

## Kansas Corporation Commission Oil & Gas Conservation Division

1078624

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

# WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No. 15
Name:	Spot Description:
Address 1:	SecTwpS. R
Address 2:	Feet from North / South Line of Section
City: State: Zip:+	Feet from East / West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	County:
Name:	Lease Name: Well #:
Wellsite Geologist:	Field Name:
Purchaser:	Producing Formation:
Designate Type of Completion:	Elevation: Ground: Kelly Bushing:
New Well Re-Entry Workover	Total Depth: Plug Back Total Depth:
Oil WSW SWD SIOW Gas D&A ENHR SIGW OG GSW Temp. Abd. CM (Coal Bed Methane) Cathodic Other (Core, Expl., etc.):	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: sx cmt
Operator:	
Well Name:	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)
Original Comp. Date: Original Total Depth: Original Total Depth: Conv. to ENHR	Chloride content: ppm Fluid volume: bbls  Dewatering method used:
Plug Back: Plug Back Total Depth	Location of fluid disposal if hauled offsite:
Commingled Permit #:	Operator Name:
Dual Completion Permit #:	Lease Name: License #:
SWD Permit #:	QuarterSec TwpS. R East West
ENHR Permit #:	County: Permit #:
GSW Permit #:	
Spud Date or Date Reached TD Completion Date or Recompletion Date  Recompletion Date	

#### **AFFIDAVIT**

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

**Submitted Electronically** 

KCC Office Use ONLY		
Letter of Confidentiality Received		
Date:		
Confidential Release Date:		
Wireline Log Received		
Geologist Report Received		
UIC Distribution		
ALT I II III Approved by: Date:		

Side Two



Operator Name: \_ Lease Name: \_ \_ Well #: \_ County: \_ INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wireline Logs surveyed. Attach final geological well site report. **Drill Stem Tests Taken** Yes No Log Formation (Top), Depth and Datum Sample (Attach Additional Sheets) Name Top Datum Samples Sent to Geological Survey ☐ Yes □ No Cores Taken Yes No Electric Log Run Electric Log Submitted Electronically Yes No (If no, Submit Copy) List All E. Logs Run: CASING RECORD Used New Report all strings set-conductor, surface, intermediate, production, etc. Size Hole Size Casing Weight # Sacks Type and Percent Type of Purpose of String Drilled Set (In O.D.) Lbs. / Ft. Additives Depth Cement Used ADDITIONAL CEMENTING / SQUEEZE RECORD Purpose: Depth Type of Cement # Sacks Used Type and Percent Additives Top Bottom Perforate **Protect Casing** Plug Back TD Plug Off Zone PERFORATION RECORD - Bridge Plugs Set/Type Acid, Fracture, Shot, Cement Squeeze Record Shots Per Foot Specify Footage of Each Interval Perforated (Amount and Kind of Material Used) Depth TUBING RECORD: Size: Set At: Packer At: Liner Run: No Yes Producing Method: Date of First, Resumed Production, SWD or ENHR. Pumping Gas Lift Other (Explain) Flowing **Estimated Production** Bbls. Water Bbls. Gas-Oil Ratio Oil Gas Mcf Gravity Per 24 Hours **DISPOSITION OF GAS:** METHOD OF COMPLETION: PRODUCTION INTERVAL: Open Hole Dually Comp. Perf. Commingled Vented Sold Used on Lease (Submit ACO-5) (Submit ACO-4) (If vented, Submit ACO-18.) Other (Specify)

Form	ACO1 - Well Completion	
Operator	Downing-Nelson Oil Co Inc	
Well Name	KD Unit 1-13	
Doc ID	1078624	

## Tops

Name	Тор	Datum
Top Anhydrite	1846'	+587
Base Anhydrite	1891'	+542
Topeka	3454'	-1021
Heebner	3674'	-1241
Toronto	3692'	-1259
LKC	3707'	-1274
ВКС	3954'	-1521
Marmaton	4050'	-1617
Arbuckle	NA	-1754

Form	ACO1 - Well Completion	
Operator	Downing-Nelson Oil Co Inc	
Well Name	KD Unit 1-13	
Doc ID	1078624	

## Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3911' to 3914'	250 gallons 15% Mud Acid	3782' to 3786'
4	3782' to 3786'	500 gallons 15% Mud Acid	3782' to 3786', 3762' to 3766' & 3748' to 3752'
4	3762' to 3766'	250 gallons 15% Mud Acid	3748' to 3752'
4	3748' to 3752'	250 gallons 15% NE Acid	3762' to 3766'
4	3748' to 3751'	750 gallons 15% NE Acid	3748' to 3751'
4	3709' to 3711'	250 gallons 15% Mud Acid	3709' to 3711'

