

DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

MWE #1-7

7-13s-18w Ellis,KS

Start Date: 2012.11.23 @ 16:29:15

End Date: 2012.11.23 @ 23:18:15

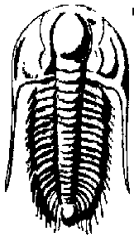
Job Ticket #: 48622 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.28 @ 09:15:26



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48622

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.11.23 @ 16:29:15

GENERAL INFORMATION:

Formation: **LKC "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:24:15

Time Test Ended: 23:18:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3515.00 ft (KB) To 3560.00 ft (KB) (TVD)

Total Depth: 3560.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2171.00 ft (KB)

2163.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press@RunDepth: 151.30 psig @ 3552.00 ft (KB)

Start Date: 2012.11.23

End Date:

2012.11.23

Start Time: 16:39:15

End Time:

23:18:15

Capacity: 8000.00 psig

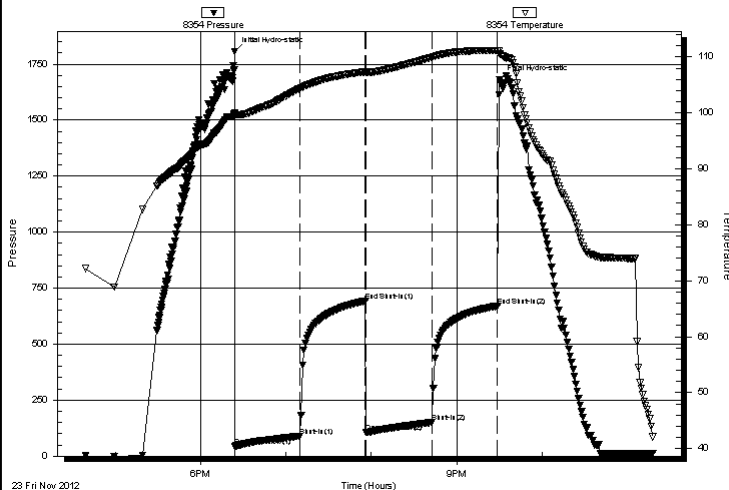
Last Calib.: 2012.11.23

Time On Btm: 2012.11.23 @ 18:24:05

Time Off Btm: 2012.11.23 @ 21:30:15

TEST COMMENT: IF-Weak building blow . BOB in 36 minutes.
ISI-No Return.
FF-Weak building blow . Built to 11 inches.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

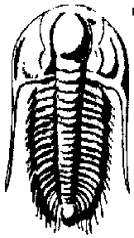
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1807.22	99.94	Initial Hydro-static
1	44.02	99.36	Open To Flow (1)
46	89.63	104.36	Shut-In(1)
92	692.05	107.35	End Shut-In(1)
93	105.52	107.24	Open To Flow (2)
139	151.30	109.95	Shut-In(2)
185	670.61	111.18	End Shut-In(2)
187	1679.72	110.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
265.00	80%Water/20%Mud	3.44

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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MWE #1-7

Job Ticket: 48622

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.11.23 @ 16:29:15

GENERAL INFORMATION:

Formation: **LKC "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:24:15

Time Test Ended: 23:18:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3515.00 ft (KB) To 3560.00 ft (KB) (TVD)

Reference Elevations: 2171.00 ft (KB)

Total Depth: 3560.00 ft (KB) (TVD)

2163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8520 Outside

Press@RunDepth: psig @ 3552.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.23

End Date:

2012.11.23

Last Calib.:

2012.11.23

Start Time: 16:39:30

End Time:

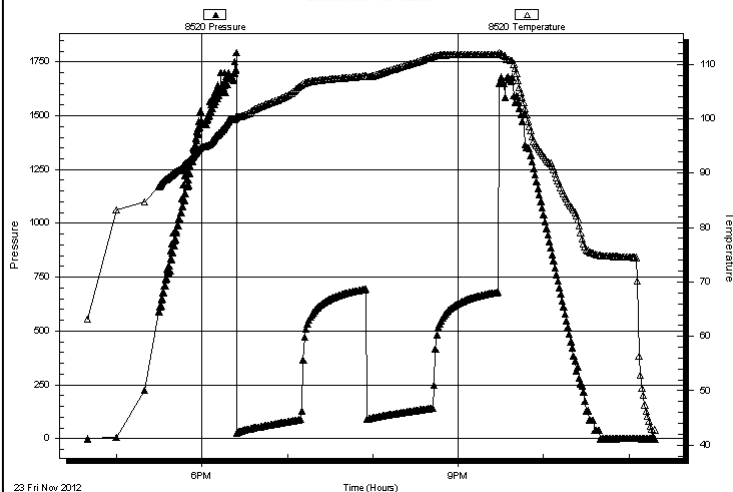
23:18:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Weak building blow . BOB in 36 minutes.
ISI-No Return.
FF-Weak building blow . Built to 11 inches.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

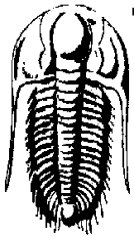
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
265.00	80%Water/20%Mud	3.44

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48622

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.11.23 @ 16:29:15

Tool Information

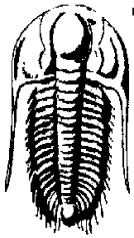
Drill Pipe:	Length:	3485.00 ft	Diameter:	3.80 inches	Volume:	48.89 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:	5000.00 lb
					Total Volume:	49.04 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		20.00 ft					String Weight: Initial	51000.00 lb
Depth to Top Packer:		3515.00 ft					Final	54000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		45.00 ft						
Tool Length:		65.00 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			3496.00		
Shut In Tool	5.00			3501.00		
Hydraulic tool	5.00			3506.00		
Packer	5.00			3511.00	20.00	Bottom Of Top Packer
Packer	4.00			3515.00		
Stubb	1.00			3516.00		
Perforations	3.00			3519.00		
Change Over Sub	1.00			3520.00		
Drill Pipe	31.00			3551.00		
Change Over Sub	1.00			3552.00		
Recorder	0.00	8354	Inside	3552.00		
Recorder	0.00	8520	Outside	3552.00		
Perforations	5.00			3557.00		
Bullnose	3.00			3560.00	45.00	Bottom Packers & Anchor

Total Tool Length: 65.00



TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48622

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.11.23 @ 16:29:15

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:

19000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: 0.62 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
265.00	80%Water/20%Mud	3.444

Total Length: 265.00 ft

Total Volume: 3.444 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

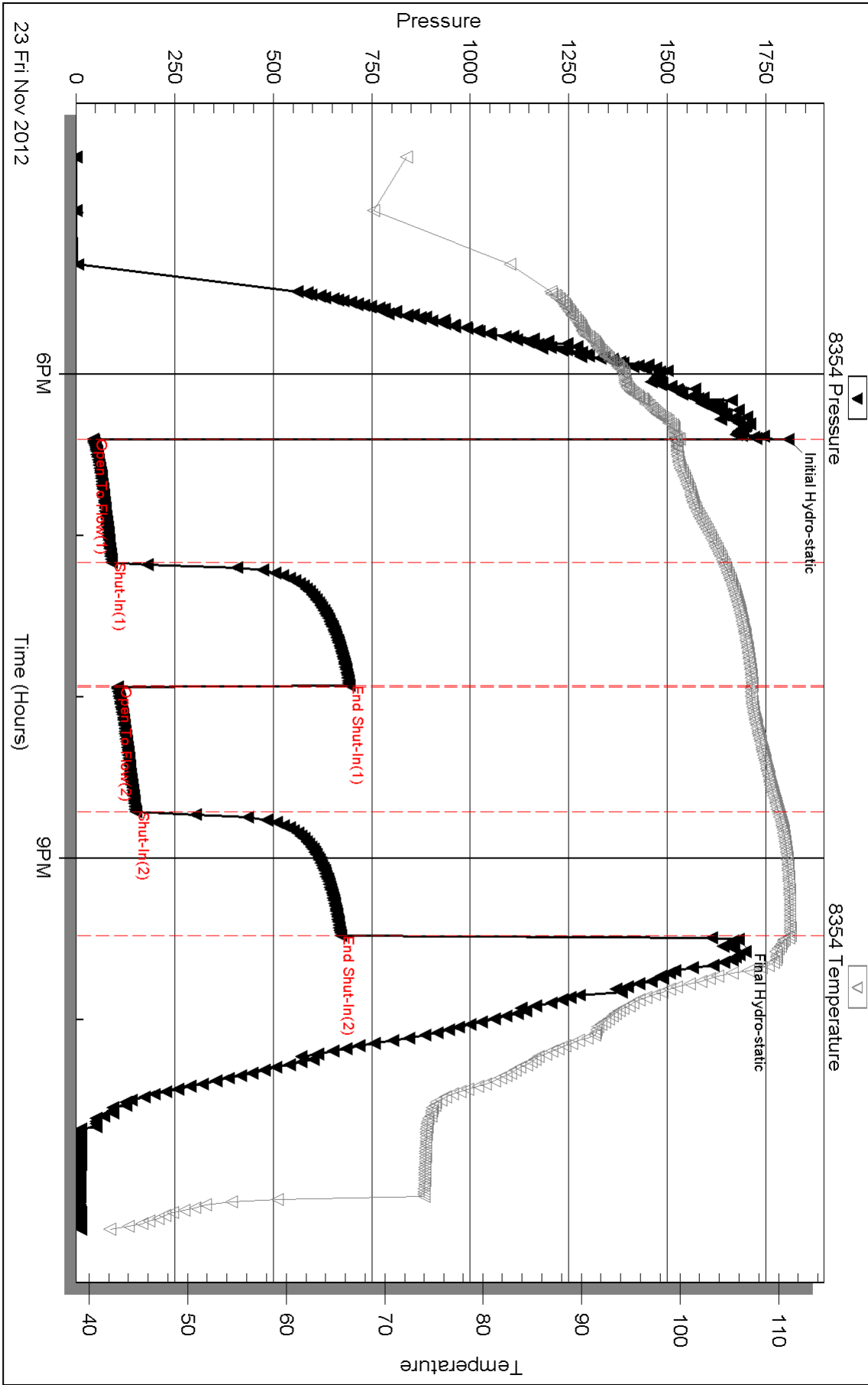
Inside

Dow nting-Nelson Oil Co., Inc.

