



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson/ Marc Dow

Befort #2-12

12-14s-19w Ellis,KS

Start Date: 2013.10.01 @ 04:47:07

End Date: 2013.10.01 @ 11:53:52

Job Ticket #: 52435 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.04 @ 15:10:05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 52435

DST#: 1

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.01 @ 04:47:07

GENERAL INFORMATION:

Formation: **Plattsmouth**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:15:37

Time Test Ended: 11:53:52

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Staats

Unit No: 47

Interval: 3377.00 ft (KB) To 3413.00 ft (KB) (TVD)

Reference Elevations: 2181.00 ft (KB)

Total Depth: 3413.00 ft (KB) (TVD)

2173.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8676 Outside

Press @ Run Depth: 50.41 psig @ 3378.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.01

End Date:

2013.10.01

Last Calib.: 2013.10.01

Start Time: 04:47:12

End Time:

11:53:51

Time On Btm: 2013.10.01 @ 07:12:52

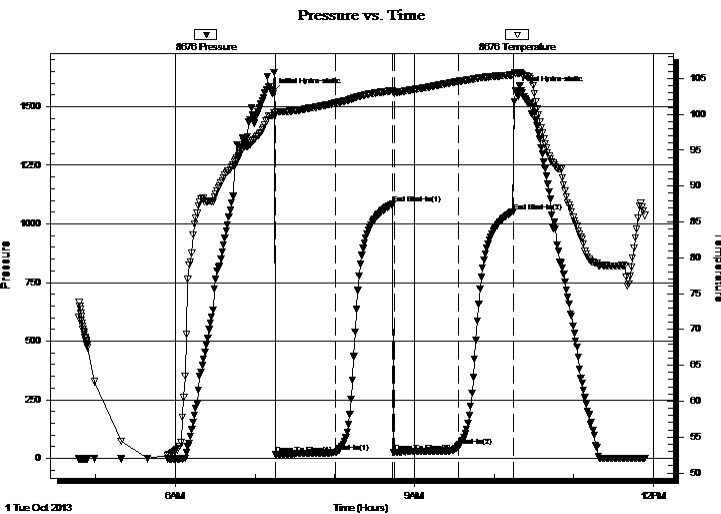
Time Off Btm: 2013.10.01 @ 10:16:07

TEST COMMENT: IF: Weak blow 3 1/4"

IS: No blow back

FF: Weak blow 2"

FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1560.15	99.84	Initial Hydro-static
3	16.19	100.23	Open To Flow (1)
48	25.36	101.56	Shut-In(1)
91	1084.07	103.30	End Shut-In(1)
92	26.57	102.99	Open To Flow (2)
140	50.41	104.58	Shut-In(2)
182	1052.72	105.51	End Shut-In(2)
184	1569.21	105.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	W,M With Oil Spots 15%w ater 85% mud	0.56

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

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Beforet #2-12

Job Ticket: 52435

DST#: 1

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.01 @ 04:47:07

Tool Information

Drill Pipe:	Length: 3359.00 ft	Diameter: 3.80 inches	Volume: 47.12 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.12 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3377.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	57.00 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			3357.00	
Shut In Tool	5.00			3362.00	
Hydraulic tool	5.00			3367.00	
Packer	5.00			3372.00	21.00 Bottom Of Top Packer
Packer	5.00			3377.00	
Stubb	1.00			3378.00	
Recorder	0.00	8676	Outside	3378.00	
Recorder	0.00	6773	Outside	3378.00	
Perforations	32.00			3410.00	
Bullnose	3.00			3413.00	36.00 Bottom Packers & Anchor
Total Tool Length:	57.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 52435

DST#: 1

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.01 @ 04:47:07

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

5500 ppm

Viscosity: 85.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.93 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
40.00	W,M With Oil Spots 15%water 85%mud	0.561

Total Length: 40.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

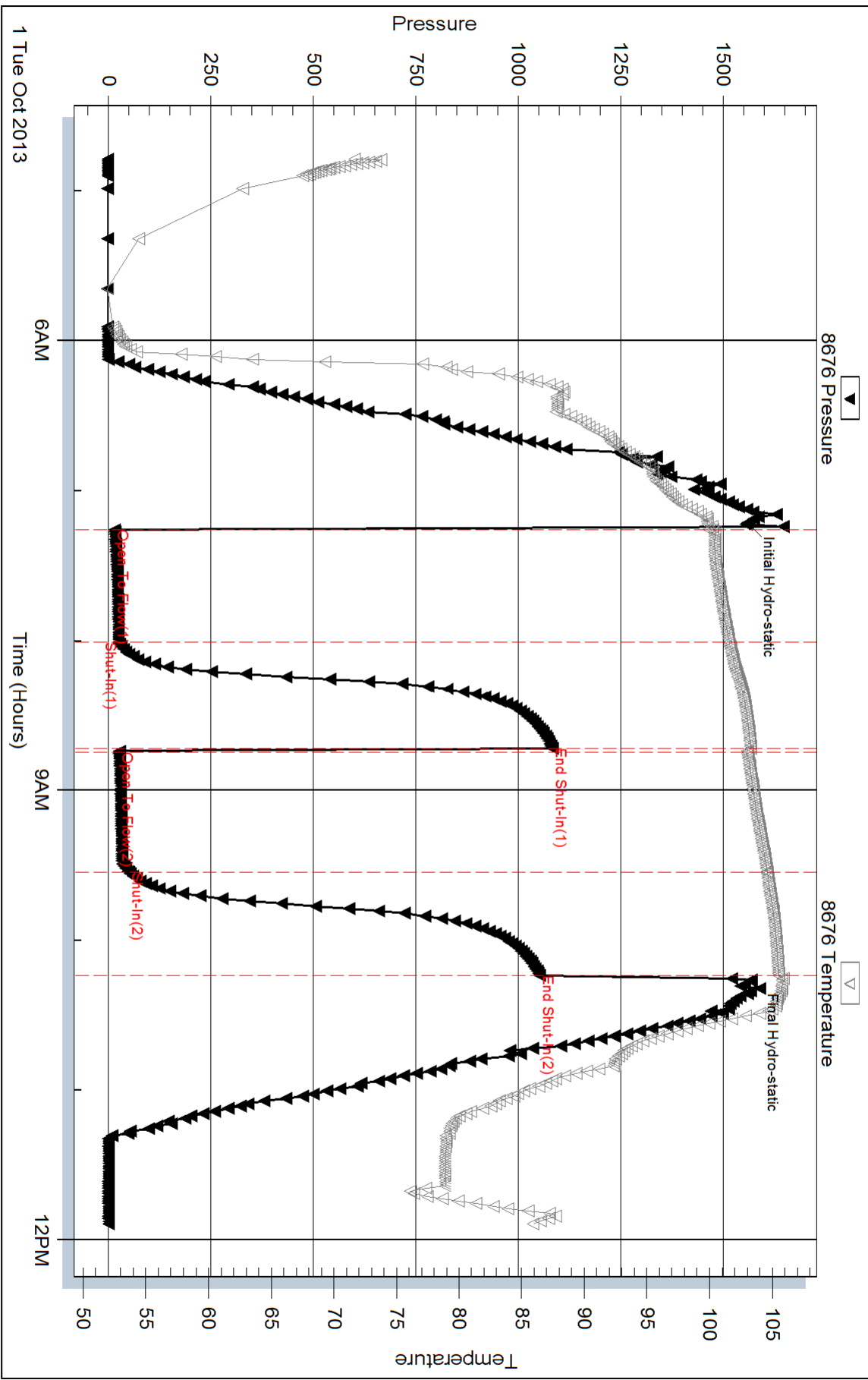
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



