



KANSAS CORPORATION COMMISSION 1089731
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: Alan 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 #: _____
07/11/2012 07/18/2012 07/19/2012
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-145-21679-00-00
Spot Description: _____
NE SE NW NE Sec. 6 Twp. 21 S. R. 20 East West
890 Feet from North / South Line of Section
1350 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Pawnee
Lease Name: Vandenburg Well #: 1-6
Field Name: Steffen Southeast
Producing Formation: Mississippian
Elevation: Ground: 2190 Kelly Bushing: 2198
Total Depth: 4361 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 1370 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: 29000 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: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: Deanna Garris Date: 09/07/2012



1089731

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Vandenburg Well #: 1-6
Sec. 6 Twp. 21 S. R. 20 East West County: Pawnee

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 <i>(Attach Additional Sheets)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name Attached	Top Attached	Datum Attached
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Electric Log Run	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Submitted Electronically <i>(If no, Submit Copy)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run: Attached				

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface pipe	12.25	8.625	23	1370	Common	525	2% Gel & 3% CC
Production string	7.875	5.5	14	4354	EA/2	125	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing				
___ Plug Back TD	-			
___ Plug Off Zone	-			

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size: <u>2.375</u>	Set At: <u>4360</u>	Packer At:	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. <u>08/01/2012</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls. <u>40</u>	Gas Mcf <u>0</u>	Water Bbls. <u>4</u>	Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input checked="" type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Vandenburg 1-6
Doc ID	1089731

All Electric Logs Run

Micro
Sonic
Dual Indcution
Dual Porostiy

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Vandenburg 1-6
Doc ID	1089731

Tops

Name	Top	Datum
Anhydrite	1361'	+839
Base	1390'	+810
Heebner	3724'	-1524
LKC	3774'	-1574
BKC	4092'	-1892
Fort Scott	4272'	-2072
Cherokee Shale	4270'	-2090
Mississippi	4235'	-2135
Osage	4358'	-2135

ALLIED OIL & GAS SERVICES, LLC 053673

Alexander, KS

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

SERVICE POINT: Great Bend, KS

DATE: <u>7-12-16</u>	SEC: <u>6</u>	TWP: <u>21</u>	RANGE: <u>20</u>	CALLED OUT	ON LOCATION	JOB START: <u>10:00 AM</u>	JOB FINISH: <u>1:30 PM</u>	
LEASE: <u>Vanderburg</u>	WELL #: <u>1-6</u>	LOCATION: <u>Alexander, KS, 14 1/2 miles</u>	COUNTY: <u>Lincoln</u>	STATE: <u>KS</u>				
OLD OR NEW (Circle one): <u>NEW</u>		LOCATION: <u>West 50. 140P</u>					MILEAGE: <u>101</u>	

CONTRACTOR: Downing Rig #4

TYPE OF JOB: 4 1/2" Plug

HOLE SIZE: 12 1/4" T.D. 1770

CASING SIZE: 9 5/8" DEPTH

TUBING SIZE: DEPTH

DRILL PIPE: DEPTH

TOOL: DEPTH

PRES. MAX: MINIMUM

MEAS. LINE: SHOE JOINT

CEMENT LEFT IN CSG: 10.00 ft

PERFS: 34.90

DISPLACEMENT: 34.90

OWNER: Downing - Nelson

CEMENT AMOUNT ORDERED: 525 7/8 Class A

3/8 cc 2 1/2 gel

COMMON	<u>525</u>	@	<u>16.25</u>	<u>8,531.25</u>
POZMIX		@		
GEL	<u>10</u>	@	<u>21.25</u>	<u>212.50</u>
CHLORIDE	<u>18</u>	@	<u>58.25</u>	<u>1,047.75</u>
ASC		@		

EQUIPMENT

PUMP TRUCK # <u>366</u>	CEMENTER: <u>Greg</u>	HELPER: <u>Kevin</u>
BULK TRUCK # <u>4410</u>	DRIVER: <u>John</u>	
BULK TRUCK #	DRIVER	

HANDLING	<u>567</u>	@	<u>2.10</u>	<u>1190.70</u>
MILEAGE	<u>25.915 x 42 x 2.35</u>			<u>2,557.21</u>
				TOTAL <u>13,539.31</u>

1088.42

REMARKS:

See Cement Log

Plug down @ 10:30 PM

SERVICE

DEPTH OF JOB	<u>1370</u>
PUMP TRUCK CHARGE	<u>1125.00</u>
EXTRA FOOTAGE	<u>900 @ .95 = 855.00</u>
MILEAGE	<u>11.00 @ 21.00 = 231.00</u>
MANIFOLD	<u>42 @ 4.00 = 168.00</u>
TOTAL <u>2,442.00</u>	

CHARGE TO: Downing - Nelson

STREET: _____

CITY: _____ STATE: _____ ZIP: _____

PLUG & FLOAT EQUIPMENT

<u>Ball Plate</u>	@	<u>112.00</u>	<u>112.00</u>
<u>Subs Plug</u>	@	<u>112.00</u>	<u>112.00</u>
TOTAL <u>224.00</u>			

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

PRINTED NAME: _____

SIGNATURE: [Signature]

SALES TAX (If Any): 831.27

TOTAL CHARGES: 16,265.86

DISCOUNT: 25.25 @ 4.051.46

IF PAID IN 30 DAYS

12,154.39

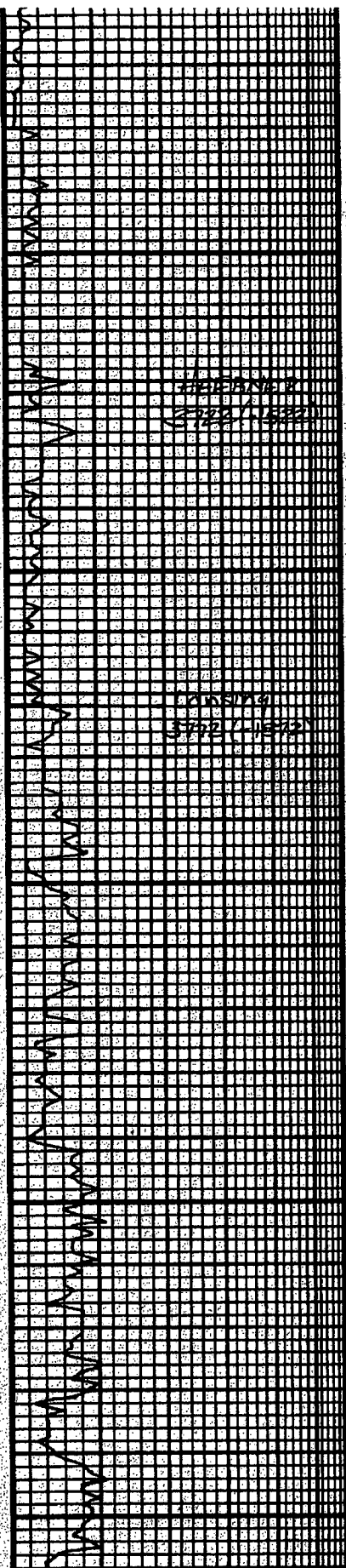
JOB LOG

SWIFT Services, Inc.

