



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Georgine Staab #1-19

19-14s-18w Ellis KS

Start Date: 2013.05.26 @ 23:23:00

End Date: 2013.05.27 @ 07:02:30

Job Ticket #: 52199 DST #: 1

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

Printed: 2013.05.31 @ 11:13:33



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

19-14s-18w Ellis KS

PO Box 1019
Hays KS 67601

Georgine Staab #1-19

Job Ticket: 52199

DST#: 1

ATTN: Marc Downing

Test Start: 2013.05.26 @ 23:23:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:04:15

Time Test Ended: 07:02:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 43

Interval: 3538.00 ft (KB) To 3614.00 ft (KB) (TVD)

Reference Elevations: 2105.00 ft (KB)

Total Depth: 3614.00 ft (KB) (TVD)

2097.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 147.69 psig @ 3606.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.05.26

End Date:

2013.05.27

Last Calib.:

2013.05.27

Start Time: 23:23:05

End Time:

07:02:29

Time On Btm:

2013.05.27 @ 02:04:00

Time Off Btm:

2013.05.27 @ 05:07:45

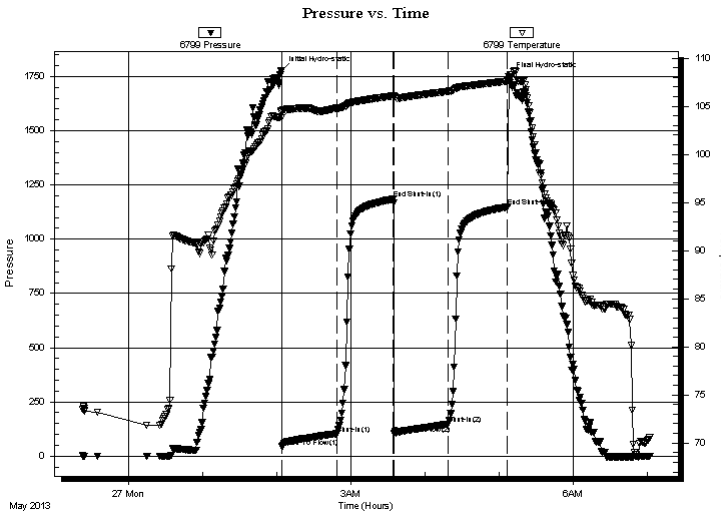
TEST COMMENT: 45 - IF- B.O.B. in 13 Minutes.

45 - IS- Surface return

45 - FF- B.O.B. in 4 Minutes

45 - FS- 5" return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.98	104.52	Initial Hydro-static
1	42.78	103.78	Open To Flow (1)
45	102.53	104.80	Shut-In(1)
91	1184.06	106.09	End Shut-In(1)
91	102.93	105.85	Open To Flow (2)
135	147.69	106.54	Shut-In(2)
183	1148.93	107.61	End Shut-In(2)
184	1748.14	108.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	HOCM, 40%O, 60%M	0.59
124.00	GHOCM, 20%M, 40%O, 40%G	1.74
124.00	GMCO, 5%G, 40%M, 55%O	1.74
0.00	248' of G.I.P.	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

19-14s-18w Ellis KS

PO Box 1019
Hays KS 67601

Georgine Staab #1-19

Job Ticket: 52199

DST#: 1

ATTN: Marc Downing

Test Start: 2013.05.26 @ 23:23:00

Tool Information

Drill Pipe:	Length: 3507.00 ft	Diameter: 3.80 inches	Volume: 49.19 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 49.34 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3538.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	97.00 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			3518.00	
Shut In Tool	5.00			3523.00	
Hydraulic tool	5.00			3528.00	
Packer	5.00			3533.00	21.00 Bottom Of Top Packer
Packer	5.00			3538.00	
Stubb	1.00			3539.00	
Perforations	3.00			3542.00	
Change Over Sub	1.00			3543.00	
Drill Pipe	62.00			3605.00	
Change Over Sub	1.00			3606.00	
Recorder	0.00	6799	Inside	3606.00	
Recorder	0.00	8648	Inside	3606.00	
Perforations	5.00			3611.00	
Bullnose	3.00			3614.00	76.00 Bottom Packers & Anchor

