KOLAR Document ID: 1359820

Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 3581
Name: Red Oak Energy, Inc.
Address 1: 7701 E KELLOGG DR STE 710
Address 2:
City: WICHITA State: KS Zip: 67207 + 1738
Contact Person: Ryan Davis
Phone: (316) 652-7373
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Sean Deenihan
Purchaser: NA

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☐ Oil ☐ WSW ☐ SWD
☐ Gas ☑ DH ☐ EOR
☐ OG ☐ GSW
☐ 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 EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

4/5/2017	4/11/2017	4/11/2017
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-193-20992-00-00
Spot Description:
SW - SE - NW - SW Sec. 32 Twp. 6 S. R. 33 ☐ East ☑ West
1485 Feet from ☐ North / ☑ South Line of Section
678 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Thomas
Lease Name: SHULL Well #: 1
Field Name: WC
Producing Formation: NA
Elevation: Ground: 3073 Kelly Bushing: 3078
Total Vertical Depth: 4715 Plug Back Total Depth: 0
Amount of Surface Pipe Set and Cemented at: 249 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: 5000 ppm Fluid volume: 824 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Red Oak Energy, Inc
Lease Name: Mathers 1-2 License #: 3581
Quarter NE Sec. 2 Twp. 12 S. R. 32 ☐ East ☑ West
County: Logan Permit #: D-32180

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: 07/17/2017
☑ **Confidential Release Date:** 07/17/2019
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 07/17/2017

Operator Name: Red Oak Energy, Inc. Lease Name: SHULL Well #: 1

Sec. 32 Twp. 6 S. R. 33 ☐ East ☑ West County: Thomas

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 *(Attach Additional Sheets)*	☑ Yes	☐ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☐ Yes	☐ No

List All E. Logs Run:
Attached

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Anhydrite	2728	350
Topeka	3863	-785
Heebner	3992	-914
Lansing	4038	-960
Marmaton	4300	-1222
Cherokee	4498	-1420
Miss	4616	-1536

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	241	Surface Blend II	180	3%cc, 2% gel

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	-			
	-			

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/ Injection:	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:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Red Oak Energy, Inc.
Well Name	SHULL 1
Doc ID	1359820

All Electric Logs Run

CDL/CNL
DIL
MEL
SON

Form	ACO1 - Well Completion
Operator	Red Oak Energy, Inc.
Well Name	SHULL 1
Doc ID	1359820

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	241	Surface Blend II	180	3%cc, 2% gel

7828
7825

CONSOLIDATED
Oil Well Services, LLC

TICKET NUMBER 51756
LOCATION Oakley KS
FOREMAN Walt Dinkel

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
4-5-17	7251	Shull #1	32	6S	33W	Thomas

CUSTOMER: Red Oak Energy
MAILING ADDRESS: 7701 E. Kellogg Dr. Ste. 710
CITY: Wichita | STATE: KS | ZIP CODE: 67207-1738

Colby Golf Course SN 6S

TRUCK #	DRIVER	TRUCK #	DRIVER
731	Cory Davis		
479	Steven Odel		
697			

JOB TYPE Surface | HOLE SIZE 12¼ | HOLE DEPTH 249' | CASING SIZE & WEIGHT 8⅝ - 23#
CASING DEPTH 249' | DRILL PIPE | TUBING | OTHER
SLURRY WEIGHT 15.2 | SLURRY VOL | WATER gal/sk | CEMENT LEFT in CASING 15-20'
DISPLACEMENT 14½ | DISPLACEMENT PSI | MIX PSI | RATE 5 BPM

REMARKS: Safety Meeting, Rig up on Murfin #7, Circ. casing on bottom, Mix 180 sks Surface Blend II, Displace 14½ BBL H_2O, Shut in
Cement Did Circ
2 BBL to Pit

Thank You
Walt + Crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
C00471	1	PUMP CHARGE	1,150.00	1,150.00
C00002	20	MILEAGE	7.15	143.00
C00711	8.46	Ton Mileage Delivery	1.75	660.00
CC5871	180 SKS	Surface Blend II	23.00	4,140.00
CP8556	1	8⅝ Centralizer	110	110.00
				6,203.00
		Less	35% Disc	-2,171.05
				4,031.95
			SALES TAX	239.14
			ESTIMATED TOTAL	207.19

Ravin 3737

AUTHORIZTION Kelly Wilson TITLE Pusher DATE 4-5-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

TERMS

In consideration of the prices to be charged for Consolidated Oil Well Services, LLC (COWS) services, equipment and products and for the performance of services and supplying of materials, Customer agrees to the following terms and conditions.

Terms. Cash in advance unless satisfactory credit is established. On credit sales, invoices are payable within 30 days of the invoice date. On all invoices not paid within 30 days, Customer agrees to pay COWS interest at the rate of 18% per annum or the maximum rate allowed by law, whichever is higher. In the event COWS retains an attorney to pursue collection of any account, Customer agrees to pay all collection costs and attorney's fees incurred by COWS.

Any applicable federal, state or local sales, use occupation, consumer's or emergency taxes shall be added to the quoted price. All process license fees required to be paid to others will be added to the scheduled prices.

All COWS' prices are subject to change without notice.

SERVICE CONDITIONS

Customer warrants that the well is in proper condition to receive the services, equipment, products and materials to be supplied by COWS. The Customer shall at all time have complete care, custody, and control of the well, the drilling and production equipment at the well, and the premises about the well. A responsible representative of the Customer shall be present to specify depths, pressures, or materials used for any service which is to be performed.

(a) COWS shall not be responsible for any claim, cause of action or demand (hereinafter referred to as a 'claim') for damage to property, or injury to or death of employees and representatives, of Customer or the well owner (if different from Customer), unless such damage, injury or death is caused by the willful misconduct or gross negligence of COWS, including but not limited to sub-surface damage and surface damage arising from sub-surface damage.

(b) Unless a claim is the result of the sole willful misconduct or gross negligence of COWS, Customer shall be responsible for and indemnify and hold COWS harmless from any claim for: (1) reservoir loss or damage, or property damage resulting from sub-surface pressure, losing control of the well and/or a well blowout; (2) damages as a result of a subsurface trespass, or an action in the nature thereof, arising from a service operation performed by COWS; (3) injury to or death of persons, other than employees of COWS, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive material in the well hole; and (4) well damage or reservoir damage caused by (i) loss of circulation, cement invasion, cement misplacement, pumping cement or cement plugs on wells with loss of circulation, including the failure to displace plug to proper depth, (ii) sub-surface pressure and resulting failure to complete pumping of cement or cement plug, including dehydration of cement slurry or flashing, plugged float shoe, annulus bridging or plugging, or (iii) down hole tools being lost or left in the well, or becoming stuck in the well for any reason and by any cause. COWS may furnish down hole tools and may supply supervision for the running and placement of such tools but will not be liable for any damage, loss or result caused by the use of such tools. Furthermore, Customer will be responsible for the cost to replace such tools if they are lost or left in the well.

(c) COWS makes no guarantee of the effectiveness of any COWS' products, supplies or materials, or the results of any COWS' treatment or services.

(d) Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, COWS is unable to guarantee the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by COWS. COWS' personnel will use their best efforts in gathering such information and their best judgement in interpreting it, but Customer agrees that COWS shall not be responsible for any damage arising from the use of such information except where due to COWS' gross negligence or willful misconduct in the preparation or furnishing of it.

(e) COWS may buy and re-sell to Customer down hole equipment, including but not limited to float equipment, DV tools, port collars, type A & B packers, and Customer agrees that COWS is not an agent or dealer for the companies who manufacture such items, and further agrees that Customer shall be solely responsible for and indemnify COWS against any claim with regard to the effectiveness, malfunction of, or functionality of such items.

