



WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

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 #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

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: _____ Date: _____



1089731

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

CASING RECORD <input 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

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: _____ 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: <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 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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
---	--	--

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

Federal Tax I.D.# 20-5975804

REMIT TO PO. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Great Bend, KS

Vandenburg

DATE <u>7-12-16</u>	SEC <u>6</u>	TWP <u>21</u>	RANGE <u>30</u>	CALLED OUT	ON LOCATION	JOB START <u>10:30am</u>	JOB FINISH <u>11:00am</u>
LEASE <u>Vandenburg</u>	WELL # <u>1-6</u>	LOCATION <u>Alexander, KS, 14 1/2 mile</u>	COUNTY <u>Wagoner</u>	STATE <u>KS</u>			
OLD OR <u>NEW</u> (Circle one)	Location <u>West 90. 14 1/2</u>						

CONTRACTOR Downing - Rig #4

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 1970

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. 40.00 ft

PERFS. 34.90

DISPLACEMENT

OWNER Downing - Nelson

CEMENT AMOUNT ORDERED 525 ex Cement

30% 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>1,047.00</u>
ASC		@	

EQUIPMENT

PUMP TRUCK CEMENTER Gregg

260 HELPER Kevin

BULK TRUCK DRIVER John Campbell

244-010

BULK TRUCK DRIVER

HANDLING	<u>567</u>	@ <u>2.10</u>	<u>1,190.70</u>
MILEAGE	<u>25.915 x 42 x 2.35</u>		<u>2,557.81</u>
	<u>1088.42</u>		<u>TOTAL 13,539.84</u>

REMARKS:

See Cement Log

Plug down @ 10:30pm

SERVICE

DEPTH OF JOB 1370

PUMP TRUCK CHARGE 1125.00

EXTRA FOOTAGE 900 @ 95 855.00

MILEAGE 11.0m 42 @ 7.00 294.00

MANIFOLD 4.00 @ 4.00 168.00

TOTAL 2,442.00

CHARGE TO: Downing - Nelson

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

Ball Plate @ 112.00 112.00

Subs Plug @ 112.00 112.00

TOTAL 224.00

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 Nick Russell

SALES TAX (If Any) 831.27

TOTAL CHARGES 16,205.86

DISCOUNT 25% 4,051.46

IF PAID IN 30 DAYS

12,154.39

JOB LOG

SWIFT Services, Inc.

DATE: 9/12/12 PAGE NO.

CUSTOMER		WELL NO.	LEASE	JOB TYPE	TICKET NO.			
Downing & Nelson		1-6	Vandenberg	Cement long string	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/4" Floalo. 105jts 5 1/2" 14" casing total pipe 438.7' 42' shoe jt jts out 106,107,108,109 Cent 1,3,5,7,9,11
	1030							on loc 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 mid 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				450	
	1430	6 3/4	105				1550	Land plug
								Release pressure to truck - dried up
	1435							wash truck
								Rack up
	1510							job complete + Plugs blame from Elave



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)

Reference Elevations: 2196.00 ft (KB)

Total Depth: 4349.00 ft (KB) (TVD)

2190.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8369 Outside

Press @ Run Depth: 322.93 psig @ 4314.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.17

End Date:

2012.07.17

Last Calib.:

2012.07.17

Start Time: 09:20:05

End Time:

16:14:59

Time On Btm:

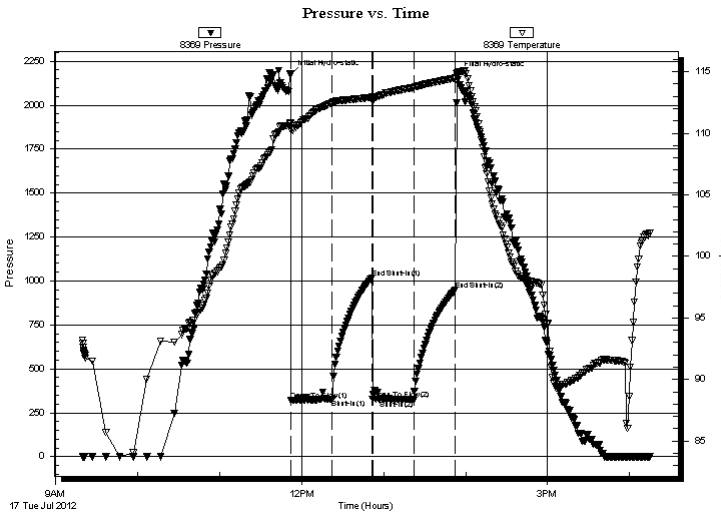
2012.07.17 @ 11:52:00

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



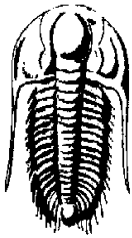
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2176.72	110.82	Initial Hydro-static
1	320.03	110.30	Open To Flow (1)
31	326.18	112.46	Shut-In(1)
60	1017.40	112.92	End Shut-In(1)
60	326.92	112.54	Open To Flow (2)
90	322.93	113.70	Shut-In(2)
121	948.66	114.47	End Shut-In(2)
122	2166.96	114.94	Final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

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)

Reference Elevations: 2196.00 ft (KB)

Total Depth: 4349.00 ft (KB) (TVD)

2190.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8319 Inside

Press @ RunDepth: psig @ 4314.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.17 End Date: 2012.07.17

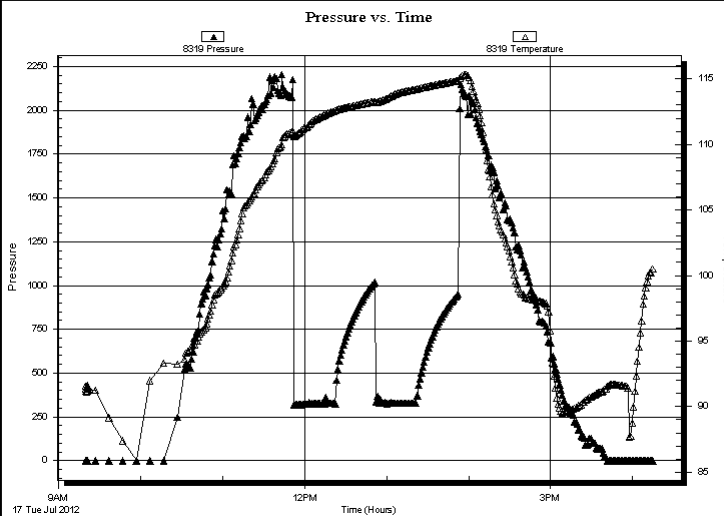
Last Calib.: 2012.07.17

Start Time: 09:20:05 End Time: 16:14:59

Time On Btm:

Time Off Btm:

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

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:

bbbl

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 bbbl
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

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

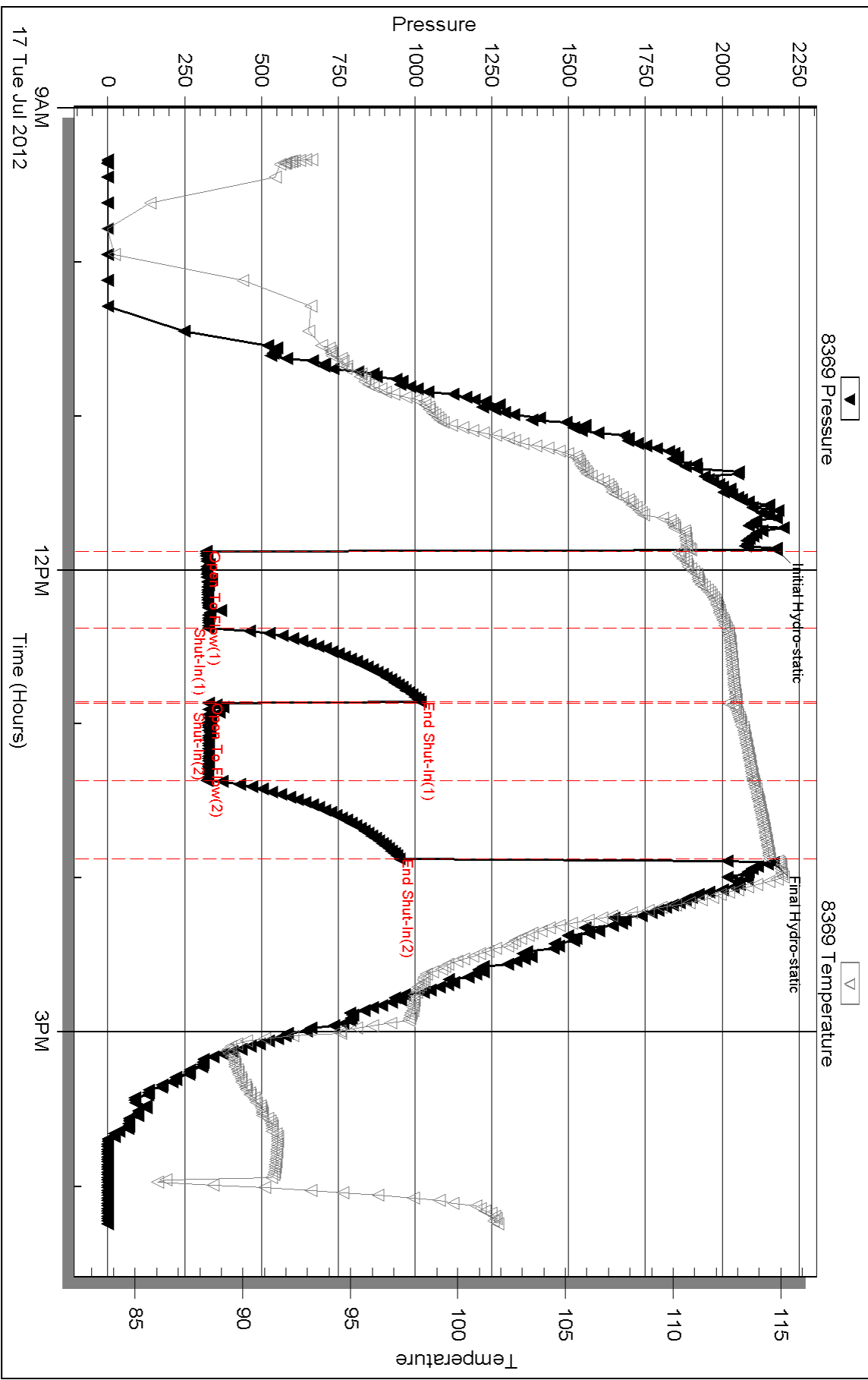
Serial #: 8369

Outside Dow nting-Nelson Oil Co Inc

Vanderburg #1-6

DST Test Number: 1

Pressure vs. Time



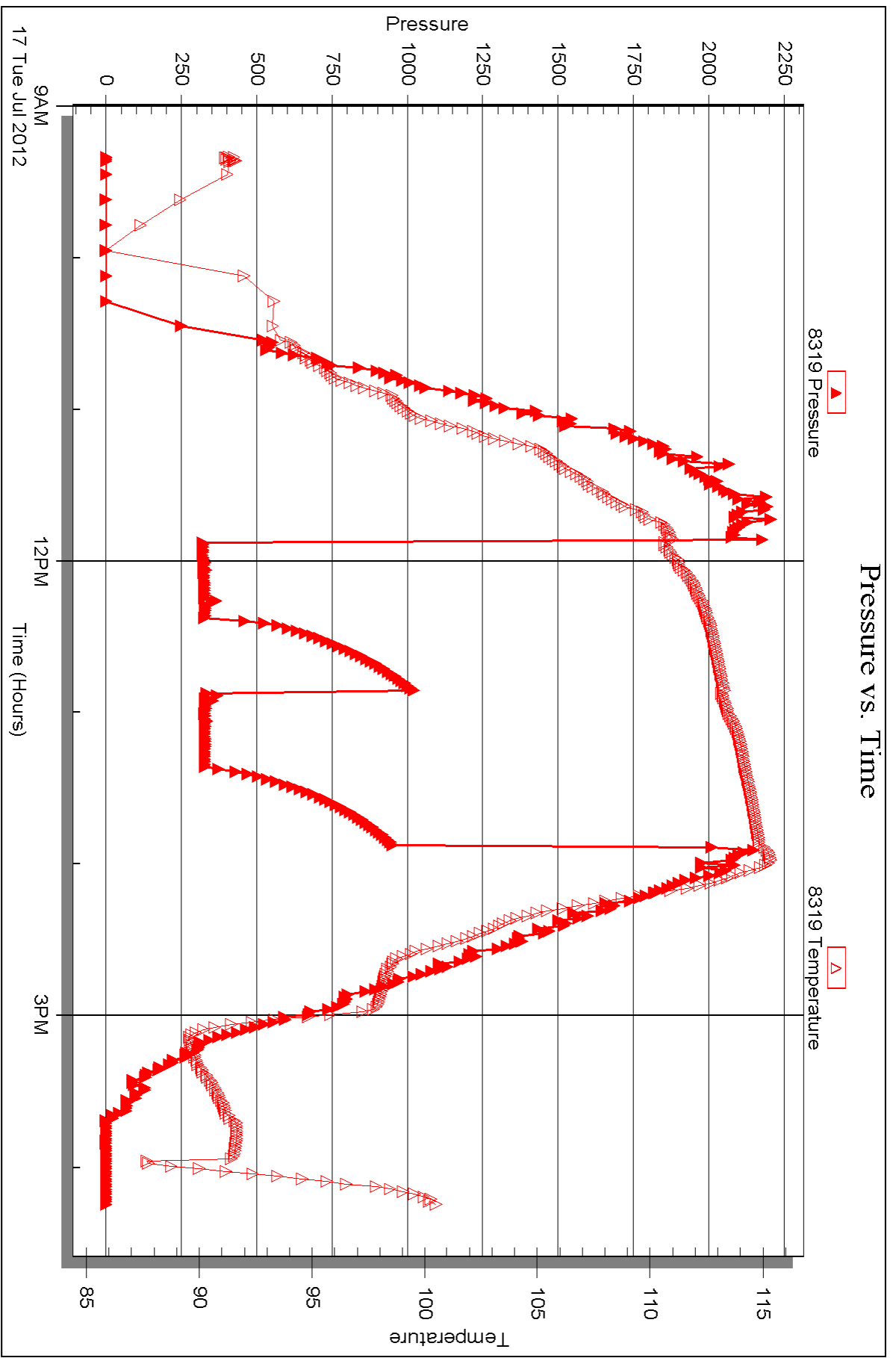
Serial #: 8319

Inside

Dow nung-Nelson Oil Co Inc

Vanderburg #1-6

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 49272

Printed: 2012.07.24 @ 09:51:01



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



**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)

Reference Elevations: 2196.00 ft (KB)

Total Depth: 4353.00 ft (KB) (TVD)

2190.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8369 Outside

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

Capacity: 8000.00 psig

Start Date: 2012.07.18

End Date: 2012.07.18

Last Calib.: 2012.07.18

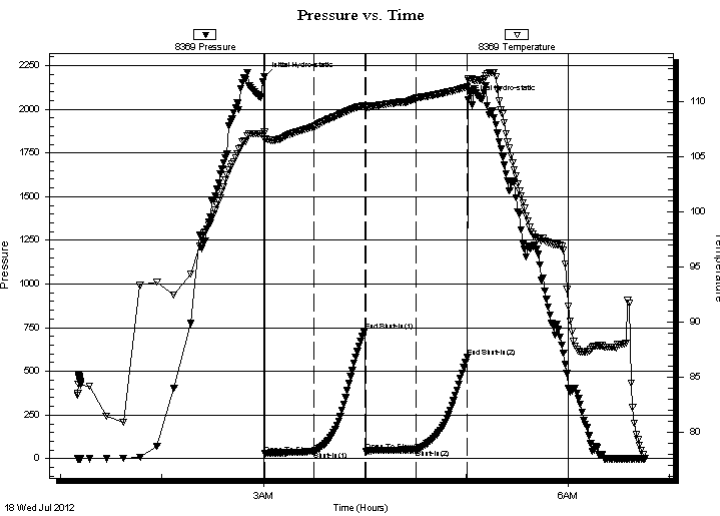
Start Time: 01:10:05

End Time: 06:45:59

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%m	0.84