DAILY DENETRATION BIT RECORD				
3322 LINCOLN DRIVE HAYS, KANSAS 67601 PHONE: 785-628-3449  COMPANY Documing - Nelson Cil Ca, Inc.  125 23 cc.	DRILL STEM TESTS  THE FEP/Time PSIP/Time PSIP/		DST# 1 3730-3769' 45" 45" 45" 45" 1290 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 27200 7" 62000 272	Vis:59 (11:9.0)  051 # 3  4052-409  1.F-608 44 min.  6.F. Gailt to 8"  1.F. Gailt to 8"
WELL K-D Unit Al-13	OIL SHOWS			
FIELD Mentagement  LOCATION 2140 FSL \$ 160 FEL  SEC_13 TWP. 125 RGE 2360  COUNTY Tregs  STATE Kansas  Drilling Mentaged From 3650 To: TO  Drilling Time From 3460 To: TO  Drilling Time From 3460 To: TO  Samples Benefied From 3650 To: TO  Operator Dascet and Drilling, Rig \$44  COMPACTOR Discensed Drilling Record Drilling  CASING RECORD  Superior  CNL/COL  MEL  DISCRIPTION DESCRIPTION OF SECURITY  MEL  DISCRIPTION DRILLERS: 4204  MEL  DISCRIPTION DRILLERS: 4204  MEL	SAMPLE DESCRIPTIONS  STORY  ST		Sh Blue cares  Sh Blue cares  DNS BRN 4.5  The microphy & DNS for child for the first microphy & DNS for child for first for the first microphy & DNS for child for first for the first microphy of first for the first for the first microphy of first for the fir	Shi 39)  Shi 39)  Shi 39)  Shi 39)  Shi 39)  Shi 30 in Shi 16 de Jen Shi 16 de Jen Shi 46 Seb in Shi 16 de Tray de Shi 16 de Tray de Shi 16 de Jen Shi 16 de
FORMATION TOPS AND STRUCTURAL POSITION  FORMATION SAMPLE ELECTRIC LOG SUB-SEA STRUCTURAL  TOPS AND STRUCTURAL POSITION	As detone	88	50 50	
Top Anhydrite  NA 1946 + 1587 + 19  Bose Anhydrite  NA 1991 + 592 MA  Topska 3452 3454 -1021 -4  HEEBAER 3672 3674 -1291 -5  LKC 3106 3107 -1279 -6  LKC 3106 3107 -1279 -4  BKC 3362 3964 -1521 -2  Merriclan 4047 4050 -1617 -3  Arbuckle 4187 NA -1754 -32  REFERENCE WELL FOR STRUCTURE DNOCL  Riedel Brothess \$11-13 1246 FSC 4 918 FEL Sec. 13-125-234	DRILLING TIME IN MINUTES  San Son of Perestration Decreases  Signature South Son			Macrosoft (1514)  Macrosoft (1



Downing-Nelson Oil Co Inc

13-12s-23w

Po Box 1019

**KD Unit 1-13** 

Hays Ks 67601

Job Ticket: 44822 DST#: 1

ATTN: Ron Nelson

End Time:

Test Start: 2012.04.06 @ 19:58:22

## GENERAL INFORMATION:

Formation: Lansing-C&D

Deviated: Whipstock: Test Type: Conventional Bottom Hole (Initial) ft (KB)

2012.04.07

02:54:22

Time Tool Opened: 22:03:52 Time Test Ended: 02:54:22 Tester: Jeff Brown 44

Reference Elevations:

Last Calib.:

Unit No:

2433.00 ft (KB) 2425.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

Inside

3769.00 ft (KB) (TVD)

KB to GR/CF: 8.00 ft

2012.04.07

Serial #: 8321

Interval:

Total Depth:

Start Time:

3738.00 ft (KB) 45.32 psig @

Capacity: 8000.00 psig

Press@RunDepth: Start Date: 2012.04.06 End Date: 19:58:23

3730.00 ft (KB) To 3769.00 ft (KB) (TVD)

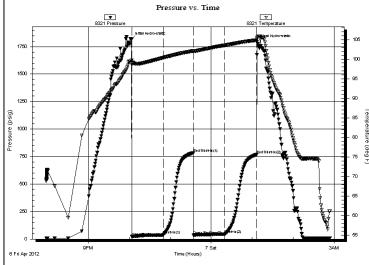
2012.04.06 @ 22:03:22 Time On Btm:

Time Off Btm: 2012.04.07 @ 01:07:22

PRESSURE SUMMARY

TEST COMMENT: IFP-Fair blow built to 5 1/2 in

ISI-Dead no blow back FFP-Fair blow built to 7 in FSI-Dead no blow back



	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
	0	1816.00	99.69	Initial Hydro-static
	1	20.58	98.58	Open To Flow (1)
	47	39.94	100.37	Shut-In(1)
7	91	783.83	102.10	End Shut-In(1)
Temperature	91	33.60	101.97	Open To Flow (2)
rature	137	45.32	103.54	Shut-In(2)
(deg	183	767.55	104.85	End Shut-In(2)
F)	184	1792.89	105.48	Final Hydro-static

