

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 # \_\_\_\_\_

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

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 #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

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

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

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: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	ORTEGA 2-25
Doc ID	1439555

All Electric Logs Run

Array Induction
Microlog
Photo Density
Comp Neutron

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	ORTEGA 2-25
Doc ID	1439555

Tops

Name	Top	Datum
Base Anhydrite	2456	+650
Heebner	3985	-879
Lansing	4024	-918
Muncie Creek	4211	-1105
Stark Shale	4309	-1203
Hushpuckney	4356	-1248
Pawnee	4528	-1422
L. Cherokee Shale	4610	-1504
Johnson	4654	-1548
Morrow Shale	4724	-1618
Mississippian	4780	-1674



GLOBAL OIL FIELD SERVICES, LLC

**Invoice**

24 S. Lincoln  
RUSSELL, KS 67665

Date	Invoice #
1/17/2019	0013313

Bill To
SHAKESPEARE OIL COMPANY INC 202 W MAIN SALEM,IL 62881

*INT*

P.O. No.	Terms	Project
ORTEGA#2-25	Due on receipt	

Quantity	Description	Rate	Amount
175	COMMON CEMENT	16.50	2,887.50
6	CALCIUM-CHLORIDE	80.00	480.00
3	BENTONITE GEL	30.00	90.00
184	HANDLING	1.90	349.60
	BULK MILEAGE	500.00	500.00
1	TRI-PLEX PUMP CHARGE FOR SURFACE	850.00	850.00
45	HEAVY EQUIPMENT. ONE WAY	6.50	292.50
45	LMV- ONE WAY	2.75	123.75
	15% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE new sales tax rate as of 7-1-2015	8.50%	0.00

RECEIVED  
JAN 22 2019

*502-5  
DH*

Thank you for your business.

Phone #	Fax #
785-445-3525	785-445-3526

**Total** \$5,573.35

*DW*



# GLOBAL OIL FIELD SERVICES, LLC

0013313

REMIT TO 24 S. Lincoln  
Russell, KS 67665

SERVICE POINT: Russell KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
1-10-19							12:30pm
LEASE	WELL #.	LOCATION			COUNTY	STATE	
ORTEGA	2-25	6mly East of Peerce <sup>KS</sup> 2 South 10			Scott	KS	
OLD OR NEW (CIRCLE ONE)			Wrs. into				

CONTRACTOR Southwind Drilling Rig # 8  
 TYPE OF JOB Surface  
 HOLE SIZE 12 1/4 T.D. \_\_\_\_\_  
 CASING SIZE 8 3/4 DEPTH 267'  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_  
 CEMENT LEFT IN CSG. 25'  
 PERFS \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_

OWNER Shakespeare Oil Co.  
 CEMENT AMOUNT ORDERED 175sx com  
3% cc 2% gel

EQUIPMENT  
 PUMP TRUCK # 417 CEMENTER Cody  
 HELPER Jasen  
 BULK TRUCK # 411 DRIVER Tom  
 BULK TRUCK # \_\_\_\_\_ DRIVER \_\_\_\_\_

COMMON \_\_\_\_\_ @ \_\_\_\_\_  
 POZMIX \_\_\_\_\_ @ \_\_\_\_\_  
 GEL \_\_\_\_\_ @ \_\_\_\_\_  
 CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_  
 ASC \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 HANDLING \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE \_\_\_\_\_ @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

REMARKS:

Run 8 3/4 of 8 3/4 casing + lit hooked to rig + broke circulation hooked to truck + pumped 175sx of cement + displaced 15 bbls of H<sub>2</sub>O + shut in.

Cement did circulate to surface

CHARGE TO: Shakespeare Oil Co.  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE  
 DEPTH OF JOB \_\_\_\_\_  
 PUMP TRUCK CHARGE \_\_\_\_\_  
 EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE \_\_\_\_\_ @ \_\_\_\_\_  
 MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

Global Oil Field 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.

PLUG & FLOAT EQUIPMENT  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

PRINTED NAME Doug Roberts  
 SIGNATURE Doug Roberts

SALES TAX (if Any) \_\_\_\_\_  
 TOTAL CHARGES \_\_\_\_\_  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS



GLOBAL OIL FIELD SERVICES, LLC

24 S. Lincoln  
RUSSELL, KS 67665

# Invoice

Date	Invoice #
1/28/2019	0013351

Bill To
SHAKESPEARE OIL COMPANY INC 202 W MAIN SALEM,IL 62881

*INT*

P.O. No.	Terms	Project
ORTEGA#2-25	Due on receipt	P+A

Quantity	Description	Rate	Amount
300	60/40 POZMIX CEMENT	13.75	4,125.00
11	BENTONITE GEL	30.00	330.00
75	FLO-SEAL	2.00	150.00
311	HANDLING	1.90	590.90
	BULK MILEAGE	1,500.00	1,500.00
1	TRI-PLEX PUMP CHARGE FOR PLUG	850.00	850.00
65	HEAVY EQUIPMENT. ONE WAY	6.50	422.50
65	LMV- ONE WAY	2.75	178.75
	15% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE new sales tax rate as of 7-1-2015	8.50%	0.00

RECEIVED  
FEB 01 2019

*S02-17  
AH*

Thank you for your business.

Phone #	Fax #
785-445-3525	785-445-3526

**Total** \$8,147.15

*DW*



# GLOBAL OIL FIELD SERVICES, LLC

0013351

REMIT TO 24 S. Lincoln  
Russell, KS 67665

SERVICE POINT: Russell KS

DATE <u>1-21-19</u>	SEC. <u>25</u>	TWP. <u>16S</u>	RANGE <u>33W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>5:45 AM</u>
LEASE <u>ORTFGA</u>	WELL #. <u>225</u>	LOCATION <u>3 East of Peace<sup>ys</sup> 1st &amp; W 4th</u>		COUNTY <u>Scott</u>	STATE <u>KS</u>		
OLD OR NEW (CIRCLE ONE)							

CONTRACTOR Southwind Drilling Rig #8  
 TYPE OF JOB Rotary Plug  
 HOLE SIZE 7 1/2" T.D. 4860'  
 CASING SIZE DEPTH  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG.  
 PERFS  
 DISPLACEMENT

OWNER Shakespeare Oil Co.  
 CEMENT AMOUNT ORDERED 300SK 60/40 P&Z  
4% Gel in #100 FLOW Seal

COMMON	@	
POZMIX	@	
GEL	@	
CHLORIDE	@	
ASC	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING	@	
MILEAGE		
		TOTAL

EQUIPMENT  
 PUMP TRUCK CEMENTER Coody  
 # 409 HELPER Tony  
 BULK TRUCK  
 # 410 DRIVER Sean  
 BULK TRUCK  
 # DRIVER

REMARKS:  
2460' 50SX  
1590' 80SX  
780' 50SX  
330' 50SX  
60' 20SX  
House 20SX RA-30SX

CHARGE TO: Shakespeare Oil Co.  
 STREET  
 CITY STATE ZIP

SERVICE

DEPTH OF JOB	
PUMP TRUCK CHARGE	
EXTRA FOOTAGE	@
MILEAGE	@
MANIFOLD	@
	@
	@
TOTAL	

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
TOTAL		

Global Oil Field 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.

