KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1078622

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

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

Designate Type of Completion:

- [x] New Well
- [ ] Re-Entry
- [ ] Workover

- [ ] Oil
- [ ] WSW
- [ ] SWD
- [ ] SIOW
- [ ] Gas
- [x] D&A
- [ ] ENHR
- [ ] SIGW
- [ ] OG
- [ ] GSW
- [ ] Temp. Abd.
- [ ] CM *(Coal Bed Methane)*
- [ ] Cathodic
- [ ] Other *(Core, Expl., etc.)*:

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

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

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

03/24/2012	04/01/2012	04/02/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-195-22759-00-00
Spot Description:
NW - SE - NE - NE Sec. 30 Twp. 12 S. R. 21 [ ] East [x] West
675 Feet from [x] North / [ ] South Line of Section
335 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [ ] SW
County: Trego
Lease Name: Patty Well #: 1-30
Field Name: Wildcat
Producing Formation: None
Elevation: Ground: 2309 Kelly Bushing: 2317
Total Depth: 4060 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 2223 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] 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: 17000 ppm Fluid volume: 400 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. [ ] East [ ] West
County: Permit #:

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

- [ ] **Letter of Confidentiality Received**
  Date:
- [ ] **Confidential Release Date:**
- [x] **Wireline Log Received**
- [x] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [ ] I [x] II [ ] III **Approved by:** Deanna Garrisor **Date:** 04/26/2012

Side Two

1078622

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

Sec. 30 Twp. 12 S. R. 21 ☐ East ☑ West County: Trego

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

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:
Attached

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

Name	Top	Datum
Attached	Attached	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	12.2500	8.6250	23	222.72	Common	150	2% Gel & 3% CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:
☐ Perforate
☐ Protect Casing
☐ Plug Back TD
☐ Plug Off Zone

Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
-			
-			

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

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:
☐ 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	Patty 1-30
Doc ID	1078622

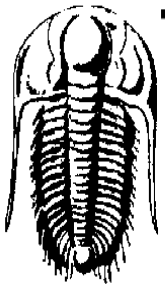
All Electric Logs Run

Sonic
Micro
Dual Induction
Compensated Density / Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Patty 1-30
Doc ID	1078622

Tops

Name	Top	Datum
Top Anhydrite	1739'	+578
Base Anhydrite	1782'	+535
Topeka	3354'	-1037
Heebner	3376'	-1059
Toronto	3596'	-1279
LKC	3608'	-1291
BKC	3847'	-1530
Marmaton	3929'	-1612
Arbuckle	4008'	-1691



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.28 @ 21:50:22
End Date: 2012.03.29 @ 04:18:52
Job Ticket #: 47305 DST #: 1

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

Printed: 2012.04.04 @ 10:53:09

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47305 **DST#: 1**

Test Start: 2012.03.28 @ 21:50:22

GENERAL INFORMATION:

Formation: **LKC-"A"**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 23:36:07
Time Test Ended: 04:18:52

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3600.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

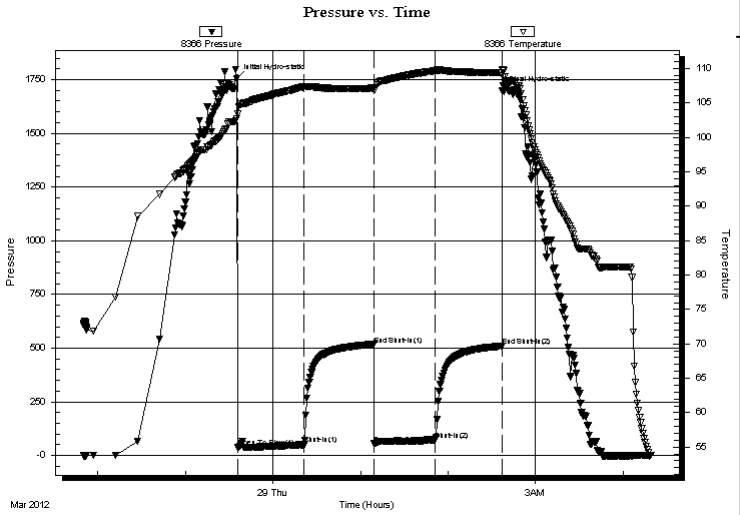
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 72.40 psig @ 3602.00 ft (KB)
Start Date: 2012.03.28 End Date: 2012.03.29
Start Time: 21:50:24 End Time: 04:18:52

Capacity: 8000.00 psig
Last Calib.: 2012.03.29
Time On Btm: 2012.03.28 @ 23:35:22
Time Off Btm: 2012.03.29 @ 02:37:22

TEST COMMENT: IFP-Fair Blow , Built to 6"
ISI-Dead
FFP-Fair Blow , Built to 5-1/2"
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1754.71	102.75	Initial Hydro-static
1	37.77	103.37	Open To Flow (1)
47	49.78	107.35	Shut-In(1)
94	516.19	107.15	End Shut-In(1)
95	53.94	106.87	Open To Flow (2)
136	72.40	109.70	Shut-In(2)
182	509.33	109.37	End Shut-In(2)
182	1698.91	109.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
95.00	VSOCMW-5%O-70%W-25%M	1.06
10.00	Free Oil	0.14
0.00	30' Gas In Pipe	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47305 **DST#: 1**

Test Start: 2012.03.28 @ 21:50:22

GENERAL INFORMATION:

Formation: **LKC-"A"**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 23:36:07
Time Test Ended: 04:18:52

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3600.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

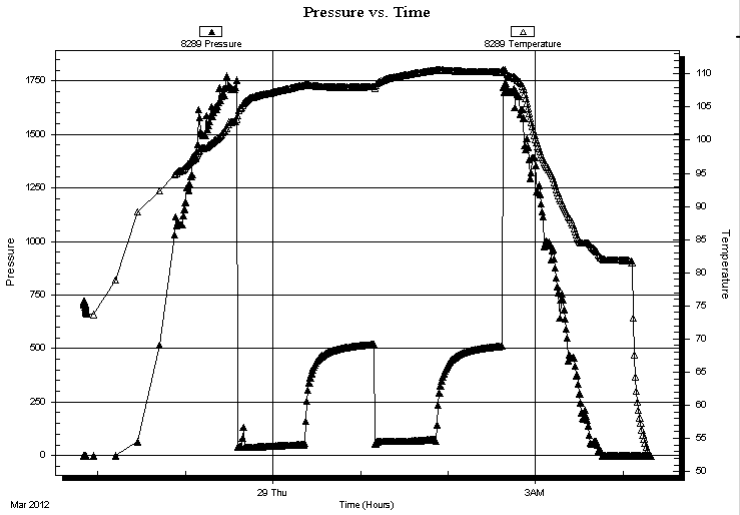
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3602.00 ft (KB)
Start Date: 2012.03.28 End Date: 2012.03.29
Start Time: 21:50:24 End Time: 04:19:22

Capacity: 8000.00 psig
Last Calib.: 2012.03.29
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Fair Blow , Built to 6"
ISI-Dead
FFP-Fair Blow , Built to 5-1/2"
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
95.00	VSOCMW-5%O-70%W-25%M	1.06
10.00	Free Oil	0.14
0.00	30' Gas In Pipe	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47305 **DST#: 1**

Test Start: 2012.03.28 @ 21:50:22

Tool Information

Drill Pipe:	Length:	3575.00 ft	Diameter:	3.80	inches	Volume:	50.15	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	30.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	
						Total Volume:	50.30	bbl	

Drill Pipe Above KB:	26.00 ft
Depth to Top Packer:	3600.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	20.00 ft
Tool Length:	41.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		25000.00 lb
Weight to Pull Loose:		80000.00 lb
Tool Chased		6.00 ft
String Weight:	Initial	50000.00 lb
	Final	50000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3580.00		
Shut In Tool	5.00			3585.00		
Hydraulic tool	5.00			3590.00		
Packer	5.00			3595.00	21.00	Bottom Of Top Packer
Packer	5.00			3600.00		
Stubb	1.00			3601.00		
Perforations	1.00			3602.00		
Recorder	0.00	8366	Inside	3602.00		
Recorder	0.00	8289	Outside	3602.00		
Perforations	15.00			3617.00		
Bullnose	3.00			3620.00	20.00	Bottom Packers & Anchor
Total Tool Length:	**41.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47305 **DST#: 1**

Test Start: 2012.03.28 @ 21:50:22

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	38 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	33000 ppm
Viscosity:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1000.00 ppm				
Filter Cake:	inches				

Recovery Information

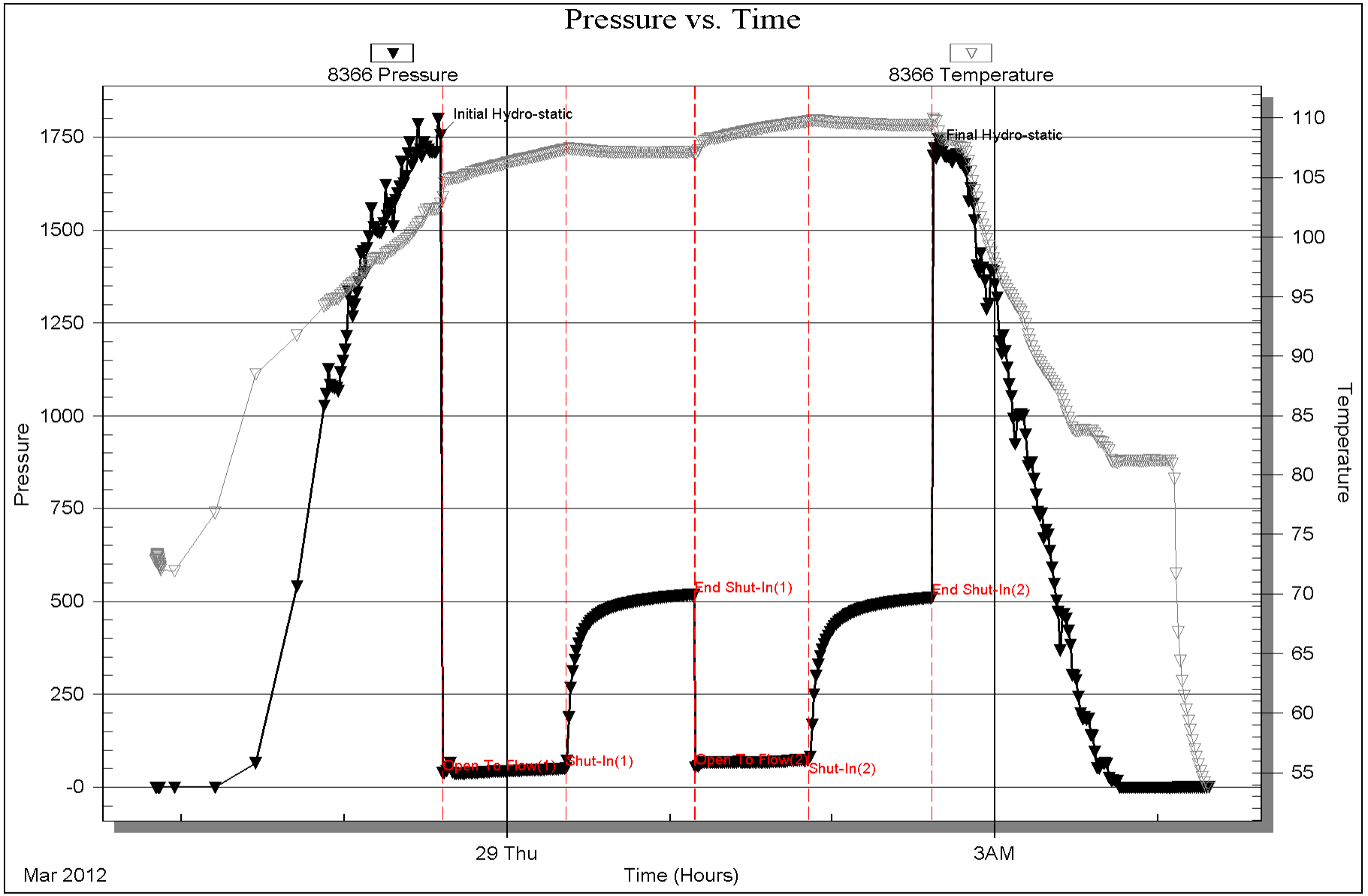
Recovery Table

Length ft	Description	Volume bbl
95.00	VSOCMW-5%O-70%W-25%M	1.059
10.00	Free Oil	0.140
0.00	30' Gas In Pipe	0.000

