



KANSAS CORPORATION COMMISSION 1070998  
OIL & GAS CONSERVATION DIVISION

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:  
 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  
 Conv. to GSW  
 Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_  
11/29/2011    12/06/2011    12/07/2011  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 15-051-26179-00-00  
Spot Description: \_\_\_\_\_  
NE SW NE NE Sec. 12 Twp. 14 S. R. 19  East  West  
775 Feet from  North /  South Line of Section  
950 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE     NW     SE     SW  
County: Ellis  
Lease Name: Pfannenstiel Well #: 1-12  
Field Name: Ridge Hill  
Producing Formation: None  
Elevation: Ground: 2150 Kelly Bushing: 2158  
Total Depth: 3894 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at: 222 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: 16000 ppm Fluid volume: 320 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: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: Deanna Gerriso Date: 01/18/2012



1070998

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Pfannenstiel Well #: 1-12
Sec. 12 Twp. 14 S. R. 19 East West County: Ellis

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 (Attach Additional Sheets)
Samples Sent to Geological Survey
Cores Taken
Electric Log Run
Electric Log Submitted Electronically (If no, Submit Copy)
List All E. Logs Run: Attached

CASING RECORD Table with columns: Purpose of String, Size Hole Drilled, Size Casing Set (In O.D.), Weight Lbs. / Ft., Setting Depth, Type of Cement, # Sacks Used, Type and Percent Additives.

ADDITIONAL CEMENTING / SQUEEZE RECORD Table with columns: Purpose, Depth Top Bottom, Type of Cement, # Sacks Used, Type and Percent Additives.

PERFORATION RECORD - Bridge Plugs Set/Type Table with columns: 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
METHOD OF COMPLETION: Open Hole, Perf., Dually Comp., Commingled, Other (Specify)
PRODUCTION INTERVAL:

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Pfannenstiel 1-12
Doc ID	1070998

All Electric Logs Run

Micro	
Sonic	
Dual Induction	
Compensated Density/ Neutron	

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Pfannenstiel 1-12
Doc ID	1070998

Tops

Name	Top	Datum
Top Anhydrite	1416'	+743
Bade Anhydrite	1464'	+695
Topeka	3172'	-1013
Heebner	3418'	-1259
Toronto	3436'	-1277
LKC	3465'	-1306
BKC	3692'	-1533
Arbuckle	3840'	-1681

# ALLIED CEMENTING CO. LLC. 035181

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

SERVICE POINT:  
RUSSELL

DATE <u>12-7-11</u>	SEC <u>12</u>	TWP. <u>14S</u>	RANGE <u>19W</u>	CALLED OUT	ON LOCATION	JOB START <u>7AM</u>	JOB FINISH <u>8PM</u>
ANNEX STEEL LEASE	WELL # <u>1-12</u>	LOCATION <u>HAYS - 1 W. ON GOLF COURSE Rd</u>			COUNTY <u>ELLI'S</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)		<u>1/2 S. - 1 WEST THEN WEST SOUTH</u>					

CONTRACTOR <u>add3</u>	OWNER <u>INTO</u>
TYPE OF JOB <u>PTA</u>	
HOLE SIZE <u>7 7/8</u>	T.D. <u>3850</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>212</u>
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2</u>	DEPTH <u>3850</u>
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT	

CEMENT AMOUNT ORDERED <u>245</u>	
COMMON <u>245</u>	@ <u>16.25</u> <u>3981.25</u>
POZMIX	@
GEL <u>9</u>	@ <u>21.25</u> <u>191.25</u>
CHLORIDE	@
ASC	@
<u>FLO-SEAL 65<sup>+</sup></u>	@ <u>2.70</u> <u>175.5</u>
	@
	@
	@
	@
	@
HANDLING <u>256.5</u>	@ <u>2.25</u> <u>577.13</u>
MILBAGE <u>35 x 256.5 x .11</u>	<u>987.35</u>
TOTAL <u>5912.48</u>	

**EQUIPMENT**

PUMP TRUCK # <u>409</u>	CEMENTER <u>Bob Smith</u>
	HELPER <u>Todd</u>
BULK TRUCK # <u>473</u>	DRIVER <u>Smayke Cody</u>
BULK TRUCK #	DRIVER

**REMARKS:**

<u>P1 - 3850 FT 25 SK</u>
<u>P2 - 1441 FT 25 SK</u>
<u>P3 - 700 FT 100 SK</u>
<u>P4 - 272 FT 40 SK</u>
<u>P5 - 40 FT 10 SK</u>
<u>RAT - 30 SK</u>
<u>mouse - 15 SK</u>

CHARGE TO: DOWNING NELSON

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**SERVICE**

DEPTH OF JOB <u>3850 FT</u>	
PUMP TRUCK CHARGE	<u>1250.00</u>
EXTRA FOOTAGE	@
MILEAGE <u>35</u>	@ <u>7.00</u> <u>245.00</u>
MANIFOLD	@
<u>LdV mileage 35</u>	@ <u>4.00</u> <u>140.00</u>
<u>WTM 3</u>	@ <u>300</u> <u>900.00</u>
TOTAL <u>2535.00</u>	

**PLUG & FLOAT EQUIPMENT**

<u>1 wooden PLUG</u>	@ <u>92.00</u> <u>92.00</u>
	@
	@
	@
	@
TOTAL <u>92.00</u>	

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.

PRINTED NAME GAVEN GASCHER

SIGNATURE Gaven Gascher

SALES TAX (if Any) \_\_\_\_\_

TOTAL CHARGES 8539.68

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

# ALLIED CEMENTING CO.. LLC. 038201

REMIT TO P.O. BOX 11  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Russell Ks.

DATE <u>11-29-2011</u>	SEC. <u>12</u>	TWP. <u>14 S</u>	RANGE <u>19 W</u>	CALLED OUT	ON LOCATION	JOB START <u>7:30 PM</u>	JOB FINISH <u>8:00 PM</u>
LEASE <u>FANNINGSTIEL</u>	WELL # <u>1-12</u>	LOCATION <u>Hay's Golf Course Rd. 1/2 W 1/2 W</u>				COUNTY <u>ELLIS</u>	STATE <u>KANSAS</u>
OLD OR NEW (Circle one) <u>NEW</u>		<u>VA S 1/4 W ETR</u>					

CONTRACTOR <u>Discovery Dalg. Rig #4</u>	OWNER _____
TYPE OF JOB <u>Cement Surface</u>	CEMENT AMOUNT ORDERED <u>150sx Corn.</u>
HOLE SIZE <u>12 1/4</u> I.D. <u>22.8'</u>	<u>290 GEL</u>
CASING SIZE <u>8 5/8</u> DEPTH <u>223'</u>	<u>3 3/8 CC</u>
TUBING SIZE _____ DEPTH _____	
DRILL PIPE _____ DEPTH _____	
TOOL _____ DEPTH _____	
PRES. MAX <u>250#</u> MINIMUM _____	COMMON <u>150 @ 16.25 2437.50</u>
MEAS. LINE _____ SHOE JOINT _____	POZMIX _____ @ _____
CEMENT LEFT IN CSG. <u>15'</u>	GEL <u>3 @ 21.25 63.75</u>
PERFS. _____	CHLORIDE <u>5 @ 58.20 291.00</u>
DISPLACEMENT <u>13 1/4 BBL</u>	ASC _____ @ _____
EQUIPMENT _____	_____ @ _____
PUMP TRUCK CEMENTER <u>Glenn</u>	_____ @ _____
# <u>409</u> HELPER <u>Woody</u>	_____ @ _____
BULK TRUCK _____	_____ @ _____
# <u>410</u> DRIVER <u>Tony</u>	_____ @ _____
BULK TRUCK _____	_____ @ _____
# _____ DRIVER _____	_____ @ _____
	HANDLING <u>158 @ 2.25 355.50</u>
	MILEAGE <u>158/11/46 @ 8.84 1394.24</u>
	TOTAL <u>3981.99</u>

REMARKS:

Ran 5 New JCS of 8 5/8 22# CSG  
Set @ Receive Circulation  
Cement w/ 150 sx corn 3 3/8, Displace  
1 BBL H<sub>2</sub>O & Shot in @ 250 #.

Cement Did Circulate To  
Surface! THANKS!

CHARGE TO: Downing & Nelson  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

DEPTH OF JOB _____	
PUMP TRUCK CHARGE _____	<u>1125.00</u>
EXTRA FOOTAGE _____ @ _____	
MILEAGE <u>HV 48</u> @ <u>7.00</u>	<u>336.00</u>
MANIFOLD _____ @ _____	
<u>LN 48</u> @ <u>4.00</u>	<u>192.00</u>
TOTAL	<u>1653.00</u>

PLUG & FLOAT EQUIPMENT

_____ @ _____
_____ @ _____
_____ @ _____
_____ @ _____
_____ @ _____

TOTAL \_\_\_\_\_

SALES TAX (if Any) \_\_\_\_\_  
TOTAL CHARGES 1653.00  
DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS










PRINTED NAME GALEN PASCHER  
SIGNATURE Galen Pascher

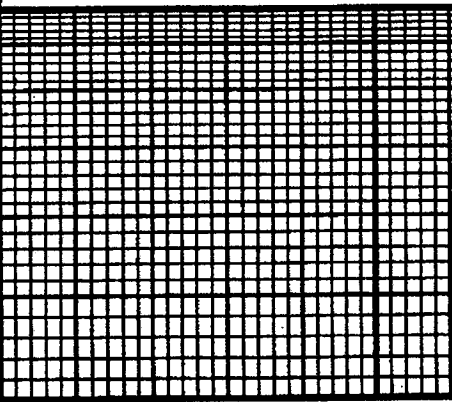




DRILL STEM TESTS							
No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	HH-FH	RECOVERY
REMARKS AND RECOMMENDATIONS <i>Lowing structurally high pore development</i>							
<i>Arbuckle very low to production, had thick cong. section</i>							
<i>Decision made to plug &amp; abandon.</i>							

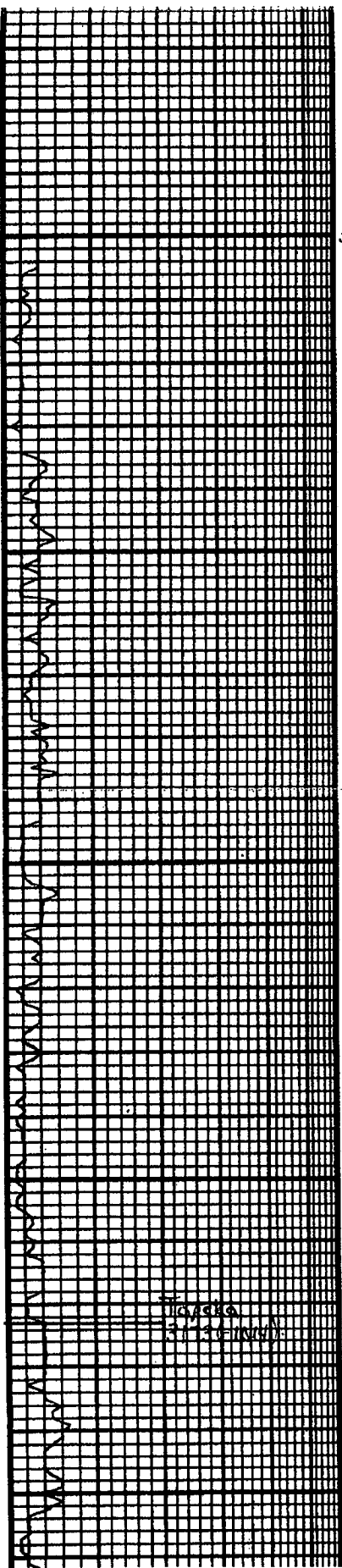
**LEGEND**

	Anhydrite
	Salt
	Sandstone
	Shale
	Carb. sh.
	Limestone
	Oil. Lime
	Chert
	Dolomite

REMARKS	
OIL SHOWS	
SAMPLE DESCRIPTIONS	
LITHOLOGY	
DEPTH	
DRILLING TIME IN MINUTES Rate of Penetration Decrease	

