



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Hillman #2-18

18-11s-24w Trego,KS

Start Date: 2014.02.14 @ 23:25:00

End Date: 2014.02.15 @ 06:16:00

Job Ticket #: 56104 DST #: 1

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

Printed: 2014.02.19 @ 14:14:43



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56104

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.02.14 @ 23:25:00

GENERAL INFORMATION:

Formation: **LCK C&D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:27:20

Time Test Ended: 06:16:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

Interval: 3728.00 ft (KB) To 3775.00 ft (KB) (TVD)

Reference Elevations: 2373.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2365.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898

Outside

Press@RunDepth: 130.72 psig @ 3738.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.14

End Date:

2014.02.15

Last Calib.:

2014.02.15

Start Time: 23:25:01

End Time:

06:16:00

Time On Btm:

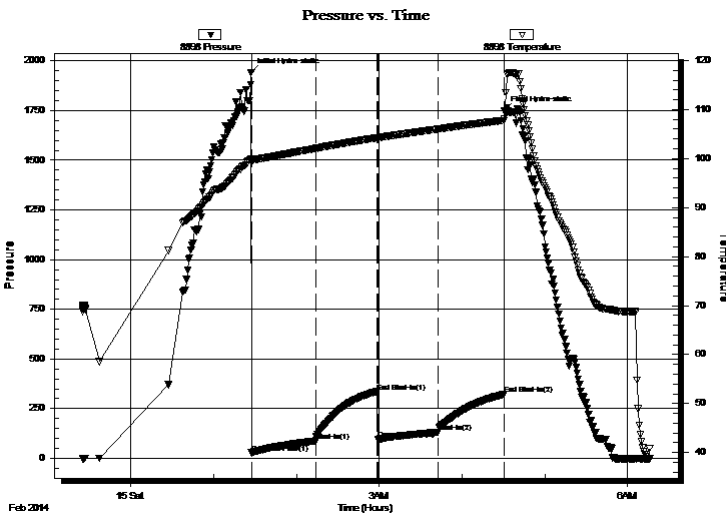
2014.02.15 @ 01:27:10

Time Off Btm:

2014.02.15 @ 04:30:39

TEST COMMENT: B.O.B. In 30 mins
Dead no blow back
Strong blow built to 10"
Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1942.25	100.00	Initial Hydro-static
1	27.60	99.19	Open To Flow (1)
47	87.87	102.06	Shut-In(1)
92	334.72	104.26	End Shut-In(1)
92	95.02	104.23	Open To Flow (2)
136	130.72	106.02	Shut-In(2)
183	321.57	107.78	End Shut-In(2)
184	1750.91	108.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
230.00	5%M 95%W	2.95

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56104

DST#: 1

ATTN: Marc Downing

Test Start: 2014.02.14 @ 23:25:00

Tool Information

Drill Pipe:	Length: 3693.00 ft	Diameter: 3.80 inches	Volume: 51.80 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 60000.00 lb
			<u>Total Volume: 51.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3728.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3713.00	
Hydraulic tool	5.00			3718.00	
Packer	5.00			3723.00	20.00 Bottom Of Top Packer
Packer	5.00			3728.00	
Stubb	1.00			3729.00	
Perforations	9.00			3738.00	
Recorder	0.00	8897	Inside	3738.00	
Recorder	0.00	8898	Outside	3738.00	
Change Over Sub	1.00			3739.00	
Drill Pipe	32.00			3771.00	
Change Over Sub	1.00			3772.00	
Bullnose	3.00			3775.00	47.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56104

DST#: 1

ATTN: Marc Downing

Test Start: 2014.02.14 @ 23:25:00

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:

65000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
230.00	5%M 95%W	2.953

Total Length: 230.00 ft Total Volume: 2.953 bbl

Num Fluid Samples: 0

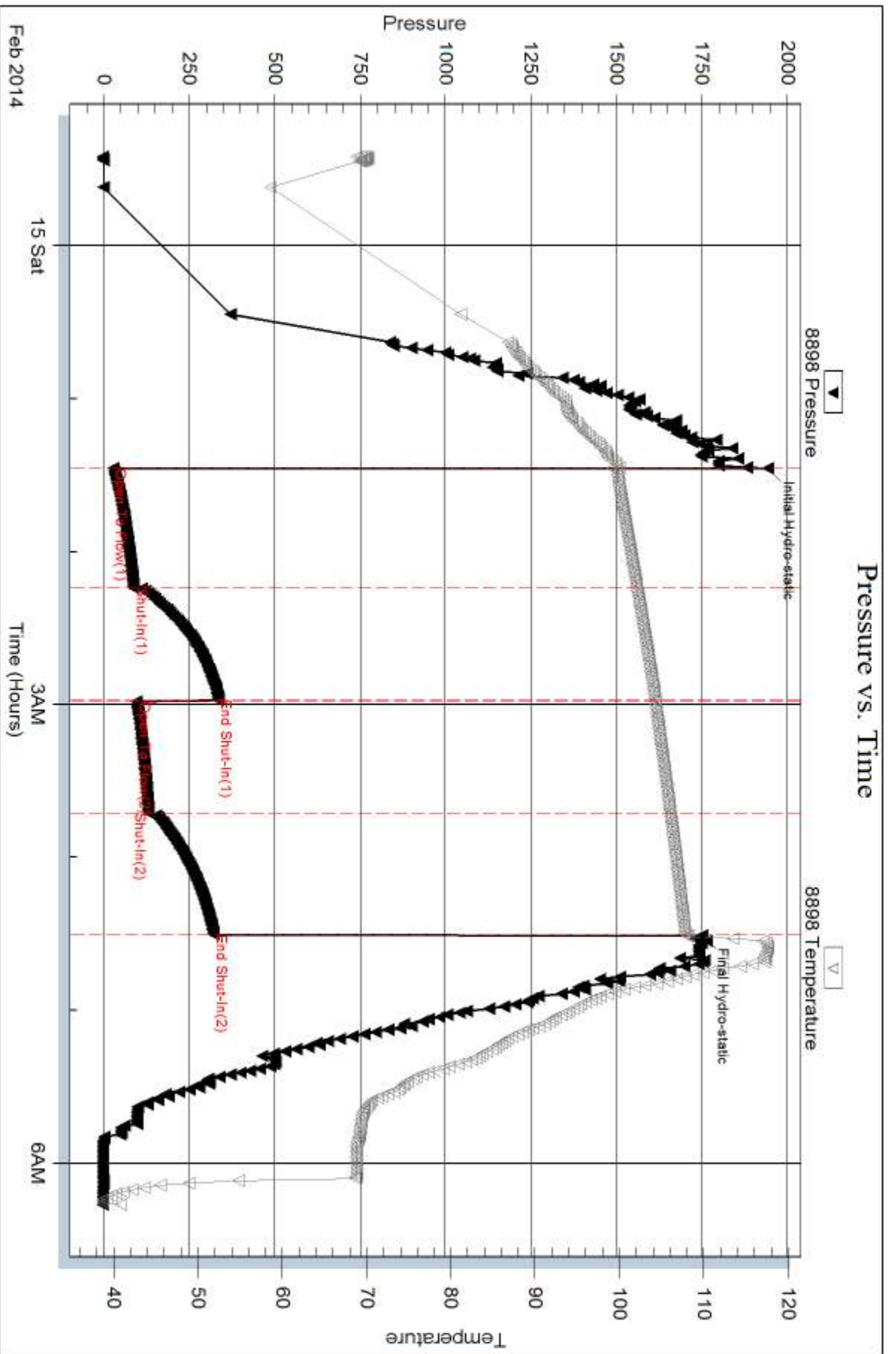
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



