



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: _____



1099401

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
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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
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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> _____ <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	Hillman-Dubach 1-31
Doc ID	1099401

All Electric Logs Run

Mixeo
Sonic
Dual Induction
Compensated Density/Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Hillman-Dubach 1-31
Doc ID	1099401

Tops

Name	Top	Datum
Top Anhydrite	1704'	+579
Base Anhydrite	1748'	+535
Topeka	3328'	-1045
Heebner	3550'	-1267
Toronton	3571'	-1288
LKC	3583'	-1300
BKC	3820'	-1537
Marmaton	3903'	-1620
Charokee Shale	3942'	-1659
Arbuckle	4050'	-1737

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 748

Date	10-1-12	Sec.	31	Twp.	12	Range	21	County	rego	State	KS	On Location	700 pm Finish Cement
Lease	Well No. 1-31			Location Regu 15 144 to 370 W to 6 No 1 W S into									
Contractor	Degrity Rig 3							Owner					
Type Job	Subface							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Hole Size	12 1/2			T.D. 224									
Csg.	8 5/8			Depth 220									
Tbg. Size				Depth									
Tool				Street Downing - Nelson Oil Co Inc									
Cement Left in Csg.				Depth									
Meas Line				City State									
The above was done to satisfaction and supervision of owner agent or contractor.													
Cement Amount Ordered 150 3/6 CC 7% gel													

EQUIPMENT

Pumptrk	5	No.	Cement Helper	Walt	Common
Bulktrk	14	No.	Driver	Brett	Poz. Mix
Bulktrk	pu	No.	Driver	Cody	Gel.

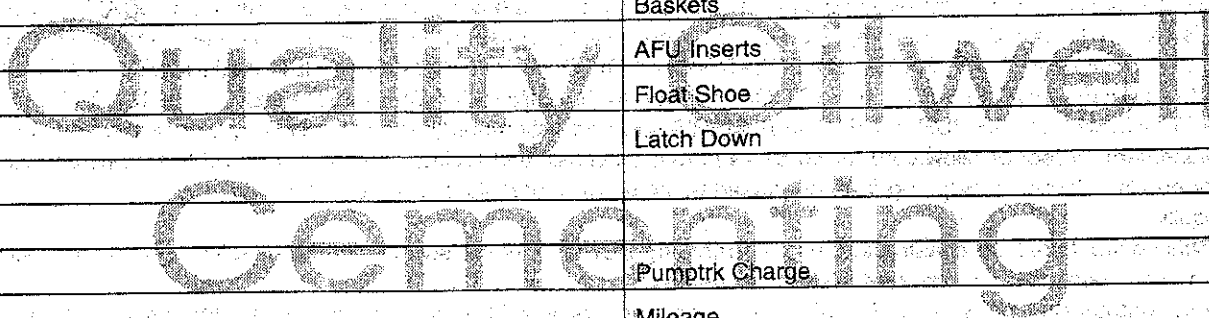
JOB SERVICES & REMARKS

Remarks:	Calcium
Rat Hole	Hulls
Mouse Hole	Salt
Centralizers	Flowseal
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
	CFL-117 or CD110 CAF 38
	Sand
	Handling
	Mileage

Loose Hillman - Dabach
Cement did Circulate

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down



	Pumptrk Charge	
	Mileage	
	Tax	
	Discount	
	Total Charge	

X Signature *John Dasher*

ALLIED OIL & GAS SERVICES, LLC 056550

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Russell KS

DATE <u>10-8-12</u>	SEC. <u>31</u>	TWP. <u>12</u>	RANGE <u>21</u>	CALLED OUT	ON LOCATION	JOB START <u>12:30 AM</u>	JOB FINISH <u>1:00 PM</u>
Hillman-Dubach LEASE				WELL# <u>1-31</u>	LOCATION <u>I-70 + Riga 15 West 1W 1N</u>	COUNTY <u>Trego</u>	STATE <u>KS</u>
OLD OR NEW (Circle one) <u>NEW</u>				<u>1W sinte</u>		<u>0-07</u> <u>68</u>	

CONTRACTOR Discovery #3 OWNER _____
 TYPE OF JOB PTA
 HOLE SIZE 7 7/8 T.D. 4048
 CASING SIZE _____ DEPTH _____
 TUBING SIZE 4 1/2 DEPTH 4000
 DRILL PIPE 4 1/2 DEPTH 4000
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. _____
 PERFS. _____
 DISPLACEMENT _____

CEMENT AMOUNT ORDERED 245 lbs 60/40 4% gal
1/4 # C10

COMMON	<u>150</u>	@	<u>17.90</u>	<u>2685.00</u>
POZMIX	<u>95</u>	@	<u>9.35</u>	<u>888.25</u>
GEL	<u>9</u>	@	<u>23.40</u>	<u>210.60</u>
CHLORIDE		@		
ASC		@		
Flo-seal	<u>62.5</u>	@	<u>2.97</u>	<u>185.63</u>
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>264.17</u>	@	<u>2.48</u>	<u>655.13</u>
MILEAGE	<u>276.1563</u>	@	<u>2.60</u>	<u>718.01</u>
				TOTAL <u>5342.62</u>

EQUIPMENT

PUMP TRUCK CEMENTER Robert Y
 # 417 HELPER Woody O
 BULK TRUCK
 # 410 DRIVER Walter K
 BULK TRUCK
 # _____ DRIVER _____

REMARKS:

p1 25 lbs @ 4000
p2 25 lbs @ 1725
p3 100 lbs @ 925
p4 40 lbs @ 270
p5 10 lbs @ 40
30 lbs @ Rat hole
15 lbs @ Mouse hole

SERVICE

DEPTH OF JOB	<u>4000'</u>
PUMP TRUCK CHARGE	<u>1250.00</u>
EXTRA FOOTAGE	@ _____
MILEAGE	<u>25 HVMI @ 7.70 192.50</u>
MANIFOLD	@ _____
	<u>25 LVMI @ 4.40 110.00</u>
	@ _____

TOTAL 1552.50

CHARGE TO: Downing - Nelson
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<u>8 7/8</u> Wooden plug	@	<u>107.64</u>	<u>107.64</u>
	@		
	@		
	@		
	@		

TOTAL 107.64

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.