LOG 7710





3000

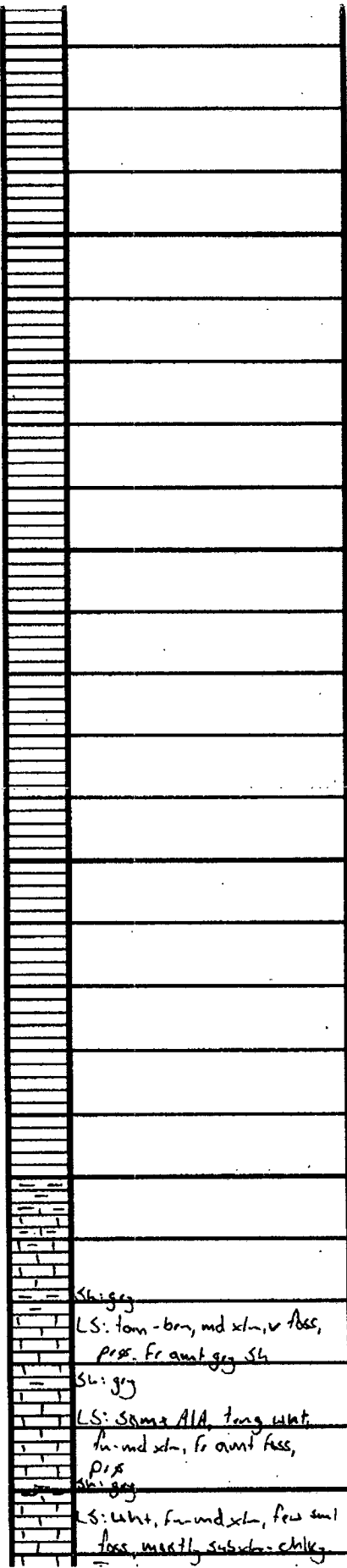
50

3100

50

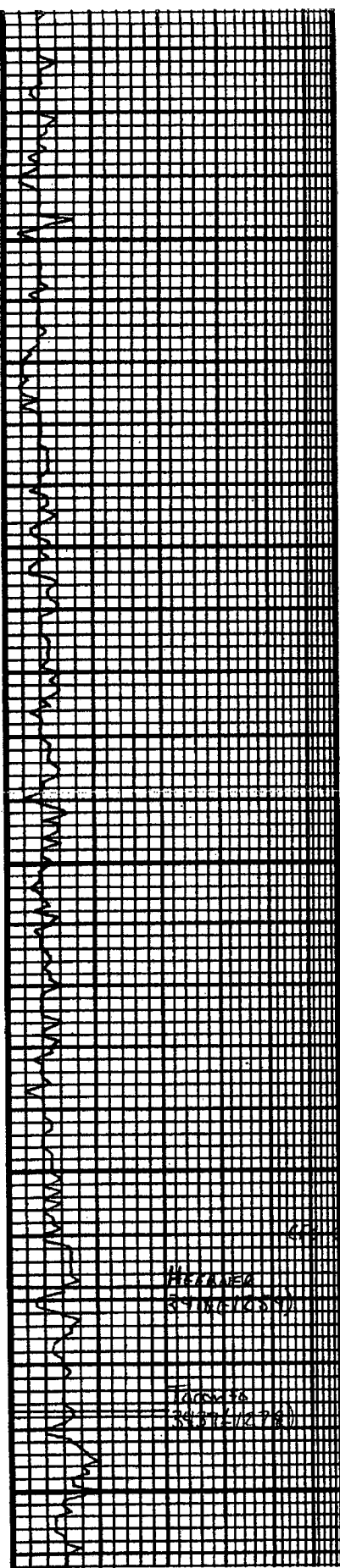
3200

3100  
3100-11000



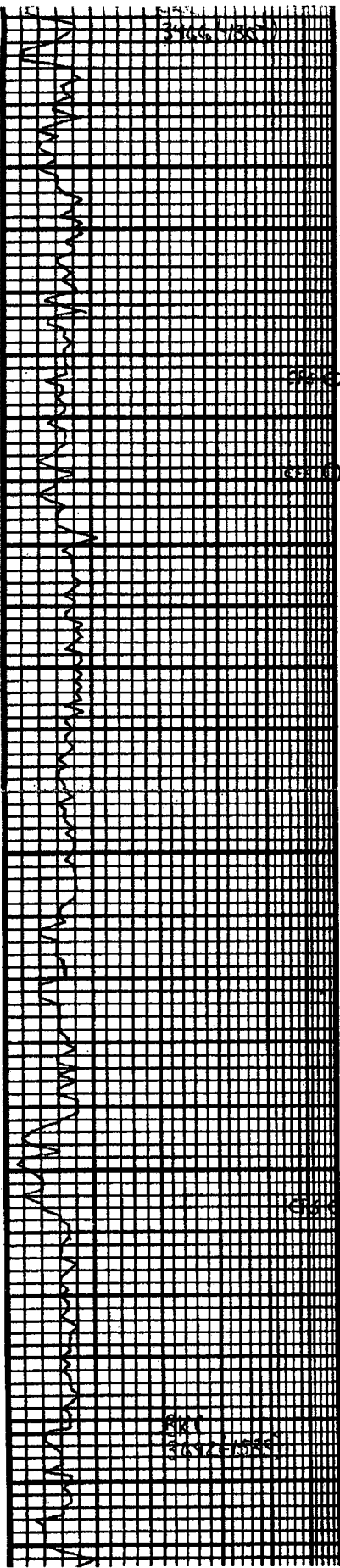
Sh: grey  
 LS: tan-brn, med xln, v fass,  
 pss. fr. amt. grey Sh  
 Sh: grey  
 LS: same ALA, tan, wht.  
 fr. med xln, fr. amt. fass,  
 pss  
 Sh: grey  
 LS: wht, fr. med xln, few small  
 fass, mostly subid. chky





	trng chns.
	Sh: gry
	LS: tan-brn, vfn xln, vchls wt No vss, v tite.
	LS: wht, fn-mid xln, few sm fss, subaln chng
50	LS: tan, fn xln, trng vchls wt No vss, scat gry foss chnta.
	Sh: gry
	LS: wht, mid xln, fss, wtd in prt. subaln chng, NS.
	Sh: Black Carb
	LS: wht-tan, fn-mid xln, prg, tite
	Sh: gry
3300	LS: wht-tan, mid xln, fss, slty wtd, prg, few chng
	Sh: gry
	LS: wht, fn-vfn xln mostly prg & tite. scat gry-blk fss chnta. All NS
	Sh: gry
	LS: wht mostly fss chnta chng 1-2 prg wt pr sp Md str. NS fr, fr Od.
	Sh: Black Carb
	LS: tan-wht, fn-mid xln, chng
	Sh: gry
50	LS: wht, mid xln, v fss, fr int fss, chng, All NS
	LS: AIA trng tite & chng, prg
	Sh: gry
	LS: wht, fn-mid xln, scat gry fss chnta, prg, NS.
	LS: wht, fn-mid xln, fss, 3-4 prg wt fr-gd int fss, scat gd 11 brn scat str wt fr-gd fss, gry in prt. fr Ant chng, pr, fr Od.
3400	LS: wht-11 tan, fn-vfn xln, prg & chng. Scat wht. tan chnta.
	Sh: Black Carb
	Sh: gry-lt gry
	LS: wht, mid xln, fss wt few chng prg. fr int xln wt scat prg. fr brn str wt scat fss, fr Od.
50	Sh: gry trng brn red

	Vis: 48	wt: 9.9
	DST #1	
	3379-3410	
	45-45-45-45	
	I.F. - 2 1/2" blue	
	F.F. - 2" blue	
	I.F.P. 14-32	
	F.F.P. 80-39	
	S.P. 1105-1064	
	M.P. 1031-1006	
	Rec:	
	50' max 50% w	
	BHT: 102° Chlor: 73K	
	DST #2	
	3500-3524	
	45-45-80-80	
	I.F.P. 17-19	
	F.F.P. 19-20	
	S.P. 623-524	
	M.P. 1714-1657	
	Rec:	
	20' mud	
	BHT: 102°	
	DST #4	
	3413-3443	
	45-45-45-45	



LS: wht, v. fin xln, v. dms  
 Sh: grg  
 LS: wht, fin-nd xln, mostly dms  
 Seal ...  
 Sh: Hggy w/ brn, gummy  
 LS: wht, fin-nd xln, ...  
 frng dms & tite. Seat brn stn  
 in pr intxln + APP, v. rare SFO,  
 NA Ad  
 Sh: grg  
 LS: wht - lt tan, fin-nd xln,  
 fass fr intxln & w/ seal vngs.  
 fr lt brn stn w/ gtted SFO,  
 lt ...  
 LS: tan-wht, mid-cis xln, oal w/  
 fass. fr-gd int oal & w/ gd vngs.  
 Seat gd sat stn, fr SFO, but No Ad  
 Sh: grg  
 LS: tan, fin-nd xln, subxln in  
 prt. Pass. pr. lt stn, NA Ad  
 LS: Tng wht, fin-v fin xln,  
 pr w/ scat fass. R. dms  
 w/ No Show.  
 Sh: drk grg  
 Sh: grg, Hggy, sltly gummy  
 LS: wht, fin xln, few smt fass, sltly  
 dalam. pr intxln + APP. Seat fr  
 brn stn w/ gtted SFO but Ad. Tite  
 LS: Tng tite w/ No visr,  
 scat fass.  
 Sh: grg  
 LS: wht, fin-nd xln, lt brn stn  
 in pr fr intxln, rare SFO, lt Ad.  
 LS: wht - tan, fass, few dalam or  
 fr-gd intxln & vngs, some total  
 sat w/ fr SFO, lt fr Ad.  
 Sh: grg  
 LS: wht - tan, v fass, mostly tite  
 w/ scat fr vngs, fr-gd stn w/  
 blk oil filter vngs, sltly tng fr Ad  
 Free oil on sup.  
 LS: wht, total fr-gd oal or fr Amt  
 chly ex. fr Amt oal or w/ gd stn  
 sat w/ fr-gd SFO, many barren  
 ex, fr-gd Ad, slt free oil on sup.  
 LS: wht, fin-v fin xln, scat  
 oal. All pr. NS.  
 Sh: grg  
 LS: wht, fin-v fin xln, few  
 smt fass + oal. All v dms w/  
 No visr, NS  
 Sh: red-brn  
 LS: tan-wht, mid xln, sltly  
 mtld.  
 Sh: brn-red

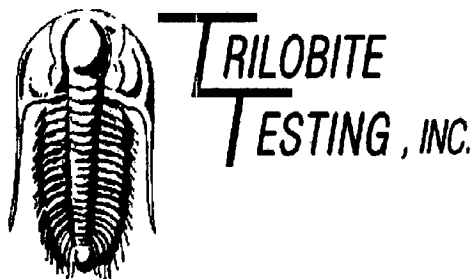
F.F. - 1 1/2" blan  
 I.F.P. 20-25'  
 F.F.P. 29-34  
 S.I.P. 914-965  
 H.P. 1736-1712  
 Rec:  
 45' vsocm 1 1/2" oil  
 BHT: 104'

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Vis: 48 Wt: 8.9  
 DST #3  
 3573-3656  
 90-45-45-45  
 Total d.d. was shown

I.F. 6" blan  
 F.F. 5" blan  
 I.F.P. 19-75  
 F.F.P. 98-103  
 S.I.P. 671-647  
 H.P. 1754-1749  
 Rec:  
 60' vsocm 2 1/2" oil  
 120' mu 50% w  
 BHT: 107' Chlor: 13K





## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

**Pfannenstiel #1-12**

**12-14s-19w Ellis,KS**

Start Date: 2011.12.03 @ 10:08:30

End Date: 2011.12.03 @ 17:10:00

Job Ticket #: 44219                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.13 @ 16:13:46

Downing-Nelson Oil Co., Inc.

