



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Seitz Barnhardt C #3

34-12s-21w Trego,KS

Start Date: 2013.01.18 @ 06:02:15

End Date: 2013.01.18 @ 12:30:15

Job Ticket #: 50329 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.22 @ 08:40:53



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

ATTN: Marc Dow ning

Job Ticket: 50329

DST#: 1

Test Start: 2013.01.18 @ 06:02:15

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:59:25

Time Test Ended: 12:30:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3488.00 ft (KB) To 3515.00 ft (KB) (TVD)

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3515.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @RunDepth: 81.67 psig @ 3492.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.18

End Date: 2013.01.18

Last Calib.: 2013.01.18

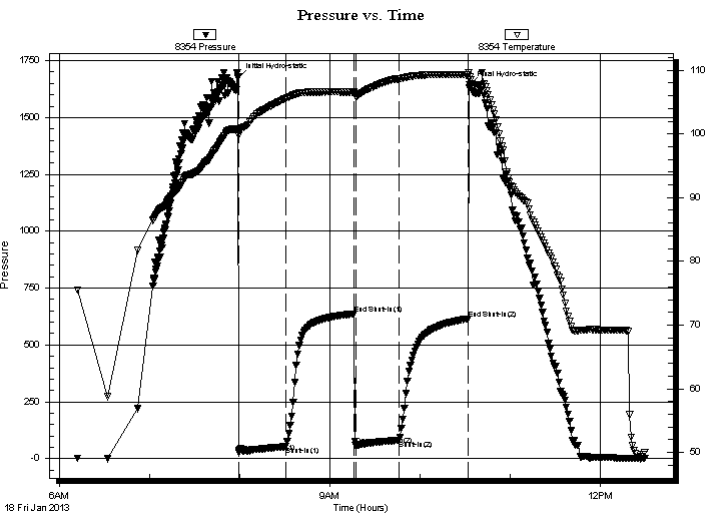
Start Time: 06:12:15

End Time: 12:30:15

Time On Btm: 2013.01.18 @ 07:59:15

Time Off Btm: 2013.01.18 @ 10:33:15

TEST COMMENT: IF-Strong building blow . BOB @ 5 minutes.
ISI-Return @ 30 seconds. Built to 2 inches.
FF-Strong building blow . BOB @ 3 minutes 30 seconds.
FSI-Return @ 30 seconds. Built to 3 1/2 inches.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1677.74	100.74	Initial Hydro-static
1	26.20	99.73	Open To Flow (1)
32	52.93	105.56	Shut-In(1)
77	636.74	106.56	End Shut-In(1)
78	57.95	105.86	Open To Flow (2)
107	81.67	108.62	Shut-In(2)
153	615.16	109.24	End Shut-In(2)
154	1642.73	108.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	10%Gas/20%Oil/40%Water/30%Mud	0.10
60.00	20%/40%Oil/40%Mud	0.75
95.00	50%Gas/50%Oil	1.33
0.00	1134' G.I.P.	0.00

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

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50329

DST#: 1

ATTN: Marc Dow ning

Test Start: 2013.01.18 @ 06:02:15

Tool Information

Drill Pipe:	Length: 3454.00 ft	Diameter: 3.80 inches	Volume: 48.45 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 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:	10000.00 lb
			<u>Total Volume: 48.60 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3488.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	27.00 ft				
Tool Length:	47.00 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			3469.00	
Shut In Tool	5.00			3474.00	
Hydraulic tool	5.00			3479.00	
Packer	5.00			3484.00	20.00 Bottom Of Top Packer
Packer	4.00			3488.00	
Stubb	1.00			3489.00	
Perforations	3.00			3492.00	
Recorder	0.00	8354	Inside	3492.00	
Recorder	0.00	8520	Outside	3492.00	
Perforations	20.00			3512.00	
Bullnose	3.00			3515.00	27.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50329

DST#: 1

ATTN: Marc Dow ning

Test Start: 2013.01.18 @ 06:02:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

22500 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.94 in³

Gas Cushion Type:

Resistivity: 0.41 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
20.00	10%Gas/20%Oil/40%Water/30%Mud	0.098
60.00	20%/40%Oil/40%Mud	0.751
95.00	50%Gas/50%Oil	1.333
0.00	1134' G.I.P.	0.000