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc
PO Box 1019
Hays KS 67601
ATTN: Alan Dow ning

6-21s-20w Pawnee,KS

Vandenburg #1-6

Job Ticket: 49273

DST#: 2

Test Start: 2012.07.18 @ 01:10:00

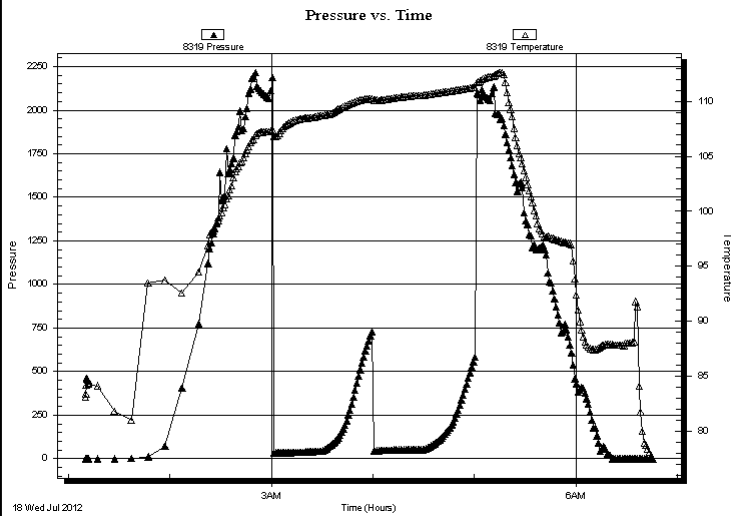
GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: 2196.00 ft (KB)
Time Tool Opened: 03:01:00
Time Test Ended: 06:46:00
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
Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 59
Reference Elevations: 2196.00 ft (KB)
2190.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8319 Inside

Press @ Run Depth: psig @ 4318.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.07.18 End Date: 2012.07.18 Last Calib.: 2012.07.18
Start Time: 01:10:05 End Time: 06:45:59 Time On Btm:
Time Off Btm:

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

Recovery

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

Gas Rates

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

* Recovery from multiple tests



**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 betw een 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:

bbbl

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 bbbl
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:

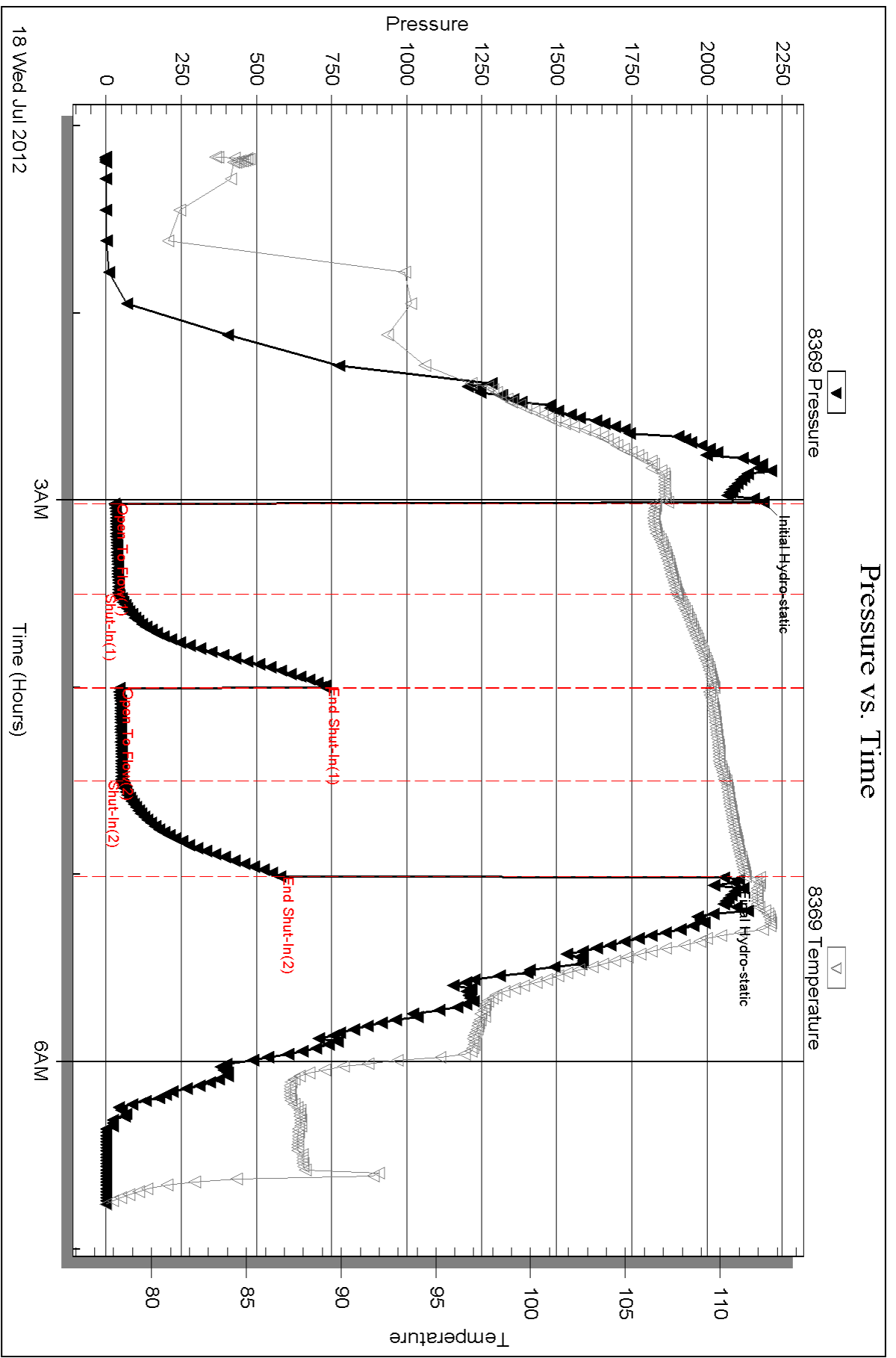
Recovery Comments:

Serial #: 8369

Outside Dow nung-Nelson Oil Co Inc

Vanderburg #1-6

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 49273

Printed: 2012.07.24 @ 09:50:09

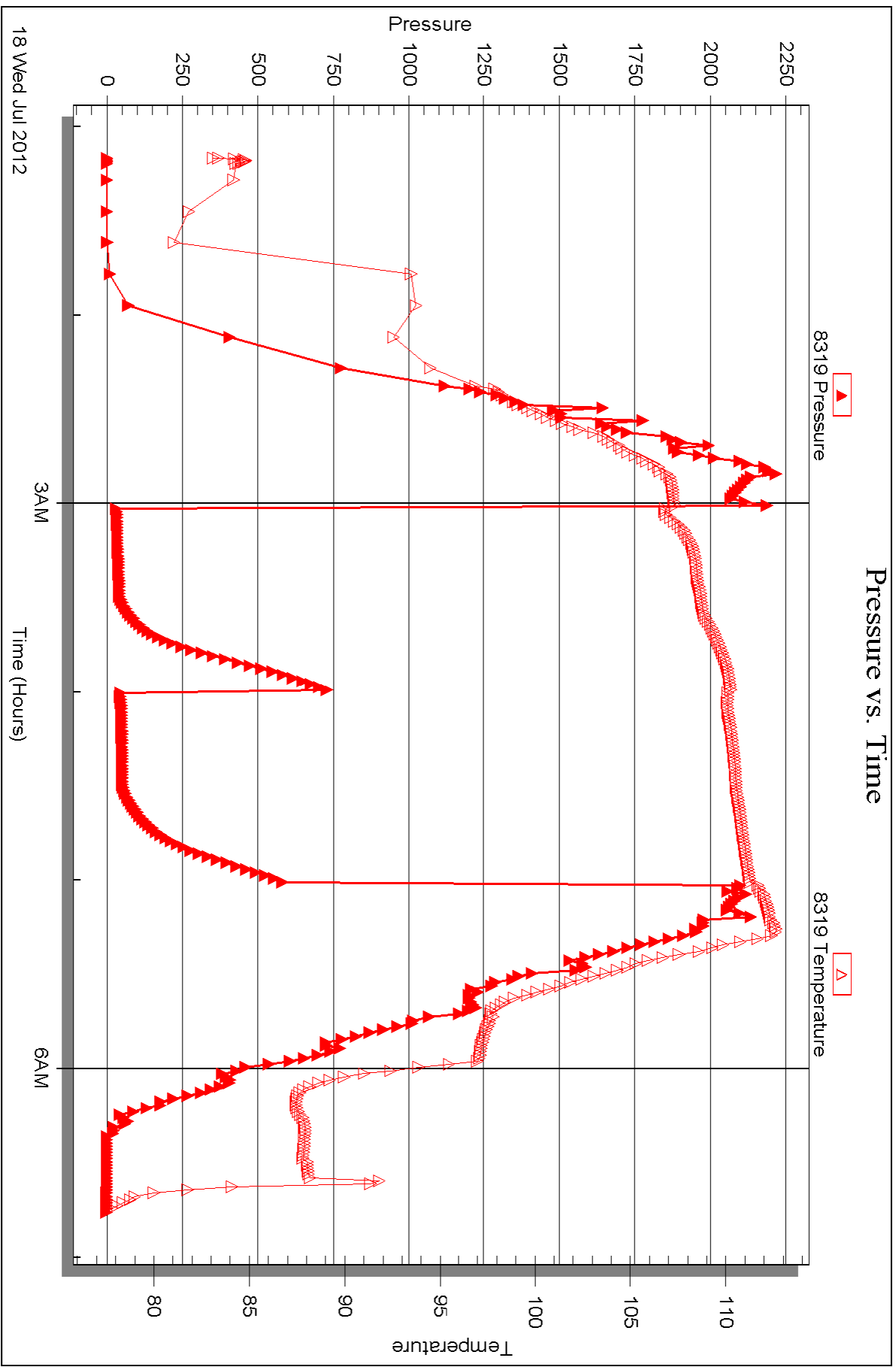
Serial #: 8319

Inside

Dow nung-Nelson Oil Co Inc

Vanderburg #1-6

DST Test Number: 2





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



**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: 49274

DST#: 3

ATTN: Alan Dow ning

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)

