



WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

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

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

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

API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

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



1167347

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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CHARGE TO: **NORTHERN LIGHTS OIL**
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET
 No 24645

PAGE 1 OF 2

SERVICE LOCATIONS: 1. **NESS CITY, KS** WELL/PROJECT NO. #2 LEASE **KEWAN** COUNTY/PARISH **LANE** STATE **KS** CITY
 2. TICKET TYPE SERVICE CONTRACTOR **MAVERIC DRILLING** RIG NAME/NO. **LANE** SHIPPED VIA **TRUCK** DELIVERED TO **LOCATIONS** DATE **10-12-13** OWNER **SAME**
 3. WELL TYPE **Oil** WELL CATEGORY **Development** JOB PURPOSE **5 1/2" 2-Stage Completion** WELL PERMIT NO.
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.			UNIT PRICE	AMOUNT
		LOC	ACCT	DF		QTY.	UM	QTY.		
575					MILEAGE # 114	45	MI		6.00	270.00
579					Pump Charge - 2 STAGE	1	CHG	4650	2000.00	2000.00
221					L-TRUCK KEY	4	EA		25.00	100.00
281					MUDFLUSH	500	GA		1.25	625.00
580					ADDITIONAL Hours - Concrete	1	HRS		200.00	200.00
402					CENTRALIZERS	9	EA	5 1/2"	70.00	630.00
403					CEMENT BASKETS	3	EA		285.00	855.00
407					INSURT FLEAT STBE W/AUTO FAL	1	EA		375.00	375.00
408					DV Tool - Plug Set	1	EA	2150	3300.00	3300.00
411					RECORDED 6 SCRATCHES	30	EA		50.00	1500.00
417					DV LATCH DOWN PLUG - BATTLE	1	EA		200.00	200.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY**, and **LIMITED WARRANTY** provisions.
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS
 DATE SIGNED: **10-12-13** TIME SIGNED: **1000** A.M. P.M.
 SIGNATURE: *[Signature]*

REMIT PAYMENT TO:
SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UN-DECIDED	DIS-AGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL #1	10055.00
#2	9981.98
Subtotal	20,036.98
TAX	1,128.63
Pen 7.15%	
TOTAL	21,165.61

SWIFT OPERATOR: *[Signature]*
 APPROVAL: *[Signature]*
 CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 24645

CUSTOMER
Northway Lbrs Or Co.

WELL
KESWA # 2

DATE
10-12-13

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		UNIT PRICE		AMOUNT	
		LOC	ACCT	DF			QTY.	UM	QTY.	UM		
325						STAMPED COVER	175	SKS			14.00	2450.00
330						SWIFT MULE - DIESEL STAMPED	240	SBS			17.10	4080.00
27b						FLOCKE	100	UGS			2.00	200.00
283						SALT	900	UGS			2.00	180.00
284						CASEX	8	SKS	800	UGS	35.00	280.00
286						HAWB-1	100	UGS			8.00	800.00
290						D-ADD	5	GAL			42.00	210.00
581						SERVICE CHARGE					2.00	830.00
583						MILEAGE CHARGE					1.00	951.98
						TOTAL WEIGHT	42310					
						LOADED MILES	45					
						CUBIC FEET	415					
						TON MILES	951.98					

CONTINUATION TOTAL 9981.98

JOB LOG

SWIFT Services, Inc.

DATE 10-12-13 PAGE NO.

CUSTOMER NORTHERN LIGHT OIL CO. WELL NO. #2 LEASE KEWAN JOB TYPE 5 1/2" 2-STAGE LGST. TICKET NO. 24645

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1000							ON LOCATION, LAY DOWN D.P., PUT ON SCRATCHERS
	1230							START 5 1/2" CASING IN WELL
								TD-4655' SET = 4650
								TP-4650 5 1/2" # 15.5
								ST-19'
								CENTRALIZERS - 2, 3, 4, 6, 8, 10, 11, 12, 59
								CMT BRKTS - 3, 16, 60
								DV TOOL = 2150 TOP JT # 60
	1430							DROP BALL - CIRCULATE REGRADUATE
	1530	6	12		✓	450		PUMP 500 GAL MUD FLUSH
	1532	6	20		✓	450		PUMP 20 BBLs KCL-FLUSH
	1542	5	42		✓	300		MAX CEMENT - 175 SKS EA-2 = 15.4 PRG
	1552							WASH OUT PUMP - LINES
	1552							RELEASE 1ST STAGE CATCH DOWN PLUG
	1555	7	0		✓			DISPLACE PLUG
	1612	6	110.2			1500		PLUG DOWN - PSE UP CATCH IN PLUG
	1615					OK		RELEASE PSE - HELD
	1620							DROP DV OPENING PLUG
	1640				✓	1200		OPEN DV TOOL - CIRCULATE
	1742	6	20		✓	300		PUMP 20 BBLs KCL-FLUSH
	1750		7-5					PLUG RH (30SKS) MH (20SKS)
	1800	5 1/4	105		✓	250		MAX CEMENT - 190 SKS SMD = 11.2 PRG
	1827							WASH OUT PUMP - LINES
	1827							RELEASE DV CLOSING PLUG
	1830	5	0		✓			DISPLACE PLUG
	1841	5	51.2			1500		PLUG DOWN - PSE UP - CLOSE DV TOOL
	1845					OK		RELEASE PSE - HELD
								CIRCULATED 20 SKS CEMENT TO PSE
								WASH TRUCK
	2000							JOB COMPLETE

THANK YOU
WAYNE, DUSTY, ROB

ALLIED OIL & GAS SERVICE LLC 061909

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
Great Bend

DATE <u>10-1-10</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START <u>130 Am</u>	JOB FINISH <u>230 Am</u>
LEASE <u>Kenan</u>	WELL # <u>2</u>	LOCATION <u>Dighton 2S, 2W, 14S</u>			COUNTY <u>lane</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>			<u>W140</u>				

CONTRACTOR Mallard OWNER _____

TYPE OF JOB Surface

HOLE SIZE 12 1/2 T.D. _____

CASING SIZE 8 5/8 DEPTH 385

TUBING SIZE _____ DEPTH _____

DRILL PIPE 4 1/2 DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 15 ft

PERFS. _____

DISPLACEMENT 23.56

EQUIPMENT

PUMP TRUCK CEMENTER Josh Isaac

398 HELPER Ben Newel

BULK TRUCK _____

544-198 DRIVER Dan Casper

BULK TRUCK _____

_____ DRIVER _____

REMARKS:

Ran 8 5/8 casing
pump 5 bbls fresh water ahead
with 225 sks class A 3/4 cc 2 1/2 gal
Displace 23.56 bbls fresh water
Shut in
Cement did circulate 1145 am
very slow

CEMENT

AMOUNT ORDERED 225 sks class A
3/4 cc 2 1/2 gal

COMMON 225 @ 17.90 4,027.50

POZMIX _____ @ _____

GEL 4 @ 23.40 93.60

CHLORIDE 8 @ 64.00 512.00

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING 242.9 @ 2.48 602.07

MILEAGE 11.09 X 35 X 2.60 1,009.17

TOTAL 6,244.28

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE _____ @ _____

MILEAGE Hum 35 @ 7.70 269.50

MANIFOLD _____ @ _____

Hum 35 @ 4.40 154.00

TOTAL 1,935.75

CHARGE TO: Northern lights

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

To: Allied Oil & Gas Services, LLC.

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

SALES TAX (If Any) _____

TOTAL CHARGES 8,184.43

DISCOUNT 1,636.08 IF PAID IN 30 DAYS

6,544.34

PRINTED NAME X Joshua L SCOTT

SIGNATURE X Joshua L Scott

Thank you!!



DRILL STEM TEST REPORT

Prepared For: **Northern lights Oil Co LC**

PO Box 164
Andover KS 67002

ATTN: Seth Evanson

Keenan #2

3-19s-29w Lane,KS

Start Date: 2013.10.06 @ 04:32:01

End Date: 2013.10.06 @ 11:25:00

Job Ticket #: 53632 DST #: 1

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

Printed: 2013.10.14 @ 16:51:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane, KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53632

DST#: 1

ATTN: Seth Evanson

Test Start: 2013.10.06 @ 04:32:01

GENERAL INFORMATION:

Formation: **LKC"G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:30:00
 Time Test Ended: 11:25:00
 Interval: **4144.00 ft (KB) To 4200.00 ft (KB) (TVD)**
 Total Depth: 4200.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Andy Carreira
 Unit No: 68
 Reference Elevations: 2820.00 ft (KB)
 2815.00 ft (CF)
 KB to GR/CF: 5.00 ft

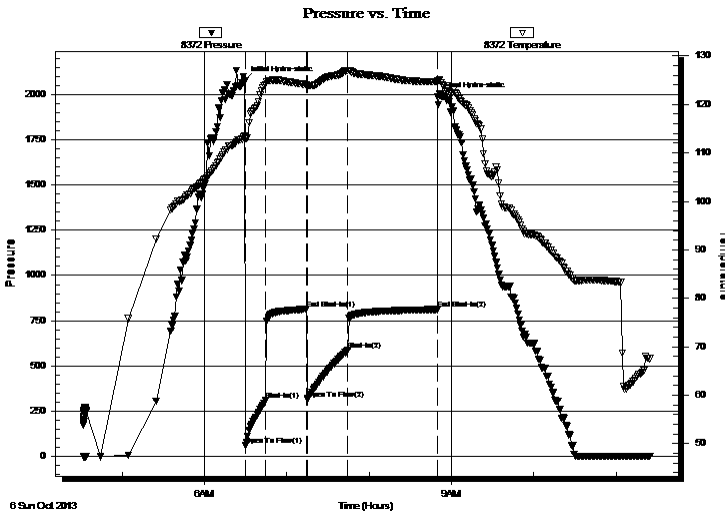
Serial #: 8372

Inside

Press @ Run Depth: 586.60 psig @ 4150.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.06 End Date: 2013.10.06 Last Calib.: 2013.10.06
 Start Time: 04:32:01 End Time: 11:25:00 Time On Btm: 2013.10.06 @ 06:29:30
 Time Off Btm: 2013.10.06 @ 08:50:00

TEST COMMENT: IF:(15min) BOB in 4 min.
 IS:(30min) No Return
 FF:(30min) BOB in 5 min
 FS:(60min) No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2073.41	113.54	Initial Hydro-static
1	60.27	113.02	Open To Flow (1)
15	308.90	124.11	Shut-In(1)
45	816.43	124.05	End Shut-In(1)
46	315.60	123.72	Open To Flow (2)
75	586.60	127.00	Shut-In(2)
140	812.54	124.62	End Shut-In(2)
141	1986.54	124.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
375.00	MW	3.10
833.00	MW w / trace oil	11.68
2.00	Oil	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53632

DST#: 1

ATTN: Seth Evanson

Test Start: 2013.10.06 @ 04:32:01

Tool Information

Drill Pipe:	Length: 3893.00 ft	Diameter: 3.80 inches	Volume: 54.61 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 237.33 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	56000.00 lb
			<u>Total Volume: 55.78 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.33 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	4144.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	56.00 ft				
Tool Length:	76.00 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			4125.00	
Shut In Tool	5.00			4130.00	
Hydraulic tool	5.00			4135.00	
Packer	5.00			4140.00	20.00 Bottom Of Top Packer
Packer	4.00			4144.00	
Stubb	1.00			4145.00	
Perforations	4.00			4149.00	
Change Over Sub	1.00			4150.00	
Recorder	0.00	8372	Inside	4150.00	
Recorder	0.00	8321	Outside	4150.00	
Drill Pipe	31.00			4181.00	
Change Over Sub	1.00			4182.00	
Perforations	15.00			4197.00	
Bullnose	3.00			4200.00	56.00 Bottom Packers & Anchor