DATE 9/12 PAGE NO. 1

CUSTOMER Downing & Nelson WELL NO. 1-6 LEASE Ardenberg JOB TYPE Cement log string TICKET NO. 22727

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								175 sks EA-2w/1/4" Floalo 105jts 5 1/2" - 14" casing total pipe 4358.7' 42' shoe jt jts not 106, 107, 108, 109 Cent 1, 3, 5, 7, 9, 11
	1030							onloc TRX 114
	1120							start 5 1/2" 14" casing in well
	1307							circulate
	1337						1000	Drop ball - set packer shoe
		4 3/4	12				200	Pump 500 gal mud flush
		4 3/4	20				200	Pump 20 bbl KCL flush
	1345		7					Plug RH - MH 30 sks - 20 sks
	1350	4 3/4	35				200	mix EA-2 cement 125 sks @ 15.3 gpg
	1400							Drop latchdown plug
								Wash pump & line
	1405	6 3/4					200	Displace plug
		6 3/4	100				400	
	1430	6 3/4	105				1550	Land plug
								Release pressure to truck - dried up
	1435							Wash truck
								Rack up
	1510							Job complete Blair James Elave



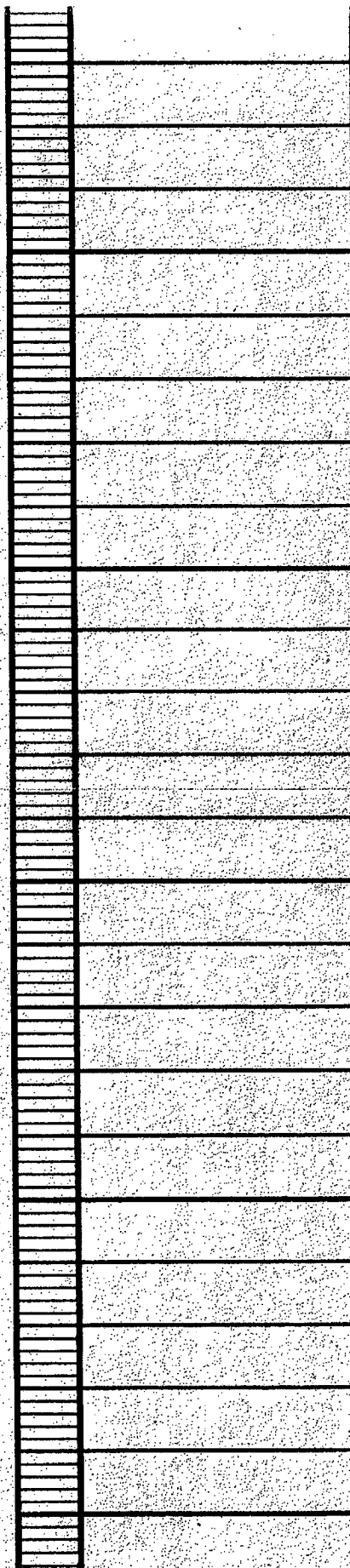
3700

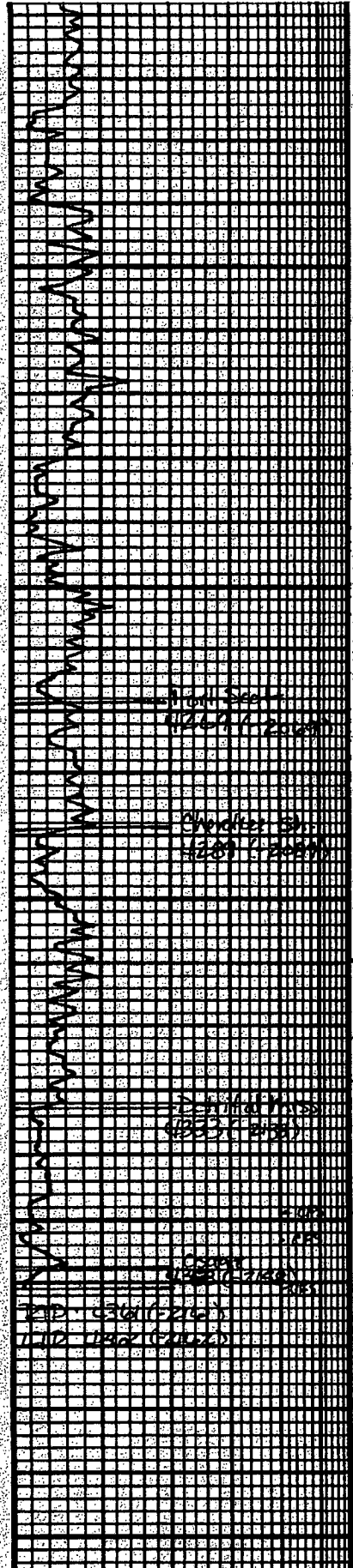
50

3800

50

3900





4200

50

4300

50

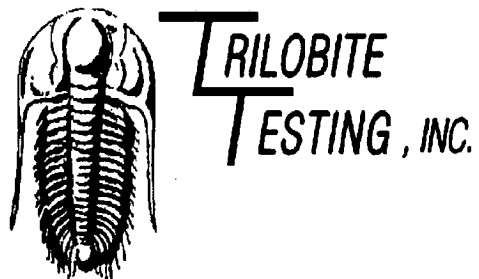
sn: v. dark gray
LS: Tan Lt. Brn w. v. dark w. scatter shales → mky LS lenses
LS: Dk Brn, v. Am, v. dse Ns-
sn: Black - carb
sn: gm-Brown
LS: Tan, cm v. Am v. dse - w. luster tan mky
sn: Black - carb
LS: Tan Am, all dse w. scatter mky LS lenses all No show
sn: Black - carb
LS: Tan Ln, dse Ns
sn: gm - green - silty
LS: Tan D. v. Am, Tan. Arch. cont. some w. qd. str. v. spt sfo. faint color some weathered w. fr. edge str.
LS: Tan Am w. mottled w. weathered Arch. v. l. sfo. 1st 2ms mostly all edge - fr. mky str.
sn: gm Brown
LS: Brn w. mottled weathered d. v. qd. color w. mky Ho w. l. sfo - v. High qd.