Total Length: 105.00 ft Total Volume: 1.199 bbl

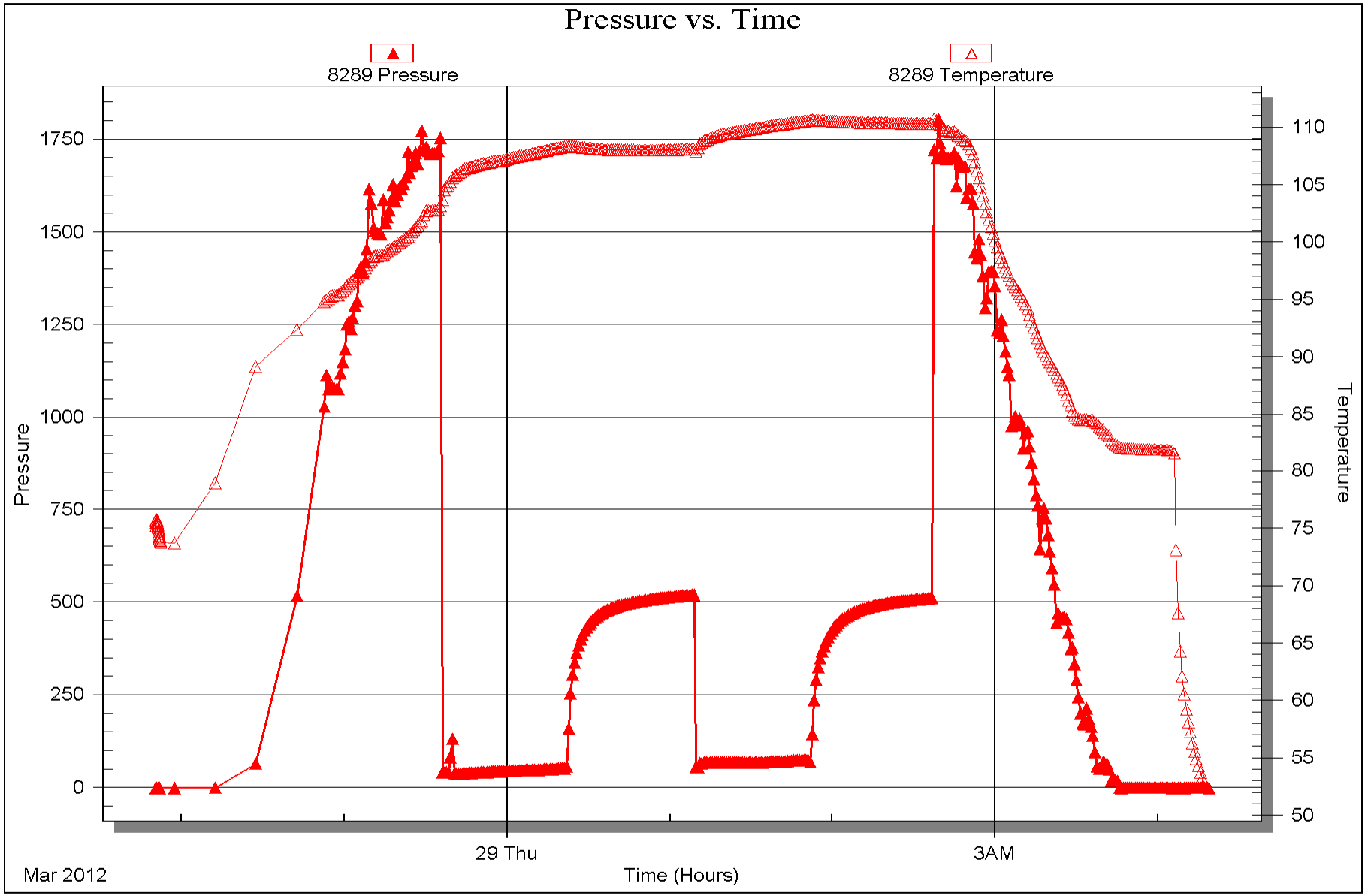
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 1

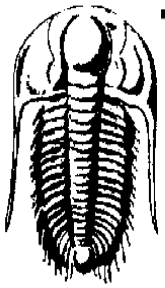


Trilobite Testing, Inc Ref. No: 47305 Printed: 2012.04.04 @ 10:53:12

Serial #: 8289 **Outside** Downing-Nelson Oil Company Patty #1-30 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 47305 Printed: 2012.04.04 @ 10:53:12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.29 @ 11:57:21
End Date: 2012.03.29 @ 17:36:21
Job Ticket #: 47306 DST #: 2

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

Printed: 2012.04.04 @ 10:42:28

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47306 **DST#: 2**

Test Start: 2012.03.29 @ 11:57:21

GENERAL INFORMATION:

Formation: **LKC "C"**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 13:42:06
Time Test Ended: 17:36:21

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3630.00 ft (KB) To 3657.00 ft (KB) (TVD)
Total Depth: 3657.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

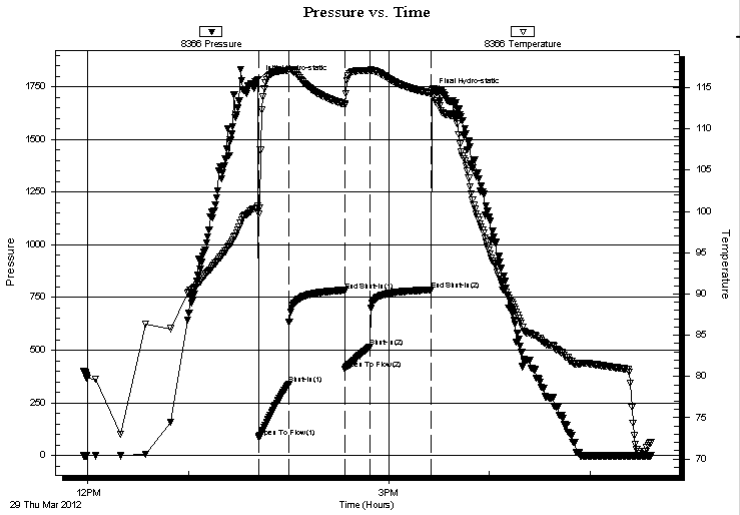
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 514.06 psig @ 3634.00 ft (KB)
Start Date: 2012.03.29 End Date: 2012.03.29
Start Time: 11:57:23 End Time: 17:36:21

Capacity: 8000.00 psig
Last Calib.: 2012.03.29
Time On Btm: 2012.03.29 @ 13:41:51
Time Off Btm: 2012.03.29 @ 15:25:36

TEST COMMENT: IFP-Strong Blow , BOB in 2 Min.
ISI-Dead
FFP-Strong Blow , BOB in 3-1/2 Min
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1783.93	100.72	Initial Hydro-static
1	87.75	99.65	Open To Flow (1)
18	338.16	117.11	Shut-In(1)
52	782.52	113.01	End Shut-In(1)
52	409.77	112.89	Open To Flow (2)
67	514.06	117.10	Shut-In(2)
104	786.30	114.32	End Shut-In(2)
104	1722.48	114.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
990.00	Salt Water	13.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47306 **DST#: 2**

Test Start: 2012.03.29 @ 11:57:21

GENERAL INFORMATION:

Formation: **LKC "C"**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 13:42:06
Time Test Ended: 17:36:21

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3630.00 ft (KB) To 3657.00 ft (KB) (TVD)
Total Depth: 3657.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

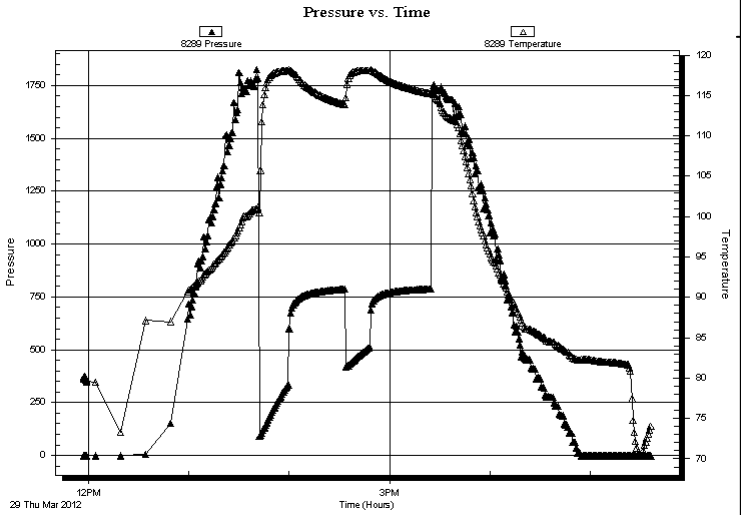
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3634.00 ft (KB)
Start Date: 2012.03.29 End Date: 2012.03.29
Start Time: 11:57:08 End Time: 17:36:36

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Strong Blow , BOB in 2 Min.
ISI-Dead
FFP-Strong Blow , BOB in 3-1/2 Min
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
990.00	Salt Water	13.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47306 **DST#: 2**

Test Start: 2012.03.29 @ 11:57:21

Tool Information

Drill Pipe:	Length:	3606.00 ft	Diameter:	3.80	inches	Volume:	50.58	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	30.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	
						Total Volume:	50.73	bbl	

Drill Pipe Above KB:	27.00 ft
Depth to Top Packer:	3630.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	27.00 ft
Tool Length:	48.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2000.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	70000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	60000.00 lb
Final	64000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3610.00		
Shut In Tool	5.00			3615.00		
Hydraulic tool	5.00			3620.00		
Packer	5.00			3625.00	21.00	Bottom Of Top Packer
Packer	5.00			3630.00		
Stubb	1.00			3631.00		
Perforations	3.00			3634.00		
Recorder	0.00	8366	Inside	3634.00		
Recorder	0.00	8289	Outside	3634.00		
Perforations	20.00			3654.00		
Bullnose	3.00			3657.00	27.00	Bottom Packers & Anchor
Total Tool Length:	**48.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47306 **DST#: 2**

Test Start: 2012.03.29 @ 11:57:21

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:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
990.00	Salt Water	13.614

