



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1182800
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: _____

1182800

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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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Grove 1-32
Doc ID	1182800

All Electric Logs Run

Micro
Sonic
Dual Induction
Compensated Density/Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Grove 1-32
Doc ID	1182800

Tops

Name	Top	Datum
Top Anhydrite	1258'	+837
Base Anhydrite	1292'	+803
Heebner	3432'	-1337
Toronto	3450'	-1355
LKC	3479'	-1384
BKC	3749'	-1654
Marmaton	3797'	-1702
Arbuckle	3834'	-1738

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. 7603

Date	11-9-13	Sec.	32	Twp.	17	Range	18	County	Bush	State	KS	On Location	9:00 Pm	Finish	12:15 Am
------	---------	------	----	------	----	-------	----	--------	------	-------	----	-------------	---------	--------	----------

Location Lachosse 1W to 240 RD

Lease Grove Well No. 1-32 Owner 15 1/2 W Ninto

Contractor Dischovaty 3
To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
Type Job Surface cementer and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4 T.D. 1269 Charge To Downing Nelson

Csg. 8 5/8 Depth 1258.97 Street Downing Nelson

Tbg. Size _____ Depth _____ City _____ State _____

Tool _____ Depth _____ The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 47.38 Shoe Joint 47.38 Pt Cement Amount Ordered 475 3900 No gel

Meas Line 23# Displace 77.5 BBL

EQUIPMENT

Pumptrk 5 No. _____ Cementer Mar + H Common 475
Helper _____ Poz. Mix _____

Bulktrk 19 No. _____ Driver Lohrie Gel. 9
Driver _____

Bulktrk pu No. _____ Driver Dave Calcium 17
Driver _____

JOB SERVICES & REMARKS

Remarks: _____ Hulls _____

Rat Hole _____ Salt _____

Mouse Hole _____ Flowseal _____

Centralizers _____ Kol-Seal _____

Baskets _____ Mud CLR 48 _____

D/V or Port Collar _____ CFL-117 or CD110 CAF 38 _____

_____ Sand _____

_____ Handling 501 _____

_____ Mileage 878 _____

FLOAT EQUIPMENT

_____ Guide Shoe _____

_____ Centralizer 2 _____

_____ Baskets _____

_____ AFU Inserts _____

_____ Float Shoe _____

_____ Latch Down _____

_____ Buffer plate _____

_____ Rubber plug _____

_____ Pumptrk Charge Long Surface _____

_____ Mileage 26 _____

_____ _____

_____ Tax _____

_____ Discount _____

_____ Total Charge _____

X Signature Ben Dacher

ALLIED OIL & GAS SERVICES, LLC 061960

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

Great Bend

DATE <i>11-15-13</i>	SEC <i>32</i>	TWP. <i>17</i>	RANGE <i>18</i>	CALLED OUT	ON LOCATION	JOB START <i>10 Am</i>	JOB FINISH <i>11 Am</i>
LEASE <i>Grass</i>	WELL# <i>1-32</i>	LOCATION <i>Lbers 1 west N into</i>				COUNTY <i>Rush</i>	STATE <i>KS</i>
OLD OR NEW (Circle one)							

CONTRACTOR *Downing Drilling #3*
 TYPE OF JOB *Rotary Plug*
 HOLE SIZE *12 1/4* T.D.
 CASING SIZE *8 3/8* DEPTH
 TUBING SIZE DEPTH
 DRILL PIPE *4 1/2* DEPTH *3825*
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. *All*
 PERFS.
 DISPLACEMENT *Frothwater*

OWNER
 CEMENT AMOUNT ORDERED *210 5105 60/40 4/80/2*
 COMMON *126* @ *17.90* *2,255.40*
 POZMIX *84* @ *9.35* *785.40*
 GEL *7* @ *23.40* *163.80*
 CHLORIDE @
 ASC @
 HANDLING *221.64* @ *2.48* *549.71*
 MILEAGE *9.38 x 254* *2.60* *609.70*

EQUIPMENT
 PUMP TRUCK CEMENTER *Josh Isaac*
 # *1398* HELPER *Andy Fimple*
 BULK TRUCK
 # *344-170* DRIVER *Tommy Tijerina*
 BULK TRUCK
 # DRIVER