Total Tool Length: 97.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

19-14s-18w Ellis KS

PO Box 1019
Hays KS 67601

Georgine Staab #1-19

Job Ticket: 52199

DST#: 1

ATTN: Marc Downing

Test Start: 2013.05.26 @ 23:23:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	HOCM, 40%O, 60%M	0.587
124.00	GHOCM, 20%M, 40%O, 40%G	1.739
124.00	GMCO, 5%G, 40%M, 55%O	1.739
0.00	248' of G.I.P.	0.000

Total Length: 310.00 ft

Total Volume: 4.065 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

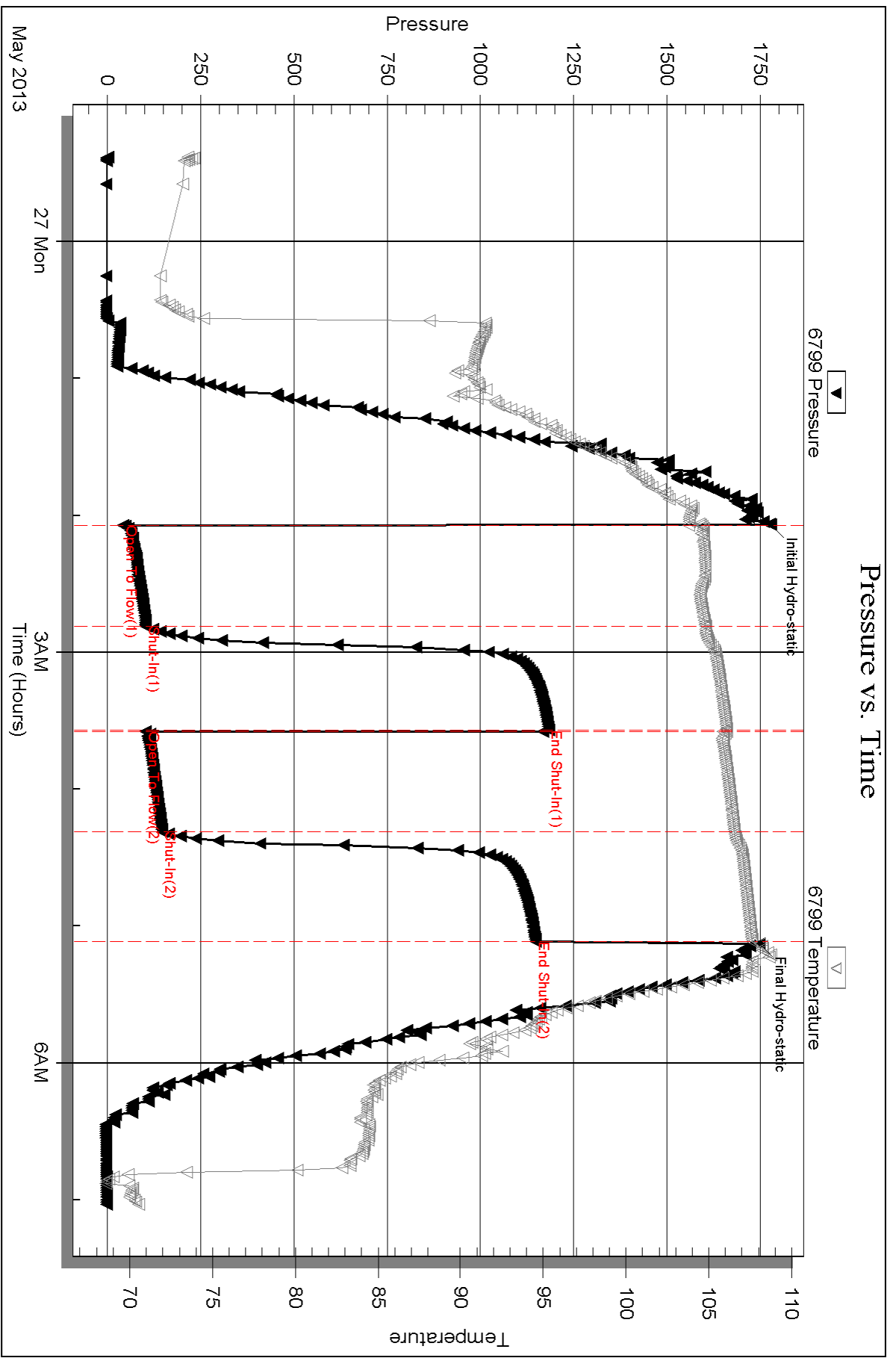
Serial #: 6799

Inside

Downing Nelson Oil Co Inc

Georgine Staab #1-19

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 52199

Printed: 2013.05.31 @ 11:13:36

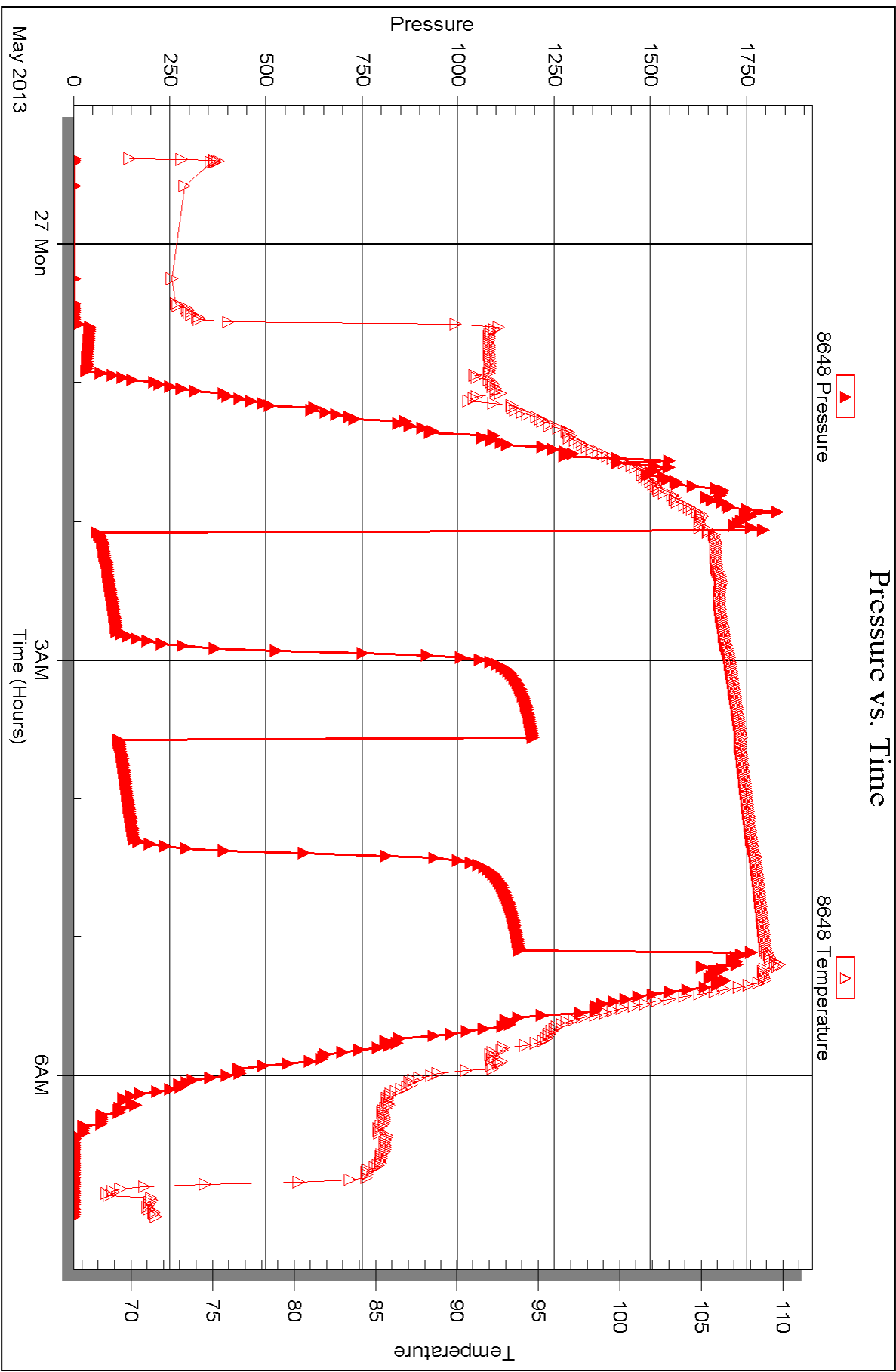
Serial #: 8648

Inside

Downing Nelson Oil Co Inc

Georgine Staab #1-19

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Georgine Staab #1-19

19-14s-18w Ellis KS

Start Date: 2013.05.27 @ 13:34:00

End Date: 2013.05.27 @ 19:51:45

Job Ticket #: 52200 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.05.31 @ 11:12:53