Total Length: 175.00 ft

Total Volume: 2.182 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

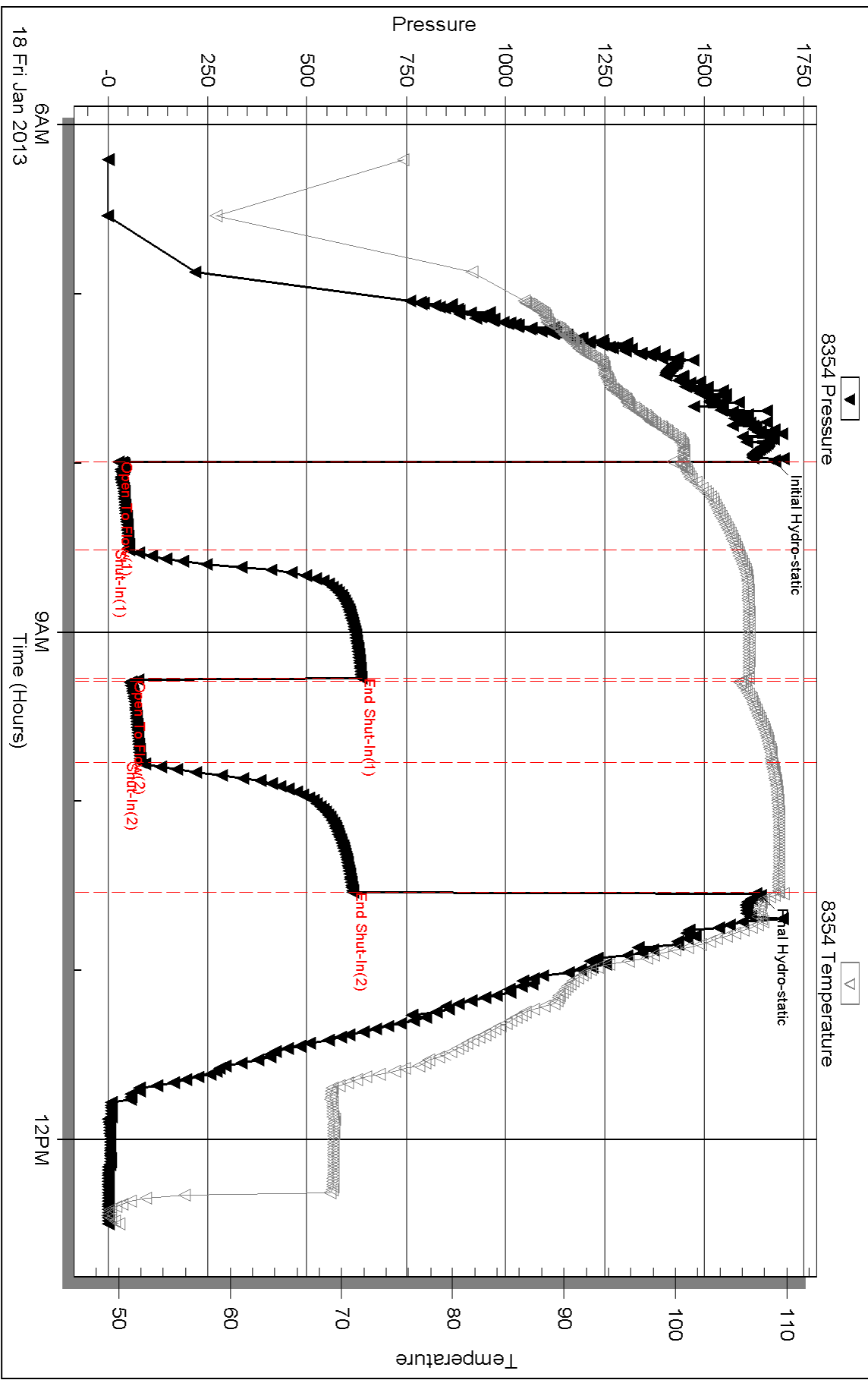
Inside

Dow nung-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 50329

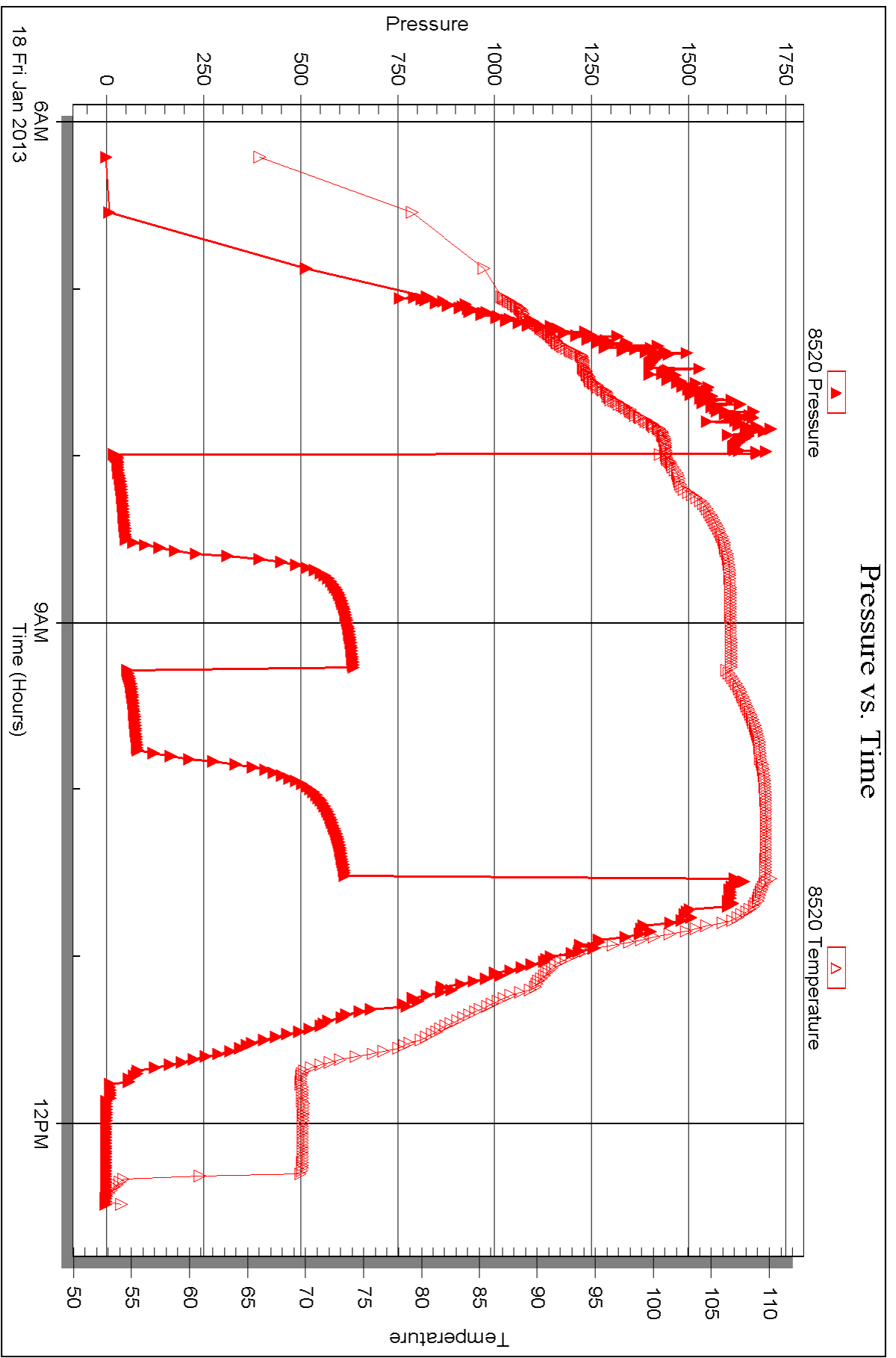
Printed: 2013.01.22 @ 08:40:56

Serial #: 8520

Outside Dow nung-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 50329

Printed: 2013.01.22 @ 08:40:57



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Seitz Barnhardt C #3

34-12s-21w Trego,KS

Start Date: 2013.01.18 @ 19:01:30

End Date: 2013.01.19 @ 00:38:30

Job Ticket #: 50330 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.22 @ 08:40:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

ATTN: Marc Dow ning

Job Ticket: 50330

DST#: 2

Test Start: 2013.01.18 @ 19:01:30

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:46:00

Time Test Ended: 00:38:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3513.00 ft (KB) To 3533.00 ft (KB) (TVD)

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3533.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press @RunDepth: 14.19 psig @ 3516.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.18

End Date: 2013.01.19

Last Calib.: 2013.01.19

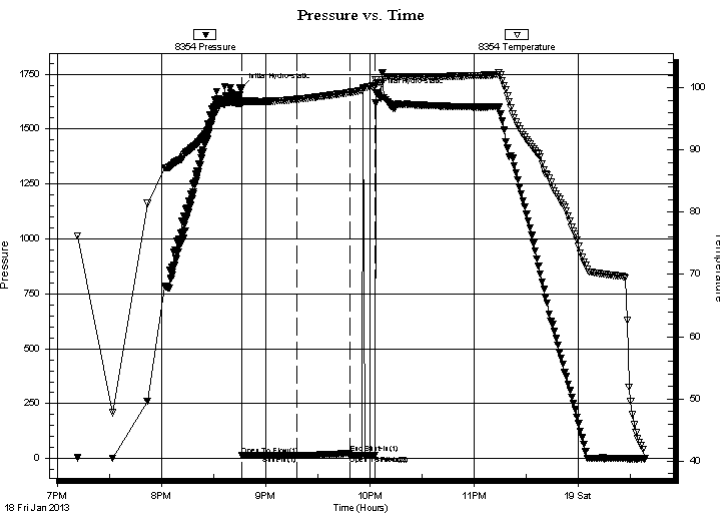
Start Time: 19:11:30

End Time: 00:38:30

Time On Btm: 2013.01.18 @ 20:45:50

Time Off Btm: 2013.01.18 @ 22:03:30

TEST COMMENT: IF-Few bubbles then died.
ISI-No Return.
FF-No Blow . Flushed Tool. Few bubbles. Pulled Tool.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.94	97.92	Initial Hydro-static
1	14.30	97.22	Open To Flow (1)
32	14.19	98.13	Shut-In(1)
63	24.24	99.22	End Shut-In(1)
63	13.82	99.24	Open To Flow (2)
77	15.03	100.27	Shut-In(2)
78	1666.82	100.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	2%Oil/98%Mud	0.02

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

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50330

DST#: 2

ATTN: Marc Dow ning

Test Start: 2013.01.18 @ 19:01:30

Tool Information

Drill Pipe:	Length: 3486.00 ft	Diameter: 3.80 inches	Volume: 48.90 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 49.05 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3513.00 ft			Final	51000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	20.00 ft				
Tool Length:	40.00 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			3494.00	
Shut In Tool	5.00			3499.00	
Hydraulic tool	5.00			3504.00	
Packer	5.00			3509.00	20.00 Bottom Of Top Packer
Packer	4.00			3513.00	
Stubb	1.00			3514.00	
Perforations	2.00			3516.00	
Recorder	0.00	8354	Inside	3516.00	
Recorder	0.00	8520	Outside	3516.00	
Perforations	14.00			3530.00	
Bullnose	3.00			3533.00	20.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50330

DST#: 2

ATTN: Marc Dow ning

Test Start: 2013.01.18 @ 19:01:30

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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	2%Oil/98%Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

