

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](mailto: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)</i> <i>(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	SCHOWALTER 8-12
Doc ID	1467686

All Electric Logs Run

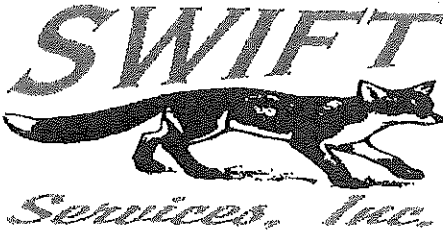
Array Induction
Photo Density
Comp Neutron
Microlog

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	SCHOWALTER 8-12
Doc ID	1467686

Tops

Name	Top	Datum
Base Anhydrite	2309	+663
Heebner	3894	-922
Lansing	3944	-972
Muncie Creek	4109	-1137
Stark Shale	4209	-1237
Hushpuckney	4245	-1273
Marmaton	4332	-1360
Pawnee	4414	-1442
L. Cherokee Shale	4484	-1512
Johnson	4526	-1554
Mississippian	4568	-1596





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



# Invoice

DATE	INVOICE #
6/17/2019	32316

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	#8-12	Schowalter	Scott	Southwind Rig #8	Oil	Development	Surface Pipe	Gideon
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				55	Miles	5.00	275.00
576D-S	Pump Charge - Shallow Surface (< 500 Ft.)				1	Job	925.00	925.00
325	Standard Cement				185	Sacks	13.50	2,497.50T
276	Flocele				50	Lb(s)	3.00	150.00T
278	Calcium Chloride				8	Sack(s)	40.00	320.00T
279	Bentonite Gel				3	Sack(s)	30.00	90.00T
290	D-Air				3	Gallon(s)	42.00	126.00T
581D	Service Charge Cement				185	Sacks	1.85	342.25
583D	Drayage				499	Ton Miles	0.95	474.05
	Subtotal							5,199.80
	Sales Tax Scott County						8.50%	270.60

**RECEIVED**  
JUN 24 2019

*502-5  
DH*

<b>We Appreciate Your Business!</b>	<b>Total</b>	\$5,470.40
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*DW*



TICKET 032316

CHARGE TO: Shakespeare Oil Co. Inc  
 ADDRESS  
 CITY, STATE, ZIP CODE

PAGE 1 OF 1

SERVICE LOCATIONS  
 1. Ness City KS WELL/PROJECT NO. 8-12 LEASE Schwalbe COUNTY/PARISH Scott STATE KS DATE 6-17-2018 OWNER  
 2. Well Type  SERVICE  SALES CONTRACTOR Southwind RIG NAME/NO. 8 SHIPPED VIA CT Location DELIVERED TO Scott City ORDER NO.  
 3. WELL TYPE Oil WELL CATEGORY Development JOB PURPOSE Surface Ppe WELL PERMIT NO.  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1		MILEAGE			56	mi	5	275
576 S		1		Pump Change - Surface			1	job	925	925
325		1		Standard CMT			185	skts	13	2497
276		1		Floceke			50	lb	3	150
278		1		Calcium Chloride			8	skts	40	320
279		1		Bentone Gel			3	skts	30	90
290		1		D-Air			3	gal	42	126
581		1		CMT Service Charge			185	skts	1	342
082		1		Drillage			18140	TW	499	74

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.

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

DATE SIGNED 6-17-2018 TIME SIGNED 11:45  A.M.  P.M.

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?	AGREE	UNDECIDED	DISAGREE
WE UNDERSTOOD AND MET YOUR NEEDS?			
OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			

ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO

TOTAL 13470.40

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR Andrew Tuck APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 6-17-19 PAGE NO. 1

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
Shakespeare		8-12		Schowalter		Surface Pp		032316	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	1230								On Location @ 8 5/8" 2316/1A
									RTD: 266
	2315								Start 8 5/8" 2316/ft Casing in Well
	0045								Break Circulation
	0100	3 1/2	5		✓	250			Pump 5 bbl H <sub>2</sub> O Spacer
	0105	4 1/2	45		✓	150			Mix 185 sks CMT @ 14.7ppg
	0120	<del>3 1/2</del> 3 1/2	<del>100</del> 100		✓	300			Displace CMT
		3 1/2	10		✓	300			Circulate @ CMT To Surface
	0130	0	16 1/4		✓	350			KO Pump ★ Shut in ★ Release Pressure
	0130								Wash up T.R #112 185 sks of Standard 2% gel 3% CC 1/4" Flo CMT used -25 sks to the Pit -
	0200								Job Complete Thank You Gideon, Preston, Isaac



# SWIFT



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



## Invoice

DATE	INVOICE #
6/27/2019	32278

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	#8-12	Schowalter	Scott	Southwind Rig #8	Oil	Development	Cement Longstring	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				60	Miles	5.00	300.00
578D-L	Pump Charge - Long String				1	Job	1,400.00	1,400.00
280	Flocheck 21				500	Gallon(s)	3.50	1,750.00T
221	Liquid KCL (Clayfix)				2	Gallon(s)	25.00	50.00T
290	D-Air				2	Gallon(s)	42.00	84.00T
419-4	4 1/2" Rotating Head Rental				1	Each	250.00	250.00T
325	Standard Cement				225	Sacks	13.50	3,037.50T
284	Calseal				11	Sack(s)	40.00	440.00T
283	Salt				1,100	Lb(s)	0.25	275.00T
277	Gilsonite (Coal Seal)				1,125	Lb(s)	1.25	1,406.25T
292	Halad 322				200	Lb(s)	8.50	1,700.00T
276	Flocele				50	Lb(s)	3.00	150.00T
581D	Service Charge Cement				225	Sacks	1.85	416.25
583D	Drayage				741.75	Ton Miles	0.95	704.66
	Subtotal							11,963.66
	Sales Tax Scott County						8.50%	777.13