Cac Datas

#### Recovery

Length (ft)	Description	Volume (bbl)
60.00	HOCGM 10%G 30%O 60%M	0.56

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

Trilobite Testing, Inc. Ref. No: 44822 Printed: 2012.04.07 @ 10:24:30



Downing-Nelson Oil Co Inc

13-12s-23w

Po Box 1019

**KD Unit 1-13** 

Hays Ks 67601

ATTN: Ron Nelson

Job Ticket: 44822 DST#: 1

Test Start: 2012.04.06 @ 19:58:22

## **GENERAL INFORMATION:**

Formation: Lansing-C&D

Whipstock: Deviated: Test Type: Conventional Bottom Hole (Initial) ft (KB)

Time Tool Opened: 22:03:52 Tester: Jeff Brown 44

Time Test Ended: 02:54:22 Unit No:

Interval: 3730.00 ft (KB) To 3769.00 ft (KB) (TVD) Reference Elevations: 2433.00 ft (KB)

Total Depth: 3769.00 ft (KB) (TVD) 2425.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

Serial #: 8737 Outside

Press@RunDepth: 3738.00 ft (KB) 8000.00 psig psig @ Capacity:

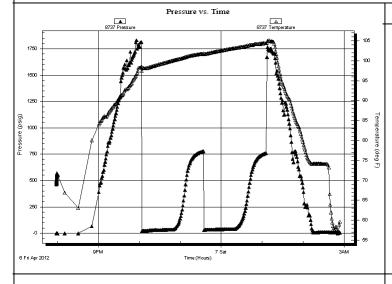
> Time (Min.)

Start Date: 2012.04.06 End Date: 2012.04.07 Last Calib.: 2012.04.07

Start Time: 19:58:26 End Time: Time On Btm: 02:54:25 Time Off Btm:

TEST COMMENT: IFP-Fair blow built to 5 1/2 in

ISI-Dead no blow back FFP-Fair blow built to 7 in FSI-Dead no blow back



Pressure	Temp	Annotation
(psig)	(deg F)	

PRESSURE SUMMARY

#### Recovery

Length (ft)	Description	Volume (bbl)
60.00	HOCGM 10%G 30%O 60%M	0.56
	<del> </del>	

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

Trilobite Testing, Inc. Ref. No: 44822 Printed: 2012.04.07 @ 10:24:30



**FLUID SUMMARY** 

Dow ning-Nelson Oil Co Inc

13-12s-23w

Po Box 1019

**KD Unit 1-13** 

Hays Ks 67601

Job Ticket: 44822

Serial #:

DST#:1

ATTN: Ron Nelson

Test Start: 2012.04.06 @ 19:58:22

#### **Mud and Cushion Information**

Mud Type:Gel ChemCushion Type:Oil A Pl:deg A PlMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight:9.00 lb/galCushion Length:ftViscosity:61.00 sec/qtCushion Volume:bbl

Water Loss: 7.99 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 2000.00 ppm Filter Cake: inches

## **Recovery Information**

## Recovery Table

Length ft	Description	Volume bbl
60.00	HOCGM 10%G 30%O 60%M	0.559

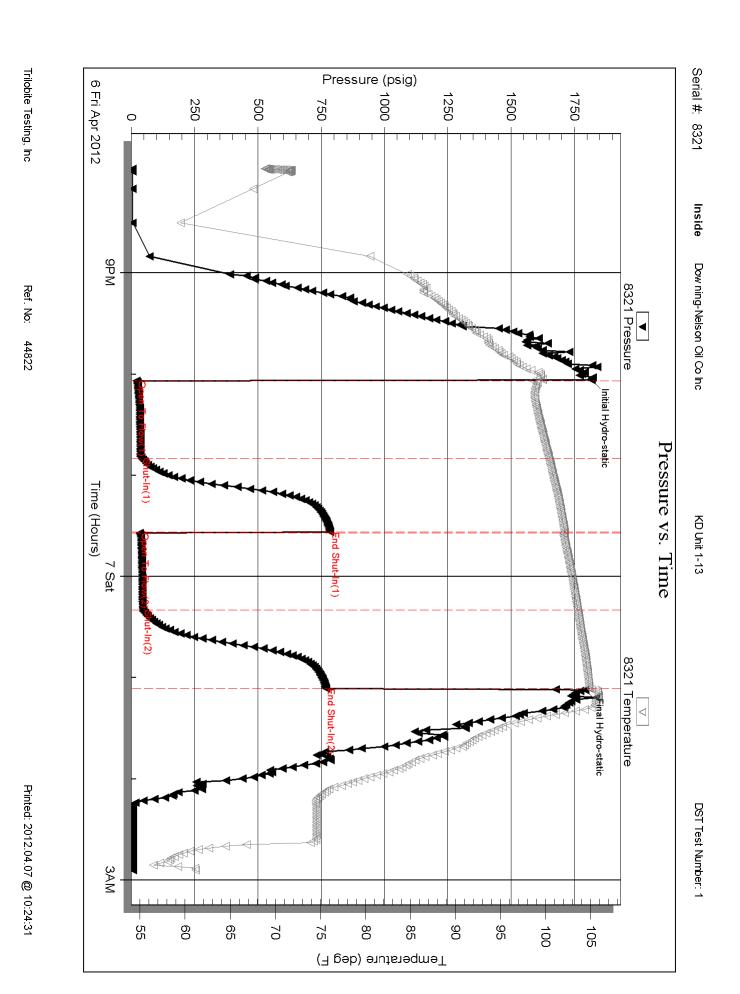
Total Length: 60.00 ft Total Volume: 0.559 bbl

