

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	MAZANEC COMMUNITY 1-12
Doc ID	1467093

All Electric Logs Run

Dual Induction
Comp Density
Comp Neutron
Microlog
Sonic

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	MAZANEC COMMUNITY 1-12
Doc ID	1467093

Tops

Name	Top	Datum
Base Anhydrite	2466	+708
Heebner	4007	-833
Lansing	4053	-879
Muncie Creek	4239	-1065
Stark Shale	4338	-1164
Hushpuckney	4391	-1217
Marmaton	4488	-1314
Pawnee	4566	-1392
L. Cherokee Shale	4649	-1475
Johnson	4693	-1519
Mississippian	4873	-1699





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



# Invoice

DATE	INVOICE #
7/12/2019	32287

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	<i>1-12</i>	Mazenec Co...	Wichita	Wild West	Oil	Development	Cement Port Collar	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				80	Miles	5.00	400.00
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)				215	Sacks	17.00	3,655.00T
276	Flocele				50	Lb(s)	3.00	150.00T
275	Cotton Seed Hulls				1	Sack(s)	35.00	35.00T
290	D-Air				2	Gallon(s)	42.00	84.00T
581D	Service Charge Cement				375	Sacks	1.85	693.75
583D	Drayage				1,492.65	Ton Miles	0.95	1,418.02
	Subtotal							7,835.77
	Sales Tax Wichita County						8.50%	333.54

*502-5  
DH*

RECEIVED  
JUL 19 2019

**We Appreciate Your Business!**

**Total**

\$8,169.31

*DW*



CHARGE TO: Shakespeare  
 ADDRESS  
 CITY, STATE, ZIP CODE

TICKET 032287  
 PAGE 1 OF 1

SERVICE LOCATIONS: Neosho City, KS WELL/PROJECT NO. Neosho Community LEASE Neosho Community COUNTY/PARISH Wichita STATE KS CITY Neosho DATE 12/19/19 OWNER  
 1. Neosho City, KS TICKET TYPE  SERVICE  SALES CONTRACTOR WIB WEST RIG NAME/NO. Wichita SHIPPED WT DELIVERED TO Neosho ORDER NO.  
 2. WELL TYPE oil WELL CATEGORY Developments JOB PURPOSE concrete post collar WELL PERMIT NO. WELL LOCATION  
 3. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCT	DF	DESCRIPTION	ACCOUNTING		UNIT PRICE	AMOUNT
						QTY.	U/M		
575		1			MILEAGE TRK 114	80	mi	5.00	400.00
576D		1			Pump Charges post course	1	ea	1400.00	1400.00
330		1			SWD cement	215	sk	17.00	3655.00
276		1			F-bell	30	lb	3.00	150.00
275		1			Cotton seed hulls	1	sk	35.00	35.00
290		1			D-air	2	gal	42.00	84.00
581		1			service charge	375	sk	1.85	693.75
683		1			D-mayage	373	1/16	149.25	557.14

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.

SWIFT OPERATOR \_\_\_\_\_ APPROVAL \_\_\_\_\_

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

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?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

PAGE TOTAL 783577

TOTAL 810931

Wichita  
 TAX 8.5%  
 333.54

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 12 Jul 19	PAGE NO. 1
TICKET NO. 32287	

CUSTOMER Shakespeare	WELL NO.	LEASE MAZANEC Community	JOB TYPE Cement port collar
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CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								4 1/2 x 2 3/8 375 sk SMD cement w/ 1/4" #10 grade Port collar - 2400'
	1230							on loc TRK 114
	1320					1000	1000	test to 1000 psi - held open port collar
		3 1/2	2			400		inj rate 3 1/2 bpm @ 400 psi.
	1330	3 1/2				400		mix SMD cement @ 11.2 ppg
		3 1/2	19			400		- fluid to surface -
		3 1/2	115			550		→ cements to surface ← { 215 sk mixed 20 sk top 1/2 }
			8 1/2					Displace 8 1/2 H <sub>2</sub> O close port collar
	1410					1000	1000	test to 1000 psi - held Run 5 joints
	1420		20					Reverse hole clean - 2 cement flags - wash truck Pack up job complete Blaine, Plant & 154AC



# SWIFT



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

## Invoice

DATE	INVOICE #
7/10/2019	32285

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	#1-12	Mazenec Co...	Wichita	Southwind	Oil	Development	Cement Long Str..	Blaine
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				80	Miles	5.00	400.00
578D-L	Pump Charge - Long String				1	Job	1,400.00	1,400.00
325	Standard Cement				275	Sacks	13.50	3,712.50T
284	Calseal				13	Sack(s)	40.00	520.00T
283	Salt				1,300	Lb(s)	0.25	325.00T
277	Gilsonite (Coal Seal)				1,375	Lb(s)	1.25	1,718.75T
292	Halad 322				250	Lb(s)	8.50	2,125.00T
276	Flocele				50	Lb(s)	3.00	150.00T
280	Flocheck 21				500	Gallon(s)	3.50	1,750.00T
221	Liquid KCL (Clayfix)				2	Gallon(s)	25.00	50.00
419-4	4 1/2" Rotating Head Rental				1	Each	250.00	250.00T
581D	Service Charge Cement				275	Sacks	1.85	508.75
583D	Drayage				1,034	Ton Miles	0.95	982.30
	Subtotal							13,892.30
	Sales Tax Wichita County						8.50%	896.86

RECEIVED  
JUL 15 2019

500-5  
DH

**We Appreciate Your Business!**

**Total**

\$14,789.16

DW



CHARGE TO: Shakespeare  
 ADDRESS \_\_\_\_\_  
 CITY, STATE, ZIP CODE \_\_\_\_\_

PAGE 1 OF 2

TICKET 032285

SERVICE LOCATIONS Perm City, KS

WELL/PROJECT NO. 1-12 LEASE NAZenev Community COUNTY/PARISH W. La. La STATE LA CITY Madec DATE 10/04/19 OWNER \_\_\_\_\_

TICKET TYPE  SERVICE  SALES CONTRACTOR \_\_\_\_\_ RIG NAME/NO. \_\_\_\_\_ SHIPPED YES DELIVERED TO location ORDER NO. \_\_\_\_\_

WELL TYPE Oil WELL CATEGORY Development JOB PURPOSE Development long string WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION 12 - 17 - 35

REFERRAL LOCATION \_\_\_\_\_ INVOICE INSTRUCTIONS \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY. U/M	UNIT PRICE	AMOUNT
		LOG	ACCT	DF					
575		1			TR-114	80 mi	5.00	400.00	
576		1			Pump Charge	1 ea	1400.00	1400.00	
325		1			Standard cement (For 8x-2)	275 sk	13.50	3712.50	
284		1			Calsal	1300 lb	40.00	5200.00	
283		1			SALT	1300 lb	0.35	325.00	
277		1			PSLWRITE	1375 lb	1.25	1718.75	
292		1			hulad-322	250 lb	8.50	2125.00	
276		1			Arcele	50 lb	3.00	150.00	

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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	AGREE	UNDECIDED	DISAGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				10351.25
WE UNDERSTOOD AND MET YOUR NEEDS?				3541.05
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				13892.30
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				8910.80
TOTAL				14799.16

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

SWIFT OPERATOR ABC 211 APPROVAL \_\_\_\_\_

Thank You!



JOB LOG

SWIFT Services, Inc.

