



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Sam Gary Jr Associates
 1515 Wynkoop STE 700
 Denver CO 80202
 ATTN: Dan Pritchard

21-10s-22w Graham,KS

Herman #1-21

Job Ticket: 56101

DST#: 1

Test Start: 2014.02.04 @ 12:40:19

GENERAL INFORMATION:

Formation: **LKC F-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:34:29
 Time Test Ended: 20:14:49
 Interval: **3663.00 ft (KB) To 3720.00 ft (KB) (TVD)**
 Total Depth: 3720.00 ft (KB) (TVD)
 Hole Diameter: inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Tate Lang
 Unit No: 49
 Reference Elevations: ft (KB)
 ft (CF)
 KB to GR/CF: ft

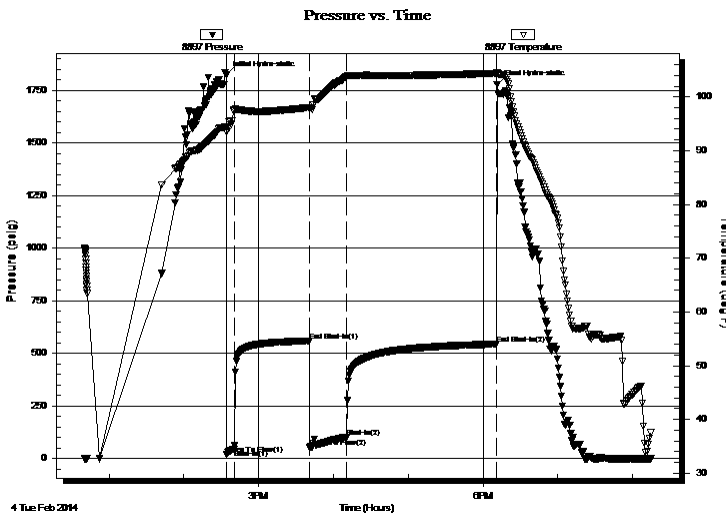
Serial #: 8897

Inside

Press @ Run Depth: 101.80 psig @ 3686.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.04 End Date: 2014.02.04 Last Calib.: 2014.02.04
 Start Time: 12:40:20 End Time: 20:14:49 Time On Btm: 2014.02.04 @ 14:34:19
 Time Off Btm: 2014.02.04 @ 18:11:19

TEST COMMENT: Fair blow built to 4 in
 Dead no blow back
 B.O.B. In 25 mins
 Dead no blow back

PRESSURE SUMMARY



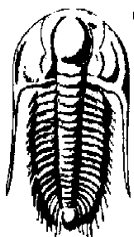
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1823.33	94.46	Initial Hydro-static
1	19.19	93.51	Open To Flow (1)
6	43.80	97.66	Shut-In(1)
67	558.88	98.04	End Shut-In(1)
67	51.51	97.91	Open To Flow (2)
96	101.80	103.83	Shut-In(2)
217	543.33	104.42	End Shut-In(2)
217	1779.31	104.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	100%M With oil spots	0.42
120.00	10%M 90%W	1.68

Gas Rates

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



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DST#: 1

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Test Start: 2014.02.04 @ 12:40:19

GENERAL INFORMATION:

Formation: **LKC F-G**

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 14:34:29 Tester: Tate Lang

Time Test Ended: 20:14:49 Unit No: 49

Interval: **3663.00 ft (KB) To 3720.00 ft (KB) (TVD)** Reference Elevations: ft (KB)

Total Depth: 3720.00 ft (KB) (TVD) ft (CF)

Hole Diameter: inches Hole Condition: Good KB to GR/CF: ft

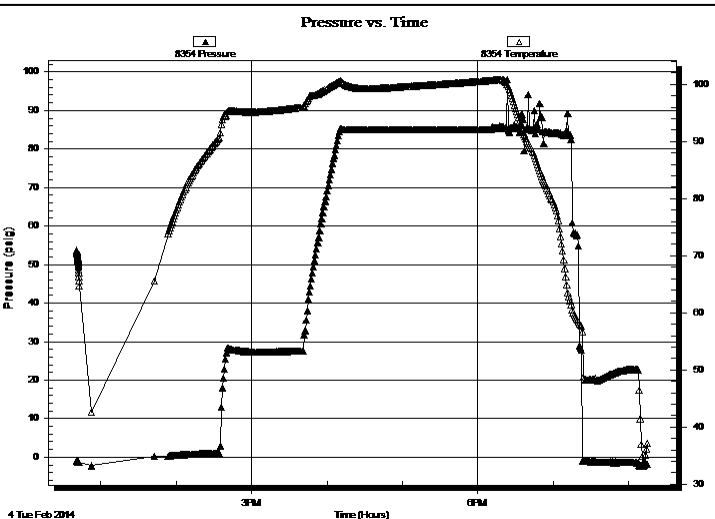
Serial #: 8354 Fluid

Press @ Run Depth: psig @ 3627.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2014.02.04 End Date: 2014.02.04 Last Calib.: 2014.02.04