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

19-14s-18w Ellis KS

PO Box 1019
Hays KS 67601

Georgine Staab #1-19

Job Ticket: 52200

DST#: 2

ATTN: Marc Downing

Test Start: 2013.05.27 @ 13:34:00

GENERAL INFORMATION:

Formation: **Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:31:45

Time Test Ended: 19:51:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 43

Interval: 3610.00 ft (KB) To 3633.00 ft (KB) (TVD)

Reference Elevations: 2105.00 ft (KB)

Total Depth: 3633.00 ft (KB) (TVD)

2097.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 15.83 psig @ 3615.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.05.27 End Date: 2013.05.27

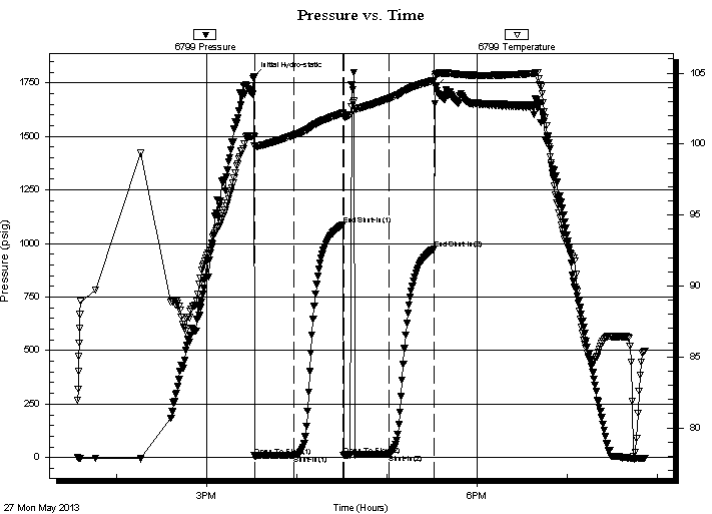
Last Calib.: 2013.05.27

Start Time: 13:34:05 End Time: 19:51:44

Time On Btm: 2013.05.27 @ 15:31:30

Time Off Btm: 2013.05.27 @ 17:32:15

TEST COMMENT: 30 - IF- Surface blow , died in 18 min.
30 - IS- No return
30 - FF- No blow for 5 minutes, flushed tool, surged and died
30 - FS- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.64	100.51	Initial Hydro-static
1	8.06	99.86	Open To Flow (1)
27	11.81	100.63	Shut-In(1)
59	1087.04	102.19	End Shut-In(1)
60	12.30	101.92	Open To Flow (2)
90	15.83	103.21	Shut-In(2)
120	975.86	104.49	End Shut-In(2)
121	1732.57	104.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w / show of oil 100%M	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

19-14s-18w Ellis KS

PO Box 1019
Hays KS 67601

Georgine Staab #1-19

Job Ticket: 52200

DST#: 2

ATTN: Marc Downing

Test Start: 2013.05.27 @ 13:34:00

Tool Information

Drill Pipe:	Length: 3568.00 ft	Diameter: 3.80 inches	Volume: 50.05 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 50.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3610.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 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			3590.00	
Shut In Tool	5.00			3595.00	
Hydraulic tool	5.00			3600.00	
Packer	5.00			3605.00	21.00 Bottom Of Top Packer
Packer	5.00			3610.00	
Stubb	1.00			3611.00	
Perforations	4.00			3615.00	
Recorder	0.00	6799	Inside	3615.00	
Recorder	0.00	8648	Inside	3615.00	
Perforations	15.00			3630.00	
Bullnose	3.00			3633.00	23.00 Bottom Packers & Anchor

