

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:	
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Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	ELLIS 1-6
Doc ID	1426659

All Electric Logs Run

Array Induction
Photo Density
Comp Neutron
Microlog

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	ELLIS 1-6
Doc ID	1426659

Tops

Name	Top	Datum
Base Anhydrite	2376	+615
Heebner	3912	-921
Lansing	3950	-959
Muncie Creek	4125	-1134
Stark Shale	4229	-1238
Hushpuckney	4271	-1280
Marmaton	4353	-1362
Pawnee	4430	-1439
L. Cherokee Shale	4511	-1520
Johnson	4552	-1561
Mississippian	4642	-1651

SWIFT

© 2018



Services, Inc.

P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
9/13/2018	27395

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

- Acidizing
- Cement
- Tool Rental

INT

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-6	Ellis	Scott	Duke Drilling Rig ...	Oil	Development	Shallow Surface	David E

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	100	Miles	5.00	500.00
576D-S	Pump Charge - <u>Shallow Surface</u> (< 500 Ft.)	1	Job	875.00	875.00
290	D-Air	2	Gallon(s)	42.00	84.00T
325	Standard Cement	165	Sacks	13.00	2,145.00T
279	Bentonite Gel	3	Sack(s)	30.00	90.00T
278	Calcium Chloride	7	Sack(s)	40.00	280.00T
276	Flocele	40	Lb(s)	2.50	100.00T
581D	Service Charge Cement	165	Sacks	1.75	288.75
583D	Drayage	800	Ton Miles	0.85	680.00
	Subtotal				5,042.75
	Sales Tax Scott County			8.50%	229.42

RECEIVED
SEP 21 2018

*502-5
DH*

We Appreciate Your Business!	Total	\$5,272.17
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DW

JOB LOG

SWIFT Services, Inc.

DATE 9-13-18 PAGE NO.

CUSTOMER Shakespeare WELL NO. # 1-6 LEASE Ellis JOB TYPE Shallow Surf TICKET NO. 27395

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	100							On location
								TD - 264 Pipe - 263.84
	100 220							Run Csg - 8 5/8 x 2 1/4 Brent Circ
	230	5	40					pump cmt - 165 sks @ 14.7 rpm
	240	5	0					Start Disp
		5	14.5					Circ Cmt
	245	5	15.5					End Disp
								Circulated 5 sks cmt to pit
								Thanks David, Zach & Kirby



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300

Invoice

DATE	INVOICE #
9/25/2018	27400

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

- Acidizing
- Cement
- Tool Rental

INT

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-6	Ellis	Scott	Duke Drilling Rig ...	Oil	Development	Long String	David E
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				90	Miles	5.00	450.00
578D-L	Pump Charge - Long String				1	Job	1,300.00	1,300.00
290	D-Air				3	Gallon(s)	42.00	126.00T
221	Liquid KCL (Clayfix)				2	Gallon(s)	25.00	50.00T
280	Flocheck 21				500	Gallon(s)	3.50	1,750.00T
419-4	4 1/2" Rotating Head Rental				1	Each	200.00	200.00T
325	Standard Cement				225	Sacks	13.00	2,925.00T
284	Calseal				10	Sack(s)	35.00	350.00T
283	Salt				1,200	Lb(s)	0.20	240.00T
292	Halad 322				100	Lb(s)	8.00	800.00T
277	Gilsonite (Coal Seal)				1,600	Lb(s)	0.85	1,360.00T
276	Flocele				28	Lb(s)	2.50	70.00T
581D	Service Charge Cement				225	Sacks	1.75	393.75
583D	Drayage				1,128	Ton Miles	0.85	958.80
	Subtotal							10,973.55
	Sales Tax Scott County						8.50%	669.04

RECEIVED
OCT 01 2018

*502-5
QH*

We Appreciate Your Business!

Total *DW* \$11,642.59



Services, Inc.

CHARGE TO: Shakespeare
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 27400
 PAGE 1 OF 1

1. SERVICE LOCATIONS: Hays KS WELLPROJECT NO. # 1-6 LEASE Ellis COUNTY/PARISH Scott STATE KS DATE 9-25-18 OWNER
 2. Ness City KS TICKET TYPE SERVICE CONTRACTOR Dele Drilling RIG NAME/NO. Rig # 2 SHIPPED VIA OT ORDER NO.
 3. WELL TYPE O/I WELL CATEGORY development JOB PURPOSE Long String DELIVERED TO location WELL PERMIT NO.
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575					1	110	90	m.			5.00	450.00
578					1	Pump Charge - Long String	1	ea			1300.00	1300.00
290					1	A-Air	3	bar			42.00	126.00
221					1	Living bar	2	bar			25.00	50.00
280					1	Stock bar	500	bar			3.50	1750.00
419					1	Rotating Head Renter	1	ea		4 1/2	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

X DATE SIGNED _____ TIME SIGNED _____

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? YES NO

WE UNDERSTOOD AND MET YOUR NEEDS? YES NO

OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO

ARE YOU SATISFIED WITH OUR SERVICE? YES NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL P.2 TOTAL 11642.159

SWIFT OPERATOR David Egerton APPROVAL _____

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. 22460

CUSTOMER
Shakespeare

WELL
E11.5 1.6

DATE 9-25-18 PAGE OF

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	WELL		UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY	U/M		
325						Standard Cement	225	sk	1.00	225.00
284						Culseal	10	sk	35.00	350.00
283						Sell	1200	lbs	70.00	84000.00
292						Halad 322	100	lbs	8.00	800.00
277						Cool Seal	1600	lbs	85.00	136000.00
276						Flarels	28	lbs	2.50	70.00
SERVICE CHARGE							CUBIC FEET	225 sk	1.00	393.25
MILEAGE CHARGE							TON MILES	128	85.00	958.00
TOTAL WEIGHT							LOADED	90		
TOTAL MILES										

CONTINUATION TOTAL

6255.55

709755

JOB LOG

SWIFT Services, Inc.

DATE 9-24-18

PAGE NO.

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Shakespeare		1-6		Ellis		Long String		27400	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	2130								On location
									Rtd - 4730 Set @ 4727 Bore @ 4683
									LARSON FLOAT EQUIP
	2330 2430								Circ on Bottom plug rat hole - 30 sts plug mouse hole 20 sts
	2440	5.5	10			300			Pump Key spacer
		5.5	12			300			Pump Flocheck 21 - 500 gal
		5.5	10			300			pump Key Spacer
	2445	5.5	42			200			Pump Cmt - 175 sts @ 15.5 PPG
									Drop plug - WASH P/L
	105	6	0			150			Start Disp
	120	5	745			700/1500			Land plug
									lift psi - 700 # land psi - 1500 #
	125								Release Psi - Dry
									Thanks David Zach & Kirby



P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
10/1/2018	31737

BILL TO
Shakespeare Oil Company, Inc 202 West Main Street Salem, IL 62881

- Acidizing
- Cement
- Tool Rental

INT

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#1-6	Ellis	Scott	Wild West	Oil	Development	Cement Port Collar	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				70	Miles	5.00	350.00
576D-D	Pump Charge - Deep Surface (> 500 Ft.) & Port Collars				1	Job	1,300.00	1,300.00
330	Swift Multi-Density Standard (MIDCON II)				215	Sacks	16.25	3,493.75T
276	Flocele				50	Lb(s)	2.50	125.00T
581D	Service Charge Cement				325	Sacks	1.75	568.75
583D	Drayage				1,131.93	Ton Miles	0.85	962.14
	Subtotal							6,799.64
	Sales Tax Scott County						8.50%	307.59

*SD-5
DA*

RECEIVED
OCT 08 2018

We Appreciate Your Business!

Total

\$7,107.23

DW

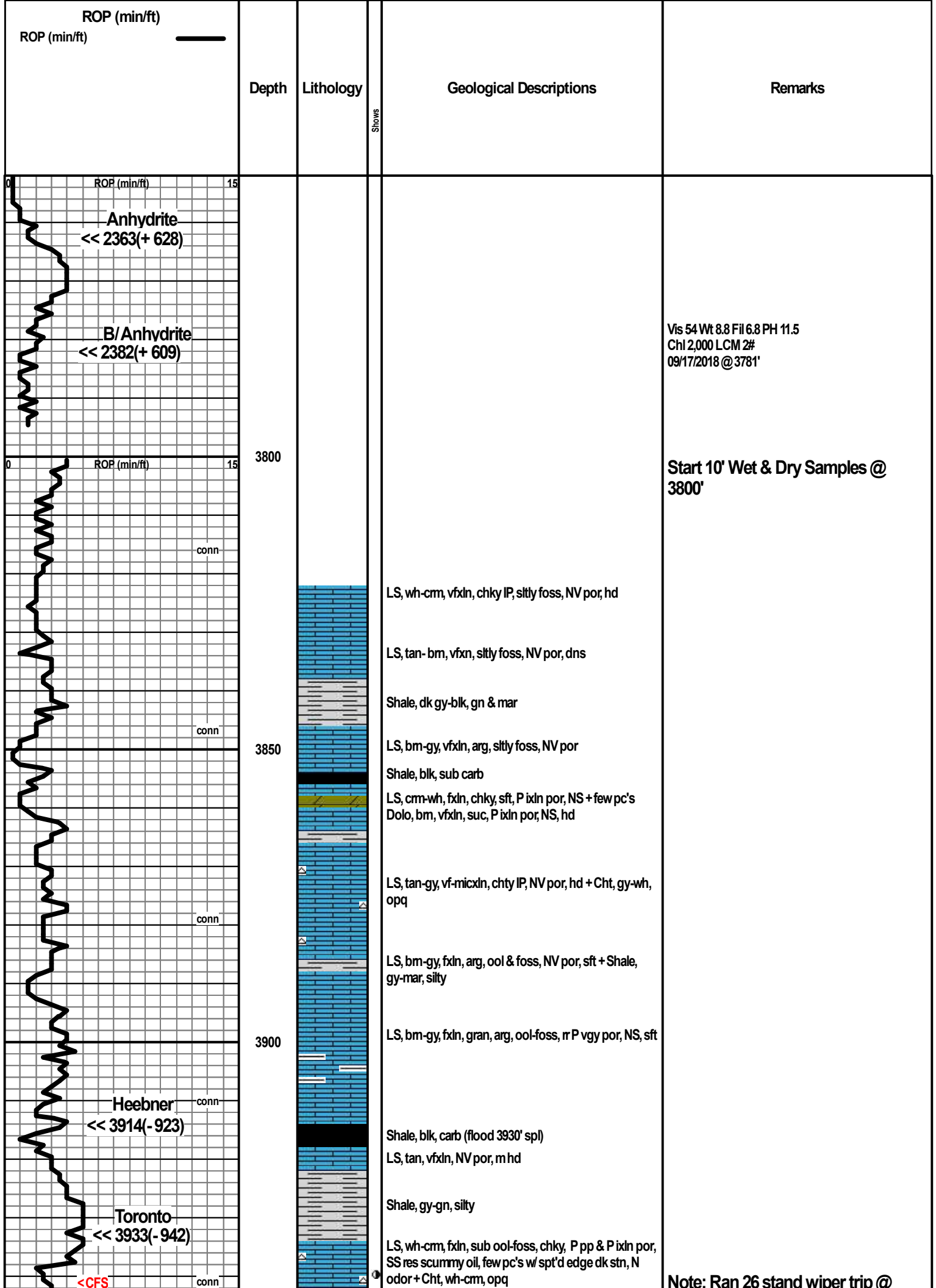
JOB LOG

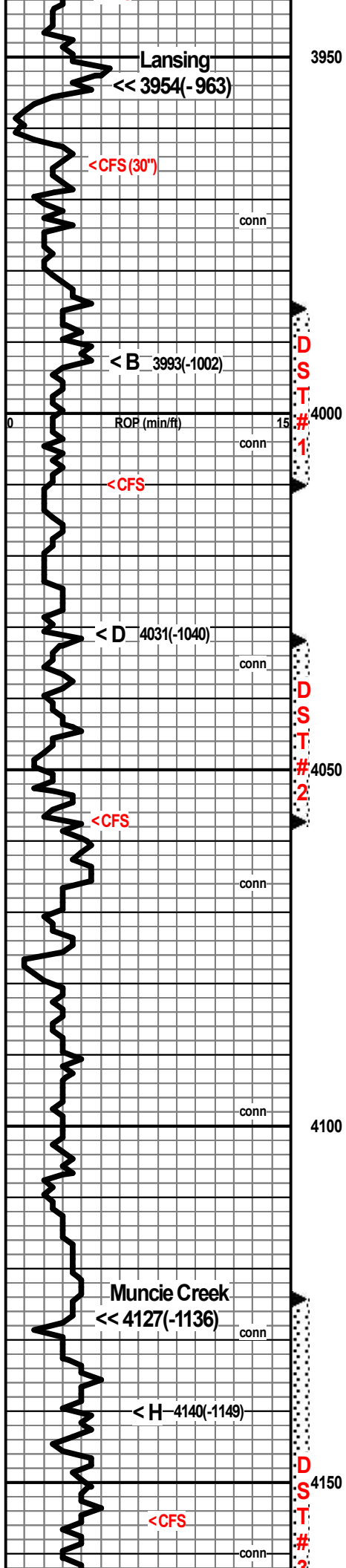
SWIFT Services, Inc.

