



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1201238
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- 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
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

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

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1201238

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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 type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 406

Date	4-8-14	Sec.	4	Twp.	9	Range	24	County	Graham	State	KS	On Location	4:00 PM	Finish	9:30 PM
Lease	Walt "C"		Well No.		1-4		Owner		W to 180 N to LRD & E Side						
Contractor	Discovery		1				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.						
Type Job	Surface						Charge To		Downing & Nelson						
Hole Size	12 1/4		T.D.		220		Street		Downing & Nelson						
Csg.	8 5/8		Depth		220		City		State						
Tbg. Size			Depth				The above was done to satisfaction and supervision of owner agent or contractor.								
Tool			Depth				Cement Amount Ordered		150 SKS 3900						
Cement Left in Csg.			Shoe Joint				Meas Line		Displace 12. 3/4						
EQUIPMENT								Common							
Pumptrk	17	No.	Cementer	Helper	Matt		Poz. Mix								
Bulktrk	19	No.	Driver	Driver	Mick		Gel.		3						
Bulktrk	pu	No.	Driver	Driver	Chad		Calcium		5						
JOB SERVICES & REMARKS								Hulls							
Remarks:								Salt							
Rat Hole								Flowseal							
Mouse Hole								Kol-Seal							
Centralizers								Mud CLR 48							
Baskets								CFL-117 or CD110 CAF 38							
DV or Port Collar								Sand							
Cement did								Handling 158							
Circulate								Mileage							
								FLOAT EQUIPMENT							
								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								Pumptrk Charge							
								Surface							
								Mileage 38							
								Tax							
								Discount							
								Total Charge							
X Signature								Coffey							

Quality Oilwell
Cementing

JOB LOG

SWIFT Services, Inc.

DATE 4-14-14 PAGE NO.

CUSTOMER Downing Nelson WELL NO. 1-4 LEASE Walt "C" JOB TYPE 5 1/2 Two Stage TICKET NO. 25448

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/24H)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1330							on location
								TD 4055 SS 22
								TP 4051 Insert 4029
								OV up 48 2131' 5 1/2 x 14"
								Centralizers 1, 3, 5, 8, 10, 12, 14, 16, 47
								Basket 1, 48
	1405							Stark Pipe
	1530							Drop Ball Break Circulation Rotate
	1620	5	12			300		Start Mud Flush
		5	20			300		Start KLL Flush
		5	36			200		Start Cement 150 stks EA-2
	1645							Drop Plug wash out Pump + Lines
	1647	6				200		Start Displacement
		6	46			200		Start Mud
		6	78	X		300		Start KLL
		6	98.3			700 1500		Land Plug
								Release Dry
	1706							Drop opening Plug
	1710		7/4					Plug MH 30 stks, MH 15 stks
	1720					1300		open OV
			94					Start SMD 170 stks @ 11.2
			7					25 stks @ 14.5
	1750							Drop Closing Plug wash out Pump + Lines
	1752					300		Start Displacement
								Circulate Cement Cement in Cellar
	1800		51.9			800 1500		Land Plug Close OV
								Release Dry
								wash up Rack up
	1845							Sub Complete

Thank You 5000, Owen, & Son



DRILL STEM TEST REPORT

Prepared For: **Dowing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Dowling

Walt "C" #1-4

4-9s-24w Graham,KS

Start Date: 2014.04.12 @ 15:50:41

End Date: 2014.04.12 @ 23:03:50

Job Ticket #: 57563 DST #: 1

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

Printed: 2014.04.16 @ 12:01:26



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57563

DST#: 1

ATTN: Marc Dow ing

Test Start: 2014.04.12 @ 15:50:41

GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:51:11

Time Test Ended: 23:03:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

Interval: 3920.00 ft (KB) To 3946.00 ft (KB) (TVD)

Reference Elevations: 2450.00 ft (KB)

Total Depth: 3946.00 ft (KB) (TVD)

2442.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8897

Inside

Press@RunDepth: 208.48 psig @ 3923.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.12

End Date:

2014.04.12

Last Calib.:

2014.04.12

Start Time: 15:50:42

End Time:

23:03:51

Time On Btm:

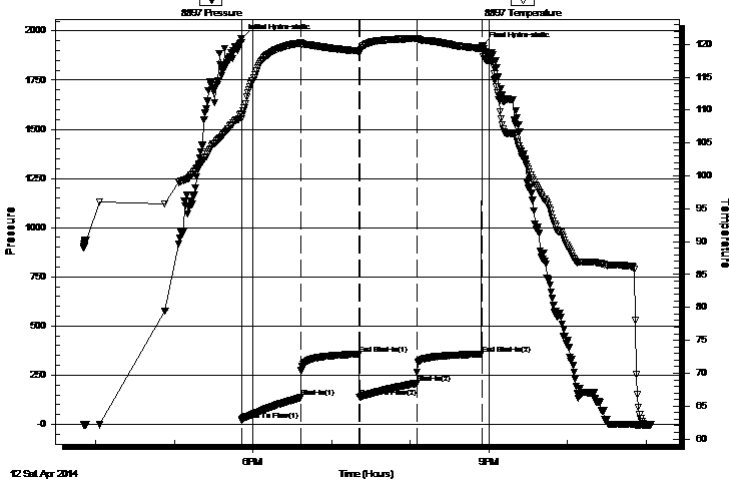
2014.04.12 @ 17:51:01

Time Off Btm:

2014.04.12 @ 20:55:01

TEST COMMENT: B.O.B. In 17 mins
Dead no blow back
B.O.B. In 35 mins
Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1961.99	109.51	Initial Hydro-static
1	20.62	108.70	Open To Flow (1)
46	135.53	120.18	Shut-In(1)
90	356.82	118.95	End Shut-In(1)
91	138.15	118.86	Open To Flow (2)
134	208.48	120.85	Shut-In(2)
184	356.57	119.37	End Shut-In(2)
184	1922.67	119.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
360.00	100%W	4.78
40.00	40%W 60%M	0.56
1.00	100%O	0.01

Gas Rates

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



DRILL STEM TEST REPORT

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57563

DST#: 1

ATTN: Marc Dow ing

Test Start: 2014.04.12 @ 15:50:41

GENERAL INFORMATION:

Formation: LKC I			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)	
Time Tool Opened: 17:51:11		Tester: Tate Lang	
Time Test Ended: 23:03:50		Unit No: 49	
Interval: 3920.00 ft (KB) To 3946.00 ft (KB) (TVD)		Reference Elevations: 2450.00 ft (KB)	
Total Depth: 3946.00 ft (KB) (TVD)		2442.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 8.00 ft	

Serial #: 8898

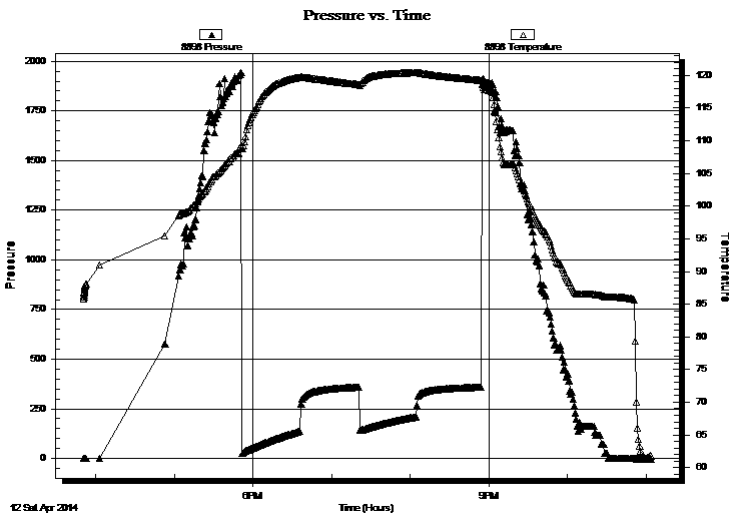
Outside

Press@RunDepth: psig @ 3923.00 ft (KB)
Start Date: 2014.04.12 End Date: 2014.04.12
Start Time: 15:50:47 End Time: 23:04:06