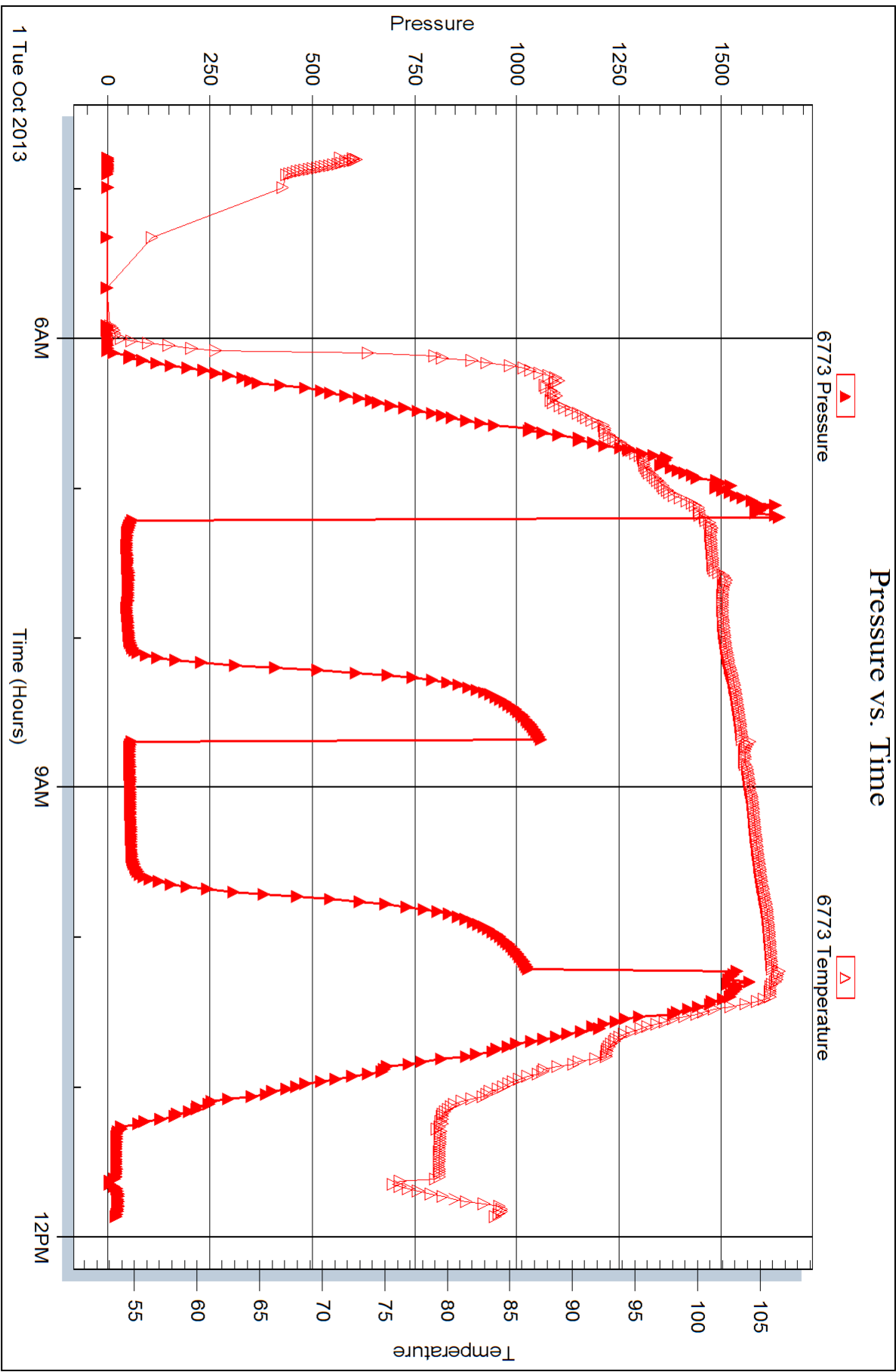
Serial #: 6773

Outside

Dow nting-Nelson Oil Co Inc

Before#2-12

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson/ Marc Dow

Befort #2-12

12-14s-19w Ellis,KS

Start Date: 2013.10.01 @ 18:08:31

End Date: 2013.10.02 @ 01:23:31

Job Ticket #: 52436 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.04 @ 15:09:40



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 52436

DST#: 2

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.01 @ 18:08:31

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:28:01

Time Test Ended: 01:23:31

Test Type: Conventional Bottom Hole (Reset)

Tester: Chris Staats

Unit No: 47

Interval: 3426.00 ft (KB) To 3462.00 ft (KB) (TVD)

Reference Elevations: 2181.00 ft (KB)

Total Depth: 3462.00 ft (KB) (TVD)

2173.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8676 Outside

Press @ Run Depth: 66.49 psig @ 3427.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.01

End Date:

2013.10.02

Last Calib.: 2013.10.02

Start Time: 18:08:36

End Time:

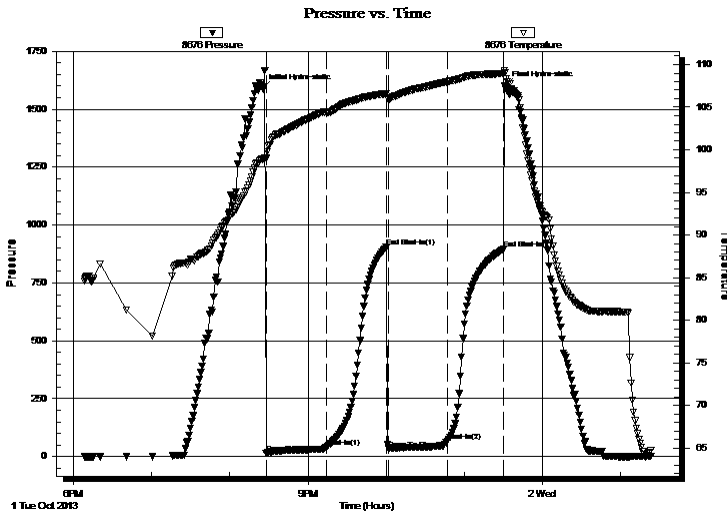
01:23:30

Time On Btm: 2013.10.01 @ 20:25:16

Time Off Btm: 2013.10.01 @ 23:31:01

TEST COMMENT: IF: Strong blow BOB 17 min
IS: No blow back
FF: Strong blow BOB 1 min
FS: Weak blow back 1"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1590.81	98.88	Initial Hydro-static
3	16.02	99.04	Open To Flow (1)
49	39.11	104.35	Shut-In(1)
95	905.02	106.57	End Shut-In(1)
97	33.33	105.87	Open To Flow (2)
142	66.49	107.98	Shut-In(2)
185	895.36	108.93	End Shut-In(2)
186	1600.98	109.03	Final Hydro-static