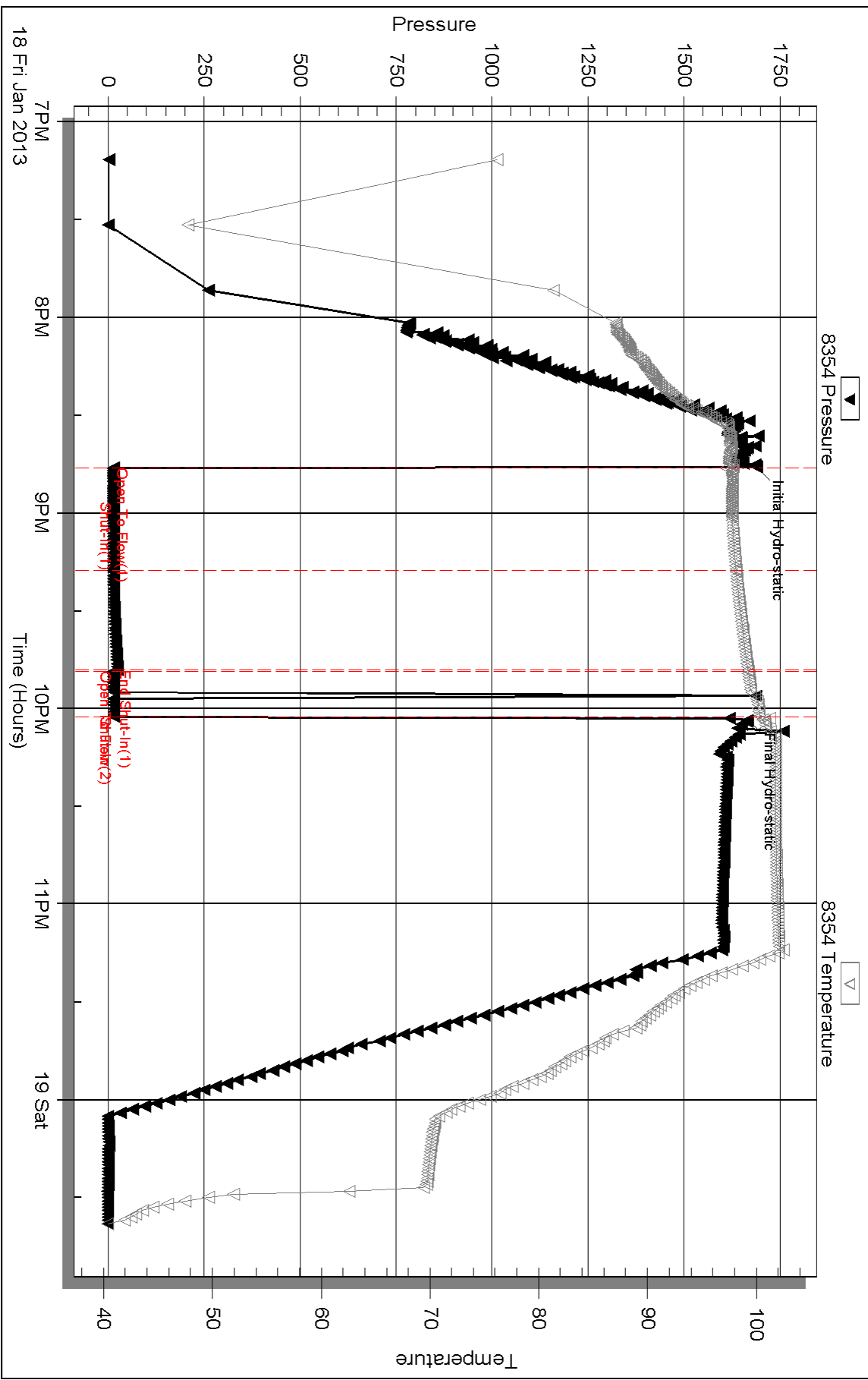
Inside

Dow nung-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 50330

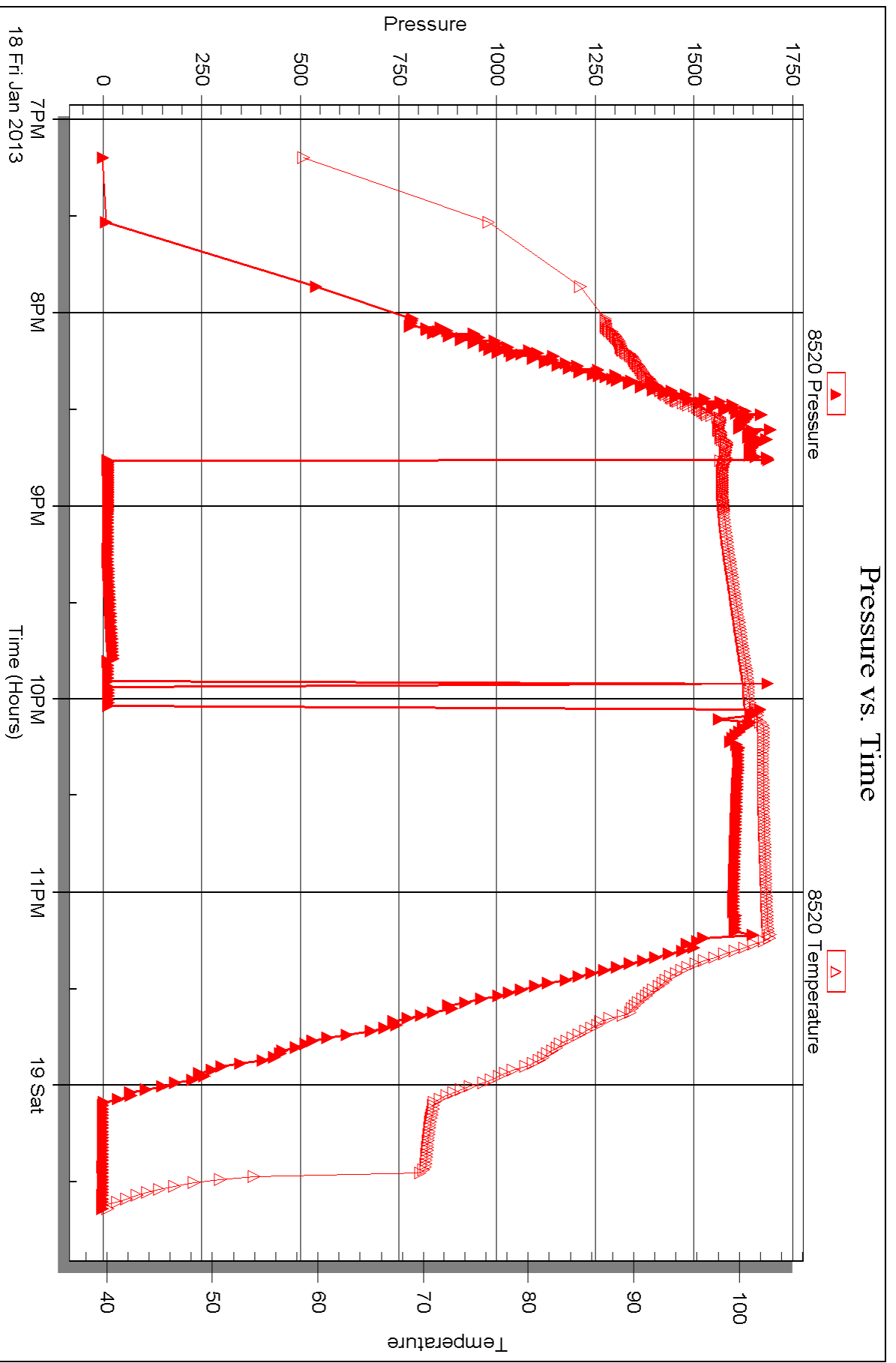
Printed: 2013.01.22 @ 08:40:18

Serial #: 8520

Outside Dow nung-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Seitz Barnhardt C #3

34-12s-21w Trego,KS

Start Date: 2013.01.19 @ 07:37:30

End Date: 2013.01.19 @ 13:27:30

Job Ticket #: 50331 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.22 @ 08:39:39



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

ATTN: Marc Dow ning

Job Ticket: 50331

DST#: 3

Test Start: 2013.01.19 @ 07:37:30

GENERAL INFORMATION:

Formation: **LKC "E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:08:20

Time Test Ended: 13:27:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3528.00 ft (KB) To 3547.00 ft (KB) (TVD)

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3547.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @RunDepth: 64.39 psig @ 3531.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.19

End Date:

2013.01.19

Last Calib.:

2013.01.19

Start Time:

07:47:30

End Time:

13:27:30

Time On Btm:

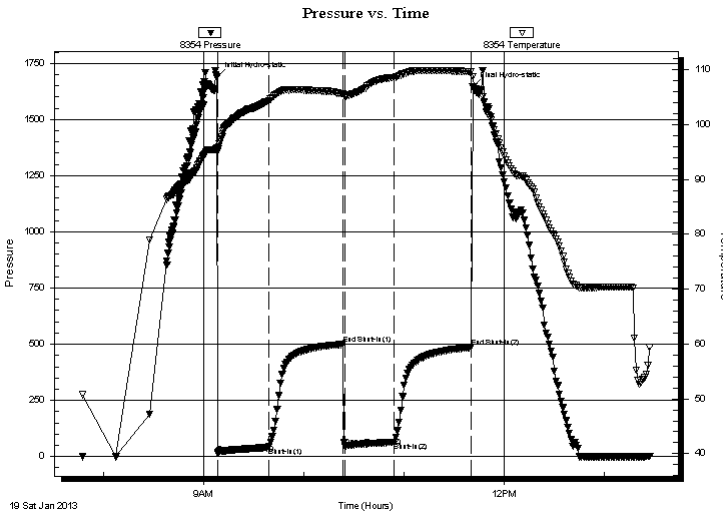
2013.01.19 @ 09:08:10

Time Off Btm:

2013.01.19 @ 11:41:00

TEST COMMENT: IF-Fair building blow . BOB @ 9 minutes 15 seconds.
ISI-Return @ 4 minutes. Died @ 9 minutes.
FF-Strong building blow . BOB @ 4 minutes.
FSI-Return @ 30 seconds. Built to 1/2 inch.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1689.88	95.77	Initial Hydro-static
1	15.84	95.10	Open To Flow (1)
31	43.31	104.29	Shut-In(1)
76	499.82	105.57	End Shut-In(1)
77	43.64	105.17	Open To Flow (2)
106	64.39	108.54	Shut-In(2)
152	485.94	109.63	End Shut-In(2)
153	1645.50	108.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	30%Gas/40%Oil/30%Mud	1.69
0.00	860' G.I.P.	0.00

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

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50331

DST#: 3

ATTN: Marc Dow ning

Test Start: 2013.01.19 @ 07:37:30

Tool Information

Drill Pipe:	Length: 3487.00 ft	Diameter: 3.80 inches	Volume: 48.91 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 49.06 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3528.00 ft			Final	51000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	19.00 ft				
Tool Length:	39.00 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			3509.00	
Shut In Tool	5.00			3514.00	
Hydraulic tool	5.00			3519.00	
Packer	5.00			3524.00	20.00 Bottom Of Top Packer
Packer	4.00			3528.00	
Stubb	1.00			3529.00	
Perforations	2.00			3531.00	
Recorder	0.00	8354	Inside	3531.00	
Recorder	0.00	8520	Outside	3531.00	
Perforations	13.00			3544.00	
Bullnose	3.00			3547.00	19.00 Bottom Packers & Anchor

Total Tool Length: 39.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50331

DST#: 3

ATTN: Marc Dow ning

Test Start: 2013.01.19 @ 07:37:30

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: 7.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
140.00	30%Gas/40%Oil/30%Mud	1.691
0.00	860' G.I.P.	0.000

Total Length: 140.00 ft

Total Volume: 1.691 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

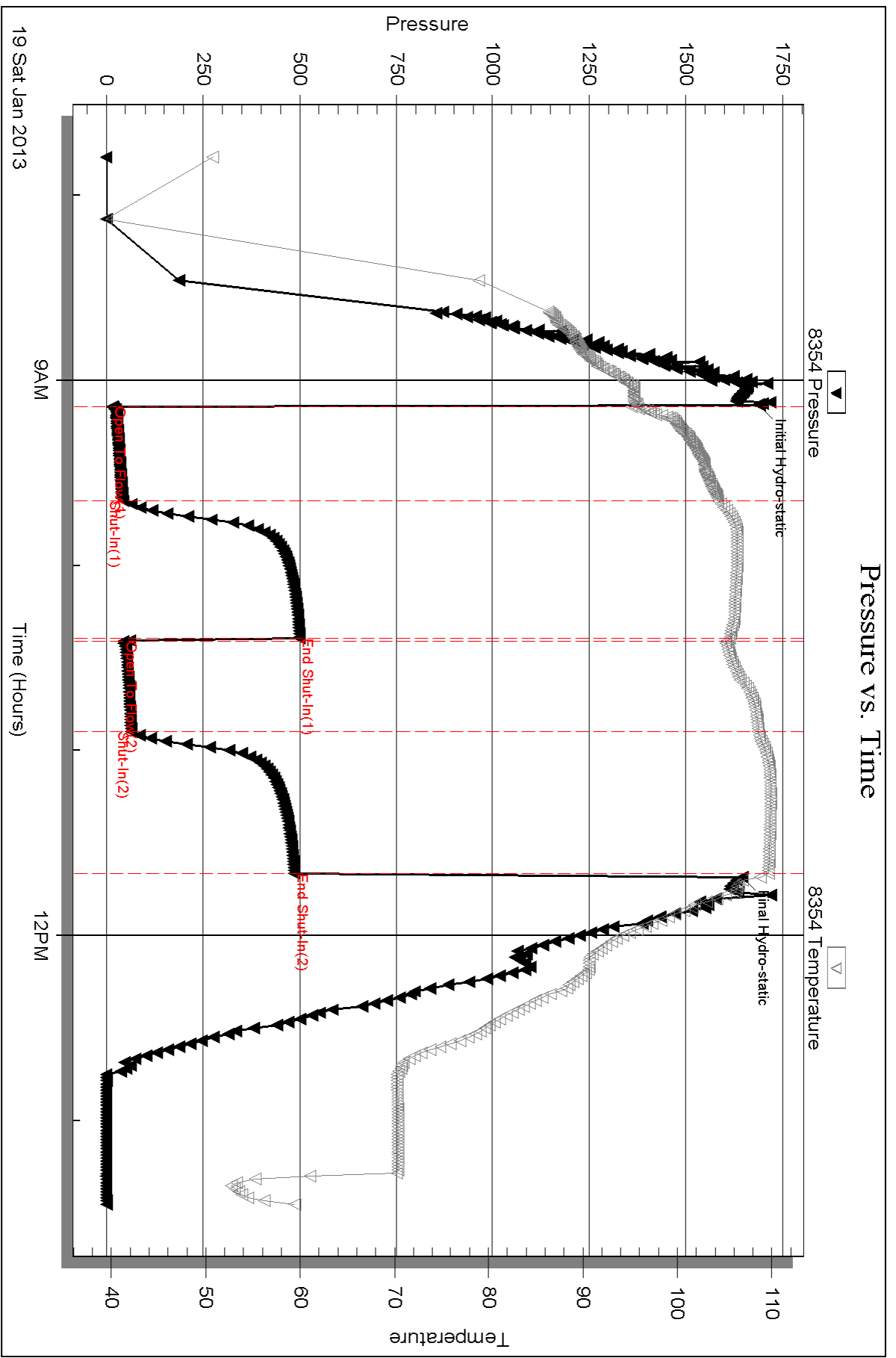
Serial #: 8354

Inside

Dow nging-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 50331

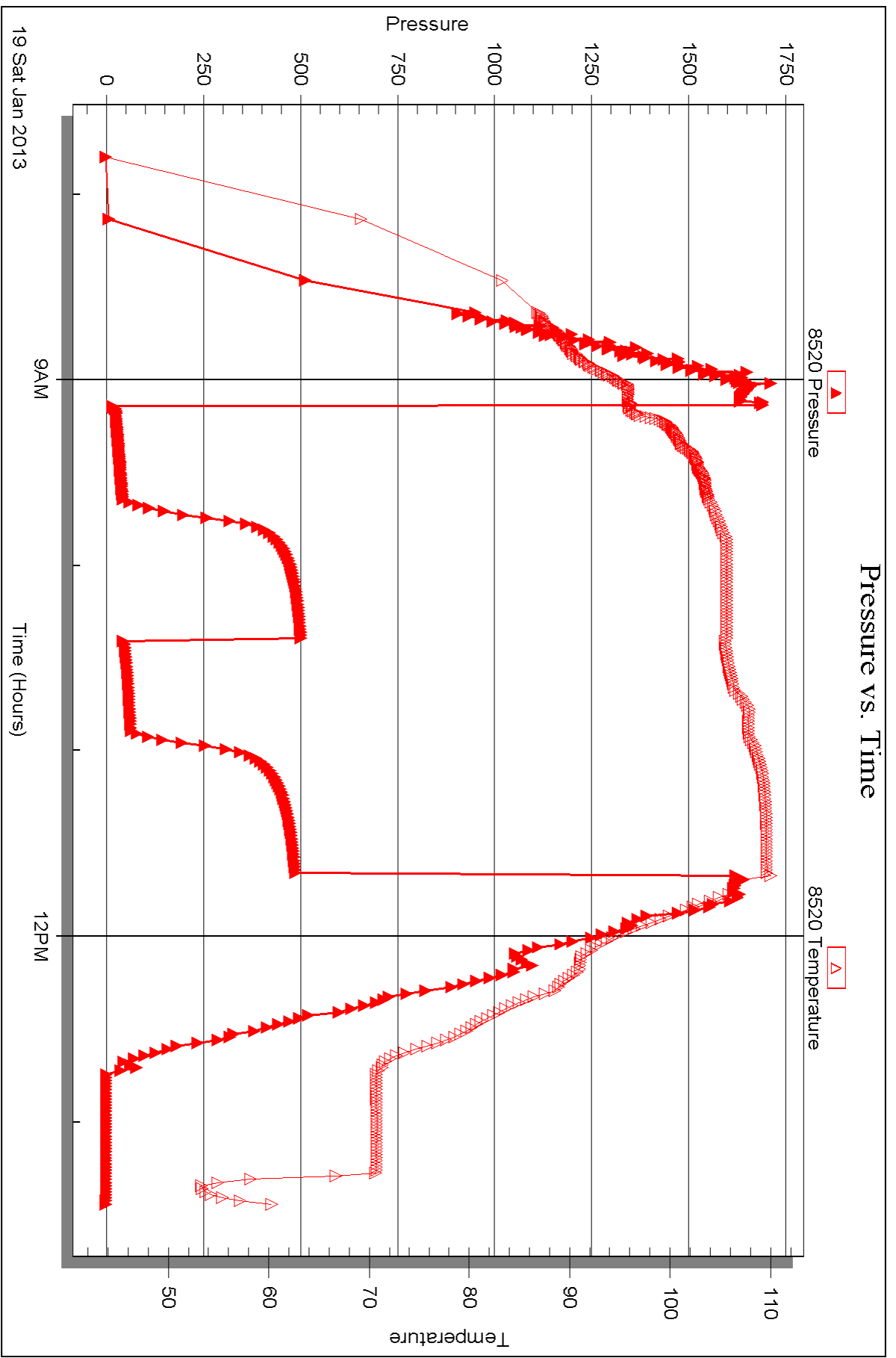
Printed: 2013.01.22 @ 08:39:41

Serial #: 8520

Outside Dow nting-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Seitz Barnhardt C #3

