



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

Donnie #2

27-9s-24w Graham,KS

Start Date: 2012.01.14 @ 11:44:18

End Date: 2012.01.14 @ 17:26:18

Job Ticket #: 46249 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.01.18 @ 16:54:51



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46249

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.01.14 @ 11:44:18

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:23:18

Time Test Ended: 17:26:18

Test Type: Conventional Bottom Hole (Initial)

Tester: Jeff Brown

Unit No: 44

Interval: 3859.00 ft (KB) To 3900.00 ft (KB) (TVD)

Reference Elevations: 2495.00 ft (KB)

Total Depth: 3900.00 ft (KB) (TVD)

2487.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8321

Inside

Press @ Run Depth: 279.85 psig @ 3864.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.01.14

End Date:

2012.01.14

Last Calib.:

2012.01.14

Start Time: 11:44:19

End Time:

17:26:18

Time On Btm:

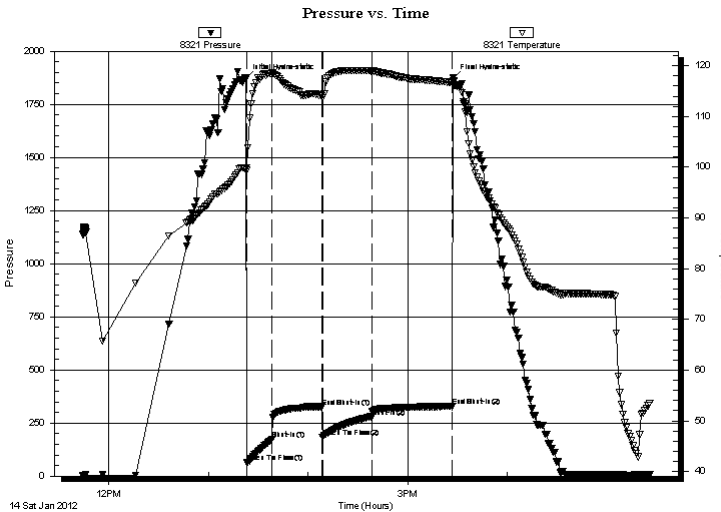
2012.01.14 @ 13:22:48

Time Off Btm:

2012.01.14 @ 15:27:18

TEST COMMENT: IFP-Strong blow BOB in 3 1/2 min
ISI-Weak surface blow back
FFP-Good blow BOB in 7 min
FSI-Dead no blow back

PRESSURE SUMMARY



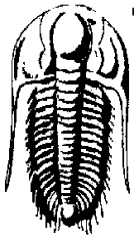
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.62	99.79	Initial Hydro-static
1	66.02	99.43	Open To Flow (1)
16	174.53	118.55	Shut-In(1)
46	326.25	114.08	End Shut-In(1)
46	182.95	113.72	Open To Flow (2)
76	279.85	118.98	Shut-In(2)
124	327.46	116.74	End Shut-In(2)
125	1872.57	116.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
504.00	MW 10%M90%W	6.80
63.00	WM 30%W70%M	0.88
0.00	63-GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46249

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.01.14 @ 11:44:18

GENERAL INFORMATION:

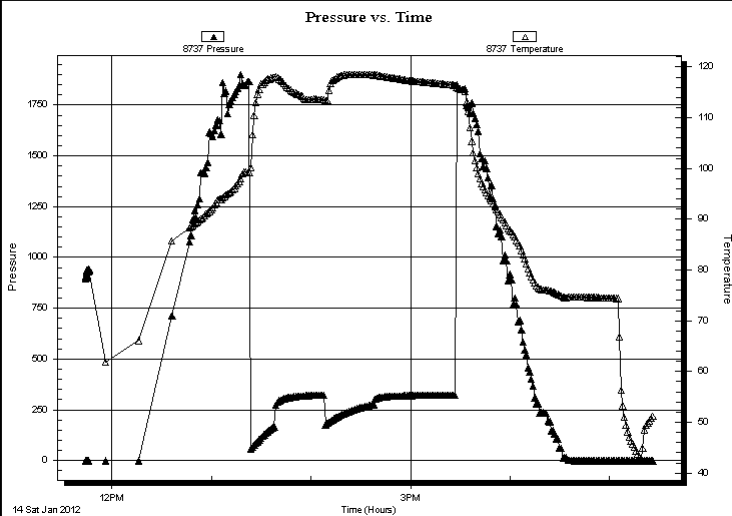
Formation: **LKC C-D**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 13:23:18 Tester: Jeff Brown
 Time Test Ended: 17:26:18 Unit No: 44
 Interval: **3859.00 ft (KB) To 3900.00 ft (KB) (TVD)** Reference Elevations: 2495.00 ft (KB)
 Total Depth: 3900.00 ft (KB) (TVD) 2487.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8737

