



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63520

DST#: 3

ATTN: Charlie Sturdavant/

Test Start: 2017.03.25 @ 11:44:00

GENERAL INFORMATION:

Formation: **Lansing 'H-I-J-K' zo**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:26:45

Time Test Ended: 19:02:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Spencer J. Staab

Unit No: 84

Interval: 3456.00 ft (KB) To 3563.00 ft (KB) (TVD)

Reference Elevations: 2052.00 ft (KB)

Total Depth: 3563.00 ft (KB) (TVD)

2044.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8934

Inside

Press@RunDepth: 308.56 psig @ 3463.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.25

End Date:

2017.03.25

Last Calib.:

2017.03.25

Start Time:

11:44:05

End Time:

19:02:29

Time On Btm:

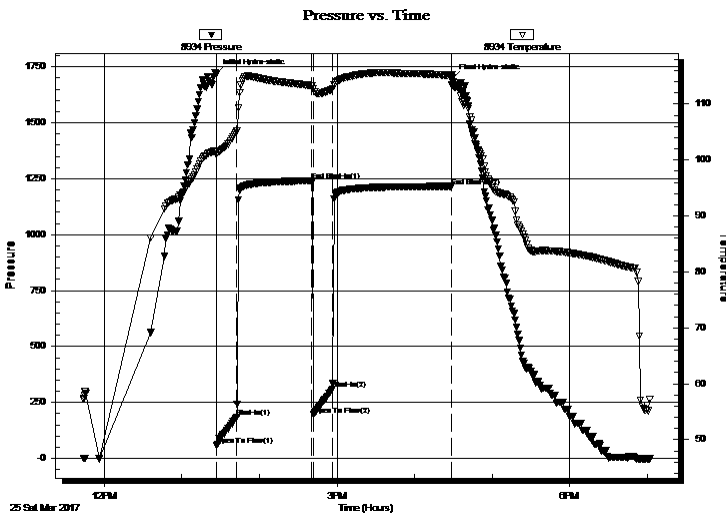
2017.03.25 @ 13:26:30

Time Off Btm:

2017.03.25 @ 16:29:15

TEST COMMENT: 15-IF-BOB in 2 minutes
60-ISI-BOB in 8 minutes
15-FF-BOB instantaneously
90-FSI-BOB in 5 minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1717.98	101.67	Initial Hydro-static
1	58.76	100.99	Open To Flow (1)
16	184.54	105.12	Shut-In(1)
74	1239.99	113.29	End Shut-In(1)
76	195.08	112.74	Open To Flow (2)
90	308.56	112.70	Shut-In(2)
182	1215.90	115.08	End Shut-In(2)
183	1699.19	114.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
840.00	GMCO 10%M 20%G 70%O	11.78

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Cynosure Energy LLC

1125 17th St Suite 410
Denver Co, 80202

ATTN: Charlie Sturdavant/

S14-15S-20W Ellis Co, KS

Penny #1-14-15-20

Job Ticket: 63520

DST#: 3

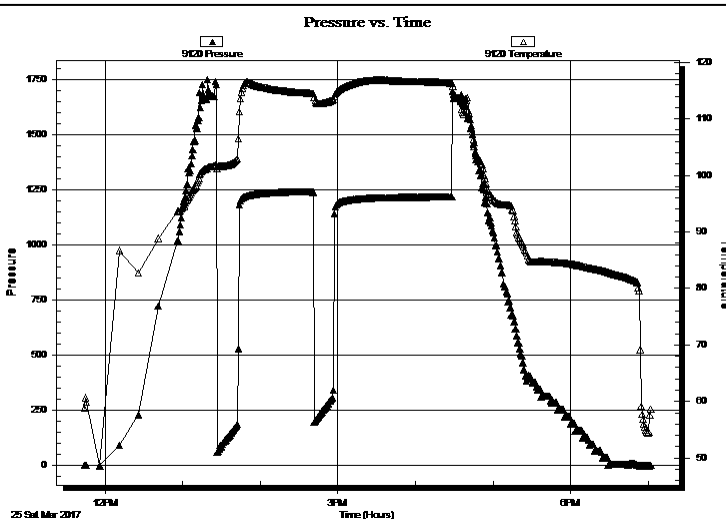
Test Start: 2017.03.25 @ 11:44:00

GENERAL INFORMATION:

Formation: **Lansing 'H-I-J-K' zo**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:26:45
 Time Test Ended: 19:02:30
 Interval: **3456.00 ft (KB) To 3563.00 ft (KB) (TVD)**
 Total Depth: 3563.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Spencer J. Staab
 Unit No: 84
 Reference Elevations: 2052.00 ft (KB)
 2044.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9120 **Inside**
 Press@RunDepth: psig @ 3463.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.03.25 End Date: 2017.03.25 Last Calib.: 2017.03.25
 Start Time: 11:44:15 End Time: 19:02:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: 15-IF-BOB in 2 minutes
 60-ISI-BOB in 8 minutes
 15-FF-BOB instantaneously
 90-FSI-BOB in 5 minutes