Start Time: 12:40:46 End Time: 20:15:15 Time On Btm: Time Off Btm:

TEST COMMENT: Fair blow built to 4 in
Dead no blow back
B.O.B. in 25 mins
Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
50.00	100%M With oil spots	0.42
120.00	10%M 90%W	1.68

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Sam Gary Jr Associates

21-10s-22w Graham,KS

1515 Wynkoop STE 700
Denver CO 80202

Herman #1-21

Job Ticket: 56101

DST#: 1

ATTN: Dan Pritchard

Test Start: 2014.02.04 @ 12:40:19

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	100%M With oil spots	0.419
120.00	10%M 90%W	1.683

Total Length: 170.00 ft

Total Volume: 2.102 bbl

Num Fluid Samples: 0

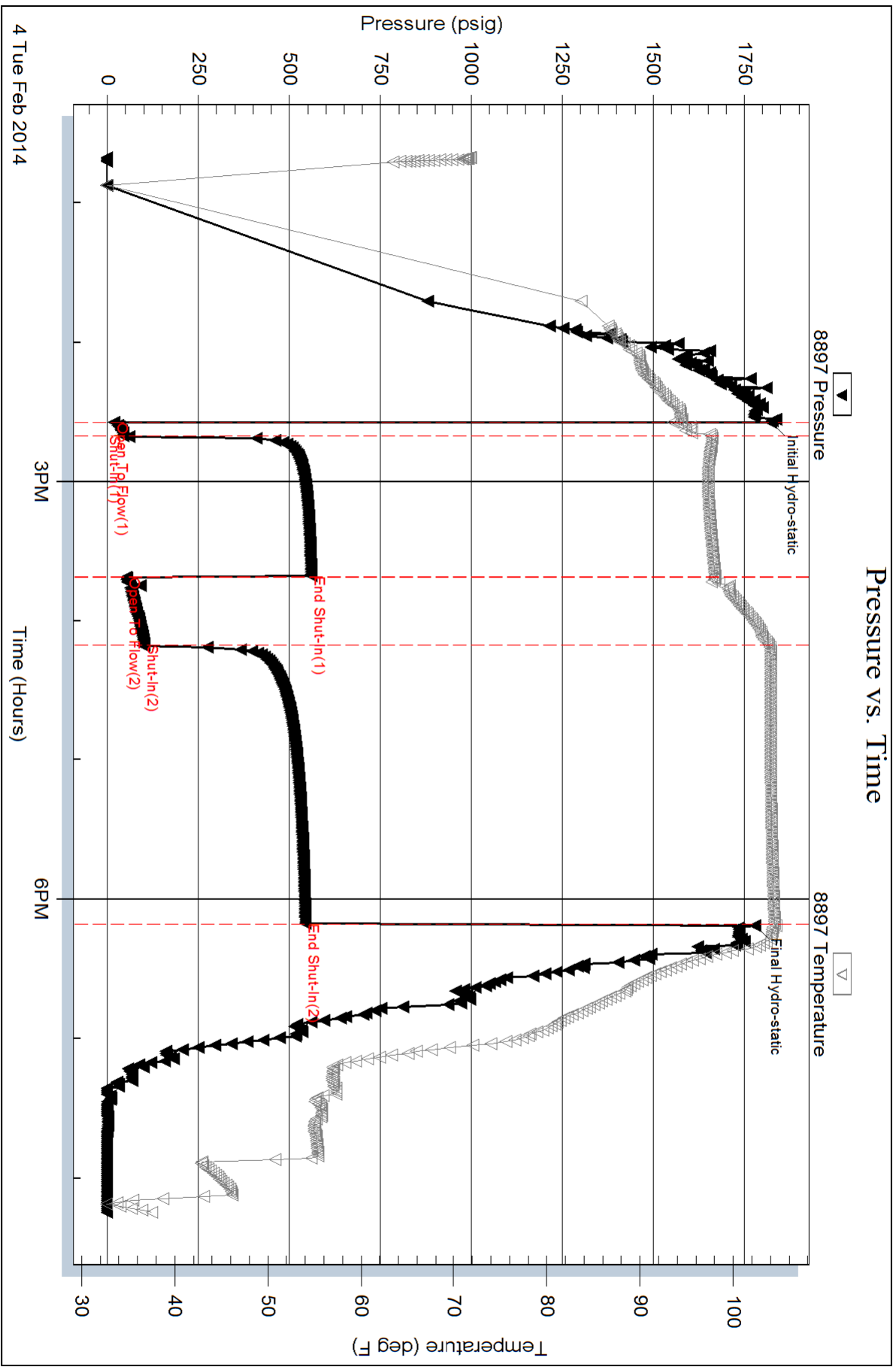
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8354

Fluid

Sam Gary Jr Associates

Herman #1-21

DST Test Number: 1