SALES TAX (if Any) 476.18
 TOTAL CHARGES 7007.76
 DISCOUNT 1628.14 IF PAID IN 30 DAYS

PRINTED NAME GALEN GASCHLER
 SIGNATURE Galen Gaschler

Net 5374.62 BS 10-9
before tax



DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays, KS 67601

ATTN: Al Downing

Hillman-Dubach #1-31

31-12s-21w Trego,KS

Start Date: 2012.10.05 @ 13:29:15

End Date: 2012.10.05 @ 19:43:45

Job Ticket #: 47941 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.09 @ 11:38:54



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

31-12s-21w Trego,KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

ATTN: Al Dow ning

Job Ticket: 47941

DST#: 1

Test Start: 2012.10.05 @ 13:29:15

GENERAL INFORMATION:

Formation: **LKC "A-D"**

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

Time Tool Opened: 15:41:15

Time Test Ended: 19:43:45

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Dustin Rash**

Unit No: **38**

Interval: 3578.00 ft (KB) To 3654.00 ft (KB) (TVD)

Reference Elevations: **2283.00 ft (KB)**

Total Depth: **3654.00 ft (KB) (TVD)**

2275.00 ft (CF)

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

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

Serial #: 8354

Inside

Press @ Run Depth: **169.85 psig @ 3646.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2012.10.05**

End Date:

2012.10.05

Last Calib.: **2012.10.05**

Start Time: **13:39:15**

End Time:

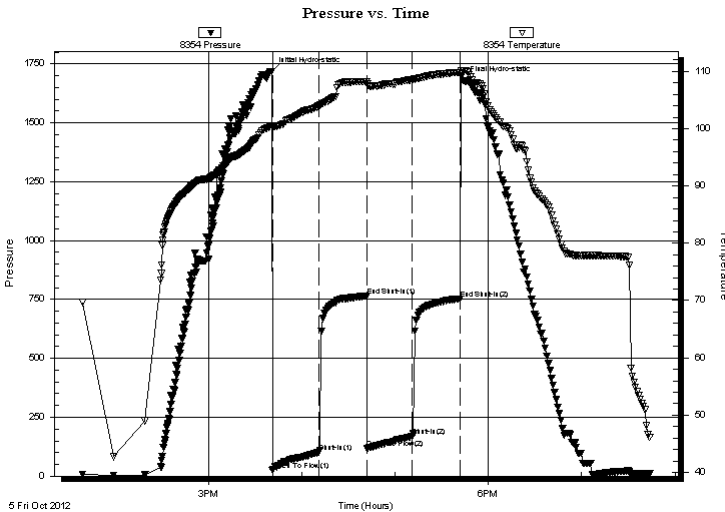
19:43:45

Time On Btm: **2012.10.05 @ 15:40:45**

Time Off Btm: **2012.10.05 @ 17:43:45**

TEST COMMENT: IF-Fair building blow . BOB in 16 minutes 30 seconds.
ISI-No Return.
FF-Fair building blow . BOB in 20 minutes.
FSI-No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1717.58	100.45	Initial Hydro-static
1	23.81	100.18	Open To Flow (1)
31	102.62	104.02	Shut-In(1)
61	764.79	108.28	End Shut-In(1)
62	119.02	107.85	Open To Flow (2)
91	169.85	108.59	Shut-In(2)
121	753.16	109.84	End Shut-In(2)
123	1678.36	110.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
330.00	85%Water/15%Mud	4.36

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.

31-12s-21w Trego,KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

Job Ticket: 47941

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.10.05 @ 13:29:15

Tool Information

Drill Pipe:	Length: 3551.00 ft	Diameter: 3.80 inches	Volume: 49.81 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: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 49.96 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3578.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	76.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3559.00	
Shut In Tool	5.00			3564.00	
Hydraulic tool	5.00			3569.00	
Packer	5.00			3574.00	20.00 Bottom Of Top Packer
Packer	4.00			3578.00	
Stubb	1.00			3579.00	
Perforations	3.00			3582.00	
Change Over Sub	1.00			3583.00	
Drill Pipe	62.00			3645.00	
Change Over Sub	1.00			3646.00	
Recorder	0.00	8354	Inside	3646.00	
Recorder	0.00	8520	Outside	3646.00	
Perforations	5.00			3651.00	
Bullnose	3.00			3654.00	76.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

31-12s-21w Trego,KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

Job Ticket: 47941

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.10.05 @ 13:29:15

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:

16000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: 0.72 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
330.00	85%Water/15%Mud	4.356

