

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1325955
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

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
- Plug Back Conv. to GSW Conv. to Producer
- 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

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical 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

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1325955

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

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

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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 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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	DIETZ-ZWENGER UNIT 1-30
Doc ID	1325955

All Electric Logs Run

Sonic
Micro
Dual Induction
Compensated Density Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	DIETZ-ZWENGER UNIT 1-30
Doc ID	1325955

Tops

Name	Top	Datum
Top Anhydrite	1285'	+770
Base Anhydrite	1324'	+731
Topeka	3058'	-1003
Heebner	3315'	-1260
Toronto	3334'	-1279
LKC	3362'	-1307
BKC	3594'	-1539
Reworked Arbuckle	3650'	-1595
Arbuckle	3668	-1613

SWIFT Services, Inc.

DATE 9-28-16 PAGE NO. _____

ing-Nelson

WELL NO. 1-3D

LEASE Dieter-Zwenger

JOB TYPE shallow Surface

TICKET NO. 29464

WELL NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1800							On location
								8 5/8 CS9 R+D - 215' Pipe set to 215'
	2030							Break Circulation on ISTM
	2040	4.5					200	PUMP WTR SPACER
	2045	4.5	36				200	PUMP CEMENT - 150 SKS STANDARD - 2% GEL 3% Calcium Chloride 14.7 PPG
	2055	4.5	12.5				350	Displace CEMENT - Circulated 15 SKS CMT TO PIT
	2100							JOB COMPLETE THANKS David, Jon H, & ISAAC

SWIFT Services, Inc.

DATE 10-6-16 PAGE NO. 1

Winn-Nelson

WELL NO. 1-30

LEASE Dietz-Zwenger

JOB TYPE Two Stage

TICKET NO. 29473

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	400							On location
								RTD - 3767
								Pipe set @ 3759.35
								Shoe JT - 32.63 @ 3726
								Centralizers - 1, 3, 5, 7, 9, 11, 59
								Basket - 60
								D.V. TOOL - 60 @ 1257
	445							START Running Csg
	630							BREAK CIRCULATION on Bottom
	715	5	12			400		Pump MUD EVEL - 500 Gae
		5	20			400		Pump Kel Spall
	720	5	36			400		Pump 1st Stage CMT
								- 150 sks EA-2 @ 15.5 ppg
	735							Drop plug
	750	6	91			800		DISPLACE CMT
								- Lift - psi - 800 LAND PSI - 1500
	755							Drop Bomb
		2.5	16			0		Plug RAT Hole - 30 sks
		2.5	8			0		Plug Mouse Hole - 15 sks
	810					1200		Open D.V. TOOL
		5	75			400		Pump 2nd Stage CMT
	835							- 135 sks SMD @ 11.2 ppg
								Drop plug
	845	6	30			600		DISPLACE CMT - Lift - 600 Land - 1500
								- Circulated CMT 15 BBL into
								DISPLACEMENT -
								- 30 sks TO pit
								JOB Complete
								THANKS
								DAVID, JON H, & ISAAC



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.02 @ 11:24:17

End Date: 2016.10.02 @ 16:18:47

Job Ticket #: 61282 DST #: 1

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

Printed: 2016.10.05 @ 15:43:24



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

ATTN: Al Dow ning

Test Start: 2016.10.02 @ 11:24:17

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:32:17

Time Test Ended: 16:18:47

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3364.00 ft (KB) To 3394.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3394.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651 Inside

Press@RunDepth: 10.42 psig @ 3365.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.02 End Date: 2016.10.02

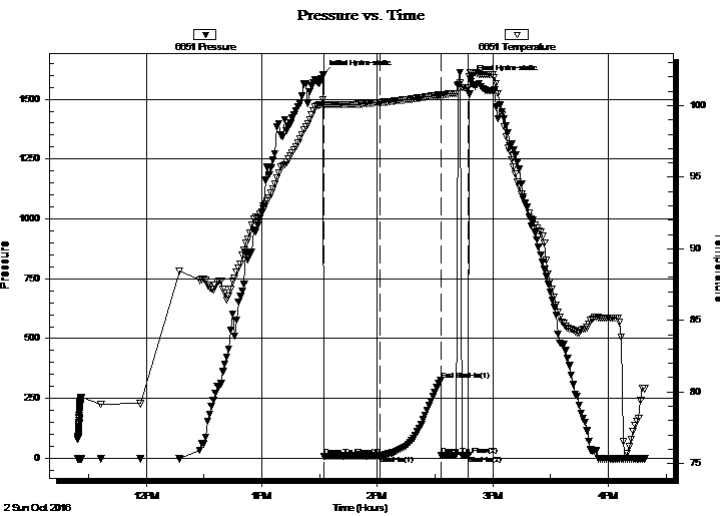
Last Calib.: 2016.10.02

Start Time: 11:24:18 End Time: 16:18:47

Time On Btm: 2016.10.02 @ 13:31:47

Time Off Btm: 2016.10.02 @ 14:48:17

TEST COMMENT: 30- IF- Surface blow died in 2 mins
30- IS- No blow
10- FF- No blow Flushed tool Surge died Pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1603.59	100.42	Initial Hydro-static
1	7.74	99.96	Open To Flow (1)
30	10.42	100.22	Shut-In(1)
61	326.32	100.75	End Shut-In(1)
62	10.96	100.60	Open To Flow (2)
76	12.40	101.28	Shut-In(2)
77	1583.90	102.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02

Gas Rates

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



DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis, KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

ATTN: Al Dow ning

Job Ticket: 61282 **DST#: 1**

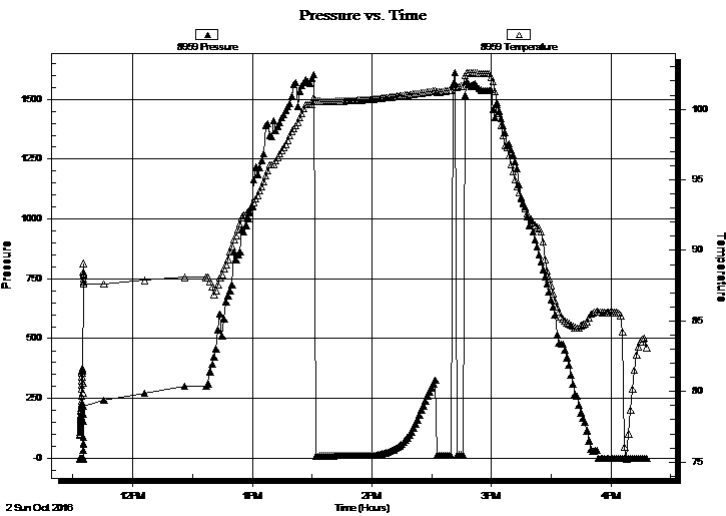
Test Start: 2016.10.02 @ 11:24:17

GENERAL INFORMATION:

Formation: LKC "C"	
Deviated: No Whipstock: ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 13:32:17	Tester: Brannan Lonsdale
Time Test Ended: 16:18:47	Unit No: 73
Interval: 3364.00 ft (KB) To 3394.00 ft (KB) (TVD)	Reference Elevations: 2055.00 ft (KB)
Total Depth: 3394.00 ft (KB) (TVD)	2047.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair	KB to GR/CF: 8.00 ft

Serial #: 8959	Outside	
Press@RunDepth: psig @ 3365.00 ft (KB)	Capacity: 8000.00 psig	
Start Date: 2016.10.02 End Date: 2016.10.02	Last Calib.: 2016.10.02	
Start Time: 11:33:22 End Time: 16:17:51	Time On Btm:	
	Time Off Btm:	

TEST COMMENT: 30- IF- Surface blow died in 2 mins
 30- IS- No blow
 10- FF- No blow Flushed tool Surge died Pulled tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02

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.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

ATTN: Al Dow ning

Test Start: 2016.10.02 @ 11:24:17

Tool Information

Drill Pipe:	Length: 3327.00 ft	Diameter: 3.82 inches	Volume: 47.16 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:	66000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3364.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	30.00 ft				
Tool Length:	50.00 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			3345.00	
Shut In Tool	5.00			3350.00	
Hydraulic tool	5.00			3355.00	
Packer	5.00			3360.00	20.00 Bottom Of Top Packer
Packer	4.00			3364.00	
Stubb	1.00			3365.00	
Recorder	0.00	6651	Inside	3365.00	
Recorder	0.00	8959	Outside	3365.00	
Perforations	26.00			3391.00	
Bullnose	3.00			3394.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61282

DST#: 1

ATTN: Al Dow ning

Test Start: 2016.10.02 @ 11:24:17

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:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