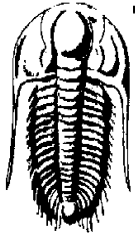
Recovery

Length (ft)	Description	Volume (bbl)
20.00	Oil 100%	0.28
60.00	O,G,M 5%oil 10%gas 85%mud	0.84

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

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 52436

DST#: 2

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.01 @ 18:08:31

Tool Information

Drill Pipe:	Length: 3420.00 ft	Diameter: 3.80 inches	Volume: 47.97 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume: 47.97 bbl</u>	Tool Chased	1.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3426.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	57.00 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			3406.00	
Shut In Tool	5.00			3411.00	
Hydraulic tool	5.00			3416.00	
Packer	5.00			3421.00	21.00 Bottom Of Top Packer
Packer	5.00			3426.00	
Stubb	1.00			3427.00	
Recorder	0.00	8676	Outside	3427.00	
Recorder	0.00	6773	Outside	3427.00	
Perforations	32.00			3459.00	
Bullnose	3.00			3462.00	36.00 Bottom Packers & Anchor
Total Tool Length:	57.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Befort #2-12

Job Ticket: 52436

DST#: 2

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.01 @ 18:08:31

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.93 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
20.00	Oil 100%	0.281
60.00	O,G,M 5%oil 10%gas 85%mud	0.842

Total Length: 80.00 ft Total Volume: 1.123 bbf

Num Fluid Samples: 0

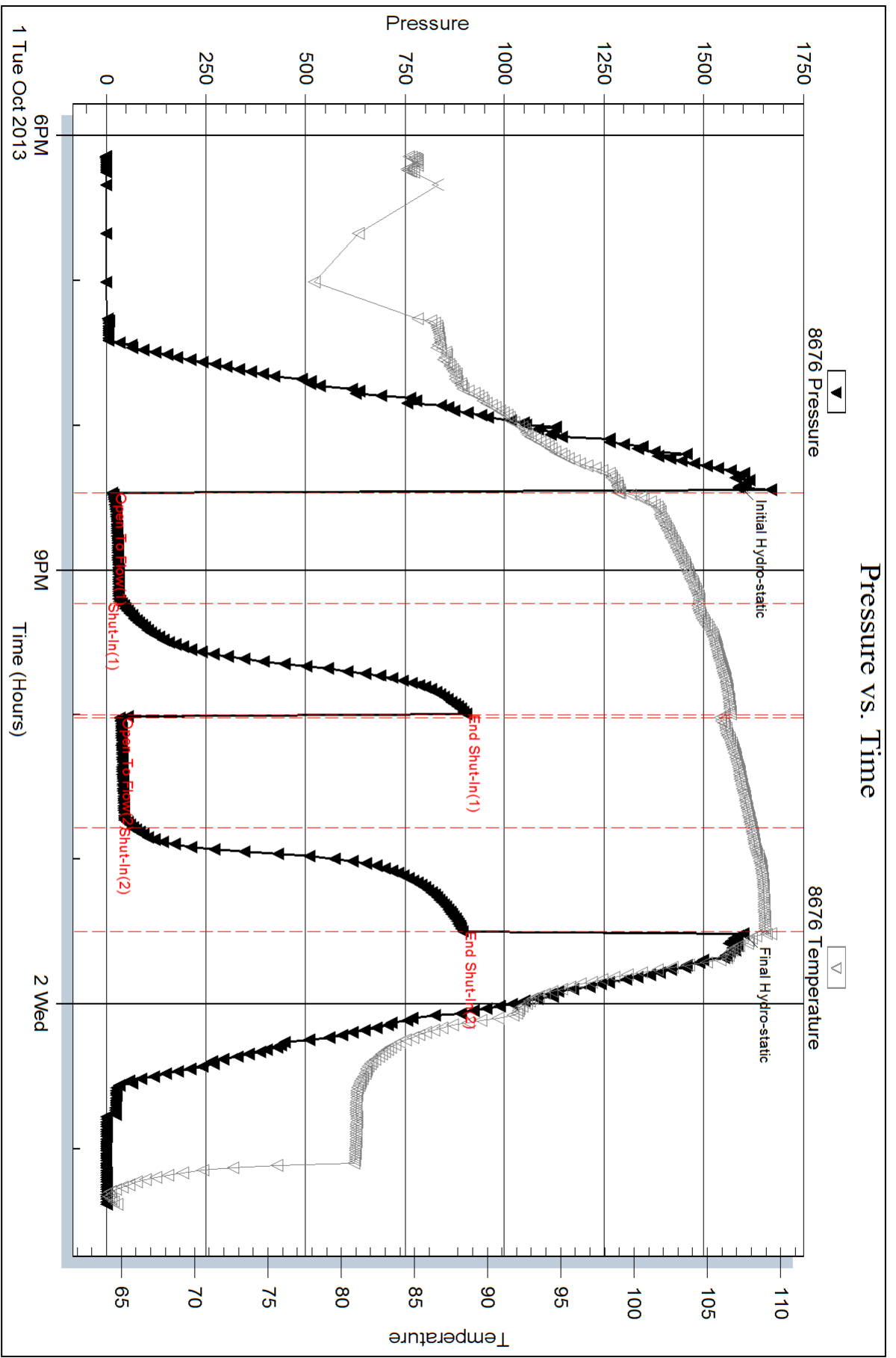
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