MME#1-7

DST Test Number: 1

Pressure vs. Time



Serial #: 8520

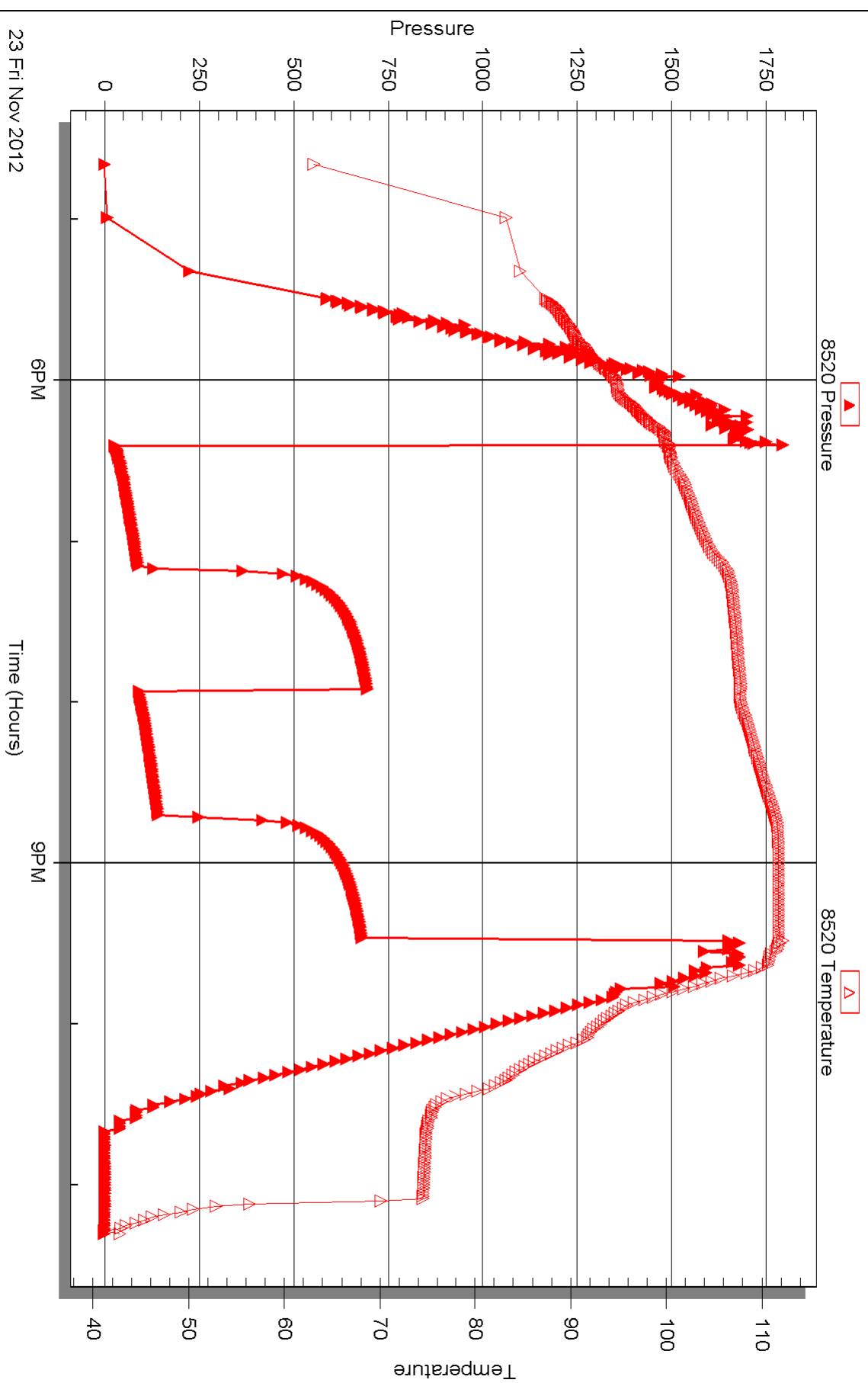
Outside

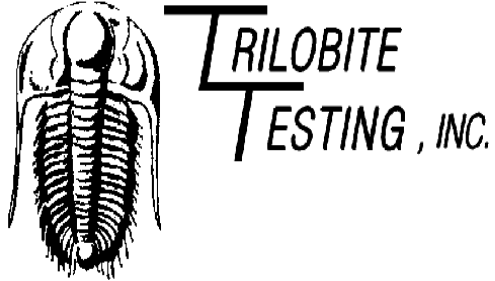
Dow nina-Nelson Oil Co., Inc.

MME#1-7

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

MWE #1-7

7-13s-18w Ellis,KS

Start Date: 2012.11.24 @ 06:37:30

End Date: 2012.11.24 @ 12:50:00

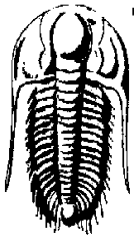
Job Ticket #: 48263 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.28 @ 09:14:43



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48263

DST#: 2

ATTN: Al Dow ning

Test Start: 2012.11.24 @ 06:37:30

GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:11:50

Time Test Ended: 12:50:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3555.00 ft (KB) To 3582.00 ft (KB) (TVD)

Total Depth: 3582.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2171.00 ft (KB)

2163.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press@RunDepth: 59.15 psig @ 3558.00 ft (KB)

Start Date: 2012.11.24

End Date:

2012.11.24

Start Time: 06:37:30

End Time:

12:50:00

Capacity: 8000.00 psig

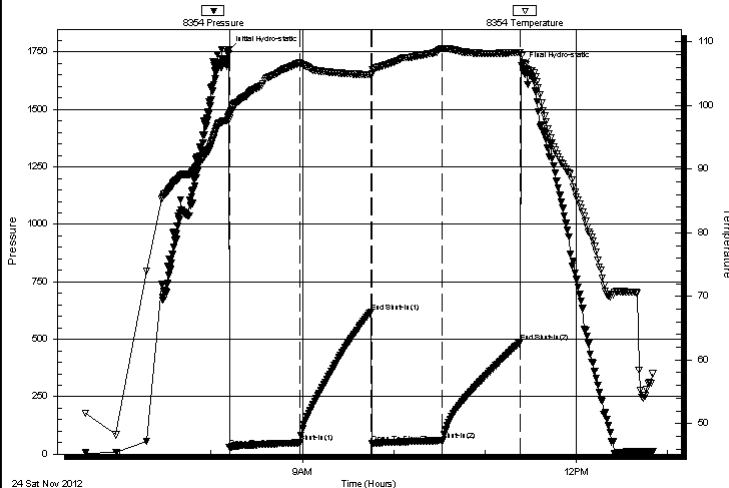
Last Calib.: 2012.11.24

Time On Btm: 2012.11.24 @ 08:11:40

Time Off Btm: 2012.11.24 @ 11:24:00

TEST COMMENT: IF-Weak building blow . Built to 5 & 1/2 inches.
ISI-No Return.
FF-Weak building blow . Built to 4 inches.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

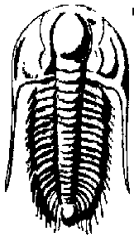
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1758.17	98.50	Initial Hydro-static
1	30.27	98.00	Open To Flow (1)
47	49.46	106.67	Shut-In(1)
94	618.73	104.87	End Shut-In(1)
94	46.89	104.96	Open To Flow (2)
140	59.15	108.97	Shut-In(2)
192	487.22	108.33	End Shut-In(2)
193	1688.92	107.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	80%Water/20%Mud	0.99

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48263

DST#: 2

ATTN: Al Dow ning

Test Start: 2012.11.24 @ 06:37:30

GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:11:50

Time Test Ended: 12:50:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3555.00 ft (KB) To 3582.00 ft (KB) (TVD)

Total Depth: 3582.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2171.00 ft (KB)

2163.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8520 Outside

Press@RunDepth: psig @ 3558.00 ft (KB)

Start Date: 2012.11.24

End Date:

2012.11.24

Start Time: 06:37:45

End Time:

12:49:45

Capacity: 8000.00 psig

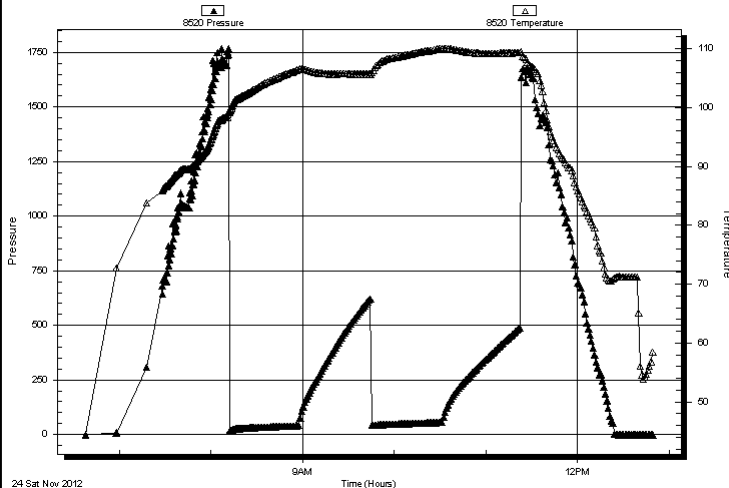
Last Calib.: 2012.11.24

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Weak building blow . Built to 5 & 1/2 inches.
ISI-No Return.
FF-Weak building blow . Built to 4 inches.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

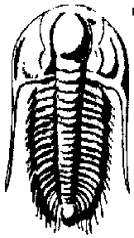
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
90.00	80%Water/20%Mud	0.99

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48263

DST#: 2

ATTN: Al Dow ning

Test Start: 2012.11.24 @ 06:37:30

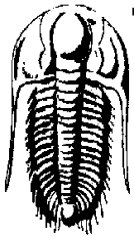
Tool Information

Drill Pipe:	Length:	3518.00 ft	Diameter:	3.80 inches	Volume:	49.35 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:	5000.00 lb
					Total Volume:	49.50 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		13.00 ft					String Weight: Initial	52000.00 lb
Depth to Top Packer:		3555.00 ft					Final	54000.00 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
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Change Over Sub	1.00			3536.00	
Shut In Tool	5.00			3541.00	
Hydraulic tool	5.00			3546.00	
Packer	5.00			3551.00	20.00 Bottom Of Top Packer
Packer	4.00			3555.00	
Stubb	1.00			3556.00	
Perforations	2.00			3558.00	
Recorder	0.00	8354	Inside	3558.00	
Recorder	0.00	8520	Outside	3558.00	
Perforations	21.00			3579.00	
Bullnose	3.00			3582.00	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.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48263

DST#: 2

ATTN: Al Dow ning

Test Start: 2012.11.24 @ 06:37:30

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 57.00 sec/qt

Water Loss: 7.96 in³

Resistivity: 0.45 ohm.m

Salinity: 1500.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity: 22000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	80%Water/20%Mud	0.989