Outside

Press @ Run Depth: psig @ 3864.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.01.14 End Date: 2012.01.14 Last Calib.: 2012.01.14
 Start Time: 11:44:19 End Time: 17:26:18 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP-Strong blow BOB in 3 1/2 min
 ISI-Weak surface blow back
 FFP-Good blow BOB in 7 min
 FSI-Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
504.00	MW 10%M90%W	6.80
63.00	WM 30%W70%M	0.88
0.00	63-GIP	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

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46249

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.01.14 @ 11:44:18

Tool Information

Drill Pipe:	Length: 3841.00 ft	Diameter: 3.80 inches	Volume: 53.88 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: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 54.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3859.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 ft			
Tool Length:	61.00 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	4.00			3854.00	20.00 Bottom Of Top Packer
Packer	5.00			3859.00	
Stubb	1.00			3860.00	
Perforations	4.00			3864.00	
Recorder	0.00	8321	Inside	3864.00	
Recorder	0.00	8737	Outside	3864.00	
Perforations	33.00			3897.00	
Bullnose	3.00			3900.00	41.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co Inc

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46249

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.01.14 @ 11:44:18

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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
504.00	MW 10%M90%W	6.797
63.00	WM 30%W70%M	0.884
0.00	63-GIP	0.000

Total Length: 567.00 ft Total Volume: 7.681 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