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53632

DST#: 1

ATTN: Seth Evanson

Test Start: 2013.10.06 @ 04:32:01

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:

70000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.74 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
375.00	MW	3.098
833.00	MW w / trace oil	11.685
2.00	Oil	0.028

Total Length: 1210.00 ft Total Volume: 14.811 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Resistivity- .125 @ 68 = 70000

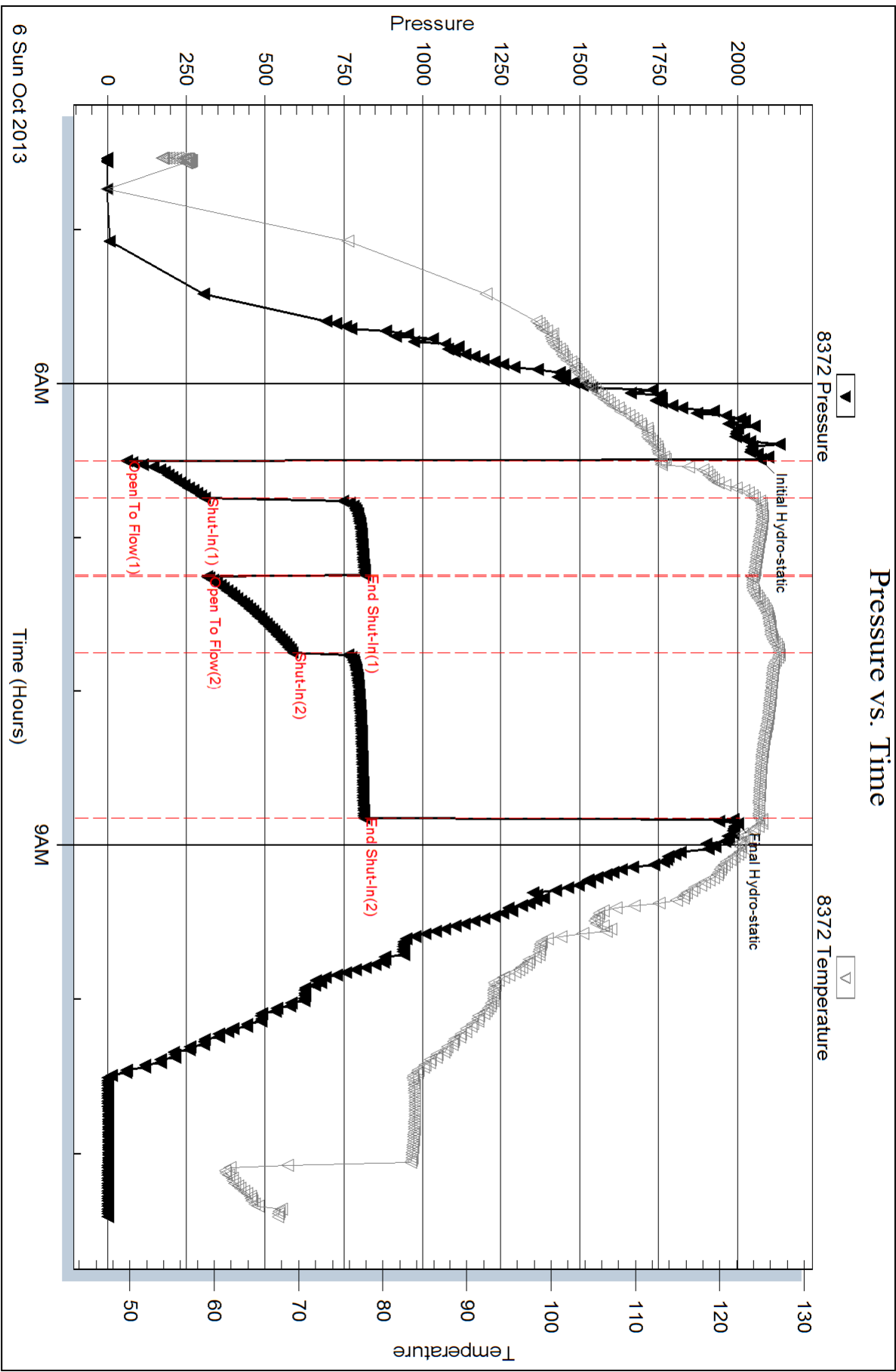
Serial #: 8372

Inside

Northern lights Oil Co LC

Keenan #2

DST Test Number: 1

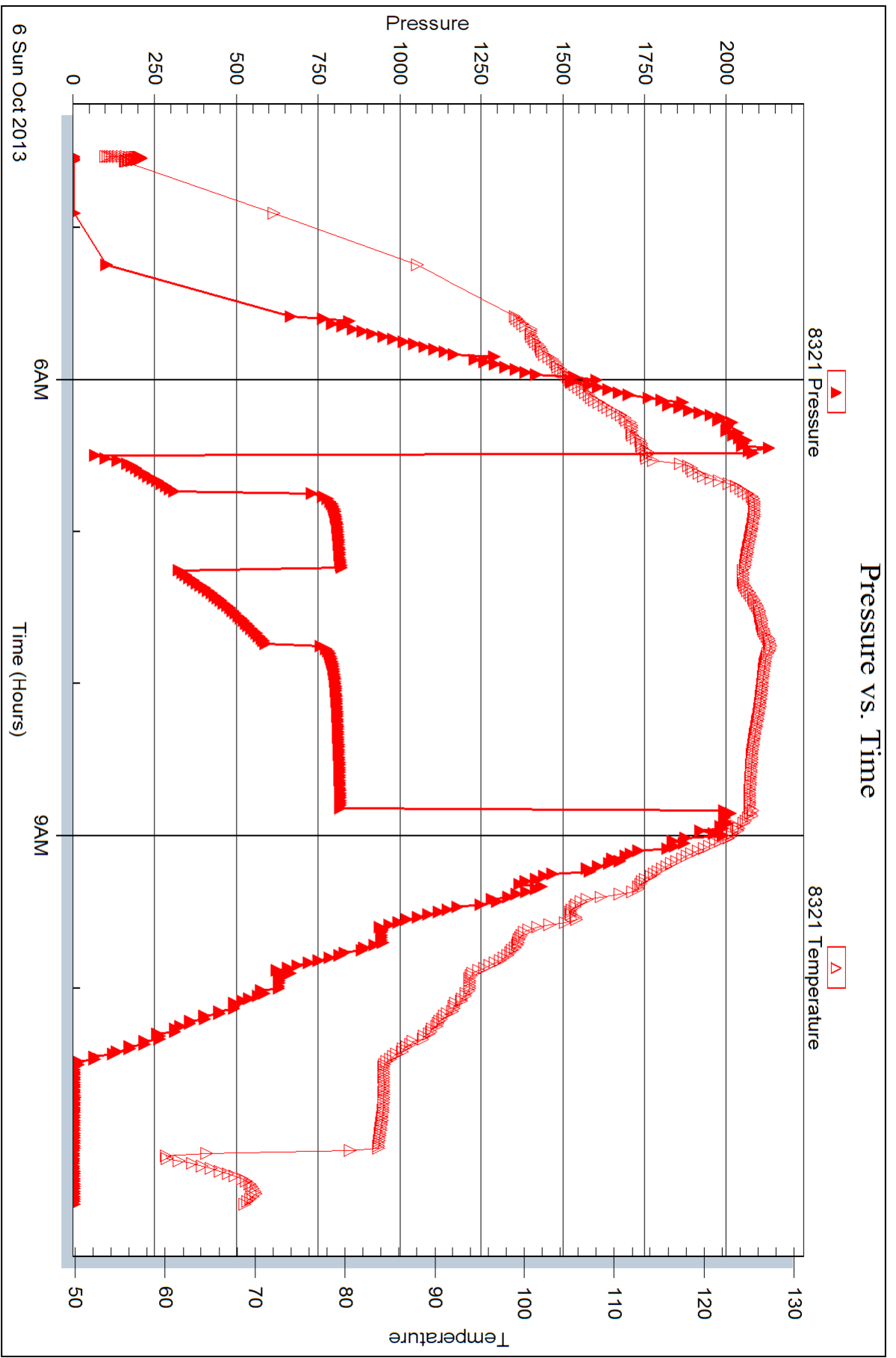


Serial #: 8321

Outside Northern lights Oil Co LC

Keenan #2

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Northern lights Oil Co LC**

PO Box 164
Andover KS 67002

ATTN: Seth Evanson

Keenan #2

3-19s-29w Lane,KS

Start Date: 2013.10.06 @ 19:01:01

End Date: 2013.10.07 @ 04:49:00

Job Ticket #: 53633 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.14 @ 16:51:13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane, KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53633

DST#: 2

ATTN: Seth Evanson

Test Start: 2013.10.06 @ 19:01:01

GENERAL INFORMATION:

Formation: **LKC"H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:42:30

Time Test Ended: 04:49:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 4197.00 ft (KB) To 4221.00 ft (KB) (TVD)

Total Depth: 4221.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2820.00 ft (KB)

2815.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8372

Inside

Press @ Run Depth: 447.74 psig @ 4198.00 ft (KB)

Start Date: 2013.10.06

End Date: 2013.10.07

Start Time: 19:01:01

End Time: 04:49:00

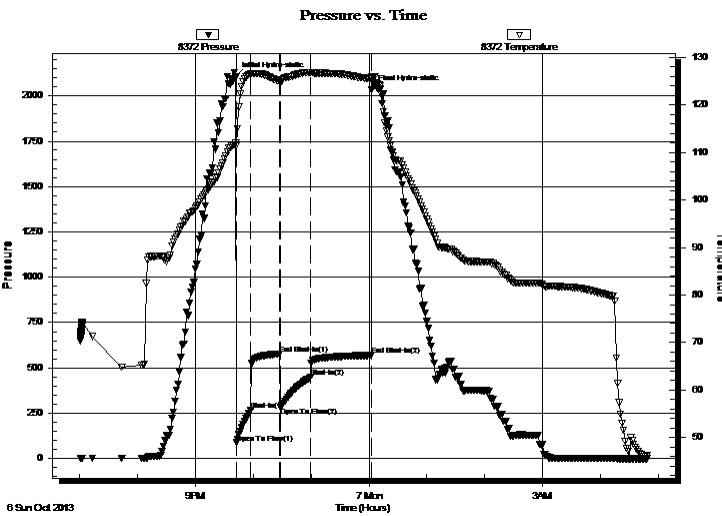
Capacity: 8000.00 psig

Last Calib.: 2013.10.07

Time On Btm: 2013.10.06 @ 21:42:00

Time Off Btm: 2013.10.07 @ 00:03:00

TEST COMMENT: IF:(15min) BOB in 2 min.
 IS:(30min) Return blow immediately after bleed off. Built to 6" in 15 min.
 FF:(30min) BOB in 2 min.
 FS:(60min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2104.41	112.03	Initial Hydro-static
1	86.32	111.44	Open To Flow (1)
16	267.59	126.57	Shut-In(1)
46	576.63	124.93	End Shut-In(1)
47	280.95	124.60	Open To Flow (2)
78	447.74	126.85	Shut-In(2)
141	569.34	125.53	End Shut-In(2)
141	2033.84	126.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	GOCM g=20% o=20% m=60%	0.31
63.00	MCGO m=20% g=30% o=50%	0.31
1039.00	GO g=15% o=85%	13.56
0.00	GIP= 410ft	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

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53633

DST#: 2

ATTN: Seth Evanson

Test Start: 2013.10.06 @ 19:01:01

Tool Information

Drill Pipe:	Length: 3956.00 ft	Diameter: 3.80 inches	Volume: 55.49 bbl	Tool Weight:	2500.00 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: 237.33 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: 56.66 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.33 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4197.00 ft			Final	57000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	24.00 ft				
Tool Length:	44.00 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			4178.00	
Shut In Tool	5.00			4183.00	
Hydraulic tool	5.00			4188.00	
Packer	5.00			4193.00	20.00 Bottom Of Top Packer
Packer	4.00			4197.00	
Stubb	1.00			4198.00	
Recorder	0.00	8372	Inside	4198.00	
Recorder	0.00	8321	Outside	4198.00	
Perforations	20.00			4218.00	
Bullnose	3.00			4221.00	24.00 Bottom Packers & Anchor
Total Tool Length:	44.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53633

