



## DRILL STEM TEST REPORT

Prepared For: **Vess Oil Corporation**

1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619

ATTN: Dylan Klaus, Roger M

**Comeau #2**

**7-10s-16w Rooks,KS**

Start Date: 2016.10.27 @ 17:10:27

End Date: 2016.10.28 @ 00:41:06

Job Ticket #: 63526                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.10.31 @ 11:02:16

Vess Oil Corporation  
7-10s-16w Rooks,KS  
Comeau #2  
DST # 1  
Plattsmouth - LKC "F"  
2016.10.27



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vess Oil Corporation  
 1700 Waterfront PKWY  
 Bldg 500  
 Wichita KS 67206-6619  
 ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**

**Comeau #2**

Job Ticket: 63526

**DST#: 1**

Test Start: 2016.10.27 @ 17:10:27

## GENERAL INFORMATION:

Formation: **Plattsmouth - LKC "F"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:29:22  
 Time Test Ended: 00:41:06

Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ray Schwager  
 Unit No: 77

Interval: **3105.00 ft (KB) To 3287.00 ft (KB) (TVD)**  
 Total Depth: 3287.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2131.00 ft (KB)  
 2123.00 ft (CF)  
 KB to GRVCF: 8.00 ft

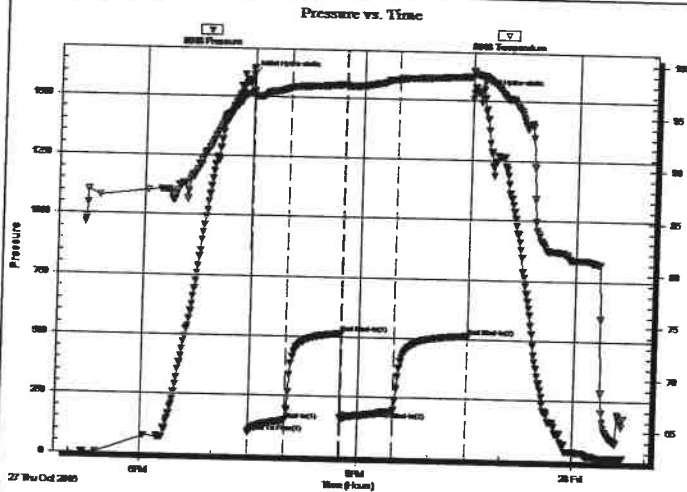
**Serial #: 8018**

**Inside**

Press@RunDepth: 192.53 psig @ 3108.00 ft (KB)  
 Start Date: 2016.10.27 End Date: 2016.10.28  
 Start Time: 17:10:27 End Time: 00:41:06

Capacity: 8000.00 psig  
 Last Calib.: 2016.10.27  
 Time On Btm: 2016.10.27 @ 19:28:22  
 Time Off Btm: 2016.10.27 @ 22:35:21

TEST COMMENT: 30-IFP-w k to a gd bl 1" to 6 1/2" bl  
 45-ISIP-no bo bk  
 45-FFP-surface to 4" blow  
 60-FSIP-no bl bk



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.31	97.00	Initial Hydro-static
1	95.94	96.55	Open To Flow (1)
32	148.28	97.44	Shut-In(1)
77	515.05	97.82	End Shut-In(1)
78	161.14	97.70	Open To Flow (2)
122	192.53	98.40	Shut-In(2)
183	514.52	98.81	End Shut-In(2)
187	1533.36	99.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	HO&GCM 10%G30%O60%M	0.88
62.00	HO&GCM 5%G25%O70%M	0.44
40.00	OCM 15%O85%M	0.35
0.00	Tool Sample 20%G25%O55%M	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**  
**Comeau #2**  
Job Ticket: 63526 **DST#: 1**  
Test Start: 2016.10.27 @ 17:10:27

## GENERAL INFORMATION:

Formation: **Plattsmouth - LKC "F"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 19:29:22  
Time Test Ended: 00:41:06

Test Type: Conventional Bottom Hole (Initial)  
Tester: Ray Schwager  
Unit No: 77

Interval: **3105.00 ft (KB) To 3287.00 ft (KB) (TVD)**  
Total Depth: 3287.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

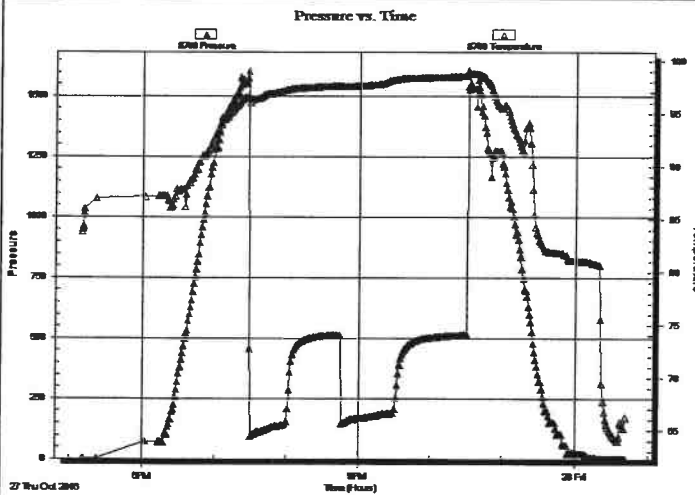
Reference Elevations: 2131.00 ft (KB)  
2123.00 ft (CF)  
KB to GR/CF: 8.00 ft

## Serial #: 8700 Outside

Press@RunDepth: psig @ 3108.00 ft (KB)  
Start Date: 2016.10.27 End Date: 2016.10.28  
Start Time: 17:10:23 End Time: 00:41:02

Capacity: 8000.00 psig  
Last Calib.: 2016.10.27  
Time On Btm:  
Time Off Btm:

TEST COMMENT: 30-IFP-w k to a gd bl 1" to 6 1/2" bl  
45-ISIP-no bo bk  
45-FFP-surface to 4" blow  
60-FSIP-no bl bk



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
124.00	HO&GCM 10%G30%O60%M	0.88
62.00	HO&GCM 5%G25%O70%M	0.44
40.00	OCM 15%O85%M	0.35
0.00	Tool Sample 20%G25%O55%M	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63526

DST#: 1

Test Start: 2016.10.27 @ 17:10:27

### Tool Information

Drill Pipe:	Length: 2870.00 ft	Diameter: 3.80 inches	Volume: 40.26 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 217.00 ft	Diameter: 2.70 inches	Volume: 1.54 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 41.80 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3105.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	182.00 ft			
Tool Length:	206.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3082.00	
Shut In Tool	0.00			3082.00	
Hydraulic tool	5.00			3087.00	
Jars	5.00			3092.00	
Safety Joint	3.00			3095.00	
Packer	5.00			3100.00	24.00 Bottom Of Top Packer
Packer	5.00			3105.00	
Stubb	1.00			3106.00	
Perforations	2.00			3108.00	
Recorder	0.00	8018	Inside	3108.00	
Recorder	0.00	8700	Outside	3108.00	
Blank Spacing	161.00			3269.00	
Perforations	15.00			3284.00	
Bullnose	3.00			3287.00	182.00 Bottom Packers & Anchor

**Total Tool Length: 206.00**



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vess Oil Corporation

**7-10s-16w Rooks,KS**

1700 Waterfront PKWY

**Comeau #2**

Bldg 500

Job Ticket: 63526

**DST#: 1**

Wichita KS 67206-6619

ATTN: Dylan Klaus, Roger M

Test Start: 2016.10.27 @ 17:10:27

### 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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	HO&GCM 10%G30%O60%M	0.878
62.00	HO&GCM 5%G25%O70%M	0.439
40.00	OCM 15%O85%M	0.346
0.00	Tool Sample 20%G25%O55%M	0.000

