Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1182978

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 # 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: Coffeyville Resources

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 #:

01/20/2014	01/28/2014	01/29/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26658-00-00
Spot Description:
SE - NW - NW - NW Sec. 30 Twp. 14 S. R. 18 ☐ East ☑ West
335 Feet from ☑ North / ☐ South Line of Section
335 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ellis
Lease Name: Amy Well #: 1-30
Field Name: Wildcat
Producing Formation: Arbuckle
Elevation: Ground: 2060 Kelly Bushing: 2068
Total Vertical Depth: 3812 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1232 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: 32000 ppm Fluid volume: 720 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Blackhawk Production Company
Lease Name: Brull #2 License #: 32504
Quarter NW Sec. 30 Twp. 14 S. R. 18 ☐ East ☑ West
County: Ellis Permit #: D26232

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:** Deanna Garrison **Date:** 04/23/2014

[redacted] 1182978

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Amy Well #: 1-30

Sec. 30 Twp. 14 S. R. 18 ☐ East ☑ West County: Ellis

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Micro
Dual Induction
Compensated Density/Neutron

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name Attached Top Attached Datum Attached

CASING RECORD ☑ New ☐ 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	1323	Common	480	2% Gel & 3% CC
Production Casing	7.875	5.5	14	3810	EA/2	130	

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	-			
	-			

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 *(Amount and Kind of Material Used)*	Depth
4	3717' - 3719' & 3721'-3723'	350 gallons 15% Mud Acid	3717' - 3719' & 3721'-372
		50sks common cement	3717' - 3719' & 3721'-372
4	3717' - 3719' & 3721'-3723'	350 gallons 20% Mud Acid	3717' - 3719' & 3721'-372

TUBING RECORD: Size: 2.3750 Set At: 3756' Packer At:

Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 03/18/2014

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	2		20		

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Amy 1-30
Doc ID	1182978

Tops

Name	Top	Datum
Top Anhydrite	1317'	+752
Base Anhydrite	1358'	+711
Topeka	3098'	-1029
Heebner	3353'	-1284
Toronto	3370'	-1301
LKC	3400'	-1331
BKC	3633'	-1564
Arbuckle	3717'	-1648

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. 7716

Date	Sec.	Twp.	Range	County	State	On Location	Finish
1-22-14	30	14	18	Ellis	KS		7:00Am

Location Hays S Munger Rd 3w 1/8s Into

Lease Amy Well No. 1-30

Contractor Discovery #4

Type Job Surface

Hole Size 12 1/4 T.D. 1323

Csg. 8 5/8 Depth 1323

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 28' Shoe Joint 28'

Meas Line Displace 82 1/2 BL

EQUIPMENT

Pumptrk 18 No. Cementer Craig
Helper

Bulktrk No. Driver Cody
Driver

Bulktrk 12 No. Driver
Driver David

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar Baffle Set @ 1295'

8 5/8 on bottom: Est. Circulation. Mix 480 SK & Displace Plug.

Cement Circulated

Plug landed @ 200#.

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.

Charge To Downing/Nelson

Street

City State

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

Cement Amount Ordered 480 com 3% CC 2% Gel 1/4# Flow

Common	480
Poz. Mix	
Gel.	9
Calcium	17
Hulls	
Salt	
Flowseal	120#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	506
Mileage	

FLOAT EQUIPMENT

Guide Shoe	8 5/8
Centralizer	2
~~Baskets~~	Baffle Plate
~~AFU Inserts~~	Rubber Plug
Float Shoe	
Latch Down	
Pumptrk Charge	Long Surface
Mileage	8
Tax	
Discount	
Total Charge	

X Signature

JOB LOG — **SWIFT Services, Inc.** — DATE 1-28-14 — PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Dominion & NeGas	1-30	Amy	Cement Longstring	25373

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	TD-3812' DESCRIPTION OF OPERATION AND MATERIALS
1/28	2300					14#/A	5½	On location w/ Float Equip
								Rig Classics over
1/29	0015							Start 5½" casing to 3810'
								Tagged Float Shoe w/ Fillup
								L.D. Baffle - S.J. 21½' = 3789'
								Cent - 1-3-5-7-9-11
								Drop Fillup Ball
	0145							Rig Tag bottom Lay down JT.
	0200							Start circ / Rotate
								Get Pump Tks Ready
			1/5			~		Plug RH - 30 sks EA-2 cmt
								MH 20 sks EA-2 cmt
		6	12				300	Pump 500 gal Mud Flush
		6	20				300	Pump 30 BBL KCl Flush
		4					200	Start 125 sks EA-2 cmt
			30				200/Vac	Finish cmt
								Wash out Pump & Lines
								Drop L.D. Plug.
		9					300	Start Displ
		9	70				400	Caught it PR press
		7/8	80				700/1600	Slow rate
		6	85				700	Slow rate
	0240						1000/1500	Plug Down - Hold / Release & Held
								Job Complete
								Wash up & Rack up
								Thanks
								Ron, Jon & Craig

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

Amy #1-30

30 14s 18w Ellis,KS

Start Date: 2014.01.25 @ 19:01:00
End Date: 2014.01.25 @ 23:50:00
Job Ticket #: 50419 DST #: 1

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

Printed: 2014.01.30 @ 11:00:31

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Dow ning

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50419 **DST#: 1**

Test Start: 2014.01.25 @ 19:01:00

GENERAL INFORMATION:

Formation: **Plattsmouth**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:04:15
Time Test Ended: 23:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Jim Svaty
Unit No: 54

Interval: 3297.00 ft (KB) To 3316.00 ft (KB) (TVD)
Total Depth: 3316.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

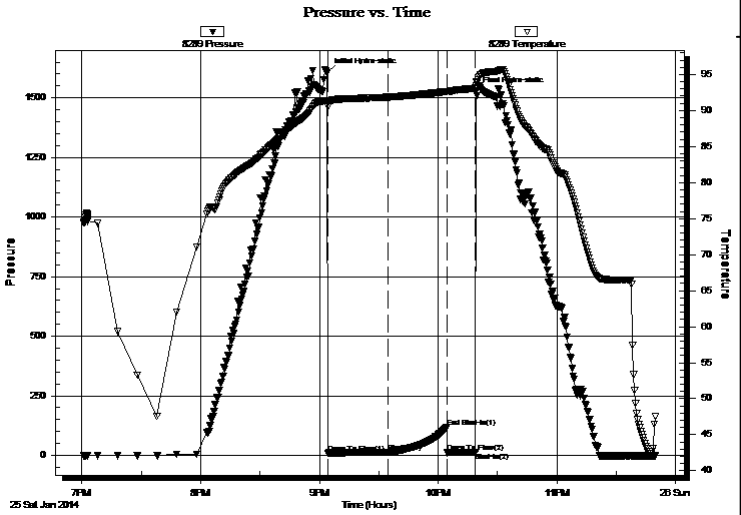
Reference Elevations: 2066.00 ft (KB)
2059.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: 12.77 psig @ 3298.00 ft (KB)
Start Date: 2014.01.25 End Date: 2014.01.25
Start Time: 19:01:02 End Time: 23:49:45