DST#: 2

ATTN: Seth Evanson

Test Start: 2013.10.06 @ 19:01:01

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: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	GOCM g=20% o=20% m=60%	0.310
63.00	MCGO m=20% g=30% o=50%	0.310
1039.00	GO g=15% o=85%	13.560
0.00	GIP= 410ft	0.000

Total Length: 1165.00 ft

Total Volume: 14.180 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8372

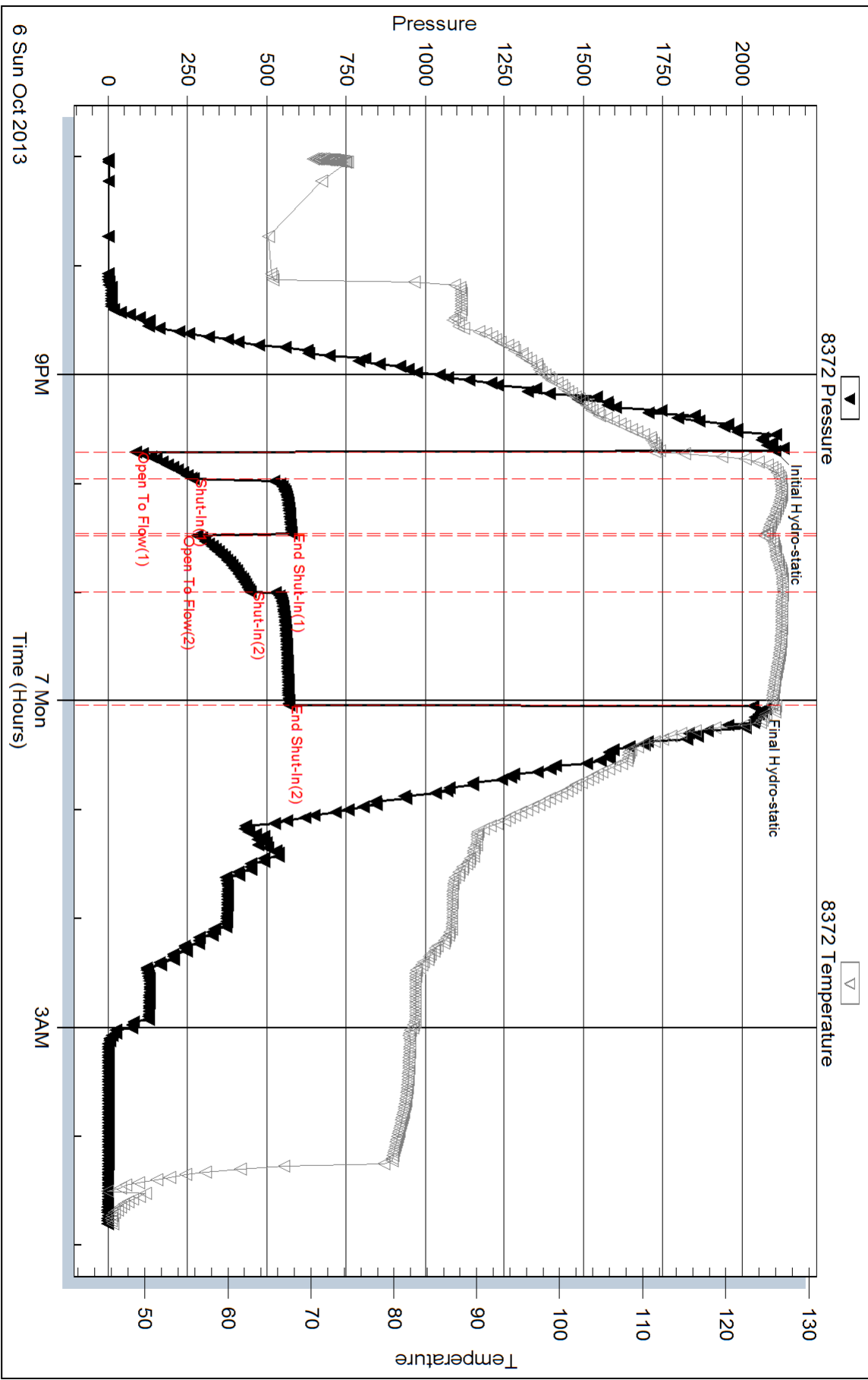
Inside

Northern lights Oil Co LC

Keenan #2

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 53633

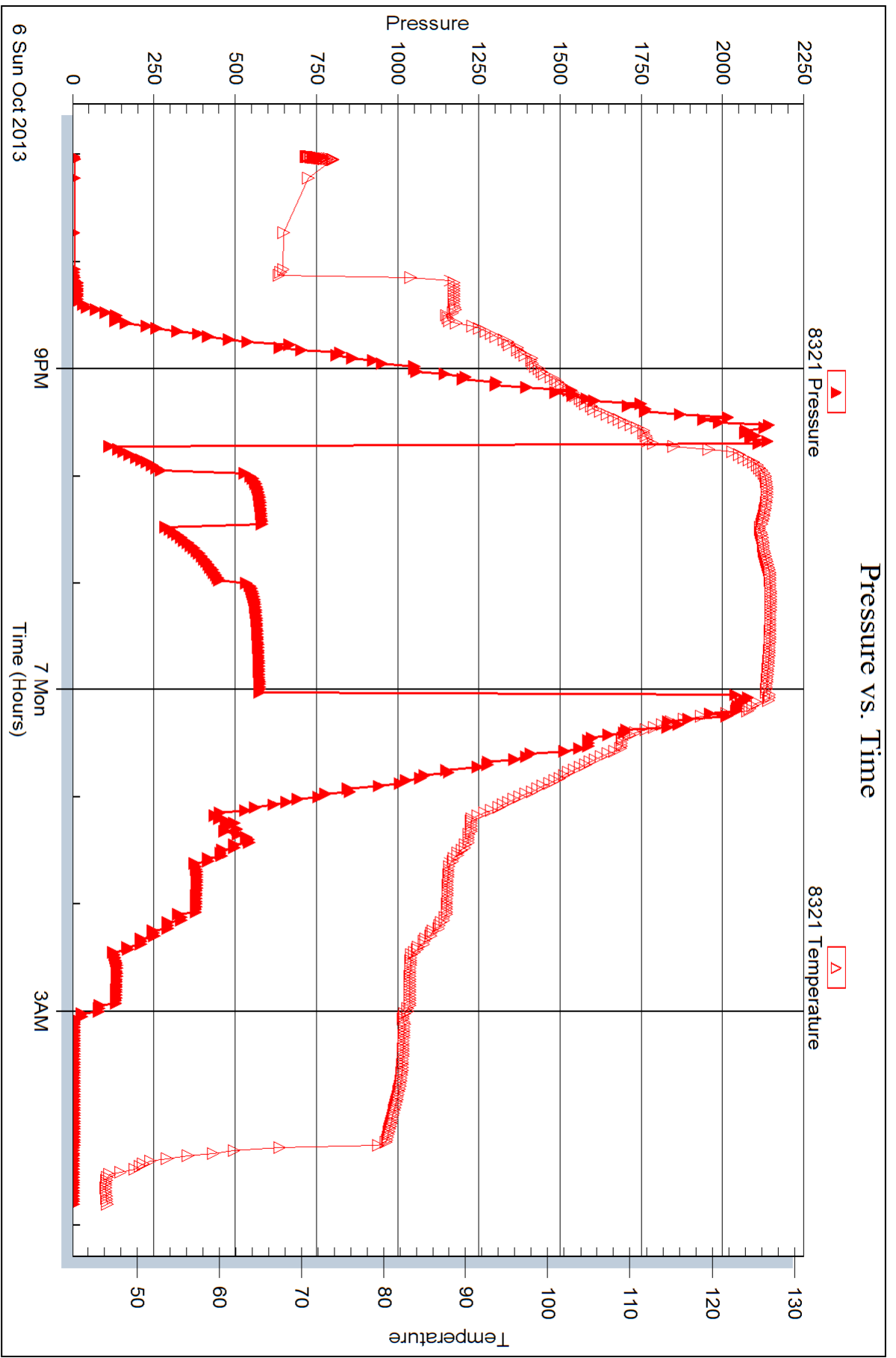
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Serial #: 8321

Outside Northern lights Oil Co LC

Keenan #2

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Northern lights Oil Co LC**

PO Box 164
Andover KS 67002

ATTN: Seth Evanson

Keenan #2

3-19s-29w Lane,KS

Start Date: 2013.10.07 @ 16:26:01

End Date: 2013.10.07 @ 23:27:00

Job Ticket #: 53634 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.14 @ 16:42:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane, KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53634

DST#: 3

ATTN: Seth Evanson

Test Start: 2013.10.07 @ 16:26:01

GENERAL INFORMATION:

Formation: **LKC"J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:07:30

Time Test Ended: 23:27:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 4220.00 ft (KB) To 4255.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4255.00 ft (KB) (TVD)

2815.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

Serial #: 8372

Inside

Press @ Run Depth: 231.28 psig @ 4221.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.07

End Date: 2013.10.07

Last Calib.: 2013.10.07

Start Time: 16:26:01

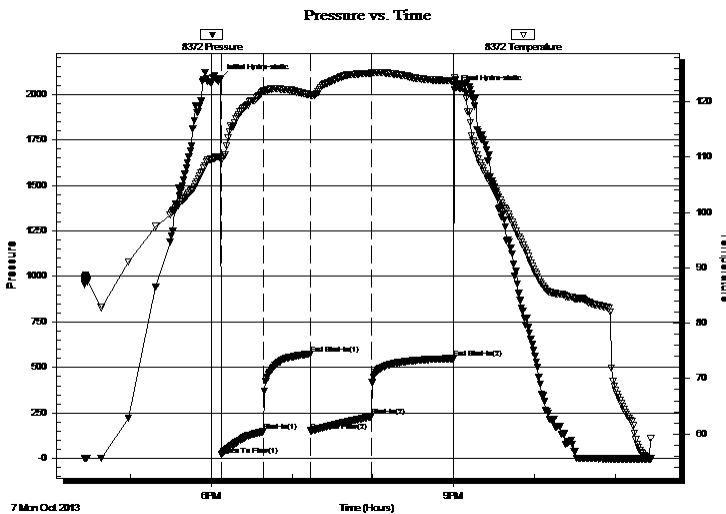
End Time: 23:27:00

Time On Btm: 2013.10.07 @ 18:07:00

Time Off Btm: 2013.10.07 @ 21:00:30

TEST COMMENT: IF:(30min) 4" blow in 5 min. 8" blow in 11 min. BOB in 20 min.
ISl:(35min) No Return
FF:(45min) 4" blow in 10 min. 8" blow in 19 min. BOB in 29 min.
FSl:(60min) No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2084.29	110.01	Initial Hydro-static
1	20.60	109.31	Open To Flow (1)
32	148.32	121.86	Shut-In(1)
67	573.71	121.31	End Shut-In(1)
67	151.85	121.15	Open To Flow (2)
112	231.28	125.11	Shut-In(2)
173	549.65	123.67	End Shut-In(2)
174	2025.60	124.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
470.00	MW	4.43
30.00	Oil	0.42