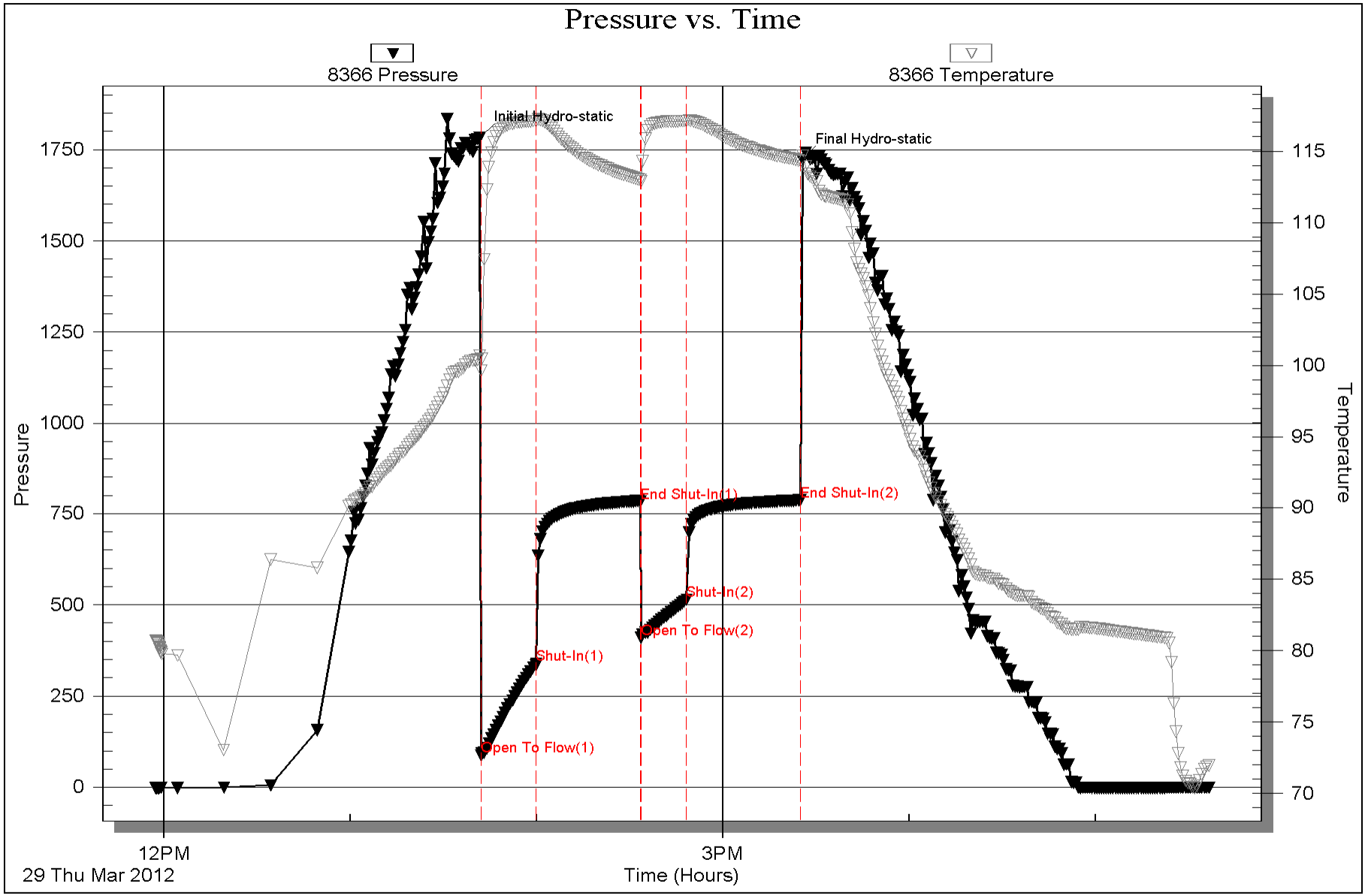
Total Length: 990.00 ft Total Volume: 13.614 bbl

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

Laboratory Name: Laboratory Location:

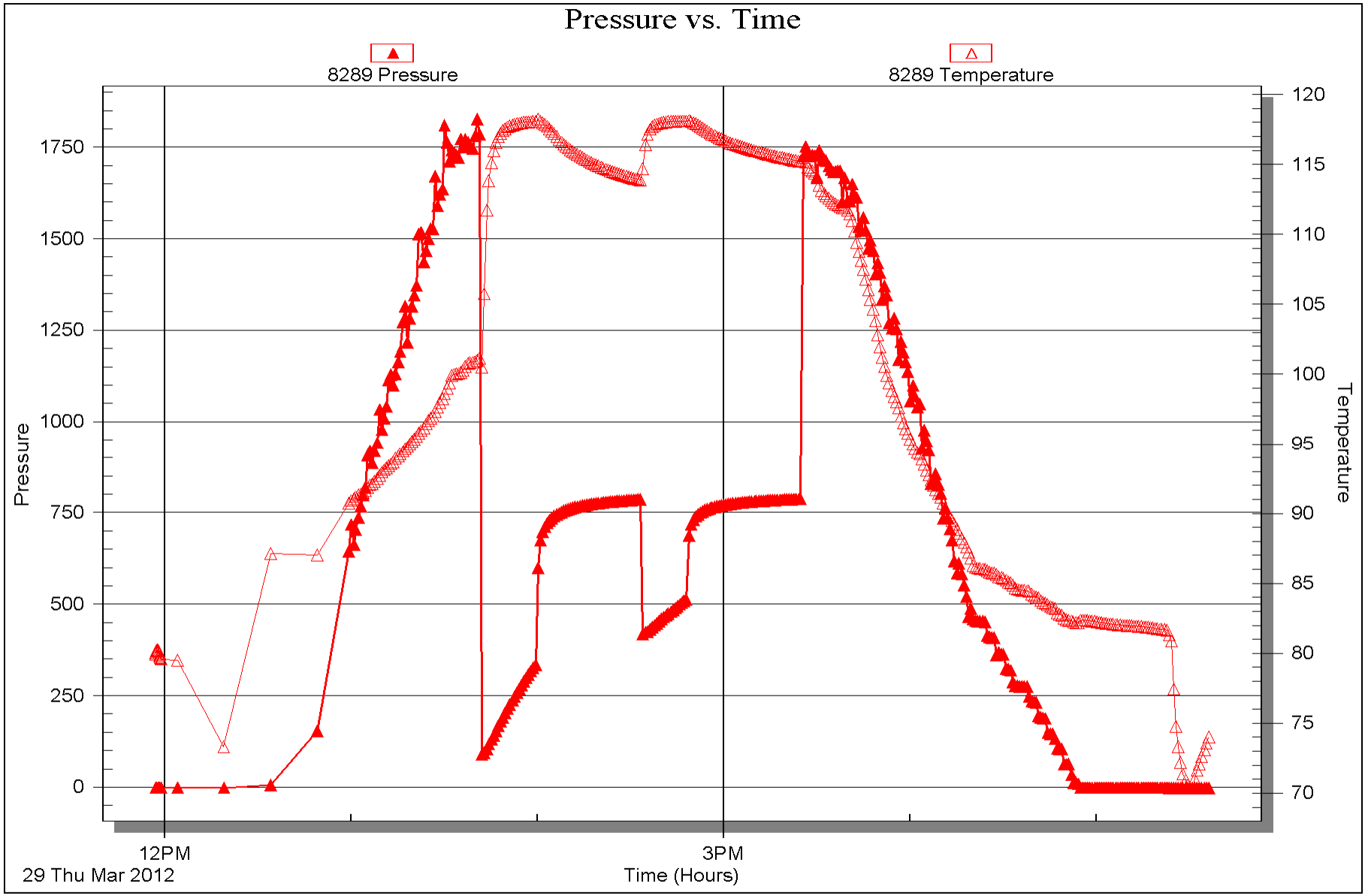
Recovery Comments:

Serial #: 8366 **Inside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 47306 Printed: 2012.04.04 @ 10:42:30

Serial #: 8289 **Outside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 2



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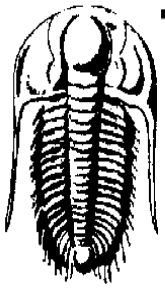


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.30 @ 09:13:18
End Date: 2012.03.30 @ 14:52:03
Job Ticket #: 47307 DST #: 3

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

Printed: 2012.04.04 @ 10:41:48

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47307 **DST#: 3**

Test Start: 2012.03.30 @ 09:13:18

GENERAL INFORMATION:

Formation: **LKC "J"**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 11:00:33
Time Test Ended: 14:52:03

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3780.00 ft (KB) To 3801.00 ft (KB) (TVD)
Total Depth: 3801.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

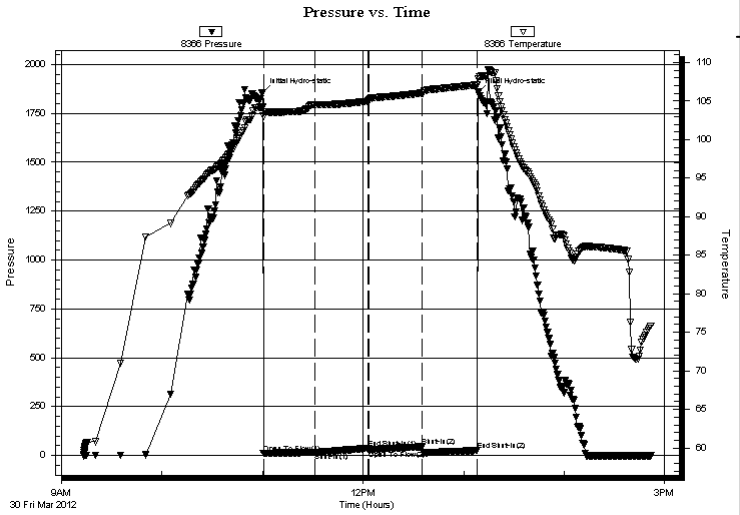
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 45.02 psig @ 3783.00 ft (KB)
Start Date: 2012.03.30 End Date: 2012.03.30
Start Time: 09:13:20 End Time: 14:52:03

Capacity: 8000.00 psig
Last Calib.: 2012.03.30
Time On Btm: 2012.03.30 @ 11:00:18
Time Off Btm: 2012.03.30 @ 13:08:48

TEST COMMENT: IFP-Weak Surface Blow
ISI-Dead
FFP-Dead
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1856.81	104.22	Initial Hydro-static
1	9.87	103.05	Open To Flow (1)
31	14.90	104.52	Shut-In(1)
63	35.98	104.99	End Shut-In(1)
63	27.99	105.01	Open To Flow (2)
95	45.02	106.05	Shut-In(2)
128	25.44	107.10	End Shut-In(2)
129	1858.22	107.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	VSOCM-3%O-97%M	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47307 **DST#: 3**

Test Start: 2012.03.30 @ 09:13:18

Tool Information

Drill Pipe:	Length:	3761.00 ft	Diameter:	3.80	inches	Volume:	52.76	bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70	inches	Volume:	0.00	bbl	
Drill Collar:	Length:	30.00 ft	Diameter:	2.25	inches	Volume:	0.15	bbl	
						Total Volume:	52.91	bbl	