TOTAL *4,364.01*
 SERVICE
 DEPTH OF JOB *3825*
 PUMP TRUCK CHARGE *2600.43*
 EXTRA FOOTAGE @
 MILEAGE *Hum 25* @ *7.70* *192.50*
 MANIFOLD @
Hum 25 @ *4.40* *110.00*

REMARKS:
Ran 4 1/2 drill pipe
on back side of rig and
#1 - 3825 - 5000
#2 - 1300 ft - 50 RH - 30
#3 - 480 - 40 RH - 20
#4 - 60 - 20
Plug down
Rig down

CHARGE TO: *Downing-Nelson oil co*
 STREET
 CITY STATE ZIP

TOTAL *2,902.97*

PLUG & FLOAT EQUIPMENT
 @
 @
 @
 @
 @

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

TOTAL
 SALES TAX (If Any)
 TOTAL CHARGES *7,266.98*
 DISCOUNT *1,453.37* IF PAID IN 30 DAYS
5,813.58

PRINTED NAME *X GALEN GASCHLER*
 SIGNATURE *X Galen Gaschler*
Thank you!



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Al Downing

Grove #1-32

32-17s-18w Rush,KS

Start Date: 2013.11.13 @ 10:15:00

End Date: 2013.11.13 @ 17:53:15

Job Ticket #: 55319 DST #: 1

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

Printed: 2013.11.15 @ 10:37:42



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co Inc.

32-17s-18w Rush,KS

PO Box 1019
Hays KS 67601

Grove #1-32

Job Ticket: 55319

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.11.13 @ 10:15:00

GENERAL INFORMATION:

Formation: **KC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:40:45

Time Test Ended: 17:53:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3489.00 ft (KB) To 3520.00 ft (KB) (TVD)

Reference Elevations: 2098.00 ft (KB)

Total Depth: 3520.00 ft (KB) (TVD)

2090.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8736 Inside

Press@RunDepth: 37.00 psig @ 3517.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.13

End Date: 2013.11.13

Last Calib.: 2013.11.13

Start Time: 10:15:05

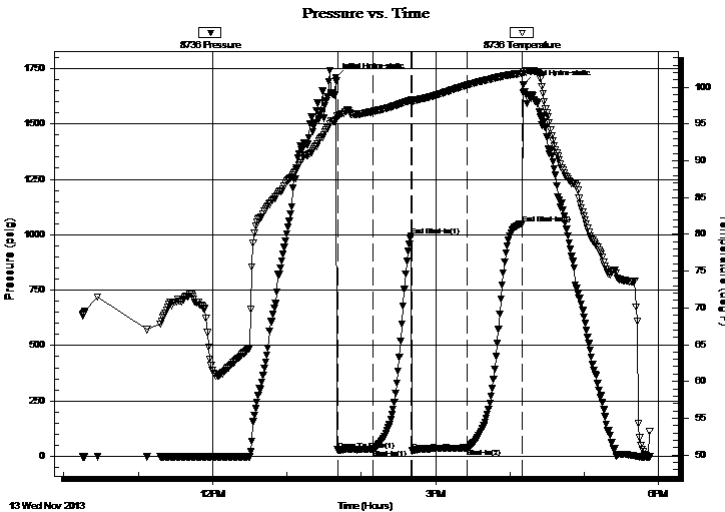
End Time: 17:53:14

Time On Btm: 2013.11.13 @ 13:39:30

Time Off Btm: 2013.11.13 @ 16:11:00

TEST COMMENT: IF-1 1/2" blow
IS-No blow
FF-5" blow
FS-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1708.35	95.42	Initial Hydro-static
2	29.06	96.08	Open To Flow (1)
31	32.09	96.71	Shut-In(1)
61	993.95	98.23	End Shut-In(1)
62	24.72	97.95	Open To Flow (2)
106	37.00	100.27	Shut-In(2)
151	1049.50	101.88	End Shut-In(2)
152	1678.49	102.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	VSOCM 5%O 95%M	0.57

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc.

