

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)</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	KOEHN 1-24
Doc ID	1314432

All Electric Logs Run

Array Induction
Photo Density
Comp Neutron
Microlog
Sonic

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	KOEHN 1-24
Doc ID	1314432

Tops

Name	Top	Datum
Base Anhydrite	2459	+650
Heebner	3985	-876
Lansing	4025	-916
Muncie Creek	4207	-1098
Stark Shale	4308	-1199
Hushpuckney	4352	-1243
Marmaton	4448	-1339
Pawnee	4542	-1433
L. Cherokee Shale	4617	-1508
Johnson	4661	-1552
Mississippian	4812	-1703





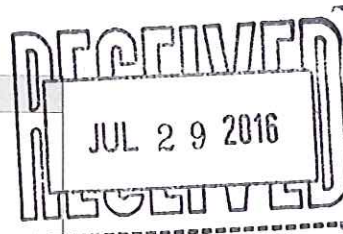
# INVOICE

Invoice Number: 152396  
 Invoice Date: Jul 13, 2016  
 Page: 1

Federal Tax I.D.#: 81-2169190

P.O. Box 205803  
 Dallas, TX 75320-5803

Voice: (832) 482-3742  
 Fax: (832) 482-3738



**Bill To:**  
 Shakespeare Oil Co., Inc.  
 202 West Main St.  
 Salem, IL 62881

Customer ID	Field Ticket #	Payment Terms	
Shak	68081	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Jul 13, 2016	8/12/16

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Koehn 1-24		
180.00	CEMENT MATERIALS	Class A Common	17.90	3,222.00
338.00	CEMENT MATERIALS	GEL	0.50	169.00
508.00	CEMENT MATERIALS	Calcium Chloride	1.10	558.80
194.64	CEMENT SERVICE	PHDL	2.48	482.71
399.60	CEMENT SERVICE	DRYG	2.75	1,098.90
45.00	CEMENT SERVICE	MILV	4.40	198.00
45.00	CEMENT SERVICE	MIHV	7.70	346.50
1.00	CEMENT SERVICE	Surface Charge	1,512.25	1,512.25
1.00	CEMENT SERVICE	Swedge	275.00	275.00
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Material	1,974.90	-1,974.90
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Cement Service	1,956.68	-1,956.68
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	OPERATOR ASSISTANT	Kevin Ryan		
1.00	EQUIPMENT OPERATOR	Monty Phillips		

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. ONLY IF PAID ON OR  
 BEFORE

**Aug 12, 2016**

1 1/2% CHARGED  
 THEREAFTER.

Subtotal	3,931.58
Sales Tax	335.73
Total Invoice Amount	4,267.31
Payment/Credit Applied	
<b>TOTAL</b>	<b>4,267.31</b>

10502-5  
 KW J



# ALLIED OFS, LLC

Federal Tax I.D. #81-2169190

44008

REMIT TO: Allied OFS, LLC  
P.O. Box 205803  
Dallas, TX 75320-5803

SERVICE POINT:

*Cable*

DATE <i>7-13-16</i>	SEC <i>24</i>	TWP <i>16</i>	RANGE <i>34</i>	CALLED OUT	ON LOCATION	JOB START <i>4:30 AM</i>	JOB FINISH <i>5:00 AM</i>
LEASE <i>Koehn</i>	WELL # <i>1-24</i>	LOCATION <i>Pence 16 15 E + Ninto</i>		COUNTY <i>SCOTT</i>	STATE <i>TX</i>		
OLD OR NEW (Circle one)							

CONTRACTOR *Duke 2*

TYPE OF JOB *Surface*

HOLE SIZE *12 1/4* T.D. *264'*

CASING SIZE *8 5/8* DEPTH *264.70'*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. *151*

PERFS.

DISPLACEMENT *15.90 BBL*

OWNER *Same*

CEMENT AMOUNT ORDERED *180 SKS com 3 3/8 CC 2 3/4 GEL*

COMMON *180 SKS* @ *17.90* *3222.00*

POZMIX @

GEL *338 gal* @ *1.50* *169.00*

CHLORIDE *508#* @ *1.10* *558.80*

ASC @

EQUIPMENT

PUMP TRUCK CEMENTER *Andrew Finstrand*

#*566-281* HELPER *Kevin Ryan*

BULK TRUCK

#*723* DRIVER *Mandy Phillips*

BULK TRUCK

# DRIVER

_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____

TOTAL *3,949.80*

DISCOUNT *50% 1974.90*

REMARKS:

*Cement in cellar*

*Thank you*

CHARGE TO: *Shakespeare*

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

### SERVICE

HANDLING *194.64 cu/ft* @ *2.48* *482.71*

MILEAGE *2.25 trip/mile* *8.88 / mi* *1098.90*

DEPTH OF JOB *264.70*

PUMP TRUCK CHARGE *1512.25*

EXTRA FOOTAGE @

HV MILEAGE *45 miles* @ *7.00* *346.50*

LV MILEAGE *45 miles* @ *4.40* *198.00*

*Swedge* @ *225.00*

TOTAL *3,913.36*

DISCOUNT *50% 1956.68*

### PLUG & FLOAT EQUIPMENT

_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____
_____	@	_____	_____

TOTAL \_\_\_\_\_

DISCOUNT \_\_\_\_\_%

To: Allied OFS, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME *Dion Vasquez*

SIGNATURE *Dion Vasquez*

THEL PRINTING CO., INC. - GREAT BEND, KS.

SALES TAX (If Any)

TOTAL CHARGES *7,863.16*

DISCOUNT *3,987.58 (50%)* IF PAID IN 30 DAYS

NET TOTAL *3,931.58* IF PAID IN 30 DAYS



# INVOICE

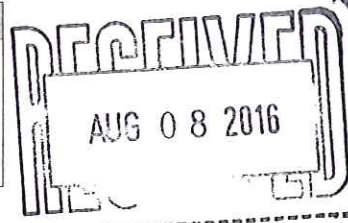
P.O. Box 205803  
Dallas, TX 75320-5803

Invoice Number: 152478  
Invoice Date: Jul 24, 2016  
Page: 1

Voice: (832) 482-3742  
Fax: (832) 482-3738

Federal Tax I.D.#: 81-2169190

**Bill To:**  
Shakespeare Oil Co., Inc.  
202 West Main St.  
Salem, IL 62881



Customer ID	Field Ticket #	Payment Terms	
Shak	68086	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-03	Oakley	Jul 24, 2016	8/23/16

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Koehn 1-24		
290.00	CEMENT MATERIALS	60-40-4%	18.92	5,486.80
73.00	CEMENT MATERIALS	FloSeal	2.97	216.81
311.45	CEMENT SERVICE	PHDL	2.48	772.40
585.00	CEMENT SERVICE	DRYG	2.75	1,608.75
45.00	CEMENT SERVICE	MILV	4.40	198.00
45.00	CEMENT SERVICE	MIHV	7.70	346.50
1.00	CEMENT SERVICE	Plug to Abandon ✓	2,483.59	2,483.59
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Material	2,851.81	-2,851.81
1.00	JOB DISCOUNT	Job Discount if paid within terms -- Cement Service	2,704.61	-2,704.61
1.00	E-FORSLUND.MERRELL	SERVICE SUPERVISOR		
1.00	E-MCGHGHY.WAYNE	EQUIPMENT OPERATOR		
1.00	E-PHILLIPS.MONTY	EQUIPMENT OPERATOR		

INT

10502-17  
KW

<p>ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. ONLY IF PAID ON OR BEFORE</p> <p><b>Aug 23, 2016</b></p> <p>1 1/2% CHARGED THEREAFTER.</p>	Subtotal	5,556.43
	Sales Tax	484.81
	Total Invoice Amount	6,041.24
	Payment/Credit Applied	
	<b>TOTAL</b>	<b>6,041.24</b>

DW





# ALLIED OFS, LLC

Federal Tax I.D. #81-2169190

60186

REMIT TO: Allied OFS, LLC  
P.O. Box 205803  
Dallas, TX 75320-5803

SERVICE POINT:

Dakota

DATE <u>7-24-16</u>	SEC <u>24</u>	TWP <u>16</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION <u>11:00am</u>	JOB START <u>6:00am</u>	JOB FINISH <u>2:00pm</u>
LEASE <u>Koehn</u>	WELL# <u>1-24</u>	LOCATION <u>Pence 1E 1S E7N1to</u>			COUNTY <u>Scott</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR Duke 2  
 TYPE OF JOB PTA  
 HOLE SIZE 7 7/8 T.D. 4900'  
 CASING SIZE DEPTH  
 TUBING SIZE DEPTH  
 DRILL PIPE 4 1/2 DEPTH 2470'  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG.  
 PERFS.  
 DISPLACEMENT