Drill Pipe Above KB:	32.00 ft
Depth to Top Packer:	3780.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	21.00 ft
Tool Length:	42.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2000.00 lb
Weight set on Packer:	25000.00 lb
Weight to Pull Loose:	65000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	60000.00 lb
Final	60000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3760.00		
Shut In Tool	5.00			3765.00		
Hydraulic tool	5.00			3770.00		
Packer	5.00			3775.00	21.00	Bottom Of Top Packer
Packer	5.00			3780.00		
Stubb	1.00			3781.00		
Perforations	2.00			3783.00		
Recorder	0.00	8366	Inside	3783.00		
Recorder	0.00	8289	Outside	3783.00		
Perforations	15.00			3798.00		
Bullnose	3.00			3801.00	21.00	Bottom Packers & Anchor
Total Tool Length:	**42.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47307 **DST#: 3**

Test Start: 2012.03.30 @ 09:13:18

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:	46.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	inches				

Recovery Information

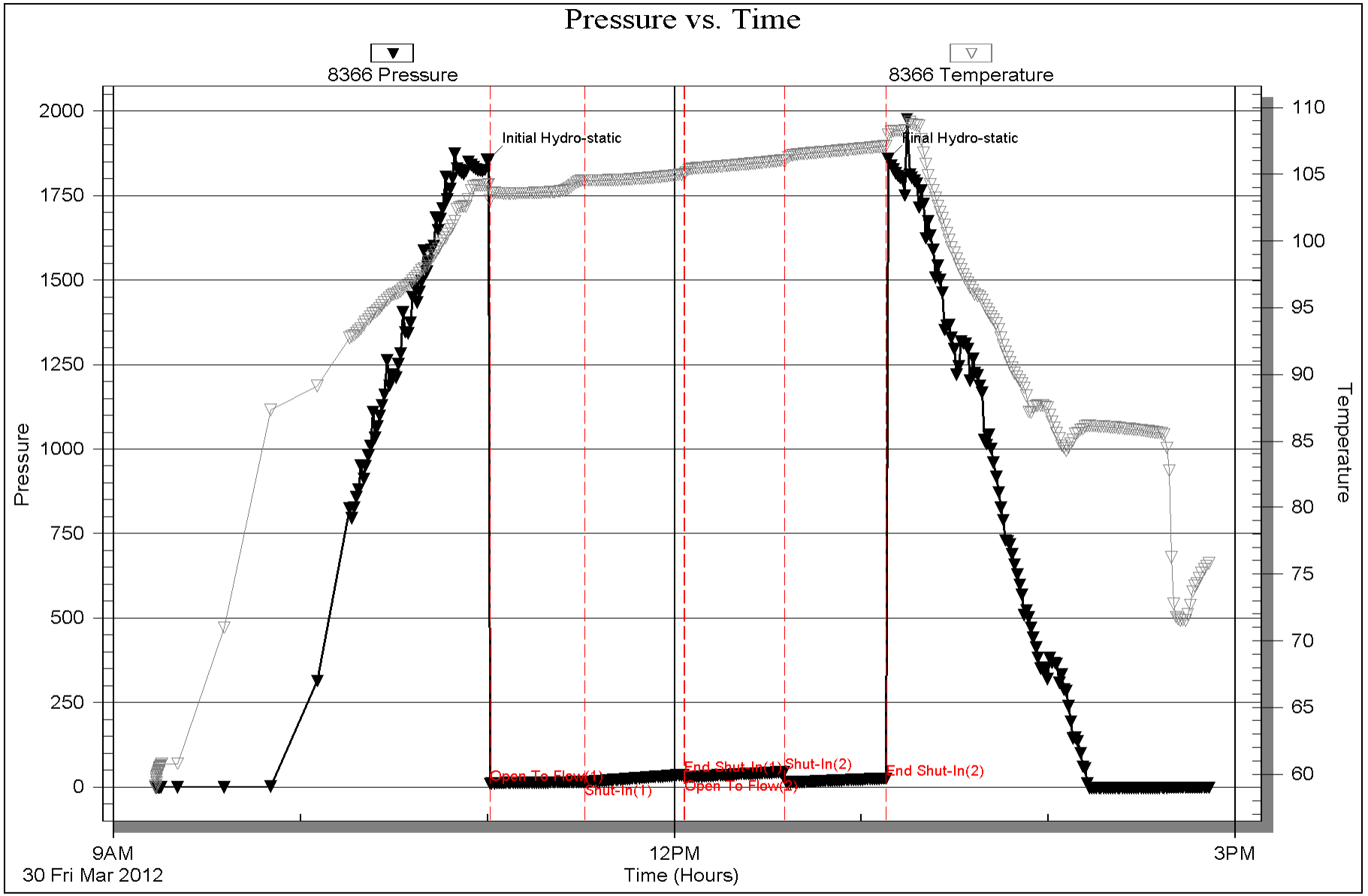
Recovery Table

Length ft	Description	Volume bbl
10.00	VSOCM-3%O-97%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

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

Serial #: 8366 **Inside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 3



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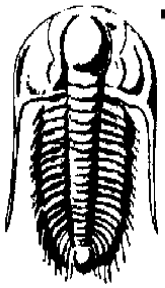


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.31 @ 09:29:46
End Date: 2012.03.31 @ 16:18:46
Job Ticket #: 47308 DST #: 4

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

Printed: 2012.04.04 @ 10:40:07

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47308 **DST#: 4**

Test Start: 2012.03.31 @ 09:29:46

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 11:21:01
Time Test Ended: 16:18:46

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3933.00 ft (KB) To 3965.00 ft (KB) (TVD)
Total Depth: 3965.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

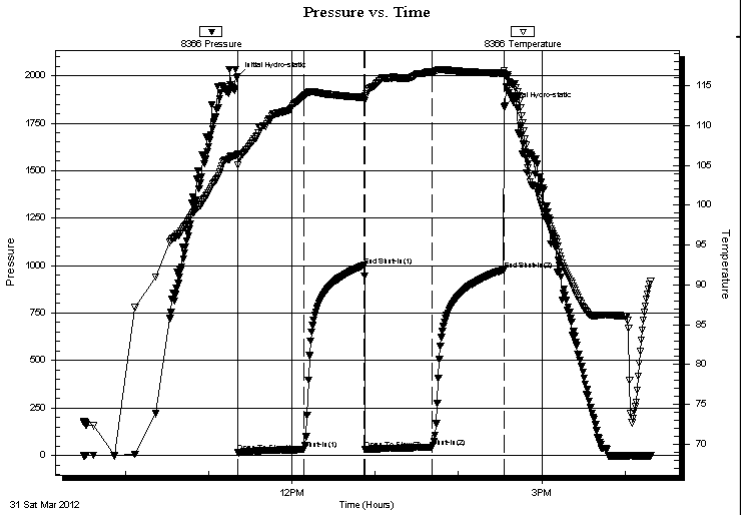
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 43.48 psig @ 3937.00 ft (KB)
Start Date: 2012.03.31 End Date: 2012.03.31
Start Time: 09:29:48 End Time: 16:18:46

Capacity: 8000.00 psig
Last Calib.: 2012.03.31
Time On Btm: 2012.03.31 @ 11:20:46
Time Off Btm: 2012.03.31 @ 14:32:46

TEST COMMENT: IFP-Weak Blow , Built to 3"
ISI-Dead
FFP-Weak Blow , Built to 1-1/2"
FFP-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1994.87	106.38	Initial Hydro-static
1	15.09	105.01	Open To Flow (1)
48	31.56	113.69	Shut-In(1)
92	1000.35	113.52	End Shut-In(1)
92	33.56	113.15	Open To Flow (2)
141	43.48	116.78	Shut-In(2)
192	976.70	116.55	End Shut-In(2)
192	1836.88	116.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Muddy Water	0.57
10.00	Free Oil	0.14

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47308 **DST#: 4**

Test Start: 2012.03.31 @ 09:29:46

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 11:21:01
Time Test Ended: 16:18:46

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3933.00 ft (KB) To 3965.00 ft (KB) (TVD)
Total Depth: 3965.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

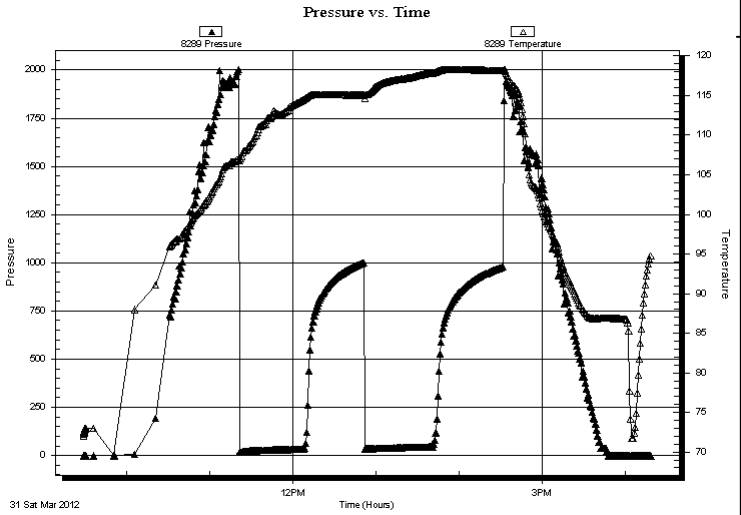
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3937.00 ft (KB)
Start Date: 2012.03.31 End Date: 2012.03.31
Start Time: 09:28:54 End Time: 16:18:37

Capacity: 8000.00 psig
Last Calib.: 2012.03.31
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow , Built to 3"
ISI-Dead
FFP-Weak Blow , Built to 1-1/2"
FFP-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Muddy Water	0.57
10.00	Free Oil	0.14

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47308 **DST#: 4**

Test Start: 2012.03.31 @ 09:29:46

Tool Information

Drill Pipe:	Length:	3887.00 ft	Diameter:	3.80 inches	Volume:	54.52 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 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
					Total Volume:	54.67 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		5.00 ft					String Weight:	Initial	60000.00 lb
Depth to Top Packer:		3933.00 ft						Final	60000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		32.00 ft							
Tool Length:		53.00 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			3913.00		
Shut In Tool	5.00			3918.00		
Hydraulic tool	5.00			3923.00		
Packer	5.00			3928.00	21.00	Bottom Of Top Packer
Packer	5.00			3933.00		
Stubb	1.00			3934.00		
Perforations	3.00			3937.00		
Recorder	0.00	8366	Inside	3937.00		
Recorder	0.00	8289	Outside	3937.00		
Perforations	25.00			3962.00		
Bullnose	3.00			3965.00	32.00	Bottom Packers & Anchor
Total Tool Length:	**53.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47308 **DST#: 4**

Test Start: 2012.03.31 @ 09:29:46

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	34 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	27000 ppm
Viscosity:	63.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5000.00 ppm				
Filter Cake:	inches				

