

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY <u>VESS OIL CORPORATION</u>	ELEVATIONS
LEASE <u>EARL SUTOR #11</u>	KB <u>2236'</u> GL <u>2228'</u>
FIELD <u>MARCOTTE</u>	Measurements Are All
LOCATION <u>1980' FSL & 1560' FEL</u>	From <u>KB</u>
SECTION <u>12</u> TOWNSHIP <u>10S</u> RANGE <u>20W</u>	API <u>15-163-24321-00-00</u>
COUNTY <u>ROOKS</u> STATE <u>KANSAS</u>	
CONTRACTOR <u>Discovery Drilling Rig #1</u>	CASING
SPUD <u>10/03/2016</u> COMP <u>10/10/2016</u>	SURFACE <u>8 5/8" 23#/FT set @ 219.41' KB</u>
RTD <u>3768' (-1532)</u> LTD <u>n/a</u>	<u>w/175 sx common 2% gel 3% CC</u>
<u>No Open Hole E-logs</u>	PRODUCTION <u>5 1/2" 15.5#/FT set @</u>
<u>ELECTRICAL SURVEYS</u>	<u>3766' KB + DV tool- see remarks</u>

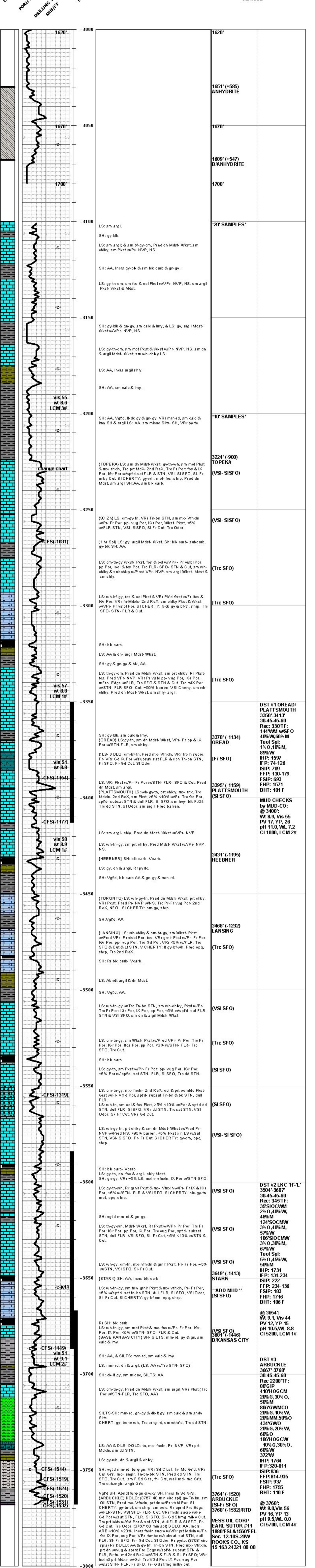
FORMATION TOPS	LOG	SAMPLES	CHRONOLOGY
			09/29/2016- Dig reserve pits.
Anhydrite		1651' (+585)	09/30/2016- MIRU Discovery Drilling, Rig #1.
Base Anhydrite		1689' (+547)	10/03/2016- SPUD 12 1/4" hole @ 10:45 AM. Ran 5 lbs new 8 5/8", 23# casing and set @ 219.41' KB. Cemented w/175 sx common, 2% gel 3% CC- cement did circulate @ 3:15 PM. WOC 8 hrs. Drilling out plug @ 11:15 PM.
Topseka		3224' (-988)	
Oread		3370' (-1134)	10/04/2016- Depth @ 7:00 AM: 900' Mud Vis 26m Mud Wt 9.8 ppg
Plattsmouth		3395' (-1159)	
Heebner		3431' (-1195)	10/05/2016- Depth @ 7:00 AM: 2165' Mud Vis 27, Mud Wt 9.5 ppg
Lansing		3468' (-1232)	
Stak		3649' (-1413)	10/06/2016- Depth @ 7:00 AM: 2915' Mud Vis 28, Mud Wt 9.8 ppg
Base Kansas City		3681' (-1446)	10/07/2016- Depth @ 7:00 AM: 3390' CFS Mud Vis 54, Mud Wt 8.8 ppg DST #1- Oread/Plattsmouth
Arbuckle		3768' (-1528)	
RTD		3768' (-1532)	10/08/2016- Depth @ 7:00 AM: 3515' Mud Vis 50, Mud Wt 9 ppg
			10/09/2016- Depth @ 7:00 AM: 3687' Mud Vis 51, Mud Wt 9.1 ppg DST #2- LKC HL
			10/10/2016- Depth @ 7:00 AM: 3768' Mud Vis 60, Mud Wt 9.2 ppg DST #3- Arbuckle

REMARKS:

PRODUCTION CASING JOB (by R.L. Martin): RIH w/87 jts new 5 1/2", 15.5# J-55 Casing. Packer shoe set 2' off bottom @ 2766' w/2000 psi. 19' maker it set @ 3411.8'. DV tool set in Anhydrite @ 1681.77'. Cemented first stage w/150 sx AA2 (10% salt, 0.8% FL, 0.2% defoamer, 0.8% gilsonite). Good lift. Pressure held throughout 500-700 psi. Bumped the plug @ 12:45 AM 10/11/2016 @ 1500 psi- held.