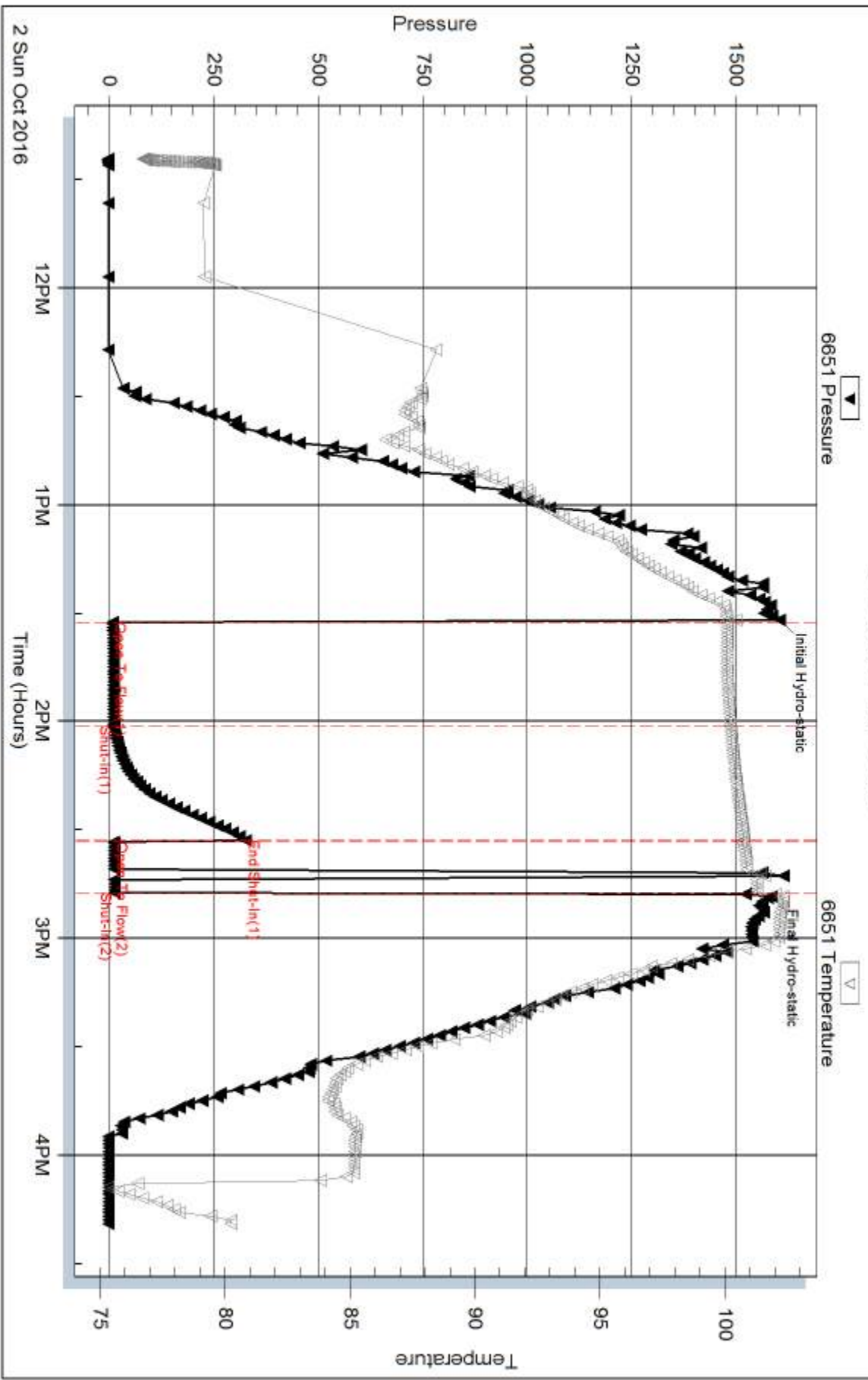
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

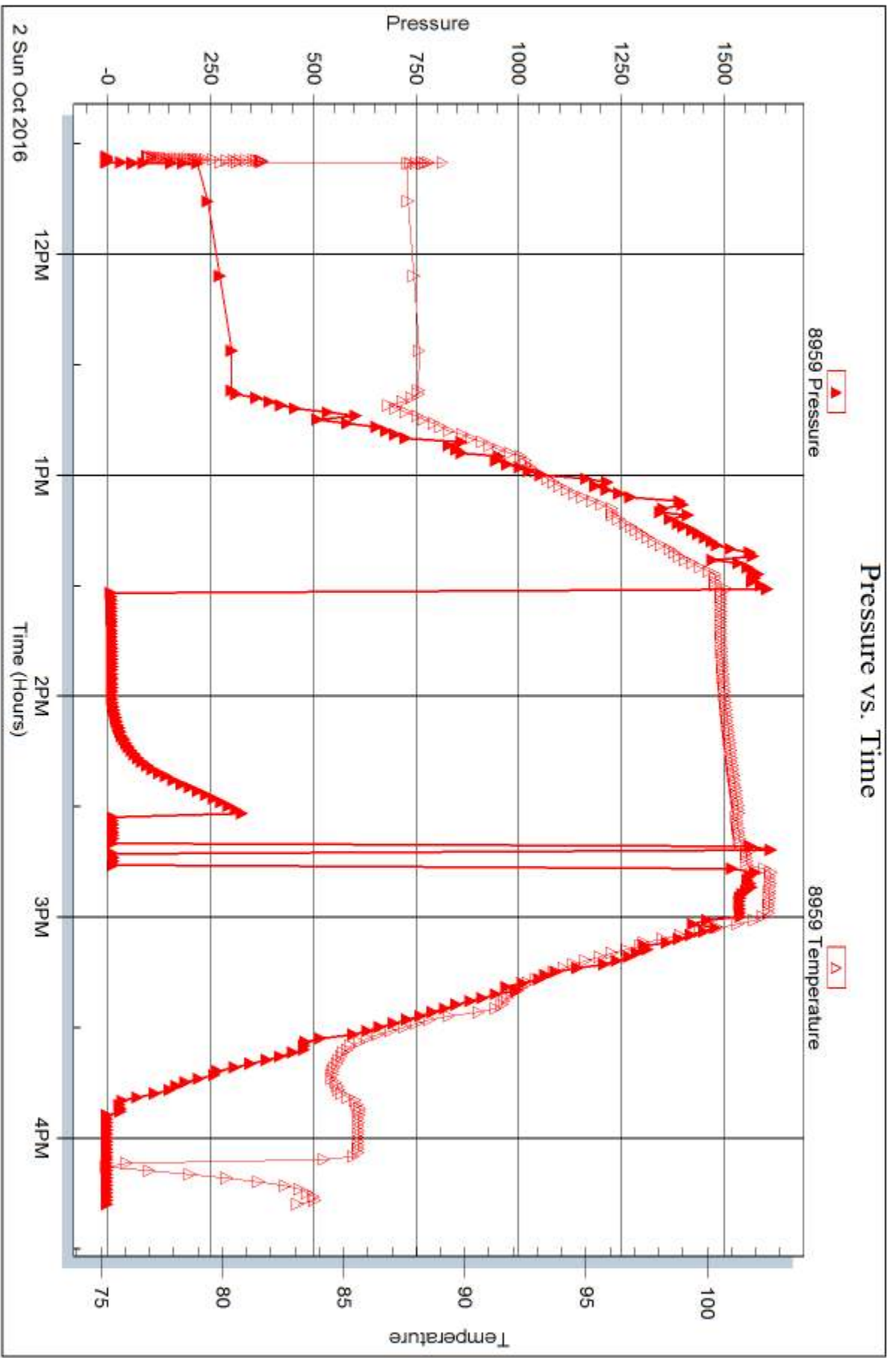


Serial #: 8959

Outside Dow nung-Nelson Oil Co. Inc.

Dietz-Zw enger #1-30

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.03 @ 00:28:04

End Date: 2016.10.03 @ 07:37:34

Job Ticket #: 61283 DST #: 2

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

Printed: 2016.10.05 @ 15:43:01

Downing-Nelson Oil Co. Inc.
30-14s-18w Ellis,KS
Dietz-Zwenger #1-30
DST # 2
LKC
2016.10.03



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283

DST#: 2

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 00:28:04

GENERAL INFORMATION:

Formation: **LKC**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:40:04
 Time Test Ended: 07:37:34
 Interval: **3411.00 ft (KB) To 3440.00 ft (KB) (TVD)**
 Total Depth: 3440.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2055.00 ft (KB)
 2047.00 ft (CF)
 KB to GR/CF: 8.00 ft

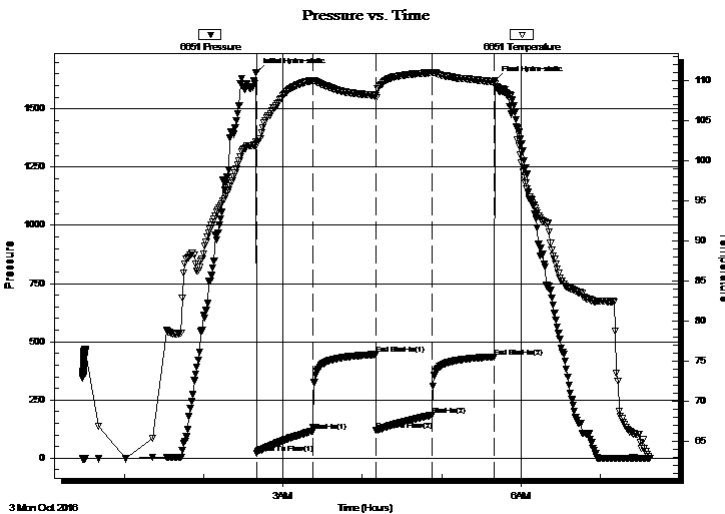
Serial #: 6651

Inside

Press@RunDepth: 185.15 psig @ 3412.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.03 End Date: 2016.10.03 Last Calib.: 2016.10.03
 Start Time: 00:28:05 End Time: 07:37:34 Time On Btm: 2016.10.03 @ 02:39:34
 Time Off Btm: 2016.10.03 @ 05:40:34

TEST COMMENT: 45- IF- BOB 22 mins
 45- IS- No blow
 45- FF- BOB 36 mins
 45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1656.76	102.35	Initial Hydro-static
1	20.06	102.08	Open To Flow (1)
43	117.06	110.03	Shut-In(1)
91	445.58	108.16	End Shut-In(1)
91	120.18	107.89	Open To Flow (2)
133	185.15	110.99	Shut-In(2)
180	435.43	109.85	End Shut-In(2)
181	1621.85	109.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
370.00	MW, 20%M 80%W	4.96

* 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.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283

DST#: 2

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 00:28:04

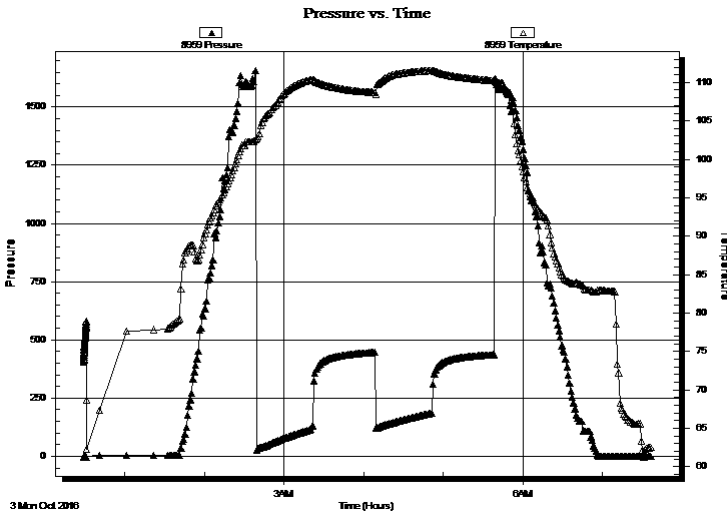
GENERAL INFORMATION:

Formation: **LKC**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 02:40:04 Tester: Brannan Lonsdale
 Time Test Ended: 07:37:34 Unit No: 73
 Interval: **3411.00 ft (KB) To 3440.00 ft (KB) (TVD)** Reference Elevations: 2055.00 ft (KB)
 Total Depth: 3440.00 ft (KB) (TVD) 2047.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8959 Outside
 Press@RunDepth: psig @ 3412.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.03 End Date: 2016.10.03 Last Calib.: 2016.10.03
 Start Time: 00:28:58 End Time: 07:36:27 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45- IF- BOB 22 mins
 45- IS- No blow
 45- FF- BOB 36 mins
 45- FS- No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
370.00	MW, 20%M 80%W	4.96

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283

DST#: 2

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 00:28:04

Tool Information

Drill Pipe:	Length: 3391.00 ft	Diameter: 3.82 inches	Volume: 48.07 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:	76000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3411.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	29.00 ft				
Tool Length:	49.00 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			3392.00	
Shut In Tool	5.00			3397.00	
Hydraulic tool	5.00			3402.00	
Packer	5.00			3407.00	20.00 Bottom Of Top Packer
Packer	4.00			3411.00	
Stubb	1.00			3412.00	
Recorder	0.00	6651	Inside	3412.00	
Recorder	0.00	8959	Outside	3412.00	
Perforations	25.00			3437.00	
Bullnose	3.00			3440.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61283

DST#: 2

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 00:28:04

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:

52000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 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
370.00	MW, 20%M 80%W	4.958

Total Length: 370.00 ft Total Volume: 4.958 bbl

Num Fluid Samples: 0

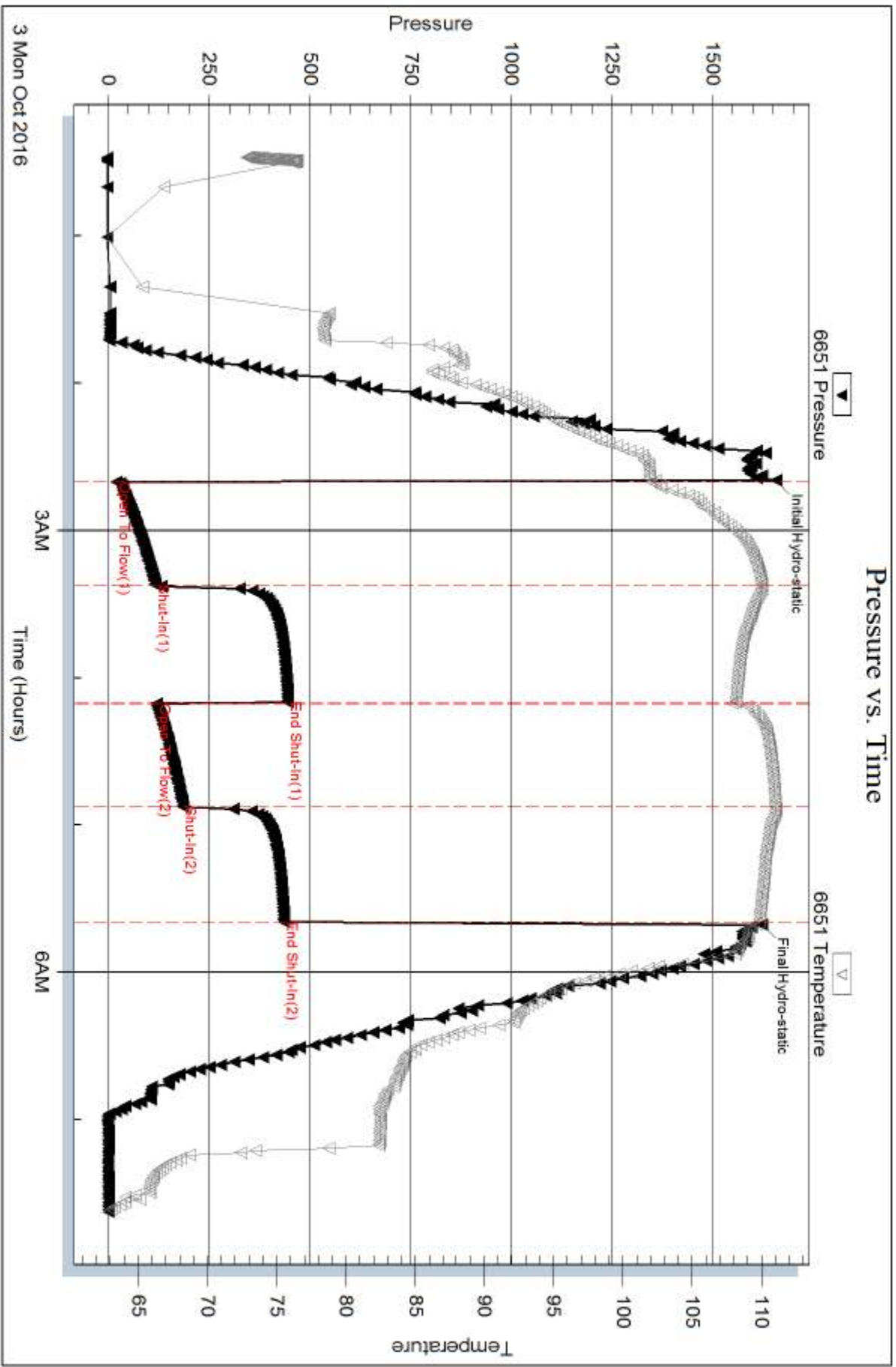
Num Gas Bombs: 0

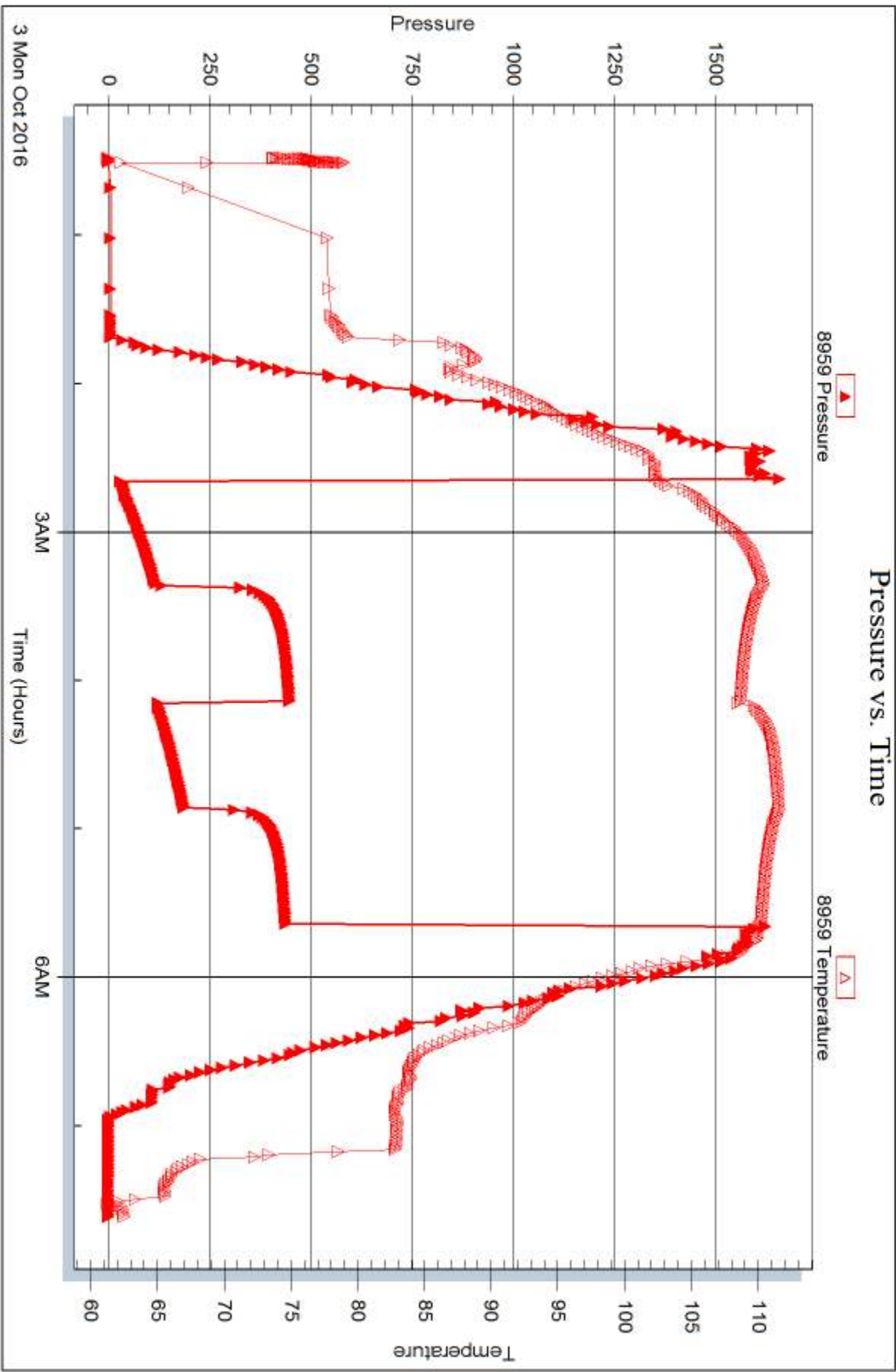
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .06@62deg







DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.03 @ 17:38:07

End Date: 2016.10.04 @ 01:21:07

Job Ticket #: 61284 DST #: 3

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

Printed: 2016.10.05 @ 15:42:37



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

GENERAL INFORMATION:

Formation: **LKC "H - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:07

Time Test Ended: 01:21:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3470.00 ft (KB) To 3522.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3522.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651

Inside

Press@RunDepth: 29.78 psig @ 3471.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.03

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time:

17:38:08

End Time:

01:21:07

Time On Btm:

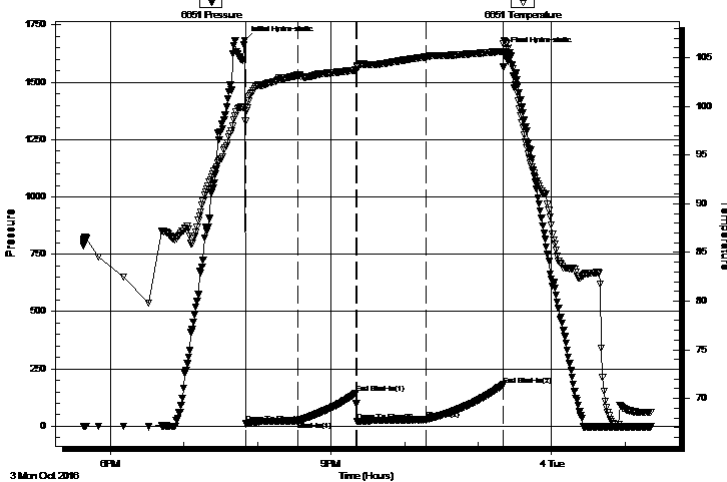
2016.10.03 @ 19:49:37

Time Off Btm:

2016.10.03 @ 23:21:07

TEST COMMENT: 45- IF- Weak blow built very slowly to 4"
45- IS- No blow
60- FF- Initial surge of 3" built slowly to 8 1/2"
60- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1680.61	99.82	Initial Hydro-static
1	11.31	98.46	Open To Flow (1)
44	23.77	103.20	Shut-In(1)
91	144.62	103.72	End Shut-In(1)
92	20.31	104.06	Open To Flow (2)
148	29.78	105.08	Shut-In(2)
211	180.52	105.66	End Shut-In(2)
212	1633.34	106.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
47.00	OCM, 20%O 80%M	0.38
0.00	143' 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.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284 **DST#: 3**

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

GENERAL INFORMATION:

Formation: **LKC "H - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:07

Time Test Ended: 01:21:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3470.00 ft (KB) To 3522.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3522.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8959 Outside

Press@RunDepth: psig @ 3471.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.03

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time: 17:39:00

End Time:

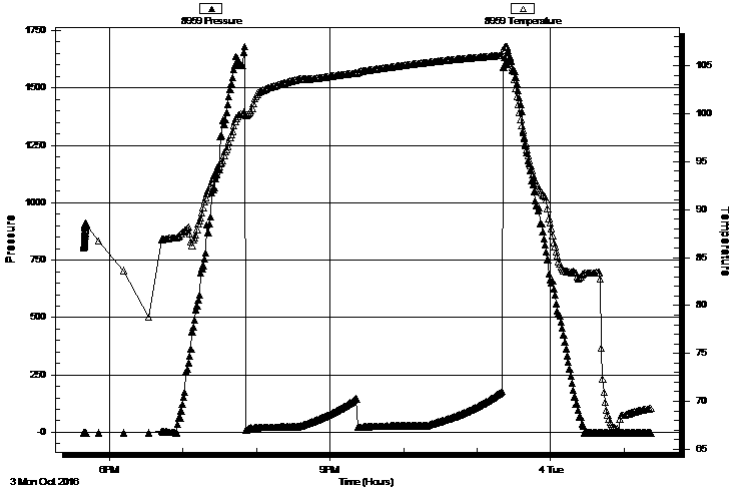
01:21:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 45- IF- Weak blow built very slowly to 4"
45- IS- No blow
60- FF- Initial surge of 3" built slowly to 8 1/2"
60- FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
47.00	OCM, 20%O 80%M	0.38
0.00	143' 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.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

Tool Information

Drill Pipe:	Length: 3423.00 ft	Diameter: 3.82 inches	Volume: 48.52 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 62000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3470.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	52.00 ft			
Tool Length:	72.00 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			3451.00	
Shut In Tool	5.00			3456.00	
Hydraulic tool	5.00			3461.00	
Packer	5.00			3466.00	20.00 Bottom Of Top Packer
Packer	4.00			3470.00	
Stubb	1.00			3471.00	
Recorder	0.00	6651	Inside	3471.00	
Recorder	0.00	8959	Outside	3471.00	
Perforations	15.00			3486.00	
Change Over Sub	1.00			3487.00	
Drill Pipe	31.00			3518.00	
Change Over Sub	1.00			3519.00	
Bullnose	3.00			3522.00	52.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61284

DST#: 3

ATTN: Al Dow ning

Test Start: 2016.10.03 @ 17:38:07

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: 47.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
47.00	OCM, 20%O 80%M	0.379
0.00	143' GIP	0.000

Total Length: 47.00 ft Total Volume: 0.379 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

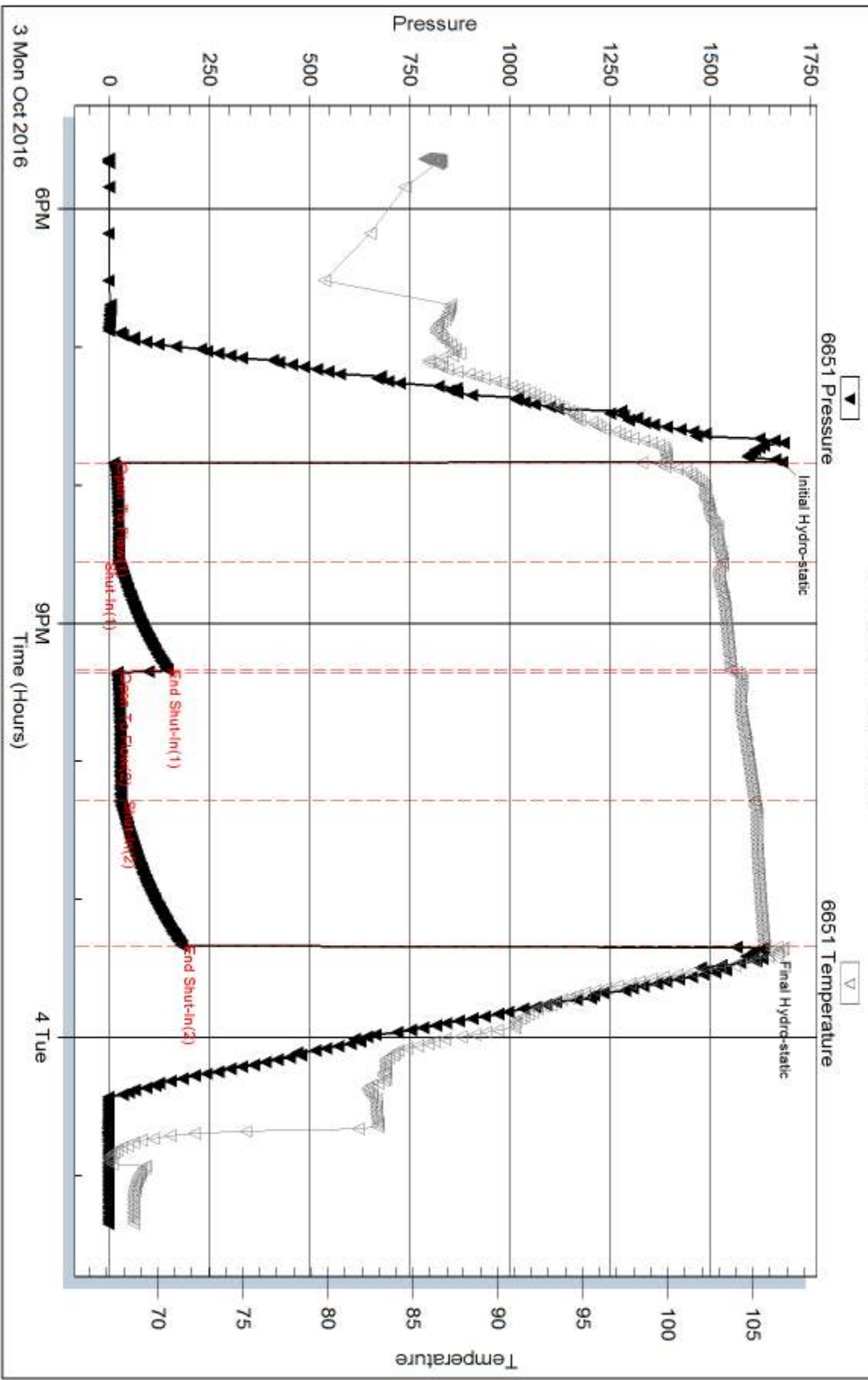
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

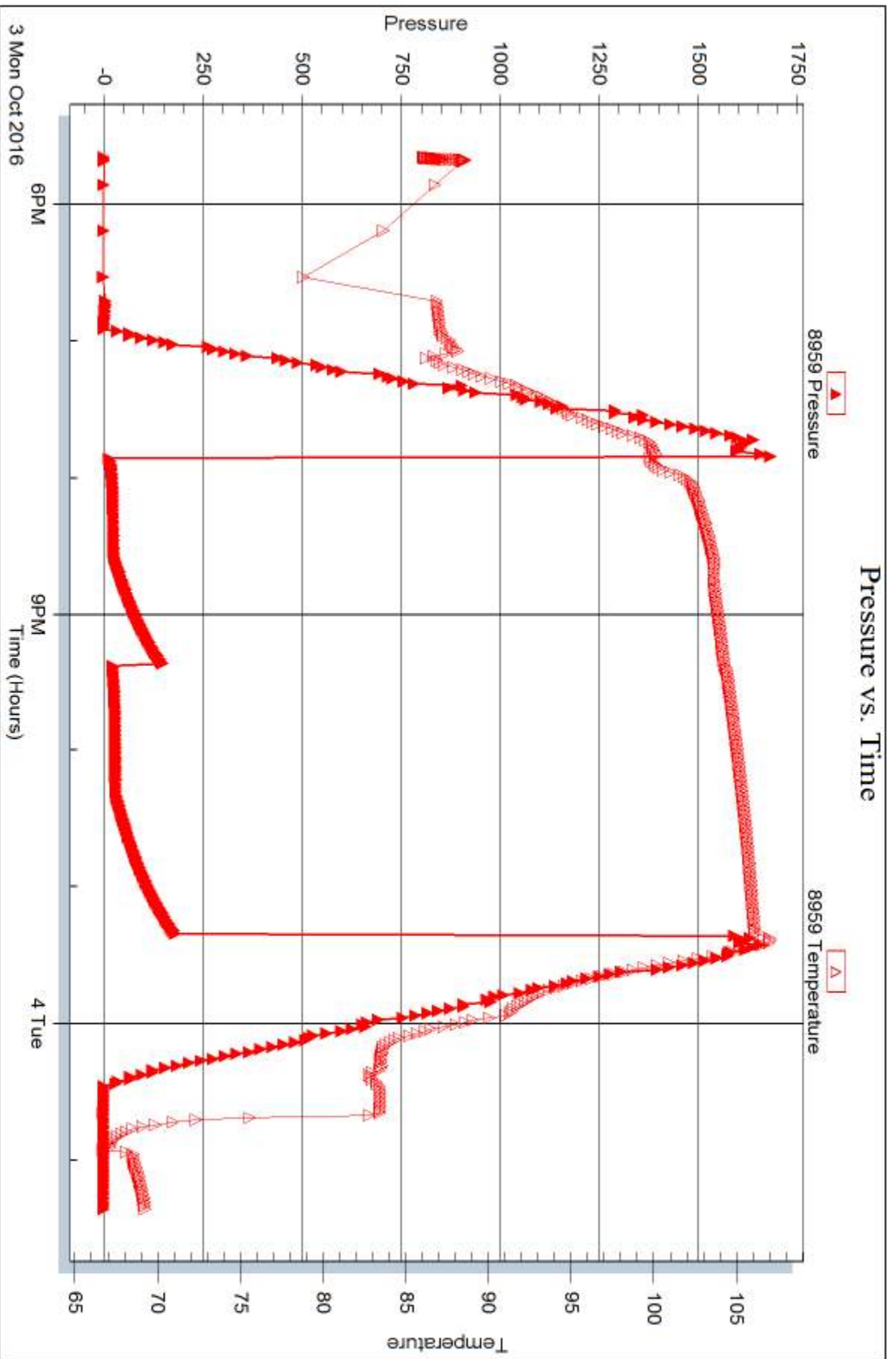


Serial #: 8959

Outside Dow nung-Nelson Oil Co. Inc.