32-17s-18w Rush, KS

PO Box 1019
Hays KS 67601

Grove #1-32

Job Ticket: 55319

DST#: 1

ATTN: Al Downing

Test Start: 2013.11.13 @ 10:15:00

GENERAL INFORMATION:

Formation: **KC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:40:45

Time Test Ended: 17:53:15

Interval: 3489.00 ft (KB) To 3520.00 ft (KB) (TVD)

Total Depth: 3520.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Reference Elevations: 2098.00 ft (KB)

2090.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6753

Outside

Press@RunDepth: psig @ 3517.00 ft (KB)

Start Date: 2013.11.13

End Date:

2013.11.13

Start Time: 10:15:05

End Time:

17:53:14

Capacity: 8000.00 psig

Last Calib.:

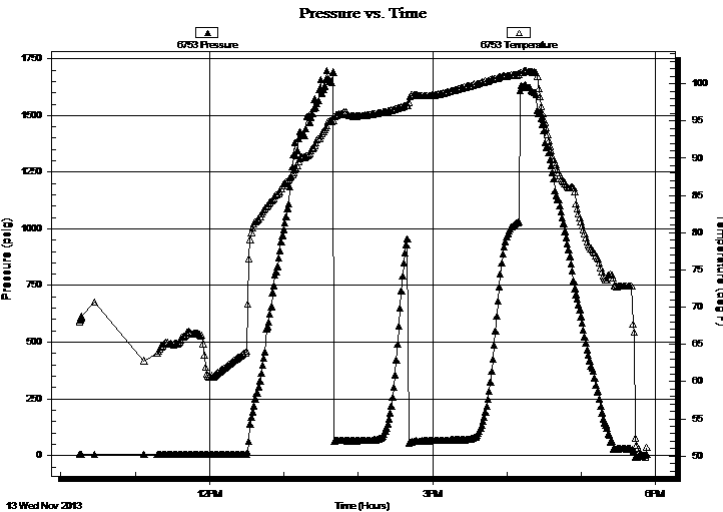
2013.11.13

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-1 1/2" blow
IS-No blow
FF-5" blow
FS-No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	VSOCM 5%O 95%M	0.57

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.

32-17s-18w Rush,KS

PO Box 1019
Hays KS 67601

Grove #1-32

Job Ticket: 55319

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.11.13 @ 10:15:00

Tool Information

Drill Pipe:	Length: 3456.00 ft	Diameter: 3.80 inches	Volume: 48.48 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - 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:</u>	Tool Chased	5.00 ft
			- bbl	String Weight: Initial	52000.00 lb
Drill Pipe Above KB:	18.00 ft			Final	52000.00 lb
Depth to Top Packer:	3489.00 ft				
Depth to Bottom Packer:	ft				
Interval betw een Packers:	31.00 ft				
Tool Length:	52.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3469.00	
Shut In Tool	5.00			3474.00	
Hydraulic tool	5.00			3479.00	
Packer	5.00			3484.00	21.00 Bottom Of Top Packer
Packer	5.00			3489.00	
Stubb	1.00			3490.00	
Perforations	27.00			3517.00	
Recorder	0.00	8736	Inside	3517.00	
Recorder	0.00	6753	Outside	3517.00	
Bullnose	3.00			3520.00	31.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Co Inc.

32-17s-18w Rush,KS

PO Box 1019
Hays KS 67601

Grove #1-32

Job Ticket: 55319

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.11.13 @ 10:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1250.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	VSOCM 5%O 95%M	0.568

Total Length: 60.00 ft Total Volume: 0.568 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

