



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Seitz-Bamhardt #C-5

34-12s-21w Trego KS

Start Date: 2014.07.07 @ 03:48:00

End Date: 2014.07.07 @ 10:32:30

Job Ticket #: 54064 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.07.10 @ 10:35:07

Downing-Nelson Oil Co Inc

34-12s-21w Trego KS

Seitz-Bamhardt #C-5

DST # 1

Cong. Sand

2014.07.07



**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-Bamhardt #C-5

Job Ticket: 54064

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.07.07 @ 03:48:00

GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:45:15

Time Test Ended: 10:32:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3807.00 ft (KB) To 3853.00 ft (KB) (TVD)

Reference Elevations: 2201.00 ft (KB)

Total Depth: 3853.00 ft (KB) (TVD)

2193.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8648

Inside

Press@RunDepth: 36.79 psig @ 3845.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.07

End Date:

2014.07.07

Last Calib.:

2014.07.07

Start Time:

03:48:05

End Time:

10:32:29

Time On Btm:

2014.07.07 @ 06:45:00

Time Off Btm:

2014.07.07 @ 08:47:00

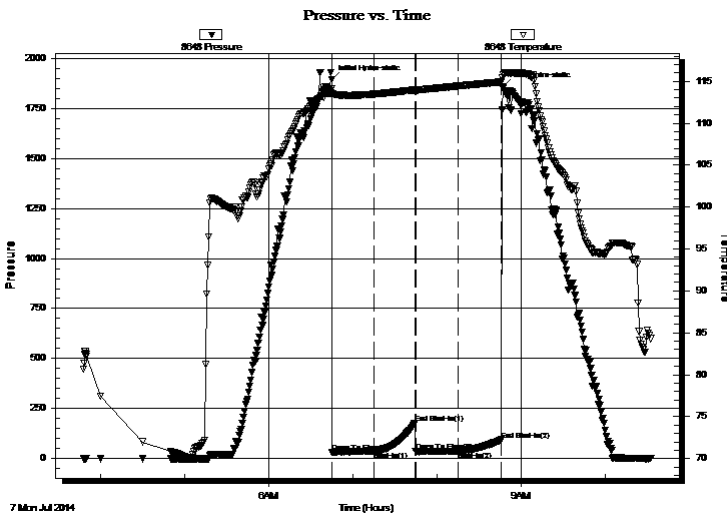
TEST COMMENT: 30 - IF- 1/4" blow , died back to surface blow

30 - IS- No return

30 - FF- No blow

30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1894.96	114.15	Initial Hydro-static
1	31.87	113.48	Open To Flow (1)
30	35.82	113.47	Shut-In(1)
59	175.78	113.97	End Shut-In(1)
60	34.90	113.94	Open To Flow (2)
90	36.79	114.44	Shut-In(2)
121	93.87	114.93	End Shut-In(2)
122	1856.33	115.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	VSOCM, 2%O,98%M	0.01
0.00	1" of free oil on top	0.00

Gas Rates

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



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-Bamhardt #C-5

ATTN: Marc Dow ning

Job Ticket: 54064 **DST#: 1**

Test Start: 2014.07.07 @ 03:48:00

GENERAL INFORMATION:

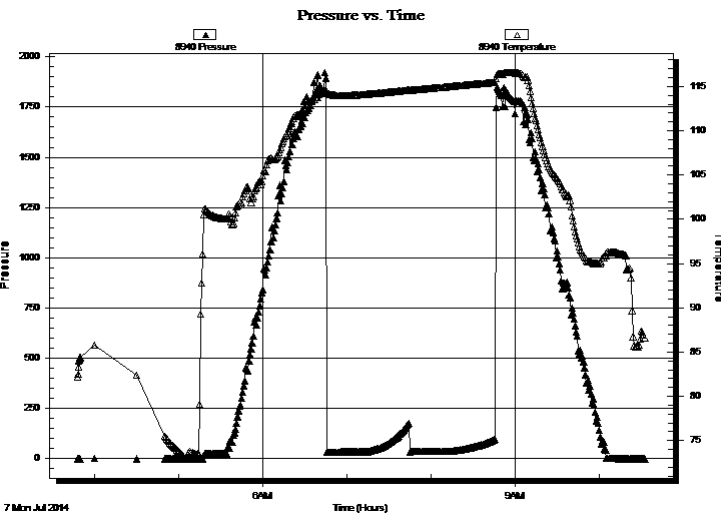
Formation: **Cong. Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:45:15
 Time Test Ended: 10:32:30
 Interval: **3807.00 ft (KB) To 3853.00 ft (KB) (TVD)**
 Total Depth: 3853.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Cody Bloedorn
 Unit No: 73
 Reference Elevations: 2201.00 ft (KB)
 2193.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8940

Outside

Press@RunDepth: psig @ 3845.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.07.07 End Date: 2014.07.07 Last Calib.: 2014.07.07
 Start Time: 03:48:05 End Time: 10:32:29 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" blow , died back to surface blow
 30 - IS- No return
 30 - FF- No blow
 30 - FS- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	VSOCM, 2%O,98%M	0.01
0.00	1" of free oil on top	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-Bamhardt #C-5

Job Ticket: 54064

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.07.07 @ 03:48:00

Tool Information

Drill Pipe:	Length: 3772.00 ft	Diameter: 3.80 inches	Volume: 52.91 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: 30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 53.06 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3807.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	46.00 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			3787.00	
Shut In Tool	5.00			3792.00	
Hydraulic tool	5.00			3797.00	
Packer	5.00			3802.00	21.00 Bottom Of Top Packer
Packer	5.00			3807.00	
Perforations	4.00			3811.00	
Stubb	1.00			3812.00	
Change Over Sub	1.00			3813.00	
Drill Pipe	31.00			3844.00	
Change Over Sub	1.00			3845.00	
Recorder	0.00	8648	Inside	3845.00	
Recorder	0.00	8940	Outside	3845.00	
Perforations	5.00			3850.00	
Bullnose	3.00			3853.00	46.00 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-Bamhardt #C-5

Job Ticket: 54064

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.07.07 @ 03:48:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 20000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
3.00	VSOCM, 2%O,98%M	0.015
0.00	1" of free oil on top	0.000