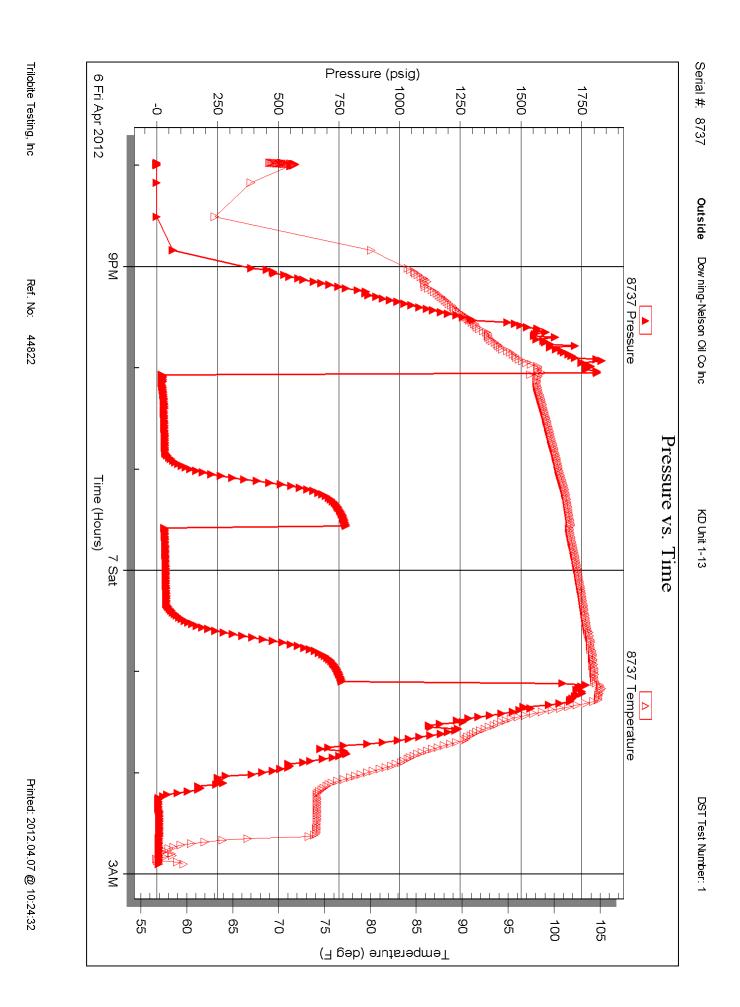
Num Fluid Samples: 0 Num Gas Bombs: 0

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 44822 Printed: 2012.04.07 @ 10:24:31







Downing-Nelson Oil Co Inc

13-12s-23w

Po Box 1019

**KD Unit 1-13** 

Hays Ks 67601

Job Ticket: 44823 DST#: 2

ATTN: Ron Nelson

Test Start: 2012.04.07 @ 09:40:22

## GENERAL INFORMATION:

Formation: Lansing-E

Deviated: Whipstock: Test Type: Conventional Bottom Hole (Reset) No ft (KB)

Time Tool Opened: 11:46:22 Tester: Jeff Brown 44

Time Test Ended: 17:07:52 Unit No:

3767.00 ft (KB) To 3788.00 ft (KB) (TVD) Reference Elevations: 2433.00 ft (KB) Interval:

Total Depth: 3788.00 ft (KB) (TVD) 2425.00 ft (CF)

7.88 inches Hole Condition: Good KB to GR/CF: Hole Diameter: 8.00 ft

Serial #: 8321 Inside

Press@RunDepth: 3770.00 ft (KB) 90.83 psig @ Capacity: 8000.00 psig

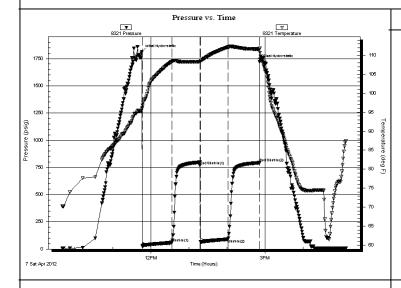
Start Date: 2012.04.07 End Date: 2012.04.07 Last Calib.: 2012.04.07 Start Time: 09:40:23 End Time: 17:06:52 Time On Btm: 2012.04.07 @ 11:45:52 Time Off Btm: 2012.04.07 @ 14:51:22