WARRANTIES - LIMITATION OF LIABILITY

COWS warrants title to the products, supplies and materials, and that the same are free from defects in workmanship and materials. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, NOR ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE, WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. COWS's liability and Customer's exclusive remedy in any claim (whether in contract, tort, breach of warranty or otherwise,) arising out of the sale or use of any COWS' products, supplies, materials or services is expressly limited to the replacement of such products, supplies, materials or services or their return to COWS or, at COWS' option, an allowance to Customer of credit for the cost of such items.

Customer waives and releases all claims against COWS for any special, incidental, indirect, consequential or punitive damages.

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64006 **DST#: 1**

Test Start: 2017.04.08 @ 19:00:00

GENERAL INFORMATION:

Formation: **LKC " D "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:24:30
Time Test Ended: 01:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Jim Svaty
Unit No: 76

Interval: 4031.00 ft (KB) To 4098.00 ft (KB) (TVD)
Total Depth: 4098.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

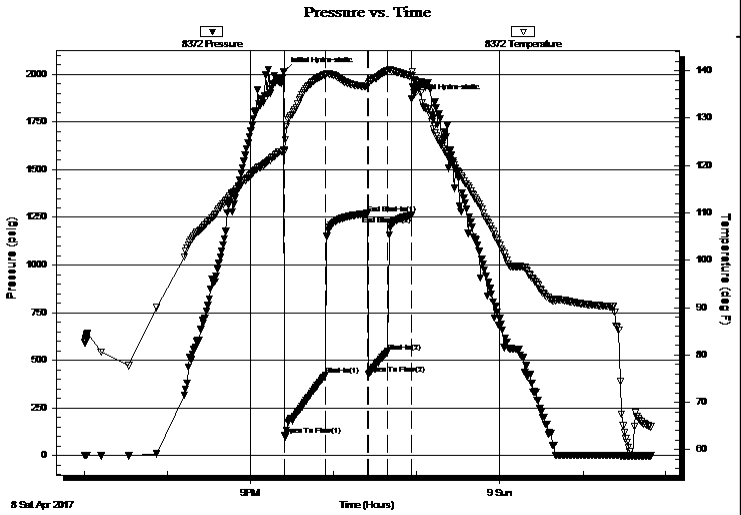
Reference Elevations: 3079.00 ft (KB)
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8372 **Outside**

Press@RunDepth: 545.11 psig @ 4032.00 ft (KB)
Start Date: 2017.04.08 End Date: 2017.04.09
Start Time: 19:00:01 End Time: 01:49:30

Capacity: 8000.00 psig
Last Calib.: 2017.04.09
Time On Btm: 2017.04.08 @ 21:24:00
Time Off Btm: 2017.04.08 @ 22:56:30

TEST COMMENT: 30-IFP- BOB in 3 1/2min.
30-ISIP- No Blow
15-FFP- BOB in 4 1/2min.
15-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2016.56	123.37	Initial Hydro-static
1	104.21	123.00	Open To Flow (1)
30	421.03	139.22	Shut-In(1)
61	1269.71	136.59	End Shut-In(1)
61	425.72	137.20	Open To Flow (2)
75	545.11	140.01	Shut-In(2)
92	1259.57	138.81	End Shut-In(2)
93	1871.93	139.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
697.00	MCW 5%m 95%w	8.07
252.00	MCW 35%m 65%w	3.53
126.00	WCM 45%w 55%m	1.77

Gas Rates

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

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64006 **DST#: 1**

Test Start: 2017.04.08 @ 19:00:00

GENERAL INFORMATION:

Formation: **LKC " D "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:24:30
Time Test Ended: 01:50:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Jim Svaty
Unit No: 76

Interval: 4031.00 ft (KB) To 4098.00 ft (KB) (TVD)
Total Depth: 4098.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

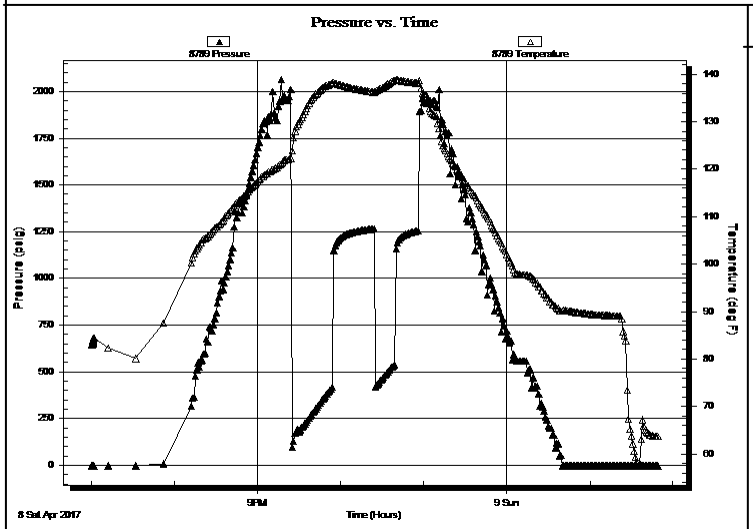
Reference Elevations: 3079.00 ft (KB)
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8789 **Inside**

Press@RunDepth: psig @ 4032.00 ft (KB)
Start Date: 2017.04.08 End Date: 2017.04.09
Start Time: 19:00:01 End Time: 01:49:30

Capacity: 8000.00 psig
Last Calib.: 2017.04.09
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP- BOB in 3 1/2min.
30-ISIP- No Blow
15-FFP- BOB in 4 1/2min.
15-FSIP- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
697.00	MCW 5%m 95%w	8.07
252.00	MCW 35%m 65%w	3.53
126.00	WCM 45%w 55%m	1.77

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64006 **DST#: 1**

Test Start: 2017.04.08 @ 19:00:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	53000 ppm
Viscosity:	63.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2400.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
697.00	MCW 5%m 95%w	8.074
252.00	MCW 35%m 65%w	3.535
126.00	WCM 45%w 55%m	1.767

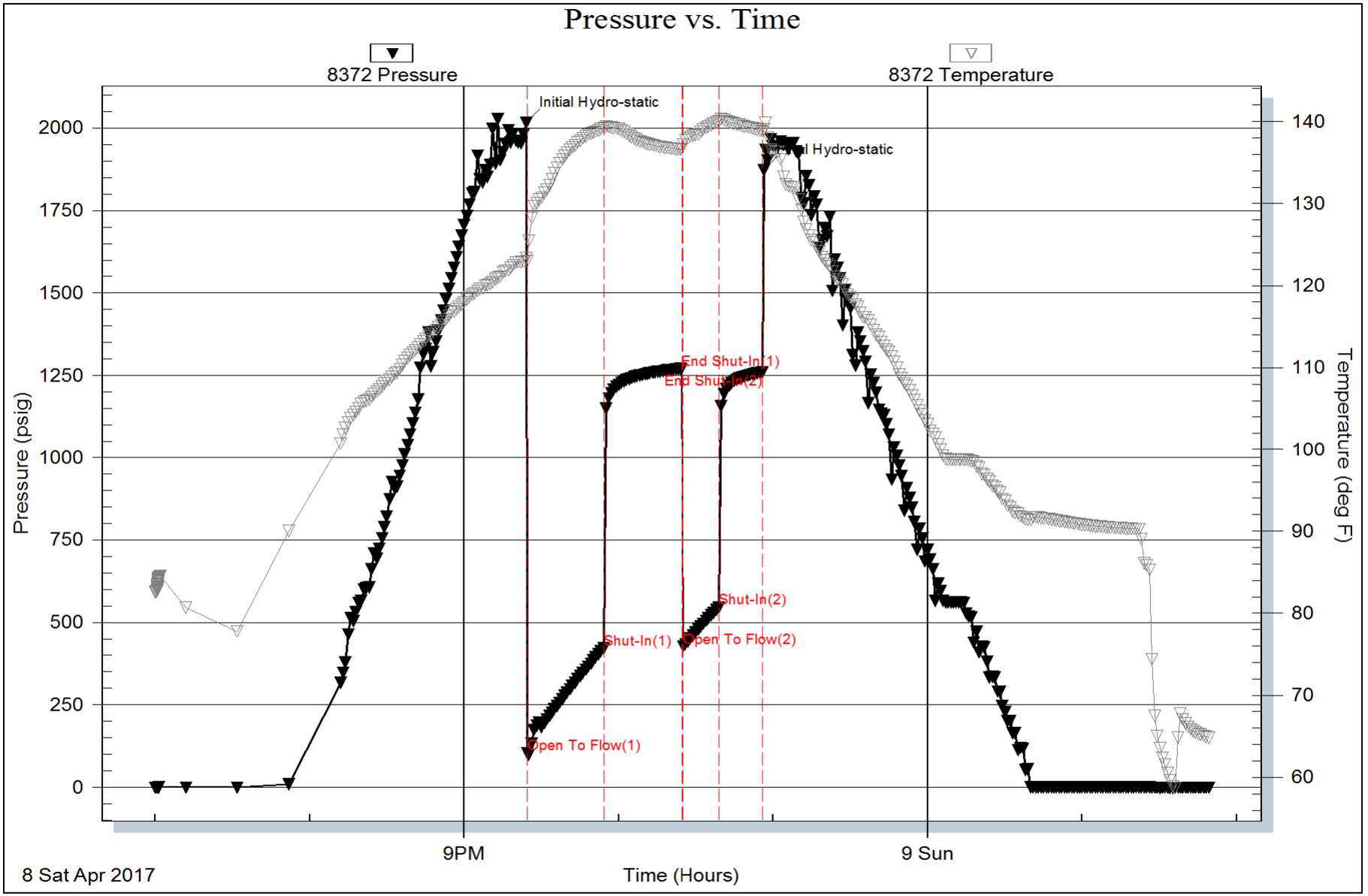
Total Length: 1075.00 ft Total Volume: 13.376 bbl

