



KANSAS CORPORATION COMMISSION 1089748
OIL & GAS CONSERVATION DIVISION

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

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

Designate Type of Completion:
 New Well Re-Entry Workover
 Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 CM (Coal Bed Methane)
 Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:
Operator: _____
Well Name: _____
Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____
07/20/2012 07/28/2012 07/29/2012
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-145-21681-00-00
Spot Description: _____
W2 NW NE SW Sec. 30 Twp. 20 S. R. 20 East West
2310 Feet from North / South Line of Section
1440 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Pawnee
Lease Name: Galen Well #: 1-30
Field Name: Steffen
Producing Formation: Mississippian
Elevation: Ground: 2192 Kelly Bushing: 2200
Total Depth: 4373 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 1203 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: 19000 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 Gamisor Date: 12/04/2012



1089748

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Galen Well #: 1-30
 Sec. 30 Twp. 20 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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Sample Name Attached Top Attached Datum Attached
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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	1203	Common	450	2% Gel & 3% CC
Production string	7.875	5.5	14	4368	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 (Amount and Kind of Material Used)	Depth
4	4346' to 4353' and 4359' to 4362'	500 gallons 15% Mud Acid	4346' to 4353' and 4359'
		750 gallons 15% IND Acid	4346' to 4353' and 4359'

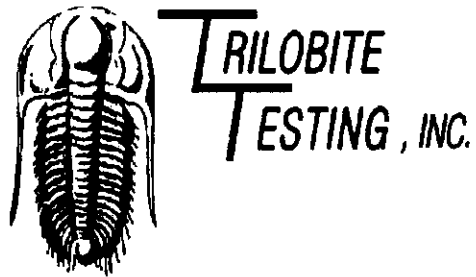
TUBING RECORD: Size: <u>2.375</u> Set At: <u>4342.63</u> Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>10/30/2012</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____	
Estimated Production Per 24 Hours	Oil Bbls. <u>2</u>	Gas Mcf <u>0</u>	Water Bbls. <u>85</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 type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Galen 1-30
Doc ID	1089748

Tops

Top Anhydrite	1378'	+822
Base Anhydrite	1403'	+797
Heebner	3716'	-1516
LKC	3767'	-1567
BKC	4085'	-1885
Fort Scott	4277'	-2077
Cherokee Shale	4292'	-2092
Mississippi	4346'	-2146



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Galen #1-30

30-20s-20w Pawnee,KS

Start Date: 2012.07.26 @ 20:31:05

End Date: 2012.07.27 @ 02:19:50

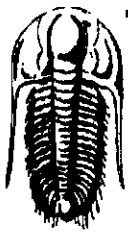
Job Ticket #: 47902 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.09 @ 11:38:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47902

DST#: 1

ATTN: Marc Dow ning

Test Start: 2012.07.26 @ 20:31:05

GENERAL INFORMATION:

Formation: **Miss**

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

Time Tool Opened: 22:27:50

Time Test Ended: 02:19:50

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

Tester: **Andy Carreira**

Unit No: **39**

Interval: **4314.00 ft (KB) To 4355.00 ft (KB) (TVD)**

Reference Elevations: **2200.00 ft (KB)**

Total Depth: **4355.00 ft (KB) (TVD)**

2192.00 ft (CF)

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

KB to GR/CF: 8.00 ft

Serial #: 8372 **Outside**

Press@RunDepth: **60.90 psig @ 4319.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2012.07.26**

End Date:

2012.07.27

Last Calib.: **2012.07.27**

Start Time: **20:31:05**

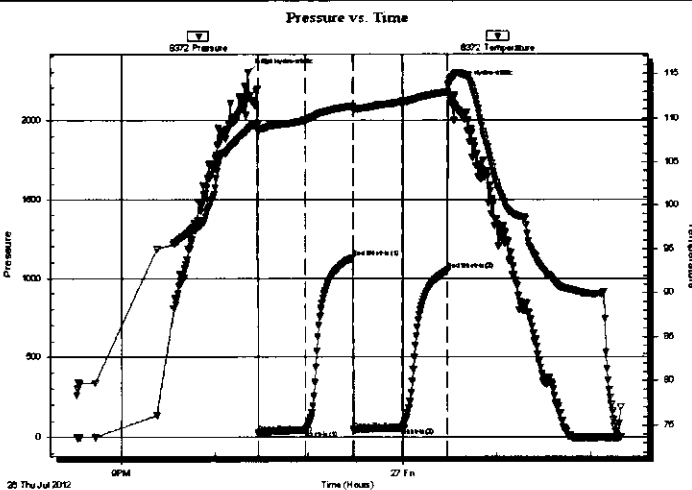
End Time:

02:19:50

Time On Btm: **2012.07.26 @ 22:21:30**

Time Off Btm: **2012.07.27 @ 00:29:30**

TEST COMMENT: IF:(30min) Weak, surface blow
ISl:(30min) No Return
FF:(30min) Weak, surface blow
FSl:(30min) No Return



PRESSURE SUMMARY

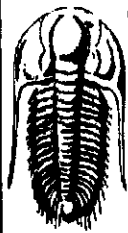
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.20	108.67	Initial Hydro-static
7	23.77	108.40	Open To Flow (1)
37	45.44	109.75	Shut-In(1)
67	1130.28	111.36	End Shut-In(1)
68	44.74	111.04	Open To Flow (2)
99	60.90	111.83	Shut-In(2)
128	1051.46	112.93	End Shut-In(2)
128	2226.88	113.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
95.00	HOCGM g=5% o=25% m=70%	1.06

Gas Rates

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



TRILLOBITE TESTING, INC

DRILL STEM TEST REPORT

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47902

DST#: 1

ATTN: Marc Downing

Test Start: 2012.07.26 @ 20:31:05

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:27:50

Time Test Ended: 02:19:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Andy Carreira

Unit No: 39

Interval: 4314.00 ft (KB) To 4355.00 ft (KB) (TVD)

Reference Elevations: 2200.00 ft (KB)

Total Depth: 4355.00 ft (KB) (TVD)

2192.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8017 Inside

Press@RunDepth: psig @ 4319.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.26

End Date: 2012.07.27

Last Calib.: 2012.07.27

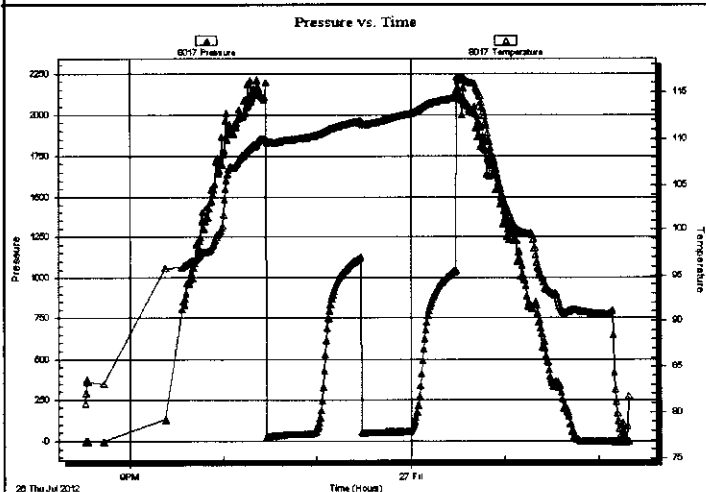
Start Time: 20:31:05

End Time: 02:19:50

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:(30min) Weak, surface blow
IS:(30min) No Return
FF:(30min) Weak, surface blow
FS:(30min) No Return