TEST COMMENT: IFP-Good blow BOB in 24 min

ISI-Weak surface blow back built to 1/2 in

FFP-Good blow BOB in 24 min

FSI-Weak surface blow back built to 1 in



rime	Pressure	remp	Annotation
(Min.)	(psig)	(deg F)	
0	1812.36	95.96	Initial Hydro-static
1	26.29	96.10	Open To Flow (1)
47	61.37	108.29	Shut-In(1)

PRESSURE SUMMARY

			,
1	26.29	96.10	Open To Flow (1)
47	61.37	108.29	Shut-In(1)
92	767.34	108.28	End Shut-In(1)
92	65.55	108.35	Open To Flow (2)
136	90.83	112.12	Shut-In(2)
185	793.29	111.58	End Shut-In(2)
186	1719.75	111.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	OCMW 10%O 20%M 70%W	0.60
63.00	HOCWM 30%O 10%W 60%M	0.88
20.00	Gassy Oil 25%G75%M	0.28
0.00	409-GIP	0.00
* Recovery from mult	tiple tests	

Gas Rates

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

Trilobite Testing, Inc. Ref. No: 44823 Printed: 2012.04.07 @ 18:42:13



Downing-Nelson Oil Co Inc

13-12s-23w

Po Box 1019

**KD Unit 1-13** 

Hays Ks 67601

Job Ticket: 44823 DST#: 2

ATTN: Ron Nelson

Test Start: 2012.04.07 @ 09:40:22

## GENERAL INFORMATION:

Formation: Lansing-E

Deviated: Whipstock: Test Type: Conventional Bottom Hole (Reset) No ft (KB)

Time Tool Opened: 11:46:22 Tester: Jeff Brown Time Test Ended: 17:07:52 44

Unit No:

Interval: 3767.00 ft (KB) To 3788.00 ft (KB) (TVD) Reference Elevations: 2433.00 ft (KB)

Total Depth: 3788.00 ft (KB) (TVD) 2425.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

Serial #: 8737 Outside

Press@RunDepth: 3770.00 ft (KB) 8000.00 psig psig @ Capacity:

Start Date: 2012.04.07 End Date: 2012.04.07 Last Calib.: 2012.04.07

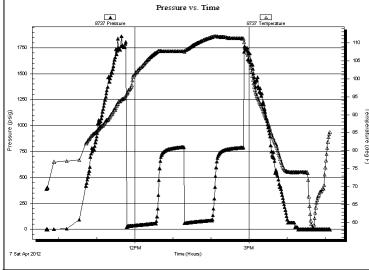
Start Time: 09:40:32 End Time: Time On Btm: 17:07:31 Time Off Btm:

TEST COMMENT: IFP-Good blow BOB in 24 min

ISI-Weak surface blow back built to 1/2 in

FFP-Good blow BOB in 24 min

FSI-Weak surface blow back built to 1 in



Ы	RESSI	JRE	SUMMARY	_

Ī	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
	(101111.)	(psig)	(ueg i )	
_				
emperat				
Temperature (deg F)				
J				

#### Recovery

Length (ft)	Description	Volume (bbl)	
63.00	OCMW 10%O 20%M 70%W	0.60	
63.00	HOCWM 30%O 10%W 60%M	0.88	
20.00	Gassy Oil 25%G75%M	0.28	
0.00	409-GIP	0.00	
* Recovery from multiple tests			

#### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Trilobite Testing, Inc. Ref. No: 44823 Printed: 2012.04.07 @ 18:42:13



**FLUID SUMMARY** 

Dow ning-Nelson Oil Co Inc

13-12s-23w KD Unit 1-13

Po Box 1019 Hays Ks 67601

Job Ticket: 44823

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.04.07 @ 09:40:22

#### **Mud and Cushion Information**

Mud Type:Gel ChemCushion Type:Oil A Pl:31 deg A PlMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight: 9.00 lb/gal Cushion Length: ft
Viscosity: 61.00 sec/qt Cushion Volume: bbl

7.98 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 2000.00 ppm Filter Cake: inches

## **Recovery Information**

Water Loss:

## Recovery Table

Length ft	Description	Volume bbl
63.00	OCMW 10%O 20%M 70%W	0.601
63.00	HOCWM 30%O 10%W 60%M	0.884
20.00	Gassy Oil 25%G75%M	0.281
0.00	409-GIP	0.000

