



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Heidi #1-31

31 18s 17w Rush,KS

Start Date: 2014.10.30 @ 07:00:00

End Date: 2014.10.30 @ 12:16:00

Job Ticket #: 60610 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.11.05 @ 14:44:13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60610

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.10.30 @ 07:00:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:10:00

Time Test Ended: 12:16:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jim Svaty

Unit No: 76

Interval: 3737.00 ft (KB) To 3812.00 ft (KB) (TVD)

Reference Elevations: 2044.00 ft (KB)

Total Depth: 3812.00 ft (KB) (TVD)

2036.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6668 Outside

Press@RunDepth: psig @ 3745.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.30

End Date:

2014.10.30

Last Calib.:

2014.10.30

Start Time: 07:00:02

End Time:

12:16:00

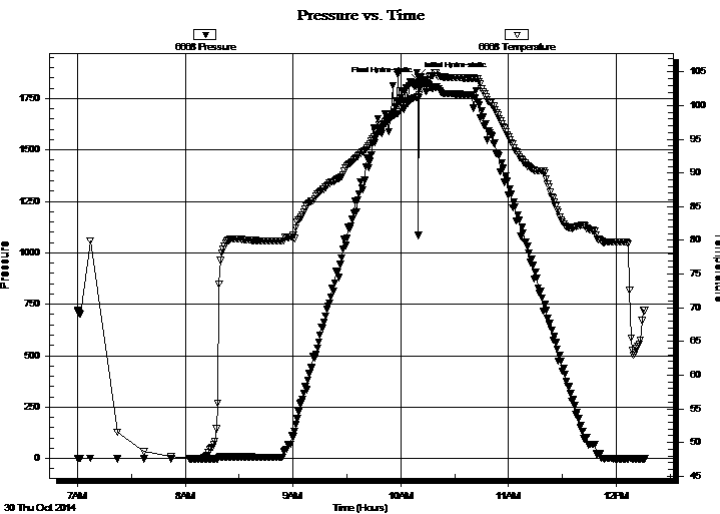
Time On Btm:

2014.10.30 @ 10:09:30

Time Off Btm:

2014.10.30 @ 10:10:00

TEST COMMENT: Missrun Packer Failed.....



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1854.85	101.28	Initial Hydro-static
1	1831.64	101.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	Mud 100%	1.83

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60610

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.10.30 @ 07:00:00

Tool Information

Drill Pipe:	Length: 3710.00 ft	Diameter: 3.80 inches	Volume: 52.04 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 52.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3737.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	75.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3717.00	
Shut In Tool	5.00			3722.00	
Hydraulic tool	5.00			3727.00	
Packer	5.00			3732.00	21.00 Bottom Of Top Packer
Packer	5.00			3737.00	
Stubb	1.00			3738.00	
Perforations	6.00			3744.00	
Change Over Sub	1.00			3745.00	
Recorder	0.00	8789	Inside	3745.00	
Recorder	0.00	6668	Outside	3745.00	
Blank Spacing	63.00			3808.00	
Change Over Sub	1.00			3809.00	
Bullnose	3.00			3812.00	75.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60610

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.10.30 @ 07:00:00

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:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.50 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	Mud 100%	1.831

Total Length: 150.00 ft Total Volume: 1.831 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

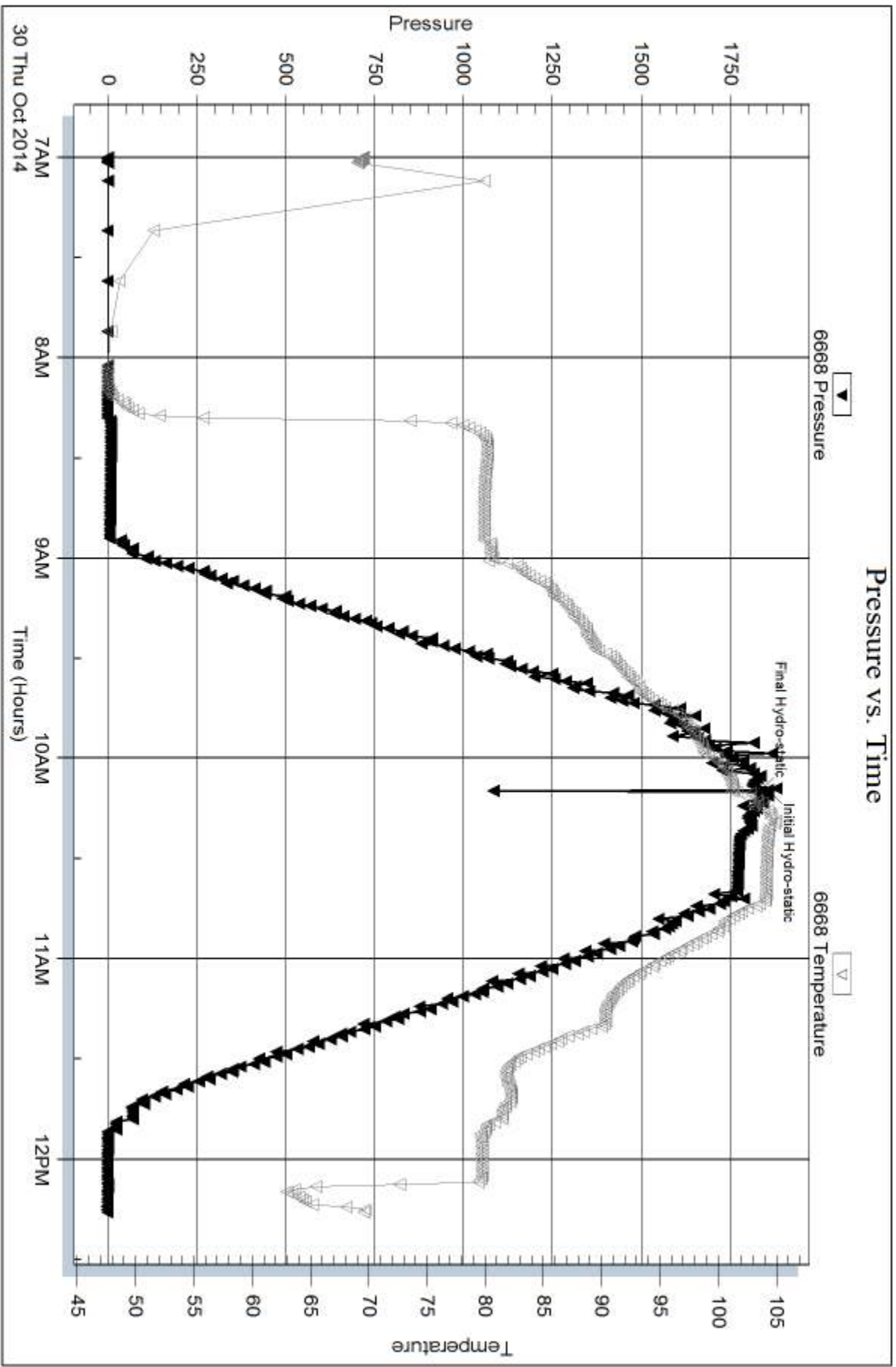
Recovery Comments:

