DRILL STEM TEST REPORT

H & D Exploration, LLC.

165 West 1st
P.O.Box 387
Hoisington, Ks. 67544
ATTN: Jim Musgrove

5-25s-12w Stafford Co. Ks.

Farris #1

Job Ticket: 65455 **DST#: 1**

Test Start: 2019.11.18 @ 14:23:18

GENERAL INFORMATION:

Formation: **Lansing I-L Zones**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:00:33
Time Test Ended: 20:55:03

Test Type: Conventional Bottom Hole (Initial)
Tester: Matt Smith
Unit No: 68

Interval: 3727.00 ft (KB) To 3820.00 ft (KB) (TVD)
Total Depth: 3820.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

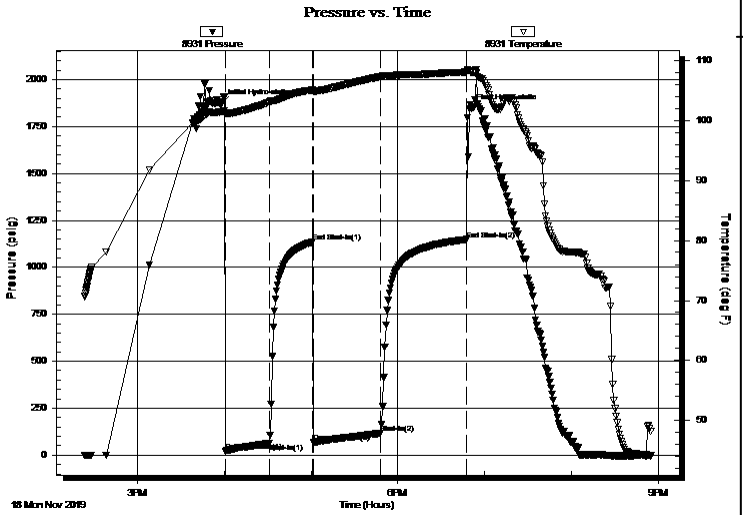
Reference Elevations: 1901.00 ft (KB)
1892.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8931 **Inside**

Press@RunDepth: 116.05 psig @ 3728.00 ft (KB)
Start Date: 2019.11.18 End Date: 2019.11.18
Start Time: 14:23:23 End Time: 20:55:02

Capacity: 8000.00 psig
Last Calib.: 2019.11.18
Time On Btm: 2019.11.18 @ 15:57:48
Time Off Btm: 2019.11.18 @ 18:49:33

TEST COMMENT: IF: Fair - Strong Blow . Built to 11.09".
ISI: No Blow .
FF: Fair - Strong Blow . Built to 10.71".
FSI: No Blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1870.98	101.42	Initial Hydro-static
3	22.27	101.07	Open To Flow (1)
33	61.90	102.99	Shut-In(1)
63	1135.48	105.05	End Shut-In(1)
64	67.52	104.82	Open To Flow (2)
111	116.05	107.28	Shut-In(2)
170	1148.40	108.02	End Shut-In(2)
172	1843.99	108.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GMCW 5%g 20%m 75%w	0.88
64.00	GMCW 5%g 10%m 85%w	0.90
63.00	GOspecWCM 5%g 25%w 70%m	0.88
32.00	GOsoecWCM 5%g 45%w 50%m	0.45
0.00	31' G.I.P. 100%g	0.00

Gas Rates

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

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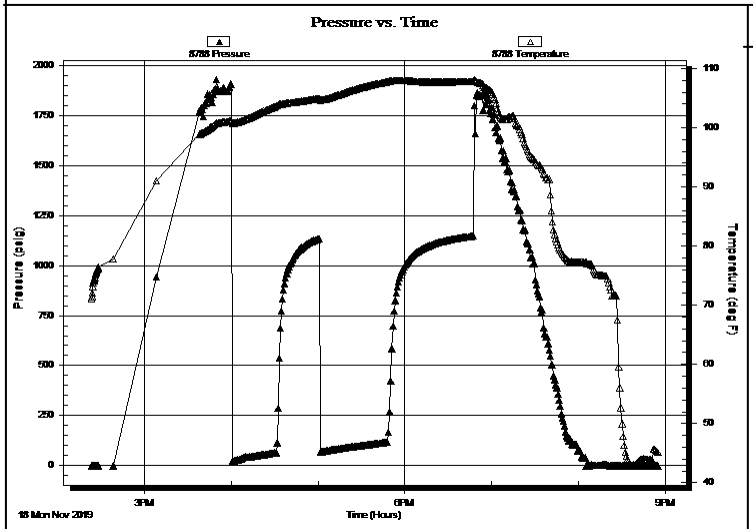
Reference Elevations: 1901.00 ft (KB)
1892.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8788 **Outside**

Press@RunDepth: psig @ 3728.00 ft (KB)
Start Date: 2019.11.18 End Date: 2019.11.18
Start Time: 14:23:27 End Time: 20:55:06

Capacity: 8000.00 psig
Last Calib.: 2019.11.18
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Fair - Strong Blow . Built to 11.09".
ISI: No Blow .
FF: Fair - Strong Blow . Built to 10.71".
FSI: No Blow .