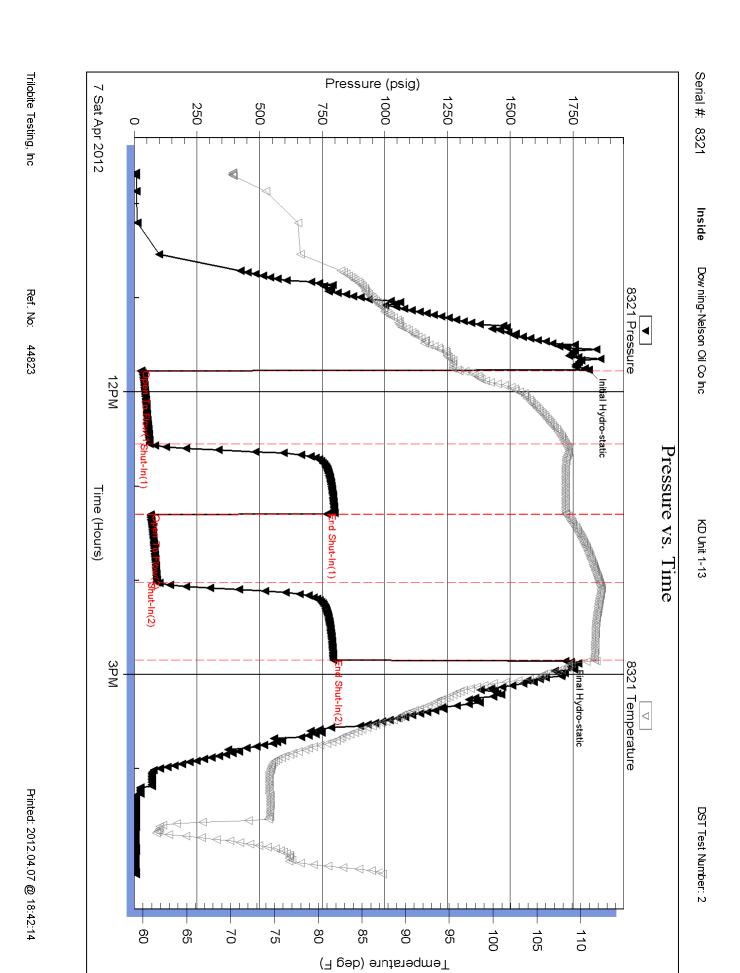
Total Length: 146.00 ft Total Volume: 1.766 bbl

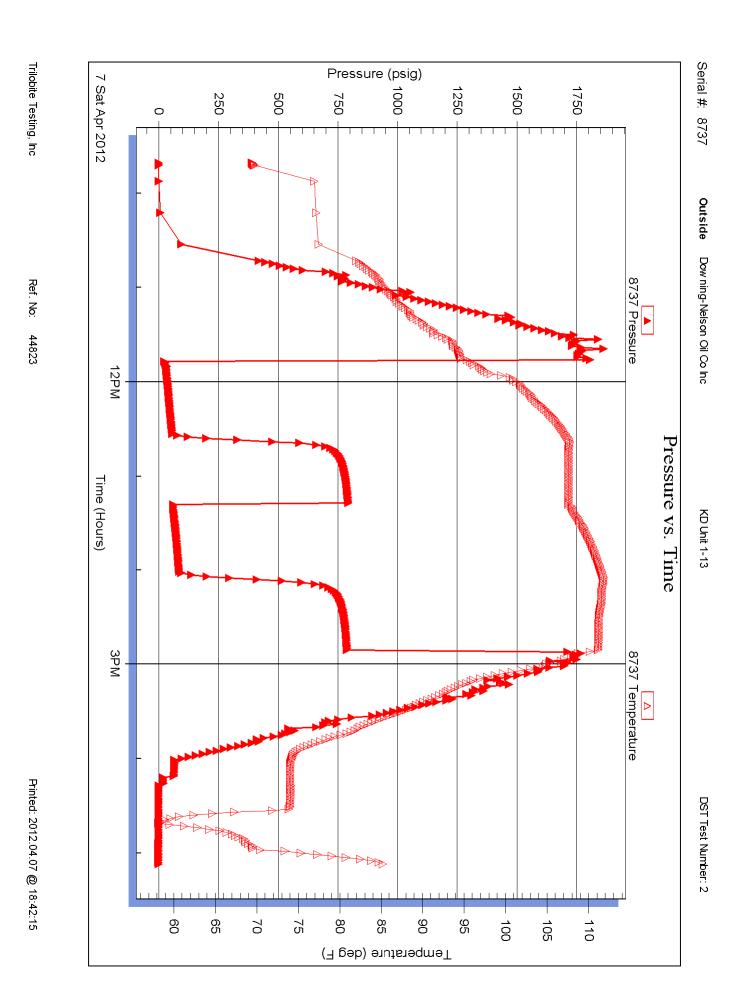
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 44823 Printed: 2012.04.07 @ 18:42:14







