



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60777

DST#: 5

ATTN: Dan Pritchard

Test Start: 2014.10.29 @ 17:45:00

GENERAL INFORMATION:

Formation: **LKC "F - H"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:20:00 Tester: James Winder
 Time Test Ended: 22:43:30 Unit No: 57
 Interval: **3569.00 ft (KB) To 3630.00 ft (KB) (TVD)** Reference Elevations: 2348.00 ft (KB)
 Total Depth: 3630.00 ft (KB) (TVD) 2340.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

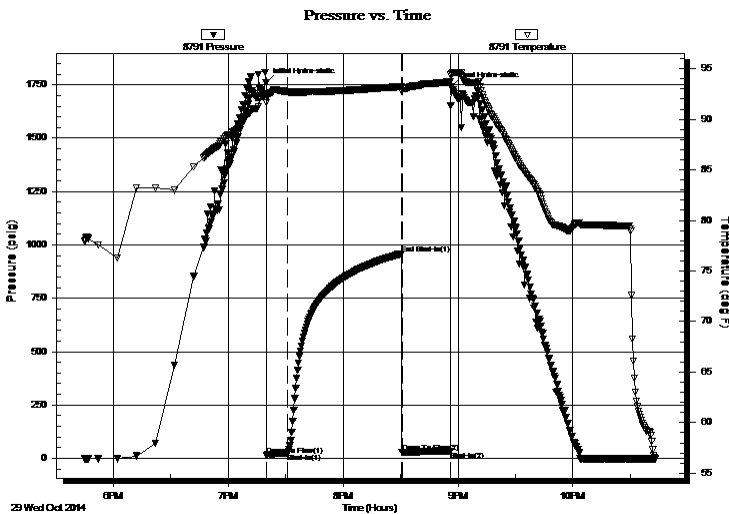
Serial #: 8791

Inside

Press @ Run Depth: 24.07 psig @ 3570.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29
 Start Time: 17:45:05 End Time: 22:43:29 Time On Btm: 2014.10.29 @ 19:19:45
 Time Off Btm: 2014.10.29 @ 20:56:30

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to just under 1"
 60 - IS: No blow back
 15 - FF: Blow started at 3 min., built to almost 1/4"
 Pulled tool

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1759.64	92.49	Initial Hydro-static
1	15.32	91.65	Open To Flow (1)
12	24.07	92.71	Shut-In(1)
71	959.63	93.25	End Shut-In(1)
71	28.77	92.80	Open To Flow (2)
97	32.35	93.72	Shut-In(2)
97	1743.10	94.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.21

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60777

DST#: 5

ATTN: Dan Pritchard

Test Start: 2014.10.29 @ 17:45:00

GENERAL INFORMATION:

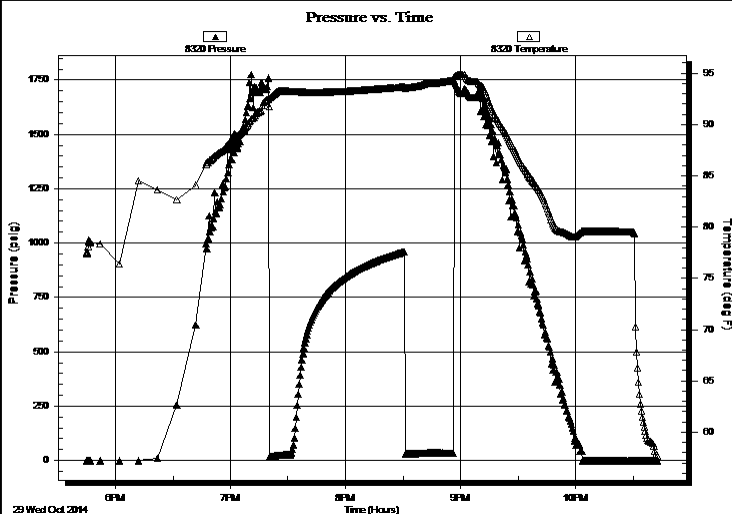
Formation: **LKC "F - H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:20:00
 Time Test Ended: 22:43:30
Interval: 3569.00 ft (KB) To 3630.00 ft (KB) (TVD)
 Total Depth: 3630.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: James Winder
 Unit No: 57
 Reference Elevations: 2348.00 ft (KB)
 2340.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8320