Serial #: 6668

Outside Dow nrg-Nelson Oil Co Inc

Heidi #1-31

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60610

Printed: 2014.11.05 @ 14:44:14

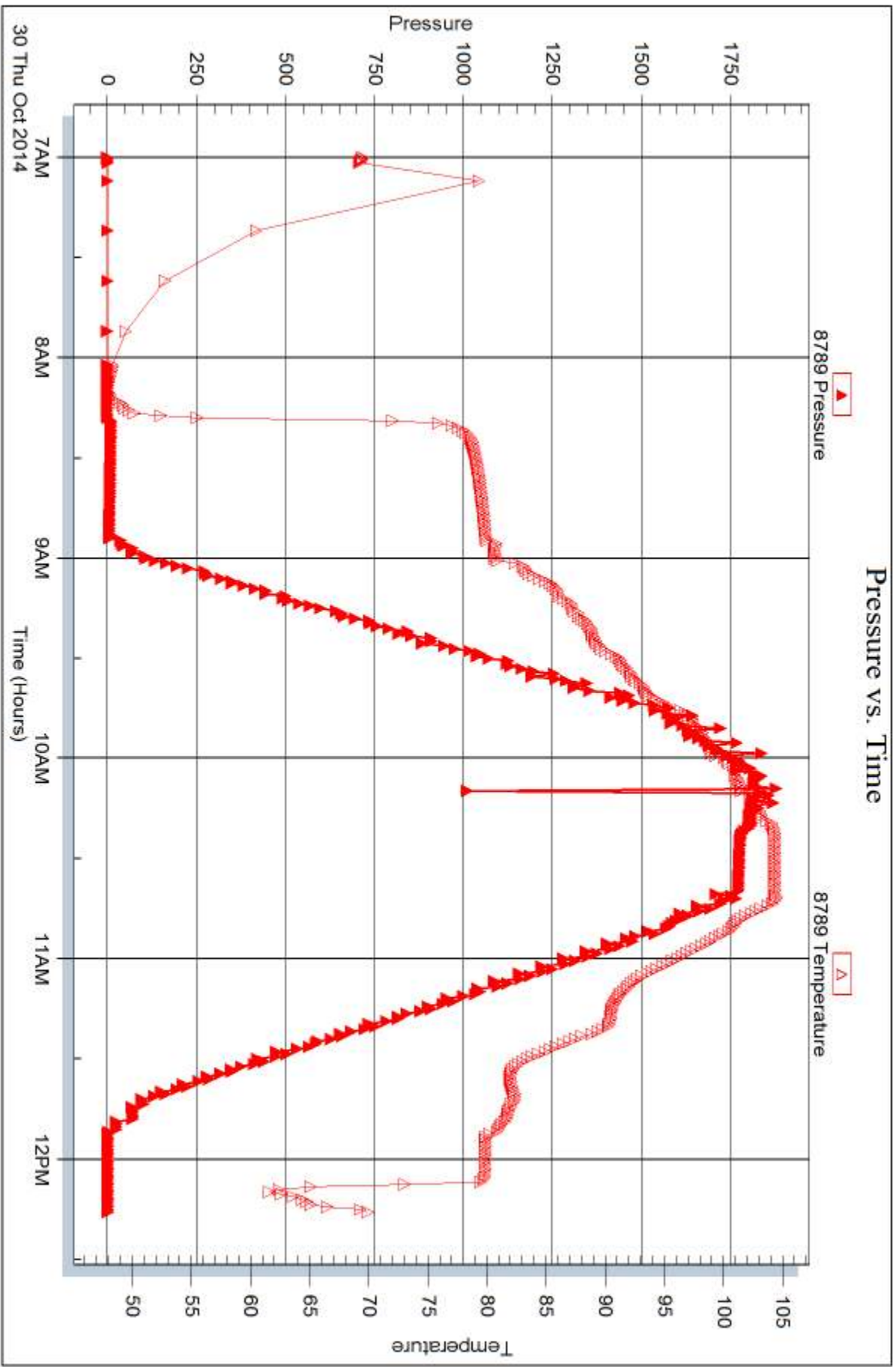
Serial #: 8789

Inside

Dow nrg-Nelson Oil Co Inc

Heidi #1-31

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60610

Printed: 2014.11.05 @ 14:44:14



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Heidi #1-31

31 18s 17w Rush,KS

Start Date: 2014.10.30 @ 12:39:00

End Date: 2014.10.30 @ 19:29:00

Job Ticket #: 60611 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.11.05 @ 14:43:52