RECEIVED  
JUL 01 2019

*502-5  
DH*

**We Appreciate Your Business!**

**Total**

\$12,740.79

*DW*



CHARGE TO: Shakespear  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 032278  
 PAGE 1 OF 2

SERVICE LOCATIONS: North Ky KS  
 1. WELL/PROJECT NO. 8-12 LEASE Schwabacker COUNTY/PARISH Scott STATE KS CITY Scott City DATE 27 Nov 19 OWNER  
 2. CONTRACTOR  
 3. TICKET TYPE  SERVICE  SALES RIG NAME/NO. 9 SHIPPED WT DELIVERED TO location ORDER NO.  
 4. WELL TYPE Development WELL CATEGORY Development JOB PURPOSE cement long string WELL PERMIT NO. WELL LOCATION 12-13-82  
 REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY. U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF					
575		1			TBR U4	60 mi	5.00	300.00	
578		1			Pump Charge long string	4 1/2 in	14.00	1400.00	
280		1			Flackack 21	500 gal	3.50	1750.00	
221		1			KCL Dryrid	1 bag	25.00	25.00	
290		1			D-ris	2 gal	42.00	84.00	
419		1			Rotating head rental	1 ea	250.00	250.00	

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 \_\_\_\_\_  A.M.  P.M.

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

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 3834.00  
 TOTAL 18940.19

SWIFT OPERATOR \_\_\_\_\_ APPROVAL \_\_\_\_\_  
 Thank You!



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

TICKET CONTINUATION

TICKET No. 32278

CUSTOMER Shakespear INVTL Schumacher 8-12 DATE 27 Jan 19 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	INVTL		DATE	UNIT PRICE	AMOUNT
		LOC	ACCT	DF			QTY	U/M			
325						Standard Cement (for 21-2)	225	SK		13.50	3037.50
284						Calsed	1100	lb		4.00	4400.00
283						SALT	1100	lb		0.25	275.00
277						Gypsum	1125	lb		1.25	1406.25
292						hdd - 322	300	lb		8.50	2550.00
276						Alcels	50	lb		3.00	150.00
581						SERVICE CHARGE				1.85	4.16
583						MILEAGE CHARGE				0.95	7.04
						TOTAL WEIGHT	24725				
						LOADED MILES	60				
						TON MILES	741.75				
CONTINUATION TOTAL											8473.41
											8129.66

JOB LOG

SWIFT Services, Inc.

DATE 27 Jun 19 PAGE NO. 1

CUSTOMER Shakespeare WELL NO. 8-12 LEASE Schowalter JOB TYPE Cement long string TICKET NO. 32278

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								225 sk standard cement w/ Gilsomite 4 1/2 x 10.5" 462' shoe jt 43.95 Port Colter 2249'
	0800							on loc TRK 114
	0938							start 4 1/2 x 10.5 casing in well
	1200							Drop ball - circulate - ROTATE
	1300	3	15			100		Pump 15 KCL flush
		3	12			100		Pump 20 gal Fladdek
		3	5			100		Pump 5 bbl KCL flush
	1310		7					Plug RH - MH 30sk - 20sk
	1320	3 1/2	46			100		mix EAZ cement 175sk @ 15.3 PPG
								Drop latch down plug Wash out pump & line
	1342	5 1/2				0		Displace plug
		5 1/2	51			200		
		5 1/2	68			650		
	1400	5 1/2	74			1500		Land plug
	1405							Release pressure to truck - dried up
	1410							wash truck Rack up
	1440							job complete Thanks Blair, Phil & squatch

# SWIFT



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

## Invoice

DATE	INVOICE #
7/2/2019	32280

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	#8-12	Schowalter	Scott	Wild West	Oil	Development	Cement 4 1/2 por...	Blaine

PRICE REF.	DESCRIPTION	QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way	60	Miles	5.00	300.00
576D-D	Pump Charge - Deep Surface (> 500 Ft.) & Port Collars	1	Job	1,400.00	1,400.00
330	Swift Multi-Density Standard (MIDCON II)	200	Sacks	17.00	3,400.00T
276	Flocele	50	Lb(s)	3.00	150.00T
290	D-Air	1	Gallon(s)	42.00	42.00T
581D	Service Charge Cement	350	Sacks	1.85	647.50
583D	Drayage	1,044.85	Ton Miles	0.95	992.61
	Subtotal				6,932.11
	Sales Tax Scott County			8.50%	305.32

**RECEIVED**

JUL 05 2019

*502-5  
DH*

**We Appreciate Your Business!**

**Total**

\$7,237.43

*DW*



JOB LOG

SWIFT Services, Inc.

DATE 2 Jul 19 PAGE NO. 1

CUSTOMER Snakespear WELL NO. 8-12 LEASE Schoualter JOB TYPE Cement port collar TICKET NO. 32280

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								350sk SMD cement w/ 1/4" floccle 2 3/4 x 4 1/2 port collar - 2244'
	1010							on loc TRK 114
	1024					1000	1000	test to 1000psi - held open port collar
		3 1/2	2			300		inj rate 3 1/2 bpm @ 300 psi
		3 1/2				300		mix SMD cement @ 1.2 ppg
		3 1/2	18			300		- circulate fluid top it -
		3 1/2	107			600		→ cement to surface ← { 200 sk mixed } 30 top it
			7 1/2					Displace 7 1/2 bbl H <sub>2</sub> O close port collar
	1120					1000	1000	test to 1000 psi - held Run 5 joints
	1125		25					Reverse hole clean - 2 cement plugs -
	1139							wash truck pull tool Rack up
	1230							job complete thanks Blaine, Flint # 15A AC

# WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG  
CONSULTANT GEOLOGIST



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

Well Name: SCHOWALTER #8-12  
 Location: SE NW SE SE SEC. 12-18S-32W  
 Licence Number: API: 15-171-21253  
 Spud Date: June 17, 2019  
 Surface Coordinates: 985' FSL & 940' FEL

Region: Scott Co., KS  
 Drilling Completed: June 26, 2019

Bottom Hole Coordinates:  
 Ground Elevation (ft): 2962' K.B. Elevation (ft): 2972'  
 Logged Interval (ft): 3800' To: RTD Total Depth (ft): 4650'  
 Formation: Mississippian  
 Type of Drilling Fluid: Chemical Premix (Displaced)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR:

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

### DRILLING CONTRACTOR:

Southwind Drilling Co., Rig #8  
 DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8", 469.05'; Kelly 40.00'; Tool Joint 5.5" ; Bit: 7-7/8", JZ QX23, 3/14; rpm 80, WOB 35k; Kelly Bushing 10' above ground level; Doug Roberts (tool pusher).