DATE 10 Jul 19 PAGE NO. 1

CUSTOMER Shakespeare WELL NO. 1-12 LEASE Mazenod Community JOB TYPE cement long string TICKET NO. 32285

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								275 sk EA-2 cement w/ Oilbonite & floccul 4 1/2 x 10.5" casing 4951' TD 4950' Port collar 2400' Shoejt 44.24
0015								on loc TRK 114
0040								start 4 1/2 x 10.5" casing in well
0245								Drop ball - circulate - ROTATE
0410		4	15				200	Pump 1500 KCl flush
		4	12				200	Pump 500 gal floccul
		4	5				200	Pump 5 bbl KCl flush
			7					Plug RH-MH <del>30sk</del> - <del>20sk</del>
0425		3 1/2	59				200	MIX EA-2 cement <del>225sk</del> @ 15.3 ppg
								Drop latch down plug wash out pup & line
0450		6					200	Displace plug
		6	55				300	
		5 3/4	72				800	
0515		5 3/4	78				1600	Land plug
								Release pressure to truck - drier up
0520								wash truck
								Rack up
0550								job complete Thanks Steve, Phil & Isaac

GLOBAL OIL FIELD SERVICES, LLC

24 S. Lincoln  
RUSSELL, KS 67665

# Invoice

Date	Invoice #
7/8/2019	13763

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

*INT*

P.O. No.	Terms	Project
MAZANEC#1-12	Due on receipt	Cmt Surface Cg

Quantity	Description	Rate	Amount
200	COMMON CEMENT	16.50	3,300.00
7	CALCIUM-CHLORIDE	80.00	560.00
4	BENTONITE GEL	30.00	120.00
211	HANDLING	1.90	400.90
	BULK MILEAGE	975.00	975.00
1	TRI-PLEX PUMP CHARGE FOR PLUG	850.00	850.00
70	HEAVY EQUIPMENT. ONE WAY	6.50	455.00
70	LMV- ONE WAY	2.75	192.50
	15% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE	8.00%	0.00
	LOGAN CO SALES TAX		

RECEIVED  
JUL 12 2019

*502-5  
DH*

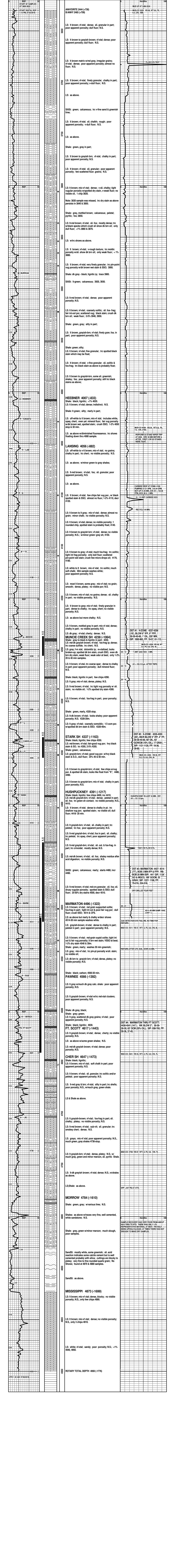
Thank you for your business.

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

**Total** \$6,853.40

*DW*





ROP  
START 20 SAMPLES  
AT 3000-3020  
START DIGITAL ROP  
1:15 PM, 07/02/2019

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**ANHYDRITE 2444 (-4730)**  
**BANNY 2465 (-4709)**

LS: lt brown; vf-xtal; dense; sli. granular in part; poor apparent porosity; dull fluor; N.S.

LS: lt brown to grayish brown; vf-xtal; dense; poor apparent porosity; dull fluor; N.S.

LS: lt brown matrix w/md gray, irregular grains; vf-xtal; dense; poor apparent porosity; almost no fluor; N.S.

LS: lt brown; vf-xtal; finely granular; chalky in part; poor apparent porosity; v-dull fluor; N.S.

LS: as above.

SiltSt: green; calcareous; trc v-fine sand & greenish lime;

LS: lt brown; vf-xtal; sli. chalk; rough; poor apparent porosity; v-dull fluor; N.S.

LS: as above.

Shale: green, gray in part;

LS: lt brown to grayish-bm; vf-xtal; chalky in part; poor apparent porosity; N.S.

LS: lt brown; vf-xtal; sli. granular; poor apparent porosity; few scattered fluor. grains; N.S.

LS: lt brown; mic-vf-xtal; dense; v-sli. chalky; tight vugular porosity w/spotted dry stain, v-weak fluor; no visible oil, 1 chip 3820.

Note: 3830 sample was missed, trc dry stain as above persists in 3840 & 3850.

Shale: gray, mottled brown; calcareous; peletal; pyritic; fos; 3850.

LS: lt-md brown; vf-xtal; sli. fos; mostly dense; trc w/black specks which crush sil show dk brn oil; only dull fluor; <1% 3860 & 3870.

LS: w/trc shows as above.

LS: lt brown; vf-xtal; v-rough texture; trc moldic porosity w/sil. show dk brn oil; only weak fluor; <1% 3880.

LS: lt brown; vf-xtal; very finely granular; trc pin-point vug porosity w/dk brown wet stain & SSO; 3900.

Shale: dk gray - black; lignitic ip; trace 3900.

SiltSt: lt-green; calcareous; 3920, 3930.

LS: lt-md brown; vf-xtal; dense; poor apparent porosity; N.S.

LS: lt brown; vf-xtal; coarsely oolitic; sli. fos-frag; fair int-ool por, scattered vug; black stain; crush dk brn oil; weak fluor; 2-5% 3940, 3950.

Shale: green, gray; silty in part;

LS: lt brown, grayish-bm; vf-xtal; finely gran; fos. in part; poor apparent porosity; N.S.

Shale: green; silty;

LS: lt brown; vf-xtal; fine granular; trc spotted black stain which may be float;

LS: lt brown; vf-xtal; v-fine granular; sli. oolitic & fos-frag; trc black stain as above is probably float;

LS: lt brown to grayish-bm, some sli. greenish; shaley; fos; poor apparent porosity; still trc black stains as above;

**HEEBNER 4007 (-833)**  
Shale: black; lignitic; <1% 4020.  
LS: lt brown; vf-xtal; dense; indistinct; N.S.

Shale: lt green; silty; marly in part;

LS: off-white to lt brown; mic-vf-xtal; includes white, opa. chert; even yel. mineral fluor; fair vug porosity w/dk brown wet, spotted stain; crush SSO; 1-2% 4050 stop & 30 min.

LS: as above w/diminished fluorescence; trc shows floating thru 4080 sample.

**LANSING 4056 (-882)**  
LS: off-white to v-lt brown; mic-vf-xtal; no grains; chalky in part; trc chert; no visible porosity; N.S.

LS: as above; w/minor green to gray shales;

LS: lt-md brown; vf-xtal; fos; sli. granular; poor apparent porosity; N.S.

LS: as above.

LS: lt brown; vf-xtal; few chips fair vug por., w/ black spotted stain & SSO; almost no fluor; 1-2% 4110, decr 4120.

LS: lt brown to lt gray; mic-vf-xtal; dense; almost no grain; minor chalk; no visible porosity; N.S.

LS: lt brown; vf-xtal; dense; no visible porosity; 1 rounded chip, spotted stain is probably float; 4140.

LS: lt brown to grayish-bm; vf-xtal; dense; no visible porosity; N.S.; w/minor green/gray sh; 4150.

LS: lt brown to gray; vf-xtal; much fos-frag; trc oolitic; tight int frag porosity; only dull fluor; scattered pin-point wet stain; crush few micro-drops oil; 4170, 4180.

LS: white to lt brown; mic-vf-xtal; trc oolitic; much soft chalk; 30m sample washes white; poor apparent porosity; N.S.

LS: most lt brown, some gray; mic-vf-xtal; no grain; smooth; dense, platy; no visible por; N.S.

LS: lt brown; mic-vf-xtal; no grains; dense; sli. chalky in part; no visible porosity; N.S.

LS: lt brown to gray; mic-vf-xtal; finely granular in part; dense to chalky; trc opa. chert; no visible porosity; N.S.

LS: as above but more chalky; N.S.

LS: lt brown to mottled gray in part; mic-vf-xtal; dense; chalky in part; no visible porosity; N.S.

LS: dk gray; vf-xtal; cherty; dense; N.S.

**MUNICE CREEK SH 4238 (-1064)**  
Shale: gray to black & lignitic in part; 4220.  
LS: md-dk grayish brown; vf-xtal; fos-frag ip; dense; trc coarse sulfide; trc chert; N.S.

LS: gray; f-m xtal; dolomitic ip; re-xtalized, looks broken-up; spotted dk brn stain, crush SSO, even dk brn dry stain, weak fluor; weak odor at best; only 1-2% 20 & 40 min samples.

LS: lt brown; vf-xtal, trc coarse spar; dense to chalky in part; poor apparent porosity; dull mineral fluor; N.S.

Shale: black; lignitic in part; few chips 4290.

LS: lt gray; mic-vf-xtal; dense, platy; N.S.

LS: lt-md brown; vf-xtal; trc tight vug porosity w/ sil. stain; no visible oil; 1-2% spotted dry stain 4300.

LS: lt brown; vf-xtal; fos-frag in part; poor porosity; N.S.

Shale: green, marly, 4328 stop.

LS: lt-dk brown; vf-xtal; looks shaley; poor apparent porosity; N.S. 4328-20m.

LS: lt gray; vf-xtal; coarsely oomolitic; 1/3 oom por. w/spotted dk brn stain & SSO; 4328-40m.