DATE 1 OCT 18 PAGE NO. 1

CUSTOMER Shakespeare WELL NO. 1-6 LEASE Ellis JOB TYPE TICKET NO. 31737

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								325 sk SMD cement w/ 1/4" flocc 2 3/8 x 4 1/2 port collar - 2362'
	1030							on loc TRK 114
	1100					1000	1000	test to 1000 psi - held open part collar
	1105	3 1/2	2			650		inj rate 3 1/2 bpm @ 650 psi
	1109	3 1/2				500		MIX SMD cement @ 11.2 ppg
		3 1/2	18			520		- circ fluid to pit -
		3	116			650		→ cement to surface ← { 215 sk mixed } 20 to pit
	1135		8					Displace w/ 8 bbl H ₂ O close part collar
	1145					1000	1000	test to 1000 psi - held RUN 5 joints
			20					Reverse hole clean - cement plugs -
	1200							Wash truck
	1							Rack up
	1230							Job complete Thanks Steve Flint & squatch





LS, br-gy, f-mxn, P ixln por, NS, hd + Cht, lt gy-tan, opq-tmsl, silty foss
Shale, gn-gy & mar

LS, cm-bm, fxl, ool, F-P iool por & P oom por, NS, sft

LS, tan-bm, vfxln, sub ool, NV por, hd

LS, wh-cm, vfxln, sub ool, NV por, chky-dns

Shale, blk-dk gy

LS, gy-bm, fxl, ool, F-P iool por & P vgy-pp por, FSFO(hvy), dk spt'd-unf stn, dull fluor, fnt odor + Cht, cm-gy, opq

LS, tan-lt gy, vf-micxn, sub ool, chty-chky IP, NV por, m hd

LS, tan-gy, vf-micxn, NV por, sub ool-foss, NV por, most dns

LS, bm-gy, micxn, NV por, dns + LS, bm-gy, f-vfxln, sub ool-foss, r P vgy por, NS & few pc's Cht, gy-tan, opq-tmsl

Shale, turq, mar, blk, sub carb

LS, bm-gy, f-mxn, sub ool, F-P ixln por & F-P iool por, FSFO w/few gas bubb, spt'd-unf stn, dull unf fluor, F odor

LS, cm-wh, f-vfxln, ool, NV por, hd

Shale, gn-gy, & mar

LS, cm-wh, vfxln, sub ool, chky, NV por sft + LS, tan-gy, vfxln, sub ool-foss, NV por, dns & Cht, lt gy, opq

LS, tan-lt gy, vfxln, ool, F-P oom & iool por, NS, sft

LS, wh-cm, vfxln, ool packed, NV por, dns + Cht, tan-gy, opq

LS, cm-wh, vf-micxn, silty ool, chky-dns, NV por

LS, gy-tan, vf-micxn, sub ool, chky-ghty IP, NV por, hd

LS, gy-cm, vf-micxn, chty IP, sub ool-foss, NV por, most dns

Shale, blk carb (4140' spl)
LS, bm-gy, fxl, chky-arg IP, silty foss, m sft, NV por

Shale, gy-gn

LS, bm, f-vfxln, sub ool, P ixln por, SSFO, unf stn & dull fluor + LS, gy-tan, fxl, foss-ool, F-P ipart por & P vgy por, S-FSFO, spt'd-unf dk stn, dull fluor, G odor, w/ abnt Cht, gy-tan, tmsl-op, silty foss

LS, gy-tan, vf-micxn, chty IP, sub ool-foss, NV por, hd + LS, cm-wh, fxl, chky, ool, NV por, NS & Cht, wh-gy, opq-tmsl

3941'

Pipe Strap @ 4010'
Strap .93 short
Survey 1 deg

DST#1 3985-4010

(Lansing B Zone)
30 30 45 60
BLOW:
IF Built to 3 1/2"
ISI No return
FF Built to 3 1/2"
FSI No return
RECOVERY:
20' O (100% o)
42' OCM (5% o 95% m)
62' WCM (10% w 90% m)
124' TOTAL FLUID (Gr 28 Chl 19,000)
IH 1927
IF 21 - 39
ISI 1029
FF 41 - 70
FSI 1038
FHP 1879 BHT 117 deg F

Vis 53 Wt 9.0 Fil 7.2 PH 11.0
Chl 3,000 LCM 1#
09/18/2018 @ 4010'

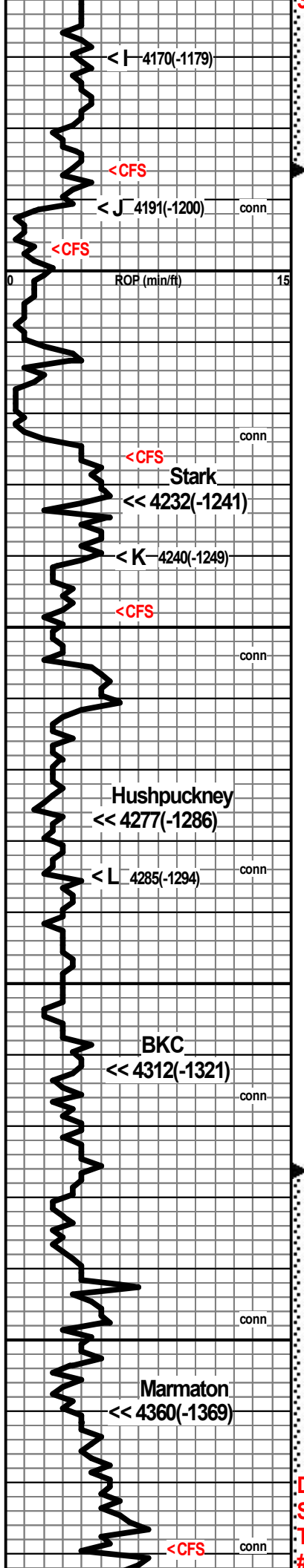
DST#2 4032 - 4057

(Lansing D Zone)
30 30 30 30
BLOW:
IF Built to 1"
ISI No return
FF Built to 3/4"
FSI No return
RECOVERY:
1' O (100% o)
30' OCM (1% O 99% m)
31' TOTAL FLUID (Gr 26)
IH 1945
IF 18 - 25
ISI 1051
FF 27 - 34
FSI 1031
FHP 1931 BHT 114 deg F

Vis 55 Wt 9.1 Fil 8.0 PH 11.0
Chl 4,100 LCM 1#
09/19/2018 @ 4129'

DST#3 4124 - 4186

(Lansing H & I Zones)
30 30 45 60
BLOW:
IF Built to 4"
ISI No return
FF Built to 3"
FSI No return



Shale, blk, sub carb

LS, cm-wh-gy, fxl, foss & ool, F-P vgy-pp por & P ipart por, GSFO (hvy), few gas bubb, spt'd-unf dk stn, dull unf fluor, G odor (strong)

LS, cm-tan, vf-fxl, chky IP, slty foss, NV por, m sft + Shale, gy, gn & blk

LS, cm-wh, f-vfxln, ool, F-G oom por, NSFO, few pc's w/ asph spt'd stn, (most barren oom por), frnt odor + LS w/ show AA (I Zone)

LS, cm-wh, f-vfxln, ool, F-P oom por, spt'd asph stn, NSFO, frnt odor

LS, cm-wh-gy, f-vfxln, F-G oom por, NSFO, r spt'd asph stn, NSFO, N odor

LS, cm-wh, vf-micln, ool-sub ool, r P oom por, NS, most NV por, dns

LS, gy-bm, vf-micln, NV por, dns

Shale, blk, carb

Shale, mar & gy

Dolo, gy-bm, vf-fxl, sub arg, P ixln por, sft, NS + LS cm-gy, f-vfxln, sub ool-foss, r P vgy por, NS, N cup odor (cfs 4248)

LS, bm-tan-gy, vf-micln, sharp, NV por, dns + Cht, gy-wh, opq

LS, tan-wh, vfxln, sub ool, NV por, chky-dns + Cht, gy-wh, opq

LS, cm-wh, fxl, slty foss, chky, NV por

Shale, blk, carb + LS, tan-lt gy, vfxln-micln, sharp, dns

LS, gy-bm, vfxln, ool, NV por, dns + LS tan-lt gy, vf-fxl, sub ool-foss, NV por, chky-dns w/ inc Cht, tan-gy, opq

LS, lt-gy (bluish), vf-micln sharp, chty, NV por, hd + Cht AA

LS, bm-gy-cm, f-vfxln, slty foss, NV por, chky-ghty IP, most dns

Shale, red, gn(sft), bm & gy + Sltst, gy-lt gn, calc

LS, bm, vf-micln, sharp, NV por, dns

Shale, gy, gn, mar & blk, sub carb

LS, cm-wh, vf-fxl, ool packed, chky IP, most NV por, dns + few pc's LS, gy-cm, f-vfxln, sub ool, hd, P pp por, VSSFO, spt'd stn, N fluor, N odor

LS, gy, vfxln, gran, arg, NV por, hd + LS, bm-gy, vfxln, sharp, NV por, dns

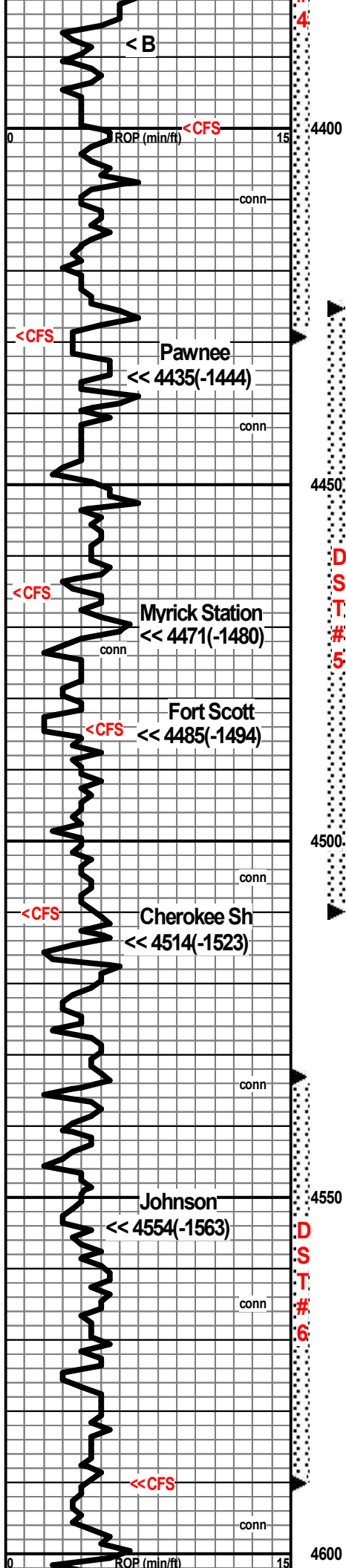
RECOVERY:
 124' M w oil spots (100% m)
 IH 206
 IF 36 - 56
 ISI 1132
 FF 65 - 80
 FSI 1141
 FH 1977 BHT 118 deg F

Vis 53 Wt 9.1

Vis 56 Wt 9.2 Fil 8.8 PH 10.5
 Chl 4,400 LCM 1#
 09/20/2018 @ 4270'

DST#4 4326 - 4429
 (Marmaton A, B & C)
 30 30 30 30
 BLOW:
 IF Built to 1/2"
 ISI No return
 FF No blow
 FSI No return
 RECOVERY:

D
S
T
#



Shale, blk, sub carb, dk gn-gy

LS, cm-gy, vf-fxn, sub ool-foss, F-P vgy-pp por & F-P mold por, S-FSFO w/ few gas bubb, spt'd dk unf-spt'd stn, N fluor, fnt odor + Cht, gy-amber, tmsl-opq

LS, tan-gy, vf-micln, sub ool-foss, chty IP, NV por, dns, r spt'd edge asph stn, NSFO, N odor + Cht, gy-tan, sltly foss, opq-tmsl