PRESSURE SUMMARY

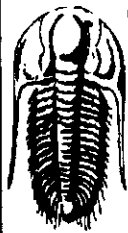
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
95.00	HOCGM g=5% o=25% m=70%	1.06

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47902

DST#: 1

ATTN: Marc Downing

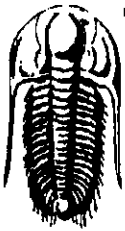
Test Start: 2012.07.26 @ 20:31:05

Tool Information

Drill Pipe:	Length: 4286.00 ft	Diameter: 3.80 inches	Volume: 60.12 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:	24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 60.27 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	59000.00 lb
Depth to Top Packer:	4314.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	41.00 ft				
Tool Length:	69.00 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			4287.00	
Shut In Tool	5.00			4292.00	
Hydraulic tool	5.00			4297.00	
Jars	5.00			4302.00	
Safety Joint	3.00			4305.00	
Packer	5.00			4310.00	28.00 Bottom Of Top Packer
Packer	4.00			4314.00	
Stubb	1.00			4315.00	
Perforations	3.00			4318.00	
Change Over Sub	1.00			4319.00	
Recorder	0.00	8017	Inside	4319.00	
Recorder	0.00	8372	Outside	4319.00	
Drill Pipe	31.00			4350.00	
Change Over Sub	1.00			4351.00	
Perforations	1.00			4352.00	
Bullnose	3.00			4355.00	41.00 Bottom Packers & Anchor
Total Tool Length:	69.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47902

DST#: 1

ATTN: Marc Downing

Test Start: 2012.07.26 @ 20:31:05

Mud and Cushion Information

Mud Type:		Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.32 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	HOCGM g=5% o=25% m=70%	1.059

Total Length: 95.00 ft Total Volume: 1.059 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8372