### CASING:

Ran 6 joints of new 23#, 8 5/8" casing, Tally @ 253', Set @ 265'  
 Set 4-1/2" production casing.

### CIRCULATION SYSTEM:

Continental EMSCO D-375, duplex, 6 x 14, 57 spm, 314 gpm, Chemical, premix, earth pits, MudCo/Service Mud, Inc., Reid Atkins.

### GAS DETECTION SYSTEM:

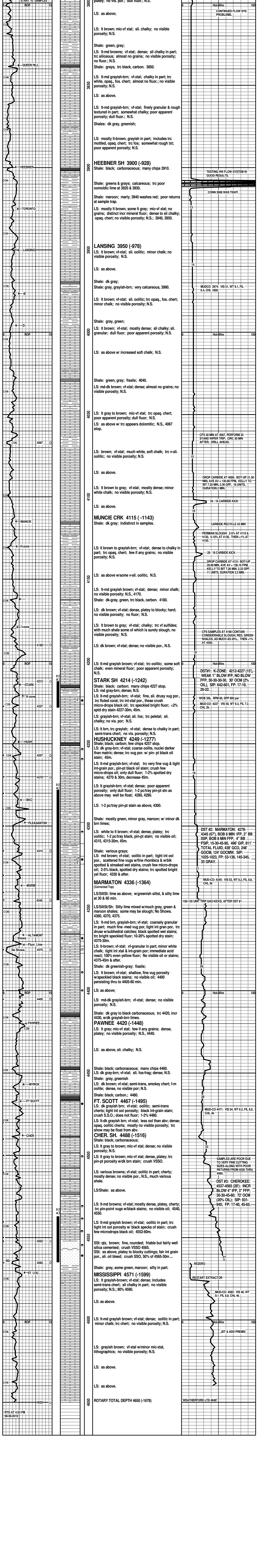
Delphian 3.0 volt catalytic bead combustible gas detector, Portable Hot-Wire, USB-1208LS, Module-41.

### DRILL STEM TESTS:

Trilobite Testing, Inc., Scott City, KS, Mike Roberts.

### OPEN HOLE LOGS:

DN, DI (SP), ML, No Sonic; 5" detail LTD-3600; 2" DI to surface casing; Weatherford Wireline Services, Liberal, KS, LTD 4649', 1' short to rotary total depth.







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881

**Schowalter 8-12**

Job Ticket: 64828

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2019.06.23 @ 08:52:23

## GENERAL INFORMATION:

Formation: **K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:41:08  
 Time Test Ended: 15:30:08  
 Interval: **4212.00 ft (KB) To 4227.00 ft (KB) (TVD)**  
 Total Depth: 4227.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Mike Roberts  
 Unit No: 81  
 Reference Elevations: 2972.00 ft (KB)  
 2962.00 ft (CF)  
 KB to GR/CF: 10.00 ft

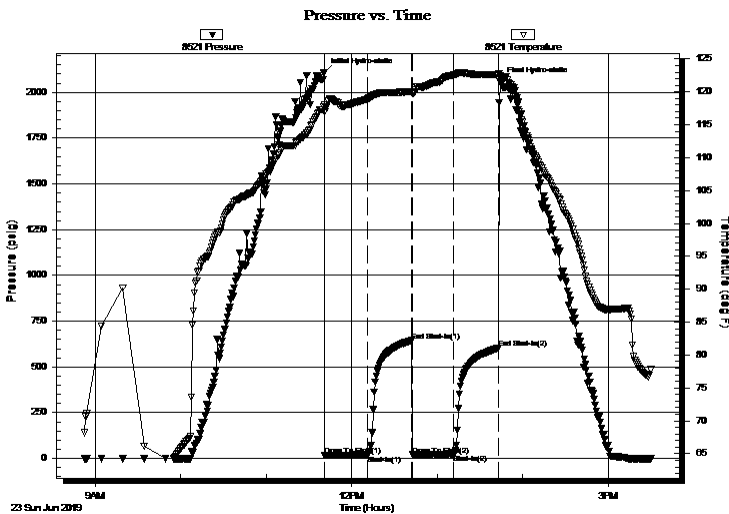
## Serial #: 8521

Inside

Press@RunDepth: 22.48 psig @ 4213.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.06.23 End Date: 2019.06.23 Last Calib.: 2019.06.23  
 Start Time: 08:52:23 End Time: 15:30:08 Time On Btm: 2019.06.23 @ 11:40:53  
 Time Off Btm: 2019.06.23 @ 13:44:08

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

## PRESSURE SUMMARY



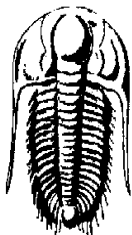
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2108.61	118.07	Initial Hydro-static
1	17.20	116.95	Open To Flow (1)
31	19.60	118.92	Shut-In(1)
61	642.92	120.04	End Shut-In(1)
62	20.10	119.69	Open To Flow (2)
91	22.48	122.58	Shut-In(2)
122	601.13	122.62	End Shut-In(2)
124	2059.52	122.43	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	ocm 2%o 98 %m	0.42