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53634

DST#: 3

ATTN: Seth Evanson

Test Start: 2013.10.07 @ 16:26:01

Tool Information

Drill Pipe:	Length: 3988.00 ft	Diameter: 3.80 inches	Volume: 55.94 bbl	Tool Weight: 2500.00 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: 237.33 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.33 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	4220.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	55.00 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			4201.00	
Shut In Tool	5.00			4206.00	
Hydraulic tool	5.00			4211.00	
Packer	5.00			4216.00	20.00 Bottom Of Top Packer
Packer	4.00			4220.00	
Stubb	1.00			4221.00	
Recorder	0.00	8372	Inside	4221.00	
Recorder	0.00	8321	Outside	4221.00	
Perforations	31.00			4252.00	
Bullnose	3.00			4255.00	35.00 Bottom Packers & Anchor
Total Tool Length:	55.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53634

DST#: 3

ATTN: Seth Evanson

Test Start: 2013.10.07 @ 16:26:01

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:

30000 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbf

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
470.00	MW	4.431
30.00	Oil	0.421

Total Length: 500.00 ft Total Volume: 4.852 bbf

Num Fluid Samples: 0

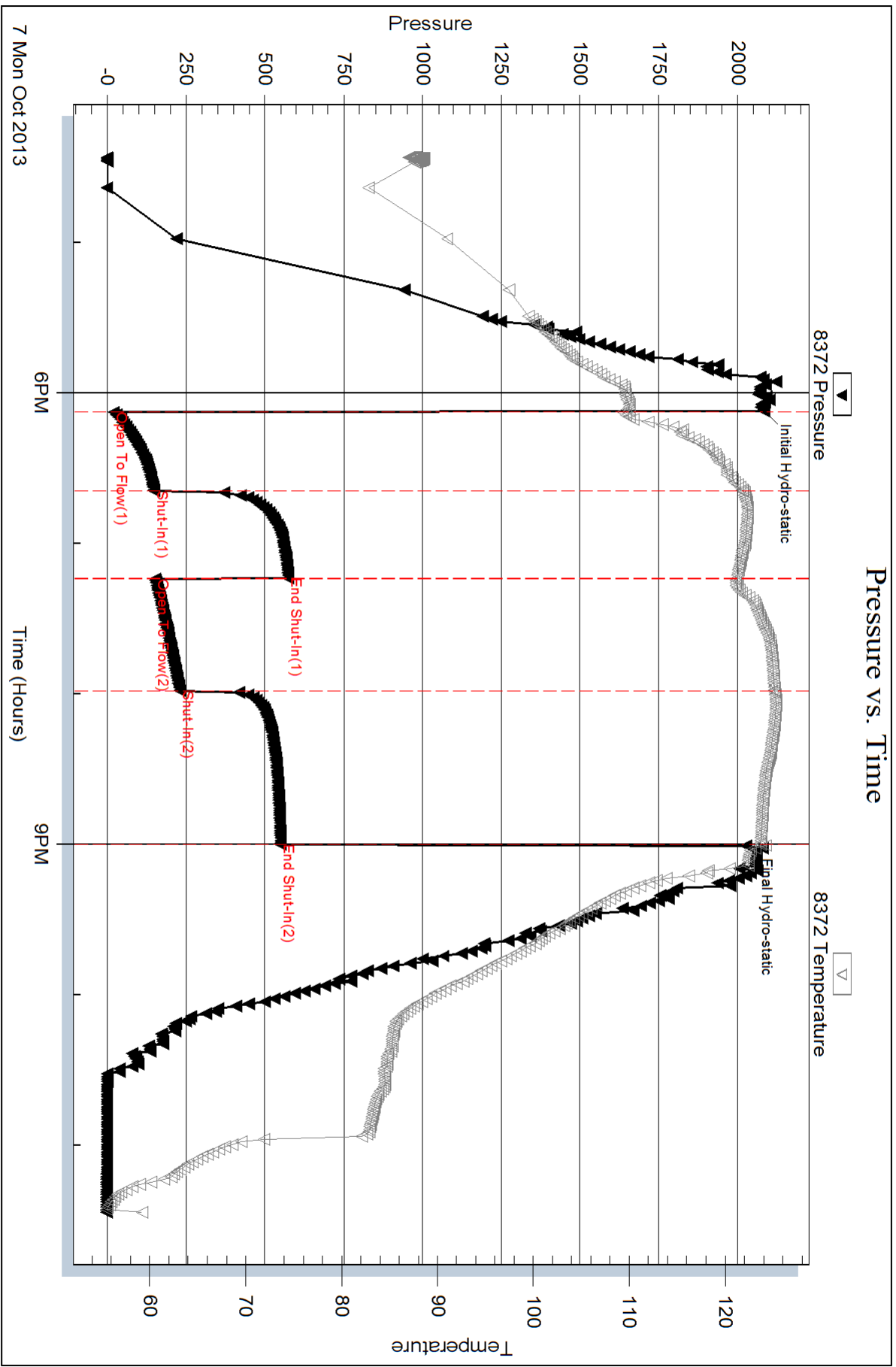
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Resistivity- .293 @ 57deg = 30000

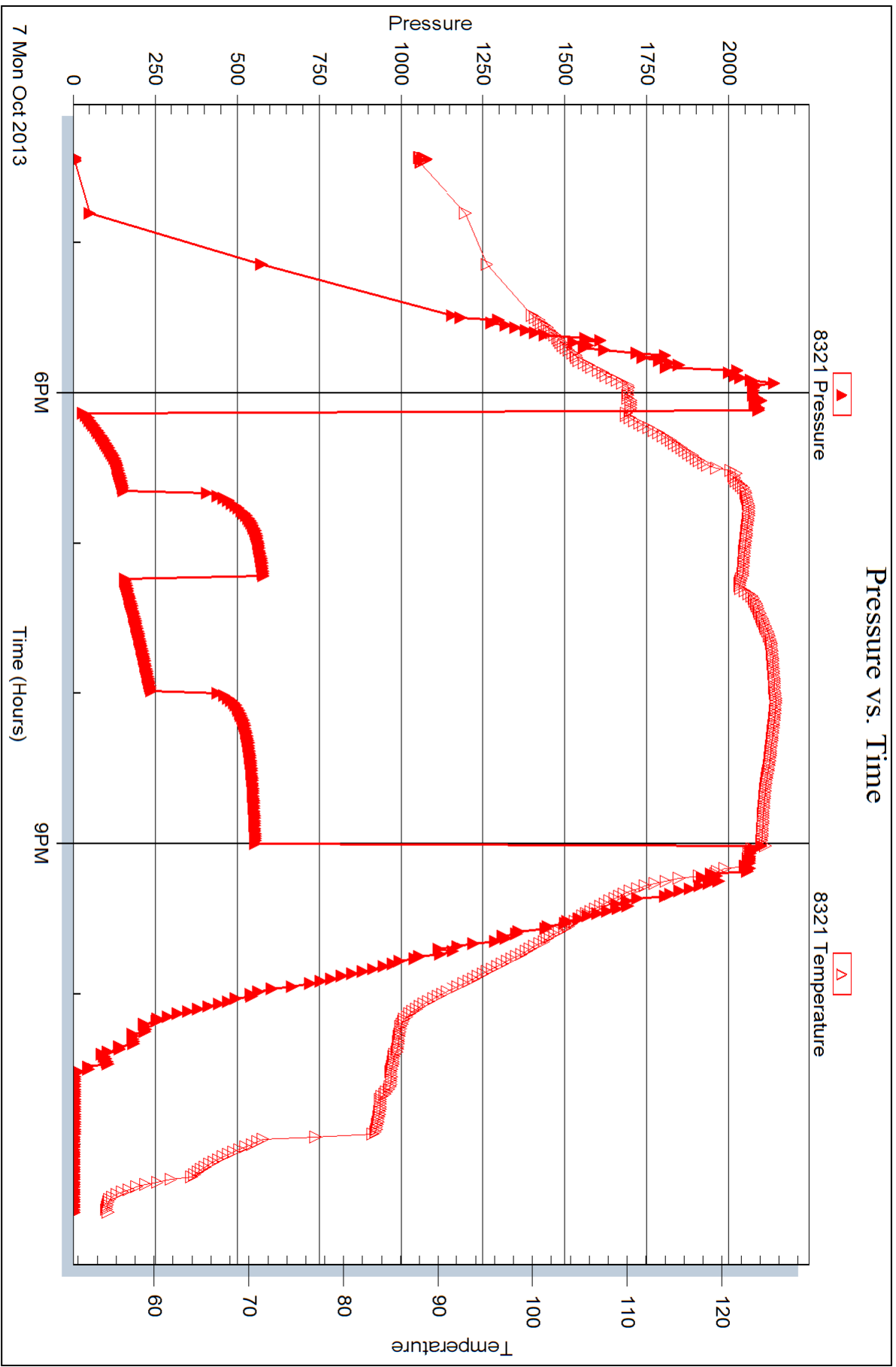


Serial #: 8321

Outside Northern lights Oil Co LC

Keenan #2

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Northern lights Oil Co LC**

PO Box 164
Andover KS 67002

ATTN: Seth Evanson

Keenan #2

3-19s-29w Lane,KS

Start Date: 2013.10.08 @ 07:09:01

End Date: 2013.10.08 @ 15:04:30

Job Ticket #: 56635 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.14 @ 16:42:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane, KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 56635

DST#: 4

ATTN: Seth Evanson

Test Start: 2013.10.08 @ 07:09:01

GENERAL INFORMATION:

Formation: **LKC"K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:40:00

Time Test Ended: 15:04:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 4259.00 ft (KB) To 4277.00 ft (KB) (TVD)

Total Depth: 4277.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2820.00 ft (KB)

2815.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8372

Inside

Press @ Run Depth: 484.97 psig @ 4260.00 ft (KB)

Start Date: 2013.10.08

End Date:

2013.10.08

Start Time: 07:09:01

End Time:

15:04:30

Capacity: 8000.00 psig

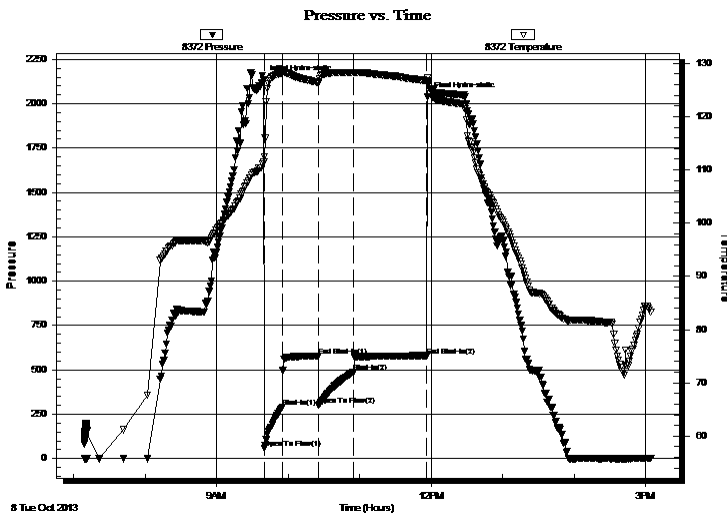
Last Calib.: 2013.10.08

Time On Btm: 2013.10.08 @ 09:39:30

Time Off Btm: 2013.10.08 @ 11:57:00

TEST COMMENT: IF:(15min) BOB in 3 min.
IS:(30min) No Return
FF:(30min) BOB in 5 min.
FS:(60min) No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2136.39	111.45	Initial Hydro-static
1	59.84	112.46	Open To Flow (1)
16	290.35	128.12	Shut-In(1)
46	578.77	126.41	End Shut-In(1)
46	299.17	126.26	Open To Flow (2)
75	484.97	128.27	Shut-In(2)
137	579.84	126.80	End Shut-In(2)
138	2037.85	127.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1010.00	MW	12.01
20.00	MW w / trace oil	0.28