Total Length: 226.00 ft

Total Volume: 1.663 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

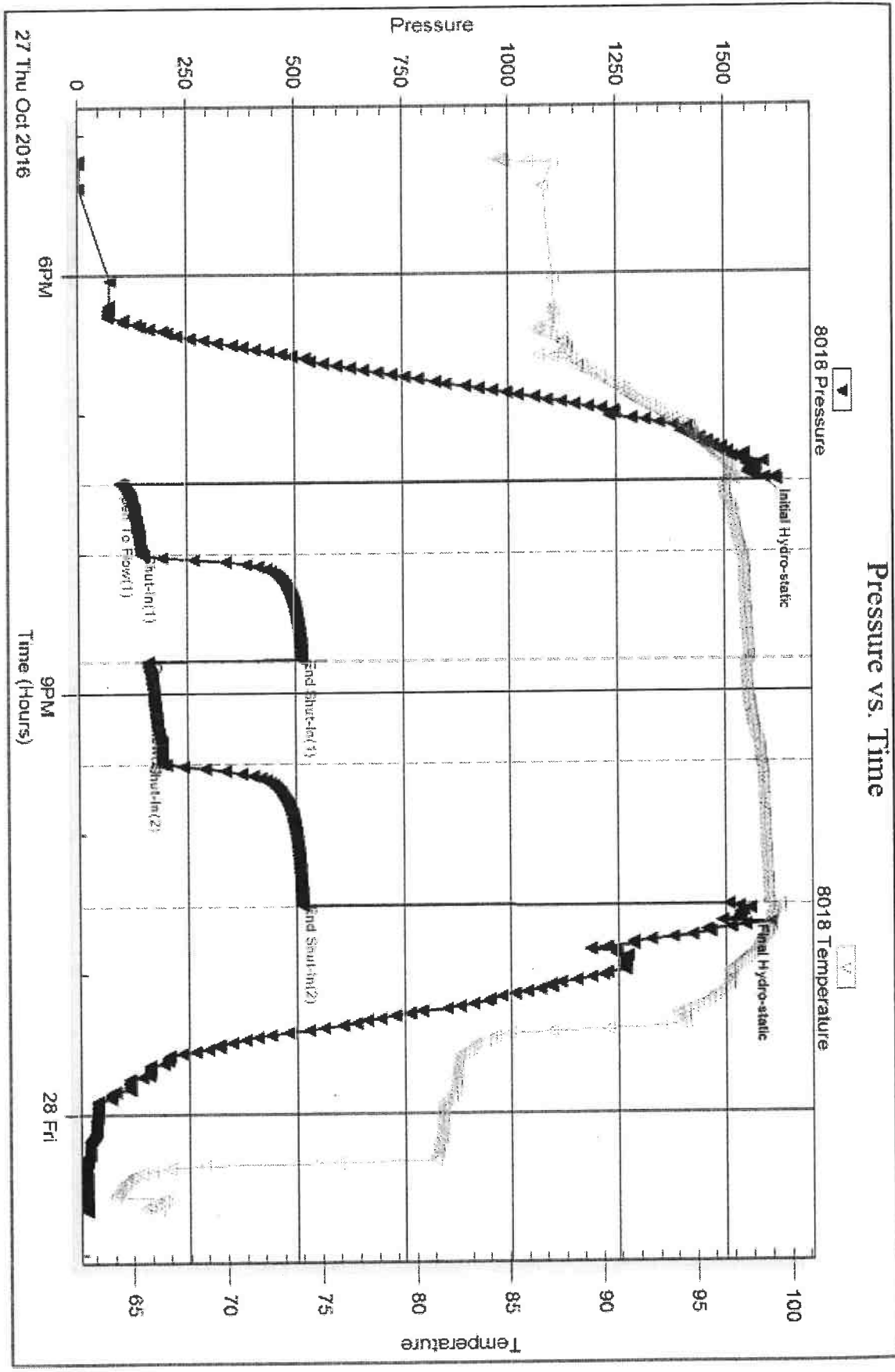
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

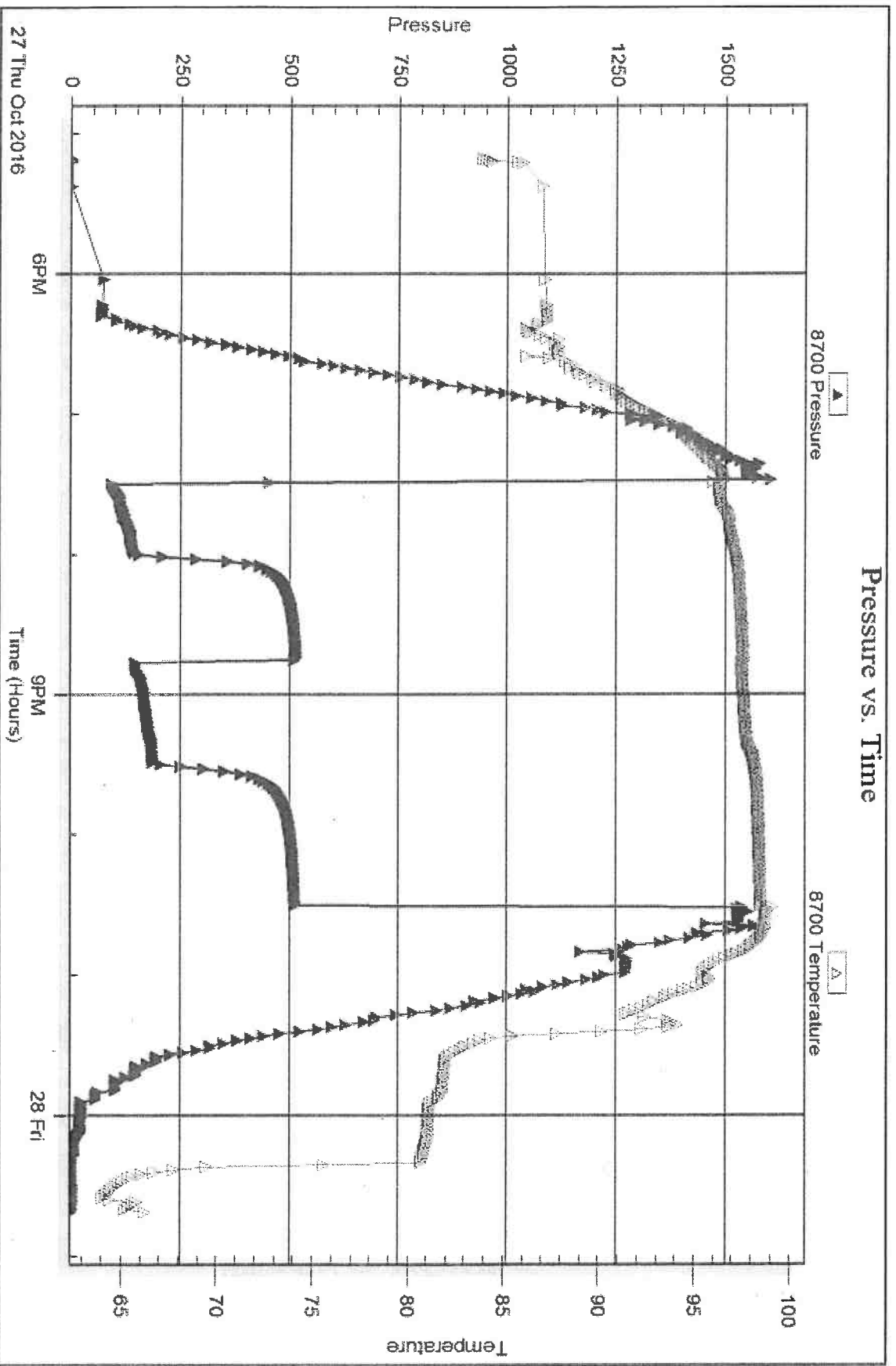


Serial #: 8700

Outside Vess Oil Corporation

Comau #2

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 63526

Printed: 2016.10.31 @ 11:02:18



## DRILL STEM TEST REPORT

Prepared For: **Vess Oil Corporation**

1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619

ATTN: Dylan Klaus, Roger M

### **Comeau #2**

### **7-10s-16w Rooks,KS**

Start Date: 2016.10.28 @ 09:30:10

End Date: 2016.10.28 @ 16:29:19

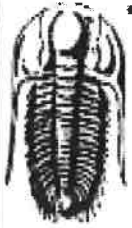
Job Ticket #: 63527                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