10/11/2016- Circulated between stages for 2 hours. Cemented second stage w/240 sx A-Con blend (3% CC, 0.25#/sk cellflake). 30 sx in Rathole & 15 sx in Mousehole. Plug down @ 4:15 AM @ 1500 psi- held. Cement did circulate (cirt 50 sx to pit). Released rig @ 4:45 AM on 10/11/2016.

Respectfully submitted,
Roger L. Martin, Geologist





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Vess Oil Corporation

12-10s-20w Rooks

1700 Waterfront Pkw y
Bldg 500
Wichita Ks 67206-6619

Earl Sutor #11

Job Ticket: 64745

DST#: 1

ATTN: Dylan Klaus, Roger M

Test Start: 2016.10.07 @ 15:51:00

GENERAL INFORMATION:

Formation: **Oread / Plattsmouth**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:01:25

Time Test Ended: 23:07:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 77

Interval: 3350.00 ft (KB) To 3413.00 ft (KB) (TVD)

Reference Elevations: 2236.00 ft (KB)

Total Depth: 3413.00 ft (KB) (TVD)

2228.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8018

Inside

Press@RunDepth: 179.27 psig @ 3356.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.07

End Date:

2016.10.07

Last Calib.:

2016.10.07

Start Time: 15:51:00

End Time:

23:07:39

Time On Btm:

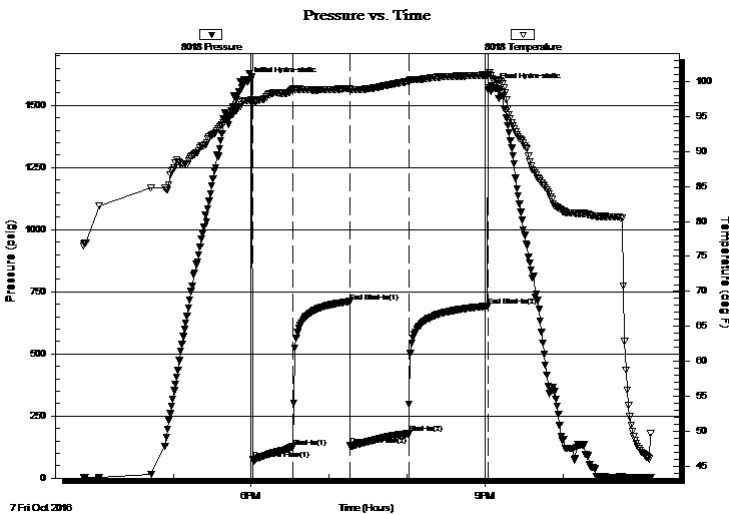
2016.10.07 @ 17:57:40

Time Off Btm:

2016.10.07 @ 21:06:39

TEST COMMENT: 30-IFP-w k to a gd bl 1/2"to 7"bl
45-ISIP-no bl
45-FFP-w k to a fr bl 1/4"to 5"bl
60-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.95	97.23	Initial Hydro-static
4	74.17	96.96	Open To Flow (1)
35	125.83	98.83	Shut-In(1)
79	708.56	98.96	End Shut-In(1)
79	130.48	98.76	Open To Flow (2)
124	179.27	100.00	Shut-In(2)
185	692.85	100.90	End Shut-In(2)
189	1570.52	100.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	Water	1.32
144.00	WM40%W60%M w/show of oil	1.16
0.00	Fluid sample in tool 1%O10%M89%W	0.00

Gas Rates

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



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TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

12-10s-20w Rooks

1700 Waterfront Pkw y
Bldg 500

Earl Sutor #11

Wichita Ks 67206-6619

Job Ticket: 64745

DST#: 1

ATTN: Dylan Klaus, Roger M

Test Start: 2016.10.07 @ 15:51:00

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:

88000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.20 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 bbf
186.00	Water	1.317
144.00	WM40%W60%M w/show of oil	1.159
0.00	Fluid sample in tool 1%O10%M89%W	0.000

Total Length: 330.00 ft Total Volume: 2.476 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: slid tool approx 15' to bottom after tool opened
RW .11@55F