Total Length: 90.00 ft

Total Volume: 0.989 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

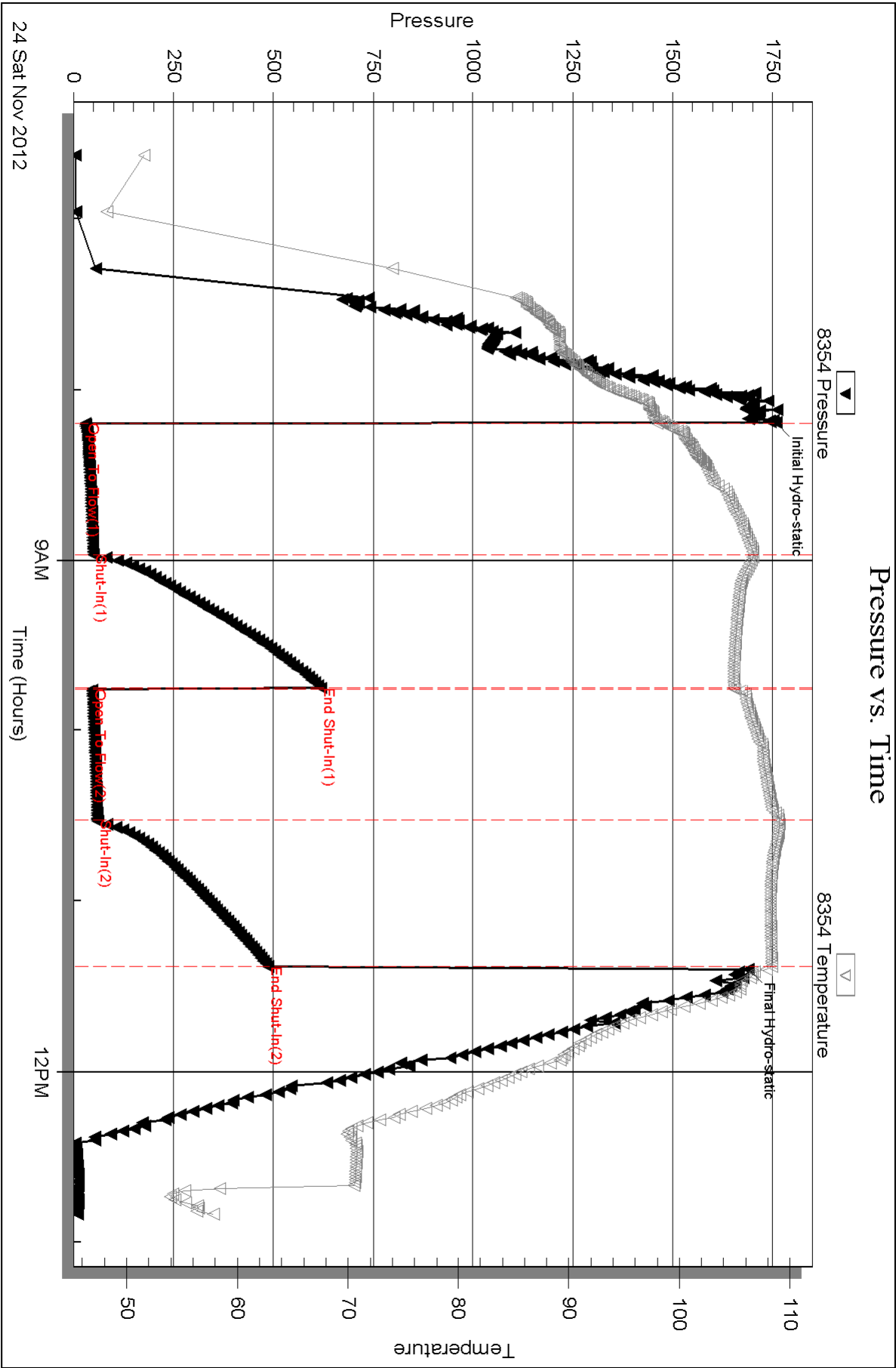
Serial #: 8354

Inside

Dow n/ing-Nelson Oil Co., Inc.

MME #1-7

DST Test Number: 2

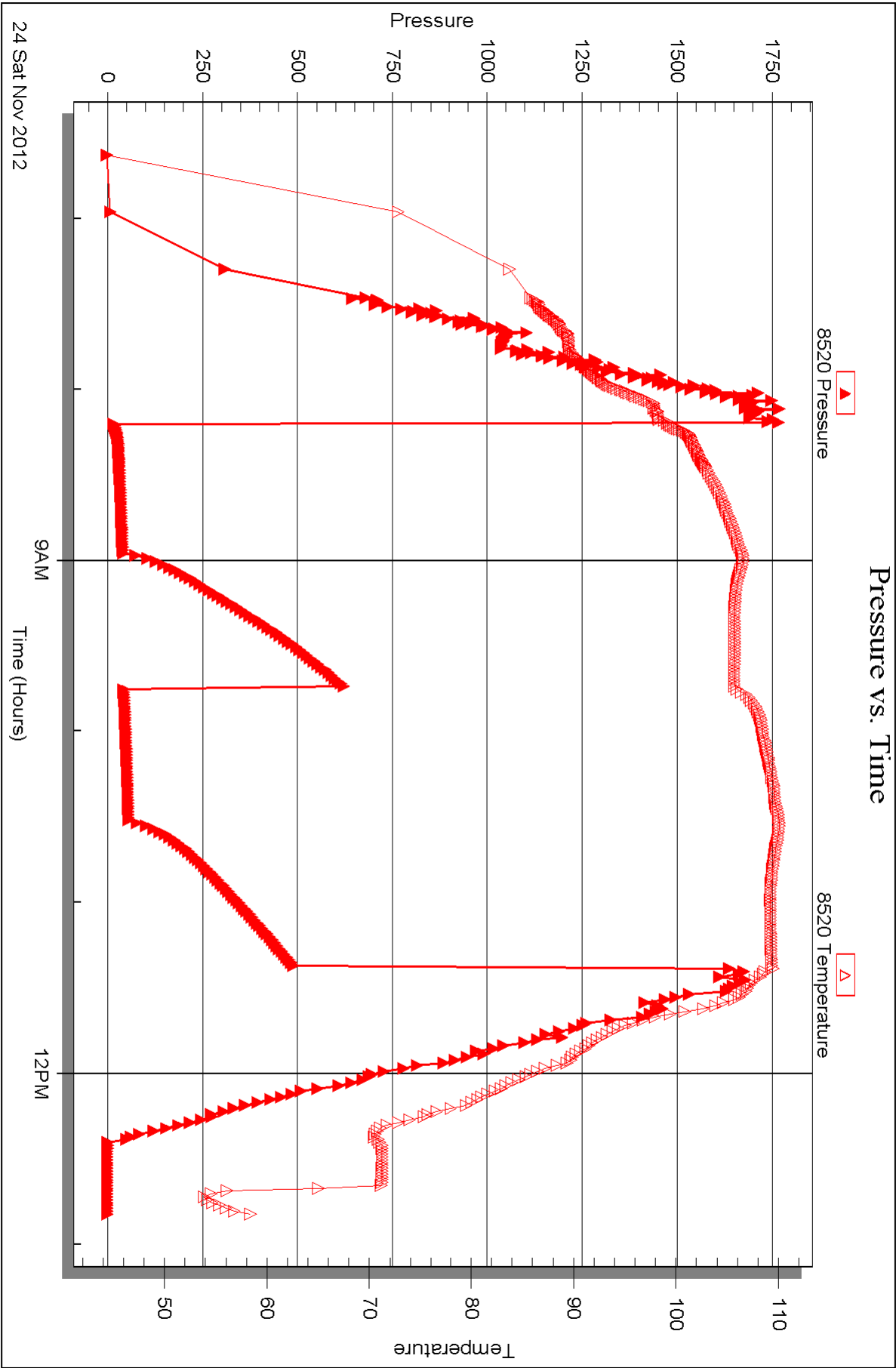


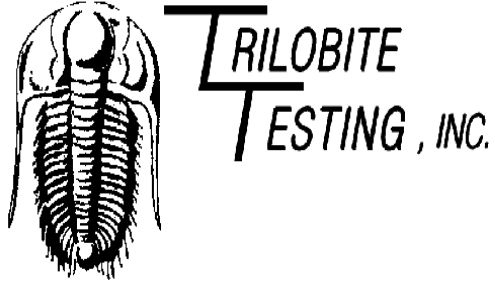
Serial #: 8520

Outside Dow nting-Nelson Oil Co., Inc.

MWE#1-7

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

MWE #1-7

7-13s-18w Ellis,KS

Start Date: 2012.11.25 @ 00:54:30

End Date: 2012.11.25 @ 08:46:00

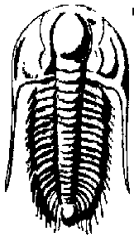
Job Ticket #: 48624 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.28 @ 09:13:53



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48624

DST#: 3

ATTN: Al Dow ning

Test Start: 2012.11.25 @ 00:54:30

GENERAL INFORMATION:

Formation: **LKC "H,I,J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:44:20

Time Test Ended: 08:46:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3606.00 ft (KB) To 3682.00 ft (KB) (TVD)

Total Depth: 3682.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2171.00 ft (KB)

2163.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press@RunDepth: 316.23 psig @ 3674.00 ft (KB)

Start Date: 2012.11.25

End Date:

2012.11.25

Start Time: 01:04:30

End Time:

08:46:00

Capacity: 8000.00 psig

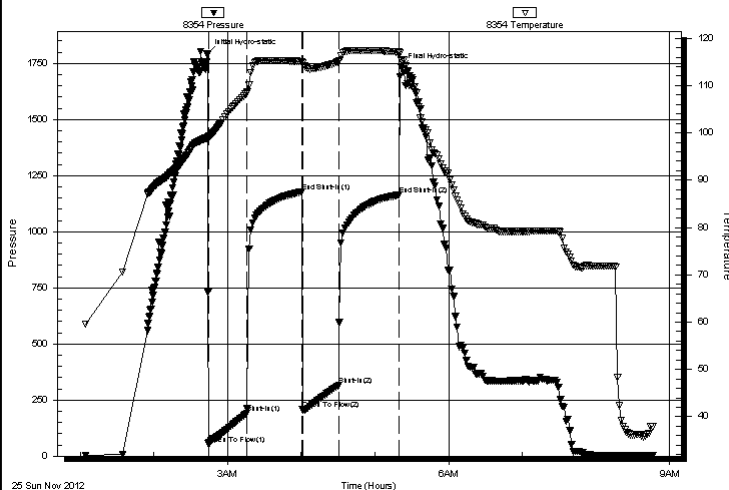
Last Calib.: 2012.11.25

Time On Btm: 2012.11.25 @ 02:44:00

Time Off Btm: 2012.11.25 @ 05:21:00

TEST COMMENT: IF-Strong building blow . BOB in 1 minute 45 seconds.
ISI-Return @ 15 seconds. BOB in 3 & 1/2 mintues.
FF-Strong building blow . BOB in 2 minutes. GTS @ 27 minutes.
FSI-Return @ 30 seconds. BOB @ 4 minutes.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1792.25	99.07	Initial Hydro-static
1	54.97	98.60	Open To Flow (1)
32	190.80	108.44	Shut-In(1)
77	1178.84	115.07	End Shut-In(1)
77	206.99	114.75	Open To Flow (2)
107	316.23	115.05	Shut-In(2)
156	1164.91	117.05	End Shut-In(2)
157	1733.45	115.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	25%Gas/50%Oil/25%Mud	1.47
850.00	50%Gas/50%Oil	11.92
0.00	2606' G.I.P.	0.00

Gas Rates

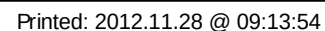
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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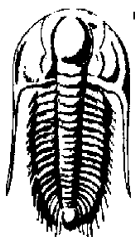


Test Start: 2012.11.25 @ 00:54:30

KB to GR/CF: 8.00 ft

FSI-Return @ 30 seconds. BOB @ 4 minutes.