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881  
ATTN: Vern Schrag

**Schowalter 8-12**

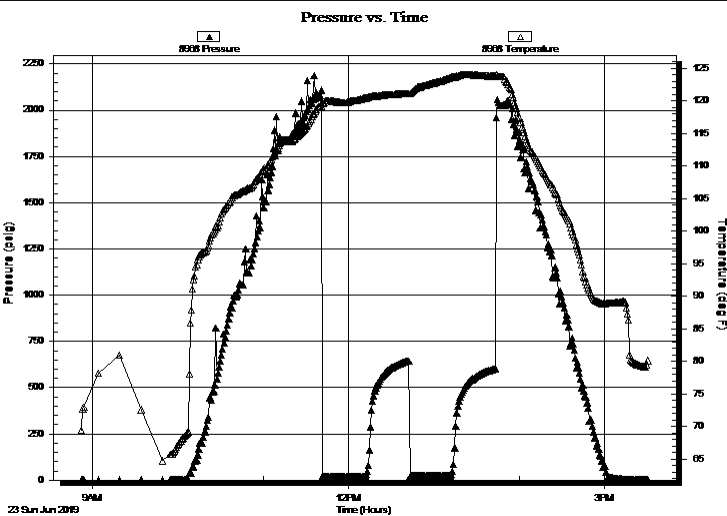
Job Ticket: 64828      **DST#: 1**  
Test Start: 2019.06.23 @ 08:52:23

### GENERAL INFORMATION:

Formation: <b>K</b>			
Deviated:      No      Whipstock:      ft (KB)		Test Type:      Conventional Bottom Hole (Initial)	
Time Tool Opened: 11:41:08		Tester:      Mike Roberts	
Time Test Ended: 15:30:08		Unit No:      81	
<b>Interval:      4212.00 ft (KB) To      4227.00 ft (KB) (TVD)</b>		Reference Elevations:      2972.00 ft (KB)	
Total Depth:      4227.00 ft (KB) (TVD)		2962.00 ft (CF)	
Hole Diameter:      7.88 inches	Hole Condition:      Fair	KB to GR/CF:      10.00 ft	

<b>Serial #: 8968</b>	<b>Outside</b>		
Press@RunDepth:      psig @      4213.00 ft (KB)		Capacity:      8000.00 psig	
Start Date:      2019.06.23	End Date:      2019.06.23	Last Calib.:      2019.06.23	
Start Time:      08:52:15	End Time:      15:30:45	Time On Btm:	
		Time Off Btm:	

**TEST COMMENT:** IF: Built to 1" 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)
30.00	ocm 2% o 98 % m	0.42

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881

**Schowalter 8-12**

Job Ticket: 64828

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2019.06.23 @ 08:52:23

## 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: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
30.00	ocm 2% o 98 %m	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

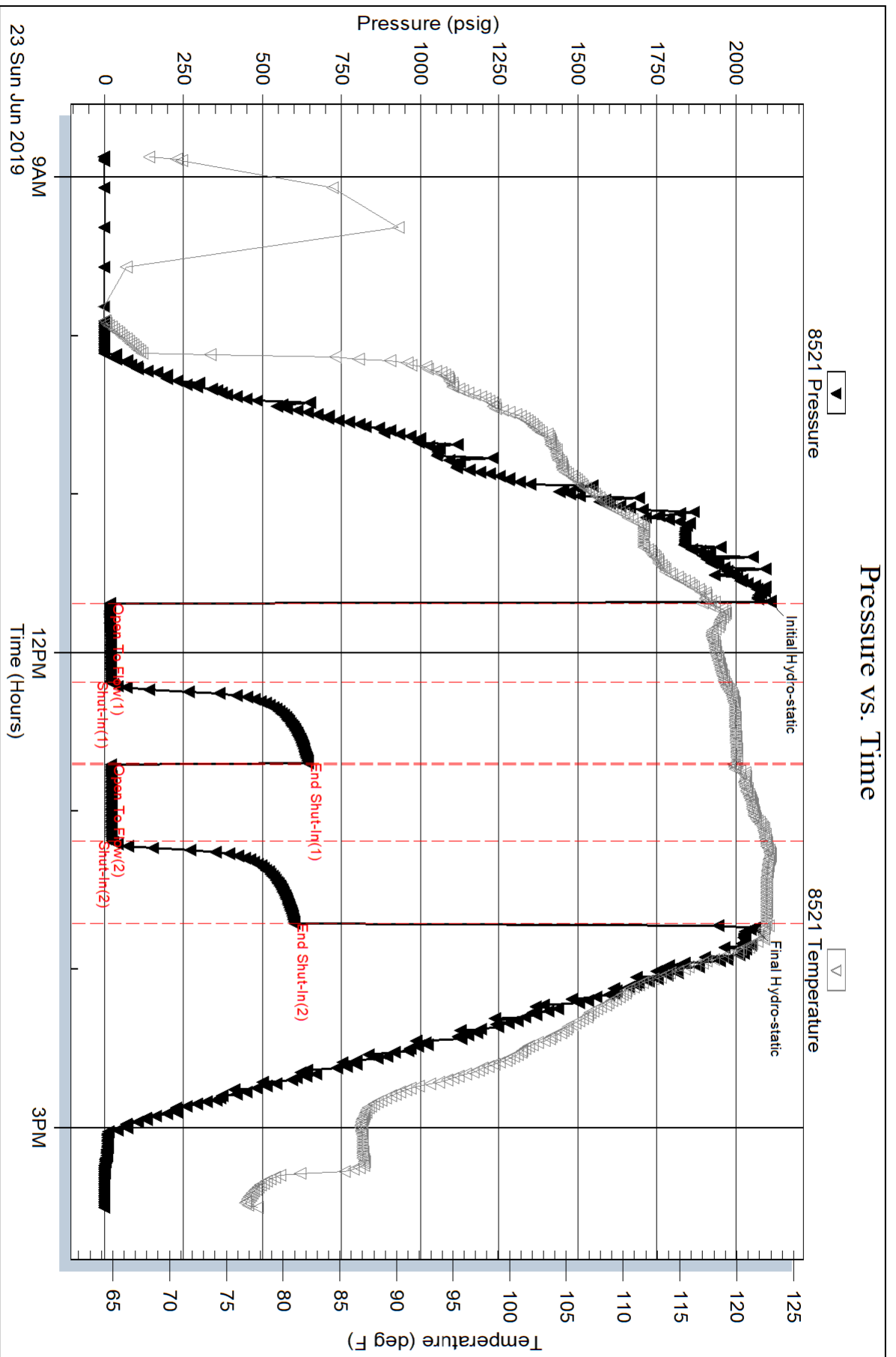
Serial #: 8521

Inside

Shakespeare Oil Co. Inc.