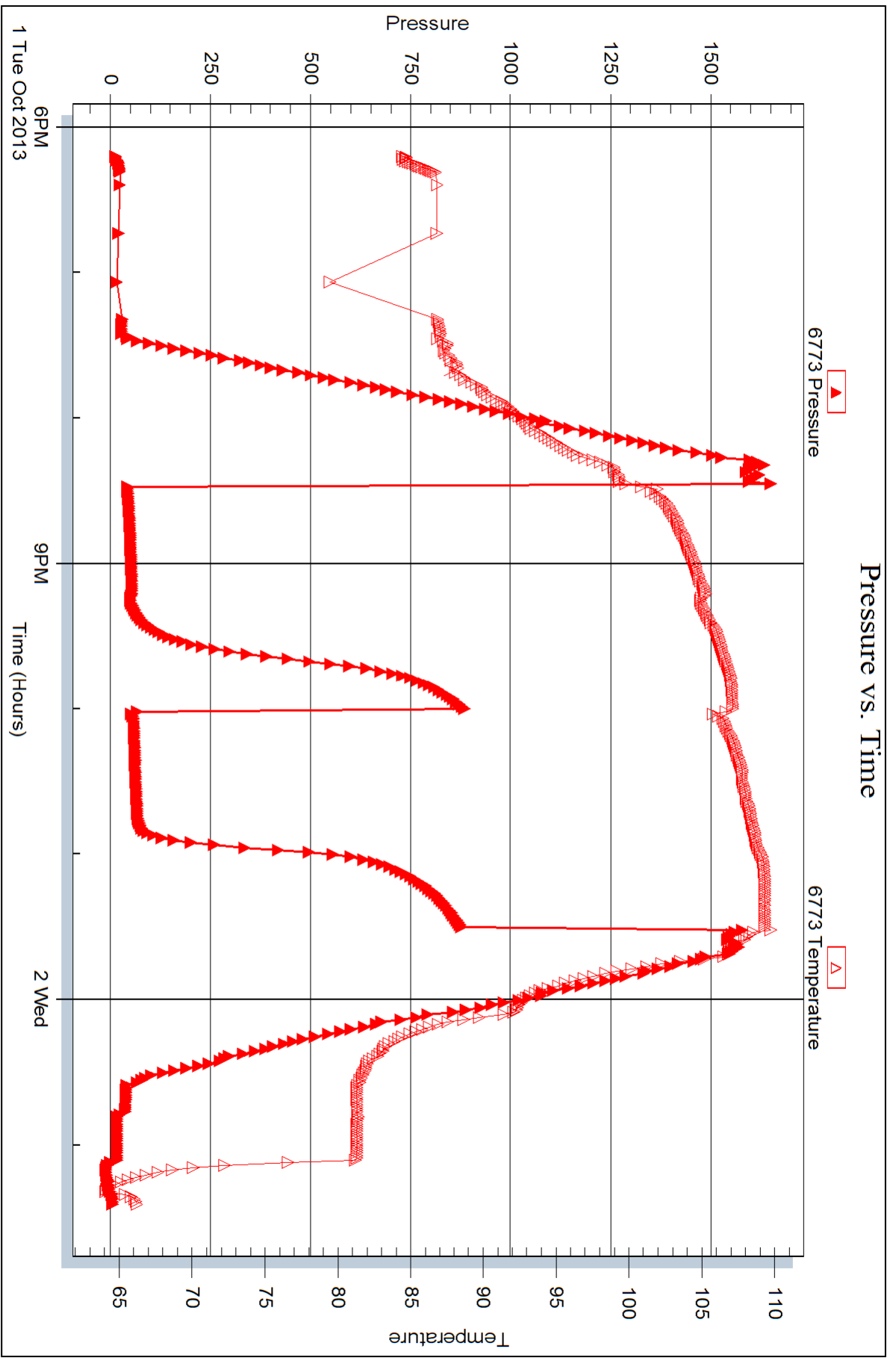


Serial #: 6773

Outside Dow nting-Nelson Oil Co Inc

Before#2-12

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 52436

Printed: 2013.10.04 @ 15:09:41



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson/ Marc Dow

Befort #2-12

12-14s-19w Ellis,KS

Start Date: 2013.10.02 @ 09:45:29

End Date: 2013.10.02 @ 15:07:53

Job Ticket #: 54821 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.04 @ 15:09:11



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 54821

DST#: 3

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.02 @ 09:45:29

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:30:24

Time Test Ended: 15:07:53

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3479.00 ft (KB) To 3535.00 ft (KB) (TVD)

Reference Elevations: 2181.00 ft (KB)

Total Depth: 3535.00 ft (KB) (TVD)

2173.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369 Outside

Press @ Run Depth: 23.95 psig @ 3481.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.02

End Date:

2013.10.02

Last Calib.:

2013.10.02

Start Time:

09:45:29

End Time:

15:07:53

Time On Btm:

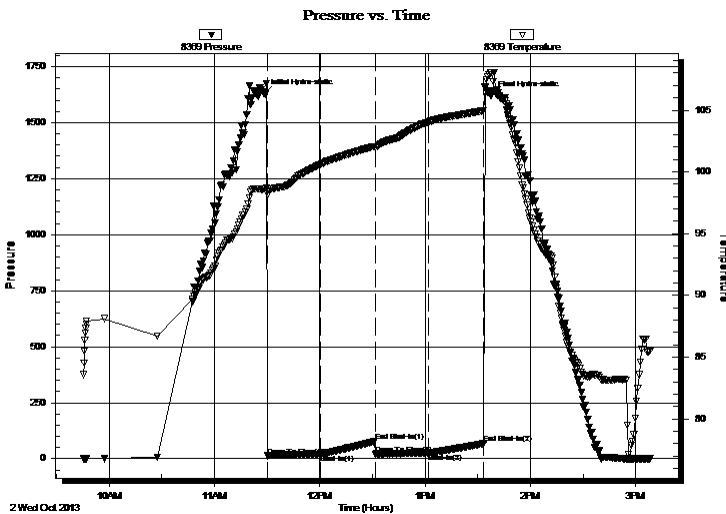
2013.10.02 @ 11:28:39

Time Off Btm:

2013.10.02 @ 13:37:39

TEST COMMENT: 30-IFP-w k bl thru-out
30-ISIP-no bl
30-FFP-w k bl thru-out 1 1/2" to 2" bl
30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1627.58	98.62	Initial Hydro-static
2	13.36	98.17	Open To Flow (1)
32	20.87	100.60	Shut-In(1)
63	78.55	102.07	End Shut-In(1)
64	18.62	102.04	Open To Flow (2)
94	23.95	104.02	Shut-In(2)
125	67.95	104.97	End Shut-In(2)
129	1619.63	108.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	110'GIP	0.00
10.00	O&GCM 10%G10%O80%M	0.14

* 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

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 54821

DST#: 3

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.02 @ 09:45:29

Tool Information

Drill Pipe:	Length: 3481.00 ft	Diameter: 3.80 inches	Volume: 48.83 bbl	Tool Weight: 2200.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 48.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3479.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	77.00 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			3459.00	
Shut In Tool	5.00			3464.00	
Hydraulic tool	5.00			3469.00	
Packer	5.00			3474.00	21.00 Bottom Of Top Packer
Packer	5.00			3479.00	
Stubb	1.00			3480.00	
Perforations	1.00			3481.00	
Recorder	0.00	8369	Outside	3481.00	
Recorder	0.00	8700	Outside	3481.00	
Blank Spacing	33.00			3514.00	
Perforations	18.00			3532.00	
Bullnose	3.00			3535.00	56.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Befort #2-12

Job Ticket: 54821

DST#: 3

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.02 @ 09:45:29

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 59.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.74 in³

Gas Cushion Type:

Resistivity: 0.00 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	110'GIP	0.000
10.00	O&GCM 10%G10%O80%M	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