34-12s-21w Trego,KS

Start Date: 2013.01.20 @ 00:50:30

End Date: 2013.01.20 @ 07:08:00

Job Ticket #: 50332 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.22 @ 08:38:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

ATTN: Marc Dow ning

Job Ticket: 50332

DST#: 4

Test Start: 2013.01.20 @ 00:50:30

GENERAL INFORMATION:

Formation: **LKC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:15:40

Time Test Ended: 07:08:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3590.00 ft (KB) To 3658.00 ft (KB) (TVD)

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3658.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @RunDepth: 34.37 psig @ 3630.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.20

End Date:

2013.01.20

Last Calib.:

2013.01.20

Start Time: 01:00:30

End Time:

07:08:00

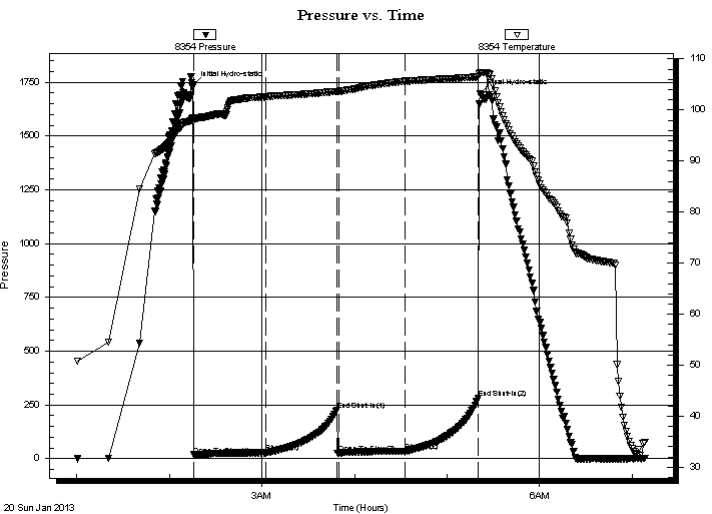
Time On Btm:

2013.01.20 @ 02:15:30

Time Off Btm:

2013.01.20 @ 05:21:30

TEST COMMENT: IF-Weal building blow . Built to 4 1/2 inches.
ISI-No Return.
FF-Weak building blow . Built to 8 inches.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1736.48	98.47	Initial Hydro-static
1	18.57	97.74	Open To Flow (1)
47	28.80	102.56	Shut-In(1)
93	225.34	103.63	End Shut-In(1)
94	24.86	103.61	Open To Flow (2)
137	34.37	105.60	Shut-In(2)
185	281.12	106.48	End Shut-In(2)
186	1695.29	107.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	10%Gas/30%Oil/60%Mud	0.29
0.00	140' G.I.P.	0.00

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

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50332

DST#: 4

ATTN: Marc Dow ning

Test Start: 2013.01.20 @ 00:50:30

Tool Information

Drill Pipe:	Length: 3550.00 ft	Diameter: 3.80 inches	Volume: 49.80 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	52000.00 lb
Drill Pipe Above KB:	10.00 ft			Final	54000.00 lb
Depth to Top Packer:	3590.00 ft				
Depth to Bottom Packer:	ft				
Interval betw een Packers:	68.00 ft				
Tool Length:	88.00 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			3571.00	
Shut In Tool	5.00			3576.00	
Hydraulic tool	5.00			3581.00	
Packer	5.00			3586.00	20.00 Bottom Of Top Packer
Packer	4.00			3590.00	
Stubb	1.00			3591.00	
Perforations	5.00			3596.00	
Change Over Sub	1.00			3597.00	
Drill Pipe	32.00			3629.00	
Change Over Sub	1.00			3630.00	
Recorder	0.00	8354	Inside	3630.00	
Recorder	0.00	8520	Outside	3630.00	
Perforations	25.00			3655.00	
Bullnose	3.00			3658.00	68.00 Bottom Packers & Anchor

Total Tool Length: 88.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 50332

DST#: 4

ATTN: Marc Dow ning

Test Start: 2013.01.20 @ 00:50:30

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: 43.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.56 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
40.00	10%Gas/30%Oil/60%Mud	0.288
0.00	140' G.I.P.	0.000

Total Length: 40.00 ft Total Volume: 0.288 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