Capacity: 8000.00 psig
Last Calib.: 2014.04.12
Time On Btm:
Time Off Btm:

TEST COMMENT: B.O.B. In 17 mins
Dead no blow back
B.O.B. In 35 mins
Dead no blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
360.00	100%W	4.78
40.00	40%W 60%M	0.56
1.00	100%O	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57563

DST#: 1

ATTN: Marc Dow ing

Test Start: 2014.04.12 @ 15:50:41

Tool Information

Drill Pipe:	Length: 3883.00 ft	Diameter: 3.80 inches	Volume: 54.47 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:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 54.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3920.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	26.00 ft				
Tool Length:	46.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3905.00	
Hydraulic tool	5.00			3910.00	
Packer	5.00			3915.00	20.00 Bottom Of Top Packer
Packer	5.00			3920.00	
Stubb	1.00			3921.00	
Perforations	2.00			3923.00	
Recorder	0.00	8897	Inside	3923.00	
Recorder	0.00	8898	Outside	3923.00	
Perforations	20.00			3943.00	
Bullnose	3.00			3946.00	26.00 Bottom Packers & Anchor
Total Tool Length:	46.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57563

DST#: 1

ATTN: Marc Dow ing

Test Start: 2014.04.12 @ 15:50:41

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:

35000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 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 bbbl
360.00	100%W	4.777
40.00	40%W 60%M	0.561
1.00	100%O	0.014

Total Length: 401.00 ft Total Volume: 5.352 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8897