PRINTED NAME Doug Roberts  
 SIGNATURE Doug Roberts

SALES TAX (If Any)  
 TOTAL CHARGES  
 DISCOUNT IF PAID IN 30 DAYS





# SHAKESPEARE OIL COMPANY, INC. ORTEGA #2-25

950' FNL & 2293' FEL of Section 25-T16S-R34W  
Scott County, Kansas  
API#15-171-21239-00-00

## Geologist's Report

### WellSight Systems

Scale 1:240 (5"=100') Imperial  
Measured Depth Log

Well Name: Shakespeare Oil Company, Inc. Ortega #2-25  
API: 15-171-21239-00-00  
Location: 950' FNL & 2293' FEL of Section 25-T16S-R34W  
License Number: Operator #7311 Region: Scott County, KS  
Spud Date: 01/10/2019 Drilling Completed: 01/20/2019  
Surface Coordinates: 950' FNL & 2293' FEL of Section 25-T16S-R34W

Bottom Hole Vertical Test Field: Wildcat  
Coordinates: D&A  
Ground Elevation (ft): GL 3096 K.B. Elevation (ft): KB 3106  
Logged Interval (ft): RTD To: 3800 Total Depth (ft): RTD 4860 LTD 4860  
Formation: Mississippi  
Type of Drilling Fluid: Chemical (Displaced @ 3460 )

Printed by MudLog from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## Operator

Company: Shakespeare Oil Company, Inc.  
Address: 202 West Main Street  
Salem, IL 62881

## Geologist

Name: Richard S.(Steve) Davis Jr.  
Company: Consulting Petroleum Geologist  
Address: 7329 E. Norfolk  
Wichita, Kansas 67206  
Cell 316-772-6479 Home 316-686-1193

**FORMATION TOPS**

KB 3106	Sample	E-Log	Sub-Sea		Sample	E-log	Sub-Sea
Anhydrite	2437	2433	+673	Marmaton	4456	4454	-1348
B/Anhydrite	2457	2454	+652	Pawnee	4529	4528	-1422
Heebner	3986	3984	-878	Myrick St.	4564	4564	-1458
Lansing	4026	4025	-919	Fort Scott	4582	4584	-1478
Muncie Creek	4211	4211	-1105	Cherokee	4610	4609	-1503
Stark	4308	4309	-1203	Johnson	4654	4654	-1548
Hushpuckney	4355	4355	-1249	Morrow	4724	4724	-1618
BKC	4392	4394	-1288	Mississippi	4784	4782	-1676
				Total Depth	4860	4860	-1754

**DAILY PENETRATION: 7:00 AM**

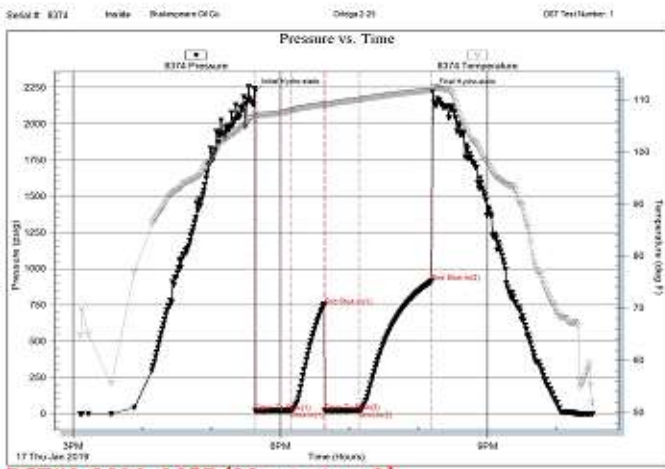
Date	Depth	Activity
01/09/19	0	MIRU
01/10	245	Drlg
01/11	830	Drlg
01/12	2025	Drlg
01/13	2810	Drlg
01/14	3460	Drlg
01/15	3863	Drlg
01/16	4173	Drlg
01/17	4475	CFS
01/18	4527	Drlg
01/19	4730	Short trip
01/20	4840	Drlg
01/21	4860	P&A

**CONTRACTOR:**

Southwind Drilling Rig #8  
 Toolpusher: Doug Roberts  
**MUD:**  
 Mud Co (displacement complete @ 3460')  
 Reed Atkins  
**DRILL STEM TESTING: Trilobite Testing**  
 Mike Roberts  
**ELECTRIC LOG:**  
 Weatherford: Terry Guthmueller  
 (DIL, CDL/CNL, PE & MEL)  
**CASING RECORD:**  
 Surface: 8 5/8" @ 265' w/ 175 sx  
 Production: None

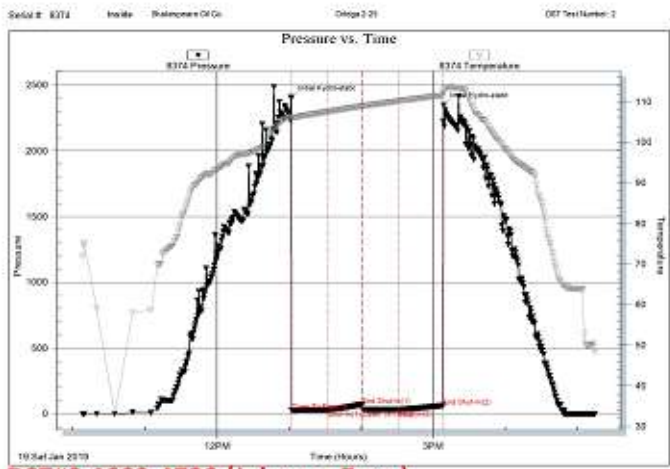
**Bit Record:**

Bit No./Size	Make/Type	Out	Ftg	Hrs
#1/ 12 1/4"	Varel RR	267	267	2
#2/ 7 7/8"	Varel HE-29	4860	4593	155 1/2



**DST#1 4411-4485 (Marmaton A)**

File: 4411-4485 (Marmaton A) Date: 2019-01-19 07:12:45



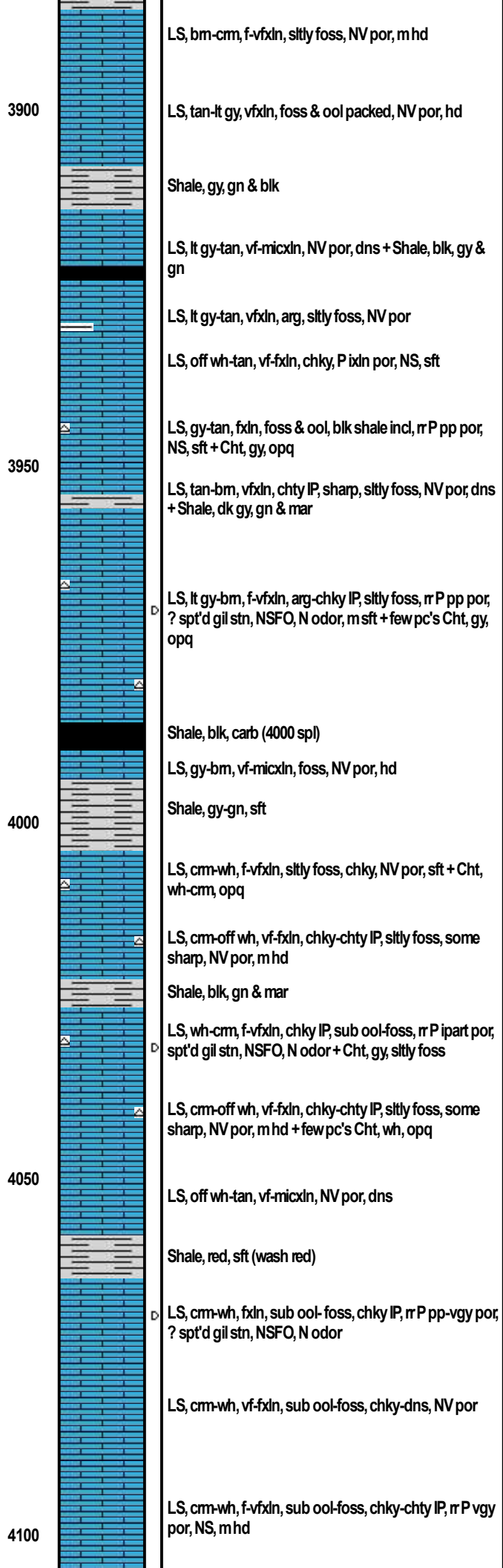
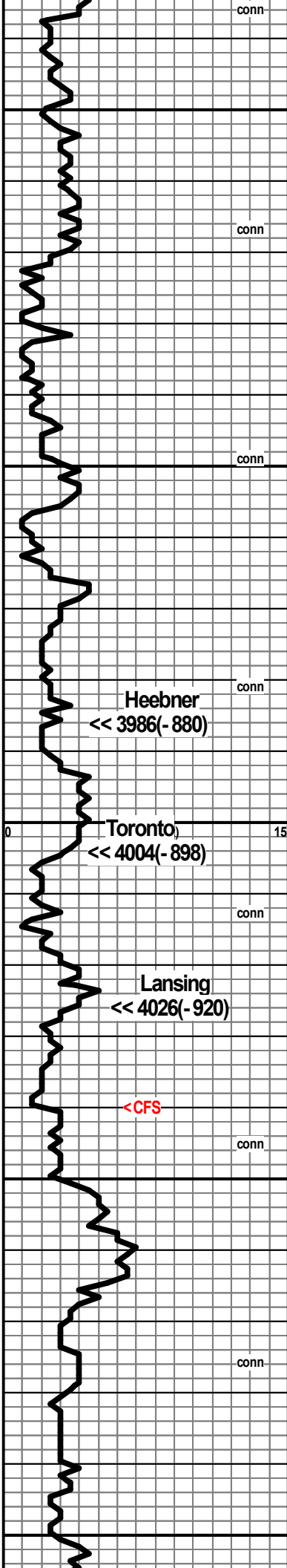
**DST#2 4660-4730 (Johnson Zone)**