Total Tool Length: 44.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

19-14s-18w Ellis KS

PO Box 1019
Hays KS 67601

Georgine Staab #1-19

Job Ticket: 52200

DST#: 2

ATTN: Marc Downing

Test Start: 2013.05.27 @ 13:34:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud w/ show of oil 100%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

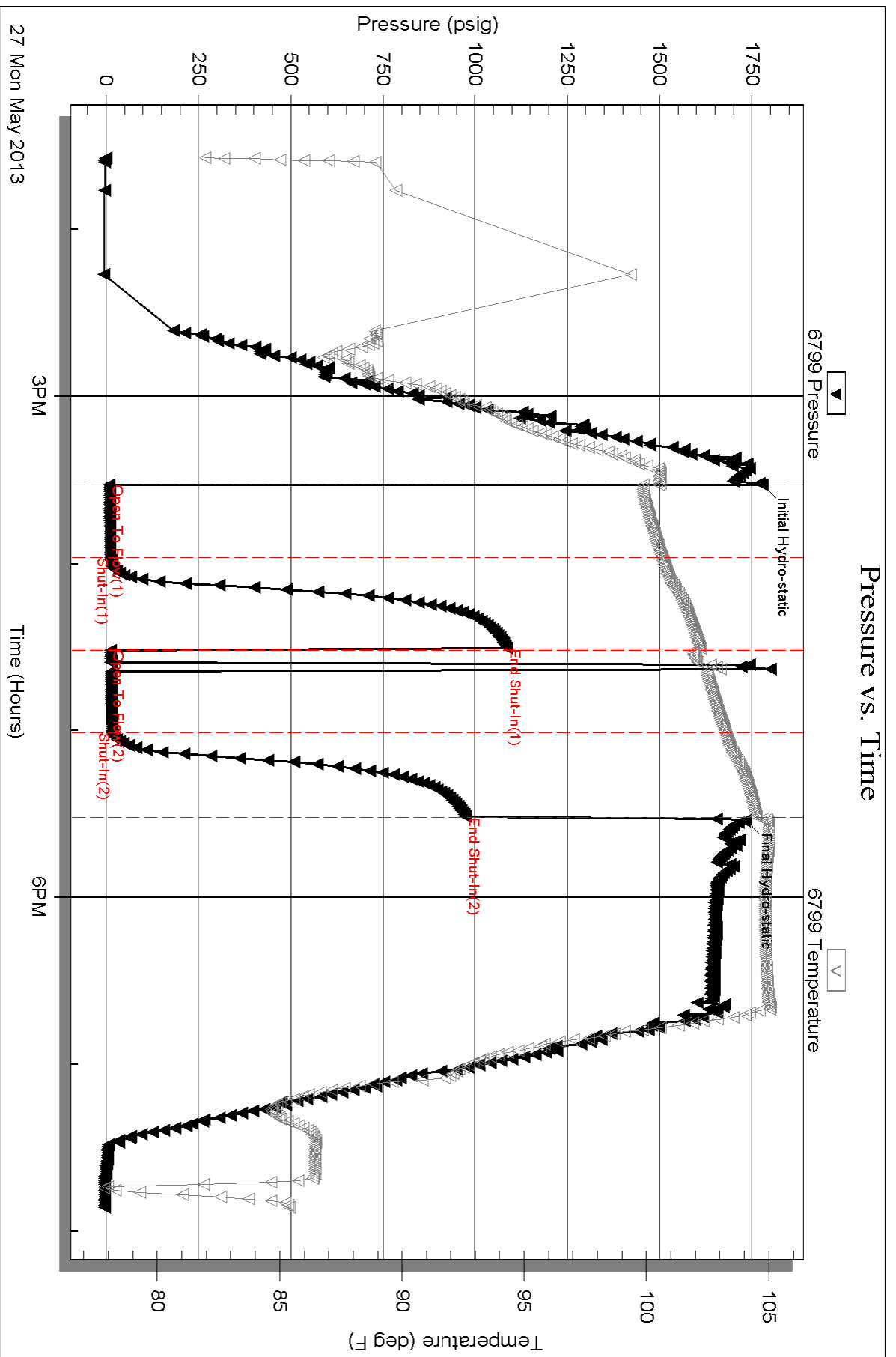
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