12-14s-19w Ellis,KS

Pfannenstiel #1-12

DST # 1

Plattsmouth

2011.12.03



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dowling-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44219

**DST#: 1**

ATTN: Marc Dowling

Test Start: 2011.12.03 @ 10:08:30

## GENERAL INFORMATION:

Formation: **Plattsmouth**

Deviated: No Whipstock ft (KB)

Time Tool Opened: 12:23:00

Time Test Ended: 17:10:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **3379.00 ft (KB) To 3410.00 ft (KB) (TVD)**

Total Depth: 3410.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2159.00 ft (KB)

2151.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8354 Inside**

Press@RunDepth: 38.12 psig @ 3382.00 ft (KB)

Start Date: 2011.12.03

End Date:

2011.12.03

Start Time: 10:18:30

End Time:

17:10:00

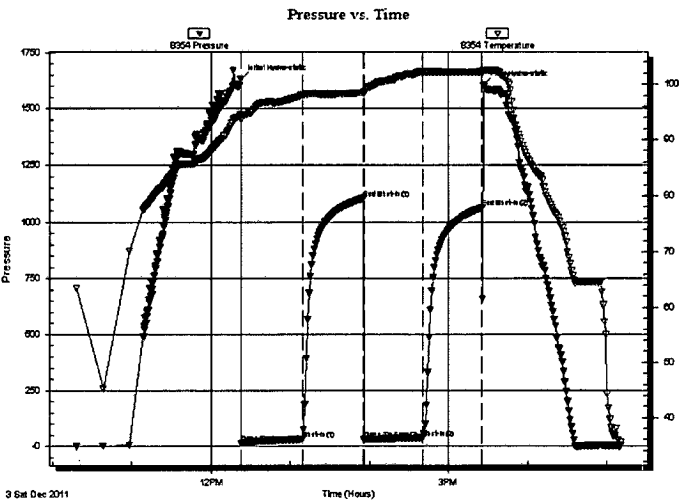
Capacity: 8000.00 psig

Last Calib.: 2011.12.03

Time On Btm: 2011.12.03 @ 12:22:30

Time Off Btm: 2011.12.03 @ 15:26:30

**TEST COMMENT:** IF-Very weak building blow . Built to 2 & 1/2 inches.  
IS-No Return.  
FF-Very weak building blow . Built to 2 inches.  
FSI-No Return.



## PRESSURE SUMMARY

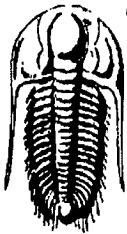
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1631.39	94.58	Initial Hydro-static
1	13.83	93.73	Open To Flow (1)
47	31.61	98.08	Shut-In(1)
93	1104.78	98.44	End Shut-In(1)
93	29.59	98.26	Open To Flow (2)
138	38.12	102.24	Shut-In(2)
183	1063.60	102.22	End Shut-In(2)
184	1605.75	102.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
50.00	50%Water/50%Mud	0.42

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

ATTN: Marc Downing

Job Ticket: 44219

DST#: 1

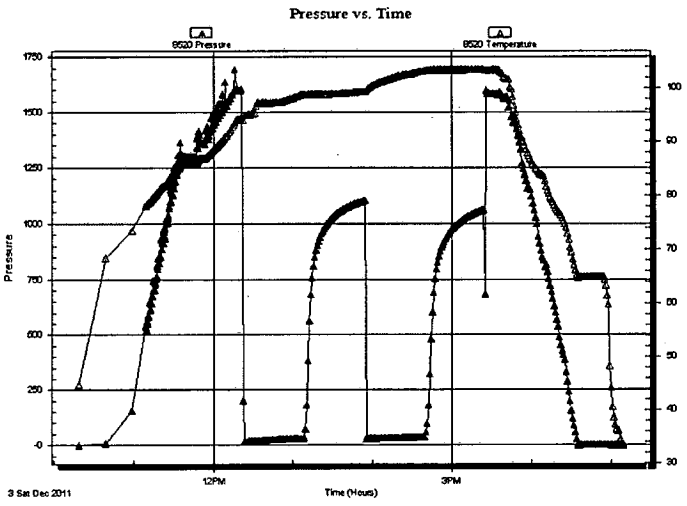
Test Start: 2011.12.03 @ 10:08:30

**GENERAL INFORMATION:**

Formation: **Plattsmouth**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:23:00  
 Time Test Ended: 17:10:00  
 Interval: **3379.00 ft (KB) To 3410.00 ft (KB) (TVD)**  
 Total Depth: 3410.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 38  
 Reference Elevations: 2159.00 ft (KB)  
 2151.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8520 Outside**  
 Press@RunDepth: psig @ 3382.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.12.03 End Date: 2011.12.03 Last Calib.: 2011.12.03  
 Start Time: 10:18:45 End Time: 17:09:45 Time On Btmr:  
 Time Off Btmr:

**TEST COMMENT:** IF-Very weak building blow . Built to 2 & 1/2 inches.  
 IS-No Return.  
 FF-Very weak building blow . Built to 2 inches.  
 FSI-No Return.



**PRESSURE SUMMARY**

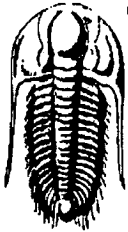
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
50.00	50%Water/50%Mud	0.42

**Gas Rates**

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



**TRILOBITE**  
TESTING, INC

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44219

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.12.03 @ 10:08:30

### Tool Information

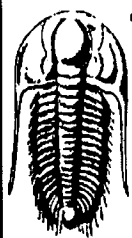
Drill Pipe:	Length: 3359.00 ft	Diameter: 3.80 inches	Volume: 47.12 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 47.27 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3379.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	31.00 ft				
Tool Length:	51.00 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			3360.00	
Shut In Tool	5.00			3365.00	
Hydraulic tool	5.00			3370.00	
Packer	5.00			3375.00	20.00 Bottom Of Top Packer
Packer	4.00			3379.00	
Stubb	1.00			3380.00	
Perforations	2.00			3382.00	
Recorder	0.00	8354	Inside	3382.00	
Recorder	0.00	8520	Outside	3382.00	
Perforations	25.00			3407.00	
Bullnose	3.00			3410.00	31.00 Bottom Packers & Anchor

**Total Tool Length: 51.00**





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44219

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.12.03 @ 10:08:30

**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:

73000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.95 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.25 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
50.00	50%Water/50%Mud	0.419

Total Length: 50.00 ft      Total Volume: 0.419 bbl

Num Fluid Samples: 0

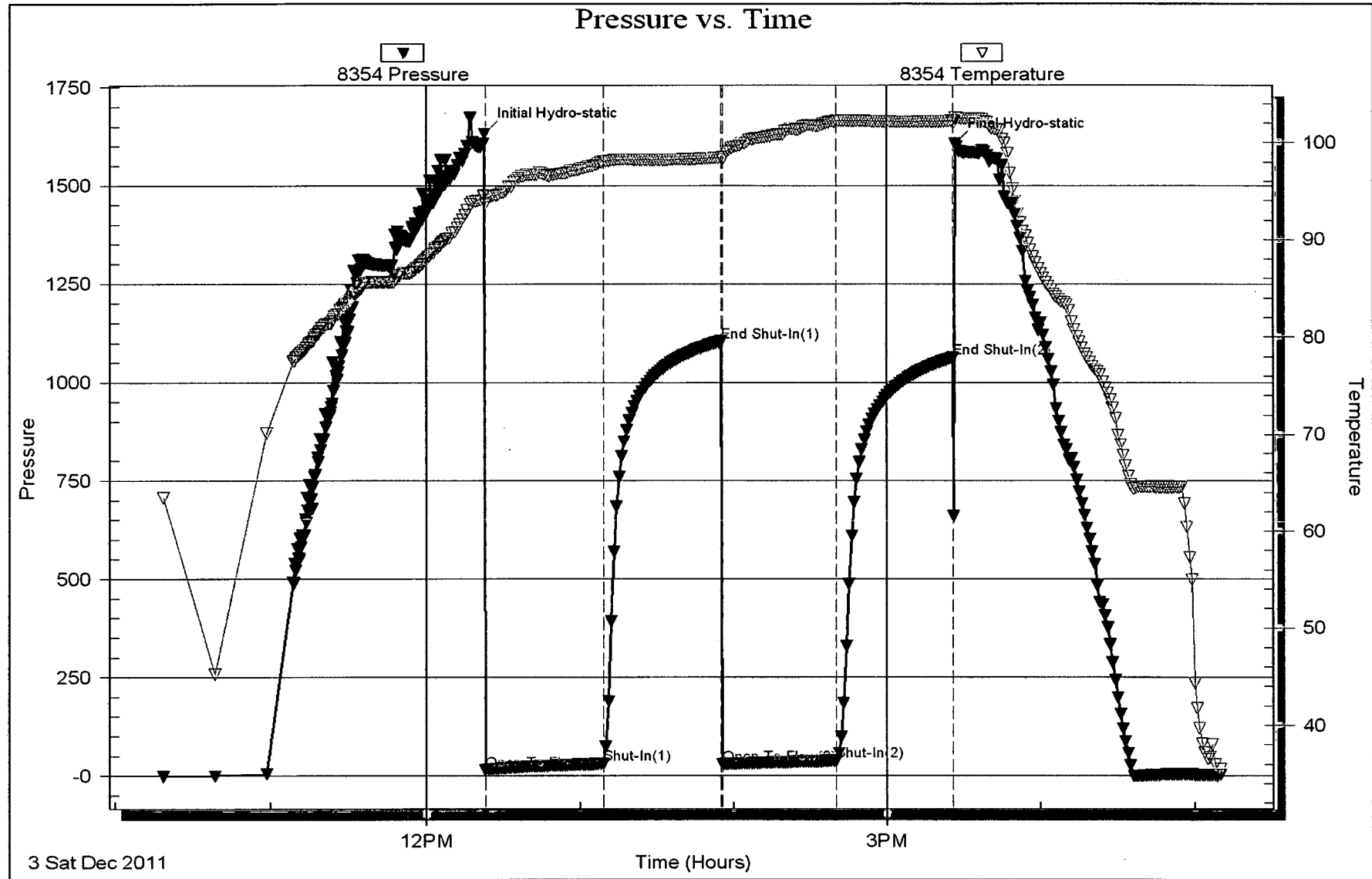
Num Gas Bombs: 0

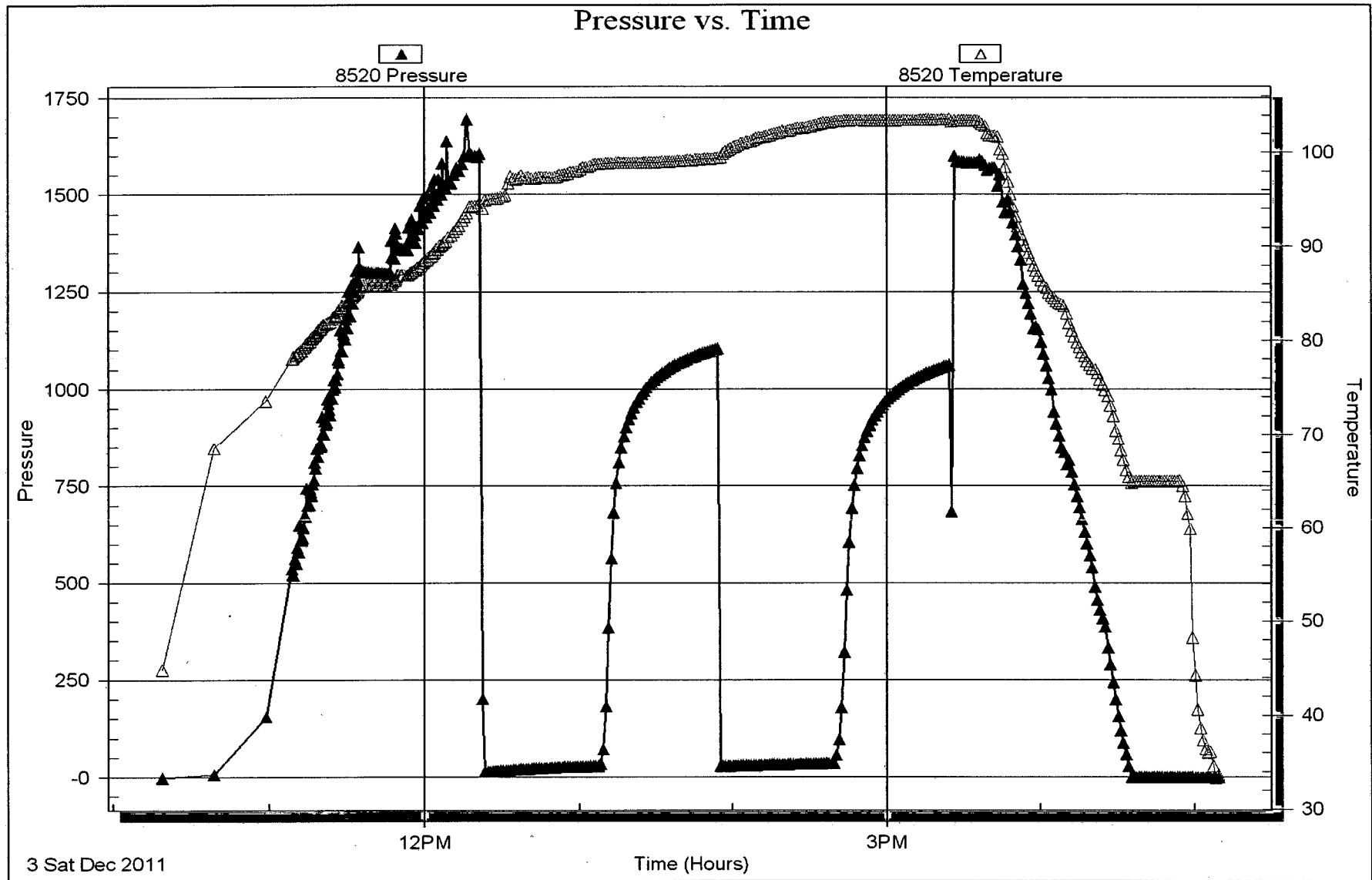
Serial #:

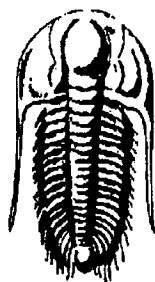
Laboratory Name:

Laboratory Location:

Recovery Comments:







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

**Pfannenstiel #1-12**

**12-14s-19w Ellis,KS**

Start Date: 2011.12.04 @ 05:12:30

End Date: 2011.12.04 @ 11:28:30

Job Ticket #: 44220                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.13 @ 16:13:03

Downing-Nelson Oil Co., Inc.

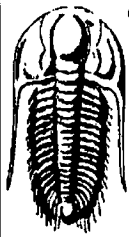
12-14s-19w Ellis,KS

Pfannenstiel #1-12

DST # 2

LKC "D"

2011.12.04



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44220

**DST#: 2**

ATTN: Marc Downing

Test Start: 2011.12.04 @ 05:12:30

### GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:03:50

Time Test Ended: 11:28:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **3500.00 ft (KB) To 3524.00 ft (KB) (TVD)**

Total Depth: 3524.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2159.00 ft (KB)

2151.00 ft (CF)

KB to GR/CF: 8.00 ft

### Serial #: 8354

Inside

Press@RunDepth: 19.93 psig @ 3501.00 ft (KB)

Start Date: 2011.12.04

End Date: 2011.12.04

Start Time: 05:22:30

End Time: 11:28:30

Capacity: 8000.00 psig

Last Calib.: 2011.12.04

Time On Btm: 2011.12.04 @ 07:03:40

Time Off Btm: 2011.12.04 @ 09:41:00

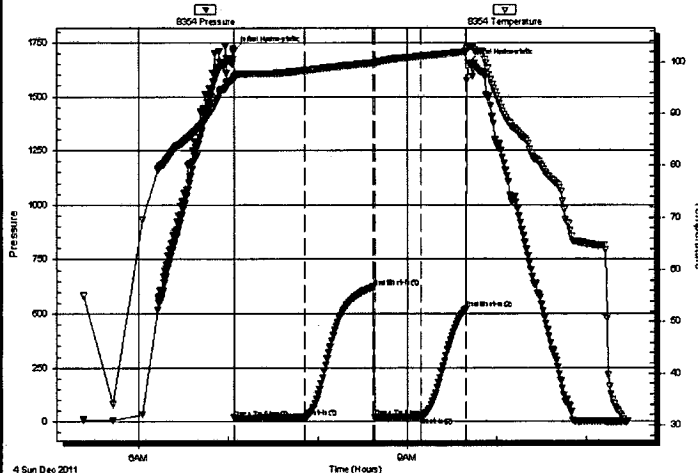
TEST COMMENT: IF-Very weak building blow . Built to 1 & 1/4 inch. Died to 1/2 inch.

IS-No Return.

FF-Very weak surface blow . Died @ 18 minutes.

FSI-No Return.

Pressure vs. Time



### PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1714.19	97.08	Initial Hydro-static
1	16.71	96.52	Open To Flow (1)
48	17.87	98.30	Shut-In(1)
94	623.27	99.75	End Shut-In(1)
95	18.76	99.70	Open To Flow (2)
126	19.93	101.02	Shut-In(2)
156	524.18	101.88	End Shut-In(2)
158	1656.59	102.81	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10

### Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

12-14s-19w Ellis, KS

PO Box 1019  
Hays, KS 67601

Pfannenstiel #1-12

Job Ticket: 44220

DST#: 2

ATTN: Marc Downing

Test Start: 2011.12.04 @ 05:12:30

### GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:03:50

Time Test Ended: 11:28:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **3500.00 ft (KB) To 3524.00 ft (KB) (TVD)**

Total Depth: 3524.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2159.00 ft (KB)

2151.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: **8520** Outside

Press@RunDepth: psig @ 3501.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.12.04 End Date: 2011.12.04

Last Calib.: 2011.12.04

Start Time: 05:23:00 End Time: 11:28:00

Time On Btmr

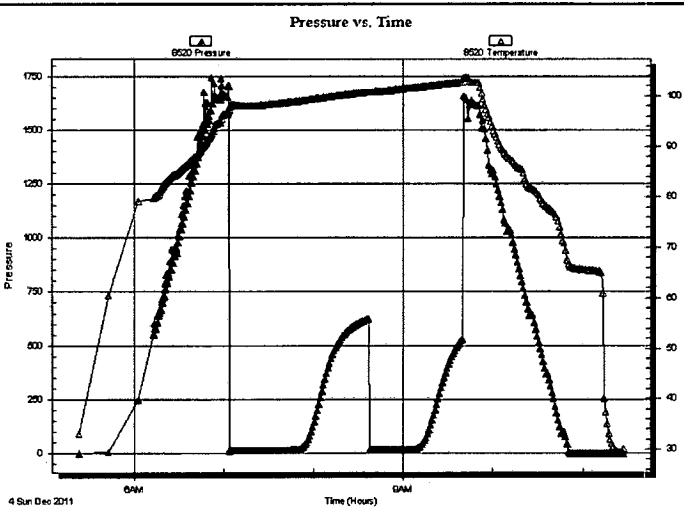
Time Off Btmr

TEST COMMENT: IF-Very weak building blow . Built to 1 & 1/4 inch. Died to 1/2 inch.

IS-No Return.

FF-Very weak surface blow . Died @ 18 minutes.

FSI-No Return.



### PRESSURE SUMMARY

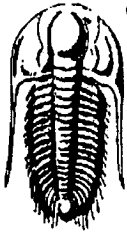
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44220

**DST#: 2**

ATTN: Marc Downing

Test Start: 2011.12.04 @ 05:12:30

**Tool Information**

Drill Pipe:	Length: 3454.00 ft	Diameter: 3.80 inches	Volume: 48.45 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 5000.00 lb
			<b>Total Volume: 48.60 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3500.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	44.00 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			3481.00	
Shut In Tool	5.00			3486.00	
Hydraulic tool	5.00			3491.00	
Packer	5.00			3496.00	20.00            Bottom Of Top Packer
Packer	4.00			3500.00	
Stubb	1.00			3501.00	
Recorder	0.00	8354	Inside	3501.00	
Recorder	0.00	8520	Outside	3501.00	
Perforations	20.00			3521.00	
Bullnose	3.00			3524.00	24.00            Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>44.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44220

**DST#: 2**

ATTN: Marc Downing

Test Start: 2011.12.04 @ 05:12:30

## 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: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.96 in<sup>3</sup>

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
20.00	100%Mud	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

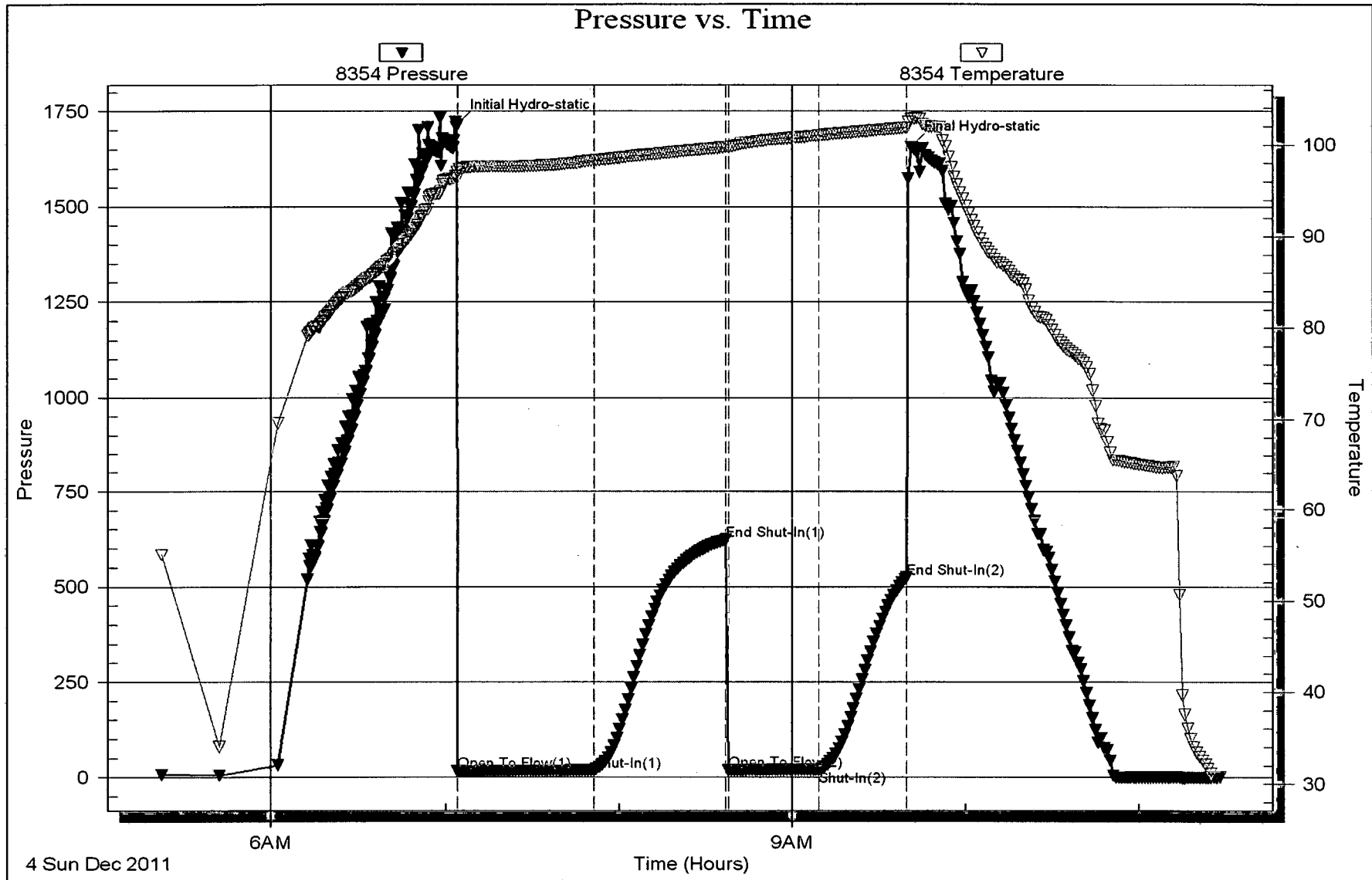
Serial #:

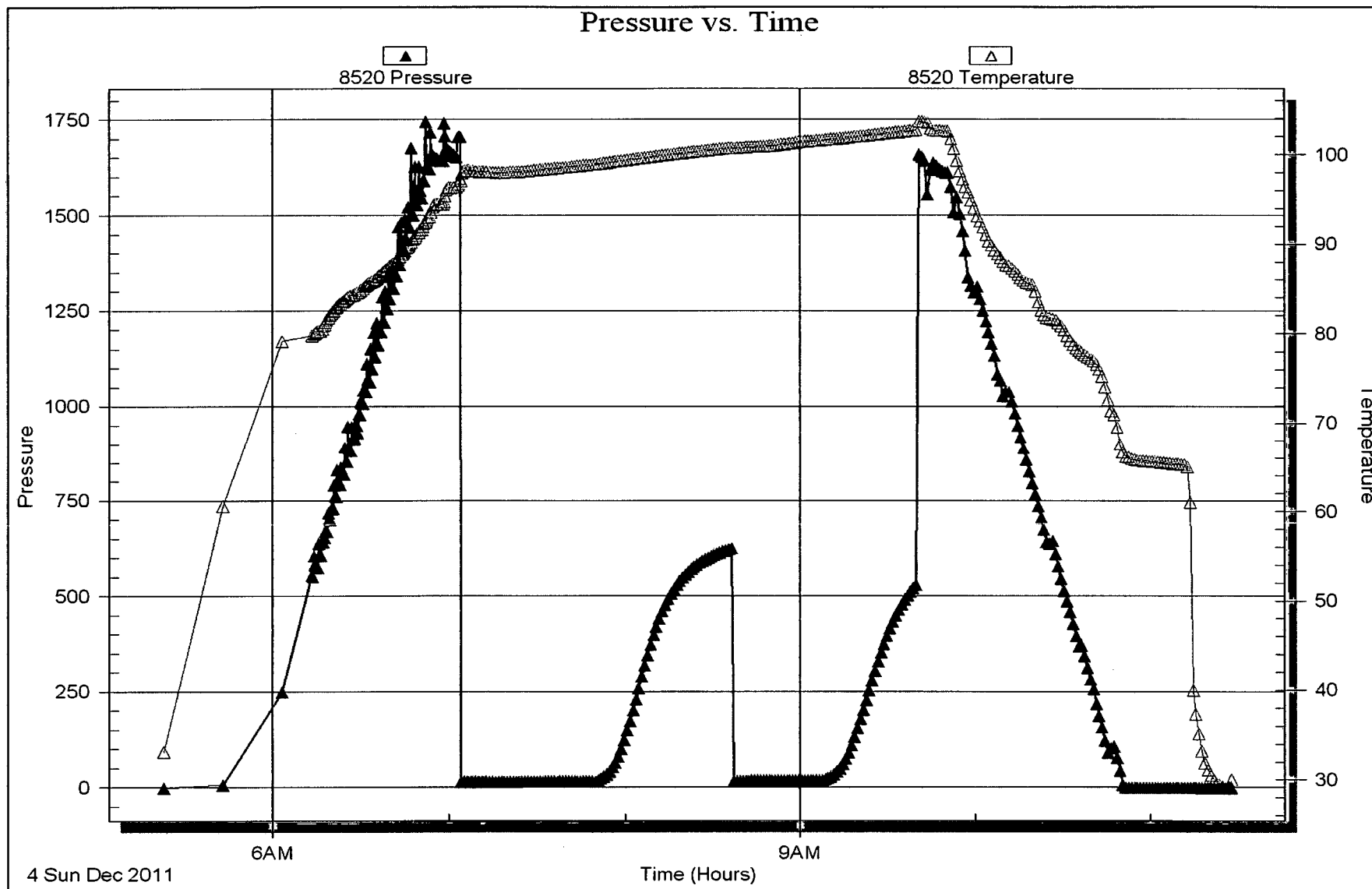
Laboratory Name:

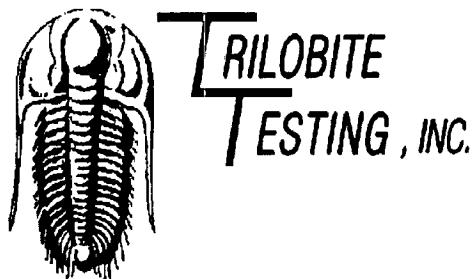
Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

**Pfannenstiel #1-12**

**12-14s-19w Ellis,KS**

Start Date: 2011.12.05 @ 03:00:15

End Date: 2011.12.05 @ 11:58:15

Job Ticket #: 44241                      DST #: 3

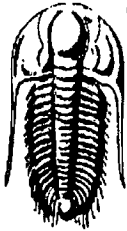
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.13 @ 16:12:15

Downing-Nelson Oil Co., Inc. 12-14s-19w Ellis,KS Pfannenstiel #1-12 DST # 3 LKC "H-K" 2011.12.05



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44241

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2011.12.05 @ 03:00:15

### GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:19:45

Time Test Ended: 11:58:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **3573.00 ft (KB) To 3656.00 ft (KB) (TVD)**

Total Depth: 3656.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2159.00 ft (KB)

2151.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8354**

**Inside**

Press@RunDepth: 102.77 psig @ 3643.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.12.05

End Date:

2011.12.05

Last Calib.: 2011.12.05

Start Time: 03:10:15

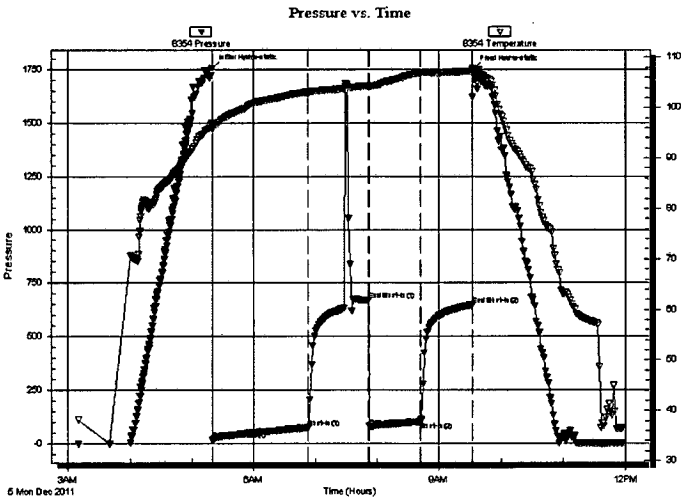
End Time:

11:58:15

Time On Btm: 2011.12.05 @ 05:19:15

Time Off Btm: 2011.12.05 @ 09:32:45

**TEST COMMENT:** IF-Very weak building blow . Built to 6 inches.  
IS-Weak return. Built to 1 inch. Tool torqued up on shut in.  
FF-Very weak building blow . Built to 5 inches.  
FSI-No Return.



### PRESSURE SUMMARY

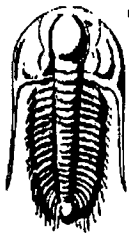
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1753.97	96.88	Initial Hydro-static
1	18.94	95.71	Open To Flow (1)
94	75.03	103.07	Shut-In(1)
153	670.67	104.32	End Shut-In(1)
154	80.11	104.20	Open To Flow (2)
203	102.77	106.93	Shut-In(2)
253	646.62	107.23	End Shut-In(2)
254	1749.24	107.49	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	50%Water/50%Mud	1.40
60.00	2%Oil/98%Mud	0.84

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44241                      **DST#: 3**

ATTN: Marc Downing

Test Start: 2011.12.05 @ 03:00:15

### GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No    Whipstock:                      ft (KB)

Time Tool Opened: 05:19:45

Time Test Ended: 11:58:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **3573.00 ft (KB) To 3656.00 ft (KB) (TVD)**

Total Depth: 3656.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches    Hole Condition: Fair

Reference Elevations: 2159.00 ft (KB)

2151.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8520          Outside**

Press@RunDepth:                      psig @    3643.00 ft (KB)

Start Date: 2011.12.05                      End Date: 2011.12.05

Start Time: 03:10:30                      End Time: 11:58:00

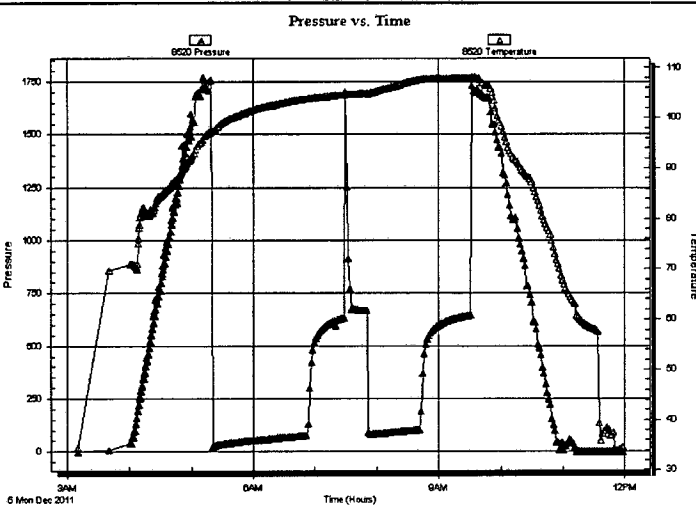
Capacity: 8000.00 psig

Last Calib.: 2011.12.05

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Very weak building blow . Built to 6 inches.  
IS-Weak return. Built to 1 inch. Tool torqued up on shut in.  
FF-Very weak building blow . Built to 5 inches.  
FSI-No Return.



### PRESSURE SUMMARY

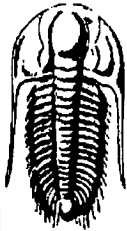
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
120.00	50%Water/50%Mud	1.40
60.00	2%Oil/98%Mud	0.84

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44241

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.12.05 @ 03:00:15

**Tool Information**

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 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:	28000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	10000.00 lb
			<b>Total Volume: 49.98 bbl</b>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3573.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	83.00 ft				
Tool Length:	103.00 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			3554.00	
Shut In Tool	5.00			3559.00	
Hydraulic tool	5.00			3564.00	
Packer	5.00			3569.00	20.00 Bottom Of Top Packer
Packer	4.00			3573.00	
Stubb	1.00			3574.00	
Perforations	5.00			3579.00	
Change Over Sub	1.00			3580.00	
Drill Pipe	62.00			3642.00	
Change Over Sub	1.00			3643.00	
Recorder	0.00	8354	Inside	3643.00	
Recorder	0.00	8520	Outside	3643.00	
Perforations	10.00			3653.00	
Bullnose	3.00			3656.00	83.00 Bottom Packers & Anchor

**Total Tool Length: 103.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44241

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.12.05 @ 03:00:15

### 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:

13000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 1.20 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	50%Water/50%Mud	1.401
60.00	2%Oil/98%Mud	0.842