**STARK SH 4337 (-1163)**  
Shale: black; lignitic; few chips 4350.  
LS: md-brown; vf-xtal; fair-good vug por; hvy black stain & SO; trc 4350, 2-5% 4355.  
Shale: green; calcareous;

LS: grayish-bm; vf-xtal; good vug por. w/hvy black stain & S.O., dull fluor; 25% 40 & 60 min.

LS: lt brown to grayish-bm; vf-xtal; few chips w/vug por. & spotted dk stain, looks like float from "K", 4480, 4490.

LS: lt brown to grayish-bm; mic-vf-xtal; chalky in part; poor porosity; N.S.

**HUSHPUCKNEY 4391 (-1217)**  
Shale: black; lignitic; few chips 4400, inc 4410.  
LS: md-dk grayish-bm; vf-xtal; dense; peletal in part; sil. fos; trc green sh contact; no visible porosity; N.S., 4410.

LS: lt brown; vf-xtal; dense to chalky in pt; trc shallow vug por; spotted stain; no visible oil; dull fluor; 4418-20 min.

LS: lt grayish-bm; vf-xtal; sli. chalky in part; trc peletal; trc fos; poor apparent porosity; N.S.

LS: lt-md grayish-bm; vf-xtal; fos in part; sli. chalky; trc peletal; trc opa. chert; poor apparent porosity; N.S.

LS: lt-md grayish-bm; vf-xtal; sli. ool. & fos-frag. in part; trc crinoidal; mostly dense; N.S.

LS: md-dk brown; vf-xtal; sli. fos; shaley residue after acid digestion; no visible porosity; N.S.

SiltSt: green; calcareous; marly; starts 4480, inc 4490.

LS: lt-md brown; vf-xtal; md-grs granular; sli. fos; sli. drusy vugular porosity; spotted stain & SSO; dull fluor; 25-50% dry stains 4500, decr 4510.

**MARMATON 4496 (-1322)**  
LS: lt brown; vf-xtal; md grain supported colite; fos-frag in part; tight int ool & poor-fair vug por; dull fluor; crush SSO; 4514 & CFS.

LS: as above but marly & chalky w/decr shows 4514-30 min sample washes white.

LS: grayish-brown; vf-xtal; dense to chalky in part; peletal in part; poor apparent porosity; N.S.

LS: lt brown; vf-xtal; md-grain sup'd oolite; tight int ool & fair vug porosity; lt brn wet stain; VSSO at best; 1-2% dry stain 4540 & 30m.

Shale: green, marly; washes 30 min greenish;

LS: gray; mic-vf-xtal; trc pin-pt porosity w/sil. stain; no visible oil;

LS: dk brn to grayish-bm; vf-xtal; dense, platy; no visible porosity; N.S.

**PAWNEE 4566 (-1392)**  
Shale: black; carbon; 4560-30 min.

LS: lt gray calc; 4566; poor apparent porosity; N.S.

LS: lt grayish brown; vf-xtal w/trc md-xtal clusters; poor apparent porosity; N.S.

Shale: dk gray, black;  
Shale: gray, green;  
LS: lt gray, scattered dk gray grains; vf-xtal; poor apparent porosity; N.S.

Shale: black; lignitic; 4630.

**FT. SCOTT 4617 (-1443)**  
LS: lt grayish brown; vf-xtal; dense; cherty; no visible porosity; N.S.

LS: as above w/some green shales; N.S.

LS: md-dk grayish brown; vf-xtal; dense; poor porosity; N.S.

**CHER SH 4647 (-1473)**  
Shale: black; lignitic;  
LS: lt brown; mic-vf-xtal; soft chalk in part; poor apparent porosity; N.S.

LS: lt brown; vf-xtal; sli. granular; trc oolitic and/or peletal; poor apparent porosity; N.S.

LS: lt-md gray & brn; vf-xtal; silty in part; trc shells; poor porosity; N.S.; w/much gray, green shale.

LS & Shale as above.

LS: lt grayish-brown; vf-xtal; fos-frag in part; sli. chalky; platy; no visible porosity; N.S.

LS: lt-md brown; vf-xtal; sub-vit; sli. granular; trc smokey chert; dense; N.S.

LS: grays; mic-vf-xtal; poor apparent porosity; N.S., much green, gray shales 4736-stop.

LS: lt grayish-bm; vf-xtal; dense, platy; N.S.; w/ much gray, green and minor maroon, sli. pyritic. Shale.

LS: lt-dk grayish brown; vf-xtal; dense; N.S.; w/shales as above.

LS:Shale: as above.

**MORROW 4784 (-1610)**  
Shale: green, gray; w/various lime; N.S.

Shales: as above w/traces very fine, well cemented, white sandstone; N.S.

Shale: gray, green w/minor maroon; much slough, poor samples.

SandSt: mostly white, some greenish; sli. acid reaction indicates some calcite cement but is well cemented probably with silica; cuttings are blocky to shaley; very fine to fine rounded quartz grain; No Shows; found at 4870 & 4880 samples.

SandSt: as above.

**MISSISSIPPI 4873 (-1699)**  
LS: lt brown; mic-vf-xtal; dense, blocky; no visible porosity; N.S., only few chips 4890.

LS: lt brown; mic-vf-xtal; dense; no visible porosity; N.S., only 3 chips 4910.

LS: white; vf-xtal; sandy; poor porosity; N.S.; <1% 4940, 4950.

**ROTARY TOTAL DEPTH 4950 (-1776)**

MUD UP AT 2:46-3524  
MUD-CC 3629: VIS 60, WT 8.6, FIL 6.4, CHL 1800.

FLOW SYS TEST

Hot-Wire

MUD-CC 4038: VIS 54, WT 8.8, FIL 7.2, CHL 2700;

PERFORM 35 STAND WIPER TRIP AT 4050, CIRC 30 MIN BEFORE & AFTER. FIRST 5 OR SO STANDS WERE TIGHT.

CARBIDE DROP AT CONN. 4100: PUMPING 57.51 SPM, 316.44 GPM; BOT-UP 31.05 MIN, AVE AV = 132.06 FPM, KICK 36 U / 3 MIN.

51 / 15 UNIT CARBIDE KICK

RECYCLE 44 MIN.

Hot-Wire

DST #1: H-ZONE: 4237-4256 (19); BLOW 9' IFF, 9' FFF, 30-30-45-60, 1' OIL, 220' MW, SIP: 1000-963, FP: 19-57, 61-113.

MUD-CC: 4256: VIS 48, WT 9.5, FIL 8.8, CHL 4K.

7 UNIT GAS KICK / 4 MIN.

AV = 105.15 fpm AFTER TRIPS

Hot-Wire

DST #2: K-ZONE: 4335-4355 (20); INCR BLOW 5' IFF, 4' FF; 30-30-45-60, 60' OIL, 63' GOWCM (10% OIL), 17 GRV, SIP: 1121-1129, FP: 19-36, 39-60.

MUD-CC: 4355: VIS 50, WT 9.2, FIL 8.0, CHL 5K.

Hot-Wire

HUSHPUCKNEY IN JUST 34 MIN. EST. AV = 131.15 fpm.

Hot-Wire

DST #3: MARMATON: 4437-4514 (77); BOB 2 MIN IFF & FFF; RB: BOB 20 MIN SIP: 441' CIP: 1134' GO & MGCO, 189' GOCM; 32 GRV; SIP: 1227-1199, FP: 79-219, 234-518;

DRY DRILLED FOUR FEET

4514-60 MIN SAMP. WAS LOST -x

GAS DETECTION SYS FAILURE, NO TIME FOR REPAIRS.

MUD-CC: 4511: VIS 57, WT 9.3, FIL 8.8, CHL 6K.

REPAIRS AFTER CFS 4540, DOWN 45 MIN.

Hot-Wire

DST #4: MARMATON THRU FT SCOTT: 4430-4541 (141); WK BLOW 2'; 30-30-30-30; 63' OCM (20% OIL); SIP: 938-765, FP: 30-36, 37-45.

MUD-CC: 4641: VIS 53, WT 9.3, FIL 9.6, CHL 7K.

Hot-Wire

SPP = 847 PSI AT 4770.

Hot-Wire

SAMPLE RECOVERY WAS VERY POOR FROM ABOUT 4810 THRU TO RTD. THERE WAS ONLY 1-2% REPRESENTATIVE MATERIAL AT BEST. THE BULK BEING UPHOLE BLOCK. AT TIMES THERE WAS NOT ENOUGH TO MAKE DRY SAMPLES.