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

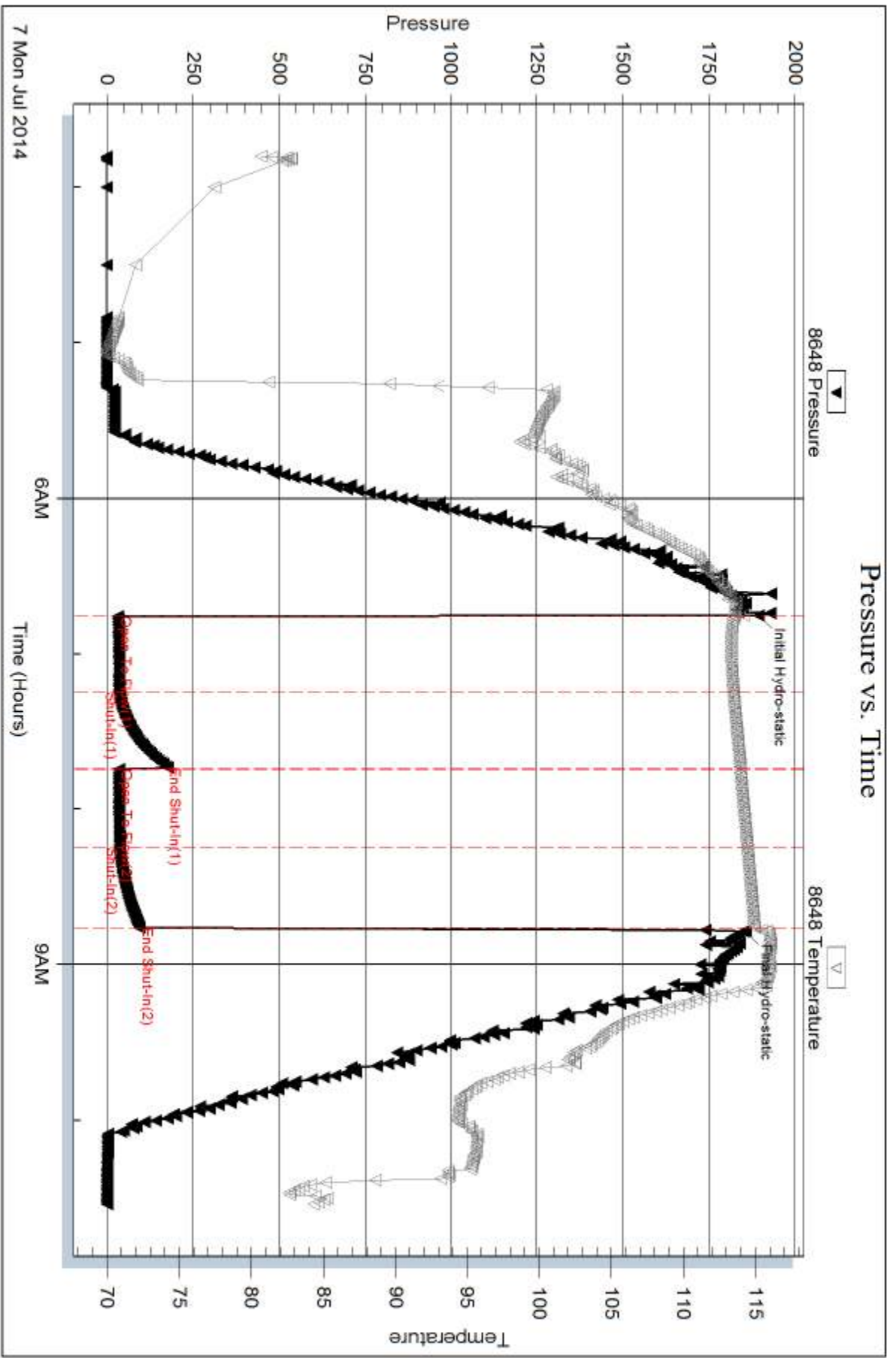
Serial #: 8648

Inside

Dow nng-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54064

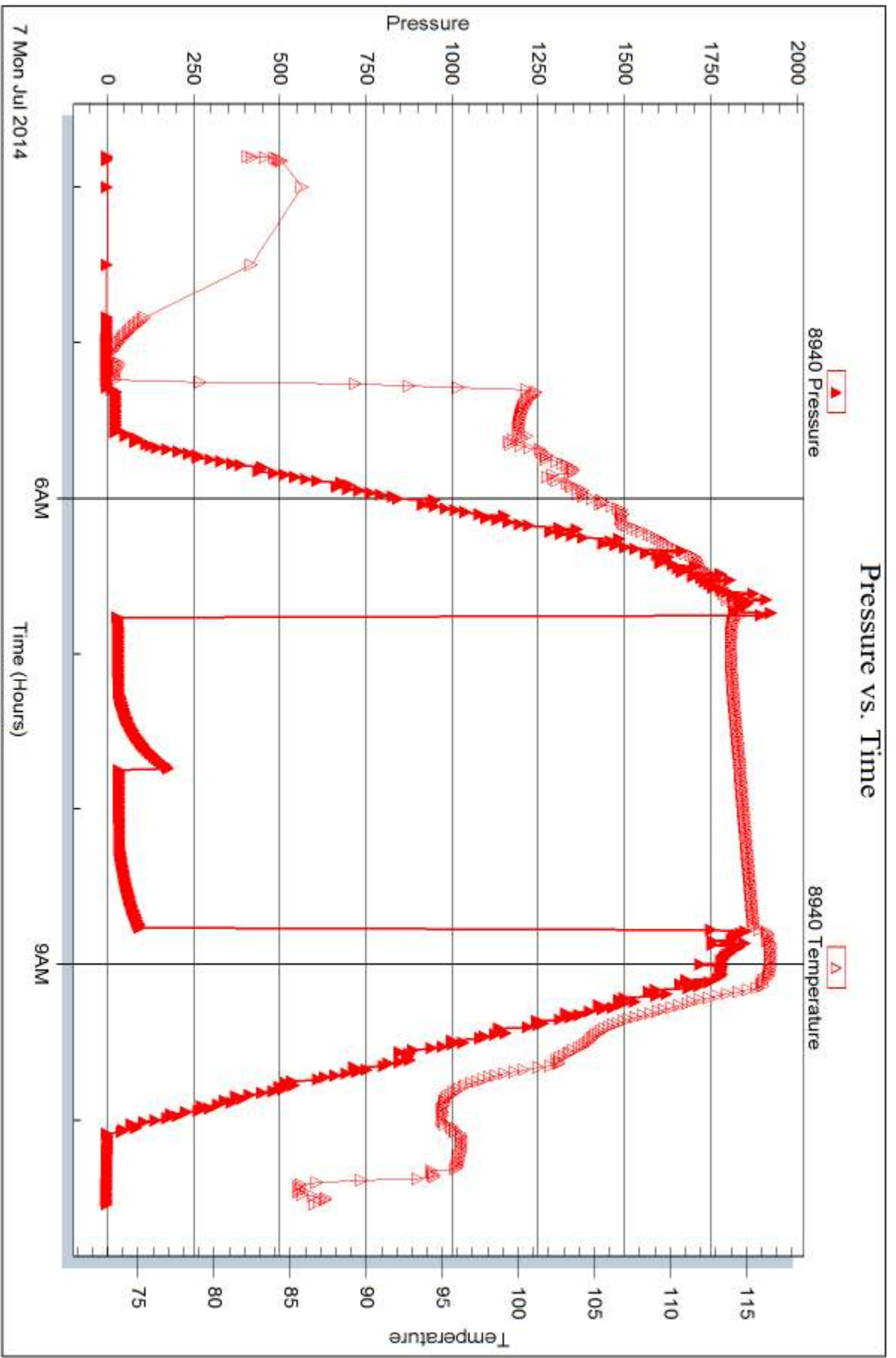
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Serial #: 8940

Outside Dow nng-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54064

Printed: 2014.07.10 @ 10:35:09



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Seitz-Bamhardt #C-5

34-12s-21w Trego KS

Start Date: 2014.07.07 @ 16:23:00

End Date: 2014.07.07 @ 23:46:00

Job Ticket #: 54065 DST #: 2

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

Printed: 2014.07.10 @ 10:34:44



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-Bamhardt #C-5

ATTN: Marc Dow ning

Job Ticket: 54065

DST#: 2

Test Start: 2014.07.07 @ 16:23:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:47:00

Time Test Ended: 23:46:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3806.00 ft (KB) To 3869.00 ft (KB) (TVD)

Reference Elevations: 2201.00 ft (KB)

Total Depth: 3869.00 ft (KB) (TVD)

2193.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8648

Inside

Press@RunDepth: 74.46 psig @ 3844.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.07

End Date:

2014.07.07

Last Calib.:

2014.07.07

Start Time: 16:23:05

End Time:

23:45:59

Time On Btm:

2014.07.07 @ 18:46:45

Time Off Btm:

2014.07.07 @ 21:47:45

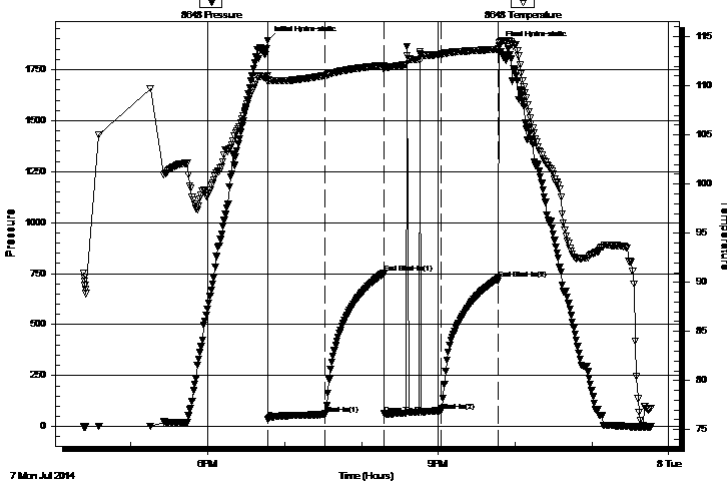
TEST COMMENT: 45 - IF- 2 1/4" blow @ 20 minutes, died off to 1 3/4" blow

45 - IS- No return

45 - FF- No blow , flushed tool @ 15 minutes, surged and died, flushed tool again, weak surface blow

45 - FS- No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1893.33	111.05	Initial Hydro-static
1	36.71	110.38	Open To Flow (1)
45	59.72	111.07	Shut-In(1)
91	751.33	112.09	End Shut-In(1)
91	62.17	111.68	Open To Flow (2)
136	74.46	113.22	Shut-In(2)
180	725.35	113.73	End Shut-In(2)
181	1866.60	114.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	VSOCM, 2%O, 98%M	0.60
30.00	VSOCM, 5%O, 95%M	0.42