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48624

DST#: 3

ATTN: Al Downing

Test Start: 2012.11.25 @ 00:54:30

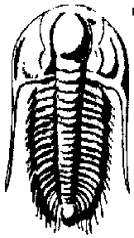
Tool Information

Drill Pipe:	Length:	3580.00 ft	Diameter:	3.80 inches	Volume:	50.22 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:	5000.00 lb
					Total Volume:	50.37 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		24.00 ft					String Weight: Initial	54000.00 lb
Depth to Top Packer:		3606.00 ft					Final	59000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		76.00 ft						
Tool Length:		96.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3587.00	
Shut In Tool	5.00			3592.00	
Hydraulic tool	5.00			3597.00	
Packer	5.00			3602.00	20.00 Bottom Of Top Packer
Packer	4.00			3606.00	
Stubb	1.00			3607.00	
Perforations	2.00			3609.00	
Change Over Sub	1.00			3610.00	
Drill Pipe	63.00			3673.00	
Change Over Sub	1.00			3674.00	
Recorder	0.00	8354	Inside	3674.00	
Recorder	0.00	8520	Outside	3674.00	
Perforations	5.00			3679.00	
Bullnose	3.00			3682.00	76.00 Bottom Packers & Anchor

Total Tool Length: 96.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48624

DST#: 3

ATTN: Al Dow ning

Test Start: 2012.11.25 @ 00:54:30

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.97 in³

Resistivity: ohm.m

Salinity: 2000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

34 deg API

ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	25%Gas/50%Oil/25%Mud	1.466
850.00	50%Gas/50%Oil	11.923
0.00	2606' G.I.P.	0.000

Total Length: 974.00 ft

Total Volume: 13.389 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

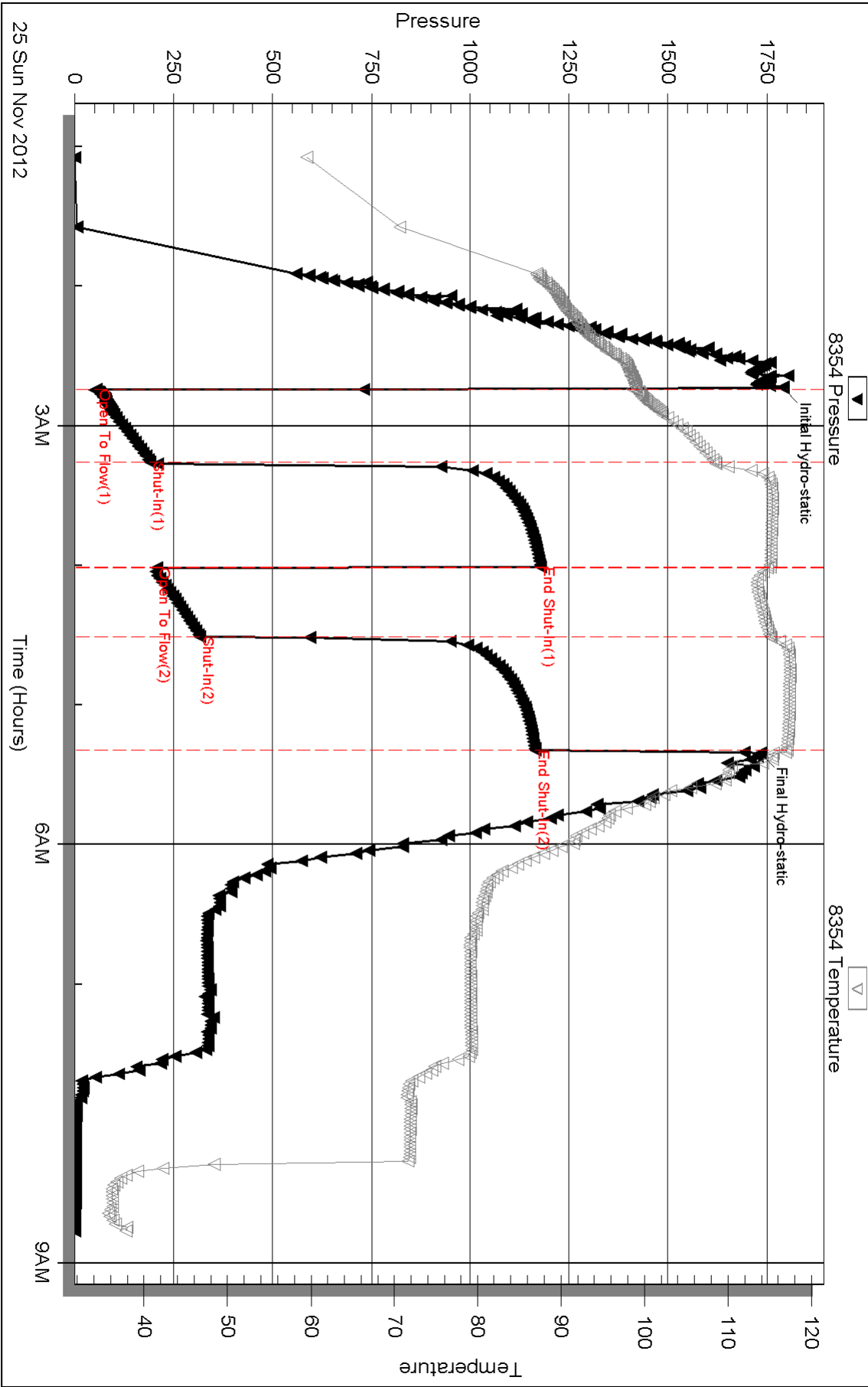
Inside

Dow n/ing-Nelson Oil Co., Inc.

MWE #1-7

DST Test Number: 3

Pressure vs. Time

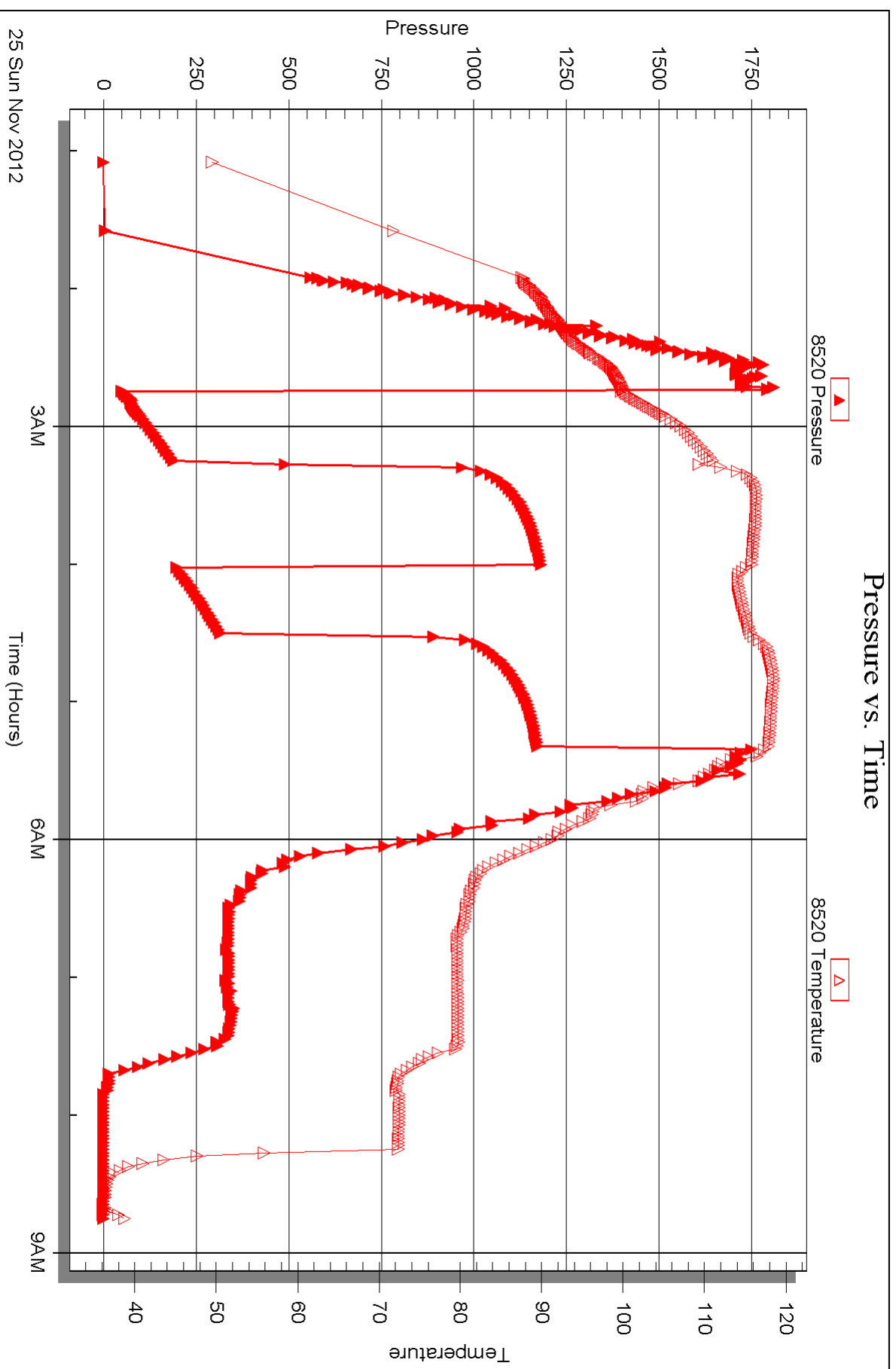


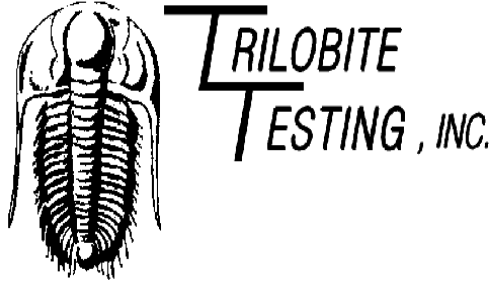
Serial #: 8520

Outside Dow nting-Nelson Oil Co., Inc.

MWE#1-7

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

MWE #1-7

7-13s-18w Ellis,KS

Start Date: 2012.11.25 @ 15:43:15

End Date: 2012.11.25 @ 20:27:15

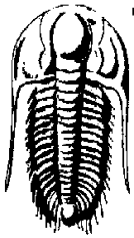
Job Ticket #: 48625 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.28 @ 09:13:07



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48625

DST#: 4

ATTN: Al Dow ning

Test Start: 2012.11.25 @ 15:43:15

GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:29:35

Time Test Ended: 20:27:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3686.00 ft (KB) To 3710.00 ft (KB) (TVD)

Total Depth: 3710.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2171.00 ft (KB)

2163.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press@RunDepth: 15.81 psig @ 3687.00 ft (KB)

Start Date: 2012.11.25

End Date:

2012.11.25

Start Time: 15:53:15

End Time:

20:27:15

Capacity: 8000.00 psig

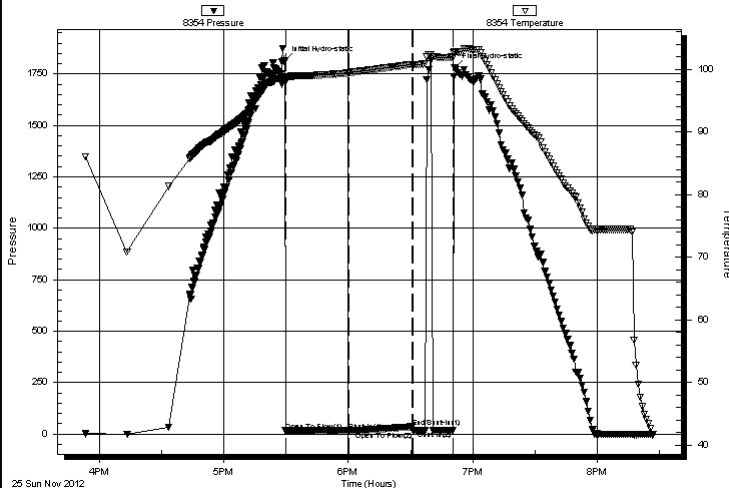
Last Calib.: 2012.11.25

Time On Btm: 2012.11.25 @ 17:29:25

Time Off Btm: 2012.11.25 @ 18:51:15

TEST COMMENT: IF-Very weak building blow . Built to 1 inch.
ISI-No Return.
FF-No Blow . Flushed Tool. No Blow . Pulled Tool.