File: 4660-4730 (Johnson Zone) Date: 2019-01-19 22:11:56

**Rock Types**

- |      |       |      |       |       |
|------|-------|------|-------|-------|
| Anhy | Clyst | Gyp  | Mrlst | Shgy  |
| Bent | Coal  | Igne | Salt  | Sltst |
| Brec | Congl | Lmst | Shale | Ss    |
| Cht  | Dol   | Meta | Shcol | Till  |

ROP (min/ft)	Depth	Lithology	Geological Descriptions	Remarks
0	3800	conn	LS, tan-bm, vfxln, arg, sltly foss, NV por, m hd	Vis 54 Wt 8.9 Fl 8.0 PH 11.0 Chl 2,500 LCM 2# 01/15/2019 @ 3827
0	3850	conn	Shale, gy, gn blk & mar LS, cm-off wh, f-vfxln, chky, NV por, m hd Shale, blk, sub carb, bm, gy & gn Shale, vcol + Sltst, gy-tan	



LS, bm-cm, f-vfxln, sltly foss, NV por, m hd

LS, tan-lt gy, vfxln, foss & ool packed, NV por, hd

Shale, gy, gn & blk

LS, lt gy-tan, vf-micxln, NV por, dns + Shale, blk, gy & gn

LS, lt gy-tan, vfxln, arg, sltly foss, NV por

LS, off wh-tan, vf-fxln, chky, P ixln por, NS, sft

LS, gy-tan, fxln, foss & ool, blk shale incl, rP pp por, NS, sft + Cht, gy, opq

LS, tan-bm, vfxln, chty IP, sharp, sltly foss, NV por, dns + Shale, dk gy, gn & mar

LS, lt gy-bm, f-vfxln, arg-chky IP, sltly foss, rP pp por, ? spt'd gil stn, NSFO, N odor, m sft + few pc's Cht, gy, opq

Shale, blk, carb (4000 spl)

LS, gy-bm, vf-micxln, foss, NV por, hd

Shale, gy-gn, sft

LS, cm-wh, f-vfxln, sltly foss, chky, NV por, sft + Cht, wh-cm, opq

LS, cm-off wh, vf-fxln, chky-chty IP, sltly foss, some sharp, NV por, m hd

Shale, blk, gn & mar

LS, wh-cm, f-vfxln, chky IP, sub ool-foss, rP ipart por, spt'd gil stn, NSFO, N odor + Cht, gy, sltly foss

LS, cm-off wh, vf-fxln, chky-chty IP, sltly foss, some sharp, NV por, m hd + few pc's Cht, wh, opq

LS, off wh-tan, vf-micxln, NV por, dns

Shale, red, sft (wash red)

LS, cm-wh, fxln, sub ool- foss, chky IP, rP pp-vgy por, ? spt'd gil stn, NSFO, N odor

LS, cm-wh, vf-fxln, sub ool-foss, chky-dns, NV por

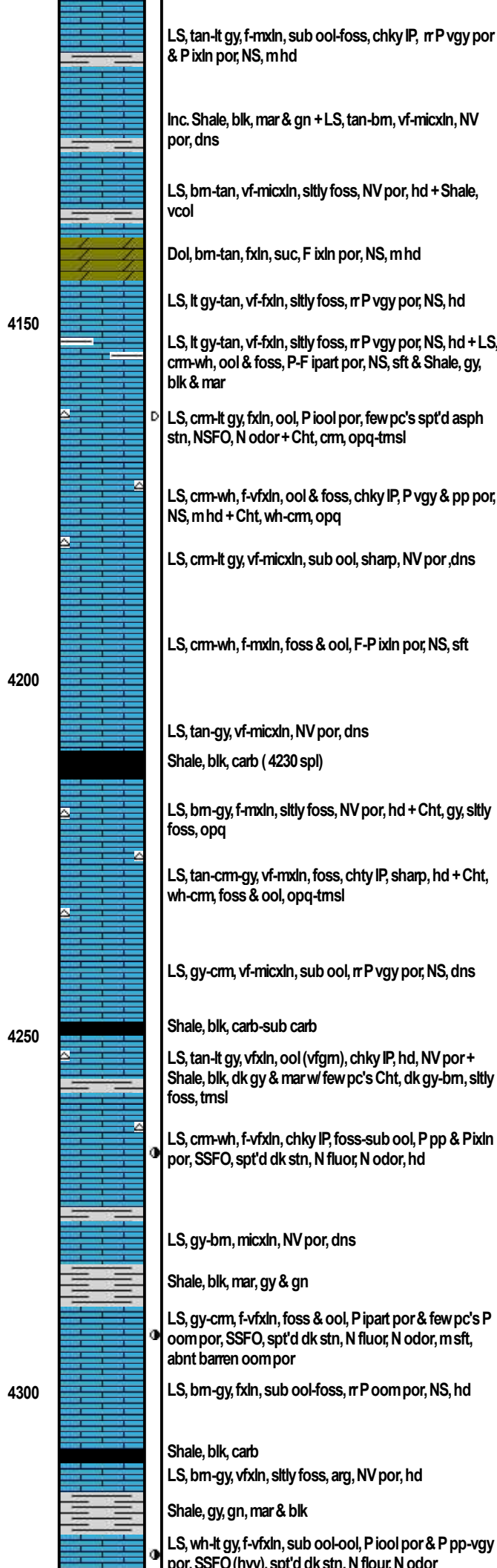
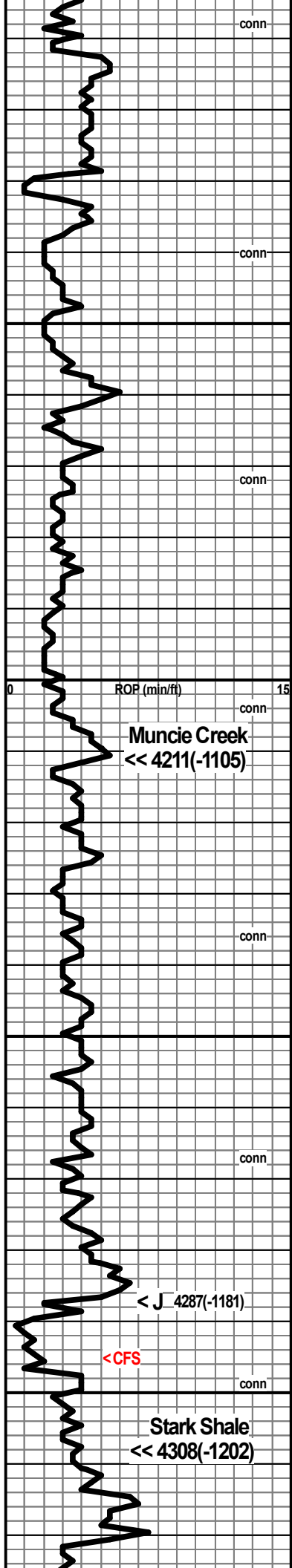
LS, cm-wh, f-vfxln, sub ool-foss, chky-chty IP, rP vgy por, NS, m hd