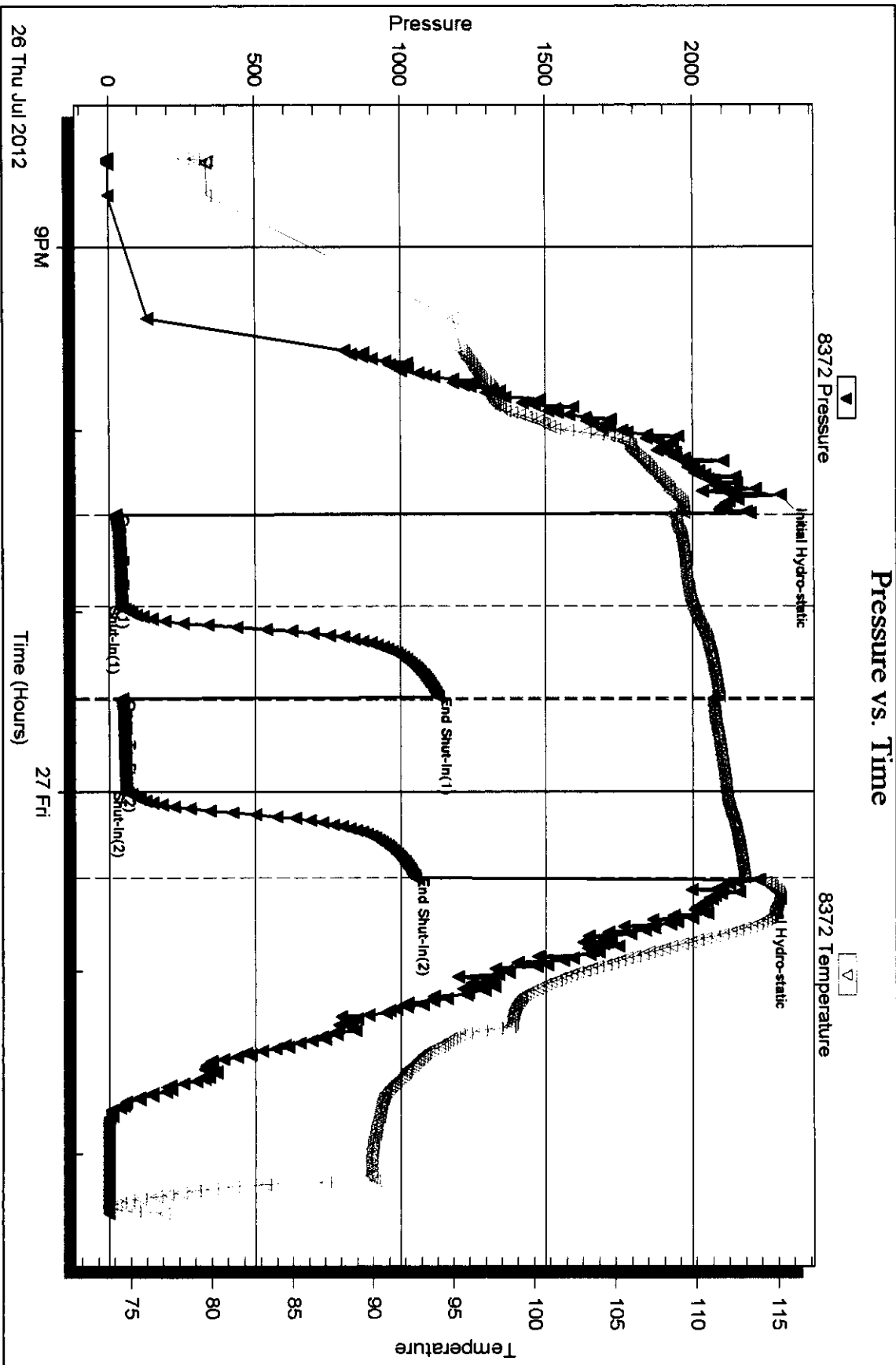
Outside

Dow nung Nelson Oil Company

Galen #1-30

DST Test Number: 1

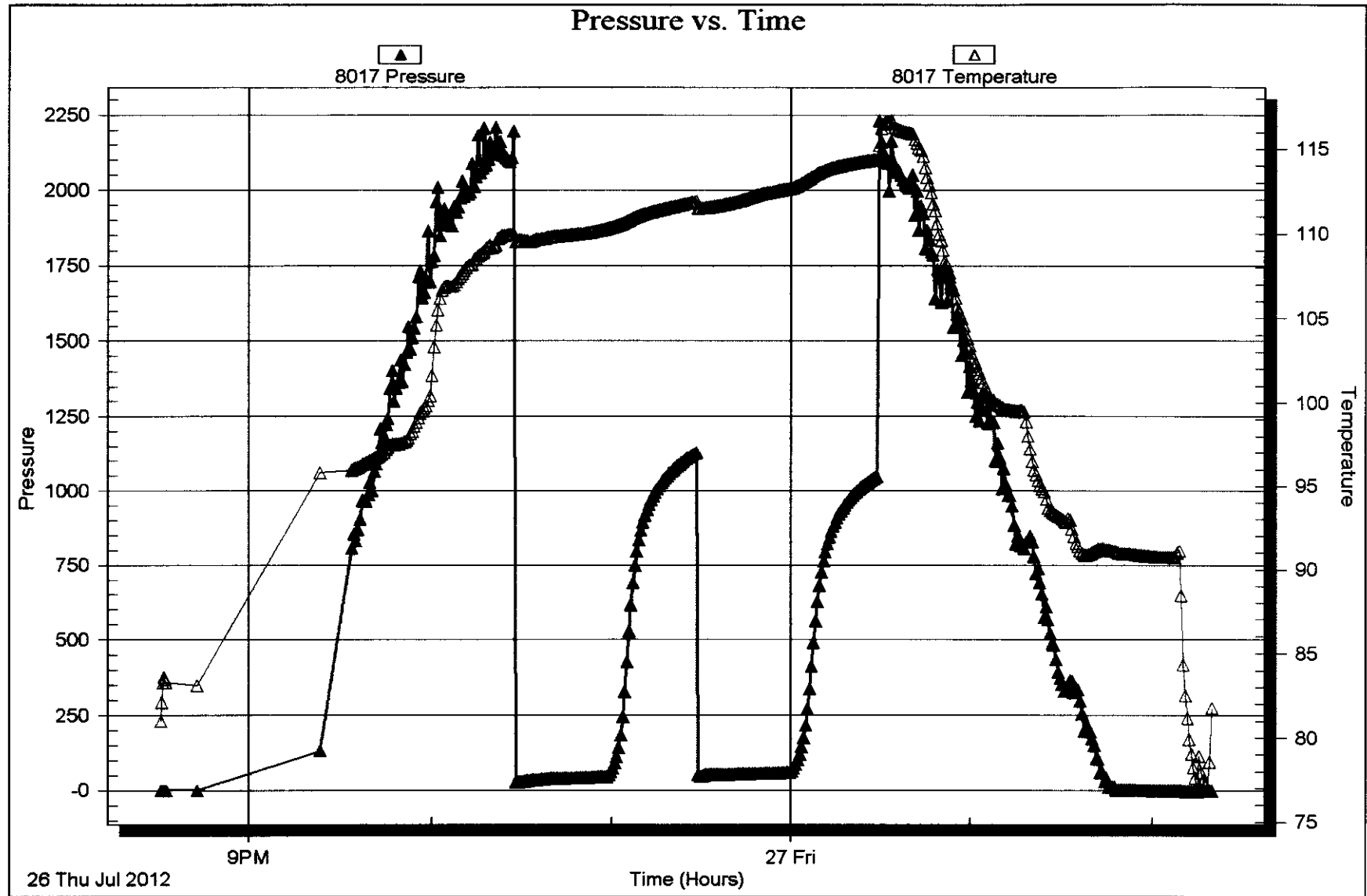
Pressure vs. Time

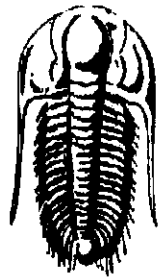


Trilobite Testing, Inc

Ref. No: 47902

Printed: 2012.08.09 @ 11:38:14





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Galen #1-30

30-20s-20w Pawnee,KS

Start Date: 2012.07.27 @ 08:59:05

End Date: 2012.07.27 @ 15:18:50

Job Ticket #: 47903 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.09 @ 11:37:19

Downing Nelson Oil Company
30-20s-20w Pawnee,KS
Galen #1-30
DST # 2
Miss
2012.07.27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47903

DST#: 2

ATTN: Marc Dow ning

Test Start: 2012.07.27 @ 08:59:05

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:11:30

Time Test Ended: 15:18:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 39

Interval: **4355.00 ft (KB) To 4365.00 ft (KB) (TVD)**

Reference Elevations: 2200.00 ft (KB)

Total Depth: 4365.00 ft (KB) (TVD)

2192.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8372 Outside

Press@RunDepth: 60.28 psig @ 4356.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.27

End Date:

2012.07.27

Last Calib.: 2012.07.27

Start Time: 08:59:05

End Time:

15:18:50

Time On Btm: 2012.07.27 @ 11:02:00

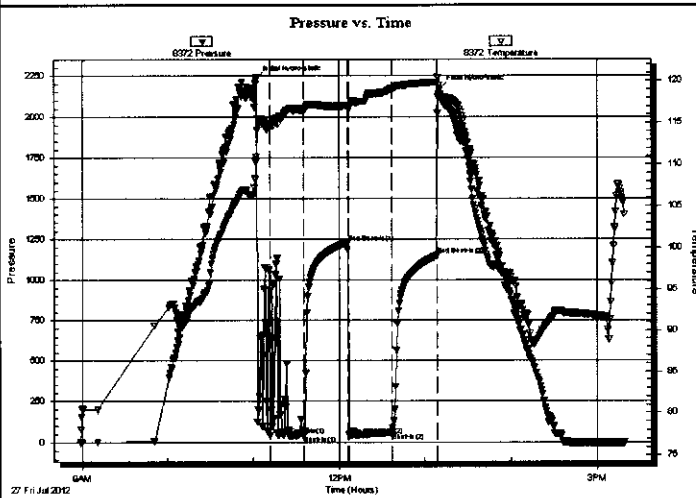
Time Off Btm: 2012.07.27 @ 13:10:20

TEST COMMENT: IF:(30min) Weak, intermittent surface blow . Flushed, surged, surface blow .

IS:(30min) No Return

FF:(30min) Surface blow

FS:(30min) No Return



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2230.24	110.29	Initial Hydro-static
10	43.68	114.64	Open To Flow (1)
34	44.92	116.54	Shut-In(1)
64	1230.93	117.07	End Shut-In(1)
65	45.95	116.72	Open To Flow (2)
95	60.28	119.01	Shut-In(2)
127	1150.92	119.85	End Shut-In(2)
129	2168.59	118.21	Final Hydro-static

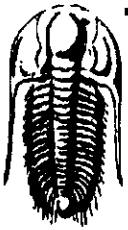
Recovery

Length (ft)	Description	Volume (bbl)
110.00	HOCGM g=5% o=45% m=50%	1.27

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47903

DST#: 2

ATTN: Marc Downing

Test Start: 2012.07.27 @ 08:59:05

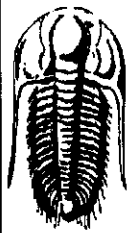
Tool Information

Drill Pipe:	Length: 4319.00 ft	Diameter: 3.80 inches	Volume: 60.58 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: 22000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.73 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4355.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 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			4328.00	
Shut In Tool	5.00			4333.00	
Hydraulic tool	5.00			4338.00	
Jars	5.00			4343.00	
Safety Joint	3.00			4346.00	
Packer	5.00			4351.00	28.00 Bottom Of Top Packer
Packer	4.00			4355.00	
Stubb	1.00			4356.00	
Recorder	0.00	8017	Inside	4356.00	
Recorder	0.00	8372	Outside	4356.00	
Perforations	6.00			4362.00	
Bullnose	3.00			4365.00	10.00 Bottom Packers & Anchor

Total Tool Length: 38.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47903

DST#: 2

ATTN: Marc Dow ning

Test Start: 2012.07.27 @ 08:59:05

Mud and Cushion Information

Mud Type:		Cushion Type:		Oil API:	deg API
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.34 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
110.00	HOCGM g=5% o=45% m=50%	1.270