Pressure vs. Time



PRESSURE SUMMARY

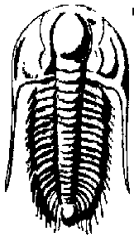
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1815.68	98.76	Initial Hydro-static
1	15.37	98.01	Open To Flow (1)
31	15.81	99.46	Shut-In(1)
62	35.35	100.79	End Shut-In(1)
62	15.42	100.80	Open To Flow (2)
81	18.33	101.93	Shut-In(2)
82	1779.26	102.87	Final Hydro-static

Recovery

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

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48625

DST#: 4

ATTN: Al Dow ning

Test Start: 2012.11.25 @ 15:43:15

GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:29:35

Time Test Ended: 20:27:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3686.00 ft (KB) To 3710.00 ft (KB) (TVD)

Total Depth: 3710.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2171.00 ft (KB)

2163.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8520 Outside

Press@RunDepth: psig @ 3687.00 ft (KB)

Start Date: 2012.11.25

End Date:

2012.11.25

Capacity: 8000.00 psig

Last Calib.:

2012.11.25

Start Time: 15:53:35

End Time:

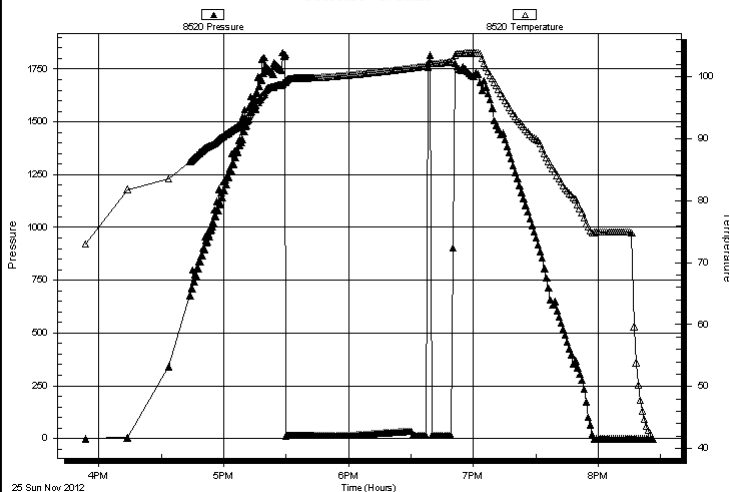
20:26:35

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Very weak building blow . Built to 1 inch.
ISI-No Return.
FF-No Blow . Flushed Tool. No Blow . Pulled Tool.

Pressure vs. Time



PRESSURE SUMMARY

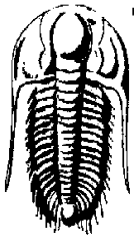
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

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

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48625

DST#: 4

ATTN: Al Dow ning

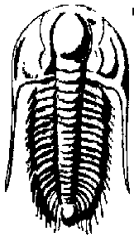
Test Start: 2012.11.25 @ 15:43:15

Tool Information

Drill Pipe:	Length:	3645.00 ft	Diameter:	3.80 inches	Volume:	51.13 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.70 inches	Volume:	- 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
					Total Volume:	- bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		9.00 ft					String Weight: Initial	54000.00 lb
Depth to Top Packer:		3686.00 ft					Final	54000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		24.00 ft						
Tool Length:		44.00 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			3667.00	
Shut In Tool	5.00			3672.00	
Hydraulic tool	5.00			3677.00	
Packer	5.00			3682.00	20.00 Bottom Of Top Packer
Packer	4.00			3686.00	
Stubb	1.00			3687.00	
Recorder	0.00	8354	Inside	3687.00	
Recorder	0.00	8520	Outside	3687.00	
Perforations	20.00			3707.00	
Bullnose	3.00			3710.00	24.00 Bottom Packers & Anchor
Total Tool Length:	44.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 48625

DST#: 4

ATTN: Al Dow ning

Test Start: 2012.11.25 @ 15:43:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.97 in³

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

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

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

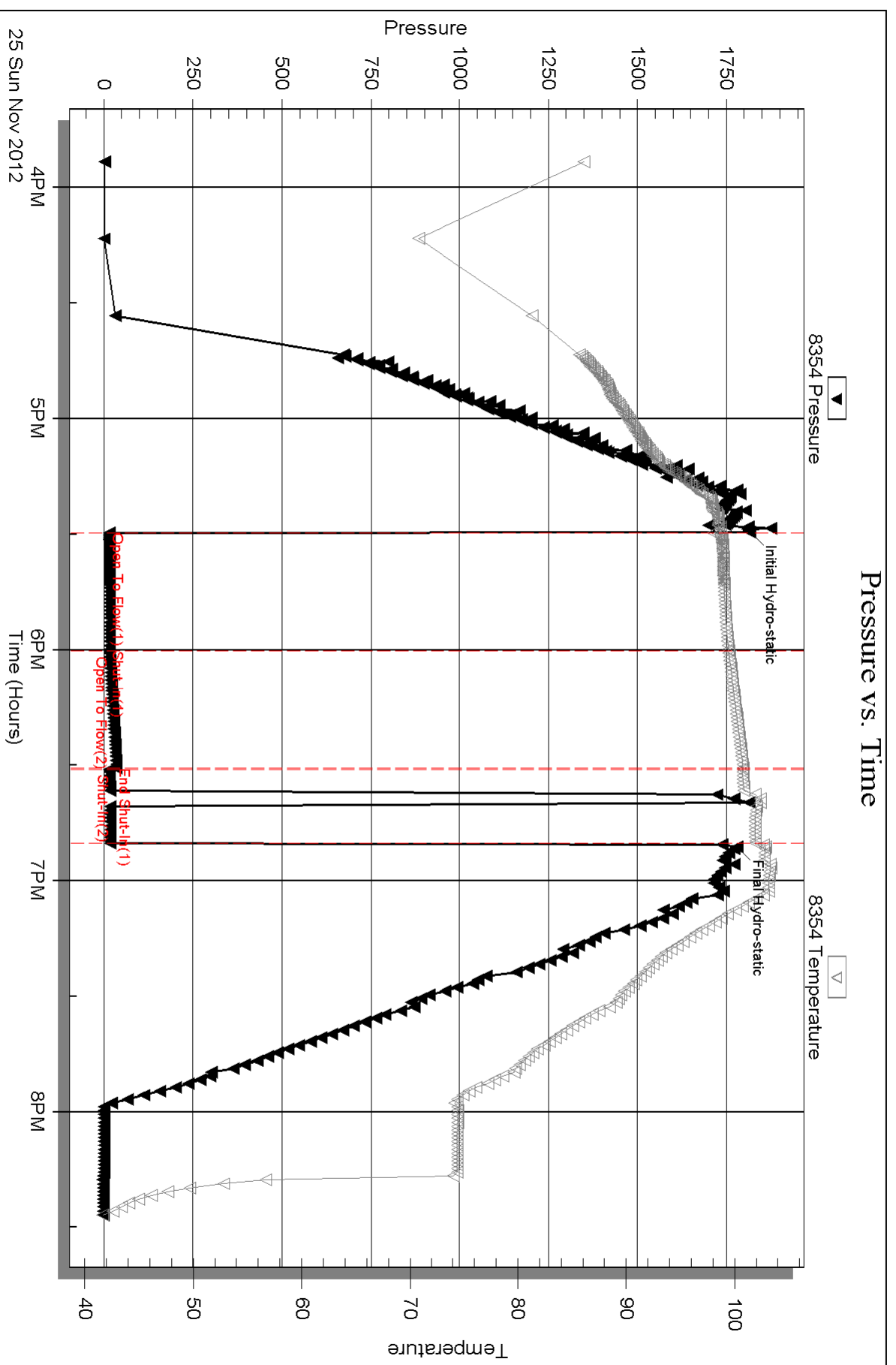
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