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 56635

DST#: 4

ATTN: Seth Evanson

Test Start: 2013.10.08 @ 07:09:01

Tool Information

Drill Pipe:	Length: 4018.00 ft	Diameter: 3.80 inches	Volume: 56.36 bbl	Tool Weight:	2500.00 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: 237.33 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	68000.00 lb
			<u>Total Volume: 57.53 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.33 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	4259.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	18.00 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			4240.00	
Shut In Tool	5.00			4245.00	
Hydraulic tool	5.00			4250.00	
Packer	5.00			4255.00	20.00 Bottom Of Top Packer
Packer	4.00			4259.00	
Stubb	1.00			4260.00	
Recorder	0.00	8372	Inside	4260.00	
Recorder	0.00	8321	Outside	4260.00	
Perforations	14.00			4274.00	
Bullnose	3.00			4277.00	18.00 Bottom Packers & Anchor
Total Tool Length:	38.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 56635

DST#: 4

ATTN: Seth Evanson

Test Start: 2013.10.08 @ 07:09:01

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:

40000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1010.00	MW	12.006
20.00	MW w / trace oil	0.281

Total Length: 1030.00 ft Total Volume: 12.287 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Resistivity- .153 @ 86 deg = 40000

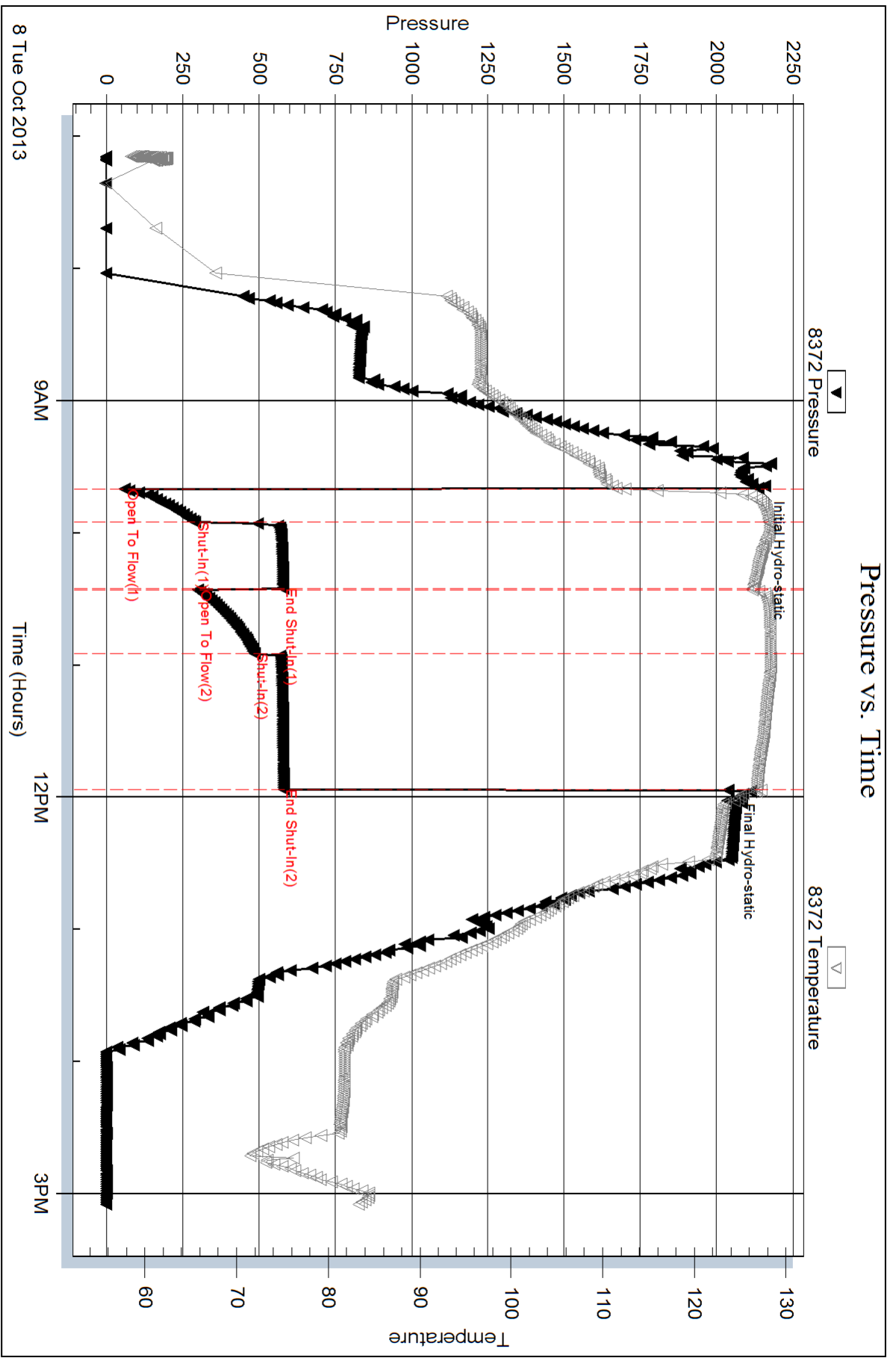
Serial #: 8372

Inside

Northern lights Oil Co LC

Keenan #2

DST Test Number: 4

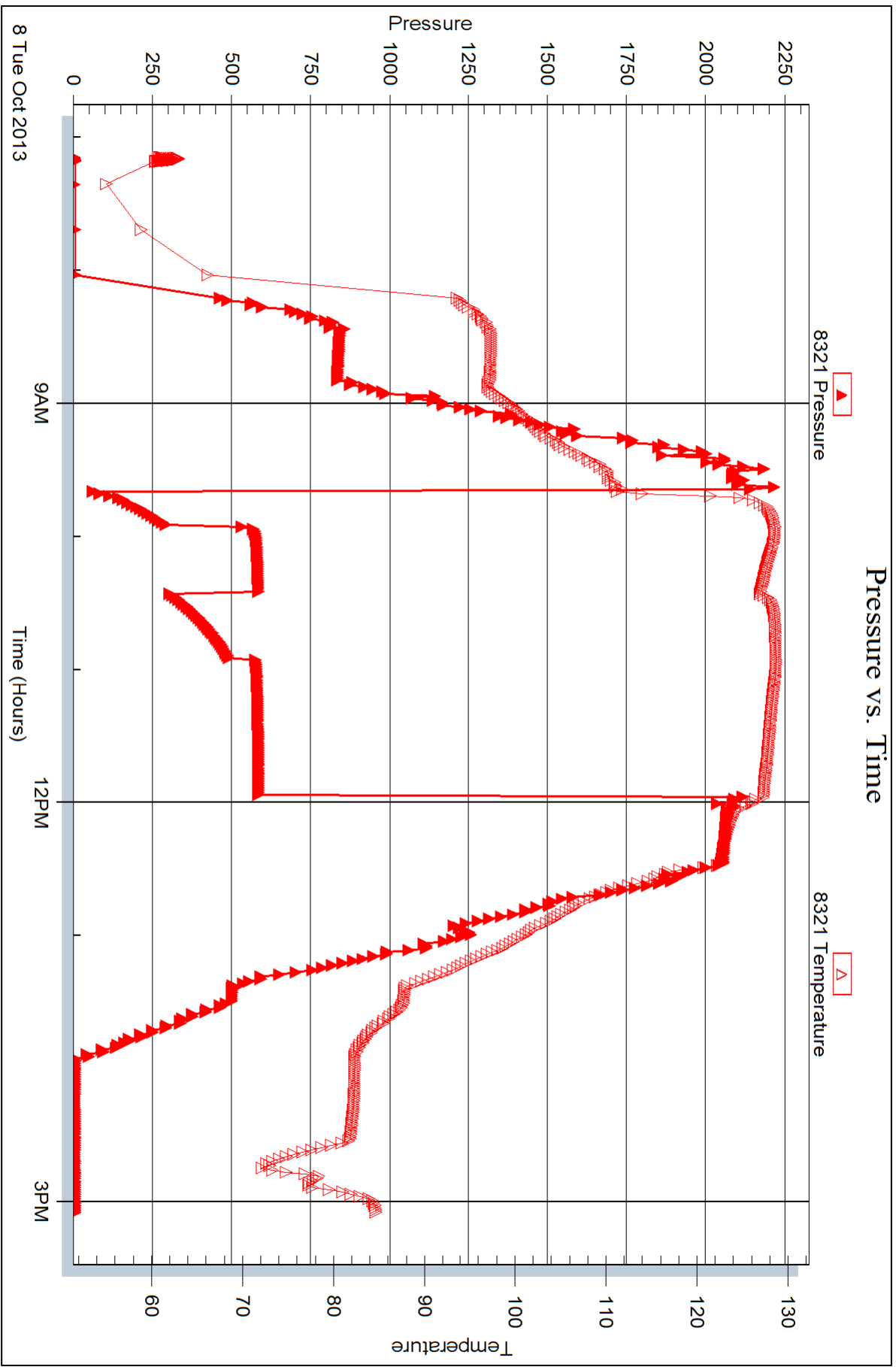


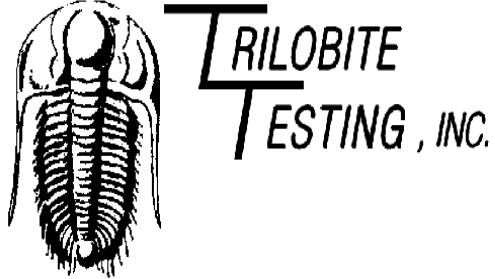
Serial #: 8321

Outside Northern lights Oil Co LC

Keenan #2

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Northern lights Oil Co LC**

PO Box 164
Andover KS 67002

ATTN: Seth Evanson

Keenan #2

3-19s-29w Lane,KS

Start Date: 2013.10.09 @ 10:00:01

End Date: 2013.10.09 @ 15:24:30

Job Ticket #: 53636 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.14 @ 16:41:42



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53636

DST#: 5

ATTN: Seth Evanson

Test Start: 2013.10.09 @ 10:00:01

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:23:30

Time Test Ended: 15:24:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 4358.00 ft (KB) To 4386.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4386.00 ft (KB) (TVD)

2815.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

Serial #: 8372 Inside

Press @ Run Depth: 15.65 psig @ 4359.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.09 End Date: 2013.10.09

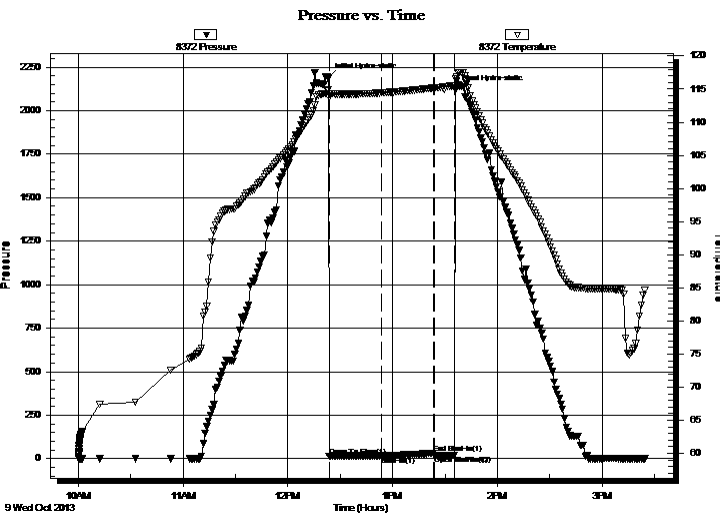
Last Calib.: 2013.10.09

Start Time: 10:00:01 End Time: 15:24:30

Time On Btm: 2013.10.09 @ 12:23:00

Time Off Btm: 2013.10.09 @ 13:36:00

TEST COMMENT: IF:(30min) Intermittent surface blow died in 15 min.
IS:(30min) No Return
FF:(10min) No blow . Flushed, Surged, No blow . Pulled Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2187.85	114.95	Initial Hydro-static
1	14.89	113.74	Open To Flow (1)
31	15.65	114.43	Shut-In(1)
61	31.11	115.17	End Shut-In(1)
61	16.72	115.17	Open To Flow (2)
73	18.67	115.51	Shut-In(2)
73	2118.63	116.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOSM o=tr m=100%	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53636