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

34-12s-21w Trego KS

PO Box 1019
Hays KS 67601

Seitz-Bamhardt #C-5

Job Ticket: 54065

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.07.07 @ 16:23:00

Tool Information

Drill Pipe:	Length: 3772.00 ft	Diameter: 3.80 inches	Volume: 52.91 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:	30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	59000.00 lb
			<u>Total Volume: 53.06 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3806.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	63.00 ft				
Tool Length:	84.00 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			3786.00	
Shut In Tool	5.00			3791.00	
Hydraulic tool	5.00			3796.00	
Packer	5.00			3801.00	21.00 Bottom Of Top Packer
Packer	5.00			3806.00	
Perforations	4.00			3810.00	
Stubb	1.00			3811.00	
Change Over Sub	1.00			3812.00	
Drill Pipe	31.00			3843.00	
Change Over Sub	1.00			3844.00	
Recorder	0.00	8648	Inside	3844.00	
Recorder	0.00	8940	Outside	3844.00	
Perforations	22.00			3866.00	
Bullnose	3.00			3869.00	63.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**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-Bamhardt #C-5

Job Ticket: 54065

DST#: 2

ATTN: Marc Dow ning

Test Start: 2014.07.07 @ 16:23:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 59.00 sec/qt

Water Loss: 7.58 in³

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	VSOCM, 2%O, 98%M	0.596
30.00	VSOCM, 5%O, 95%M	0.421

Total Length: 92.00 ft Total Volume: 1.017 bbl

Num Fluid Samples: 0

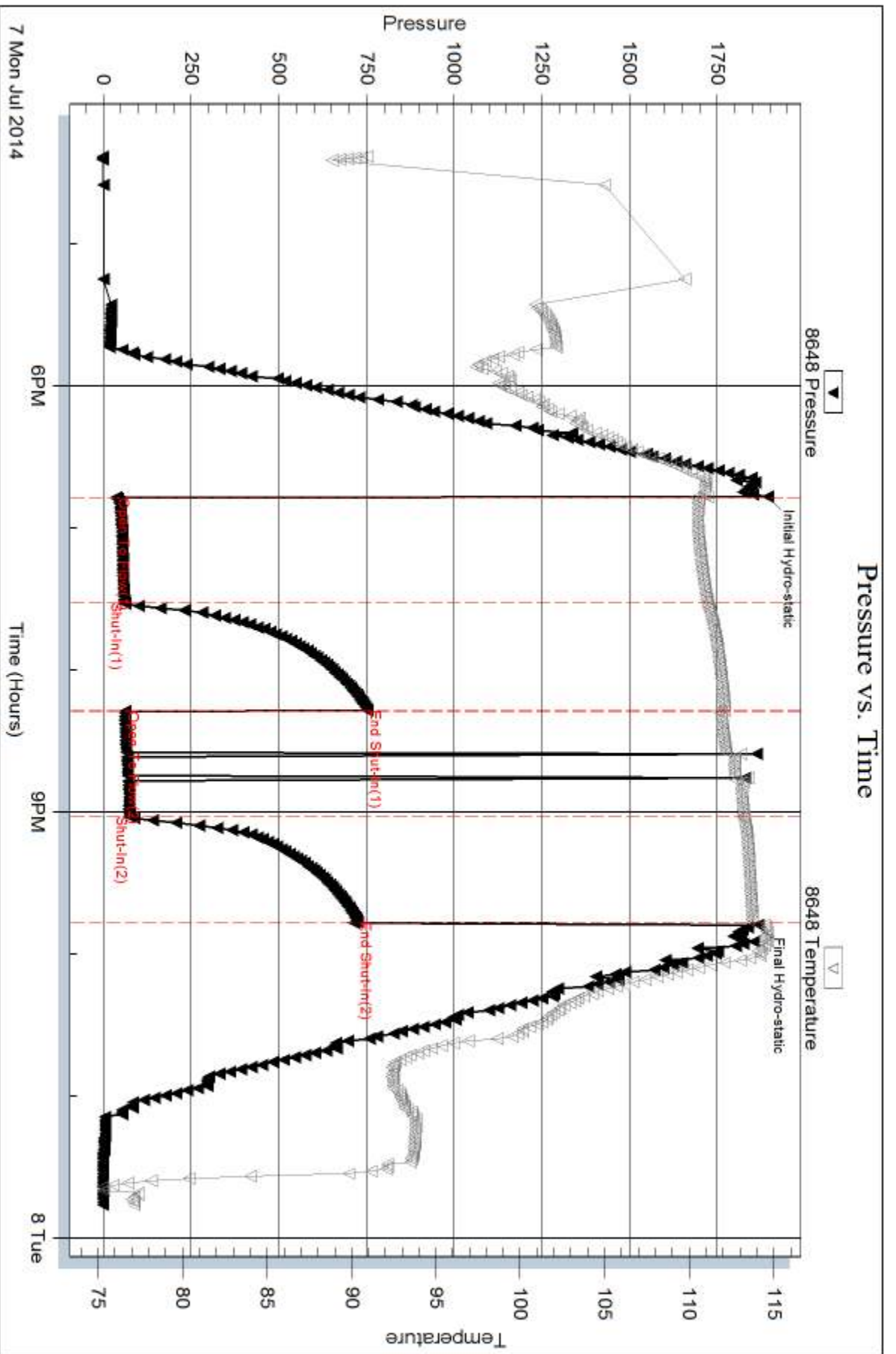
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