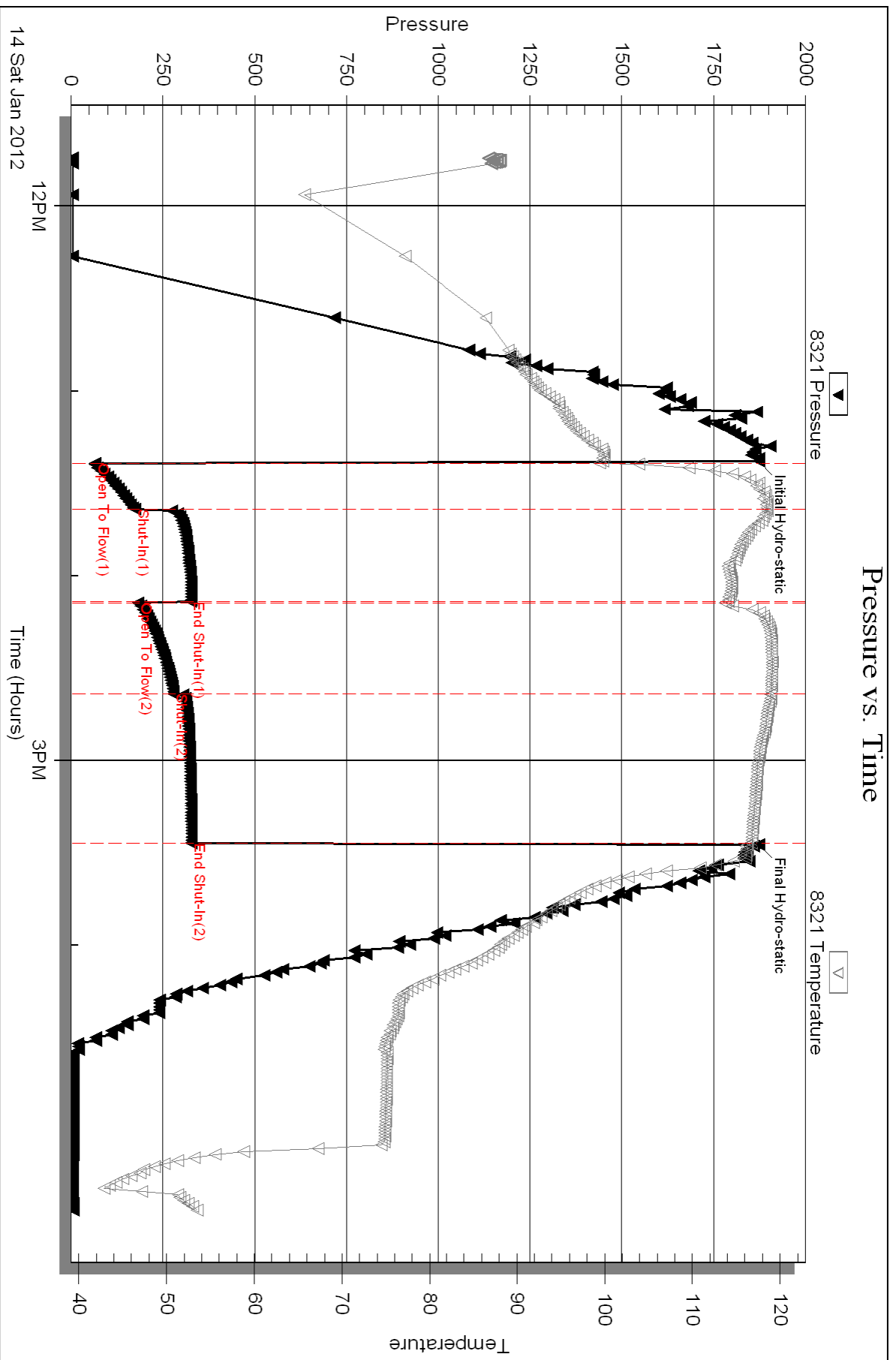
Serial #: 8321

Inside

Dow nung-Nelson Oil Co Inc

Donnie #2

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 46249

Printed: 2012.01.18 @ 16:54:53

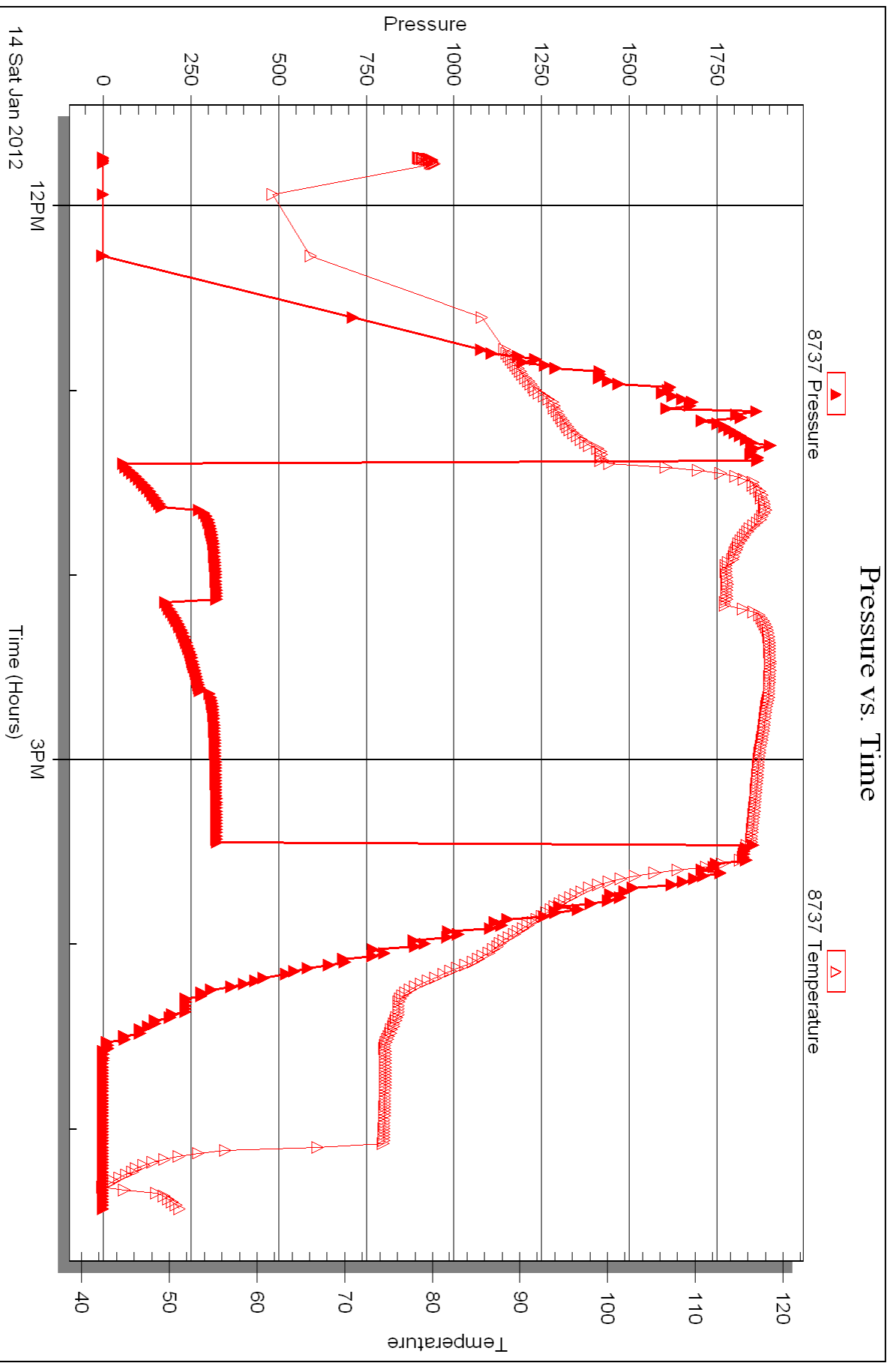
Serial #: 8737

Outside

Dow nung-Nelson Oil Co Inc

Donnie #2

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 46249

Printed: 2012.01.18 @ 16:54:53



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

Donnie #2

27-9s-24w Graham,KS

Start Date: 2012.01.15 @ 06:06:18

End Date: 2012.01.15 @ 12:46:48

Job Ticket #: 46250 DST #: 2

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

Printed: 2012.01.18 @ 16:54:16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46250