Total Length: 110.00 ft Total Volume: 1.270 bbl

Num Fluid Samples: 0

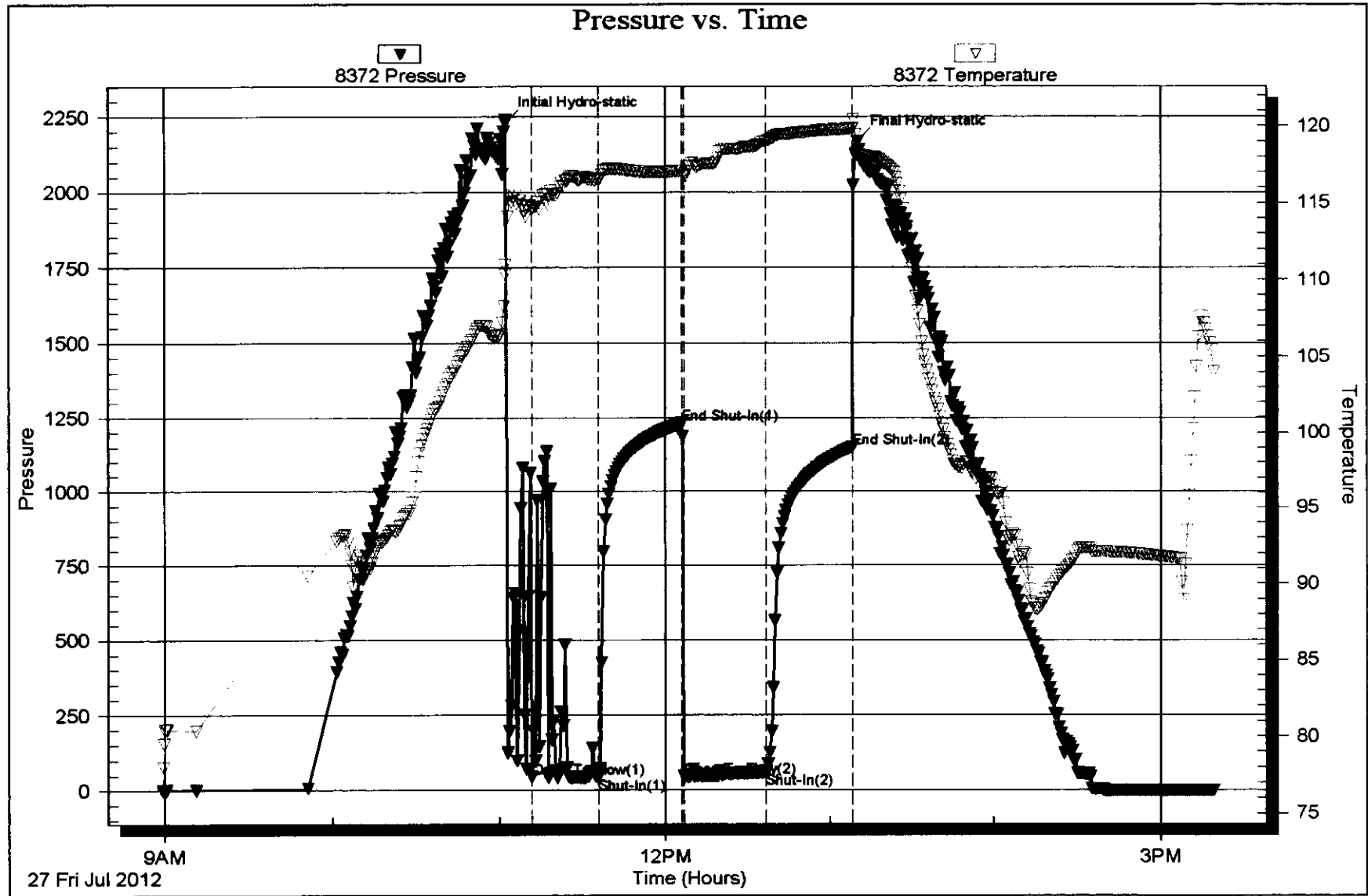
Num Gas Bombs: 0

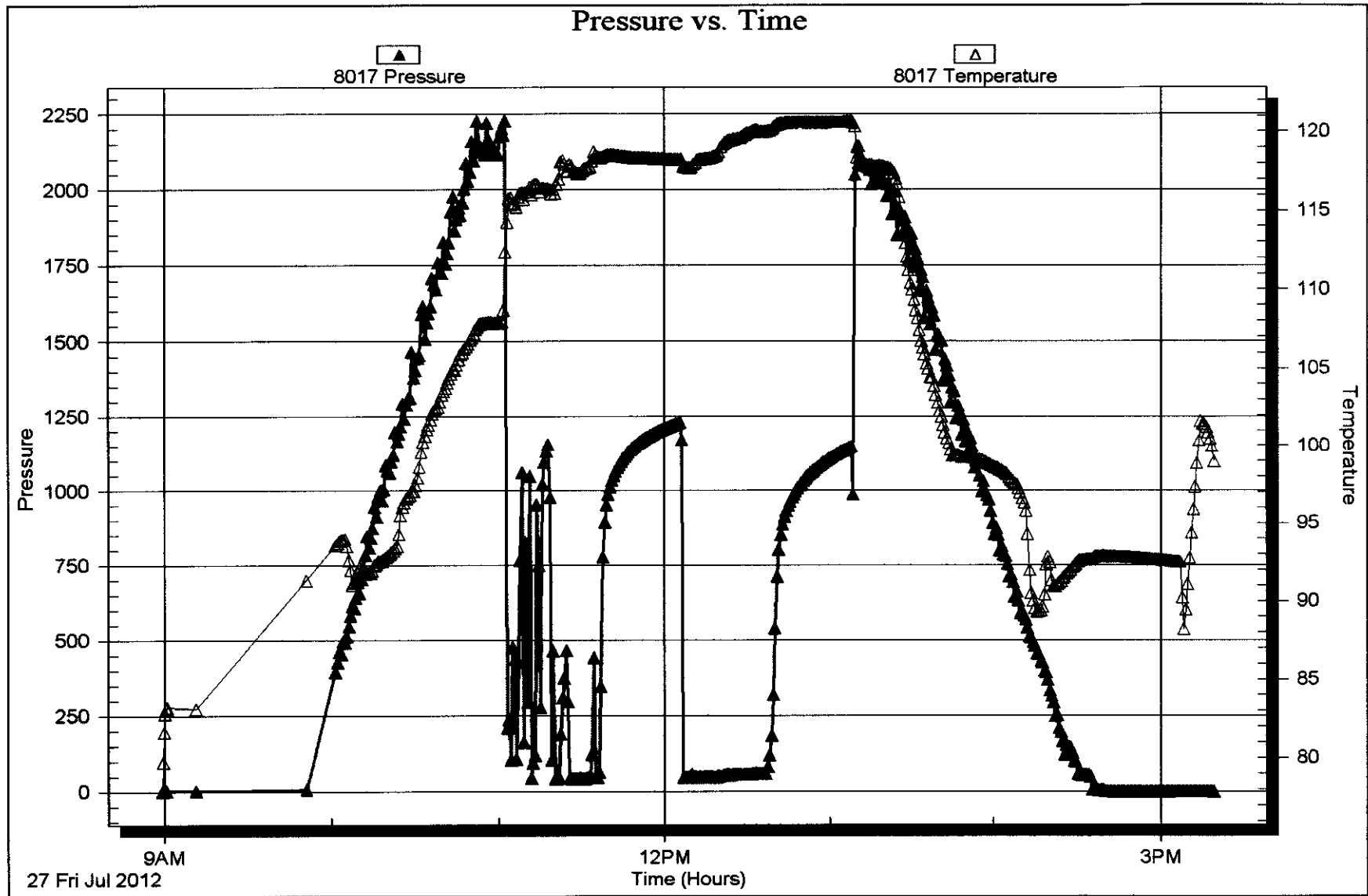
Serial #:

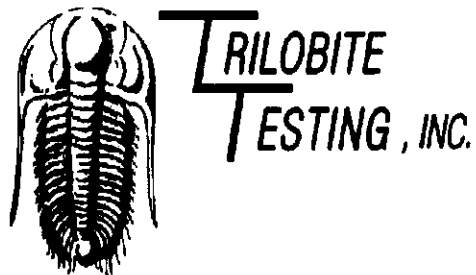
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Galen #1-30

30-20s-20w Pawnee,KS

Start Date: 2012.07.27 @ 22:22:05

End Date: 2012.07.28 @ 04:13:59

Job Ticket #: 47904 DST #: 3

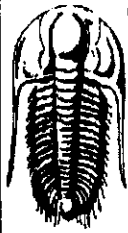
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.09 @ 11:36:19