LS, wh-cm, fxn, chky, NV por, sft + LS, gy-bm, vfxln, sub ool-foss, NV por, m hd + few pc's Cht, wh, opq

Shale, blk, carb-sub carb, sft, (washed blk) + pyr

LS, cm-wh, fxn, chky, sltly foss, P ixln por, SSFO, lt spt'd stn, N fluor, N odor + Cht, wh-gy, opq-tmsl

LS, wh-tan, fxn, sltly foss, P ixln por & P vgy por, FSFO(V lt), spt'd-unf lt stn & fluor, fnt odor + few pc's Cht AA

LS, dk bm-dk gy, vf-micln, chty IP, some sharp, NV por, dns + abnt Cht, dk bm, tmsl, sltly foss

Shale, blk carb

LS, tan-cm, f-vfxln, sltly foss, P ixln por & P pp por, FSFO, unf lt stn & fluor, fnt odor

LS, cm-tan, vfxln, ool, NV por, dns + Cht gy, foss, tmsl

Shale, blk carb

LS, bm-gy, vfxln, ool, F-P iool por & P vgy por, F-GSFO (some bleeding), few gas bubb, unf stn & dull fluor, F odor + LS, bm-gy, vfxln, ool packed, NV por, dns w/ abnt Cht, gy-wh, ool, opq

LS, bm-gy, vf-micln, NV por, dns

LS, bm-gy, f-vfxln, ool, r P vgy por, NS + Cht, amber-gy, tmsl

Shale, blk carb

LS, gy-bm, f-vfxln, gran, arg, NV por, m sft

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

Shale, blk, carb-sub carb + LS, br-gy-tan, vf-micln, sharp, sub ool-foss, NV por, dns

LS, dk gy- bm, vf-micln, chty IP, sharp, NV por, dns + Shale, sub carb, dk gy & mar

LS, bm-cm, vfxln, foss, P vgy & P ipart por, S-FSFO + few gas bubb, spt'd-unf dk stn, N fluor, fnt odor & LS, tan-gy, micln, foss, NV por, dns w/ Cht, gy-br, foss, opq

LS, bm-gy, vf-fxn, foss, P ixln & P pp por, FSFO w/ few gas bubb, unf dk stn, N fluor, F odor

LS, gy-tan, vfxln, foss, P foss mold por & P pp por, SSFO, spt'd-unf dk stn, N fluor, F odor + LS, gy-bm, vfxln, ool & foss, NV por, dns w/ inc Cht, bm, opq-tmsl

Shale, gy, blk, mar + abnt LS, tan-gy, vf-micln, NV por, dns (wash red)

SS, gn, glauc, vfgm, rd, well sort, comp, P lg por, NS +

20' M (100% m)
 IH 2174
 IF 50 - 55
 ISI 905
 FF 54 - 58
 FSI 794
 FH 1221 BHT 116 deg F

Vis 52 Wt 9.2 Fil 7.2 PH 11.0
 Chl 4,000 LCM 1#
 09/21/2018 @ 4429'

DST#5 4425 - 4510

(Pawnee, Myrick Station & Fort Scott)
 30 30 30 30
 BLOW:
 IF Built to 2 1/2"
 ISI No return
 FF Built to 1 1/2"
 FSI No return
 RECOVERY
 30' OCM (3% o 97% m)
 IH 2256
 IF 52 - 54
 ISI 174
 FF 54 - 57
 FSI 139
 FH 2171 BHT 116 deg F

Vis 57 Wt 9.4 Fil 10.4 PH 10.0
 Chl 5,500 LCM 1#
 09/22/2018 @ 4510

DST#6 4533 - 4590

(Johnson)
 30 45 60 90
 BLOW:
 IF BOB 6 min
 ISI No return
 FF BOB 6 min
 FSI 2 1/2" return
 RECOVERY: 124' GIP
 92' OCM (30% o 70% m)
 124' MCGO (50% g 30% o 20% m)
 62' OCGM (60% g 20% o 20% m)
 278' TOTAL FLUID
 IH 2254
 IF 43 - 81
 ISI 1134
 FF 92 - 152
 FSI 1134
 FH 2234 BHT 122 deg F

Vis 59 Wt 9.4 Fil 11.2 PH 8.0
 Chl 6,400 LCM 1#
 09/23/2018 @ 4590'

abnt LS, gy-tan, vrxln, sub ool, r pp por & spt d stn, most NV por & Shale, vcol

Shale, blk, mar, gn & yel + Sltst, gn & SS, gn-gy, vfgm, rd, well sort w/ abnt LSAA

SS, lt gy, vfgm, rd, well sort, arg, comp, P ig por, NS + SS, wh-clr qtz, f-vfgm, rd-sub rd, mod sort, comp, P ig por, NS

SS, wh-clr qtz, f-mgm, rd, mod well sort, fri, F ig por, NS

SSAA + Inc Shale, mar, turq, gy & mar & LS, tan-gy, fxln, chky IP, arg, NV por

SS, tan-lt gy, vfgm, rd, well sort, fri, F-P igpor, NS

LS, wh, fxln, sdy, chky IP, sft, NV por

LS, wh-lt gy, f-vfxln, sdy, NV por, hd

LS, lt gy-wh, fxln, sdy, chky IP, NV por, m hd

LS, cm-wh, vfxln, chky IP, sub sdy-foss, NV por, hd

LSAA w/ inc LS, tan-bm, vf-micxln, dn NV por

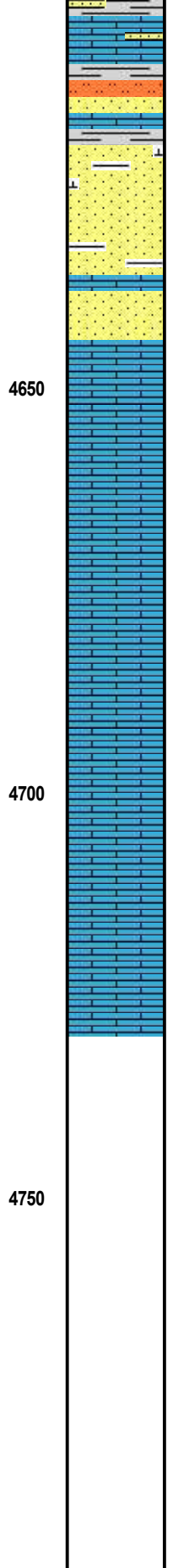
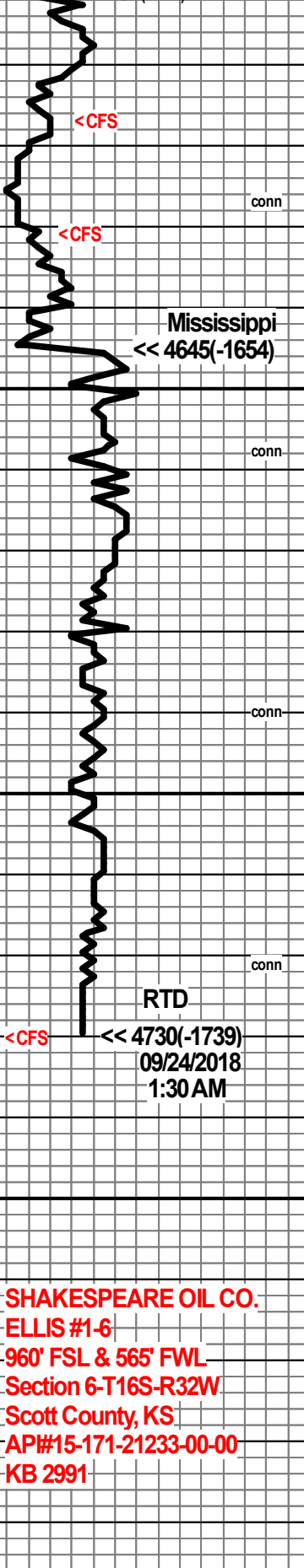
Vis 58 Wt 9.2

LS, wh-cm, vfxln, sub ool-sdy, NV por, dns + LS, wh-cm, fxln, chky IP, NV por, sft

LSAA, w/ inc. LS, tan-bm, vf-micxln, NV por, dns

LS, wh-cm, fxln, chky, sub ool-sdy, NV por, msft + LS, tan, vfxln, NV por, dns

Survey @ 4730 1 1/4 deg



abnt LS, gy-tan, vrxln, sub ool, r pp por & spt d stn, most NV por & Shale, vcol
Shale, blk, mar, gn & yel + Sltst, gn & SS, gn-gy, vfgm, rd, well sort w/ abnt LSAA
SS, lt gy, vfgm, rd, well sort, arg, comp, P ig por, NS + SS, wh-clr qtz, f-vfgm, rd-sub rd, mod sort, comp, P ig por, NS
SS, wh-clr qtz, f-mgm, rd, mod well sort, fri, F ig por, NS
SSAA + Inc Shale, mar, turq, gy & mar & LS, tan-gy, fxln, chky IP, arg, NV por
SS, tan-lt gy, vfgm, rd, well sort, fri, F-P igpor, NS
LS, wh, fxln, sdy, chky IP, sft, NV por
LS, wh-lt gy, f-vfxln, sdy, NV por, hd
LS, lt gy-wh, fxln, sdy, chky IP, NV por, m hd
LS, cm-wh, vfxln, chky IP, sub sdy-foss, NV por, hd
LSAA w/ inc LS, tan-bm, vf-micxln, dn NV por
LS, wh-cm, vfxln, sub ool-sdy, NV por, dns + LS, wh-cm, fxln, chky IP, NV por, sft
LSAA, w/ inc. LS, tan-bm, vf-micxln, NV por, dns
LS, wh-cm, fxln, chky, sub ool-sdy, NV por, msft + LS, tan, vfxln, NV por, dns

SHAKESPEARE OIL CO.
ELLIS #1-6
960' FSL & 565' FWL
Section 6-T16S-R32W
Scott County, KS
API#15-171-21233-00-00
KB 2991



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64386

DST#: 1

Test Start: 2018.09.18 @ 04:56:15

GENERAL INFORMATION:

Formation: **Lansing B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:15:30

Time Test Ended: 11:51:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 3985.00 ft (KB) To 4010.00 ft (KB) (TVD)

Reference Elevations: 2991.00 ft (KB)

Total Depth: 4010.00 ft (KB) (TVD)

2986.00 ft (CF)

Hole Diameter: 6.75 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8374

Inside

Press@RunDepth: 70.19 psig @ 3986.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.09.18

End Date:

2018.09.18

Last Calib.:

2018.09.18

Start Time:

04:56:15

End Time:

11:51:30

Time On Btm:

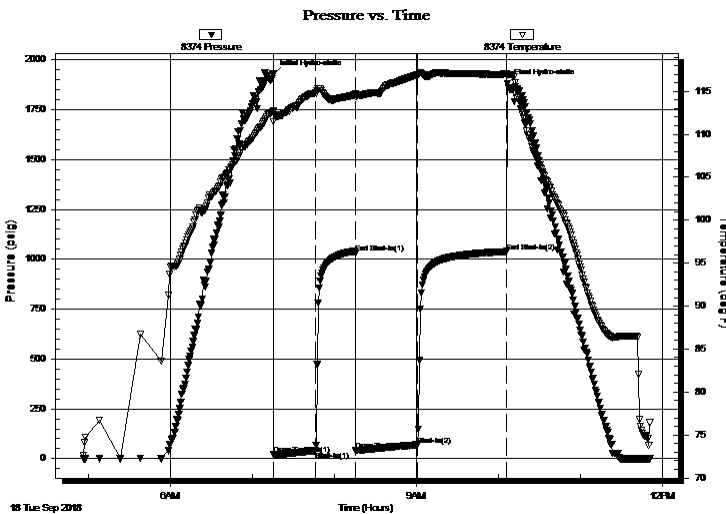
2018.09.18 @ 07:15:15

Time Off Btm:

2018.09.18 @ 10:06:45

TEST COMMENT: IF: Built to 3 1/2" blow
IS: No return blow
FF: Built to 3 1/2" blow
FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1927.02	112.72	Initial Hydro-static
1	21.86	111.47	Open To Flow (1)
31	39.60	114.71	Shut-In(1)
61	1029.62	114.70	End Shut-In(1)
61	41.37	114.35	Open To Flow (2)
106	70.19	116.93	Shut-In(2)
171	1038.80	117.04	End Shut-In(2)
172	1879.32	116.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	free oil 100%o	0.17
42.00	ocm 5%o 95%m	0.37
62.00	w cm 10%w 90%m	0.54

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64386

DST#: 1

Test Start: 2018.09.18 @ 04:56:15

GENERAL INFORMATION:

Formation: **Lansing B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:15:30