Survey @ 3917, 3/4 deg

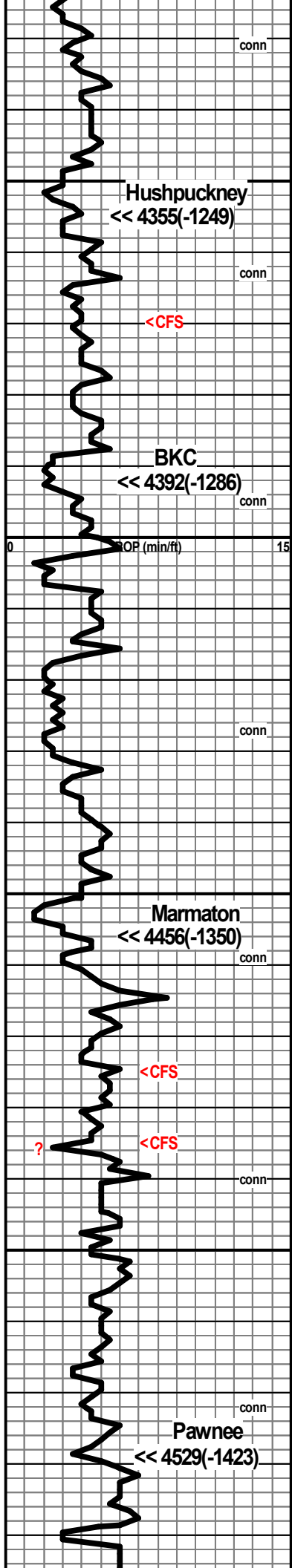
Ran 35 stand wiper trip @ 4040'

Vis 52 Wt 9.0 LCM 1#





Vis 63 Wt 9.1 Fil 8.8 PH 10.5  
 Chl 3,000 LCM 2#  
 01/16/2019 @ 4200



4350  
4400  
4450  
4500

Hushpuckney  
 << 4355(-1249)

BKC  
 << 4392(-1286)

Marmaton  
 << 4456(-1350)

Pawnee  
 << 4529(-1423)

<CFS

<CFS

<CFS

DST #1

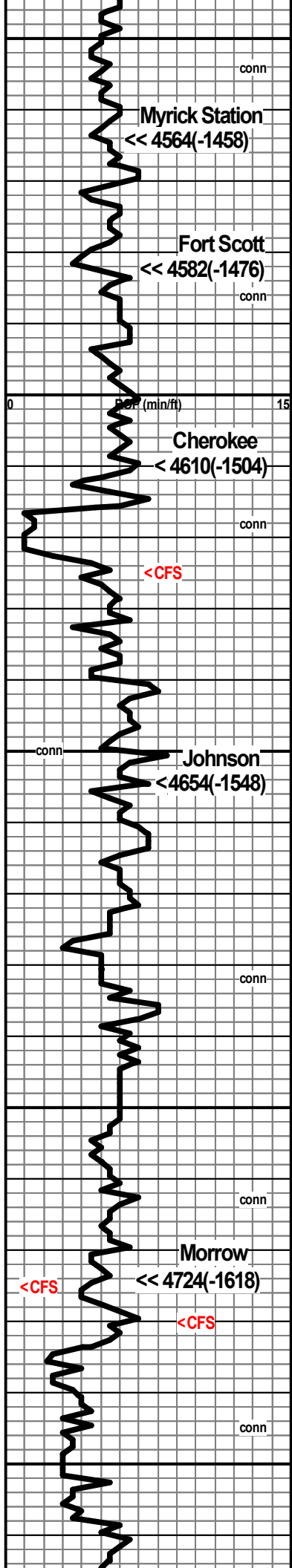
LS, lt gy-tan-wh, vf-fxn, foss & ool, NV por, chky IP-dns  
 LS, bm-lt gy, vf-micxn, chty, sharp, NV por, dns  
 LS, cm-off wh, fxdn, chky, ool & foss, P ipart por, r spt'd asph stn, NSFO, N odor, N fluor  
 Shale, blk, carb  
 LS, bm-tan-gy, f-vfxn, chky IP, r P ipart por, NS + 2 pc's LS, gy-wh, vf-mxn, sltly foss, P ixln por & F-P pp-vgy por, GSFO (V hvy), spt'd-unf asph stn, N fluor, fnt odor  
 LS, cm-lt gy, fxdn, ool, r P iool por, NS, chky IP, hd, most NV por  
 LS, lt gy-tan, vf-fxdn, ool & foss packed, NV por, dns  
 LS, wh-cm, fxdn, sub ool, chky, NV por, sft + Shale, blk, gy, gn & mar  
 LS, tan-lt gy, vf-micxn, NV por, dns  
 Shale, blk, dk gy, gn & mar  
 LS, tan-cm, vfxn, ool, NV por dns + few pc's Cht, gy-bm, opq-tmsl  
 Sltst, gy-gn + Shale, gy, gn & mar  
 Shale, gy, gn, blk & bm + Sltst, gy (HTW) w/ LS, bm-gy, vf-micxn, sub ool-foss, NV por, dns  
 Shale, gy, gn, blk & bm + LS, gy-bm, f-vfxn, sub ool, NV por, dns  
 LS, cm-gy, fxdn, chky, ool, F-P iool por, SSFO, spt'd-unf lt stn, dull fluor, fnt odor + few pc's Cht, wh, opq (4470 spl)  
 LS, cm-tan, fxdn, chky IP, sub ool, P iool por & Ppp por, SSFO, spt'd stn, dull fluor, N odor + LS, tan-cm, vfxn, chky IP, sub ool, NV por; hd  
 LS, tan-off wh, vf-micxn, sub ool, few pc's w/ P vgy por, VSSFO, spt'd lt stn, dull spt'd fluor, N odor + Shale, blk, dk gy-gn & bm  
 LS cm-off wh, vf-fxdn, sub ool-foss, chky IP, NV por, hd + Abnd shale, vcol  
 Shale, gy-gn, mar & bm  
 Cht, tan-gy, sub ool, tmsl + LS, cm-gy-bm, fxdn, chky IP, ool-foss, NV por, m hd & LS, dk bm-gy, vfxn, foss-ool, NV por, dns, w/ abnt Shale, turq, gy, mar & bm  
 Shale, blk, carb, gy (sft), mar & red (HTW)  
 LS, tan-lt gy, vfxn, sltly foss-ool, chky IP, NV por, hd + few pc's Cht, gy, tmsl  
 LS, tan-gy, vf-micxn, sub ool-foss, NV por, dns + LS, cm-gy, fxdn, chky IP, sub ool, P iool por, NS + 2 pc's LS, gy-wh, vf-mxn, sltly foss, P ixln por & F-P pp-vgy por, GSFO (V hvy), spt'd-unf asph stn, N fluor, fnt odor

Vis 60 Wt 9.2 LCM 2#

Pipe Strap & Survey @ 4485  
 Strap .12 long to board, Survey 1 deg

DST#1 4411 - 4485  
 (Marmaton A)  
 30 30 30 60  
 BLOW:  
 IF 1/2"  
 ISI No return  
 FF No blow  
 FSI No return  
 RECOVERY: 5' M (100%/m)  
 IH 2223  
 IF 18 - 21  
 ISI 748  
 FF 21 - 21  
 FSI 912  
 FH 2219 BHT 112 deg F