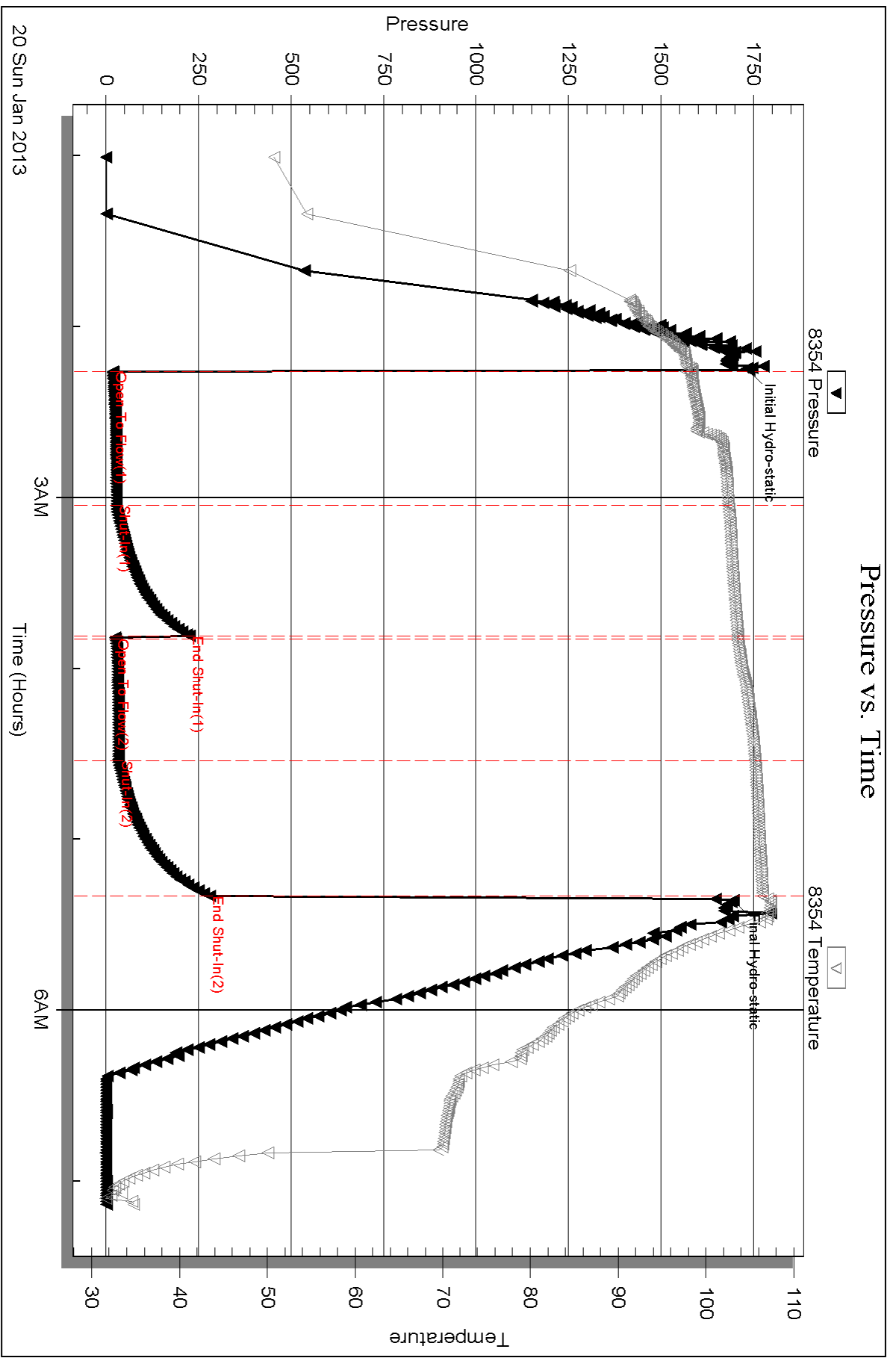
Serial #: 8354

Inside

Dow nung-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 4

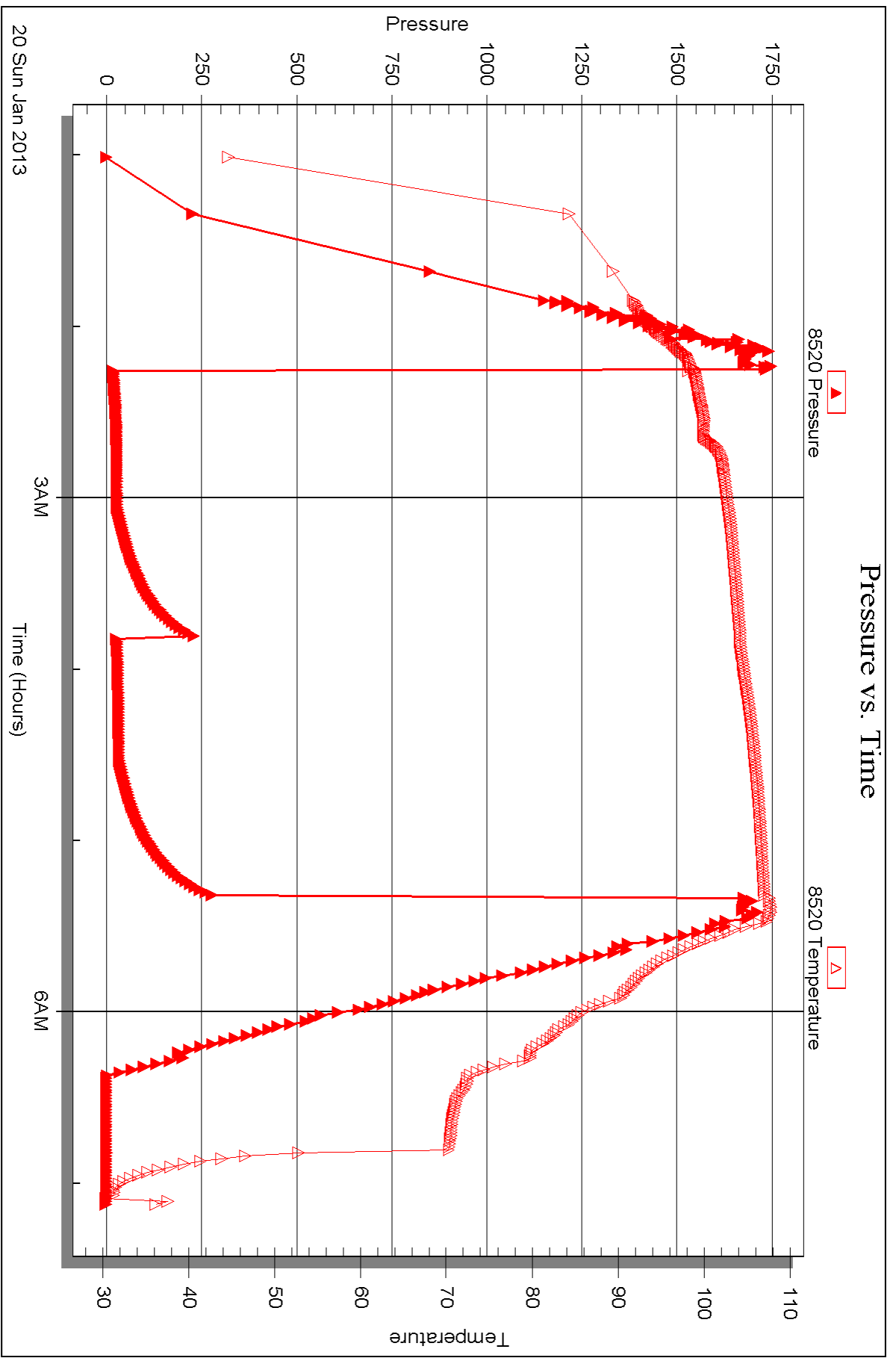


Serial #: 8520

Outside Dow nung-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 4





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Seitz Barnhardt C #3

34-12s-21w Trego,KS

Start Date: 2013.01.20 @ 21:30:00

End Date: 2013.01.21 @ 05:25:30

Job Ticket #: 51577 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.22 @ 08:37:54

Downing-Nelson Oil Co., Inc

34-12s-21w Trego,KS

Seitz Barnhardt C #3

DST # 5

Arbuckle

2013.01.20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

ATTN: Marc Dow ning

Job Ticket: 51577

DST#: 5

Test Start: 2013.01.20 @ 21:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:57:30

Time Test Ended: 05:25:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 66

Interval: 3802.00 ft (KB) To 3849.00 ft (KB) (TVD)

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3849.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8520 Outside

Press @RunDepth: 504.61 psig @ 3841.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.20

End Date:

2013.01.21

Last Calib.: 2013.01.21

Start Time: 21:40:00

End Time:

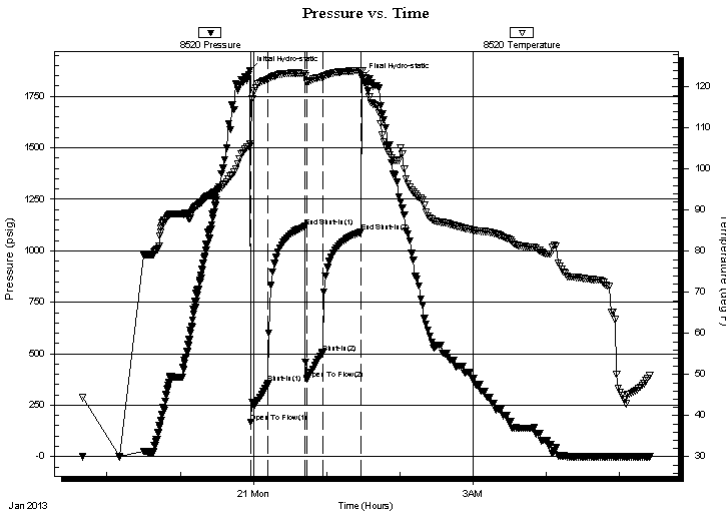
05:25:30

Time On Btm: 2013.01.20 @ 23:57:00

Time Off Btm: 2013.01.21 @ 01:29:00

TEST COMMENT: 15 - IF- B.O.B. in 1 Minute
30 - IS- Surface blow back
15 - FF- B.O.B. in 1 Minute
30 - FS- Surface blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1876.32	106.11	Initial Hydro-static
1	165.40	106.05	Open To Flow (1)
15	354.82	121.82	Shut-In(1)
45	1118.13	123.21	End Shut-In(1)
47	375.34	121.33	Open To Flow (2)
60	504.61	122.43	Shut-In(2)
91	1091.15	123.95	End Shut-In(2)
92	1839.92	124.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	GHOCM, 10%G, 30%O, 60%M	2.34
1085.00	GO, 30%G, 70%O	15.22
0.00	1900' of G.I.P.	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

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 51577

DST#: 5

ATTN: Marc Dow ning

Test Start: 2013.01.20 @ 21:30:00

Tool Information

Drill Pipe:	Length: 3771.00 ft	Diameter: 3.80 inches	Volume: 52.90 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 53.05 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3802.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een 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
Change Over Sub	1.00			3783.00	
Shut In Tool	5.00			3788.00	
Hydraulic tool	5.00			3793.00	
Packer	5.00			3798.00	20.00 Bottom Of Top Packer
Packer	4.00			3802.00	
Stubb	1.00			3803.00	
Perforations	5.00			3808.00	
Change Over Sub	1.00			3809.00	
Drill Pipe	31.00			3840.00	
Change Over Sub	1.00			3841.00	
Recorder	0.00	8354	Inside	3841.00	
Recorder	0.00	8520	Outside	3841.00	
Perforations	5.00			3846.00	
Bullnose	3.00			3849.00	47.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc

34-12s-21w Trego,KS

PO Box 1019
Hays, KS 67601

Seitz Barnhardt C #3

Job Ticket: 51577

DST#: 5

ATTN: Marc Dow ning

Test Start: 2013.01.20 @ 21:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
186.00	GHOCM, 10%G, 30%O, 60%M	2.336
1085.00	GO, 30%G, 70%O	15.220
0.00	1900' of G.I.P.	0.000

Total Length: 1271.00 ft Total Volume: 17.556 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Greavity 32 @40 Degrees = 34

