



KANSAS CORPORATION COMMISSION 1095444
OIL & GAS CONSERVATION DIVISION

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 30717
Name: Downing-Nelson Oil Co Inc
Address 1: PO BOX 1019
Address 2: _____
City: HAYS State: KS Zip: 67601 + _____
Contact Person: Ron Nelson
Phone: (785) 621-2610
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Marc Downing
Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SLOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

<u>09/14/2012</u>	<u>09/21/2012</u>	<u>09/22/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-195-22810-00-00

Spot Description: _____

NE SE SW NE Sec. 12 Twp. 12 S. R. 23 East West

2060 Feet from North / South Line of Section

1410 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

County: Trego

Lease Name: D & D Well #: 1-12

Field Name: _____

Producing Formation: LKC

Elevation: Ground: 2399 Kelly Bushing: 2407

Total Depth: 4157 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 220 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: 1778 Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 19000 ppm Fluid volume: 320 bbls

Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: Deanna Garrison Date: 12/04/2012



1095444

Operator Name: Downing-Nelson Oil Co Inc Lease Name: D & D Well #: 1-12
 Sec. 12 Twp. 12 S. R. 23 East West County: Trego

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Dual Induction Micro Compensated Density/Neutron	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Attached Top Attached Datum Attached
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CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface Pipe	12.25	8.625	23	219.86	Common	150	2% Gel & 3% CC
Production Casing	7.875	5.5	14	4156.06	Common	135	10% Salt & 5% Gilsontite

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing	-			
___ Plug Back TD				
___ Plug Off Zone	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	3638' - 3640'	250 gallons 15% Mud Acid	3638' - 3640'

TUBING RECORD: Size: <u>2.375</u> Set At: <u>4095.67</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>10/11/2012</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. <u>15</u>	Gas Mcf <u>0</u>	Water Bbls. <u>35</u>

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	D & D 1-12
Doc ID	1095444

Tops

Top Anhydrite	1816'	+591
Base Anhydrite	1859'	+548
Topeka	3399'	-992
Heebner	3616'	-1209
Toronto	3636'	-1229
LKC	3652'	-1245
BKC	3900'	-1493
Marmaton	3987'	-1580
Arbuckle	4106'	-1699

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 5360

Date	9-14-12	Sec.	12	Twp.	12	Range	23	County	Trego	State	KS	On Location	Finish	7:30 PM	
Lease	D+D	Well No.	1-12		Location Ogallah + I70, W to 290th, 1/4 N										
Contractor	Discovery #3					Owner	w/Intro								
Type Job	Surface					To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.									
Hole Size	12 1/4"		T.D.	220'		Charge To	Downing - Nelson								
Csg.	8 5/8"		Depth	219'		Street									
Tbg. Size			Depth			City	State								
Tool			Depth			The above was done to satisfaction and supervision of owner agent or contractor.									
Cement Left in Csg.	15'		Shoe Joint	15'		Cement Amount Ordered	150 sx Common 3% CC								
Meas Line			Displace	13 BLS											
EQUIPMENT															
Pumptrk	5	No.	Cementer	Brett		2" Gel									
			Helper			Common	150								
Bulktrk	10	No.	Driver	Doug		Poz. Mix									
			Driver			Gel.	3								
Bulktrk	p.u.	No.	Driver	Rick		Calcium	5								
			Driver			Hulls									
JOB SERVICES & REMARKS															
Remarks:	Cement did Circulate.					Salt									
Rat Hole						Flowseal									
Mouse Hole						Kol-Seal									
Centralizers						Mud CLR 48									
Baskets						CFL-117 or CD110 CAF 38									
D/V or Port Collar						Sand									
						Handling	150								
						Mileage									
FLOAT EQUIPMENT															
						Guide Shoe									
						Centralizer									
						Baskets									
						AFU Inserts									
						Float Shoe									
						Latch Down									
						Pumptrk Charge	Surface								
						Mileage	32								
						Tax									
						Discount									
						Total Charge									
X Signature <i>Eden Goulter</i>															

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 6548

Date	9-22-12	Sec.	12	Twp.	12	Range	23	County	Trego	State	KS	On Location	Finish
													7:30 AM

Location Gallegos Hwy 40 SW to 29000 1/2 N Winto

Lease <u>DVD</u>	Well No. <u>1-12</u>	Owner To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor <u>Discovery #3</u>		
Type Job <u>Production String</u>		
Hole Size <u>7 7/8</u>	T.D. <u>4157</u>	Charge To <u>Downing/Nelson</u>
Csg. <u>5 1/2</u>	Depth <u>4156</u>	Street
Tbg. Size	Depth	City State
Tool <u>Port Collar</u>	Depth <u>1778</u>	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg. <u>20.94</u>	Shoe Joint <u>20.94</u>	Cement Amount Ordered <u>180 com 10% salt 5% carbonite</u>
Meas Line	Displace <u>101 BC</u>	<u>500 gal mud flush</u>

EQUIPMENT

Pumptrk <u>15</u>	No.	Cement Helper <u>Chris</u>	Common <u>180</u>
			Poz. Mix
Bulktrk	No.	Driver <u>Mike</u>	Gel.
Bulktrk <u>8</u>	No.	Driver <u>Cody</u>	Calcium

JOB SERVICES & REMARKS

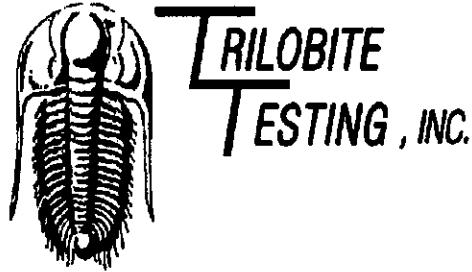
Remarks:	Hulls
Rat Hole <u>30</u>	Salt <u>180</u>
Mouse Hole <u>15</u>	Flowseal
Centralizers	Kol-Seal <u>900ft</u>
Baskets	Mud CLR 48 <u>500 gal</u>
D/V on <u>Port Collar</u> <u>1778</u>	CFL-117 or CD110 CAF 38
<u>5 1/2 sec @ 4156 - Insure 4135 Est.</u>	Sand
<u>Circulation Pump 500 gal mud clear</u>	Handling <u>196</u>
<u>with 100 spacer - Cement Rate increase</u>	Mileage

FLOAT EQUIPMENT

<u>Cement 5 1/2 with 135 sec - Clear lines</u>	Guide Shoe <u>5 1/2</u>
<u>Displace Plug - Plug landed @ 1500ft</u>	Centralizer <u>7</u>
<u>Release Pressure DV</u>	Baskets <u>1</u>
	AFU Inserts <u>Port collar</u>
	Float Shoe <u>1</u>
	Latch Down <u>1</u>
	<u>Rotator</u>

Pumptrk Charge <u>prod long string</u>	Tax
Mileage <u>32</u>	Discount

Signature <u>Dolan D. Walker</u>	Total Charge
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DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

D&D #1-12

12-12s-23w Trego,KS

Start Date: 2012.09.18 @ 08:10:41

End Date: 2012.09.18 @ 15:23:35

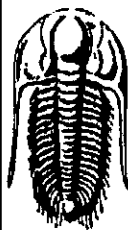
Job Ticket #: 48680 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.25 @ 11:59:17



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-12-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48680

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.09.18 @ 08:10:41

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:27:36

Time Test Ended: 15:23:35

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 42

Interval: **3678.00 ft (KB) To 3716.00 ft (KB) (TVD)**

Reference Elevations: 2407.00 ft (KB)

Total Depth: 3716.00 ft (KB) (TVD)

2399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369

Inside

Press@RunDepth: 109.05 psig @ 3684.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.18

End Date:

2012.09.18

Last Calib.: 2012.09.18

Start Time: 08:10:41

End Time:

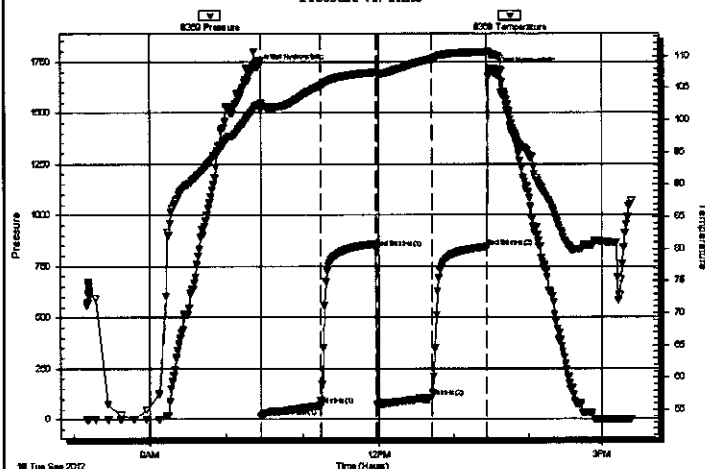
15:23:35

Time On Btm: 2012.09.18 @ 10:24:36

Time Off Btm: 2012.09.18 @ 13:30:35

TEST COMMENT: 45-IFP-w k to a fr bl 1/2" to 7 1/2" bl
45-ISIP-no bl
45-FFP-w k to a fr bl 1" to 3 1/2" bl
45-FSIP-no bl

Pressure vs. Time



PRESSURE SUMMARY

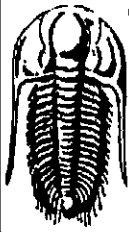
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1722.05	102.32	Initial Hydro-static
3	14.79	101.75	Open To Flow (1)
49	69.99	105.32	Shut-In(1)
93	839.63	107.38	End Shut-In(1)
94	74.05	107.19	Open To Flow (2)
138	109.05	109.49	Shut-In(2)
183	844.87	110.49	End Shut-In(2)
186	1704.34	110.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water	1.41
70.00	SOCMW 1%O49%M50%W	0.98
5.00	CO	0.07
0.00	105'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

12-12s-23w Trego, KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48680

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.09.18 @ 08:10:41

Tool Information

Drill Pipe:	Length: 3639.00 ft	Diameter: 3.80 inches	Volume: 51.05 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 70000.00 lb
			<u>Total Volume: 51.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3678.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	59.00 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			3658.00	
Shut In Tool	5.00			3663.00	
Hydraulic tool	5.00			3668.00	
Packer	5.00			3673.00	21.00 Bottom Of Top Packer
Packer	5.00			3678.00	
Stubb	1.00			3679.00	
Perforations	5.00			3684.00	
Recorder	0.00	8369	Inside	3684.00	
Recorder	0.00	8700	Outside	3684.00	
Perforations	29.00			3713.00	
Bullnose	3.00			3716.00	38.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48680

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.09.18 @ 08:10:41

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

93000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.52 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
120.00	Water	1.410
70.00	SOCMV 1%O49%M50%W	0.982
5.00	CO	0.070
0.00	105'GIP	0.000