Schowalter 8-12

DST Test Number: 1

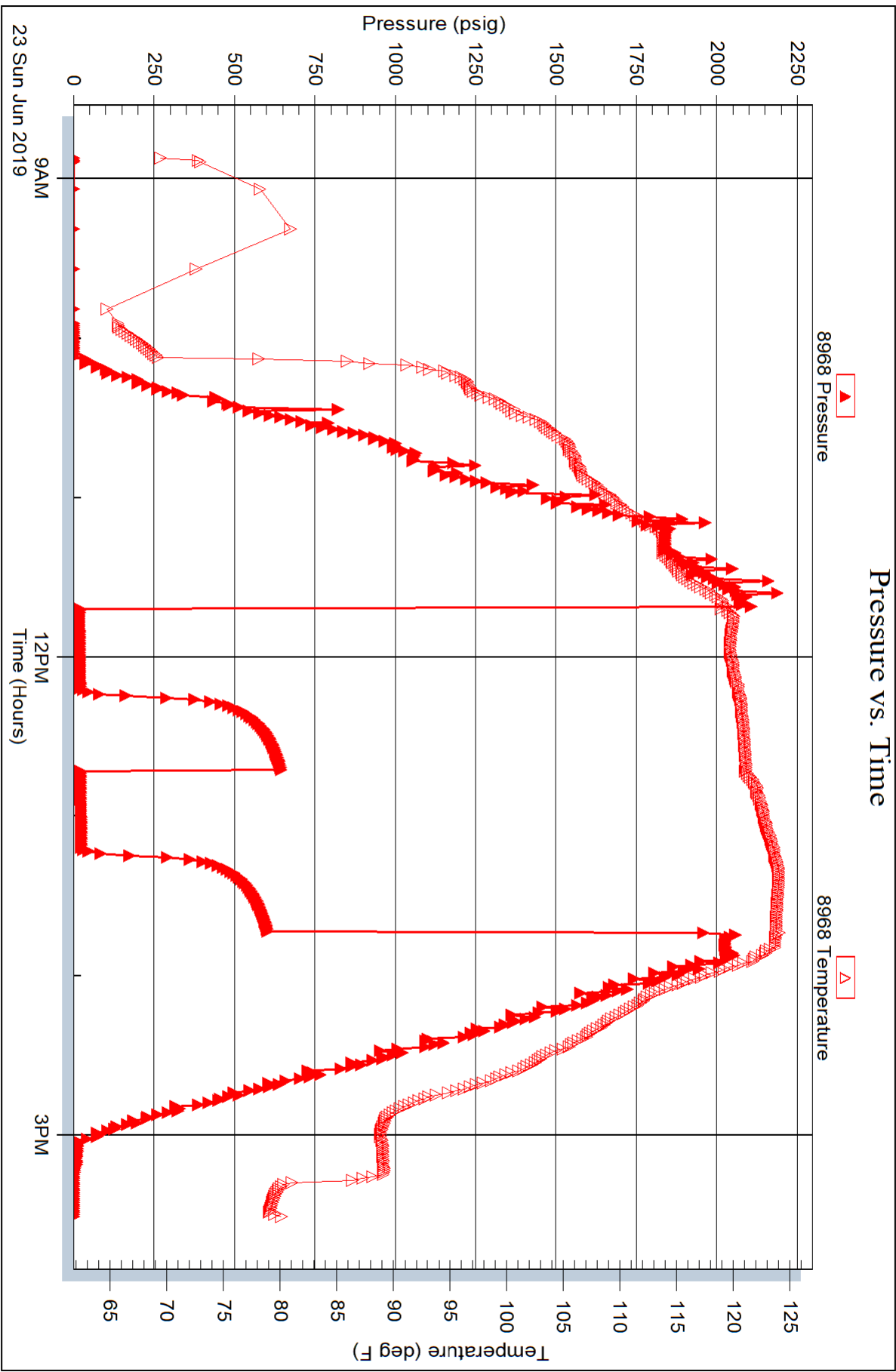


Serial #: 8968

Outside Shakespeare Oil Co. Inc.

Schowalter 8-12

DST Test Number: 1





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881  
ATTN: Vern Schrag

**Schowalter 8-12**

Job Ticket: 64829

**DST#: 2**

Test Start: 2019.06.24 @ 10:48:15

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:57:45

Time Test Ended: 18:15:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

**Interval: 4278.00 ft (KB) To 4345.00 ft (KB) (TVD)**

Reference Elevations: 2972.00 ft (KB)

Total Depth: 4345.00 ft (KB) (TVD)

2962.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8521 Inside**

Press@RunDepth: 345.39 psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.06.24

End Date:

2019.06.24

Last Calib.:

2019.06.24

Start Time: 10:48:15

End Time:

18:15:30

Time On Btm:

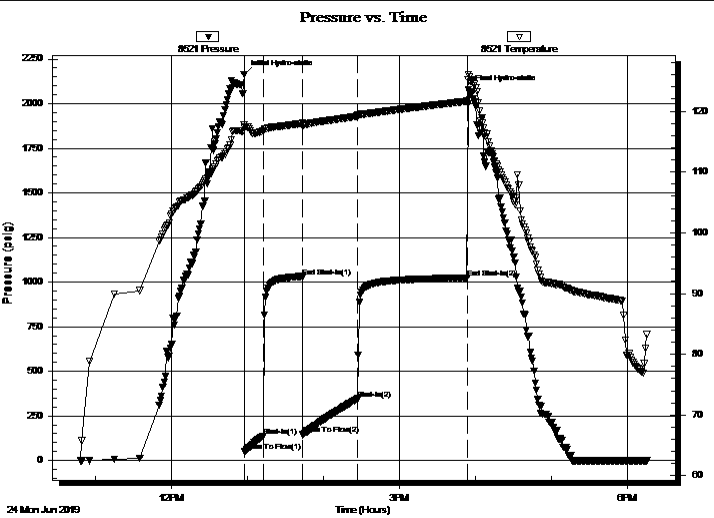
2019.06.24 @ 12:57:15

Time Off Btm:

2019.06.24 @ 15:54:30

**TEST COMMENT:** IF:BOB in 6 min. Built to 25 3/4" blow  
IS:Return blow built to 3 1/4"  
FF:BOB in 8 min. Built to 71" blow  
FS:Return bow built to 4 3/4"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2163.64	117.78	Initial Hydro-static
1	53.24	117.32	Open To Flow (1)
15	136.25	116.72	Shut-In(1)
47	1025.57	118.02	End Shut-In(1)
47	145.19	117.59	Open To Flow (2)
90	345.39	119.21	Shut-In(2)
177	1023.21	121.66	End Shut-In(2)
178	2077.60	126.07	Final Hydro-static

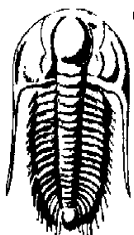
## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP- 496 ft	0.00
439.00	gco 20%g 80%o	6.16
248.00	ocm 5%o 5%g 80%m	3.48
124.00	5%g 5%o 10%m 80%m	1.74

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881  
ATTN: Vern Schrag

**Schowalter 8-12**

Job Ticket: 64829

**DST#: 2**

Test Start: 2019.06.24 @ 10:48:15

### GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:57:45

Time Test Ended: 18:15:30

Interval: **4278.00 ft (KB) To 4345.00 ft (KB) (TVD)**

Total Depth: 4345.00 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: 2972.00 ft (KB)

2962.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8968**

**Outside**

Press@RunDepth: psig @ 4315.00 ft (KB)

Start Date: 2019.06.24

End Date: 2019.06.24

Start Time: 10:48:15

End Time: 18:15:15

Capacity: 8000.00 psig

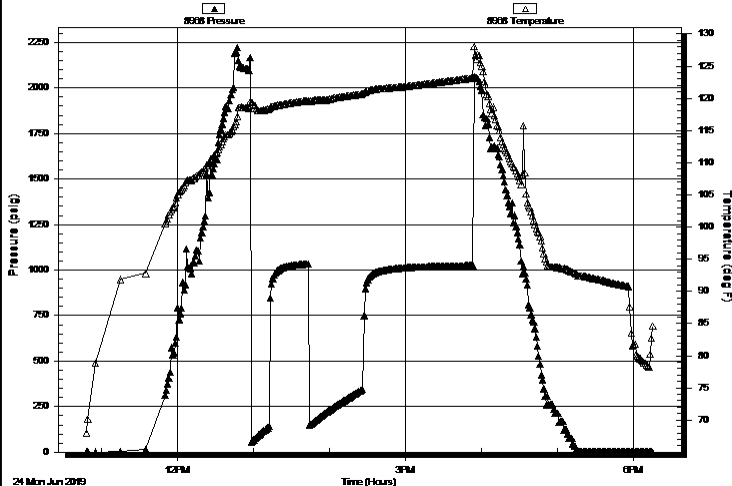
Last Calib.: 2019.06.24

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 6 min. Built to 25 3/4" blow  
IS:Return blow built to 3 1/4"  
FF:BOB in 8 min. Built to 71" blow  
FS:Return bow built to 4 3/4"

Pressure vs. Time



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP- 496 ft	0.00
439.00	gco 20%g 80%o	6.16
248.00	ocm 5%o 5%g 80%m	3.48
124.00	5%g 5%o 10%m 80%m	1.74

### 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. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881

**Schowalter 8-12**

Job Ticket: 64829

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2019.06.24 @ 10:48:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

22000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GIP- 496 ft	0.000
439.00	gco 20%g 80%o	6.158
248.00	ocm 5%o 5%g 80%m	3.479
124.00	5%g 5%o 10%m 80%m	1.739

Total Length: 811.00 ft      Total Volume: 11.376 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API= 32 @ 90 corrected to 35@ 60