DST #1
4310-4349
30-30-30-30
Rec:
3' diam or 1
420' v. sfo cm
slid to bottom 15'
IHP: 2176 #
FFP: 320-321 #
FFP: 320-322 #
SIP: 1017-448 #

DST #2
4310-4353
30-30-30-30
Rec:
80' ocm
IHP: 2187 #
IFP: 27-41 #
FFP: 43-51 #
SIP: 730-579 #
IHP: 2055 #

DST #3
4342-4361
10-30-10-30
Rec:
675' gip
1715' 090
IF 130B 305C
FF 806 305C
IHP: 2358 #
IFP: 244-603 #
FFP: 647-829 #
SIP: 1365-1364 #
Temp: 128°F

Am v



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Alan Downing

Vandenburg #1-6

6-21s-20w Pawnee,KS

Start Date: 2012.07.17 @ 09:20:00

End Date: 2012.07.17 @ 16:15:00

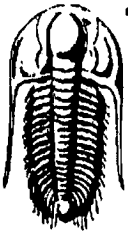
Job Ticket #: 49272 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:50:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49272

DST#: 1

ATTN: Alan Dow ning

Test Start: 2012.07.17 @ 09:20:00

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: 2196.00 ft (KB)

Time Tool Opened: 11:52:30

Time Test Ended: 16:15:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jim Svaty

Unit No: 59

Interval: **4310.00 ft (KB) To 4349.00 ft (KB) (TVD)**

Total Depth: 4349.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2196.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8369 Outside

Press@RunDepth: 322.93 psig @ 4314.00 ft (KB)

Start Date: 2012.07.17

End Date: 2012.07.17

Start Time: 09:20:05

End Time: 16:14:59

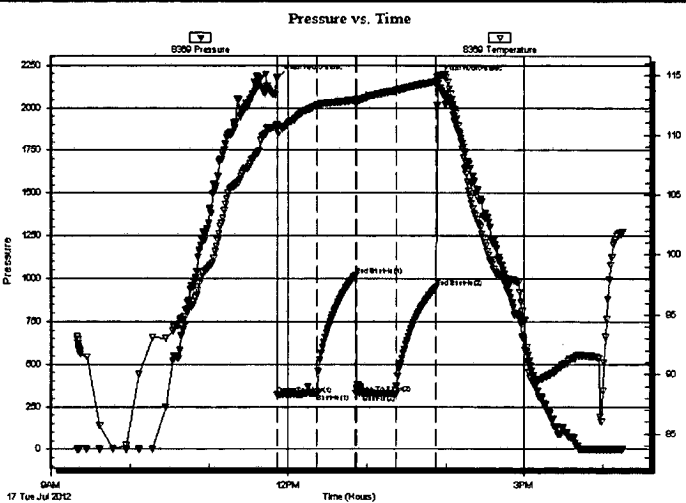
Capacity: 8000.00 psig

Last Calib.: 2012.07.17

Time On Btm: 2012.07.17 @ 11:52:00

Time Off Btm: 2012.07.17 @ 13:54:00

TEST COMMENT: 30-IFP- Surface Blow Building to 1/4"
30-ISIP- No Blow
30-FFP- No Blow Flushed Good Surge No Blow
30-FSIP- No Blow



PRESSURE SUMMARY

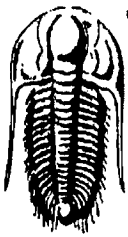
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2176.72	110.82	Initial Hydro-static
1	320.03	110.30	Open To Flow (1)
31	326.18	112.46	Shut-In(1)
60	1017.40	112.92	End Shut-In(1)
60	326.92	112.54	Open To Flow (2)
90	322.93	113.70	Shut-In(2)
121	948.66	114.47	End Shut-In(2)
122	2166.96	114.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	CO 100%o	0.01
620.00	VS Oil Speck Mud	8.44

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49272

DST#: 1

ATTN: Alan Dow ning

Test Start: 2012.07.17 @ 09:20:00

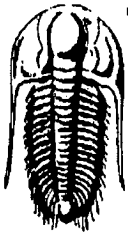
Tool Information

Drill Pipe:	Length: 4289.00 ft	Diameter: 3.80 inches	Volume: 60.16 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4310.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	39.00 ft			
Tool Length:	59.00 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			4291.00	
Shut In Tool	5.00			4296.00	
Hydraulic tool	5.00			4301.00	
Packer	4.00			4305.00	20.00 Bottom Of Top Packer
Packer	5.00			4310.00	
Stubb	1.00			4311.00	
Perforations	2.00			4313.00	
Change Over Sub	1.00			4314.00	
Recorder	0.00	8319	Inside	4314.00	
Recorder	0.00	8369	Outside	4314.00	
Blank Spacing	31.00			4345.00	
Change Over Sub	1.00			4346.00	
Bullnose	3.00			4349.00	39.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49272

DST#: 1

ATTN: Alan Dow ning

Test Start: 2012.07.17 @ 09:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	CO 100%o	0.015
620.00	VS Oil Speck Mud	8.442