Time Test Ended: 11:51:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 3985.00 ft (KB) To 4010.00 ft (KB) (TVD)

Reference Elevations: 2991.00 ft (KB)

Total Depth: 4010.00 ft (KB) (TVD)

2986.00 ft (CF)

Hole Diameter: 6.75 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8968 Outside

Press@RunDepth: psig @ 3986.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.09.18 End Date: 2018.09.18

Last Calib.: 2018.09.18

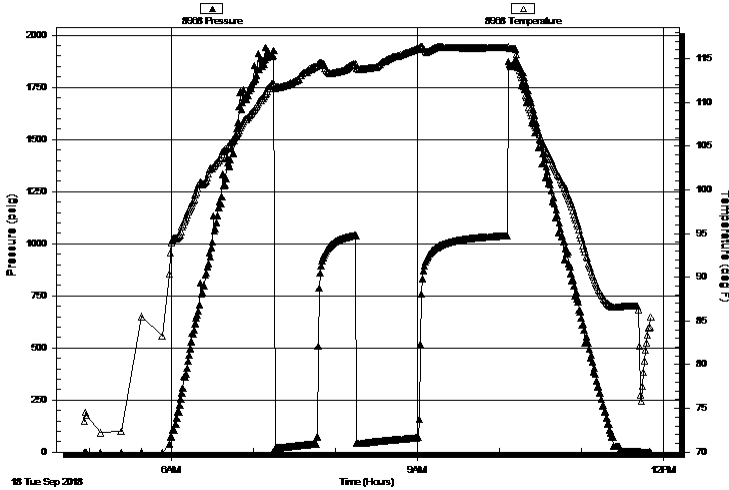
Start Time: 04:56:15 End Time: 11:51:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Built to 3 1/2" blow
IS: No return blow
FF: Built to 3 1/2" blow
FS: No return blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	free oil 100%o	0.17
42.00	ocm 5%o 95%m	0.37
62.00	w cm 10%w 90%m	0.54

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 Street
Salem IL
62881
ATTN: Steve Davis

6-16s-32w Scott Co KS
Ellis 1-6
Job Ticket: 64386 **DST#: 1**
Test Start: 2018.09.18 @ 04:56:15

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 28 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 19000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.79 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

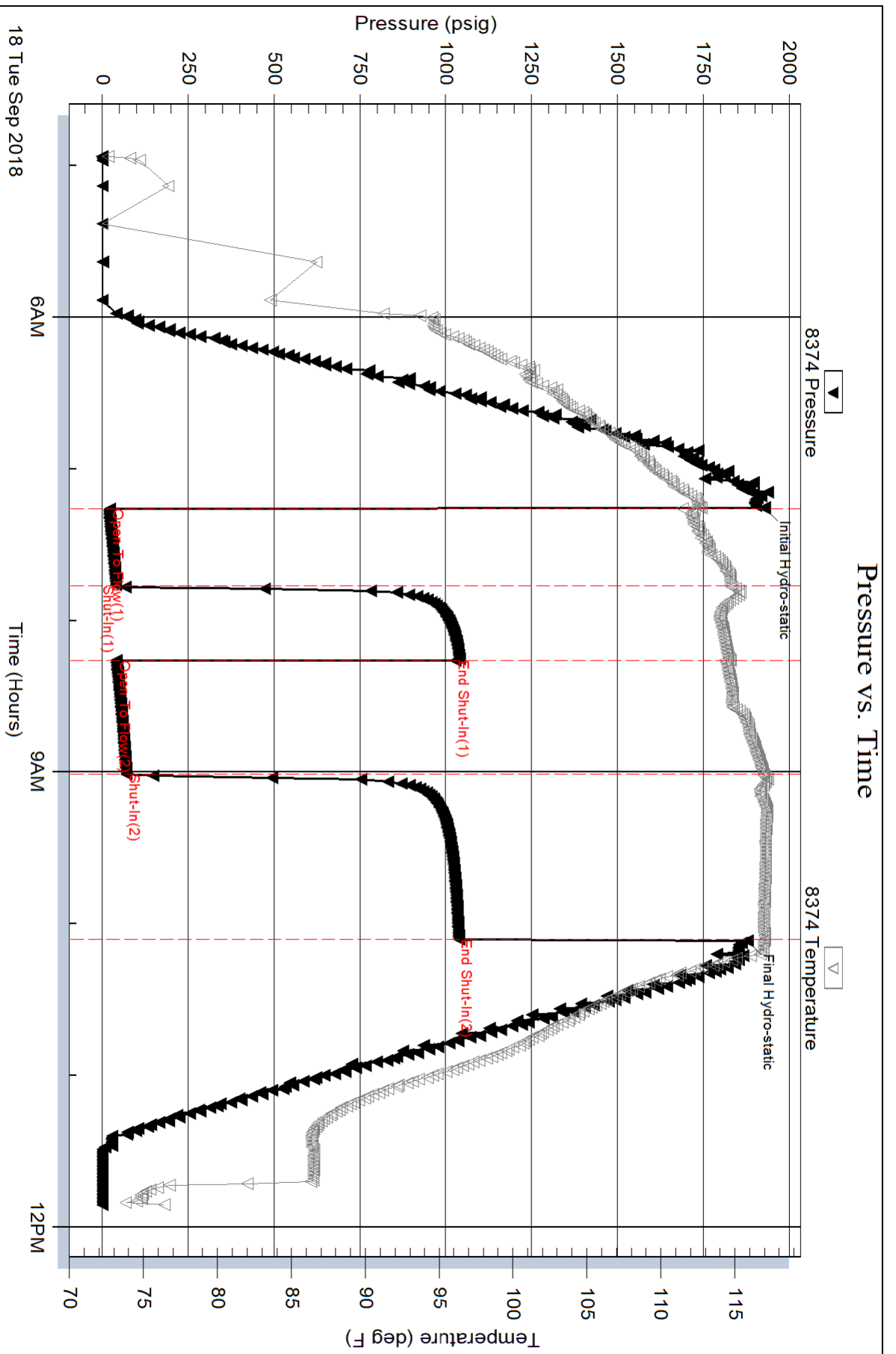
Length ft	Description	Volume bbl
20.00	free oil 100%o	0.175
42.00	ocm 5%o 95%m	0.367
62.00	wcm 10%w 90%m	0.542

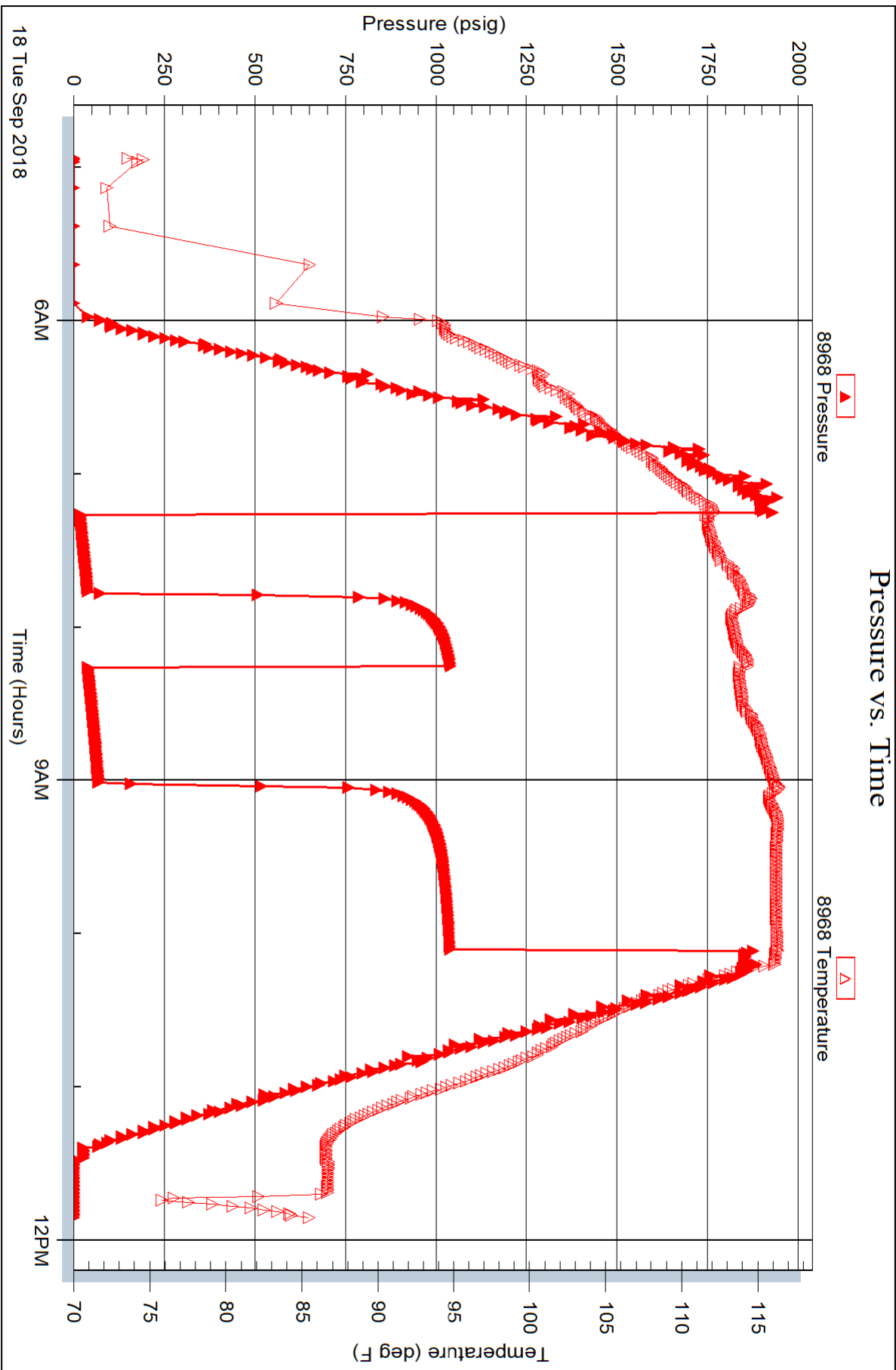
Total Length: 124.00 ft Total Volume: 1.084 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW= .302 @ 86.7= 19,000 ppm
API= 29 @ 70 corrected to 28 @ 60







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64387

DST#: 2

Test Start: 2018.09.18 @ 20:36:15

GENERAL INFORMATION:

Formation: **D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:28:15
 Time Test Ended: 02:02:00
 Interval: **4032.00 ft (KB) To 4057.00 ft (KB) (TVD)**
 Total Depth: 4057.00 ft (KB) (TVD)
 Hole Diameter: 6.75 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2991.00 ft (KB)
 2986.00 ft (CF)
 KB to GR/CF: 5.00 ft

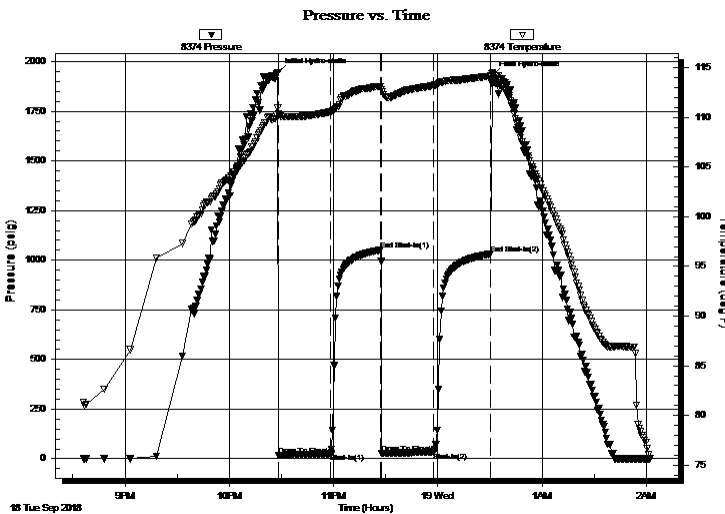
Serial #: 8374

Inside

Press@RunDepth: 34.43 psig @ 4033.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.18 End Date: 2018.09.19 Last Calib.: 2018.09.19
 Start Time: 20:36:15 End Time: 02:02:00 Time On Btm: 2018.09.18 @ 22:28:00
 Time Off Btm: 2018.09.19 @ 00:31:30

TEST COMMENT: IF: Built to 1" blow
 IS: No return blow
 FF: Built to 3/4" blow
 FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1945.82	110.98	Initial Hydro-static
1	18.32	110.33	Open To Flow (1)
30	25.81	110.56	Shut-In(1)
59	1051.75	113.10	End Shut-In(1)
60	27.12	112.80	Open To Flow (2)
90	34.43	113.22	Shut-In(2)
123	1031.88	114.16	End Shut-In(2)
124	1931.62	114.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil 100%o	0.01
30.00	ocm 1%o 99%m	0.26