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
840.00	GMCO 10%M 20%G 70%O	11.78

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Cynosure Energy LLC

S14-15S-20W Ellis Co, KS

1125 17th St Suite 410
Denver Co, 80202

Penny #1-14-15-20

Job Ticket: 63520

DST#: 3

ATTN: Charlie Sturdavant/

Test Start: 2017.03.25 @ 11:44:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 10000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
840.00	GMCO 10%M 20%G 70%O	11.783

Total Length: 840.00 ft Total Volume: 11.783 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

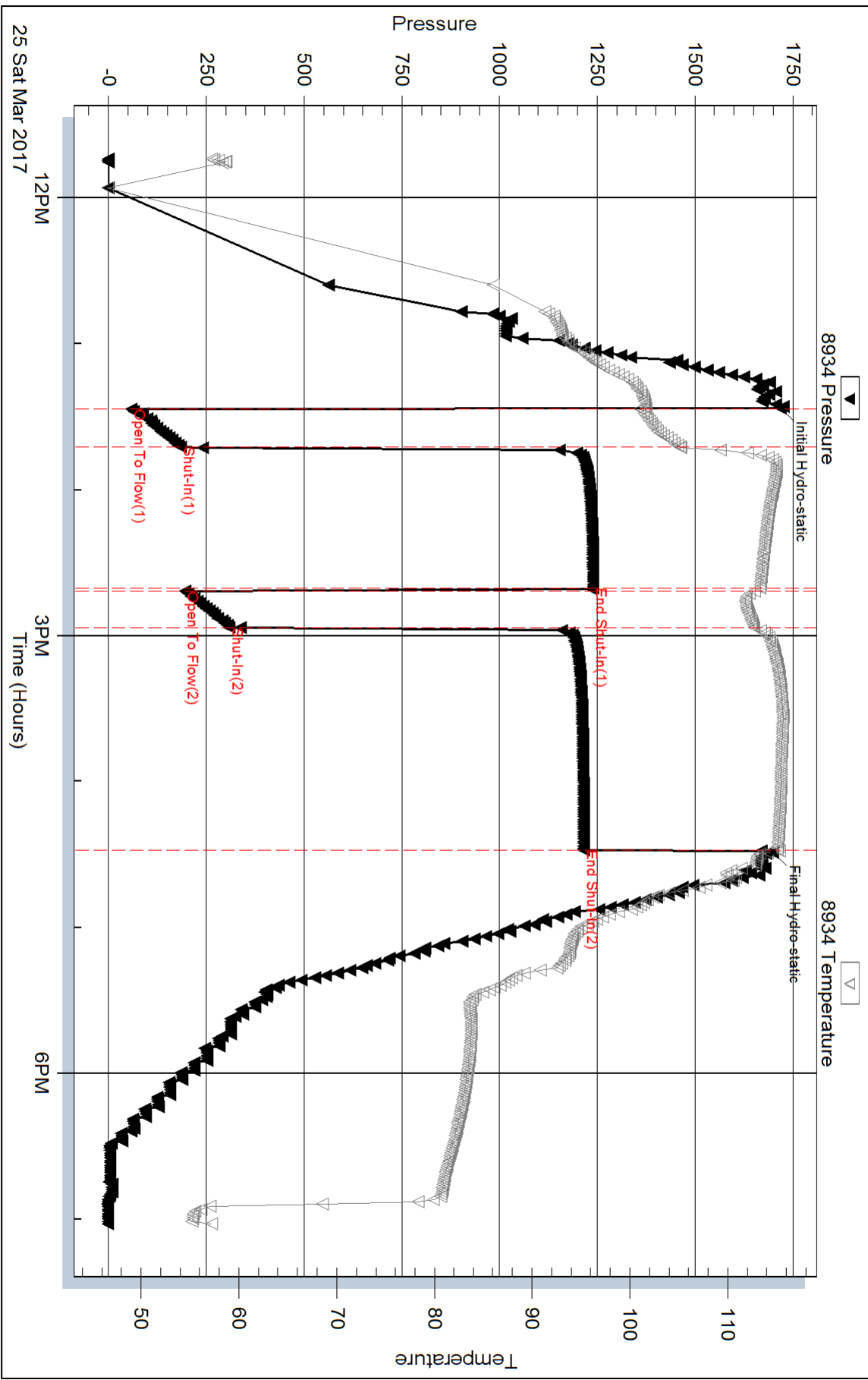
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 2# LCM

Pressure vs. Time



Serial #: 9120

Inside

Cynosure Energy LLC

Penny #1-14-15-20

DST Test Number: 3