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60611

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.10.30 @ 12:39:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:07:00

Time Test Ended: 19:29:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3682.00 ft (KB) To 3812.00 ft (KB) (TVD)

Reference Elevations: 2044.00 ft (KB)

Total Depth: 3812.00 ft (KB) (TVD)

2036.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6668 Outside

Press@RunDepth: 128.47 psig @ 3689.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.30

End Date:

2014.10.30

Last Calib.:

2014.10.30

Start Time: 12:39:02

End Time:

19:29:00

Time On Btm:

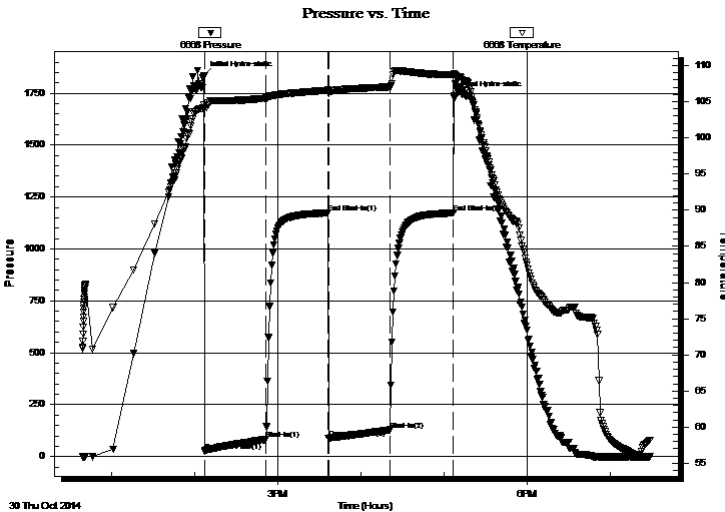
2014.10.30 @ 14:06:45

Time Off Btm:

2014.10.30 @ 17:07:15

TEST COMMENT: 45-IFP- Surface Blow Building to 7 3/4"
45-ISIP- No Blow
45-FFP- Surface Blow Building to 9"
45-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1836.76	104.52	Initial Hydro-static
1	24.16	104.12	Open To Flow (1)
45	82.33	105.47	Shut-In(1)
90	1173.22	106.58	End Shut-In(1)
90	89.22	106.10	Open To Flow (2)
135	128.47	107.05	Shut-In(2)
180	1173.52	108.71	End Shut-In(2)
181	1736.82	108.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OSWCM 3%o 32%w 65%m	1.49
63.00	OSM 3%o 97%m	0.88
55.00	OCM 30%o 70%m	0.77
3.00	CO 100%	0.04

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60611

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.10.30 @ 12:39:00

Tool Information

Drill Pipe:	Length: 3647.00 ft	Diameter: 3.80 inches	Volume: 51.16 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 51.31 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	3682.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	130.00 ft				
Tool Length:	151.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3662.00	
Shut In Tool	5.00			3667.00	
Hydraulic tool	5.00			3672.00	
Packer	5.00			3677.00	21.00 Bottom Of Top Packer
Packer	5.00			3682.00	
Stubb	1.00			3683.00	
Perforations	6.00			3689.00	
Recorder	0.00	8789	Inside	3689.00	
Recorder	0.00	6668	Outside	3689.00	
Perforations	23.00			3712.00	
Change Over Sub	1.00			3713.00	
Blank Spacing	95.00			3808.00	
Change Over Sub	1.00			3809.00	
Bullnose	3.00			3812.00	130.00 Bottom Packers & Anchor

Total Tool Length: 151.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60611

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.10.30 @ 12:39:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

14000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.50 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
126.00	OSWCM 3%o 32%w 65%m	1.494
63.00	OSM 3%o 97%m	0.884
55.00	OCM 30%o 70%m	0.772
3.00	CO 100%	0.042