Downing-Nelson Oil Co Inc

13-12s-23w

**KD Unit 1-13** 

Po Box 1019

Hays Ks 67601 Job Ticket: 44824

ATTN: Ron Nelson Test Start: 2012.04.09 @ 00:05:09

## GENERAL INFORMATION:

Formation: Marmaton

Deviated: Whipstock: Test Type: Conventional Bottom Hole (Reset) No ft (KB)

Time Tool Opened: 02:03:09 Tester: Jeff Brown 44

Time Test Ended: 07:18:09 Unit No:

Interval: 4052.00 ft (KB) To 4095.00 ft (KB) (TVD) Reference Elevations: 2433.00 ft (KB) Total Depth: 4095.00 ft (KB) (TVD)

2425.00 ft (CF)

DST#: 3

Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

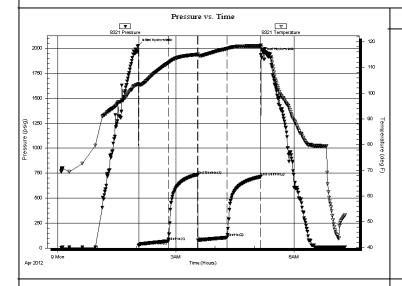
Serial #: 8321 Inside

Press@RunDepth: 4056.00 ft (KB) 110.67 psig @ Capacity: 8000.00 psig

Start Date: 2012.04.09 End Date: 2012.04.09 Last Calib.: 2012.04.09 Start Time: 00:05:10 End Time: 2012.04.09 @ 02:02:39 07:18:09 Time On Btm: Time Off Btm: 2012.04.09 @ 05:09:39

TEST COMMENT: IFP-Good blow BOB in 44 min

ISI-Dead no blow back FFP-Fair blow built to 8 in FSI- Dead no blow back



# PRESSURE SUMMARY

Pressure	Temp	Annotation
(psig)	(deg F)	
2026.95	103.50	Initial Hydro-static
24.15	103.15	Open To Flow (1)
70.63	111.69	Shut-In(1)
731.06	115.00	End Shut-In(1)
76.11	114.67	Open To Flow (2)
110.67	117.29	Shut-In(2)
714.31	118.30	End Shut-In(2)
1934.02	118.64	Final Hydro-static
	(psig) 2026.95 24.15 70.63 731.06 76.11 110.67 714.31	(psig) (deg F) 2026.95 103.50 24.15 103.15 70.63 111.69 731.06 115.00 76.11 114.67 110.67 117.29 714.31 118.30

#### Recovery

Length (ft)	Description	Volume (bbl)	
126.00	SOCMW 5%O 35%M 60%W	1.49	
53.00	VSOCWM 3%O 12%W 85%M	0.74	
15.00	Gassy Oil 10%G 90%O	0.21	
* Recovery from multiple tests			

#### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Trilobite Testing, Inc. Ref. No: 44824 Printed: 2012.04.09 @ 07:51:28



**FLUID SUMMARY** 

Dow ning-Nelson Oil Co Inc

13-12s-23w

Po Box 1019

**KD Unit 1-13** 

Hays Ks 67601

Job Ticket: 44824

DST#: 3

ATTN: Ron Nelson

Test Start: 2012.04.09 @ 00:05:09

#### **Mud and Cushion Information**

ohm.m

Mud Type:Gel ChemCushion Type:Oil A Pl:31 deg A PlMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Viscosity: 58.00 sec/qt Cushion Volume: bbl

7.98 in<sup>3</sup> Gas Cushion Type:

Gas Cushion Pressure: psig

Salinity: 5000.00 ppm Filter Cake: inches

## **Recovery Information**

Water Loss:

Resistivity:

## Recovery Table

Length ft	Description	Volume bbl
126.00	SOCMW 5%O 35%M 60%W	1.485
53.00	VSOCWM 3%O 12%W 85%M	0.743
15.00	Gassy Oil 10%G 90%O	0.210