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GMCW 5%g 20%m 75%w	0.88
64.00	GMCW 5%g 10%m 85%w	0.90
63.00	GOspecWCM 5%g 25%w 70%m	0.88
32.00	GOsoecWCM 5%g 45%w 50%m	0.45
0.00	31' G.I.P. 100%g	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

H & D Exploration, LLC.

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Hoisington, Ks. 67544
ATTN: Jim Musgrove

5-25s-12w Stafford Co. Ks.

Farris #1

Job Ticket: 65455 **DST#: 1**

Test Start: 2019.11.18 @ 14:23:18

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	62000 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.79 in³	Gas Cushion Type:			
Resistivity:	6700.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	ppm				
Filter Cake:	0.20 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	GMCW 5%g 20%m 75%w	0.884
64.00	GMCW 5%g 10%m 85%w	0.898
63.00	GOspecWCM 5%g 25%w 70%m	0.884
32.00	GOsoecWCM 5%g 45%w 50%m	0.449
0.00	31' G.I.P. 100%g	0.000

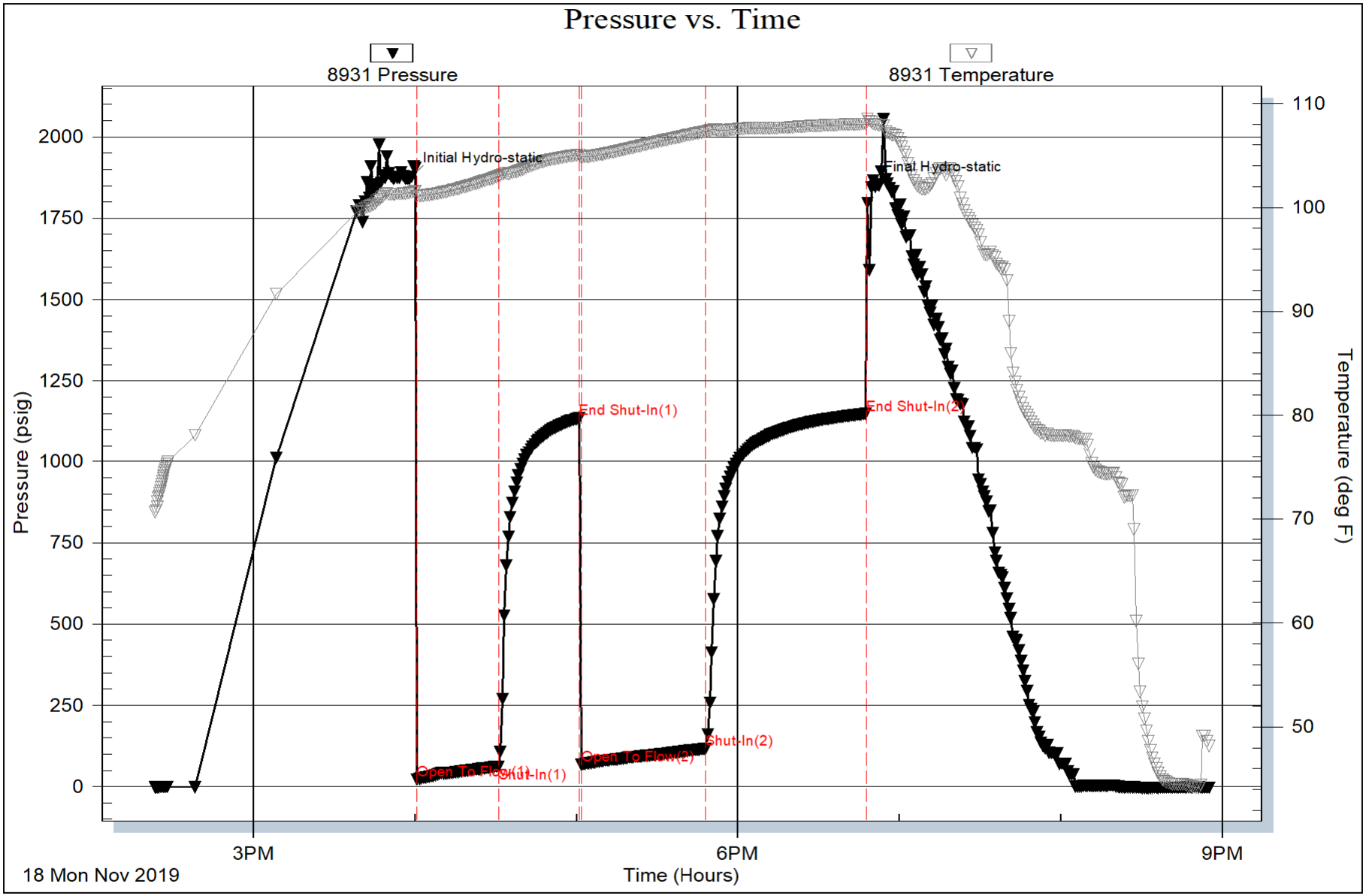
Total Length: 222.00 ft Total Volume: 3.115 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