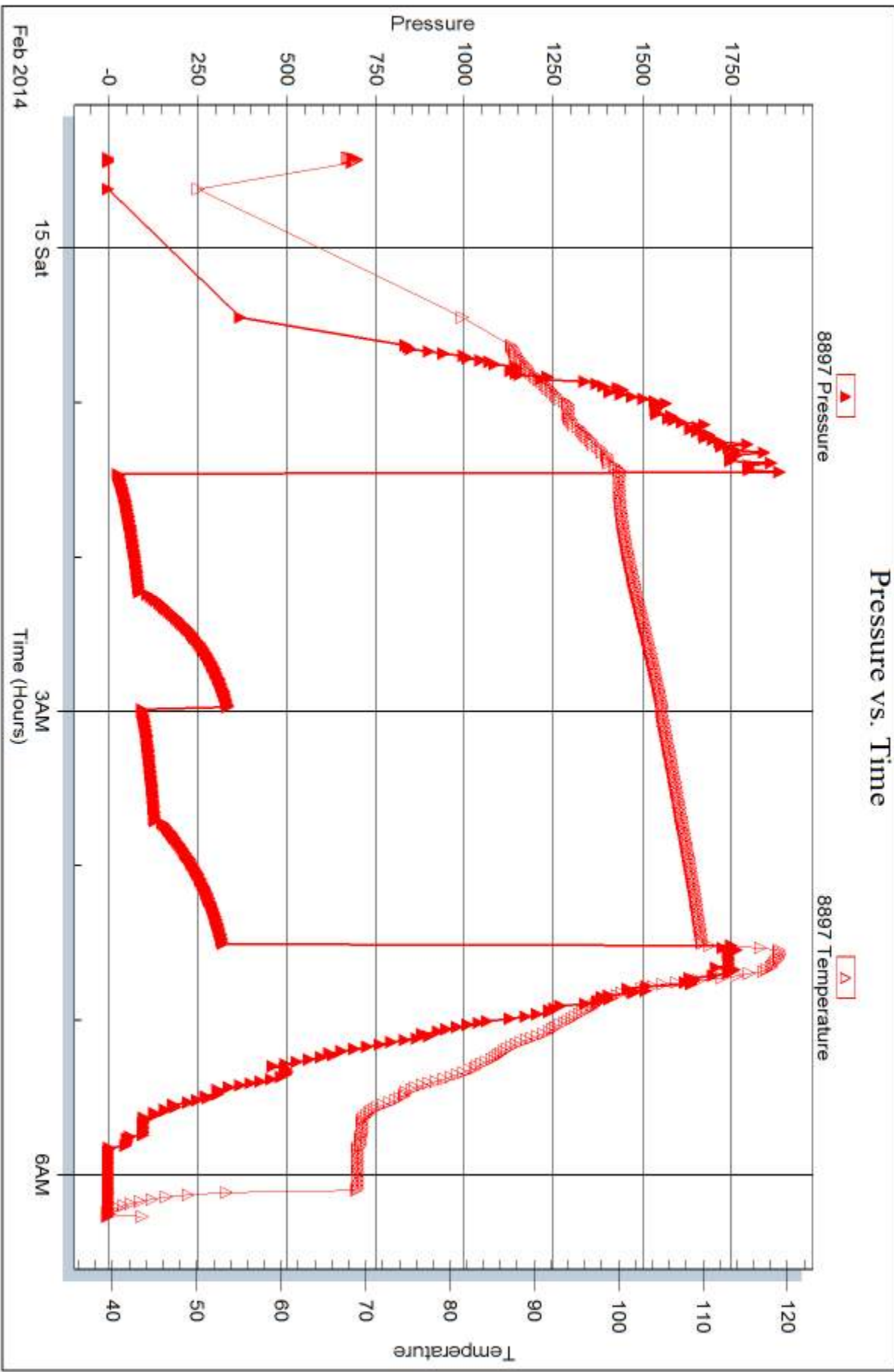
Serial #: 8897

Inside

Dow nting Nelson Oil Co Inc

Hillman #2-18

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56104

Printed: 2014.02.19 @ 14:14:46



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Hillman #2-18

18-11s-24w Trego,KS

Start Date: 2014.02.15 @ 18:00:00

End Date: 2014.02.16 @ 00:34:00

Job Ticket #: 56105 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56105

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.02.15 @ 18:00:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:48:40

Time Test Ended: 00:34:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3825.00 ft (KB) To 3898.00 ft (KB) (TVD)

Reference Elevations: 2373.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2365.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898

Outside

Press@RunDepth: 41.30 psig @ 3830.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.15

End Date:

2014.02.16

Last Calib.:

2014.02.16

Start Time: 18:00:01

End Time:

00:34:00

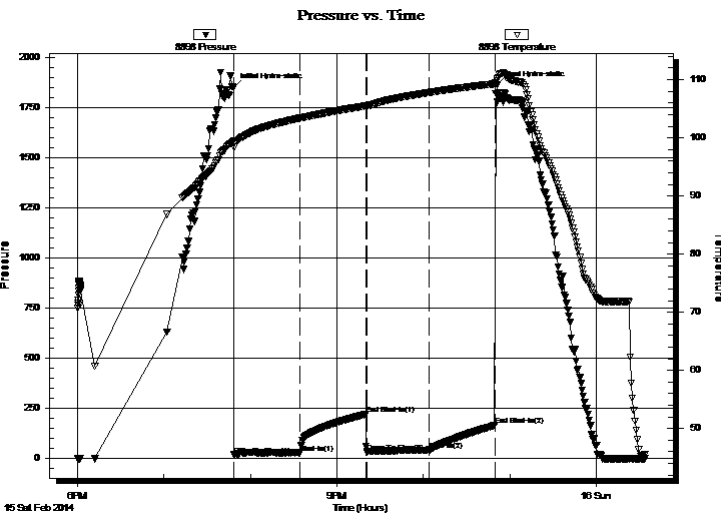
Time On Btm:

2014.02.15 @ 19:48:20

Time Off Btm:

2014.02.15 @ 22:51:20

TEST COMMENT: Fair blow built to 4"
Dead no blow back
B.O.B. In 1 min
Weak surface blow died in 20 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1850.57	99.45	Initial Hydro-static
1	17.63	99.00	Open To Flow (1)
46	27.49	103.36	Shut-In(1)
92	219.40	105.50	End Shut-In(1)
93	31.84	105.51	Open To Flow (2)
136	41.30	107.79	Shut-In(2)
182	163.76	109.29	End Shut-In(2)
183	1861.59	110.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	410 GIP	0.00
110.00	5%G 15%O 80%M	1.27

* 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

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56105

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.02.15 @ 18:00:00

Tool Information

Drill Pipe:	Length: 3790.00 ft	Diameter: 3.80 inches	Volume: 53.16 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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:	50000.00 lb
			<u>Total Volume: 53.31 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3825.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	73.00 ft				
Tool Length:	93.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3810.00	
Hydraulic tool	5.00			3815.00	
Packer	5.00			3820.00	20.00 Bottom Of Top Packer
Packer	5.00			3825.00	
Stubb	1.00			3826.00	
Perforations	4.00			3830.00	
Recorder	0.00	8897	Inside	3830.00	
Recorder	0.00	8898	Outside	3830.00	
Change Over Sub	1.00			3831.00	
Drill Pipe	63.00			3894.00	
Change Over Sub	1.00			3895.00	
Bullnose	3.00			3898.00	73.00 Bottom Packers & Anchor

Total Tool Length: 93.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56105

DST#: 2

ATTN: Marc Downing

Test Start: 2014.02.15 @ 18:00:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	410 GIP	0.000
110.00	5%G 15%O 80%M	1.270

Total Length: 110.00 ft Total Volume: 1.270 bbl

Num Fluid Samples: 0

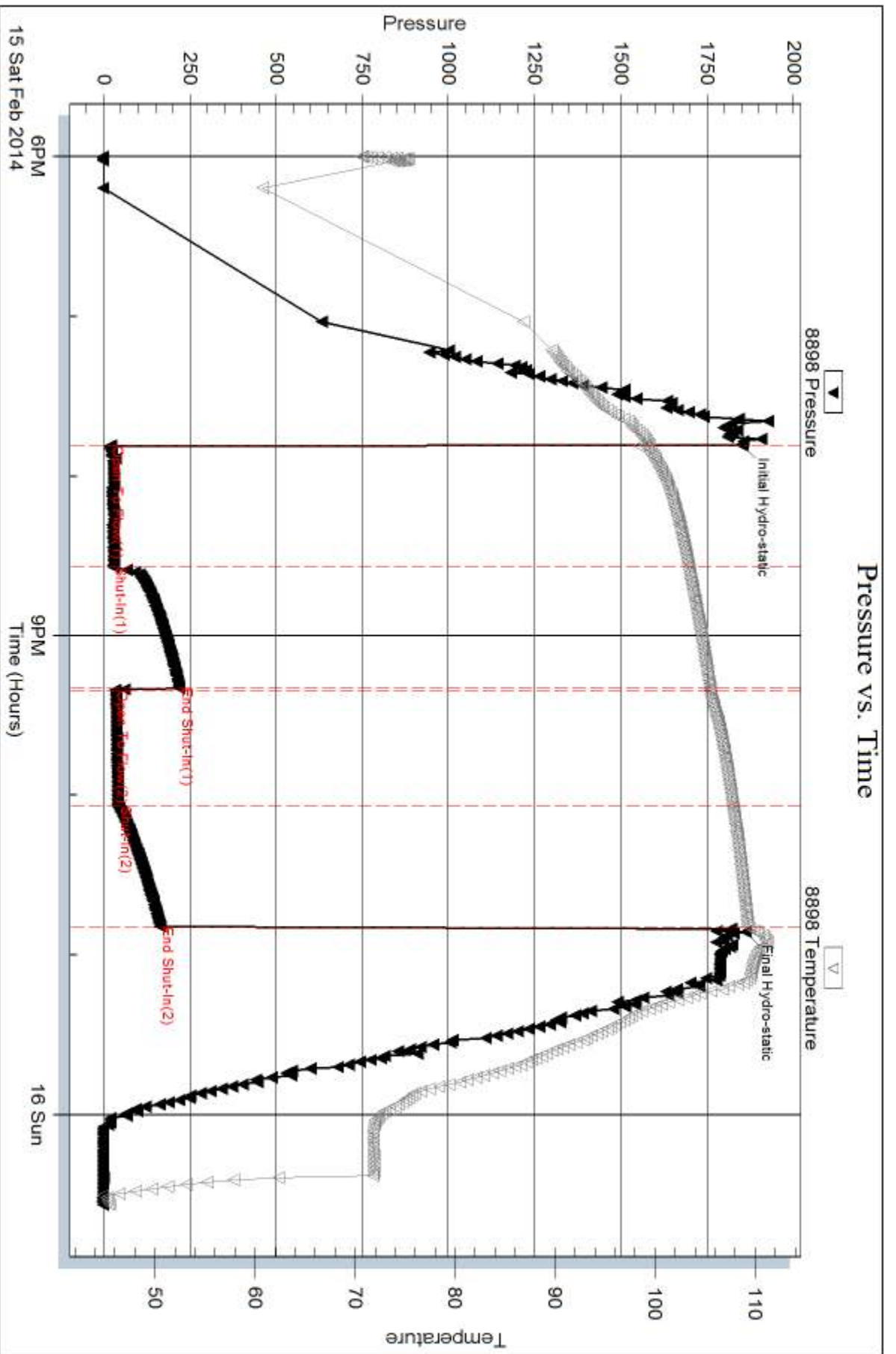
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