Hot-Wire



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

ATTN: Vern Schrag

Job Ticket: 65236

**DST#: 1**

Test Start: 2019.07.04 @ 08:41:45

## GENERAL INFORMATION:

Formation: **Lansing H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:13:45

Time Test Ended: 16:03:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

**Interval: 4237.00 ft (KB) To 4256.00 ft (KB) (TVD)**

Reference Elevations: 3174.00 ft (KB)

Total Depth: 4256.00 ft (KB) (TVD)

3164.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8166 Outside**

Press@RunDepth: 113.79 psig @ 4238.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.04

End Date:

2019.07.04

Last Calib.:

2019.07.04

Start Time:

08:41:50

End Time:

16:03:44

Time On Btm:

2019.07.04 @ 11:12:45

Time Off Btm:

2019.07.04 @ 14:00:15

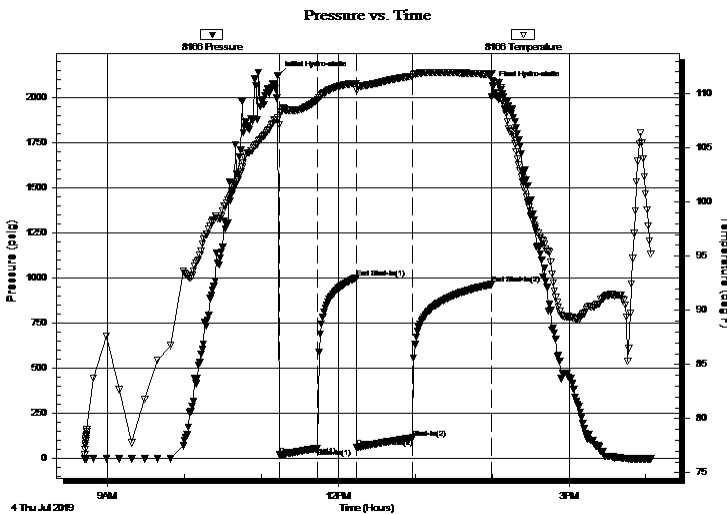
TEST COMMENT: IF: 3/4 blow built to 8 1/2.

IS: No return.

FF: Surface blow built to 9 3/4.

FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.95	107.74	Initial Hydro-static
1	19.60	107.14	Open To Flow (1)
31	57.63	109.41	Shut-In(1)
61	1000.51	110.95	End Shut-In(1)
62	61.71	110.33	Open To Flow (2)
105	113.79	111.61	Shut-In(2)
167	963.90	111.76	End Shut-In(2)
168	2066.84	111.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	mcw 80%w 20%m	1.77
94.00	nw oil spots 50%w 50%m	1.32
1.00	free oil 100%o	0.01

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Co

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

Job Ticket: 65236

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2019.07.04 @ 08:41:45

## 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:

11000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	mcw 80%w 20%m	1.767
94.00	mw oil spots 50%w 50%m	1.319
1.00	free oil 100%o	0.014

Total Length: 221.00 ft      Total Volume: 3.100 bbl

Num Fluid Samples: 0

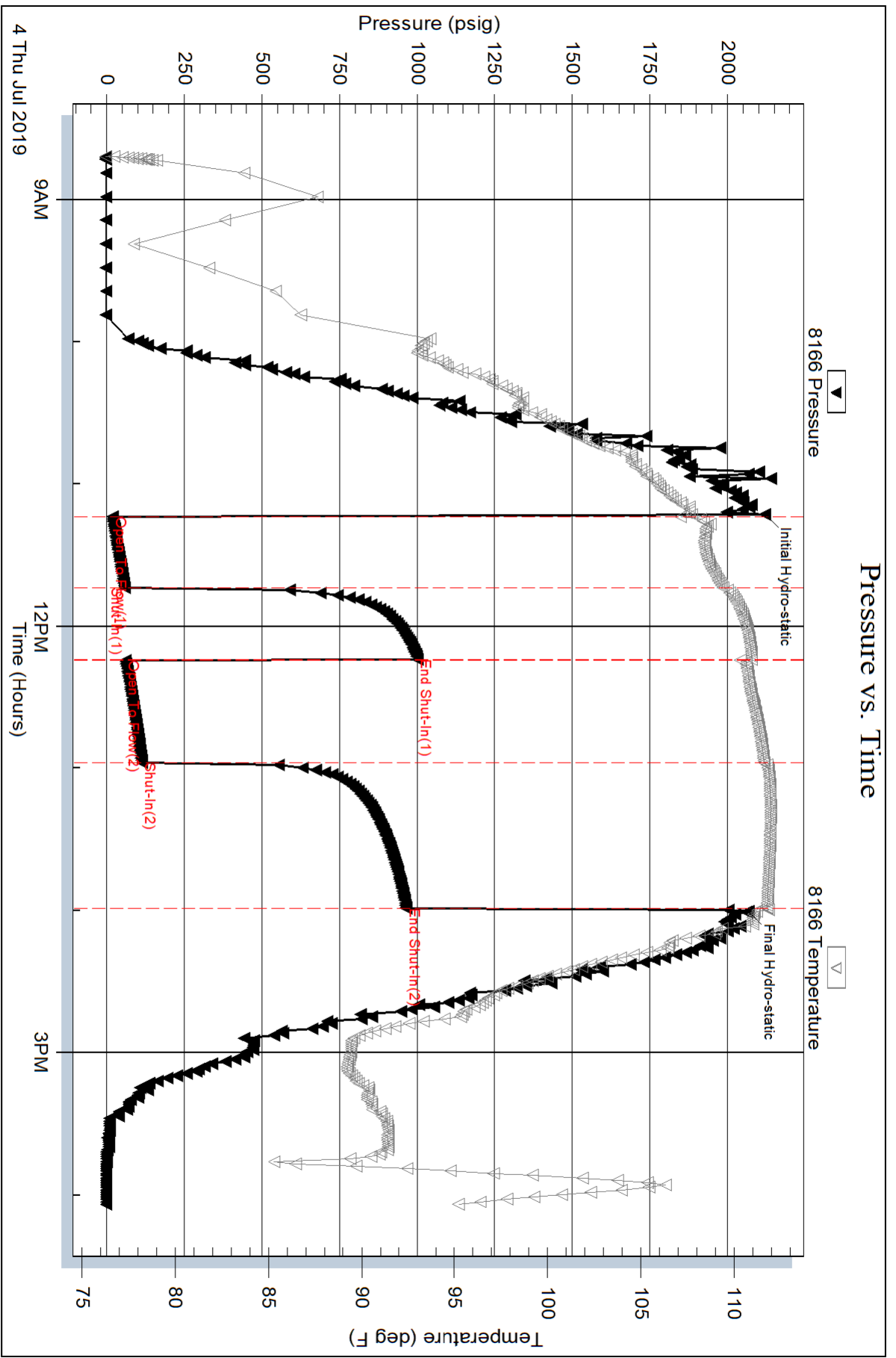
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .41@100=11000