DST#: 5

ATTN: Seth Evanson

Test Start: 2013.10.09 @ 10:00:01

Tool Information

Drill Pipe:	Length: 4115.00 ft	Diameter: 3.80 inches	Volume: 57.72 bbl	Tool Weight:	2500.00 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: 237.33 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	64000.00 lb
			<u>Total Volume: 58.89 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.33 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4358.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	48.00 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			4339.00	
Shut In Tool	5.00			4344.00	
Hydraulic tool	5.00			4349.00	
Packer	5.00			4354.00	20.00 Bottom Of Top Packer
Packer	4.00			4358.00	
Stubb	1.00			4359.00	
Recorder	0.00	8372	Inside	4359.00	
Recorder	0.00	8321	Outside	4359.00	
Perforations	24.00			4383.00	
Bullnose	3.00			4386.00	28.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53636

DST#: 5

ATTN: Seth Evanson

Test Start: 2013.10.09 @ 10:00:01

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:

bbf

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	SOSM o=tr m=100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8372

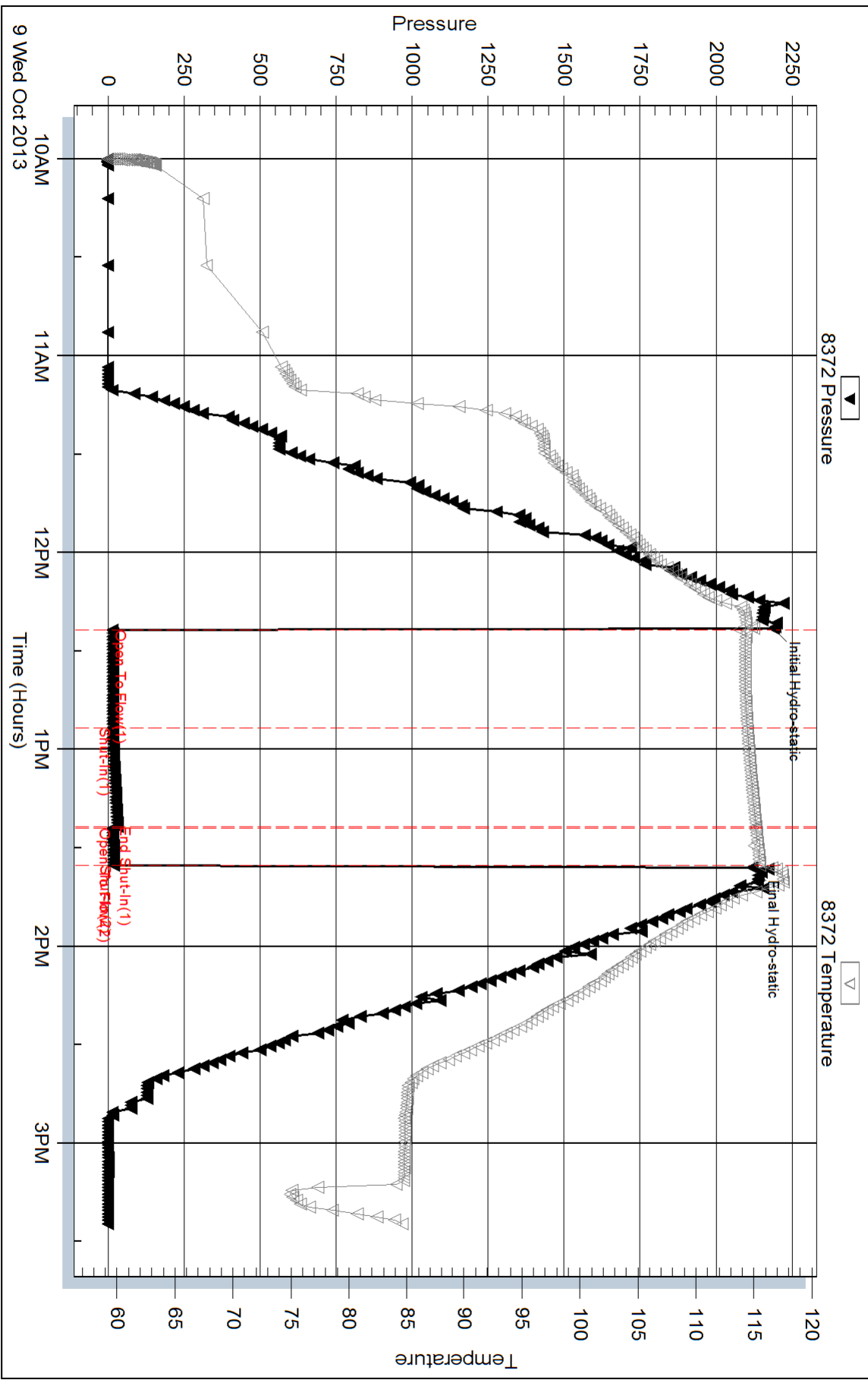
Inside

Northern lights Oil Co LC

Keenan #2

DST Test Number: 5

Pressure vs. Time



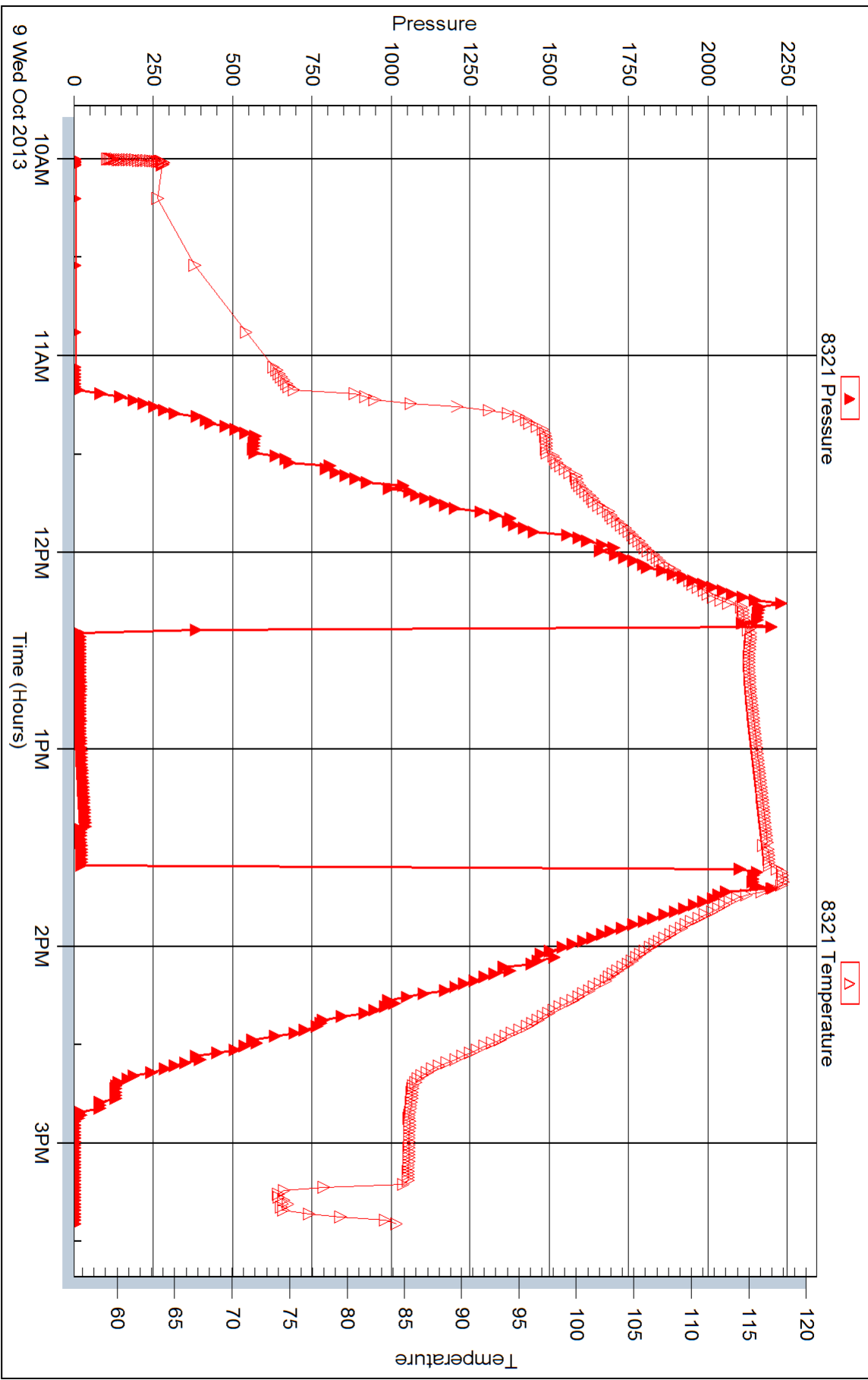
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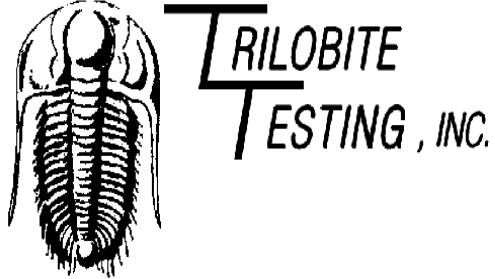
Outside Northern lights Oil Co LC

Keenan #2

DST Test Number: 5

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Northern lights Oil Co LC**

PO Box 164
Andover KS 67002

ATTN: Seth Evanson

Keenan #2

3-19s-29w Lane,KS

Start Date: 2013.10.10 @ 02:00:01

End Date: 2013.10.10 @ 09:31:30

Job Ticket #: 53637 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.14 @ 16:41:16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane, KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53637

DST#: 6

ATTN: Seth Evanson

Test Start: 2013.10.10 @ 02:00:01

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:53:00

Time Test Ended: 09:31:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 4401.00 ft (KB) To 4435.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4435.00 ft (KB) (TVD)

2815.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

Serial #: 8372 Inside

Press @ Run Depth: 408.00 psig @ 4402.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.10

End Date:

2013.10.10

Last Calib.: 2013.10.10

Start Time: 02:00:01

End Time:

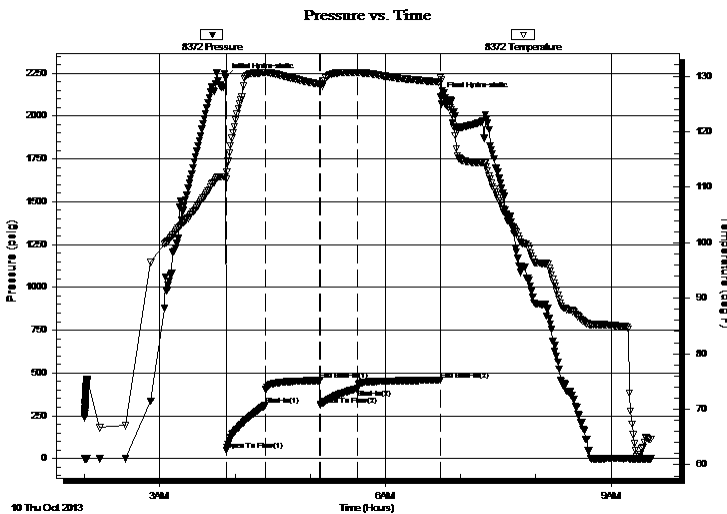
09:31:30

Time On Btm: 2013.10.10 @ 03:52:30

Time Off Btm: 2013.10.10 @ 06:44:00

TEST COMMENT: IF:(30min) BOB in 5 min.
ISl:(45min) No Return
FF:(30min) BOB in 12 min.
FSl:(60min) No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2221.70	111.93	Initial Hydro-static
1	46.93	111.43	Open To Flow (1)
32	310.84	130.65	Shut-In(1)
75	455.98	128.56	End Shut-In(1)
76	313.84	128.48	Open To Flow (2)
105	408.00	130.59	Shut-In(2)
171	456.69	128.94	End Shut-In(2)
172	2111.38	129.81	Final Hydro-static