Serial #: 8018

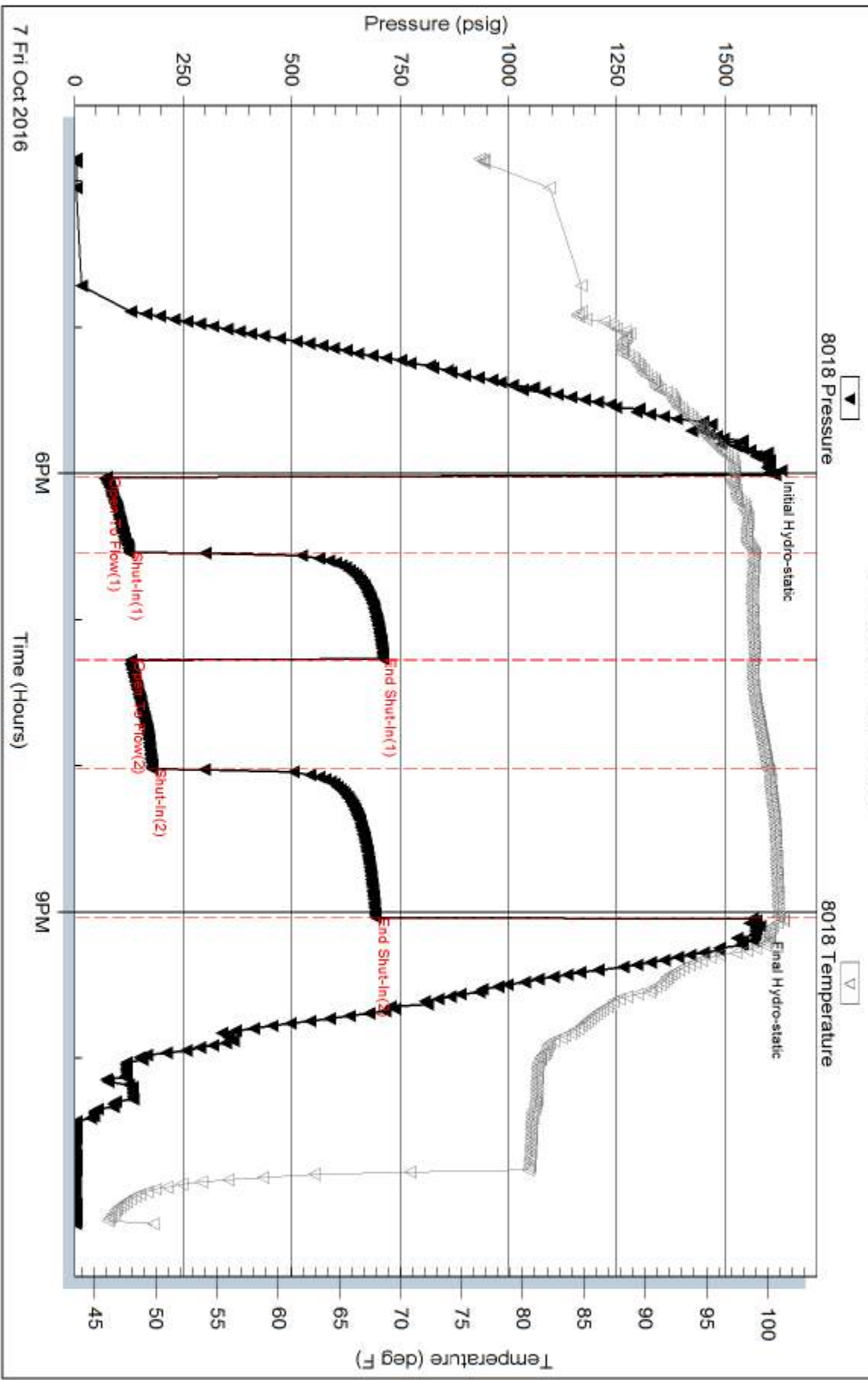
Inside

Vess Oil Corporation

Earl Sutor #11

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 64745

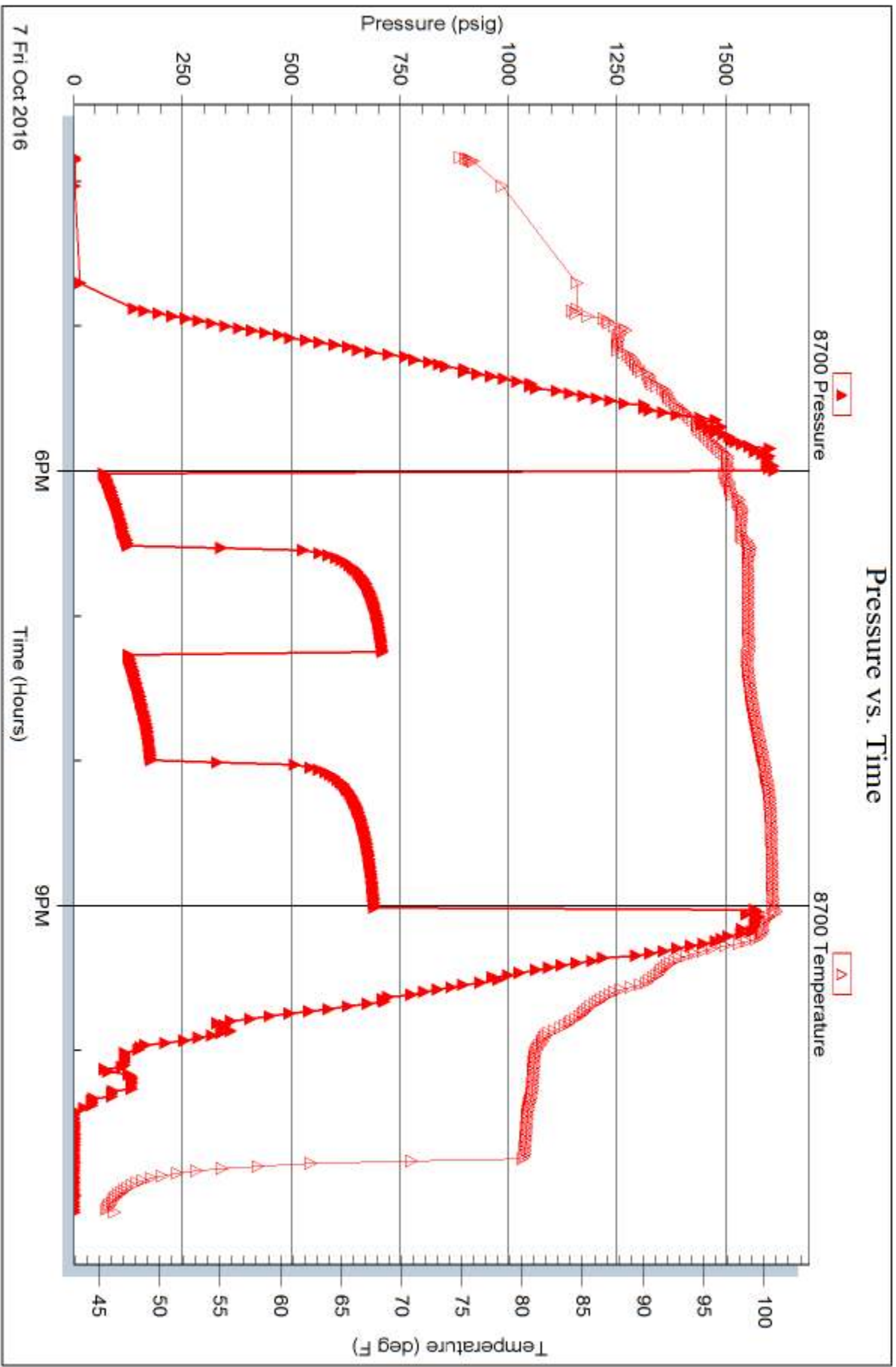
Printed: 2016.10.08 @ 07:56:45

Serial #: 8700

Outside Vess Oil Corporation

Earl Sutor #11

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64745

Printed: 2016.10.08 @ 07:56:45



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Vess Oil Corporation
1700 Waterfront Pkw y
Bldg 500
Wichita Ks 67206-6619
ATTN: Dylan Klaus, Roger M

12-10s-20w Rooks
Earl Sutor #11
Job Ticket: 64746 **DST#: 2**
Test Start: 2016.10.09 @ 00:30:17

GENERAL INFORMATION:

Formation: **LKC H-L**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:48:27
Time Test Ended: 08:22:11
Interval: **3584.00 ft (KB) To 3687.00 ft (KB) (TVD)**
Total Depth: 3413.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 77
Reference Elevations: 2236.00 ft (KB)
2228.00 ft (CF)