Total Length: 247.00 ft

Total Volume: 3.192 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

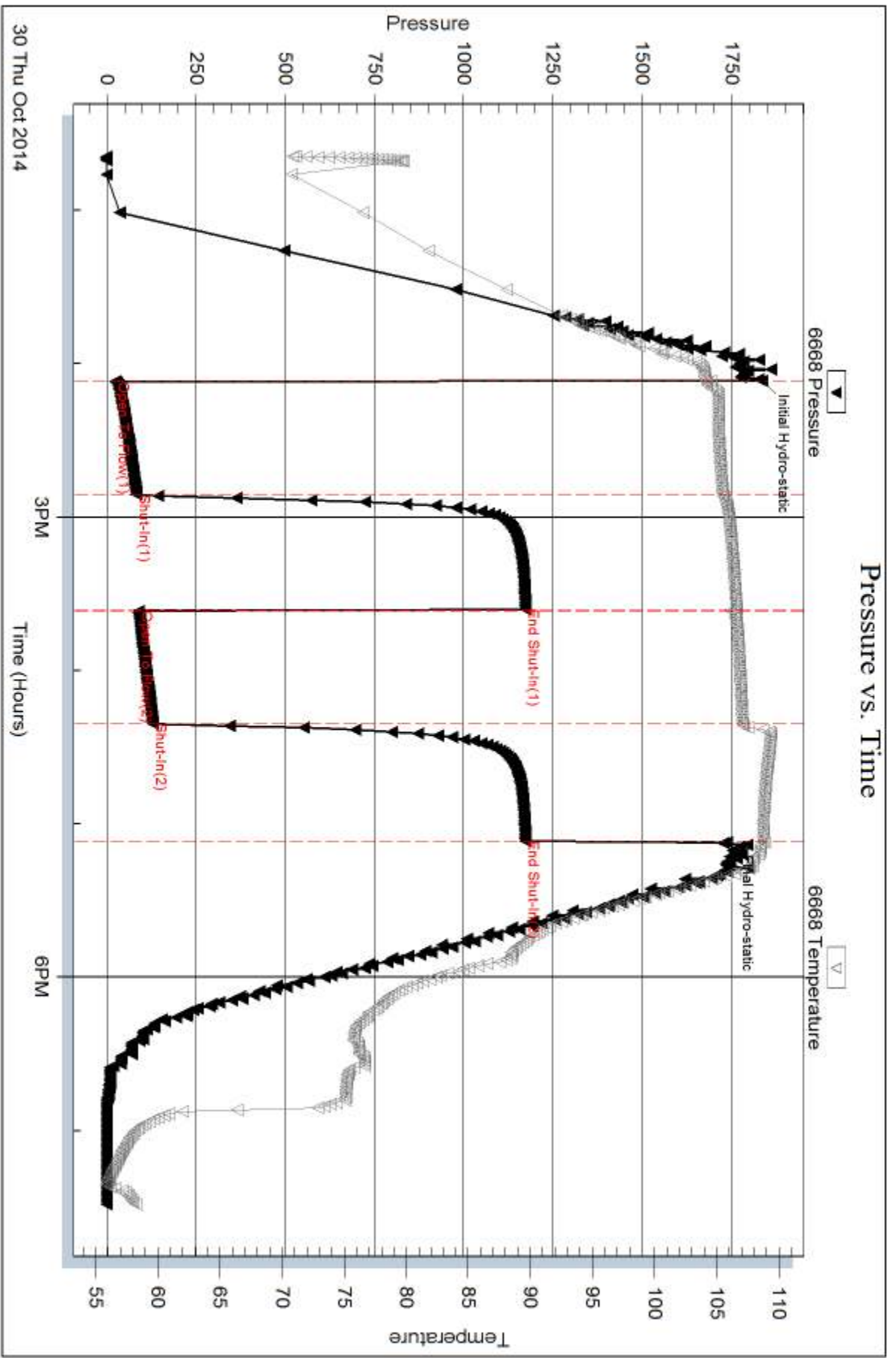
Recovery Comments: .510 @ 64

Serial #: 6668

Outside Dow nng-Nelson Oil Co Inc

Heidi #1-31

DST Test Number: 2



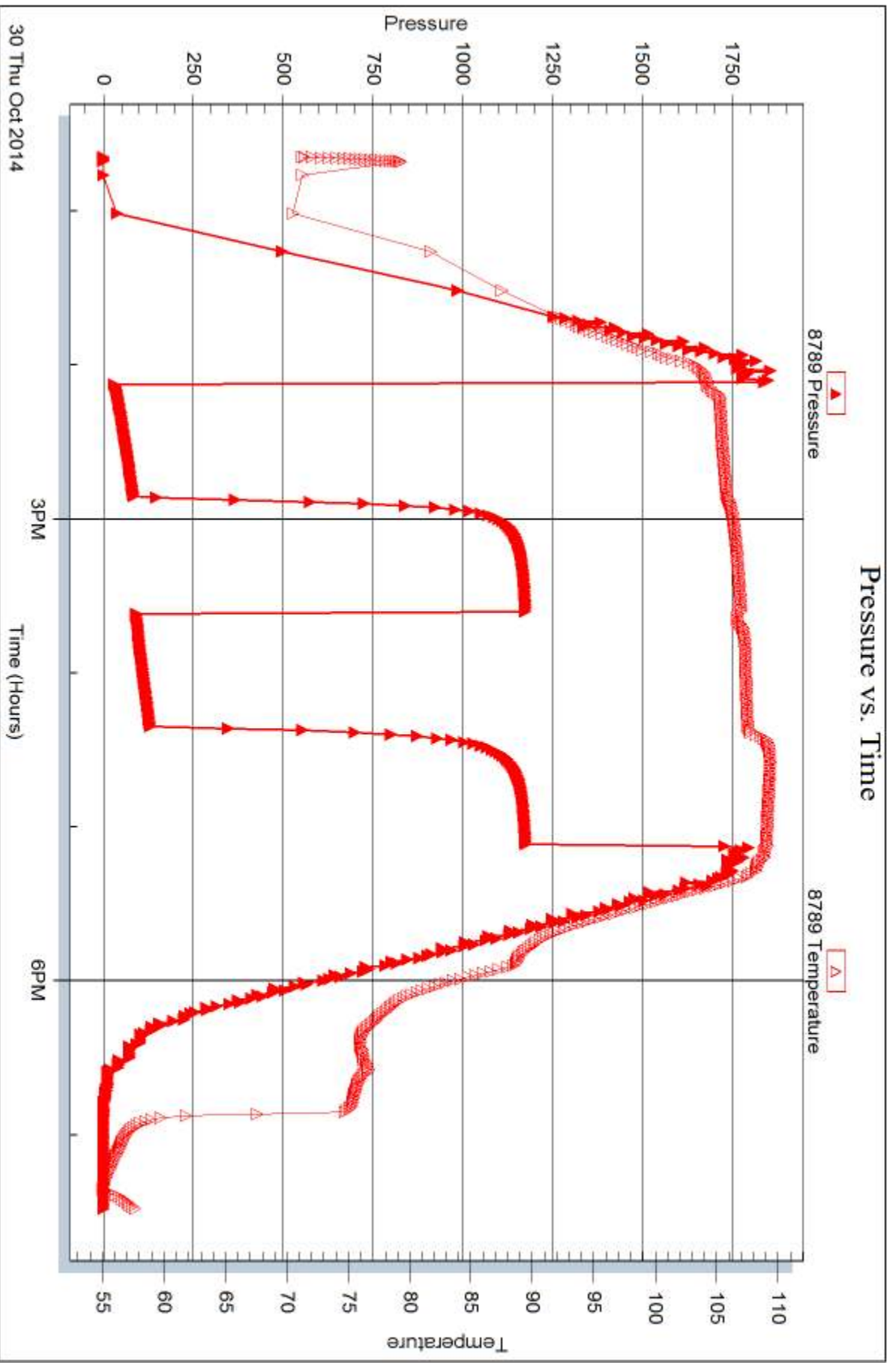
Serial #: 8789

Inside

Dow nng-Nelson Oil Co Inc

Heidi #1-31

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 60611

Printed: 2014.11.05 @ 14:43:53



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Heidi #1-31

31 18s 17w Rush,KS

Start Date: 2014.10.31 @ 10:26:00

End Date: 2014.10.31 @ 18:01:00

Job Ticket #: 60612 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.11.05 @ 14:43:12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60612

DST#: 3

ATTN: Marc Dow ning

Test Start: 2014.10.31 @ 10:26:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:58:00

Time Test Ended: 18:01:00

Test Type: Conventional Straddle (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3797.00 ft (KB) To 3808.00 ft (KB) (TVD)

Reference Elevations: 2044.00 ft (KB)

Total Depth: 3895.00 ft (KB) (TVD)

2036.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8289 Outside

Press@RunDepth: 36.42 psig @ 3804.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.31

End Date:

2014.10.31

Last Calib.:

2014.10.31

Start Time: 10:26:02

End Time:

18:01:15

Time On Btm:

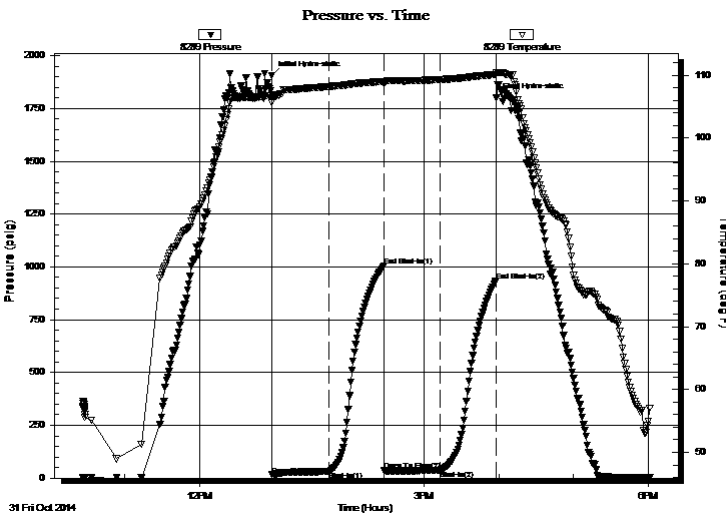
2014.10.31 @ 12:57:45

Time Off Btm:

2014.10.31 @ 15:58:15

TEST COMMENT: 45-IFP- Surface Blow Building to 2"
45-ISIP- No Blow
45-FFP- Surface Blow Building to 1" In 15 min. Died Back in 30 min.
45-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1904.16	106.83	Initial Hydro-static
1	15.26	105.60	Open To Flow (1)