Total Length: 180.00 ft      Total Volume: 2.243 bbl

Num Fluid Samples: 0

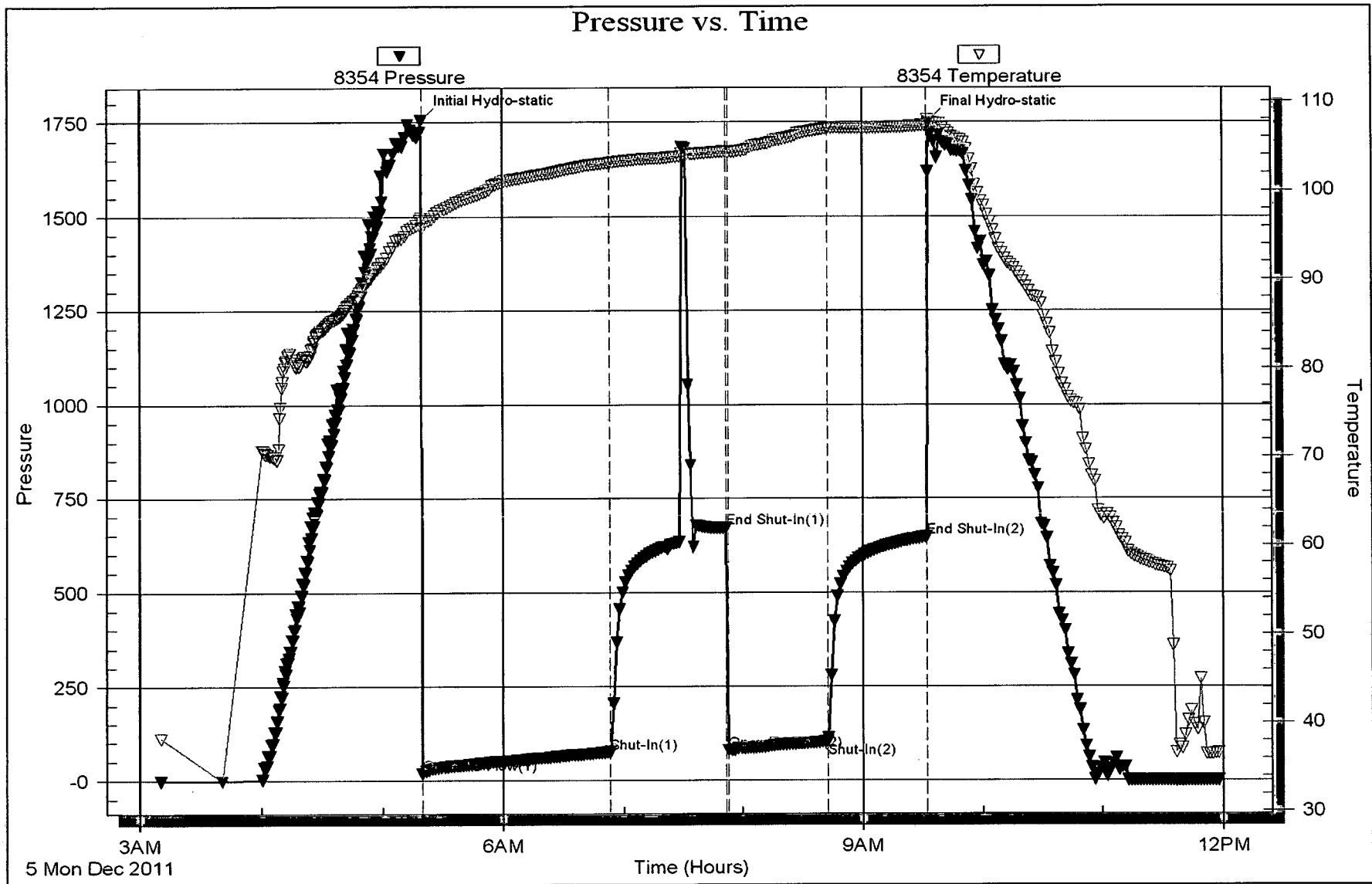
Num Gas Bombs: 0

Serial #:

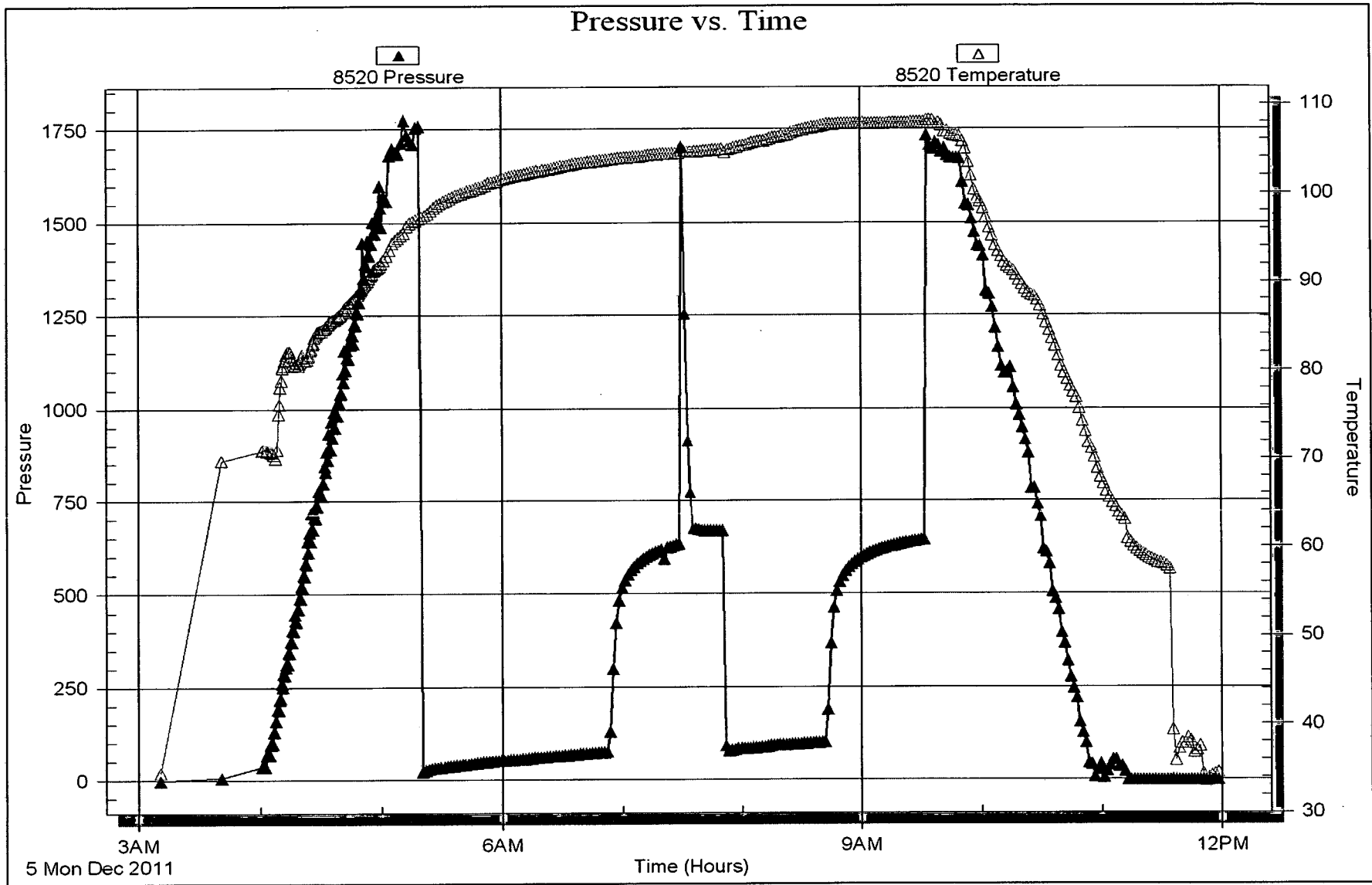
Laboratory Name:

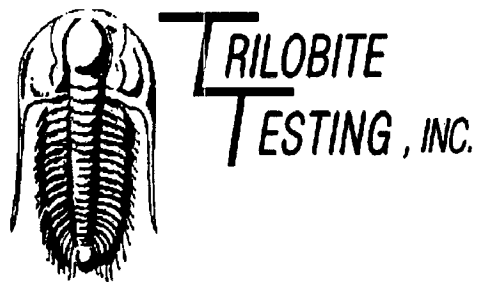
Laboratory Location:

Recovery Comments: Tool torqued up hard on first shut in.









## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

**Pfannenstiel #1-12**

**12-14s-19w Ellis,KS**

Start Date: 2011.12.06 @ 13:34:15

End Date: 2011.12.06 @ 20:40:15

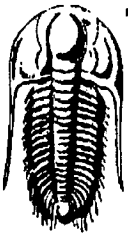
Job Ticket #: 44222                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.12.13 @ 16:08:36



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44222

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.12.06 @ 13:34:15

## GENERAL INFORMATION:

Formation: **Topeka**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 15:19:35

Time Test Ended: 20:40:15

Test Type: **Conventional Straddle (Initial)**

Tester: **Dustin Rash**

Unit No: **38**

**Interval: 3413.00 ft (KB) To 3443.00 ft (KB) (TVD)**

Total Depth: **3894.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2159.00 ft (KB)**

**2151.00 ft (CF)**

**KB to GR/CF: 8.00 ft**

**Serial #: 8354**

**Inside**

Press@RunDepth: **33.54 psig @ 3414.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2011.12.06**

End Date:

**2011.12.06**

Last Calib.: **2011.12.06**

Start Time: **13:44:15**

End Time:

**20:40:15**

Time On Btm: **2011.12.06 @ 15:19:25**

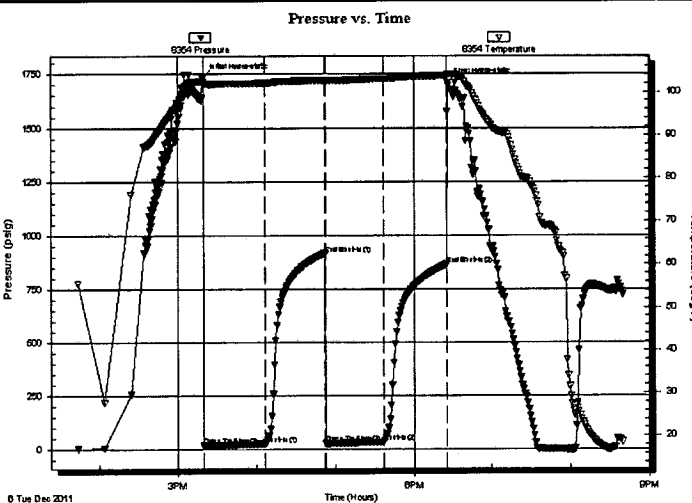
Time Off Btm: **2011.12.06 @ 18:26:15**

**TEST COMMENT:** IF-Very weak building blow . Built to 4 inches.

ISI-No Return.

FF-Very weak building blow . Built to 1 & 1/2 inches. Died to 1 inch.

FSI-No Return.



## PRESSURE SUMMARY

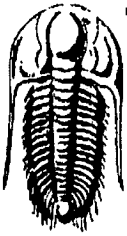
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1736.17	102.35	Initial Hydro-static
1	20.12	101.70	Open To Flow (1)
48	25.43	102.05	Shut-In(1)
93	913.98	102.66	End Shut-In(1)
94	28.87	102.43	Open To Flow (2)
138	33.54	103.03	Shut-In(2)
186	864.90	103.71	End Shut-In(2)
187	1712.36	104.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	1%Oil/99%Mud	0.63

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44222

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.12.06 @ 13:34:15

### GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:19:35

Time Test Ended: 20:40:15

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: **3413.00 ft (KB) To 3443.00 ft (KB) (TVD)**

Reference Elevations: 2159.00 ft (KB)

Total Depth: 3894.00 ft (KB) (TVD)

2151.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8520 Outside**

Press@RunDepth: psig @ 3414.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.12.06

End Date: 2011.12.06

Last Calib.: 2011.12.06

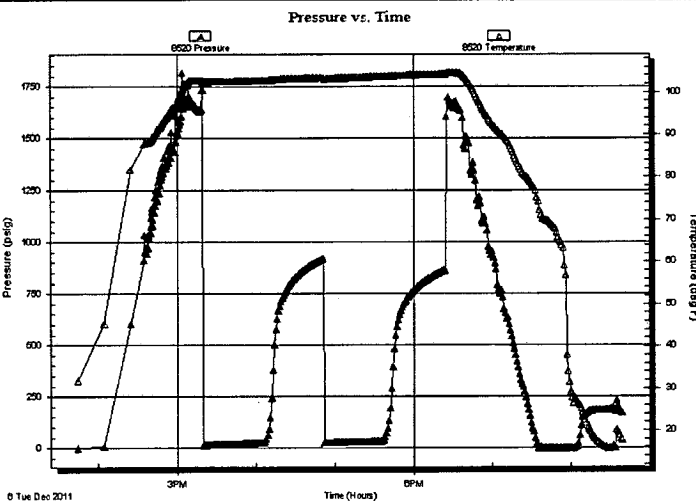
Start Time: 13:44:45

End Time: 20:39:45

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Very weak building blow . Built to 4 inches.  
IS-No Return.  
FF-Very weak building blow . Built to 1 & 1/2 inches. Died to 1 inch.  
FSI-No Return.