Vis 56 Wt 9.3 Fil 8.0 PH 10.0  
 Chl 3,500 LCM 2#  
 01/17/2019 @ 4474



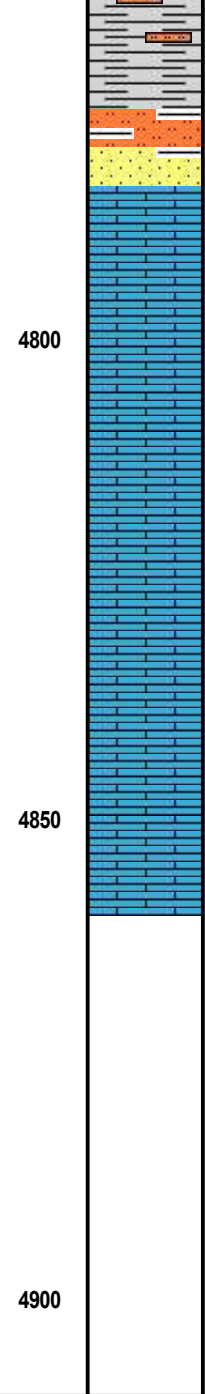
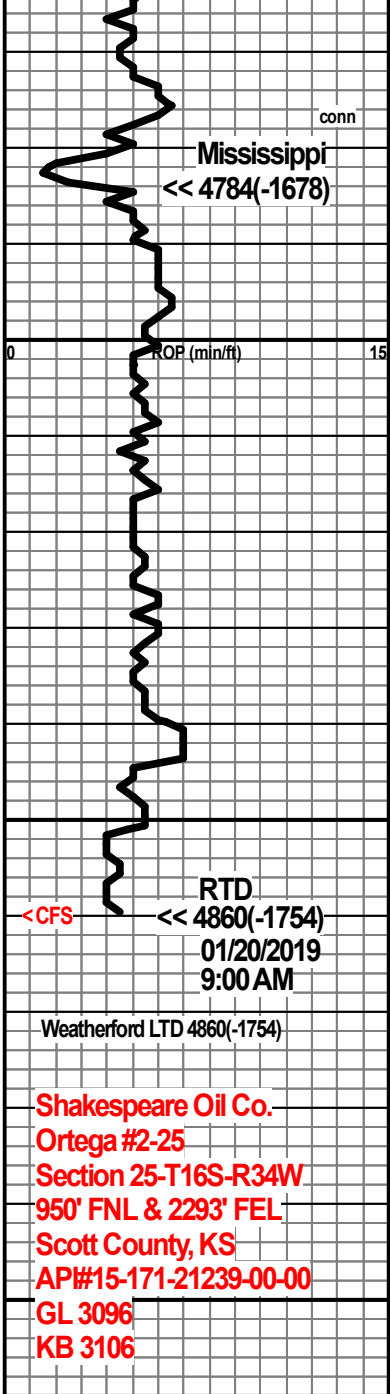
4550  
 conn  
 Myrick Station  
 << 4564(-1458)  
 Fort Scott  
 << 4582(-1476)  
 conn  
 0 Por (min/ft) 15  
 Cherokee  
 < 4610(-1504)  
 conn  
 <CFS  
 Johnson  
 < 4654(-1548)  
 conn  
 DST #2  
 4700  
 conn  
 Morrow  
 << 4724(-1618)  
 <CFS  
 <CFS  
 conn  
 4750

LS, bm-dk gy, vf-micxn, chty, sharp, sltly foss NV por, dns + Cht, bm, opq  
 Shale, blk, carb  
 LS, tan-gy, vf-micxn, sub ool-foss, NV por, dns + LS, cm-gy, f-vfxn, sltly foss, chky IP, NV por, hd & Cht, dk gy-bm, opq-tmsl  
 Shale, blk carb  
 LS, br-gy-cm, f-vfxn, ool, chky-chty, m hd, NV por + Cht, tan, ool, tmsl  
 LS, bm-gy-cm, f-vfxn, ool, chky-chty, r P iool por w/ spt'd asph stn, NSFO, N fluor, N odor, most dns + Cht, tan-gy, ool, opq-tmsl  
 LS, bm-dk gy, vf-micxn, dns, NV por  
 Shale, blk, carb  
 LS, bm-gy, fxl, ool, F iool por, sft, unf-spt'd stn, NSFO, dull fluor, N odor  
 LS, bm-dk gy, micxn, NV por, dns  
 Shale, blk, carb & dk gy + LS, bm-gy, vf-micxn, foss-ool, dns, NV por  
 Shale, blk carb, gy & gn + LS, cm-off wh, vfxn, chky IP, sltly foss, NV por, m hd  
 Shale, gy-gn & blk  
 LS, bm-gy, vf-micxn, chty IP, sharp, NV por, most dns + Cht, bm-gy, tmsl-opq  
 LS, bm-gy-cm, vfxn, sub ool, NV por, dns  
 LS, bm-gy, vf-micxn, chty, sharp, sub ool, P pp por, VSSFQ, r spt'd pp stn, N fluor, N odor + Cht, bm-tan, sltly foss, tmsl  
 LS, bm-gy-cm, vf-micxn, sub ool, foss, chty, sharp, NV por, dns + Cht, bm-tan, sltly foss, tmsl  
 LS, lt gy-cm, vf-fxn, sltly foss, P ixln por, few pc's VSSFQ, dk spt'd-unf stn, N fluor, N odor  
 LS, br-tan-cm, vf-micxn, sub ool-foss, chky IP, dns + Shale, blk, gy, gn & bm  
 LS, gy, bm, tan, vfxn, foss-ool, chky IP, P ixln por & P vgy-pp por, spt'd-unf dk stn, VSSFQ, fnt odor  
 Shale, gy-gn, blk, mar & turq + Slst, gy-gn  
 Shale, gn-turq, mar-red, gy, blk & tan + Slst, gy-bm  
 Shale, gn-turq, bm, mar, blk & gy + Slst, gy-bm  
 Shale, gn-turq, bm, mar, blk & gy + Slst, gy-bm,

Vis 50 Wt 9.3 Fil 7.2 PH 10.5  
 Chl 4,800 LCM 2#  
 01/18/2019 @ 4560

**DST#2 4660 - 4730**  
 Johnson Zone  
 (30 30 30 30)  
 BLOW:  
 IF 1/2"  
 ISI No return  
 FF No blow  
 FSI No return  
 RECOVERY: 5' M  
 IH 2402  
 IF 26 - 29  
 ISI 70  
 FF 31 - 32  
 FSI 62  
 FH 2345 BHT 112 deg F

Vis 59 Wt 9.4 Fil 8.8 PH 10.0  
 Chl 5,000 LCM 2#  
 01/19/2019 @ 4730



Shale, gn-turq, bm, blk & gy + Sltst, gy-bm

Shale & Sltst AA+SS, gy-clrqtz, rd-sub rd, well sort, fri, F-G ig por, NS+Shale, vcolAA

LS, wh-lt gy, vfxln, sdy (v fgm), NV por, hd

LS, lt gy-tan-cm, f-vfxln, sdy(vfgm), NV por, hd

LS, cm-wh, vf-fxln, chky IP, sltly foss, NV por, m hd

LS, cm-tan, vf-fxln, chky IP, sub ool-foss, NV por, dns

LSAA+LS, tan, micxln, NV por, dns

LS, cm-wh, vf-fxln, ool-sub sdy, chky IP, NV por, m hd

LS cm-wh, vfxln, chky IP, foss & ool, hd w/ inc. LS, wh-lt gy, micxln, NV por, dns

Vis 61 Wt 9.3 Fil 8.2 PH 10.0  
 Chl 4,000 LCM 2#  
 01/20/2019 @ 4837

Survey @ 4860, 1 deg

Weatherford LTD 4860(-1754)

**Shakespeare Oil Co.**  
**Ortega #2-25**  
**Section 25-T16S-R34W**  
**950' FNL & 2293' FEL**  
**Scott County, KS**  
**API#15-171-21239-00-00**  
**GL 3096**  
**KB 3106**

4800

4850

4900



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co.  
202 W. Main St.  
Salem IL  
62881  
ATTN: Steve Davis

**25-16s-34w Scott Co KS**

**Ortega 2-25**

Job Ticket: 64856

**DST#: 1**

Test Start: 2019.01.17 @ 15:06:15

## GENERAL INFORMATION:

Formation: **Marmaton A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:38:00

Time Test Ended: 22:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: **4411.00 ft (KB) To 4485.00 ft (KB) (TVD)**

Reference Elevations: 3106.00 ft (KB)

Total Depth: 4485.00 ft (KB) (TVD)

3096.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8374**

**Inside**

Press@RunDepth: 21.86 psig @ 4480.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.01.17

End Date:

2019.01.17

Last Calib.:

2019.01.17

Start Time: 15:06:15

End Time:

22:32:00

Time On Btm:

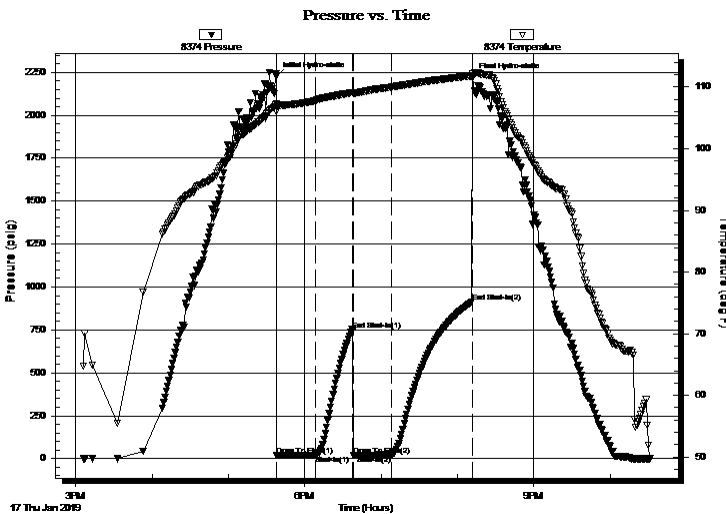
2019.01.17 @ 17:37:45

Time Off Btm:

2019.01.17 @ 20:12:15

TEST COMMENT: IF: Built to 1/2" blow  
IS: No return blow  
FF: No blow  
FS: No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2223.59	107.21	Initial Hydro-static
1	18.27	106.01	Open To Flow (1)
31	21.25	107.85	Shut-In(1)
61	748.75	109.10	End Shut-In(1)
61	21.63	108.90	Open To Flow (2)
91	21.86	109.98	Shut-In(2)
154	912.15	111.83	End Shut-In(2)
155	2219.68	112.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.07

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co.  
202 W. Main St.  
Salem IL  
62881  
ATTN: Steve Davis

**25-16s-34w Scott Co KS**

**Ortega 2-25**

Job Ticket: 64856

**DST#: 1**

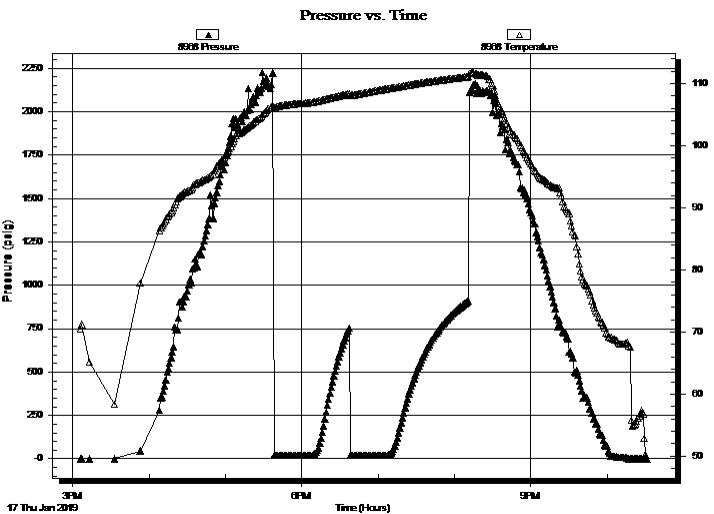
Test Start: 2019.01.17 @ 15:06:15

## GENERAL INFORMATION:

Formation: **Marmaton A**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 17:38:00 Tester: Mike Roberts  
 Time Test Ended: 22:32:00 Unit No: 81  
 Interval: **4411.00 ft (KB) To 4485.00 ft (KB) (TVD)** Reference Elevations: 3106.00 ft (KB)  
 Total Depth: 4485.00 ft (KB) (TVD) 3096.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

**Serial #: 8968 Outside**  
 Press@RunDepth: psig @ 4480.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.01.17 End Date: 2019.01.17 Last Calib.: 2019.01.17  
 Start Time: 15:06:15 End Time: 22:31:45 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF: Built to 1/2" blow  
 IS: No return blow  
 FF: No blow  
 FS: No return blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100% <sub>m</sub>	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co.  
202 W. Main St.  
Salem IL  
62881  
ATTN: Steve Davis

**25-16s-34w Scott Co KS**  
**Ortega 2-25**  
Job Ticket: 64856      **DST#: 1**  
Test Start: 2019.01.17 @ 15:06:15

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

Serial #: 8374

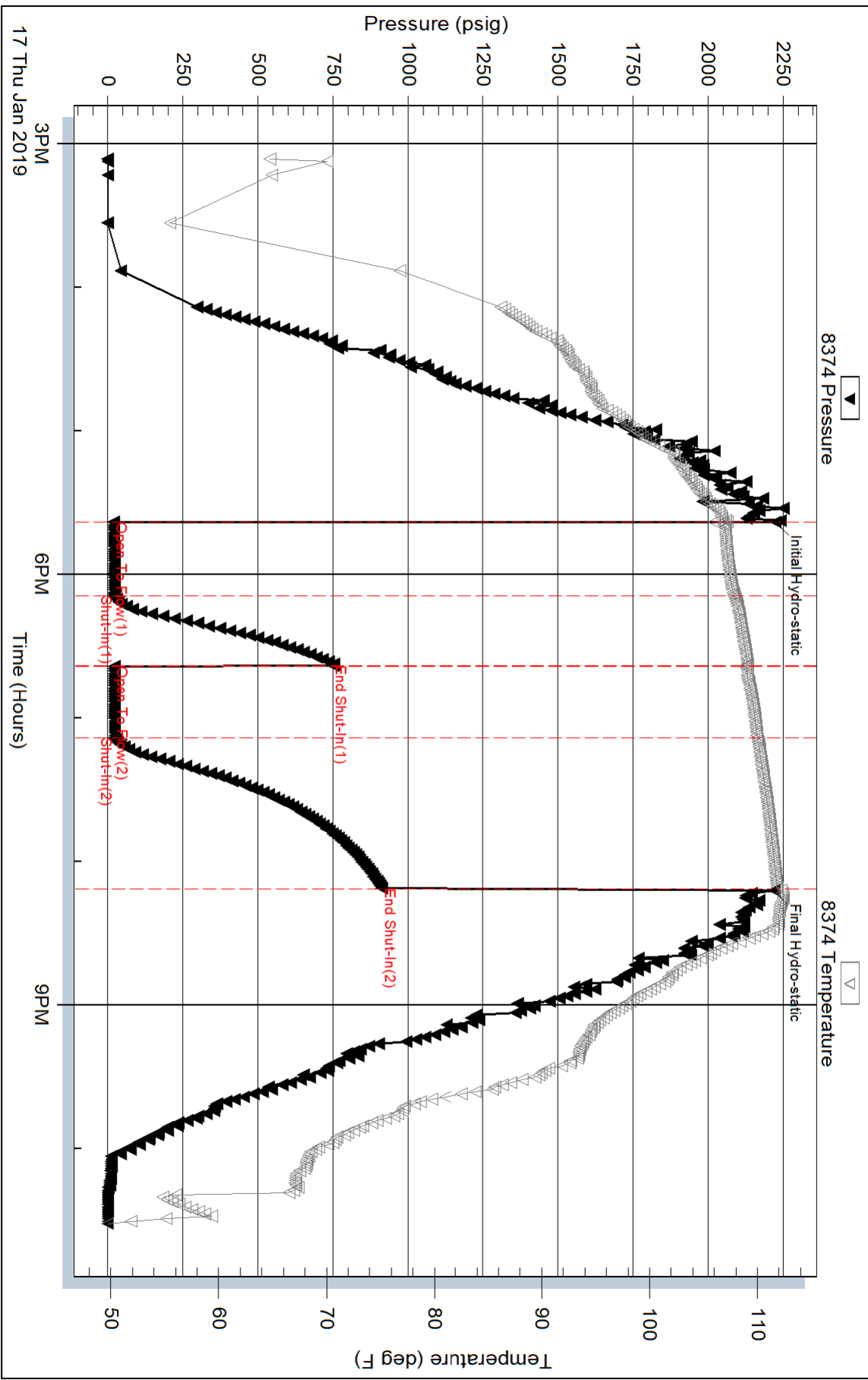
Inside

Shakespeare Oil Co.