Capacity: 8000.00 psig
Last Calib.: 2014.01.25
Time On Btm: 2014.01.25 @ 21:04:00
Time Off Btm: 2014.01.25 @ 22:19:00

TEST COMMENT: 30-IFP- Weak Blow 1/8"
30-ISIP- No Blow
15-FFP Weak Surface Blow
Pulled



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1604.62	91.40	Initial Hydro-static
1	10.29	90.45	Open To Flow (1)
31	12.77	91.86	Shut-In(1)
61	118.81	92.64	End Shut-In(1)
61	11.60	92.58	Open To Flow (2)
75	13.71	93.10	Shut-In(2)
75	1524.99	93.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

Gas Rates

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

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50419 **DST#: 1**

Test Start: 2014.01.25 @ 19:01:00

GENERAL INFORMATION:

Formation: **Plattsmouth**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:04:15
Time Test Ended: 23:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Jim Svaty
Unit No: 54

Interval: 3297.00 ft (KB) To 3316.00 ft (KB) (TVD)
Total Depth: 3316.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

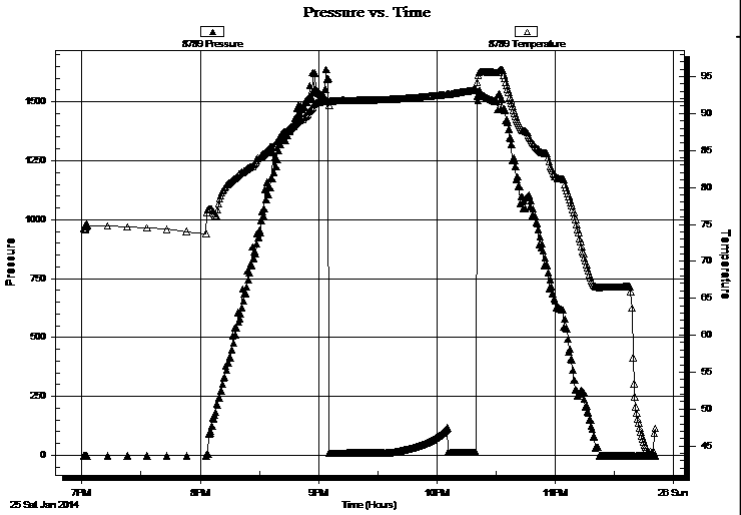
Reference Elevations: 2066.00 ft (KB)
2059.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8789 **Inside**

Press@RunDepth: psig @ 3298.00 ft (KB)
Start Date: 2014.01.25 End Date: 2014.01.25
Start Time: 19:01:02 End Time: 23:51:00

Capacity: 8000.00 psig
Last Calib.: 2014.01.25
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP- Weak Blow 1/8"
30-ISIP- No Blow
15-FFP Weak Surface Blow
Pulled



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50419 **DST#: 1**

Test Start: 2014.01.25 @ 19:01:00

Tool Information

Drill Pipe:	Length:	3250.00 ft	Diameter:	3.80 inches	Volume:	45.59 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	32.00 ft	Diameter:	2.25 inches	Volume:	0.16 bbl	Weight to Pull Loose:		50000.00 lb
					Total Volume:	45.75 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		6.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		3297.00 ft						Final	50000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		19.00 ft							
Tool Length:		40.00 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			3277.00		
Shut In Tool	5.00			3282.00		
Hydraulic tool	5.00			3287.00		
Packer	5.00			3292.00	21.00	Bottom Of Top Packer
Packer	5.00			3297.00		
Stubb	1.00			3298.00		
Recorder	0.00	8789	Inside	3298.00		
Recorder	0.00	8289	Outside	3298.00		
Perforations	15.00			3313.00		
Bullnose	3.00			3316.00	19.00	Bottom Packers & Anchor
Total Tool Length:	**40.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Dow ning

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50419 **DST#: 1**

Test Start: 2014.01.25 @ 19:01:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	8.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	61.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.95 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3500.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

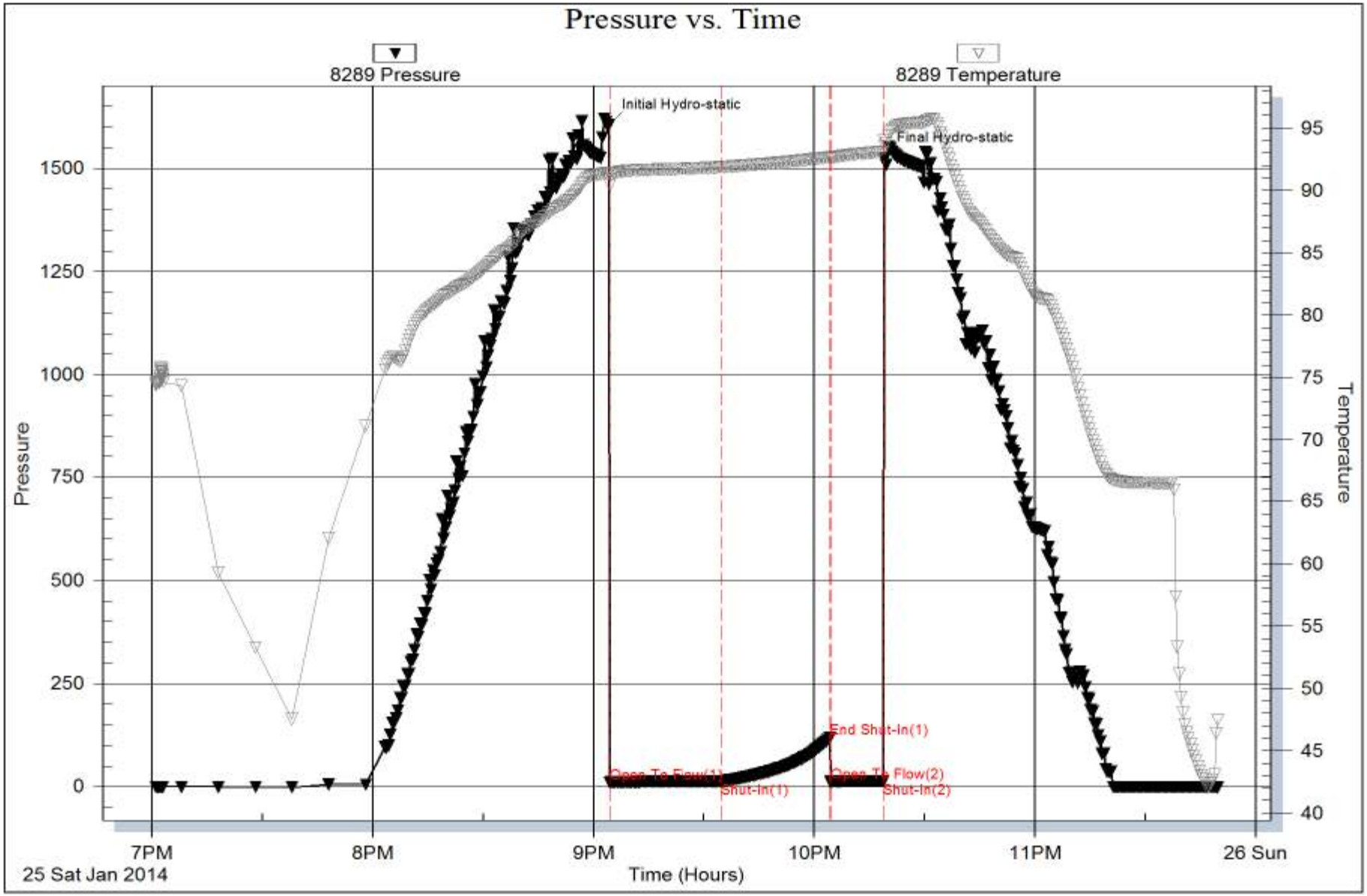
Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