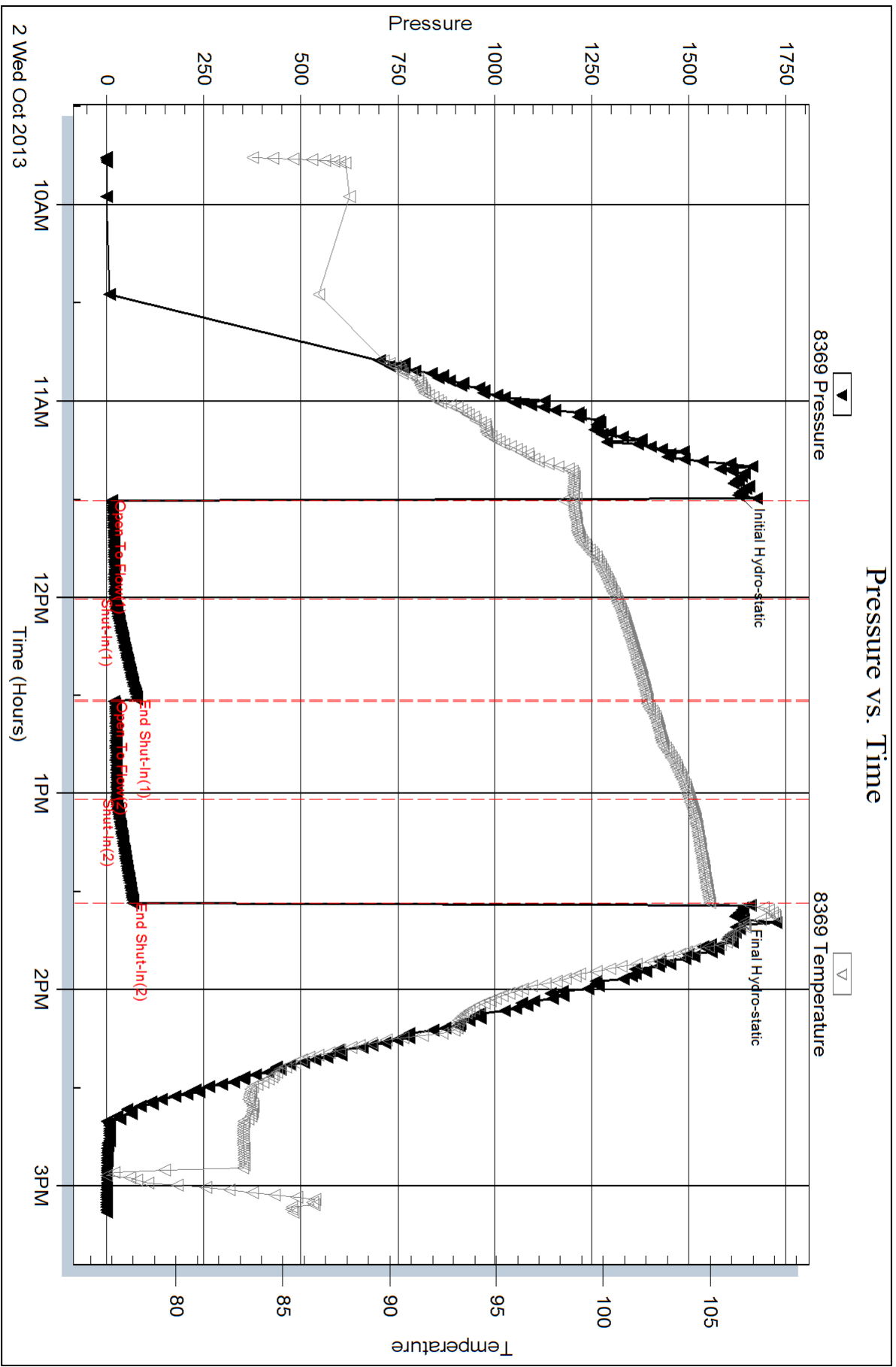
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