46	31.09	108.20	Shut-In(1)
90	1004.02	109.02	End Shut-In(1)
91	35.55	108.69	Open To Flow (2)
136	36.42	109.31	Shut-In(2)
180	932.92	110.11	End Shut-In(2)
181	1800.71	110.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	OCM 45% o 55% m	0.36
10.00	CO 100%	0.14

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60612

DST#: 3

ATTN: Marc Dow ning

Test Start: 2014.10.31 @ 10:26:00

Tool Information

Drill Pipe:	Length: 3773.00 ft	Diameter: 3.80 inches	Volume: 52.93 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 53.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3797.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	3808.00 ft			
Interval betw een Packers:	11.00 ft			
Tool Length:	118.00 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			3777.00	
Shut In Tool	5.00			3782.00	
Hydraulic tool	5.00			3787.00	
Packer	5.00			3792.00	21.00 Bottom Of Top Packer
Packer	5.00			3797.00	
Stubb	1.00			3798.00	
Perforations	6.00			3804.00	
Recorder	0.00	6668	Inside	3804.00	
Recorder	0.00	8289	Outside	3804.00	
Blank Off Sub	1.00			3805.00	
Blank Spacing	3.00			3808.00	11.00 Tool Interval
Packer	1.00			3809.00	
Perforations	17.00			3826.00	
Change Over Sub	1.00			3827.00	
Recorder	0.00	8789	Below	3827.00	
Blank Spacing	63.00			3890.00	
Change Over Sub	1.00			3891.00	
Bullnose	3.00			3894.00	86.00 Bottom Packers & Anchor

Total Tool Length: 118.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

31 18s 17w Rush,KS

PO Box 1019
Hays KS 67601

Heidi #1-31

Job Ticket: 60612

DST#: 3

ATTN: Marc Dow ning

Test Start: 2014.10.31 @ 10:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.50 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	OCM 45%o 55%m	0.358
10.00	CO 100%	0.140