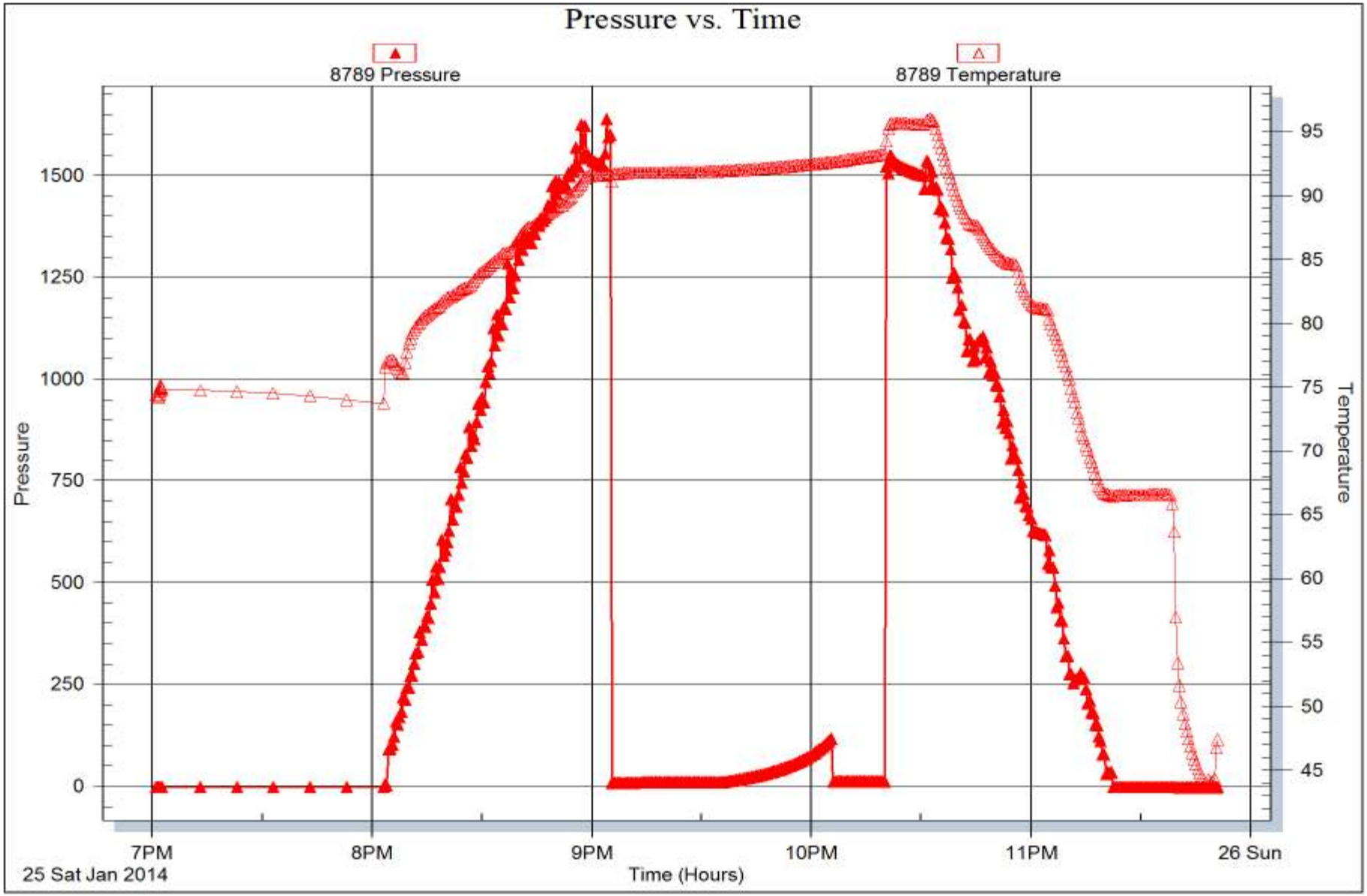
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8289 **Outside** Dow ning-Nelson Oil Co Inc Amy #1-30 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50419 Printed: 2014.01.30 @ 11:00:33

Serial #: 8789 **Inside** Dow ning-Nelson Oil Co Inc Amy #1-30 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 50419 Printed: 2014.01.30 @ 11:00:33

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

Amy #1-30

30 14s 18w Ellis,KS

Start Date: 2014.01.27 @ 11:34:00
End Date: 2014.01.27 @ 19:09:00
Job Ticket #: 50420 DST #: 2

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

Printed: 2014.01.30 @ 10:59:49

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Dow ning

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50420 **DST#: 2**

Test Start: 2014.01.27 @ 11:34:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:52:15
Time Test Ended: 19:09:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 54

Interval: 3672.00 ft (KB) To 3722.00 ft (KB) (TVD)
Total Depth: 3722.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

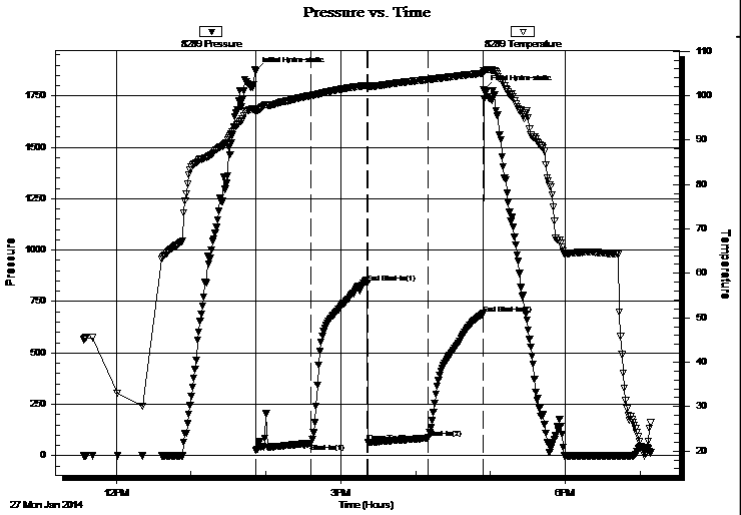
Reference Elevations: 2066.00 ft (KB)
2059.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: 84.65 psig @ 3682.00 ft (KB)
Start Date: 2014.01.27 End Date: 2014.01.27
Start Time: 11:34:02 End Time: 19:09:00