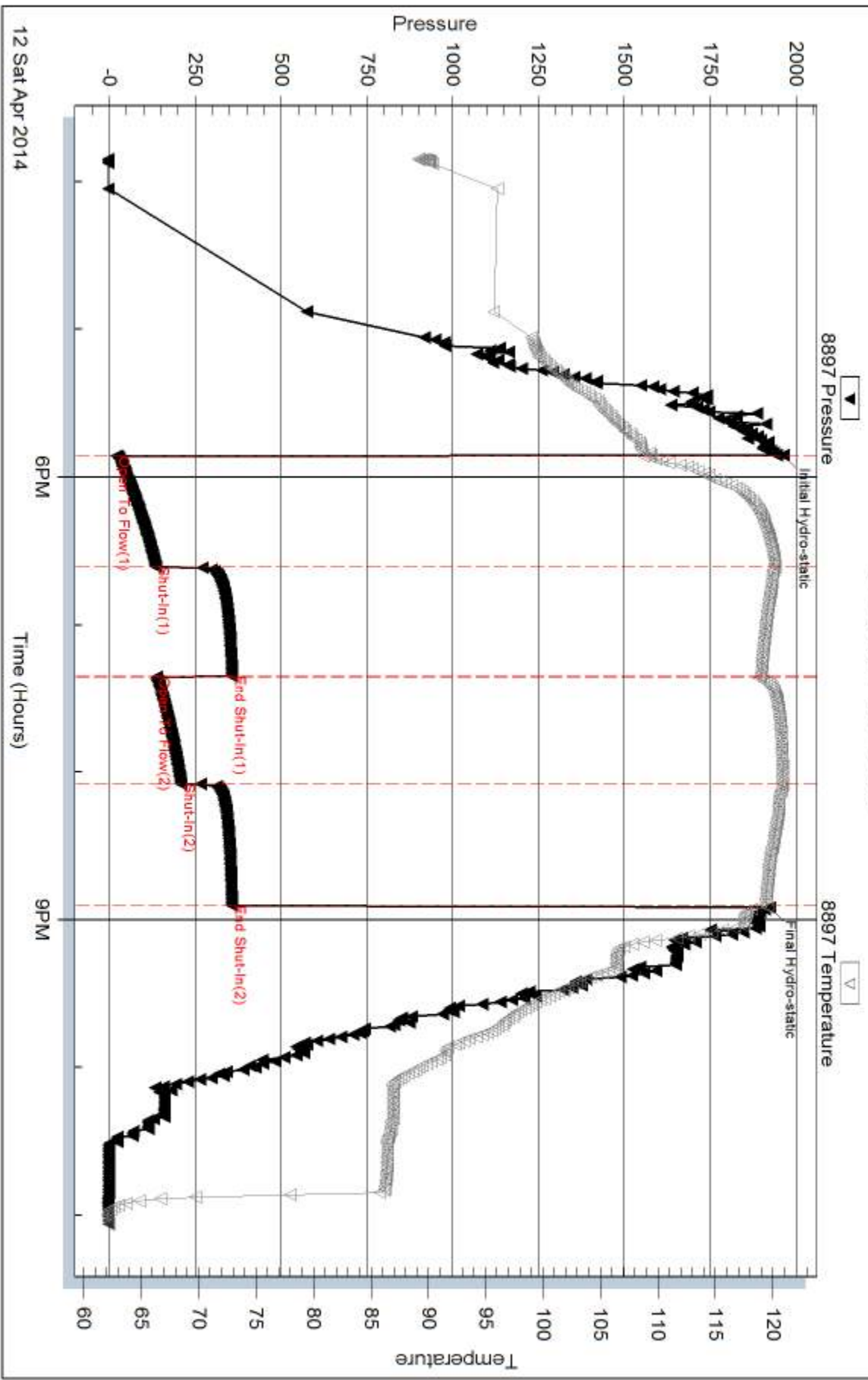
Inside

Dowling Nelson Oil Company

Well 'C' #1-4

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 57563

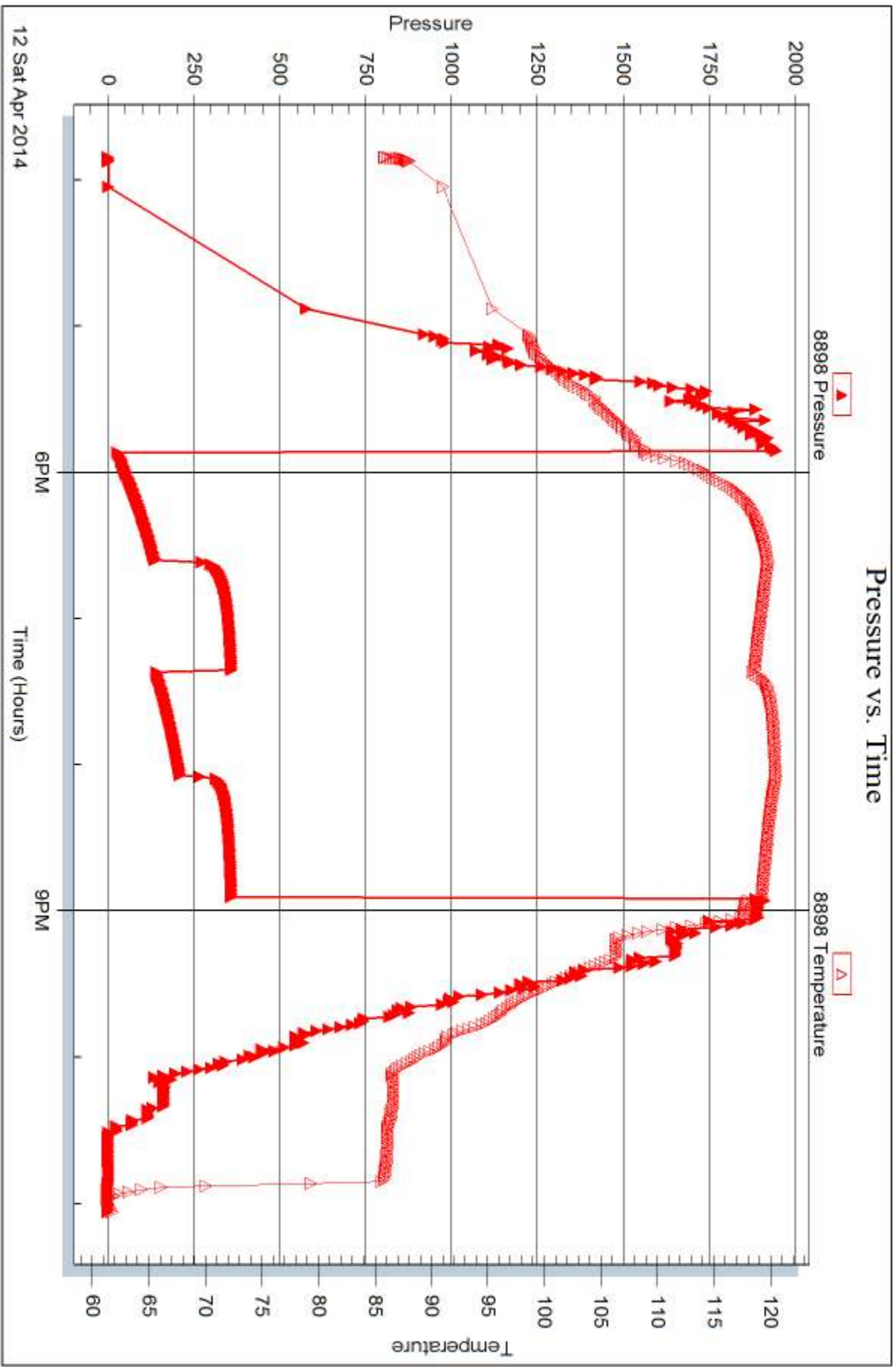
Printed: 2014.04.16 @ 12:01:28

Serial #: 8898

Outside Dow lng Nelson Oil Company

Well 'C' #1-4

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 57563

Printed: 2014.04.16 @ 12:01:29



DRILL STEM TEST REPORT

Prepared For: **Dowing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Dowling

Walt "C" #1-4

4-9s-24w Graham,KS

Start Date: 2014.04.13 @ 16:03:31

End Date: 2014.04.13 @ 23:24:01

Job Ticket #: 57564 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.16 @ 12:01:02

Dowing Nelson Oil Company

4-9s-24w Graham,KS

Walt "C" #1-4

DST # 2

LKC J&K

2014.04.13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57564

DST#: 2

ATTN: Marc Dow ing

Test Start: 2014.04.13 @ 16:03:31

GENERAL INFORMATION:

Formation: **LKC J&K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:26:11

Time Test Ended: 23:24:01

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3939.00 ft (KB) To 3977.00 ft (KB) (TVD)

Reference Elevations: 2450.00 ft (KB)

Total Depth: 4050.00 ft (KB) (TVD)

2442.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 29.47 psig @ 3943.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.13

End Date:

2014.04.13

Last Calib.:

2014.04.13

Start Time:

16:03:32

End Time:

23:24:01

Time On Btm:

2014.04.13 @ 18:26:01

Time Off Btm:

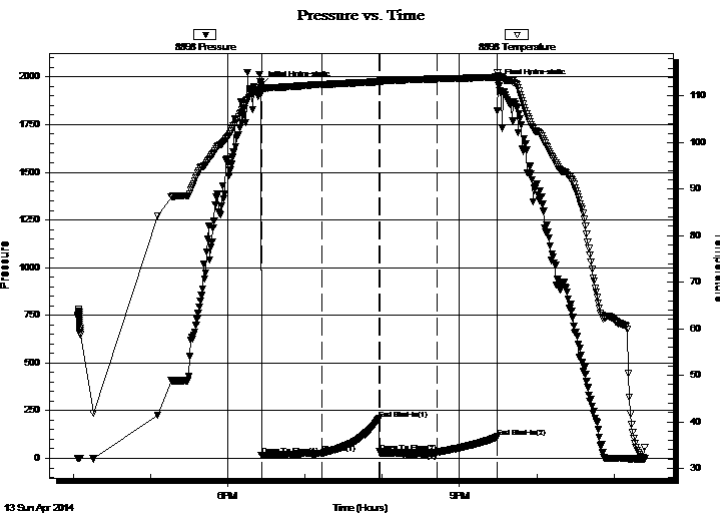
2014.04.13 @ 21:30:01

TEST COMMENT: Weak surface blow built to 3"

Dead no blow back

Weaksurface blow built to 1 1/2"

Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1956.19	111.76	Initial Hydro-static
1	17.36	110.72	Open To Flow (1)
47	25.84	112.46	Shut-In(1)
92	207.91	113.08	End Shut-In(1)
93	29.38	113.10	Open To Flow (2)
137	29.47	113.67	Shut-In(2)
184	112.54	114.08	End Shut-In(2)
184	1966.89	114.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	40%O 60%M	0.29
0.00	20 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57564

DST#: 2

ATTN: Marc Dow ing

Test Start: 2014.04.13 @ 16:03:31

GENERAL INFORMATION:

Formation: **LKC J&K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:26:11

Time Test Ended: 23:24:01

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3939.00 ft (KB) To 3977.00 ft (KB) (TVD)

Reference Elevations: 2450.00 ft (KB)

Total Depth: 4050.00 ft (KB) (TVD)

2442.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8354 Below (Straddle)

Press@RunDepth: psig @ 3991.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.13

End Date:

2014.04.13

Last Calib.:

2014.04.13

Start Time: 16:03:38

End Time:

23:24:07

Time On Btm:

Time Off Btm:

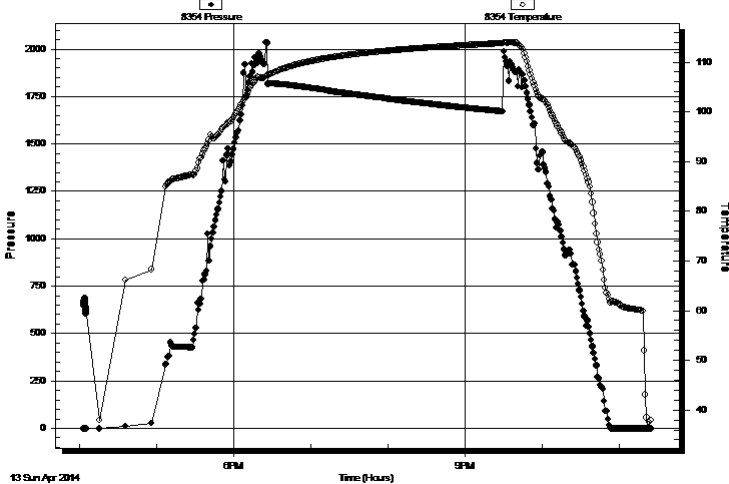
TEST COMMENT: Weak surface blow built to 3"

Dead no blow back

Weaksurface blow built to 1 1/2"

Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
40.00	40%O 60%M	0.29
0.00	20 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57564

DST#: 2

ATTN: Marc Dow ing

Test Start: 2014.04.13 @ 16:03:31

Tool Information

Drill Pipe:	Length: 3910.00 ft	Diameter: 3.80 inches	Volume: 54.85 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: 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: 55.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3939.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	3977.00 ft			
Interval between Packers:	38.00 ft			
Tool Length:	148.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Shut In Tool	5.00			3917.00	
Hydraulic tool	5.00			3922.00	
Jars	5.00			3927.00	
Safety Joint	2.00			3929.00	
Packer	5.00			3934.00	27.00 Bottom Of Top Packer
Packer	5.00			3939.00	
Stubb	1.00			3940.00	
Perforations	3.00			3943.00	
Recorder	0.00	8897	Inside	3943.00	
Recorder	0.00	8898	Outside	3943.00	
Perforations	29.00			3972.00	
Blank Off Sub	1.00			3973.00	
Blank Spacing	4.00			3977.00	38.00 Tool Interval
Packer	5.00			3982.00	
Stubb	1.00			3983.00	
Perforations	8.00			3991.00	
Recorder	0.00	8354	Below	3991.00	
Change Over Sub	1.00			3992.00	
Blank Spacing	64.00			4056.00	
Change Over Sub	1.00			4057.00	
Bullnose	3.00			4060.00	83.00 Bottom Packers & Anchor

Total Tool Length: 148.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57564

