



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Samuel Gary Jr. & Associates

31-14s-16w-Ellis

1515 Wynkoop
Suite 700
Denver, CO. 80202
ATTN: Chris Mitchell

Pfeifer #1-31

Job Ticket: 52225

DST#: 3

Test Start: 2013.04.18 @ 14:29:41

GENERAL INFORMATION:

Formation: **Middle G-H**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 17:08:26

Time Test Ended: 23:50:56

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: 3277.00 ft (KB) To 3343.00 ft (KB) (TVD)

Reference Elevations: 1930.00 ft (KB)

Total Depth: 3343.00 ft (KB) (TVD)

1922.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8789 Inside

Press @ Run Depth: 176.54 psig @ 3312.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.18 End Date: 2013.04.18

Last Calib.: 2013.04.18

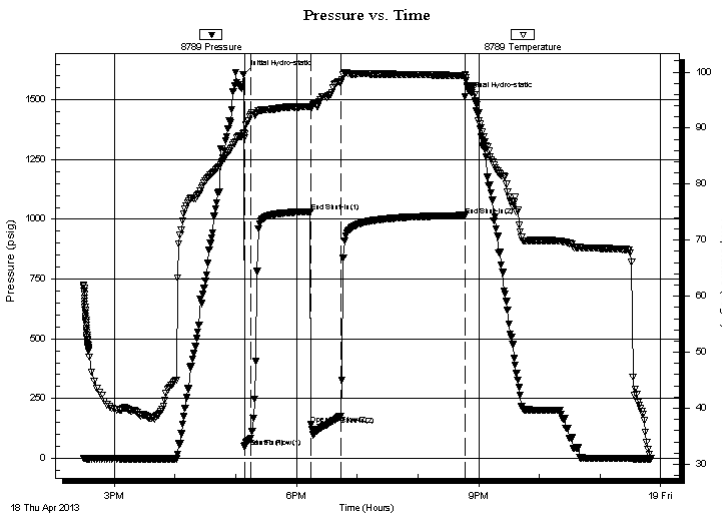
Start Time: 14:29:43 End Time: 23:50:56

Time On Btm: 2013.04.18 @ 17:07:56

Time Off Btm: 2013.04.18 @ 20:46:41

TEST COMMENT: IFP-Strong, BOB in 2 Min.
ISI-Dead
FFP-Strong, BOB in 30 Seconds
FSI-Blow back BOB in 25 Min., Gas To Surface on Shut in.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1604.17	89.17	Initial Hydro-static
1	47.76	88.32	Open To Flow (1)
7	82.99	92.30	Shut-In(1)
66	1032.52	93.86	End Shut-In(1)
67	140.74	93.60	Open To Flow (2)
96	176.54	98.21	Shut-In(2)
219	1016.54	99.41	End Shut-In(2)
219	1512.67	99.54	Final Hydro-static

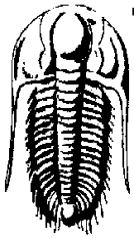
Recovery

Length (ft)	Description	Volume (bbl)
240.00	Gassy Oil-30%G-70%O	3.37
135.00	GHOCM-40%G-35%O-25%M	1.89

Gas Rates

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

* Recovery from multiple tests



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Total Depth: 3343.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 1930.00 ft (KB)

1922.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6668 Fluid

Press @ Run Depth: psig @ 3241.00 ft (KB)

Start Date: 2013.04.18

End Date: 2013.04.18

Start Time: 14:27:14

End Time: 23:48:02

Capacity: 8000.00 psig

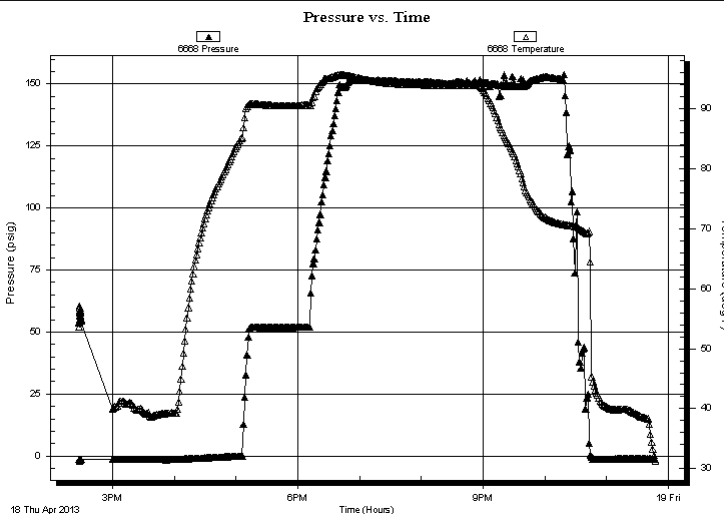
Last Calib.: 2013.04.18

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-Strong, BOB in 2 Min.
ISI-Dead
FFP-Strong, BOB in 30 Seconds
FSI-Blow back BOB in 25 Min., Gas To Surface on Shut in.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
240.00	Gassy Oil-30%G-70%O	3.37
135.00	GHOCM-40%G-35%O-25%M	1.89

