



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hess Oil Company
PO Box 1009
McPherson KS 67460
ATTN: David Gould

18-10s-11w-Osborne Co.

Pike #1

Job Ticket: 60516

DST#: 1

Test Start: 2014.09.20 @ 03:43:02

GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:15:22
 Time Test Ended: 09:47:52
 Interval: **2876.00 ft (KB) To 2954.00 ft (KB) (TVD)**
 Total Depth: 2954.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Tate Lang
 Unit No: 77
 Reference Elevations: 1745.00 ft (KB)
 1740.00 ft (CF)
 KB to GR/CF: 5.00 ft

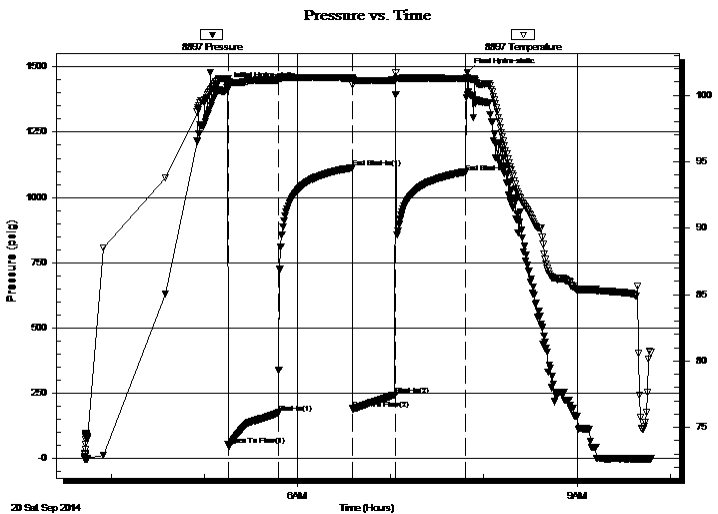
Serial #: 8897

Inside

Press @ Run Depth: 243.92 psig @ 2887.00 ft (KB)
 Start Date: 2014.09.20 End Date: 2014.09.20
 Start Time: 03:43:03 End Time: 09:47:52
 Capacity: 8000.00 psig
 Last Calib.: 2014.09.20
 Time On Btm: 2014.09.20 @ 05:15:12
 Time Off Btm: 2014.09.20 @ 07:49:32

TEST COMMENT: 30-B.O.B. in 9 mins
 45-Dead no blow back
 30-B.O.B. in 20 mins
 45-Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1422.62	101.22	Initial Hydro-static
1	51.99	100.52	Open To Flow (1)
33	174.90	101.15	Shut-In(1)
81	1113.16	101.28	End Shut-In(1)
81	190.09	100.76	Open To Flow (2)
108	243.92	101.12	Shut-In(2)
153	1096.35	101.25	End Shut-In(2)
155	1478.66	101.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	VSMCW 2%M 98%W	1.22
120.00	MCW 30%M 70%W	1.68
100.00	Mud 100%M w ith oil spots	1.40

Gas Rates

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



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18-10s-11w-Osborne Co.

Pike #1

Job Ticket: 60516 **DST#: 1**

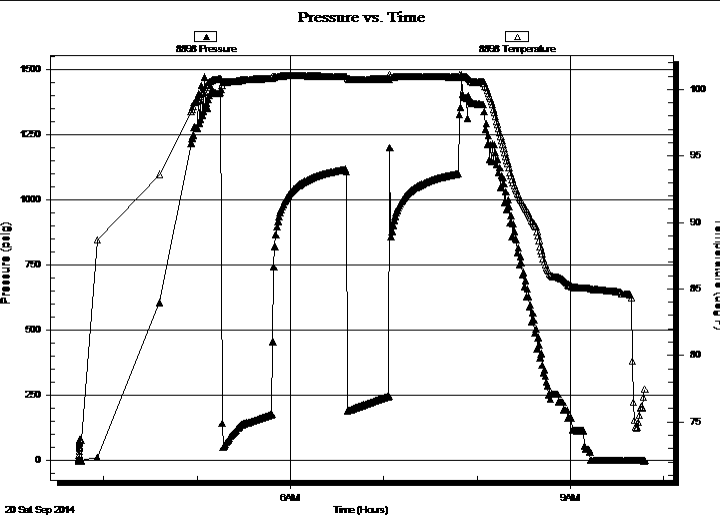
Test Start: 2014.09.20 @ 03:43:02

GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 05:15:22 Tester: Tate Lang
 Time Test Ended: 09:47:52 Unit No: 77
 Interval: **2876.00 ft (KB) To 2954.00 ft (KB) (TVD)** Reference Elevations: 1745.00 ft (KB)
 Total Depth: 2954.00 ft (KB) (TVD) 1740.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8898 Outside
 Press @ Run Depth: psig @ 2887.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.20 End Date: 2014.09.20 Last Calib.: 2014.09.20
 Start Time: 03:43:39 End Time: 09:48:18 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-B.O.B. in 9 mins
 45-Dead no blow back
 30-B.O.B. in 20 mins
 45-Dead no blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
248.00	VSMCW 2%M 98%W	1.22
120.00	MCW 30%M 70%W	1.68
100.00	Mud 100%M w ith oil spots	1.40