Total Length: 55.00 ft Total Volume: 0.498 bbl

Num Fluid Samples: 0

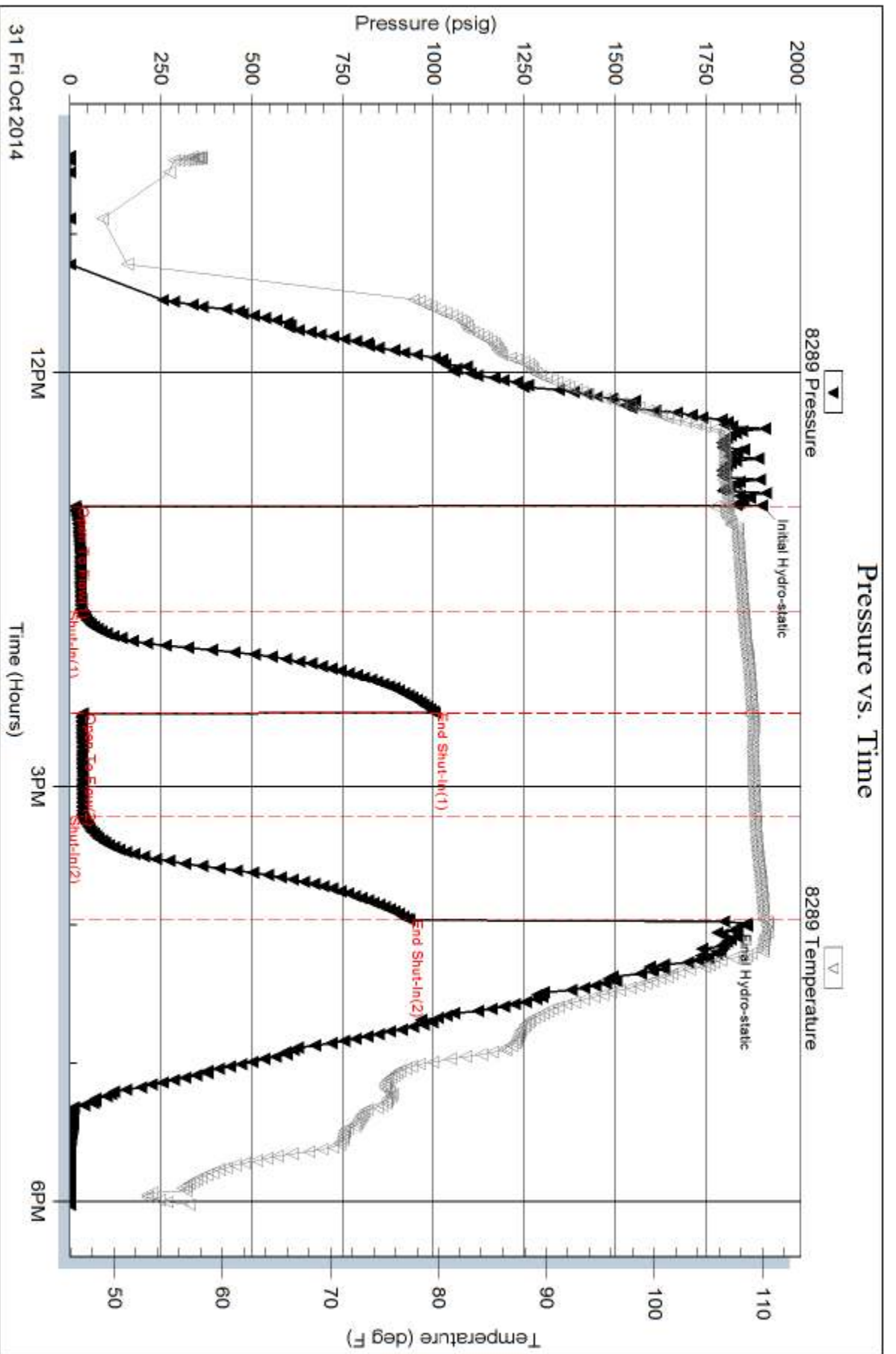
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