Capacity: 8000.00 psig
Last Calib.: 2014.01.27
Time On Btm: 2014.01.27 @ 13:52:00
Time Off Btm: 2014.01.27 @ 16:54:30

TEST COMMENT: 45-IFP- BOB in 22 min.
45-ISIP- Surface Blow in 2 min.
48-FFP- BOB in 47 min.
45-FSIP- Surface Blow in 3 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1871.21	97.10	Initial Hydro-static
1	24.43	96.37	Open To Flow (1)
45	60.56	100.05	Shut-In(1)
90	839.74	102.31	End Shut-In(1)
90	66.21	102.13	Open To Flow (2)
138	84.65	103.62	Shut-In(2)
183	690.94	105.06	End Shut-In(2)
183	1779.22	105.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
83.00	MCO 30%o 70%m	0.87
106.00	CO 100%	1.49

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50420 **DST#: 2**

Test Start: 2014.01.27 @ 11:34:00

Tool Information

Drill Pipe:	Length:	3626.00 ft	Diameter:	3.80 inches	Volume:	50.86 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	32.00 ft	Diameter:	2.25 inches	Volume:	0.16 bbl	Weight to Pull Loose:		55000.00 lb
					Total Volume:	51.02 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		7.00 ft					String Weight:	Initial	53000.00 lb
Depth to Top Packer:		3672.00 ft						Final	54000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		50.00 ft							
Tool Length:		71.00 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			3652.00		
Shut In Tool	5.00			3657.00		
Hydraulic tool	5.00			3662.00		
Packer	5.00			3667.00	21.00	Bottom Of Top Packer
Packer	5.00			3672.00		
Stubb	1.00			3673.00		
Perforations	8.00			3681.00		
Change Over Sub	1.00			3682.00		
Recorder	0.00	8789	Inside	3682.00		
Recorder	0.00	8289	Outside	3682.00		
Blank Spacing	31.00			3713.00		
Change Over Sub	1.00			3714.00		
Perforations	5.00			3719.00		
Bullnose	3.00			3722.00	50.00	Bottom Packers & Anchor
Total Tool Length:	**71.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Dow ning

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50420 **DST#: 2**

Test Start: 2014.01.27 @ 11:34:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	30 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.14 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	7000.00 ppm				
Filter Cake:	1.50 inches				

Recovery Information

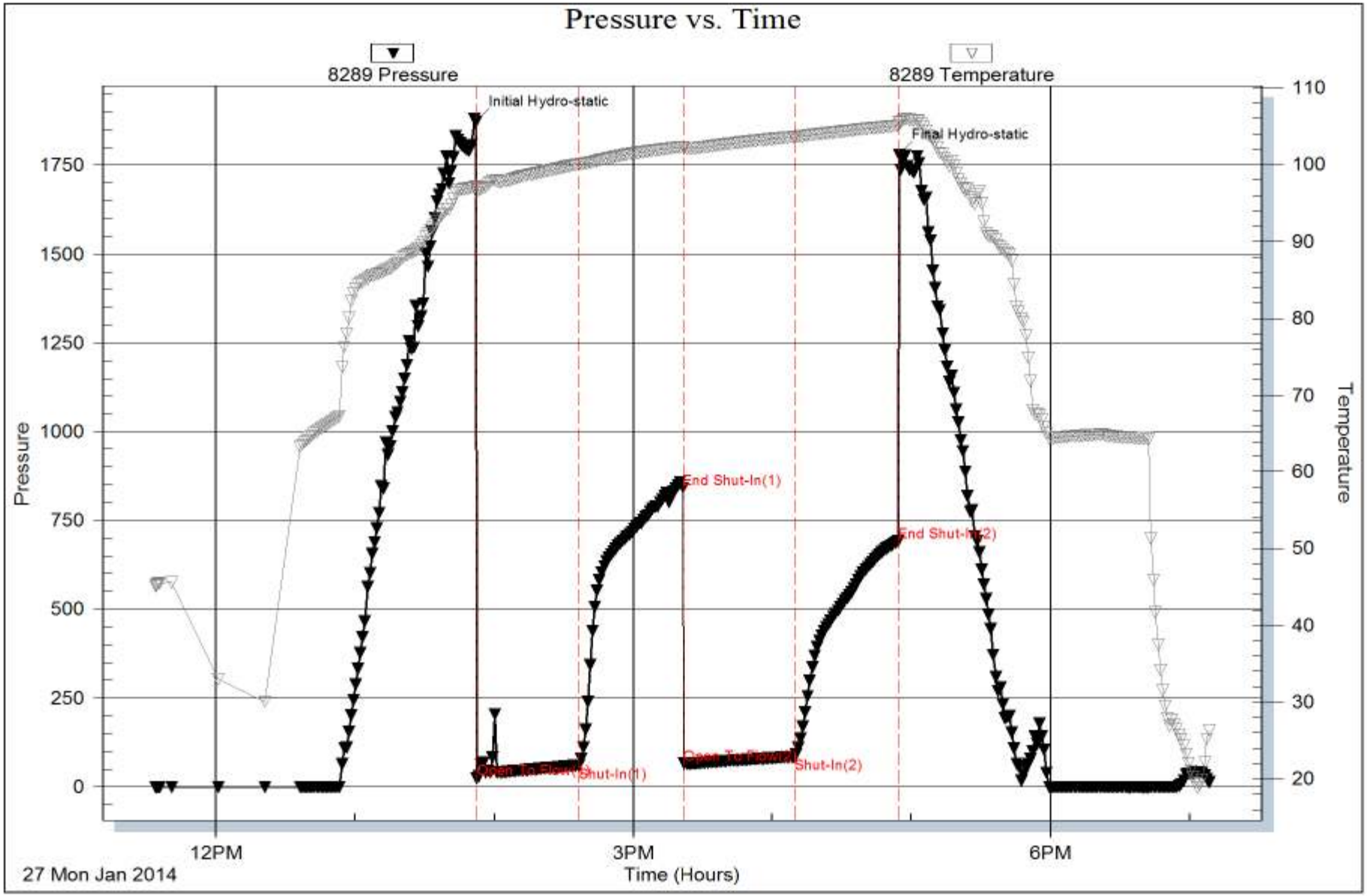
Recovery Table

Length ft	Description	Volume bbl
83.00	MCO 30%o 70%m	0.873
106.00	CO 100%	1.487

Total Length: 189.00 ft Total Volume: 2.360 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8289 **Outside** Dow ning-Nelson Oil Co Inc Amy #1-30 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 50420 Printed: 2014.01.30 @ 10:59:52

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

Amy #1-30

30 14s 18w Ellis,KS

Start Date: 2014.01.28 @ 08:57:00
End Date: 2014.01.28 @ 16:16:00
Job Ticket #: 50421 DST #: 3

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

Printed: 2014.01.30 @ 10:58:01

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50421 **DST#: 3**

Test Start: 2014.01.28 @ 08:57:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:11:45
Time Test Ended: 16:16:00

Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 54

Interval: 3673.00 ft (KB) To 3730.00 ft (KB) (TVD)
Total Depth: 3812.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