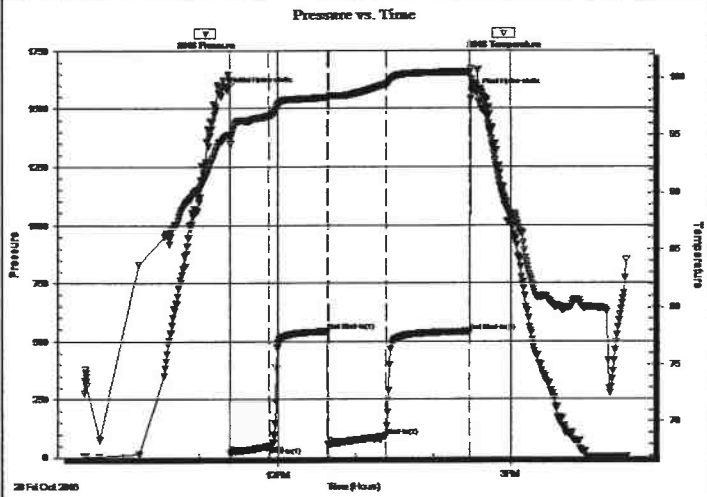
**7-10s-16w Rooks,KS**  
**Comeau #2**  
Job Ticket: 63527      **DST#: 2**  
Test Start: 2016.10.28 @ 09:30:10

## GENERAL INFORMATION:

Formation: **LKC "G"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 11:23:35  
Time Test Ended: 16:29:19  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Ray Schwager  
Unit No: 77  
Interval: **3290.00 ft (KB) To 3305.00 ft (KB) (TVD)**  
Total Depth: 3305.00 ft (KB) (TVD)  
Reference Elevations: 2131.00 ft (KB)  
2123.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
KB to GR/CF: 8.00 ft

**Serial #: 8018      Inside**  
Press@RunDepth: 90.85 psig @ 3291.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2016.10.28      End Date: 2016.10.28      Last Calib.: 2016.10.28  
Start Time: 09:30:10      End Time: 16:29:19      Time On Btm: 2016.10.28 @ 11:21:05  
Time Off Btm: 2016.10.28 @ 14:33:34

**TEST COMMENT:** 30-IFP-w k to BOB blow in 16 min  
45-ISIP-no bl bk  
45-FFP-w k to BOB blow in 10 min  
60-FSIP-2" bl bk



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1577.81	94.93	Initial Hydro-static
3	20.97	94.18	Open To Flow (1)
33	50.16	96.66	Shut-In(1)
78	542.82	98.28	End Shut-In(1)
79	55.68	98.27	Open To Flow (2)
123	90.85	99.41	Shut-In(2)
188	541.84	100.45	End Shut-In(2)
193	1568.42	99.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
42.00	VGMO 50%G10%M40%O	0.30
175.00	CO	1.24
0.00	650' GIP	0.00
0.00	Tool Sample 2%M98%O	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**

**Comeau #2**

Job Ticket: 63527

**DST#: 2**

Test Start: 2016.10.28 @ 09:30:10

## GENERAL INFORMATION:

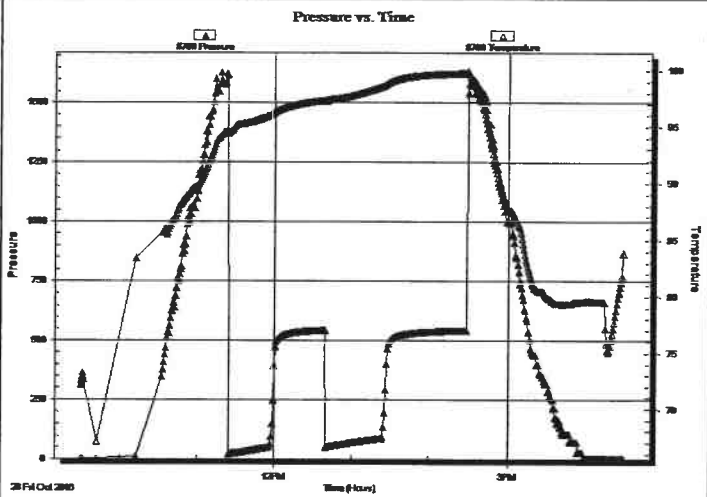
Formation: **LKC "G"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 11:23:35  
 Tester: Ray Schwager  
 Time Test Ended: 16:29:19  
 Unit No: 77  
 Interval: **3290.00 ft (KB) To 3305.00 ft (KB) (TVD)**  
 Reference Elevations: 2131.00 ft (KB)  
 Total Depth: 3305.00 ft (KB) (TVD)  
 2123.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 8.00 ft

**Serial #: 8700**

**Outside**

Press@RunDepth: psig @ 3291.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.10.28 End Date: 2016.10.28 Last Calib.: 2016.10.28  
 Start Time: 09:30:12 End Time: 16:29:21 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 30-IFP-w k to BOB blow in 16 min  
 45-ISIP-no bl bk  
 45-FFP-w k to BOB blow in 10 min  
 60-FSIP-2" bl bk



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
42.00	VGMO 50%G10%M40%O	0.30
175.00	CO	1.24
0.00	650' GIP	0.00
0.00	Tool Sample 2%M98%O	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Vess Oil Corporation

7-10s-16w Rooks,KS

1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

**Comeau #2**  
Job Ticket: 63527      **DST#: 2**  
Test Start: 2016.10.28 @ 09:30:10

### Tool Information

Drill Pipe:	Length: 3061.00 ft	Diameter: 3.80 inches	Volume: 42.94 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 217.00 ft	Diameter: 2.70 inches	Volume: 1.54 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume:</u> 44.48 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3290.00 ft			Final	51000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	39.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3267.00	
Shut In Tool	0.00			3267.00	
Hydraulic tool	5.00			3272.00	
Jars	5.00			3277.00	
Safety Joint	3.00			3280.00	
Packer	5.00			3285.00	24.00      Bottom Of Top Packer
Packer	5.00			3290.00	
Stubb	1.00			3291.00	
Recorder	0.00	8018	Inside	3291.00	
Recorder	0.00	8700	Outside	3291.00	
Perforations	11.00			3302.00	
Bullnose	3.00			3305.00	15.00      Bottom Packers & Anchor

**Total Tool Length: 39.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**

**Comeau #2**

Job Ticket: 63527

**DST#: 2**

Test Start: 2016.10.28 @ 09:30:10

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 50.00 sec/qt  
Water Loss: 7.35 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 5700.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: 39 deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
42.00	VGMO 50%G10%M40%O	0.297
175.00	CO	1.239
0.00	650' GIP	0.000
0.00	Tool Sample 2%M98%O	0.000

Total Length: 217.00 ft      Total Volume: 1.536 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8018

