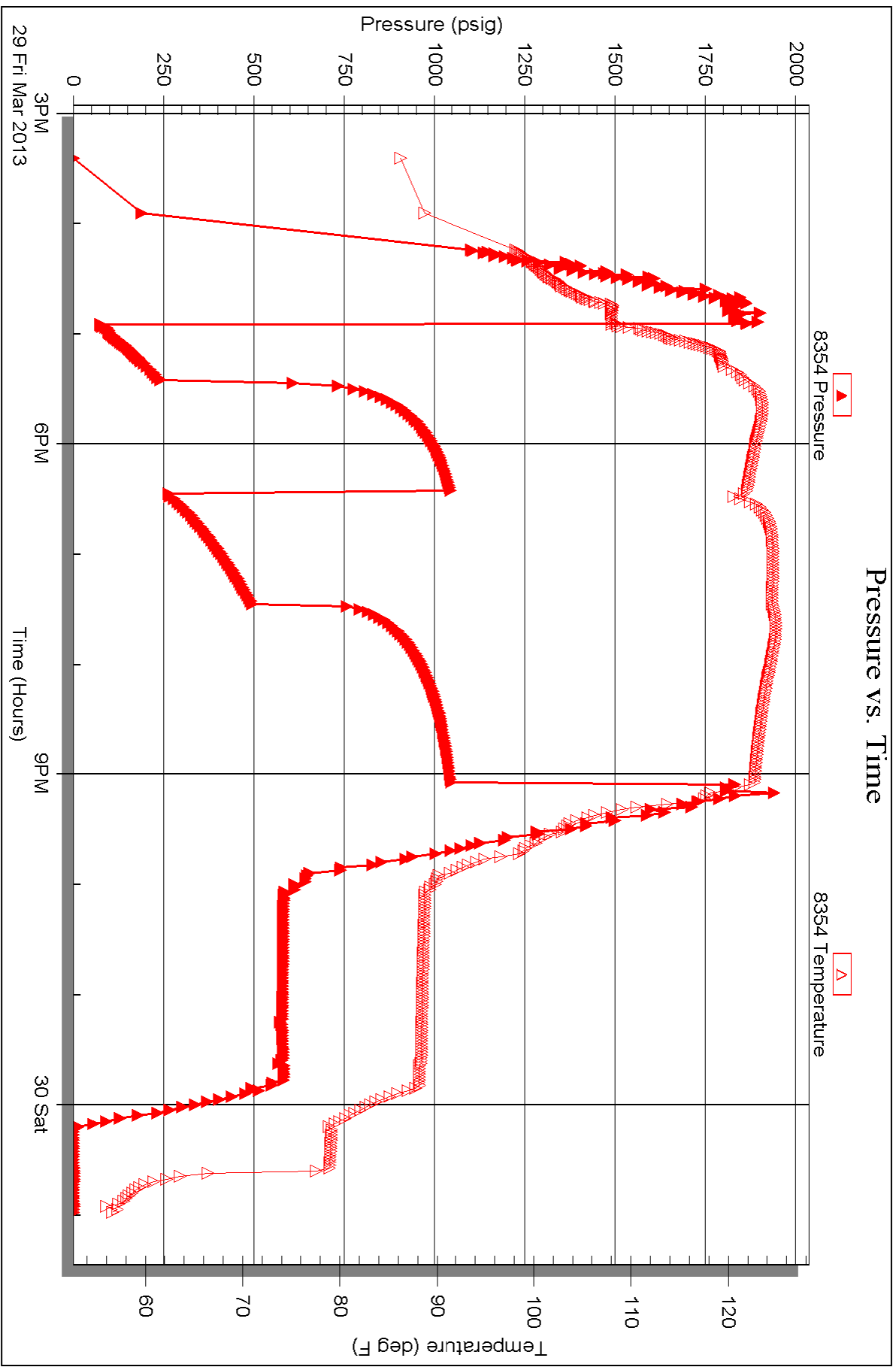
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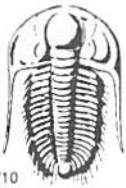
Inside