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

Laboratory Name: Laboratory Location:

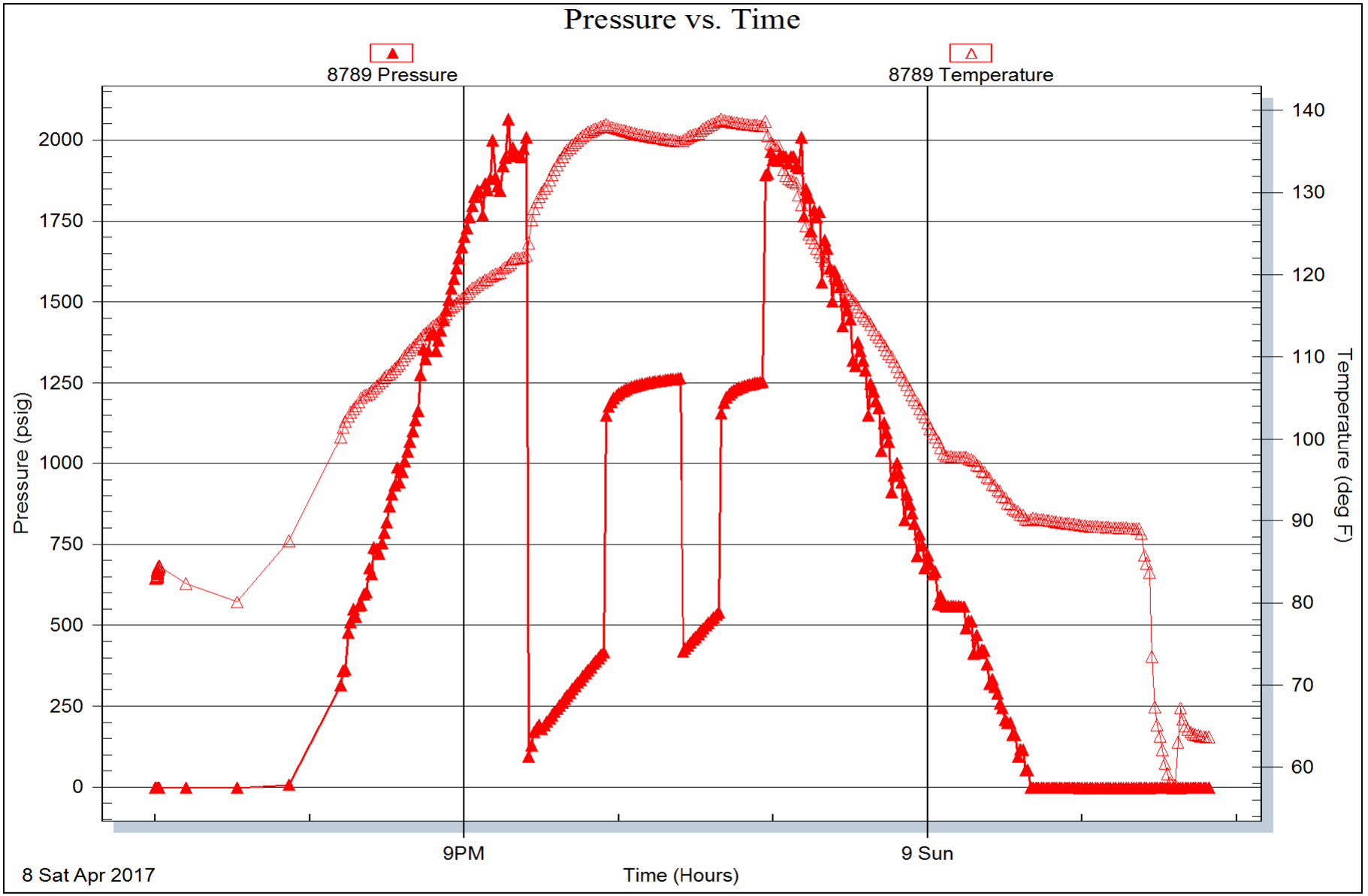
Recovery Comments: .115 @ 68

Serial #: 8372 **Outside** Red Oak Energy Inc. Shull 1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 64006 Printed: 2017.04.09 @ 12:34:03

Serial #: 8789 **Inside** Red Oak Energy Inc. Shull 1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 64006 Printed: 2017.04.09 @ 12:34:03

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64007 **DST#: 2**

Test Start: 2017.04.09 @ 21:04:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:29:00
Time Test Ended: 04:23:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 76

Interval: 4244.00 ft (KB) To 4376.00 ft (KB) (TVD)
Total Depth: 4376.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

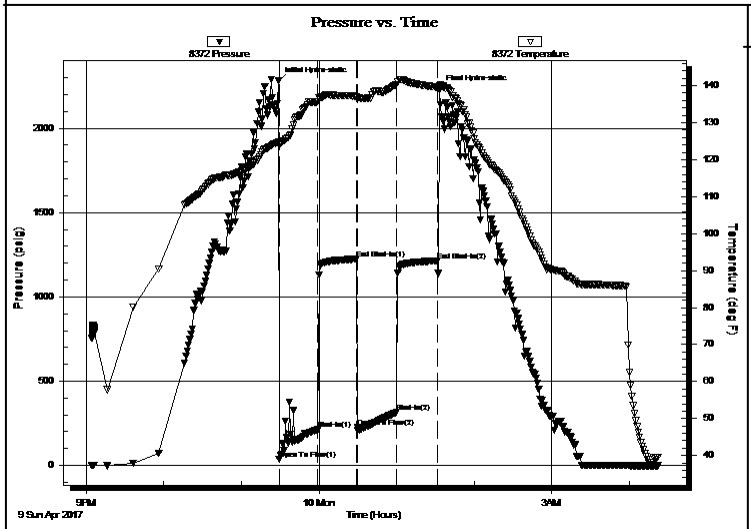
Reference Elevations: 3079.00 ft (KB)
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8372 **Outside**

Press@RunDepth: 314.24 psig @ 4248.00 ft (KB)
Start Date: 2017.04.09 End Date: 2017.04.10
Start Time: 21:04:01 End Time: 04:22:30