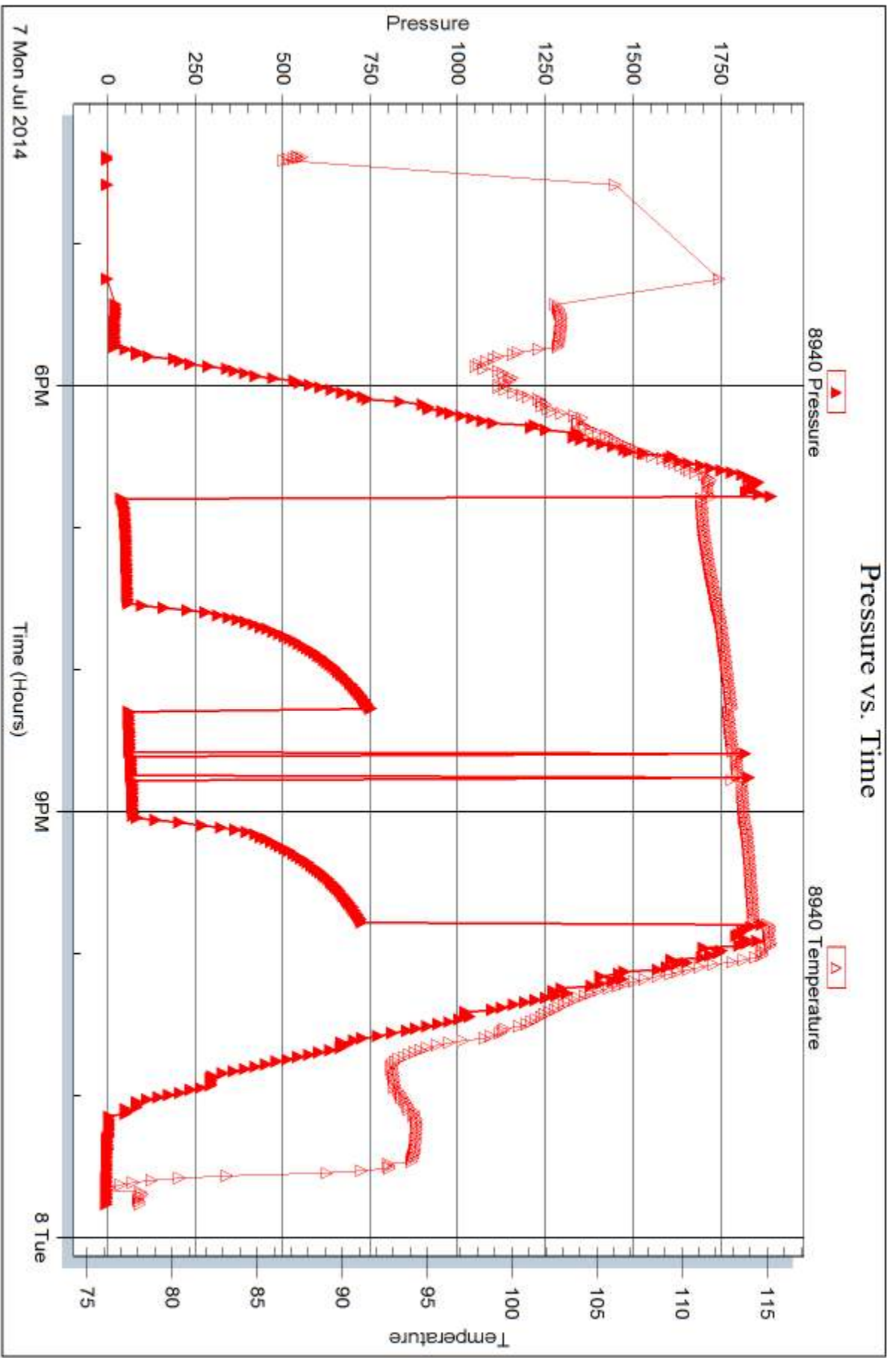


Serial #: 8940

Outside Dow n/mg-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 54065

Printed: 2014.07.10 @ 10:34:45



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Seitz-Bamhardt #C-5

34-12s-21w Trego KS

Start Date: 2014.07.08 @ 12:52:00

End Date: 2014.07.08 @ 20:18:15

Job Ticket #: 54066 DST #: 3

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

Printed: 2014.07.10 @ 10:28:37



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-Bamhardt #C-5

ATTN: Marc Dow ning

Job Ticket: 54066

DST#: 3

Test Start: 2014.07.08 @ 12:52:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:41:30

Time Test Ended: 20:18:15

Test Type: Conventional Straddle (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3860.00 ft (KB) To 3878.00 ft (KB) (TVD)

Reference Elevations: 2201.00 ft (KB)

Total Depth: 3961.00 ft (KB) (TVD)

2193.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8648

Inside

Press@RunDepth: 250.29 psig @ 3861.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.08

End Date:

2014.07.08

Last Calib.:

2014.07.08

Start Time: 12:52:05

End Time:

20:18:14

Time On Btm:

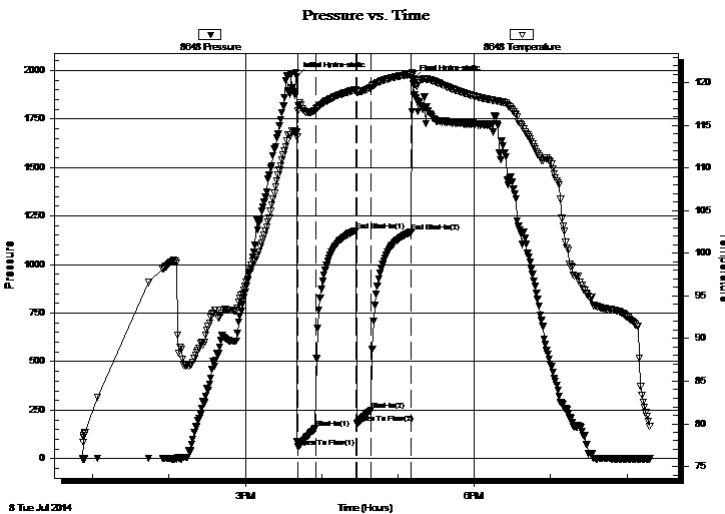
2014.07.08 @ 15:40:30

Time Off Btm:

2014.07.08 @ 17:11:30

TEST COMMENT: 15 - IF- B.O.B. in 3 minutes
30 - IS- Surface return, died in 9 minutes
15 - FF- B.O.B. in 3 minutes
30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1968.33	114.20	Initial Hydro-static
1	60.77	116.72	Open To Flow (1)
15	155.42	116.78	Shut-In(1)
47	1173.82	119.17	End Shut-In(1)
48	180.09	118.91	Open To Flow (2)
59	250.29	119.45	Shut-In(2)
90	1166.43	120.97	End Shut-In(2)
91	1950.87	121.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	MW - Oil spots, 20%M, 80%W	5.81
77.00	VSOCWM, 5%O, 15%W, 80%M	1.08
1.00	Free Oil, 100%O	0.01

* 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-Bamhardt #C-5

Job Ticket: 54066

DST#: 3

ATTN: Marc Dow ning

Test Start: 2014.07.08 @ 12:52:00

Tool Information

Drill Pipe:	Length: 3836.00 ft	Diameter: 3.80 inches	Volume: 53.81 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: 30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 53.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3860.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	3878.00 ft			
Interval betw een Packers:	18.00 ft			
Tool Length:	126.00 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			3840.00	
Shut In Tool	5.00			3845.00	
Hydraulic tool	5.00			3850.00	
Packer	5.00			3855.00	21.00 Bottom Of Top Packer
Packer	5.00			3860.00	
Stubb	1.00			3861.00	
Recorder	0.00	8648	Inside	3861.00	
Recorder	0.00	8940	Outside	3861.00	
Perforations	16.00			3877.00	
Blank Off Sub	1.00			3878.00	18.00 Tool Interval
Packer	5.00			3883.00	
Change Over Sub	1.00			3884.00	
Recorder	0.00	8958	Below	3884.00	
Drill Pipe	62.00			3946.00	
Perforations	16.00			3962.00	
Bullnose	3.00			3965.00	87.00 Bottom Packers & Anchor
Total Tool Length:	126.00				



**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-Bamhardt #C-5

Job Ticket: 54066

DST#: 3

ATTN: Marc Dow ning

Test Start: 2014.07.08 @ 12:52:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
434.00	MW - Oil spots, 20%M, 80%W	5.815
77.00	VSOCWM, 5%O, 15%W, 80%M	1.080
1.00	Free Oil, 100%O	0.014

Total Length: 512.00 ft

Total Volume: 6.909 bbl

Num Fluid Samples: 0

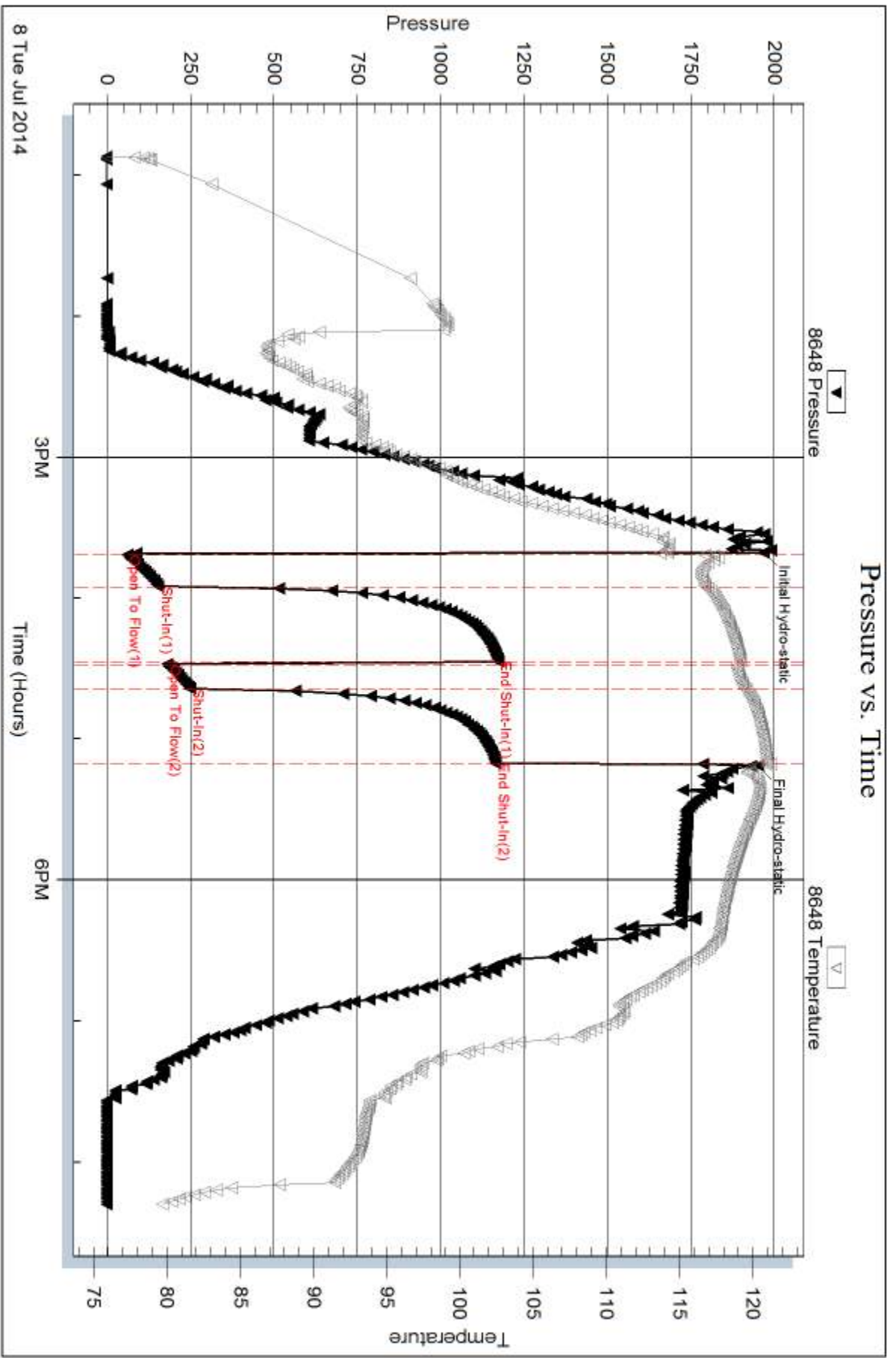
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