Downing Nelson Oil Company
30-20s-20w Pawnee,KS
Galen #1-30
DST # 3
Miss
2012.07.27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47904

DST#: 3

ATTN: Marc Dow ning

Test Start: 2012.07.27 @ 22:22:05

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 04:13:59

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 39

Interval: **4358.00 ft (KB) To 4373.00 ft (KB) (TVD)**

Reference Elevations: 2200.00 ft (KB)

Total Depth: 4373.00 ft (KB) (TVD)

2192.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

Serial #: 8372 Outside

Press@RunDepth: 1356.46 psig @ 4359.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.27

End Date: 2012.07.28

Last Calib.: 2012.07.28

Start Time: 22:22:05

End Time: 04:13:59

Time On Btm: 2012.07.28 @ 00:17:20

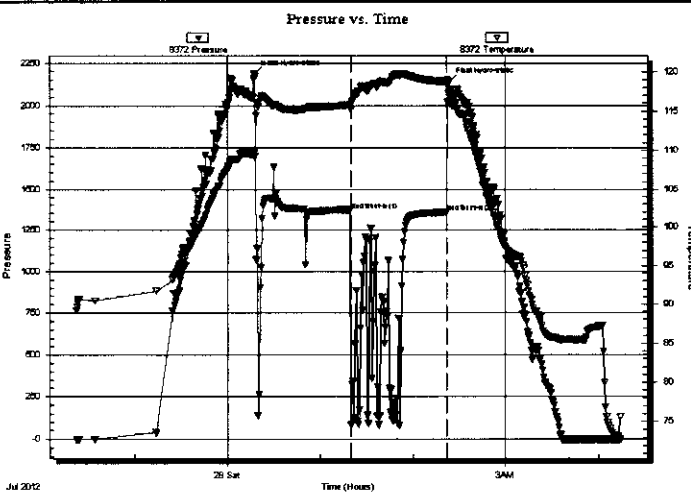
Time Off Btm: 2012.07.28 @ 02:23:40

TEST COMMENT: IF:(30min) Weak, intermittent blow , Died in 8 min. Flushed, surged, died in 2 min.

IS:(30min) No Return

FF:(30min) No Blow , Flushed, Weak surge, No Blow

FS:(30min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2186.39	109.62	Initial Hydro-static
63	1370.54	115.83	End Shut-In(1)
125	1356.46	118.74	End Shut-In(2)
127	2140.83	116.22	Final Hydro-static

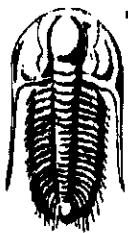
Recovery

Length (ft)	Description	Volume (bbl)
95.00	Heavy Mud	1.06

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47904

DST#: 3

ATTN: Marc Downing

Test Start: 2012.07.27 @ 22:22:05

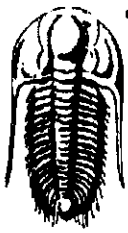
Tool Information

Drill Pipe:	Length: 4317.00 ft	Diameter: 3.80 inches	Volume: 60.56 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: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 60.71 bbl</u>	Tool Chased 10.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4358.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool Slid 10 ft. Causing Tool to plug

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4331.00	
Shut In Tool	5.00			4336.00	
Hydraulic tool	5.00			4341.00	
Jars	5.00			4346.00	
Safety Joint	3.00			4349.00	
Packer	5.00			4354.00	28.00 Bottom Of Top Packer
Packer	4.00			4358.00	
Stubb	1.00			4359.00	
Recorder	0.00	8017	Inside	4359.00	
Recorder	0.00	8372	Outside	4359.00	
Perforations	11.00			4370.00	
Bullnose	3.00			4373.00	15.00 Bottom Packers & Anchor

Total Tool Length: 43.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47904

DST#: 3

ATTN: Marc Downing

Test Start: 2012.07.27 @ 22:22:05

Mud and Cushion Information

Mud Type:		Cushion Type:		Oil API:	deg API
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.37 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

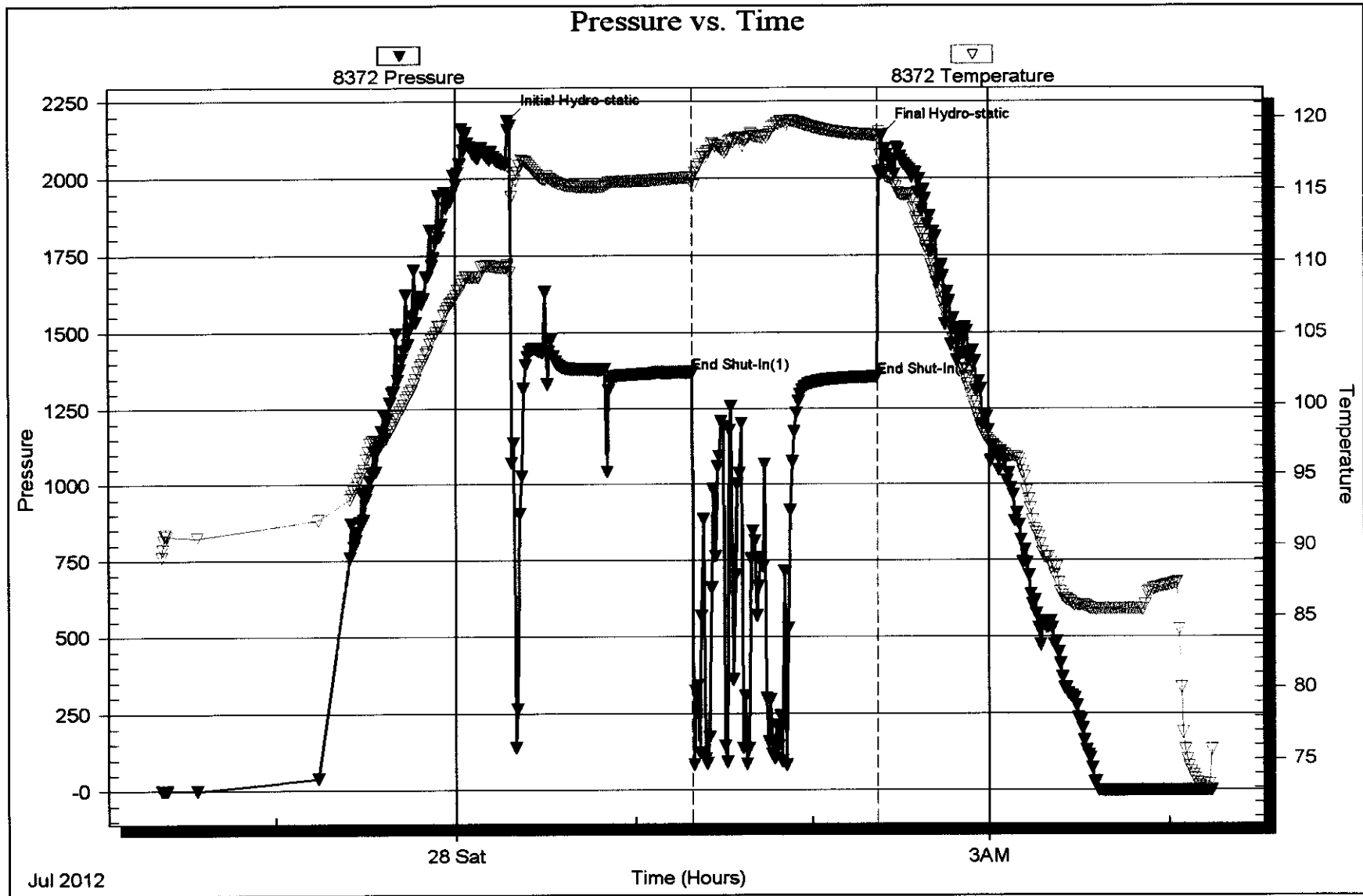
Length ft	Description	Volume bbl
95.00	Heavy Mud	1.059