Capacity: 8000.00 psig
Last Calib.: 2017.04.10
Time On Btm: 2017.04.09 @ 23:28:30
Time Off Btm: 2017.04.10 @ 01:33:00

TEST COMMENT: 30-IFP- BOB in 13min.
30-ISIP- No Blow
30-FFP- BOB in 15 1/2min.
30-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2279.73	124.79	Initial Hydro-static
1	37.18	124.04	Open To Flow (1)
31	212.41	135.76	Shut-In(1)
61	1224.70	136.94	End Shut-In(1)
61	223.91	136.30	Open To Flow (2)
92	314.24	140.35	Shut-In(2)
123	1214.57	139.61	End Shut-In(2)
125	2226.97	140.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
187.00	MCW 15%m 85%w	0.92
315.00	MCW 40%m 60%w	4.42
113.00	Mud 100%	1.59

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64007 **DST#: 2**

Test Start: 2017.04.09 @ 21:04:00

GENERAL INFORMATION:

Formation: **Marmaton**
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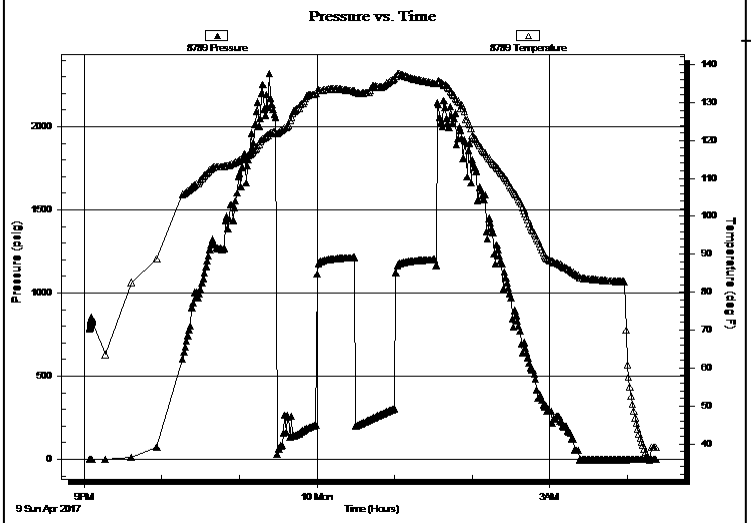
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8789 **Inside**
Press@RunDepth: psig @ 4248.00 ft (KB)
Start Date: 2017.04.09 End Date: 2017.04.10
Start Time: 21:04:01 End Time: 04:22:30

Capacity: 8000.00 psig
Last Calib.: 2017.04.10
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP- BOB in 13min.
30-ISIP- No Blow
30-FFP- BOB in 15 1/2min.
30-FSIP- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
187.00	MCW 15%m 85%w	0.92
315.00	MCW 40%m 60%w	4.42
113.00	Mud 100%	1.59

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64007 **DST#: 2**

Test Start: 2017.04.09 @ 21:04:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	67500 ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.20 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3400.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

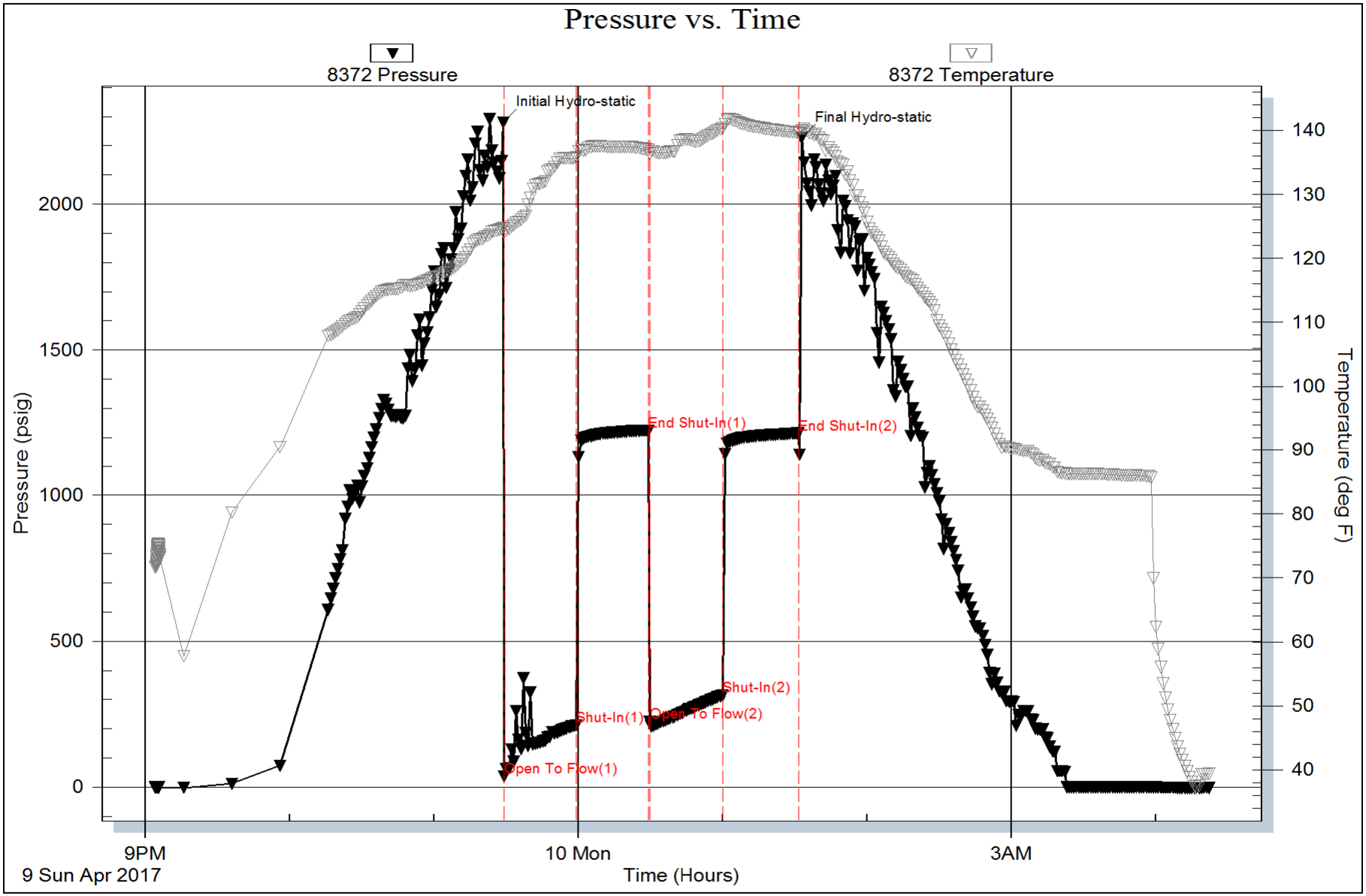
Recovery Table

Length ft	Description	Volume bbl
187.00	MCW 15%m 85%w	0.920
315.00	MCW 40%m 60%w	4.419
113.00	Mud 100%	1.585