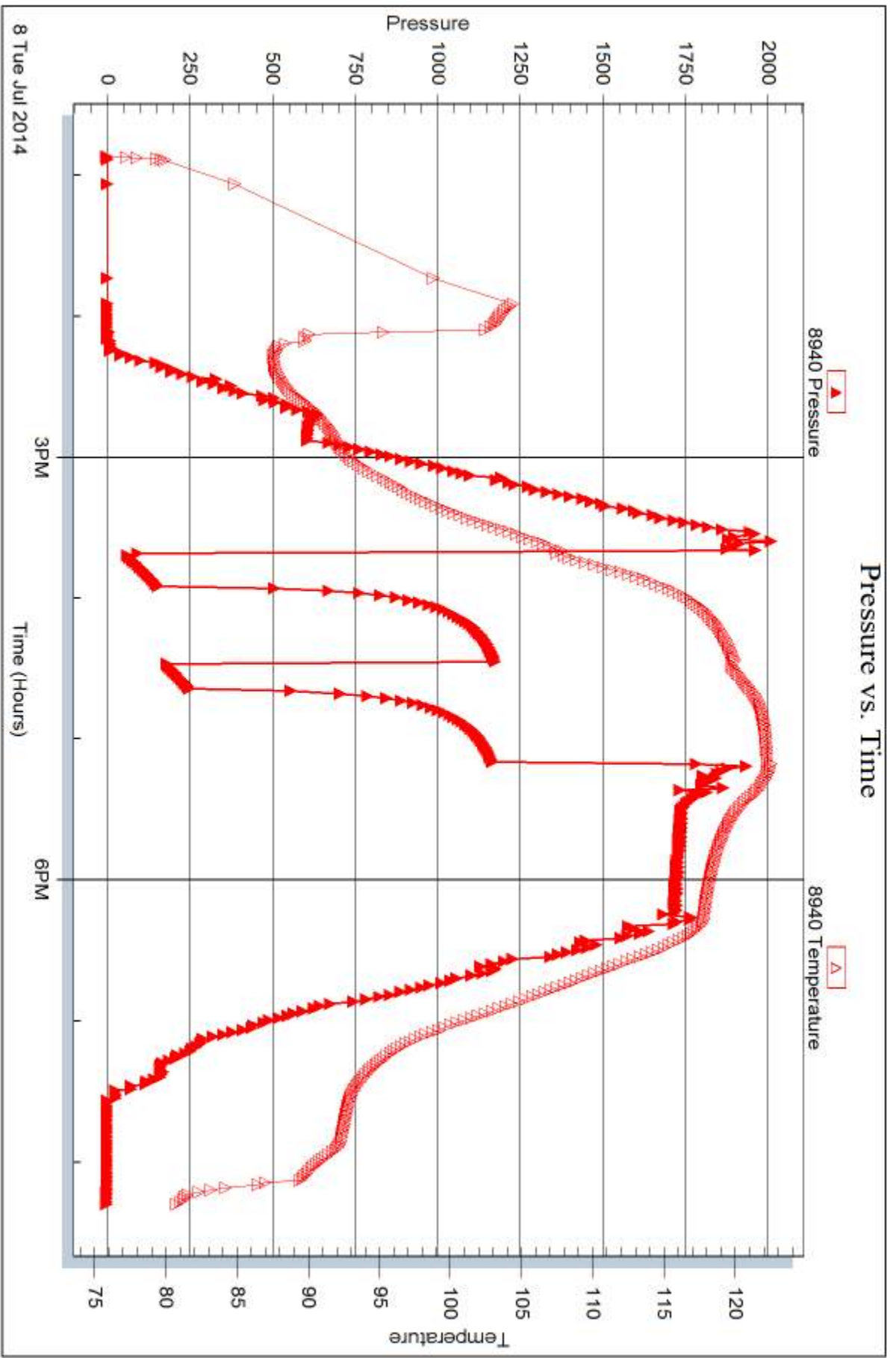


Serial #: 8940

Outside Dow nmg-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 54066

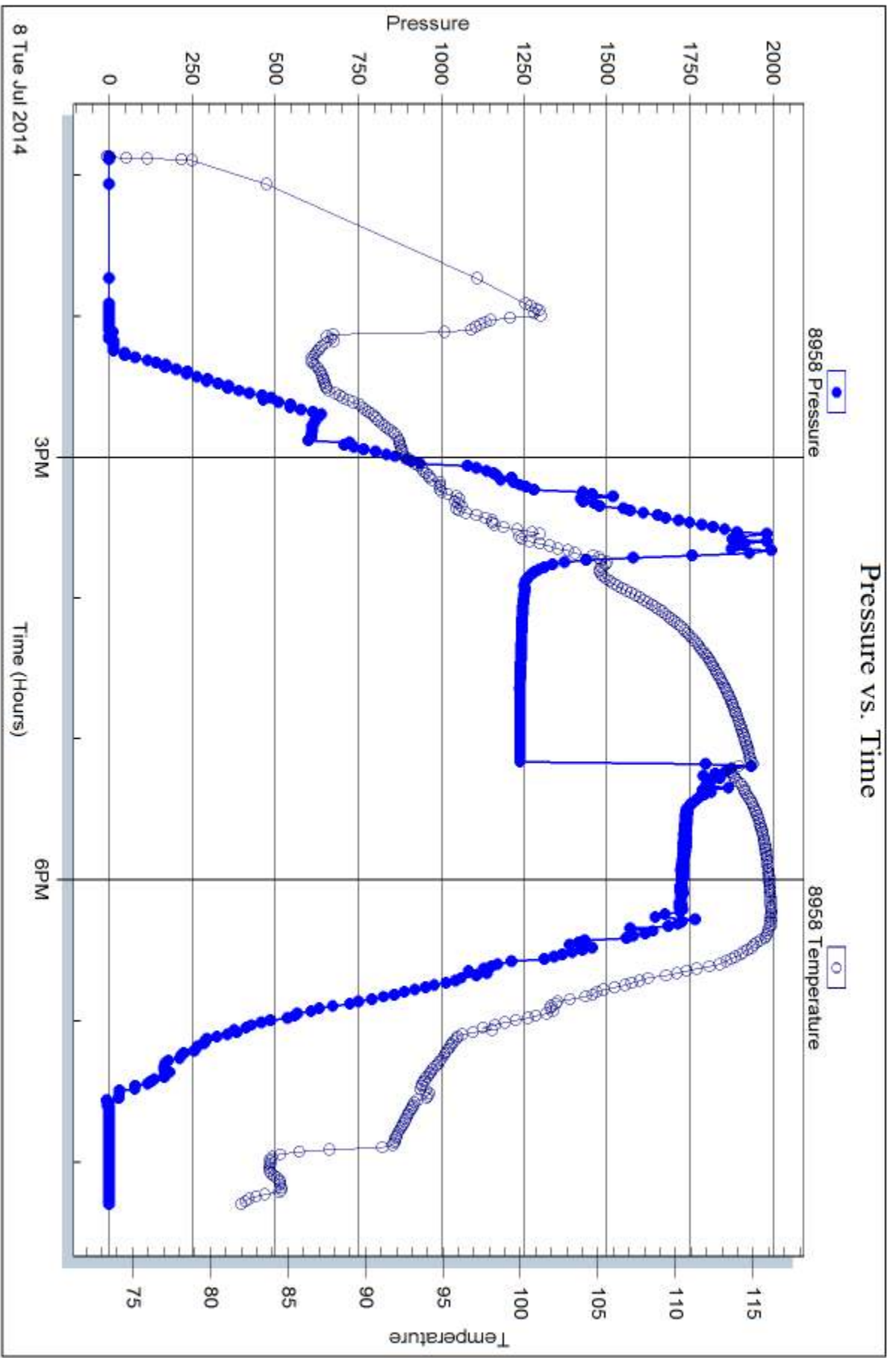
Printed: 2014.07.10 @ 10:28:39

Serial #: 8958

Below (Str-Rath)eng-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 54066

Printed: 2014.07.10 @ 10:28:39



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Seitz-Bamhardt #C-5

34-12s-21w Trego KS

Start Date: 2014.07.08 @ 20:44:00

End Date: 2014.07.09 @ 03:47:30

Job Ticket #: 54067 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.07.10 @ 10:27:52

Downing-Nelson Oil Co Inc

34-12s-21w Trego KS

Seitz-Bamhardt #C-5

DST # 4

LKC "C-E"

2014.07.08



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-Bamhardt #C-5

ATTN: Marc Dow ning

Job Ticket: 54067

DST#: 4

Test Start: 2014.07.08 @ 20:44:00

GENERAL INFORMATION:

Formation: **LKC "C-E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:03:00

Time Test Ended: 03:47:30

Test Type: Conventional Straddle (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3502.00 ft (KB) To 3558.00 ft (KB) (TVD)

Total Depth: 3961.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2201.00 ft (KB)

2193.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8648

Inside

Press@RunDepth: 51.94 psig @ 3540.00 ft (KB)

Start Date: 2014.07.08

End Date:

2014.07.09

Start Time: 20:44:05

End Time:

03:47:29

Capacity: 8000.00 psig

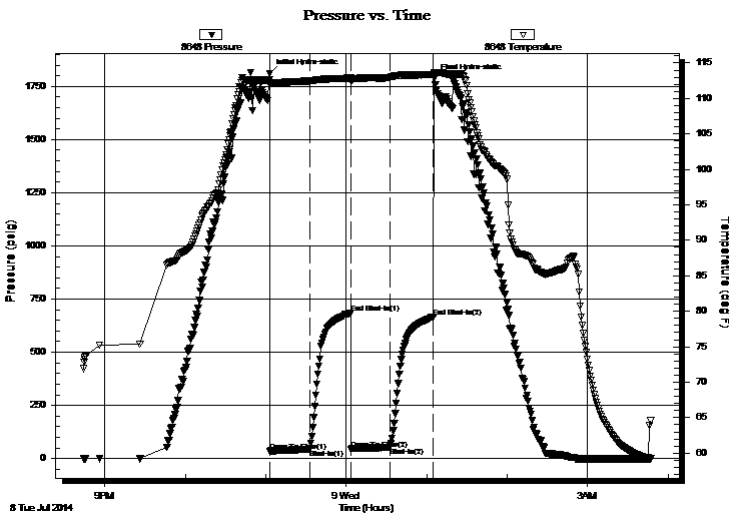
Last Calib.: 2014.07.09

Time On Btm: 2014.07.08 @ 23:02:45

Time Off Btm: 2014.07.09 @ 01:05:45

TEST COMMENT: 30 - IF- 3/4" Blow
30 - IS- No return
30 - FF- 1/4" blow
30 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1808.63	112.63	Initial Hydro-static
1	35.60	111.92	Open To Flow (1)
30	44.61	112.46	Shut-In(1)
61	682.65	112.87	End Shut-In(1)