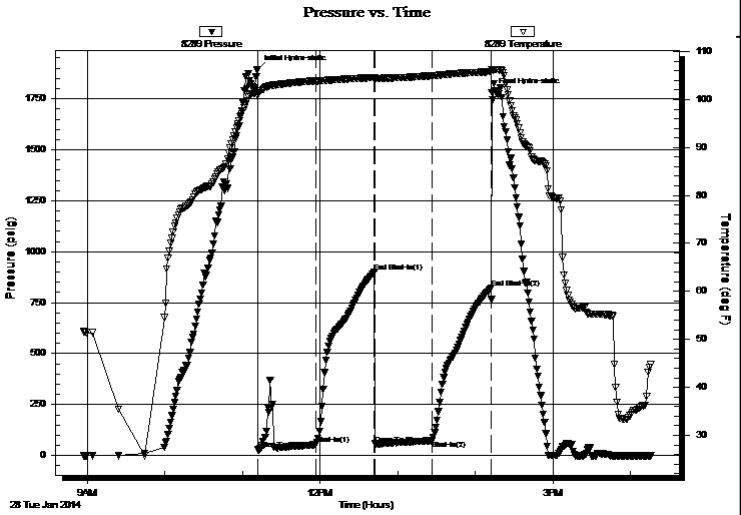
Reference Elevations: 2066.00 ft (KB)
2059.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: 73.16 psig @ 3683.00 ft (KB)
Start Date: 2014.01.28 End Date: 2014.01.28
Start Time: 08:57:02 End Time: 16:15:45

Capacity: 8000.00 psig
Last Calib.: 2014.01.28
Time On Btm: 2014.01.28 @ 11:11:30
Time Off Btm: 2014.01.28 @ 14:12:30

TEST COMMENT: 45-IFP- BOB in 32 min.
45-ISIP- Surface Blow in 1 1/2 min.
45-FFP- Surface Blow Building to 8 1/4"
45-FSIP- Surface Blow in 3 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1894.17	102.00	Initial Hydro-static
1	28.86	100.88	Open To Flow (1)
45	53.82	103.82	Shut-In(1)
91	899.82	104.59	End Shut-In(1)
91	56.83	104.40	Open To Flow (2)
135	73.16	104.95	Shut-In(2)
181	821.35	105.80	End Shut-In(2)
181	1778.91	106.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
96.00	OCM 35%o 65%m	1.06
50.00	CO 100%	0.70

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50421 **DST#: 3**

Test Start: 2014.01.28 @ 08:57:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:11:45
Time Test Ended: 16:16:00

Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 54

Interval: 3673.00 ft (KB) To 3730.00 ft (KB) (TVD)
Total Depth: 3812.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

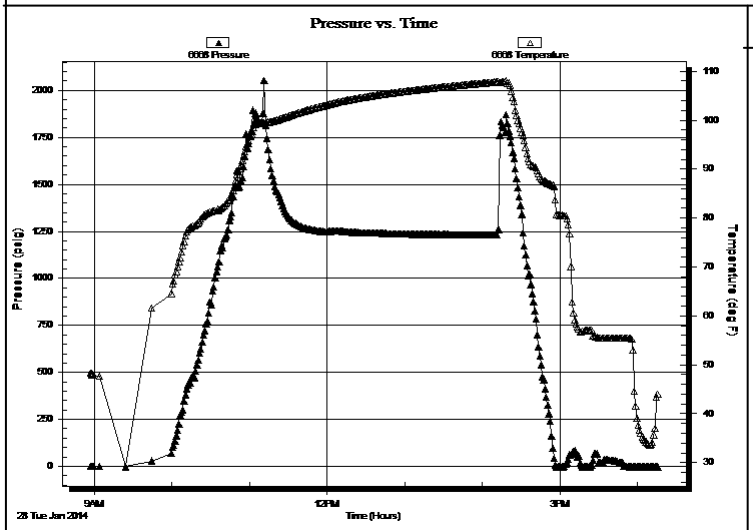
Reference Elevations: 2066.00 ft (KB)
2059.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6668 **Below (Straddle)**

Press@RunDepth: psig @ 3744.00 ft (KB)
Start Date: 2014.01.28 End Date: 2014.01.28
Start Time: 08:57:02 End Time: 16:15:30

Capacity: 8000.00 psig
Last Calib.: 2014.01.28
Time On Btm:
Time Off Btm:

TEST COMMENT: 45-IFP- BOB in 32 min.
45-ISIP- Surface Blow in 1 1/2 min.
45-FFP- Surface Blow Building to 8 1/4"
45-FSIP- Surface Blow in 3 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
96.00	OCM 35%o 65%m	1.06
50.00	CO 100%	0.70

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Dow ning

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50421 **DST#: 3**

Test Start: 2014.01.28 @ 08:57:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:11:45
Time Test Ended: 16:16:00

Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 54

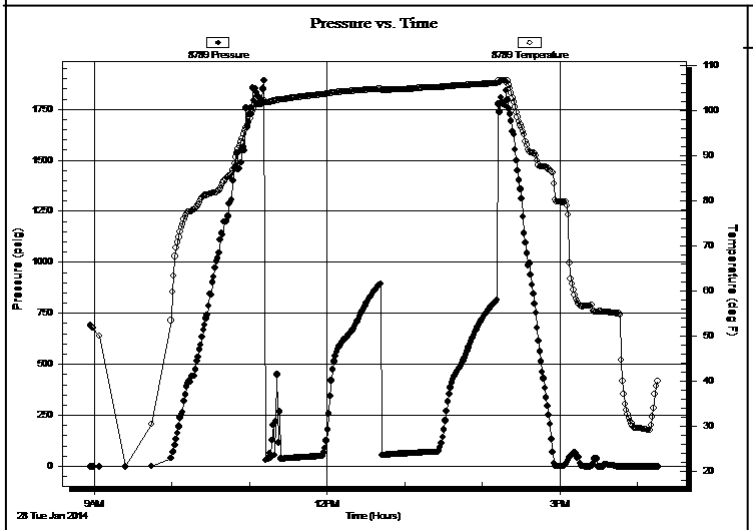
Interval: 3673.00 ft (KB) To 3730.00 ft (KB) (TVD)
Total Depth: 3812.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2066.00 ft (KB)
2059.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8789 **Inside**
Press@RunDepth: psig @ 3683.00 ft (KB)
Start Date: 2014.01.28 End Date: 2014.01.28
Start Time: 08:57:02 End Time: 16:15:30

Capacity: 8000.00 psig
Last Calib.: 2014.01.28
Time On Btm:
Time Off Btm:

TEST COMMENT: 45-IFP- BOB in 32 min.
45-ISIP- Surface Blow in 1 1/2 min.
45-FFP- Surface Blow Building to 8 1/4"
45-FSIP- Surface Blow in 3 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
96.00	OCM 35%o 65%m	1.06
50.00	CO 100%	0.70