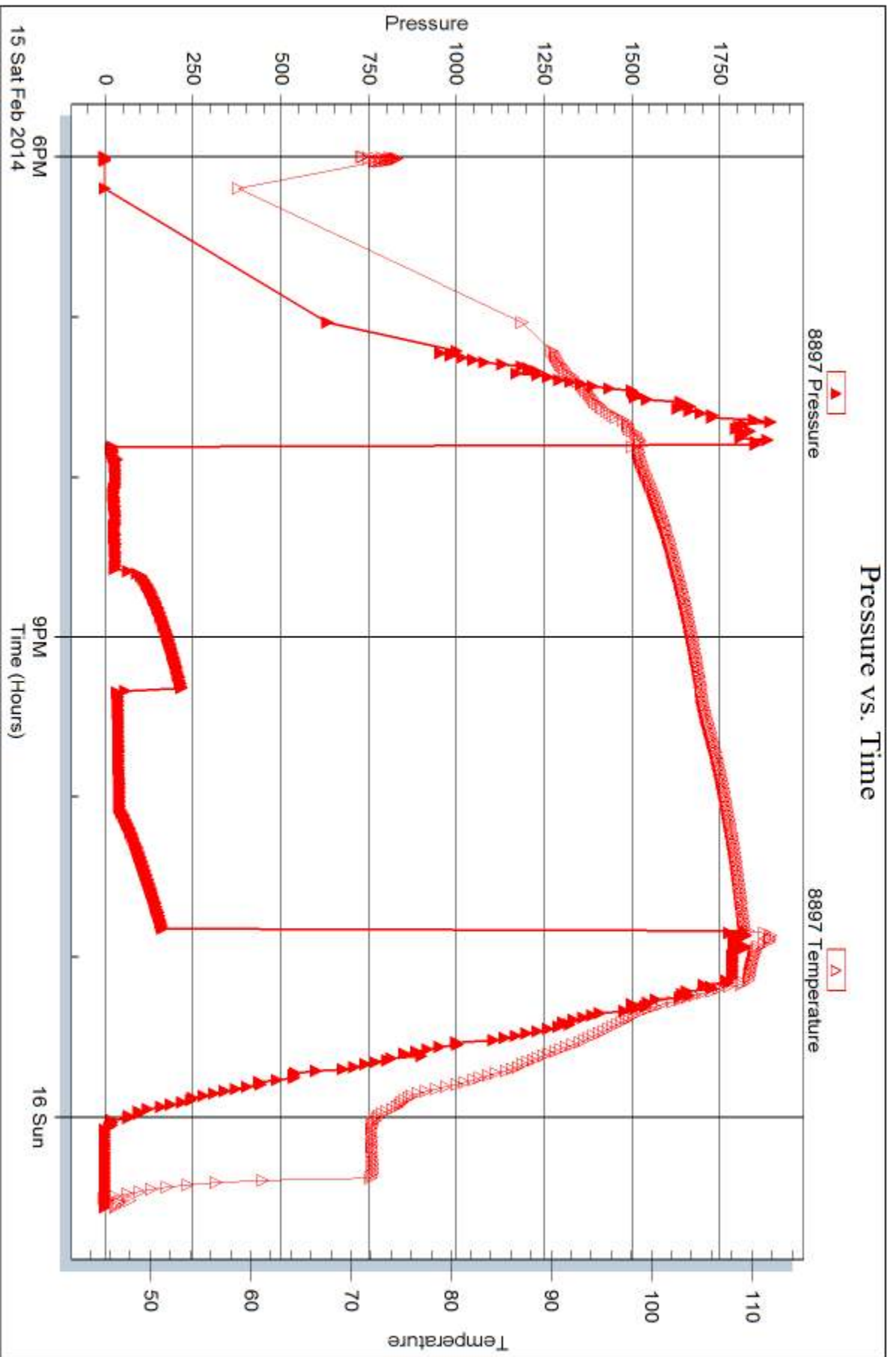
Serial #: 8897

Inside

Dow nng Nelson Oil Co Inc

Hillman #2-18

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 56105

Printed: 2014.02.19 @ 14:14:22



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Hillman #2-18

18-11s-24w Trego,KS

Start Date: 2014.02.16 @ 07:32:45

End Date: 2014.02.16 @ 11:09:55

Job Ticket #: 56106 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.02.19 @ 14:13:56



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56106

DST#: 3

ATTN: Marc Downing

Test Start: 2014.02.16 @ 07:32:45

Tool Information

Drill Pipe:	Length: 3852.00 ft	Diameter: 3.80 inches	Volume: 54.03 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 50000.00 lb
			<u>Total Volume: 54.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3887.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3872.00	
Hydraulic tool	5.00			3877.00	
Packer	5.00			3882.00	20.00 Bottom Of Top Packer
Packer	5.00			3887.00	
Stubb	1.00			3888.00	
Recorder	0.00	8897	Inside	3888.00	
Recorder	0.00	8898	Outside	3888.00	
pERforations	31.00			3919.00	
Bullnose	3.00			3922.00	35.00 Bottom Packers & Anchor
Total Tool Length:	55.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56106

DST#: 3

ATTN: Marc Downing

Test Start: 2014.02.16 @ 07:32:45

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
230.00	100%M	2.953

Total Length: 230.00 ft Total Volume: 2.953 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