Total Length: 195.00ft Total Volume: 2.462 bbf

Num Fluid Samples: 0

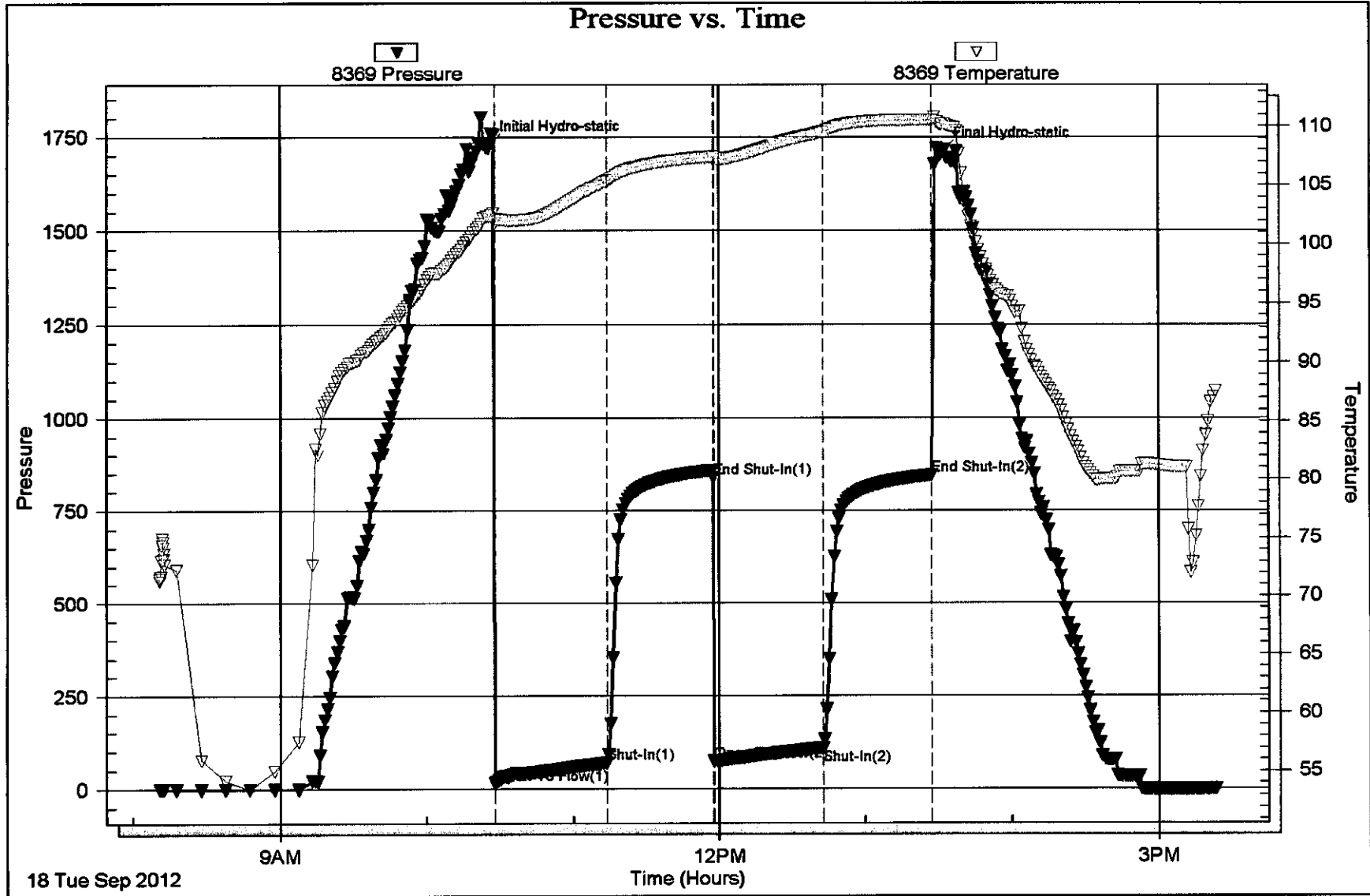
Num Gas Bombs: 0

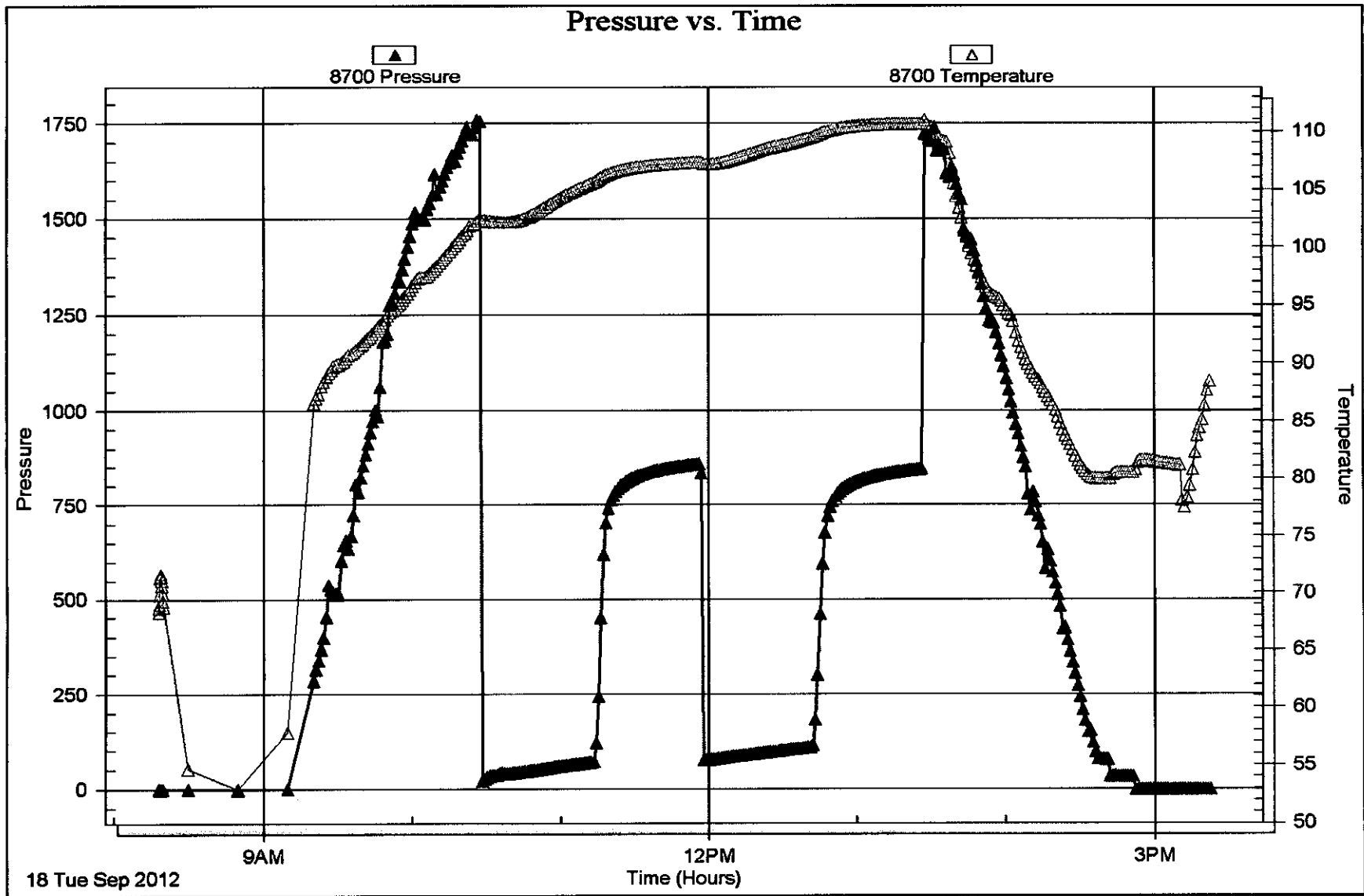
Serial #:

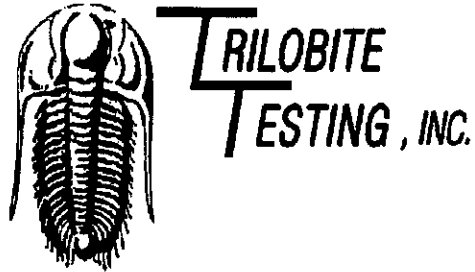
Laboratory Name:

Laboratory Location:

Recovery Comments: RW .07@83F







DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

D&D #1-12

12-12s-23w Trego,KS

Start Date: 2012.09.18 @ 21:45:57

End Date: 2012.09.19 @ 04:18:21

Job Ticket #: 48681 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.25 @ 11:58:38



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48681

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.09.18 @ 21:45:57

GENERAL INFORMATION:

Formation: **LKC E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:03:22

Time Test Ended: 04:18:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3714.00 ft (KB) To 3730.00 ft (KB) (TVD)**

Reference Elevations: 2407.00 ft (KB)

Total Depth: 3730.00 ft (KB) (TVD)

2399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **8369**

Inside

Press@RunDepth: 26.86 psig @ 3715.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.18

End Date:

2012.09.19

Last Calib.:

2012.09.19

Start Time: 21:45:57

End Time:

04:18:21

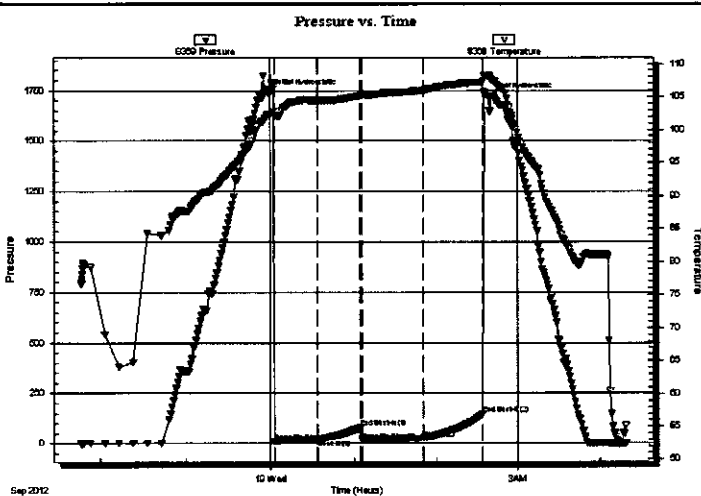
Time On Btm:

2012.09.18 @ 23:59:52

Time Off Btm:

2012.09.19 @ 02:38:21

TEST COMMENT: 30-IFP-w k bl 1/4"
30-ISIP-no bl
45-FFP-w k bl thru-out 1" to 2 1/2" bl
45-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1736.68	102.22	Initial Hydro-static
4	10.36	102.21	Open To Flow (1)
34	19.99	104.39	Shut-In(1)
65	79.72	105.13	End Shut-In(1)
66	17.89	105.27	Open To Flow (2)
111	26.86	105.92	Shut-In(2)
155	148.76	107.23	End Shut-In(2)
159	1718.02	108.21	Final Hydro-static