KB to GR/CF: 8.00 ft

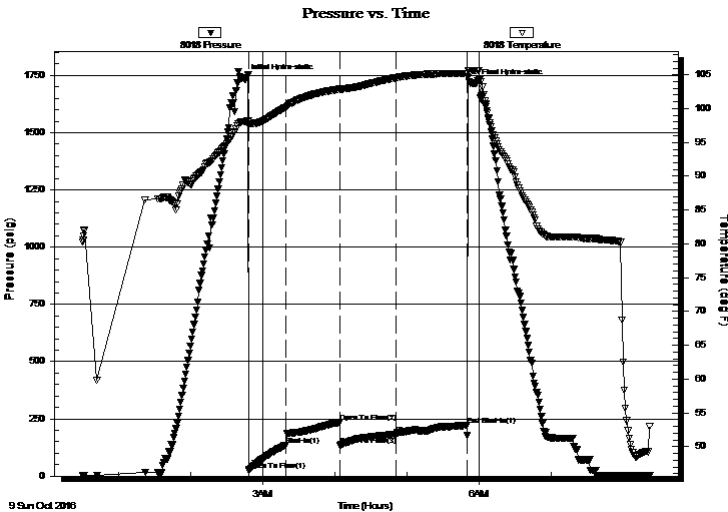
Serial #: 8018

Inside

Press@RunDepth: 134.27 psig @ 3590.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.10.09 End Date: 2016.10.09 Last Calib.: 2016.10.09
Start Time: 00:30:17 End Time: 08:22:11 Time On Btm: 2016.10.09 @ 02:45:27
Time Off Btm: 2016.10.09 @ 05:56:26

TEST COMMENT: 30-IFP-w k to a gd bl 1/2"to 9"bl
45-ISIP-no bl bk
45-FFP-w k bl thru-out 1/4"to 3"bl
60-FSIP-no bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1734.38	98.11	Initial Hydro-static
3	23.94	97.52	Open To Flow (1)
34	134.27	100.19	Shut-In(1)
79	234.46	102.87	Open To Flow (2)
79	135.59	102.84	Open To Flow (3)
126	182.53	104.56	Shut-In(2)
185	221.72	105.18	End Shut-In(1)
191	1716.02	105.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	SOCMW 3%O30%M67%W	1.32
124.00	SOCMW 3%O40%M57%W	0.88
35.00	SOCWM 2%O40%W48%M	0.49
0.00	Tool Sample 5%O45%W50%M	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