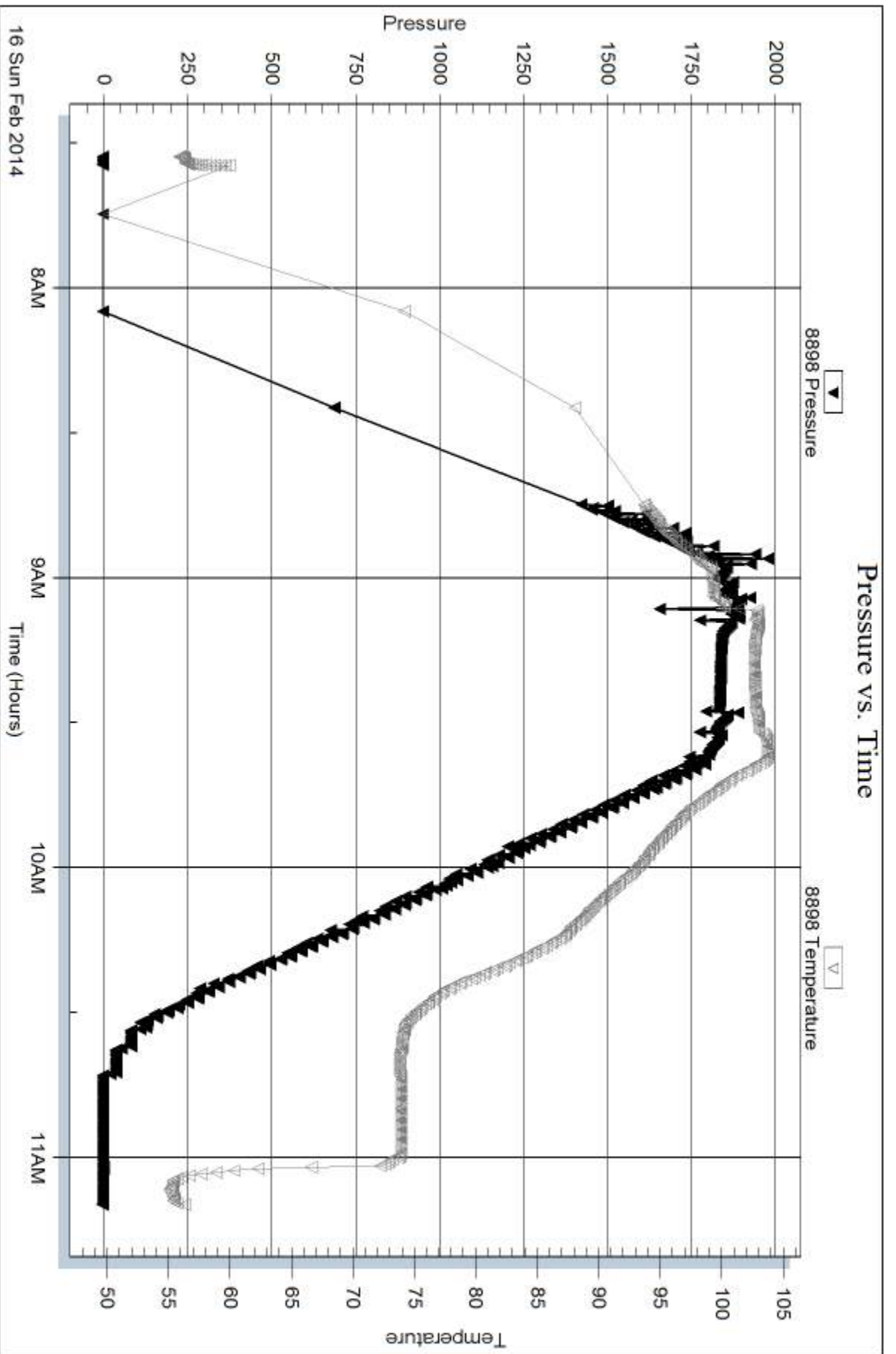
Recovery Comments:

Serial #: 8898

Outside Dow n ing Nelson Oil Co Inc

Hillman #2-18

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 56106

Printed: 2014.02.19 @ 14:13:58

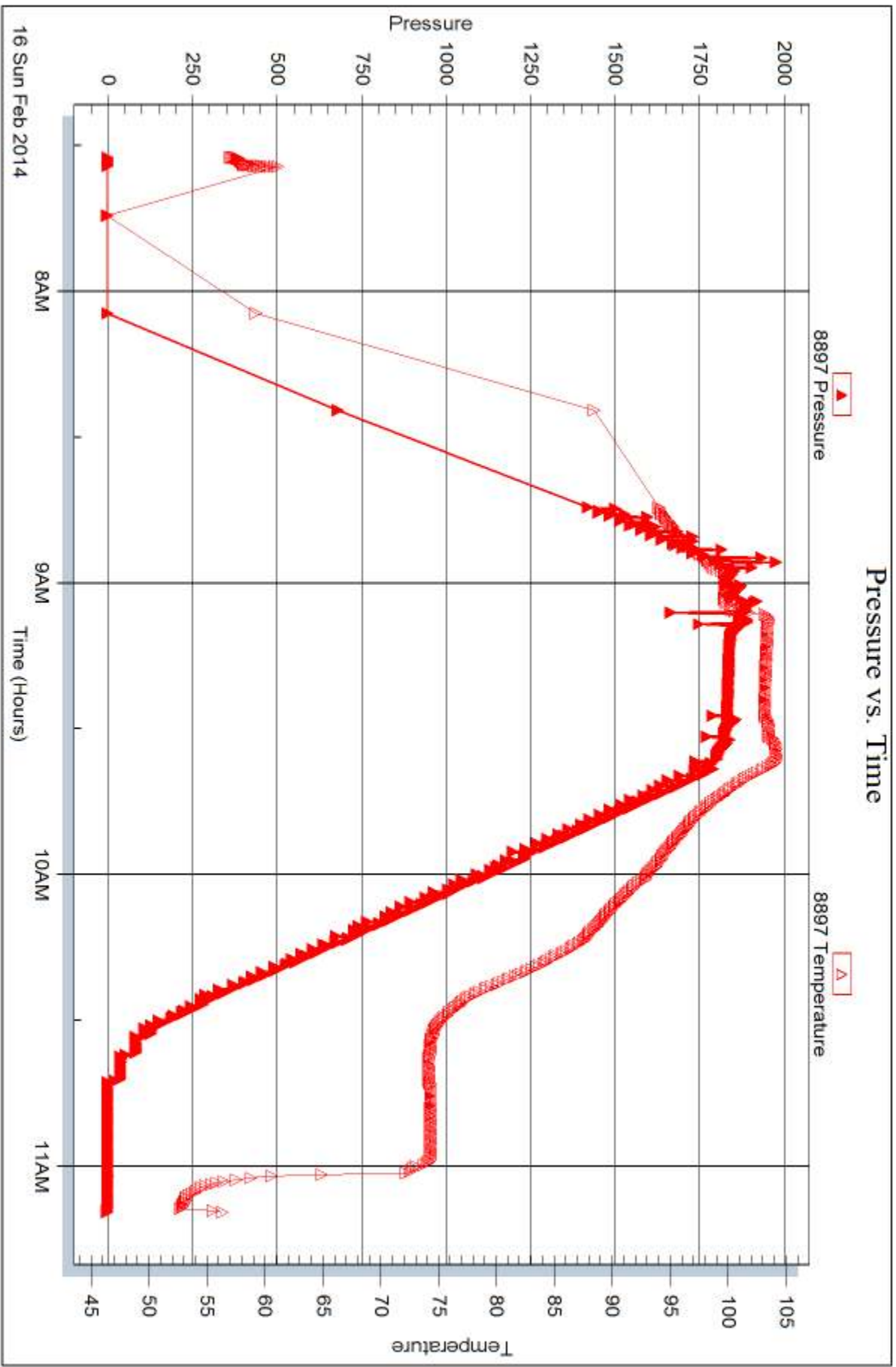
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Inside