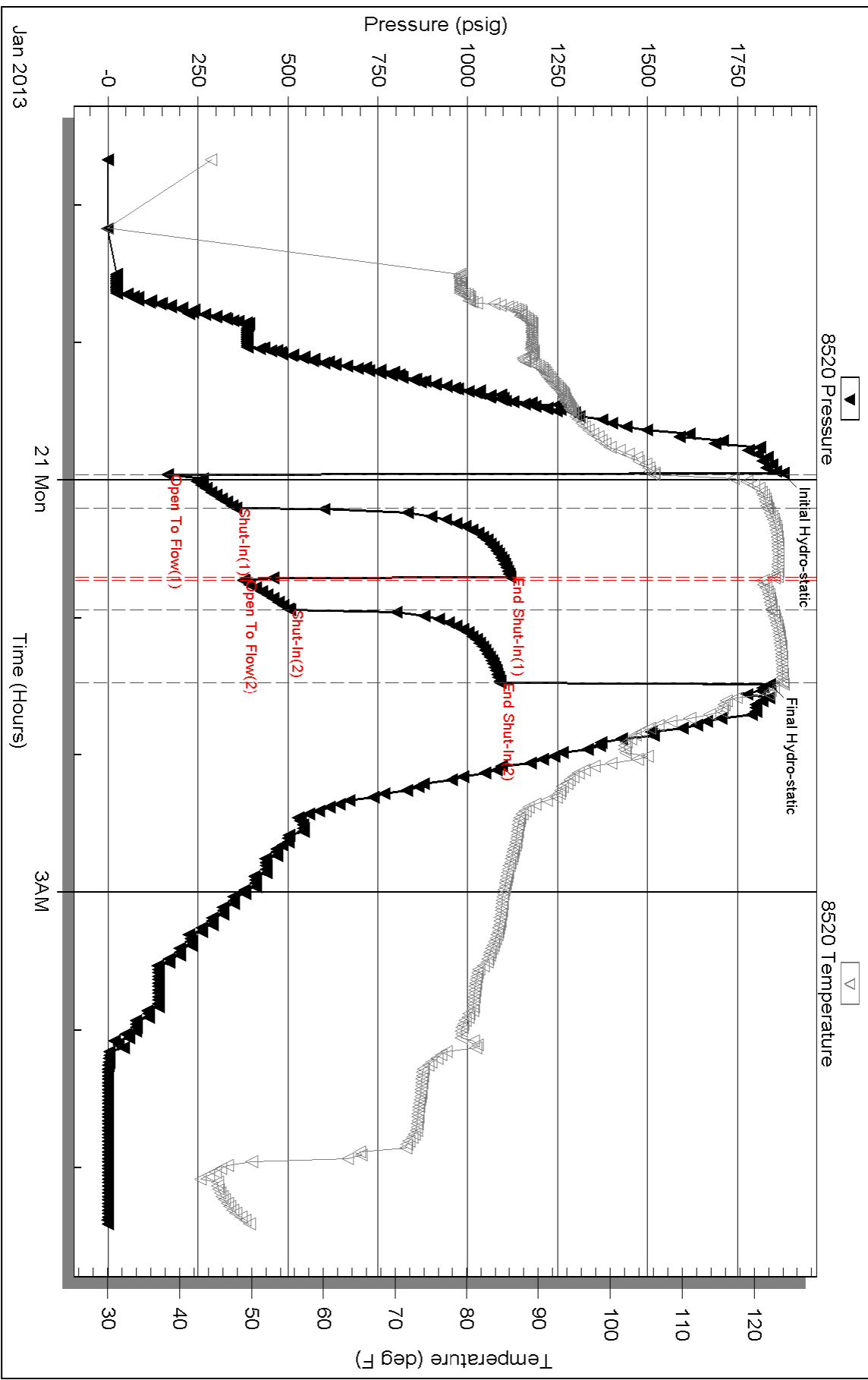
Serial #: 8520

Outside Dow nging-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 5

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 51577

Printed: 2013.01.22 @ 08:37:56

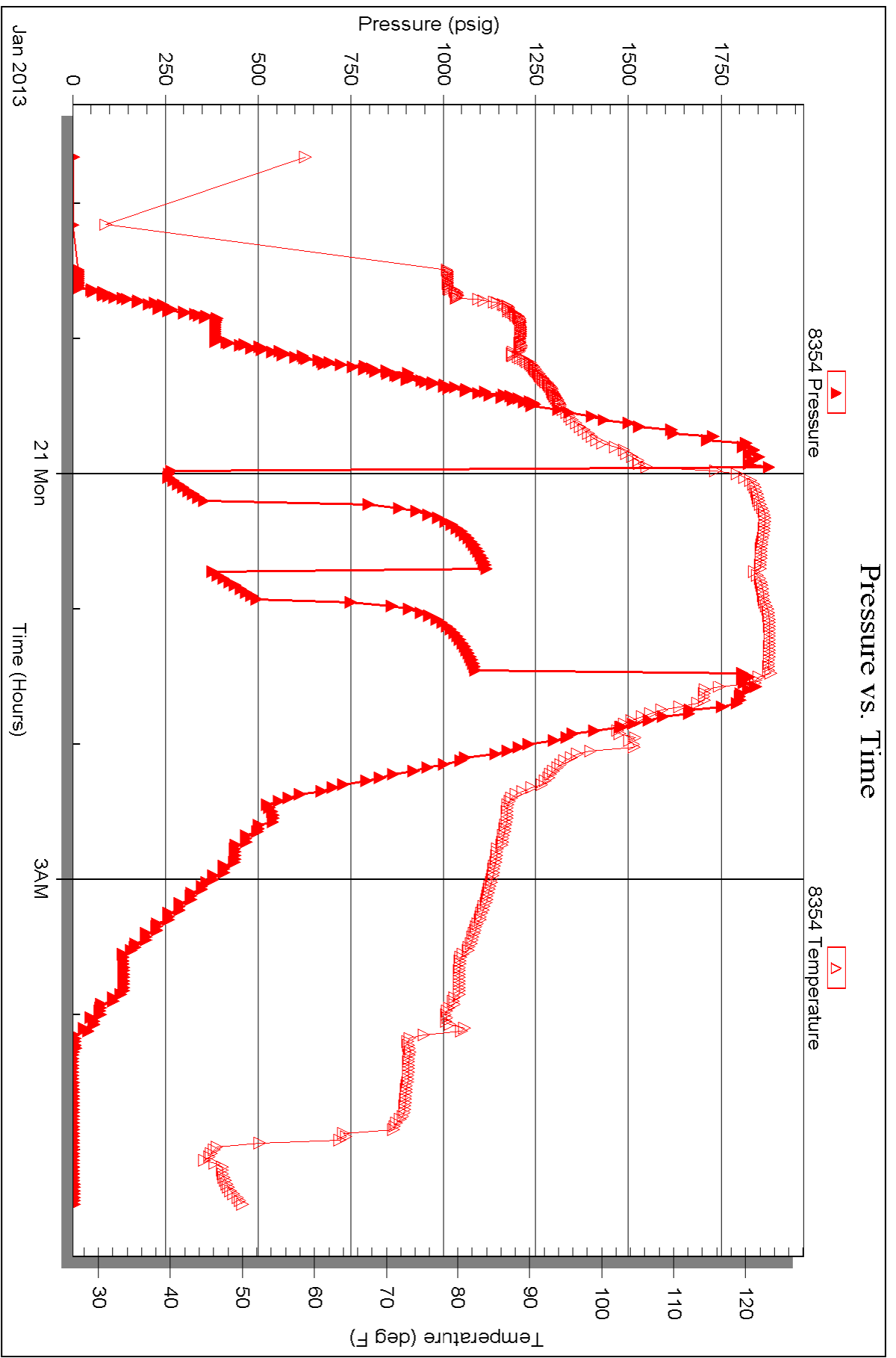
Serial #: 8354

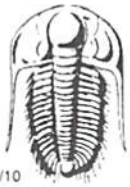
Inside

Dow nging-Nelson Oil Co., Inc

Seitz Barnhardt C#3

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50329

Well Name & No. Seitz-Banhardt "C" #3 Test No. 1 Date 1-18-13
 Company Downing-Nelson Oil Co., Inc. Elevation 2206 KB 2198 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Maic Downing Rig Discovery 3
 Location: Sec. 34 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3488-3515 Zone Tested LKC "C"
 Anchor Length 27' Drill Pipe Run 354' Mud Wt. 8.5
 Top Packer Depth 3483 Drill Collars Run 29.96 Vis 54
 Bottom Packer Depth 3488 Wt. Pipe Run 0 WL 8.0
 Total Depth 3515 Chlorides 1000 ppm System LCM 2.5"

Blow Description IF- Strong building blow. BOB @ 5 minutes,
FSI- Return @ 30 seconds. Built to 2 inches.
FF- Strong building blow. BOB @ 3 1/2 minutes,
FST- Return @ 30 seconds. Built to 3 1/2 inches.