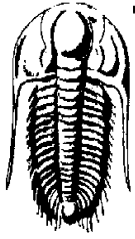
Recovery

Length (ft)	Description	Volume (bbl)
955.00	MW	11.23

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53637

DST#: 6

ATTN: Seth Evanson

Test Start: 2013.10.10 @ 02:00:01

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:53:00

Time Test Ended: 09:31:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 68

Interval: 4401.00 ft (KB) To 4435.00 ft (KB) (TVD)

Reference Elevations: 2820.00 ft (KB)

Total Depth: 4435.00 ft (KB) (TVD)

2815.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

Serial #: 8321 Outside

Press @RunDepth: psig @ 4402.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.10

End Date:

2013.10.10

Last Calib.:

2013.10.10

Start Time: 02:00:01

End Time:

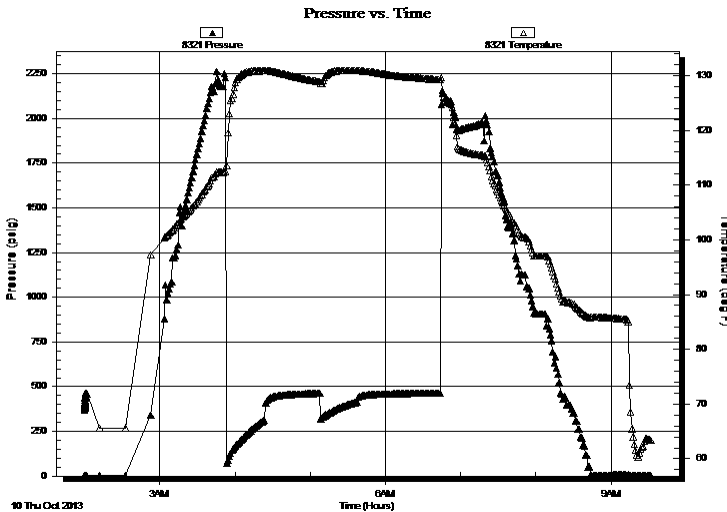
09:31:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:(30min) BOB in 5 min.
ISl:(45min) No Return
FF:(30min) BOB in 12 min.
FSl:(60min) No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
955.00	MW	11.23

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53637

DST#: 6

ATTN: Seth Evanson

Test Start: 2013.10.10 @ 02:00:01

Tool Information

Drill Pipe:	Length: 4174.00 ft	Diameter: 3.80 inches	Volume: 58.55 bbl	Tool Weight:	2500.00 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: 237.33 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 59.72 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.33 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4401.00 ft			Final	61000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	54.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4382.00	
Shut In Tool	5.00			4387.00	
Hydraulic tool	5.00			4392.00	
Packer	5.00			4397.00	20.00 Bottom Of Top Packer
Packer	4.00			4401.00	
Stubb	1.00			4402.00	
Recorder	0.00	8372	Inside	4402.00	
Recorder	0.00	8321	Outside	4402.00	
Perforations	30.00			4432.00	
Bullnose	3.00			4435.00	34.00 Bottom Packers & Anchor
Total Tool Length:	54.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Northern lights Oil Co LC

3-19s-29w Lane,KS

PO Box 164
Andover KS 67002

Keenan #2

Job Ticket: 53637

DST#: 6

ATTN: Seth Evanson

Test Start: 2013.10.10 @ 02:00:01

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:

40000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 0.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 0.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
955.00	MW	11.234

Total Length: 955.00 ft Total Volume: 11.234 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Resistivity- .200 @ 67 deg = 40000

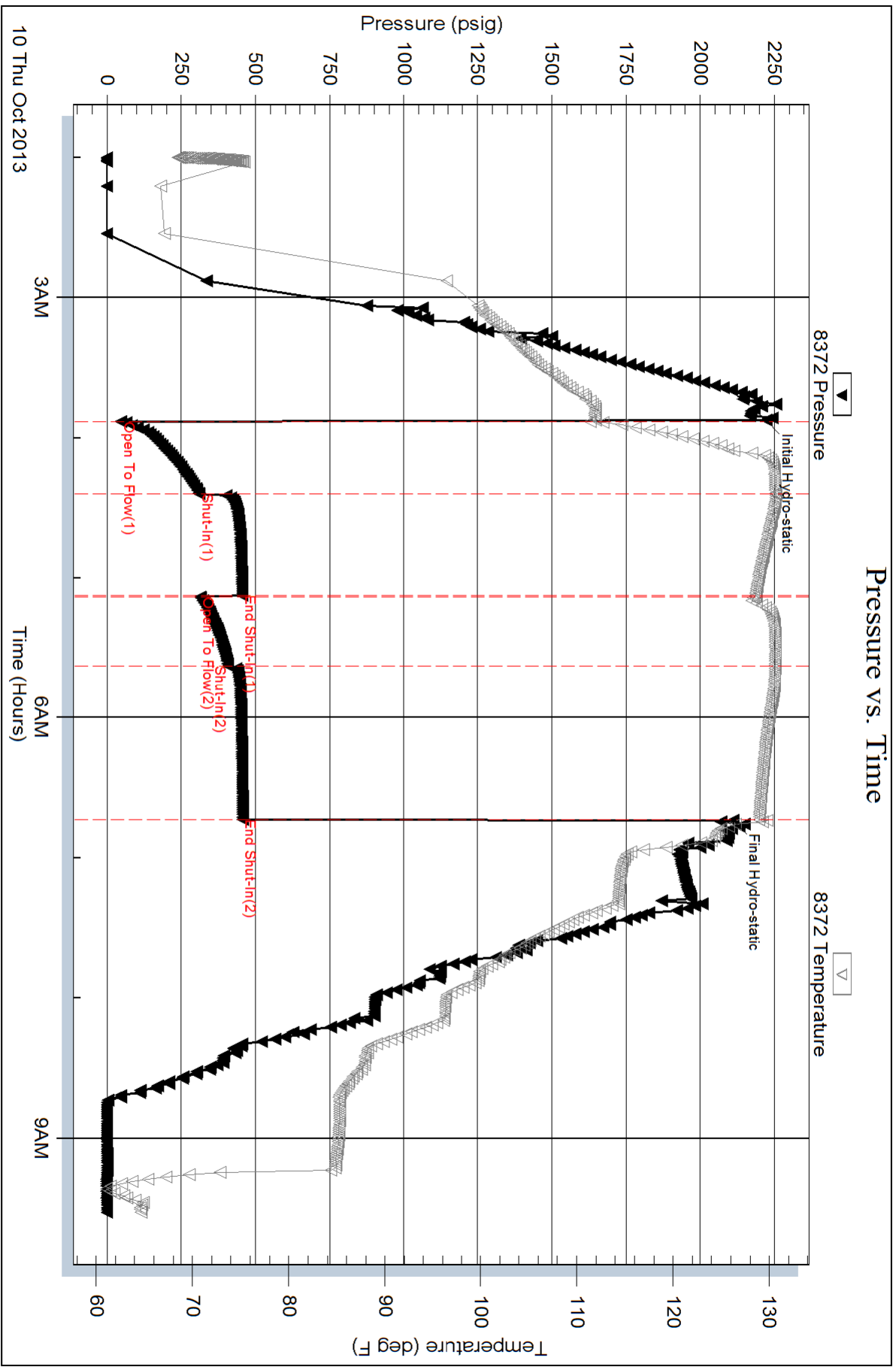
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Inside

Northern lights Oil Co LC

Keenan #2

DST Test Number: 6



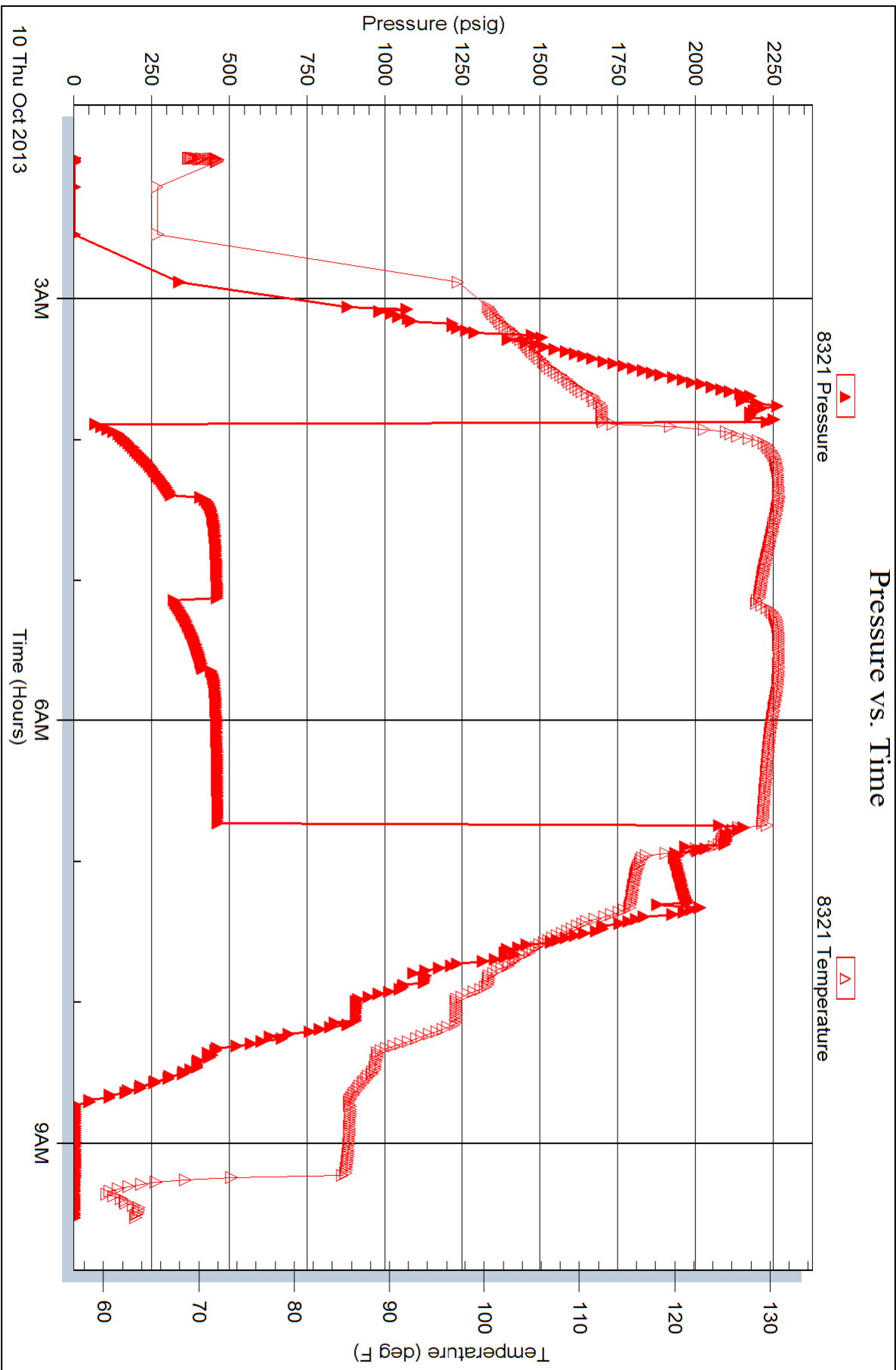
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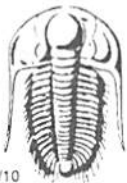
Outside