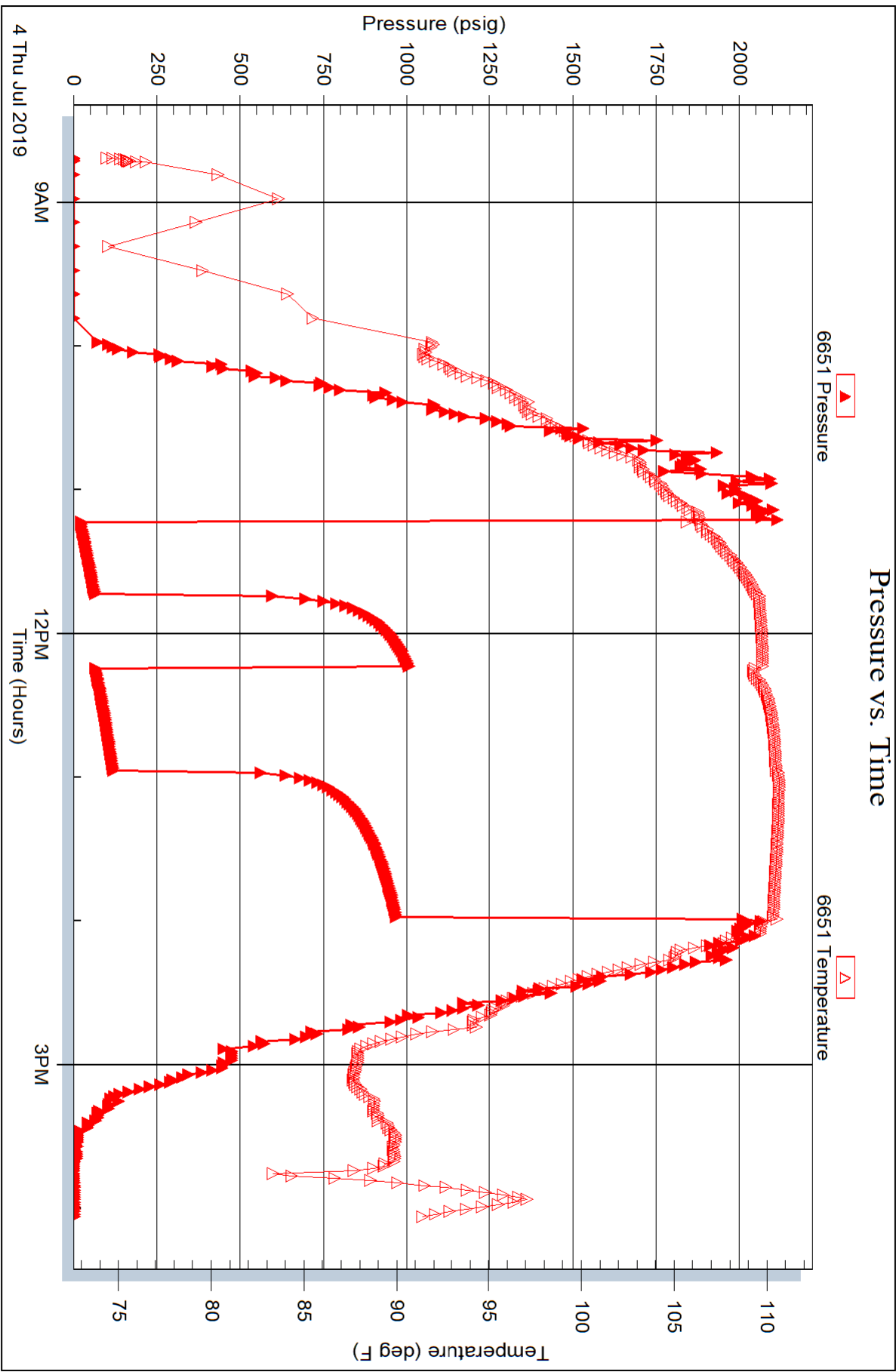
Serial #: 6651

Inside

Shakespeare Oil Co

Mazanec Community 1-12

DST Test Number: 1





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

ATTN: Vern Schrag

Job Ticket: 65237

**DST#: 2**

Test Start: 2019.07.05 @ 07:36:02

## GENERAL INFORMATION:

Formation: **K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:14:32  
 Time Test Ended: 13:52:02  
 Interval: **4335.00 ft (KB) To 4355.00 ft (KB) (TVD)**  
 Total Depth: 4355.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 3174.00 ft (KB)  
 3164.00 ft (CF)  
 KB to GR/CF: 10.00 ft

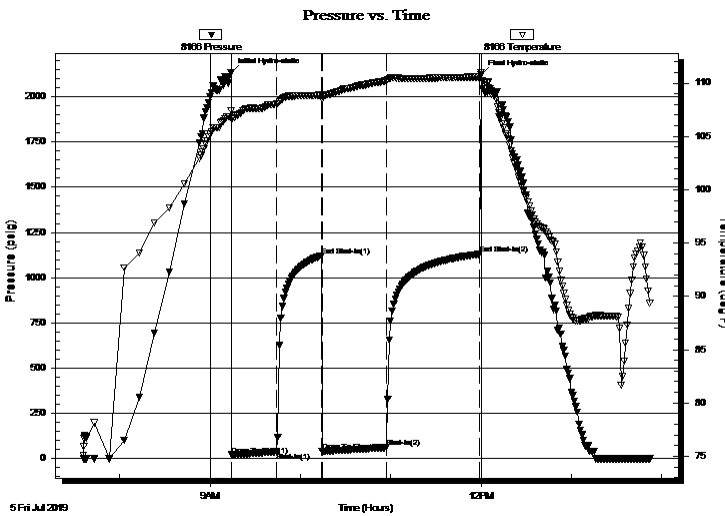
## Serial #: 8166

Outside

Press@RunDepth: 60.88 psig @ 4336.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2019.07.05 End Date: 2019.07.05 Last Calib.: 2019.07.05  
 Start Time: 07:36:07 End Time: 13:52:01 Time On Btm: 2019.07.05 @ 09:14:02  
 Time Off Btm: 2019.07.05 @ 12:00:02

TEST COMMENT: IF: 1/2 blow built to 4 3/4.  
 IS: No return.  
 FF: Surface blow built to 4.  
 FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2134.78	107.40	Initial Hydro-static
1	19.45	106.70	Open To Flow (1)
30	36.71	108.02	Shut-In(1)
60	1121.44	108.88	End Shut-In(1)
61	39.20	108.49	Open To Flow (2)
103	60.88	110.21	Shut-In(2)
165	1129.72	110.57	End Shut-In(2)
166	2122.56	111.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocw m 10%g 10%o 10%w 70%m	0.88
60.00	go 5%g 95%o	0.84

\* 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

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

Job Ticket: 65237

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2019.07.05 @ 07:36:02

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

17 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 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 bbbl
63.00	gocw m 10%g 10%o 10%w 70%m	0.884
60.00	go 5%g 95%o	0.842

Total Length: 123.00 ft

Total Volume: 1.726 bbl

Num Fluid Samples: 0

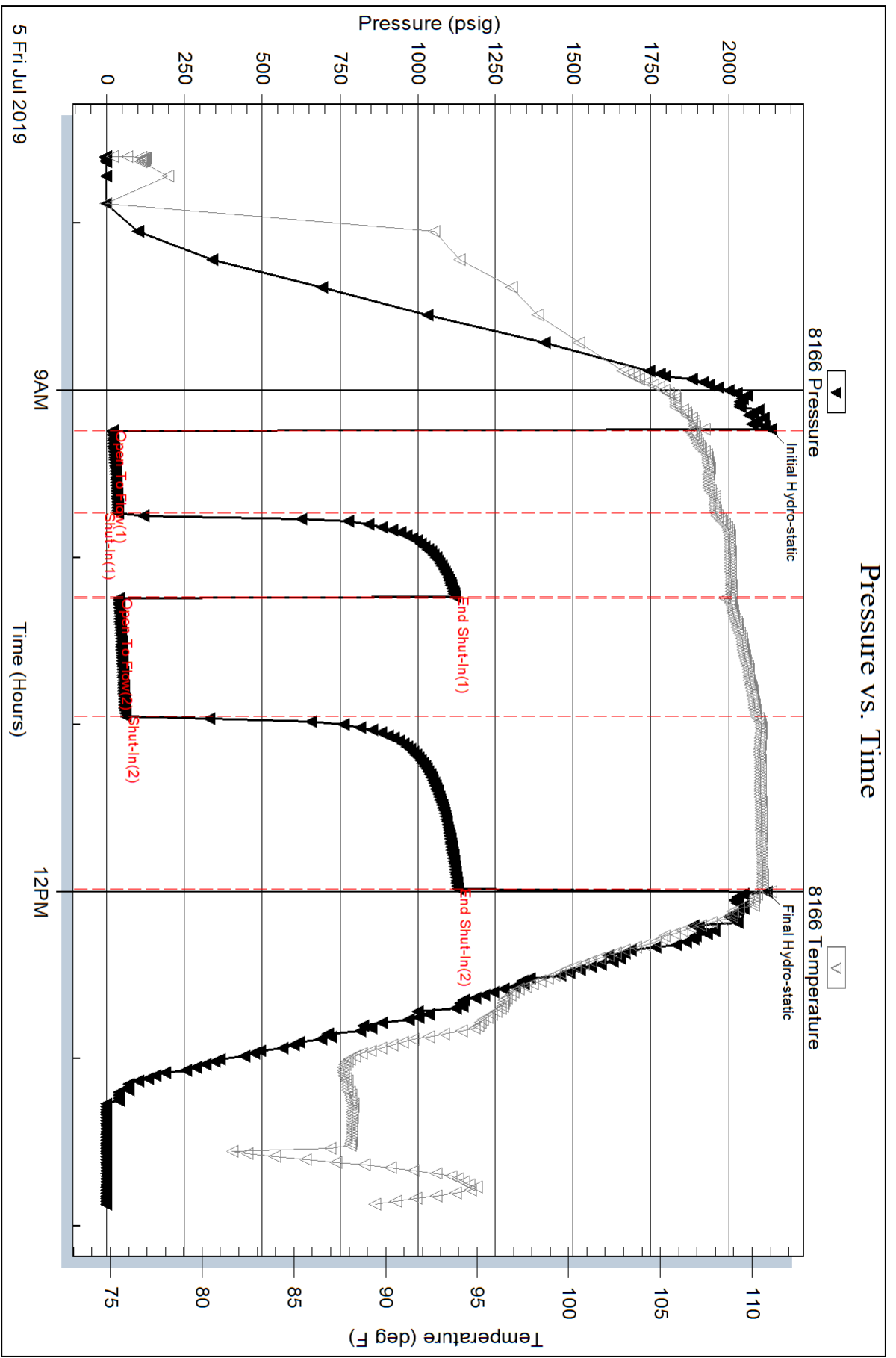
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 19@80=17





