



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

9-9s-24w Graham,KS

Michaelis-Hamburg B #1-9

Start Date: 2014.04.19 @ 20:50:00

End Date: 2014.04.20 @ 04:34:45

Job Ticket #: 54030 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.24 @ 11:47:49

Downing-Nelson Oil Co Inc

Michaelis-Hamburg B #1-9

9-9s-24w Graham,KS

DST # 1

LKC "C-D"

2014.04.19



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

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Michaelis-Hamburg B #1-9

PO Box 1019
Hays KS 67601

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ATTN: Ron Nelson

Job Ticket: 54030

DST#: 1

Test Start: 2014.04.19 @ 20:50:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:45:30

Time Test Ended: 04:34:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 3877.00 ft (KB) To 3920.00 ft (KB) (TVD)

Reference Elevations: 2488.00 ft (KB)

Total Depth: 3920.00 ft (KB) (TVD)

2480.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8648

Inside

Press@RunDepth: 63.71 psig @ 3917.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.19

End Date:

2014.04.20

Last Calib.:

2014.04.20

Start Time: 20:50:05

End Time:

04:34:44

Time On Btm:

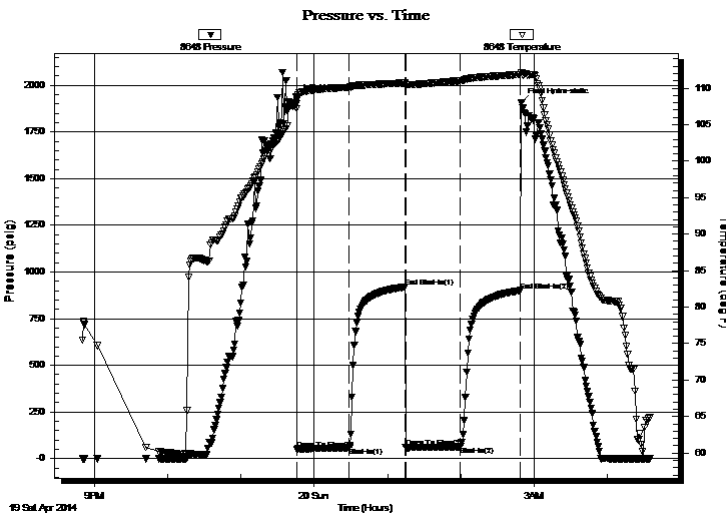
2014.04.19 @ 23:45:15

Time Off Btm:

2014.04.20 @ 02:49:45

TEST COMMENT: 45 - IF- 2" blow
45 - IS- No return
FF- 1/2" blow
FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1930.75	107.93	Initial Hydro-static
1	50.15	107.22	Open To Flow (1)
44	58.53	110.10	Shut-In(1)
89	919.76	110.71	End Shut-In(1)
90	59.17	110.42	Open To Flow (2)
135	63.71	111.02	Shut-In(2)
184	900.55	111.87	End Shut-In(2)
185	1907.71	112.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	Mud, 100%M	0.50

Gas Rates

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



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TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

Michaelis-Hamburg B #1-9

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

ATTN: Ron Nelson

Job Ticket: 54030

DST#: 1

Test Start: 2014.04.19 @ 20:50:00

Tool Information

Drill Pipe:	Length: 3848.00 ft	Diameter: 3.80 inches	Volume: 53.98 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: 68000.00 lb
			<u>Total Volume: 54.13 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3877.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: slid 15' to bottom

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3857.00	
Shut In Tool	5.00			3862.00	
Hydraulic tool	5.00			3867.00	
Packer	5.00			3872.00	21.00 Bottom Of Top Packer
Packer	5.00			3877.00	
Stubb	1.00			3878.00	
Perforations	2.00			3880.00	
Change Over Sub	1.00			3881.00	
Drill Pipe	31.00			3912.00	
Change Over Sub	1.00			3913.00	
Perforations	4.00			3917.00	
Recorder	0.00	8648	Inside	3917.00	
Recorder	0.00	8940	Outside	3917.00	
Bullnose	3.00			3920.00	43.00 Bottom Packers & Anchor

Total Tool Length: 64.00



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FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

Michaelis-Hamburg B #1-9

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

Job Ticket: 54030

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.04.19 @ 20:50:00

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: 75.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
55.00	Mud, 100%M	0.498

Total Length: 55.00 ft Total Volume: 0.498 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