Dietz-Zw enger #1-30

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 61284

Printed: 2016.10.05 @ 15:42:39



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.04 @ 07:37:26

End Date: 2016.10.04 @ 14:07:56

Job Ticket #: 61285 DST #: 4

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

Printed: 2016.10.05 @ 15:41:52



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

GENERAL INFORMATION:

Formation: **LKC "I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:33:56

Time Test Ended: 14:07:56

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3517.00 ft (KB) To 3546.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3546.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651

Inside

Press@RunDepth: 34.02 psig @ 3518.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.04

End Date:

2016.10.04

Last Calib.:

2016.10.04

Start Time: 07:37:27

End Time:

14:07:56

Time On Btm:

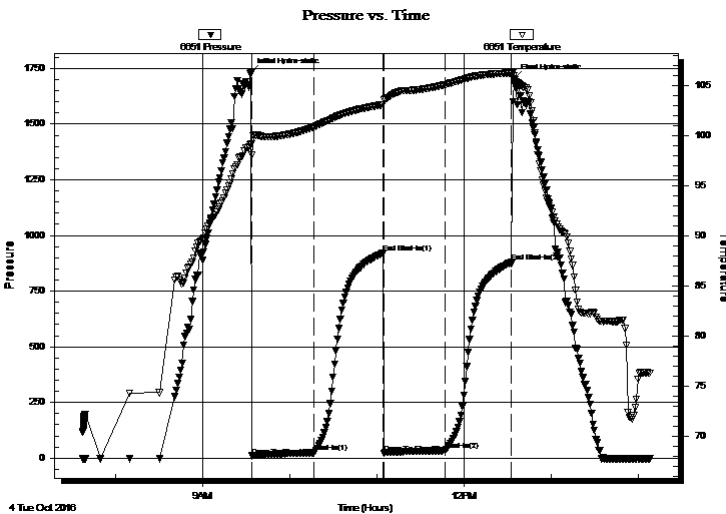
2016.10.04 @ 09:33:26

Time Off Btm:

2016.10.04 @ 12:34:26

TEST COMMENT: 45- IF- BOB 33 mins
45- IS- No blow
45- FF- Slow ly built to 10 1/2"
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1731.84	99.21	Initial Hydro-static
1	10.47	98.06	Open To Flow (1)
43	24.19	100.86	Shut-In(1)
91	919.69	103.08	End Shut-In(1)
92	20.49	103.54	Open To Flow (2)
134	34.02	105.08	Shut-In(2)
179	879.27	106.26	End Shut-In(2)
181	1703.48	106.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MW, 30%M 70%W	0.15
20.00	SGSWOCM, 5%G 5%W 20%O 70%M	0.27
10.00	CO	0.14
0.00	320' 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.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

ATTN: Al Dow ning

Job Ticket: 61285

DST#: 4

Test Start: 2016.10.04 @ 07:37:26

GENERAL INFORMATION:

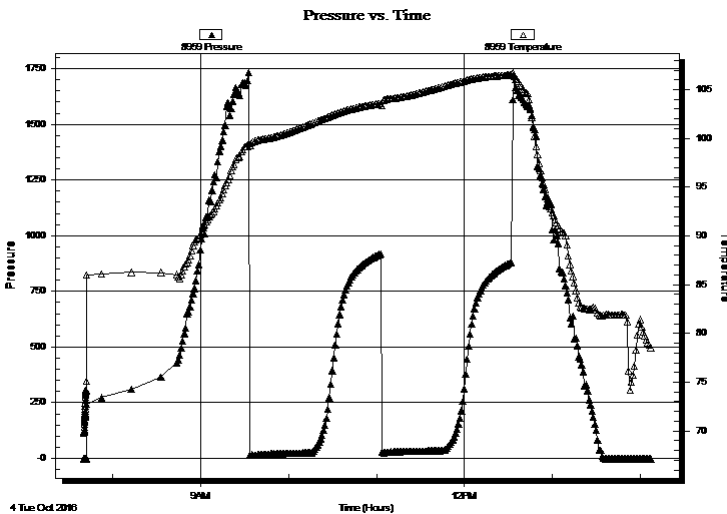
Formation: **LKC "I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:33:56
 Time Test Ended: 14:07:56
 Interval: **3517.00 ft (KB) To 3546.00 ft (KB) (TVD)**
 Total Depth: 3546.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2055.00 ft (KB)
 2047.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8959

Outside

Press@RunDepth: psig @ 3518.00 ft (KB)
 Start Date: 2016.10.04 End Date: 2016.10.04
 Start Time: 07:40:21 End Time: 14:07:20
 Capacity: 8000.00 psig
 Last Calib.: 2016.10.04
 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45- IF- BOB 33 mins
 45- IS- No blow
 45- FF- Slow ly built to 10 1/2"
 45- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MW, 30%M 70%W	0.15
20.00	SGSWOCM, 5%G 5%W 20%O 70%M	0.27
10.00	CO	0.14
0.00	320' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

Tool Information

Drill Pipe:	Length: 3486.00 ft	Diameter: 3.82 inches	Volume: 49.42 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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:	64000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3517.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	29.00 ft				
Tool Length:	49.00 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			3498.00	
Shut In Tool	5.00			3503.00	
Hydraulic tool	5.00			3508.00	
Packer	5.00			3513.00	20.00 Bottom Of Top Packer
Packer	4.00			3517.00	
Stubb	1.00			3518.00	
Recorder	0.00	6651	Inside	3518.00	
Recorder	0.00	8959	Outside	3518.00	
Perforations	25.00			3543.00	
Bullnose	3.00			3546.00	29.00 Bottom Packers & Anchor
Total Tool Length:	49.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61285

DST#: 4

ATTN: Al Dow ning

Test Start: 2016.10.04 @ 07:37:26

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:

58000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	MW, 30%M 70%W	0.148
20.00	SGSWOCM, 5%G 5%W 20%O 70%M	0.274
10.00	CO	0.142
0.00	320' GIP	0.000