Recovery Information

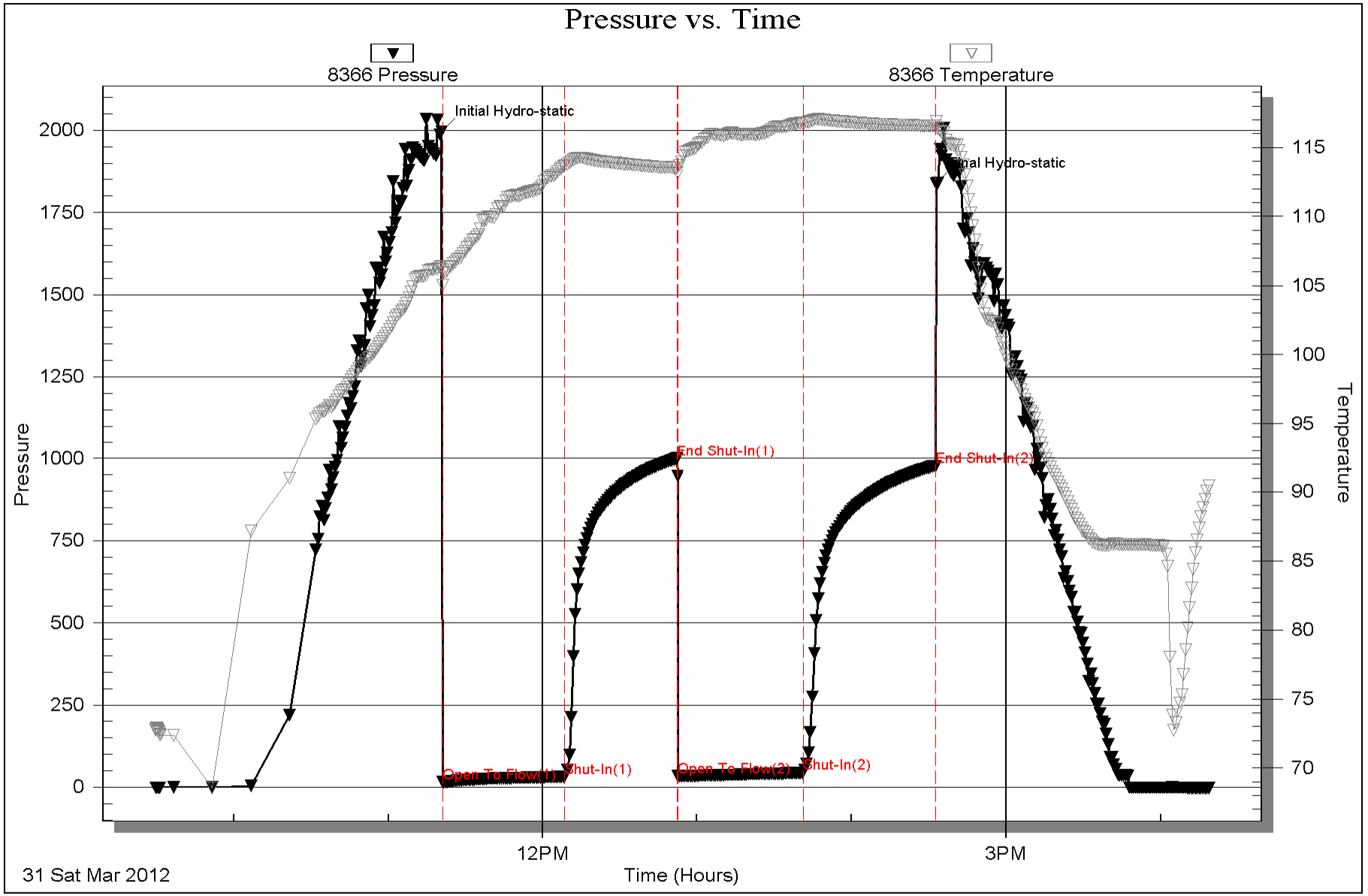
Recovery Table

Length ft	Description	Volume bbl
60.00	Muddy Water	0.568
10.00	Free Oil	0.140

Total Length: 70.00 ft Total Volume: 0.708 bbl

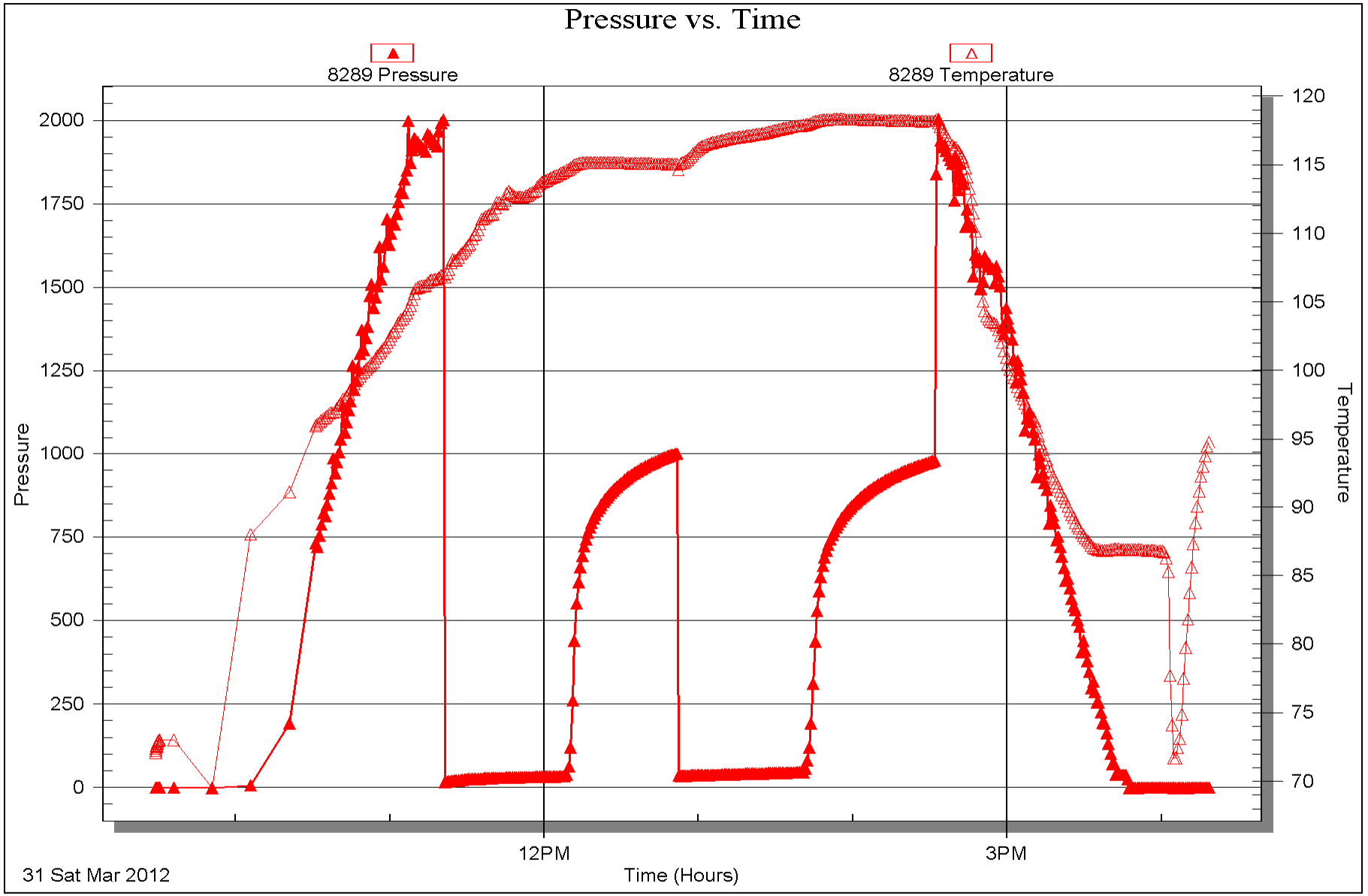
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 47308 Printed: 2012.04.04 @ 10:40:09

Serial #: 8289 **Outside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 4



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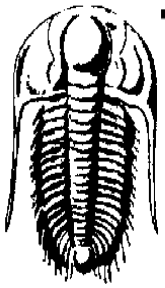


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.04.01 @ 10:24:35
End Date: 2012.04.01 @ 18:30:35
Job Ticket #: 47309 DST #: 5

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

Printed: 2012.04.04 @ 10:39:23

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Dow ning

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47309 **DST#: 5**

Test Start: 2012.04.01 @ 10:24:35

GENERAL INFORMATION:

Formation: **D-E**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 13:00:50
Time Test Ended: 18:30:35

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3668.00 ft (KB) To 3690.00 ft (KB) (TVD)
Total Depth: 4061.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

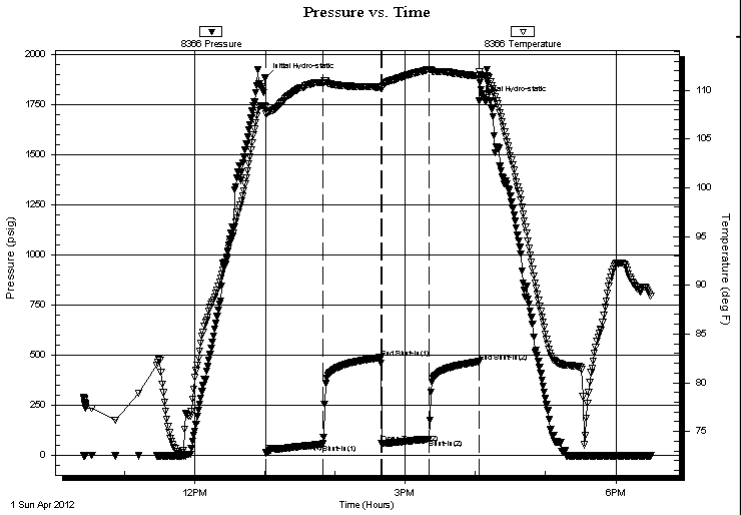
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 79.96 psig @ 3671.00 ft (KB)
Start Date: 2012.04.01 End Date: 2012.04.01
Start Time: 10:24:37 End Time: 18:30:35

Capacity: 8000.00 psig
Last Calib.: 2012.04.01
Time On Btm: 2012.04.01 @ 13:00:35
Time Off Btm: 2012.04.01 @ 16:03:20

TEST COMMENT: IFP-Fair Blow , Built to 7-1/2"
ISI-Dead
FFP-Weak Blow , Built to 3"
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1886.62	108.38	Initial Hydro-static
1	13.35	107.56	Open To Flow (1)
49	56.85	110.76	Shut-In(1)
98	487.76	110.35	End Shut-In(1)
99	58.12	110.23	Open To Flow (2)
140	79.96	112.14	Shut-In(2)
183	467.60	111.51	End Shut-In(2)
183	1771.74	111.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	Muddy Water W/Oil Scum	1.83

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47309 **DST#: 5**

Test Start: 2012.04.01 @ 10:24:35

GENERAL INFORMATION:

Formation: **D-E**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 13:00:50
Time Test Ended: 18:30:35

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3668.00 ft (KB) To 3690.00 ft (KB) (TVD)
Total Depth: 4061.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

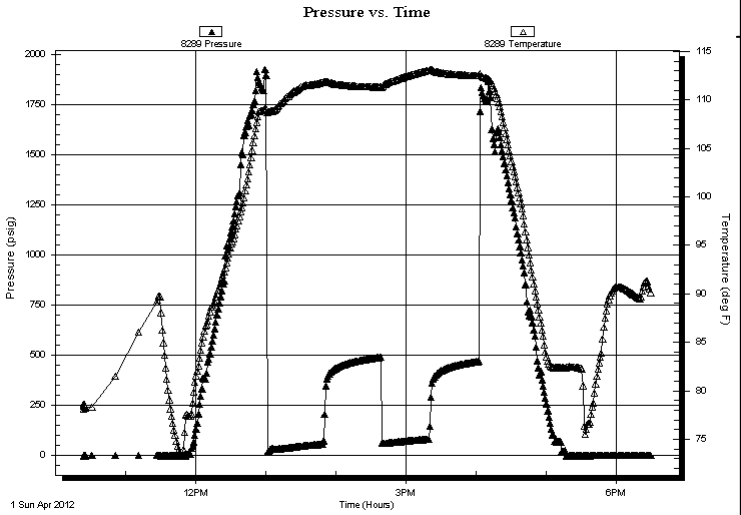
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3671.00 ft (KB)
Start Date: 2012.04.01 End Date: 2012.04.01
Start Time: 10:24:22 End Time: 18:30:05