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.01.15 @ 06:06:18

GENERAL INFORMATION:

Formation: **LKC I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:52:18

Time Test Ended: 12:46:48

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 44

Interval: 3983.00 ft (KB) To 4025.00 ft (KB) (TVD)

Reference Elevations: 2495.00 ft (KB)

Total Depth: 4025.00 ft (KB) (TVD)

2487.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8321

Inside

Press @ Run Depth: 57.98 psig @ 3989.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.01.15

End Date:

2012.01.15

Last Calib.:

2012.01.15

Start Time:

06:06:19

End Time:

12:45:48

Time On Btm:

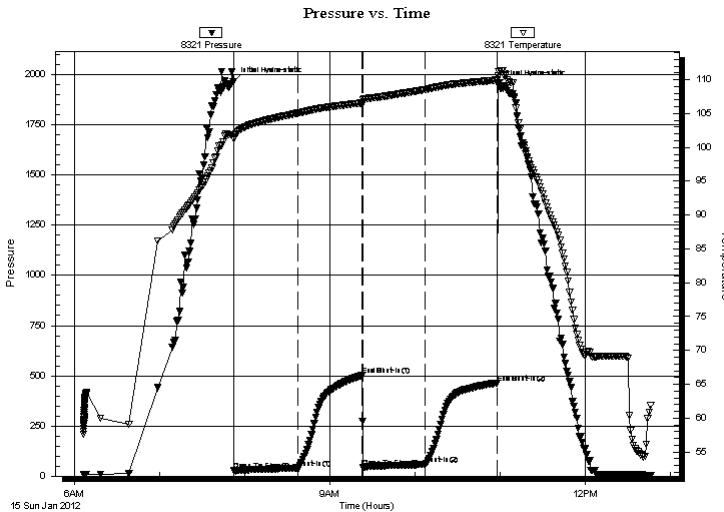
2012.01.15 @ 07:51:48

Time Off Btm:

2012.01.15 @ 10:58:18

TEST COMMENT: IFP-Good blow BOB in 14 min
ISI-Dead no blow back
FFP-Good blow BOB in 20 min
FSI-Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1966.43	101.89	Initial Hydro-static
1	27.43	101.23	Open To Flow (1)
46	41.33	105.07	Shut-In(1)
91	501.43	106.58	End Shut-In(1)
92	42.85	106.99	Open To Flow (2)
135	57.98	108.55	Shut-In(2)
186	462.92	109.96	End Shut-In(2)
187	1948.95	110.57	Final Hydro-static

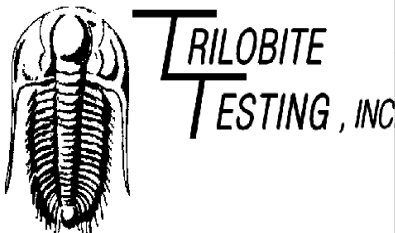
Recovery

Length (ft)	Description	Volume (bbl)
48.00	HOCM 40%O60%M	0.40
63.00	HGOCM 20%G40%O40%M	0.88
0.00	519-GIP	0.00

Gas Rates

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

* Recovery from multiple tests



DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc
PO Box 1019
Hays KS 67601
ATTN: Ron Nelson

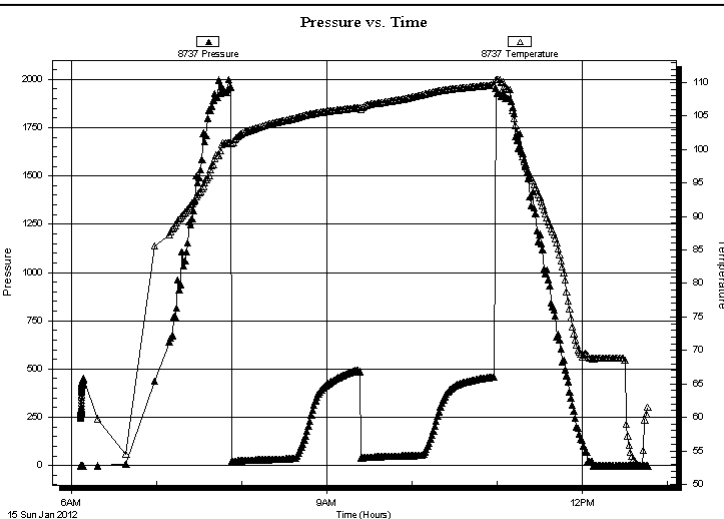
27-9s-24w Graham,KS
Donnie #2
Job Ticket: 46250 **DST#: 2**
Test Start: 2012.01.15 @ 06:06:18

GENERAL INFORMATION:

Formation: **LKC I-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:52:18
Time Test Ended: 12:46:48
Interval: 3983.00 ft (KB) To 4025.00 ft (KB) (TVD)
Total Depth: 4025.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2495.00 ft (KB)
2487.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8737 **Outside**
Press @RunDepth: psig @ 3989.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.01.15 End Date: 2012.01.15 Last Calib.: 2012.01.15
Start Time: 06:06:19 End Time: 12:45:48 Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Good blow BOB in 14 min
ISI-Dead no blow back
FFP-Good blow BOB in 20 min
FSI-Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
48.00	HOCM 40% O60% M	0.40
63.00	HGOCM 20% G40% O40% M	0.88
0.00	519-GIP	0.00

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co Inc

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46250

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.01.15 @ 06:06:18

Tool Information

Drill Pipe:	Length: 3965.00 ft	Diameter: 3.80 inches	Volume: 55.62 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:	20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	69000.00 lb
			<u>Total Volume: 55.77 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3983.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	42.00 ft				
Tool Length:	62.00 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			3964.00	
Shut In Tool	5.00			3969.00	
Hydraulic tool	5.00			3974.00	
Packer	4.00			3978.00	20.00 Bottom Of Top Packer
Packer	5.00			3983.00	
Stubb	1.00			3984.00	
Perforations	5.00			3989.00	
Recorder	0.00	8321	Inside	3989.00	
Recorder	0.00	8737	Outside	3989.00	
Perforations	33.00			4022.00	
Bullnose	3.00			4025.00	42.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co Inc