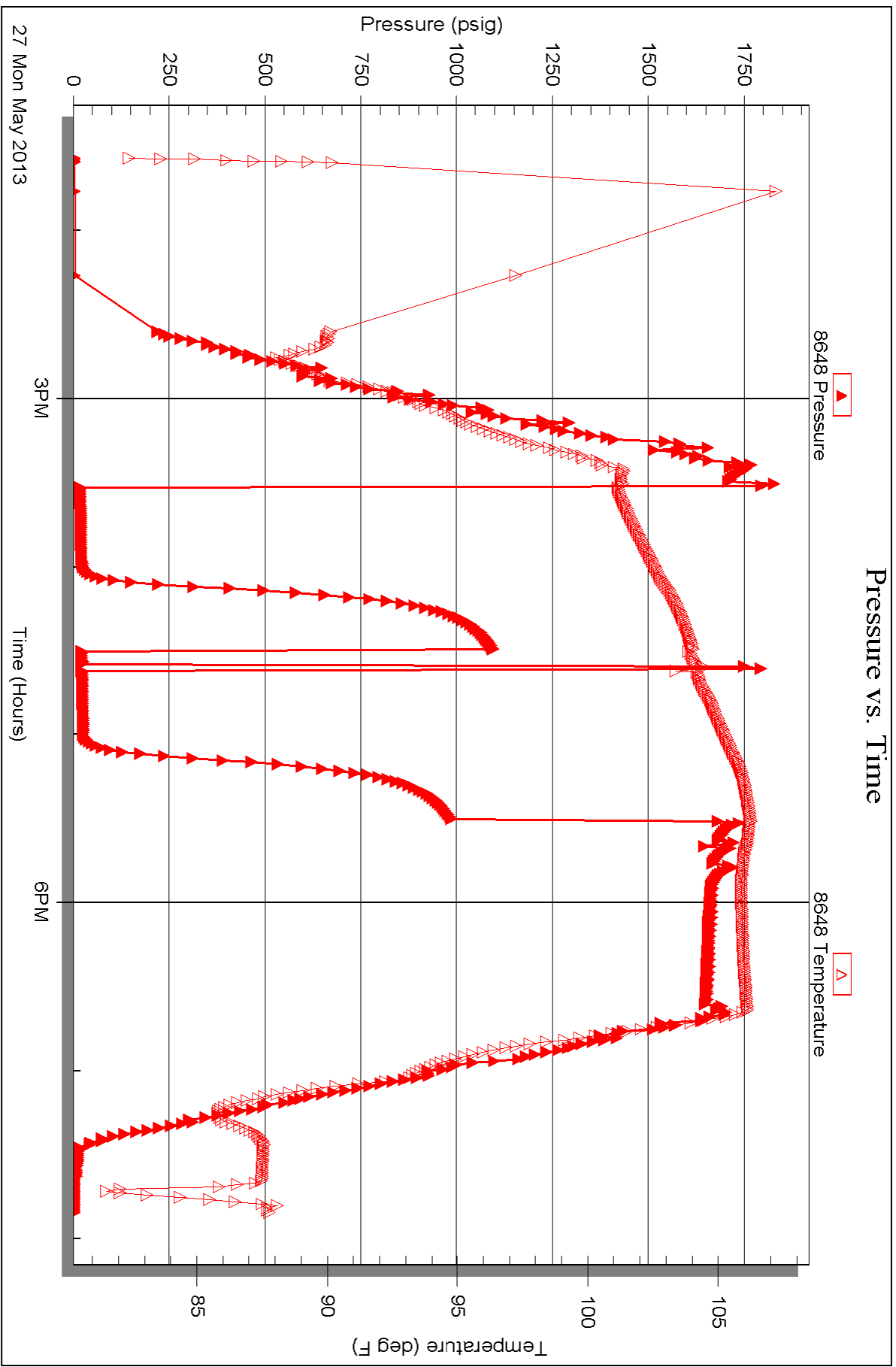
Serial #: 8648

Inside

Downing Nelson Oil Co Inc

Georgine Staab #1-19

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52199

Well Name & No. Georgine Staab #1-19 Test No. 1 Date 5-26-13
 Company Downing - Nelson Oil Co Inc Elevation 2105 KB 2097 GL
 Address Po Box 1019, Hays KS, 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 19 Twp. 14S Rge. 18W Co. Ellis State KS

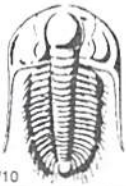
Interval Tested 3538-3614 Zone Tested "H-J"
 Anchor Length 76' Drill Pipe Run 3507' Mud Wt. 9.0
 Top Packer Depth 3533 Drill Collars Run 31' Vis 60
 Bottom Packer Depth 3538 Wt. Pipe Run — WL 8.0
 Total Depth 3614 Chlorides 4,000 ppm System LCM —
 Blow Description #F- B.O.B. in 13 minutes
ISI- Surface return
FF- B.O.B. in 4 minutes
FSI- 5" return

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>HOCM</u>	<u>40</u>	<u>40</u>	<u>60</u>	<u>—</u>
<u>124</u>	<u>GHOCM</u>	<u>40</u>	<u>40</u>	<u>20</u>	<u>—</u>
<u>124</u>	<u>GMCO</u>	<u>5</u>	<u>55</u>	<u>40</u>	<u>—</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>248' of G.I.P.</u>	%gas	%oil	%water	%mud

Rec Total 310' BHT 107° Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1777</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>9:58pm</u>
(B) First Initial Flow <u>42</u>	<input type="checkbox"/> Jars	T-Started <u>11:23pm</u>
(C) First Final Flow <u>102</u>	<input type="checkbox"/> Safety Joint	T-Open <u>2:05am</u>
(D) Initial Shut-In <u>1184</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>5:05am</u>
(E) Second Initial Flow <u>102</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7:03am</u>
(F) Second Final Flow <u>147</u>	<input checked="" type="checkbox"/> Mileage <u>22 RT</u> 34.10	Comments