RW= .371@ 89.5= 22,000 ppm



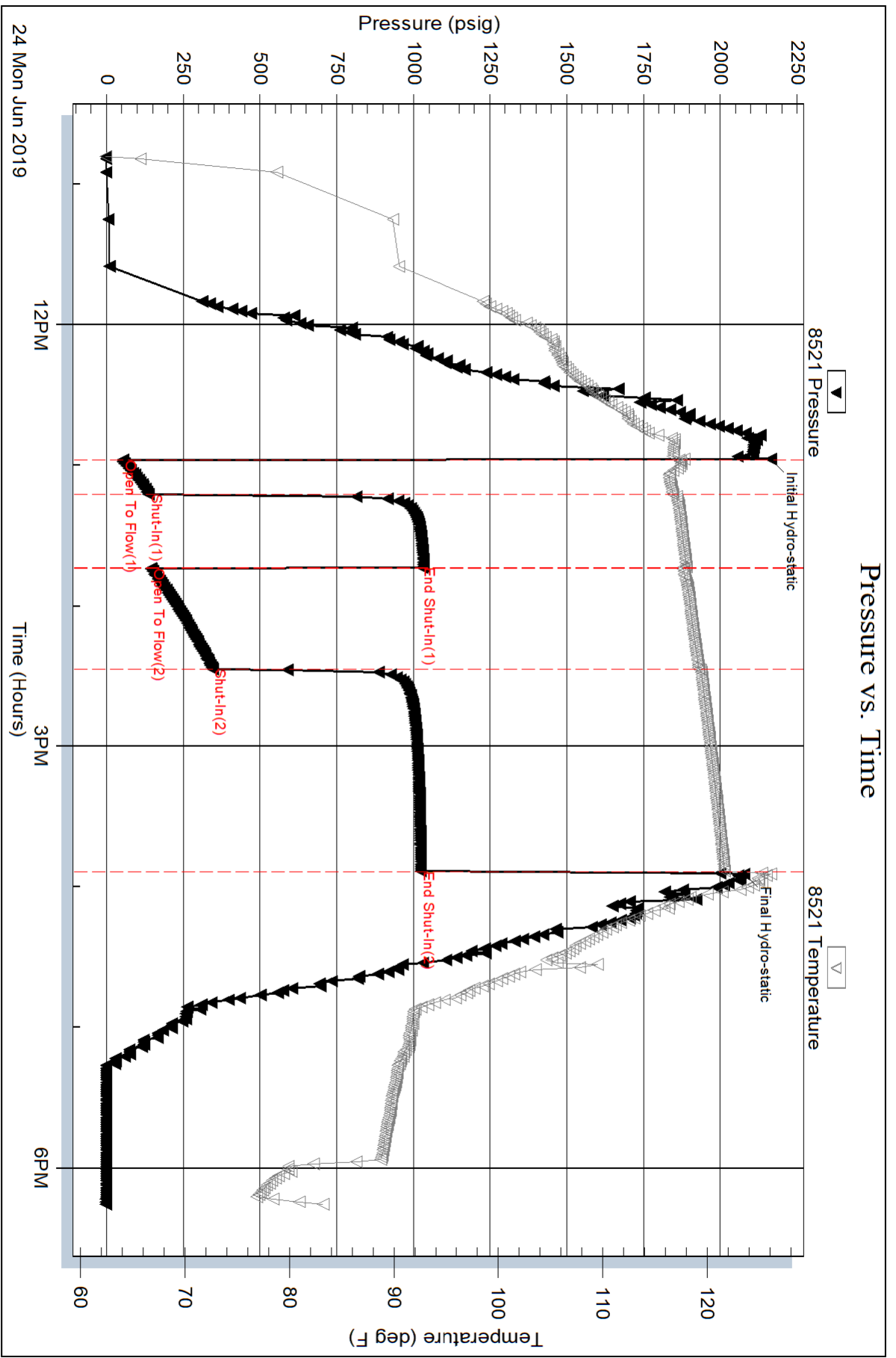
Serial #: 8521

Inside

Shakespeare Oil Co. Inc.

Schowalter 8-12

DST Test Number: 2

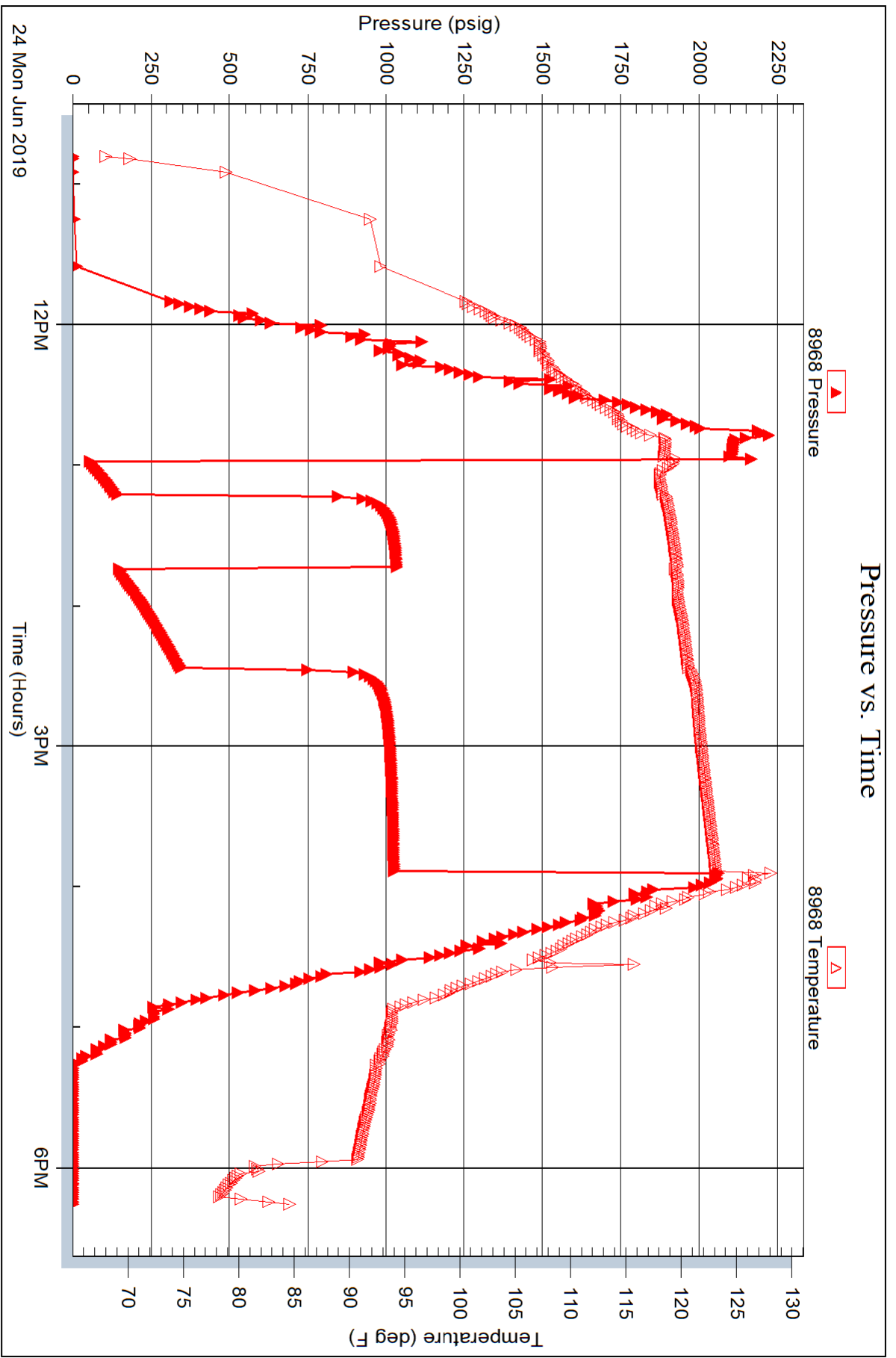


Serial #: 8968

Outside Shakespeare Oil Co. Inc.