61	43.01	112.43	Open To Flow (2)
90	51.94	112.97	Shut-In(2)
123	665.32	113.34	End Shut-In(2)
123	1788.43	113.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud, 100%M	0.22

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

34-12s-21w Trego KS

PO Box 1019
Hays KS 67601

Seitz-Bamhardt #C-5

Job Ticket: 54067

DST#: 4

ATTN: Marc Dow ning

Test Start: 2014.07.08 @ 20:44:00

Tool Information

Drill Pipe:	Length: 3457.00 ft	Diameter: 3.80 inches	Volume: 48.49 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: 30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 48.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3502.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	3558.00 ft			
Interval betw een Packers:	56.00 ft			
Tool Length:	484.00 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			3482.00	
Shut In Tool	5.00			3487.00	
Hydraulic tool	5.00			3492.00	
Packer	5.00			3497.00	21.00 Bottom Of Top Packer
Packer	5.00			3502.00	
Stubb	1.00			3503.00	
Perforations	4.00			3507.00	
Change Over Sub	1.00			3508.00	
Drill Pipe	31.00			3539.00	
Change Over Sub	1.00			3540.00	
Recorder	0.00	8648	Inside	3540.00	
Recorder	0.00	8940	Outside	3540.00	
Perforations	17.00			3557.00	
Blank Off Sub	1.00			3558.00	56.00 Tool Interval
Packer	5.00			3563.00	
Change Over Sub	1.00			3564.00	
Drill Pipe	381.00			3945.00	
Recorder	0.00	8958	Below	3945.00	
Perforations	17.00			3962.00	
Bullnose	3.00			3965.00	407.00 Bottom Packers & Anchor

Total Tool Length: 484.00



**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-Bamhardt #C-5

Job Ticket: 54067

DST#: 4

ATTN: Marc Dow ning

Test Start: 2014.07.08 @ 20:44:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
35.00	Mud, 100%M	0.218

Total Length: 35.00 ft Total Volume: 0.218 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