Ortega 2-25

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 64856

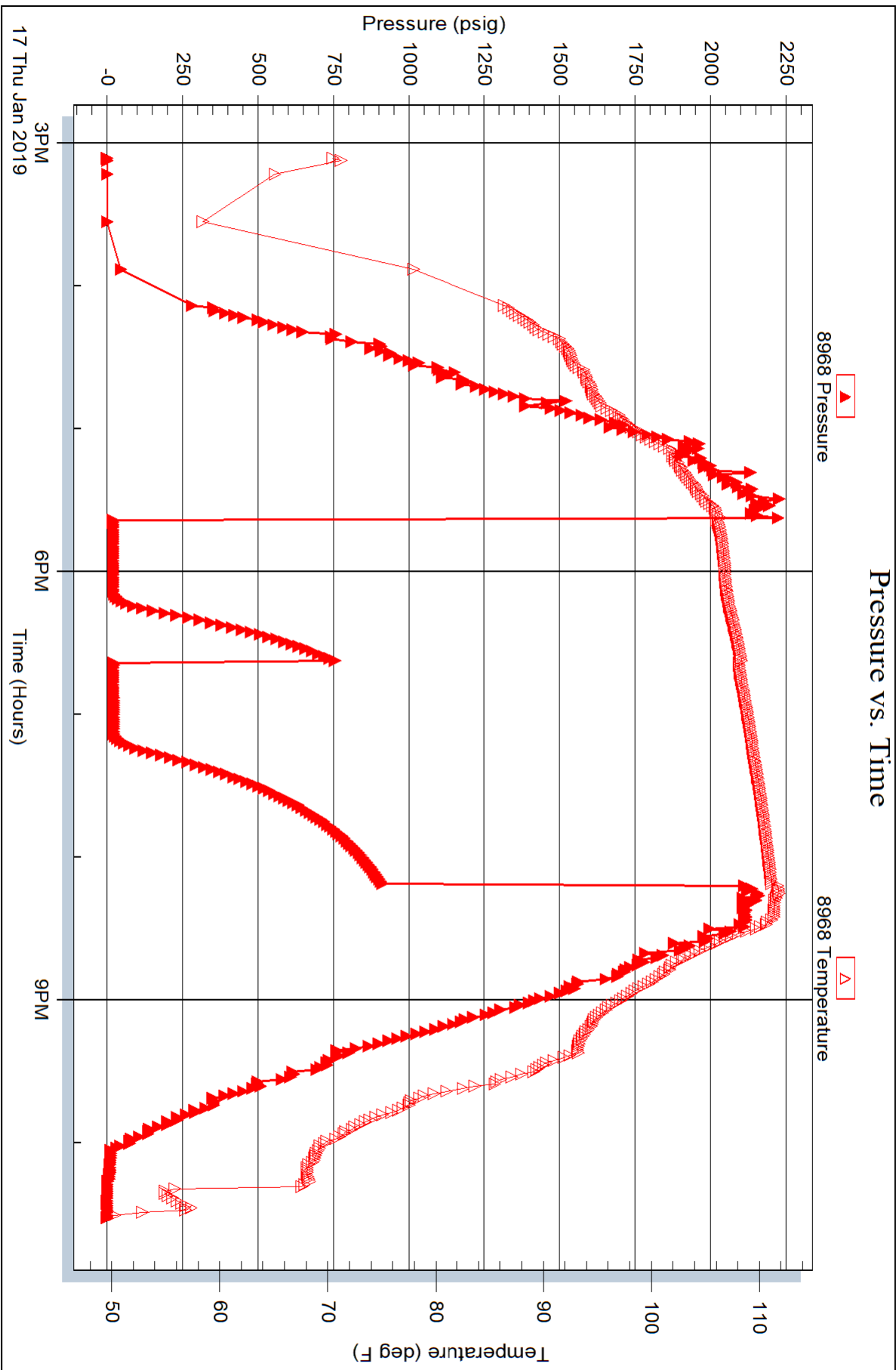
Printed: 2019.01.18 @ 07:10:45

Serial #: 8968

Outside Shakespeare Oil Co.

Ortega 2-25

DST Test Number: 1





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co.  
202 W. Main St.  
Salem IL  
62881  
ATTN: Steve Davis

**25-16s-34w Scott Co KS**

**Ortega 2-25**

Job Ticket: 64857

**DST#: 2**

Test Start: 2019.01.19 @ 10:08:15

## GENERAL INFORMATION:

Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:02:00  
 Time Test Ended: 17:14:45  
 Interval: **4660.00 ft (KB) To 4730.00 ft (KB) (TVD)**  
 Total Depth: 4660.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Mike Roberts  
 Unit No: 81  
 Reference Elevations: 3106.00 ft (KB)  
 3096.00 ft (CF)  
 KB to GR/CF: 10.00 ft

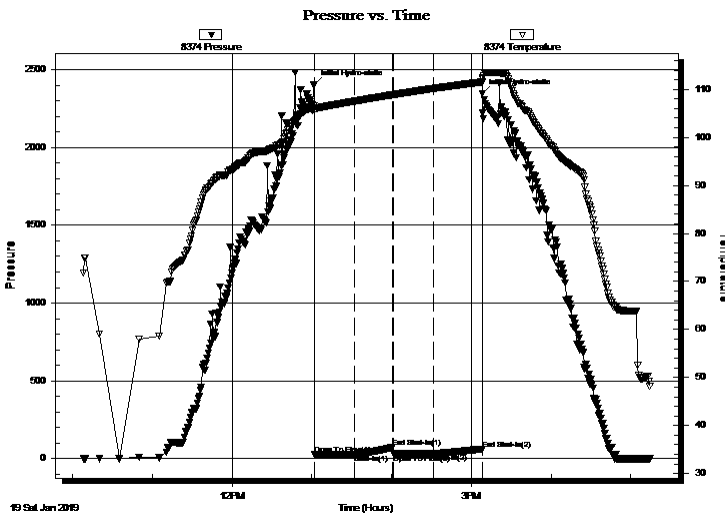
**Serial #: 8374**

**Inside**

Press@RunDepth: 32.70 psig @ 4728.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.01.19 End Date: 2019.01.19 Last Calib.: 2019.01.19  
 Start Time: 10:08:15 End Time: 17:14:45 Time On Btm: 2019.01.19 @ 13:01:45  
 Time Off Btm:

TEST COMMENT: IF: Built to 1/2" blow  
 IS: No return blow  
 FF: No blow  
 FS: No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2402.38	106.60	Initial Hydro-static
1	26.92	105.98	Open To Flow (1)
31	29.89	107.53	Shut-In(1)
60	70.21	108.89	End Shut-In(1)
60	31.22	108.88	Open To Flow (2)
90	32.70	110.16	Shut-In(2)
127	62.77	111.53	End Shut-In(2)
127	2345.20	112.31	Initial Hydro-static

## Recovery

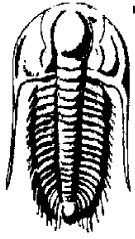
Length (ft)	Description	Volume (bbl)
5.00	mud 100%m	0.07

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Shakespeare Oil Co.  
202 W. Main St.  
Salem IL  
62881  
ATTN: Steve Davis

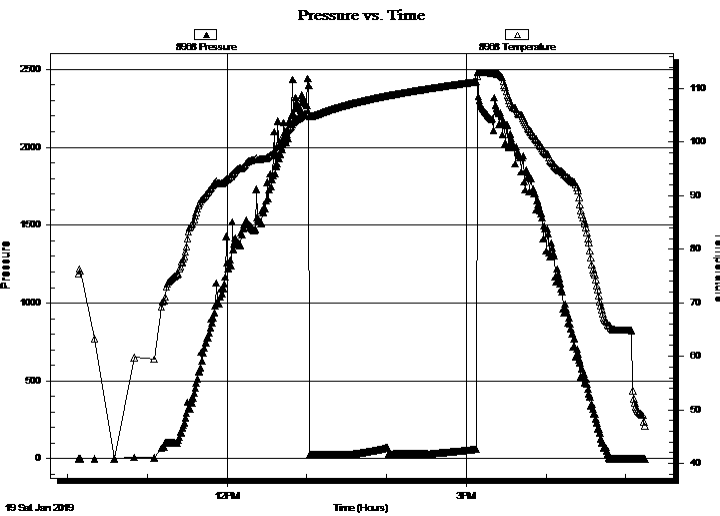
**25-16s-34w Scott Co KS**  
**Ortega 2-25**  
Job Ticket: 64857      **DST#: 2**  
Test Start: 2019.01.19 @ 10:08:15

**GENERAL INFORMATION:**

Formation: **Johnson**  
Deviated: No Whipstock:                      ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 13:02:00      Tester: Mike Roberts  
Time Test Ended: 17:14:45      Unit No: 81  
**Interval: 4660.00 ft (KB) To 4730.00 ft (KB) (TVD)**      Reference Elevations: 3106.00 ft (KB)  
Total Depth: 4660.00 ft (KB) (TVD)      3096.00 ft (CF)  
Hole Diameter: 7.88 inches      Hole Condition: Fair      KB to GR/CF: 10.00 ft

**Serial #: 8968      Outside**  
Press@RunDepth:                      psig @ 4728.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2019.01.19      End Date: 2019.01.19      Last Calib.: 2019.01.19  
Start Time: 10:08:15      End Time: 17:14:30      Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IF: Built to 1/2" blow  
IS: No return blow  
FF: No blow  
FS: No return blow



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

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	mud 100% m	0.07

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co.  
202 W. Main St.  
Salem IL  
62881  
ATTN: Steve Davis