Total Length: 615.00 ft Total Volume: 6.924 bbl

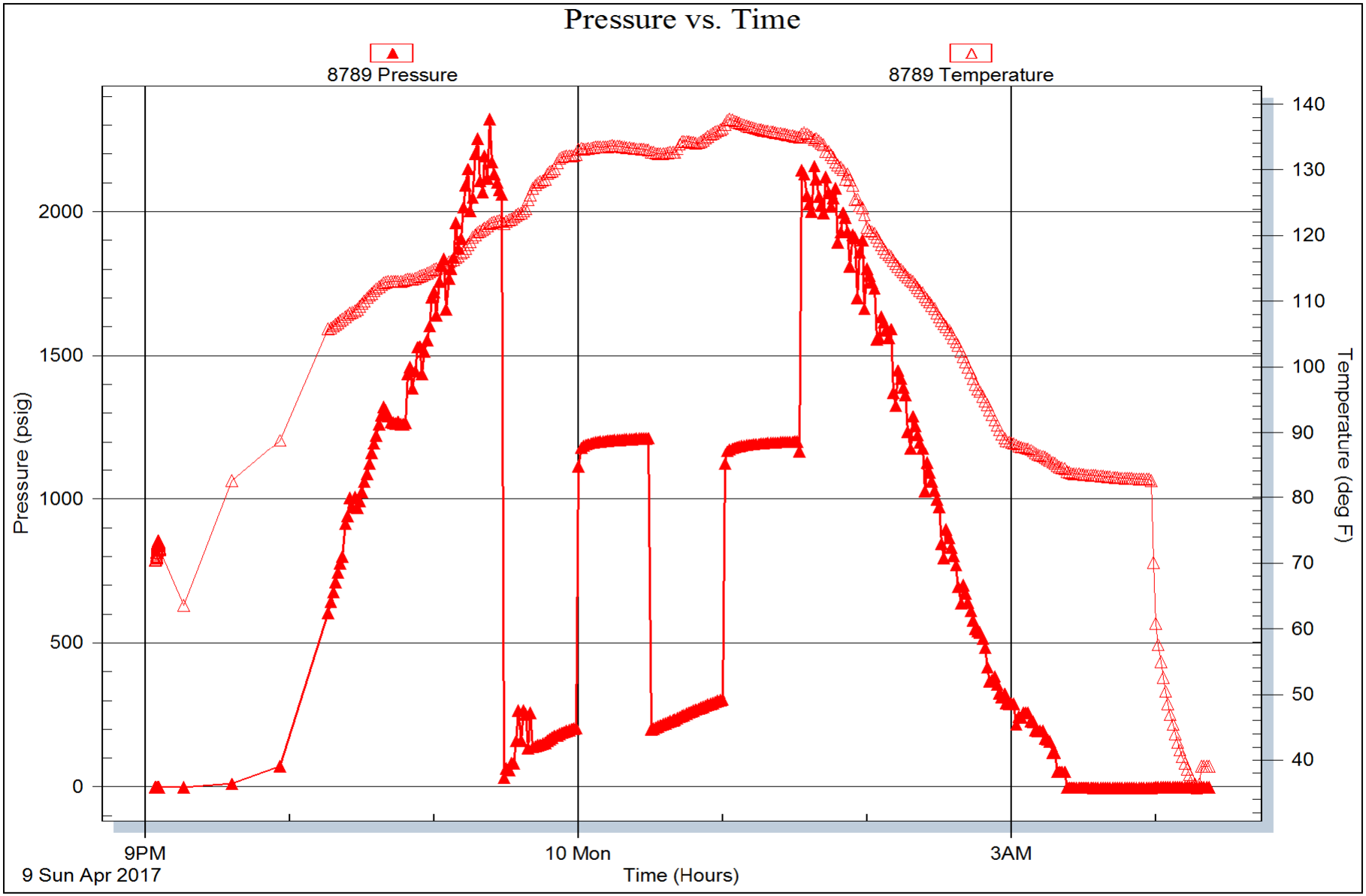
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .220 @ 37

Serial #: 8372 **Outside** Red Oak Energy Inc. Shull 1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 64007 Printed: 2017.04.10 @ 07:28:34

Serial #: 8789 **Inside** Red Oak Energy Inc. Shull 1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 64007 Printed: 2017.04.10 @ 07:28:34

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64008 **DST#: 3**

Test Start: 2017.04.11 @ 09:17:00

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:32:30
Time Test Ended: 16:13:00

Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 76

Interval: 4370.00 ft (KB) To 4509.00 ft (KB) (TVD)
Total Depth: 4716.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

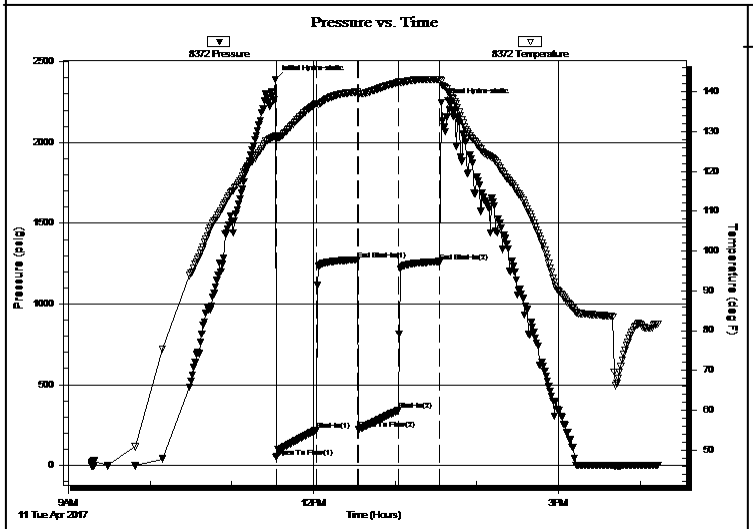
Reference Elevations: 3079.00 ft (KB)
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8372 **Outside**

Press@RunDepth: 341.34 psig @ 4373.00 ft (KB)
Start Date: 2017.04.11 End Date: 2017.04.11
Start Time: 09:17:01 End Time: 16:13:00

Capacity: 8000.00 psig
Last Calib.: 2017.04.11
Time On Btm: 2017.04.11 @ 11:32:00
Time Off Btm: 2017.04.11 @ 13:34:00

TEST COMMENT: 30-IFP- BOB in 10min.
30-ISIP- No Blow
30-FFP- BOB in 13min.
30-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2390.05	128.98	Initial Hydro-static
1	50.40	128.10	Open To Flow (1)
30	219.60	137.04	Shut-In(1)
61	1274.43	139.94	End Shut-In(1)
61	221.68	139.44	Open To Flow (2)
91	341.34	142.35	Shut-In(2)
121	1263.11	143.05	End Shut-In(2)
122	2246.41	142.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
314.00	MCW 5%m 95%w	2.70
400.00	MCW 25%m 75%w	5.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64008 **DST#: 3**

Test Start: 2017.04.11 @ 09:17:00

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:32:30
Time Test Ended: 16:13:00

Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 76

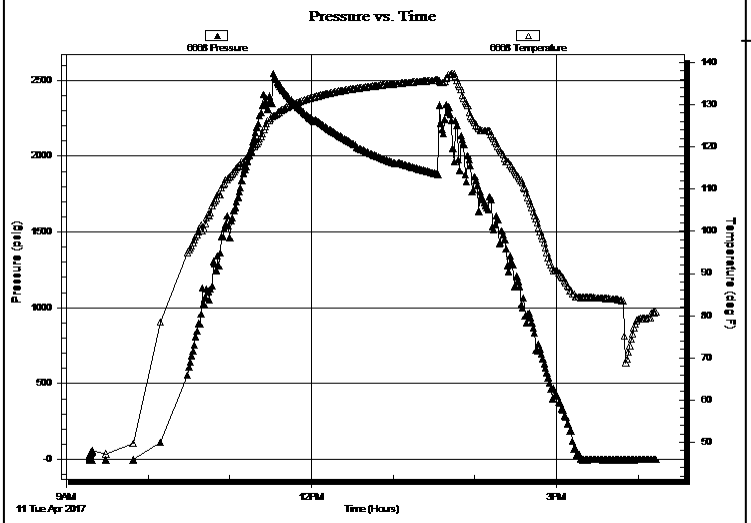
Interval: 4370.00 ft (KB) To 4509.00 ft (KB) (TVD)
Total Depth: 4716.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3079.00 ft (KB)
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 6668 **Below (Straddle)**
Press@RunDepth: psig @ 4521.00 ft (KB)
Start Date: 2017.04.11 End Date: 2017.04.11
Start Time: 09:17:01 End Time: 16:13:00