Cobalt Energy, LLC

Terry "B" #1-1

DST Test Number: 4





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51699

4/10

Well Name & No. Trey "B" #11 Test No. 1 Date 3-27-13  
 Company Cobalt Energy, LLC Elevation 2368 KB 2357 GL  
 Address 115 S. Belmont #12 Wichita, KS 67208  
 Co. Rep / Geo. Cory Rig Murphy 21  
 Location: Sec. 1 Twp. 11S Rge. 25W Co. Trego State KS

Interval Tested 3724-3750 Zone Tested LKC "C-D"  
 Anchor Length 26' Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.9  
 Top Packer Depth 3719 Drill Collars Run 87.63 Vis 59  
 Bottom Packer Depth 3724 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3750 Chlorides 1800 ppm System LCM 2#

Blow Description FF- Strong building blow. BOB @ 4 minutes.  
JST- Return @ 1 minute. Built to 6 inches.  
FF- Fair building blow. BOB @ 8 minutes.  
FST- Return @ 2 minutes. Built to 6 inches.

Rec	Feet of	%gas	%oil	%water	%mud
<u>882</u>	<u>Gassy Oil</u>	<u>55</u>	<u>45</u>		
<u>60</u>	<u>HOC</u>		<u>40</u>	<u>30</u>	<u>30</u>
____	____	%gas	%oil	%water	%mud
____	<u>378' G.I.P.</u>	%gas	%oil	%water	%mud
____	<u>Dropped Bar</u>	%gas	%oil	%water	%mud

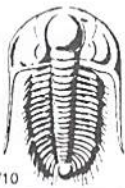
Rec Total 942 BHT 121 Gravity 27 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides N/A ppm

(A) Initial Hydrostatic 1772  Test 1150 T-On Location 1100  
 (B) First Initial Flow 47  Jars T-Started 1200  
 (C) First Final Flow 168  Safety Joint 75 T-Open 1337  
 (D) Initial Shut-In 851  Circ Sub 50 T-Pulled 1740  
 (E) Second Initial Flow 181  Hourly Standby 1 1.5h 150 T-Out 2130  
 (F) Second Final Flow 321  Mileage 50X2 155 Comments BOB-1145  
 (G) Final Shut-In 813  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1804  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 60 90  Day Standby \_\_\_\_\_ Total 1580  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1580

Approved By \_\_\_\_\_ Our Representative [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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51700

Well Name & No. Terry "B" # H1 Test No. 2 Date 3-28-13  
 Company Cobalt Energy, LLC Elevation 2368 KB 2357 GL  
 Address 115 S. Belmont #12 Wichita, KS 67208  
 Co. Rep / Geo. Coy Rig Mullin 21  
 Location: Sec. 1 Twp. 11S Rge. 25W Co. Trego State KS

Interval Tested 3770-3794 Zone Tested LHC "E-F"  
 Anchor Length 24' Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.9  
 Top Packer Depth 3765 Drill Collars Run 30.18 Vis 59  
 Bottom Packer Depth 3770 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3794 Chlorides 1800 ppm System LCM 2#

Blow Description VF - Very weak building blow. Built to 2 1/2 inches.  
IST - No Return.  
FF - Very weak building blow. Built to 2 1/2 inches.  
FST - No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Watery Mud w/oil spec</u>	<u>1</u>	<u>29</u>	<u>70</u>	
<u>20</u>	<u>Mud</u>			<u>100</u>	
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 40 BHT 115 Gravity \_\_\_\_\_ API RW 471 @ 65 °F Chlorides 14,500 ppm

(A) Initial Hydrostatic 1797  Test 1150 T-On Location 0520  
 (B) First Initial Flow 12  Jars T-Started 0540  
 (C) First Final Flow 29  Safety Joint 75 T-Open 0719  
 (D) Initial Shut-In 1157  Circ Sub T-Pulled 1120  
 (E) Second Initial Flow 30  Hourly Standby T-Out 1300  
 (F) Second Final Flow 45  Mileage 50X2 155 Comments BHT-0536  
 (G) Final Shut-In 1147  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1749  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_  
 Final Shut-In 90  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1380 Total 1380  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52101