27-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Donnie #2

Job Ticket: 46250

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.01.15 @ 06:06:18

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: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
48.00	HOCM40%O60%M	0.400
63.00	HGOCM20%G40%O40%M	0.884
0.00	519-GIP	0.000

Total Length: 111.00 ft

Total Volume: 1.284 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8321

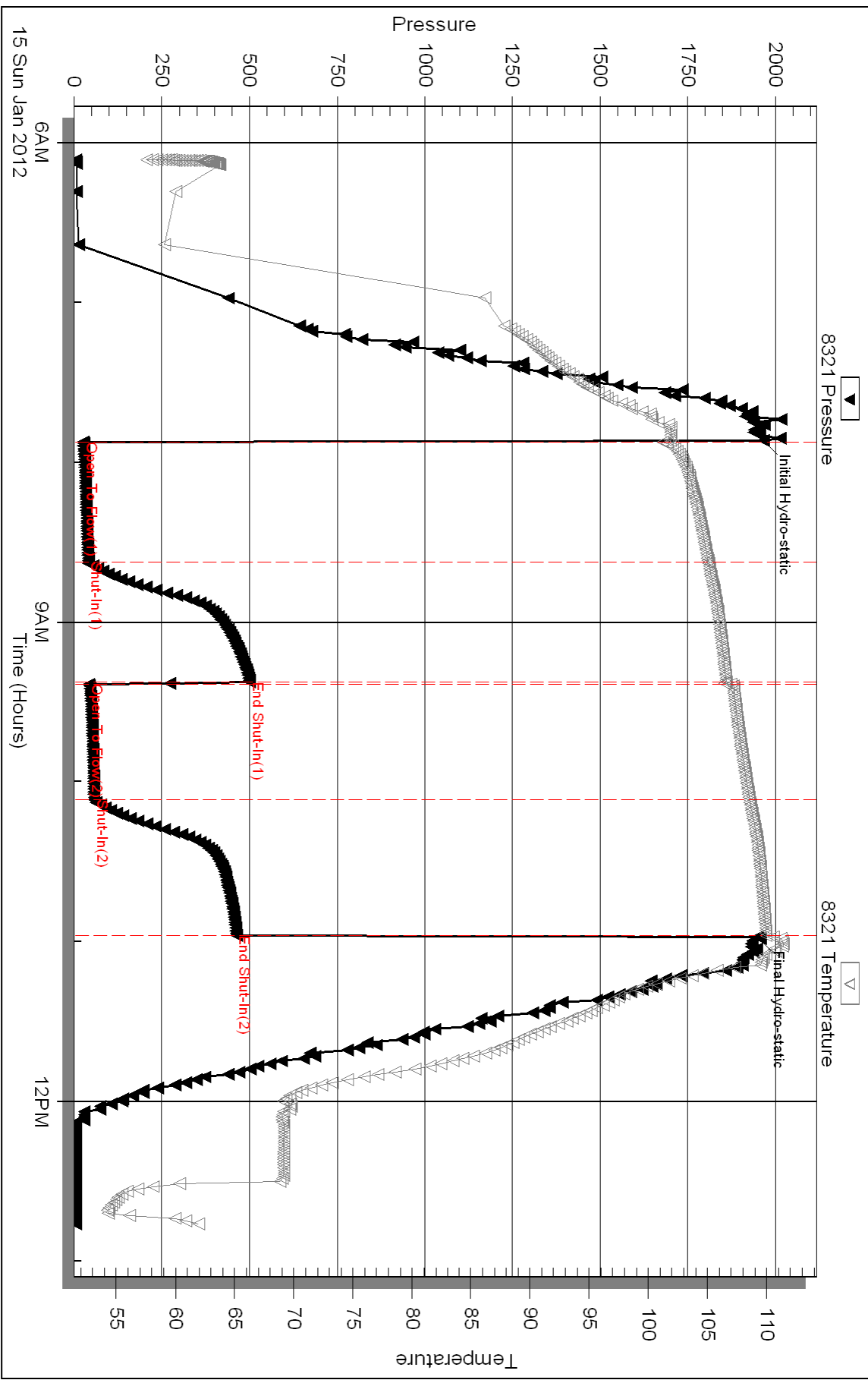
Inside

Dow nung-Nelson Oil Co Inc