OWNER Same

CEMENT  
 AMOUNT ORDERED 290 sls 6 1/2 40 gel  
1/4 flo-seal

EQUIPMENT  
 PUMP TRUCK CEMENTER Andrew Karslup  
 # 431 HELPER Wayne Mackley  
 BULK TRUCK  
 # 891 DRIVER Monty Phillips  
 BULK TRUCK  
 # DRIVER

COMMON @  
 POZMIX @  
 GEL @  
 CHLORIDE @  
 ASC @  
6 1/2 40 gel 290 sls @ 18.92 5486.80  
 @  
 @  
Flo-seal 73# @ 2.97 216.81  
 @  
 @  
 @

TOTAL 5,703.61

REMARKS:

DISCOUNT 50% 2,851.81

50 sls @ 2470'  
80 sls @ 1550'  
50 sls @ 750'  
40 sls @ 300'  
20 sls @ 60'  
20 sls mousehole  
30 sls Rat hole

Thank you

CHARGE TO: Shakespeare  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

SERVICE

HANDLING 311.45 cu ft @ 2.48 772.39  
 MILEAGE R. 25 70/mile 13 Ton 1608.25  
 DEPTH OF JOB 2470'  
 PUMP TRUCK CHARGE 2483.59  
 EXTRA FOOTAGE @  
 HV MILEAGE 45 miles @ 7.70 346.50  
 LV MILEAGE 45 miles @ 4.90 198.00  
 @  
 @

TOTAL 5409.23

DISCOUNT 50% 2704.61

PLUG & FLOAT EQUIPMENT

@  
 @  
 @  
 @  
 @

TOTAL

DISCOUNT %

To: Allied OFS, LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Dion Vasquez

SIGNATURE Dion Vasquez

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES 11,112.84  
 DISCOUNT 5,556.42 (50%) IF PAID IN 30 DAYS  
 NET TOTAL 5,556.42 IF PAID IN 30 DAYS



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Shakespear Oil Company

**24-16-34 Scott Co KS**

202 West Main Street  
Salem IL  
62881  
ATTN: Tim Priest

**Koehn 1 24**

Job Ticket: 64587

**DST#: 1**

Test Start: 2016.07.21 @ 02:02:15

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:05:15

Time Test Ended: 09:12:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

**Interval: 4413.00 ft (KB) To 4460.00 ft (KB) (TVD)**

Reference Elevations: 3109.00 ft (KB)

Total Depth: 4460.00 ft (KB) (TVD)

3101.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8646 Inside**

Press@RunDepth: 36.96 psig @ 4420.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.07.20

End Date:

2016.07.20

Last Calib.:

2016.07.21

Start Time: 02:02:15

End Time:

09:12:45

Time On Btm:

2016.07.20 @ 05:05:00

Time Off Btm:

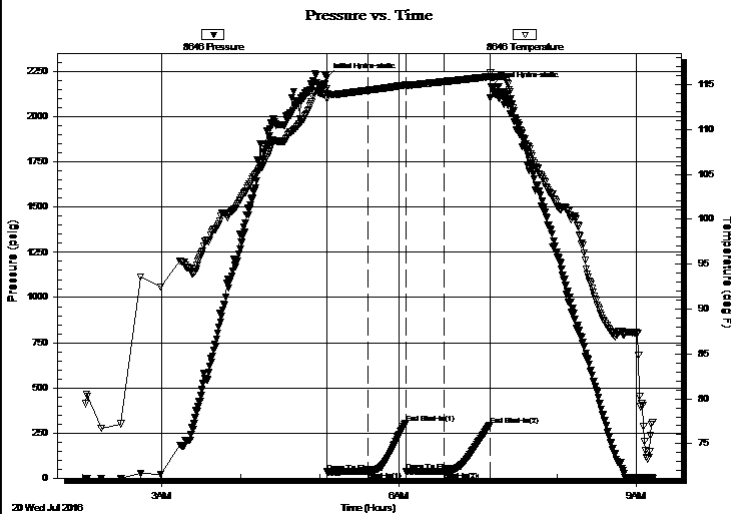
2016.07.20 @ 07:10:15

TEST COMMENT: IF: Built to 1/8" blow and died in 6 min.