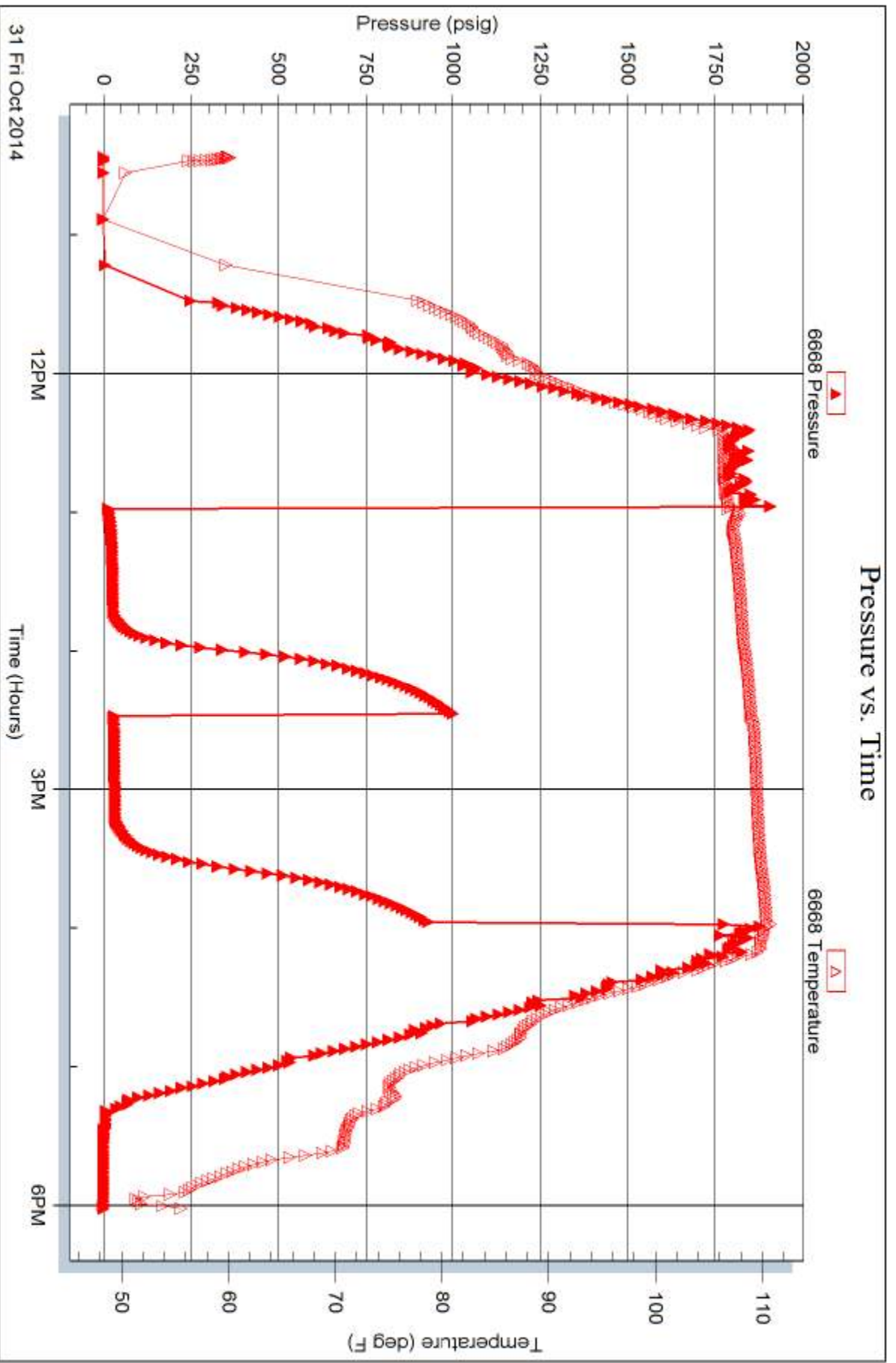
Serial #: 6668

Inside

Dow nrg-Nelson Oil Co Inc

Heidi #1-31

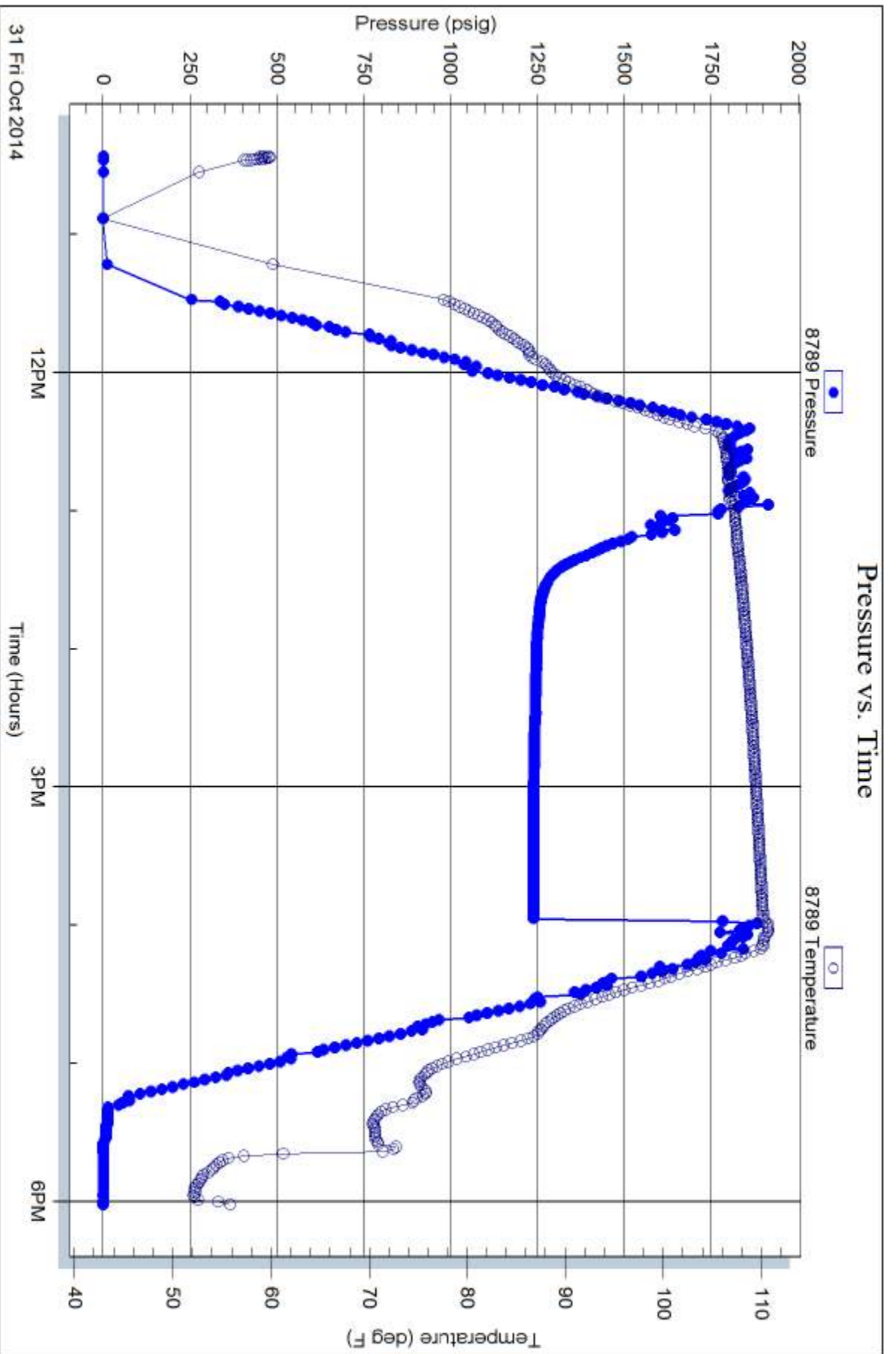
DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 60612