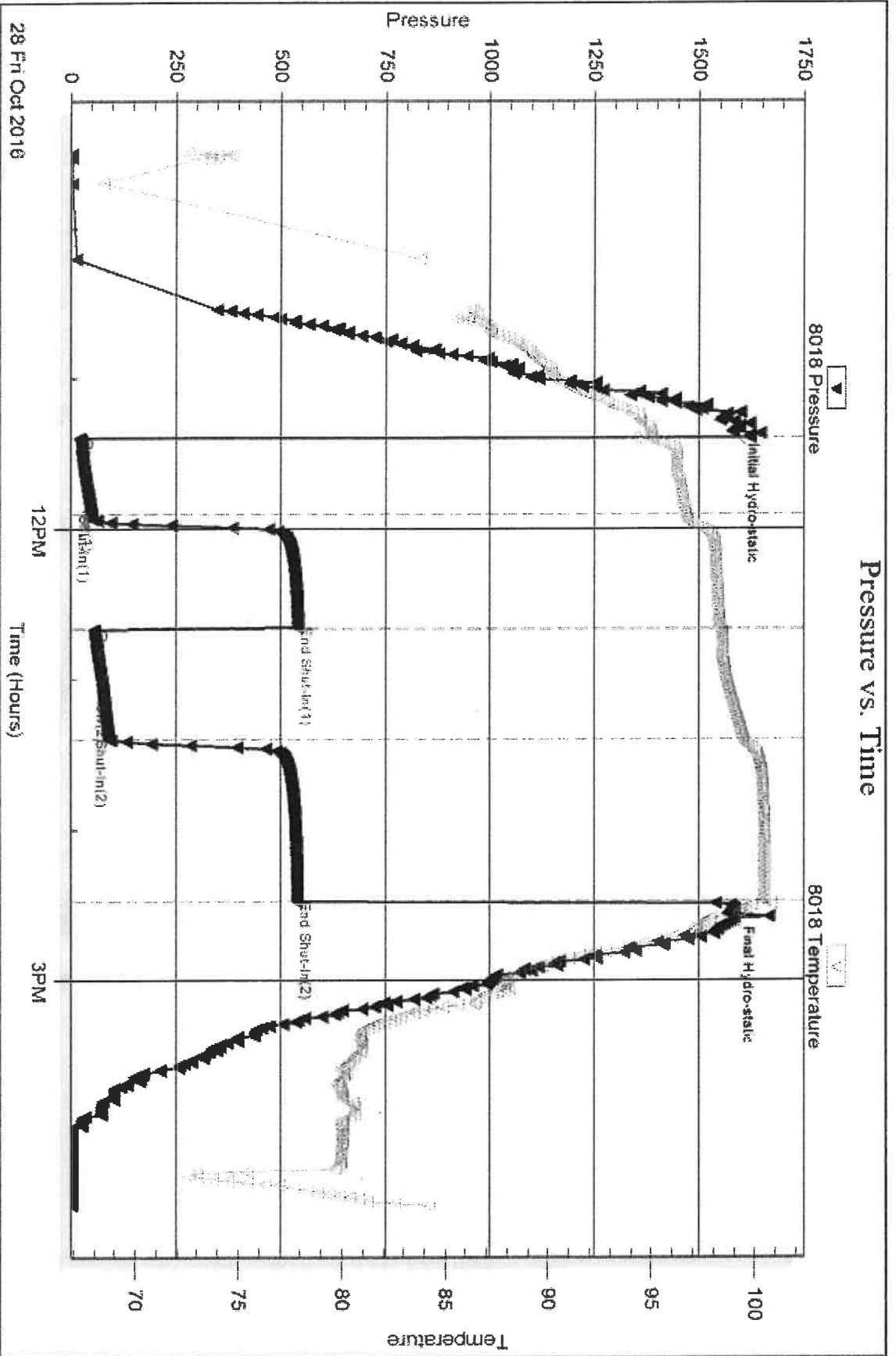
Inside

Vess. Oil Corporation

Comeau #2

DST Test Number: 2

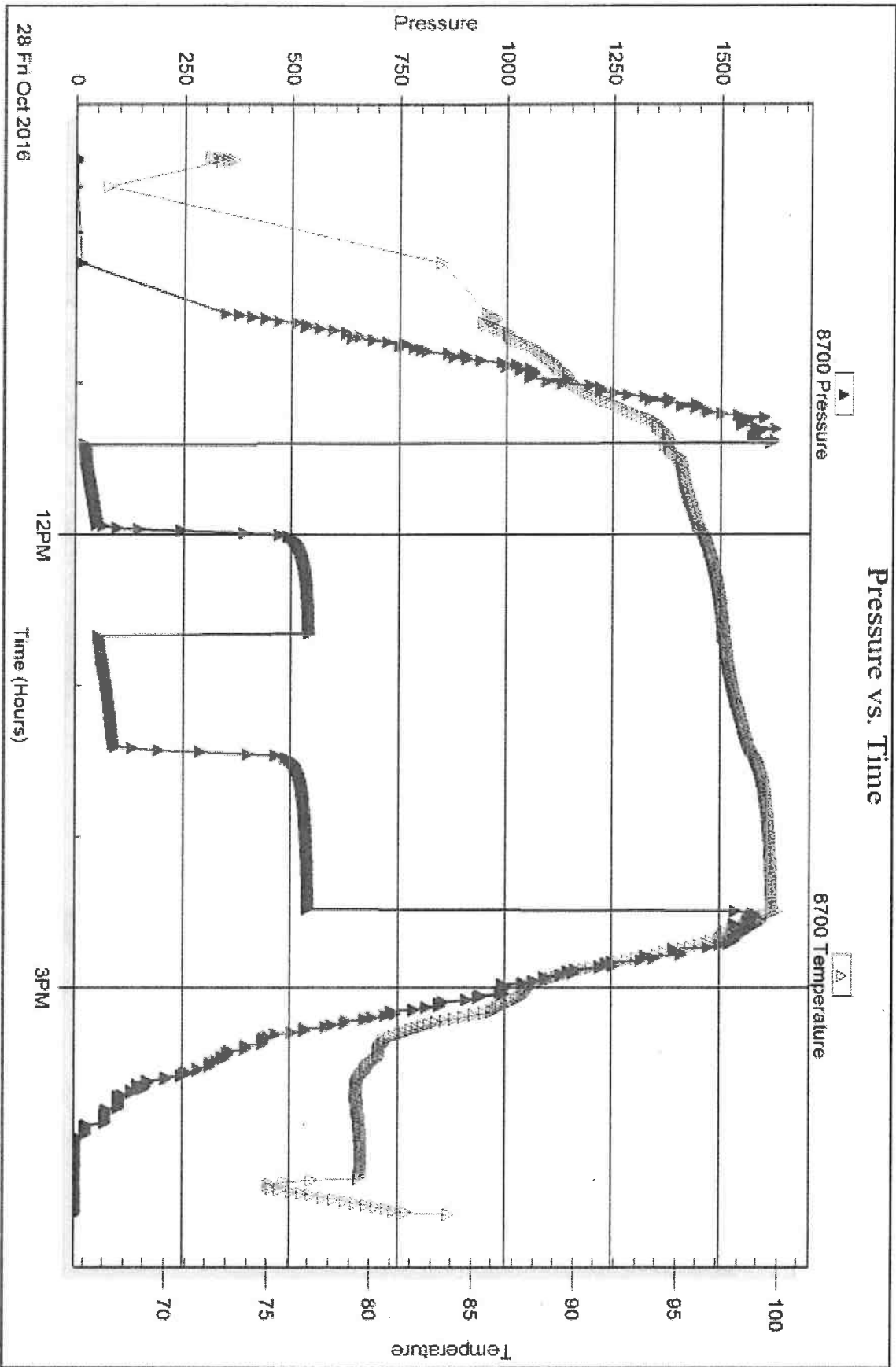
### Pressure vs. Time



Trioble Testing, Inc

Ref. No: 63927

Printed: 2016-10-31 @ 11:01:50





## DRILL STEM TEST REPORT

Prepared For: **Vess Oil Corporation**

1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619

ATTN: Dylan Klaus, Roger M

### **Comeau #2**

### **7-10s-16w Rooks,KS**

Start Date: 2016.10.29 @ 09:10:19

End Date: 2016.10.29 @ 16:13:58

Job Ticket #: 63528                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.10.31 @ 11:01:25