Total Length: 330.00 ft

Total Volume: 4.356 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

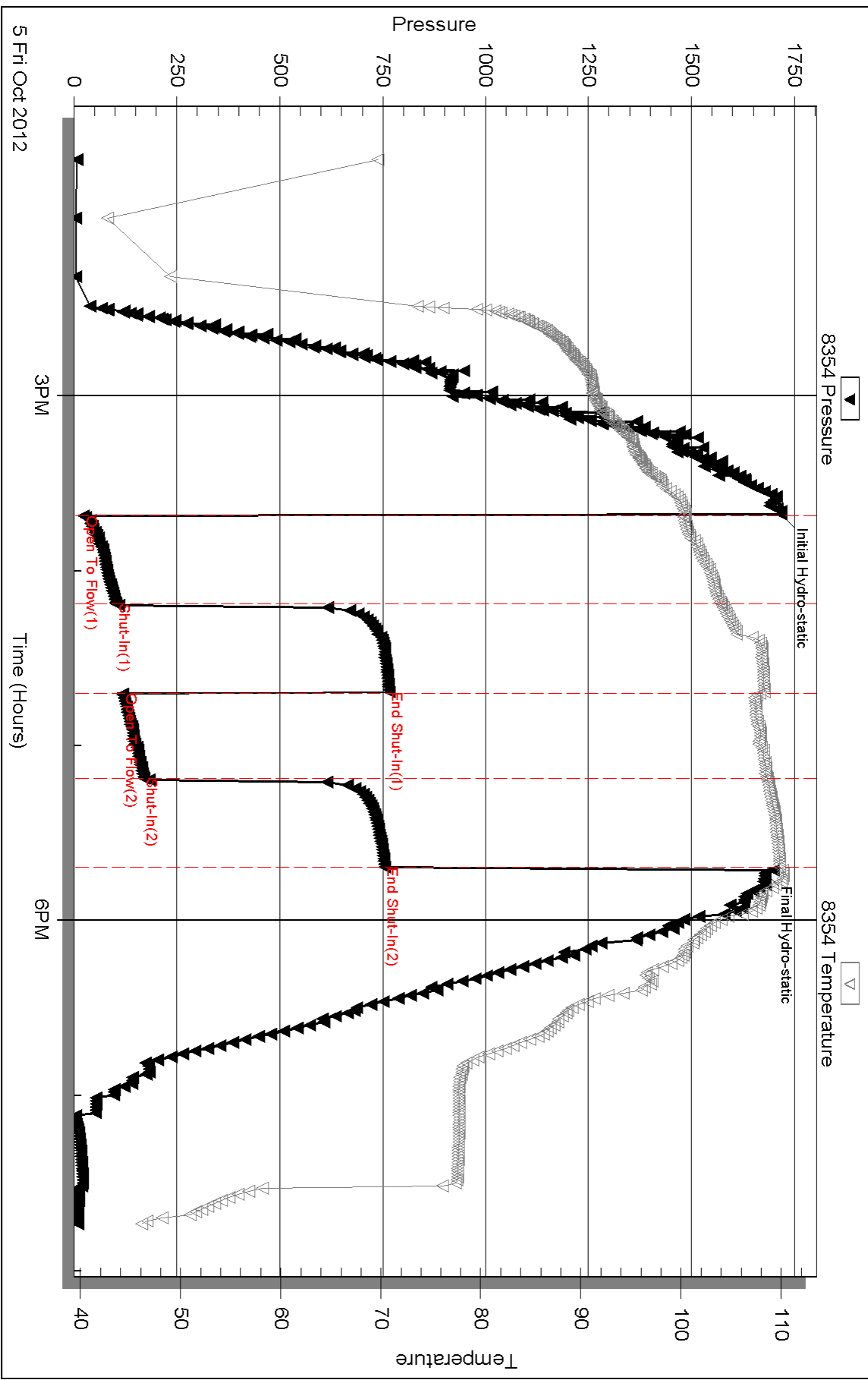
Inside

Dow nting-Nelson Oil Co., Inc.

Hillman-Dubach #1-31

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 47941

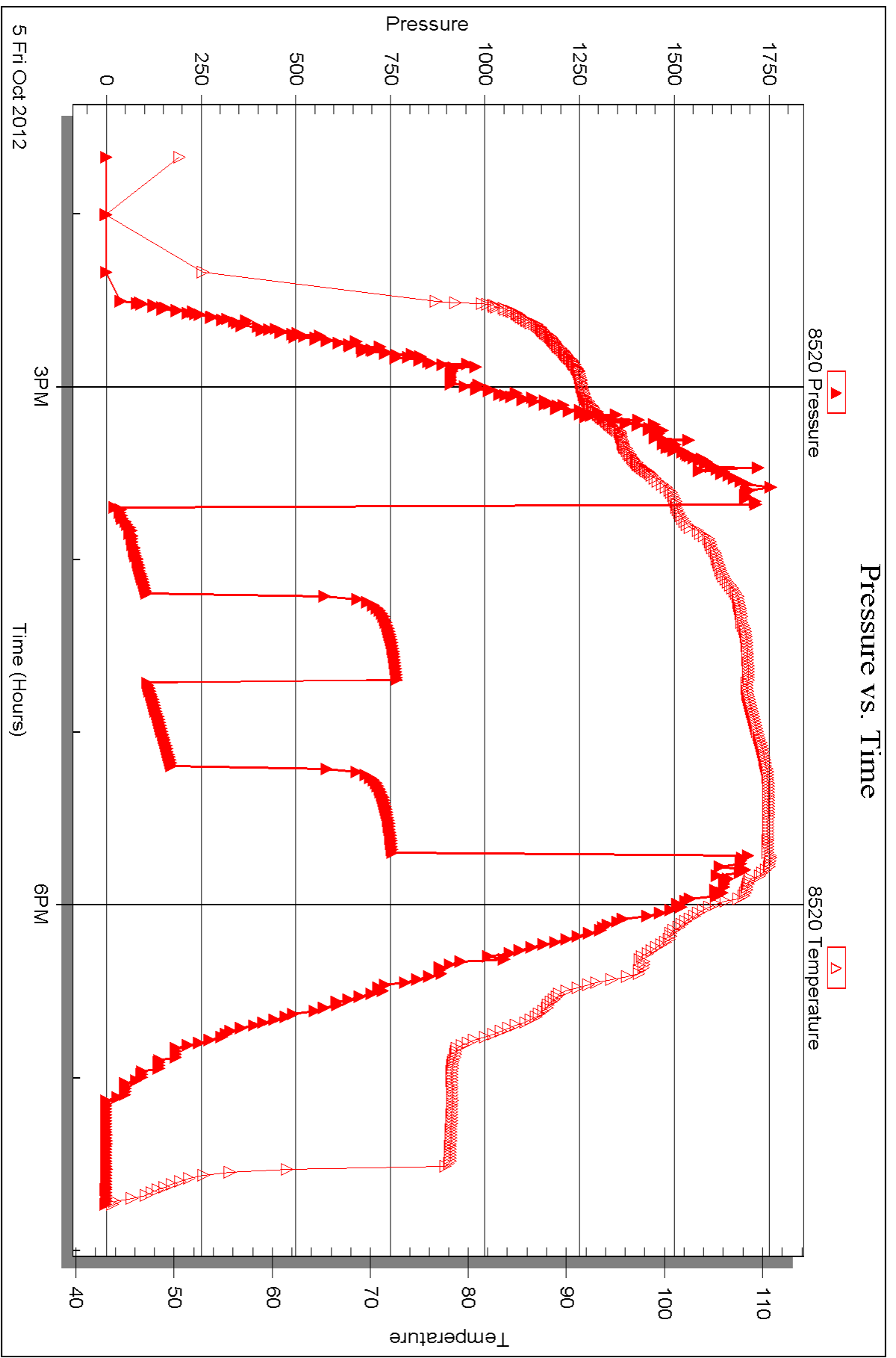
Printed: 2012.10.09 @ 11:38:59

Serial #: 8520

Outside Dow nung-Nelson Oil Co., Inc.

Hillman-Dubach #1-31

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 47941

Printed: 2012.10.09 @ 11:39:00



DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays, KS 67601

ATTN: Al Downing

Hillman-Dubach #1-31

31-12s-21w Trego,KS

Start Date: 2012.10.07 @ 11:19:15

End Date: 2012.10.07 @ 17:59:15

Job Ticket #: 47942 DST #: 2

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

Printed: 2012.10.09 @ 11:38:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

31-12s-21w Trego,KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

ATTN: Al Dow ning

Job Ticket: 47942

DST#: 2

Test Start: 2012.10.07 @ 11:19:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:17:25

Time Test Ended: 17:59:15

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3910.00 ft (KB) To 3934.00 ft (KB) (TVD)

Reference Elevations: 2283.00 ft (KB)

Total Depth: 4048.00 ft (KB) (TVD)

2275.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8354

Inside

Press @ Run Depth: 42.15 psig @ 3911.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.07

End Date:

2012.10.07

Last Calib.:

2012.10.07

Start Time: 11:29:15

End Time:

17:59:15

Time On Btm:

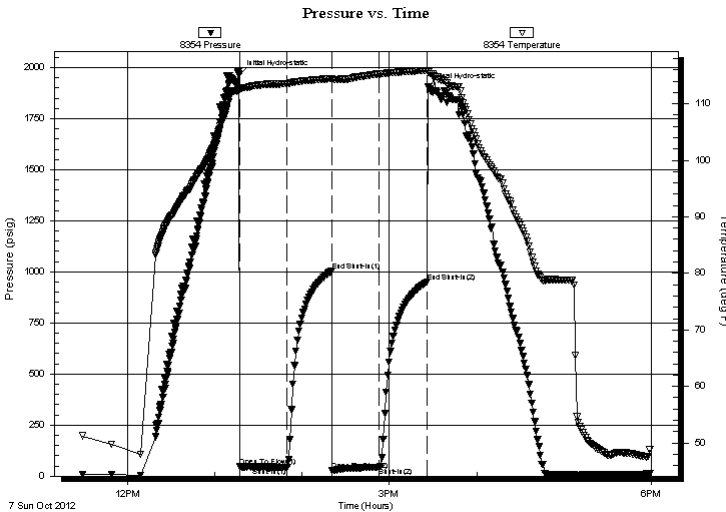
2012.10.07 @ 13:17:05

Time Off Btm:

2012.10.07 @ 15:26:45

TEST COMMENT: IF-Very weak building blow . Built to 1 1/2 inches.
ISI-No Return.
FF-Very weak surface blow throughout.
FSI-No Return.

PRESSURE SUMMARY



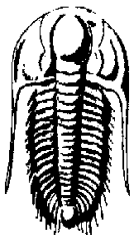
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.23	112.96	Initial Hydro-static
1	48.18	112.55	Open To Flow (1)
33	44.33	113.56	Shut-In(1)
64	1003.81	114.50	End Shut-In(1)
64	28.22	114.29	Open To Flow (2)
96	42.15	115.27	Shut-In(2)
129	951.63	115.91	End Shut-In(2)
130	1904.18	115.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	5%Water/95%Mud	0.10

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

31-12s-21w Trego,KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

ATTN: Al Dow ning

Job Ticket: 47942 **DST#: 2**

Test Start: 2012.10.07 @ 11:19:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:17:25

Time Test Ended: 17:59:15

Interval: 3910.00 ft (KB) To 3934.00 ft (KB) (TVD)

Total Depth: 4048.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Reference Elevations: 2283.00 ft (KB)

2275.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8520 Outside

Press @ Run Depth: psig @ 3911.00 ft (KB)

Start Date: 2012.10.07 End Date: 2012.10.07

Start Time: 11:29:30 End Time: 17:58:30

Capacity: 8000.00 psig

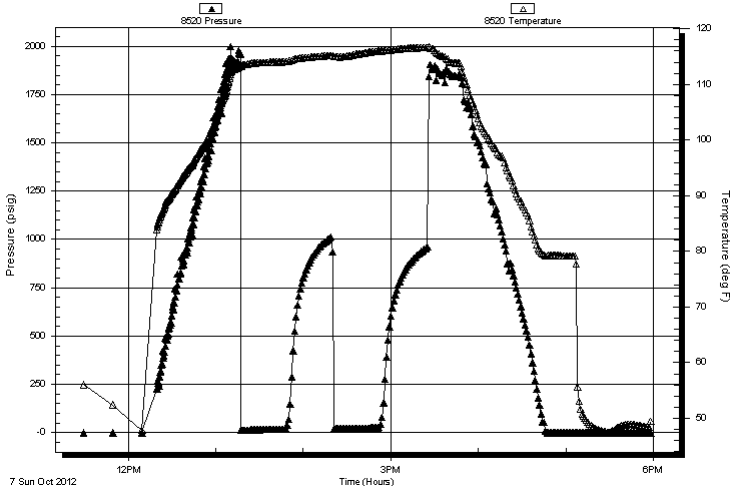
Last Calib.: 2012.10.07

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Very weak building blow . Built to 1 1/2 inches.
IS-No Return.
FF-Very weak surface blow throughout.
FS-No Return.

Pressure vs. Time



PRESSURE SUMMARY

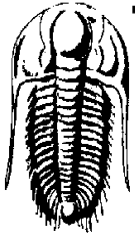
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	5%Water/95%Mud	0.10

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

P.O. Box 1019
Hays, KS 67601

ATTN: Al Dow ning

31-12s-21w Trego,KS

Hillman-Dubach #1-31

Job Ticket: 47942 **DST#: 2**

Test Start: 2012.10.07 @ 11:19:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:17:25

Time Test Ended: 17:59:15

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3910.00 ft (KB) To 3934.00 ft (KB) (TVD)

Total Depth: 4048.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2283.00 ft (KB)

2275.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8653 Below (Straddle)

Press @ RunDepth: psig @ 3951.00 ft (KB)

Start Date: 2012.10.07 End Date: 2012.10.07

Start Time: 11:19:46 End Time: 17:56:15

Capacity: 8000.00 psig

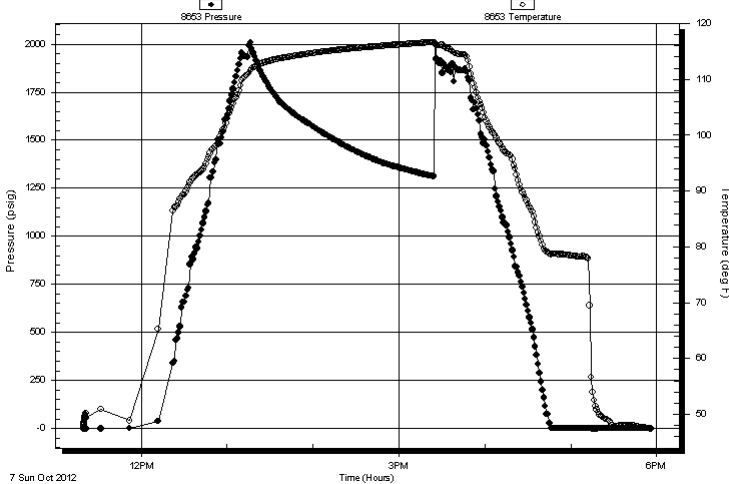
Last Calib.: 2012.10.07

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Very weak building blow . Built to 1 1/2 inches.
ISI-No Return.
FF-Very weak surface blow throughout.
FSI-No Return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	5%Water/95%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.