DST#: 2

ATTN: Marc Dow ing

Test Start: 2014.04.13 @ 16:03:31

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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 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 bbl
40.00	40%O 60%M	0.288
0.00	20 GIP	0.000

Total Length: 40.00 ft Total Volume: 0.288 bbl

Num Fluid Samples: 0

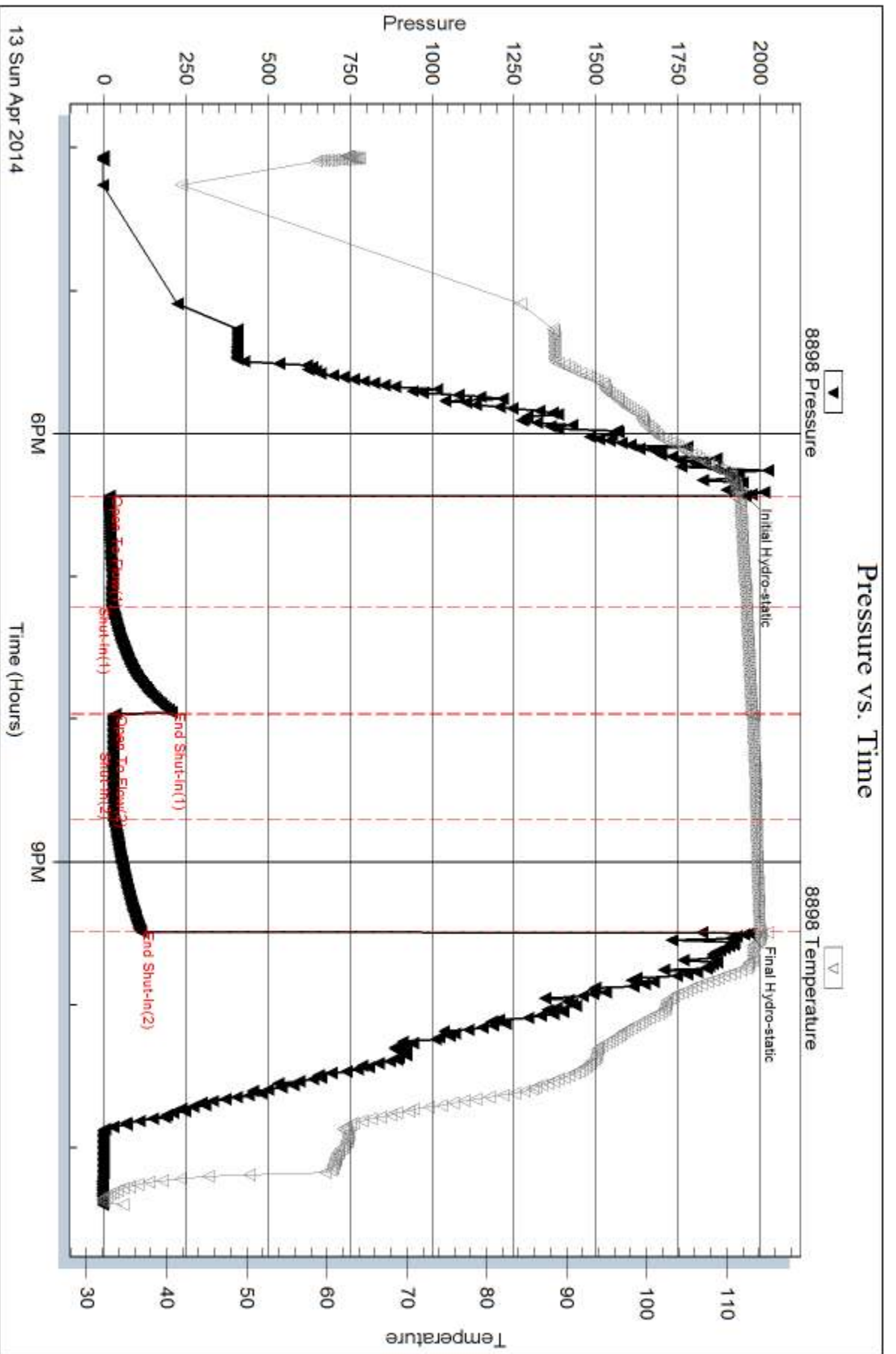
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