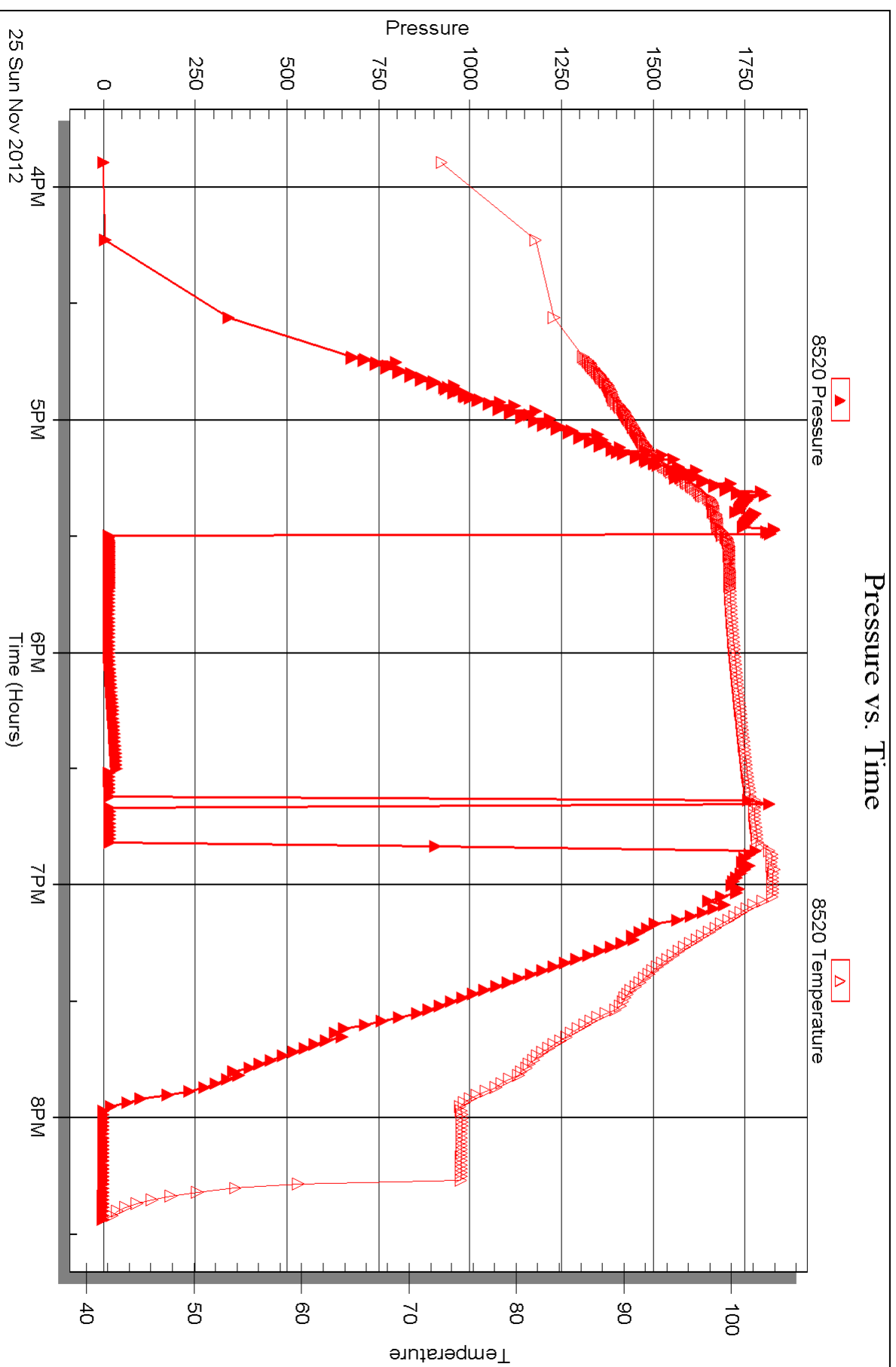


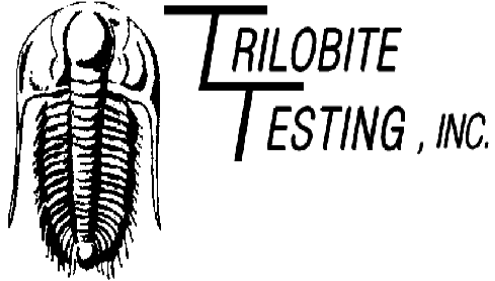
Serial #: 8520

Outside Dow nting-Nelson Oil Co., Inc.

MWE#1-7

DST Test Number: 4





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

MWE #1-7

7-13s-18w Ellis,KS

Start Date: 2012.11.26 @ 16:11:15

End Date: 2012.11.26 @ 21:57:15

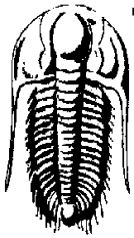
Job Ticket #: 51651 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.28 @ 09:12:15



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 51651

DST#: 5

ATTN: Al Dow ning

Test Start: 2012.11.26 @ 16:11:15

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:45

Time Test Ended: 21:57:15

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3768.00 ft (KB) To 3810.00 ft (KB) (TVD)

Reference Elevations: 2171.00 ft (KB)

Total Depth: 3889.00 ft (KB) (TVD)

2163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354 Inside

Press@RunDepth: 30.09 psig @ 3770.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.26

End Date:

2012.11.26

Last Calib.: 2012.11.26

Start Time: 16:21:15

End Time:

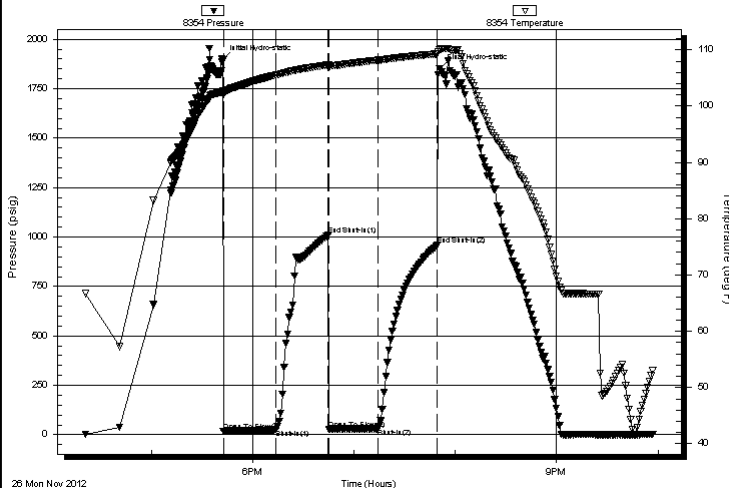
21:57:15

Time On Btm: 2012.11.26 @ 17:42:35

Time Off Btm: 2012.11.26 @ 19:50:45

TEST COMMENT: IF-Very weak building blow . Built to 1 inch.
ISI-No Return.
FF-Very weak building blow . Built to 3/4 inch.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

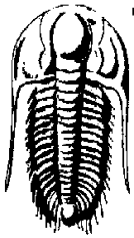
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1896.05	102.69	Initial Hydro-static
1	17.19	102.03	Open To Flow (1)
32	25.96	105.53	Shut-In(1)
63	1010.62	107.33	End Shut-In(1)
63	28.86	107.10	Open To Flow (2)
92	30.09	108.16	Shut-In(2)
127	957.40	109.29	End Shut-In(2)
129	1853.18	110.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100%Mud	0.07

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 51651

DST#: 5

ATTN: Al Dow ning

Test Start: 2012.11.26 @ 16:11:15

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:45

Time Test Ended: 21:57:15

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3768.00 ft (KB) To 3810.00 ft (KB) (TVD)

Reference Elevations: 2171.00 ft (KB)

Total Depth: 3889.00 ft (KB) (TVD)

2163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8520 Outside

Press@RunDepth: psig @ 3770.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.26

End Date:

2012.11.26

Last Calib.:

2012.11.26

Start Time: 16:21:30

End Time:

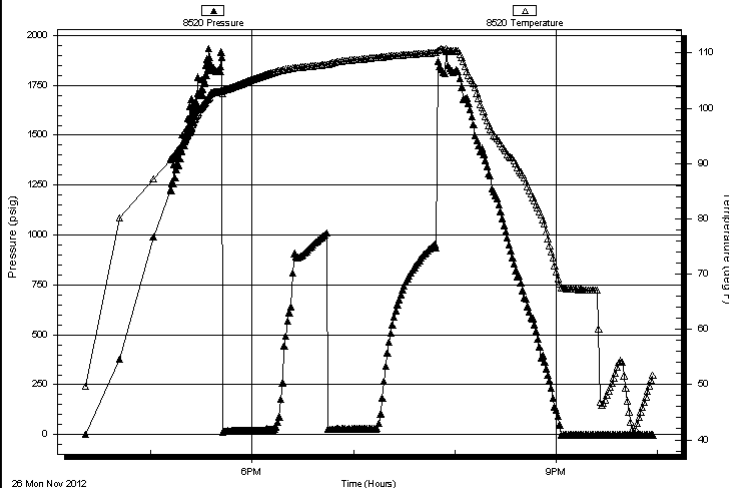
21:57:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Very weak building blow . Built to 1 inch.
ISI-No Return.
FF-Very weak building blow . Built to 3/4 inch.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

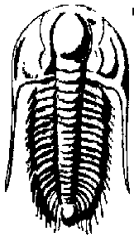
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
15.00	100%Mud	0.07

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 51651

DST#: 5

ATTN: Al Dow ning

Test Start: 2012.11.26 @ 16:11:15

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:45

Time Test Ended: 21:57:15

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 66

Interval: 3768.00 ft (KB) To 3810.00 ft (KB) (TVD)

Reference Elevations: 2171.00 ft (KB)

Total Depth: 3889.00 ft (KB) (TVD)

2163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8653 Below (Straddle)

Press@RunDepth: psig @ 3823.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.26

End Date:

2012.11.26

Last Calib.:

2012.11.26

Start Time: 16:11:46

End Time:

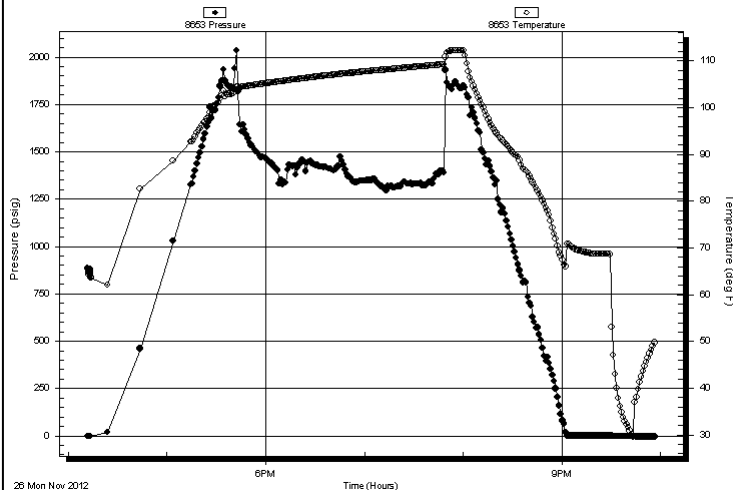
21:56:15

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Very weak building blow . Built to 1 inch.
ISI-No Return.
FF-Very weak building blow . Built to 3/4 inch.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

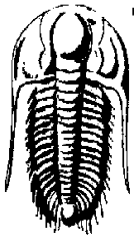
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
15.00	100%Mud	0.07

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 51651

DST#: 5

ATTN: Al Dow ning

Test Start: 2012.11.26 @ 16:11:15

Tool Information

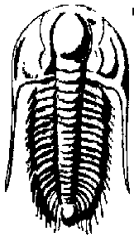
Drill Pipe:	Length:	3740.00 ft	Diameter:	3.80 inches	Volume:	52.46 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:	10000.00 lb
					Total Volume:	52.61 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	22.00 ft					String Weight: Initial	57000.00 lb	
Depth to Top Packer:	3768.00 ft					Final	58000.00 lb	
Depth to Bottom Packer:	3807.00 ft							
Interval between Packers:	39.00 ft							
Tool Length:	141.00 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			3749.00	
Shut In Tool	5.00			3754.00	
Hydraulic tool	5.00			3759.00	
Packer	5.00			3764.00	20.00 Bottom Of Top Packer
Packer	4.00			3768.00	
Stubb	1.00			3769.00	
Perforations	1.00			3770.00	
Recorder	0.00	8354	Inside	3770.00	
Recorder	0.00	8520	Outside	3770.00	
Change Over Sub	1.00			3771.00	
Drill Pipe	31.00			3802.00	
Change Over Sub	1.00			3803.00	
Perforations	3.00			3806.00	
Blank Off Sub	1.00			3807.00	39.00 Tool Interval
Packer	4.00			3811.00	
Stubb	1.00			3812.00	
Perforations	10.00			3822.00	
Change Over Sub	1.00			3823.00	
Recorder	0.00	8653	Below	3823.00	
Drill Pipe	62.00			3885.00	
Change Over Sub	1.00			3886.00	
Bullnose	3.00			3889.00	82.00 Bottom Packers & Anchor

Total Tool Length: 141.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

7-13s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

MWE #1-7

Job Ticket: 51651

DST#: 5

ATTN: Al Dow ning

Test Start: 2012.11.26 @ 16:11:15

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: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	100%Mud	0.074