Vess Oil Corporation

7-10s-16w Rooks,KS

Comeau #2

DST # 3

LKC base

2016.10.29



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Vess Oil Corporation  
 1700 Waterfront PKWY  
 Bldg 500  
 Wichita KS 67206-6619  
 ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**

**Comeau #2**

Job Ticket: 63528

**DST#: 3**

Test Start: 2016.10.29 @ 09:10:19

## GENERAL INFORMATION:

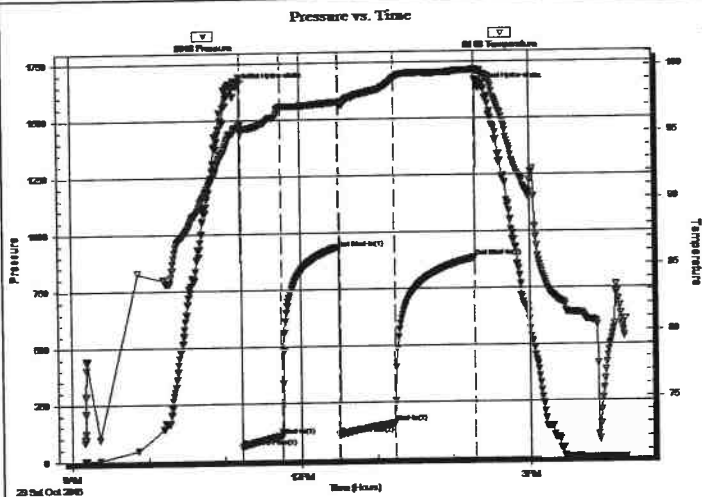
Formation: **LKC base**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:13:59  
 Time Test Ended: 16:13:58  
 Interval: **3313.00 ft (KB) To 3450.00 ft (KB) (TVD)**  
 Total Depth: 3450.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ray Schwager  
 Unit No: 77  
 Reference Elevations: 2131.00 ft (KB)  
 2123.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8018

Inside

Press@RunDepth: 158.38 psig @ 3318.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.10.29 End Date: 2016.10.29 Last Calib.: 2016.10.29  
 Start Time: 09:10:19 End Time: 16:13:58 Time On Btm: 2016.10.29 @ 11:11:29  
 Time Off Btm: 2016.10.29 @ 14:20:13

TEST COMMENT: 30-IFP-wk to a gd bl, 1/2" to 6' bl  
 45-ISIP-no bl bk  
 45-FFP-wk bl thru-out surface to 3" blow  
 60-FSIP-no bl bk



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.37	95.44	Initial Hydro-static
3	59.51	95.02	Open To Flow (1)
34	105.95	96.98	Shut-In(1)
79	934.09	97.32	End Shut-In(1)
79	110.71	97.05	Open To Flow (2)
123	158.38	99.04	Shut-In(2)
186	884.77	99.66	End Shut-In(2)
189	1634.74	99.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
191.00	WM 20%W80%M w/show of oil ~1%oil	1.35
0.00	Tool Sample 1%O10%W89%M	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**

**Comeau #2**

Job Ticket: 63528

**DST#: 3**

Test Start: 2016.10.29 @ 09:10:19

## GENERAL INFORMATION:

Formation: **LKC base**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 11:13:59  
Time Test Ended: 16:13:58

Test Type: Conventional Bottom Hole (Reset)  
Tester: Ray Schwager  
Unit No: 77

Interval: **3313.00 ft (KB) To 3450.00 ft (KB) (TVD)**  
Total Depth: 3450.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2131.00 ft (KB)  
2123.00 ft (CF)  
KB to GR/CF: 8.00 ft

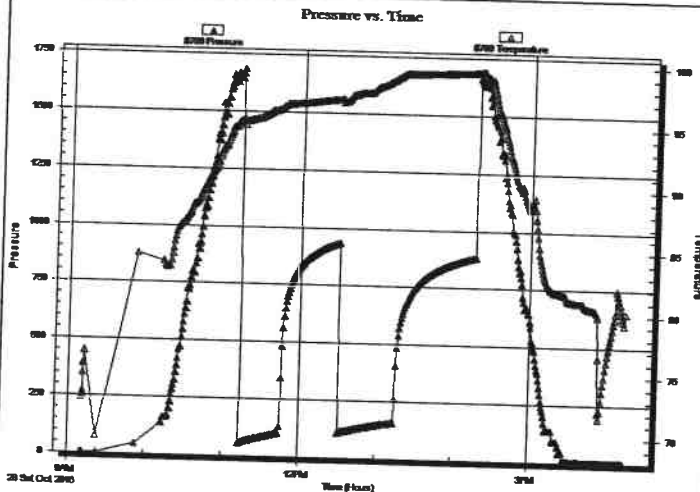
**Serial #: 8700**

**Outside**

Press@RunDepth: psig @ 3318.00 ft (KB)  
Start Date: 2016.10.29 End Date: 2016.10.29  
Start Time: 09:10:24 End Time: 16:14:03

Capacity: 8000.00 psig  
Last Calib.: 2016.10.29  
Time On Btm:  
Time Off Btm:

TEST COMMENT: 30-IFP-w k to a gd bl, 1/2" to 6' bl  
45-ISIP-no bl bk  
45-FFP-w k bl thru-out surface to 3" blow  
60-FSIP-no bl bk



## PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
191.00	WM 20%W80%M w/show of oil	~1%oil 1.35
0.00	Tool Sample 1%O10%W89%M	0.00

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63528

DST#: 3

Test Start: 2016.10.29 @ 09:10:19

### Tool Information

Drill Pipe:	Length: 3092.00 ft	Diameter: 3.80 inches	Volume: 43.37 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 217.00 ft	Diameter: 2.70 inches	Volume: 1.54 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 44.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3313.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	137.00 ft			
Tool Length:	161.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3290.00	
Shut In Tool	0.00			3290.00	
Hydraulic tool	5.00			3295.00	
Jars	5.00			3300.00	
Safety Joint	3.00			3303.00	
Packer	5.00			3308.00	24.00 Bottom Of Top Packer
Packer	5.00			3313.00	
Stubb	1.00			3314.00	
Perforations	4.00			3318.00	
Recorder	0.00	8018	Inside	3318.00	
Recorder	0.00	8700	Outside	3318.00	
Blank Spacing	97.00			3415.00	
Perforations	32.00			3447.00	
Bullhose	3.00			3450.00	137.00 Bottom Packers & Anchor

**Total Tool Length: 161.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vess Oil Corporation

7-10s-16w Rooks,KS

1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619

**Comeau #2**

Job Ticket: 63528

**DST#: 3**

ATTN: Dylan Klaus, Roger M

Test Start: 2016.10.29 @ 09:10:19

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.37 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 5700.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

deg API

Water Salinity: 18000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
191.00	WM 20%W80%M w/show of oil ~1%oil	1.353
0.00	Tool Sample 1%O10%W89%M	0.000

Total Length: 191.00 ft      Total Volume: 1.353 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .36@65F