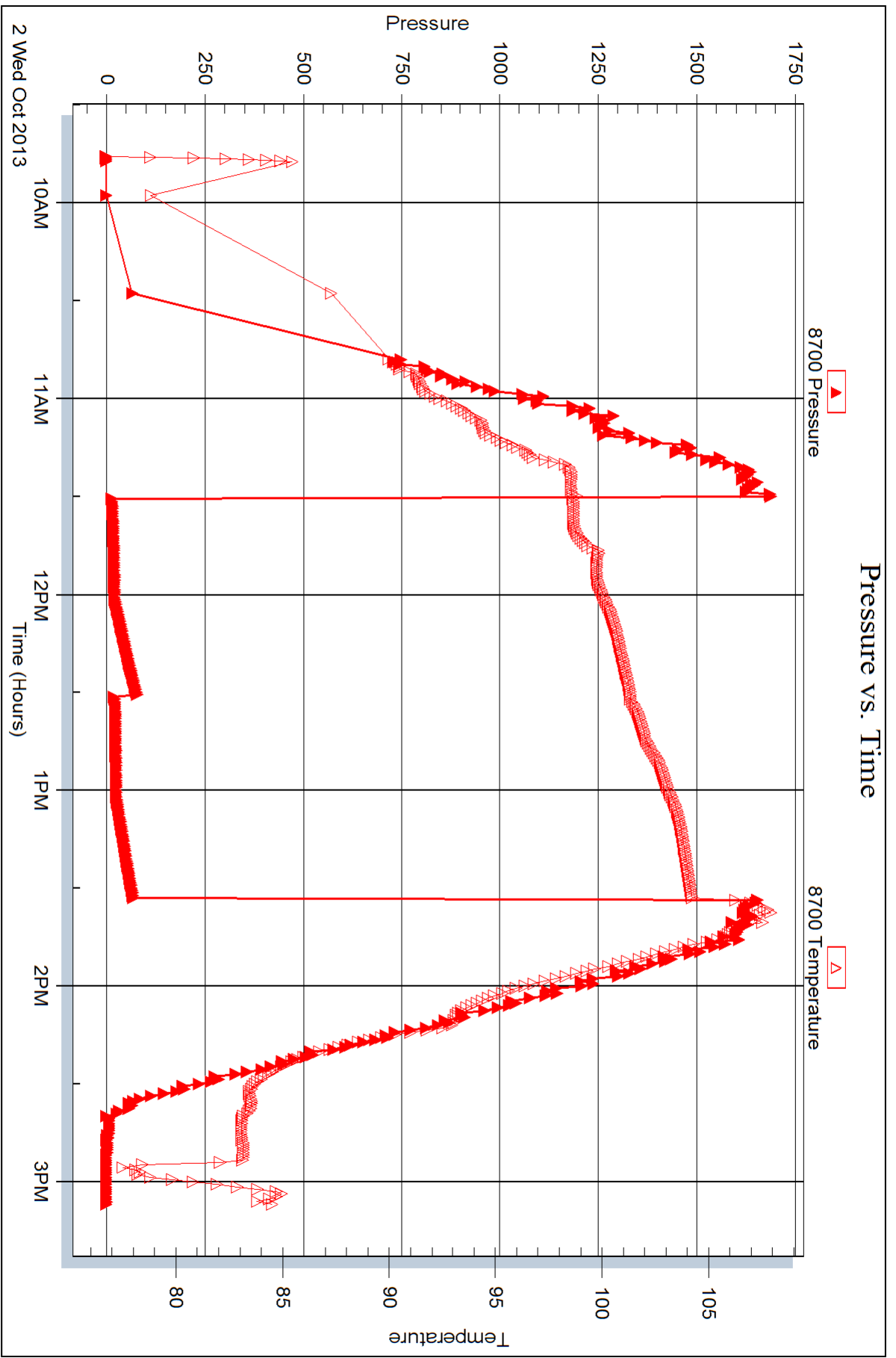


Serial #: 8700

Outside Dow nting-Nelson Oil Co Inc

Before#2-12

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54821

Printed: 2013.10.04 @ 15:09:13



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson/ Marc Dow

Befort #2-12

12-14s-19w Ellis,KS

Start Date: 2013.10.03 @ 02:40:28

End Date: 2013.10.03 @ 09:17:52

Job Ticket #: 54822 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.04 @ 15:07:51



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

ATTN: Ron Nelson/ Marc Dow

Job Ticket: 54822

DST#: 4

Test Start: 2013.10.03 @ 02:40:28

GENERAL INFORMATION:

Formation: **LKC H-I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:34:23

Time Test Ended: 09:17:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3585.00 ft (KB) To 3642.00 ft (KB) (TVD)

Reference Elevations: 2181.00 ft (KB)

Total Depth: 3642.00 ft (KB) (TVD)

2173.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369 Outside

Press @ Run Depth: 48.61 psig @ 3587.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.03

End Date:

2013.10.03

Last Calib.: 2013.10.03

Start Time: 02:40:28

End Time:

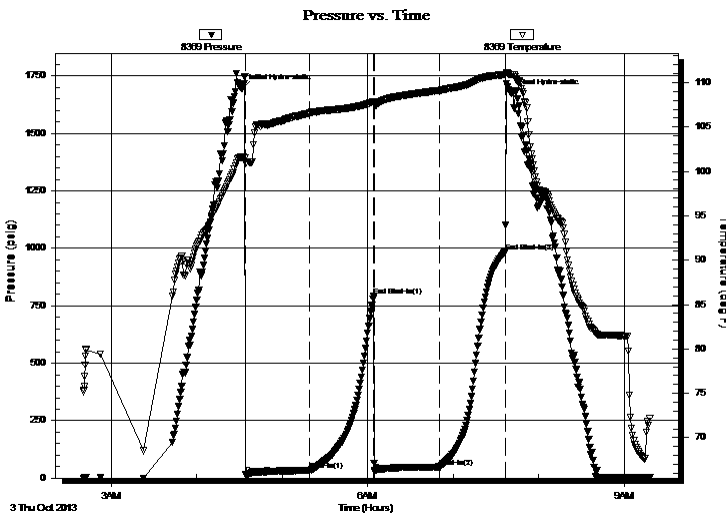
09:17:52

Time On Btm: 2013.10.03 @ 04:32:08

Time Off Btm: 2013.10.03 @ 07:40:52

TEST COMMENT: 45-IFP-w k to a gd bl 1/2" to 6 1/2" bl
45-ISIP-no bl
45-FFP-strg bl thru-out
45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1695.05	101.58	Initial Hydro-static
3	14.69	100.93	Open To Flow (1)
48	34.42	106.55	Shut-In(1)
92	793.24	107.80	End Shut-In(1)
93	29.08	107.44	Open To Flow (2)
138	48.61	109.11	Shut-In(2)
185	986.15	110.89	End Shut-In(2)
189	1675.21	110.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GMO 30%G30%M40%O	0.84
30.00	O&GCM 10%G10%O80%M	0.42
0.00	775'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

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 54822

DST#: 4

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.03 @ 02:40:28

Tool Information

Drill Pipe:	Length: 3577.00 ft	Diameter: 3.80 inches	Volume: 50.18 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 50.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3585.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	78.00 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			3565.00	
Shut In Tool	5.00			3570.00	
Hydraulic tool	5.00			3575.00	
Packer	5.00			3580.00	21.00 Bottom Of Top Packer
Packer	5.00			3585.00	
Stubb	1.00			3586.00	
Perforations	1.00			3587.00	
Recorder	0.00	8369	Outside	3587.00	
Recorder	0.00	8700	Outside	3587.00	
Blank Spacing	33.00			3620.00	
Perforations	19.00			3639.00	
Bullnose	3.00			3642.00	57.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Before #2-12

Job Ticket: 54822

DST#: 4

ATTN: Ron Nelson/ Marc Dow

Test Start: 2013.10.03 @ 02:40:28

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
60.00	GMO 30%G30%M40%O	0.842
30.00	O&GCM 10%G10%O80%M	0.421
0.00	775'GIP	0.000