Total Length: 15.00 ft

Total Volume: 0.074 bbl

Num Fluid Samples: 0

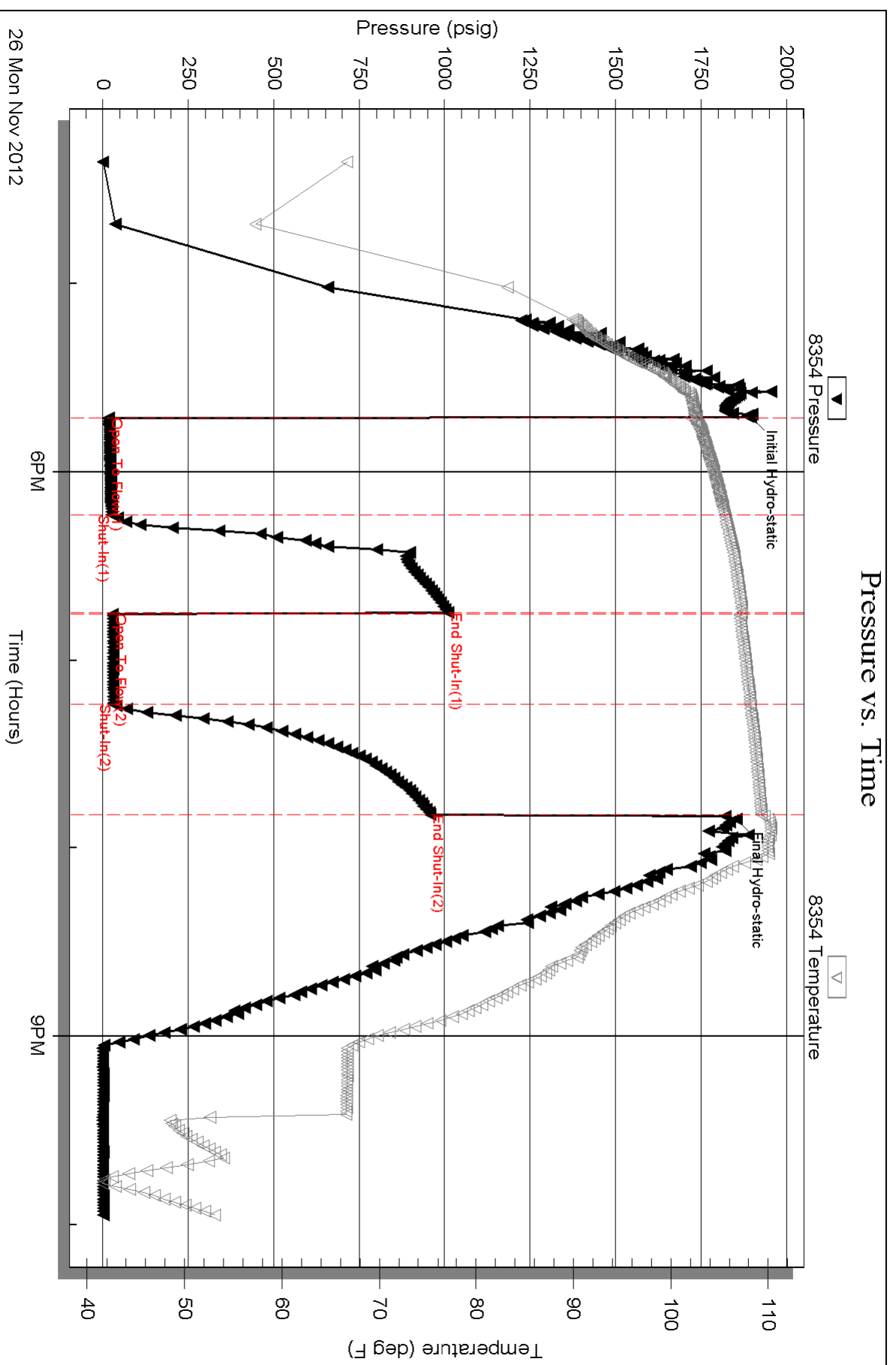
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

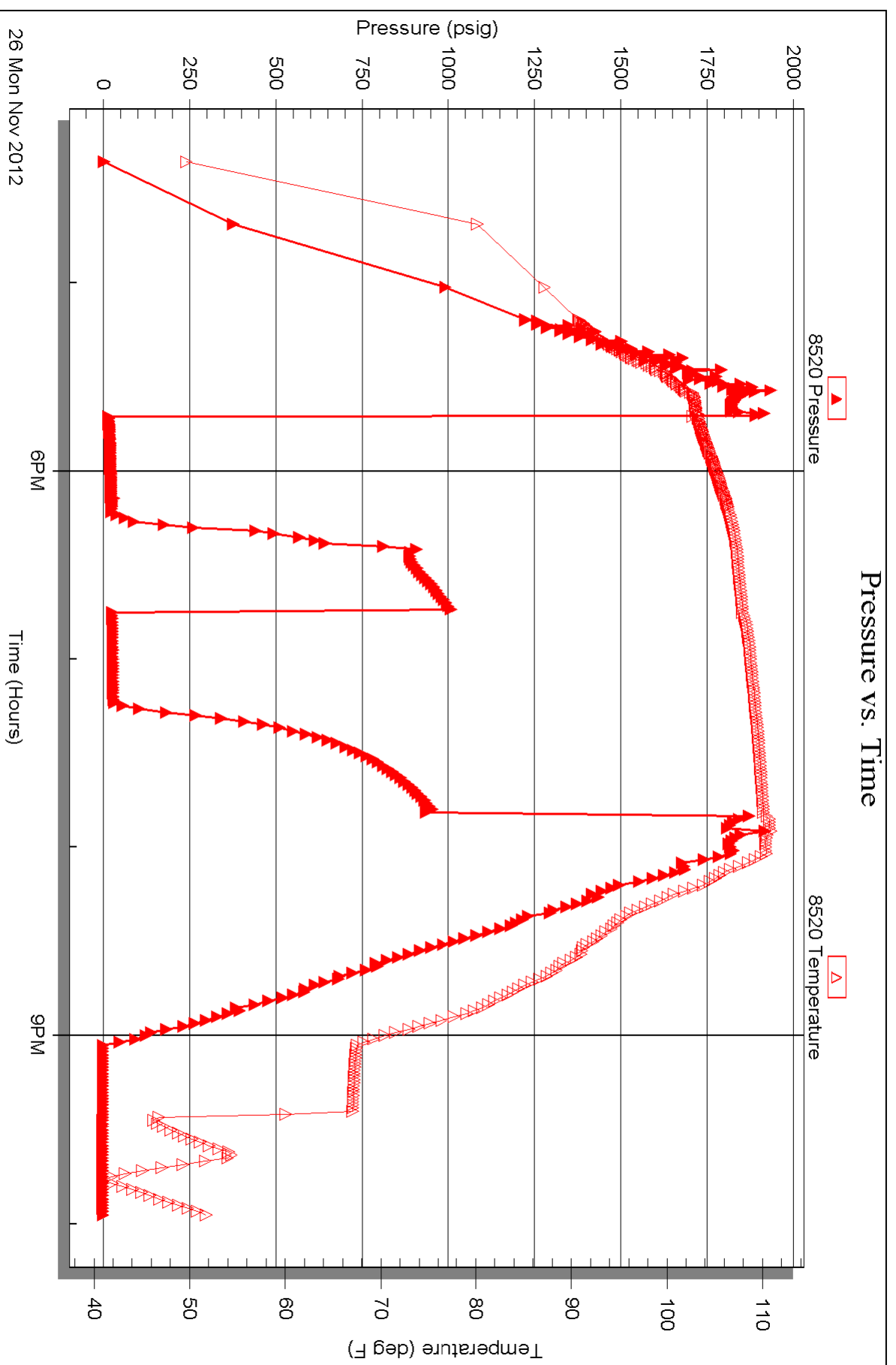


Serial #: 8520

Outside Dow nung-Nelson Oil Co., Inc.

MWE#1-7

DST Test Number: 5

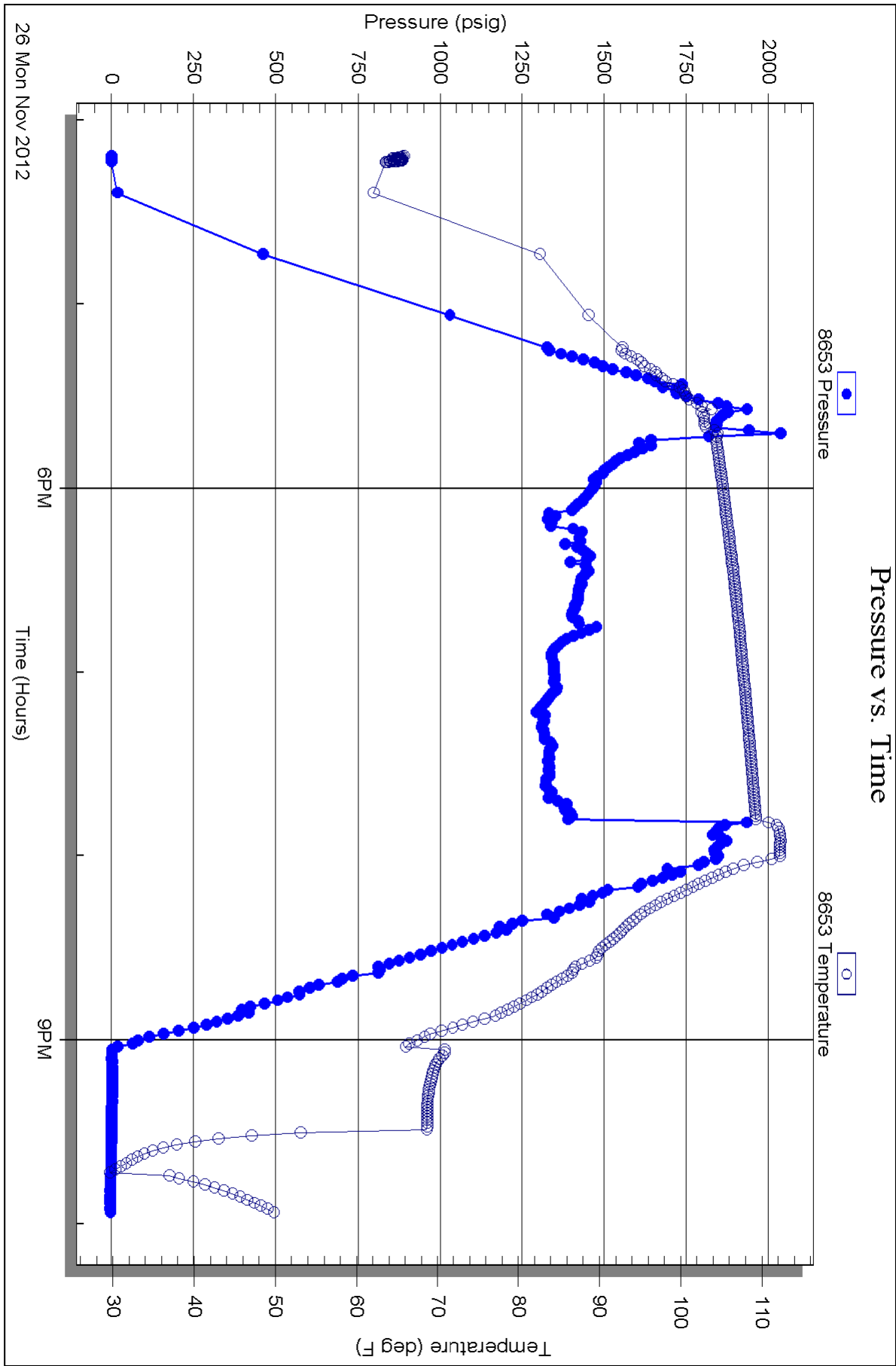


Serial #: 8653

Below (Stratton)ng-Nelson Oil Co., Inc.