Serial #: 8018

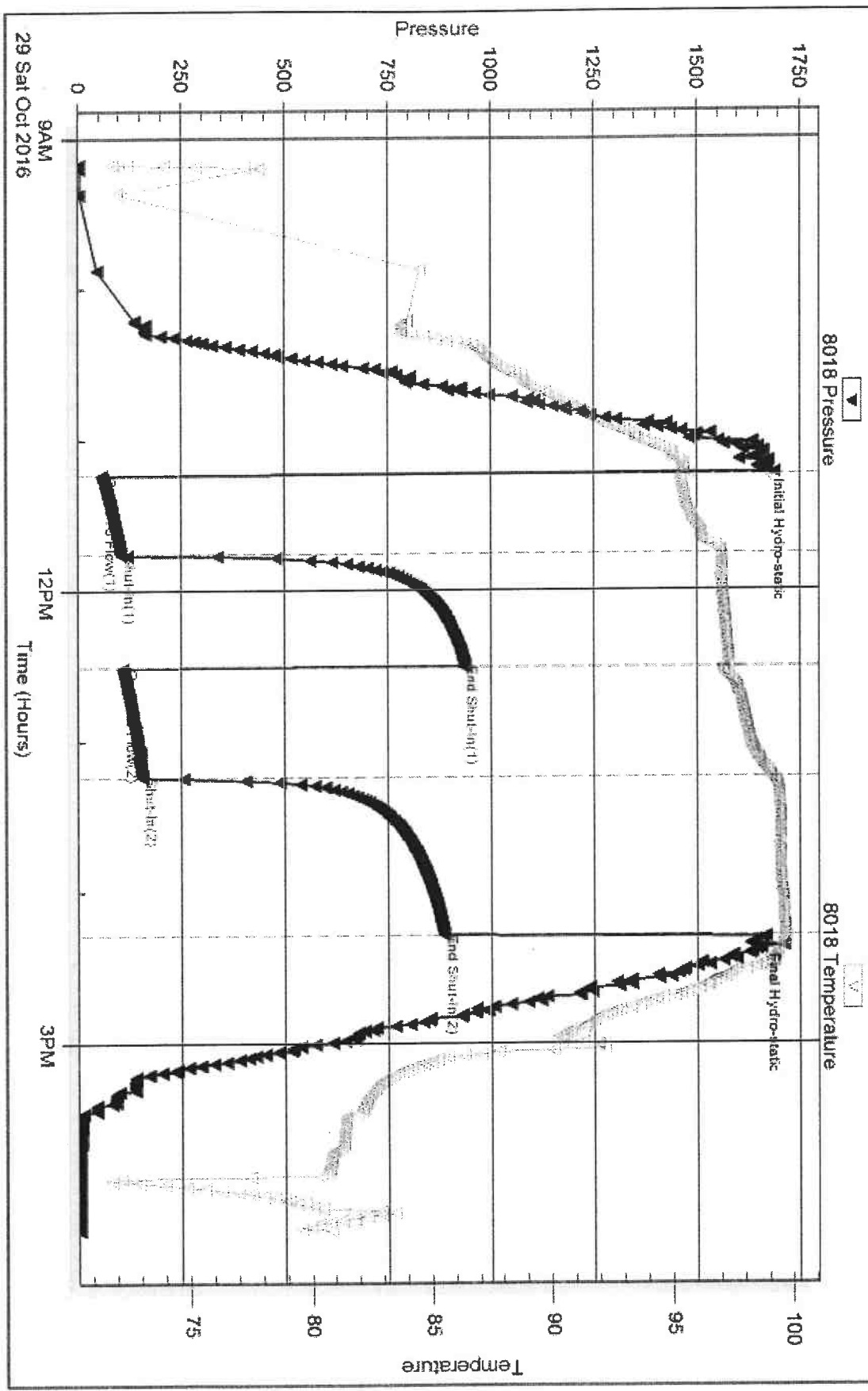
Inside

Vess Off Corporation

Comau #2

DST Test Number: 3

### Pressure vs. Time



Tribble Testing, Inc

Ref. No: 63528

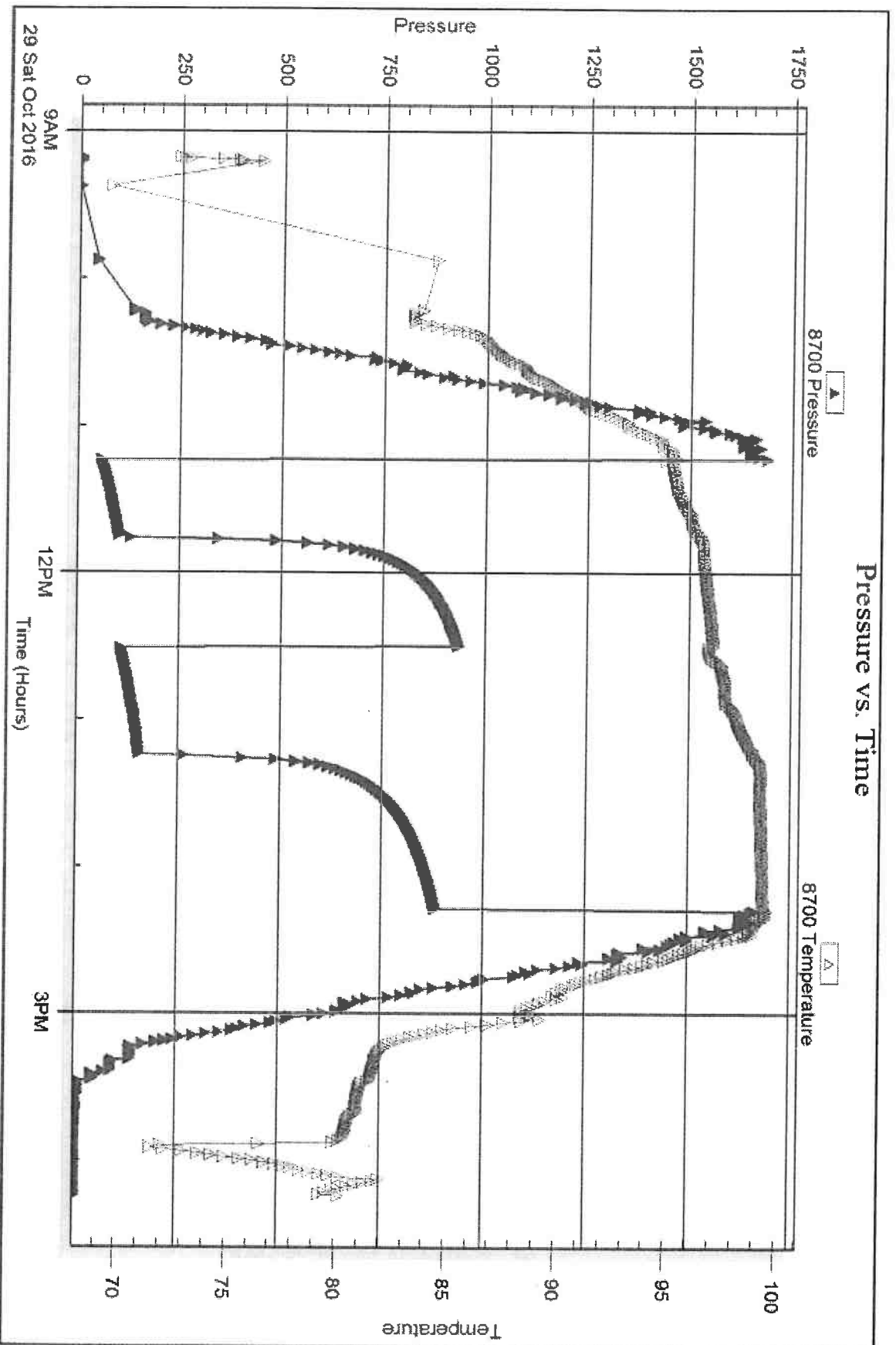
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Serial #: 8700