Total Length: 90.00 ft Total Volume: 1.263 bbf

Num Fluid Samples: 0

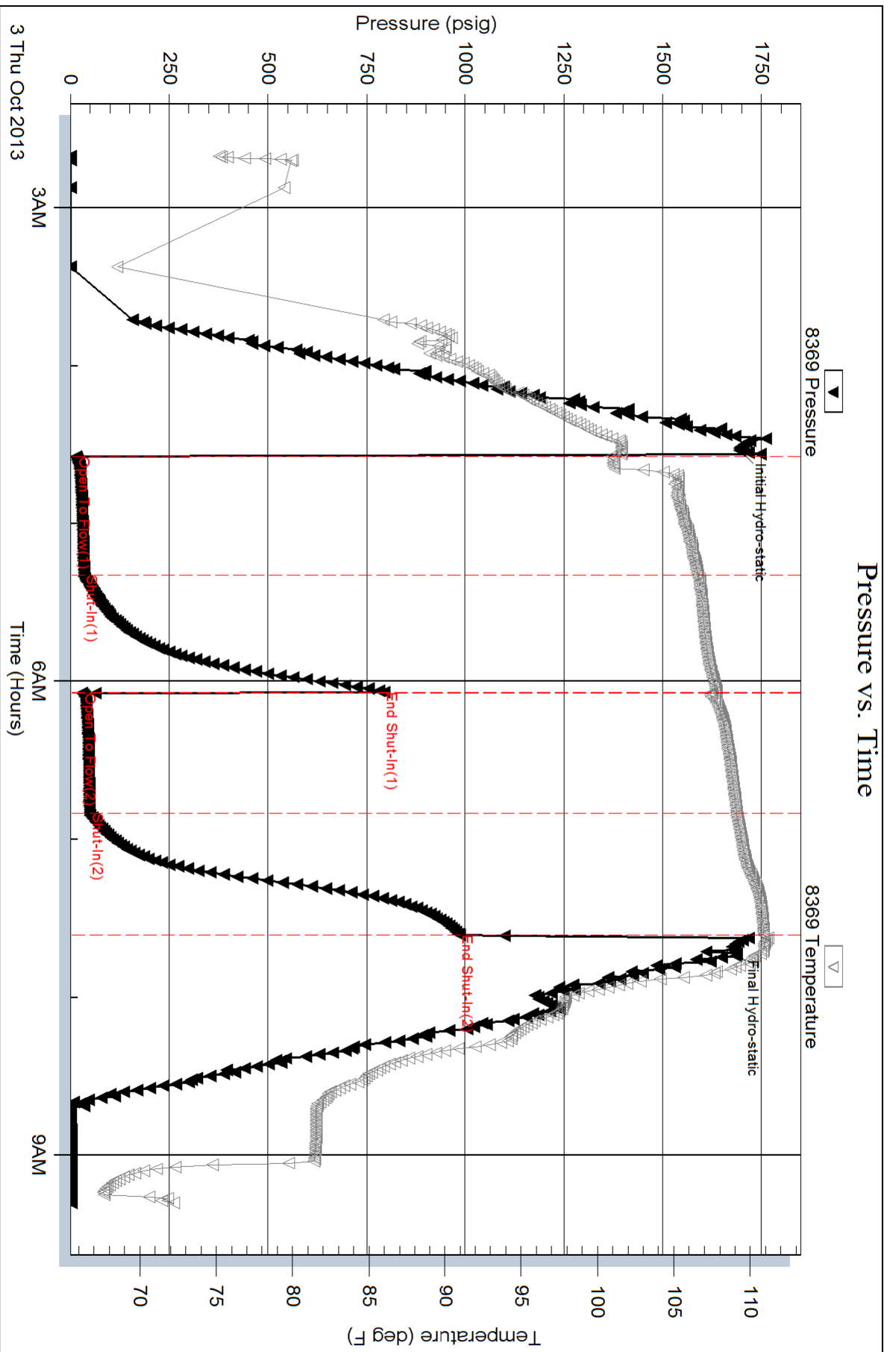
Num Gas Bombs: 0

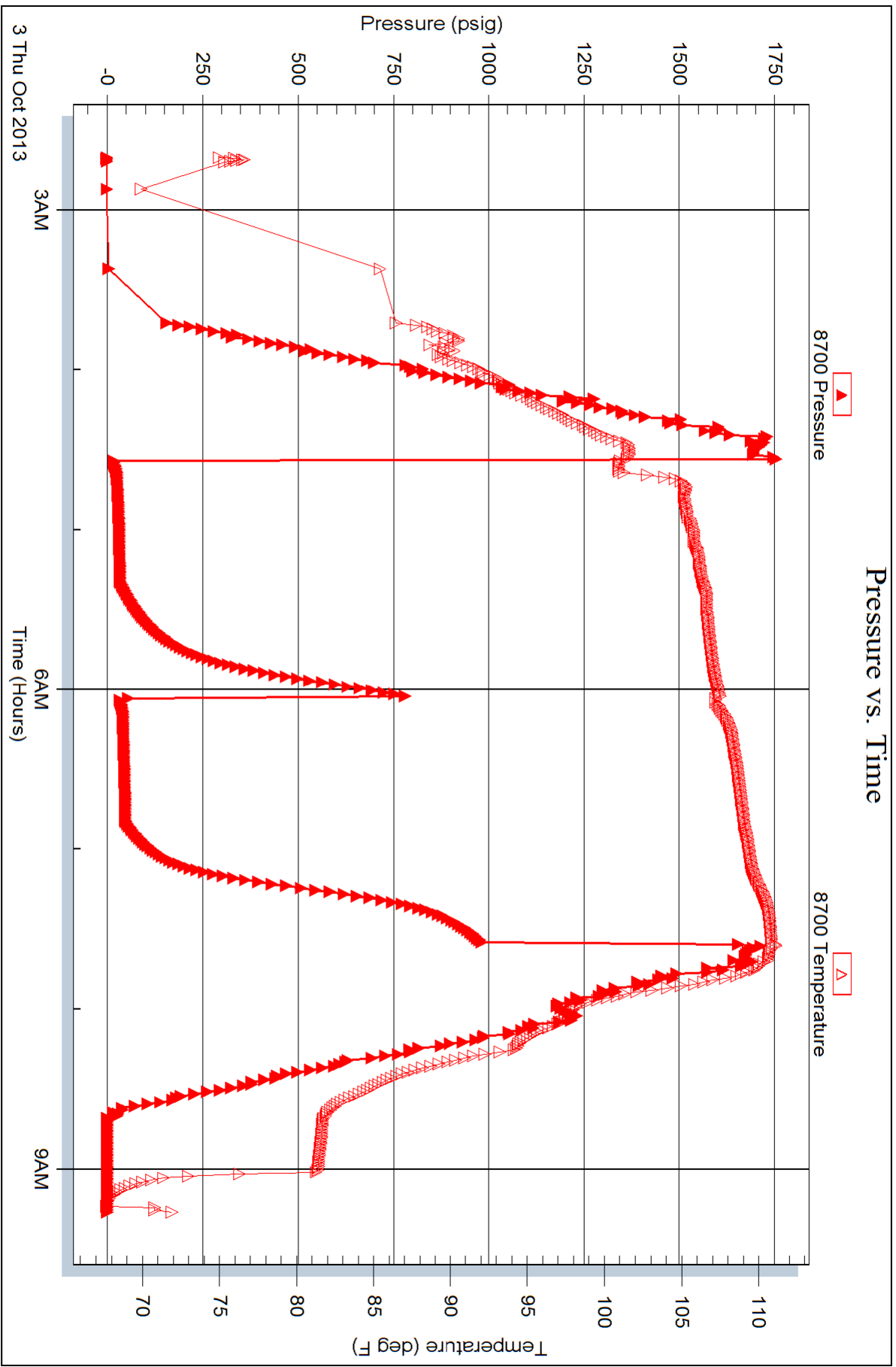
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52435

Well Name & No. BeFort # 2-12 Test No. 1 Date 10-1-13
 Company Downing - Nelson oil co INC Elevation 2181 KB 2173 GL
 Address PO box 1019 111 west 10th Street Hays KS 67601
 Co. Rep / Geo. Ron Nelson / Marc Downing Rig Discovery #3
 Location: Sec. 12 Twp. 14 Rge. 19 Co. Ellis State KS

Interval Tested 3377 - 3413 Zone Tested Plottsmouth
 Anchor Length 36' Drill Pipe Run 3359 Mud Wt. 8.5
 Top Packer Depth 3372 Drill Collars Run 0 Vis 8.5
 Bottom Packer Depth 3377 Wt. Pipe Run 0 WL 8.0
 Total Depth 3413 Chlorides 500 ppm System LCM 2.5#