* 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 Street
 Salem IL
 62881
 ATTN: Steve Davis

6-16s-32w Scott Co KS

Ellis 1-6
 Job Ticket: 64387 **DST#: 2**
 Test Start: 2018.09.18 @ 20:36:15

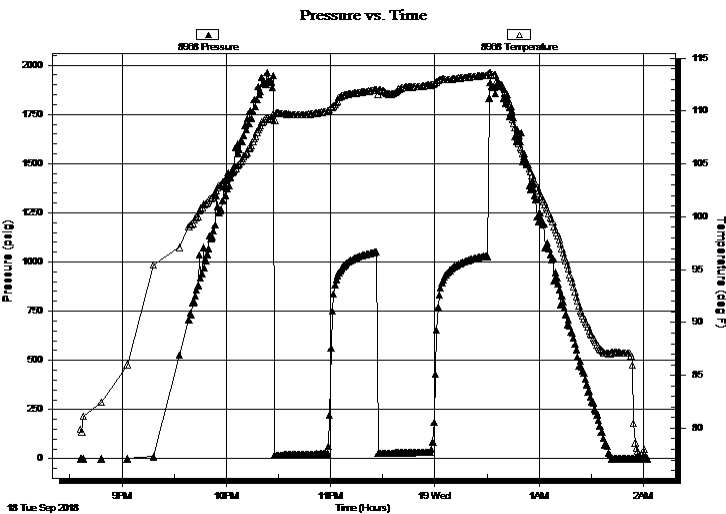
GENERAL INFORMATION:

Formation: **D**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Reset)**
 Time Tool Opened: **22:28:15** Tester: **Mike Roberts**
 Time Test Ended: **02:02:00** Unit No: **81**

Interval: 4032.00 ft (KB) To 4057.00 ft (KB) (TVD) Reference Elevations: **2991.00 ft (KB)**
 Total Depth: **4057.00 ft (KB) (TVD)** **2986.00 ft (CF)**
 Hole Diameter: **6.75 inches** Hole Condition: **Fair** KB to GR/CF: **5.00 ft**

Serial #: 8968 **Outside**
 Press@RunDepth: **psig @ 4033.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2018.09.18** End Date: **2018.09.19** Last Calib.: **2018.09.19**
 Start Time: **20:36:15** End Time: **02:01:45** Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Built to 1" blow
 IS: No return blow
 FF: Built to 3/4" blow
 FS: No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
1.00	free oil 100%o	0.01
30.00	ocm 1%o 99%m	0.26

* Recovery from multiple tests

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 Street
Salem IL
62881
ATTN: Steve Davis

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64387

DST#: 2

Test Start: 2018.09.18 @ 20:36:15

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 53.00 sec/qt
Water Loss: 7.19 in³
Resistivity: 0.00 ohm.m
Salinity: 3000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 26 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	free oil 100%o	0.009
30.00	ocm 1%o 99%m	0.262

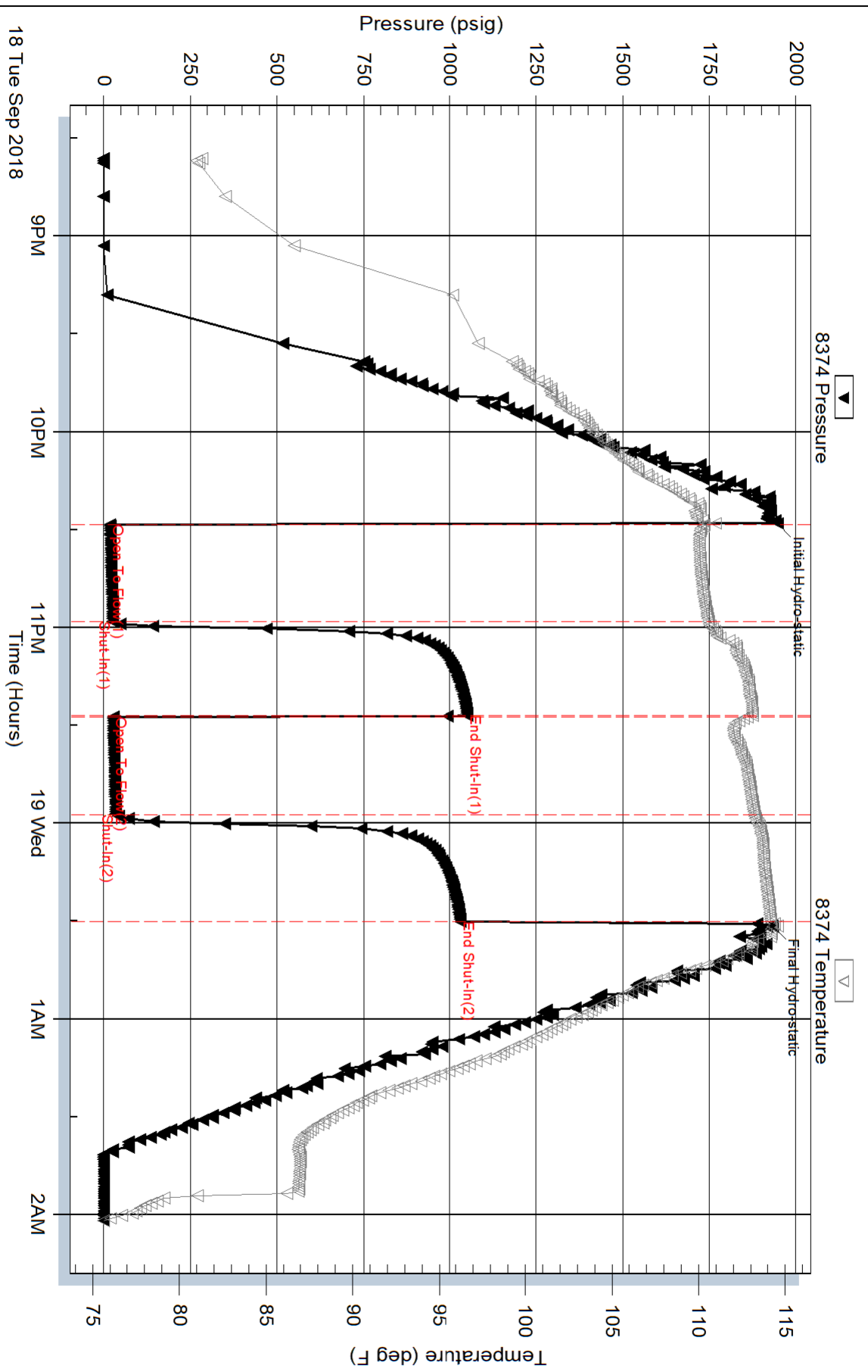
Total Length: 31.00 ft Total Volume: 0.271 bbl

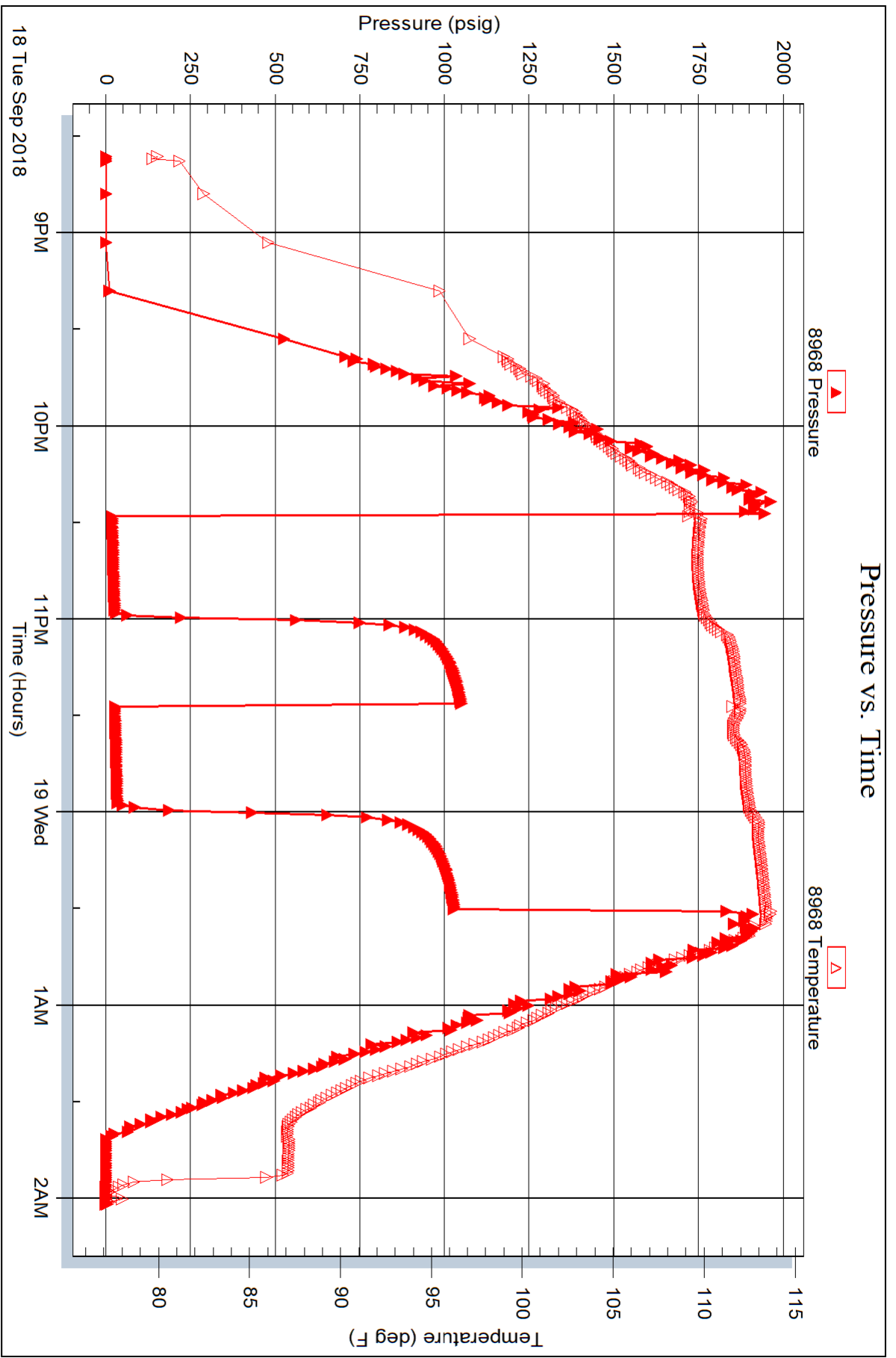
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: API= 26 @ 60 corrected to 26

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64388

DST#: 3

Test Start: 2018.09.19 @ 18:28:15

GENERAL INFORMATION:

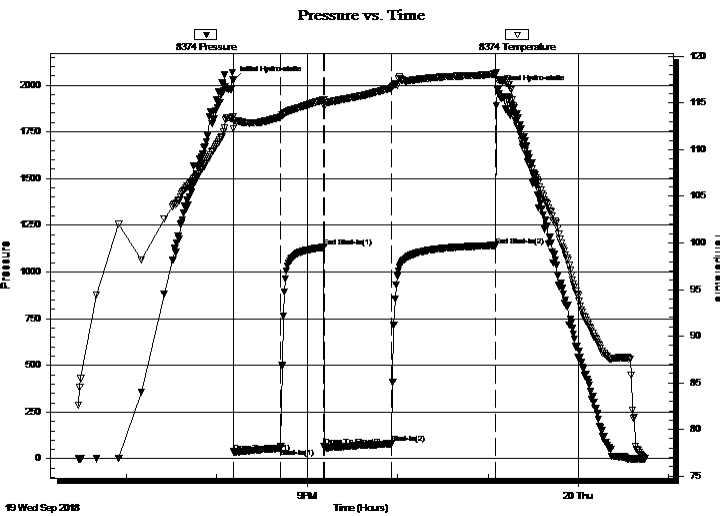
Formation: **H-I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:11:00
 Time Test Ended: 00:44:30
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Interval: **4124.00 ft (KB) To 4186.00 ft (KB) (TVD)**
 Reference Elevations: 2991.00 ft (KB)
 Total Depth: 4186.00 ft (KB) (TVD)
 2986.00 ft (CF)
 Hole Diameter: 6.75 inches Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 8374