12-10s-20w Rooks

1700 Waterfront Pkw y
Bldg 500

Earl Sutor #11

Wichita Ks 67206-6619

Job Ticket: 64746

DST#: 2

ATTN: Dylan Klaus, Roger M

Test Start: 2016.10.09 @ 00:30:17

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:

63000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
186.00	SOCMW 3%O30%M67%W	1.317
124.00	SOCMW 3%O40%M57%W	0.878
35.00	SOCWM 2%O40%W48%M	0.491
0.00	Tool Sample 5%O45%W50%M	0.000

Total Length: 345.00 ft

Total Volume: 2.686 bbf

Num Fluid Samples: 0

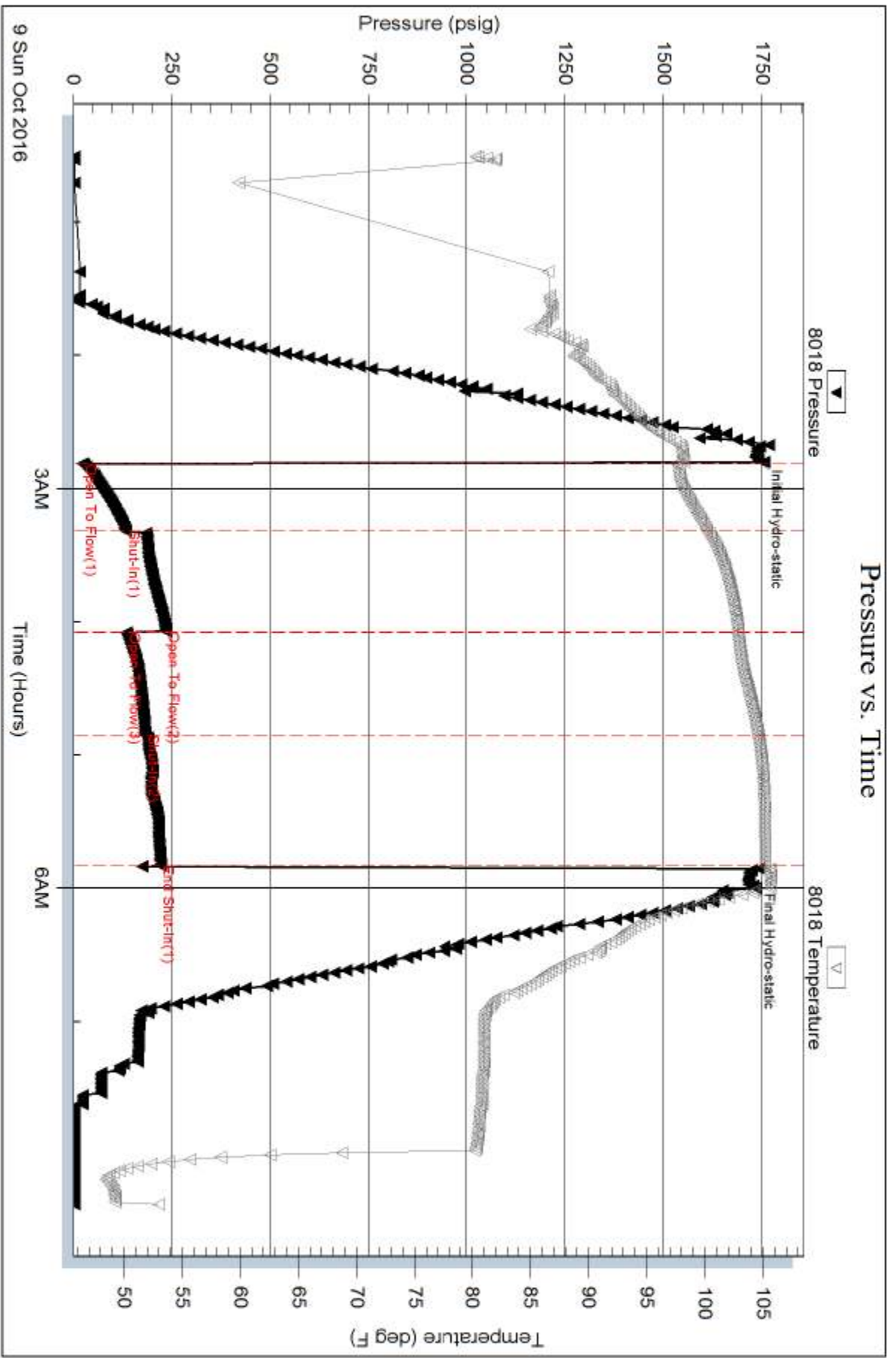
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .14@60F