**25-16s-34w Scott Co KS**  
**Ortega 2-25**  
Job Ticket: 64857      **DST#: 2**  
Test Start: 2019.01.19 @ 10:08:15

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

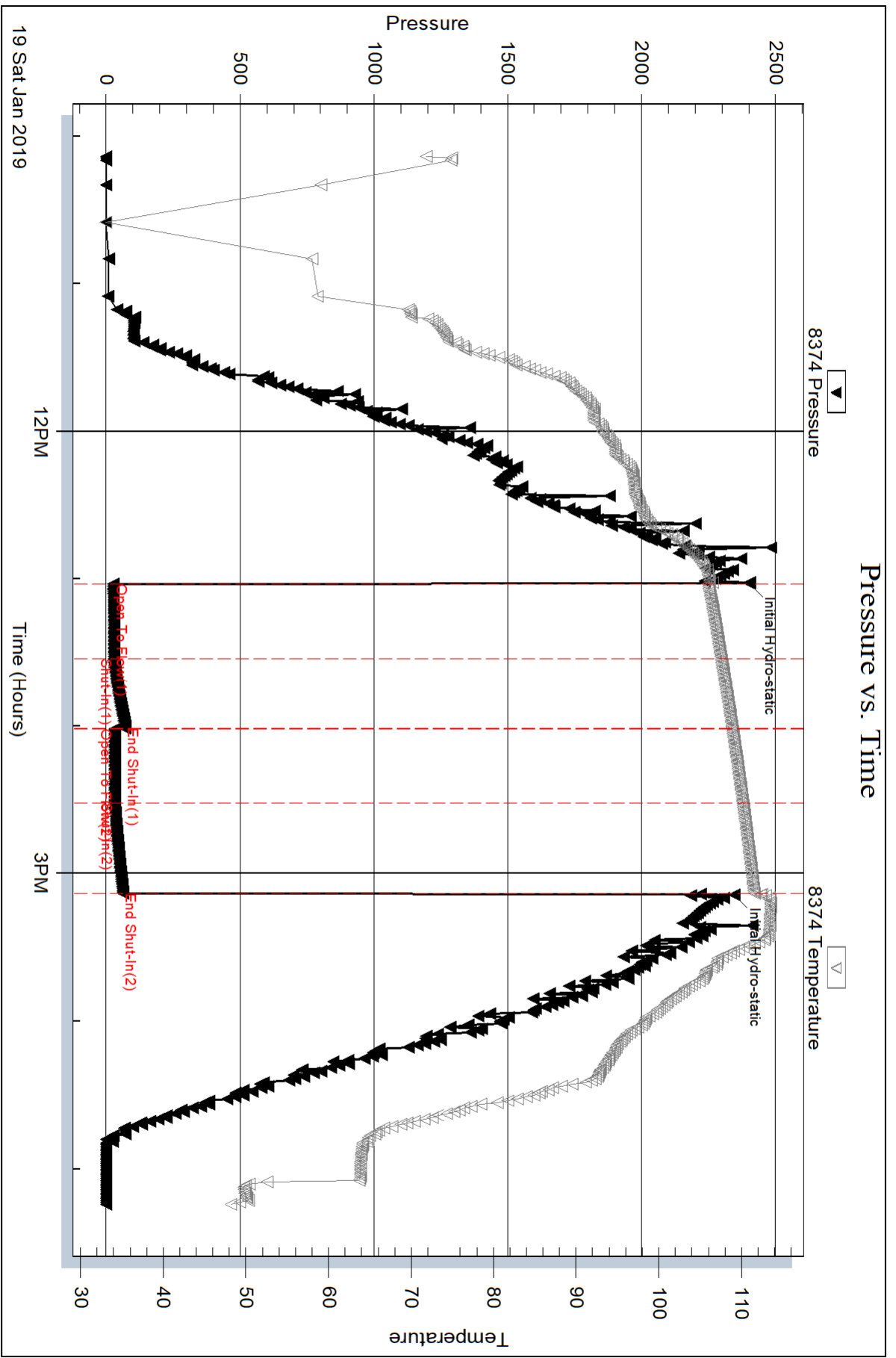
Serial #: 8374

Inside

Shakespeare Oil Co.

Ortega 2-25

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64857

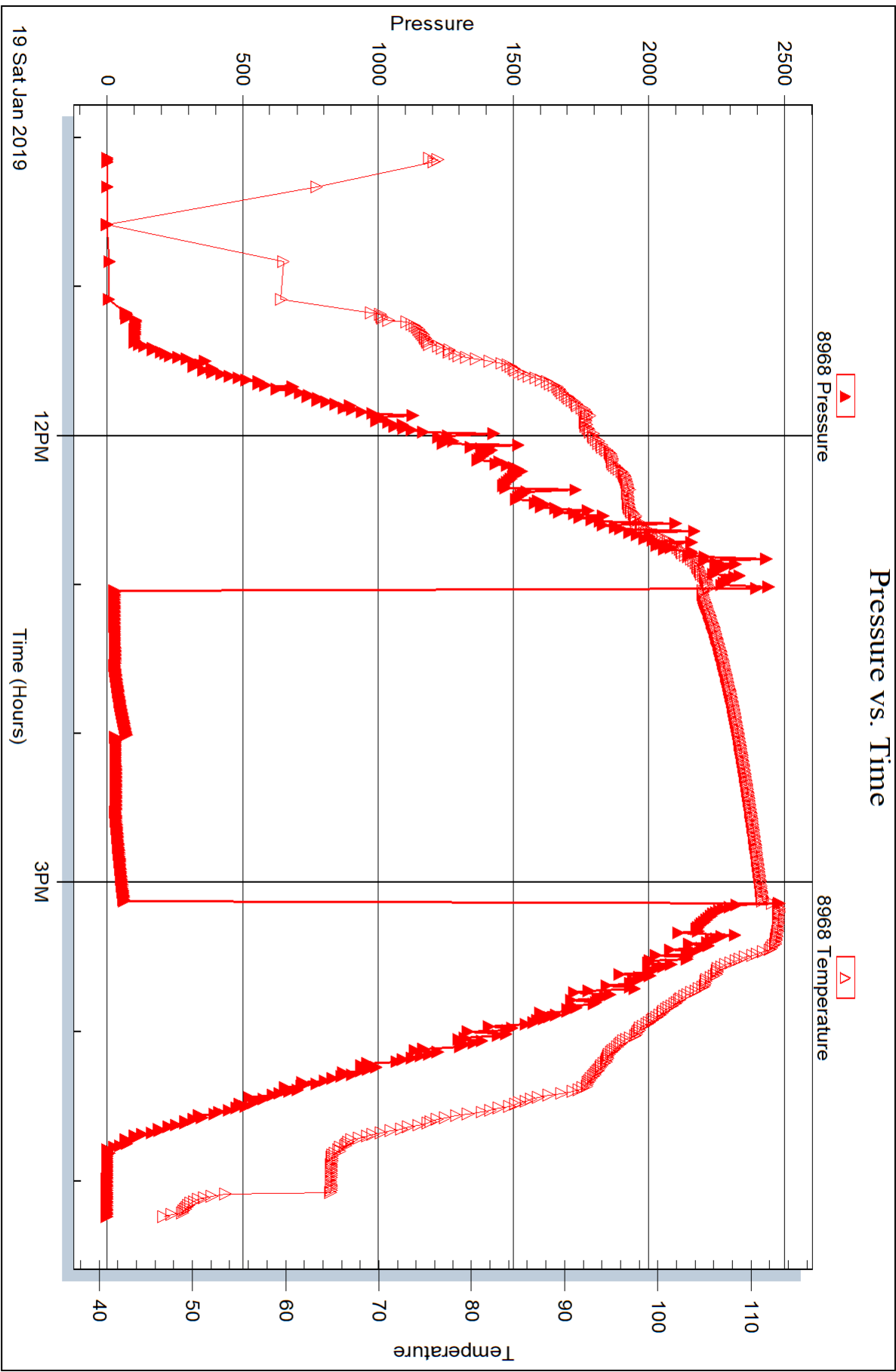
Printed: 2019.01.19 @ 22:13:58

Serial #: 8968

Outside Shakespeare Oil Co.

Ortega 2-25

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64857

Printed: 2019.01.19 @ 22:13:58