31-12s-21w Trego, KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

Job Ticket: 47942

DST#: 2

ATTN: Al Downing

Test Start: 2012.10.07 @ 11:19:15

Tool Information

Drill Pipe:	Length: 3869.00 ft	Diameter: 3.80 inches	Volume: 54.27 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: 30000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 54.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3910.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	3932.00 ft			
Interval between Packers:	22.00 ft			
Tool Length:	160.00 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			3891.00	
Shut In Tool	5.00			3896.00	
Hydraulic tool	5.00			3901.00	
Packer	5.00			3906.00	20.00 Bottom Of Top Packer
Packer	4.00			3910.00	
Stubb	1.00			3911.00	
Recorder	0.00	8354	Inside	3911.00	
Recorder	0.00	8520	Outside	3911.00	
Perforations	20.00			3931.00	
Blank Off Sub	1.00			3932.00	22.00 Tool Interval
Packer	4.00			3936.00	
Stubb	1.00			3937.00	
Perforations	13.00			3950.00	
Change Over Sub	1.00			3951.00	
Recorder	0.00	8653	Below	3951.00	
Drill Pipe	95.00			4046.00	
Change Over Sub	1.00			4047.00	
Bullnose	3.00			4050.00	118.00 Bottom Packers & Anchor

Total Tool Length: 160.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

31-12s-21w Trego,KS

P.O. Box 1019
Hays, KS 67601

Hillman-Dubach #1-31

Job Ticket: 47942

DST#: 2

ATTN: Al Dow ning

Test Start: 2012.10.07 @ 11:19:15

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	5%Water/95%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:

Serial #: 8354

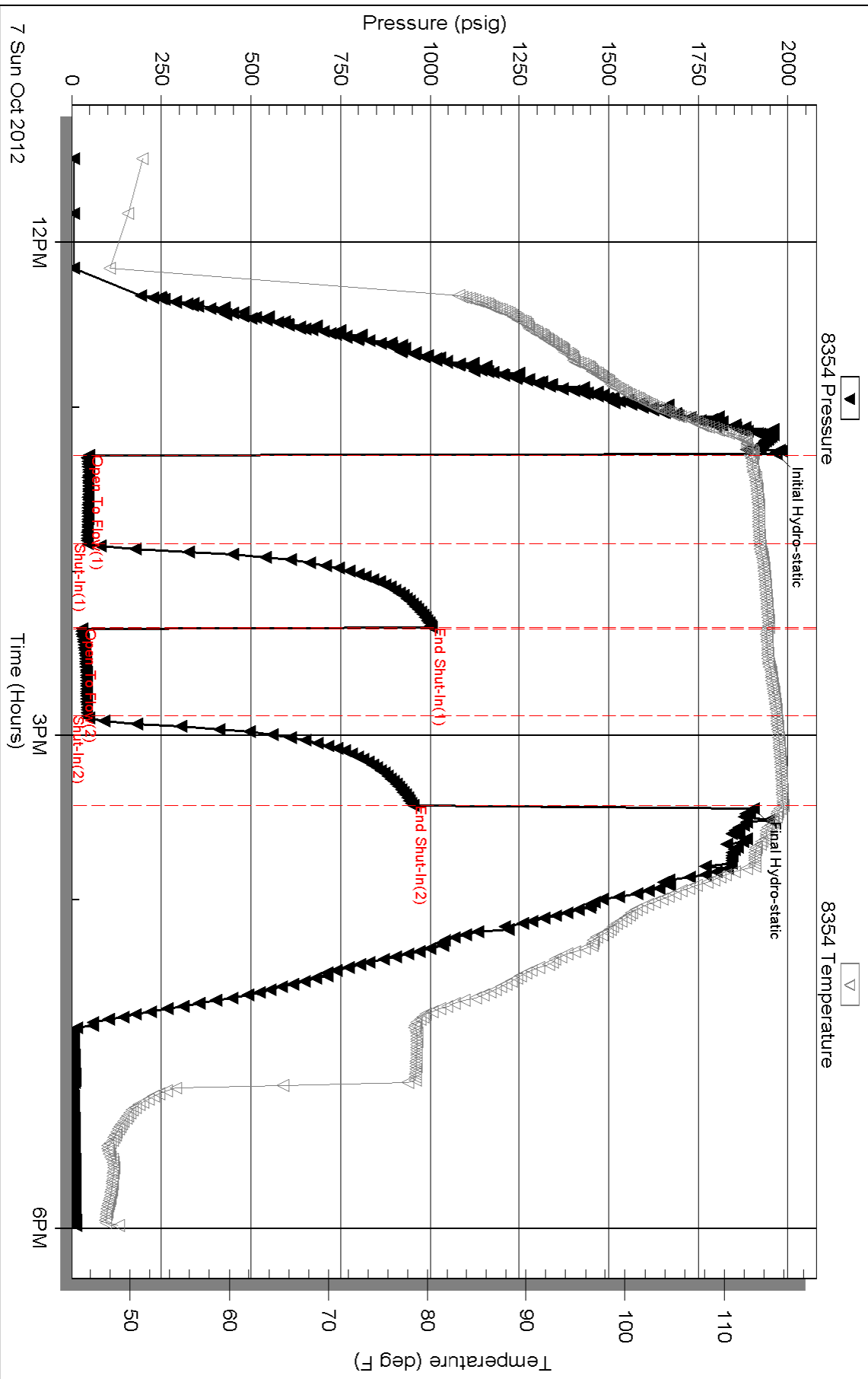
Inside

Dow nting-Nelson Oil Co., Inc.