Outside

Press @ Run Depth: psig @ 3570.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.29 End Date: 2014.10.29 Last Calib.: 2014.10.29
 Start Time: 17:45:05 End Time: 22:42:44 Time On Btm:
 Time Off Btm:

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to just under 1"
 60 - IS: No blow back
 15 - FF: Blow started at 3 min., built to almost 1/4"
 Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

ATTN: Dan Pritchard

Job Ticket: 60777

DST#: 5

Test Start: 2014.10.29 @ 17:45:00

GENERAL INFORMATION:

Formation: **LKC "F - H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:20:00

Time Test Ended: 22:43:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: 3569.00 ft (KB) To 3630.00 ft (KB) (TVD)

Total Depth: 3630.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2348.00 ft (KB)

2340.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8366

Fluid

Press @ RunDepth: psig @ 3534.00 ft (KB)

Start Date: 2014.10.29

End Date: 2014.10.29

Start Time: 17:45:05

End Time: 22:44:44

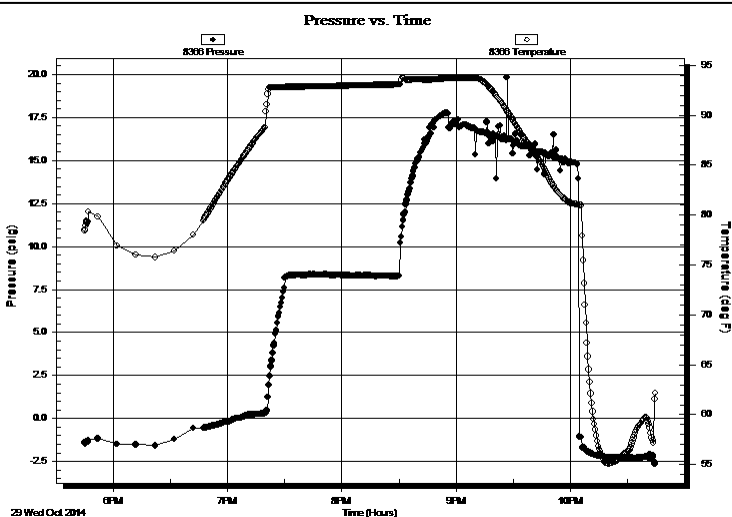
Capacity: 8000.00 psig

Last Calib.: 2014.10.29

Time On Btm:

Time Off Btm:

TEST COMMENT: 10 - IF: 1/4" Blow at open, built to just under 1"
60 - IS: No blow back
15 - FF: Blow started at 3 min., built to almost 1/4"
Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud 100%	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary Jr. & Associates

1/5s/24w Norton KS

1515 Wynkoop STE 700
Denver, CO 80202

Marian et al #1-1

Job Ticket: 60777

DST#: 5

ATTN: Dan Pritchard

Test Start: 2014.10.29 @ 17:45:00

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: 72.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	Mud 100%	0.209

Total Length: 35.00 ft Total Volume: 0.209 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