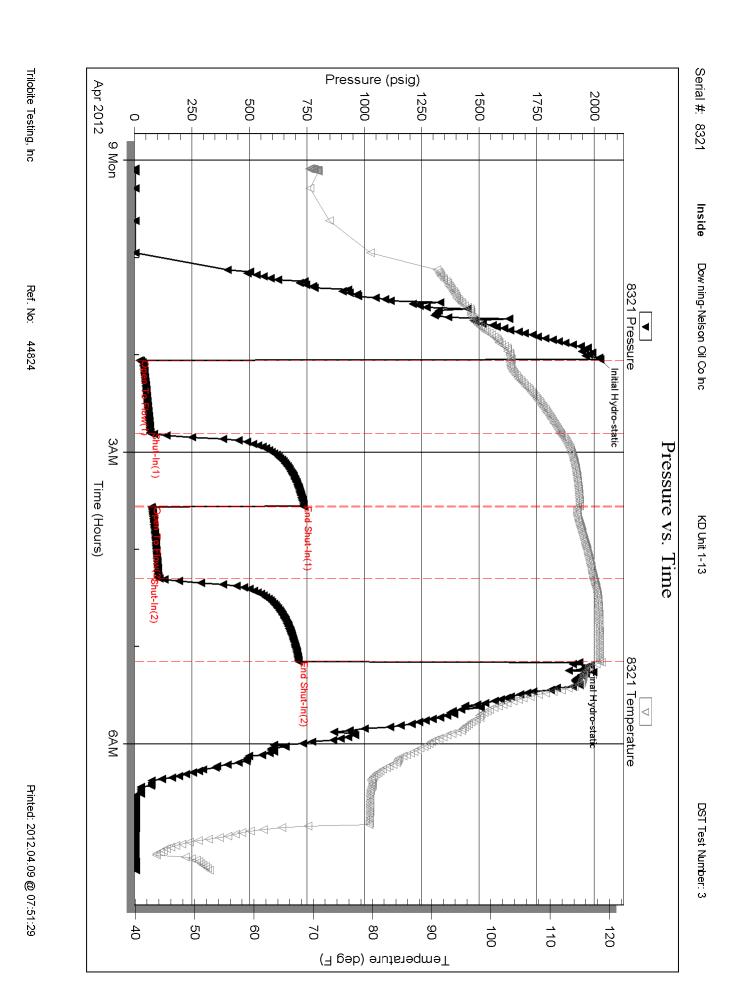
Total Length: 194.00 ft Total Volume: 2.438 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 44824 Printed: 2012.04.09 @ 07:51:29



ALLIED OIL & GAS SERVICES, LLC 056375

Federal Tax I.D.# 20-5975804 REMIT TO P.O. BOX 31 RUSSELL, KANSAS 17665 SERVICE POINT: JOB START
6.00 PM
COUNTY
/Rego JOB FINISH SEC. 13 TWP. NGE 2 3 CALLED OUT ON LOCATION DATE 4-2-6:30 PM UNC LOCATION (OGALLEH OLD OR NEW (Circle one) OWNER CONTRACTOR TYPE OF JOB CEMEN CASING SIZE () 5/ CEMENT 170 sx AMOUNT ORDERED DEPTH 23 Neu DEPTH 28 Gel DRILL PIPE DEPTH TOOL DEPTH COMMON. PRES. MAX **MINIMUM** MEAS, LINE SHOE JOINT POZMIX CEMENT LEFT IN CSG. **GEL** CHLORIDE 3 @ 58.20 174.60 PERFS. DISPLACEMENT AS RI @ @ **EQUIPMENT** @ @ CEMENTER (27 ENA PUMPTŖUCK @ <u>417</u> HELPER WOOD @ BULK TRUCK # 710 DRIVER @ **BULK TRUCK** @ DRIVER HANDLING MILEAGE REMARKS: SERVICE JOINTS OF Recieved <u> 22 Gel</u>DEPTH OF JOB PUMP TRUCK CHARGE 1125.00 ement EXTRA FOOTAGE 7.00 SURFACE MILEAGE\_< @ TOTAL 1730 00 STREET ZIP. CITY\_ STATE 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 TOTAL \_ done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL 208,39 SALES TAX (If Any) TERMS AND CONDITIONS" listed on the reverse side. 6280,30 TOTAL CHARGES /844, 83 if PAID IN 30 DAYS DISCOUNT 20/70 PRINTED NAME SIGNATURE N

JOB	1	$\Delta \Delta$
חנוו.		1217

# SWIFT Services, Inc.

DATE 1-10-12 PAGE NO.

CUSTOMER			WELL NO.		LEASE		JOB TYPE	TICKET NO.
DOBLAND & Nolson		1-13		KD Unit		JOBTYPE Coment Longstring	TICKET NO.	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T C	PRESSUR TUBING	E (PSI) CASING	TO 1262 DESCRIPTION OF OPERATION AN	D MATERIALS
	0500						On foretron w/ Flort 1	gu()
<u>,</u>	Macc						Start 51/2" 14# ft. casi	
							Fuscot Fleet Shoe WAL	-
							L.D. Beffle - SJ 42 % @	
							Cent 1-3-5-7-9-11-57	
6							Port Coller #58 @ 1836'	
	0740							a tate coni
	D830		5	<del>                                     </del>			Finding - Plan PH & M	20 SKS
••••	U5.30		121			200		art's
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	ļ	5-1/2			<u> </u>	95E	Pung 20 BB, Kel Al	
	<b> </b>	5	<b>1</b>	<del>                                     </del>		200 50 Tal	Mix 125 SKS EA-	
	0.900	7/2	34			l .	Fin out - Wash out	
	-	8/2			<u> </u>	<i>3</i> 26	Deap LD Plage Start	
. ———	<del> </del>	8/2	95	<del> </del>	<u> </u>	350 750	(a) 18 1 Caugh int 5	
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