Printed: 2014.11.05 @ 14:43:14





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60610**

Well Name & No. Heidi 1-31 Test No. 1 Date 10-30-14
 Company Downing-Nelson Oil Co. Inc. Elevation 2044 KB 2036 GL
 Address P.O. Box 1019 HAYS KS 67601
 Co. Rep / Geo. MARC Downing Rig Discovery #3
 Location: Sec. 31 Twp. 18^s Rge. 17^w Co. Rush State KS

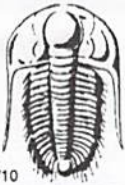
Interval Tested 3737-3812 Zone Tested Arbuckle
 Anchor Length 75 Drill Pipe Run _____ Mud Wt. 8.9
 Top Packer Depth 3732 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 3737 Wt. Pipe Run 0 WL 8.8
 Total Depth 3812 Chlorides 3000 ppm System LCM 1.5
 Blow Description MISSRUN packer failed.

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>MUD</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT 102 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1854 Test 950 T-On Location 5:15
 (B) First Initial Flow _____ Jars _____ T-Started 7:00
 (C) First Final Flow _____ Safety Joint _____ T-Open 10:10
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled 10:15
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 12:16
 (F) Second Final Flow _____ Mileage RT 71 110.05 Comments _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 1831 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open _____ Extra Recorder _____ Sub Total 0
 Initial Shut-In _____ Day Standby _____ Total 1060.05
 Final Flow _____ Accessibility _____ MP/DST Disc't _____
 Final Shut-In _____ Sub Total 1060.05

Approved By _____ Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60611

4/10

Well Name & No. Heidi 1-31 Test No. 2 Date 10-30-14
 Company Downing-Nelson Oil Co. Inc. Elevation 2044 KB 2036 GL
 Address P.O. BOX 1019 HAYS KS 67601
 Co. Rep / Geo. MARC DOWNING Rig Discovery #3
 Location: Sec. 31 Twp. 18S Rge. 17W Co. Rush State KS

Interval Tested 3682-3812 Zone Tested Arbuckle
 Anchor Length 130 Drill Pipe Run 3647 Mud Wt. 8.9
 Top Packer Depth 3677 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 3682 Wt. Pipe Run 80 WL 8.8
 Total Depth 3812 Chlorides 3000 ppm System LCM 1.5

Blow Description IFP - Surface Blow Building to 7 3/4 in.
ISIP - No Blow
FFP - Surface Blow Building to 9 in.
F5IP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>0.5 WCM</u>	<u>3</u>	<u>32</u>	<u>65</u>	
<u>63</u>	<u>0.5 m</u>	<u>3</u>		<u>97</u>	
<u>55</u>	<u>0 cm</u>	<u>30</u>		<u>70</u>	
<u>3</u>	<u>CO</u>	<u>100</u>			

Rec Total 247 BHT 109 Gravity 40 API RW 510 @ 64 °F Chlorides 14000 ppm

(A) Initial Hydrostatic 1836 Test 1150 T-On Location 5:15
 (B) First Initial Flow 24 Jars _____ T-Started 12:39
 (C) First Final Flow 82 Safety Joint _____ T-Open 14:07
 (D) Initial Shut-In 1173 Circ Sub _____ T-Pulled 17:07
 (E) Second Initial Flow 89 Hourly Standby _____ T-Out 19:29
 (F) Second Final Flow 128 Mileage _____ Comments _____
 (G) Final Shut-In 1173 Sampler _____
 (H) Final Hydrostatic 1736 Straddle _____

Initial Open 45 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Extra Packer _____ Ruined Packer _____
 Final Flow 45 Extra Recorder _____ Extra Copies _____
 Final Shut-In 45 Day Standby _____ Sub Total 0
 Accessibility _____ Total 1150
 Sub Total 1150 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

TriLOBITE Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60612

4/10

Well Name & No. Heidi 1-31 Test No. 3 Date 10-31-14
 Company Downing-Nelson Oil Co. Inc. Elevation 2044 KB 2036 GL
 Address P.O. Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #3
 Location: Sec. 31 Twp. 18^s Rge. 17w Co. Rush State KS

Interval Tested 3797-3808 Zone Tested Arbuckle
 Anchor Length 11 (87TP) Drill Pipe Run 2773 Mud Wt. 8.9
 Top Packer Depth 3797 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 3808 Wt. Pipe Run 0 WL 8.8
 Total Depth 3895 Chlorides 3000 ppm System LCM 1.5

Blow Description IFP - Surface Blow Building to 2 in.
ISIP - No Blow
FFP - Surface Blow Building to 1 in in 15 min. Died Back in 30 min.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>0cm</u>	<u>45</u>		<u>55</u>	
<u>10</u>	<u>00</u>	<u>100</u>			

Rec Total 55 BHT 110 Gravity 40 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1904 Test 1150 T-On Location 9:22
 (B) First Initial Flow 15 Jars _____ T-Started 10:26
 (C) First Final Flow 31 Safety Joint _____ T-Open 12:58
 (D) Initial Shut-In 1004 Circ Sub _____ T-Pulled 15:58
 (E) Second Initial Flow 35 Hourly Standby _____ T-Out 18:01
 (F) Second Final Flow 36 Mileage 110.05 Comments _____
 (G) Final Shut-In 932 Sampler _____
 (H) Final Hydrostatic 1800 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1860.05
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1860.05

Approved By _____ Our Representative [Signature]

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