Blow Description IF: weak blow 3 1/4"
ISI: ~~weak blow 3 1/4"~~ No blow back
FF: weak blow 2"
FSI: NO blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>40'</u>	Feet of <u>W, M with oil spots</u>	%gas	%oil <u>15</u>	%water <u>85</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40' BHT 102 Gravity - API RW 96 @ 87 ° F Chlorides 5500 ppm
 (A) Initial Hydrostatic 1560 Test 1150 T-On Location 4:30
 (B) First Initial Flow 16 Jars _____ T-Started _____
 (C) First Final Flow 25 Safety Joint _____ T-Open _____
 (D) Initial Shut-In 1084 Circ Sub _____ T-Pulled # 10:15
 (E) Second Initial Flow 26 Hourly Standby _____ T-Out 11:50
 (F) Second Final Flow 50 Mileage 20 miles 27.90 Comments _____
 (G) Final Shut-In 1052 Sampler _____
 (H) Final Hydrostatic 1569 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1177.90
 Accessibility _____ MP/DST Disc't _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1177.90

Approved By _____ Our Representative Chris [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. 52436

4/10

Well Name & No. BCFort #2-12 Test No. 2 Date 10-1-73
 Company Downing - Nelson Oil Co INC Elevation 2181 KB 2173 GL
 Address Po box 1019 111 West 10th Street Hays KS 67601
 Co. Rep / Geo. Ron Nelson / Marc Downing Rig Discovery #3
 Location: Sec. 12 Twp. 14 Rge. 19 Co. Ellis State KS

Interval Tested 3426 - 3462 Zone Tested Toronto
 Anchor Length 36' Drill Pipe Run 3420 Mud Wt. 8.6
 Top Packer Depth 3421 Drill Collars Run 0 Vis 62
 Bottom Packer Depth 3426 Wt. Pipe Run 0 WL 8.0
 Total Depth 3462 Chlorides 1000 ppm System LCM 2#

Blow Description IF: Strong blow BOB 17 min
ISL: NO blow back
FF: Strong blow BOB 1 min
FSL: Weak blow back 1"

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>20'</u>	Feet of <u>Clean oil</u>	%gas <u>100</u>	%oil	%water	%mud
Rec <u>60'</u>	Feet of <u>0.6 M</u>	<u>10</u> %gas	<u>5</u> %oil	%water <u>85</u>	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

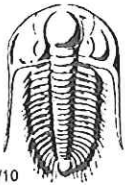
Rec Total 80' BHT 110 Gravity 30 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1590 Test 1150 T-On Location 17:50
 (B) First Initial Flow 16 Jars _____ T-Started 18:08
 (C) First Final Flow 39 Safety Joint _____ T-Open 20:28
 (D) Initial Shut-In 905 Circ Sub _____ T-Pulled 23:30
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 1:15
 (F) Second Final Flow 66 Mileage 27.90 Comments _____
 (G) Final Shut-In 895 Sampler _____
 (H) Final Hydrostatic 1600 Straddle _____

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Extra Recorder _____
 Extra Packer _____
 Day Standby _____
 Accessibility _____
 Sub Total 1177.90
 Sub Total 1177.90
 Total 1177.90
 MP/DST Disc't _____

Approved By _____ Our Representative Chris Stout

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54821

Well Name & No. Befort #2-12 Test No. 3 Date 10-2-13
 Company Downing-Nelson Oil Co Inc Elevation 2181 KB 2173 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC Downing Rig Discovery 1193
 Location: Sec. 12 Twp. 14^s Rge. 19^w Co. ELLIS State Ks

Interval Tested 3479-3535 Zone Tested LKC C-0
 Anchor Length 56 Drill Pipe Run 3481 Mud Wt. 8.4
 Top Packer Depth 3474 Drill Collars Run 30 Vis 59
 Bottom Packer Depth 3479 Wt. Pipe Run - WL 8.8
 Total Depth 3535 Chlorides 4000 ppm System LCM 1 1/2 #

Blow Description IFP - Weak surface Blow thru-out
ISIP - NO Blow
FFP - Weak Blow thru-out 1 1/2" To 2" Blow
FSTIP - NO Blow

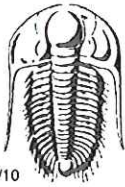
Rec	Feet of	%gas	%oil	%water	%mud
<u>110</u>	<u>GIP</u>				
<u>10</u>	<u>0+6CM</u>	<u>10</u>	<u>10</u>	<u>80</u>	

Rec Total 10 BHT 104 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1627</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0905</u>
(B) First Initial Flow <u>13</u>	<input type="checkbox"/> Jars	T-Started <u>0945</u>
(C) First Final Flow <u>20</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1130</u>
(D) Initial Shut-In <u>78</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1330</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1507</u>
(F) Second Final Flow <u>23</u>	<input checked="" type="checkbox"/> Mileage <u>18RT</u> 27.90	Comments
(G) Final Shut-In <u>67</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1619</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1177.90</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1177.90</u>	

Approved By _____ Our Representative RAY SCHWAB *Thank you*

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54822

Well Name & No. Befort #2-12 Test No. 4 Date 10-3-13
 Company Downing-Nelson Oil Co Inc Elevation 2181 KB 2123 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC Downing Rig Discovery rig 3
 Location: Sec. 12 Twp. 14^s Rge. 19^w Co. ELLIS State K

Interval Tested 3585-3642 Zone Tested LKC H-I
 Anchor Length 57 Drill Pipe Run 3577 Mud Wt. 8.3
 Top Packer Depth 3580 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 3585 Wt. Pipe Run - WL 8.8
 Total Depth 3642 Chlorides 4000 ppm System LCM 1 1/2 #
 Blow Description IFP - Weak To A Good Blow 1/2" To 6 1/2" Blow
ISTP - NO Blow
FFP - STRONG Blow Thru-out

Rec	Feet of	%gas	%oil	%water	%mud
<u>775</u>	<u>GIP</u>				
<u>30</u>	<u>0+6CM</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>60</u>	<u>6MO</u>	<u>30</u>	<u>40</u>	<u>30</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 90 BHT 110 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1695 Test 1150 T-On Location 0215
 (B) First Initial Flow 14 Jars _____ T-Started 0240
 (C) First Final Flow 34 Safety Joint _____ T-Open 0435
 (D) Initial Shut-In 793 Circ Sub _____ T-Pulled 0735
 (E) Second Initial Flow 29 Hourly Standby _____ T-Out 0917
 (F) Second Final Flow 48 Mileage 18RT 55.80 Comments Loaded Tool 10-4-13
 (G) Final Shut-In 986 Sampler _____ 10.30 AM
 (H) Final Hydrostatic 1675 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 800
 Initial Shut-In 45 Day Standby _____ Total 2005.80
 Final Flow 45 Accessibility 1d 1.25h MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1205.80

Approved By _____ Our Representative Ray Schwager Thank you
 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.