Rec	Feet of	%gas	%oil	%water	%mud
95	Gassy Oil	50	50		
60	G HOCM	70	40		40
20	GOCMW	10	20	40	30

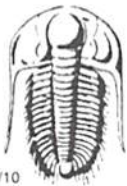
Rec Total 175 BHT 109 Gravity 41 API RW 409 @ 53 °F Chlorides 22,500 ppm

(A) Initial Hydrostatic 1678 Test 1150 T-On Location 0400
 (B) First Initial Flow 26 Jars T-Started 0600
 (C) First Final Flow 53 Safety Joint T-Open 0800
 (D) Initial Shut-In 637 Circ Sub T-Pulled 1030
 (E) Second Initial Flow 58 Hourly Standby T-Out 1230
 (F) Second Final Flow 82 Mileage 23X2 71.30 Comments Best-0602
 (G) Final Shut-In 615 Sampler
 (H) Final Hydrostatic 1643 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1221.30
 Accessibility MP/DST Disc't

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45
 Sub Total 1221.30

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. 50330

4/10

Well Name & No. Seitz-Bankhardt "C" #3 Test No. 2 Date 1-18-13
 Company Downing-Nelson Oil Co., Inc. Elevation 2206 KB 2198 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Mark Downing Rig Discovery 3
 Location: Sec. 34 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3513-3533 Zone Tested LKC "D"
 Anchor Length 20' Drill Pipe Run 3486 Mud Wt. 8.5
 Top Packer Depth 3508 Drill Collars Run 29,96 Vis 54
 Bottom Packer Depth 3513 Wt. Pipe Run e WL 8.0
 Total Depth 3533 Chlorides 1000 ppm System LCM 2.5#

Blow Description IF - Few bubbles then died.
IS - No Return.
FF - No Blow. Flushed Tool. Few bubbles. Pulled Tool.

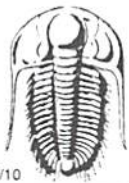
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>180CM</u>		<u>2</u>		<u>98</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 101 Gravity ✓ API RW 71.30 @ 71.30 °F Chlorides 1000 ppm

(A) Initial Hydrostatic 1689 Test 1150 T-On Location 1830
 (B) First Initial Flow 14 Jars _____ T-Started 1915
 (C) First Final Flow 14 Safety Joint _____ T-Open 2046
 (D) Initial Shut-In 24 Circ Sub _____ T-Pulled 2200
 (E) Second Initial Flow 14 Hourly Standby _____ T-Out 0045
 (F) Second Final Flow _____ Mileage 23X2 Comments BHT-1901
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 1667 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1221.30
 Final Flow 10-Pulled Accessibility _____ MP/DST Disc't _____
 Final Shut-In _____ Sub Total 1221.30

Approved By _____ Our Representative D. Rash

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. 50331

Well Name & No. Seitz-Bainhardt "C" #3 Test No. 3 Date 1-19-13
 Company Downing-Nelson Oil Co., Inc. Elevation 2206 KB 2198 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Mark Downing Rig Discovery 3
 Location: Sec. 34 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3528-3547 Zone Tested LKC "E"
 Anchor Length 19' Drill Pipe Run 3487 Mud Wt. 8.9
 Top Packer Depth 3523 Drill Collars Run 29.96 Vis 54
 Bottom Packer Depth 3528 Wt. Pipe Run 0 WL 8.0
 Total Depth 3547 Chlorides 2000 ppm System LCM 2#

Blow Description IF - Fair building blow. BOB @ 9 minutes 15 seconds.
ISI - Return @ 4 minutes. Died @ 9 minutes.
FF - Strong building blow. BOB @ 4 minutes.
FBI - Return @ 30 seconds. Built to 1/2 inch.

Rec	Feet of	%gas	%oil	%water	%mud
<u>140</u>	<u>6 HOCM</u>	<u>30</u>	<u>40</u>	<u>30</u>	<u>30</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

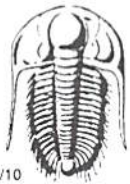
Rec Total 140 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1690 Test 1150 T-On Location 0715
 (B) First Initial Flow 16 Jars _____ T-Started 0740
 (C) First Final Flow 43 Safety Joint _____ T-Open 0908
 (D) Initial Shut-In 500 Circ Sub _____ T-Pulled 1140
 (E) Second Initial Flow 44 Hourly Standby _____ T-Out 1330
 (F) Second Final Flow 64 Mileage 23X2 71.30 Comments Batt-0737
 (G) Final Shut-In 486 Sampler _____
 (H) Final Hydrostatic 1646 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1221.30
 Final Shut-In 45 Accessibility _____ MP/DST Disc't _____
 Sub Total 1221.30

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. 50332

4/10

Well Name & No. Seitz Bauhardt "C" #3 Test No. 4 Date 1-20-13
 Company Downing - Nelson Oil Co., Inc. Elevation 2206 KB 2198 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 3
 Location: Sec. 34 Twp. 12S Rge 21W Co. Trego State KS

Interval Tested 3590-3658 Zone Tested LKC "H-J"
 Anchor Length 68' Drill Pipe Run 3550 Mud Wt. 9.0
 Top Packer Depth 3585 Drill Collars Run 29.96 Vis 43
 Bottom Packer Depth 3590 Wt. Pipe Run 0 WL 9.6
 Total Depth 3658 Chlorides 5000 ppm System LCM 1"

Blow Description IF-Weak building blow, Built to 4 1/2 inches,
IST- No Return,
FF-Weak building blow, Built to 8 inches,
FST- No Return,

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>OCGM</u>	<u>10</u>	<u>30</u>	<u>60</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

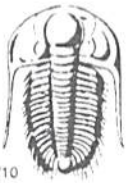
Rec Total 40 BHT 107 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1736 Test 1150 T-On Location 0015
 (B) First Initial Flow 19 Jars _____ T-Started 0100
 (C) First Final Flow 29 Safety Joint _____ T-Open 0216
 (D) Initial Shut-In 225 Circ Sub _____ T-Pulled 0520
 (E) Second Initial Flow 25 Hourly Standby _____ T-Out 0715
 (F) Second Final Flow 34 Mileage 23X2 71.30 Comments Boat-0050
 (G) Final Shut-In 281 Sampler _____
 (H) Final Hydrostatic 1695 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 45 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 1221.30
 Final Shut-In 45 Accessibility _____ MP/DST Disc _____
 Sub Total 1221.30

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. 51577

4/10

Well Name & No. Seitz Barnhardt C-3 Test No. 5 Date 1-20-13
 Company Downing Nelson Oil Co Elevation 2206 KB 2198 GL
 Address Po Box 1019 Hays KS, 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #3
 Location: Sec. 34 Twp. 12s Rge. 21w Co. Trego State KS

Interval Tested 3802-3849 Zone Tested Arbuckle
 Anchor Length 47' Drill Pipe Run 3771' Mud Wt. 9.1
 Top Packer Depth 3797 Drill Collars Run 30' Vis 40
 Bottom Packer Depth 3802 Wt. Pipe Run — WL 10
 Total Depth 3849 Chlorides 7,000 ppm System LCM —

Blow Description IF-B.O.B. in 1 Minute
ISI-Surface blow back
FF-B.O.B. in 1 Minute
FSI-Surface blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>186</u>	<u>6HOCM</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>1085</u>	<u>60</u>	<u>30</u>	<u>70</u>		
	<u>1900' of G.I.P.</u>				

Rec Total 1271' BHT 123° Gravity 34 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1876 Test 1150 T-On Location 9:16pm
 (B) First Initial Flow 165 Jars — T-Started 9:30pm
 (C) First Final Flow 354 Safety Joint — T-Open 11:58pm
 (D) Initial Shut-In 1118 Circ Sub — T-Pulled 1:28am
 (E) Second Initial Flow 375 Hourly Standby — T-Out 5:26am
 (F) Second Final Flow 504 Mileage 26 RT 71.30 Comments —
 (G) Final Shut-In 1091 Sampler —
 (H) Final Hydrostatic 1839 Straddle — Ruined Shale Packer —

Initial Open 15 Shale Packer — Ruined Packer —
 Initial Shut-In 30 Extra Packer — Extra Copies —
 Final Flow 15 Extra Recorder — Sub Total 0
 Final Shut-In 30 Day Standby — Total 1221.30
 Accessibility — MP/DST Disc't —
 Sub Total 1221.30

Approved By _____ Our Representative Cody Bell

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.