Total Length: 623.00 ft Total Volume: 8.457 bbl

Num Fluid Samples: 0

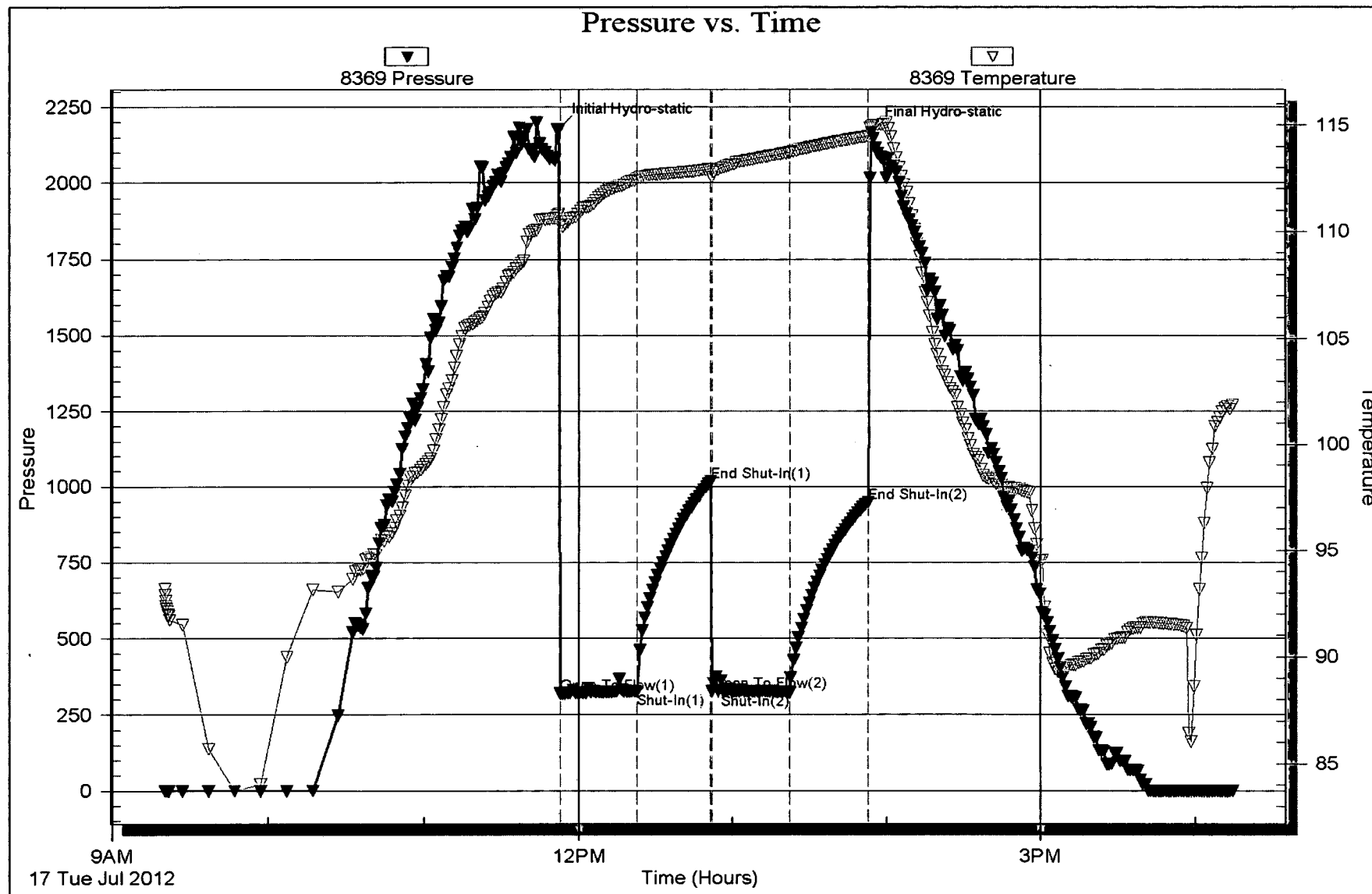
Num Gas Bombs: 0

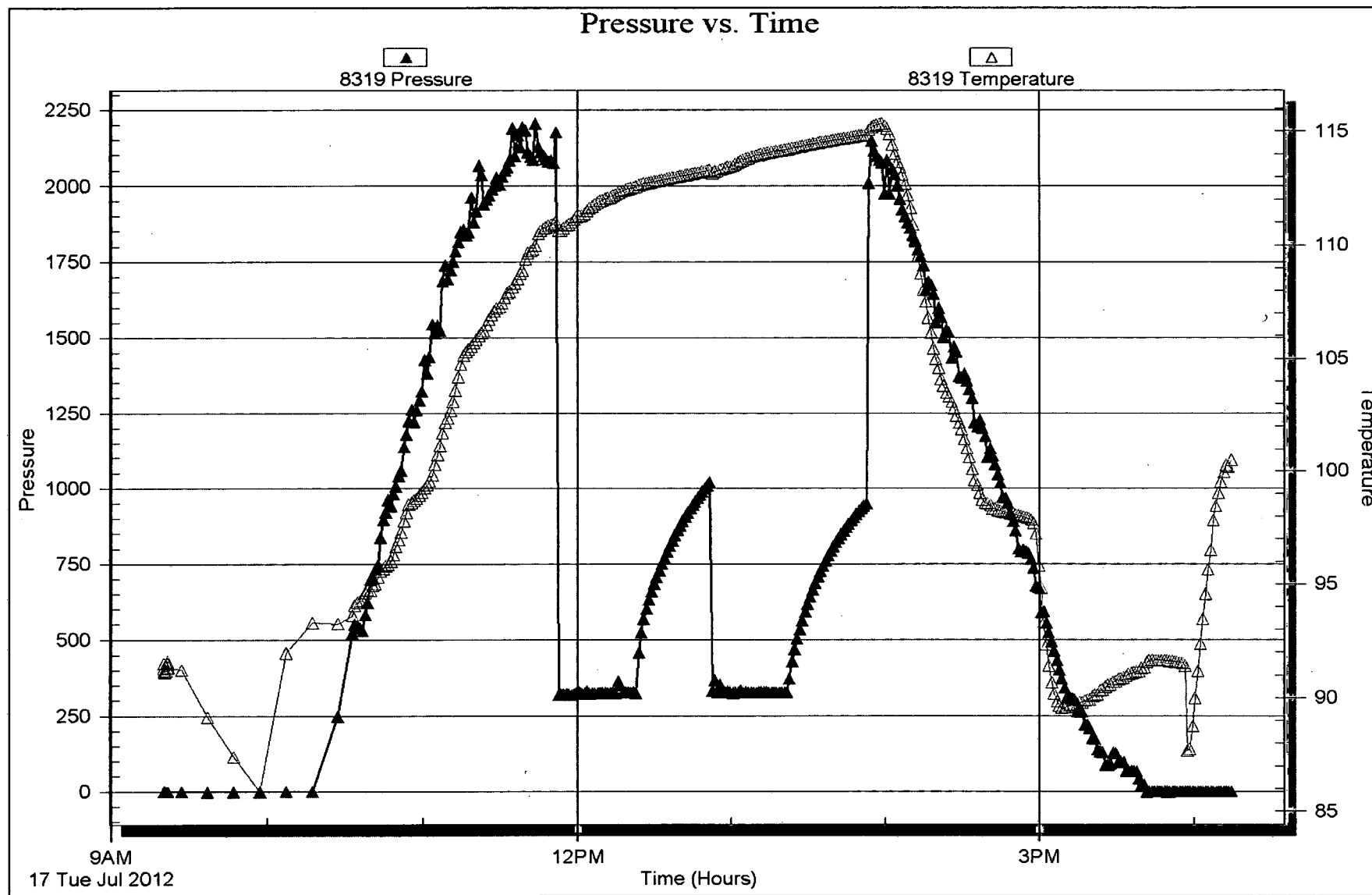
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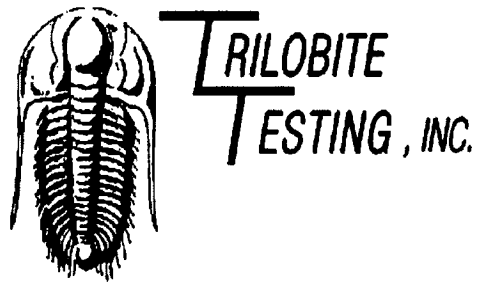
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Alan Downing

Vandenburg #1-6

6-21s-20w Pawnee,KS

Start Date: 2012.07.18 @ 01:10:00

End Date: 2012.07.18 @ 06:46:00

Job Ticket #: 49273 DST #: 2

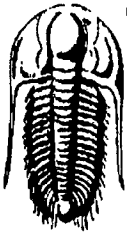
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:50:07

Downing-Nelson Oil Co Inc
6-21s-20w Pawnee,KS
Vandenburg #1-6
DST # 2
Miss
2012.07.18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49273

DST#: 2

ATTN: Alan Dow ning

Test Start: 2012.07.18 @ 01:10:00

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: 2196.00 ft (KB)

Time Tool Opened: 03:01:00

Time Test Ended: 06:46:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 59

Interval: **4310.00 ft (KB) To 4353.00 ft (KB) (TVD)**

Total Depth: 4353.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2196.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8369 Outside

Press@RunDepth: 51.45 psig @ 4318.00 ft (KB)