Hillman-Dubach #1-31

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 47942

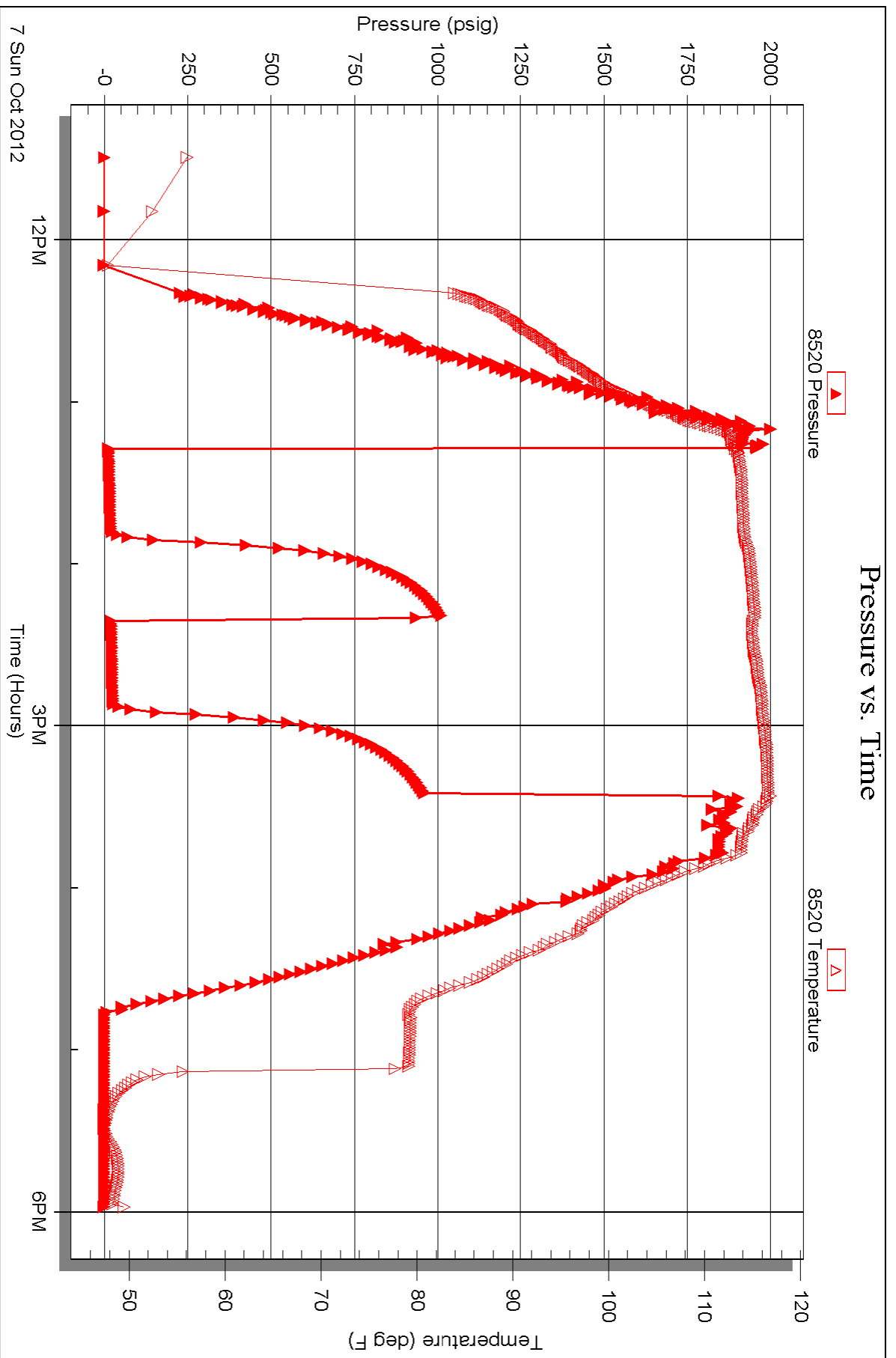
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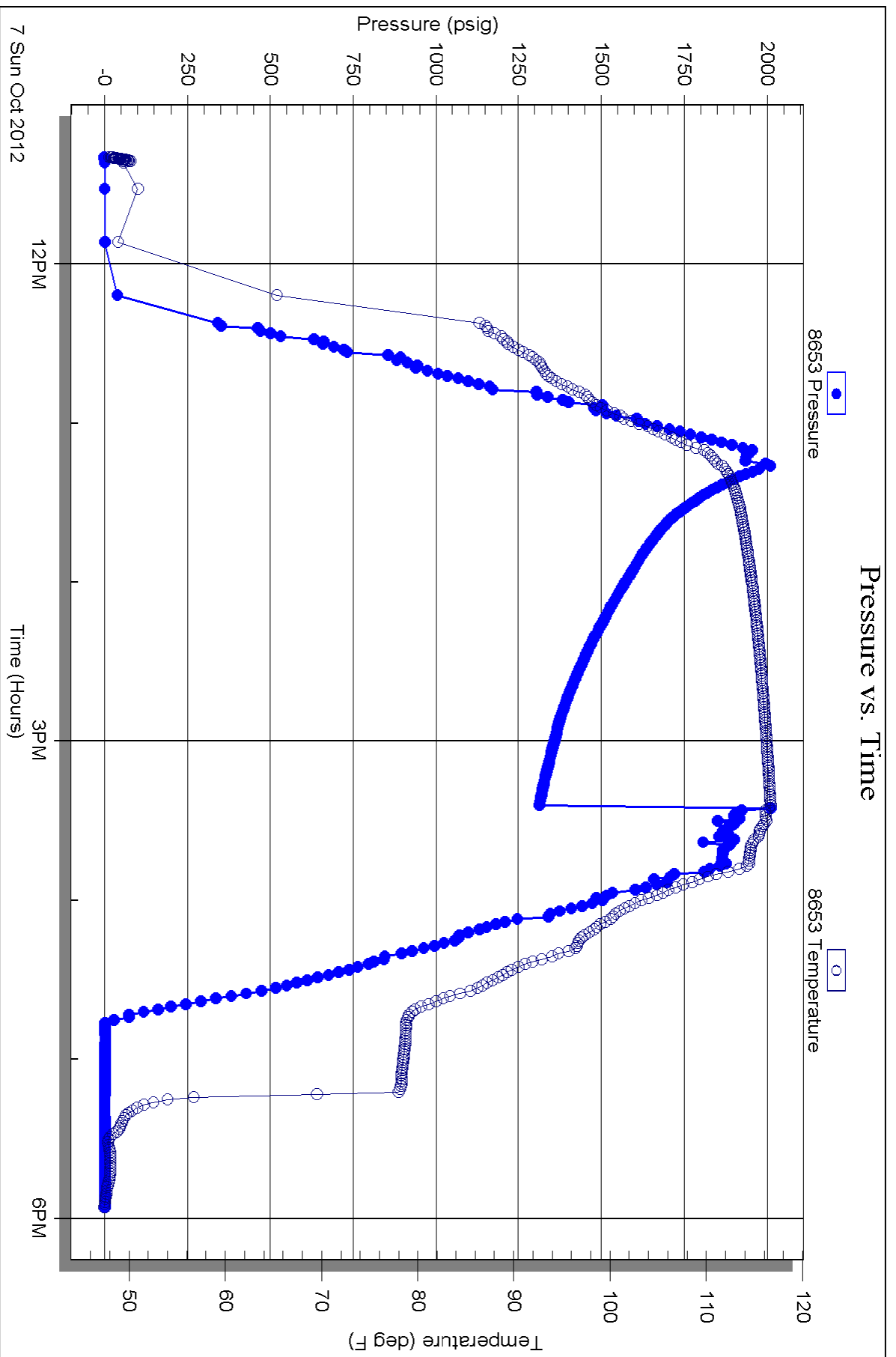
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Outside Dow nging-Nelson Oil Co., Inc.

