



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates, Inc.

35/4s/23w Norton KS

1515 Wynkoop St. STE 700
Denver, CO 80202

Hager Trust #2-35

Job Ticket: 52753

DST#: 2

ATTN: Clayton Camozzi

Test Start: 2013.06.23 @ 23:15:00

GENERAL INFORMATION:

Formation: **Gorham Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:01:15

Time Test Ended: 06:50:30

Test Type: Conventional Bottom Hole (Reset)

Tester: James Winder

Unit No: 57

Interval: **3659.00 ft (KB) To 3699.00 ft (KB) (TVD)**

Reference Elevations: 2297.00 ft (KB)

Total Depth: 3699.00 ft (KB) (TVD)

2289.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8671

Inside

Press @ Run Depth: 398.02 psig @ 3660.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.23

End Date:

2013.06.24

Last Calib.:

2013.06.24

Start Time: 23:15:05

End Time:

06:50:29

Time On Btm:

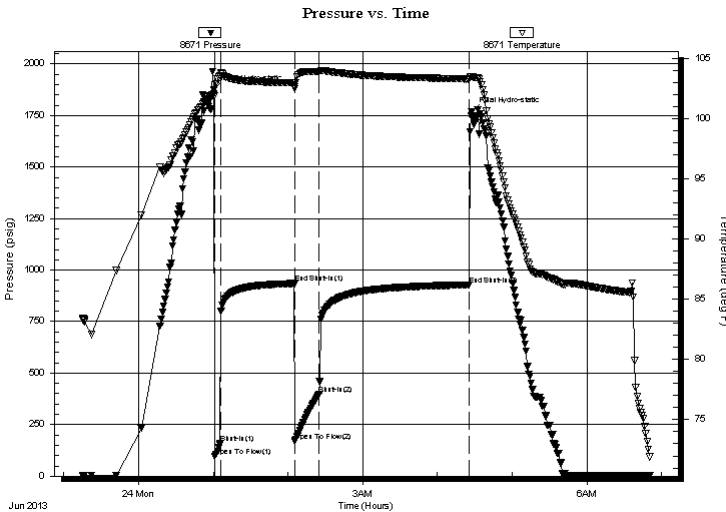
2013.06.24 @ 01:00:15

Time Off Btm:

2013.06.24 @ 04:27:30

TEST COMMENT: 5 - IF: Blow built to BOB (11") in 2 min.
60 - IS: Blow back built slowly to 1/2" then died off
20 - FF: Blow built to BOB in 2 1/2 min.
120 - FSI: Weak surface blow back occasionally

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.60	102.02	Initial Hydro-static
1	96.40	101.89	Open To Flow (1)
6	159.64	103.56	Shut-In(1)
65	935.32	102.96	End Shut-In(1)
66	168.73	102.66	Open To Flow (2)
85	398.02	103.87	Shut-In(2)
206	927.93	103.28	End Shut-In(2)
208	1768.61	103.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	WCM 87% <i>m</i> , 13% <i>w</i>	0.36
460.00	SMCW 92% <i>w</i> , 8% <i>m</i>	6.45
300.00	MCW W/trace oil 72% <i>w</i> , 28% <i>m</i>	4.21
0.00	Sampler = 2500 mL W 410 PSI	0.00

* Recovery from multiple tests

Gas Rates

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



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FLUID SUMMARY

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Test Start: 2013.06.23 @ 23:15:00

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:

23000 ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	WCM 87% _m , 13% _w	0.358
460.00	SMCW 92% _w , 8% _m	6.453
300.00	MCW W/trace oil 72% _w , 28% _m	4.208
0.00	Sampler = 2500 mL W 410 PSI	0.000

Total Length: 805.00 ft Total Volume: 11.019 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