Total Length: 60.00 ft Total Volume: 0.564 bbl

Num Fluid Samples: 0

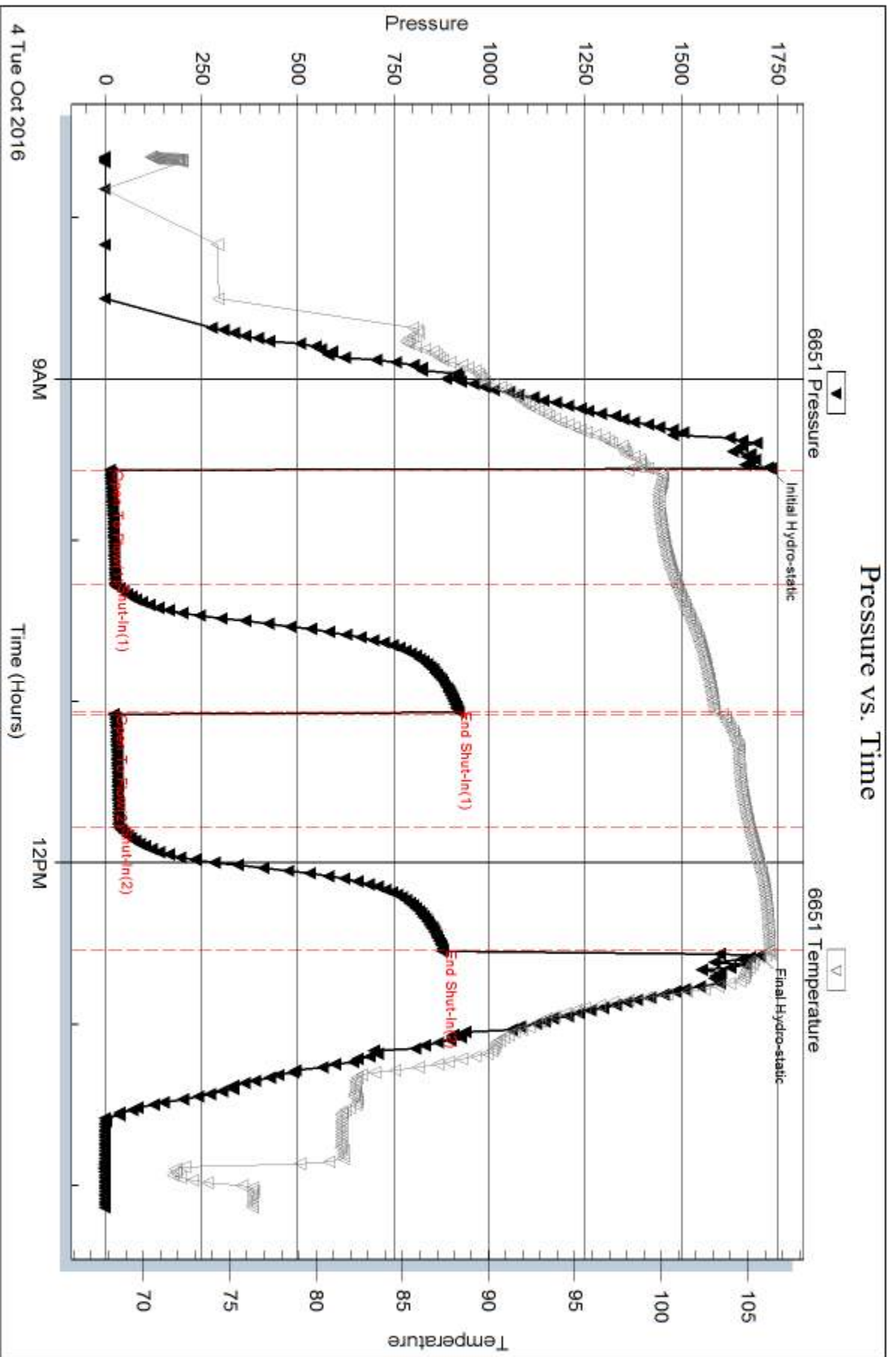
Num Gas Bombs: 0

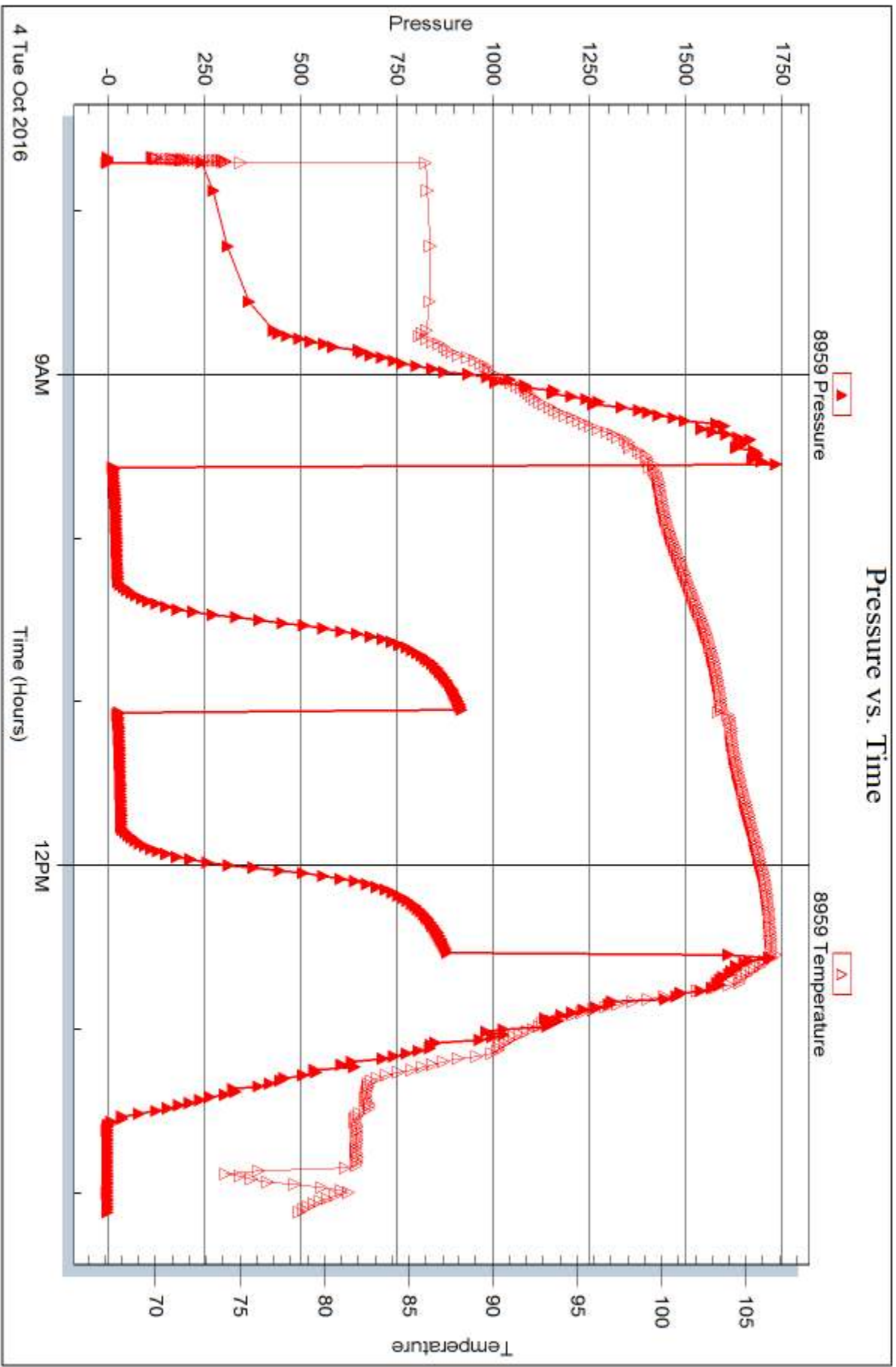
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .10@80deg







DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

Dietz-Zwenger #1-30

30-14s-18w Ellis,KS

Start Date: 2016.10.05 @ 01:34:21

End Date: 2016.10.05 @ 09:19:51

Job Ticket #: 61286 DST #: 5

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

Printed: 2016.10.05 @ 15:41:31



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:27:21

Time Test Ended: 09:19:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3634.00 ft (KB) To 3666.00 ft (KB) (TVD)

Reference Elevations: 2055.00 ft (KB)

Total Depth: 3666.00 ft (KB) (TVD)

2047.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6651 Inside

Press@RunDepth: 134.53 psig @ 3635.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.10.05 End Date: 2016.10.05

Last Calib.: 2016.10.05

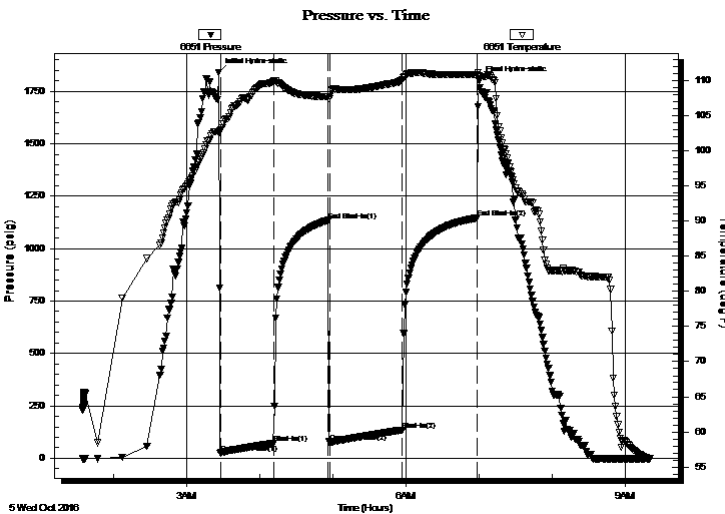
Start Time: 01:34:22 End Time: 09:19:51

Time On Btm: 2016.10.05 @ 03:25:51

Time Off Btm: 2016.10.05 @ 06:59:51

TEST COMMENT: 45- IF- Slow ly built to 5"
45- IS- Surface blow died in 7 mins
45- FF- BOB 43 mins
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1840.89	102.71	Initial Hydro-static
2	24.06	102.81	Open To Flow (1)
45	71.47	109.77	Shut-In(1)
90	1135.13	107.69	End Shut-In(1)
92	77.17	107.64	Open To Flow (2)
151	134.53	110.05	Shut-In(2)
212	1145.86	110.78	End Shut-In(2)
214	1799.64	110.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OCM, 35%O 65%M	1.50
206.00	CGO,	2.92
0.00	174' GIP	0.00

* 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.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286 **DST#: 5**

ATTN: Al Dow ning

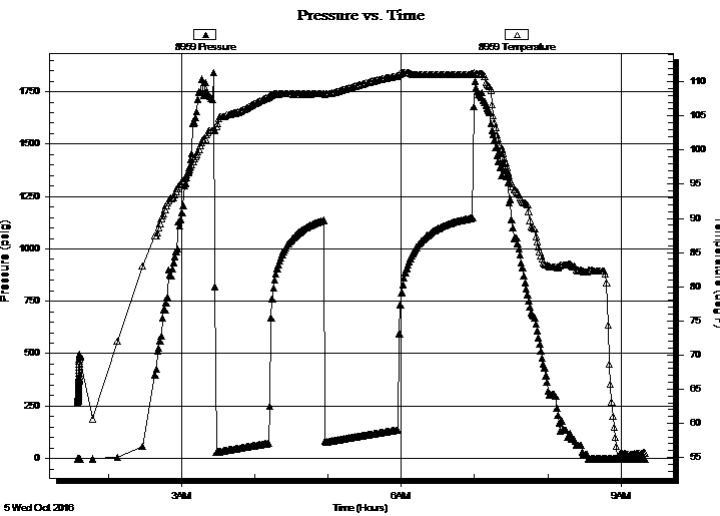
Test Start: 2016.10.05 @ 01:34:21

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:27:21
 Time Test Ended: 09:19:51
 Interval: **3634.00 ft (KB) To 3666.00 ft (KB) (TVD)**
 Total Depth: 3666.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2055.00 ft (KB)
 2047.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8959 Outside
 Press@RunDepth: psig @ 3635.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.10.05 End Date: 2016.10.05 Last Calib.: 2016.10.05
 Start Time: 01:34:52 End Time: 09:19:51 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45- IF- Slow ly built to 5"
 45- IS- Surface blow died in 7 mins
 45- FF- BOB 43 mins
 45- FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OCM, 35%O 65%M	1.50
206.00	CGO,	2.92
0.00	174' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

Tool Information

Drill Pipe:	Length: 3613.00 ft	Diameter: 3.82 inches	Volume: 51.22 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - 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: 64000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3634.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	32.00 ft			
Tool Length:	52.00 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			3615.00	
Shut In Tool	5.00			3620.00	
Hydraulic tool	5.00			3625.00	
Packer	5.00			3630.00	20.00 Bottom Of Top Packer
Packer	4.00			3634.00	
Stubb	1.00			3635.00	
Recorder	0.00	6651	Inside	3635.00	
Recorder	0.00	8959	Outside	3635.00	
Perforations	28.00			3663.00	
Bullnose	3.00			3666.00	32.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co. Inc.