Dow n ing Nelson Oil Co Inc

Hillman #2-18

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 56106

Printed: 2014.02.19 @ 14:13:58



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Hillman #2-18

18-11s-24w Trego,KS

Start Date: 2014.02.17 @ 02:29:00

End Date: 2014.02.17 @ 09:07:39

Job Ticket #: 56107 DST #: 4

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

Printed: 2014.02.19 @ 14:13:19



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56107

DST#: 4

ATTN: Marc Dow ning

Test Start: 2014.02.17 @ 02:29:00

GENERAL INFORMATION:

Formation: **K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:15:10
 Time Test Ended: 09:07:39
 Interval: **3895.00 ft (KB) To 3991.00 ft (KB) (TVD)**
 Total Depth: 3991.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Tate Lang
 Unit No: 49
 Reference Elevations: 2373.00 ft (KB)
 2365.00 ft (CF)
 KB to GR/CF: 8.00 ft

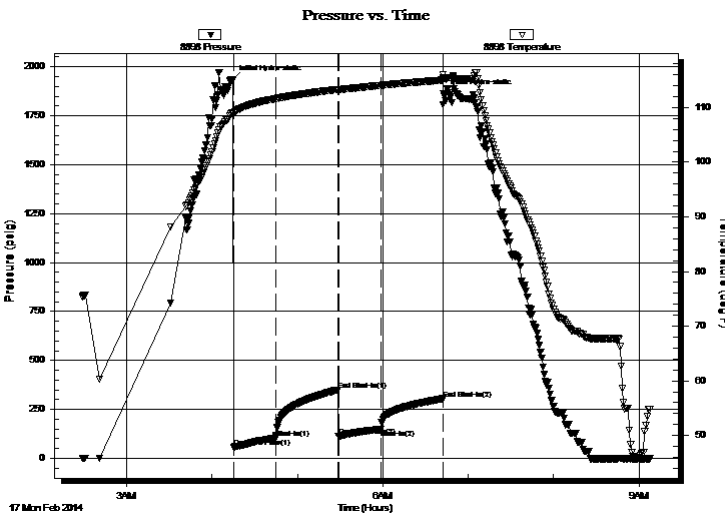
Serial #: 8898

Outside

Press@RunDepth: 148.61 psig @ 3923.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.17 End Date: 2014.02.17 Last Calib.: 2014.02.17
 Start Time: 02:29:01 End Time: 09:07:40 Time On Btm: 2014.02.17 @ 04:14:10
 Time Off Btm: 2014.02.17 @ 06:42:40

TEST COMMENT: B.O.B. in 8 mins
 Weak surface blow
 B.O.B. in 15 mins
 Weak surface blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1932.68	109.07	Initial Hydro-static
1	56.09	109.00	Open To Flow (1)
31	104.01	111.63	Shut-In(1)
75	349.48	113.30	End Shut-In(1)
75	113.08	113.26	Open To Flow (2)
105	148.61	114.04	Shut-In(2)
149	304.02	115.03	End Shut-In(2)
149	1862.24	115.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	10%M 85%W 5%M	1.41
60.00	90%M 10%O	0.84
10.00	5%G 95%O	0.14
0.00	110 GIP	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

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56107

DST#: 4

ATTN: Marc Downing

Test Start: 2014.02.17 @ 02:29:00

Tool Information

Drill Pipe:	Length: 3853.00 ft	Diameter: 3.80 inches	Volume: 54.05 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 250000.0 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 54.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3895.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	96.00 ft			
Tool Length:	116.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3880.00	
Hydraulic tool	5.00			3885.00	
Packer	5.00			3890.00	20.00 Bottom Of Top Packer
Packer	5.00			3895.00	
Stubb	1.00			3896.00	
Perforations	27.00			3923.00	
Recorder	0.00	8897	Inside	3923.00	
Recorder	0.00	8898	Outside	3923.00	
Change Over Sub	1.00			3924.00	
Drill Pipe	63.00			3987.00	
Change Over Sub	1.00			3988.00	
Bullnose	3.00			3991.00	96.00 Bottom Packers & Anchor

Total Tool Length: 116.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

18-11s-24w Trego,KS

PO Box 1019
Hays, KS 67601

Hillman #2-18

Job Ticket: 56107

DST#: 4

ATTN: Marc Downing

Test Start: 2014.02.17 @ 02:29:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	10%M 85%W 5%M	1.410
60.00	90%M 10%O	0.842
10.00	5%G 95%O	0.140
0.00	110 GIP	0.000