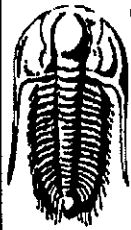
Recovery

Length (ft)	Description	Volume (bbl)
35.00	MGO 10%G40%M50%O	0.22
0.00	85'GIP	0.00

* 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

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48681

DST#: 2

ATTN: Ron Nelson

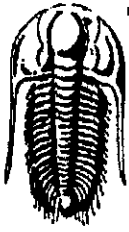
Test Start: 2012.09.18 @ 21:45:57

Tool Information

Drill Pipe:	Length: 3676.00 ft	Diameter: 3.80 inches	Volume: 51.56 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 65000.00 lb
			<u>Total Volume: 51.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3714.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	37.00 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			3694.00	
Shut In Tool	5.00			3699.00	
Hydraulic tool	5.00			3704.00	
Packer	5.00			3709.00	21.00 Bottom Of Top Packer
Packer	5.00			3714.00	
Stubb	1.00			3715.00	
Recorder	0.00	8369	Inside	3715.00	
Recorder	0.00	8700	Outside	3715.00	
Perforations	12.00			3727.00	
Bullnose	3.00			3730.00	16.00 Bottom Packers & Anchor
Total Tool Length:	37.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48681

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.09.18 @ 21:45:57

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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.53 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
35.00	MGO 10%G40%M50%O	0.218
0.00	85'GIP	0.000

Total Length: 35.00 ft

Total Volume: 0.218 bbl

Num Fluid Samples: 0

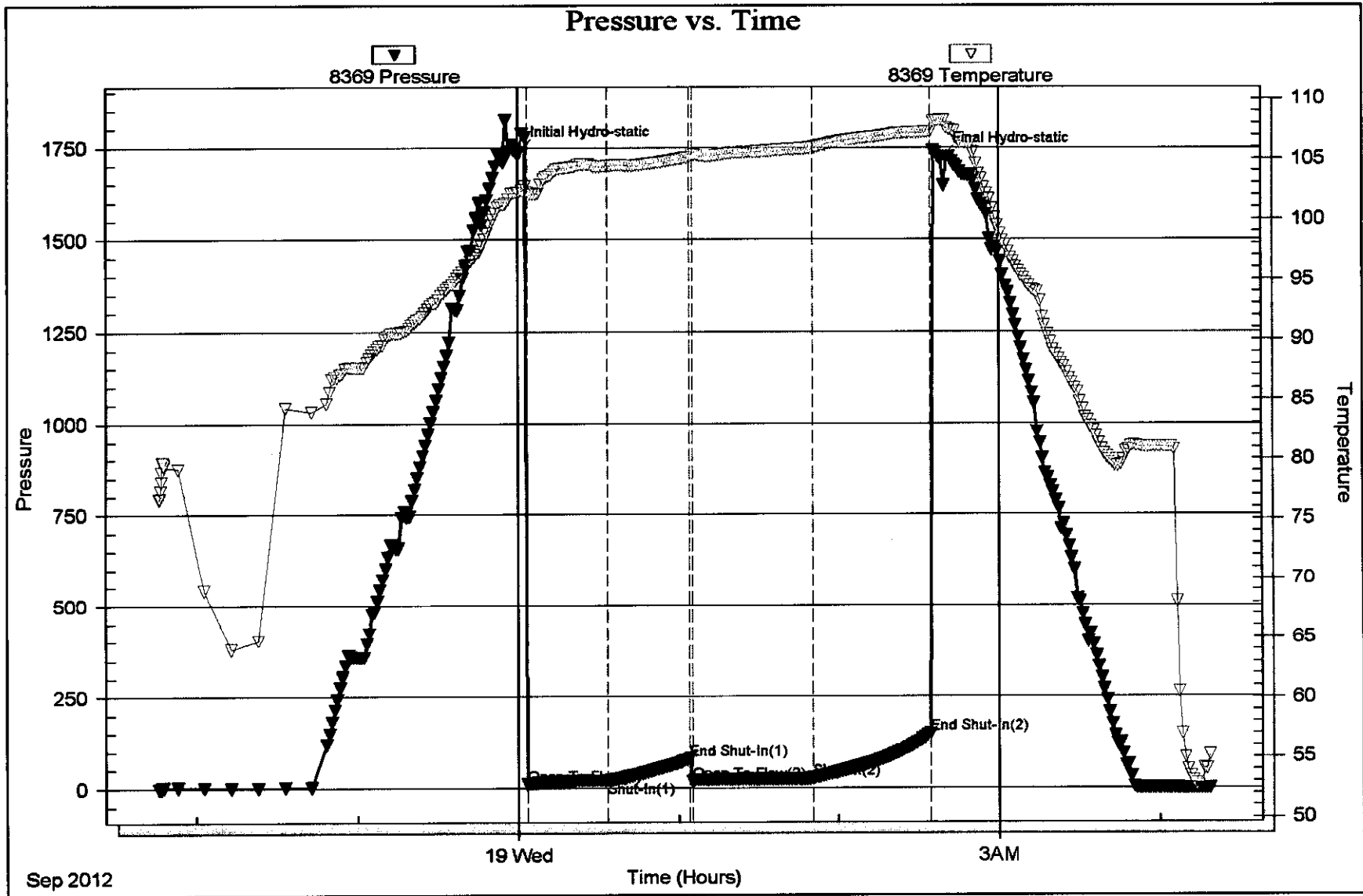
Num Gas Bombs: 0

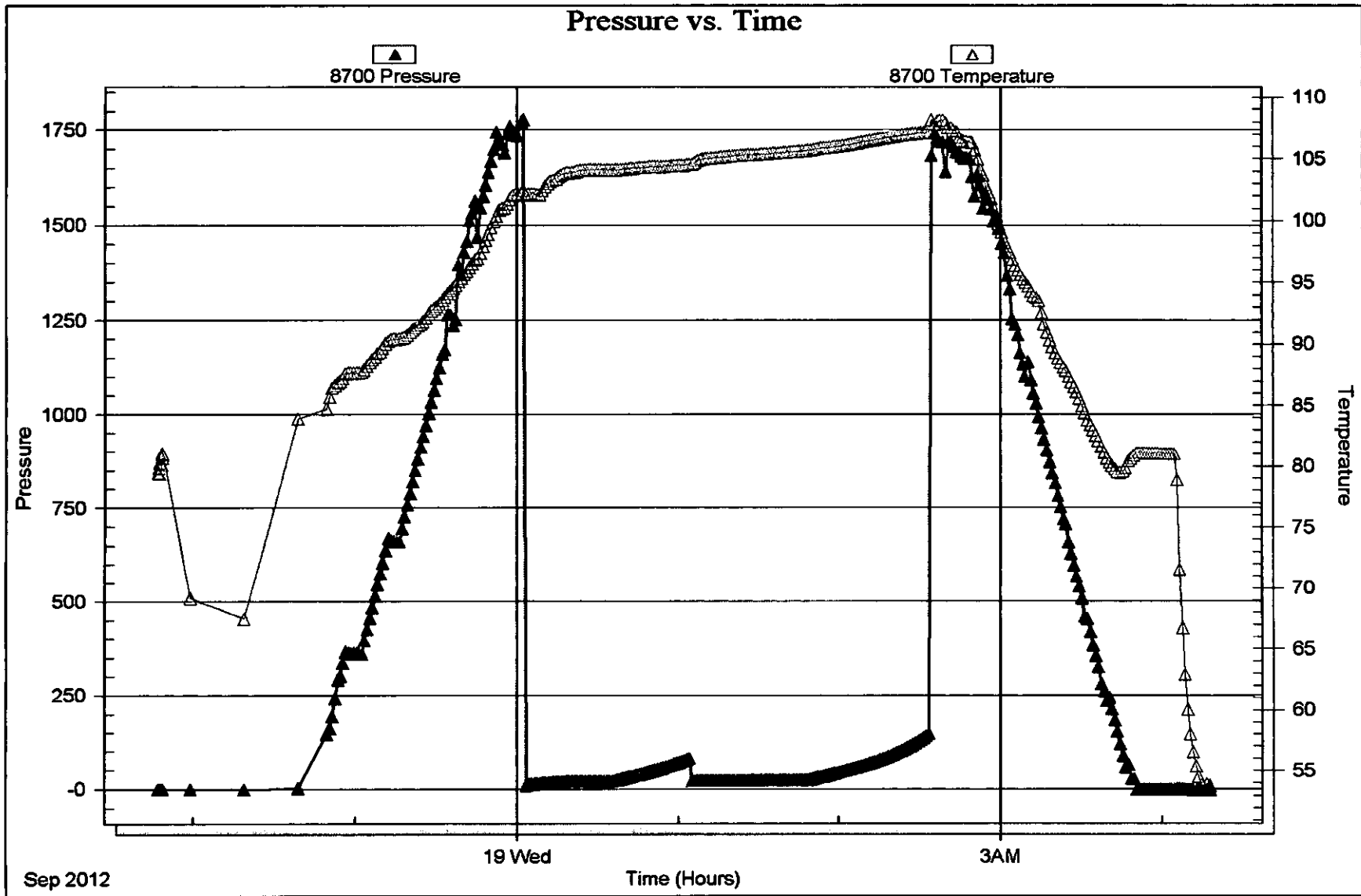
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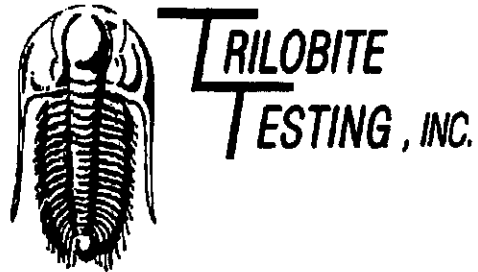
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

D&D #1-12

12-12s-23w Trego,KS

Start Date: 2012.09.19 @ 17:10:12

End Date: 2012.09.19 @ 22:50:36

Job Ticket #: 48682 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.25 @ 11:57:52



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48682

DST#: 3

ATTN: Ron Nelson

Test Start: 2012.09.19 @ 17:10:12

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:09:07

Time Test Ended: 22:50:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3780.00 ft (KB) To 3850.00 ft (KB) (TVD)**

Reference Elevations: 2407.00 ft (KB)

Total Depth: 3850.00 ft (KB) (TVD)

2399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **8369**

Inside

Press@RunDepth: 21.81 psig @ 3784.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.19

End Date:

2012.09.19

Last Calib.:

2012.09.19

Start Time: 17:10:12

End Time:

22:50:36

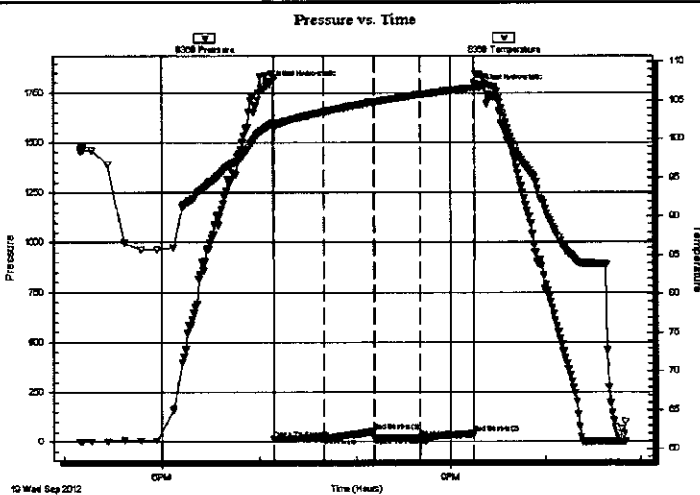
Time On Btm:

2012.09.19 @ 19:06:37

Time Off Btm:

2012.09.19 @ 21:17:37

TEST COMMENT: 30-IFP-very Weak surface bl ,died in 20 min
30-ISIP-no bl
30-FFP-no bl
30-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1793.67	101.77	Initial Hydro-static
3	14.60	101.65	Open To Flow (1)
33	18.75	103.50	Shut-In(1)
65	54.88	104.77	End Shut-In(1)
65	20.89	104.78	Open To Flow (2)
94	21.81	105.72	Shut-In(2)
128	42.71	106.62	End Shut-In(2)
131	1773.66	108.35	Final Hydro-static

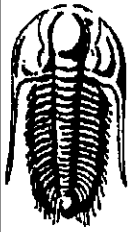
Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 5% O95%M	0.02

* 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

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48682

DST#: 3

ATTN: Ron Nelson

Test Start: 2012.09.19 @ 17:10:12

Tool Information

Drill Pipe:	Length: 3742.00 ft	Diameter: 3.80 inches	Volume: 52.49 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 65000.00 lb
			<u>Total Volume: 52.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3780.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	91.00 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			3760.00	
Shut In Tool	5.00			3765.00	
Hydraulic tool	5.00			3770.00	
Packer	5.00			3775.00	21.00 Bottom Of Top Packer
Packer	5.00			3780.00	
Stubb	1.00			3781.00	
Perforations	3.00			3784.00	
Recorder	0.00	8369	Inside	3784.00	
Recorder	0.00	8700	Outside	3784.00	
Blank Spacing	63.00			3847.00	
Bullnose	3.00			3850.00	70.00 Bottom Packers & Anchor

Total Tool Length: 91.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48682

DST#: 3

ATTN: Ron Nelson

Test Start: 2012.09.19 @ 17:10:12

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: 53.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.91 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	SOCM 5%O95%M	0.025

Total Length: 5.00 ft

Total Volume: 0.025 bbf

Num Fluid Samples: 0

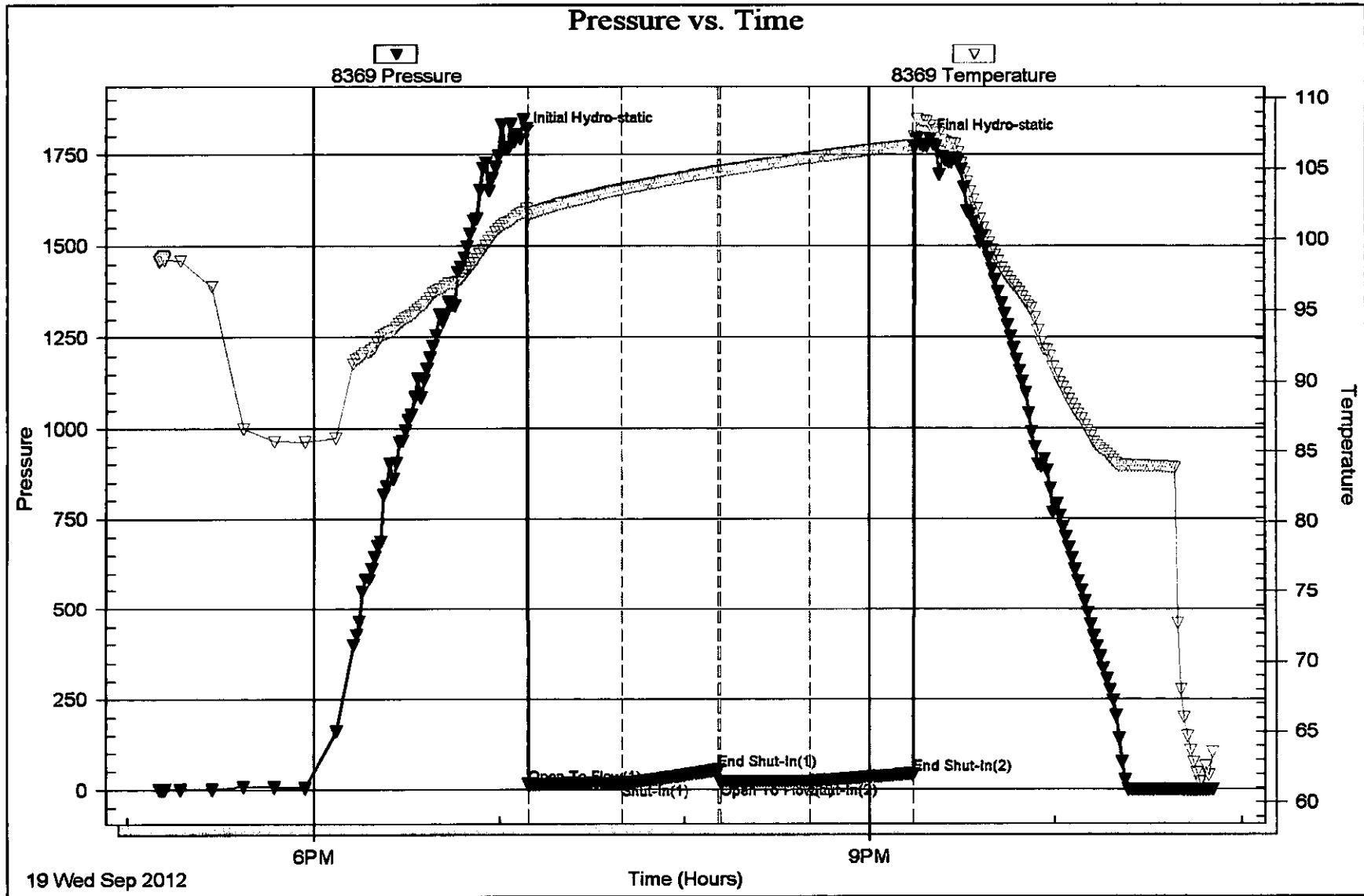
Num Gas Bombs: 0

Serial #:

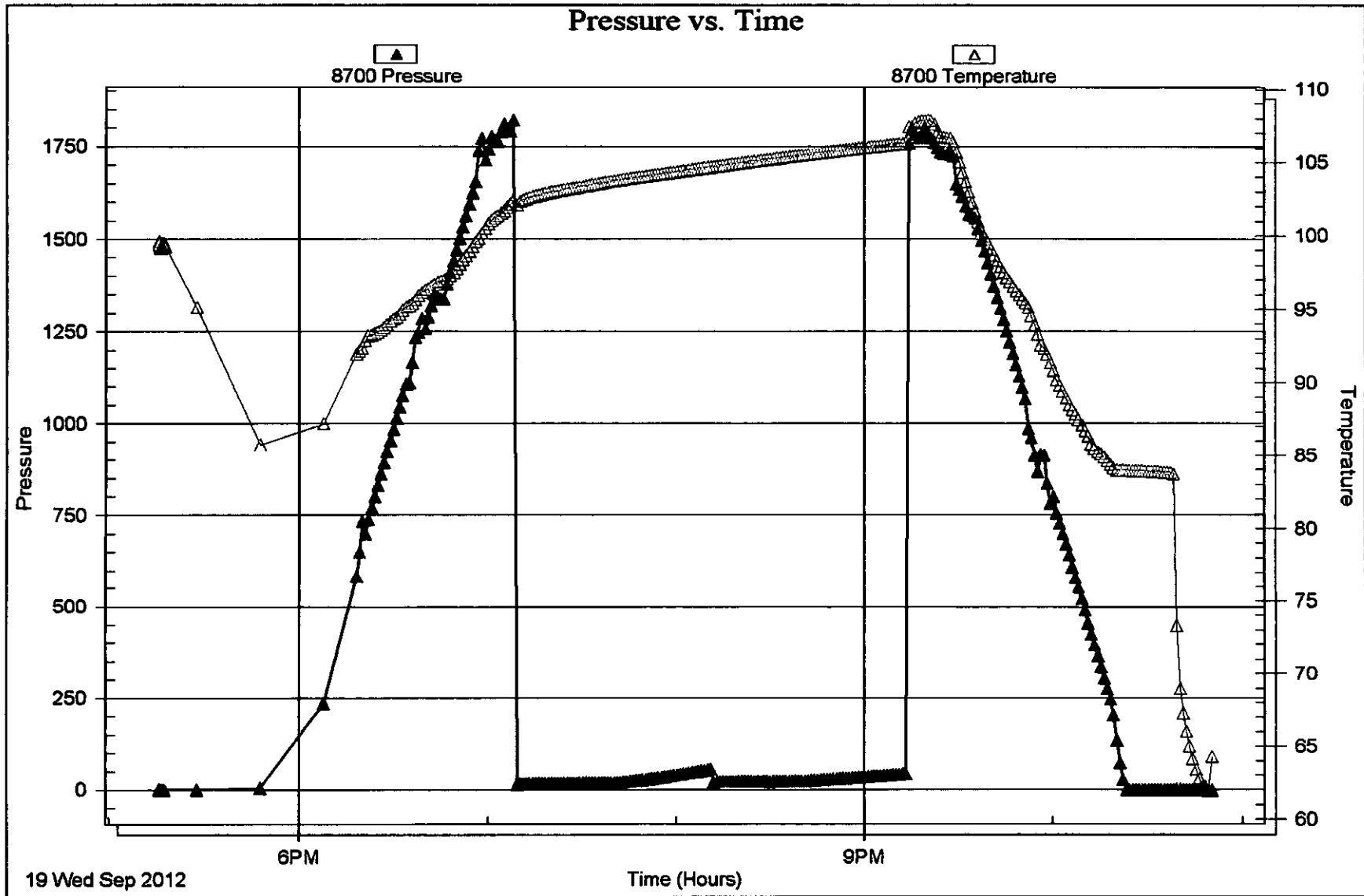
Laboratory Name:

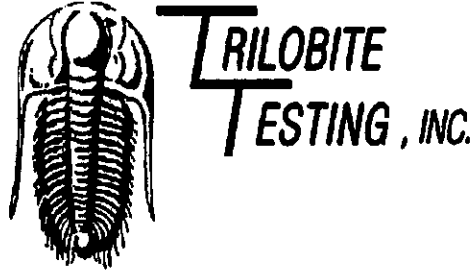
Laboratory Location:

Recovery Comments:



19 Wed Sep 2012





DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

D&D #1-12

12-12s-23w Trego,KS

Start Date: 2012.09.20 @ 16:35:33

End Date: 2012.09.20 @ 22:24:27

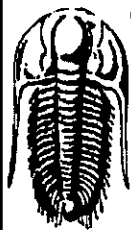
Job Ticket #: 48683 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.25 @ 11:57:09



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48683

DST#: 4

ATTN: Ron Nelson

Test Start: 2012.09.20 @ 16:35:33

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:42:28

Time Test Ended: 22:24:27

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: 3994.00 ft (KB) To 4036.00 ft (KB) (TVD)

Reference Elevations: 2407.00 ft (KB)

Total Depth: 4036.00 ft (KB) (TVD)

2399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369

Inside

Press@RunDepth: 37.12 psig @ 4000.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.20

End Date:

2012.09.20

Last Calib.: 2012.09.20

Start Time: 16:35:33

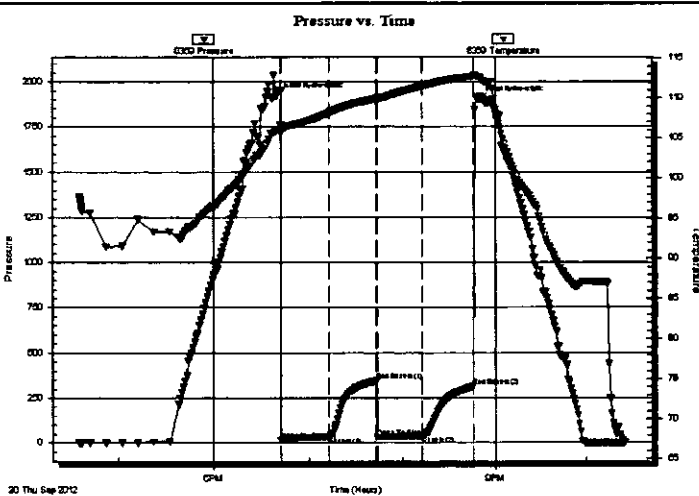
End Time:

22:24:27

Time On Btmr: 2012.09.20 @ 18:39:58

Time Off Btmr: 2012.09.20 @ 20:49:58

TEST COMMENT: 30-IFP-w k bl 1/4" to 1/2" bl
30-ISIP-no bl
30-FFP-very w k surface bl thru-out
30-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1919.95	105.98	Initial Hydro-static
3	16.13	105.72	Open To Flow (1)
33	31.61	108.16	Shut-In(1)
64	345.58	109.96	End Shut-In(1)
64	33.09	109.90	Open To Flow (2)
93	37.12	111.55	Shut-In(2)
126	312.84	112.71	End Shut-In(2)
130	1899.93	112.66	Final Hydro-static

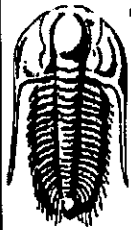
Recovery

Length (ft)	Description	Volume (bbl)
55.00	SOCWM 5%O25%W70%M	0.50

* 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

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48683

DST#: 4

ATTN: Ron Nelson

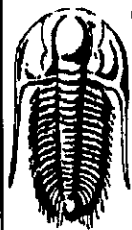
Test Start: 2012.09.20 @ 16:35:33

Tool Information

Drill Pipe:	Length: 3961.00 ft	Diameter: 3.80 inches	Volume: 55.56 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 70000.00 lb
			<u>Total Volume: 55.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3994.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	42.00 ft			
Tool Length:	63.00 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			3974.00	
Shut In Tool	5.00			3979.00	
Hydraulic tool	5.00			3984.00	
Packer	5.00			3989.00	21.00 Bottom Of Top Packer
Packer	5.00			3994.00	
Stubb	1.00			3995.00	
Perforations	5.00			4000.00	
Recorder	0.00	8369	Inside	4000.00	
Recorder	0.00	8700	Outside	4000.00	
Blank Spacing	33.00			4033.00	
Bullnose	3.00			4036.00	42.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48683

DST#: 4

ATTN: Ron Nelson

Test Start: 2012.09.20 @ 16:35:33

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:

10000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.94 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
55.00	SOCWM 5%O25%W70%M	0.498

Total Length: 55.00 ft

Total Volume: 0.498 bbf

Num Fluid Samples: 0

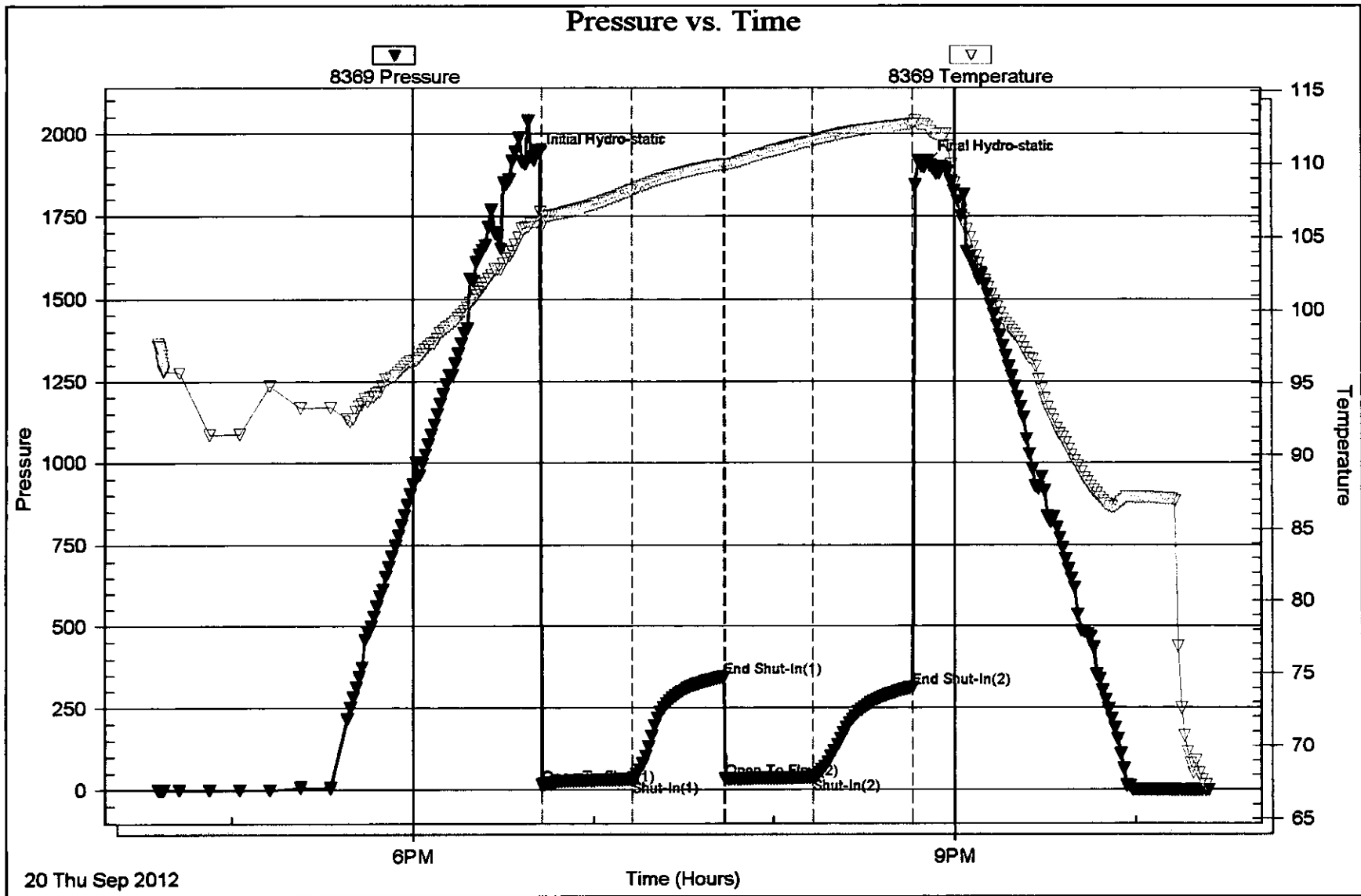
Num Gas Bombs: 0

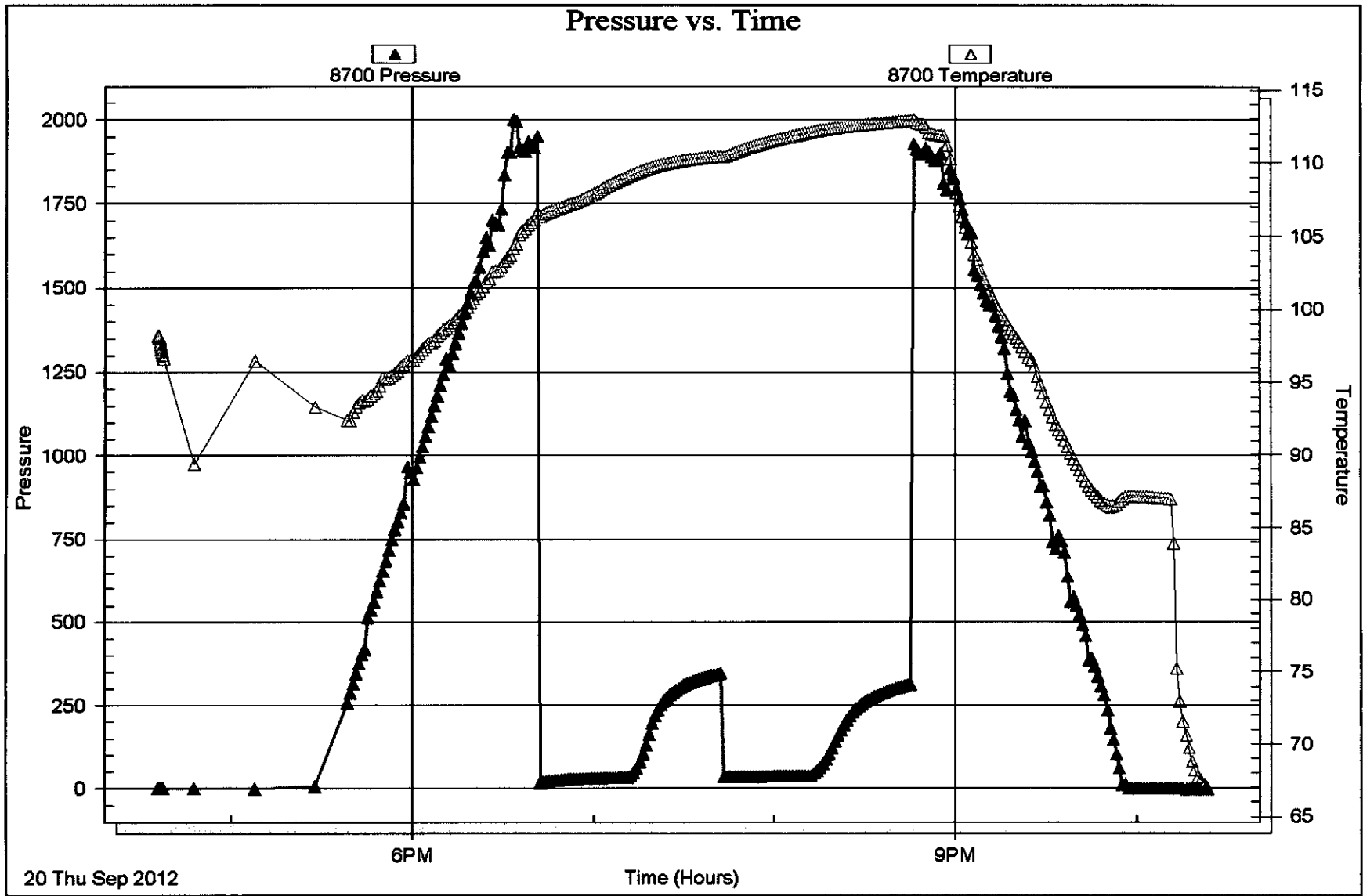
Serial #:

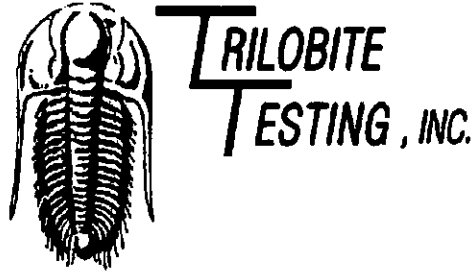
Laboratory Name:

Laboratory Location:

Recovery Comments: RW .59@72F







DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

D&D #1-12

12-12s-23w Trego,KS

Start Date: 2012.09.21 @ 13:25:30

End Date: 2012.09.21 @ 19:46:54

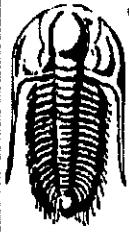
Job Ticket #: 48684 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.25 @ 11:56:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48684

DST#: 5

ATTN: Ron Nelson

Test Start: 2012.09.21 @ 13:25:30

GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:50:55

Time Test Ended: 19:46:54

Test Type: Conventional Straddle (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3622.00 ft (KB) To 3644.00 ft (KB) (TVD)**

Reference Elevations: 2407.00 ft (KB)

Total Depth: 4157.00 ft (KB) (TVD)

2399.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369

Inside

Press@RunDepth: 239.75 psig @ 3625.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.21

End Date:

2012.09.21

Last Calib.: 2012.09.21

Start Time: 13:25:30

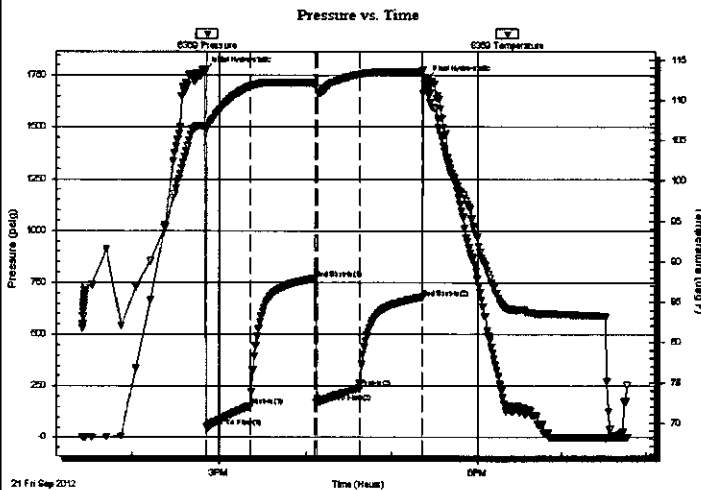
End Time:

19:46:54

Time On Btrm: 2012.09.21 @ 14:49:25

Time Off Btrm: 2012.09.21 @ 17:23:55

TEST COMMENT: 30-IFP-strg bl in 3 min
45-ISIP-4" bl bk
30-FFP-strg bl in 3 min
45-FSIP-6" bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1773.84	106.85	Initial Hydro-static
2	54.30	106.31	Open To Flow (1)
32	155.45	111.70	Shut-In(1)
77	769.27	112.12	End Shut-In(1)
78	171.42	111.51	Open To Flow (2)
107	239.75	113.19	Shut-In(2)
152	678.15	113.54	End Shut-In(2)
155	1730.78	111.39	Final Hydro-static

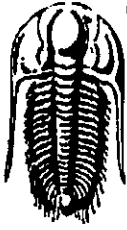
Recovery

Length (ft)	Description	Volume (bbl)
0.00	1010'GIP	0.00
567.00	CO	7.68
63.00	GMO 20%G20%M60%O	0.88

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

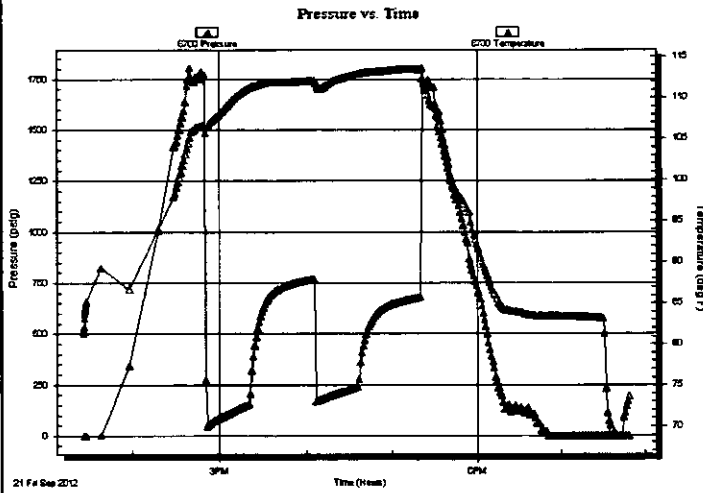
12-12s-23w Trego,KS
D&D #1-12
Job Ticket: 48684 **DST#: 5**
Test Start: 2012.09.21 @ 13:25:30

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:50:55
Time Test Ended: 19:46:54
Interval: **3622.00 ft (KB) To 3644.00 ft (KB) (TVD)**
Total Depth: 4157.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Reset)
Tester: Ray Schwager
Unit No: 42
Reference Elevations: 2407.00 ft (KB)
2399.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8700 **Outside**
Press@RunDepth: psig @ 3625.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.09.21 End Date: 2012.09.21 Last Calib.: 2012.09.21
Start Time: 13:26:00 End Time: 19:48:24 Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP-strg bl in 3 min
45-ISIP-4" bl bk
30-FFP-strg bl in 3 min
45-FSIP-6" bl bk



PRESSURE SUMMARY

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

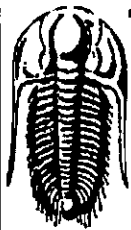
Recovery

Length (ft)	Description	Volume (bbl)
0.00	1010'GIP	0.00
567.00	CO	7.68
63.00	GMO 20%G20%M60%O	0.88

* Recovery from multiple tests

Gas Rates

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



**TRILLOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48684

DST#: 5

ATTN: Ron Nelson

Test Start: 2012.09.21 @ 13:25:30

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: **No** Whipstock: **ft (KB)**
Time Tool Opened: 14:50:55
Time Test Ended: 19:46:54

Test Type: **Conventional Straddle (Reset)**
Tester: **Ray Schwager**
Unit No: **42**

Interval: **3622.00 ft (KB) To 3644.00 ft (KB) (TVD)**
Total Depth: **4157.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2407.00 ft (KB)**
2399.00 ft (CF)
KB to GR/CF: **8.00 ft**

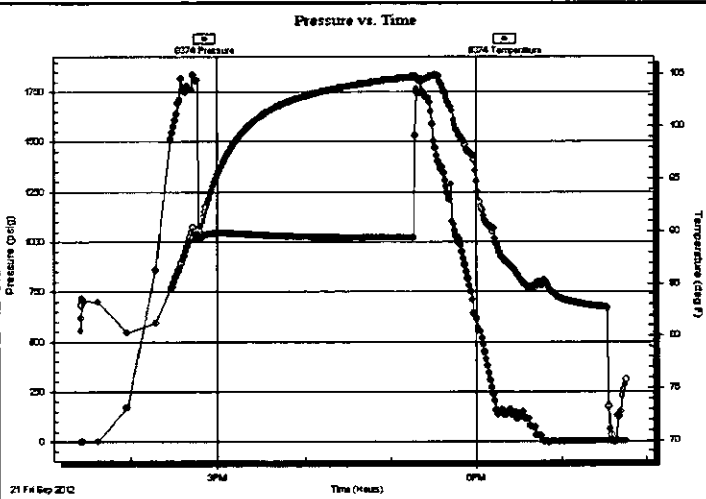
Serial #: 8374

Below (Straddle)

Press@RunDepth: **psig @ 3650.00 ft (KB)**
Start Date: **2012.09.21** End Date: **2012.09.21**
Start Time: **13:25:46** End Time: **19:46:40**

Capacity: **8000.00 psig**
Last Calib.: **2012.09.21**
Time On Btmr
Time Off Btmr

TEST COMMENT: 30-IFP-strg bl in 3 min
45-ISIP-4" bl bk
30-FFP-strg bl in 3 min
45-FSIP-6" bl bk



PRESSURE SUMMARY

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

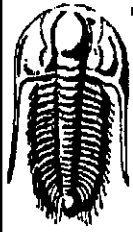
Recovery

Length (ft)	Description	Volume (bbl)
0.00	1010'GIP	0.00
567.00	CO	7.68
63.00	GMO 20%G20%M60%O	0.88

* 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

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48684

DST#: 5

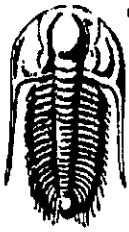
ATTN: Ron Nelson

Test Start: 2012.09.21 @ 13:25:30

Tool Information

Drill Pipe:	Length: 3601.00 ft	Diameter: 3.80 inches	Volume: 50.51 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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: 80000.00 lb
			<u>Total Volume: 50.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3622.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	3644.00 ft			
Interval between Packers:	22.00 ft			
Tool Length:	559.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3602.00	
Shut In Tool	5.00			3607.00	
Hydraulic tool	5.00			3612.00	
Packer	5.00			3617.00	21.00 Bottom Of Top Packer
Packer	5.00			3622.00	
Stubb	1.00			3623.00	
Perforations	2.00			3625.00	
Recorder	0.00	8369	Inside	3625.00	
Recorder	0.00	8700	Outside	3625.00	
Perforations	15.00			3640.00	
Blank Off Sub	1.00			3641.00	
Blank Spacing	3.00			3644.00	22.00 Tool Interval
Packer	5.00			3649.00	
Stubb	1.00			3650.00	
Recorder	0.00	8374	Below	3650.00	
Blank Spacing	507.00			4157.00	
Bullnose	3.00			4160.00	516.00 Bottom Packers & Anchor
Total Tool Length:	559.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