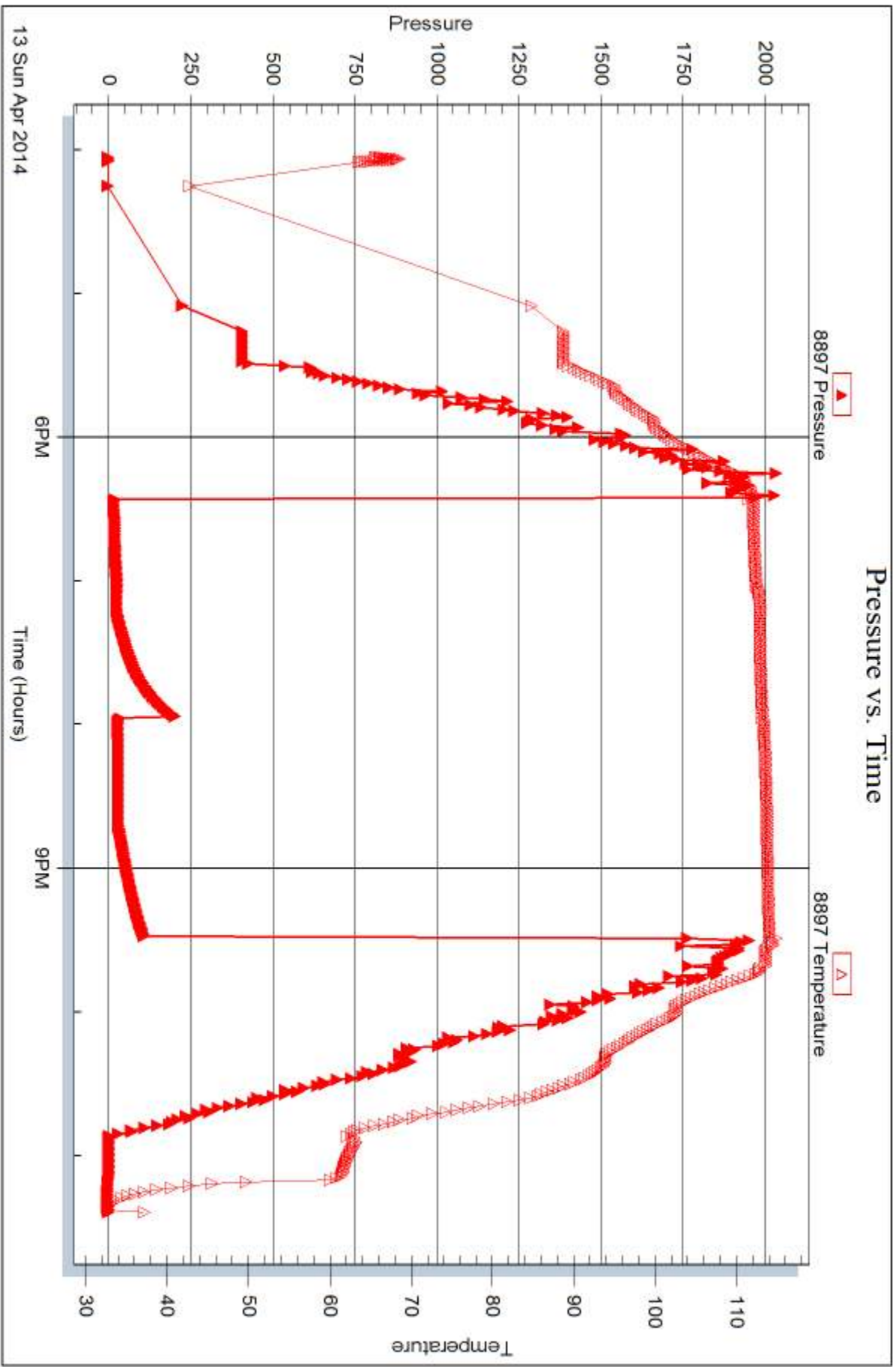
Serial #: 8897

Inside

Dow lng Nelson Oil Company

Well 'C' #1-4

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 57564

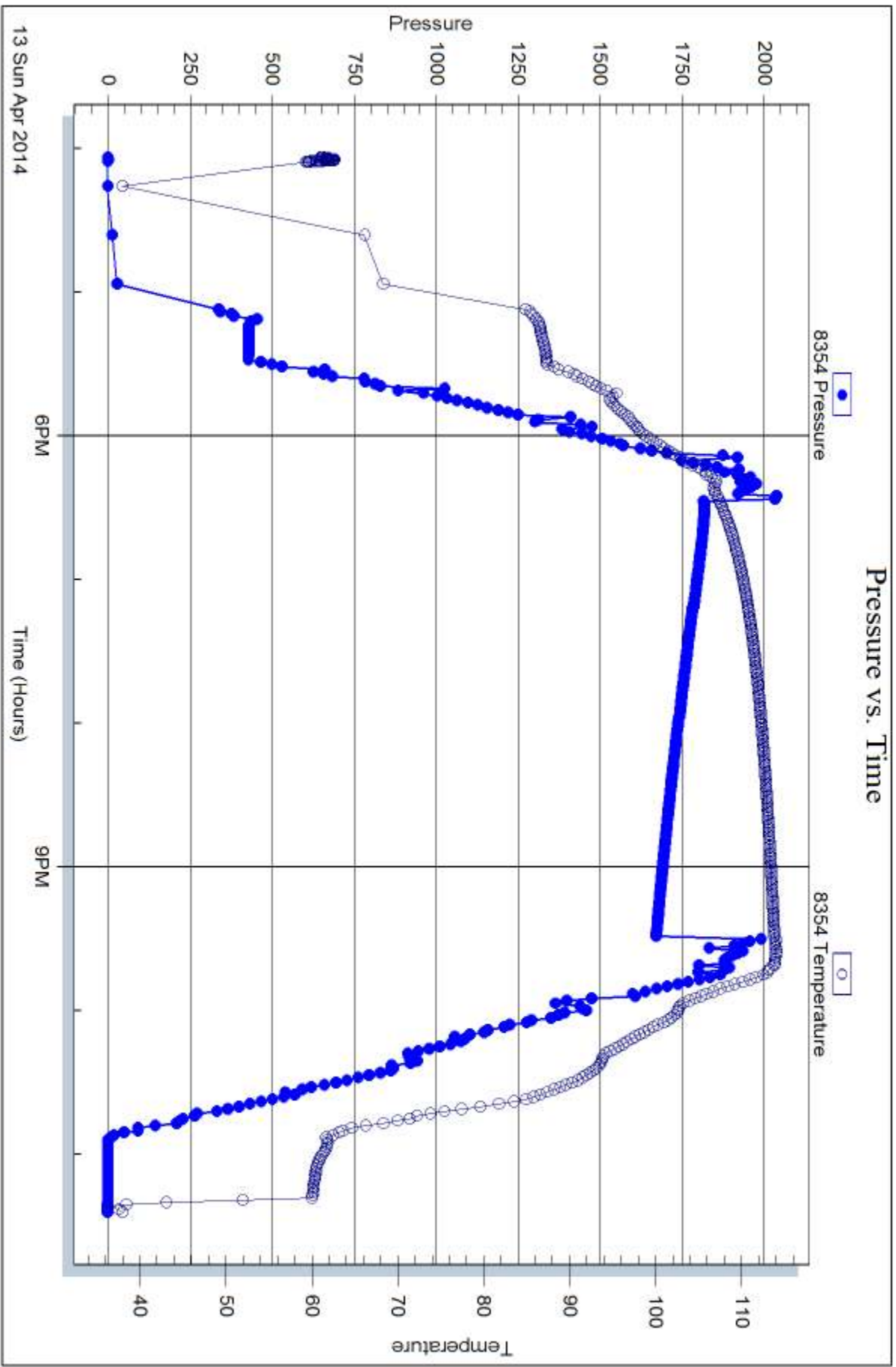
Printed: 2014.04.16 @ 12:01:05

Serial #: 8354

Below (Stratberry) Nelson Oil Company

Well 'C' #1-4

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 57564

Printed: 2014.04.16 @ 12:01:06



DRILL STEM TEST REPORT

Prepared For: **Dowing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Dowling

Walt "C" #1-4

4-9s-24w Graham,KS

Start Date: 2014.04.14 @ 00:05:20

End Date: 2014.04.14 @ 07:11:10

Job Ticket #: 57566 DST #: 3

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

Printed: 2014.04.16 @ 12:00:34



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57566

DST#: 3

ATTN: Marc Dow ing

Test Start: 2014.04.14 @ 00:05:20

GENERAL INFORMATION:

Formation: **LKC E&F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:00:10

Time Test Ended: 07:11:10

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3836.00 ft (KB) To 3885.00 ft (KB) (TVD)

Reference Elevations: 2450.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2442.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 57.19 psig @ 3841.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.14

End Date:

2014.04.14

Last Calib.: 2014.04.14

Start Time: 00:05:21

End Time:

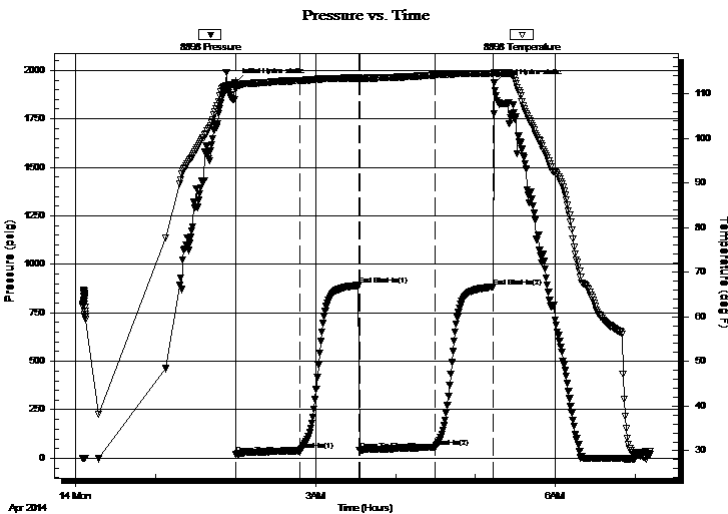
07:11:10

Time On Btm: 2014.04.14 @ 02:00:00

Time Off Btm: 2014.04.14 @ 05:13:59

TEST COMMENT: Fair blow built to 6"
Dead no blow back
Fair blow built to 6"
Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1937.25	112.12	Initial Hydro-static
1	19.38	110.92	Open To Flow (1)
49	39.01	112.92	Shut-In(1)
93	892.04	113.52	End Shut-In(1)
93	39.82	113.29	Open To Flow (2)
150	57.19	114.19	Shut-In(2)
194	883.30	114.52	End Shut-In(2)
194	1934.19	114.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
85.00	30%O 70%M	0.92
5.00	100%O	0.07
0.00	30 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57566

DST#: 3

ATTN: Marc Dow ing

Test Start: 2014.04.14 @ 00:05:20

GENERAL INFORMATION:

Formation: **LKC E&F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:00:10

Time Test Ended: 07:11:10

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3836.00 ft (KB) To 3885.00 ft (KB) (TVD)

Reference Elevations: 2450.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2442.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8897 Inside

Press@RunDepth: psig @ 3841.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.14