IS: No return blow

FF: No blow

FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2219.95	114.56	Initial Hydro-static
1	35.06	113.39	Open To Flow (1)
32	36.17	114.36	Shut-In(1)
60	303.67	114.93	End Shut-In(1)
61	36.87	114.82	Open To Flow (2)
90	36.96	115.33	Shut-In(2)
124	294.74	115.89	End Shut-In(2)
126	2169.44	115.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud 100% m	0.03

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespear Oil Company

**24-16-34 Scott Co KS**

202 West Main Street  
Salem IL  
62881  
ATTN: Tim Priest

**Koehn 1 24**

Job Ticket: 64587

**DST#: 1**

Test Start: 2016.07.21 @ 02:02:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
2.00	mud 100%m	0.028

Total Length: 2.00 ft      Total Volume: 0.028 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

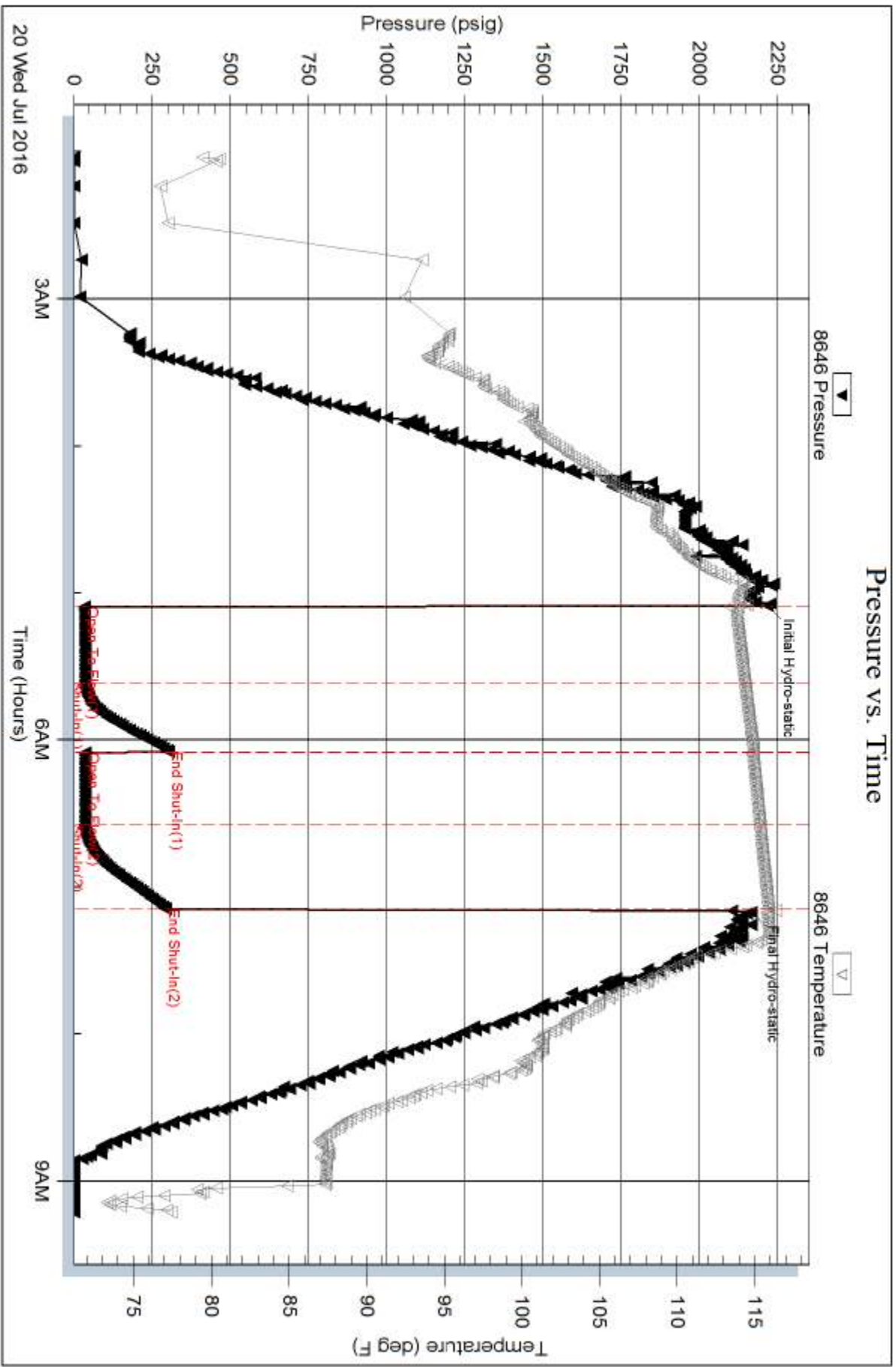
Serial #: 8646

Inside

Shakespeare Oil Company

Koehn 1 24

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64587

Printed: 2016.07.21 @ 10:18:36



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil Company  
202 West Main Street  
Salem IL 62881  
ATTN: Tim Priest