Inside

Press@RunDepth: 80.86 psig @ 4162.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.19 End Date: 2018.09.20 Last Calib.: 2018.09.20
 Start Time: 18:28:15 End Time: 00:44:30 Time On Btm: 2018.09.19 @ 20:10:45
 Time Off Btm: 2018.09.19 @ 23:06:30

TEST COMMENT: IF: Built to 4" blow
 IS: No return blow
 FF: Built to 3" blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2026.17	113.51	Initial Hydro-static
1	36.56	112.28	Open To Flow (1)
32	56.77	113.49	Shut-In(1)
61	1132.35	115.35	End Shut-In(1)
61	65.71	114.68	Open To Flow (2)
106	80.86	116.61	Shut-In(2)
175	1141.39	118.12	End Shut-In(2)
176	1977.79	117.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud w ith oil spots 100% m	1.08

* 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 Street
Salem IL
62881
ATTN: Steve Davis

6-16s-32w Scott Co KS
Ellis 1-6
Job Ticket: 64388 **DST#: 3**
Test Start: 2018.09.19 @ 18:28:15

GENERAL INFORMATION:

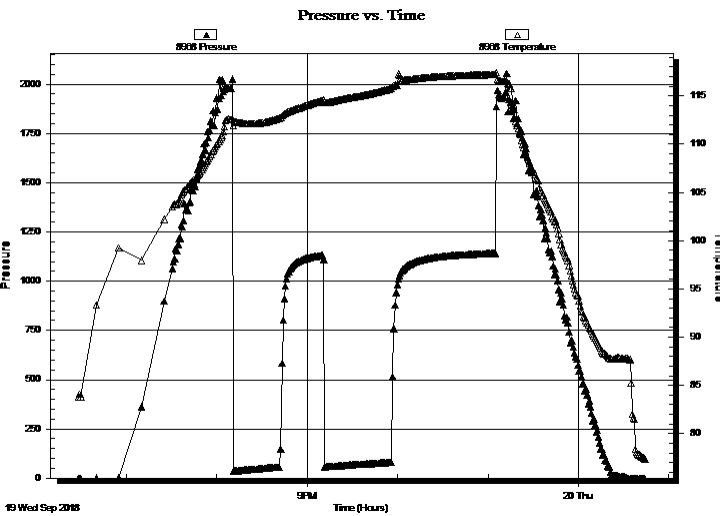
Formation: **H-I**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 20:11:00 Tester: Mike Roberts
Time Test Ended: 00:44:30 Unit No: 81
Interval: 4124.00 ft (KB) To 4186.00 ft (KB) (TVD) Reference Elevations: 2991.00 ft (KB)
Total Depth: 4186.00 ft (KB) (TVD) 2986.00 ft (CF)
Hole Diameter: 6.75 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8968

Outside

Press@RunDepth: psig @ 4162.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.09.19 End Date: 2018.09.20 Last Calib.: 1899.12.30
Start Time: 18:28:15 End Time: 00:44:30 Time On Btm:
Time Off Btm:

TEST COMMENT: IF:Built to 4" blow
IS:No return blow
FF:Built to 3" blow
FS:No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud w ith oil spots 100% m	1.08

* Recovery from multiple tests

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 Street
Salem IL
62881
ATTN: Steve Davis

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64388

DST#: 3

Test Start: 2018.09.19 @ 18:28:15

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: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4100.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	mud w ith oil spots 100% m	1.084

Total Length: 124.00 ft Total Volume: 1.084 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

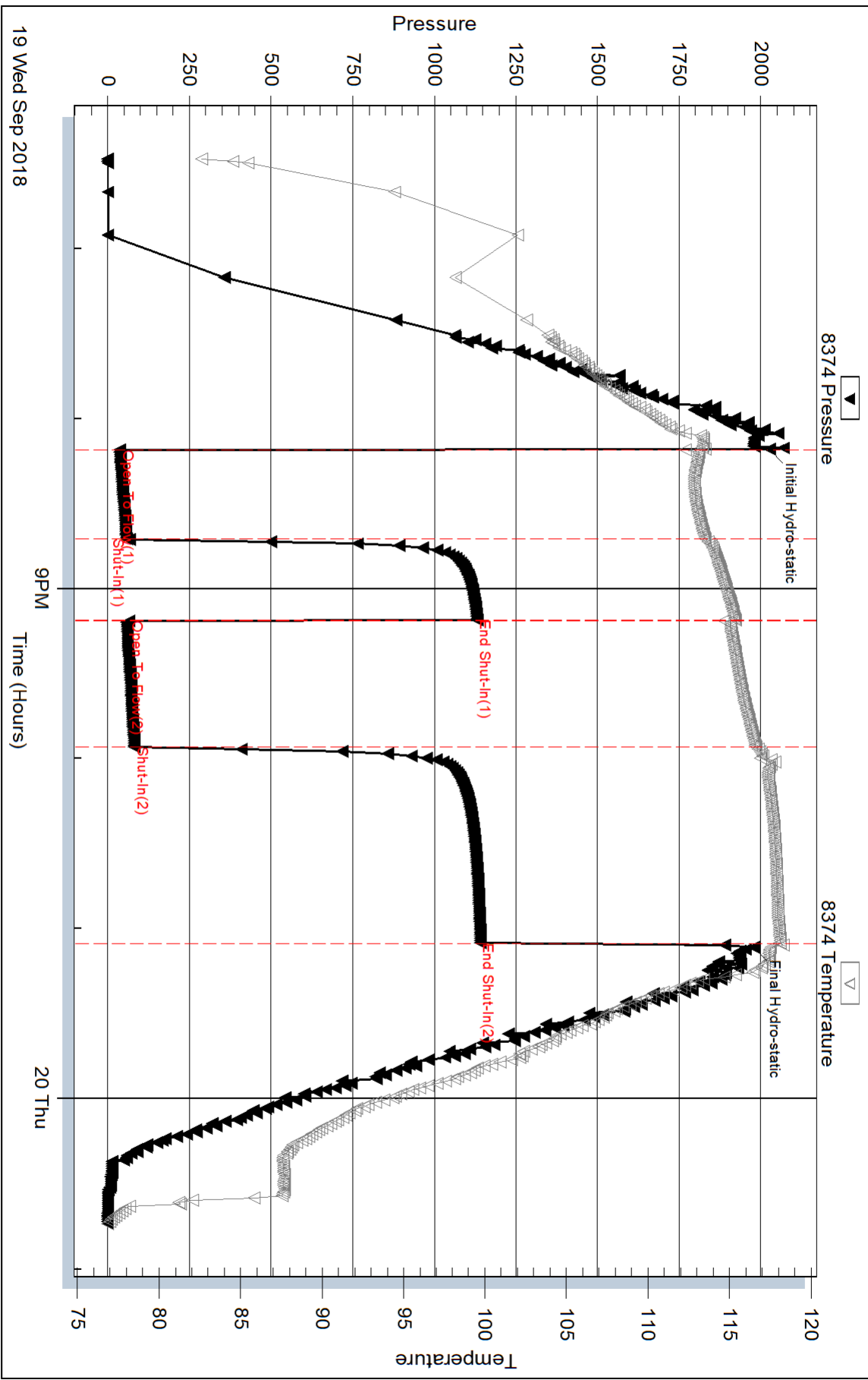
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

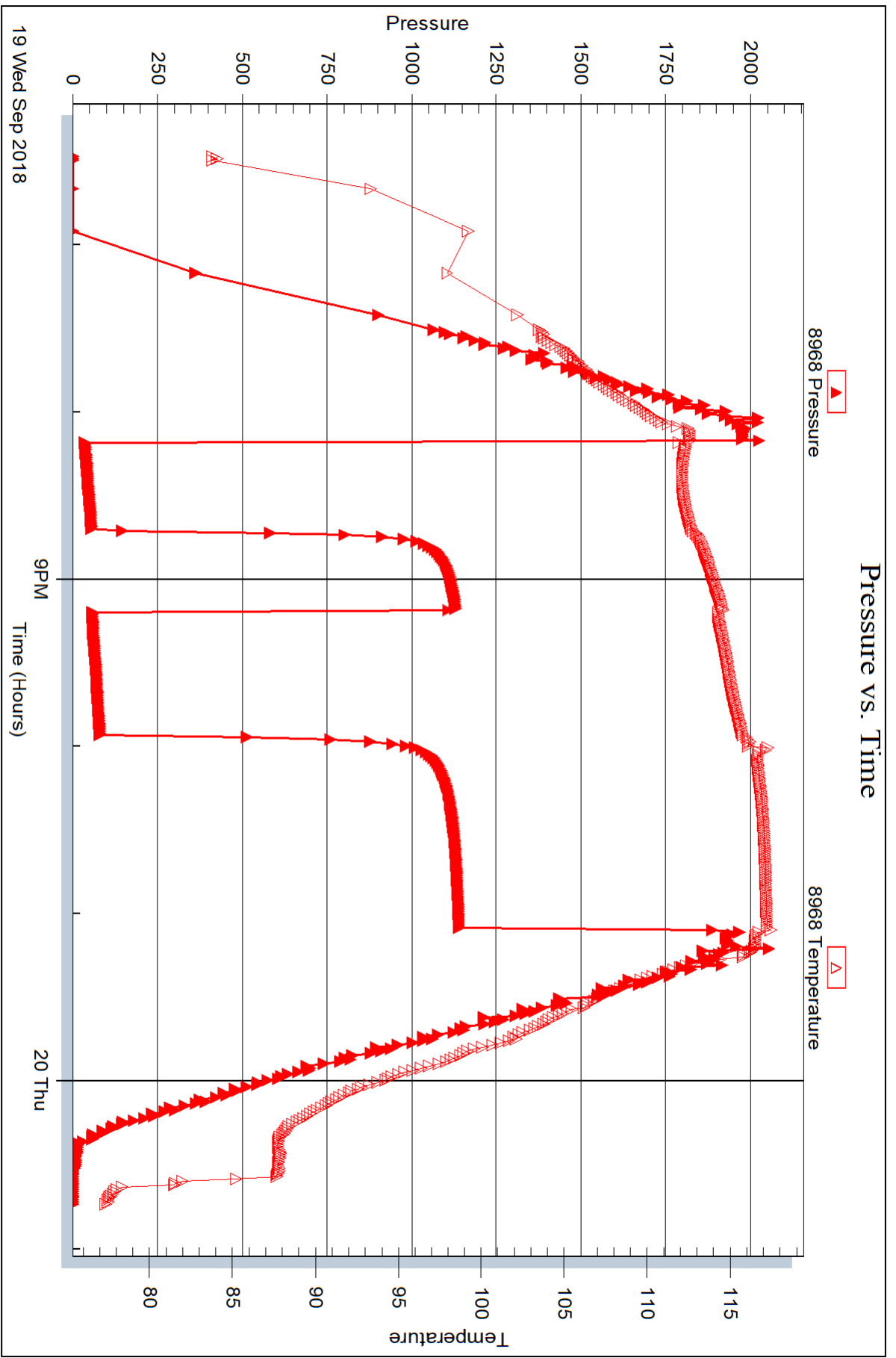


Serial #: 8968

Outside Shakespeare Oil Co.

Ellis 1-6

DST Test Number: 3





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64389

DST#: 4

Test Start: 2018.09.21 @ 05:36:15

GENERAL INFORMATION:

Formation: **Marmaton A-B-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:54:45
 Time Test Ended: 11:53:30
 Interval: **4326.00 ft (KB) To 4429.00 ft (KB) (TVD)**
 Total Depth: 4429.00 ft (KB) (TVD)
 Hole Diameter: 6.75 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2991.00 ft (KB)
 2986.00 ft (CF)
 KB to GR/CF: 5.00 ft

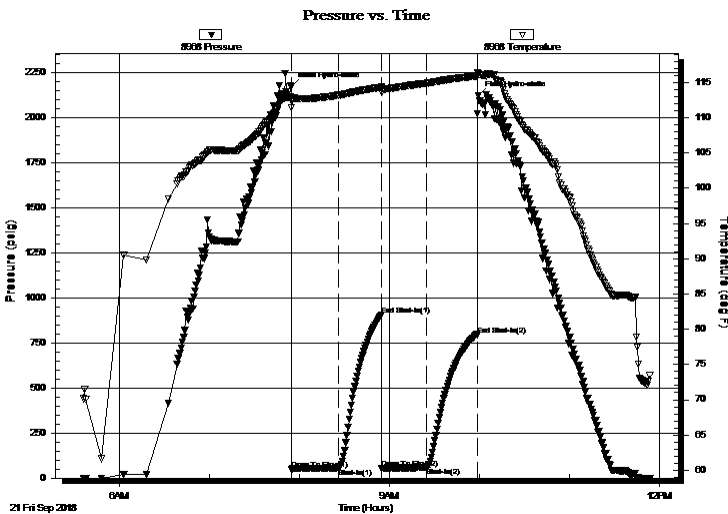
Serial #: 8968

Outside

Press@RunDepth: 58.19 psig @ 4396.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.21 End Date: 2018.09.21 Last Calib.: 2018.09.21
 Start Time: 05:36:15 End Time: 11:53:30 Time On Btm: 2018.09.21 @ 07:54:30
 Time Off Btm: 2018.09.21 @ 09:59:30

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	2174.08	112.98	Initial Hydro-static
1	50.77	111.42	Open To Flow (1)
32	55.43	113.18	Shut-In(1)
61	905.93	114.31	End Shut-In(1)
61	54.41	113.63	Open To Flow (2)
91	58.19	114.87	Shut-In(2)
124	794.84	115.82	End Shut-In(2)
125	2121.22	116.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud 100%m	0.17

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil Co.