Capacity: 8000.00 psig
Last Calib.: 2017.04.11
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP- BOB in 10min.
30-ISIP- No Blow
30-FFP- BOB in 13min.
30-FSIP- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
314.00	MCW 5%m 95%w	2.70
400.00	MCW 25%m 75%w	5.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64008 **DST#: 3**

Test Start: 2017.04.11 @ 09:17:00

GENERAL INFORMATION:

Formation: **Altamont**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:32:30
Time Test Ended: 16:13:00

Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 76

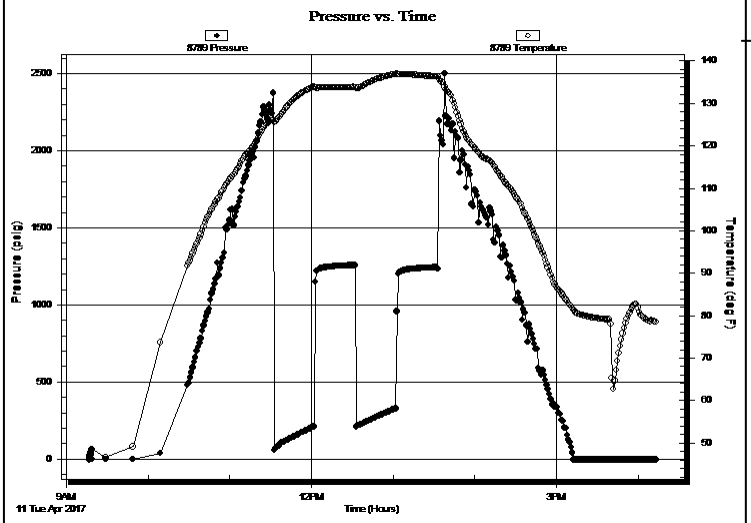
Interval: 4370.00 ft (KB) To 4509.00 ft (KB) (TVD)
Total Depth: 4716.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3079.00 ft (KB)
3074.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8789 **Inside**
Press@RunDepth: psig @ 4373.00 ft (KB)
Start Date: 2017.04.11 End Date: 2017.04.11
Start Time: 09:17:01 End Time: 16:13:00

Capacity: 8000.00 psig
Last Calib.: 2017.04.11
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP- BOB in 10min.
30-ISIP- No Blow
30-FFP- BOB in 13min.
30-FSIP- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
314.00	MCW 5%m 95%w	2.70
400.00	MCW 25%m 75%w	5.61

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy Inc.

7701 E Kellogg Dr Ste 710
Wichita KS 67207-1738

ATTN: Sean Deenihan

32 6s 33w Thomas KS

Shull 1

Job Ticket: 64008 **DST#: 3**

Test Start: 2017.04.11 @ 09:17:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	52000 ppm
Viscosity:	63.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.77 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
314.00	MCW 5%m 95%w	2.701
400.00	MCW 25%m 75%w	5.611

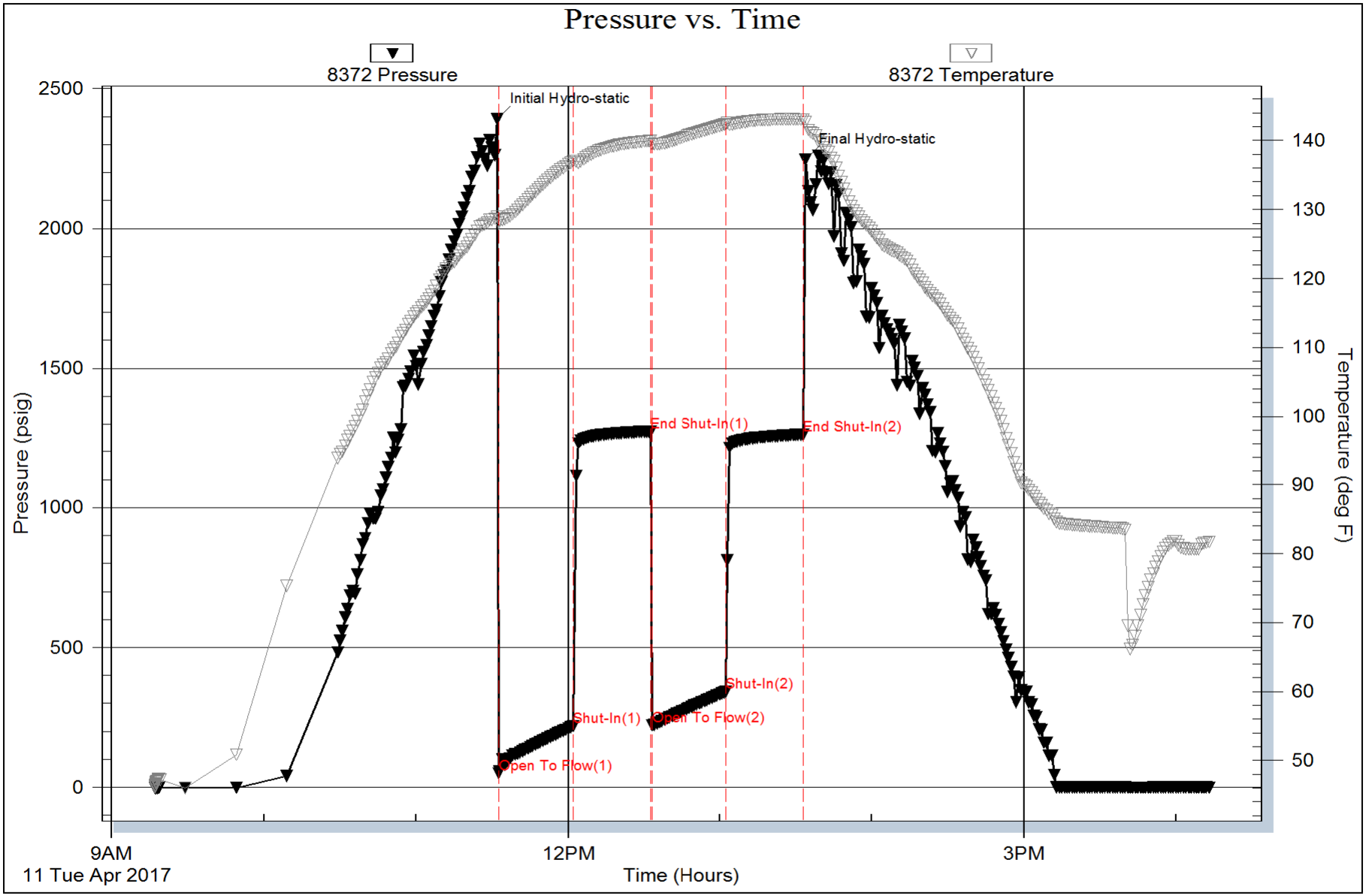
Total Length: 714.00 ft Total Volume: 8.312 bbl

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

Laboratory Name: Laboratory Location:

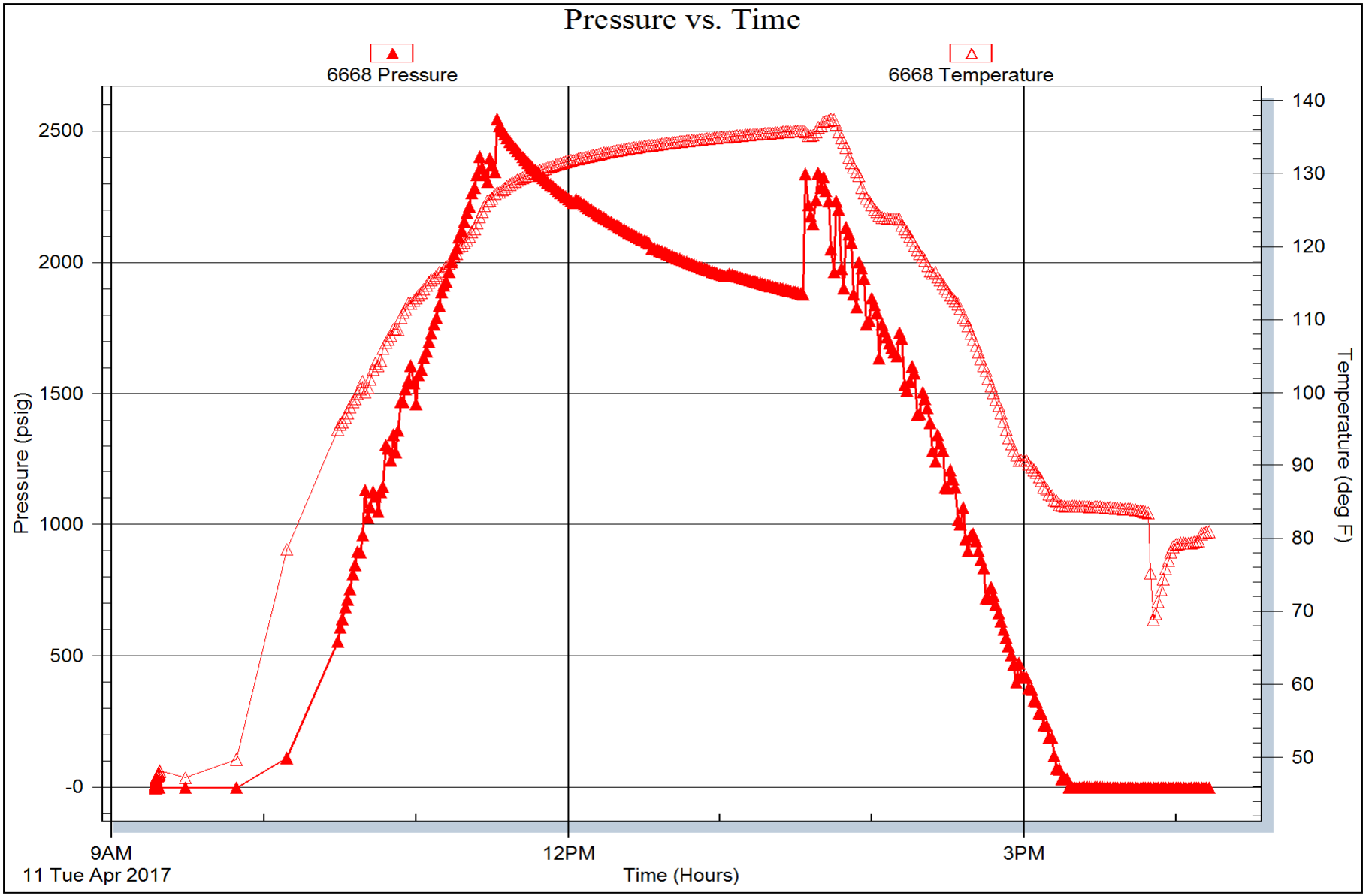
Recovery Comments: .136 @ 76

Serial #: 8372 **Outside** Red Oak Energy Inc. Shull 1 DST Test Number: 3



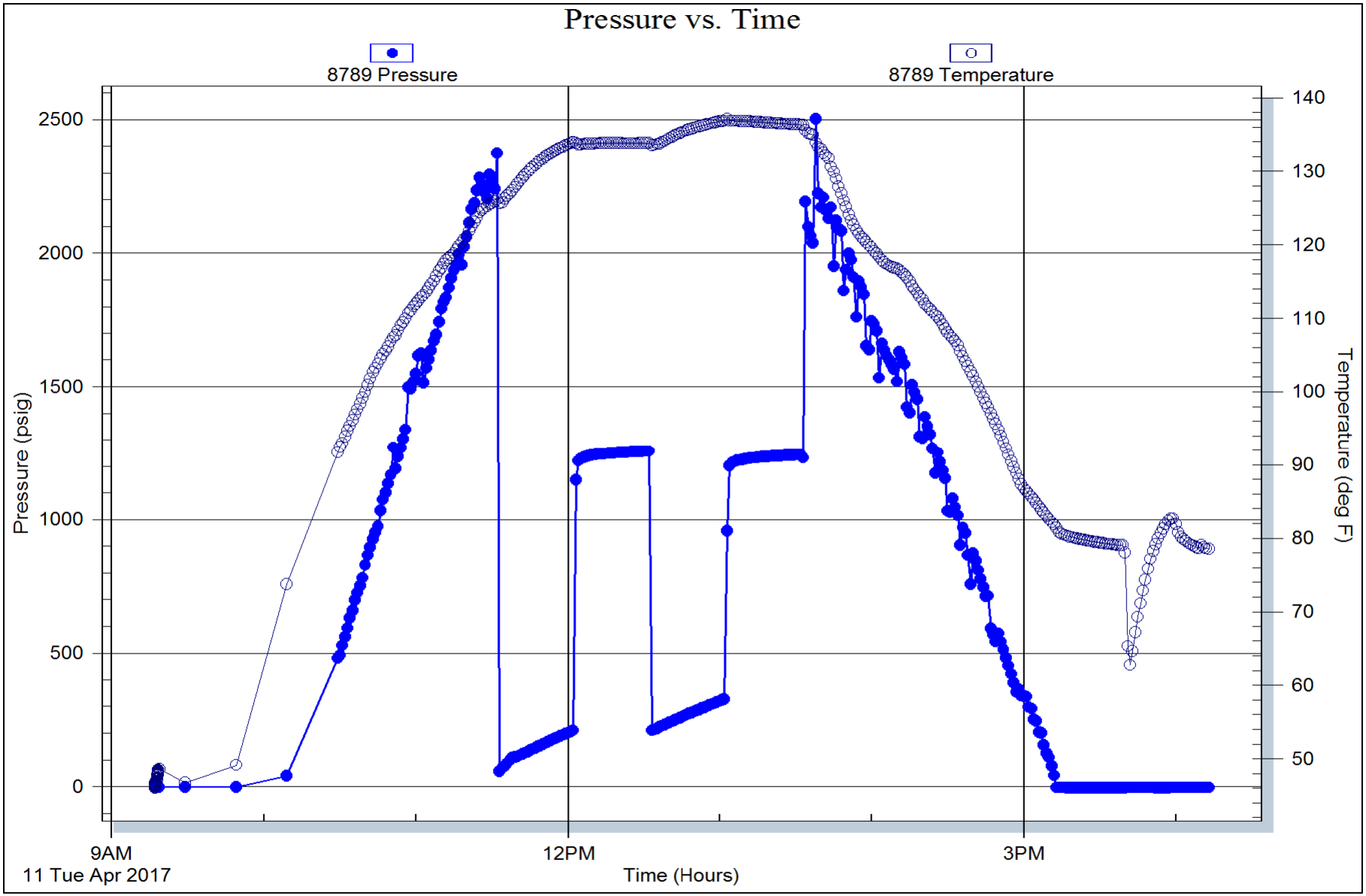
Trilobite Testing, Inc Ref. No: 64008 Printed: 2017.04.11 @ 17:01:36

Serial #: 6668 Below (Straddle) Redoak Energy Inc. Shull 1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 64008 Printed: 2017.04.11 @ 17:01:36

Serial #: 8789 **Inside** Red Oak Energy Inc. Shull 1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 64008 Printed: 2017.04.11 @ 17:01:36

15-193-20992

Sean Deenihan
Petroleum Geologist

15-193-20992

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY Red Oak Energy, Inc.
LEASE Shull #1
FIELD Wildcat
LOCATION 1485' FSL & 678' FWL
SEC 32 TWSP 6 S RGE 33 W
COUNTY Thomas STATE Kansas
CONTRACTOR Murfin Drilling Rig #7
SPUD 4/5/16 COMP 4/11/17
RTD 4715' LTD 4716'
MUD UP 3600' TYPE MUD Chemical
SAMPLES SAVED FROM 3800' TO RTD
DRILLING TIME KEPT FROM 3800' TO RTD
SAMPLES EXAMINED FROM 3800' TO RTD
GEOLOGICAL SUPERVISION FROM 3800'
REFERENCE WELL

ELEVATIONS
KB 3078'
DF
GL 3073'
Measurements Are All From Kelly Bushing

CASING
CONDUCTOR
SURFACE 8-5/8" at 249'
PRODUCTION None

ELECTRICAL SURVEYS
ELI WIRELINE
CND/DIL MIC/SON

Formation	Sample Tops	E-log Tops	Struct Pos.
B/Anhydrite		2728 (+350)	
Heebner		3992 (-914	
Lansing		4038 (-960)	
Marmaton		4300 (-1222)	
Pawnee		4406 (-1328)	
Cherokee Sh.		4498 (-1420)	
Mississippi		4614 (-1536)	

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REMARKS The Shull #1 did not encounter any commercial oil reservoirs and therefore was plugged.