End Date: 2014.04.14

Last Calib.: 2014.04.14

Start Time: 00:05:09

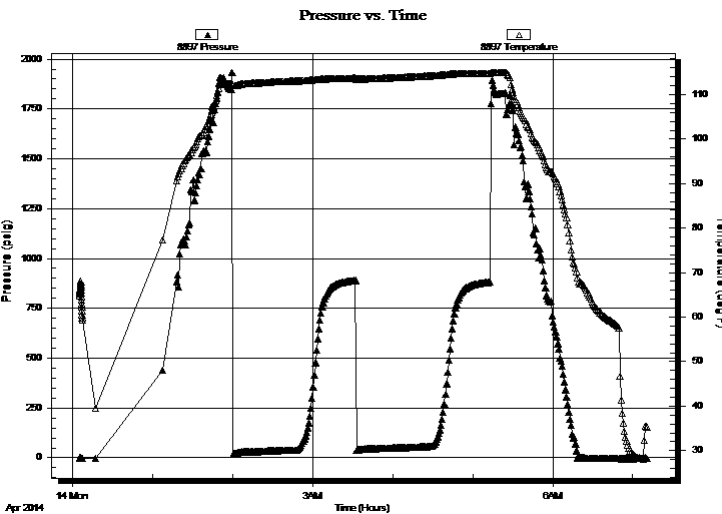
End Time: 07:10:58

Time On Btm:

Time Off Btm:

TEST COMMENT: Fair blow built to 6"
Dead no blow back
Fair blow built to 6"
Dead no blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
85.00	30%O 70%M	0.92
5.00	100%O	0.07
0.00	30 GIP	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow Ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57566

DST#: 3

ATTN: Marc Dow ing

Test Start: 2014.04.14 @ 00:05:20

GENERAL INFORMATION:

Formation: **LKC E&F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:00:10

Time Test Ended: 07:11:10

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3836.00 ft (KB) To 3885.00 ft (KB) (TVD)

Reference Elevations: 2450.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2442.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8354 Below (Straddle)

Press@RunDepth: psig @ 3895.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.14

End Date:

2014.04.14

Last Calib.:

2014.04.14

Start Time: 00:05:31

End Time:

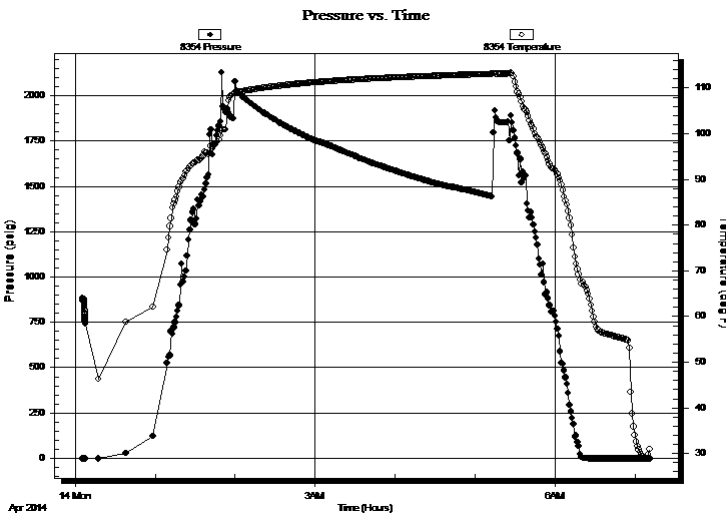
07:11:00

Time On Btm:

Time Off Btm:

TEST COMMENT: Fair blow built to 6"
Dead no blow back
Fair blow built to 6"
Dead no blow back

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
85.00	30%O 70%M	0.92
5.00	100%O	0.07
0.00	30 GIP	0.00

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57566

DST#: 3

ATTN: Marc Dow ing

Test Start: 2014.04.14 @ 00:05:20

Tool Information

Drill Pipe:	Length: 3811.00 ft	Diameter: 3.80 inches	Volume: 53.46 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: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 53.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3836.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	3885.00 ft			
Interval between Packers:	49.00 ft			
Tool Length:	251.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3814.00	
Hydraulic tool	5.00			3819.00	
Jars	5.00			3824.00	
Safety Joint	2.00			3826.00	
Packer	5.00			3831.00	27.00 Bottom Of Top Packer
Packer	5.00			3836.00	
Stubb	1.00			3837.00	
Perforations	4.00			3841.00	
Recorder	0.00	8897	Inside	3841.00	
Recorder	0.00	8898	Outside	3841.00	
Change Over Sub	1.00			3842.00	
Drill Pipe	32.00			3874.00	
Change Over Sub	1.00			3875.00	
Perforations	5.00			3880.00	
Blank Off Sub	1.00			3881.00	
Blank Spacing	4.00			3885.00	49.00 Tool Interval
Packer	5.00			3890.00	
Stubb	1.00			3891.00	
Perforations	4.00			3895.00	
Recorder	0.00	8354	Below	3895.00	
Change Over Sub	1.00			3896.00	
Blank Spacing	160.00			4056.00	
Change Over Sub	1.00			4057.00	
Bullnose	3.00			4060.00	175.00 Bottom Packers & Anchor
Total Tool Length:	251.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ing Nelson Oil Company

4-9s-24w Graham,KS

PO Box 1019
Hays KS 67601

Walt "C" #1-4

Job Ticket: 57566

DST#: 3

ATTN: Marc Dow ing

Test Start: 2014.04.14 @ 00:05:20

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 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
85.00	30%O 70%M	0.919
5.00	100%O	0.070
0.00	30 GIP	0.000

Total Length: 90.00 ft Total Volume: 0.989 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

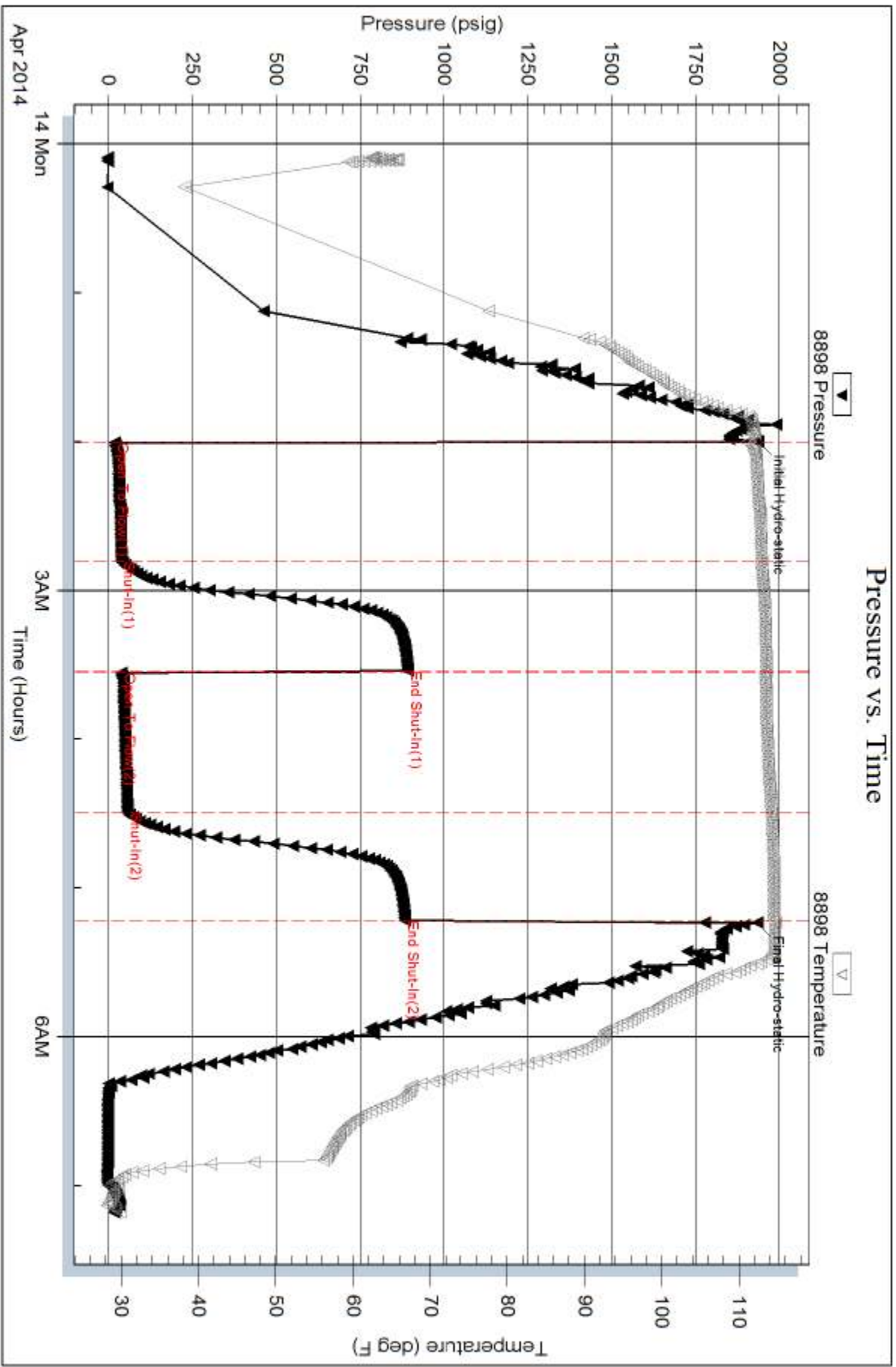
Recovery Comments:

Serial #: 8898

Outside Dow lng Nelson Oil Company

Well 'C' #1-4

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 57566

Printed: 2014.04.16 @ 12:00:37

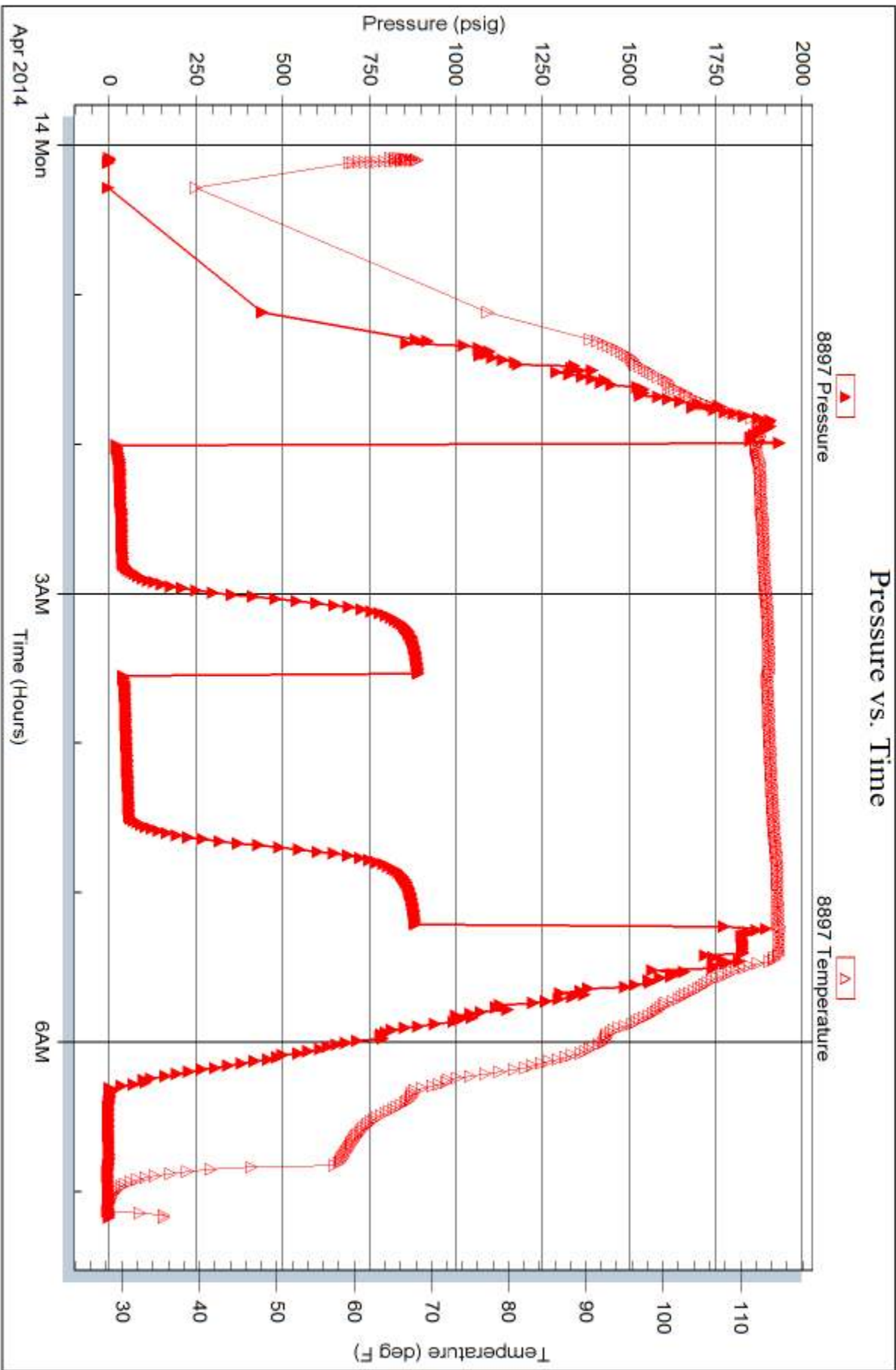
Serial #: 8897

Inside

Dowling Nelson Oil Company

Well 'C' #1-4

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 57566

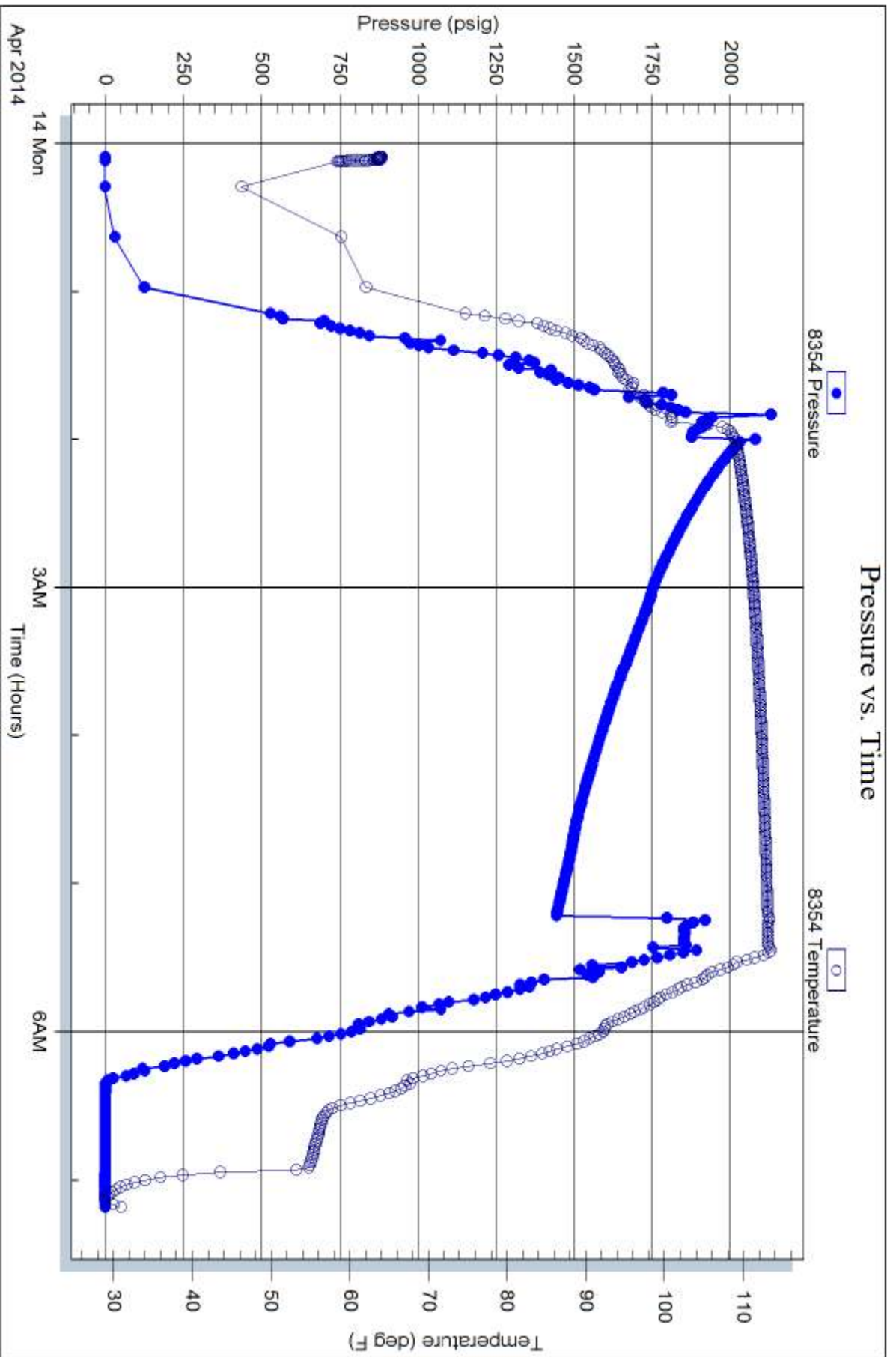
Printed: 2014.04.16 @ 12:00:37

Serial #: 8354

Below (Stratton) Nelson Oil Company

Well 'C' #1-4

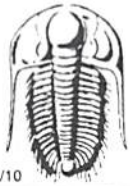
DST Test Number: 3



Tribble Testing, Inc

Ref. No: 57566

Printed: 2014.04.16 @ 12:00:37



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57563

Well Name & No. Walt "C" # 1-4 Test No. 1 Date 4-12-14
 Company Downing Nelson Oil Company Elevation 2450 KB 2442 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downey Rig Discovery # 1
 Location: Sec. 4 Twp. 9S Rge. 24W Co. Graham State KS

Interval Tested 3920 3946 Zone Tested I
 Anchor Length 26 Drill Pipe Run 3893 Mud Wt. 9.2
 Top Packer Depth 3915 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3920 Wt. Pipe Run 0 WL 8.8
 Total Depth 3946 Chlorides 2000 ppm System LCM 1#

Blow Description B.O.B. IN 17 mins
Dead no blow back
B.O.B. IN 35 mins
Dead no blow back

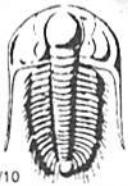
Rec	Feet of	%gas	%oil	%water	%mud
<u>360</u>	<u>Water</u>		<u>100</u>		
<u>40</u>	<u>WCM</u>		<u>40</u>	<u>60</u>	
<u>1</u>	<u>Free Oil</u>		<u>100</u>		

Rec Total 401 BHT 119 Gravity _____ API RW 239 @ 60 °F Chlorides 35000 ppm
 (A) Initial Hydrostatic 1962 Test 1150 T-On Location 14:40
 (B) First Initial Flow 21 Jars _____ T-Started 15:50
 (C) First Final Flow 136 Safety Joint _____ T-Open 17:50
 (D) Initial Shut-In 357 Circ Sub _____ T-Pulled 20:50
 (E) Second Initial Flow 138 Hourly Standby _____ T-Out 23:03
 (F) Second Final Flow 208 Mileage 124 RM 192.20 Comments _____
 (G) Final Shut-In 357 Sampler _____
 (H) Final Hydrostatic 1923 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1342.20
 Total 1342.20
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57564

Well Name & No. Well "C" #1-21 Test No. 2 Date 4-13-14
 Company DNOC Elevation 2450 KB 2442 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 4 Twp. 9S Rge. 24W Co. Graham State KS

Interval Tested 3939-3977 Zone Tested J+K
 Anchor Length 78 Tail 38 Drill Pipe Run 3910 Mud Wt. 9.3
 Top Packer Depth 3934 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3939 Wt. Pipe Run 0 WL 8.8
 Total Depth 4055 Chlorides 3000 ppm System LCM 1#

Blow Description Weak surface blow built to 3 in
Dead no blow back
Weak surface blow built to 1 1/2 in
Dead no blow back

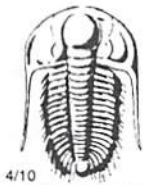
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>40</u>	Feet of <u>0.1m</u>		<u>40</u> %oil		<u>60</u> %mud
Rec <u>0</u>	Feet of <u>20' GIP</u>	<u>100</u> %gas			
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1956 Test 1250 T-On Location 15:00
 (B) First Initial Flow 17 Jars _____ T-Started 16:03
 (C) First Final Flow 26 Safety Joint _____ T-Open 18:26