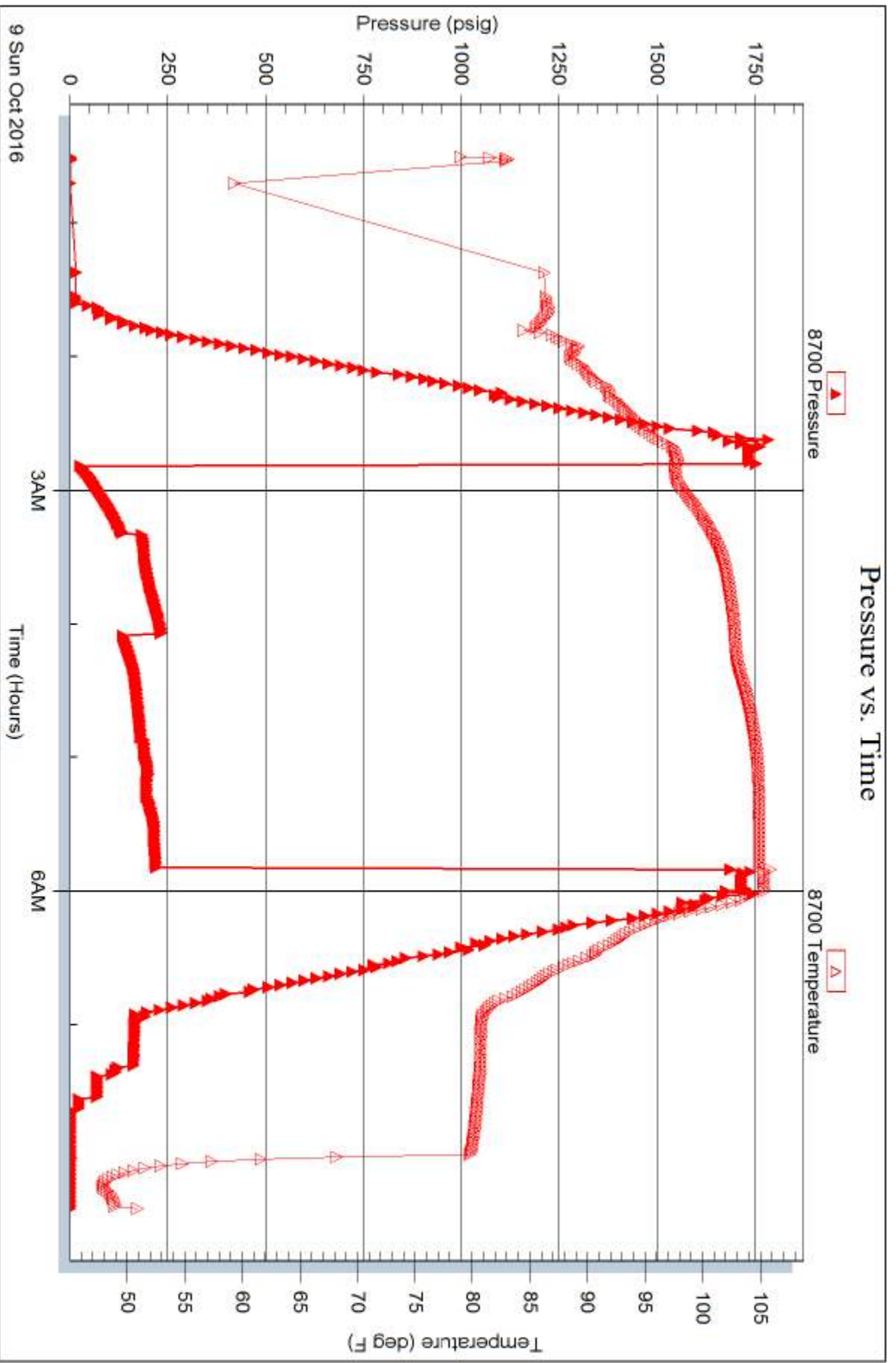


Serial #: 8700

Outside Vess Oil Corporation

Earl Sutor #11

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64746

Printed: 2016.10.09 @ 13:17:15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation
 1700 Waterfront Pkw y
 Bldg 500
 Wichita Ks 67206-6619
 ATTN: Dylan Klaus, Roger M

12-10s-20w Rooks
Earl Sutor #11
 Job Ticket: 64747 **DST#: 3**
 Test Start: 2016.10.10 @ 03:05:38

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:11:48
 Time Test Ended: 12:15:33
 Interval: **3667.00 ft (KB) To 3768.00 ft (KB) (TVD)**
 Total Depth: 3768.00 ft (KB) (TVD)
 Hole Diameter: 7.85 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 77
 Reference Elevations: 2236.00 ft (KB)
 2228.00 ft (CF)
 KB to GR/CF: 8.00 ft

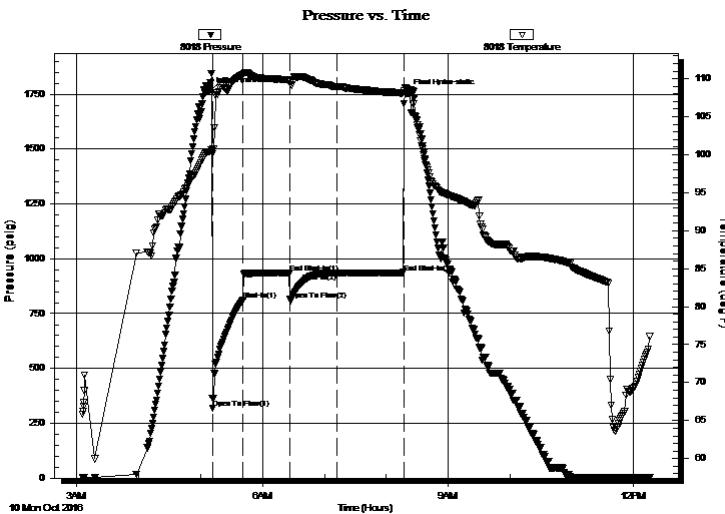
Serial #: 8018

Inside

Press@RunDepth: 934.64 psig @ 3673.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.10 End Date: 2016.10.10 Last Calib.: 2016.10.10
 Start Time: 03:05:38 End Time: 12:15:33 Time On Btm: 2016.10.10 @ 05:09:03
 Time Off Btm: 2016.10.10 @ 08:20:17