Capacity: 8000.00 psig
Last Calib.: 2012.04.01
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Fair Blow , Built to 7-1/2"
ISI-Dead
FFP-Weak Blow , Built to 3"
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
150.00	Muddy Water W/Oil Scum	1.83

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47309 **DST#: 5**

Test Start: 2012.04.01 @ 10:24:35

GENERAL INFORMATION:

Formation: **D-E**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 13:00:50
Time Test Ended: 18:30:35

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3668.00 ft (KB) To 3690.00 ft (KB) (TVD)
Total Depth: 4061.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

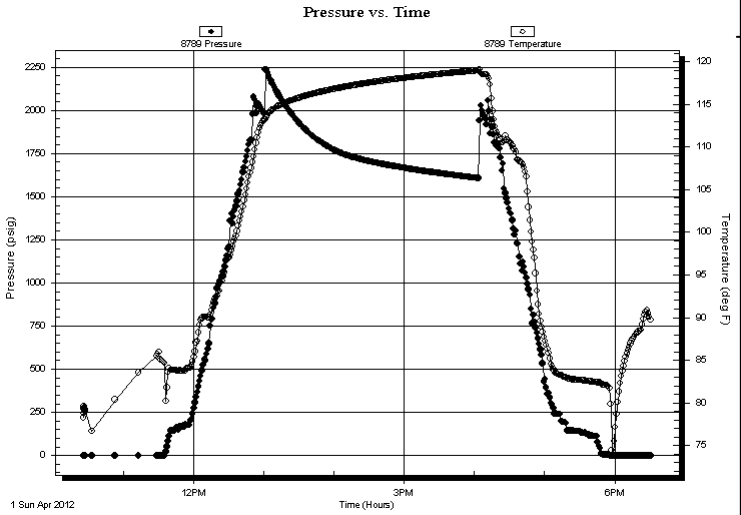
Reference Elevations: 2316.00 ft (KB)
2308.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8789 **Below (Straddle)**

Press@RunDepth: psig @ 3713.00 ft (KB)
Start Date: 2012.04.01 End Date: 2012.04.01
Start Time: 10:26:14 End Time: 18:30:57

Capacity: 8000.00 psig
Last Calib.: 2012.04.01
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Fair Blow , Built to 7-1/2"
ISI-Dead
FFP-Weak Blow , Built to 3"
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
150.00	Muddy Water W/Oil Scum	1.83

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47309 **DST#: 5**

Test Start: 2012.04.01 @ 10:24:35

Tool Information

Drill Pipe:	Length:	3639.00 ft	Diameter:	3.80 inches	Volume:	51.05 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		70000.00 lb
					Total Volume:	51.20 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		22.00 ft					String Weight:	Initial	64000.00 lb
Depth to Top Packer:		3668.00 ft						Final	67000.00 lb
Depth to Bottom Packer:		3690.00 ft							
Interval between Packers:		22.00 ft							
Tool Length:		411.00 ft							
Number of Packers:		3	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3648.00		
Shut In Tool	5.00			3653.00		
Hydraulic tool	5.00			3658.00		
Packer	5.00			3663.00	21.00	Bottom Of Top Packer
Packer	5.00			3668.00		
Stubb	1.00			3669.00		
Perforations	2.00			3671.00		
Recorder	0.00	8366	Inside	3671.00		
Recorder	0.00	8289	Outside	3671.00		
Perforations	15.00			3686.00		
Blank Off Sub	1.00			3687.00		
Blank Spacing	3.00			3690.00	22.00	Tool Interval
Packer	1.00			3691.00		
Stubb	1.00			3692.00		
Perforations	20.00			3712.00		
Change Over Sub	1.00			3713.00		
Recorder	0.00	8789	Below	3713.00		
Blank Spacing	341.00			4054.00		
Change Over Sub	1.00			4055.00		
Bullnose	3.00			4058.00	368.00	Bottom Packers & Anchor
Total Tool Length:	**411.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

30-12s-21w Trego,KS

Patty #1-30

Job Ticket: 47309 **DST#: 5**

Test Start: 2012.04.01 @ 10:24:35

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:	32000 ppm
Viscosity:	47.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	Muddy Water W/Oil Scum	1.831

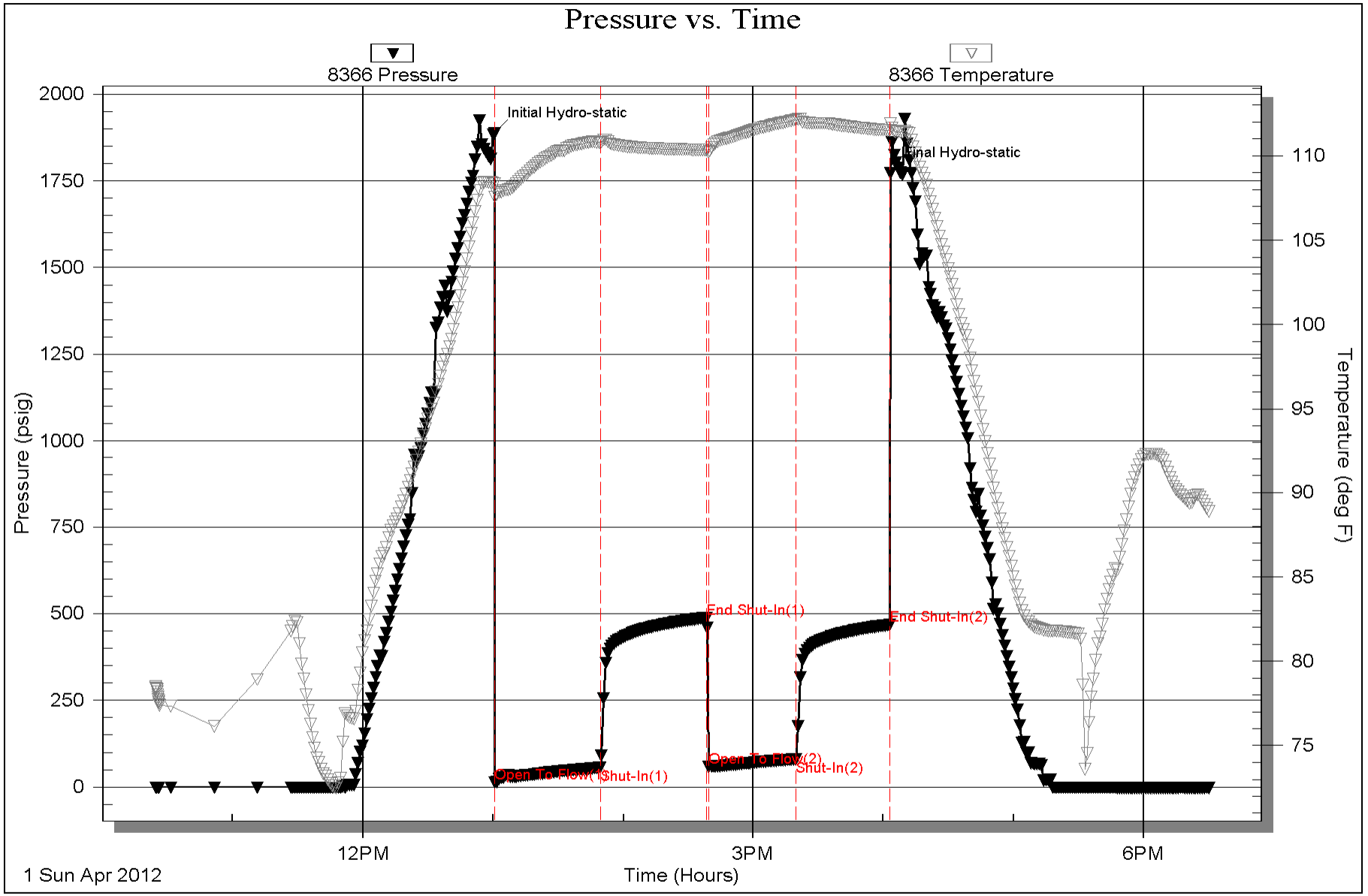
Total Length: 150.00 ft Total Volume: 1.831 bbl

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

Laboratory Name: Laboratory Location:

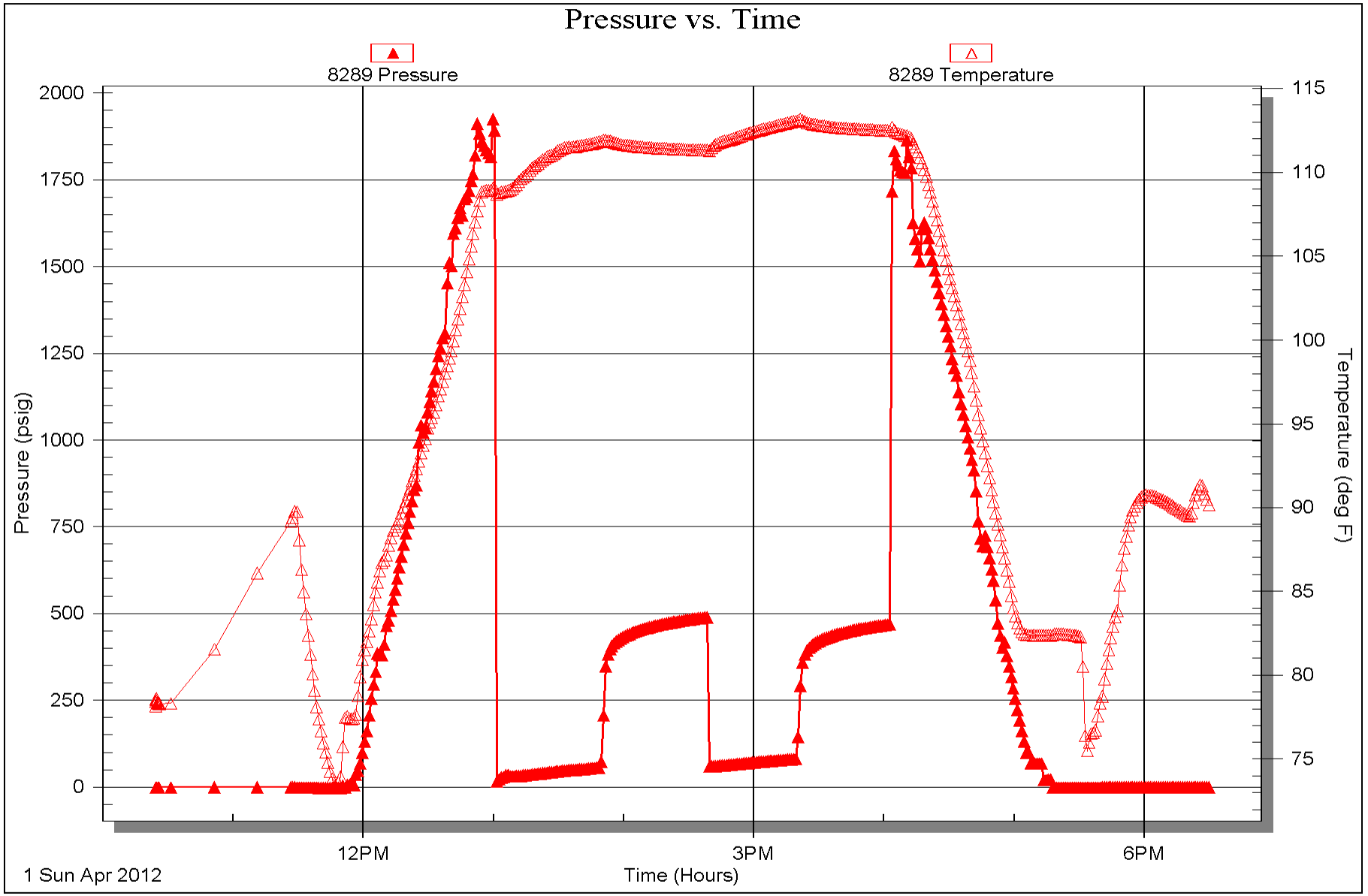
Recovery Comments:

Serial #: 8366 **Inside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 5



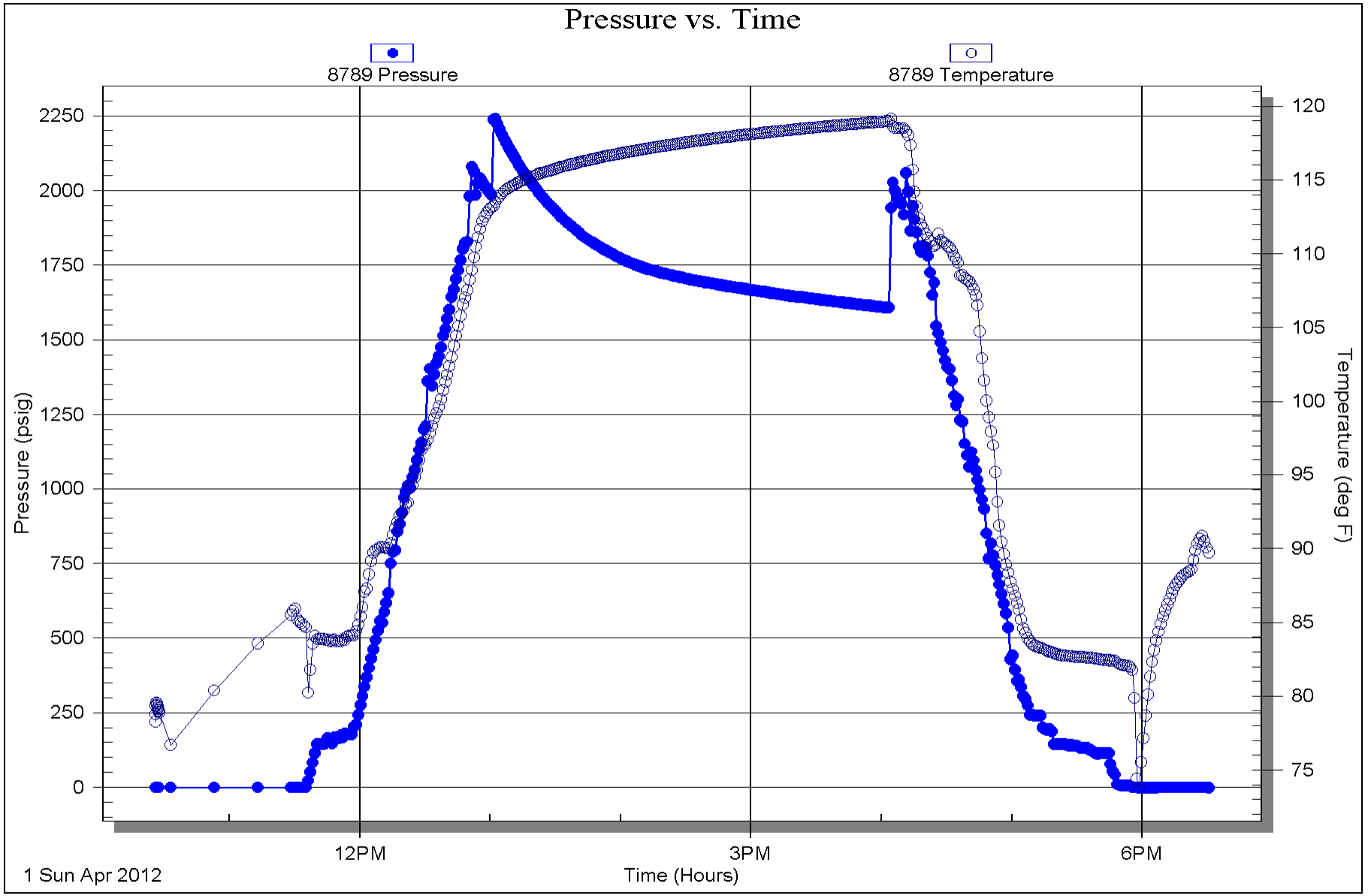
Trilobite Testing, Inc Ref. No: 47309 Printed: 2012.04.04 @ 10:39:25

Serial #: 8289 **Outside** Dow ning-Nelson Oil Company Patty #1-30 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 47309 Printed: 2012.04.04 @ 10:39:26

Serial #: 8789 Below (Straddle) Downing-Nelson Oil Company Patty #1-30 DST Test Number: 5



Trilobite Testing, Inc Ref. No: 47309 Printed: 2012.04.04 @ 10:39:26

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
APR 02 2012
BY:

Test Ticket
NO. 47305

4/10

Well Name & No. Patty #1-30 Test No. 1 Date 3-28-12
Company Downing & Nelson Oil Company Elevation 2316 KB 2305 GL
Address PO Box 1019, Hays, Ks. 67601
Co. Rep / Geo. Marc Downing Rig Discovery #4
Location: Sec. 30 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3600-3620 Zone Tested LKC 'A'
Anchor Length 20 Drill Pipe Run 3575 Mud Wt. 8.9
Top Packer Depth 3595 Drill Collars Run 30 Vis 47
Bottom Packer Depth 3600 Wt. Pipe Run 0 WL 8.8
Total Depth 3620 Chlorides 1,000 ppm System LCM 1½ #

Blow Description IFP- Fair Blow, Built to 6"
ISI- Dead
FFP- Fair Blow, Built to 5½"
FSI- Dead

Rec 10	Feet of Free oil	%gas	%oil	%water	%mud
Rec 95	Feet of VSOC MW	%gas 5	%oil 70	%water 25	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of 30' GIP	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 105 BHT 110° Gravity 38 API RW .310 @ 53 °F Chlorides 33,000 ppm

(A) Initial Hydrostatic 1755	☒ Test 1125	T-On Location 19:50
(B) First Initial Flow 38	☐ Jars	T-Started 21:48
(C) First Final Flow 50	☐ Safety Joint	T-Open 23:34
(D) Initial Shut-In 516	☐ Circ Sub	T-Pulled 2:34
(E) Second Initial Flow 54	☐ Hourly Standby	T-Out 4:26
(F) Second Final Flow 72	☒ Mileage 62 rt 86.80	Comments
(G) Final Shut-In 509	☐ Sampler	
(H) Final Hydrostatic 1699	☐ Straddle	
	☐ Shale Packer	☐ Ruined Shale Packer
Initial Open 45	☐ Extra Packer	☐ Ruined Packer
Initial Shut-In 45	☐ Extra Recorder	☐ Extra Copies
Final Flow 45	☐ Day Standby	Sub Total 0
Final Shut-In 45	☐ Accessibility	Total 1211.80
	Sub Total 1211.80	MP/DST Disc't

Approved By Our Representative Jason

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
APR 02 2012
BY:

Test Ticket

NO. 47306

Well Name & No. Patty #1-30 Test No. 2 Date 3-29-12
Company Downing & Nelson Oil Company, Inc Elevation 2316 KB 2308 GL
Address PO Box 1019, Hays KS. 67601
Co. Rep / Geo. Mark Downing Rig Discovery #4
Location: Sec. 30 Twp. 12s Rge. 21w Co. Trego State KS

Interval Tested 3630 - 3657 Zone Tested 'C'
Anchor Length ~~36~~ 27 Drill Pipe Run 3606 Mud Wt. 8.9
Top Packer Depth 3625 Drill Collars Run 30 Vis 47
Bottom Packer Depth 3630 Wt. Pipe Run 0 WL 8.8
Total Depth 3657 Chlorides 1,000 ppm System LCM 1½

Blow Description IFP- Strong. BOB in 2 min.
ISI- Dead
FFP- Strong. BOB in 3½ min.
FSI- Dead

Rec 990	Feet of Salt Water	%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	Feet of	%gas	%oil	%water	%mud

Rec Total 990 BHT 115° Gravity API RW .154 @ 73 °F Chlorides 35,000 ppm

(A) Initial Hydrostatic 1784
(B) First Initial Flow 88
(C) First Final Flow 338
(D) Initial Shut-In 783
(E) Second Initial Flow 410
(F) Second Final Flow 514
(G) Final Shut-In 786
(H) Final Hydrostatic 1722

Initial Open 15
Initial Shut-In 30
Final Flow 15
Final Shut-In 30

☑ Test 1125
☐ Jars
☐ Safety Joint
☐ Circ Sub
☐ Hourly Standby
☑ Mileage 62RT 86.80
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
Sub Total 1211.80

T-On Location 11:36
T-Started 11:55
T-Open 13:41
T-Pulled 15:11
T-Out 17:45
Comments

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
Sub Total 0
Total 1211.80
MP/DST Disc't

Approved By Our Representative Jason McLemore Thank You

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

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
APR 02 2012
KCC WICHITA

Test Ticket

NO. 47307

Well Name & No. Patty #1-30 Test No. 3 Date 3-30-12
Company Downing & Nelson Oil Company Inc. Elevation 2316 KB 2308 GL
Address PO Box 1019, Hays, KS. 67601
Co. Rep / Geo. Mara Downing. Rig Discovery #4
Location: Sec. 30 Twp. 12 s Rge. 21w Co. Trego State KS

Interval Tested 3780-3801 Zone Tested 'J'
Anchor Length 21' Drill Pipe Run 3761 Mud Wt. 9.0
Top Packer Depth 3775 Drill Collars Run 30 Vis 46
Bottom Packer Depth 3780 Wt. Pipe Run WL 8.8
Total Depth 3801 Chlorides 4,000 ppm System LCM 1½

Blow Description IFP Weak surface Blow
ISI - Dead
FFP - Dead
FSI - Dead

Rec 10'	Feet of VSOCM	%gas 3	%oil	%water 97	%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 10 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1857	☑ Test 1125	T-On Location 8:56	
(B) First Initial Flow 10	☐ Jars	T-Started 9:11	
(C) First Final Flow 15	☐ Safety Joint	T-Open 10:00	
(D) Initial Shut-In 36	☐ Circ Sub	T-Pulled 13:00	
(E) Second Initial Flow 28	☐ Hourly Standby	T-Out 15:00	
(F) Second Final Flow 45	☑ Mileage D2RT 80.80	Comments	
(G) Final Shut-In 25	☐ Sampler		
(H) Final Hydrostatic 1858	☐ 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 30	☐ Day Standby	Total 1211.80	
Final Shut-In 30	☐ Accessibility	MP/DST Disc't	
	Sub Total 1211.80		