Schowalter 8-12

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64829

Printed: 2019.06.24 @ 22:27:24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881

**Schowalter 8-12**

Job Ticket: 64830

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2019.06.25 @ 23:27:15

## GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:39:45

Time Test Ended: 06:55:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

**Interval: 4537.00 ft (KB) To 4565.00 ft (KB) (TVD)**

Reference Elevations: 2972.00 ft (KB)

Total Depth: 4565.00 ft (KB) (TVD)

2962.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8521**

**Inside**

Press@RunDepth: 65.72 psig @ 4538.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.06.25

End Date:

2019.06.26

Last Calib.:

2019.06.26

Start Time: 23:27:15

End Time:

06:55:15

Time On Btm:

2019.06.26 @ 01:39:30

Time Off Btm:

2019.06.26 @ 04:26:30

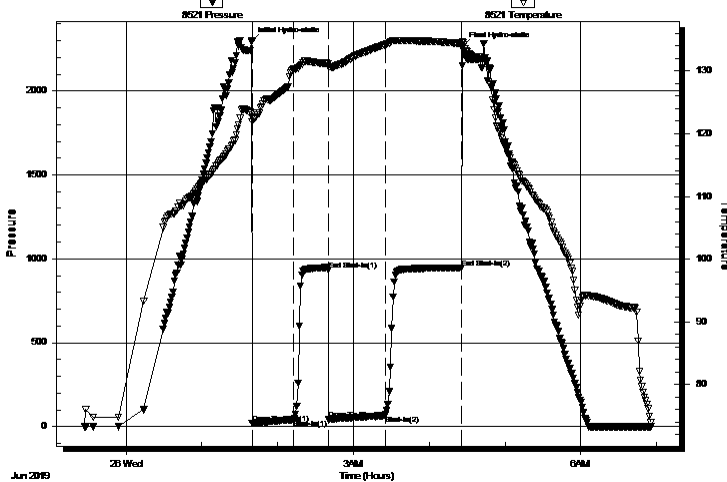
TEST COMMENT: IF: Built to 3 3/4" blow

IS: No return blow

FF: Built to 3" blow

FS: No return blow

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2292.24	123.36	Initial Hydro-static
1	17.52	121.89	Open To Flow (1)
34	40.94	130.34	Shut-In(1)
61	931.66	131.21	End Shut-In(1)
61	45.21	130.71	Open To Flow (2)
106	65.72	134.19	Shut-In(2)
166	945.68	134.43	End Shut-In(2)
167	2266.08	134.57	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
72.00	ocm 20%o 80%m	1.01

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881  
ATTN: Vern Schrag

**Schowalter 8-12**

Job Ticket: 64830

**DST#: 3**

Test Start: 2019.06.25 @ 23:27:15

## GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:39:45

Time Test Ended: 06:55:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

**Interval: 4537.00 ft (KB) To 4565.00 ft (KB) (TVD)**

Total Depth: 4565.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2972.00 ft (KB)

2962.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8968**

**Outside**

Press@RunDepth: psig @ 4538.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.06.25

End Date:

2019.06.26

Last Calib.:

2019.06.26

Start Time: 23:27:15

End Time:

06:55:15

Time On Btm:

Time Off Btm:

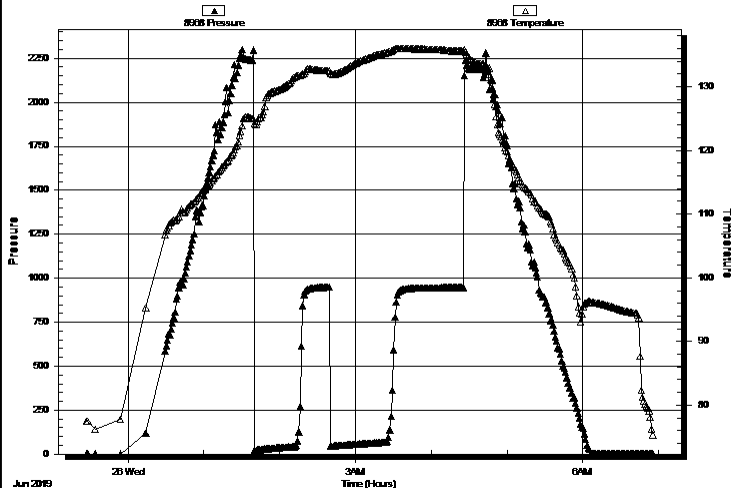
TEST COMMENT: IF: Built to 3 3/4" blow

IS: No return blow

FF: Built to 3" blow

FS: No return blow

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
72.00	ocm 20%o 80%m	1.01

## 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. Inc.

**12-18s-32w Scott Co KS**

202 West Main St  
Salem IL  
62881

**Schowalter 8-12**

Job Ticket: 64830

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2019.06.25 @ 23:27:15

## 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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
72.00	ocm 20%o 80%m	1.010

Total Length: 72.00 ft      Total Volume: 1.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8521

Inside

Shakespeare Oil Co. Inc.

Schowalter 8-12

DST Test Number: 3