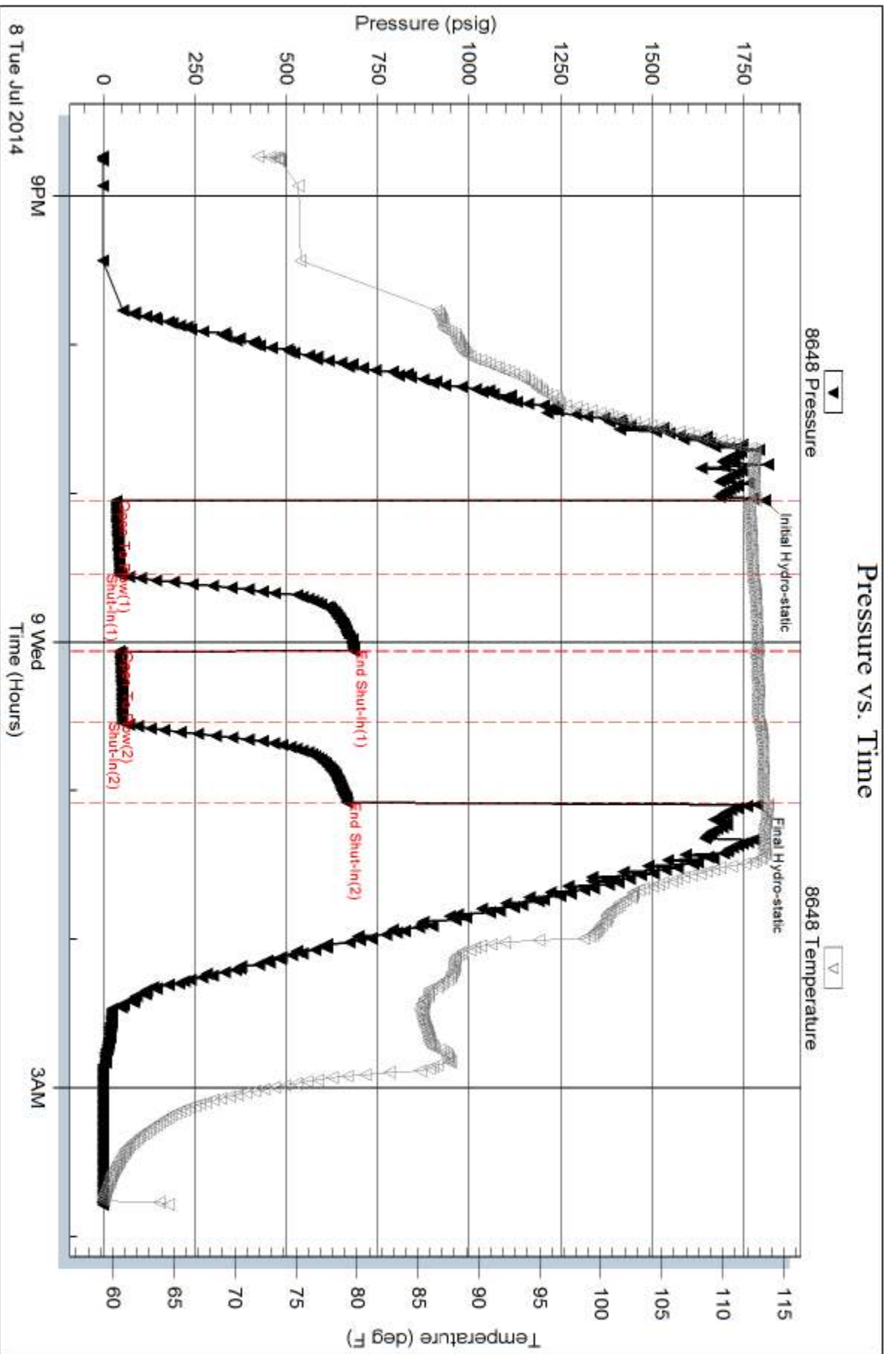
Serial #: 8648

Inside

Dow nng-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 54067

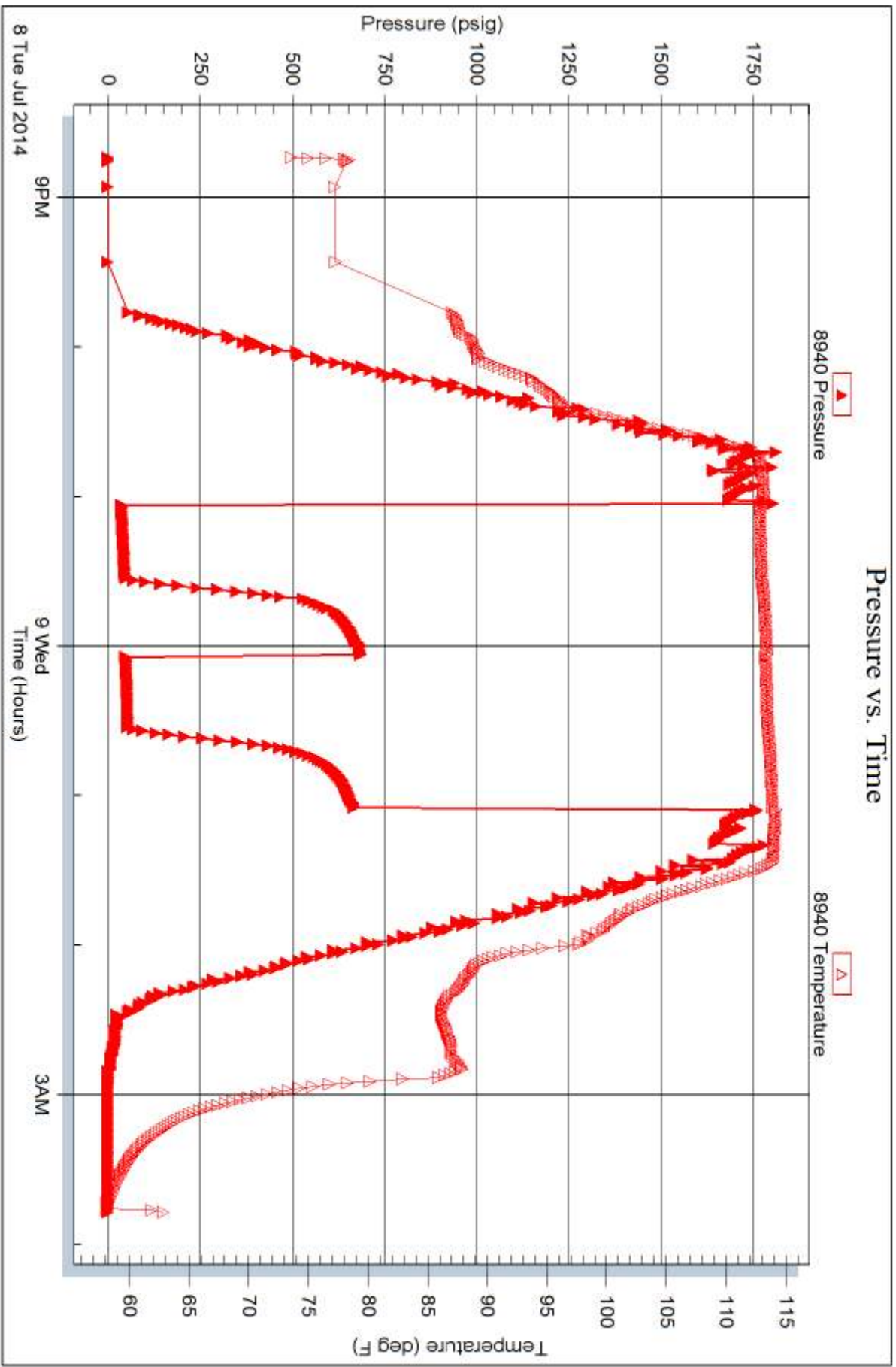
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Serial #: 8940

Outside Dow nrg-Nelson Oil Co Inc

Seitz-Banhardt #C-5

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 54067

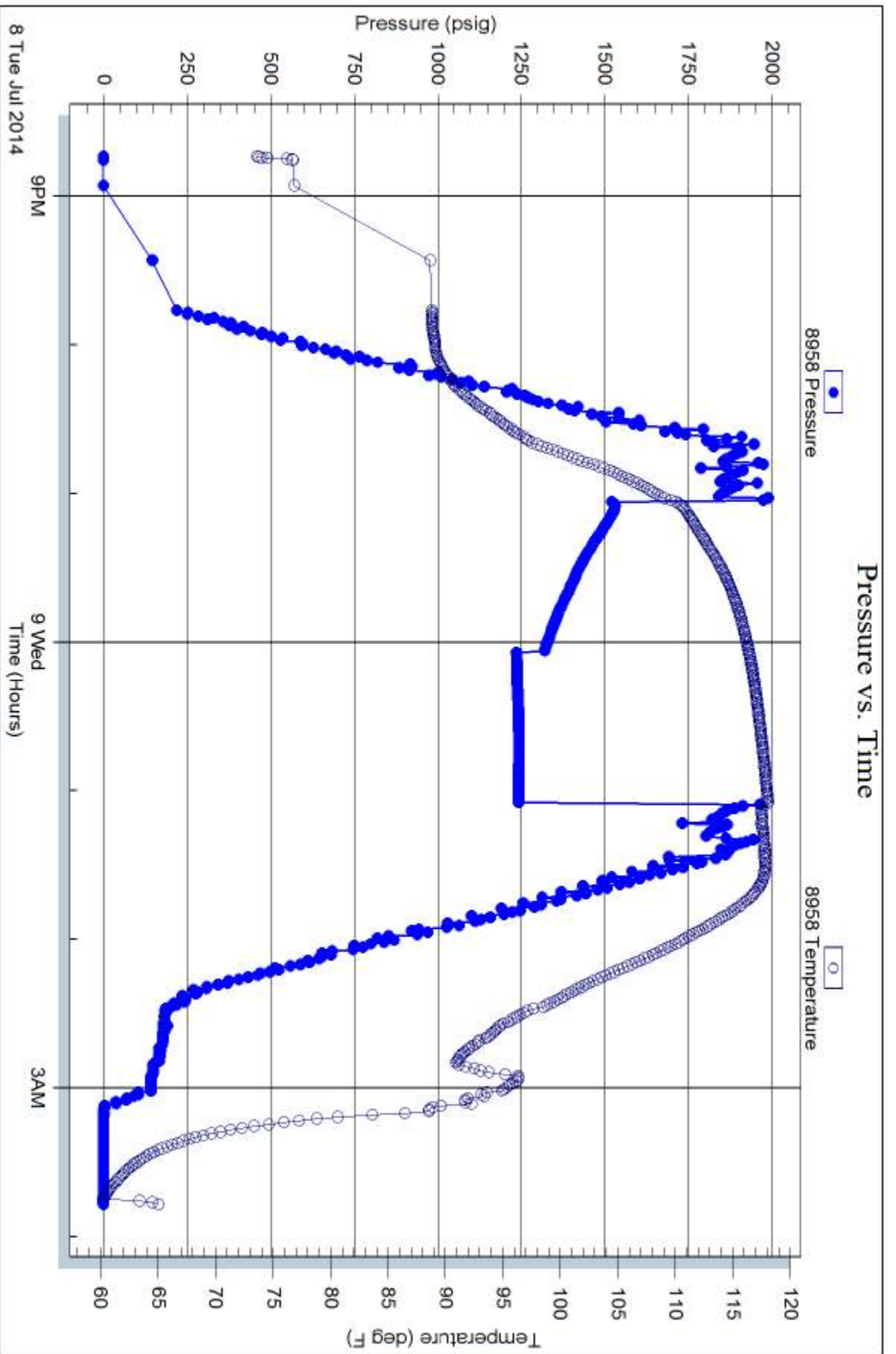
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Serial #: 8958