TEST COMMENT: 30-IFP-strg bl in 30 sec
 45-ISIP-surface bl bk
 45-FFP-strg bl in 2 min
 60-FSIP-surface bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1763.83	100.40	Initial Hydro-static
3	319.84	100.45	Open To Flow (1)
33	810.95	110.49	Shut-In(1)
77	935.89	109.80	End Shut-In(1)
78	814.07	109.73	Open To Flow (2)
124	934.64	108.94	Shut-In(2)
188	936.79	108.16	End Shut-In(2)
192	1754.57	108.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
372.00	Water	3.07
186.00	HO&GCW 10%G30%O60%W	2.61
434.00	GWO 20%G20%W60%O	6.09
806.00	GW&MCO20%G10%W20%M50%O	11.31
410.00	HO&GCM20%G30%O50%M	5.75
0.00	80'GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

12-10s-20w Rooks

1700 Waterfront Pkw y
Bldg 500
Wichita Ks 67206-6619

Earl Sutor #11

Job Ticket: 64747

DST#: 3

ATTN: Dylan Klaus, Roger M

Test Start: 2016.10.10 @ 03:05:38

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:

37000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
372.00	Water	3.065
186.00	HO&GCW 10%G30%O60%W	2.609
434.00	GWO 20%G20%W60%O	6.088
806.00	GW&MCO20%G10%W20%M50%O	11.306
410.00	HO&GCM20%G30%O50%M	5.751
0.00	80'GIP	0.000

Total Length: 2208.00 ft Total Volume: 28.819 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .2@65F Tool Sample 40%O60%W