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Hess Oil Company
PO Box 1009
McPherson KS 67460
ATTN: David Gould

18-10s-11w-Osborne Co.
Pike #1
Job Ticket: 60516 **DST#: 1**
Test Start: 2014.09.20 @ 03:43:02

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:	1250 ppm
Viscosity: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.00 in ³	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
248.00	VSMCW 2%M 98%W	1.220
120.00	MCW 30%M 70%W	1.683
100.00	Mud 100%M with oil spots	1.403

Total Length: 468.00 ft Total Volume: 4.306 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: .476 @ 67 F = 1250

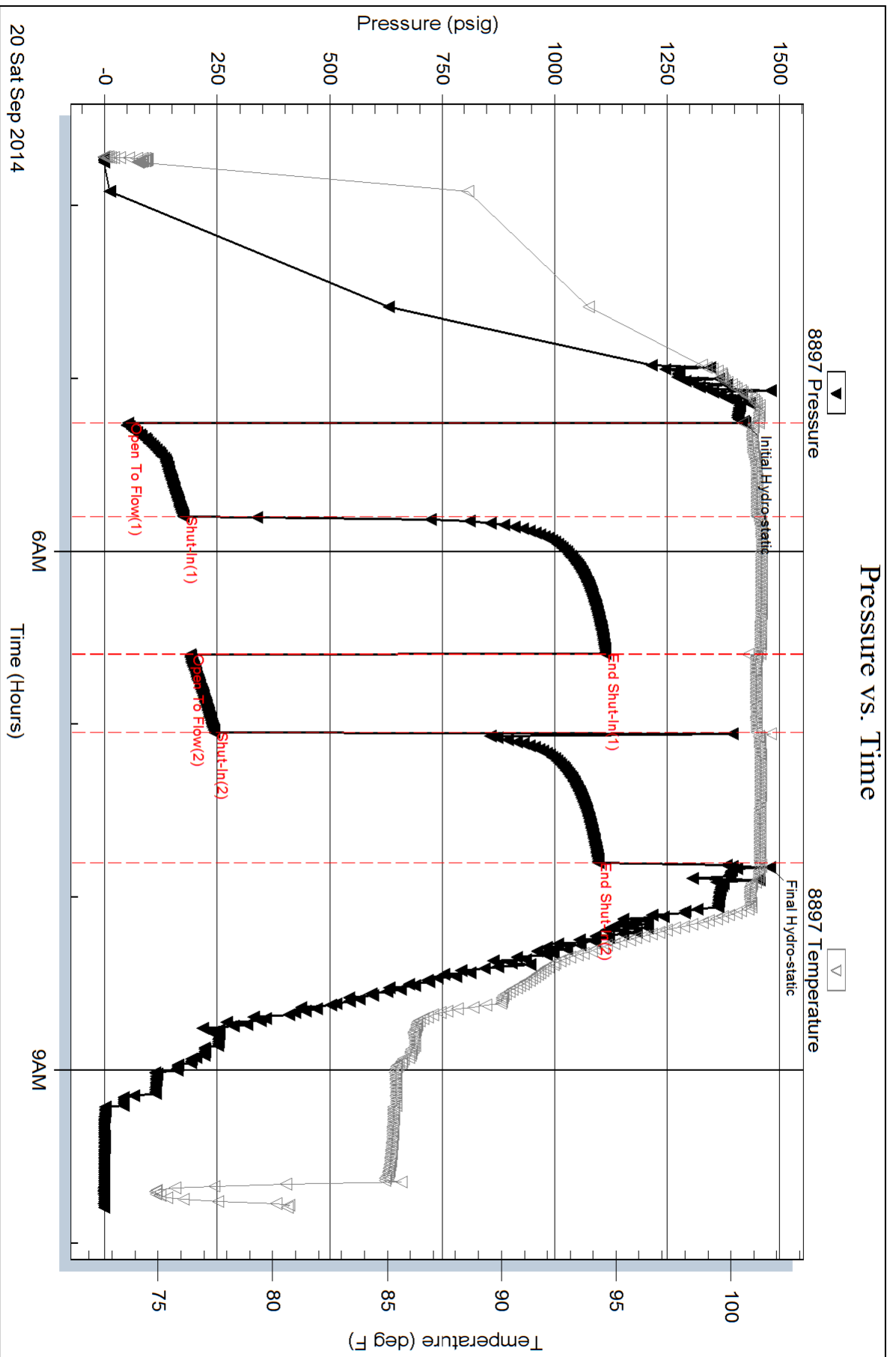
Serial #: 8897

Inside

Hess Oil Company

Pike #1

DST Test Number: 1



Serial #: 8898

Outside Hess Oil Company

Pike #1

DST Test Number: 1