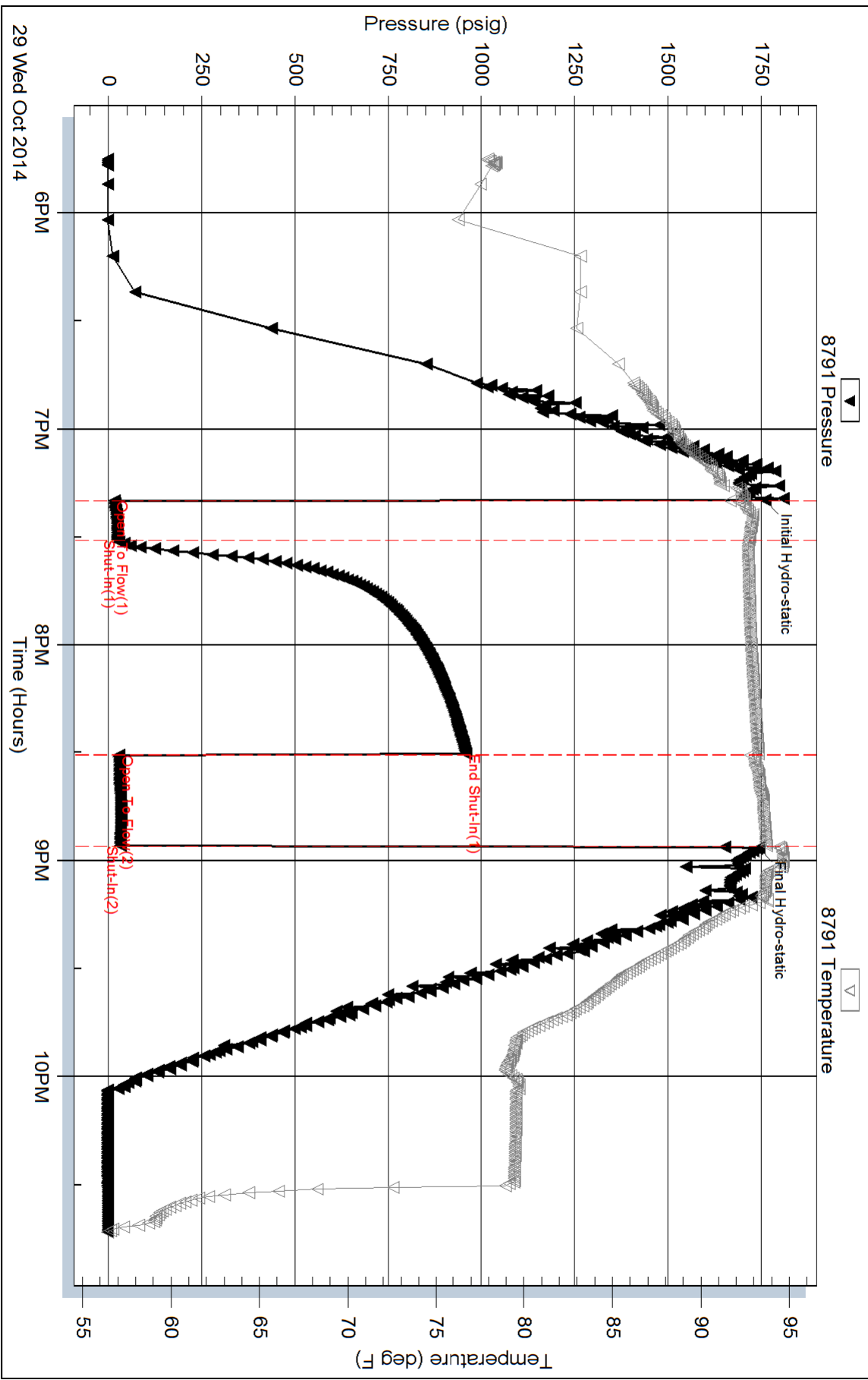
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Forgot to close tool so No sampler pressure - Caught a fluid sample as breaking tool down, got WCM 87%_m, 13%_w