Outside Vess Oil Corporation

Comau #2

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 63528

Printed: 2016 10 31 @ 11:01:26



## DRILL STEM TEST REPORT

Prepared For: **Vess Oil Corporation**

1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619

ATTN: Dylan Klaus, Roger M

### **Comeau #2**

### **7-10s-16w Rooks,KS**

Start Date: 2016.10.30 @ 13:20:07

End Date: 2016.10.30 @ 20:16:01

Job Ticket #: 63529                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

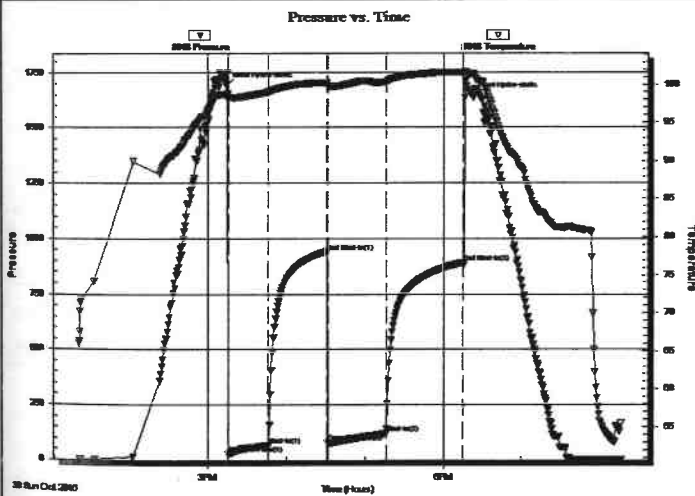
**7-10s-16w Rooks,KS**  
**Comeau #2**  
Job Ticket: 63529 **DST#: 4**  
Test Start: 2016.10.30 @ 13:20:07

### GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 15:15:17  
Time Test Ended: 20:16:01  
Interval: **3428.00 ft (KB) To 3575.00 ft (KB) (TVD)**  
Total Depth: 3575.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Ray Schwager  
Unit No: 77  
Reference Elevations: 2131.00 ft (KB)  
2123.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8018** **Inside**  
Press@RunDepth: 119.88 psig @ 3430.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2016.10.30 End Date: 2016.10.30 Last Calib.: 2016.10.30  
Start Time: 13:20:07 End Time: 20:16:01 Time On Btm: 2016.10.30 @ 15:13:47  
Time Off Btm: 2016.10.30 @ 18:22:01

**TEST COMMENT:** 30-IFP-w k to a fr bl 1/2" to 5" bl  
45-ISIP-no bl bk  
45-FFP-w k bl thru-out surface to 2" bl  
60-FSIP-no bl bk



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1689.63	98.72	Initial Hydro-static
2	29.00	98.06	Open To Flow (1)
33	69.27	99.00	Shut-In(1)
77	94.05	100.21	End Shut-In(1)
78	82.54	99.67	Open To Flow (2)
123	119.88	100.35	Shut-In(2)
182	892.07	101.52	End Shut-In(2)
189	1639.62	101.38	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW 30%W70%W	0.88
77.00	WM 25%W75%M	0.55
0.00	Tool sample 30%W70%M ~>1%oil	0.00

\* Recovery from multiple tests

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Vess Oil Corporation  
 1700 Waterfront PKWY  
 Bldg 500  
 Wichita KS 67206-6619  
 ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**

**Comeau #2**

Job Ticket: 63529

**DST#: 4**

Test Start: 2016.10.30 @ 13:20:07

### GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:15:17

Time Test Ended: 20:16:01

Interval: **3428.00 ft (KB) To 3575.00 ft (KB) (TVD)**

Total Depth: 3575.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 77

Reference Elevations: 2131.00 ft (KB)

2123.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8700**

**Outside**

Press@RunDepth: psig @ 3430.00 ft (KB)

Start Date: 2016.10.30

End Date:

2016.10.30

Capacity:

8000.00 psig

Last Calib.:

2016.10.30

Start Time: 13:21:01

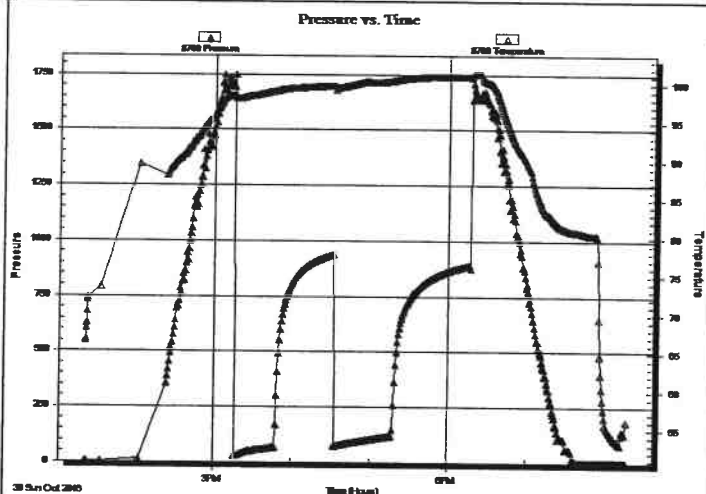
End Time:

20:16:55

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IFP-w k to a fr bl 1/2" to 5" bl  
 45-ISIP-no bl bk  
 45-FFP-w k bl thru-out surface to 2" bl  
 60-FSIP-no bl bk



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW 30%M70%W	0.88
77.00	WM 25%W75%M	0.55
0.00	Tool sample 30%W70%M ~>1%oil	0.00

\* Recovery from multiple tests

### Gas Rates

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





**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Vess Oil Corporation

**7-10s-16w Rooks,KS**

1700 Waterfront PKWY

**Comeau #2**

Bldg 500

Job Ticket: 63529

**DST#: 4**

Wichita KS 67206-6619

Test Start: 2016.10.30 @ 13:20:07

ATTN: Dylan Klaus, Roger M

### Tool Information

Drill Pipe:	Length: 3217.00 ft	Diameter: 3.80 inches	Volume: 45.13 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 217.00 ft	Diameter: 2.70 inches	Volume: 1.54 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 46.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3428.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	147.00 ft			
Tool Length:	171.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3405.00	
Shut In Tool	0.00			3405.00	
Hydraulic tool	5.00			3410.00	
Jars	5.00			3415.00	
Safety Joint	3.00			3418.00	
Packer	5.00			3423.00	24.00 Bottom Of Top Packer
Packer	5.00			3428.00	
Stubb	1.00			3429.00	
Perforations	1.00			3430.00	
Recorder	0.00	8018	Inside	3430.00	
Recorder	0.00	8700	Outside	3430.00	
Blank Spacing	129.00			3559.00	
Perforations	13.00			3572.00	
Bullnose	3.00			3575.00	147.00 Bottom Packers & Anchor

**Total Tool Length: 171.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Vess Oil Corporation  
1700 Waterfront PKWY  
Bldg 500  
Wichita KS 67206-6619  
ATTN: Dylan Klaus, Roger M

**7-10s-16w Rooks,KS**  
**Comeau #2**  
Job Ticket: 63529      **DST#: 4**  
Test Start: 2016.10.30 @ 13:20:07

### 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:	34000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5700.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	MW 30%M70%W	0.878
77.00	WM 25%W75%M	0.545
0.00	Tool sample 30%W70%M ~>1%oil	0.000

Total Length: 201.00 ft      Total Volume: 1,423 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: .18@74F