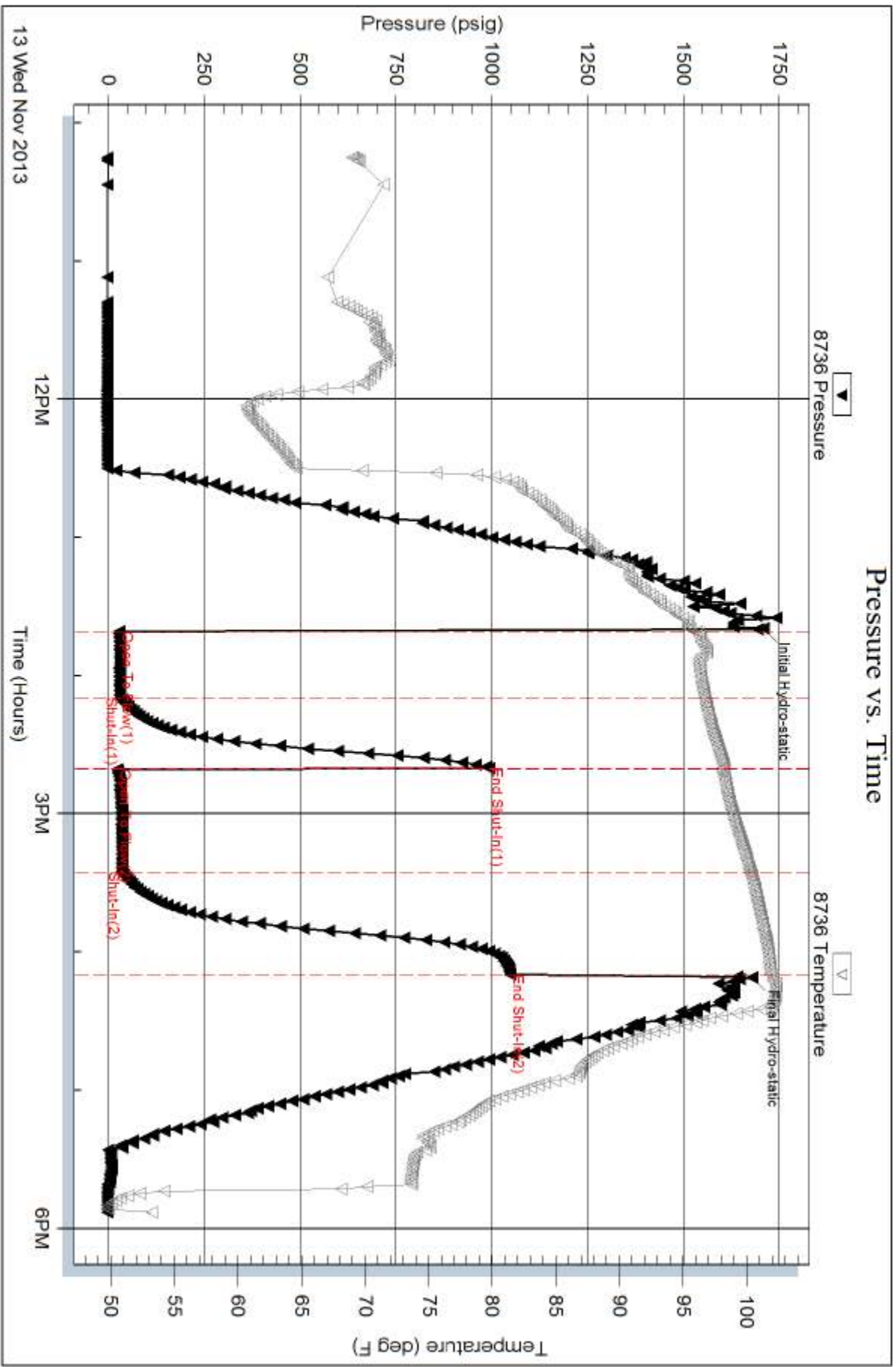
Serial #: 8736

Inside

Downing Nelson Oil Co Inc.

Grove #1-32

DST Test Number: 1



13 Wed Nov 2013

12PM

Time (Hours)