Reference Elevations: 2196.00 ft (KB)

Total Depth: 4361.00 ft (KB) (TVD)

2190.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8369 Outside

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

Capacity: 8000.00 psig

Start Date: 2012.07.18

End Date: 2012.07.18

Last Calib.: 2012.07.18

Start Time: 14:00:05

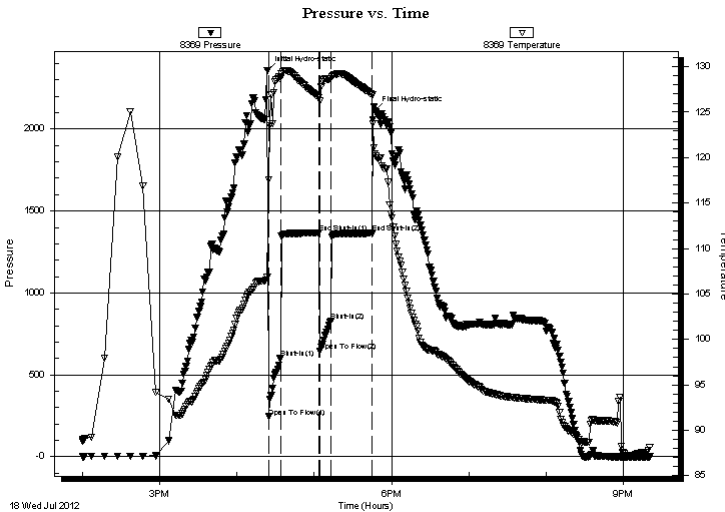
End Time: 21:20:29

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
ISI-BOB in 26 min
FF-BOB in 30 sec
FSI-8" blow

PRESSURE SUMMARY



Time (Min.)	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

Gas Rates

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

* Recovery from multiple tests



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

ATTN: Alan Dow ning

Job Ticket: 49274

DST#: 3

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 #: 8319 Inside

Press @ Run Depth: psig @ 4358.00 ft (KB)

Start Date: 2012.07.18

End Date: 2012.07.18

Capacity: 8000.00 psig

Last Calib.: 2012.07.18

Start Time: 14:00:05

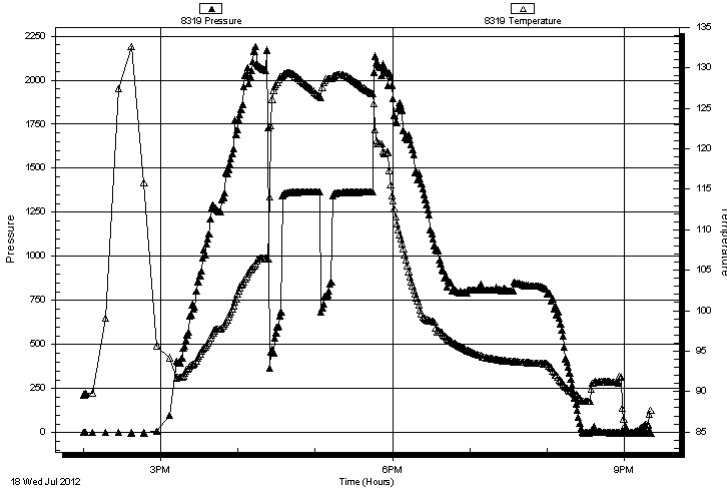
End Time: 21:20:29

Time On Btm:

Time Off Btm:

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

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

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

Gas Rates

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

* Recovery from multiple tests



**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

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

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.94 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 bbbl
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

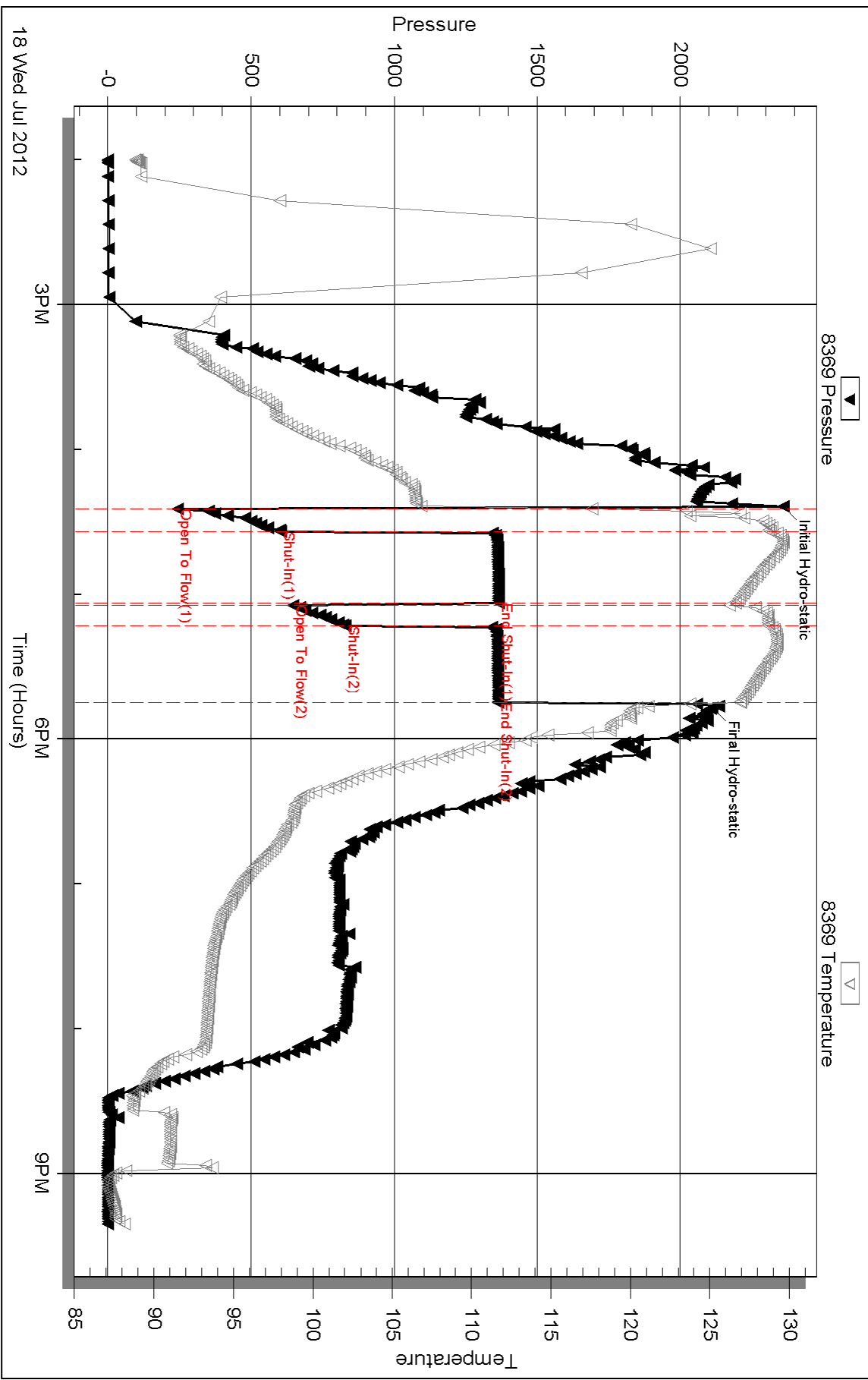
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