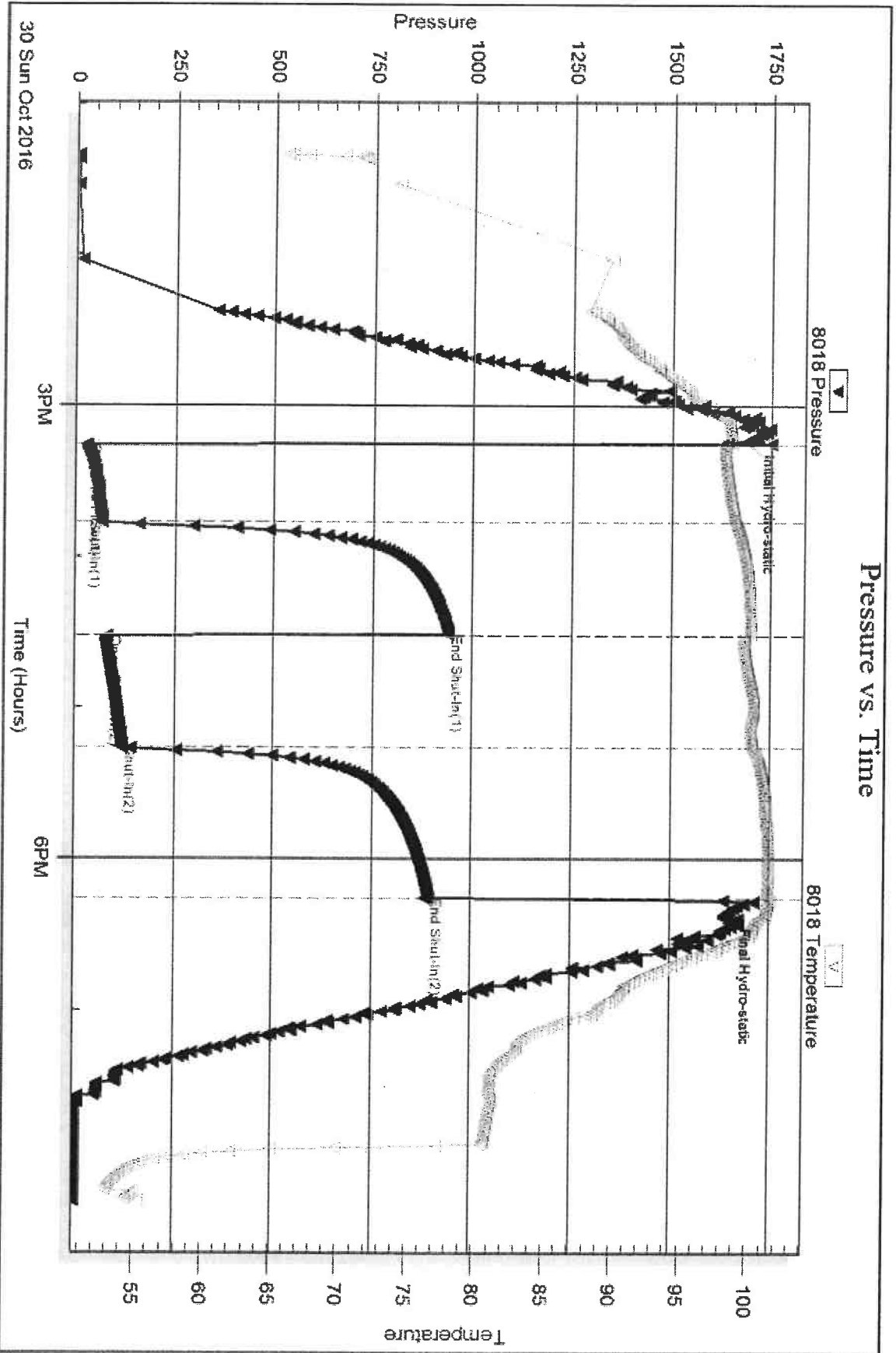
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Inside

Vess Oil Corporation

Comau #2

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 63529

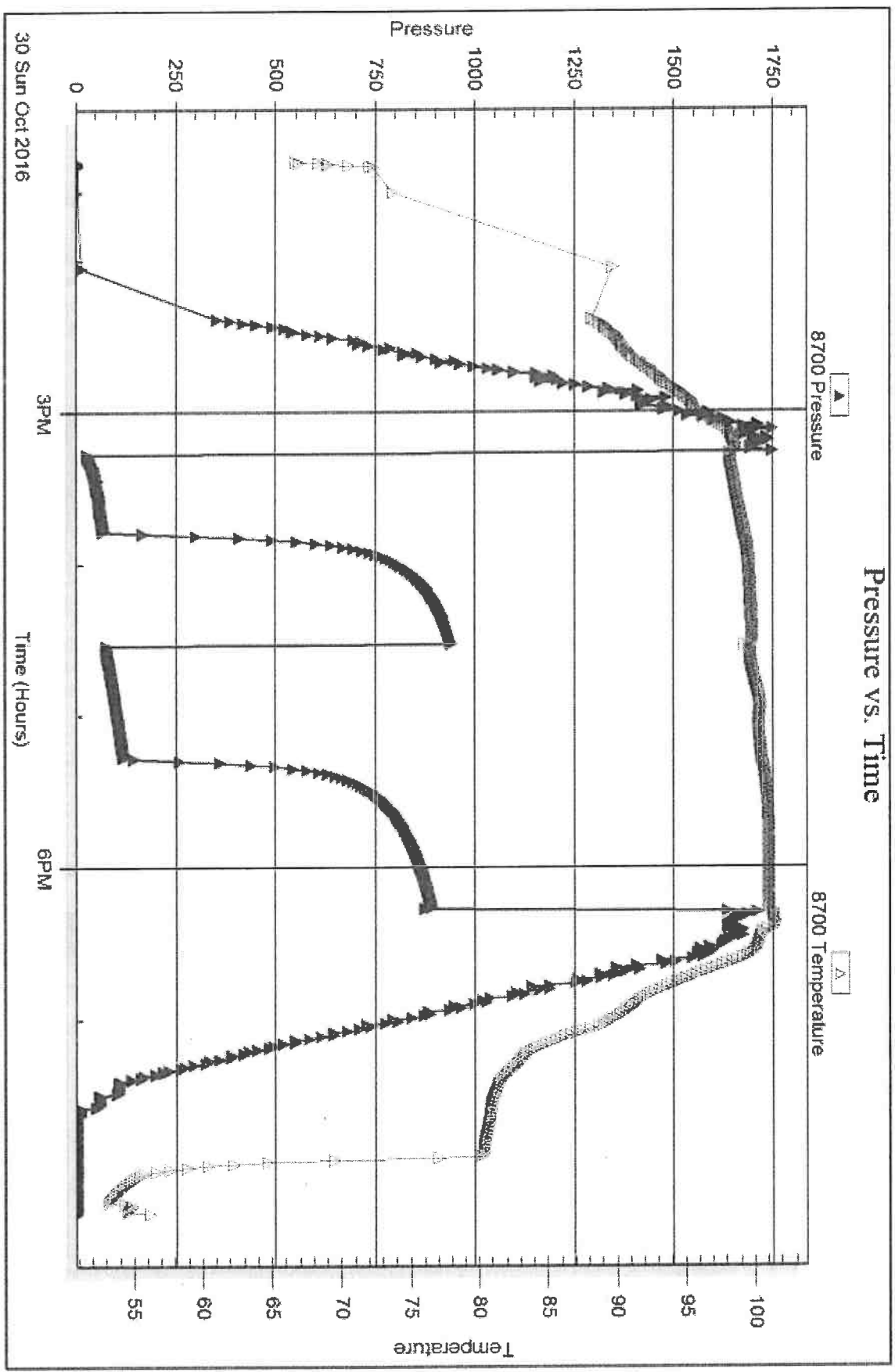
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Serial #: 8700

Outside Vess Oil Corporation

Comsau #2

DST Test Number: 4



Trioble Testing, Inc

Ref. No: 63529

Printed: 2016 10 31 @ 11:00:14