6-16s-32w Scott Co KS

202 W. Main Street
Salem IL
62881
ATTN: Steve Davis

Ellis 1-6

Job Ticket: 64389

DST#: 4

Test Start: 2018.09.21 @ 05:36:15

GENERAL INFORMATION:

Formation: **Marmaton A-B-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:54:45

Time Test Ended: 11:53:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4326.00 ft (KB) To 4429.00 ft (KB) (TVD)

Reference Elevations: 2991.00 ft (KB)

Total Depth: 4429.00 ft (KB) (TVD)

2986.00 ft (CF)

Hole Diameter: 6.75 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8374

Inside

Press@RunDepth: psig @ 4396.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.09.21

End Date:

2018.09.21

Last Calib.:

2018.09.21

Start Time: 05:36:15

End Time:

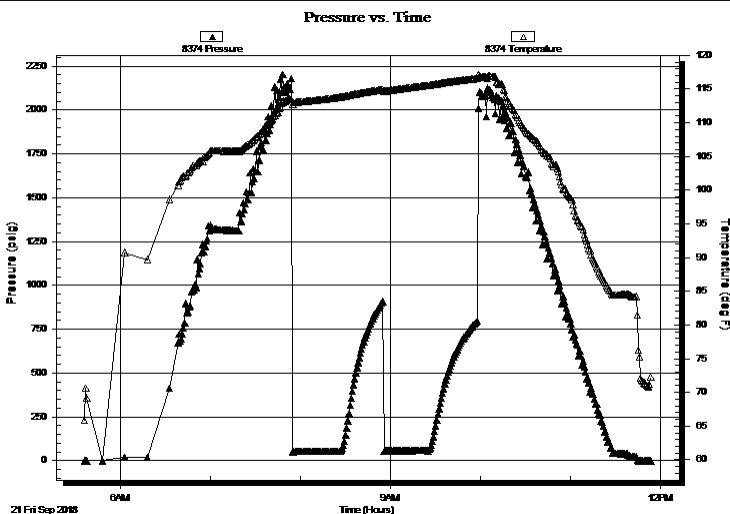
11:53:45

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)
20.00	mud 100% m	0.17

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 Street
Salem IL
62881
ATTN: Steve Davis

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64389

DST#: 4

Test Start: 2018.09.21 @ 05:36:15

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 56.00 sec/qt
Water Loss: 6.78 in³
Resistivity: 0.00 ohm.m
Salinity: 4400.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 0 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

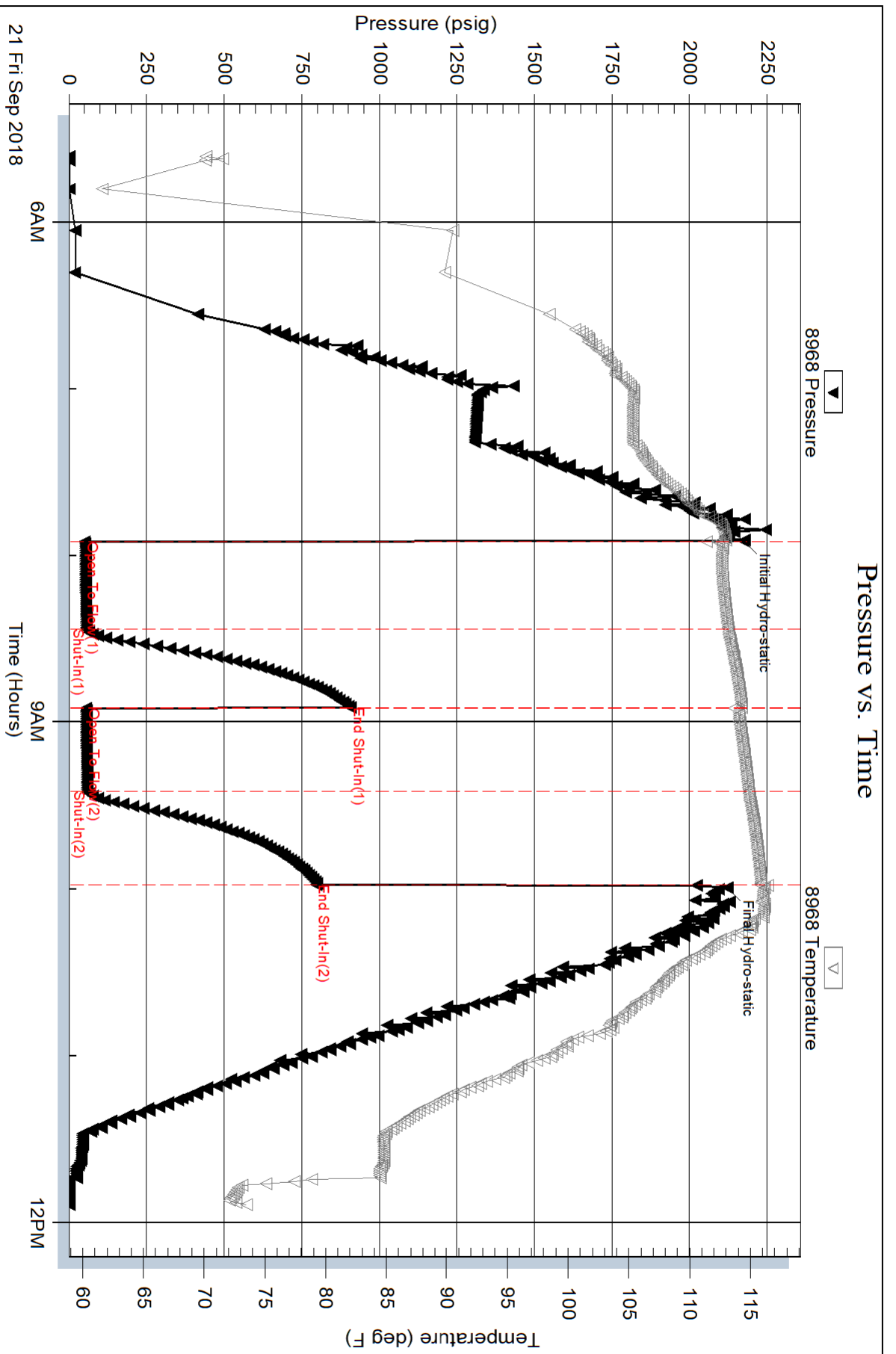
Length ft	Description	Volume bbl
20.00	mud 100%m	0.175

Total Length: 20.00 ft Total Volume: 0.175 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:



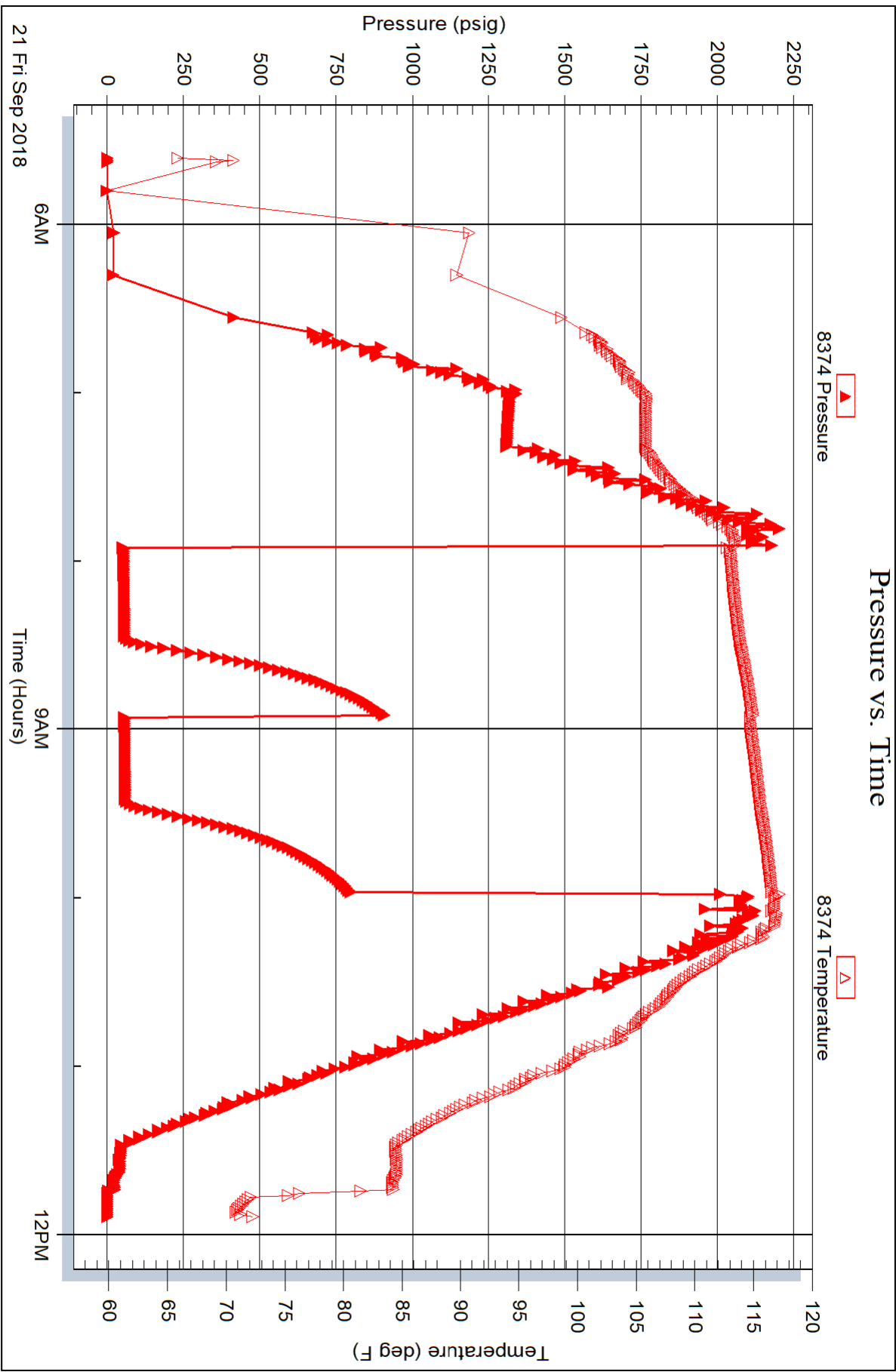
Serial #: 8374

Inside

Shakespeare Oil Co.