 (D) Initial Shut-In 208 Circ Sub _____ T-Pulled 22:26
 (E) Second Initial Flow 29 Hourly Standby _____ T-Out 23:24
 (F) Second Final Flow 29 Mileage 192.20 Comments _____
 (G) Final Shut-In 113 Sampler _____
 (H) Final Hydrostatic 1967 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 2042.20
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2042.20

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57566

Well Name & No. Walt "C" #1-4 Test No. 3 Date 4-14-14
 Company DNOC Elevation 2450 KB 2442 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 4 Twp. 9S Rge. 24W Co. Graham State KS

Interval Tested 3836 3885 Zone Tested E&F
 Anchor Length 49' 170 Tail Drill Pipe Run 3811 Mud Wt. 9.3
 Top Packer Depth 3831 Drill Collars Run 30 Vis ST
 Bottom Packer Depth 3836 Wt. Pipe Run 0 WL 8.0
 Total Depth 3840 4055 Chlorides 3006 ppm System LCM 1#

Blow Description Fair blow built to 6 in
Dead no blow back
Fair surface blow built to 6 in
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>95</u>	Feet of <u>OCM</u>	%gas <u>30</u>	%oil	%water	%mud <u>70</u>
Rec <u>5</u>	Feet of <u>Clear Oil</u>	%gas <u>100</u>	%oil	%water	%mud
Rec <u>0</u>	Feet of <u>30' GIP</u>	<u>100</u> %gas	%oil	%water	%mud

Rec Total 90 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1937 Test 1250 T-On Location _____
 (B) First Initial Flow 19 Jars _____ T-Started 00:05
 (C) First Final Flow 39 Safety Joint _____ T-Open 02:01
 (D) Initial Shut-In 892 Circ Sub _____ T-Pulled 05:01
 (E) Second Initial Flow 210 Hourly Standby _____ T-Out 07:11
 (F) Second Final Flow 57 Mileage _____ Comments _____
 (G) Final Shut-In 883 Sampler _____
 (H) Final Hydrostatic 1934 Straddle 600 Ruined Shale Packer _____

Initial Open 45 Extra Packer _____
 Initial Shut-In 45 Extra Recorder _____
 Final Flow 45 Day Standby _____
 Final Shut-In 45 Accessibility _____
 Sub Total 1850

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Marc A. Downing		Geologic Report	
Consulting Petroleum Geologist		Drilling Time and Sample Log	
Operator Downing-Nelson Oil Co., Inc.		Elevation KB 2450 DF 2448 GL 2442	
Lease Walt "C"	No. 1-4	Casing Record Surface 8 5/8" @ 220' Production 5 1/2" @ 4054'	
API # 15-065-24030-0000		Electrical Surveys CNL/CDL, DIL, MEL	
Field Holley		Location 330' FSL & 2550' FEL	
Sec. 4	Twp. 9s	Rge. 24w	
County Graham		State Kansas	
Formation	Sample tops	Log Tops	Datum
Top Anhydrite	2148	2147	+303
Base Anhydrite	2185	2182	+268
Topoka	3528	3526	-1076
Heebner	3744	3741	-1291
Toronto	3768	3765	-1315
LKC	3782	3780	-1330
BKC	4005	4004	-1554
Total Depth	4055	4055	-1605
Reference Well For Structural Comparison	Champlin SE SW SE		
Kieth #3	Sec. 4-9s-24w		

Drilling Contractor		Discovery Drilling, Rig #1	
Commenced	4-8-14	Completed	4-14-14
Samples Saved From	3700	To	RTD
Drilling Time Kept From	3400	To	RTD
Samples Examined From	3700	To	RTD
Geological Supervision From	3400	To	RTD

Summary and Recommendations	
Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion.	

Respectfully Submitted,

Marc A. Downing