Hillman-Dubach #1-31

DST Test Number: 2







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47941

Well Name & No. Hillman-Dubach #1-31 Test No. 7 Date 10-5-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2283 KB 2275 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. AI Downing Rig Discovery 3
 Location: Sec. 31 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3578-3654 Zone Tested LRC "A-D"
 Anchor Length 76' Drill Pipe Run 3551 Mud Wt. 8.7
 Top Packer Depth 3573 Drill Collars Run 29.70 Vis 56
 Bottom Packer Depth 3578 Wt. Pipe Run 0 WL 7.6
 Total Depth 3654 Chlorides 800 ppm System LCM 2#

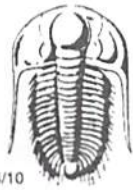
Blow Description IF- Fair building blow, BOB in 16 minutes 30 seconds.
ISI- No Return.
FF- Fair building blow, BOB in 20 minutes.
FBI- No Return.

Rec	Feet of	%gas	%oil	%water	%mud
330	Muddy Water			85	15

Rec Total 330 BHT 110 Gravity API RW .719 @ 40 °F Chlorides 16000 ppm
 Test 1150
 Jars
 Safety Joint
 Circ Sub
 Hourly Standby
 Mileage 26X2 80.60
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1230.60
 T-On Location 1130
 T-Started 1345
 T-Open 1541
 T-Pulled 1745
 T-Out 1945
 Comments BOBT-1329
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1230.60
 MP/DST Disc't

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. 47942

Well Name & No. Hillman-Dubach #1-31 Test No. 2 Date 10-7-12
 Company Downing-Nelson Oil Co., Inc. Elevation 2283 KB 2275 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery 3
 Location: Sec. 31 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3910-3934 Zone Tested Marmaton
 Anchor Length 24' 114' TP Drill Pipe Run 3869 Mud Wt. 9.0
 Top Packer Depth 3905 Drill Collars Run 29.70 Vis 53
 Bottom Packer Depth 3910 3934 SP Wt. Pipe Run Ø WL 8.0
 Total Depth 4048 Chlorides 1000 ppm System LCM 1 1/2 #

Blow Description VF- Very weak building blow, Built to 1 1/2 inches,
~~VST- No Return,~~
FF- Very weak surface blow throughout.
~~FST- No Return,~~

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Wetly Mud</u>		<u>5</u>	<u>95</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 N/A @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1967 Test 1150 T-On Location 1030
 (B) First Initial Flow 48 Jars _____ T-Started 1200
 (C) First Final Flow 44 Safety Joint _____ T-Open 1318
 (D) Initial Shut-In 1004 Circ Sub _____ T-Pulled 1525
 (E) Second Initial Flow 28 Hourly Standby _____ T-Out 1800
 (F) Second Final Flow 42 Mileage 26X2 80.60 Comments Batt-1119
 (G) Final Shut-In 952 Sampler _____
 (H) Final Hydrostatic 1904 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 491.67
 Initial Shut-In 30 Day Standby 1d 14.75hrs Total 2322.27
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1830.60

Approved By _____ Our Representative [Signature]

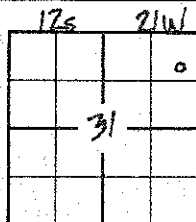
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Marc Downing

Consulting Petroleum Geologist
1411 Washington Circle
Hays, Ks 67601
Phone: 620-428-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co., Inc.
WELL Hillman-Dubach
FIELD Wildcat
LOCATION 600' ENL - 270' FEL
SEC. 31 TWP. 12s RGE. 21w
COUNTY Trego
STATE Kansas



PRODUCTION Dry
ELEVATION KB 2283
DF _____
GL 2275
Drilling Measured From: 2283 KB
Samples Saved From 3500 To: TD
Drilling Time From 3250 To: TD
Samples Examined From: 3500 To: TD
Geological Supervision From 3306 To Total Depth
Wellsite Geologist Alan Downing
Electrical Surveys Nabors
CML/GZ - microlog
Sonic - Dual Induction

OPERATOR DNOCI
CONTRACTOR Discovery Drig. Rig #3
COMM: 10-1-12 COMP: 10-7-12
SURF: 5 3/8" - 217 PROD: _____
TOTAL DEPTH DRILLERS: 4048
TOTAL DEPTH LOG: 4048

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Anhydrite	1703	1704	+579	-9
Base	1750	1748	+535	-3
Topokg	3320	3328	-1045	+3
Herbner	3550	3550	-1267	+5
Toronto	3572	3571	-1288	+4
Lansing	3584	3583	-1300	+4
B/C	3823	3820	-1537	+9
Marmaton	3803	3903	-1620	+5
Overice shale	3942	3942	-1659	+4
Arbuckle	4021	4020	-1737	-10

REFERENCE WELL FOR STRUCTURE
Isem - Wells Schoenthaler #1
NW-NW-NW Sec 32-12s-21w Trego Co., Ks

DRILL STEM TESTS

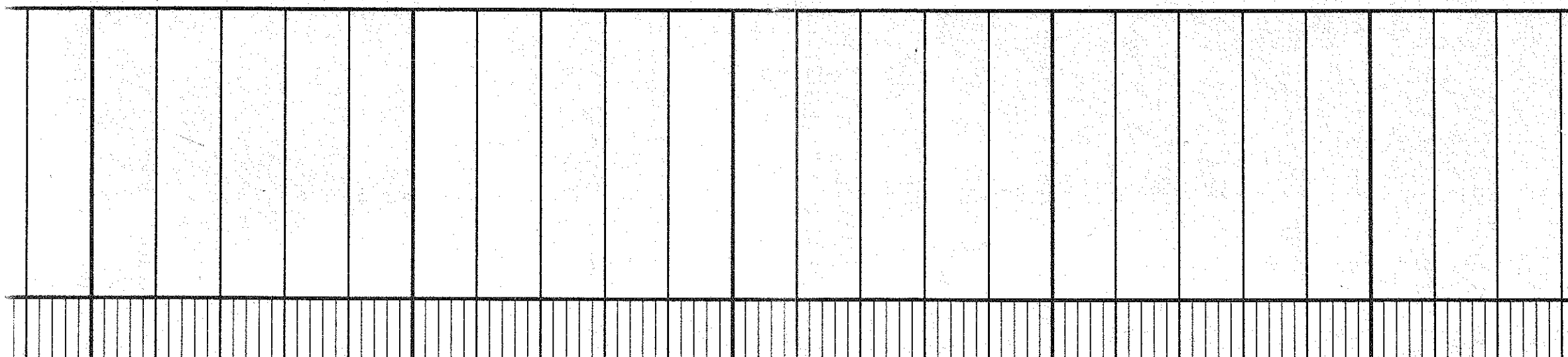
No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHP-FHP	RECOVERY
1	3578 3654	24 [#] / _{30'} 1103	765 [#] / _{36'}	119-170 [#] / _{36'}	753 [#] / _{30'}	1719 [#] / ₁₁₆₇₈	330' NW
2	3910 3934	28 [#] / _{30"}	42 [#] / _{36"} 1003	44-48 [#] / _{30"}	95 [#] / ₃₀	1907 [#] / ₁₉₀₄	20' mud w/ oil sps