Respectfully Submitted,

Sean P. Deenihan

15-193-20992

Geological Descriptions

Sh., brn, gy, teal

Topeka 3862 (-784)

Ls., off wh, chlky, f gr, p intgran Por, no show

Sh., gy, teal, brn

Ls., wh, chlky-sbchlky, gran, p intgran Por, firm, sli blk O stn, no odr

Sh., varic

Ls., wh, crm, vf gr, sme dolic, dnse, p intgran Por, sme gils snt, no show free oil, no odr

Ls., wh, crm, dnse, iso vug Por, PSFO, no odr

Ls., gy, vf gr, dnse, no show

Ls., wh, chlky, soft, p-fr intgran Por, iso vug Por, PSFO- dk brn-blk, no odr, no fluor

Ls., wh, v chlky, v soft

Heebner 3994 (-916)

4010 - Flood of Blk Sh., brn strk, no odr

Sh., lt gy

Ls,. tn, xf gr, dnse, p vis Por, no show

Lansing 4038 (-960)

Ls., wh, crm, vf gr, p shallow vug Por, PSFO- dk brn, tarry, no odr

Strap .97' Short to Board. SHT: .75*

Sh., gy, dk gy, chlky Ls

Ls., crm, tn vf gr, tr Ool., p vis Por, vug, PSFO-dk brn-blk, sme gils, sli chlky, ft odr, no fluor

DST #1
4031-4098'
30-30-15-15"
IF: BOB 3.5 min
FF: BOB 4.5 min
No BB
Rec 947' MCW, 126' WCM
IFP: 104-421#
FFP: 426-545#
SIP: 1270-1260#

Ls., wh, crm, vf gr, sli chlky, spotty blk gils stn, rr tarry O, no odr

Sh., brn, gy, rd

Sh., blk

Ls., wh, crm, vf gr, p intgran Por, dnse, inc. shaly, no show

Ls., gy, xf gr, dnse, no vis Por, no odr

SH., gy, brn, dk gy

Sh., grn, gy, fis

Ls., wh, off wh, vf gr, chrty IP, p vis Por, sme chlky, Sli show tarry dk brn O, no odr

Muncie Creek 4152 (-1074)

Sh., blk

Ls., wh, crm, vf gr, dnse, sme chlky, sme wh chrt, pred dnse, no show

SH., varic

Dol., gy, tn, vf xln, barren

Ls., crm, gy, dnse, dolic, sme suc, barren

Dol., gy, tn, vf xln, dnse, p intxln Por, sli o stn?, NSFO, no odr

Ls., crm, ool IP, dnse, p intgran Por, rr vug, sli blk stn, tr tarry O, no odr

Ls., dnse, re-xtl, xf gr, p vis Por, fos, dnse no show

Ls., wh, crm, chlky, tr cherty, p vis Por, fri-firm, no show

Stark 4230 (-1152)

Sh., dk gy-blk
Sh, varic, soft

Ls., crm, tn, xf gr, sli dolic, dnse, NVP, firm

DST #2
4244-4376'
30-30-30-30"
IF: BOB 13.5 min
FF: BOB 15.5 min
No BB
Rec 502' MCW, 113' M
IFP: 37-212#
FFP: 222-314#
SIP: 1224-1214#

Sh., lt-dk gy,

Sh., varic

Ls., gy, crm, dnse, xf-vf gr,

Ls., wh, gy, chlky, vf gr, sme fos, p intgran por, firm, no show

Ls., wh, crm, xf-vf gr, dnse, p.p. Por, SSFO, no odr

Sh., rd, brn, gy, cong

Ls., gy, crm, xf-vf gr, sing, dnse, fos frag, p vis Por, firm, no show, no odr

Ls., wh, Ool., p intool Por, mod O stn, PSFO upon crush, fri-firm, ft odr, no fluor

Ls., wh., crm, fos, p intgran Por, P intfos Por, dnse, no show

Sh.gy, soft wh, chlky, Ls.

Sh., rd, gy, gummy

Abd wh, chlky, Ls., soft

Ls., tn, re-xtl Ool, p intool Por, Sli stn, no odr, NSFO, no cut

Dol., tn, vf xln, fos, p-fr intxln Por, barren, no fluor

Ls., wh, gy, fos, vf-md gr, rextl, NVP-p intgran Por, firm, no show

Ls., gy, tn, dnse, p intgran Por, hd. Cht., orng,

Sh., dk gy-blk

Pawnee 4410 (-1332)

Ls., gy, fos, vf gr, dnse, p intgran Por, no show

Ls., gy, mottled, vf gr, sb chlky-chlky, dnse, no odr, no show

Muncie Ck 4440 (-1362)

Ls,. tn, gy, dnse, fos, xf-vf gr, p vug Por, no show. Inc. in chlky, wh, Ls.

Cht., wh, gy, fresh, sharp

Sh., blk

Ft. Scott 4474 (-1396)

Ls,. off wh, gy, dnse, fos, gran, p intgran Por, dnse, occ Cht., wh, fresh, no odr

Ls., tn, vf gr, fos, p intgran Por, dnse, sme Cht., wh, fresh, spic, no show

Cherokee Sh. 4498 (-1441)

Ls., gy, tn, brn, xf-vf gr, fos IP, p vis Por, firm, no show

DST #3
4370-4509'
30-30-30-30"
IF: BOB 10 min
FF: BOB 13 min
No BB
Rec 714' MCW,
IFP: 50-220#
FFP: 222-341#
SIP: 1274-1263#

Sh, dk gy, sme gummy, soft

Shale gy, silty, soft

Ls., crm, tn, chlky IP, fos, vf-f gr, dnse, calc re-xtl, NVP

Sh., gy, congl, rr unconsolidated SS gr, clr, vf gr, sbrd, no stn.
Siltstone, gy, fri, barren

Cht., Orange, fresh, fos

Sh., teal

Cht., orange-brn, fresh

Ss., yel, clr, vf-f gr, sbrd, p intgran Por, dnse, no show

SS., f-md, gr, shaly, p intgran P, glauc, no show

Sh., yel, grn, purp, gy

Cht., orange, yel, fresh, fos, sharp

Ls., pink/wh, vf gr, dnse

Mississippi 4616 (-1538)

Dol., tn, vf xln, dnse, p intxln por, no show

Flood of Sh., gy, gummy

Ls., wh, gy, brn, dnse, p intgran Por, sme w/ sdy inclusions, no show

Dolomitic Shale, gy, firm-hd, no show

Dol., tn, gy, vf-f xln, dnse, sme dnse Ls., rr vug Por, no show

Ls., crm, dnse, fos, p intgran Por, PSFO - dk brn, no odr,

Dol., gy, tn, vf xln, p-fr intxln Por, suc, barren

RTD: 4715' LTD: 4716'

RED OAK ENERGY - Shull #1 KB: 3078'