30-14s-18w Ellis,KS

PO Box 1019
Hays, KS 67601

Dietz-Zwenger #1-30

Job Ticket: 61286

DST#: 5

ATTN: Al Dow ning

Test Start: 2016.10.05 @ 01:34:21

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 13000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	OCM, 35%O 65%M	1.499
206.00	CGO,	2.920
0.00	174' GIP	0.000

Total Length: 332.00 ft

Total Volume: 4.419 bbl

Num Fluid Samples: 0

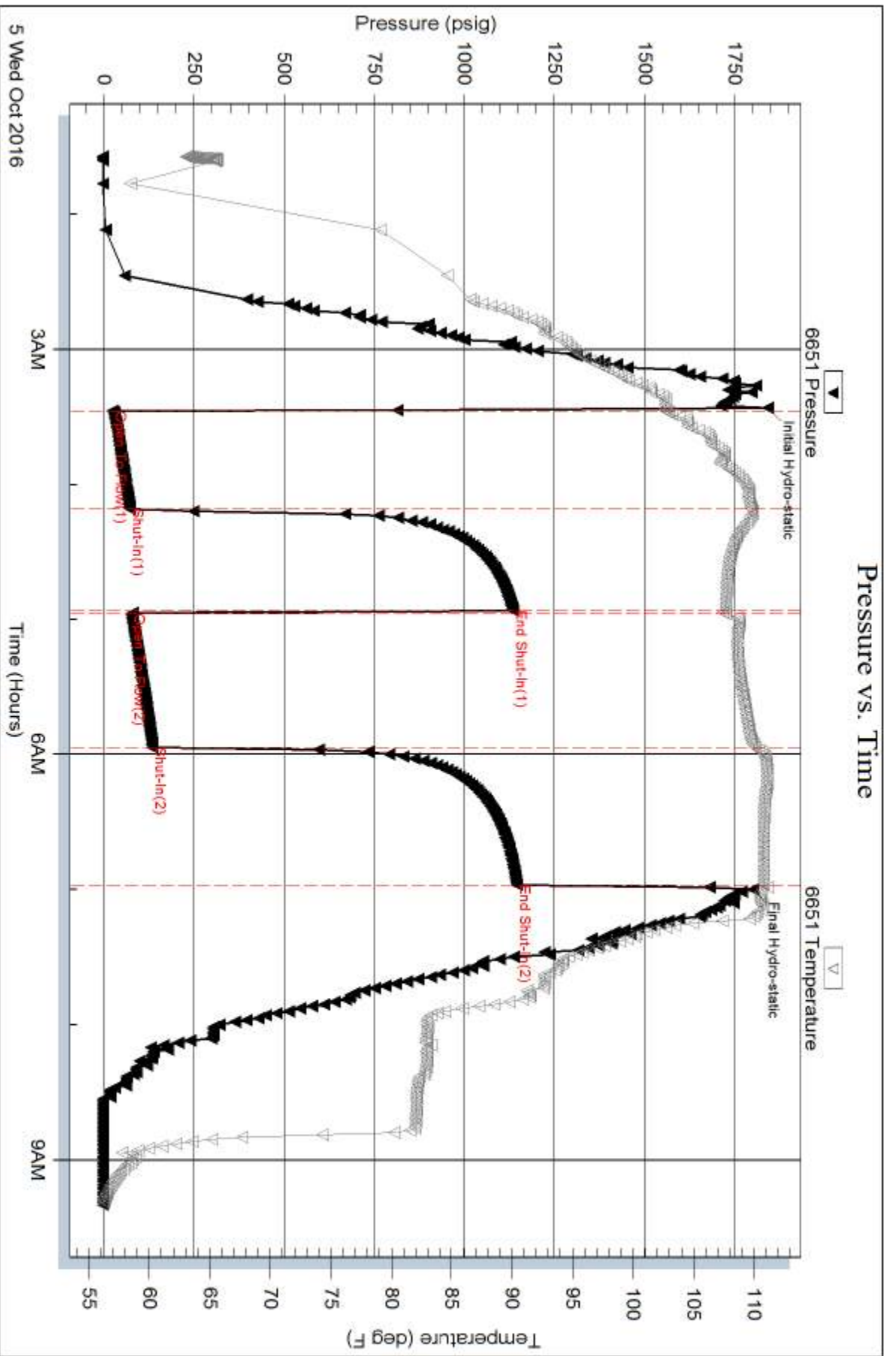
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

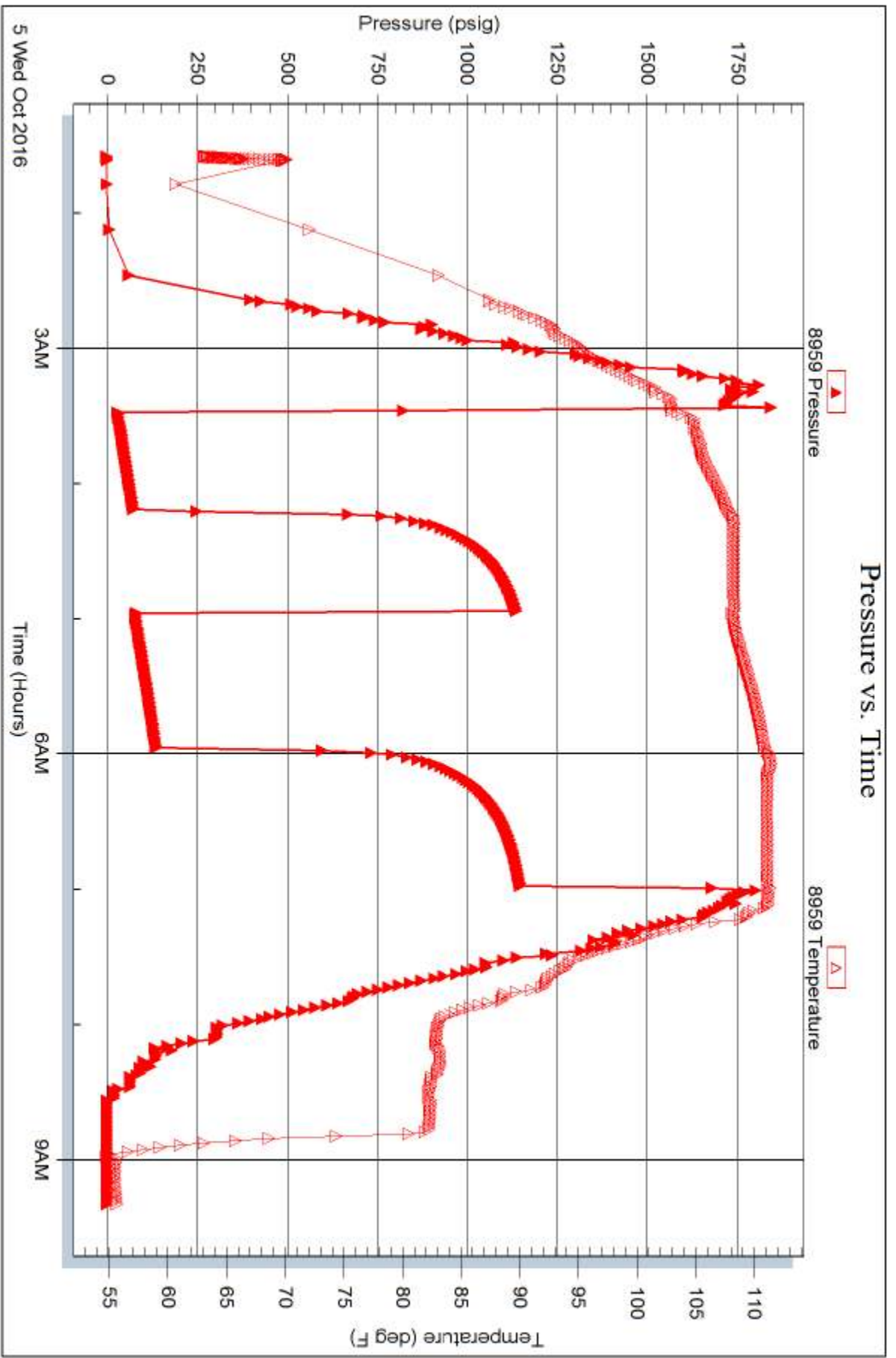


Serial #: 8959

Outside Dow nung-Nelson Oil Co. Inc.

Dietz-Zw enger #1-30

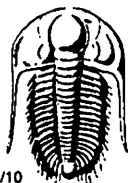
DST Test Number: 5



Triobite Testing, Inc

Ref. No: 61286

Printed: 2016.10.05 @ 15:41:33



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61282

Well Name & No. Dietz-Zwenger Unit #1-30 Test No. 1 Date 10/2/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 109 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3364-3394 Zone Tested LKC "C"
 Anchor Length 30' Drill Pipe Run 3327 Mud Wt. 8.6
 Top Packer Depth 3359 Drill Collars Run 31 Vis 50
 Bottom Packer Depth 3364 Wt. Pipe Run _____ WL 8.0
 Total Depth 3394 Chlorides 4520 ppm System LCM 3

Blow Description IF - Surface blow died in 2 mins
ISI - No blow
FF - No blow Flushed tool surge died Pulled tool
FSD -

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>M</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 5' BHT 101° Gravity 1050 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1604 Test 1050 T-On Location 1027
 (B) First Initial Flow 8 Jars _____ T-Started 1124
 (C) First Final Flow 10 Safety Joint _____ T-Open 1332
 (D) Initial Shut-In 326 Circ Sub _____ T-Pulled 1345
 (E) Second Initial Flow 11 Hourly Standby _____ T-Out 1618
 (F) Second Final Flow 12 Mileage 20 RT 15 _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 1584 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

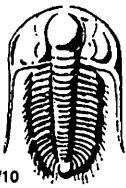
Sub Total 1065

Sub Total 1065

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1065
 MP/DST Disc't _____

Approved By _____ Our Representative Brannan Lonsdale

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61283

Well Name & No. Dietz-Zwenger Unit #1-30 Test No. 2 Date 10/3/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2655 KB 2047 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 20 Twp. 14 S Rge. 18 W Co. Ellis State KS