Ellis 1-6

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 64389

Printed: 2018.09.21 @ 12:58:36



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64390

DST#: 5

Test Start: 2018.09.22 @ 04:50:15

GENERAL INFORMATION:

Formation: **Pawnee-Myrick St. Ft**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:46:15

Time Test Ended: 10:52:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4425.00 ft (KB) To 4510.00 ft (KB) (TVD)

Reference Elevations: 2991.00 ft (KB)

Total Depth: 4510.00 ft (KB) (TVD)

2986.00 ft (CF)

Hole Diameter: 6.75 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8374

Inside

Press@RunDepth: 57.42 psig @ 4495.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.09.22

End Date:

2018.09.22

Last Calib.:

2018.09.22

Start Time: 04:50:15

End Time:

10:52:45

Time On Btm:

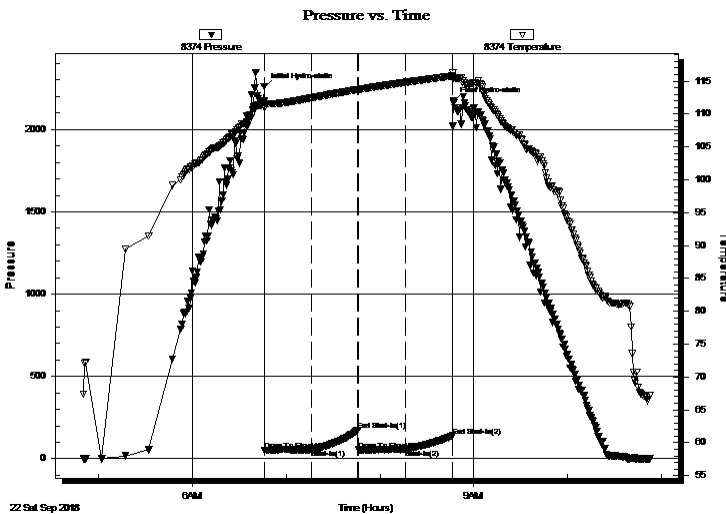
2018.09.22 @ 06:46:00

Time Off Btm:

2018.09.22 @ 08:47:00

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2256.42	111.98	Initial Hydro-static
1	52.21	110.96	Open To Flow (1)
30	54.24	112.45	Shut-In(1)
60	174.00	113.73	End Shut-In(1)
60	54.38	113.71	Open To Flow (2)
90	57.42	114.81	Shut-In(2)
121	139.19	115.79	End Shut-In(2)
121	2171.18	115.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	ocm 3%o 97%m	0.26

* Recovery from multiple tests

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 Street
Salem IL
62881
ATTN: Steve Davis

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64390

DST#: 5

Test Start: 2018.09.22 @ 04:50:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 7.17 in³

Resistivity: 0.00 ohm.m

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

0 deg API

Water Salinity: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	ocm 3%o 97%m	0.262

Total Length: 30.00 ft Total Volume: 0.262 bbl

Num Fluid Samples: 0

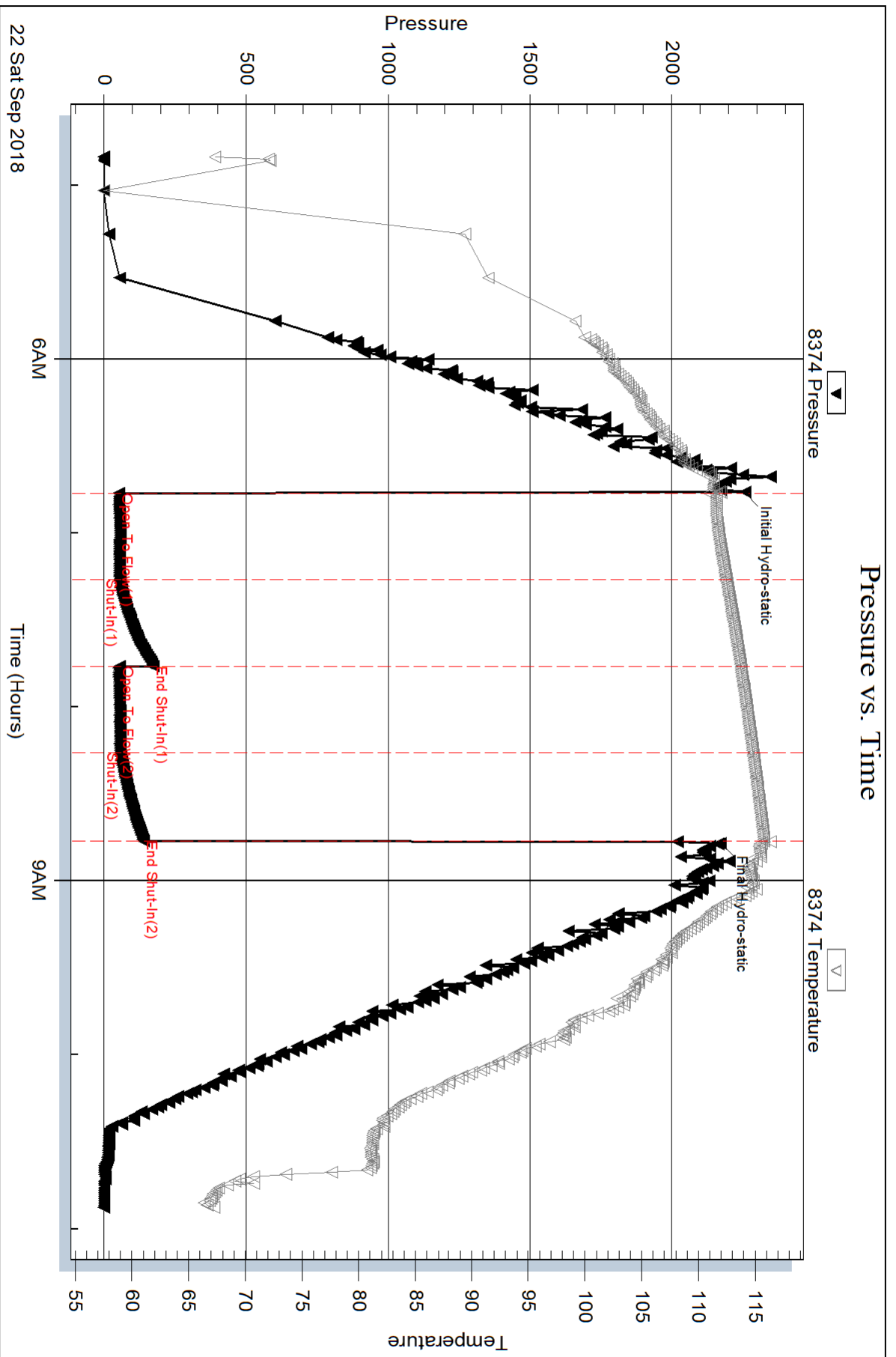
Num Gas Bombs: 0

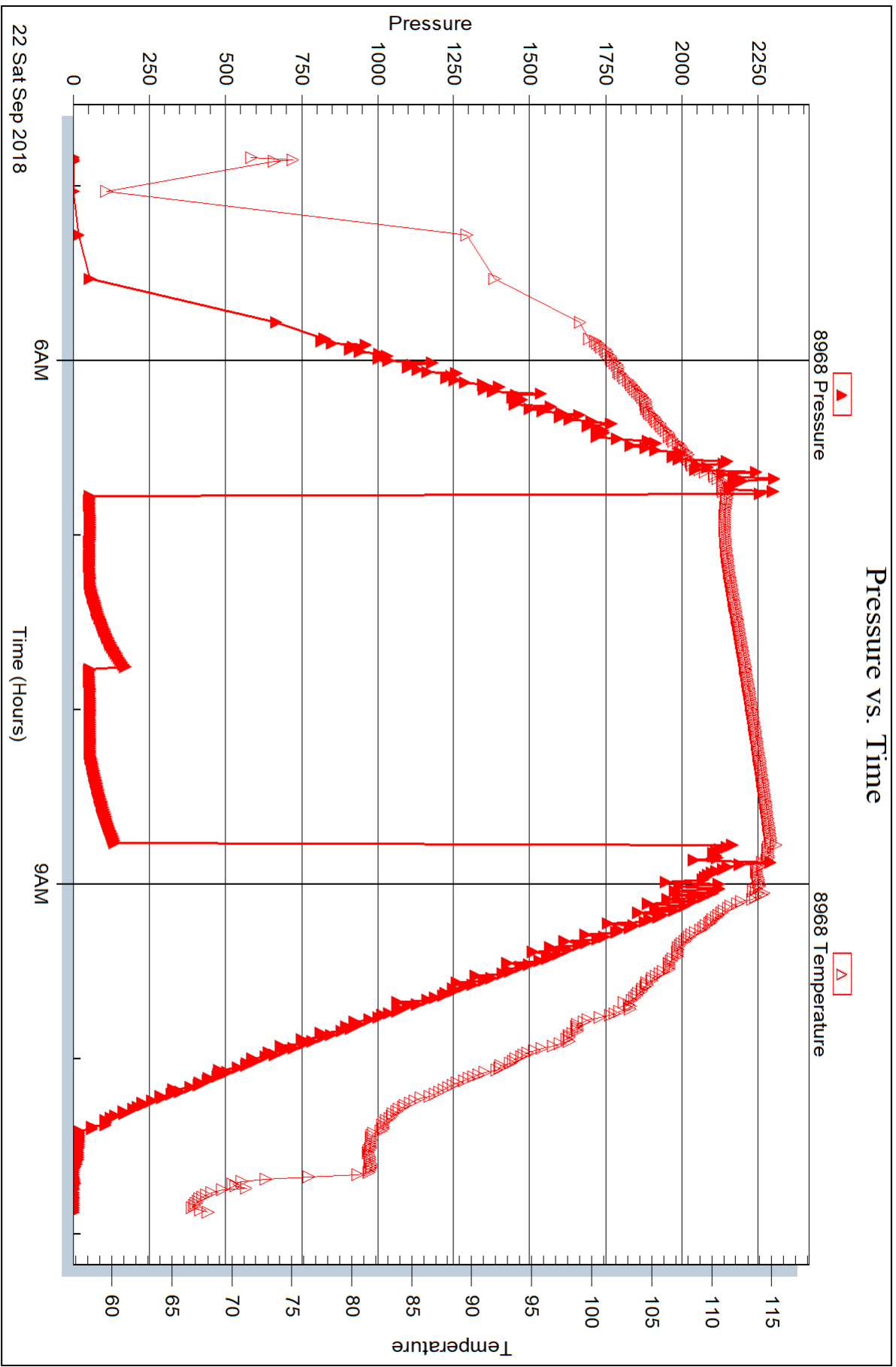
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

6-16s-32w Scott Co KS

Ellis 1-6

Job Ticket: 64391

DST#: 6

Test Start: 2018.09.22 @ 00:39:15

GENERAL INFORMATION:

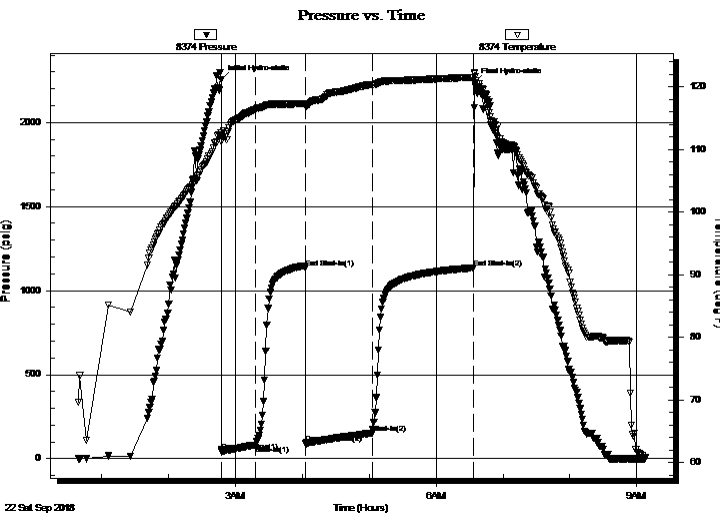
Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:47:30
 Time Test Ended: 09:07:15
 Interval: **4533.00 ft (KB) To 4590.00 ft (KB) (TVD)**
 Total Depth: 4590.00 ft (KB) (TVD)
 Hole Diameter: 6.75 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 2991.00 ft (KB)
 2986.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8374

Inside

Press@RunDepth: 152.42 psig @ 4571.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.22 End Date: 2018.09.22 Last Calib.: 2018.09.23
 Start Time: 00:39:15 End Time: 09:07:15 Time On Btm: 2018.09.22 @ 02:47:00
 Time Off Btm: 2018.09.22 @ 06:34:30

TEST COMMENT: IF: Built to 46 3/4" blow
 IS: No return blow
 FF: Built to 94.16" blow
 FS: Return blow built to 2 1/2" blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2254.09	112.70	Initial Hydro-static
1	43.17	112.01	Open To Flow (1)
31	81.80	116.31	Shut-In(1)
76	1134.62	117.32	End Shut-In(1)
76	92.41	116.95	Open To Flow (2)
136	152.42	120.33	Shut-In(2)
227	1134.66	121.51	End Shut-In(2)
228	2234.80	122.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 124 ft	0.00
92.00	ocm 30%o 70%m	0.80
124.00	mcog 20%m 30%o 50%g	1.08
62.00	ocmg 20%o 20%m 60%g	0.54

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil Co.

6-16s-32w Scott Co KS

202 W. Main Street
Salem IL
62881

Ellis 1-6

Job Ticket: 64391

DST#: 6

ATTN: Steve Davis

Test Start: 2018.09.22 @ 00:39:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	GIP= 124 ft	0.000
92.00	ocm 30%o 70%m	0.804
124.00	mcog 20%m 30%o 50%g	1.084
62.00	ocmg 20%o 20%m 60%g	0.542

Total Length: 278.00 ft Total Volume: 2.430 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 23 @ 60 deg F