3PM

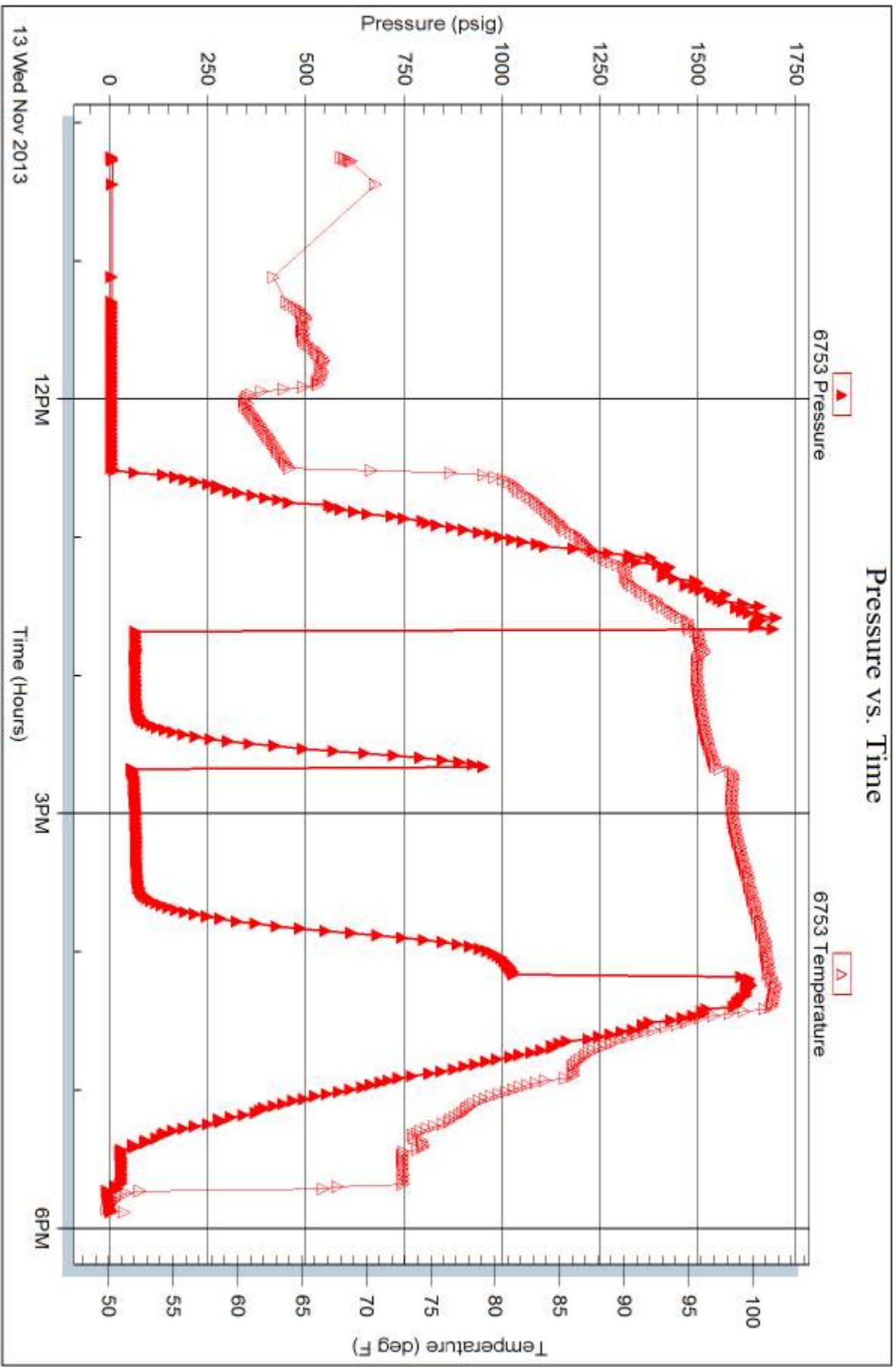
6PM

Serial #: 6753

Outside Dow n ing Nelson Oil Co Inc.

Grove #1-32

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55319

Printed: 2013.11.15 @ 10:37:43



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55319**

Well Name & No. Grove 1-32 Test No. 1 Date 11/13/13
 Company Downing - Nelson Oil Co Inc. Elevation 2098 KB 2090 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. AI Downing Rig Discovery #3
 Location: Sec. 32 Twp. 17 Rge. 18 Co. Rush State KS

Interval Tested 3489-3520 Zone Tested KC" C"
 Anchor Length 31 Drill Pipe Run _____ Mud Wt. 8.6
 Top Packer Depth 3484 Drill Collars Run 30 Vis 55
 Bottom Packer Depth 3489 Wt. Pipe Run _____ WL 8.0
 Total Depth 3520 Chlorides 1250 ppm System LCM 1/2#