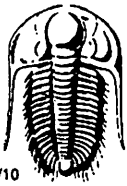
Interval Tested 3411-3440 Zone Tested LKC
 Anchor Length 29' Drill Pipe Run 3391 Mud Wt. 8.9
 Top Packer Depth 3406 Drill Collars Run 31 Vis 44
 Bottom Packer Depth 3411 Wt. Pipe Run _____ WL 8.0
 Total Depth 3440 Chlorides 3,000 ppm System LCM 2nd
 Blow Description IF - BOB 22 mins
ISF - No blow
FF - BOB 36 mins
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>370</u>	<u>NW</u>			<u>80</u>	<u>20</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 370' BHT 110° Gravity _____ API RW .06 @ 62° F Chlorides 52,000 ppm
 (A) Initial Hydrostatic 1657 Test 1050 T-On Location 0011
 (B) First Initial Flow 20 Jars _____ T-Started 0028
 (C) First Final Flow 117 Safety Joint _____ T-Open 0239
 (D) Initial Shut-In 446 Circ Sub _____ T-Pulled 0539
 (E) Second Initial Flow 120 Hourly Standby _____ T-Out 0737
 (F) Second Final Flow 185 Mileage 20 RT 15 Comments _____
 (G) Final Shut-In 435 Sampler _____
 (H) Final Hydrostatic 1622 Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1065
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 _____
 Sub Total 1065

Approved By _____ Our Representative Brannen Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61284

4/10

Well Name & No. Diets-Zwenger Unit #1-30 Test No. 3 Date 10/3/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 74 S Rge. 18 W Co. E/HS State KS

Interval Tested 3470-3522 Zone Tested LKC "H+I"
 Anchor Length 52' Drill Pipe Run 3423 Mud Wt. 8.9
 Top Packer Depth 9465 Drill Collars Run 31 Vis 47
 Bottom Packer Depth 3470 Wt. Pipe Run — WL 8.0
 Total Depth 3522 Chlorides 8500 ppm System LCM 2#

Blow Description IF - Weak blow built very slowly to 4"
ISI - No blow
FF - Initial surge of 3" built slowly to 8 1/2"
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>47</u>	<u>OCM</u>		<u>20</u>		<u>80</u>
Rec	Feet of <u>143' GI?</u>	%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 47' BHT 106° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

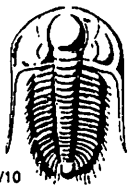
(A) Initial Hydrostatic 1681 Test 1050 T-On Location 1718
 (B) First Initial Flow 11 Jars _____ T-Started 1738
 (C) First Final Flow 24 Safety Joint _____ T-Open 1950
 (D) Initial Shut-In 145 Circ Sub _____ T-Pulled 2320 ~~2250~~
 (E) Second Initial Flow 20 Hourly Standby _____ T-Out 10/4 0121
 (F) Second Final Flow 30 Mileage 20 RT ¹⁵ _____
 (G) Final Shut-In 181 Sampler _____
 (H) Final Hydrostatic 1633 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1065

Initial Open 45
 Initial Shut-In 45
 Final Flow 60 ~~45~~
 Final Shut-In 60 ~~45~~

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1065
 MP/DST Disc't _____

Approved By _____ Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61285

Well Name & No. Dietz - Zwenger Unit #1-30 Test No. 4 Date 10/4/16
 Company Downing - Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 1019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3517-3546 Zone Tested LKC "I"
 Anchor Length 29' Drill Pipe Run 3486 Mud Wt. 8.9
 Top Packer Depth 3512 Drill Collars Run 31 Vis 47
 Bottom Packer Depth 3517 Wt. Pipe Run — WL 8.0
 Total Depth 3546 Chlorides 8,500 ppm System LCM 2"

Blow Description IF-BOB 33mins
ISI- No blow
FF- slowly built to 10 1/2"
FSI- No blow

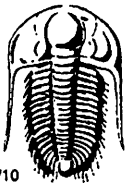
Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>MW</u>			<u>70%</u>	<u>30%</u>
<u>20</u>	<u>ASWOCM</u>	<u>5%</u>	<u>20%</u>	<u>5%</u>	<u>70%</u>
<u>10</u>	<u>CO</u>				
	<u>320' GIP</u>				

Rec Total 60' BHT 106~~25~~ Gravity 35 API RW .10 @ 80 ° F Chlorides 58,000 ppm

(A) Initial Hydrostatic 1732 Test 1050 T-On Location 0711
 (B) First Initial Flow 10 Jars — T-Started 0237
 (C) First Final Flow 24 Safety Joint — T-Open 0933
 (D) Initial Shut-In 920 Circ Sub — T-Pulled 1233
 (E) Second Initial Flow 20 Hourly Standby — T-Out 1407
 (F) Second Final Flow 34 Mileage 20 RT ¹⁵ Comments —
 (G) Final Shut-In 879 Sampler —
 (H) Final Hydrostatic 1703 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1065
 Accessibility — MP/DST Disc't —
 Sub Total 1065

Approved By — Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61286

Well Name & No. Dietz-Zwenger Unit #1-30 Test No. 5 Date 10/5/16
 Company Downing-Nelson Oil Co. Inc. Elevation 2055 KB 2047 GL
 Address PO Box 7019 Hays, KS 67601
 Co. Rep / Geo. Al Downing Rig Discovery #3
 Location: Sec. 30 Twp. 14 S Rge. 18 W Co. Ellis State KS

Interval Tested 3634-3666 Zone Tested Arbuckle
 Anchor Length 32' Drill Pipe Run 3613 Mud Wt. 9.1
 Top Packer Depth 3629 Drill Collars Run 31 Vis 51
 Bottom Packer Depth 3634 Wt. Pipe Run — WL 8.8
 Total Depth 3666 Chlorides 13,000 ppm System LCM 2A
 Blow Description IF - Slowly built to 5"
ISI - Surface blow died in 7 mins
FF - BOD 43 mins
FST - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>OCM</u>		<u>35</u>	<u>65</u>	
<u>206</u>	<u>CGO</u>	<u>15</u>	<u>85</u>		
	<u>174' GIP</u>				

Rec Total 332' BHT 111° Gravity 31 API RW — @ — °F Chlorides — ppm
 (A) Initial Hydrostatic 1841 Test 1050 T-On Location 0120
 (B) First Initial Flow 24 Jars — T-Started 0134
 (C) First Final Flow 71 Safety Joint — T-Open 0327
 (D) Initial Shut-In 1135 Circ Sub — T-Pulled 0657 ~~0627~~
 (E) Second Initial Flow 77 Hourly Standby — T-Out 0919
 (F) Second Final Flow 135 Mileage 20 RT 15 Comments —
 (G) Final Shut-In 1146 Sampler —
 (H) Final Hydrostatic 1800 Straddle —
 Shale Packer — Ruined Shale Packer —
 Extra Packer — Ruined Packer —
 Extra Recorder — Extra Copies —
 Initial Open 45 Day Standby — Sub Total 0
 Initial Shut-In 45 Accessibility — Total 1065
 Final Flow 6045 MP/DST Disc't —
 Final Shut-In 6045 Sub Total 1065

Approved By _____ Our Representative Brannan Lonsdale

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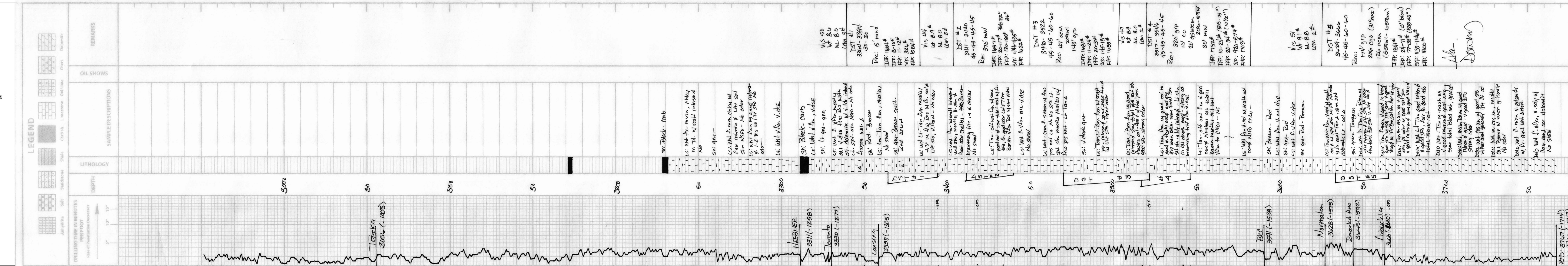
Marc A. Downing		Geologic Report	
Consulting Petroleum Geologist		Drilling Time and Sample Log	
Operator Downing-Nelson Oil Co., Inc.		Elevation KB 2055 DF 2053 GL 2047	
Lease Dietz-Zwenger Unit No. 1-30		API # 15-051-26843-0000	
Field Wildcat		Casing Record Surface 8 5/8" @ 220' Production 5 1/2" @ 3766'	
Location 965' FSL & 1430' FEL		Electrical Surveys CNDL, DIL, MEL, Sonic	
Sec. 30	Twp. 14s	Rge. 18w	
County Ellis	State Kansas		
Formation	Sample tops	Log Tops	Datum Struct Comp
Top Anhydrite	1282	1285	+770 +10
Base Anhydrite	1327	1324	+731 +13
Topeka	3056	3058	-1003 +15
Heebner	3311	3315	-1260 +12
Toronto	3330	3334	-1279 +15
LKC	3358	3362	-1307 +17
BKC	3591	3594	-1539 +15
Reworked Arbuckle	3645	3650	-1595 Absent
Arbuckle	3662	3668	-1613 +22
Total Depth	3767	3766	-1711
Reference Well For Structural Comparison Gerald Schneiker #1		Myrle F. Hoffman 450' FSL & 1825' FEL Sec. 30-14s-18w	

Drilling Contractor	Discovery Drilling, Rig #3	
Commenced	9-28-16	Completed 10-5-16
Samples Saved From	3200	To RTD
Drilling Time Kept From	2950	To RTD
Samples Examined From	3200	To RTD
Geological Supervision From	2950	To RTD

Summary and Recommendations
Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion.

Respectfully Submitted,

Marc A. Downing



Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Pat Apple, Chairman
Shari Feist Albrecht, Commissioner
Jay Scott Emler, Commissioner

Sam Brownback, Governor

February 10, 2017

Ron Nelson
Downing-Nelson Oil Co Inc
PO BOX 1019
HAYS, KS 67601

Re: ACO-1
API 15-051-26843-00-00
DIETZ-ZWENGER UNIT 1-30
SE/4 Sec.30-14S-18W
Ellis County, Kansas

Dear Ron Nelson:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 09/28/2016 and the ACO-1 was received on February 10, 2017 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department