Serial #: 8018

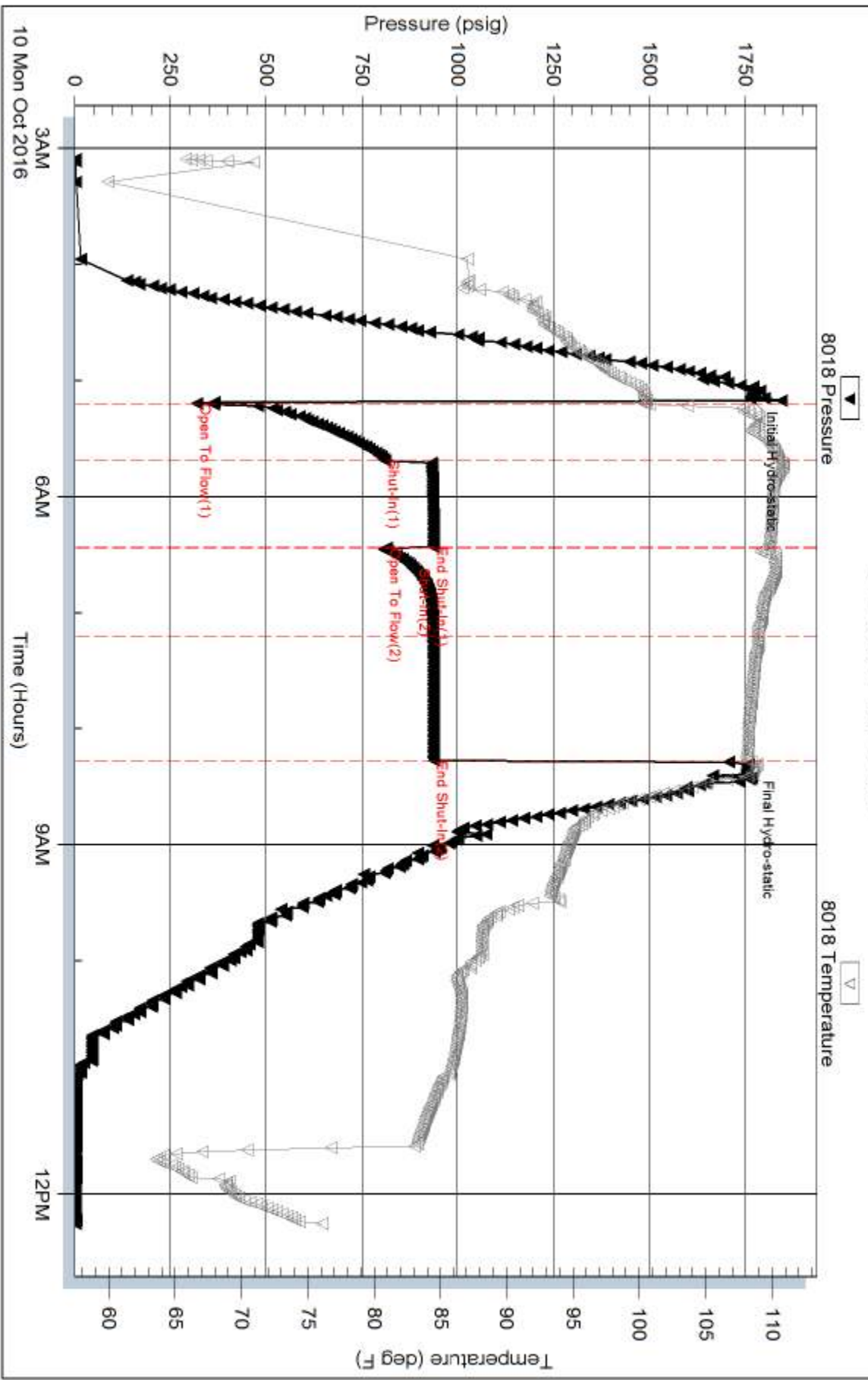
Inside

Vess Oil Corporation

Earl Sutor #11

DST Test Number: 3

Pressure vs. Time

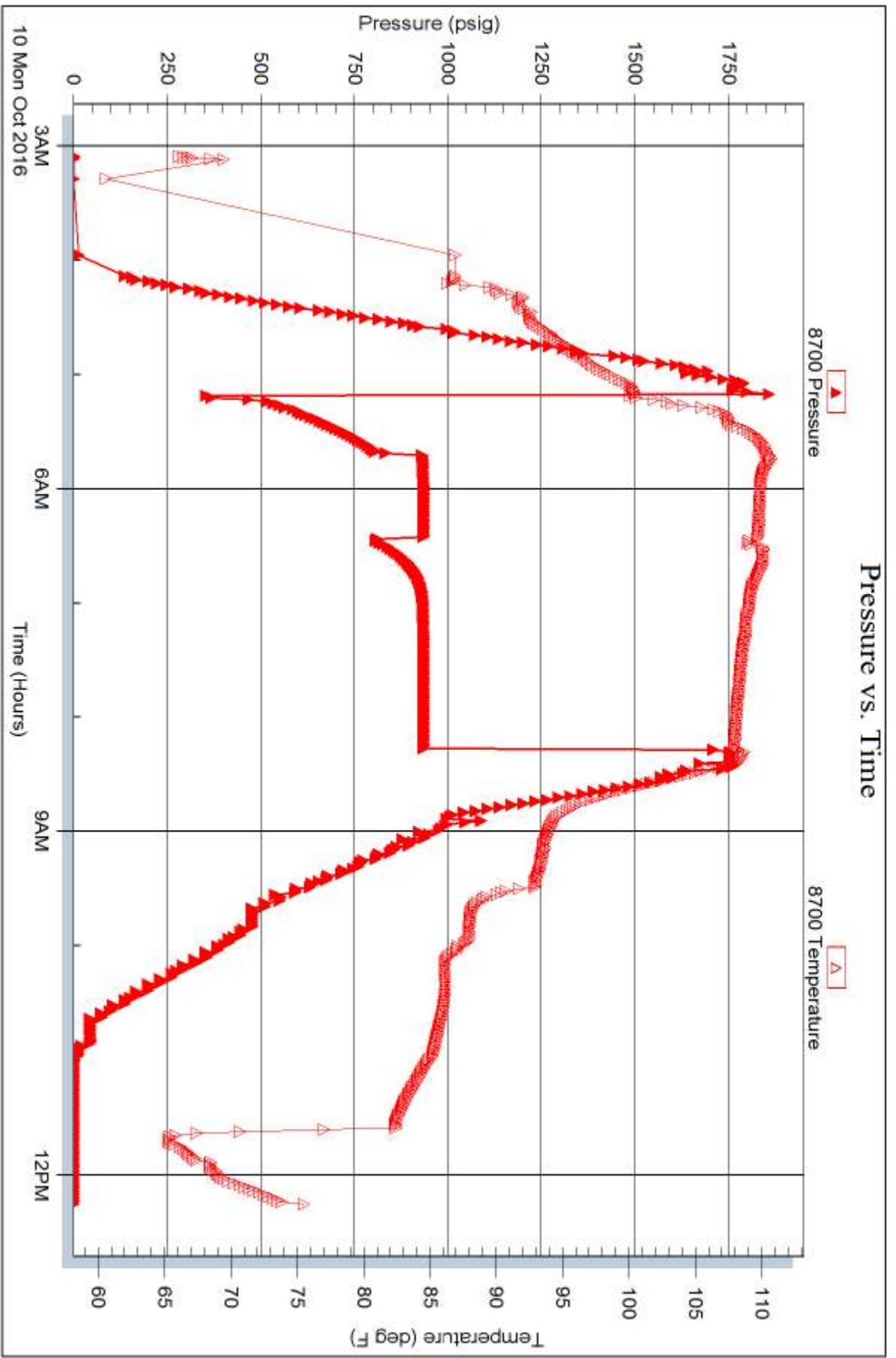


Serial #: 8700

Outside Vess Oil Corporation

Earl Sutor #11

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 64747

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