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Dow ning

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50421 **DST#: 3**

Test Start: 2014.01.28 @ 08:57:00

Tool Information

Drill Pipe:	Length:	3625.00 ft	Diameter:	3.80 inches	Volume:	50.85 bbl	Tool Weight:		2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.75 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	32.00 ft	Diameter:	2.25 inches	Volume:	0.16 bbl	Weight to Pull Loose:		55000.00 lb
					Total Volume:	51.01 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		5.00 ft					String Weight:	Initial	53000.00 lb
Depth to Top Packer:		3673.00 ft						Final	53000.00 lb
Depth to Bottom Packer:		3730.00 ft							
Interval betw een Packers:		57.00 ft							
Tool Length:		159.00 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			3653.00		
Shut In Tool	5.00			3658.00		
Hydraulic tool	5.00			3663.00		
Packer	5.00			3668.00	21.00	Bottom Of Top Packer
Packer	5.00			3673.00		
Stubb	1.00			3674.00		
Perforations	8.00			3682.00		
Change Over Sub	1.00			3683.00		
Recorder	0.00	8789	Inside	3683.00		
Recorder	0.00	8289	Outside	3683.00		
Blank Spacing	32.00			3715.00		
Change Over Sub	1.00			3716.00		
Perforations	10.00			3726.00		
Blank Off Sub	1.00			3727.00		
Blank Spacing	3.00			3730.00	57.00	Tool Interval
Packer	1.00			3731.00		
Perforations	12.00			3743.00		
Change Over Sub	1.00			3744.00		
Recorder	0.00	6668	Below	3744.00		
Blank Spacing	63.00			3807.00		
Change Over Sub	1.00			3808.00		
Bullnose	3.00			3811.00	81.00	Bottom Packers & Anchor
Total Tool Length:	**159.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co Inc

P.O. Box 1019
Hays KS 67601

ATTN: Marc Downing

30 14s 18w Ellis,KS

Amy #1-30

Job Ticket: 50421 **DST#: 3**

Test Start: 2014.01.28 @ 08:57:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	30 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	3.00 inches				