Northern lights Oil Co LC

Keenan #2

DST Test Number: 6





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53632

Well Name & No. KEZMAN #2 Test No. 1 Date 10-6-13
 Company Northern Light Oil Co. LC Elevation 2820 KB 2815 GL
 Address PO BOX 164 ANDOVER, KS. 67002
 Co. Rep / Geo. Seth EVANSON Rig Mallard
 Location: Sec. 3 Twp. 19s Rge. 29w Co. JANE State Ks

Interval Tested 4144 - 4200 Zone Tested LKC "G"
 Anchor Length 56' Drill Pipe Run 3893 Mud Wt. 9.2
 Top Packer Depth 4139 Drill Collars Run 237.33 Vis 50
 Bottom Packer Depth 4144 Wt. Pipe Run 0 WL 8.8
 Total Depth 4200 Chlorides 3000 ppm System LCM 0

Blow Description IP: BOB IN 4min
ISI: NO RETURN
FF: BOB IN 5min
FSI: NO RETURN

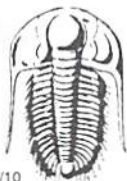
Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>oil</u>				
<u>833</u>	<u>MW w/TRACE oil</u>				
<u>375</u>	<u>MW</u>				

Rec Total 1210 BHT 124° Gravity API RW, 125 @ 68° F Chlorides 70,000 ppm
 (A) Initial Hydrostatic 2073 Test 1250 T-On Location 03:32
 (B) First Initial Flow 60 Jars 04:32
 (C) First Final Flow 308 Safety Joint 06:30
 (D) Initial Shut-In 816 Circ Sub 08:45
 (E) Second Initial Flow 315 Hourly Standby 11:26
 (F) Second Final Flow 586 Mileage 192RT 50rt 77.50 Comments _____
 (G) Final Shut-In 812 Sampler _____
 (H) Final Hydrostatic 1986 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1327.50

Initial Open 15
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 60

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53633

Well Name & No. KEENAN #2 Test No. 2 Date 10-6-13
 Company NORTHERN Light Oil CO LC Elevation 2820 KB 2815 GL
 Address PO BOX 164 ANDOVER, KS 67002
 Co. Rep / Geo. SETH EVANSON Rig MALLARD
 Location: Sec. 3 Twp. 19S Rge. 29W Co. LANE State Ks.

Interval Tested 4197-4221 Zone Tested LKC "H"
 Anchor Length 24' Drill Pipe Run 3956 Mud Wt. 9.2
 Top Packer Depth 4192 Drill Collars Run 237.33 Vis 50
 Bottom Packer Depth 4197 Wt. Pipe Run 0 WL -
 Total Depth 4221 Chlorides - ppm System LCM -

Blow Description BF: BOBIN 2min
ISI: Return blow immediately after bleedoff Built to 6" in 15min
FF: BOBIN 2min
FSI: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>1039</u>	<u>BO</u>	<u>15</u>	<u>85</u>		
<u>63</u>	<u>MCOB</u>	<u>30</u>	<u>50</u>		<u>20</u>
<u>63</u>	<u>GOCM</u>	<u>20</u>	<u>20</u>		<u>60</u>
		%gas	%oil	%water	%mud
	<u>GIP = 410'</u>	%gas	%oil	%water	%mud

Rec Total 1165 BHT _____ Gravity 41 API RW _____ @ _____ °F Chlorides _____ ppm

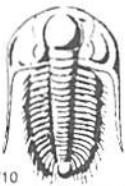
(A) Initial Hydrostatic 2104 Test 1250 T-On Location 18:47
 (B) First Initial Flow 86 Jars _____ T-Started 19:01
 (C) First Final Flow 267 Safety Joint _____ T-Open 21:43
 (D) Initial Shut-In ~~567~~ 576 Circ Sub _____ T-Pulled 23:58
 (E) Second Initial Flow 280 Hourly Standby _____ T-Out 04:50
 (F) Second Final Flow 447 Mileage 192RT 77.50 Comments Shut Down
 (G) Final Shut-In 569 Sampler _____ 2X - H₂S 40ppm
 (H) Final Hydrostatic 2033 Straddle _____ mbfsl
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 60

Sub Total 1327.50 MP/DST Disc't _____

Approved By _____ Our Representative Andy Co

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53634

Well Name & No. KEENAN #2 Test No. 3 Date 10-7-13
 Company Northern Light Oil Co LC Elevation 2820 KB 2815 GL
 Address PO BOX 164 Andover KS 67002
 Co. Rep / Geo. Seth EVANSON Rig MAILLARD
 Location: Sec. 3 Twp. 19S Rge. 29W Co. LANE State Ks

Interval Tested 4220 - 4255 Zone Tested LKC "J"
 Anchor Length 35 Drill Pipe Run 3988 Mud Wt. 9.2
 Top Packer Depth 4215 Drill Collars Run 237.33 Vis 49
 Bottom Packer Depth 4220 Wt. Pipe Run 0 WL -
 Total Depth 4255 Chlorides - ppm System LCM -

Blow Description IF: 4" blow in 5 min. 8" blow in 11 min. BOB in 20 min
ISI: NO RETURN
FF: 4" blow in 10 min. 8" blow in 19 min. BOB in 29 min
FSI: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>oil</u>				
<u>470</u>	<u>MW</u>				

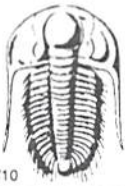
Rec Total 500' BHT 123° Gravity 36 API RW 293 @ 57° F Chlorides 30000 ppm

(A) Initial Hydrostatic 2084 Test 1250 T-On Location 16:04
 (B) First Initial Flow 20 Jars _____ T-Started 16:26
 (C) First Final Flow 148 Safety Joint _____ T-Open 18:09
 (D) Initial Shut-In 573 Circ Sub _____ T-Pulled 20:59
 (E) Second Initial Flow 151 Hourly Standby _____ T-Out 23:28
 (F) Second Final Flow 231 Mileage 192RT 77.50 Comments motel
 (G) Final Shut-In 549 Sampler _____
 (H) Final Hydrostatic 2025 Straddle _____
 Ruined Shale Packer _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 35 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 60 Day Standby _____
 Accessibility _____
 Sub Total 1327.50 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53635

Well Name & No. KEENAN #2 Test No. 4 Date 10-8-13
 Company Northern Light oil co LC Elevation 2820 KB 2815 GL
 Address PO BOX 164 ANDOVER KS. 67002
 Co. Rep / Geo. Seth EVANSON Rig Mallard
 Location: Sec. 3 Twp. 19S Rge. 29W Co. LANE State Ks

Interval Tested 4259 - 4277 Zone Tested LRC "K"
 Anchor Length 18' Drill Pipe Run 4018 Mud Wt. 9.2
 Top Packer Depth 4254 Drill Collars Run 237.33 Vis 50
 Bottom Packer Depth 4259 Wt. Pipe Run 0 WL -
 Total Depth 4277 Chlorides - ppm System LCM -

Blow Description IF: BOB IN 3min
ISI: NO RETURN
FF: BOB IN 5min
FSI: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Feet of MW w/TARVE oil</u>				
<u>1010</u>	<u>Feet of MW</u>				

Rec Total 1030 BHT 126° Gravity API RW .153 @ 86° F Chlorides 40000 ppm

(A) Initial Hydrostatic 2136 Test 1250 T-On Location 06:50
 (B) First Initial Flow 59 Jars _____ T-Started 07:09
 (C) First Final Flow 290 Safety Joint _____ T-Open 09:40
 (D) Initial Shut-In 578 Circ Sub _____ T-Pulled 11:55
 (E) Second Initial Flow 299 Hourly Standby _____ T-Out 15:05
 (F) Second Final Flow 484 Mileage 192RT 77.50
 (G) Final Shut-In 579 Sampler _____
 (H) Final Hydrostatic 2037 Straddle _____

Initial Open 15 Shale Packer _____
 Initial Shut-In 30 Shale Packer _____
 Final Flow 30 Extra Packer _____
 Final Shut-In 60 Extra Recorder _____
 Sub Total 0
 Total 1327.50
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53636

4/10

Well Name & No. KEZMAN #2 Test No. 5 Date 10-9-13
 Company Northern Light oil co. LC Elevation 2820 KB 2815 GL
 Address PO BOX 164 ANDOVER KS. 67002
 Co. Rep / Geo. Seth EVANSON Rig MALLARD
 Location: Sec. 3 Twp. 19S Rge. 29W Co. LANE State Ks

Interval Tested 4358-4386 Zone Tested MARM.
 Anchor Length 28 Drill Pipe Run 4115 Mud Wt. 9.2
 Top Packer Depth 4353 Drill Collars Run 237.33 Vis 5.0
 Bottom Packer Depth 4358 Wt. Pipe Run 0 WL -
 Total Depth 4386 Chlorides - ppm System LCM -

Blow Description IF: intermittent surface blow, Died in 15 min.
ISI: No Return
FF: NO blow, Flushed, surged, no blow, pulled tool
FSL: -

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>505m</u>		<u>TR</u>		<u>100</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

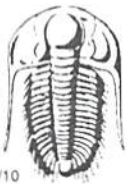
Rec Total 5' BHT 115° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2187 Test 1250 T-On Location 09:40
 (B) First Initial Flow 14 Jars _____ T-Started 10:00
 (C) First Final Flow 15 Safety Joint _____ T-Open 12:25
 (D) Initial Shut-In 31 Circ Sub _____ T-Pulled 13:35
 (E) Second Initial Flow 16 Hourly Standby _____ T-Out 15:26
 (F) Second Final Flow 18 Mileage 192RT 77.50 Comments motel
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 2118 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 30 Shale Packer _____ Ruined Packer _____
 Final Flow 10 Extra Packer _____ Extra Copies _____
 Final Shut-In _____ Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1327.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1327.50

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53637

Well Name & No. KEENAN #2 Test No. 6 Date 10-10-13
 Company NORTHERN Light oil CO. LC Elevation 2820 KB 2815 GL
 Address PO BOX 1641 ANDOVER KS. 67002
 Co. Rep / Geo. Seth EVANSON Rig MALLARD
 Location: Sec. 3 Twp. 19S Rge. 29W Co. LANE State Ks

Interval Tested 4401 - 4435 Zone Tested Altamont
 Anchor Length 34 Drill Pipe Run 4174 Mud Wt. 9.2
 Top Packer Depth 4396 Drill Collars Run 237.33 Vis 41
 Bottom Packer Depth 4401 Wt. Pipe Run 0 WL -
 Total Depth 4435 Chlorides - ppm System LCM -

Blow Description IF: BOB in 6min.
ISI: NO RETURN
FF: BOB in 12min.
FSI: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>955</u>	<u>MW</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 955 BHT 128° Gravity _____ API RW .200 @ 67° F Chlorides 40000 ppm

(A) Initial Hydrostatic 2221 Test 1250 T-On Location 01:30
 (B) First Initial Flow 46 Jars _____ T-Started 02:00
 (C) First Final Flow 310 Safety Joint _____ T-Open 03:53
 (D) Initial Shut-In 455 Circ Sub _____ T-Pulled 06:38
 (E) Second Initial Flow 313 Hourly Standby _____ T-Out 09:32
 (F) Second Final Flow 408 Mileage 192RT 155 Comments motel
 (G) Final Shut-In 456 Sampler _____ 192RT x 2 pick up tools
 (H) Final Hydrostatic 2111 Straddle _____ loaded tools 10/11 11:30

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Shale Packer _____ Ruined Packer _____
 Final Flow 30 Extra Packer _____ Extra Copies _____
 Final Shut-In 60 Extra Recorder _____ Sub Total 800
 Day Standby 1d 2hrs Total 2205
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1405

Approved By _____ Our Representative Andy Co

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