MWE #1-7

DST Test Number: 5





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48622

Well Name & No. MWE #1-7 Test No. 7 Date 11-23-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2171 KB 2163 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 3
 Location: Sec. 7 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3515-3560 Zone Tested LKC "C-D"
 Anchor Length 45' Drill Pipe Run 3485 Mud Wt. 8.9
 Top Packer Depth 3510 Drill Collars Run 30 Vis 57
 Bottom Packer Depth 3515 Wt. Pipe Run 0 WL 8.0
 Total Depth 3560 Chlorides 1500 ppm System LCM 2#

Blow Description IF- Weak building blow. BOB in 36 minutes.
ISI- No Return.
FF- Weak building blow. Built to 11 inches.
FBI- No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>265</u>	<u>Muddy Water</u>			<u>80</u>	<u>20</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 265 BHT _____ Gravity _____ API RW 1618 @ 38 °F Chlorides 19,000 ppm
 (A) Initial Hydrostatic 1807 ☒ Test 1150 T-On Location 1530
 (B) First Initial Flow 44 ☐ Jars _____ T-Started 1645
 (C) First Final Flow 90 ☐ Safety Joint _____ T-Open 1824
 (D) Initial Shut-In 692 ☐ Circ Sub _____ T-Pulled 2125
 (E) Second Initial Flow 106 ☐ Hourly Standby _____ T-Out 2315
 (F) Second Final Flow 151 ☒ Mileage 5X2 15.50 Comments Batt-1629
 (G) Final Shut-In 671 ☐ Sampler _____
 (H) Final Hydrostatic 1680 ☐ Straddle _____

Initial Open 45 ☐ Shale Packer _____
 Initial Shut-In 45 ☐ Ruined Packer _____
 Final Flow 45 ☐ Extra Packer _____
 Final Shut-In 45 ☐ Extra Recorder _____
 Sub Total 1165.50 ☐ Day Standby _____
☐ Accessibility _____
 Sub Total 1165.50 ☐ MP/DST Disc _____

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48623

Well Name & No. MWE#1-7 Test No. 2 Date 11-24-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2171 KB 2163 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 3
 Location: Sec. 7 Twp. 13 S Rge. 18 W Co. Ellis State KS

Interval Tested 3555-3582 Zone Tested LKC "E-F"
 Anchor Length 27' Drill Pipe Run _____ Mud Wt. 8.9
 Top Packer Depth 3550 Drill Collars Run 30 Vis 57
 Bottom Packer Depth 3555 Wt. Pipe Run 0 WL 8.0
 Total Depth 3582 Chlorides 1500 ppm System LCM 2#

Blow Description IF-Weak building blow, Built to 5 1/2 inches.

IST- No Return.

FF-Weak building blow, Built to 4 inches.

FST- No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>Muddy Water</u>		<u>80</u>	<u>20</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 90 BHT _____ Gravity _____ API RW 448 @ 52 °F Chlorides 22000 ppm

(A) Initial Hydrostatic 1758
 (B) First Initial Flow 30
 (C) First Final Flow 49
 (D) Initial Shut-In 619
 (E) Second Initial Flow 47
 (F) Second Final Flow 59
 (G) Final Shut-In 487
 (H) Final Hydrostatic 1689

☒ Test 1150
☐ Jars _____
☐ Safety Joint _____
☐ Circ Sub _____
☐ Hourly Standby _____
☒ Mileage 5X2 15.50
☐ Sampler _____
☐ Straddle _____
☐ Shale Packer _____
☐ Extra Packer _____
☐ Extra Recorder _____
☐ Day Standby _____
☐ Accessibility _____
 Sub Total 1165.50

T-On Location 0545
 T-Started 0645
 T-Open 0814
 T-Pulled 1120
 T-Out 1245
 Comments Bart-0627

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

☐ Ruined Shale Packer _____
☐ Ruined Packer _____
☐ Extra Copies _____
 Sub Total 0
 Total 1165.50
 MP/DST Disc't _____

Approved By _____

Our Representative D. R. Ral

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48624

Well Name & No. MWE #1-7 Test No. 3 Date 11-25-12
Company Downing-Nelson Oil Co., Inc. Elevation 2171 KB 2163 GL
Address P.O. Box 1019 Hays, KS 67601
Co. Rep / Geo. AL Downing Rig Discovery 3
Location: Sec. 7 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3606-3682 Zone Tested LKC "H, I, J"
Anchor Length 76' Drill Pipe Run 3580 Mud Wt. 9.0
Top Packer Depth 3601 Drill Collars Run 30 Vis 53
Bottom Packer Depth 3606 Wt. Pipe Run 0 WL 8.0
Total Depth 3682 Chlorides 2000 ppm System LCM 1.5#

Blow Description IF - Strong building blow, BOB in 1 minute 45 seconds,
IF - Return @ 15 seconds, BOB in 3 1/2 minutes,
FF - Strong building blow, BOB in 2 minutes, GTS @ 27 minutes,
FF - Return @ 30 seconds, BOB @ 4 minutes,

Rec	Feet of	%gas	%oil	%water	%mud
850	Gassy Oil	50	50		
124	MCGO	25	50		25

Rec Total 974 BHT 117 Gravity 34 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic	(B) First Initial Flow	(C) First Final Flow	(D) Initial Shut-In	(E) Second Initial Flow	(F) Second Final Flow	(G) Final Shut-In	(H) Final Hydrostatic
<u>1792</u>	<u>55</u>	<u>191</u>	<u>1179</u>	<u>207</u>	<u>316</u>	<u>1165</u>	<u>1733</u>

Test	Mileage	API RW	Chlorides
☒ 1150	<u>5X2</u> 15.50		
☐ Jars			
☐ Safety Joint			
☐ Circ Sub			
☐ Hourly Standby			
☐ Sampler			
☐ Straddle			
☐ Shale Packer			
☐ Extra Packer			
☐ Extra Recorder			
☐ Day Standby			
☐ Accessibility			

T-On Location 0015
T-Started 0100
T-Open 0244
T-Pulled 0520
T-Out 0845
Comments BATT-0054

Initial Open 30
Initial Shut-In 45
Final Flow 30
Final Shut-In 45
Sub Total 1165.50
MP/DST Disc't

Approved By Our Representative D. Rosh
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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48625

Well Name & No. MWE #1-7 Test No. 4 Date 11-25-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2171 KB 2163 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 3
 Location: Sec. 7 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3686-3710 Zone Tested LKC "K"
 Anchor Length 24' Drill Pipe Run 3645 Mud Wt. 8.9
 Top Packer Depth 3681 Drill Collars Run 30 Vis 50
 Bottom Packer Depth 3686 Wt. Pipe Run 0 WL 8.0
 Total Depth 3710 Chlorides 5000 ppm System LCM 1.5#
 Blow Description IF - Very weak building blow, Buried to 1 inch.
IST - No Return.
FF - No Blow. Flushed Tool, No Blow. Pulled Tool.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud w/oil spots</u>	<u>2</u>	<u>0</u>	<u>8</u>	<u>88</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 103 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1816</u>	☒ Test <u>1150</u>	T-On Location <u>1515</u>
(B) First Initial Flow <u>15</u>	☐ Jars _____	T-Started <u>1600</u>
(C) First Final Flow <u>16</u>	☐ Safety Joint _____	T-Open <u>1729</u>
(D) Initial Shut-In <u>35</u>	☐ Circ Sub _____	T-Pulled <u>1850</u>
(E) Second Initial Flow <u>15</u>	☐ Hourly Standby _____	T-Out <u>2030</u>
(F) Second Final Flow _____	☒ Mileage <u>5X2</u> 15.50	Comments <u>Bar 1543</u>
(G) Final Shut-In _____	☐ Sampler _____	☐ Ruined Shale Packer _____
(H) Final Hydrostatic <u>1779</u>	☐ Straddle _____	☐ Ruined Packer _____
Initial Open <u>30</u>	☐ Shale Packer _____	☐ Extra Copies _____
Initial Shut-In <u>30</u>	☐ Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>10-Pulled</u>	☐ Extra Recorder _____	Total <u>1165.50</u>
Final Shut-In _____	☐ Day Standby _____	MP/DST Disc _____
	☐ Accessibility _____	
	Sub Total <u>1165.50</u>	

Approved By _____

Our Representative _____

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **51651**

Well Name & No. MWE #1-7 Test No. 5 Date 11-26-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2171 KB 2163 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. AI Downing Rig Discovery 3
 Location: Sec. 7 Twp. 13S Rge. 18W Co. Ellis State KS

Interval Tested 3768-3810 Zone Tested Arbuckle
 Anchor Length 42' 79' TP Drill Pipe Run 3740 Mud Wt. 8.9
 Top Packer Depth 3763 Drill Collars Run 30 Vis 55
 Bottom Packer Depth 3768 Wt. Pipe Run 0 WL 8.0
 Total Depth 3889 Chlorides 6000 ppm System LCM 1.5#

Blow Description IF- Very weak building blow. Built to 1 inch.
ISI- No Return.
FF- Very weak building blow. Built to 3/4 inch.
FBI- No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1896</u>	☒ Test <u>1150</u>	T-On Location <u>1515</u>
(B) First Initial Flow <u>17</u>	☐ Jars _____	T-Started <u>1600</u>
(C) First Final Flow <u>26</u>	☐ Safety Joint _____	T-Open <u>1744</u>
(D) Initial Shut-In <u>1011</u>	☐ Circ Sub _____	T-Pulled <u>1950</u>
(E) Second Initial Flow <u>29</u>	☐ Hourly Standby _____	T-Out <u>2200</u>
(F) Second Final Flow <u>30</u>	☒ Mileage <u>5X2</u> 15.50	Comments <u>Burr- 1611</u>
(G) Final Shut-In <u>957</u>	☐ Sampler _____	
(H) Final Hydrostatic <u>1853</u>	☒ Straddle <u>600</u>	

Initial Open <u>30</u>	☐ Shale Packer _____	☐ Ruined Shale Packer _____
Initial Shut-In <u>30</u>	☐ Extra Packer _____	☐ Ruined Packer _____
Final Flow <u>30</u>	☐ Extra Recorder _____	☐ Extra Copies _____
Final Shut-In <u>30</u>	☐ Day Standby _____	Sub Total <u>0</u>
	☐ Accessibility _____	Total <u>1765.50</u>
	Sub Total <u>1765.50</u>	MP/DST Disc' _____

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.