Donnie #2

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 46250

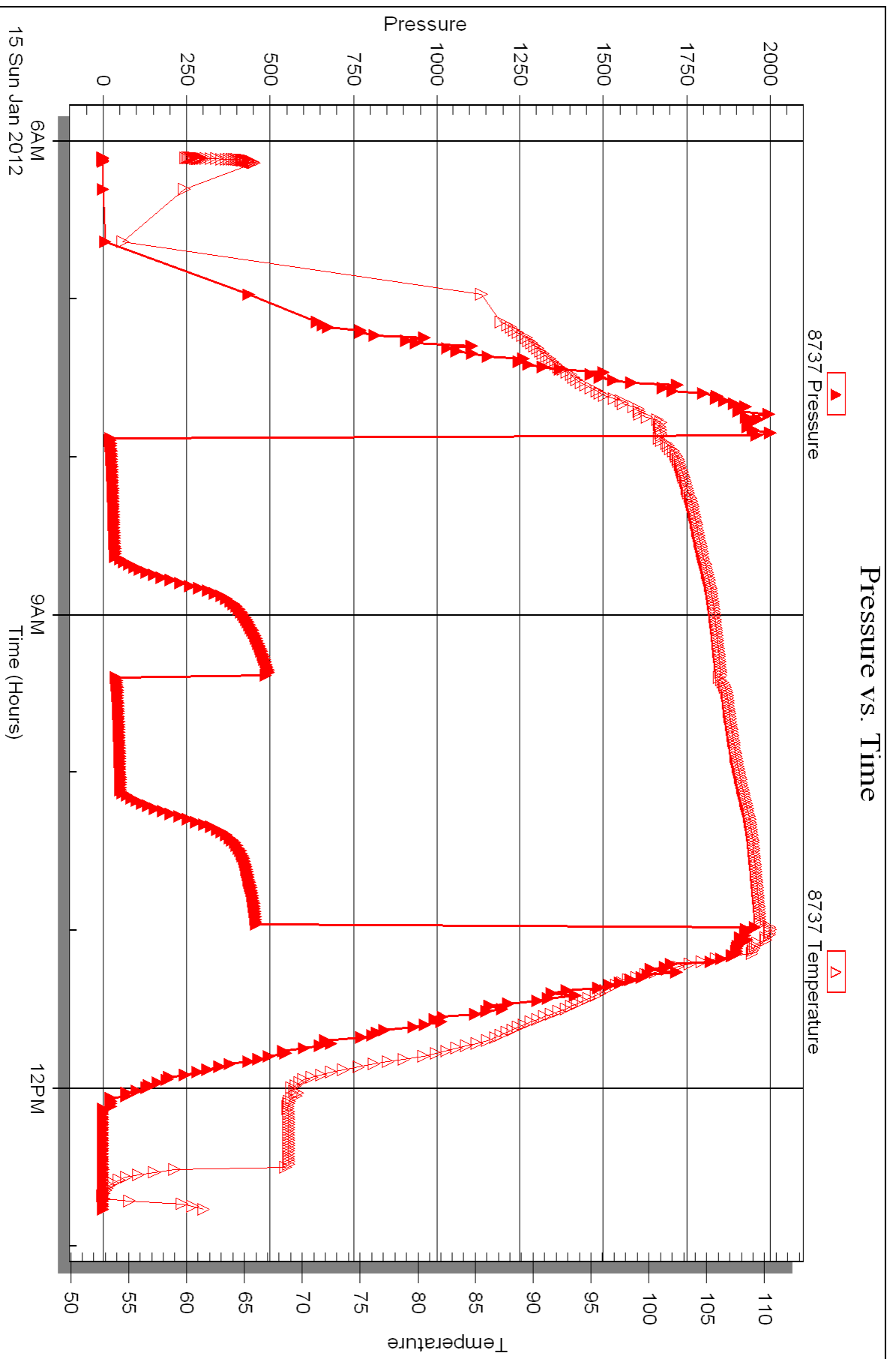
Printed: 2012.01.18 @ 16:54:18

Serial #: 8737

Outside Dow nging-Nelson Oil Co Inc

Donnie #2

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
JAN 17 2012
BY: _____

Test Ticket

NO. 46249

Well Name & No. Donnie #2 Test No. 1 Date 1-14-12
 Company Downing-Nelson Oil Co INC Elevation 2495 KB 2487 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 27 Twp. 9S Rge. 24W Co. Graham State KS