Total Length: 190.00 ft

Total Volume: 2.392 bbl

Num Fluid Samples: 0

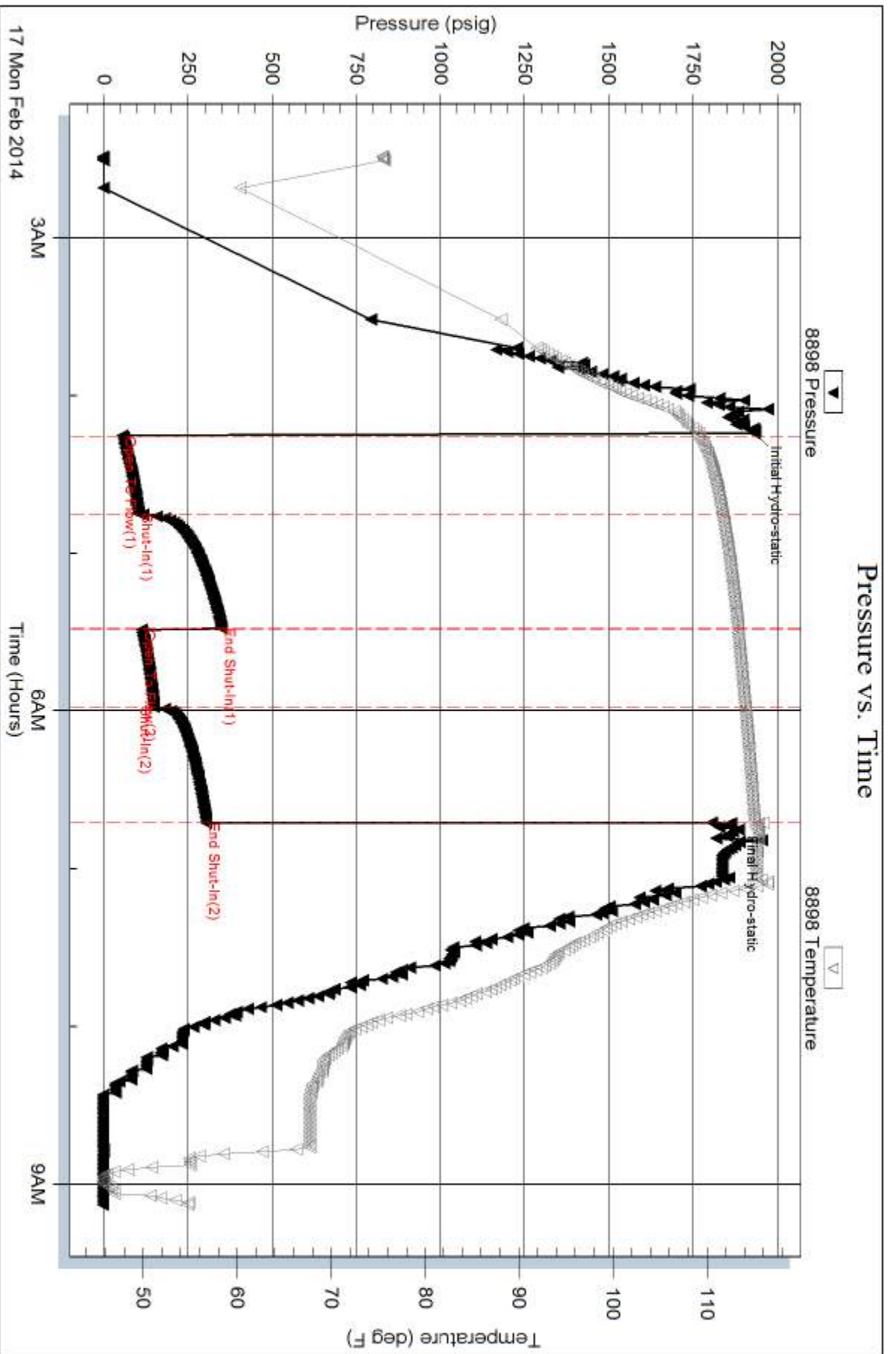
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



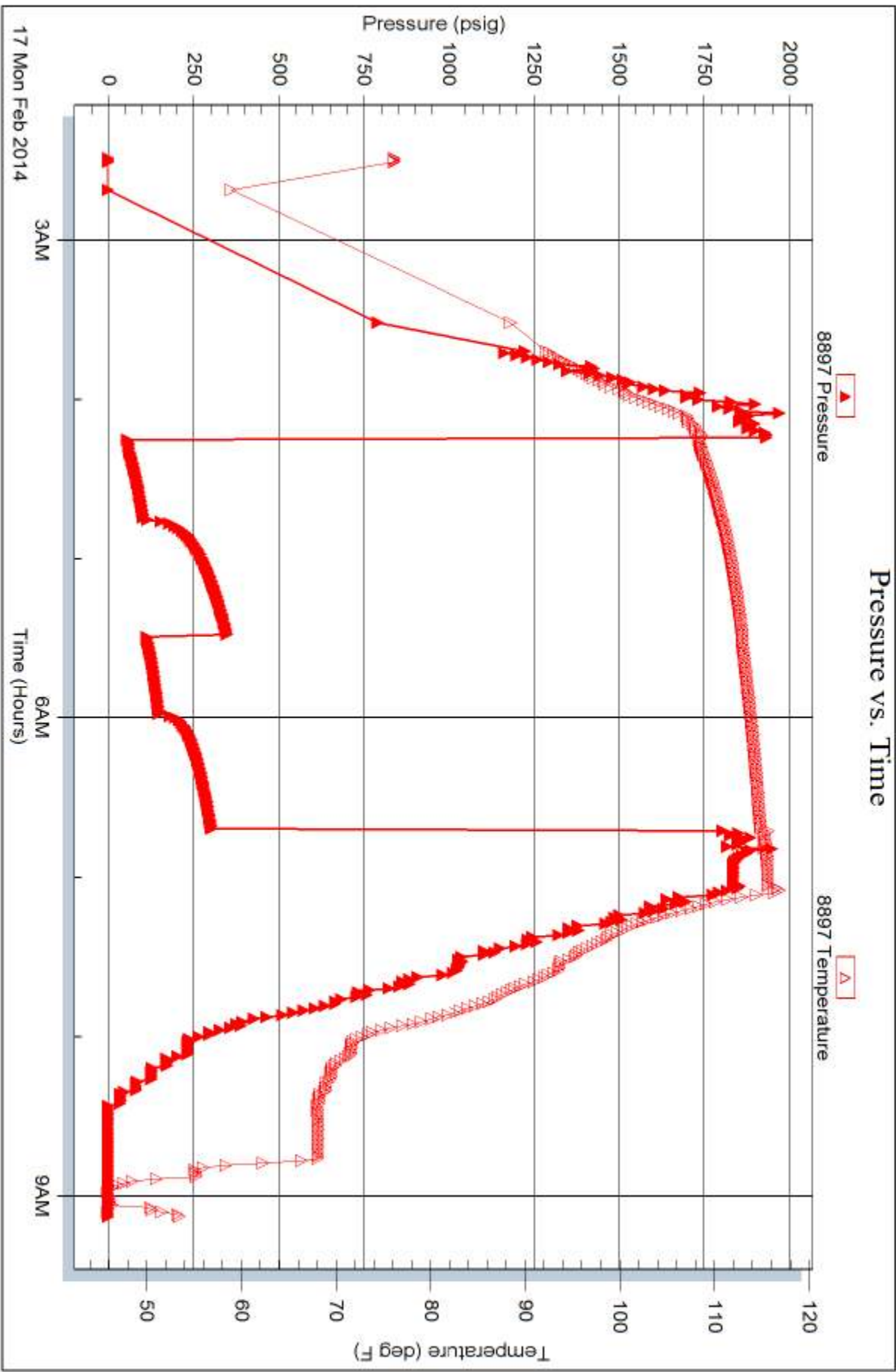
Serial #: 8897

Inside

Dow nng Nelson Oil Co Inc

Hillman #2-18

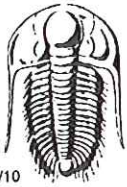
DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 56107