12-12s-23w Trego,KS

PO Box 1019
Hays KS 67601

D&D #1-12

Job Ticket: 48684

DST#: 5

ATTN: Ron Nelson

Test Start: 2012.09.21 @ 13:25:30

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

22 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	1010'GIP	0.000
567.00	CO	7.680
63.00	GMO 20%G20%M60%O	0.884

Total Length: 630.00 ft

Total Volume: 8.564 bbl

Num Fluid Samples: 0

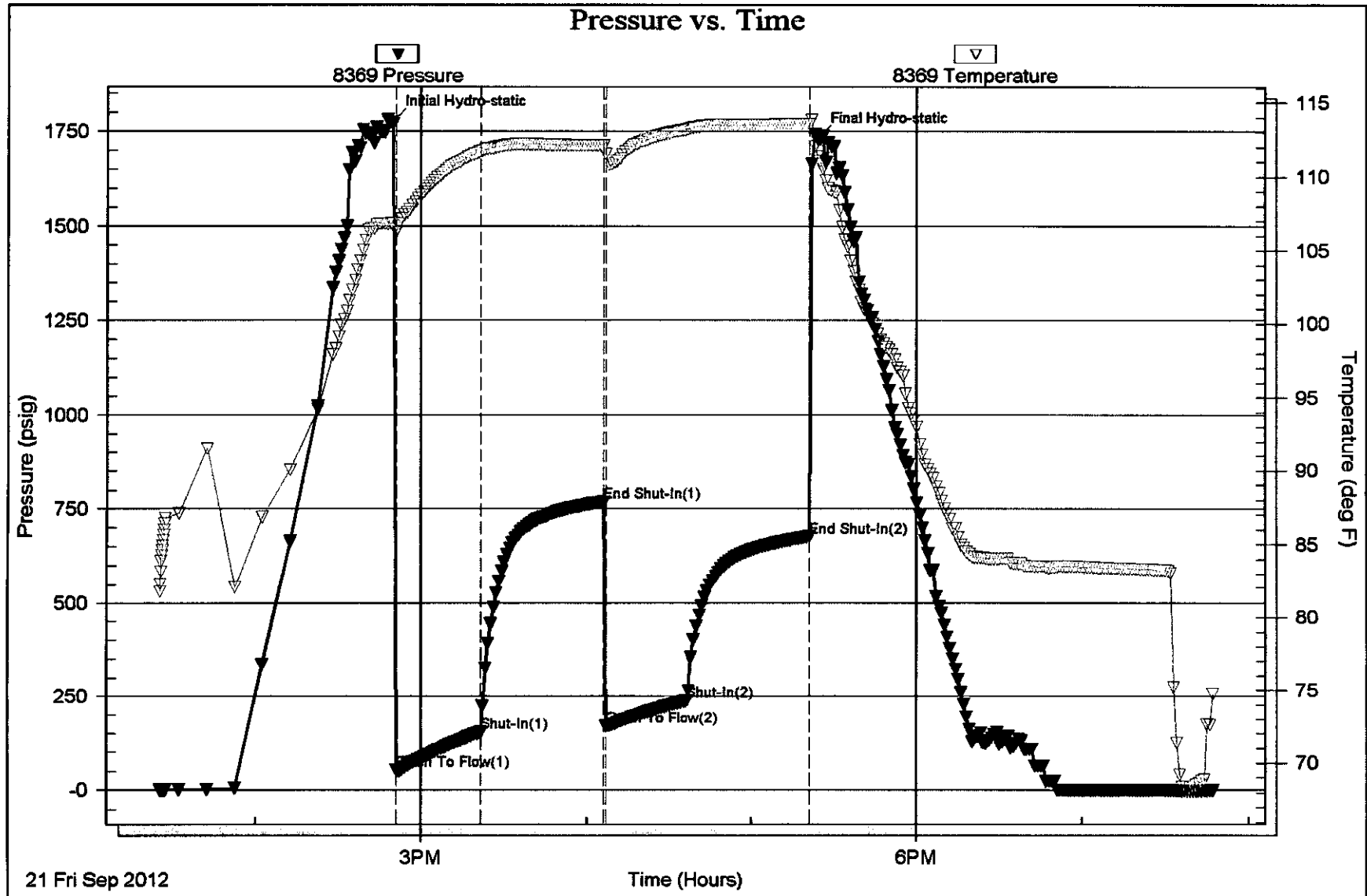
Num Gas Bombs: 0

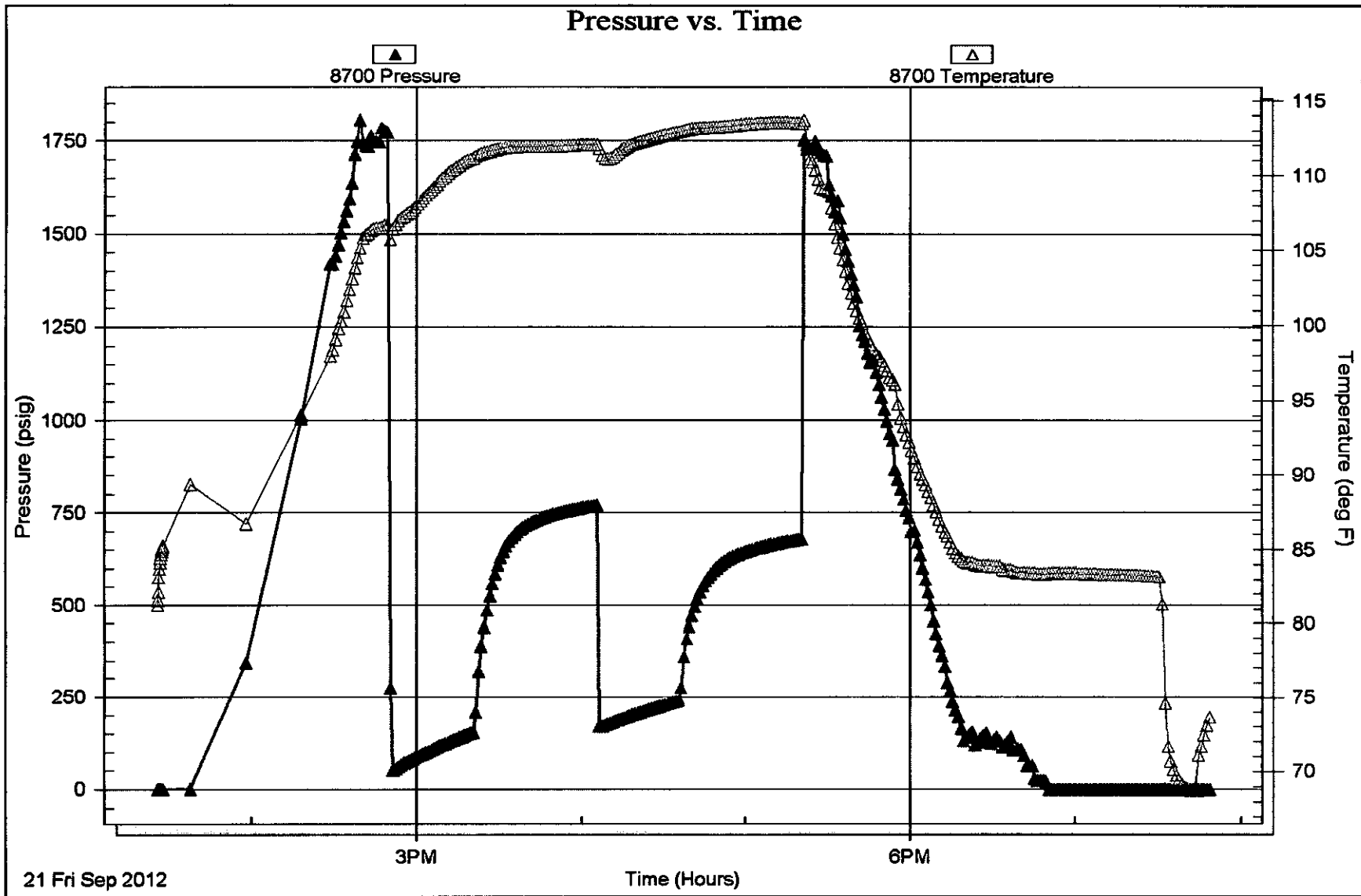
Serial #:

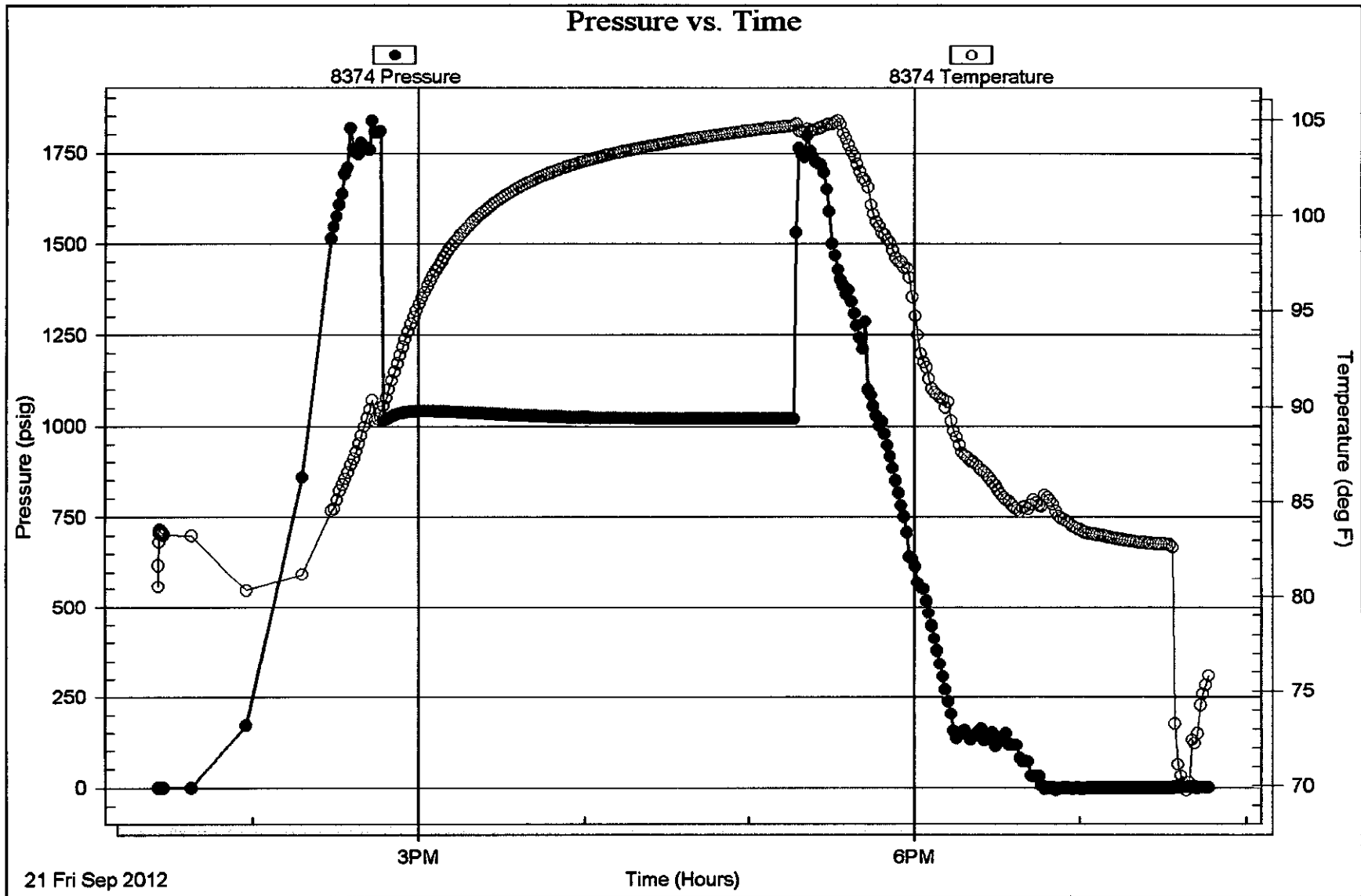
Laboratory Name:

Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48680

Well Name & No. D+D #1-12 Test No. 1 Date 9-18-12
 Company Downing-Nelson Oil Co Inc Elevation 2407 KB 2399 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC DOWNING Rig DISCOVERY rig 3
 Location: Sec. 12 Twp. 12 Rge. 23^w Co. Yrego State K

Interval Tested 3678-3716 Zone Tested LKC C-D
 Anchor Length 38 Drill Pipe Run 3639 Mud Wt. 8.7
 Top Packer Depth 3673 Drill Collars Run 30 Vis 65
 Bottom Packer Depth 3678 Wt. Pipe Run - WL 7.6
 Total Depth 3716 Chlorides 800 ppm System LCM 3[#]

Blow Description IFP - WEAK TO A GOOD BLOW 1/2" TO 7 1/2" BLOW
ISIP - NO BLOW
FFP - WEAK TO A FAIR BLOW 1" TO 3 1/2" BLOW
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>105</u>	<u>GIP</u>				
<u>5</u>	<u>CO</u>				
<u>70</u>	<u>SO CMW</u>		<u>1</u>	<u>50</u>	<u>49</u>
<u>120</u>	<u>WATER</u>				

Rec Total 195 BHT 110 Gravity 38 API RW .07 @ 83 °F Chlorides 93000 ppm
 (A) Initial Hydrostatic 1722 Test T-On Location 0700
 (B) First Initial Flow 14 Jars T-Started 0810
 (C) First Final Flow 69 Safety Joint T-Open 1025
 (D) Initial Shut-In 839 Circ Sub T-Pulled 1325
 (E) Second Initial Flow ~~10974~~ Hourly Standby T-Out 1523
 (F) Second Final Flow 109 Mileage 68RT 105.40 Comments _____
 (G) Final Shut-In 844 Sampler _____
 (H) Final Hydrostatic 1704 Straddle _____
 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1255.40
 Total 1255.40
 MP/DST Disc't _____

Approved By _____ Our Representative RAY SCHWAGER Thank you
 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. 48681

4/10

Well Name & No. D+D #1-12 Test No. 2 Date 9-18-12
 Company Downing-Nelson Oil Co Inc Elevation 2407 KB 2399 GL
 Address P.O. Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC Downing Rig DISCOVERY RIG 3
 Location: Sec. 12 Twp. 12^S Rge. 23^W Co. Trego State K

Interval Tested 3714-3730 Zone Tested LKC "E"
 Anchor Length 16 Drill Pipe Run 3676 Mud Wt. 8.7
 Top Packer Depth 3709 Drill Collars Run 30 Vis 65
 Bottom Packer Depth 3714 Wt. Pipe Run - WL 7.6
 Total Depth 3730 Chlorides 800 ppm System LCM 3#

Blow Description FFP - WEAK Blow thru-out 1/4" Blow
ISIP - NO BLOW
FFP - WEAK Blow thru-out 1" to 2 1/2" Blow
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>85</u>	<u>GIP</u>				
<u>35</u>	<u>MGO</u>	<u>10</u>	<u>50</u>	<u>40</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 35 BHT 107 Gravity - API RW - @ - F Chlorides - ppm
 (A) Initial Hydrostatic 1736 Test T-On Location 2115
 (B) First Initial Flow 10 Jars T-Started 2145
 (C) First Final Flow 19 Safety Joint T-Open 0000
 (D) Initial Shut-In 79 Circ Sub T-Pulled 0230
 (E) Second Initial Flow 17 Hourly Standby T-Out 0418
 (F) Second Final Flow 26 Mileage 6BRT 105.40 Comments
 (G) Final Shut-In 148 Sampler
 (H) Final Hydrostatic 1718 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 30
 Initial Shut-In 30
 Final Flow 45
 Final Shut-In 45
 Sub Total 0
 Total 1255.40
 MP/DST Disc't -
 Sub Total 1255.40

Approved By _____ Our Representative RAY SCHWAGH Thank you

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TRIOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48682

Well Name & No. D40 #1-12 Test No. 3 Date 9-19-12
 Company Downing-Nelson Oil Co Inc Elevation 2407 KB 2399 GL
 Address P.O. Box 1019 Hays, Ko 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 1193
 Location: Sec. 12 Twp. 12^s Rge. 23 Co. Trego State K

Interval Tested 3780-3850 Zone Tested LKL H-J
 Anchor Length 70 Drill Pipe Run 3742 Mud Wt. 8.7
 Top Packer Depth 3775 Drill Collars Run 30 Vis 53
 Bottom Packer Depth 3780 Wt. Pipe Run - WL 8
 Total Depth 3850 Chlorides 2000 ppm System LCM 2#

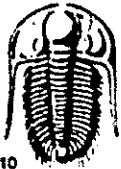
Blow Description I/FP - Very Weak surface flow, died in 20 min
I/SIP - No Blow
F/FP - No Blow
F/SIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>50 CM</u>	<u>5</u>		<u>95</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 106 Gravity - API RW - @ - °F Chlorides ppm
 (A) Initial Hydrostatic 1793 Test 1150 T-On Location 1650
 (B) First Initial Flow 14 Jars T-Started 1710
 (C) First Final Flow 18 Safety Joint T-Open 1905
 (D) Initial Shut-In 54 Circ Sub T-Pulled 2105
 (E) Second Initial Flow 20 Hourly Standby T-Out 2250
 (F) Second Final Flow 21 Mileage 68 RT 105.40 Comments
 (G) Final Shut-In 42 Sampler
 (H) Final Hydrostatic 1773 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1255.40
 Total 1255.40
 MP/DST Disc't

Approved By _____ Our Representative Ray Schwager *Thank you*
 Triobite 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. 48683

4/10

Well Name & No. 0+0 #1-12 Test No. 4 Date 9-20-12
 Company Downing-Nelson Oil Co Inc Elevation 2407 KB 2399 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. ARC Downing Rig Discovery rig 3
 Location: Sec. 12 Twp. 12^s Rge. 23^w Co. Trigo State Ks

Interval Tested 3994-4036 Zone Tested MARMA TON
 Anchor Length 42 Drill Pipe Run 3961 Mud Wt. 8.9
 Top Packer Depth 3989 Drill Collars Run 30 Vis 61
 Bottom Packer Depth 3994 Wt. Pipe Run _____ WL 8
 Total Depth 4036 Chlorides 3000 ppm System LCM 2#
 Blow Description IFP - WEAK BLOW 1/4" TO 1/2" BLOW
ISIP - NO BLOW
FFP - VERY WEAK SURFACE BLOW
FSIP - NO BLOW

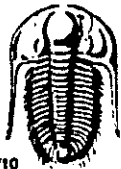
Rec	Feet of	%gas	%oil	%water	%mud
<u>SS</u>	<u>50 CWM</u>		<u>5</u>	<u>25</u>	<u>70</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total SS BHT 112 Gravity _____ API RW .59 @ 72° F Chlorides 10000 ppm
 (A) Initial Hydrostatic 1919 Test _____ T-On Location 1615
 (B) First Initial Flow 16 Jars _____ T-Started 1635
 (C) First Final Flow 31 Safety Joint _____ T-Open 1840
 (D) Initial Shut-In 345 Circ Sub _____ T-Pulled 2040
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 2224
 (F) Second Final Flow 37 Mileage 68RT 105.40
 (G) Final Shut-In 312 Sampler _____
 (H) Final Hydrostatic 1899 Straddle _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1355.40
 Total 1355.40
 MP/DST Disc't _____

Approved By _____ Our Representative Ray Schwan *Thank you*

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48684

4/10

Well Name & No. DD #1-12 Test No. 5 Date 9-21-12
 Company Downing-Nelson Oil Co Inc Elevation 2407 KB 2399 GL
 Address PO Box 1019 Hays Ks 67601
 Co. Rep / Geo. MARC DOWNING Rig DISCOVERY rig 3
 Location: Sec. 12 Twp. 12^s Rge. 23^w Co. TRCO State Ks

Interval Tested 3622-3644 Zone Tested TORONTO
 Anchor Length 22 Drill Pipe Run 3601 Mud Wt. 9.1
 Top Packer Depth 3622-3617 Drill Collars Run 30 Vis 60
 Bottom Packer Depth 3644 Wt. Pipe Run - WL 8
 Total Depth 4157 Chlorides 3000 ppm System LCM 2#

Blow Description IFP - STRONG BLOW IN 3 MIN
ISIP - 4" BLOW BACK
FFP - STRONG BLOW IN 3 MIN
FSIP - 6" BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>1010</u>	<u>GIP</u>				
<u>567</u>	<u>CO</u>				
<u>63</u>	<u>GMO</u>	<u>20</u>	<u>60</u>	<u>20</u>	

Rec Total 630 BHT 113 Gravity 22 API RW - @ - F Chlorides - ppm
 (A) Initial Hydrostatic 1773 Test 1250 T-On Location 1300
 (B) First Initial Flow 54 Jars T-Started 1325
 (C) First Final Flow 154 Safety Joint T-Open 1445
 (D) Initial Shut-In 769 Circ Sub T-Pulled 1715
 (E) Second Initial Flow 171 Hourly Standby T-Out 1946
 (F) Second Final Flow 239 Mileage 68RT 105.40 Comments
 (G) Final Shut-In 678 Sampler
 (H) Final Hydrostatic 1730 Straddle 600 Ruined Shale Packer

Initial Open 30 Extra Packer Ruined Packer
 Initial Shut-In 45 Extra Recorder Extra Copies
 Final Flow 30 Day Standby Sub Total 0
 Final Shut-In 45 Accessibility Total 1955.40
 Sub Total 1955.40 MP/DST Disc't

Approved By _____ Our Representative RAY SCHWAGN Thank 909

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. Tool's lost or damaged in the hole shall be paid for at cost by the party for whom the test is made

