



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy, LLC

**7-6-19, Rooks, KS**

PO Box 8037  
Wichita KS 67208

**Brobst A #1-7**

Job Ticket: 47086

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2012.08.04 @ 14:25:00

## GENERAL INFORMATION:

Formation: **Tor-KC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:25:00

Time Test Ended: 00:35:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3292.00 ft (KB) To 3380.00 ft (KB) (TVD)**

Reference Elevations: 2117.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

2107.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8369**

**Inside**

Press @ Run Depth: 73.76 psig @ 3293.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.04

End Date:

2012.08.05

Last Calib.: 2012.08.05

Start Time: 14:25:05

End Time:

00:35:00

Time On Btm: 2012.08.04 @ 18:21:30

Time Off Btm: 2012.08.04 @ 22:28:00

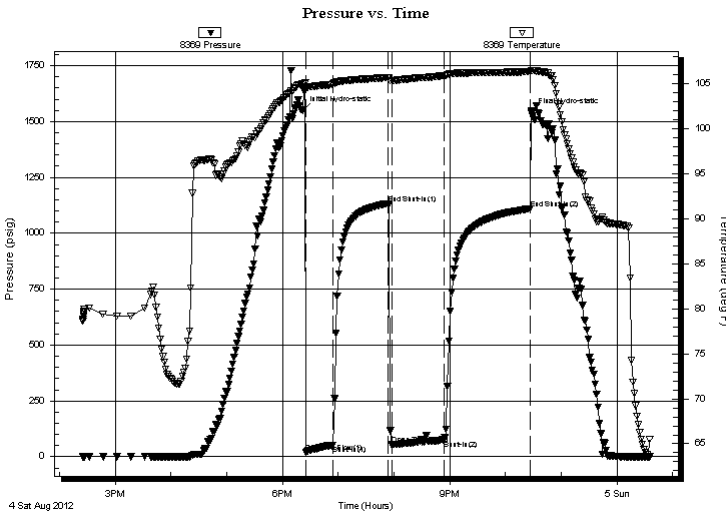
TEST COMMENT: IF-2.75in blow

ISI-No blow

FF-2in blow

FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1548.17	104.95	Initial Hydro-static
4	21.35	104.59	Open To Flow (1)
33	50.93	104.97	Shut-In(1)
93	1133.44	105.69	End Shut-In(1)
96	53.73	105.36	Open To Flow (2)
152	73.76	105.91	Shut-In(2)
245	1109.72	106.34	End Shut-In(2)
247	1540.26	106.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
114.00	VSOCM 10%O 90%M	1.05
1.00	Free oil	0.01

## Gas Rates

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





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**Brobst A #1-7**

Job Ticket: 47086

**DST#: 1**

ATTN: Robert Hendrix

Test Start: 2012.08.04 @ 14:25:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
114.00	VSOCM 10%O 90%M	1.053
1.00	Free oil	0.014