REMARKS AND RECOMMENDATIONS
Due to No show of Negative drillstem tests -
Arbuckle fell out of Bed - Plug Away

LEGEND

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

DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases ↑	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> 5" 10" 15" </div>					



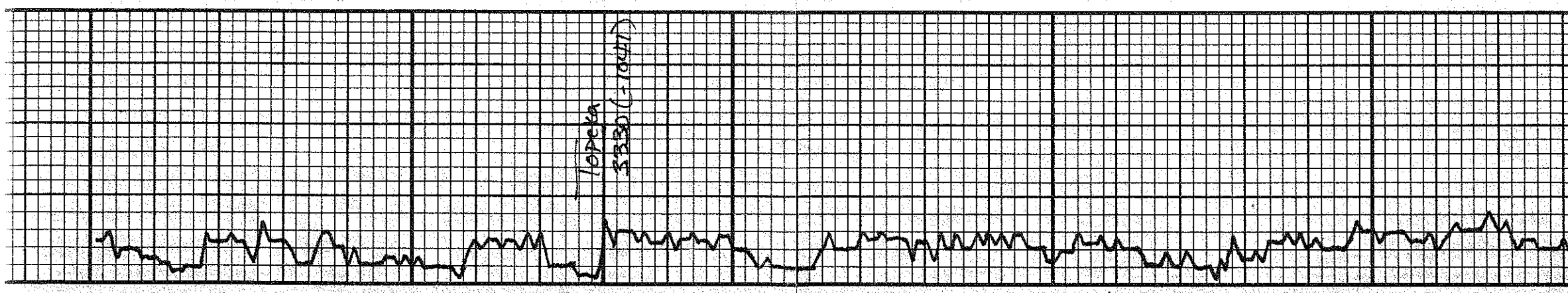
50

3300

50

3400

50



Торпелка
5330 (-10000)

3500

50

3000

50

3700

HERNANDEZ

3500 (-12167)

3578 (-12187)

3578 (-12187)

LHC

3584 (-1301)

GPS

GPS

SH: Black-Carb

LS: Wnt fm v.dse

SN: gm-Brown

LS: Tan fm w gd pp & w
gd sat str - fr odor - some
total Ben - Bill sat. - till oil

LS: Wnt fm in fr - gd rntn +
ool & w fr. fr. sfo few prs
Bm sat str v. fr. odor.

LS: Tan fm w fr - tan
Avert in Nov 1981

SN: gm-Brown: Black

LS: Tan-Lt. Tan fm v. od w
fr. sfo in good - v. gd cold
v faint odor

SH: Brown

LS: Tan-H. Bm fm w fr pp &
w gd sfo - fr. odor -

LS: Bm Ad sfo. sfo. total Black
sat. in fr. pp - &

LS: Wnt f. subvln 1-2 prs w
SH od & mpsy qm v. onky
NSFO - NO odor.

LS: Wnt fm w fr od & sfo v
only - to subvln

LS: Wnt - Lt. Tan fm w gd pp &
w 1-2 prs w v. spt. sfo No
odor.

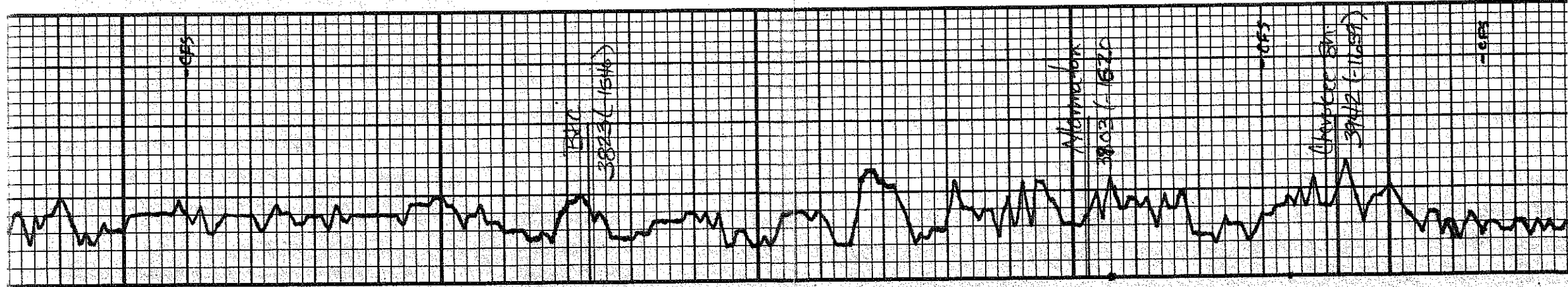
G. Wnt f. v. fm ou v. dse w
small tan - off wnt a heat
all Ns.

SN: v. lt. gm - Red

LS: Tan fm w poor intxnd
1-2 prs H. sfo NSFO No odor
marked at fr - v. faint

Vis 56
wt 8.7
wL 7.6
LW 2#

DST #1
3578-3654
30-30-30-30
Zec: 330' MW
IAP: 1718#
IAP: 24-103#
IAP: 19-170#
SFP: 765-753#
FAP: 1678#



SN: gm	LS: Tan Lt. tan f. subsh v. chky w/pt of scatt col - ore φ NS Fo - ND odor.	SN: gm	LS: Tan Lt. Tan f. v. scatt PPV V. sp. str. NSFO x10 odor.	SN: gm	LS: wnt f. xk - subsh chky w. v. sp. str. - few ooliced px w/φ - No snow) tite	SN: Red Brown-gm	LS: wnt Lt. Tan f. v. scatt col	SN: gm - Red	LS: Tan Lt. Tan f. v. scatt v. lit. int. v. sp. str. NSFO - No odor w. multi- colored actent	SN: Black - (orn)	LS: Tan f. v. f. v. scatt w. some fr. int. str. NSFO - No odor w. multi- colored actent	SN: Black - (orn)	LS: Tan f. v. f. v. scatt w. some fr. int. str. NSFO - No odor w. multi- colored actent
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1 gm - dirt white & coarse

DST #2
3910 - 3934

Rec: 20' mud w/olpts

IHP: 1967 #
IFP: 48-44 #
FFP: 28-42 #
SP: 1003-951 #
FHP: 1904 #