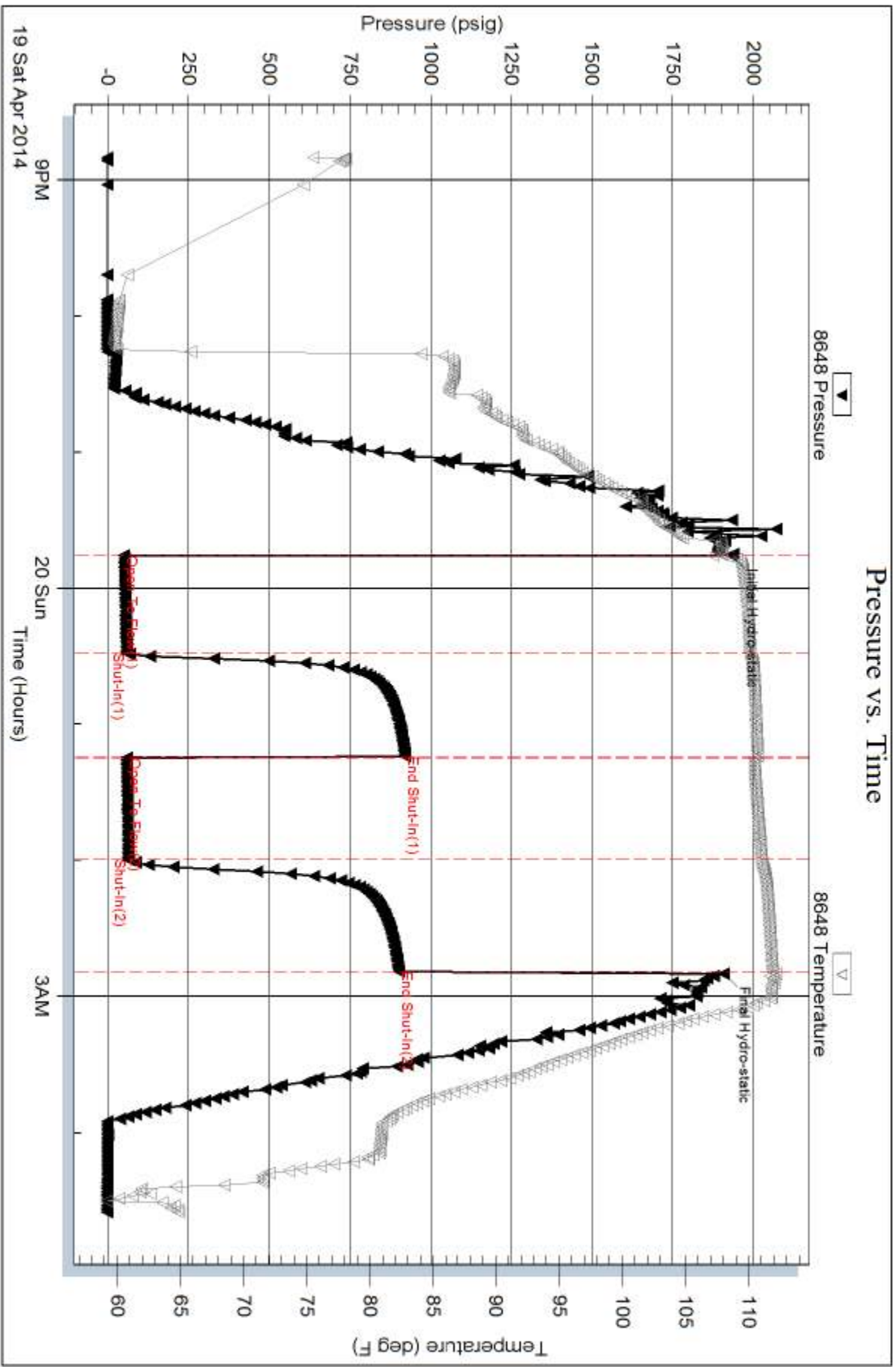
Serial #: 8648

Inside

Dow nng-Nelson Oil Co Inc

9-9s-24w Graham,KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54030

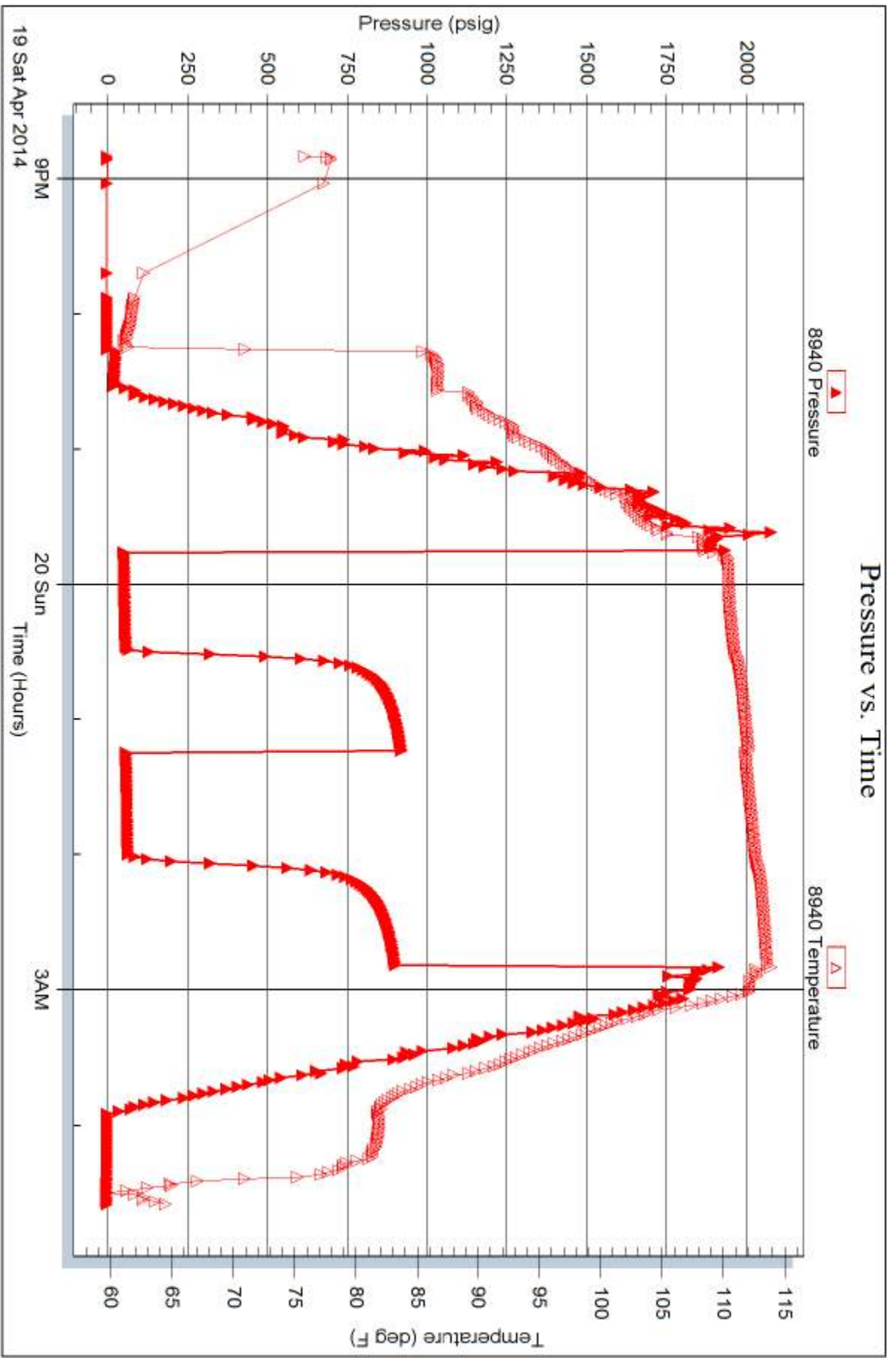
Printed: 2014.04.24 @ 11:47:50

Serial #: 8940

Outside Dow nrg-Nelson Oil Co Inc

9-9s-24w Graham,KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54030

Printed: 2014.04.24 @ 11:47:50



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54030**

Well Name & No. Michaelis-Homburg "B" 1-9 Test No. 1 Date 4-19-14
 Company Dawning Nelson oil Co Inc Elevation 2488 KB 2480 GL
 Address Po Box 1019, Hays KS, 67601
 Co. Rep / Geo. Pan Nelson Rig Discovery #1
 Location: Sec. 9 Twp. 9S Rge. 24W Co. Graham State KS

Interval Tested 3877-3920 Zone Tested LKC "C-D"
 Anchor Length 43' Drill Pipe Run 3848' Mud Wt. 8.6
 Top Packer Depth 3872 Drill Collars Run 30' Vis 75
 Bottom Packer Depth 3877 Wt. Pipe Run — WL 7.6
 Total Depth 3920 Chlorides 2,000 ppm System LCM —

Blow Description IF-2" blow
TSI- No return
FF-1/2" blow
FSI No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>55</u>	<u>Mud</u>			<u>100</u>	

Rec Total 55' BHT 1110 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1930 Test 1150 T-On Location 2003
 (B) First Initial Flow 50 Jars T-Started 2050
 (C) First Final Flow 28 Safety Joint T-Open 2346
 (D) Initial Shut-In 919 Circ Sub T-Pulled 0245
 (E) Second Initial Flow 59 Hourly Standby T-Out 0435
 (F) Second Final Flow 63 Mileage 124 RTXJ 384.40
 (G) Final Shut-In 900 Sampler
 (H) Final Hydrostatic 1907 Straddle

Initial Open 45 Shale Packer
 Initial Shut-In 45 Extra Packer
 Final Flow 45 Extra Recorder
 Final Shut-In 45 Day Standby
 Accessibility
 Sub Total 1534.40

Comments Loaded tools 4-20-14 @ 7:00pm
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1534.40
 MP/DST Disc't

Approved By Our Representative Cody Bloodorn

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