Total Length: 115.00 ft      Total Volume: 1.067 bbl

Num Fluid Samples: 0

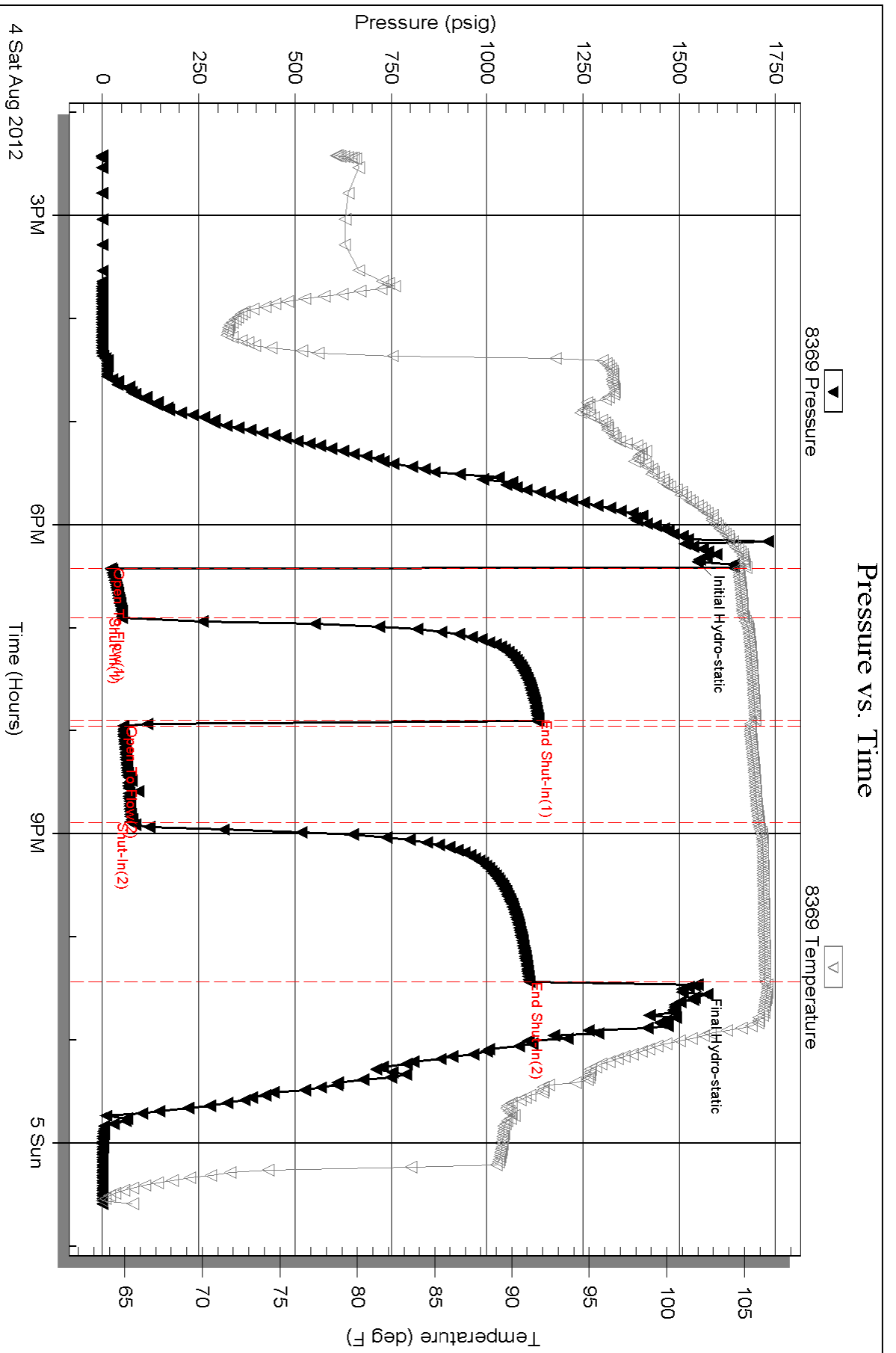
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