Start Date: 2012.07.18

End Date: 2012.07.18

Start Time: 01:10:05

End Time: 06:45:59

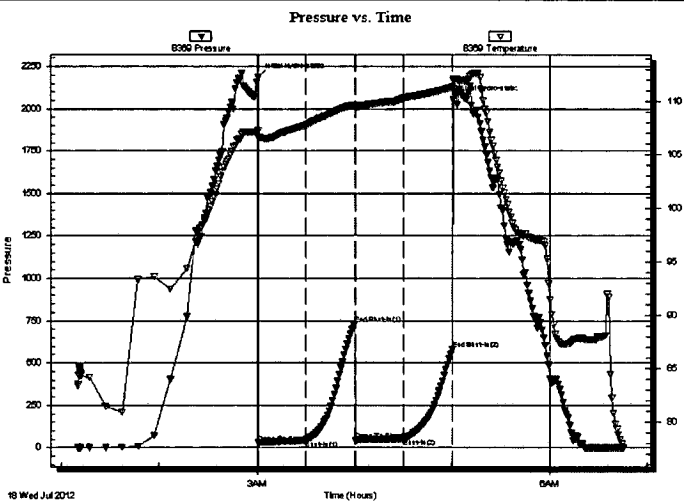
Capacity: 8000.00 psig

Last Calib.: 2012.07.18

Time On Btm: 2012.07.18 @ 03:00:30

Time Off Btm: 2012.07.18 @ 05:01:00

TEST COMMENT: 30-IFP- Good Surge Surface Blow Died in 2 min
30-ISIP- No Blow
30-FFP- Surface Blow Died in 10 sec Flushed Blow Died in 30 sec
30-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2187.35	107.22	Initial Hydro-static
1	27.69	106.56	Open To Flow (1)
30	41.68	107.73	Shut-In(1)
60	730.20	109.66	End Shut-In(1)
60	43.94	109.46	Open To Flow (2)
90	51.45	110.29	Shut-In(2)
120	579.30	111.32	End Shut-In(2)
121	2055.44	112.09	Final Hydro-static

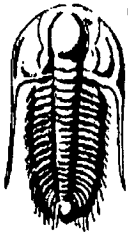
Recovery

Length (ft)	Description	Volume (bbl)
80.00	OCM 25%o 75%rn	0.84

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49273

DST#: 2

ATTN: Alan Dow ning

Test Start: 2012.07.18 @ 01:10:00

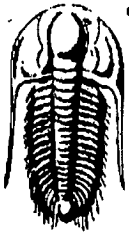
Tool Information

Drill Pipe:	Length: 4289.00 ft	Diameter: 3.80 inches	Volume: 60.16 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4310.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	63.00 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			4291.00	
Shut In Tool	5.00			4296.00	
Hydraulic tool	5.00			4301.00	
Packer	4.00			4305.00	20.00 Bottom Of Top Packer
Packer	5.00			4310.00	
Stubb	1.00			4311.00	
Perforations	6.00			4317.00	
Change Over Sub	1.00			4318.00	
Recorder	0.00	8319	Inside	4318.00	
Recorder	0.00	8369	Outside	4318.00	
Blank Spacing	31.00			4349.00	
Change Over Sub	1.00			4350.00	
Bullnose	3.00			4353.00	43.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49273

DST#: 2

ATTN: Alan Dow ning

Test Start: 2012.07.18 @ 01:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.96 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
80.00	OCM 25%o 75%m	0.840