Well Name & No. Terry "B" #1-1 Test No. 3 Date 3-28-13  
 Company Cobalt Energy, LLC Elevation 2368 KB 2357 GL  
 Address 115 S. Belmont #12 Wichita, KS 67208  
 Co. Rep / Geo. Coly Rig Mulvan 21  
 Location: Sec. 1 Twp. 11S Rge. 25W Co. Trego State KS

Interval Tested 3822-3860 Zone Tested LKC "H"  
 Anchor Length 38' Drill Pipe Run 3800 Mud Wt. 9.0  
 Top Packer Depth 3817 Drill Collars Run 30.18 Vis 61  
 Bottom Packer Depth 3822 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3860 Chlorides 1800 ppm System LCM 2#

Blow Description IF - Strong building blow. BOB @ 2 minutes,  
ISI - Return @ 15 seconds. BOB @ 8 minutes 30 seconds,  
FF - Strong building blow. BOB @ 5 minutes 30 seconds,  
FSE - Return @ 1 minute. BOB @ 29 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
<u>1040</u>	<u>Gassy Oil</u>	<u>25</u>	<u>7.5</u>		
<u>62</u>	<u>VSOC MW</u>		<u>5</u>	<u>70</u>	<u>25</u>
<u>62</u>	<u>USOC MW</u>		<u>2</u>	<u>83</u>	<u>15</u>
	<u>1353' G.I.P.</u>				
	<u>Dropped Bar</u>				

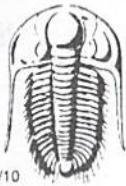
Rec Total 1164 BHT 124 Gravity 31 API RW, 822 @ 35° F Chlorides 16000 ppm

(A) Initial Hydrostatic 1841  Test 1150 T-On Location 2130  
 (B) First Initial Flow 39  Jars T-Started 2145  
 (C) First Final Flow 223  Safety Joint 75 T-Open 2334  
 (D) Initial Shut-In 956  Circ Sub 50 T-Pulled 0340  
 (E) Second Initial Flow 231  Hourly Standby T-Out 0700  
 (F) Second Final Flow 484  Mileage 50X2 155 Comments Part-2143  
 (G) Final Shut-In 943  Sampler  
 (H) Final Hydrostatic 1814  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1430  
 Total 1430  
 MP/DST Dist't

Approved By \_\_\_\_\_ Our Representative [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.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52102

Well Name & No. Terry "B" #1-1 Test No. 4 Date 3-29-13  
 Company Cobalt Energy, LLC Elevation 2368 KB 2357 GL  
 Address 115 S. Belmont #12 Wichita, KS 67208  
 Co. Rep / Geo. Cary Baker Rig Mulnix 21  
 Location: Sec. 1 Twp. 11S Rge. 25W Co. Trego State KS

Interval Tested 3860-3900 Zone Tested LKC "I-J"  
 Anchor Length 40' Drill Pipe Run 3831 Mud Wt. 9.0  
 Top Packer Depth 3855 Drill Collars Run 30.18 Vis 61  
 Bottom Packer Depth 3860 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3900 Chlorides 1800 ppm System LCM 2#

Blow Description IF - Strong building blow, BOB @ 1 minute 45 seconds,  
ISF - Return @ 15 seconds, BOB @ 11 minutes 30 seconds,  
FF - Strong building blow, BOB @ 2 minutes,  
FSF - Return @ 30 seconds, BOB @ 31 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
1149	Gassy Oil	30	70		
124	HOCGM	15	45		40
	550' G.I.P.				
	Dropped Bar				

Rec Total 1273 BHT 125 Gravity 32 API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1866  Test 1150 T-On Location 1500  
 (B) First Initial Flow 69  Jars \_\_\_\_\_ T-Started 1530  
 (C) First Final Flow 243  Safety Joint 75 T-Open 1655  
 (D) Initial Shut-In 1049  Circ Sub 50 T-Pulled 2100  
 (E) Second Initial Flow 262  Hourly Standby 1 100 T-Out 0100  
 (F) Second Final Flow 497  Mileage 50X2 155 Comments BHT-1514  
 (G) Final Shut-In 1047  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1830  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 60  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 60  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Shut-In 90  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1530  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1530

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

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.