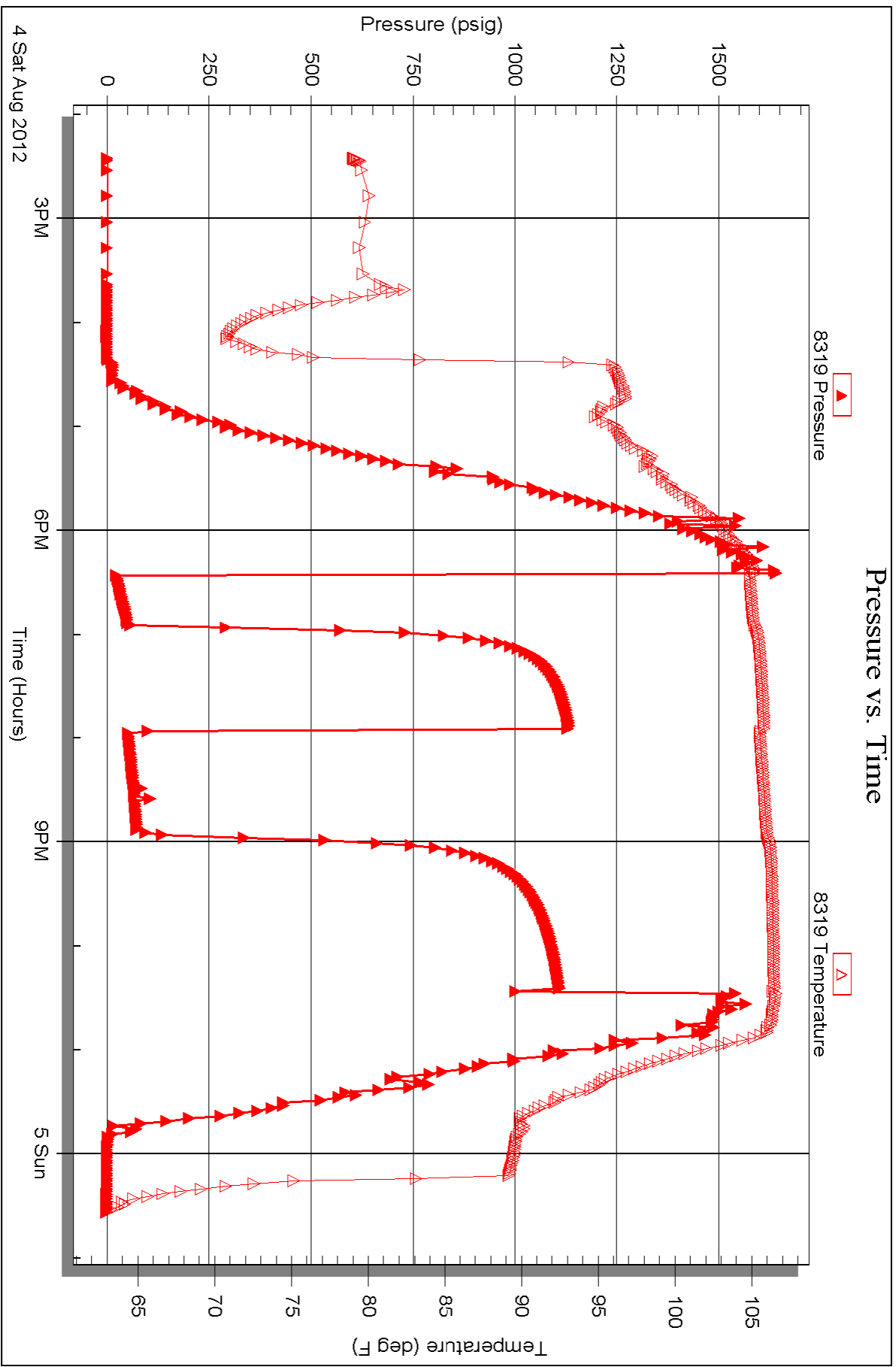


Serial #: 8319

Outside Cobalt Energy, LLC

Brobst A #1-7

DST Test Number: 1





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy, LLC

**7-6-19, Rooks, KS**

PO Box 8037  
Wichita KS 67208

**Brobst A #1-7**

Job Ticket: 47087

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2012.08.05 @ 10:10:00

## GENERAL INFORMATION:

Formation: **LANS E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:12:30

Time Test Ended: 16:59:00

Test Type: Conventional Bottom Hole (Initial)

Tester: RANDY WILLIAMS

Unit No: 59

**Interval: 3398.00 ft (KB) To 3420.00 ft (KB) (TVD)**

Reference Elevations: 2117.00 ft (KB)

Total Depth: 3420.00 ft (KB) (TVD)

2107.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

## Serial #: 8369

Press @ Run Depth: 19.14 psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.05

End Date:

2012.08.05

Last Calib.:

2012.08.05

Start Time: 10:10:05

End Time:

16:58:59

Time On Btm:

2012.08.05 @ 12:12:00

Time Off Btm:

2012.08.05 @ 14:46:30

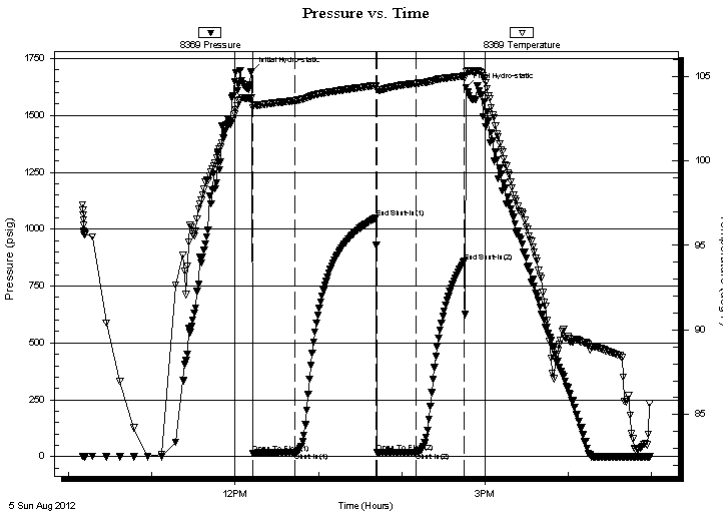
TEST COMMENT: IF - WEAK SURFACE BLOW

ISI - NBB

FF - NO BLOW

FSI - NBB

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1693.47	103.72	Initial Hydro-static
1	15.67	103.16	Open To Flow (1)
31	17.28	103.57	Shut-In(1)
89	1048.58	104.45	End Shut-In(1)
90	18.43	104.21	Open To Flow (2)
119	19.14	104.58	Shut-In(2)
153	858.38	105.01	End Shut-In(2)
155	1621.40	105.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	MUD CUT OIL 1%-O, 99%-M	0.01

## Gas Rates

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





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**7-6-19, Rooks, KS**

PO Box 8037  
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**Brobst A #1-7**

Job Ticket: 47087

**DST#: 2**

ATTN: Robert Hendrix

Test Start: 2012.08.05 @ 10:10:00

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 1.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
3.00	MUD CUT OIL 1%-O, 99%-M	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

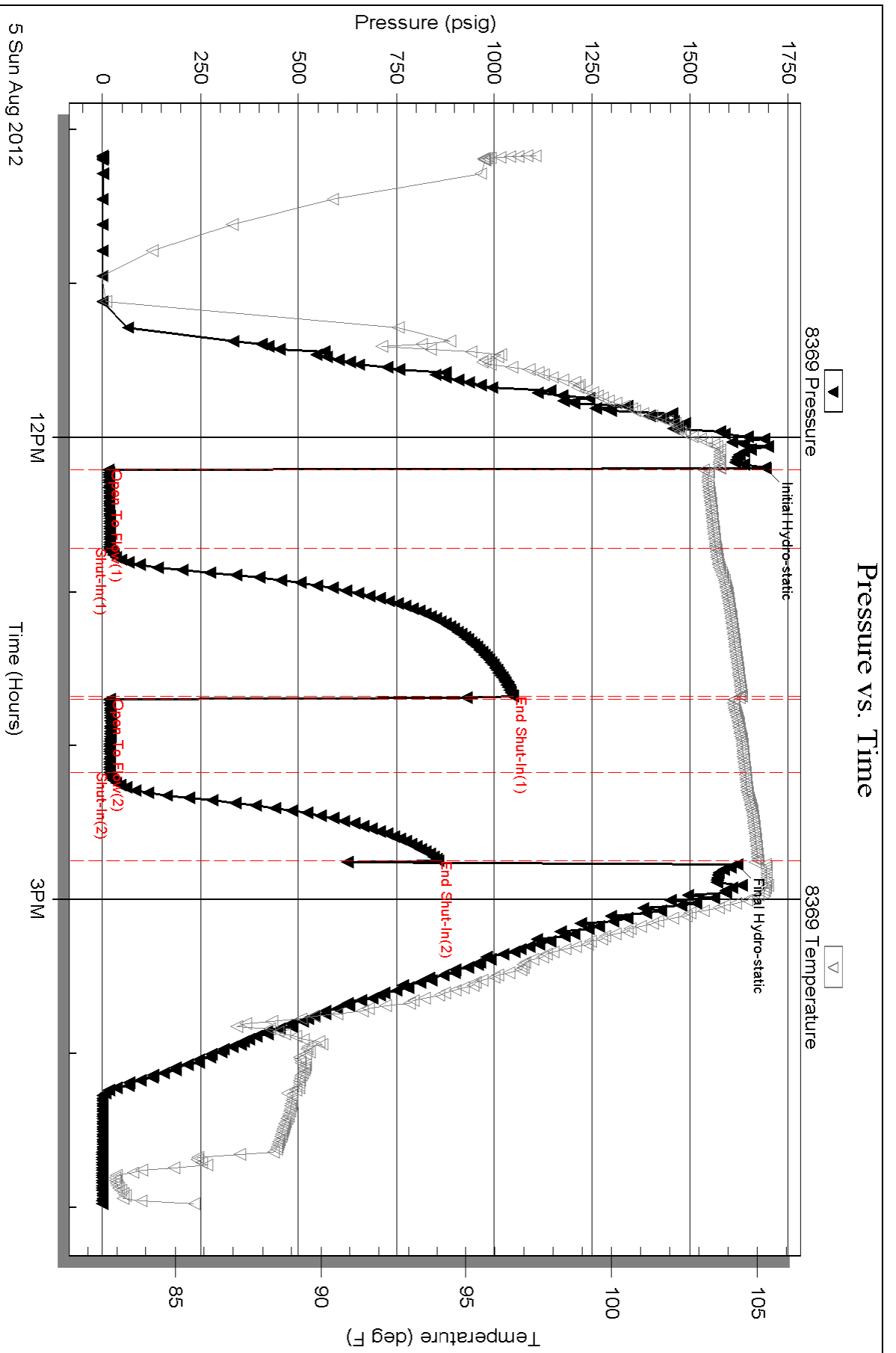
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