(G) Final Shut-In <u>1148</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1748</u>	<input type="checkbox"/> Straddle	
Initial Open <u>45</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1184.10</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1184.10</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. 52200

Well Name & No. Georgine Staab #1-19 Test No. 2 Date 5-27-13
 Company Downing-Nelson Oil Co Inc Elevation 2105 KB 2097 GL
 Address Po Box 1019, Hays KS, 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 19 Twp. 14s Rge. 18w Co. Ellis State KS

Interval Tested 3610 - 3633 Zone Tested Sand
 Anchor Length 23' Drill Pipe Run 3568 Mud Wt. 9.0
 Top Packer Depth 3605 Drill Collars Run 31' Vis 60
 Bottom Packer Depth 3610 Wt. Pipe Run - WL 8.0
 Total Depth 3633 Chlorides 4,000 ppm System LCM -

Blow Description IF - Surface blow, died in 18 minutes
ISI - No return
FF - No blow for 5 min. flushed tool, surged & died
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud, show of oil</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 Total 15' BHT 104° Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1777 Test 1150 T-On Location 1:18 pm
 (B) First Initial Flow 8 Jars _____ T-Started 1:34 pm
 (C) First Final Flow 11 Safety Joint _____ T-Open 3:31 pm
 (D) Initial Shut-In 1087 Circ Sub _____ T-Pulled 5:31 pm
 (E) Second Initial Flow 12 Hourly Standby 1.5 hours T-Out 7:51 pm
 (F) Second Final Flow 15 Mileage 22 RT X2 ^{68.20} Comments Rig wouldnt start. Had to fix it.
 (G) Final Shut-In 975 Sampler _____ Done 5-28-13 loaded
 (H) Final Hydrostatic 1732 Straddle _____ 8:30 am
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1218.20
 Total 1218.20
 MP/DST Disc't _____

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.