Printed: 2014.02.19 @ 14:13:21



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56104

Well Name & No. Hillman # 2-18 Test No. 1 Date 2/14/14 / 2/15/14
 Company Downing Nelson Oil Company Elevation 2373 KB 2365 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 18 Twp. 11S Rge. 24W Co. Trego State KS

Interval Tested 3728 3775 Zone Tested LKC CFD
 Anchor Length 47 Drill Pipe Run 3693 Mud Wt. 8.7
 Top Packer Depth 3724 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3728 Wt. Pipe Run 0 WL 8.0
 Total Depth 3775 Chlorides 2000 ppm System LCM 2#

Blow Description B.O.D. IN 30 mins
Dead up blow back
Strong blow built to 10in
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>230</u>	Feet of <u>SMCW</u>	%gas	%oil <u>95</u>	%water <u>5</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

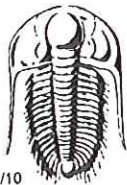
Rec Total 230 BHT 108 Gravity 204 @ 40 ° F Chlorides 6500 ppm
 Test 1150 T-On Location 22:15
 Jars T-Started 23:25
 Safety Joint T-Open 01:28
 Circ Sub T-Pulled 04:28
 Hourly Standby T-Out 06:16
 Mileage 94 R/T 145.70
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45

Sub Total 1295.70

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. **56105**

Well Name & No. Hillman #2-18 Test No. 2 Date 2-15-14
 Company Downing Nelson Oil Company Elevation 2373 KB 2365 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Mark Downing Rig Discovery #1
 Location: Sec. 18 Twp. T15 Rge. 24W Co. Trego State KS

Interval Tested 3825 3898 Zone Tested LHC H-5
 Anchor Length 73 Drill Pipe Run 3790 Mud Wt. 8.9
 Top Packer Depth 3821 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3825 Wt. Pipe Run 0 WL 8.0
 Total Depth 3898 Chlorides 4000 ppm System LCM 2#

Blow Description Fair blow built to 4in
Lead, no blowback
B.O.B. In 1min
Weak surface blow died in 20 mins

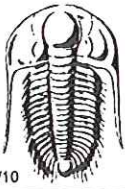
Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>410 GIP</u>	<u>100</u>			
<u>110</u>	<u>60CM</u>	<u>5</u>	<u>15</u>		<u>80</u>

Rec Total 100 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1851 Test 1150 T-On Location 17:15
 (B) First Initial Flow 18 Jars _____ T-Started 18:00
 (C) First Final Flow 27 Safety Joint _____ T-Open 19:48
 (D) Initial Shut-In 219 Circ Sub _____ T-Pulled 22:48
 (E) Second Initial Flow 32 Hourly Standby _____ T-Out 00:33
 (F) Second Final Flow 41 Mileage 94 R/T 145.70 Comments _____
 (G) Final Shut-In 164 Sampler _____
 (H) Final Hydrostatic 1862 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 45 Extra Packer _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 1295.70
 Final Shut-In 45 Accessibility _____ MP/DST Disc't _____
 Sub Total 1295.70

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56106

4/10

Well Name & No. Hillman #2-18 Test No. 3 Date 2-16-14
 Company Downing Nelson Oil Company Elevation 2373 KB 2365 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Mac Downing Rig Discovery #1
 Location: Sec. 18 Twp. 11S Rge. 24W Co. Trego State KS

Interval Tested 3887 3922 Zone Tested LKC "K"
 Anchor Length 35 Drill Pipe Run 3852 Mud Wt. 8.9
 Top Packer Depth 3883 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3887 Wt. Pipe Run 0 WL 8.0
 Total Depth 3922 Chlorides 4000 ppm System LCM 2"

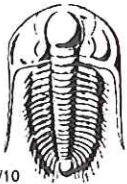
Blow Description Packer Failure

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>230</u>	Feet of <u>mud</u>				<u>100</u>
Rec	Feet of				
Rec	Feet of				

Rec Total 230 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic Test 950 T-On Location 07:00
 (B) First Initial Flow Jars _____ T-Started 07:32
 (C) First Final Flow Safety Joint _____ T-Open 09:08
 (D) Initial Shut-In Circ Sub _____ T-Pulled 09:20
 (E) Second Initial Flow Hourly Standby _____ T-Out 11:08
 (F) Second Final Flow Mileage 94 K/T 145.70 Comments _____
 (G) Final Shut-In Sampler _____
 (H) Final Hydrostatic Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open _____ Sub Total 0
 Initial Shut-In _____ Extra Recorder _____ Total 1095.70
 Final Flow NA Day Standby _____ MP/DST Disc't _____
 Final Shut-In _____ Accessibility _____
 Sub Total 1095.70

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 56107

Well Name & No. Hillman #2-18 Test No. 4 Date 2-7-14
 Company Downing Nelson Oil Company Elevation 2373 KB 2365 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Mark Downing Rig Discovery #1
 Location: Sec. 18 Twp. 71S Rge. 24W Co. Trego State KS

Interval Tested 3895 3991 Zone Tested K
 Anchor Length 96 Drill Pipe Run 3853 Mud Wt. 9.0
 Top Packer Depth 3891 Drill Collars Run 38 Vis 54
 Bottom Packer Depth 3895 3991 Wt. Pipe Run 0 WL 8.0
 Total Depth 3991 Chlorides 3000 ppm System LCM 1 1/2"

Blow Description B.O.B. IN 8 min
Weak surface blow
B.O.B. IN 5 min
Weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>110 GFP</u>	<u>100</u>			
<u>10</u>	<u>60</u>	<u>5</u>	<u>95</u>		
<u>60</u>	<u>OCM</u>		<u>10</u>		<u>90</u>
<u>120</u>	<u>OCMW</u>		<u>5</u>	<u>85</u>	<u>10</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 190 BHT 115 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1933 Test 1150 T-On Location 01:10
 (B) First Initial Flow 56 Jars _____ T-Started 02:29
 (C) First Final Flow 104 Safety Joint _____ T-Open 04:15
 (D) Initial Shut-In 349 Circ Sub _____ T-Pulled 06:45
 (E) Second Initial Flow 113 Hourly Standby _____ T-Out 09:07
 (F) Second Final Flow 149 Mileage 94 1/4 Comments _____
 (G) Final Shut-In 364 Sampler _____
 (H) Final Hydrostatic 1862 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1150
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1150

Approved By _____ Our Representative [Signature]
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