Below (Str-Rath)eng-Nelson Oil Co Inc

Seitz-Banhardt #C-5

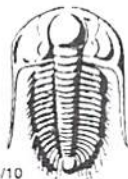
DST Test Number: 4



Tribble Testing, Inc

Ref. No: 54067

Printed: 2014.07.10 @ 10:27:54



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54064**

Well Name & No. Seitz - Bamhardt C-5 Test No. 1 Date 7-7-14
 Company Downing-Nelson oil Co INC Elevation 2201 KB 2193 GL
 Address Po Box 1019, Hays KS, 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #03
 Location: Sec. 34 Twp. 12s Rge. 21w Co. Trego State KS

Interval Tested 3807 - 3853 Zone Tested Long. Sand
 Anchor Length 46' Drill Pipe Run 3772' Mud Wt. 9
 Top Packer Depth 3802 Drill Collars Run 30 Vis 58
 Bottom Packer Depth 3807 Wt. Pipe Run — WL 7.2
 Total Depth 3853 Chlorides 2,000 ppm System LCM 1#

Blow Description IF - 1/4" blow, died back to surface blow
ISI - No return
FF - No blow
FSI - No return

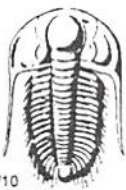
Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>VSOCM</u>		<u>2</u>	<u>98</u>	
	<u>1" of Free oil on top</u>				

Rec Total 3' BHT 114° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1894</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0320</u>
(B) First Initial Flow <u>31</u>	<input type="checkbox"/> Jars <u>—</u>	T-Started <u>0348</u>
(C) First Final Flow <u>35</u>	<input type="checkbox"/> Safety Joint <u>—</u>	T-Open <u>0645</u>
(D) Initial Shut-In <u>175</u>	<input type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>0845</u>
(E) Second Initial Flow <u>34</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>1033</u>
(F) Second Final Flow <u>36</u>	<input checked="" type="checkbox"/> Mileage <u>54RT 83.70</u>	Comments <u>—</u>
(G) Final Shut-In <u>93</u>	<input type="checkbox"/> Sampler <u>—</u>	
(H) Final Hydrostatic <u>1856</u>	<input type="checkbox"/> Straddle <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer <u>—</u>	<input type="checkbox"/> Extra Copies <u>—</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u>—</u>	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>—</u>	Total <u>1233.70</u>
	<input type="checkbox"/> Accessibility <u>—</u>	MP/DST Disc't <u>—</u>
	Sub Total <u>1233.70</u>	

Approved By _____ Our Representative Cody B...

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. 54065

Well Name & No. Seitz - Bamhardt C-5 Test No. 2 Date 7-7-14
 Company Downing Nelson Oil Co Inc Elevation 2201 KB 2193 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 3806 - 3869 Zone Tested Arbuckle
 Anchor Length 63' Drill Pipe Run 3772' Mud Wt. 9.2
 Top Packer Depth 3801 Drill Collars Run 30' Vis 59
 Bottom Packer Depth 3806 Wt. Pipe Run - WL 7.6
 Total Depth 3869 Chlorides 3,000 ppm System LCM 2#

Blow Description IF - 2.25" bbw in 20 minutes, died back to 1.75" blow
ISI - No return
FF - No blow, flushed tool @ 15 minutes, surged & died, flushed
FSI - No return tool again, surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>V50CM</u>	<u>2</u>		<u>98</u>	
<u>30</u>	<u>V50CM</u>	<u>5</u>		<u>95</u>	

Rec Total 92' BHT 1130 Gravity - API RW - @ -° F Chlorides - ppm

(A) Initial Hydrostatic <u>1893</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1609</u>
(B) First Initial Flow <u>36</u>	<input type="checkbox"/> Jars	T-Started <u>1623</u>
(C) First Final Flow <u>59</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1847</u>
(D) Initial Shut-In <u>751</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2147</u>
(E) Second Initial Flow <u>62</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2346</u>
(F) Second Final Flow <u>74</u>	<input checked="" type="checkbox"/> Mileage <u>54RT 83.70</u>	Comments
(G) Final Shut-In <u>725</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1866</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1233.70</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1233.70</u>	

Approved By _____ Our Representative Cody Bloodorn

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54066

Well Name & No. Seitz-Bamhardt C-5 Test No. 3 Date 7-8-14
 Company Downing-Nelson Oil Co. Inc Elevation 2201 KB 2193 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 3860-3878 TO 3961 Zone Tested Arbuckle
 Anchor Length 18' anchor, 83' tail Drill Pipe Run 3836' Mud Wt. 9.3
 Top Packer Depth 3855 Drill Collars Run 30' Vis 58
 Bottom Packer Depth 3860 Wt. Pipe Run — WL 8.0
 Total Depth 3878 Chlorides 3,500 ppm System LCM —

Blow Description IF - B.O.B. in 3 minutes
ISI - surface return, died in 9 minutes
FF - B.O.B. in 3 minutes
FSI - No return

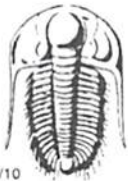
Rec	Feet of	%gas	%oil	%water	%mud
<u>434</u>	<u>MW - oil spots</u>			<u>80</u>	<u>20</u>
<u>77</u>	<u>WSOCWM</u>		<u>5</u>	<u>15</u>	<u>80</u>
<u>1'</u>	<u>Free oil on top</u>		<u>100</u>		

Rec Total 512 BHT 120° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1968</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1237</u>
(B) First Initial Flow <u>60</u>	<input type="checkbox"/> Jars	T-Started <u>1254</u>
(C) First Final Flow <u>155</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1543</u>
(D) Initial Shut-In <u>1173</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1713</u>
(E) Second Initial Flow <u>180</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2021</u>
(F) Second Final Flow <u>250</u>	<input checked="" type="checkbox"/> Mileage <u>54RT</u> <u>83.70</u>	Comments
(G) Final Shut-In <u>1166</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1950</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>15</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>15</u>	<input type="checkbox"/> Day Standby	Total <u>1833.70</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1833.70</u>	

Approved By _____ Our Representative Cody Bloodon

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54067

Well Name & No. Scitz - Bamhardt C-5 Test No. 4 Date 7-8-14
 Company Downing - Nelson Oil Co Inc Elevation 2201 KB 2193 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 3502 - 3558 Zone Tested C,D,E
 Anchor Length 56' anchor, 403' tail Drill Pipe Run 3457' Mud Wt. 9.3
 Top Packer Depth 3497 Drill Collars Run 30' Vis 58
 Bottom Packer Depth 3502 Wt. Pipe Run — WL 8.0
 Total Depth 3558 Chlorides 3,500 ppm System LCM —

Blow Description IF - 3/4" blow
ISI - No return
FF - 1/4" blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>Mud</u>			<u>100</u>	

Rec Total 35 BHT 113° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1808 Test 1150 T-On Location 2030
 (B) First Initial Flow 35 Jars T-Started 2044
 (C) First Final Flow 44 Safety Joint T-Open 2303
 (D) Initial Shut-In 682 Circ Sub T-Pulled 0103
 (E) Second Initial Flow 43 Hourly Standby T-Out 0347
 (F) Second Final Flow 51 Comments
 (G) Final Shut-In 665 Sampler
 (H) Final Hydrostatic 1788 Straddle 600 Ruined Shale Packer

Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1750
 Accessibility MP/DST Disc't
 Sub Total 1750

Approved By Our Representative Cody Blah

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