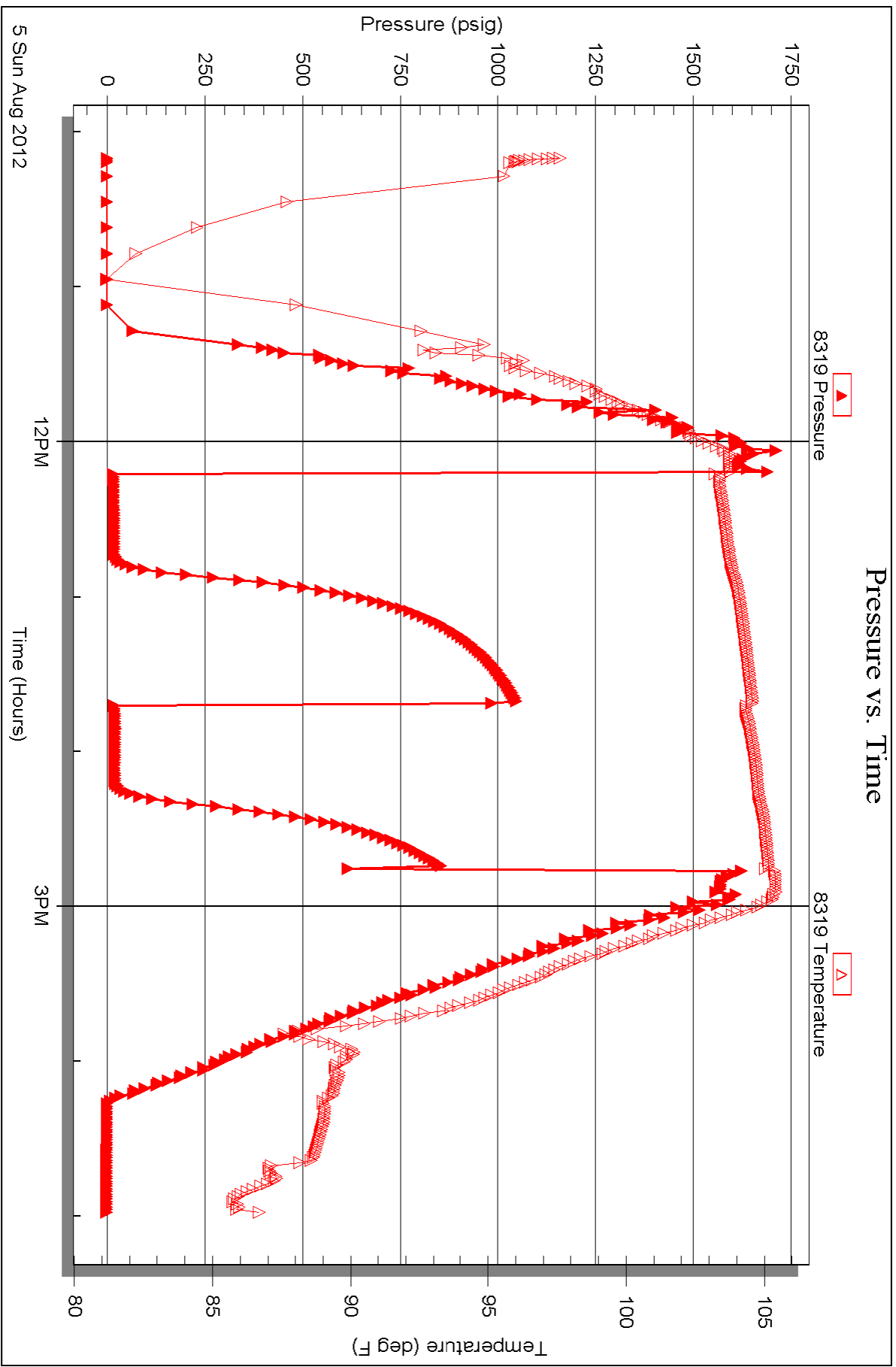
Serial #: 8319

Inside

Cobalt Energy, LLC

Brobst A #1-7

DST Test Number: 2





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# DRILL STEM TEST REPORT

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**7-6-19, Rooks, KS**

PO Box 8037  
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**Brobst A #1-7**

Job Ticket: 47088

**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2012.08.06 @ 08:30:00

## GENERAL INFORMATION:

Formation: **LKC - H,I,J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:30:30

Time Test Ended: 14:10:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Randy Williams

Unit No: 59

**Interval: 3447.00 ft (KB) To 3520.00 ft (KB) (TVD)**

Reference Elevations: 2117.00 ft (KB)

Total Depth: 3520.00 ft (KB) (TVD)

2107.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8369 Outside**

Press @ Run Depth: 37.30 psig @ 3482.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.06

End Date:

2012.08.06

Last Calib.:

2012.08.06

Start Time:

08:30:05

End Time:

14:10:29

Time On Btm:

2012.08.06 @ 10:30:00

Time Off Btm:

2012.08.06 @ 12:31:00

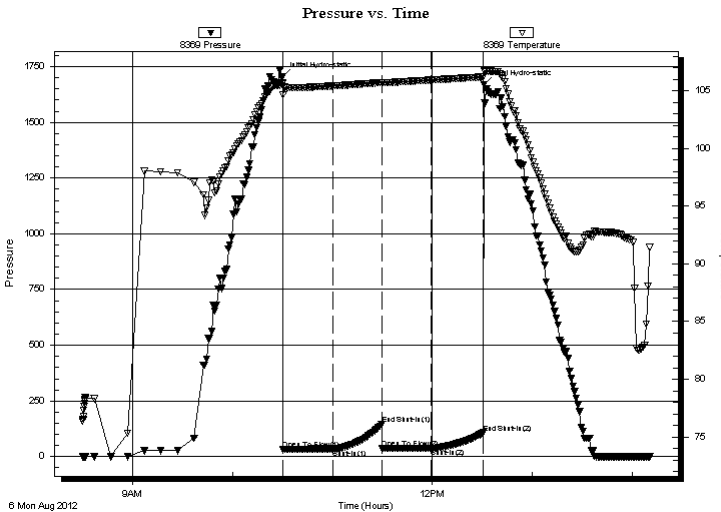
**TEST COMMENT:** IF - Weak 1/8 Blow died in 29 min

ISI - NBB

FF - No Blow

FSI - NBB

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1706.60	105.65	Initial Hydro-static
1	32.85	104.64	Open To Flow (1)
31	35.16	105.42	Shut-In(1)
60	145.15	105.71	End Shut-In(1)
60	36.10	105.65	Open To Flow (2)
90	37.30	105.93	Shut-In(2)
121	106.68	106.19	End Shut-In(2)
121	1668.76	106.76	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM, 1% O , 99% M	0.01

## Gas Rates

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



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**Brobst A #1-7**

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**DST#: 3**

ATTN: Robert Hendrix

Test Start: 2012.08.06 @ 08:30:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OCM, 1% O , 99% M	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