Interval Tested 3859-3900 Zone Tested LKC-C-D
 Anchor Length 41 Drill Pipe Run 3841 Mud Wt. 8.6
 Top Packer Depth 3854 Drill Collars Run 30 Vis 2.5
 Bottom Packer Depth 3859 Wt. Pipe Run 0 WL 7.0
 Total Depth 3900 Chlorides 800 ppm System LCM 2 1/2

Blow Description FP-Strong Blow Bob IN 3 1/2 min
BI-Weak surface Blow Back
FP-GOOD Blow Bob IN 7 min
BI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>504</u>	<u>Feet of MW</u>			<u>90</u>	<u>10</u>
<u>63</u>	<u>Feet of WM</u>			<u>30</u>	<u>70</u>
	<u>Feet of 203-GIP</u>				
	<u>Feet of</u>				
	<u>Feet of</u>				

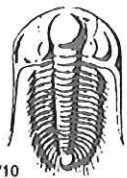
Rec Total 567 BHT 117 Gravity _____ API RW 137 @ 47.6 °F Chlorides 90,000 ppm

(A) Initial Hydrostatic 1873 Test 1125 T-On Location 10:28
 (B) First Initial Flow 6.6 Jars _____ T-Started 11:44
 (C) First Final Flow 175 Safety Joint _____ T-Open 13:23
 (D) Initial Shut-In 326 Circ Sub _____ T-Pulled 15:23
 (E) Second Initial Flow 183 Hourly Standby _____ T-Out 17:26
 (F) Second Final Flow 280 Mileage 112 RT 156.80 Comments _____
 (G) Final Shut-In 307 Sampler _____
 (H) Final Hydrostatic 1873 Straddle _____ Ruined Shale Packer _____

Initial Open 15 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 30 Extra Packer _____ Extra Copies _____
 Final Flow 30 Extra Recorder _____ Sub Total 8
 Final Shut-In 45 Day Standby _____ Total 1281.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1281.80

Approved By _____ Our Representative Jeff Brown

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

RECEIVED
JAN 18 2012
BY: _____

Test Ticket

NO. 46250

Well Name & No. Donnie #2 Test No. 2 Date 1-15-12
 Company Downing - Nelson Oil Co INC Elevation 2495 KB 2487 GL
 Address PO Box 1019 Hays KS 677401
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 27 Twp. 9S Rge. 24W Co. Graham State KS

Interval Tested 3983-4025 Zone Tested 4KC - I - J
 Anchor Length 42 Drill Pipe Run 3945 Mud Wt. 9.0
 Top Packer Depth 3978 Drill Collars Run 30 Vis 6.0
 Bottom Packer Depth 3983 Wt. Pipe Run 0 WL 8.0
 Total Depth 4025 Chlorides 1500 ppm System LCM 1 1/2

Blow Description FP - Good Blow Bob IN 14 min
IS - Dead NO Blow Back
FP - Good Blow Bob IN 20 min
IS - Dead NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>48</u>	<u>HOcm</u>		<u>40%</u>		<u>60%</u>
<u>43</u>	<u>1160cm</u>	<u>20%</u>	<u>40%</u>		<u>40%</u>
<u> </u>	<u>519.60IP</u>				
<u> </u>	<u> </u>				
<u> </u>	<u> </u>				

Rec Total 111 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1964
 (B) First Initial Flow 27
 (C) First Final Flow 41
 (D) Initial Shut-In 501
 (E) Second Initial Flow 43
 (F) Second Final Flow 58
 (G) Final Shut-In 463
 (H) Final Hydrostatic 1949

- Test 1225
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage 112 RT 156.80
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1381.80

T-On Location 5:27
 T-Started 6:00
 T-Open 7:52
 T-Pulled 10:52
 T-Out 12:46

Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1381.80
 MP/DST Disc't _____

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

Approved By _____ Our Representative Jeff Brown

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.