Total Length: 80.00 ft Total Volume: 0.840 bbl

Num Fluid Samples: 0

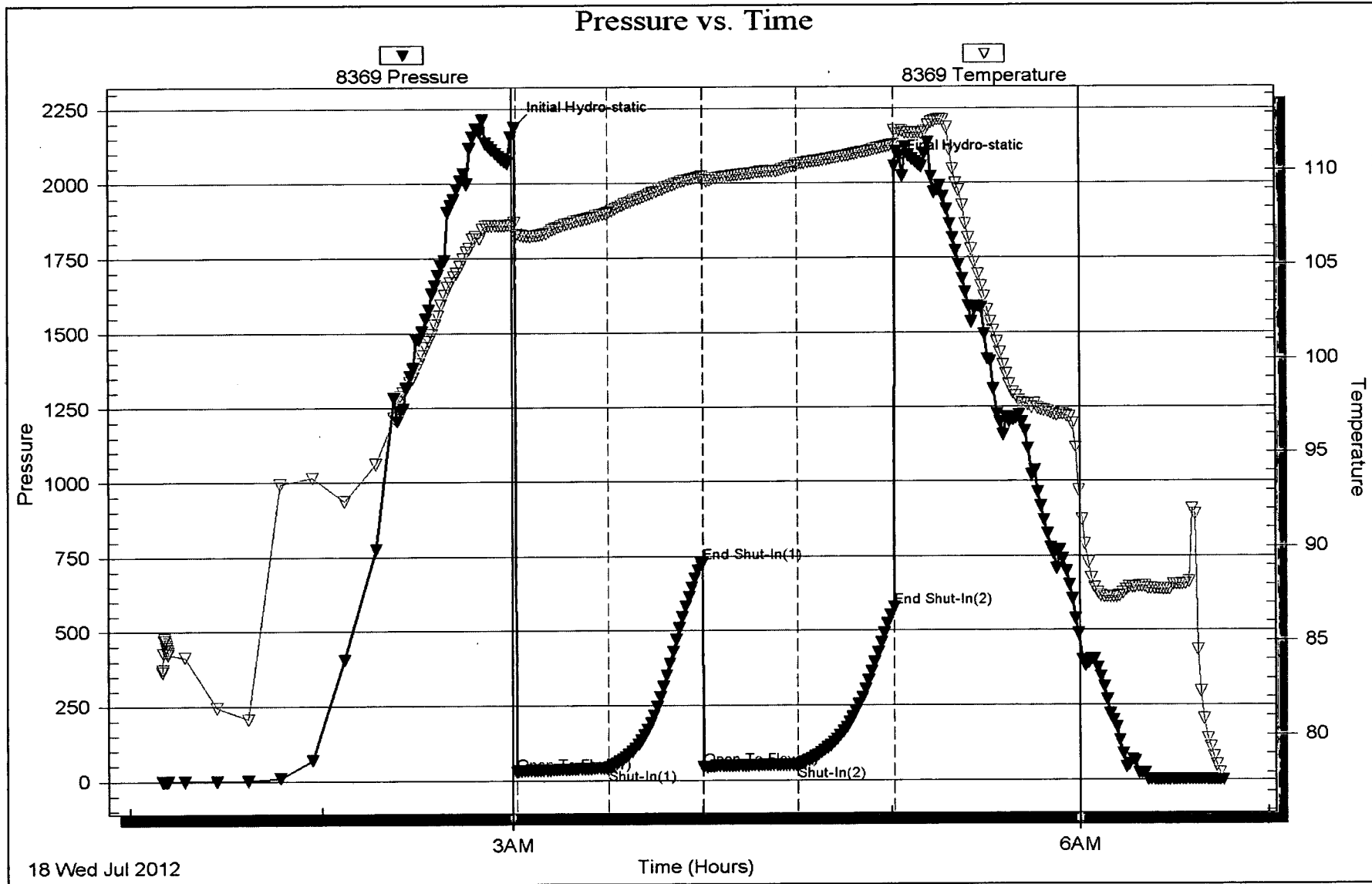
Num Gas Bombs: 0

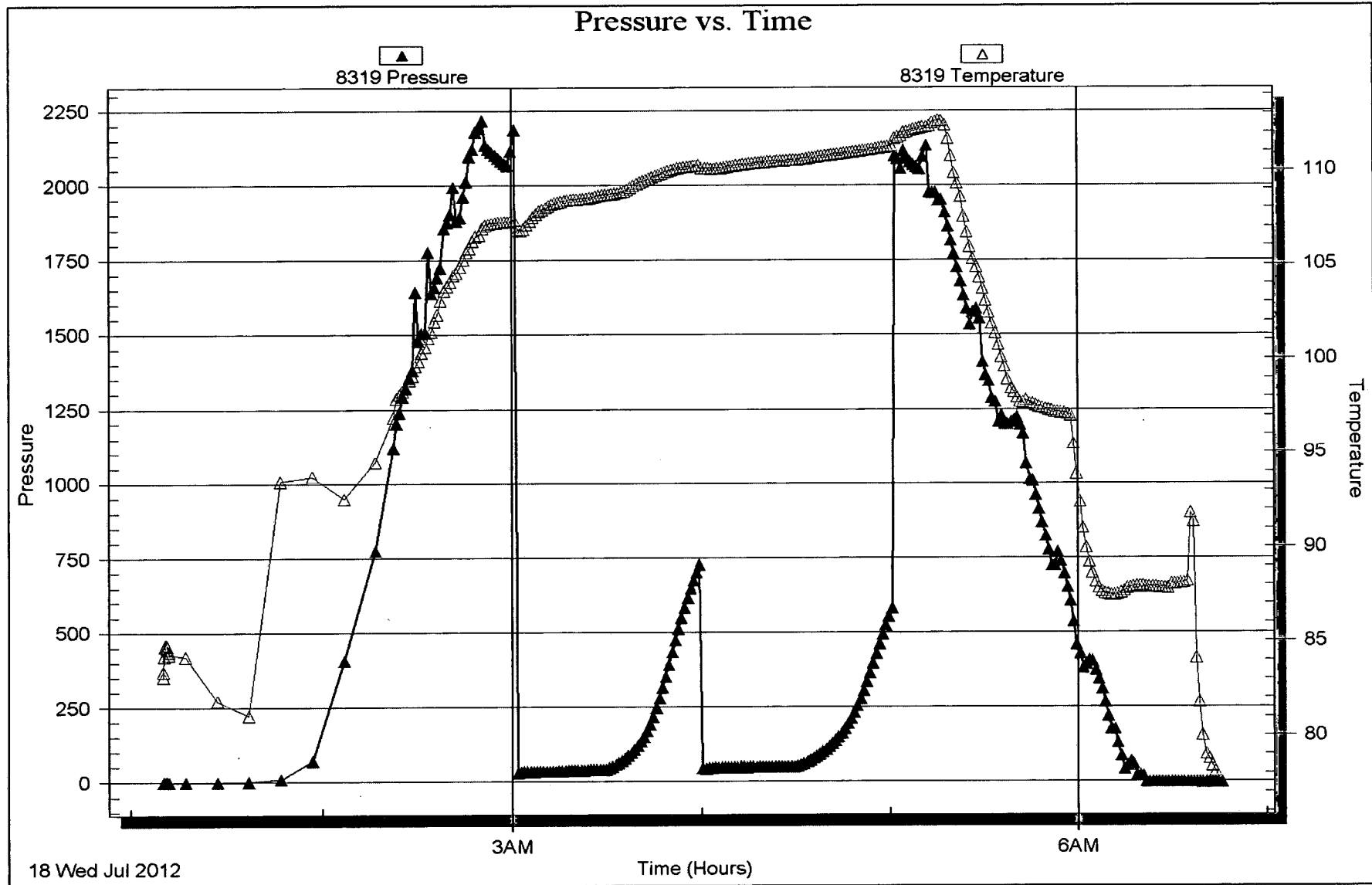
Serial #:

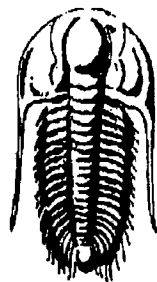
Laboratory Name:

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: Alan Downing

Vandenburg #1-6

6-21s-20w Pawnee,KS

Start Date: 2012.07.18 @ 14:00:00

End Date: 2012.07.18 @ 21:20:30

Job Ticket #: 49274 DST #: 3

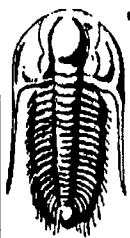
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.07.24 @ 09:49:09

Downing-Nelson Oil Co Inc
6-21s-20w Pawnee,KS
Vandenburg #1-6
DST # 3
Miss-Osage
2012.07.18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing-Nelson Oil Co Inc

6-21s-20w Pawnee, KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49274

DST#: 3

ATTN: Alan Downing

Test Start: 2012.07.18 @ 14:00:00

GENERAL INFORMATION:

Formation: **Miss-Osage**

Deviated: No Whipstock: 2196.00 ft (KB)

Time Tool Opened: 16:24:30

Time Test Ended: 21:20:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: **4345.00 ft (KB) To 4361.00 ft (KB) (TVD)**

Total Depth: 4361.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2196.00 ft (KB)

2190.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8369

Outside

Press@RunDepth: 829.03 psig @ 4358.00 ft (KB)

Start Date: 2012.07.18

End Date:

2012.07.18

Start Time: 14:00:05

End Time:

21:20:29

Capacity: 8000.00 psig

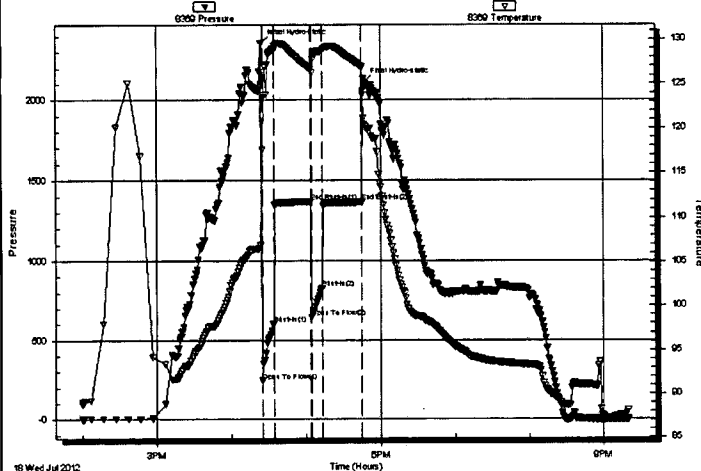
Last Calib.: 2012.07.18

Time On Btm: 2012.07.18 @ 16:23:30

Time Off Btm: 2012.07.18 @ 17:47:00

TEST COMMENT: IF-BOB in 30 sec
IS-BOB in 26 min
FF-BOB in 30 sec
FSI-8" blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2358.73	106.83	Initial Hydro-static
1	244.04	117.59	Open To Flow (1)
11	603.43	128.80	Shut-In(1)
40	1365.76	126.62	End Shut-In(1)
41	647.03	126.23	Open To Flow (2)
50	829.03	128.71	Shut-In(2)
82	1364.63	126.90	End Shut-In(2)
84	2112.10	120.39	Final Hydro-static

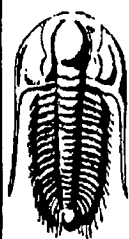
Recovery

Length (ft)	Description	Volume (bbl)
1715.00	GO 15%G 85%O	23.77
0.00	675ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49274