Pressure vs. Time

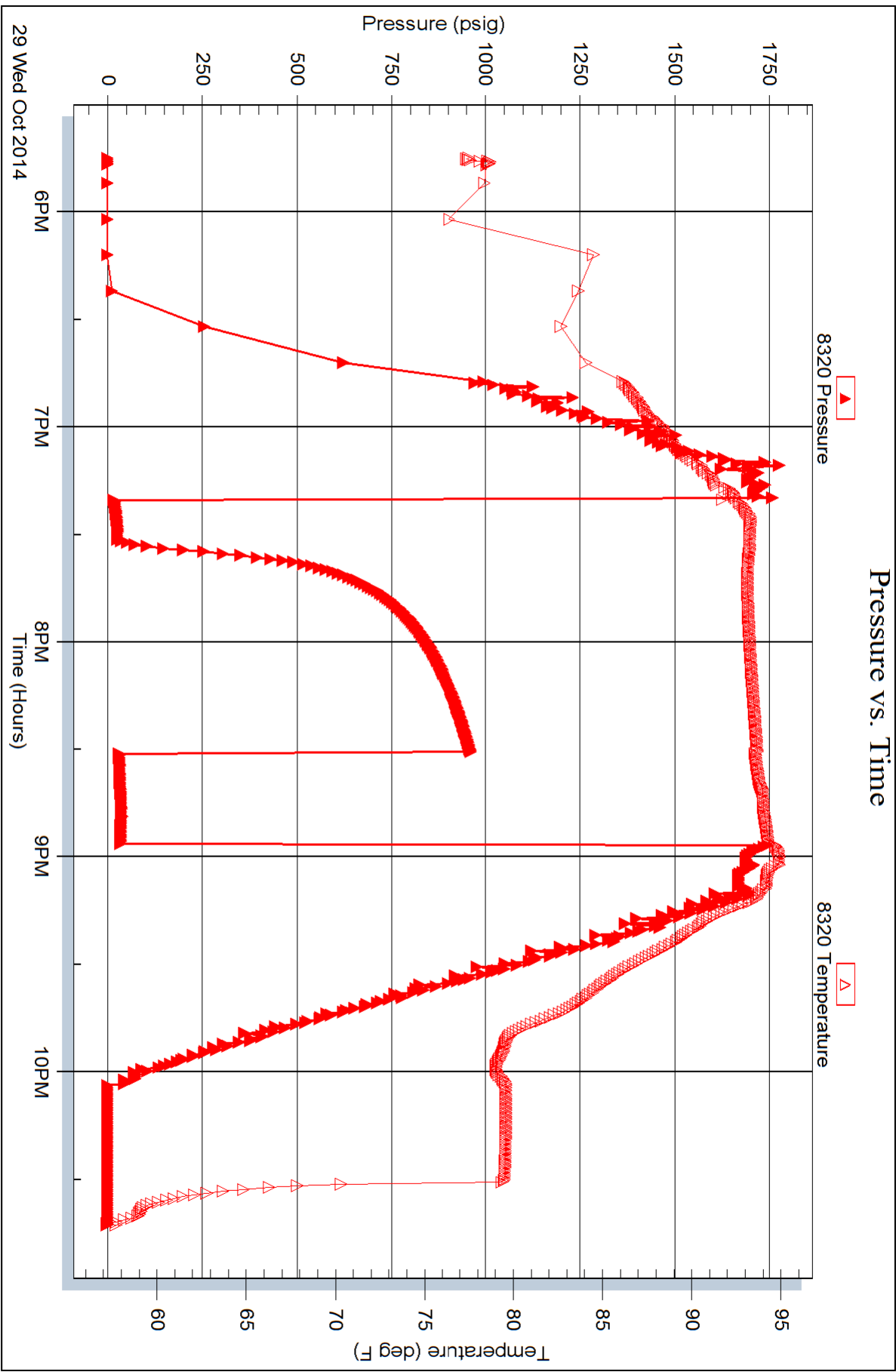


Serial #: 8320

Outside Samuel Gary Jr. & Associates

Marian et al #1-1

DST Test Number: 5



Serial #: 8366

Fluid

Samuel Gary Jr. & Associates

Marian et al #1-1

DST Test Number: 5