Blow Description IF - 1 1/2 in blow
FSI - No blow
FF - 5 in blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>VS OCM</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 60 BHT 102 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1,708 Test 1150 T-On Location 9:40
 (B) First Initial Flow 29 Jars _____ T-Started 10:45
 (C) First Final Flow 32 Safety Joint _____ T-Open 13:38
 (D) Initial Shut-In 994 Circ Sub _____ T-Pulled 16:08
 (E) Second Initial Flow 25 Hourly Standby _____ T-Out 17:52
 (F) Second Final Flow 37 Mileage 55 rtx 2 170.50 Comments _____
 (G) Final Shut-In 1,050 Sampler _____ loaded tools 5:00
 (H) Final Hydrostatic 1,678 Straddle _____ 11/15/13

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 30 Ruined Packer _____
 Final Flow 45 Extra Packer _____
 Final Shut-In 45 Extra Recorder _____
 Day Standby 1d 11.25h Sub Total 800
 Accessibility _____ Total 2120.50
 Sub Total 1320.50 MP/DST Disc't _____

Approved By _____ Our Representative Burt D. [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 Downing
Downing-Nelson Oil Co., Inc.
WELL: Ben Groves #1-3Z

COMPANY: Downing-Nelson Oil Co., Inc.
WELL: Ben Groves #1-3Z

LOCATION: B2D' FSL-1395' FEL
SEC. 32 TWP. 7S RGE. 18W
COUNTY: Rush
STATE: Kansas

PRODUCTION: Dry
ELEVATION: RB 2095
DI: 2087
GI: 2095 RB

OPERATOR: DMOCT
CONTRACTOR: Downing Oil Co. Rig # 3
CONM: 11-08-83 COMP.
CASING RECORD: Nabors
SURF: 85' - 124' PROD. 3917
TOTAL DEPTH DRILLERS: 3920
TOTAL DEPTH LOG: 3920

Drilling Measured From:
Sampled From: 3140 to 3140 TD
3000 to 3000 TD
3000 to 3000 TD
Samples Examined from: 3140 to 3140 TD
Geological Supervisors: Alan Downing
Geologist: Nabors
Electrician: DNL/GR - Mircelag
Sour: Dual Induction

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DITOM	STRUCTURAL POSITION
Anhydrite	1257	1258	+837	+6
Kaol	1292	1292	+805	+3
Heelder	3429	3432	-1337	-8
Toronto	3458	3458	-1365	-9
Cansing	3478	3478	-1384	-2
Marmaton	3748	3747	-1702	+5
Arbuckle	3831	3834	-1738	+14

REFERENCE WELL FOR STRUCTURE
Wilson Trust NE-N/E-SW
Sec 32-7S-18W Rush Co., KS.

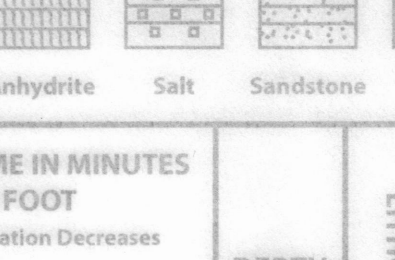
DRILL STEM TESTS

No.	Interval	HP/Time	ISP/Time	FP/Time	IR/FP	RECOVERY

REMARKS AND RECOMMENDATIONS
Will run logs to old tracks. All shows were tested. Arbuckle was high and pinched out (cong. sd., also had No shows and calculated wt.

STRAWS WERE TESTED. ARBUCKLE WAS HIGH AND PINCHED OUT (CONG. SD., ALSO HAD NO SHOWS AND CALCULATED WT.

LEGEND



DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Decreases
5" 10" 15"

DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
3000				
50				
3100				
50				
3200				
50				
3300				
50				
3400				
50				
3500				
50				
3600				
50				
3700				
50				
3800				
50				
3900				

Vis 55
wt 8.0
ml 8.0
cm 1/2"

DST #1
3489 - 3520
30-30-45-45
Rec:
60' vsocm
590ci - 952m

IHP: 1708#
IFP: 29-32"
SFP: 25-37"
SIP: 994-1050"
FIP: 1678#

HEERWER 3429(-1334)
Toronto 3480(-1355)
Cansing 3478(-1383)
BKC 3748(-1653)
Marmaton 3745(-1700)
Arbuckle 3831(-1736)

RTD: 3917 (-1822)
LTD: 3920 (-1825)

Marc Downing