Recovery Information

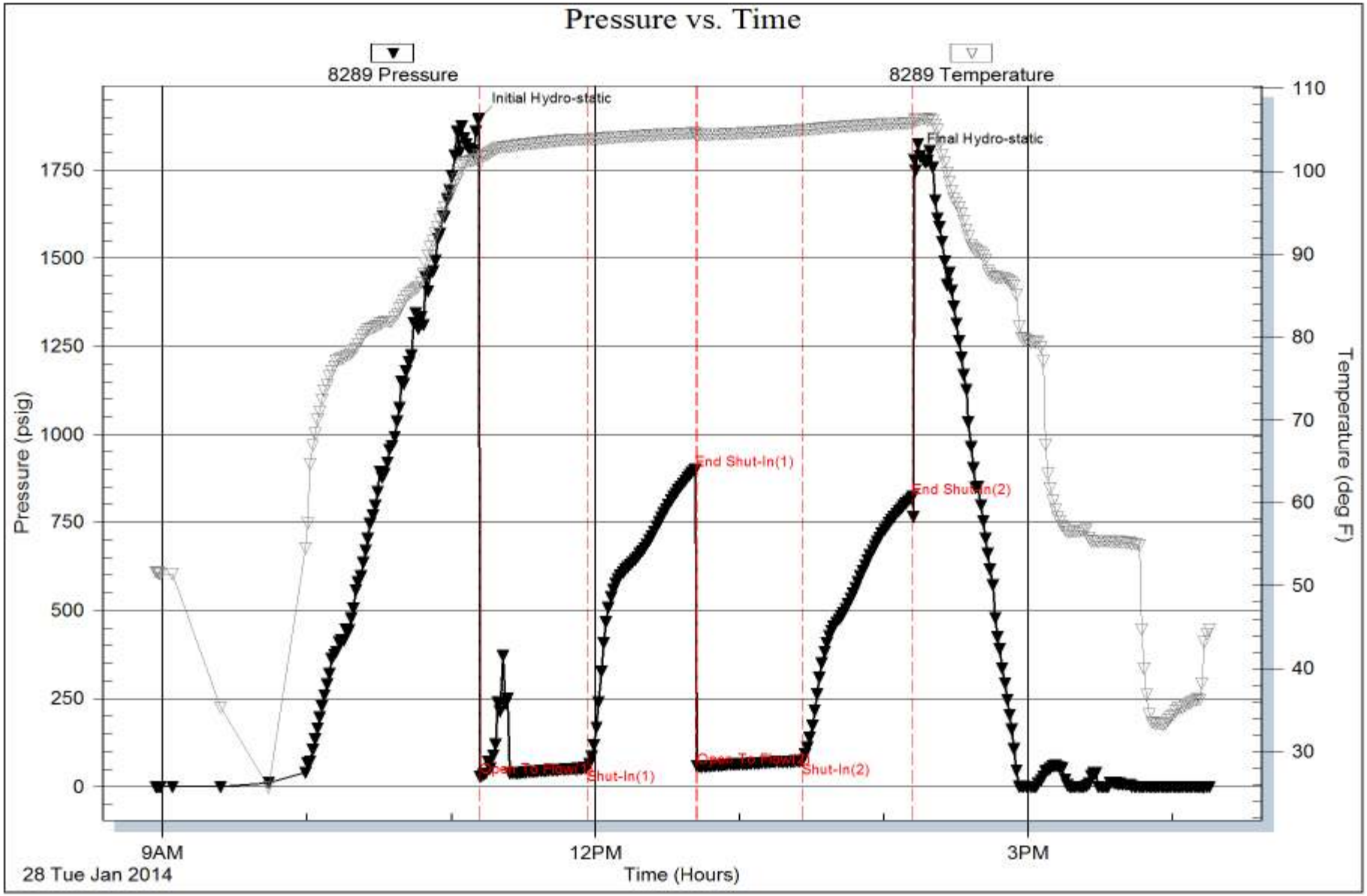
Recovery Table

Length ft	Description	Volume bbl
96.00	OCM 35%o 65%m	1.055
50.00	CO 100%	0.701

Total Length: 146.00 ft Total Volume: 1.756 bbl

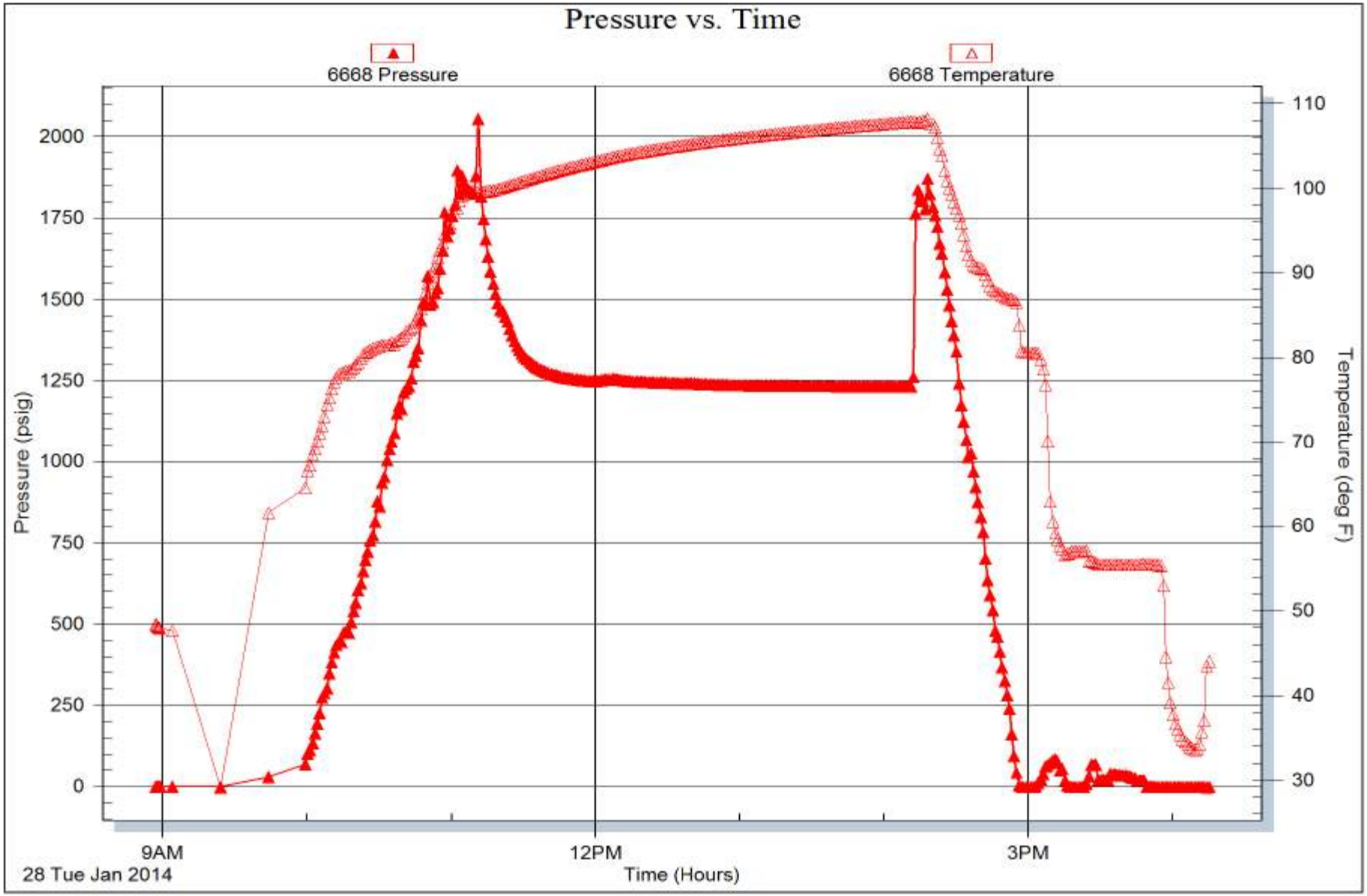
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8289 **Outside** Dow ning-Nelson Oil Co Inc Amy #1-30 DST Test Number: 3



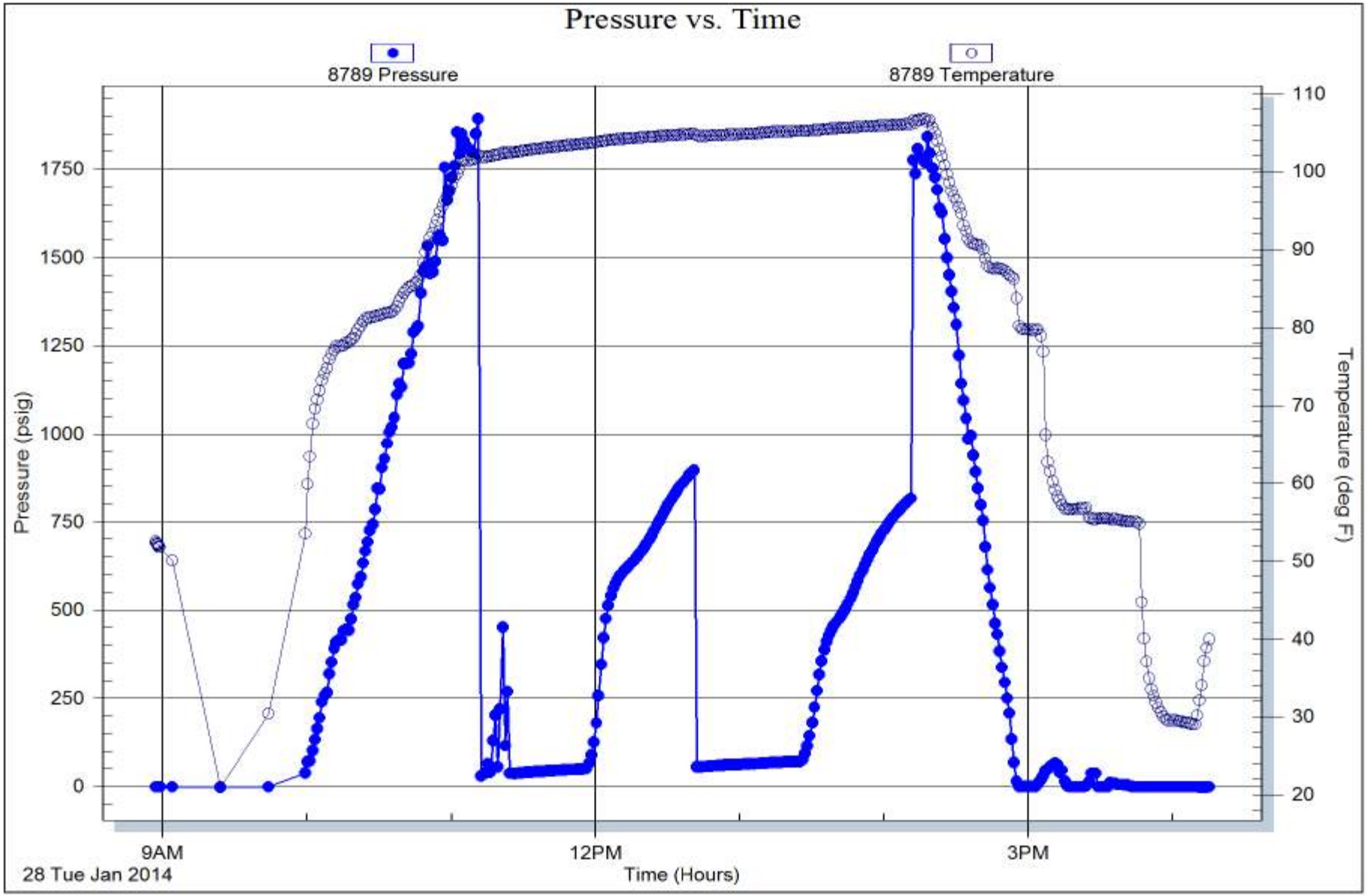
Trilobite Testing, Inc Ref. No: 50421 Printed: 2014.01.30 @ 10:58:03

Serial #: 6668 Below (Straddle) Bolding-Nelson Oil Co Inc Amy #1-30 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 50421 Printed: 2014.01.30 @ 10:58:03