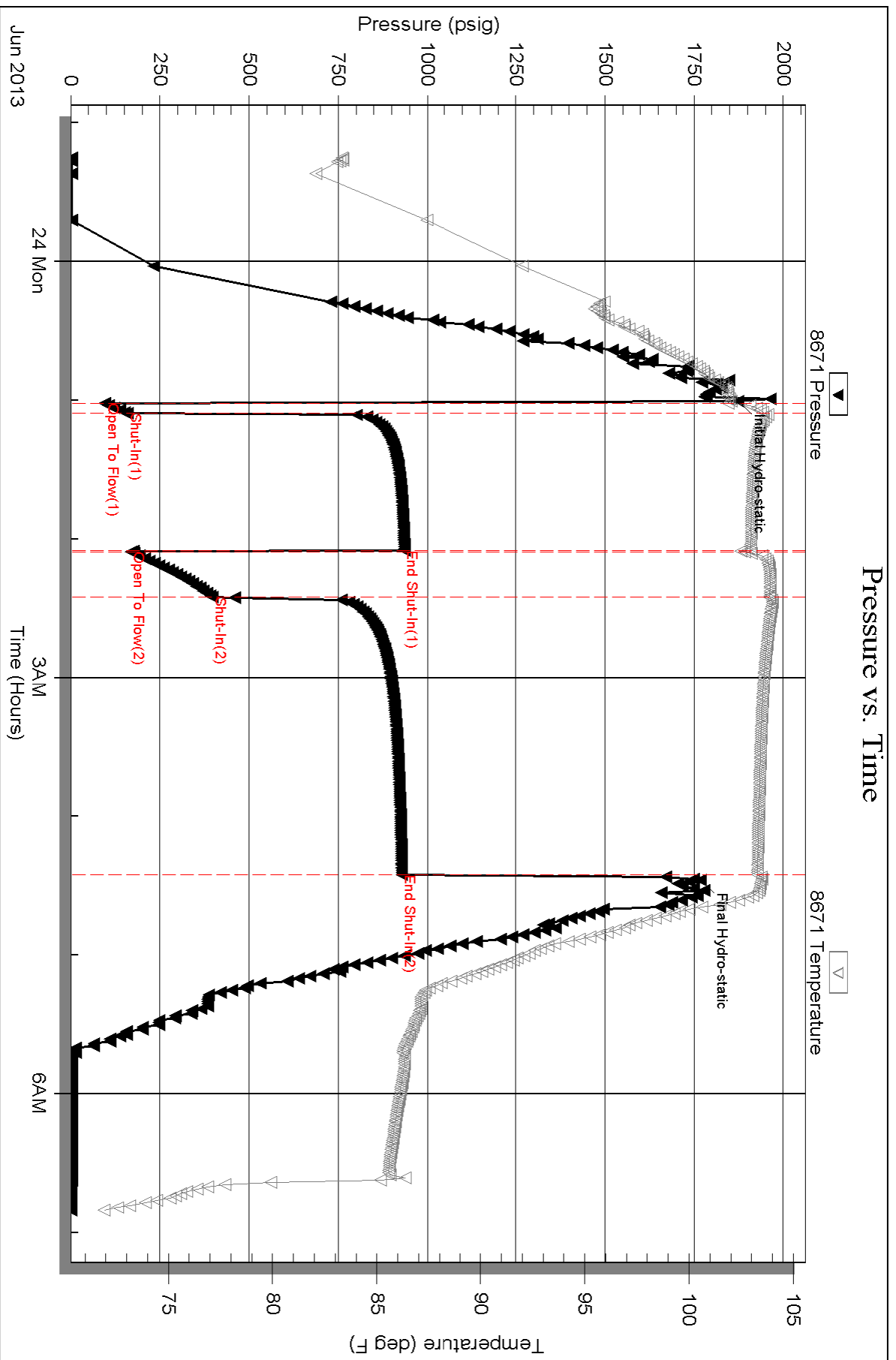
Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .294 ohms @ 71.9 deg F Chlorides = 23000 ppm

Sampler RW = .286 ohms @ 71.8 deg F = 23,500 ppm

Pressure vs. Time



Serial #: 8366

Fluid

Samuel Gary Jr. & Associates, Inc.

Hager Trust #2-35

DST Test Number: 2