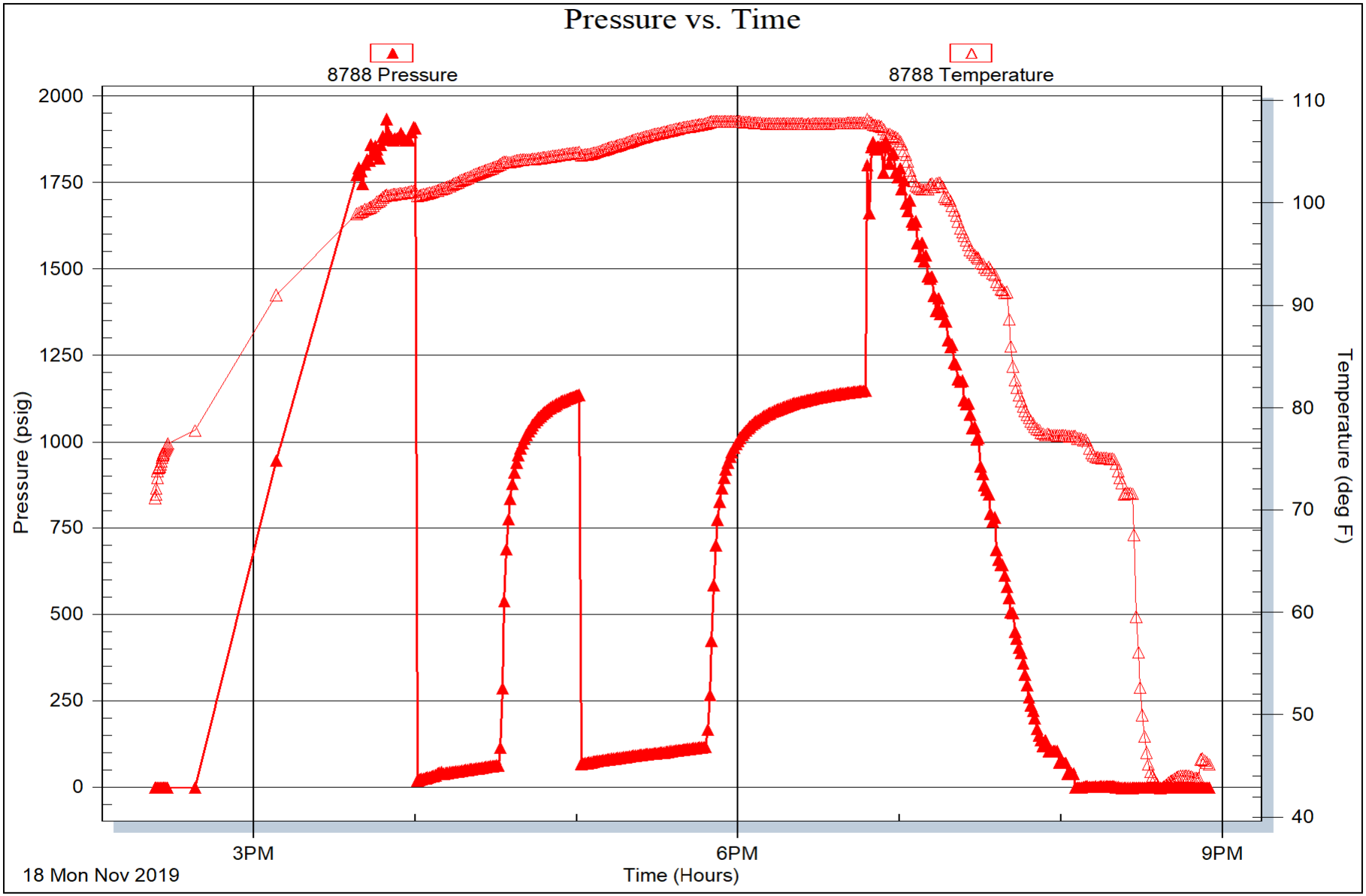
Recovery Comments: RW 1.59 @ 49 Degrees = 62,000 Chlorides

Serial #: 8931 **Inside** H & D Exploration, LLC. Farris #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65455 Printed: 2019.11.18 @ 22:33:52

Serial #: 8788 **Outside** H & D Exploration, LLC. Farris #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 65455 Printed: 2019.11.18 @ 22:33:52