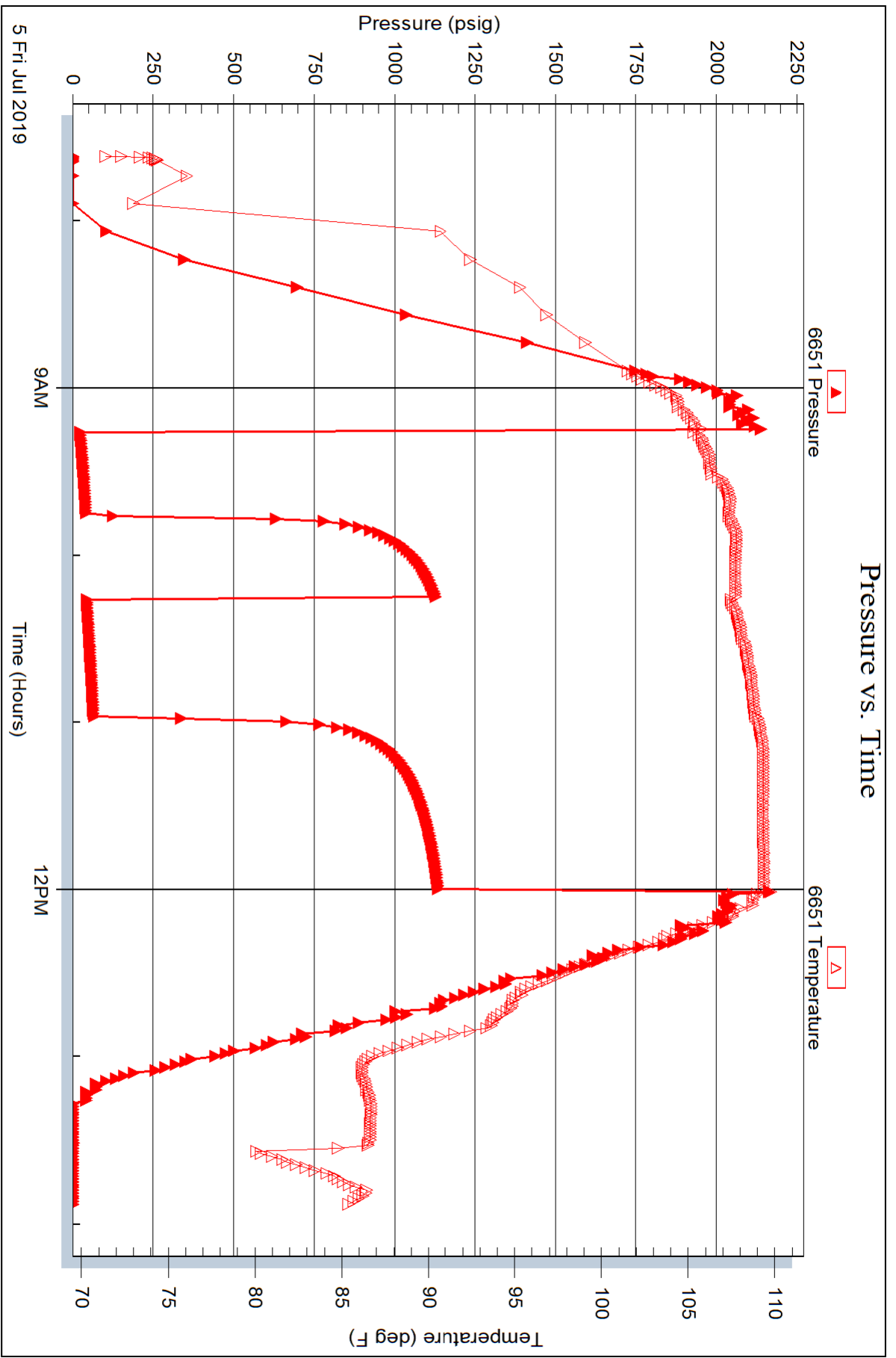
Serial #: 6651

Inside

Shakespeare Oil Co

Mazanec Community 1-12

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65237

Printed: 2019.07.05 @ 14:32:32



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

ATTN: Vern Schrag

Job Ticket: 65238

**DST#: 3**

Test Start: 2019.07.06 @ 07:15:42

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:06:12

Time Test Ended: 15:27:12

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

**Interval: 4437.00 ft (KB) To 4514.00 ft (KB) (TVD)**

Reference Elevations: 3174.00 ft (KB)

Total Depth: 4514.00 ft (KB) (TVD)

3164.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8166 Outside**

Press@RunDepth: 518.27 psig @ 4438.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.06

End Date: 2019.07.06

Last Calib.: 2019.07.06

Start Time: 07:15:47

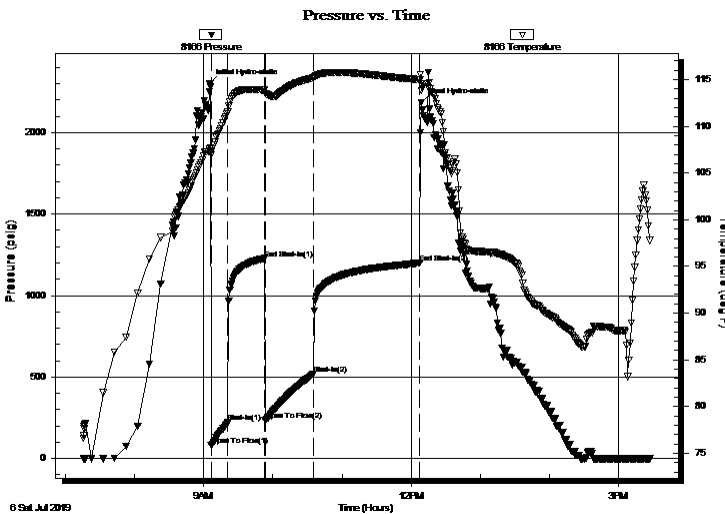
End Time: 15:27:11

Time On Btm: 2019.07.06 @ 09:05:12

Time Off Btm: 2019.07.06 @ 12:08:42

**TEST COMMENT:** IF: BOB in 2 min. 57"  
IS: BOB in 20 min 17"  
FF: BOB in 2 min. 124"  
FS: Surface blow built to 5 died to 4.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.45	107.55	Initial Hydro-static
1	79.27	106.95	Open To Flow (1)
16	219.99	111.54	Shut-In(1)
48	1227.88	113.88	End Shut-In(1)
48	234.18	113.48	Open To Flow (2)
90	518.27	115.19	Shut-In(2)
182	1199.99	115.00	End Shut-In(2)
184	2185.87	113.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
189.00	gocm 40%g 20%o 40%m	2.65
252.00	mogo 20%g 70%o 10%m	3.53
882.00	go 20%g 80%o	12.37
0.00	441 GIP	0.00

## 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

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

Job Ticket: 65238

**DST#: 3**

ATTN: Vern Schrag

Test Start: 2019.07.06 @ 07:15:42

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 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 bbbl
189.00	gocm 40%g 20%o 40%m	2.651
252.00	mcgo 20%g 70%o 10%m	3.535
882.00	go 20%g 80%o	12.372
0.00	441 GIP	0.000