### PRESSURE SUMMARY

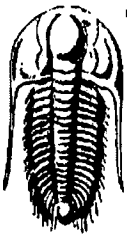
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
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### Recovery

Length (ft)	Description	Volume (bbl)
45.00	1%Oil/99%Mud	0.63

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44222

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.12.06 @ 13:34:15

### GENERAL INFORMATION:

Formation: **Topeka**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 15:19:35

Time Test Ended: 20:40:15

Test Type: **Conventional Straddle (Initial)**

Tester: **Dustin Rash**

Unit No: **38**

Interval: **3413.00 ft (KB) To 3443.00 ft (KB) (TVD)**

Total Depth: **3894.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2159.00 ft (KB)**

**2151.00 ft (CF)**

**KB to GR/CF: 8.00 ft**

**Serial #: 8653**

**Below (Straddle)**

Press@RunDepth: **psig @ 3448.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2011.12.06**

End Date:

**2011.12.06**

Last Calib.: **2011.12.06**

Start Time: **13:44:45**

End Time:

**20:38:15**

Time On Btm:

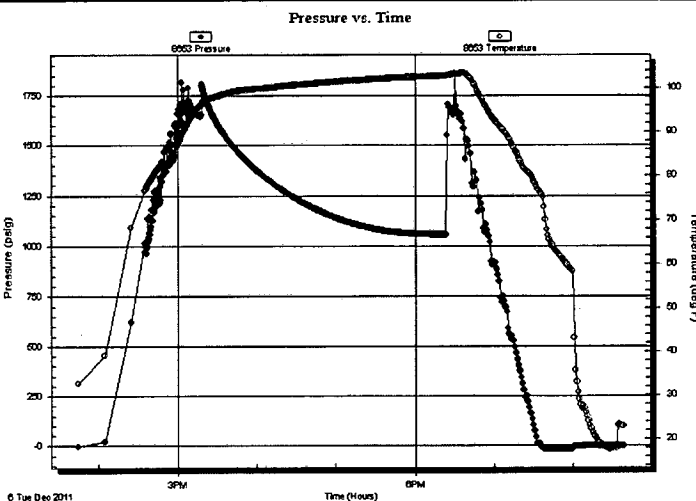
Time Off Btm:

TEST COMMENT: **IF-Very weak building blow . Built to 4 inches.**

**IS-No Return.**

**FF-Very weak building blow . Built to 1 & 1/2 inches. Died to 1 inch.**

**FSI-No Return.**



### PRESSURE SUMMARY

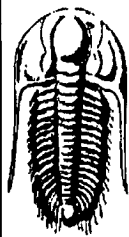
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
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### Recovery

Length (ft)	Description	Volume (bbl)
45.00	1%Oil/99%Mud	0.63

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44222

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.12.06 @ 13:34:15

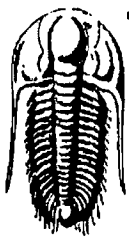
### Tool Information

Drill Pipe:	Length: 3423.00 ft	Diameter: 3.80 inches	Volume: 48.02 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 10000.00 lb
		<b>Total Volume:</b>	<b>48.02 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3413.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	3443.00 ft			
Interval between Packers:	30.00 ft			
Tool Length:	504.00 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			3394.00	
Shut In Tool	5.00			3399.00	
Hydraulic tool	5.00			3404.00	
Packer	5.00			3409.00	20.00 Bottom Of Top Packer
Packer	4.00			3413.00	
Stubb	1.00			3414.00	
Recorder	0.00	8354	Inside	3414.00	
Recorder	0.00	8520	Outside	3414.00	
Perforations	25.00			3439.00	
Blank Off Sub	1.00			3440.00	
Blank Spacing	3.00			3443.00	30.00 Tool Interval
Packer	2.00			3445.00	
Stubb	1.00			3446.00	
Perforations	1.00			3447.00	
Change Over Sub	1.00			3448.00	
Recorder	0.00	8653	Below	3448.00	
Drill Pipe	353.00			3801.00	
Drill Collar	90.00			3891.00	
Change Over Sub	1.00			3892.00	
Perforations	2.00			3894.00	
Bullnose	3.00			3897.00	454.00 Bottom Packers & Anchor

**Total Tool Length: 504.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing-Nelson Oil Co., Inc.

**12-14s-19w Ellis,KS**

PO Box 1019  
Hays, KS 67601

**Pfannenstiel #1-12**

Job Ticket: 44222

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.12.06 @ 13:34:15

## 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: 48.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
45.00	1%Oil/99%Mud	0.631

Total Length: 45.00 ft      Total Volume: 0.631 bbf

Num Fluid Samples: 0

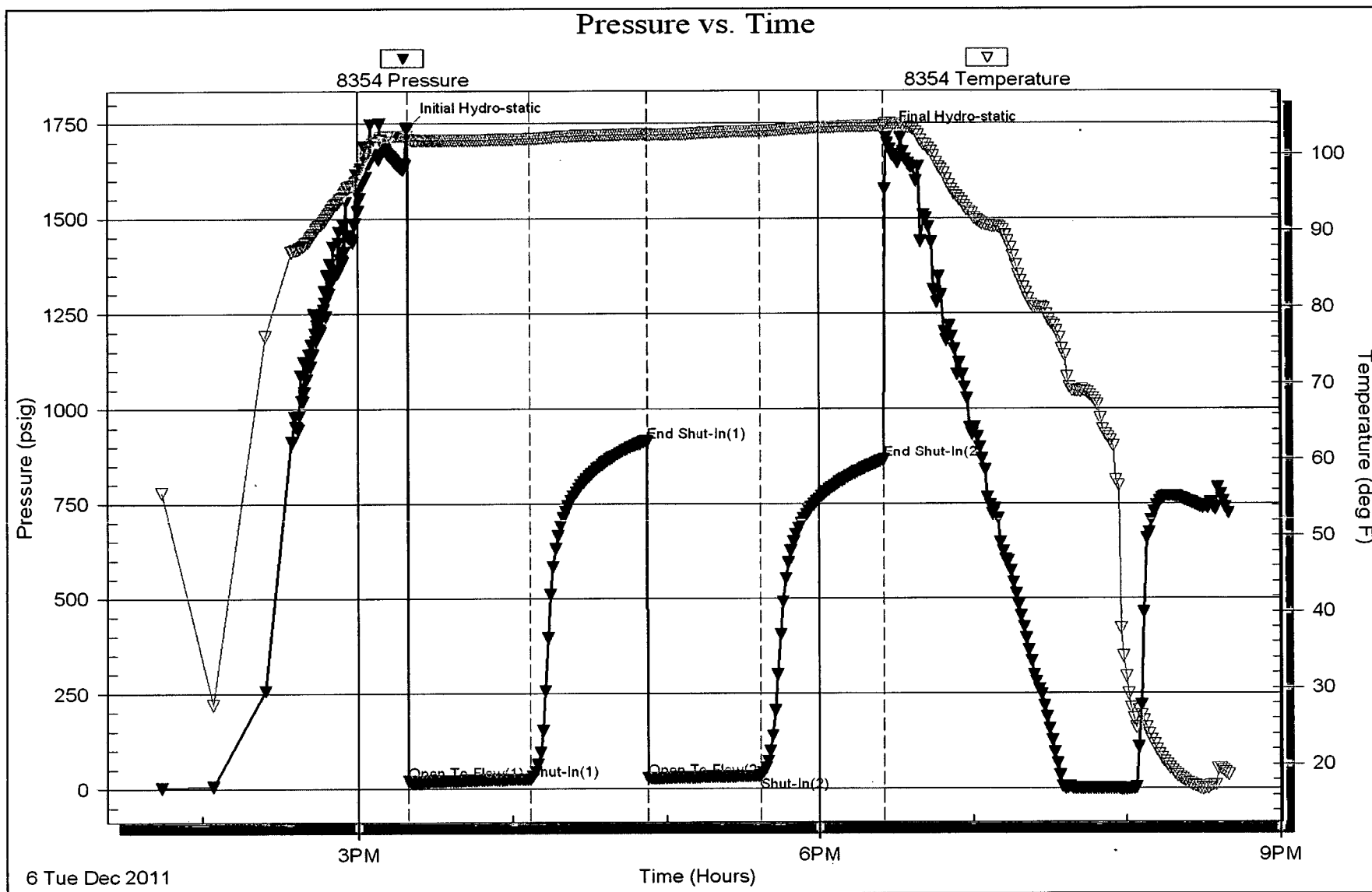
Num Gas Bombs: 0

Serial #:

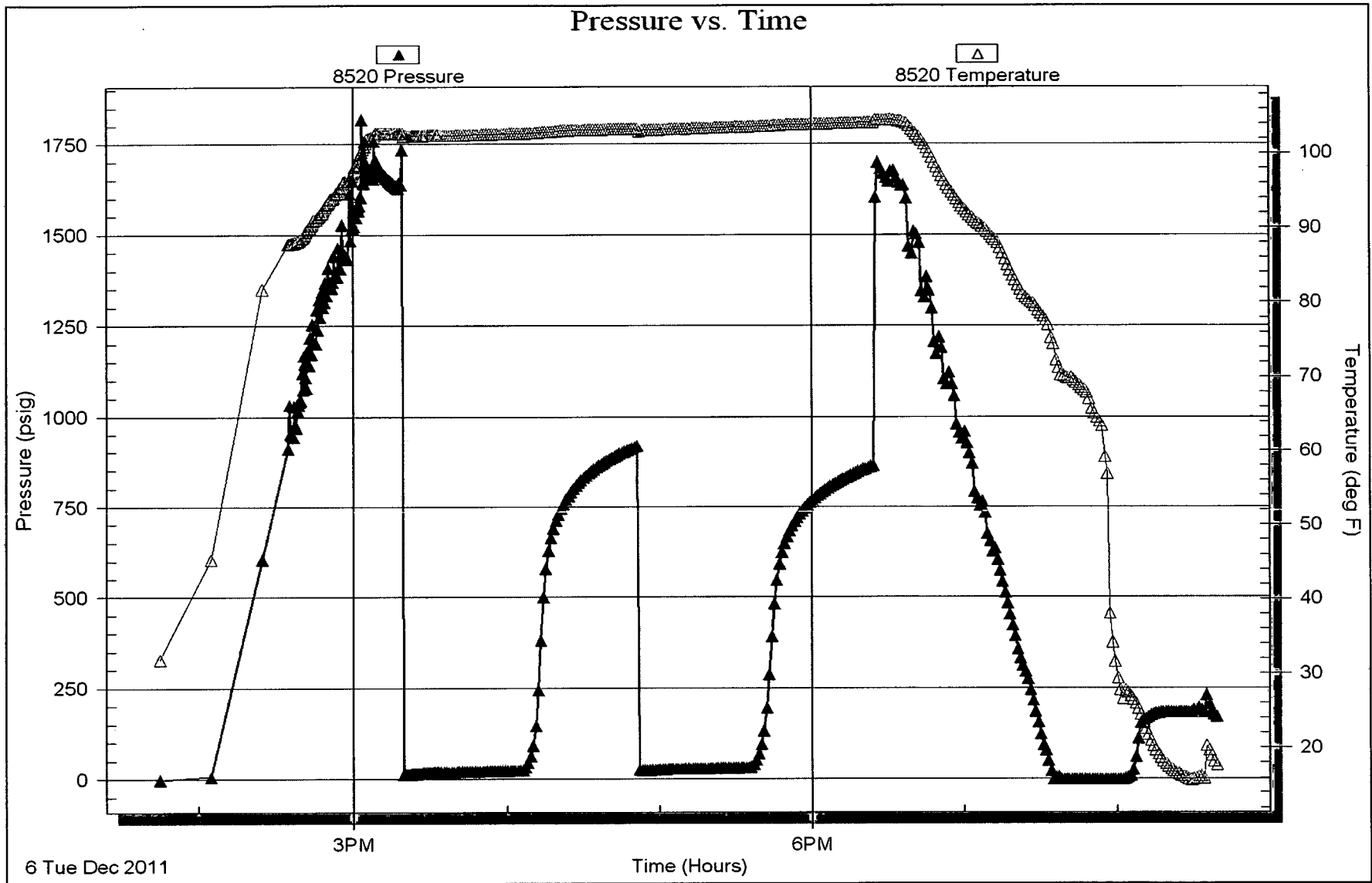
Laboratory Name:

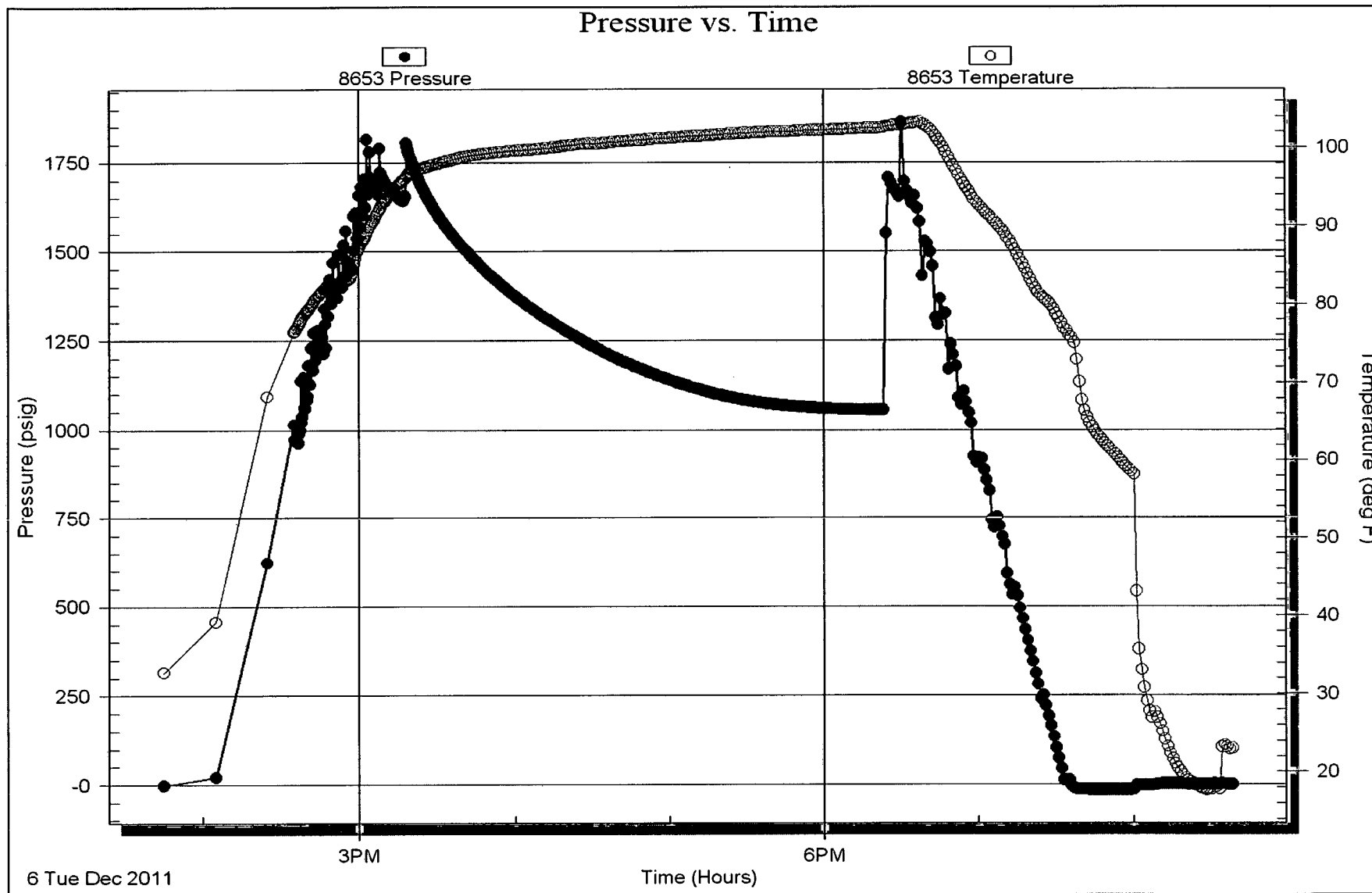
Laboratory Location:

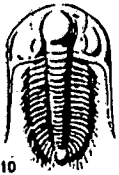
Recovery Comments:











# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
DEC 13 2011

## Test Ticket

NO. 44219

BY: \_\_\_\_\_

Well Name & No. Plamenstiel #1-12 Test No. 2 Date 12-3-11  
 Company Downing-Nelson Oil Co., Inc. Elevation 2159 KB 2151 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery 3  
 Location: Sec. 12 Twp. 14S Rge. 19W Co. Ellis State KS

Interval Tested 3379-3410 Zone Tested Plattsmouth  
 Anchor Length 31' Drill Pipe Run 3359 Mud Wt. 8.9  
 Top Packer Depth 3374 Drill Collars Run 31.54 Vis 48  
 Bottom Packer Depth 3379 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3410 Chlorides 4000 ppm System LCM 2#

Blow Description FF - Very weak building blow. Built to 2 1/2 inches.  
IST - No Return.  
FF - Very weak building blow. Built to 2 inches.  
FST - No Return.

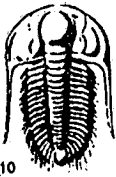
Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>Muddy Water</u>		<u>50</u>	<u>50</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 50 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW 1253 @ 31 °F Chlorides 73000 ppm

(A) Initial Hydrostatic 1631  Test 125 T-On Location 0830  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 1015  
 (C) First Final Flow 32  Safety Joint \_\_\_\_\_ T-Open 1224  
 (D) Initial Shut-In 1105  Circ Sub \_\_\_\_\_ T-Pulled 1525  
 (E) Second Initial Flow 30  Hourly Standby \_\_\_\_\_ T-Out 1715  
 (F) Second Final Flow 38  Mileage 4x2 11.20 Comments BWT-1008  
 (G) Final Shut-In 1064  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1606  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 45  Day Standby \_\_\_\_\_ Total 1136.20  
 Final Shut-In 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1136.20

Approved By \_\_\_\_\_ Our Representative D. Rash  
 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  
DEC 13 2011

## Test Ticket

NO. 44220

BY: \_\_\_\_\_

Well Name & No. Plannerstiel #1-12 Test No. 2 Date 12-4-11  
 Company Downing-Nelson Oil Co., Inc. Elevation 2159 KB 2151 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery 3  
 Location: Sec. 12 Twp. 14S Rge. 19W Co. Ellis State KS

Interval Tested 3500-3524 Zone Tested LKC "D"  
 Anchor Length 24' Drill Pipe Run 3454 Mud Wt. 8.9  
 Top Packer Depth 3495 Drill Collars Run 31.54 Vis 48  
 Bottom Packer Depth 3500 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3524 Chlorides 4000 ppm System LCM 2#

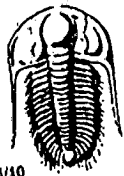
Blow Description IF - Very weak budding blow. Burst to 1/4 inch. Died to 1/2 inch.  
ISB - No Return.  
FF - Very weak surface blow. Died @ 18 minutes.  
FSB - No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1714  Test 1125 T-On Location 0345  
 (B) First Initial Flow 17  Jars \_\_\_\_\_ T-Started 0515  
 (C) First Final Flow 18  Safety Joint \_\_\_\_\_ T-Open 0705  
 (D) Initial Shut-In 623  Circ Sub \_\_\_\_\_ T-Pulled 0935  
 (E) Second Initial Flow 19  Hourly Standby \_\_\_\_\_ T-Out 1130  
 (F) Second Final Flow 20  Mileage 4X2 11.20 Comments BWT-0512  
 (G) Final Shut-In 524  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1657  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1136.20  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1136.20

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



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601 BY: \_\_\_\_\_

RECEIVED Test Ticket  
DEC 13 2011 NO. 44221

Well Name & No. Pfannenstiel #112 Test No. 3 Date 12-5-11  
 Company Downing-Nelson Oil Co., Inc. Elevation 2159 KB 2151 GL  
 Address P.O. Box 1019 Hays, KS 67601 Rig Discovery 3  
 Co. Rep / Geo. Marc Downing Co. Ellis State KS  
 Location: Sec. 12 Twp. 14S Rge. 19W

Interval Tested 3573-3656 Zone Tested LKC "H-K" Mud Wt. 8.9  
 Anchor Length 83' Drill Pipe Run 3552 Vis 48  
 Top Packer Depth ~~3561~~ 3568 Drill Collars Run 31.54 WL 8.0  
 Bottom Packer Depth ~~3566~~ 3573 Wt. Pipe Run 6 LCM 2#  
 Total Depth 3656 Chlorides 5000 ppm System

Blow Description VF - Very weak building blow, Built to 6 inches.  
FST - Weak return, Built to 1 inch. Tool tongued up on shut-in.  
FF - Very weak building blow, Built to 5 inches.

Rec	Feet of	%gas	%oil	%water	%mud
60	Feet of <u>USOCM</u>				
120	Feet of <u>Muddy Water</u>				
	Feet of _____				
	Feet of _____				
	Feet of _____				

Rec Total 180 BHT \_\_\_\_\_ Gravity \_\_\_\_\_  
 (A) Initial Hydrostatic 1754 Test 1125  
 (B) First Initial Flow 19  Jars \_\_\_\_\_  
 (C) First Final Flow 75  Safety Joint \_\_\_\_\_  
 (D) Initial Shut-In 671  Circ Sub \_\_\_\_\_  
 (E) Second Initial Flow 80  Hourly Standby 1/2 hr 50  
 (F) Second Final Flow 103  Mileage 4x2 11.20  
 (G) Final Shut-In 647  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1749  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

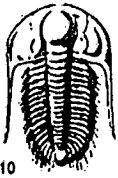
T-On Location 0215  
 T-Started 0315  
 T-Open 0520  
 T-Pulled 1025  
 T-Out 1145  
 Comments Batt-0300

Initial Open 90  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1161.20  
 MP/DST Disc't \_\_\_\_\_

Sub Total 1161.20  
 Our Representative D. Rast

Approved By \_\_\_\_\_  
 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 it  
 ... 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  
DEC 13 2011

## Test Ticket

NO. 44222

BY:

Well Name & No. Pfannerstiel #1-12 Test No. 4 Date 12-6-11  
 Company Downing-Nelson Oil Co, Inc. Elevation 2159 KB 2151 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Male Downing Rig Discovery 3  
 Location: Sec. 12 Twp. 14S. Rge. 19W. Co. Ellis State KS

Interval Tested 3413-3443 Zone Tested Tolando  
 Anchor Length 30' 451' TP Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.9  
 Top Packer Depth 3408 Drill Collars Run 93 Vis 48  
 Bottom Packer Depth 3413 3443 SP Wt. Pipe Run 0 WL 8.8  
 Total Depth 3894 Chlorides 6000 ppm System LCM 1.5#

Blow Description IF - Very weak building blow, burst to 4 inches.  
IS - No Return.  
FF - Very weak building blow, burst to 1 1/2 inches, died off to 1 inch.  
FS - No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>Mud w/ Oil Spec</u>		<u>1</u>		<u>99</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 45 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1736  Test 1125 T-On Location 1200  
 (B) First Initial Flow 20  Jars \_\_\_\_\_ T-Started 1315  
 (C) First Final Flow 25  Safety Joint \_\_\_\_\_ T-Open 1520  
 (D) Initial Shut-In 914  Circ Sub \_\_\_\_\_ T-Pulled 1825  
 (E) Second Initial Flow 29  Hourly Standby \_\_\_\_\_ T-Out 2040  
 (F) Second Final Flow 34  Mileage 8RT 11.20 Comments Bart-1334  
 (G) Final Shut-In 865  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1712  Straddle 600-  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1736.20  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1736.20

Approved By \_\_\_\_\_ Our Representative D. Rath  
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