Thank you

Approved By Our Representative Jason M. Lemon

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
APR 02 2012
BY:

Test Ticket

NO. 47308

Well Name & No. Patty #1-30 Test No. 4 Date 3-31-12
Company Downing Nelson Oil Company, Elevation 2316 KB 2308 GL
Address PO Box 1019, Hays KS. 67601
Co. Rep / Geo. Marc Downing Rig Discovery #4
Location: Sec. 30 Twp. 12s Rge. 21w Co. Trego State KS

Interval Tested 3933 - 3965 Zone Tested Marmaton
Anchor Length 32' Drill Pipe Run 3887 Mud Wt. 9.2
Top Packer Depth 3928 Drill Collars Run 30 Vis 63
Bottom Packer Depth 3933 Wt. Pipe Run 0 WL 8.0
Total Depth 3965 Chlorides 5,000 ppm System LCM 1½#
Blow Description IFP - Weak Blow, Built to 3"
ISI - Dead
FFP - Weak Blow, Built to 1½"
FSI - Dead

Rec 10	Feet of Free Oil	%gas	%oil	%water	%mud
Rec 60	Feet of Muddy Water	%gas	%oil 65	%water 35	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 70 BHT Gravity 34 API RW .210 @ 88 °F Chlorides 27,000 ppm

(A) Initial Hydrostatic 1995
(B) First Initial Flow 15
(C) First Final Flow 32
(D) Initial Shut-In 1000
(E) Second Initial Flow 34
(F) Second Final Flow 43
(G) Final Shut-In 977
(H) Final Hydrostatic 1837

Initial Open 45
Initial Shut-In 45
Final Flow 45
Final Shut-In 45

☑ Test 1125
☐ Jars
☐ Safety Joint
☐ Circ Sub
☐ Hourly Standby
☑ Mileage 62RT 86.80
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
Sub Total 1211.80

T-On Location 9:05
T-Started 9:27
T-Open 11:20
T-Pulled 14:20
T-Out 16:20
Comments

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
Sub Total Ø
Total 1211.80
MP/DST Disc't

Approved By Our Representative Jason Thomas

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
APR 02 2012
BY:

Test Ticket

NO. 47309

Well Name & No. Patty #1-30 Test No. 5 Date 4-1-12
Company Downing Nelson Oil Company Elevation 2316 KB 2308 GL
Address PO Box 1019, Hays, Ks. 67601
Co. Rep / Geo. Marc Downing Rig Discovery #4
Location: Sec. 30 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3668-3690 Zone Tested D-E
Anchor Length 22' Drill Pipe Run 3639 Mud Wt. 9.2
Top Packer Depth 3663 Drill Collars Run 30 Vis 63
Bottom Packer Depth 3668 stnd @ 3690 Wt. Pipe Run 0 WL 8.0
Total Depth 4061 Chlorides 5,000 ppm System LCM 1½#

Blow Description IFP - Fair Blow, Built to 7½"
ISI - Dead
FFP - Weak Blow, Built to 3"
FSI - Dead

Rec 150	Feet of Muddy water, w/ oil Scum	%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	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT Gravity API RW .170 @ 90 °F Chlorides 32,000 ppm

(A) Initial Hydrostatic 1887	☑ Test 1225	T-On Location 8:55
(B) First Initial Flow 13	☐ Jars	T-Started 10:22
(C) First Final Flow 57	☐ Safety Joint	T-Open 13:00
(D) Initial Shut-In 488	☐ Circ Sub	T-Pulled 16:00
(E) Second Initial Flow 58	☐ Hourly Standby	T-Out 18:36
(F) Second Final Flow 80	☑ Mileage 62mi 86.80	Comments
(G) Final Shut-In 468	☐ Sampler	
(H) Final Hydrostatic 1772	☑ Straddle 600	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 45	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 45	☐ Extra Recorder	Sub Total Ø
Final Flow 45	☐ Day Standby	Total 1911.80
Final Shut-In 45	☐ Accessibility	MP/DST Disc't
	Sub Total 1911.80	Thank you

Approved By Our Representative Jason McLemore

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 303

Cell 785-324-1041

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 3-24-12	30	12	21	Trego	KS		10:00pm.

Lease Patty Well No. 1-30 Location Ogallah 2E Ninto

Contractor Discovery #4 Owner

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

Hole Size 12 1/4 T.D. 223

Csg. 8 5/8 Depth 223 Charge To Downing/Nelson

Tbg. Size Depth Street

Tool Depth City State

Cement Left in Csg. 15' Shoe Joint The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line Displace 13 3/4 Cement Amount Ordered 150 com 3%cc 2%gel

EQUIPMENT

Pumptrk 9	No.	Cementer	Craig
		Helper	
Bulktrk	No.	Driver	Cody
		Driver	
Bulktrk 8	No.	Driver	Levi
		Driver	

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

8 5/8 on bottom. Est Circulation. Mix 150sk + Displace. Cement Circulated

Common	150
Poz. Mix	
Gel.	3
Calcium	5
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	158
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	31
Tax	
Discount	
Total Charge	

X Signature Michael Kuckelman

ALLIED CEMENTING CO., LLC. 035264

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Oakley

DATE 4-1-12	SEC. 30	TWP 12S	RANGE 21W	CALLED OUT	ON LOCATION	JOB START 12:00	JOB FINISH 1:00 Am
LEASE Patty	WELL # 1-30		LOCATION Ogallah 4E ½N into			COUNTY Trego	STATE KS
OLD OR NEW (Circle one)							

CONTRACTOR Discovery 4
TYPE OF JOB PTA
HOLE SIZE 7 7/8 T.D. 4060'
CASING SIZE DEPTH
TUBING SIZE DEPTH
DRILL PIPE 4½ DEPTH 3929'
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT

OWNER same

EQUIPMENT

PUMP TRUCK # 423-281 CEMENTER Andrew
HELPER Jerry
BULK TRUCK # 347 DRIVER Brandon
BULK TRUCK # DRIVER

CEMENT

AMOUNT ORDERED 245 sks 60/40 4%gel ¼# FLO-seal

COMMON	147 sks	@ 16.25	2388.75
POZMIX	98 sks	@ 8.50	833.00
GEL	8 sks	@ 21.25	170.00
CHLORIDE		@	
ASC		@	
		@	
Flo-seal	61#	@ 2.70	164.70
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	255 sks	@ 2.25	573.75
MILEAGE	11¢ sk/mile		1542.75
		TOTAL	5672.50

REMARKS:

25 sks 3929'
25 sks 1265'
100 sks 960'
40 sks 275'
10 sks 40'
15 sks mouse hole
30 sks Rat hole

Thank you

SERVICE

DEPTH OF JOB 3929'
PUMP TRUCK CHARGE 1250.00
EXTRA FOOTAGE @
MILEAGE 55 mi @ 7.00 385.00
MANIFOLD @
Light Vehicle 55mi @ 4.00 220.00
@
TOTAL 1855.00

CHARGE TO: Downing + Nelson
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

8⅝
1 Dry hole plug @ 92.00
@
@
@
@
TOTAL 92.00

To Allied Cementing Co., 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.

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME
SIGNATURE

Marc Downing
Consulting Petroleum Geologist
1411 Washington Circle
Hays, Ks. 67601
Phone: 620-628-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co., Inc.

WELL Patty # 1-30

FIELD Wildcat

LOCATION 1736 FNL & 335' FEL

SEC. 30 TWP. 12S RGE. 21W

COUNTY Trego

STATE Kansas

1320 | 1760 | 2310 | 2640 | 3300 | 3630 | 3960 | 4290 | 4620 | 4950 | 5280 | 5610 | 5940 | 6270 | 6600 | 6930 | 7260 | 7590 | 7920 | 8250 | 8580 | 8910 | 9240 | 9570 | 9900 | 10230 | 10560

PRODUCTION DRY

ELEVATION KB 2317
GL 2309
KB

Drilling Started 3350' TD
Drilling Time Kept 3344' TD
Drilling Completed 3360' TD
Samples Saved From 3200' to Rotary Basement
Drilling Equipment Mark Downing
Logging Engineer Superior

OPERATOR Dance
CONTRACTOR Discovery Drilling, Rig #4
Date 4-1-12

CASING RECORD
Surface 8 5/8" @ 221' Cmt/CDC
Production None
TOTAL DEPTH Driller 3360' DST #1 Open
TOTAL DEPTH Logger 3364' Strong

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE	ELECTRIC LOG	SUBSEA	STRUCTURAL POSITION
Top Anhydrite	1155	1135	+1182	+2
Base Anhydrite	1181	1164	+1153	+5
Topeka	3265	3254	-948	+3
Heebner	3515	3494	-1188	+1
Toronto	3534	3512	-1206	+1
LKC	3549	3529	-1223	+2
BKC	3792	3772	-1466	+2
Marmaton	3797	3777	-1471	+5
Altamont	3865	3865	-1541	+23

REFERENCE WELL FOR STRUCTURE Lowen Drilling, Inc.
Lowen # 1 NW-NW-NW Sec. 30-12S-21W

DAILY PENETRATION

DATE	DEPTH	6	8	10	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104	108	112	116	120	124	128	132	136	140	144	148	152	156	160	164	168	172	176	180	184	188	192	196	200

BIT RECORD

No.	Make	Size	Type	Jets	Depth Out	Feet	Hours

DRILL STEM TESTS

No.	Interval	Anchor	Anchor	Anchor	Anchor	Blow	Recovery

FORMATION | INTERVAL | DESCRIPTION OF GAS | GAS UNITS OR MCF/DAY

REMARKS AND RECOMMENDATIONS

LEGEND: Limestone, Dolomite, Chert, Oolite, Intraclastic, Oolicastic, Shale, Siltstone, Sandstone, Anhydrite, Salt

DRILLING TIME AS MINUTES PER FOOT (1" = 10' and 1" = 50')

DST #1 3294'-3360' (LKC "J" & "K" Zones)
30-45-45-60
IF: Strong blow BOB in 1 min.
FF: Strong blow BOB in 1 min.
SI: 1035 psi
IHP: 1644 psi
IFP: 54-54 psi
FFP: 54-54 psi
FHP: 1644 psi
Recovered 60' GIP
60' SOCM (5% oil, 95% mud)
No sample shows
Temp: 110°

DST #2 3496'-3563' (LKC "A" Zone)
30-45-45-60
IF: Strong blow BOB in 1 min.
FF: Strong blow BOB in 1 min.
SI: 1035 psi
IHP: 1715 psi
IFP: 54-54 psi
FFP: 54-54 psi
FHP: 1715 psi
Recovered 60' GIP
60' SOCM (5% oil, 95% mud)
No sample shows
Temp: 110°

DST #3 3796'-3863' (Marmaton)
30-45-45-60
IF: 2" blow
FF: 1/2" blow
SI: 1035 psi
IHP: 1877 psi
IFP: 54-54 psi
FFP: 54-54 psi
FHP: 1877 psi
Recovered 10' mud with trace oil
No sample shows

DST #4 3862'-3900' (Altamont)
30-45-45-60
IF: 1/2" blow
FF: 1/2" blow
SI: 1035 psi
IHP: 1929 psi
IFP: 54-54 psi
FFP: 54-54 psi
FHP: 1929 psi
Recovered 5' mud
No sample shows
BHT 117°F