Gas Rates

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

* Recovery from multiple tests



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FLUID SUMMARY

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Pfeifer #1-31

Job Ticket: 52225

DST#: 3

Test Start: 2013.04.18 @ 14:29:41

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
240.00	Gassy Oil-30%G-70%O	3.367
135.00	GHOCM-40%G-35%O-25%M	1.894

Total Length: 375.00 ft Total Volume: 5.261 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

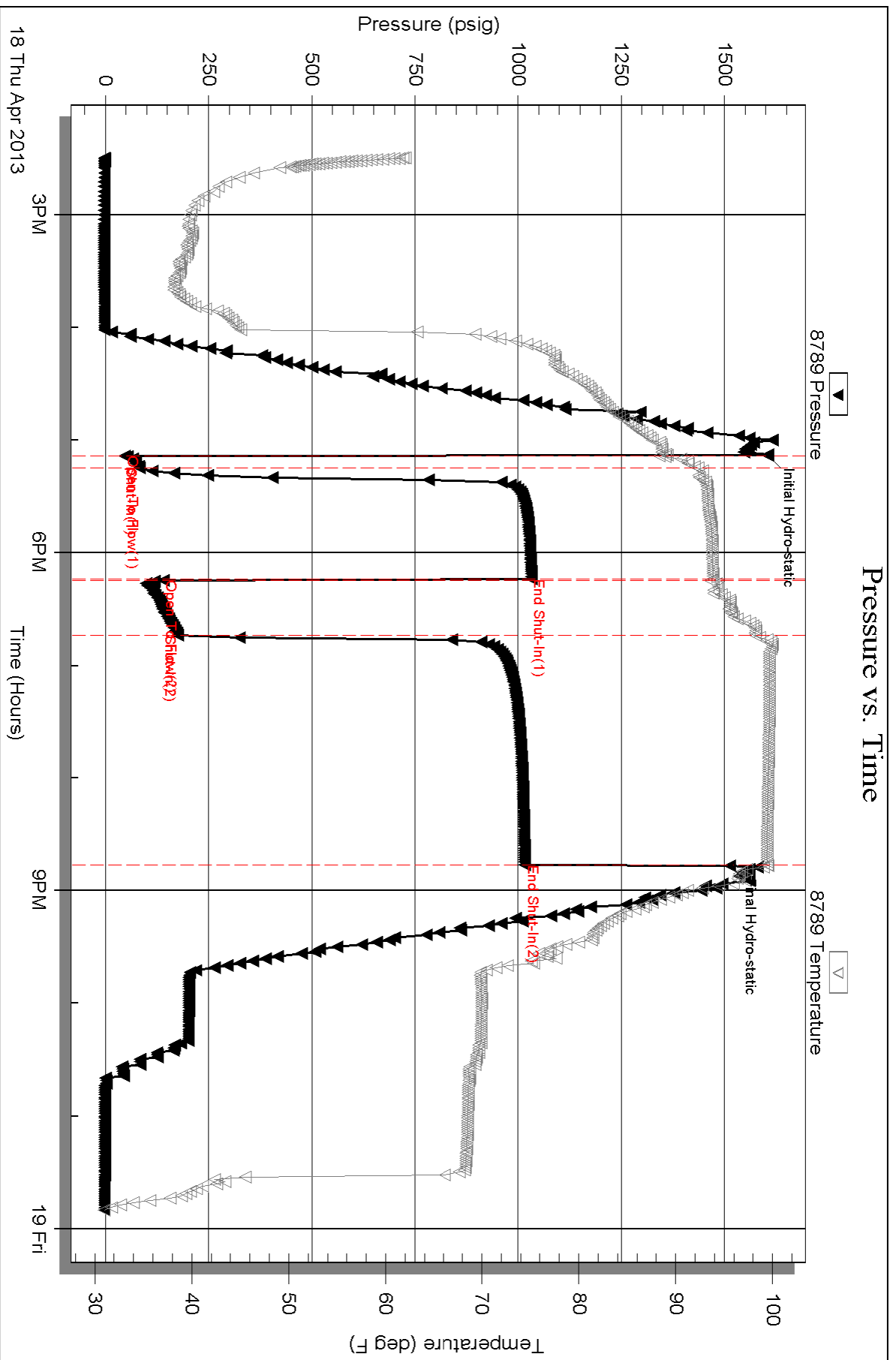
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler:750#, 2100ml Gas, 900ml Oil

Pressure vs. Time



Serial #: 6668

Fluid

Samuel Gary Jr. & Associates

Pfeifer #1-31

DST Test Number: 3