Total Length: 1323.00 ft

Total Volume: 18.558 bbl

Num Fluid Samples: 0

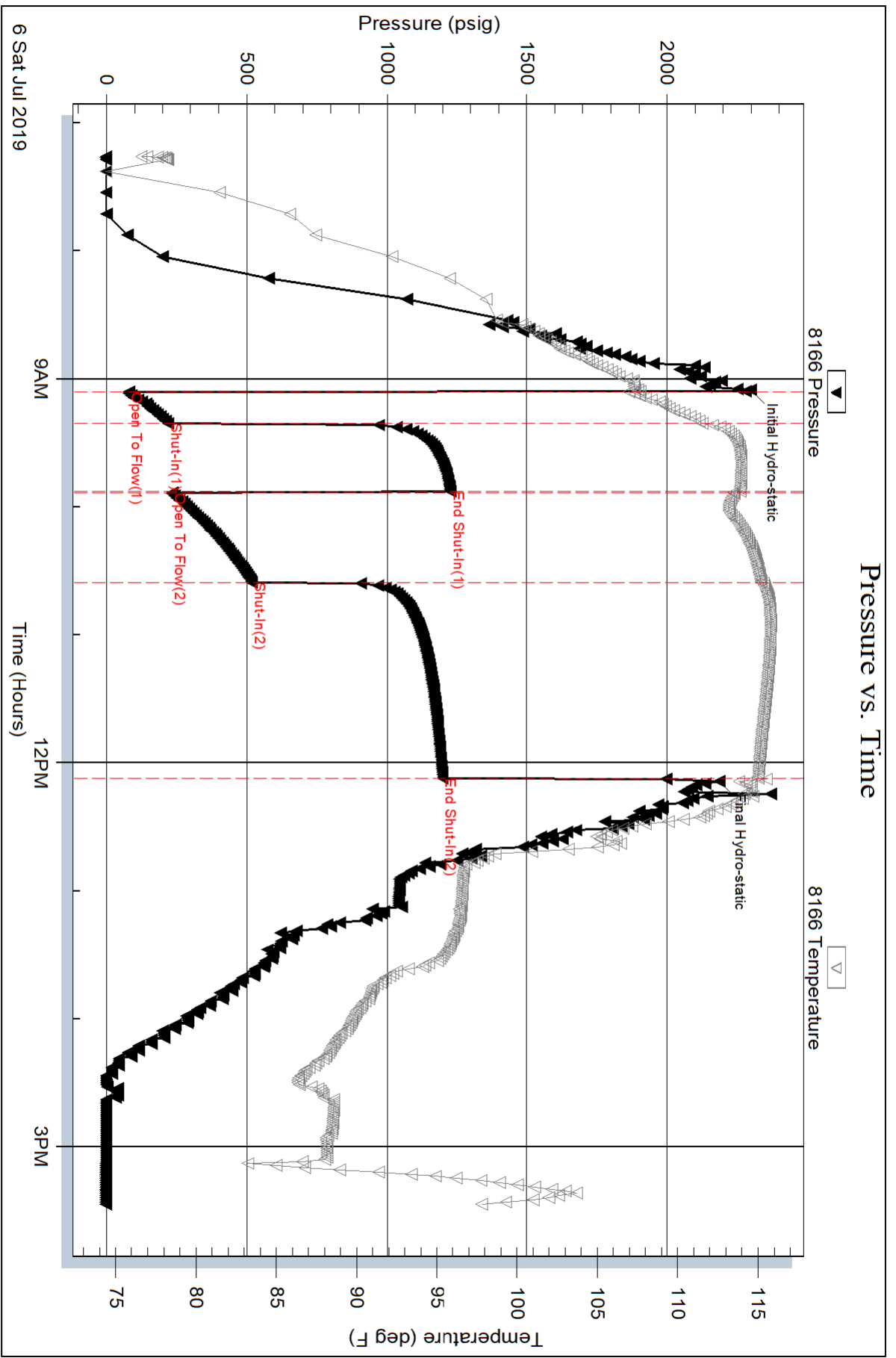
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 35@90=32



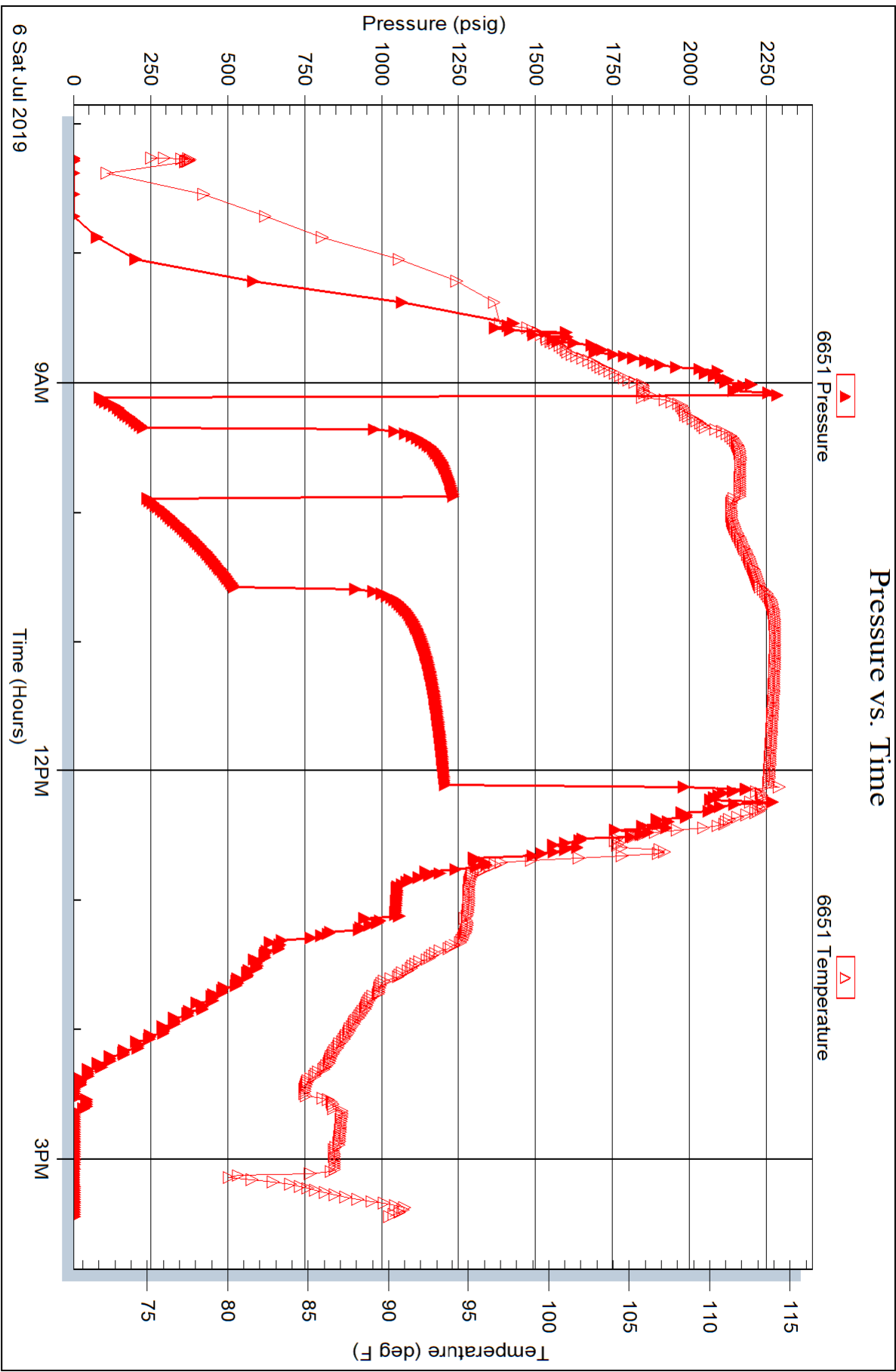
Serial #: 6651

Inside

Shakespeare Oil Co

Mazanec Community 1-12

DST Test Number: 3





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

ATTN: Vern Schrag

Job Ticket: 65239

**DST#: 4**

Test Start: 2019.07.07 @ 11:22:54

## GENERAL INFORMATION:

Formation: **Marmaton- Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:31:24

Time Test Ended: 19:34:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

**Interval: 4510.00 ft (KB) To 4641.00 ft (KB) (TVD)**

Reference Elevations: 3174.00 ft (KB)

Total Depth: 4641.00 ft (KB) (TVD)

3164.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8166 Outside**

Press@RunDepth: 45.80 psig @ 4511.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.07 End Date: 2019.07.07