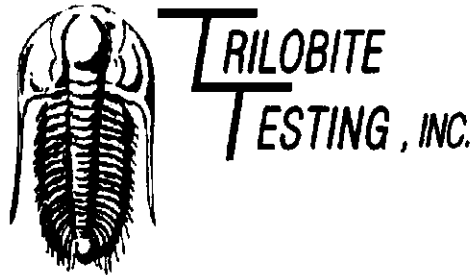
Total Length: 95.00 ft Total Volume: 1.059 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Galen #1-30

30-20s-20w Pawnee,KS

Start Date: 2012.07.28 @ 11:01:05

End Date: 2012.07.28 @ 19:22:20

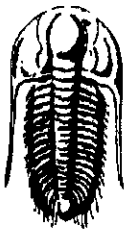
Job Ticket #: 47905 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.09 @ 11:35:31



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47905

DST#: 4

ATTN: Marc Downing

Test Start: 2012.07.28 @ 11:01:05

GENERAL INFORMATION:

Formation: **Miss**

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

Time Tool Opened: 13:43:30

Time Test Ended: 19:22:20

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

Tester: **Andy Carreira**

Unit No: **39**

Interval: 4314.00 ft (KB) To 4373.00 ft (KB) (TVD)

Reference Elevations: **2200.00 ft (KB)**

Total Depth: **4373.00 ft (KB) (TVD)**

2192.00 ft (CF)

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

KB to GR/CF: 8.00 ft

Serial #: 8372 Outside

Press@RunDepth: **213.50 psig @ 4321.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2012.07.28**

End Date: **2012.07.28**

Last Calib.: **2012.07.28**

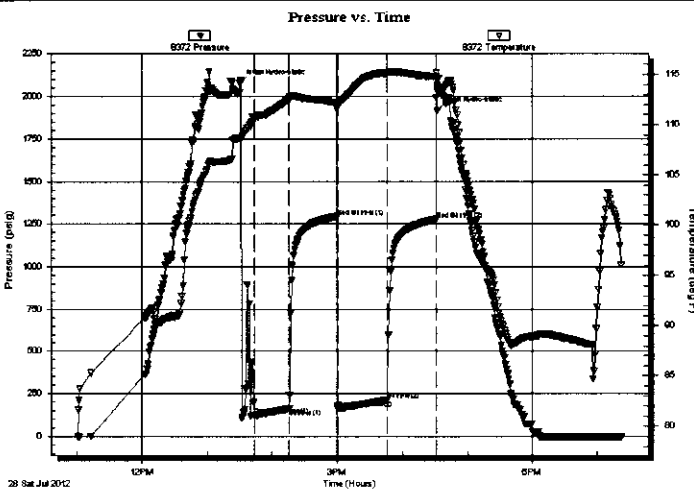
Start Time: **11:01:05**

End Time: **19:22:20**

Time On Btm: **2012.07.28 @ 13:30:50**

Time Off Btm: **2012.07.28 @ 16:32:20**

TEST COMMENT: IF:(45min) Fair, 2.5" blow
ISl:(45min) No Return
FF:(45min) Half inch blow
FSl:(45min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2078.04	108.67	Initial Hydro-static
13	123.55	110.76	Open To Flow (1)
46	164.42	112.53	Shut-In(1)
90	1290.35	112.24	End Shut-In(1)
90	163.78	111.92	Open To Flow (2)
136	213.50	115.05	Shut-In(2)
181	1273.36	114.80	End Shut-In(2)
182	1918.93	113.68	Final Hydro-static

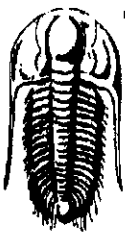
Recovery

Length (ft)	Description	Volume (bbl)
410.00	OCGM g=10% o=10% m=80%	5.48

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Company

30-20s-20w Pawnee, KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47905 **DST#: 4**

ATTN: Marc Downing

Test Start: 2012.07.28 @ 11:01:05

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:43:30

Time Test Ended: 19:22:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 39

Interval: 4314.00 ft (KB) To 4373.00 ft (KB) (TVD)

Total Depth: 4373.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2200.00 ft (KB)

2192.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8017 Inside

Press@RunDepth: psig @ 4321.00 ft (KB)

Start Date: 2012.07.28

End Date: 2012.07.28

Capacity: 8000.00 psig

Last Calib.: 2012.07.28

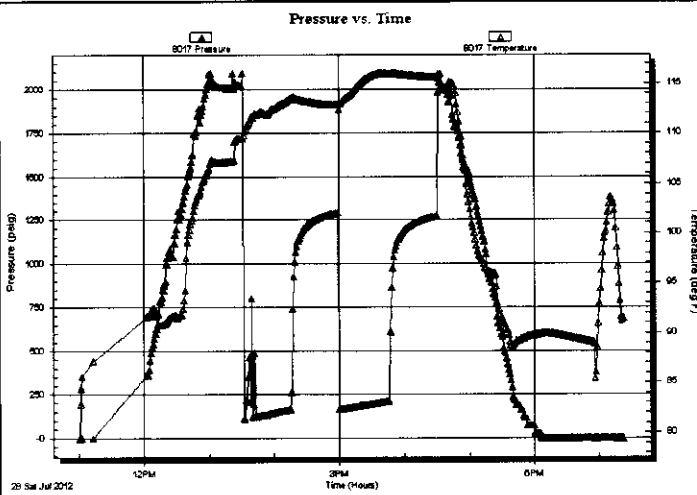
Start Time: 11:01:05

End Time: 19:22:20

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:(45min) Fair, 2.5" blow
IS:(45min) No Return
FF:(45min) Half inch blow
FS:(45min) No Return



PRESSURE SUMMARY

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

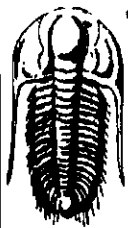
Recovery

Length (ft)	Description	Volume (bbl)
410.00	OCCM g=10% o=10% m=80%	5.48

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47905

DST#: 4

ATTN: Marc Downing

Test Start: 2012.07.28 @ 11:01:05

Tool Information

Drill Pipe:	Length: 4286.00 ft	Diameter: 3.80 inches	Volume: 60.12 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: 24000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.27 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4314.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	87.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Slid 5ft to Bridge. Tool opened on bridge packers failed. 2nd attempt tool opened on bridge & slid 15ft to bottom. Ran test.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4287.00	
Shut In Tool	5.00			4292.00	
Hydraulic tool	5.00			4297.00	
Jars	5.00			4302.00	
Safety Joint	3.00			4305.00	
Packer	5.00			4310.00	28.00 Bottom Of Top Packer
Packer	4.00			4314.00	
Stubb	1.00			4315.00	
Perforations	5.00			4320.00	
Change Over Sub	1.00			4321.00	
Recorder	0.00	8017	Inside	4321.00	
Recorder	0.00	8372	Outside	4321.00	
Drill Pipe	31.00			4352.00	
Change Over Sub	1.00			4353.00	
Perforations	17.00			4370.00	
Bullnose	3.00			4373.00	59.00 Bottom Packers & Anchor
Total Tool Length:	87.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning Nelson Oil Company