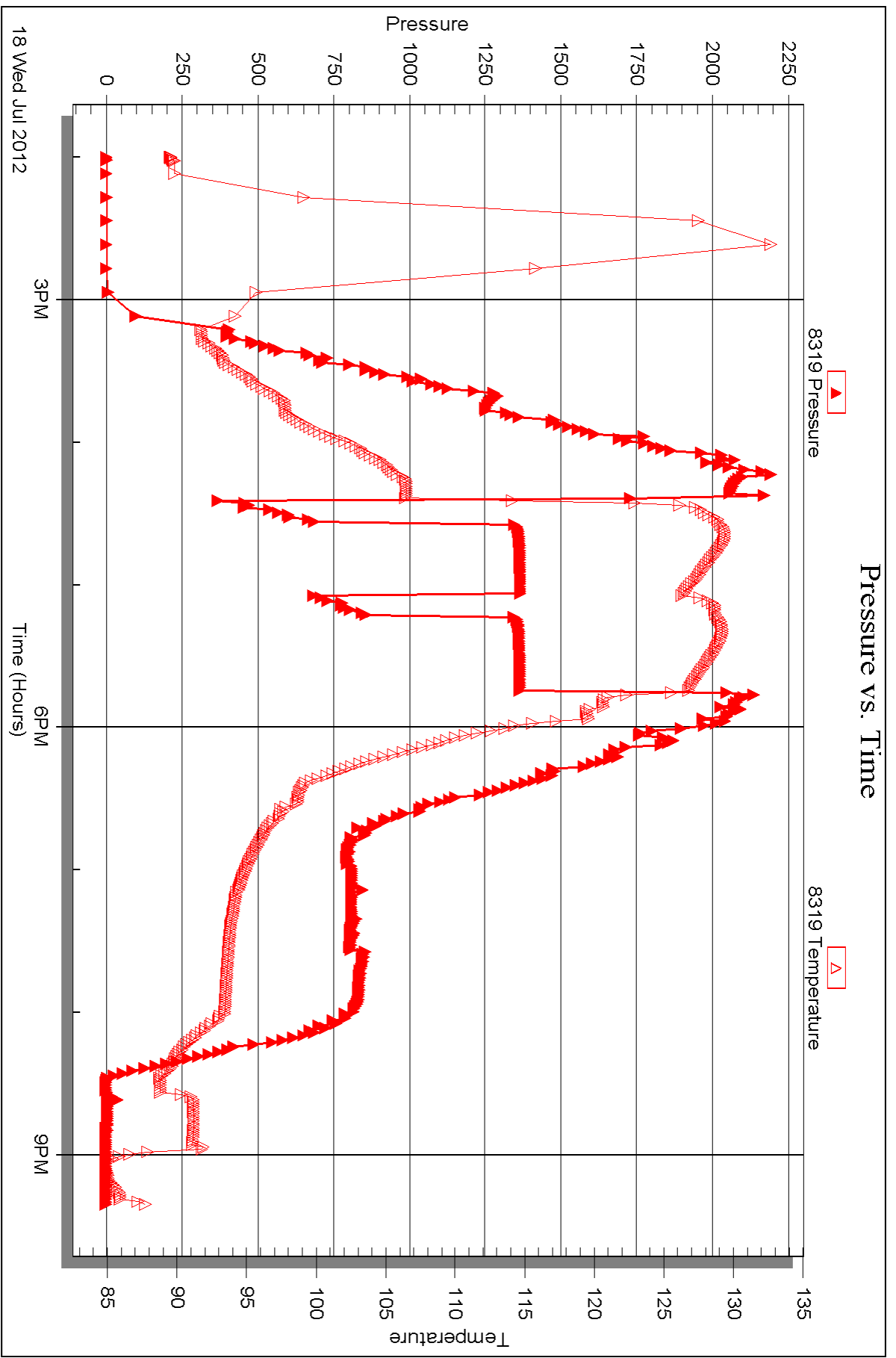
Serial #: 8319

Inside

Dow nung-Nelson Oil Co Inc

Vanderburg #1-6

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 49274

Printed: 2012.07.24 @ 09:49:12



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49272

Well Name & No. Vardenburg # 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. AI 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"
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>				

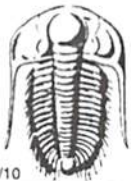
Rec Total 623 BHT 114 Gravity 35 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2176</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>07:56</u>
(B) First Initial Flow <u>320</u>	<input type="checkbox"/> Jars _____	T-Started <u>09:20</u>
(C) First Final Flow <u>326</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>11:52</u>
(D) Initial Shut-In <u>1017</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>13:52</u>
(E) Second Initial Flow <u>326</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>16:15</u>
(F) Second Final Flow <u>322</u>	<input checked="" type="checkbox"/> Mileage <u>158 RT</u> <small>244.90</small>	Comments <u>Found Dime size hole in Drill Pipe when going back in hole w/ bit</u>
(G) Final Shut-In <u>948</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>2166</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1494.90</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
Sub Total <u>1494.90</u>		

Approved By _____

Our Representative

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 4253 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

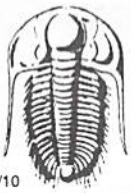
Rec Total 80 BHT 111 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2187 Test 1250 T-On Location 23:10
 (B) First Initial Flow 27 Jars _____ T-Started 01:10
 (C) First Final Flow 41 Safety Joint _____ T-Open 03:00
 (D) Initial Shut-In 730 Circ Sub _____ T-Pulled 05:00
 (E) Second Initial Flow 43 Hourly Standby _____ T-Out 06:46
 (F) Second Final Flow 51 Mileage 244.90 Comments _____
 (G) Final Shut-In 579 Sampler _____
 (H) Final Hydrostatic 2055 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 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. 49274

Well Name & No. Vanden burg #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^s 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 1250 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 _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 10
 Initial Shut-In 30
 Final Flow 10
 Final Shut-In 30

Sub Total 1494.90

MP/DST Disc't _____

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.

DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IN-FT	RECOVERY

REMARKS AND RECOMMENDATIONS

LEGEND

- Dolomite
- Dolomite
- Chert
- Chert
- Coel. Lime
- Coel. Lime
- Limestone
- Limestone
- Carb. sh.
- Shale
- Shale
- Sandstone
- Sandstone
- Salt
- Salt
- Anhydrite
- Anhydrite

DEPTH

3600

50

REMARKS

DRILLING TIME IN MINUTES PER FOOT

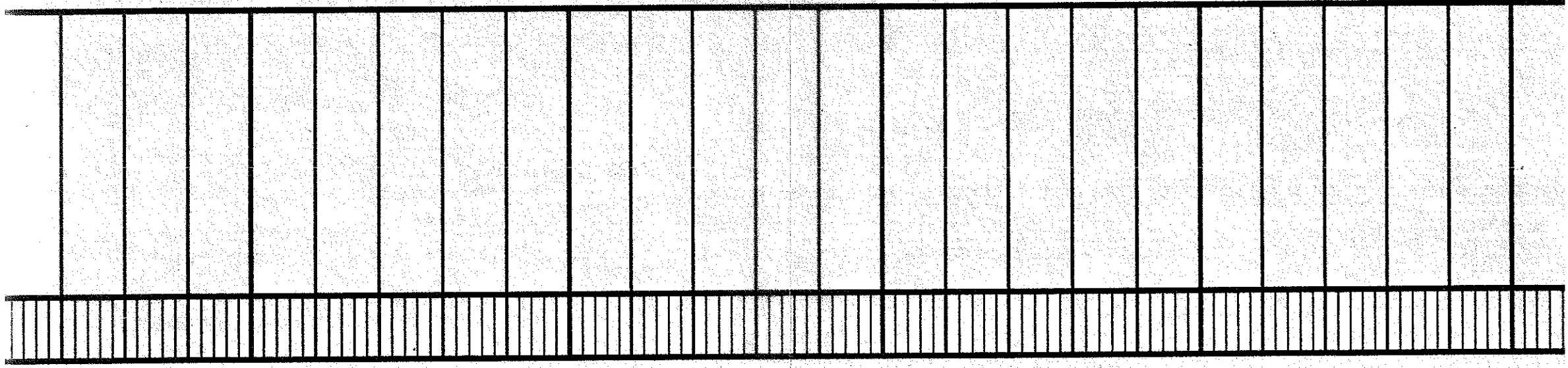
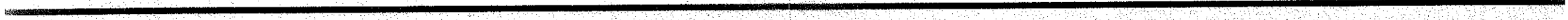
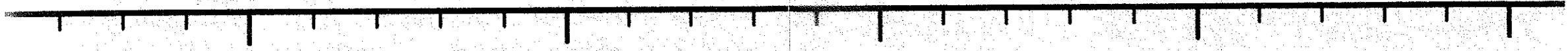
Rate of Penetration Decreases

5" 10" 15" 20" 25"