Serial #: 8789 **Inside** Dow ning-Nelson Oil Co Inc Amy #1-30 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 50421 Printed: 2014.01.30 @ 10:58:04

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50419

Well Name & No. Amy 1-30 Test No. 1 Date 1-25-14

Company Downing-Nelson Oil Co. Inc. Elevation 2066 KB 2059 GL

Address P.O. Box 1019 Hays KS 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 30 Twp. 14S Rge. 18W Co. Ellis State KS

Interval Tested 3297-3316 Zone Tested Plattsmouth

Anchor Length 19 Drill Pipe Run 3250 Mud Wt. 8.5

Top Packer Depth 3292 Drill Collars Run 32 Vis 61

Bottom Packer Depth 3297 Wt. Pipe Run 0 WL 8.0

Total Depth 3316 Chlorides 3500 ppm System LCM 2

Blow Description IFP- Weak 1/8 in Blow
ISIP- No Blow
FFP- Weak Surface Blow
FSIP- Pulled

Rec 2	Feet of Mud	%gas	%oil	%water 100	%mud
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 2 BHT 94 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	1604	☒ Test	1150	T-On Location	04:38 pm
(B) First Initial Flow	10	☐ Jars		T-Started	07:01 PM
(C) First Final Flow	12	☐ Safety Joint		T-Open	21:05
(D) Initial Shut-In	118	☐ Circ Sub		T-Pulled	22:20
(E) Second Initial Flow	11	☐ Hourly Standby		T-Out	23:50
(F) Second Final Flow		☒ Mileage	18 RT 27.90	Comments	
(G) Final Shut-In		☐ Sampler			
(H) Final Hydrostatic	1524	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	30	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	30	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1177.90
Final Shut-In	Pulled	☐ Accessibility		MP/DST Disc't	
		Sub Total	1177.90		

Approved By ____ Our Representative ____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50420

Well Name & No. Amy 1-30 Test No. 2 Date 1-27-14

Company Downing-Nelson Oil Co. Inc. Elevation 2066 KB 2059 GL

Address P.O. Box 1019 Hays KS 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3672-3722 Zone Tested Arbuckle

Anchor Length 50 Drill Pipe Run 3626 Mud Wt. 8.9

Top Packer Depth 3667 Drill Collars Run 32 Vis 49

Bottom Packer Depth 3672 Wt. Pipe Run 0 WL 9.2

Total Depth 3722 Chlorides 7000 ppm System LCM 1.5

Blow Description IFP- BOB in 22min.
ISIP- Surface Blow in 2min.
FFP- BOB in 47min
FSIP- Surface Blow in 3min

Rec 83	Feet of MCO	%gas	30	%oil	%water 70	%mud
Rec 106	Feet of CO	%gas	100	%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 189 BHT 105 Gravity 30 API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1871	☒ Test 1150	T-On Location 10:50	
(B) First Initial Flow 24	☐ Jars	T-Started 11:34	
(C) First Final Flow 60	☐ Safety Joint	T-Open 13:52	
(D) Initial Shut-In 839	☐ Circ Sub	T-Pulled 16:55	
(E) Second Initial Flow 66	☐ Hourly Standby	T-Out 19:09	
(F) Second Final Flow 84	☒ Mileage 27.90	Comments Check Stand By?	
(G) Final Shut-In 690	☐ Sampler		
(H) Final Hydrostatic 1779	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 45	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0	
Final Flow 48	☐ Day Standby	Total 1177.90	
Final Shut-In 45	☐ Accessibility	MP/DST Disc't	
	Sub Total 1177.90		

Approved By ____ Our Representative ____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 50421

Well Name & No. Amy 1-30 Test No. 3 Date 1-28-14

Company Downing-Nelson Oil Co. Inc Elevation 2066 KB 2059 GL

Address P.O. Box 1019 Hays KS 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 30 Twp. 14S Rge. 18W Co. Ellis State KS

Interval Tested 3673-3730 Zone Tested Arbuckle

Anchor Length 57 Drill Pipe Run 3625 Mud Wt. 8.9

Top Packer Depth 3668 Drill Collars Run 32 Vis 55

Bottom Packer Depth 3673 Wt. Pipe Run 0 WL 8.8

Total Depth 3730 Chlorides 5000 ppm System LCM 3

Blow Description IFP- BOB in 32min
ISIP- Surface Blow in 1½min.
FFP- Surface Blow Building to 8¼in.
FSIP- Surface Blow in 3min.

Rec 96	Feet of OCM	%gas 35	%oil	%water 65	%mud
Rec 50	Feet of CO	%gas 100	%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 146 BHT 106 Gravity 30 API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic	1894	☒ Test	1150	T-On Location	08:22
(B) First Initial Flow	28	☐ Jars		T-Started	08:57
(C) First Final Flow	53	☐ Safety Joint		T-Open	11:12
(D) Initial Shut-In	899	☐ Circ Sub		T-Pulled	14:12
(E) Second Initial Flow	56	☐ Hourly Standby		T-Out	16:16
(F) Second Final Flow	73	☒ Mileage	27.90	Comments	
(G) Final Shut-In	821	☐ Sampler			
(H) Final Hydrostatic	1778	☒ Straddle	600	☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	45	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	45	☐ Extra Recorder		Sub Total	0
Final Flow	45	☐ Day Standby		Total	1777.90
Final Shut-In	45	☐ Accessibility		MP/DST Disc't	
		Sub Total	1777.90		

Approved By ____ Our Representative ____

Marc A. Downing

Consulting Petroleum Geologist

Geologic Report

Drilling Time and Sample Log

Operator	**Downing-Nelson Oil Co., Inc.**
Lease	**Amy** No. **1-30**
API #	**15-051-26658-0000**
Field	**Wildcat**
Location	**335' FNL & 335' FWL**
Sec. **30**	Twp. **14s** Rge. **18w**
County **Ellis**	State **Kansas**

Elevation
KB **2069**
DF **2067**
GL **2061**

Casing Record
Surface **1320'**
Production **5 1/2" @ 3812'**

Electrical Surveys
CNDL, DIL, MEL

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	1313	1317	+752	-1
Base Anhydrite	1359	1358	+711	-1
Topeka	3096	3098	-1029	-5
Heebner	3351	3353	-1284	-5
Toronto	3370	3370	-1301	-2
LKC	3398	3400	-1331	-5
BKC	3629	3633	-1564	FL
Arbuckle	3714	3717	-1648	+4
Total Depth	3812	3814	-1745	

Reference Well For Structural Comparison **J.S.G. Oil Corporation**
Dechant #25-1 **NW-NE-NE** **Sec. 25-14s-19w**

Drilling Contractor		**Discovery Drilling, Rig #4**		
Commenced	**1-20-14**	Completed		**1-28-14**
Samples Saved From		**3100**	To	**RTD**
Drilling Time Kept From		**3000**	To	**RTD**
Samples Examined From		**3100**	To	**RTD**
Geological Supervision From		**3000**	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 in the Arbuckle.

Respectfully Submitted,

Marc A. Downing