30-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

Galen #1-30

Job Ticket: 47905

DST#: 4

ATTN: Marc Dow ning

Test Start: 2012.07.28 @ 11:01:05

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:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.18 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	8000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
410.00	OCGM g=10% o=10% m=80%	5.478

Total Length: 410.00 ft Total Volume: 5.478 bbl

Num Fluid Samples: 0

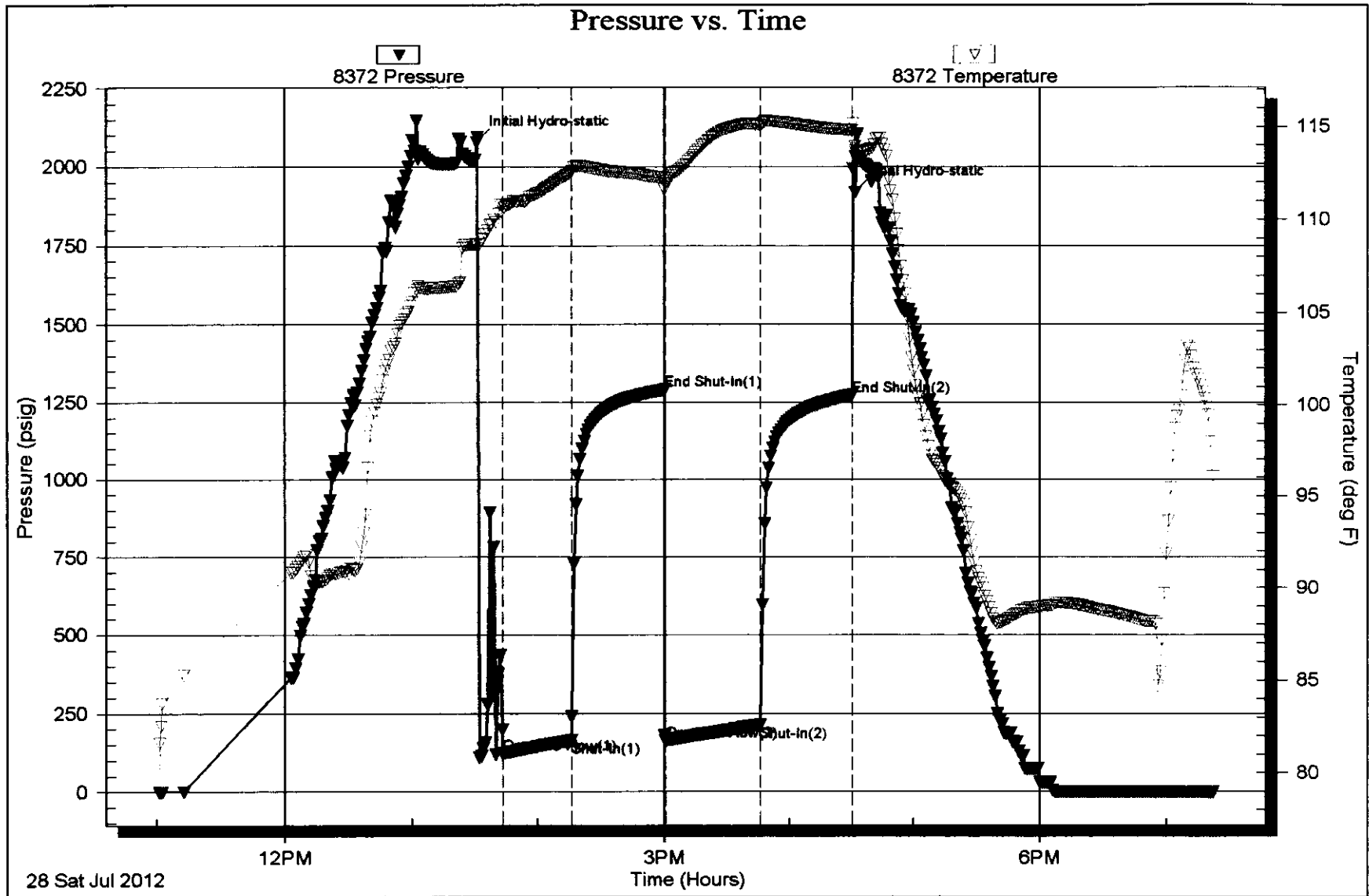
Num Gas Bombs: 0

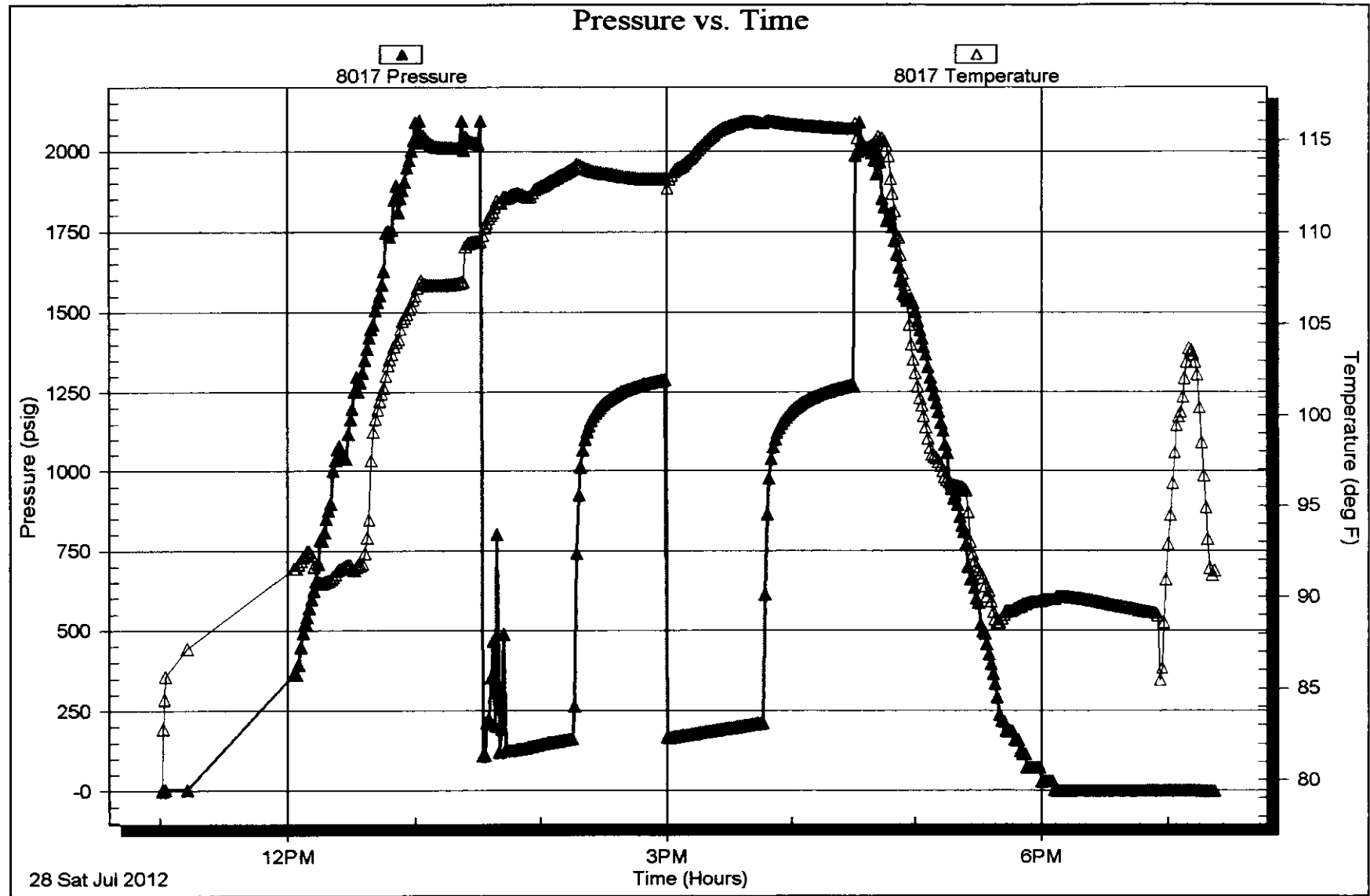
Serial #:

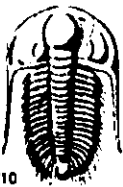
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47902

Well Name & No. GAZEN 1-30 Test No. 1 Date 7-26-12
 Company DNOC Elevation 2200 KB 2192 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. MARC DOWNING Rig DISCOVERY #4
 Location: Sec. 30 Twp. 20S Rge. 20W Co. TAWNEE State KS

Interval Tested 4314 - 4355 Zone Tested MISS
 Anchor Length 41 Drill Pipe Run 4286 Mud Wt. 9
 Top Packer Depth 4309 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 4314 Wt. Pipe Run 0 WL 10.4
 Total Depth 4355 Chlorides 4000 ppm System LCM 25

Blow Description FP: Weak surface blow
FSB: No Return
FP: Weak surface blow
FSB: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>95</u>	<u>HOC GM</u>	<u>5</u>	<u>25</u>	<u>70</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 95' BHT 112° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 2299
- (B) First Initial Flow 23
- (C) First Final Flow 45
- (D) Initial Shut-In 1130
- (E) Second Initial Flow 44
- (F) Second Final Flow 60
- (G) Final Shut-In 1051
- (H) Final Hydrostatic 2226

- Test _____
- Jars 250
- Safety Joint 75
- Circ Sub _____
- Hourly Standby _____
- Mileage 118 RT 182.90
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____

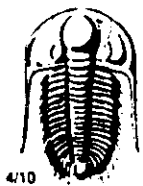
T-On Location 18:41
 T-Started 20:31
 T-Open 22:28
 T-Pulled 00:28
 T-Out 02:20

Comments Ness City
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1757.90
 MP/DST Disc't _____

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

Sub Total 1757.90
 Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47903

Well Name & No. GOLDEN 1-30 Test No. 2 Date 7-27-12
 Company DNOC Elevation 2200 KB 2192 GL
 Address PO BOX 1019 Hays KS 67601
 Co. Rep / Geo. _____ Rig D. SCOVERY #4
 Location: Sec. 30 Twp. 20S Rge. 20W Co. RAWNEE State KS

Interval Tested 4355-4365 Zone Tested Miss
 Anchor Length 10 Drill Pipe Run 4319 Mud Wt. 9.5
 Top Packer Depth 4350 Drill Collars Run 30 Vis 60
 Bottom Packer Depth 4355 Wt. Pipe Run 0 WL 10.4
 Total Depth 4365 Chlorides 8000 ppm System LCM 2.5

Blow Description BF: Weak, intermittent surface blow, flushed, surged, surface blow
FF: No Return
FF: Surface blow
FSL: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>110</u>	<u>HOCGM</u>	<u>5</u>	<u>45</u>	<u>50</u>	<u>50</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

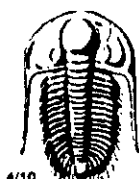
Rec Total 110' BHT 119' Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2230 Test _____ T-On Location 08:16
 (B) First Initial Flow 43 Jars 250 _____ T-Started 08:59
 (C) First Final Flow 44 Safety Joint 75 _____ T-Open 11:05
 (D) Initial Shut-In 1230 Circ Sub _____ T-Pulled 13:05
 (E) Second Initial Flow 45 Hourly Standby _____ T-Out 15:19
 (F) Second Final Flow 60 Mileage 118RT 182.90 _____ Comments _____
 (G) Final Shut-In 1150 Sampler _____ Ness City
 (H) Final Hydrostatic 2168 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1757.90
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1757.90

Approved By _____

Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47904

Well Name & No. Gal/zn 1-30 Test No. 3 Date 7-27-12
 Company DNOC Elevation 2200 KB 2192 GL
 Address PO Box 1019 Hays, Ks. 67601
 Co. Rep / Geo. MaRC Downing Rig Discovery #4
 Location: Sec. 30 Twp. 20s Rge. 20w Co. PAWNEE State Ks

Interval Tested 4358-4373 Zone Tested Miss
 Anchor Length 15' Drill Pipe Run 4317 Mud Wt. 9.5
 Top Packer Depth 4353 Drill Collars Run 30 Vis 60
 Bottom Packer Depth 4358 Wt. Pipe Run A WL 10.4
 Total Depth 4373 Chlorides 8000 ppm System LCM 2.5

Blow Description IF: Weak intermittent blow, Died in 8 min, Flushed, surged, died in 2 min
ISL: NO Return
FF: NO Blow, Flushed, weak surge, NO blow
PSL: NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>95</u>	<u>Heavy Mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 95 BHT 118° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2186
 (B) First Initial Flow —
 (C) First Final Flow —
 (D) Initial Shut-In 1370
 (E) Second Initial Flow —
 (F) Second Final Flow —
 (G) Final Shut-In 1356
 (H) Final Hydrostatic 2140

Test 1050
 Jars
 Safety Joint 75
 Circ Sub
 Hourly Standby
 Mileage 118RT 182.90
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1557.90

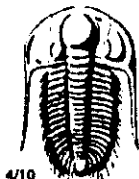
T-On Location 21:20
 T-Started 22:22
 T-Open 00:20
 T-Pulled 02:20
 T-Out 04:15

Comments Misrun - Plugged
Tool slid 10 ft
Shut-ins invalid
Ness City
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1557.90
 MP/DST Disc't _____

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

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

1025
13.50

NO. 47905

Well Name & No. Galen 1-30 Test No. 4 Date 7-28-12
 Company DNOC Elevation 2200 KB 2192 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. MARC DOWNING Rig Discovery 4
 Location: Sec. 30 Twp. 20S Rge. 20W Co. PAWNEE State KS

Interval Tested 4314-4373 Zone Tested MISS.
 Anchor Length 59 Drill Pipe Run 4286 Mud Wt. 8.7
 Top Packer Depth 4309 Drill Collars Run 30 Vis 50
 Bottom Packer Depth 4314 Wt. Pipe Run - WL 9.2
 Total Depth 4373 Chlorides 8000 ppm System LCM 2 1/2

Blow Description IF: FAIR, 2' blow
ISI: NO RETURN
FF: ~~NO~~ 2' blow
FSI: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>410</u>	<u>0 CGM</u>	<u>10</u>	<u>10</u>		<u>80</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 410' BHT 118' Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 278 Test _____ T-On Location _____
 (B) First Initial Flow 123 Jars 250 T-Started 11:01
 (C) First Final Flow 164 Safety Joint 75 T-Open 13:30
 (D) Initial Shut-In 1290 Circ Sub _____ T-Pulled 16:30
 (E) Second Initial Flow 163 Hourly Standby _____ T-Out 19:00
 (F) Second Final Flow 213 Mileage _____ Comments stayd on loc between
 (G) Final Shut-In 1273 Sampler _____ DST 3 & 4.
 (H) Final Hydrostatic 1918 Straddle _____ 31.2 20 FT.

Initial Open 45 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Shale Packer _____ Ruined Packer _____
 Final Flow 45 Extra Packer _____ Extra Copies _____
 Final Shut-In 45 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1575
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1575

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.

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