DST#: 3

ATTN: Alan Dow ning

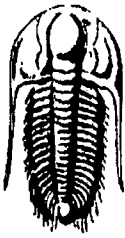
Test Start: 2012.07.18 @ 14:00:00

Tool Information

Drill Pipe:	Length: 4322.00 ft	Diameter: 3.80 inches	Volume: 60.63 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 60.78 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4345.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	16.00 ft			
Tool Length:	36.00 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			4326.00	
Shut In Tool	5.00			4331.00	
Hydraulic tool	5.00			4336.00	
Packer	4.00			4340.00	20.00 Bottom Of Top Packer
Packer	5.00			4345.00	
Stubb	1.00			4346.00	
Perforations	12.00			4358.00	
Recorder	0.00	8319	Inside	4358.00	
Recorder	0.00	8369	Outside	4358.00	
Bullnose	3.00			4361.00	16.00 Bottom Packers & Anchor
Total Tool Length:	36.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

6-21s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Vandenburg #1-6

Job Ticket: 49274

DST#: 3

ATTN: Alan Dow ning

Test Start: 2012.07.18 @ 14:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 49.00 sec/qt
Water Loss: 11.94 in³
Resistivity: ohm.m
Salinity: 9000.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 35 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1715.00	GO 15%G 85%O	23.775
0.00	675ft GIP	0.000

Total Length: 1715.00 ft Total Volume: 23.775 bbl

Num Fluid Samples: 0

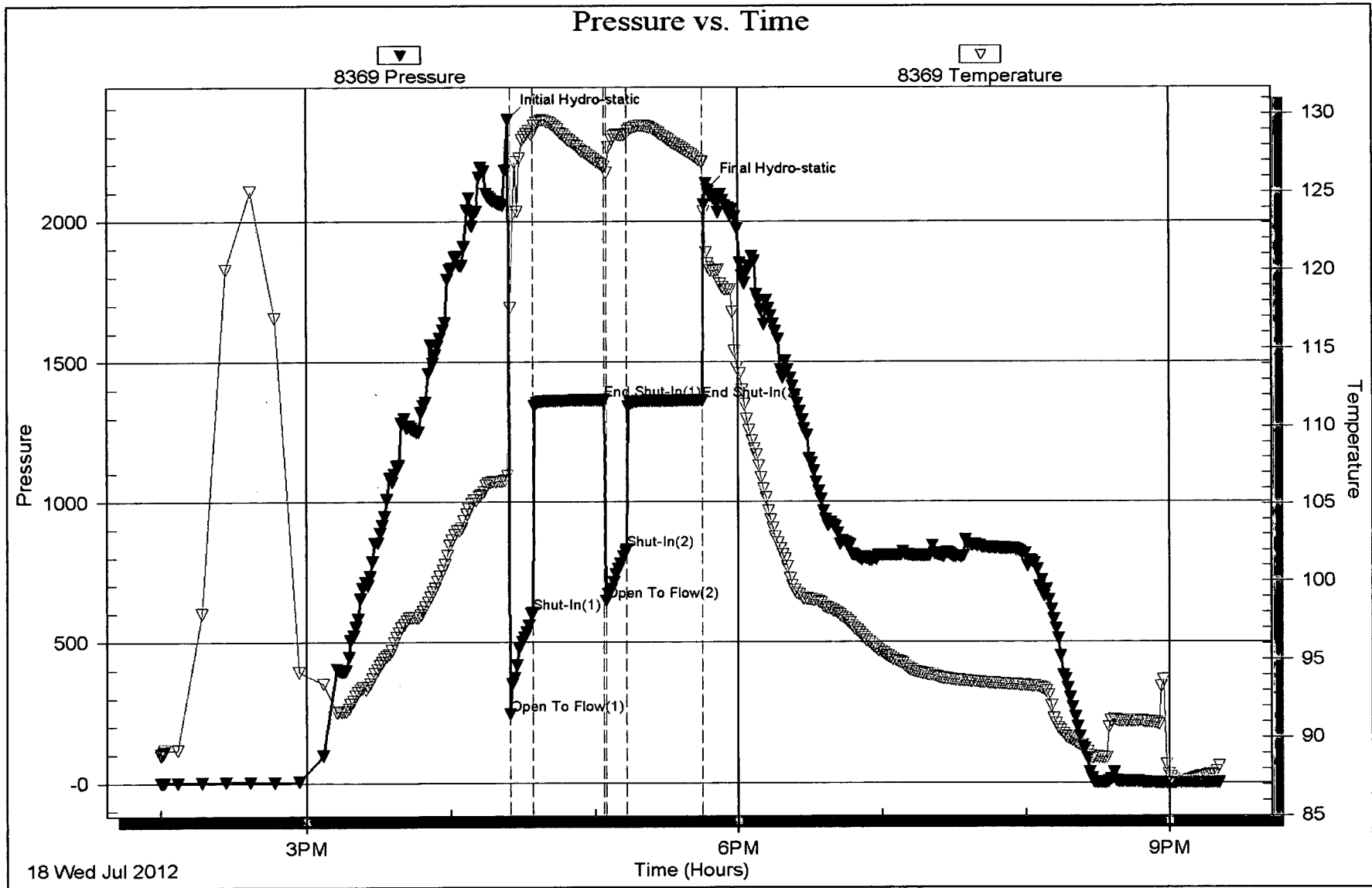
Num Gas Bombs: 0

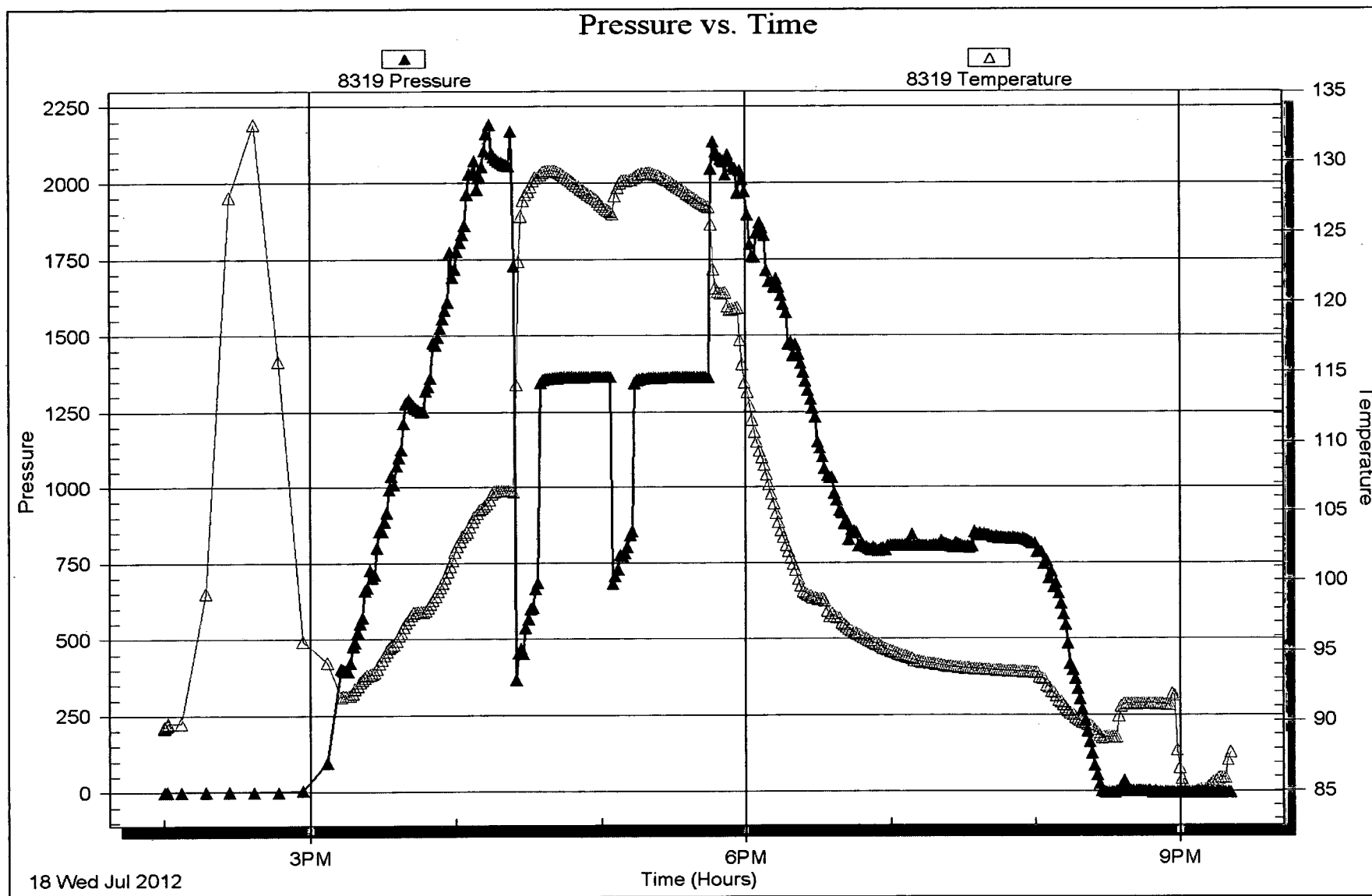
Serial #:

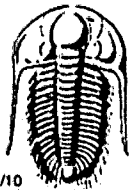
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49272

Well Name & No. Vandenburg # 1-6 Test No. 1 Date 7-17-12
 Company Downing-Nelson Oil Co, Inc, Elevation 2196 KB 2190 GL
 Address P.O. Box 1019 Hays Ks, 67601
 Co. Rep / Geo. Al Downing Rig Discovery Rig #4
 Location: Sec. 6 Twp. 21^s Rge. 20^w Co. Rawnee State KS

Interval Tested 4310 - 4349 Zone Tested MIST
 Anchor Length 39 Drill Pipe Run 4289 Mud Wt. 8.9
 Top Packer Depth 4305 Drill Collars Run 31 Vis 49
 Bottom Packer Depth 4310 Wt. Pipe Run ⊖ WL 12
 Total Depth 4349 Chlorides 9000 ppm System LCM 2

Blow Description IFP - Surface Blow Building to 1/4 in.
ISIP - No Blow
FFP - No Blow Flushed No Blow
FSIP - No Blow

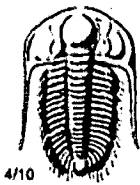
Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>CO</u>	<u>100</u>			
<u>620</u>	<u>VS 05 m</u>				

Rec Total 623 BHT 114 Gravity 35 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2176 Test 07:56
 (B) First Initial Flow 320 Jars 09:20
 (C) First Final Flow 326 Safety Joint 11:52
 (D) Initial Shut-In 1017 Circ Sub 13:52
 (E) Second Initial Flow 326 Hourly Standby 16:15
 (F) Second Final Flow 322 Mileage 158 RT ^{244.90}
 (G) Final Shut-In 948 Sampler Found Dime size hole in Drill Pipe when going back in hole w/ bit
 (H) Final Hydrostatic 2166 Straddle Ruined 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 1494.90
 Final Shut-In 30 Accessibility MP/DST Disc't
 Sub Total 1494.90

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

Test Ticket

NO. 49273

Well Name & No. Vandenburg #1-6 Test No. 2 Date 7-17-12
 Company Downing-Nelson Oil Co Inc. Elevation 2196 KB 2190 GL
 Address P.O. Box 1019 Hays KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #4
 Location: Sec. 6 Twp. 29^s Rge. 20^w Co. Pawnee State KS

Interval Tested 4310 - 4353 Zone Tested MISS
 Anchor Length 43 Drill Pipe Run 4289 Mud Wt. 8.8
 Top Packer Depth 4305 Drill Collars Run 31 Vis 58
 Bottom Packer Depth 4310 Wt. Pipe Run 0 WL 10
 Total Depth 4353 Chlorides 5000 ppm System LCM 2

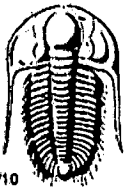
Blow Description IFP - Good Surge Surface Blow Died in 2min
ISIP - No Blow
FFP - Surface Blow Died in 10sec. Flush S.B. Died in 30sec.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>0 CM</u>	<u>25</u>		<u>75</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 80 BHT 111 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2187</u>	<input checked="" type="checkbox"/> Test _____	T-On Location <u>23:10</u>
(B) First Initial Flow <u>27</u>	<input type="checkbox"/> Jars _____	T-Started <u>01:10</u>
(C) First Final Flow <u>41</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>03:00</u>
(D) Initial Shut-In <u>730</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>05:00</u>
(E) Second Initial Flow <u>43</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>06:46</u>
(F) Second Final Flow <u>51</u>	<input checked="" type="checkbox"/> Mileage <u>244.90</u>	Comments _____
(G) Final Shut-In <u>579</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2055</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1494.90</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1494.90</u>	

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

Test Ticket

NO. 49274

Well Name & No. Vanden byug #1-6 Test No. 3 Date 7/18/12
 Company Downing-Nelson Oil Co. Inc. Elevation 2196 KB 2190 GL
 Address P.O. Box 1019 Hays KS 67601
 Co. Rep / Geo. A1 Downing Rig Discovery #4
 Location: Sec. 6 Twp. 21^g Rge. 20^w Co. Pawnee State KS

Interval Tested 4345 - 4361 Zone Tested Miss-Osage
 Anchor Length 16 Drill Pipe Run 4322 Mud Wt. _____
 Top Packer Depth 4340 Drill Collars Run 31 Vis _____
 Bottom Packer Depth 4345 Wt. Pipe Run _____ WL _____
 Total Depth 4361 Chlorides _____ ppm System LCM _____

Blow Description IF - BOB in 1/2 min
FSI - BOB in 26 min
FF - BOB in 1/2 min
FSI - 8 in blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1715</u>	<u>60</u>	<u>15</u>	<u>85</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>675-4 GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1715 BHT 120 Gravity 35 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2,359 Test _____ T-On Location 13:35
 (B) First Initial Flow 244 Jars _____ T-Started 14:00
 (C) First Final Flow 603 Safety Joint _____ T-Open 16:20
 (D) Initial Shut-In 1,366 Circ Sub _____ T-Pulled 18:40
 (E) Second Initial Flow 647 Hourly Standby _____ T-Out 21:23
 (F) Second Final Flow 829 Mileage 158 RT 244.90 Comments _____
 (G) Final Shut-In 1,365 Sampler _____
 (H) Final Hydrostatic 2,112 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 10 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1494.90
 Final Flow 10 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1494.90

Approved By _____ Our Representative Brian Down

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.