OIL SHOWS

LITHOLOGY

SAMPLE DESCRIPTIONS



3700

50

3800

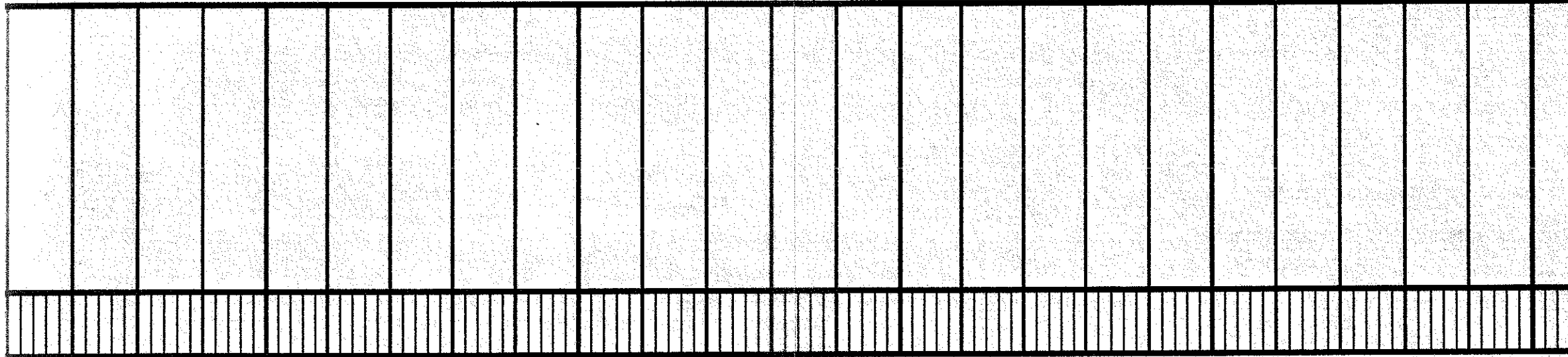
50

3900



HEAVY D
2722 / 1522

LOW SIV
3772 / 1522



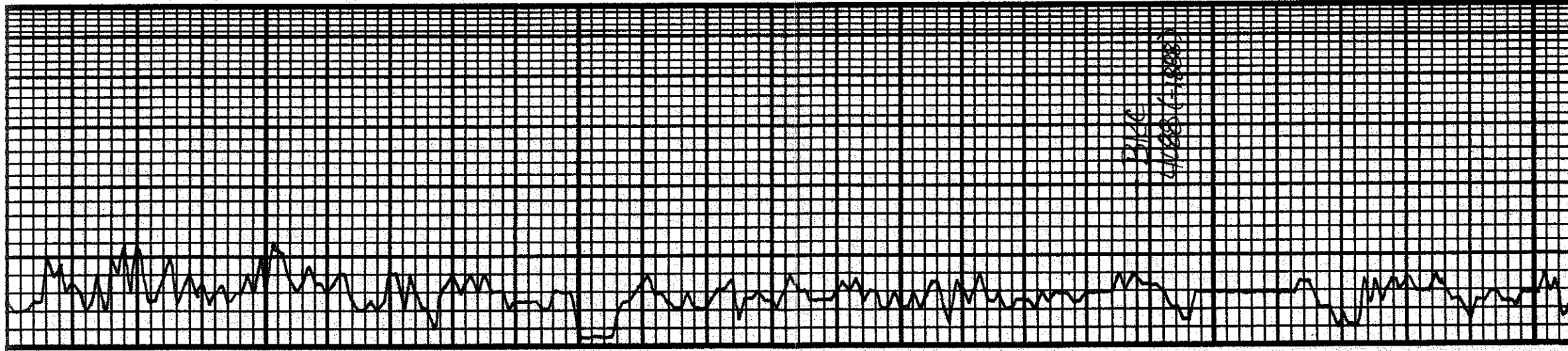
50

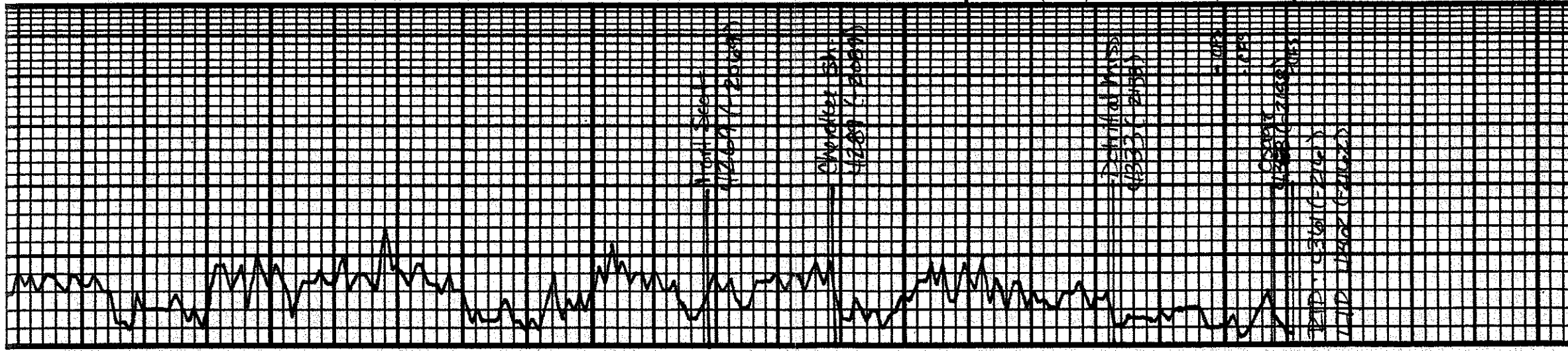
4000

50

4100

50





sh: v. dark gm	sh: Black - carb	sh: 9M - Brown	sh: Black - carb	sh: Black carb	sh: Tan 4x4, DSE NS	sh: 9M - green - silky	sh: 9M - Brown
LS: Tan Lt. Bm w/ VAm w/ scath shells → only LS lenses.	LS: Dk Bm, VAm, VDF Ns-	LS: Tan, cm VAm VDFE - w/ dusts Tan Acid	LS: Tan fm, all DSE w/ scath only LS lenses ALL No shell	LS: Tan 4x4, DSE NS	LS: Tan C. VAm w/ Tan Dcm, some w/ gd str, V. spl sfo. Point color some weathered w/ ft edge str.	LS: Tan fm w/ mostly tan weathered acmt w/ lite sfo. 1/2 as mostly all edge - has fine pins str. brown color	LS: Bm w/ wad weathered d, V. gd color w/ pyram bio w/ lite sfo - V. High grain.

DST #1
4310-4349
30-30-30-30
Rec: 3' Quaoil
620' V. 50cm
slid to Bottom 15'
IHP: 2176 #
IFP: 320-326 #
FFP: 326-322 #
SIP: 1617-448 #

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

DST #3
4342-4361
10-30-10-30
Rec: 675' gip
1715' ogo
IF 130B 30sec
FF 130B 30s/c
IHP: 2358 #
IFP: 244-603 #
FFP: 647-829 #
SIP: 1365-1364 #
Temp: 128°F

4200

50

4300

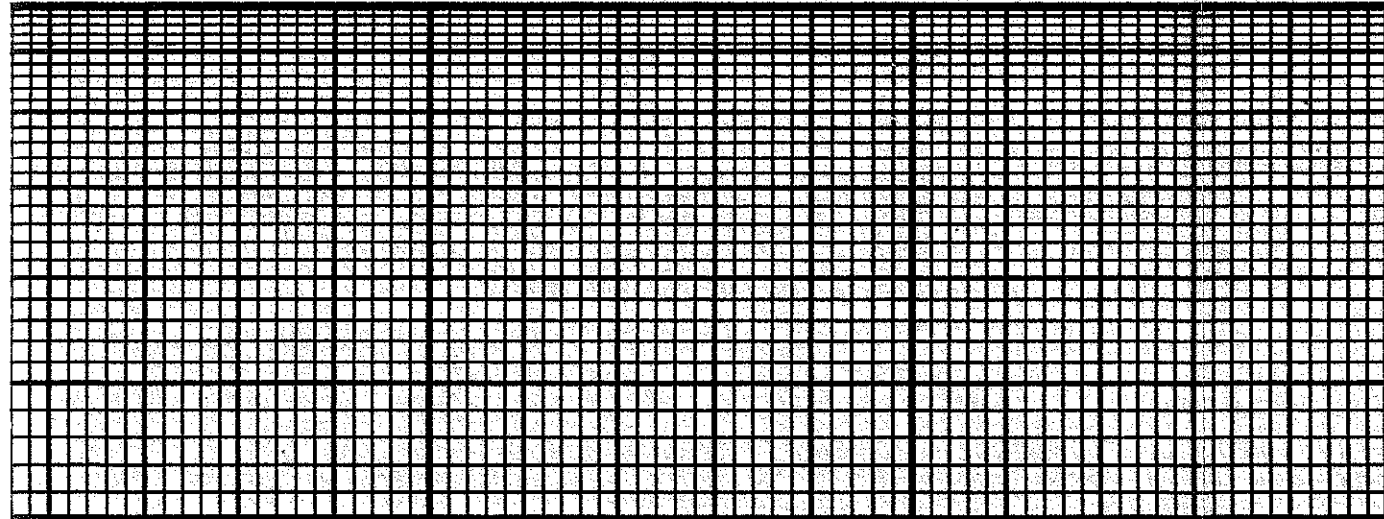
DST # 2

DST # 1

50

3

NA ~



5" 10" 15" 20" 25"
DRILLING TIME Minutes/Foot

Rate of Penetration Decreases



DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

CONTRACTOR _____

LEASE _____ IP _____

ELEVATION _____ RTD _____

LOCATION _____

SEC _____ TWP _____ RNG _____

COUNTY _____ STATE _____