Last Calib.: 2019.07.07

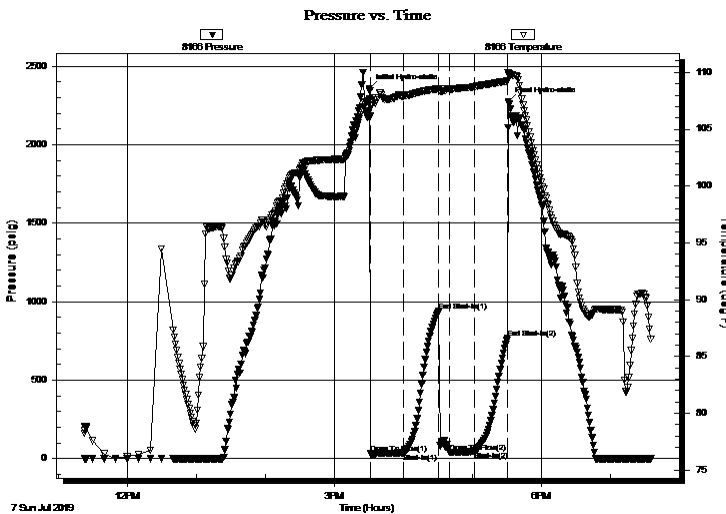
Start Time: 11:22:59 End Time: 19:34:53

Time On Btm: 2019.07.07 @ 15:30:24

Time Off Btm: 2019.07.07 @ 17:31:24

**TEST COMMENT:** IF: 1/4 blow built to 3.  
IS: No return.  
FF: Surface blow built to 2 1/2.  
FS" No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2356.50	107.65	Initial Hydro-static
1	30.52	106.15	Open To Flow (1)
30	36.25	107.93	Shut-In(1)
61	938.14	108.56	End Shut-In(1)
70	37.99	108.51	Open To Flow (2)
91	45.80	108.75	Shut-In(2)
120	765.96	109.24	End Shut-In(2)
121	2272.11	109.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	ocm 20%o 80%m	0.88

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Co

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

ATTN: Vern Schrag

Job Ticket: 65239

**DST#: 4**

Test Start: 2019.07.07 @ 11:22:54

## GENERAL INFORMATION:

Formation: **Marmaton- Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:31:24

Time Test Ended: 19:34:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

**Interval: 4510.00 ft (KB) To 4641.00 ft (KB) (TVD)**

Reference Elevations: 3174.00 ft (KB)

Total Depth: 4641.00 ft (KB) (TVD)

3164.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6651 Inside**

Press@RunDepth: psig @ 4511.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.07.07 End Date: 2019.07.07

Last Calib.: 2019.07.07

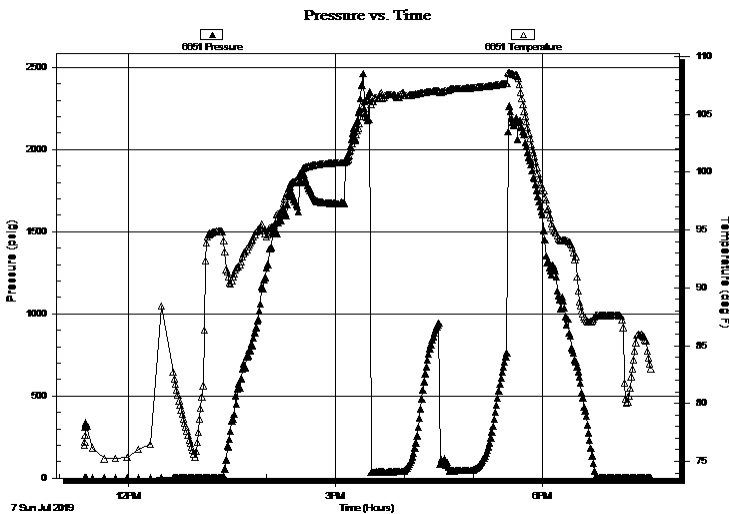
Start Time: 11:22:11 End Time: 19:34:05

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: 1/4 blow built to 3.  
IS: No return.  
FF: Surface blow built to 2 1/2.  
FS" No return.

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	ocm 20%o 80%m	0.88

## 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

**12-17s-35w Wichita, KS**

202 W Main St  
Salem, IL 62881

**MazanecCommunity1-12**

Job Ticket: 65239

**DST#: 4**

ATTN: Vern Schrag

Test Start: 2019.07.07 @ 11:22:54

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6100.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	ocm 20%o 80%m	0.884

Total Length: 63.00 ft      Total Volume: 0.884 bbl

Num Fluid Samples: 0

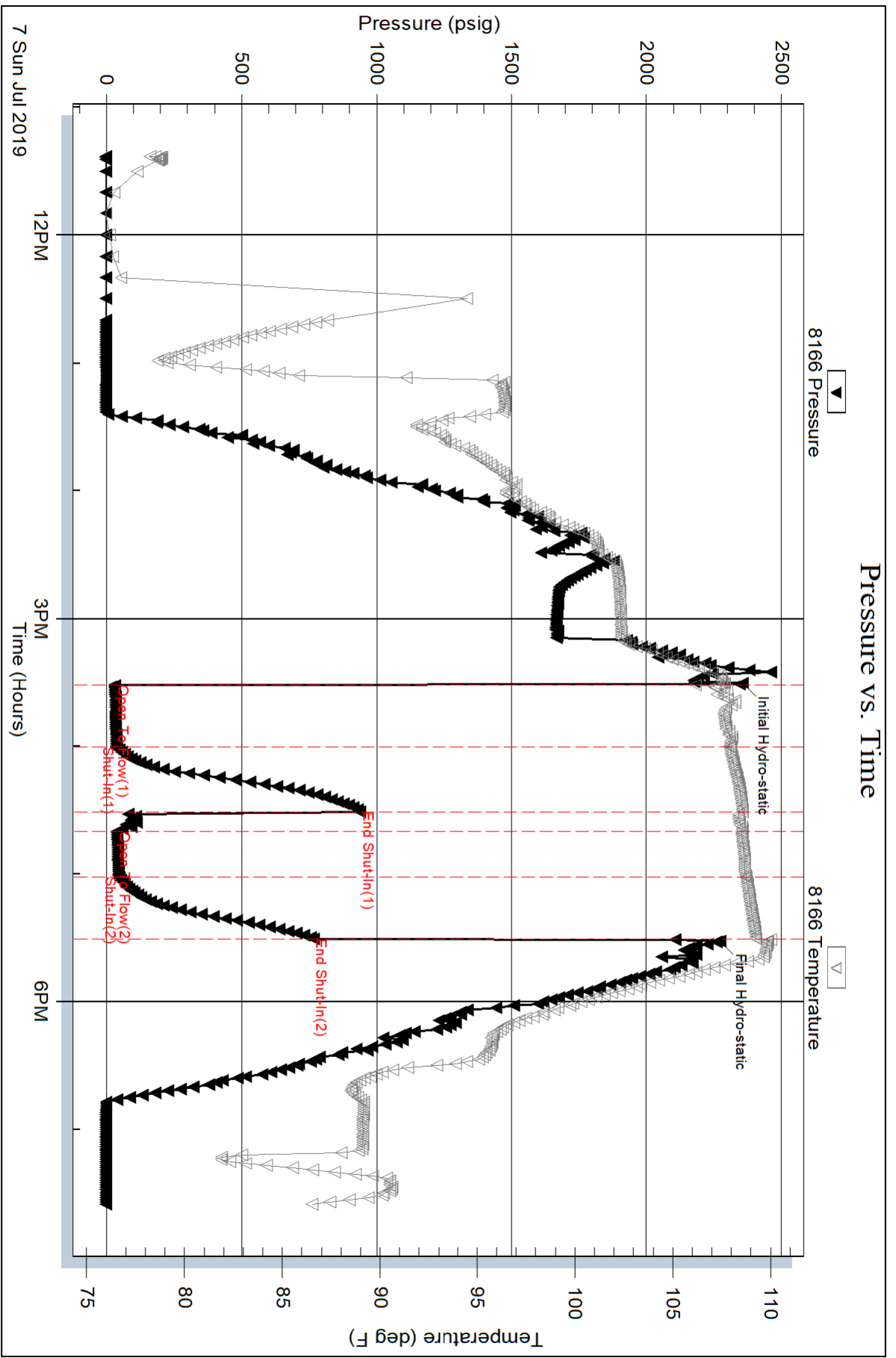
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 6651

Inside

Shakespeare Oil Co

Mazanec Community 1-12

DST Test Number: 4