**24-16-34 Scott Co KS**

**Koehn 1 24**

Job Ticket: 64588

**DST#: 2**

Test Start: 2016.07.21 @ 18:34:15

## GENERAL INFORMATION:

Formation: **Marmaton A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 22:59:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

**Interval: 4449.00 ft (KB) To 4500.00 ft (KB) (TVD)**

Total Depth: 4500.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3109.00 ft (KB)

3101.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8737 Outside**

Press@RunDepth: psig @ 4461.00 ft (KB)

Start Date: 2016.07.21

End Date: 2016.07.21

Start Time: 18:34:15

End Time: 22:59:30

Capacity: 8000.00 psig

Last Calib.: 2016.07.21

Time On Btm: 2016.07.21 @ 20:19:15

Time Off Btm: 2016.07.21 @ 20:29:15

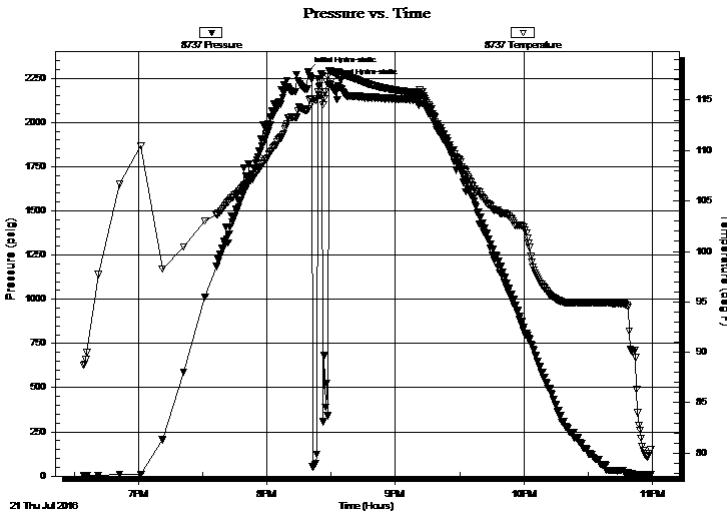
TEST COMMENT: IF:PACKER FAILURE

IS:

FF:

FS:

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2289.03	114.10	Initial Hydro-static
10	2220.02	117.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
434.00	mud 100% <sub>m</sub>	6.09

## Gas Rates

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

\* Recovery from multiple tests



# DRILL STEM TEST REPORT

Shakespeare Oil Company

**24-16-34 Scott Co KS**

202 West Main Street  
Salem IL  
62881  
ATTN: Tim Priest

**Koehn 1 24**

Job Ticket: 64588

**DST#: 2**

Test Start: 2016.07.21 @ 18:34:15

## GENERAL INFORMATION:

Formation: **Marmaton A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 22:59:30

Interval: **4449.00 ft (KB) To 4500.00 ft (KB) (TVD)**

Total Depth: 4500.00 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: 3109.00 ft (KB)

3101.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8646**

**Inside**

Press@RunDepth: psig @ 4461.00 ft (KB)

Start Date: 2016.07.21

End Date:

2016.07.21

Start Time: 18:34:15

End Time:

22:59:30

Capacity: 8000.00 psig

Last Calib.: 2016.07.21

Time On Btm:

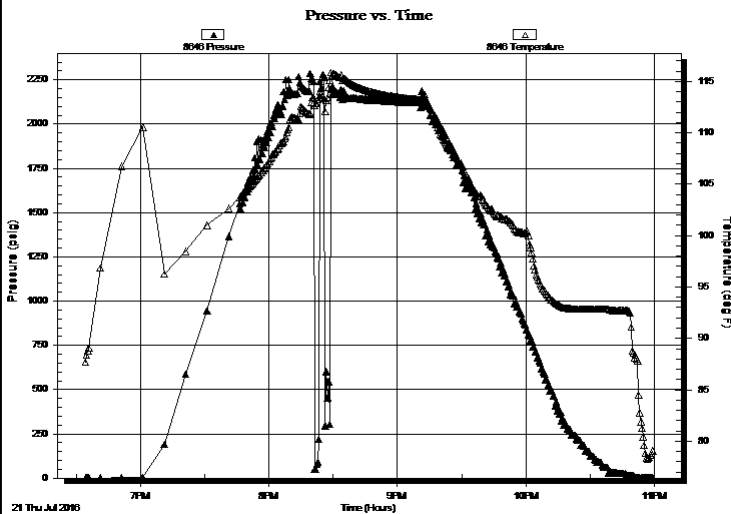
Time Off Btm:

TEST COMMENT: IF:PACKER FAILURE

IS:

FF:

FS:



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
434.00	mud 100%m	6.09

## Gas Rates

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

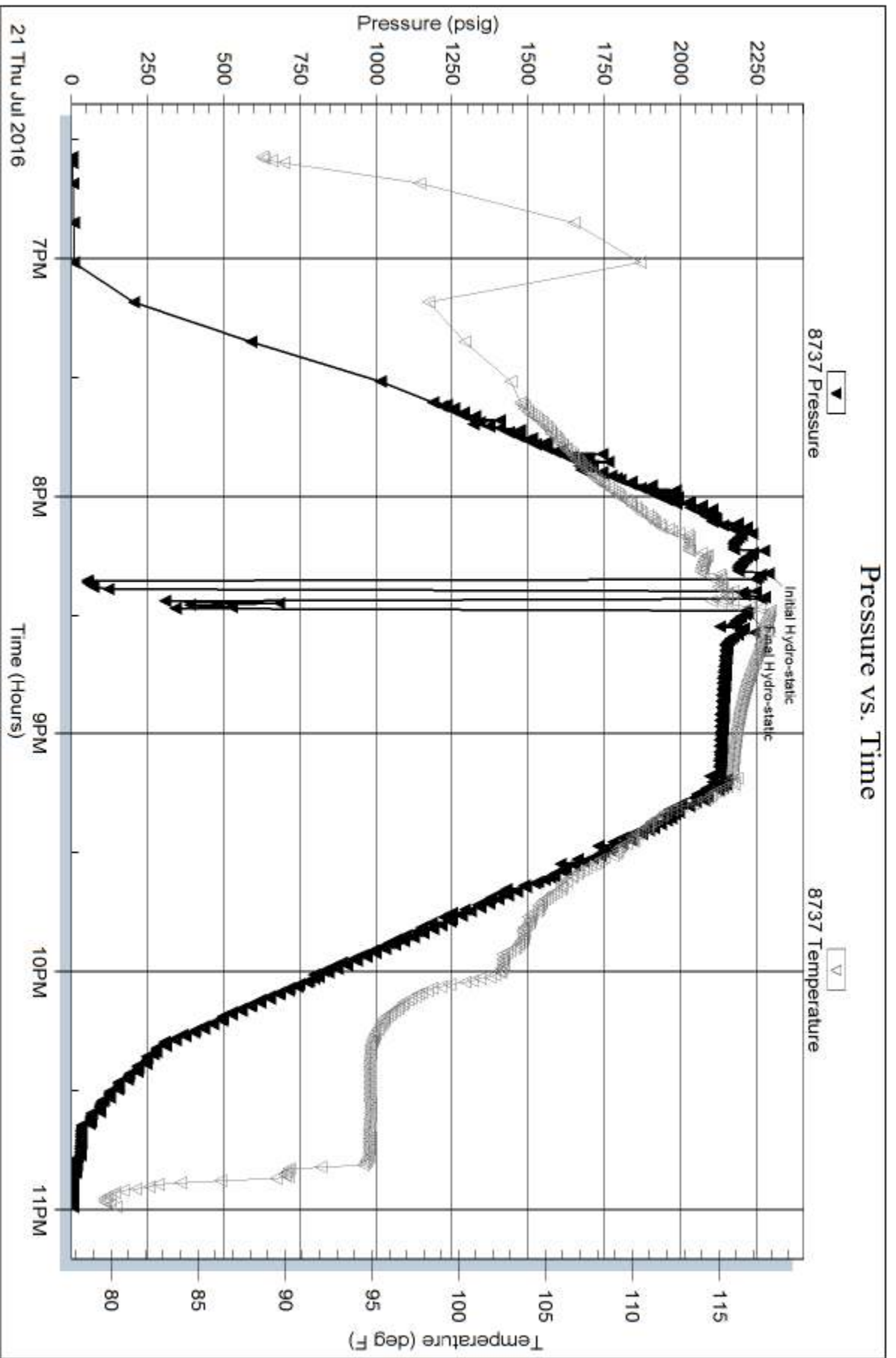
\* Recovery from multiple tests

Serial #: 8737

Outside Shakespeare Oil Company

Koehn 1 24

DST Test Number: 2



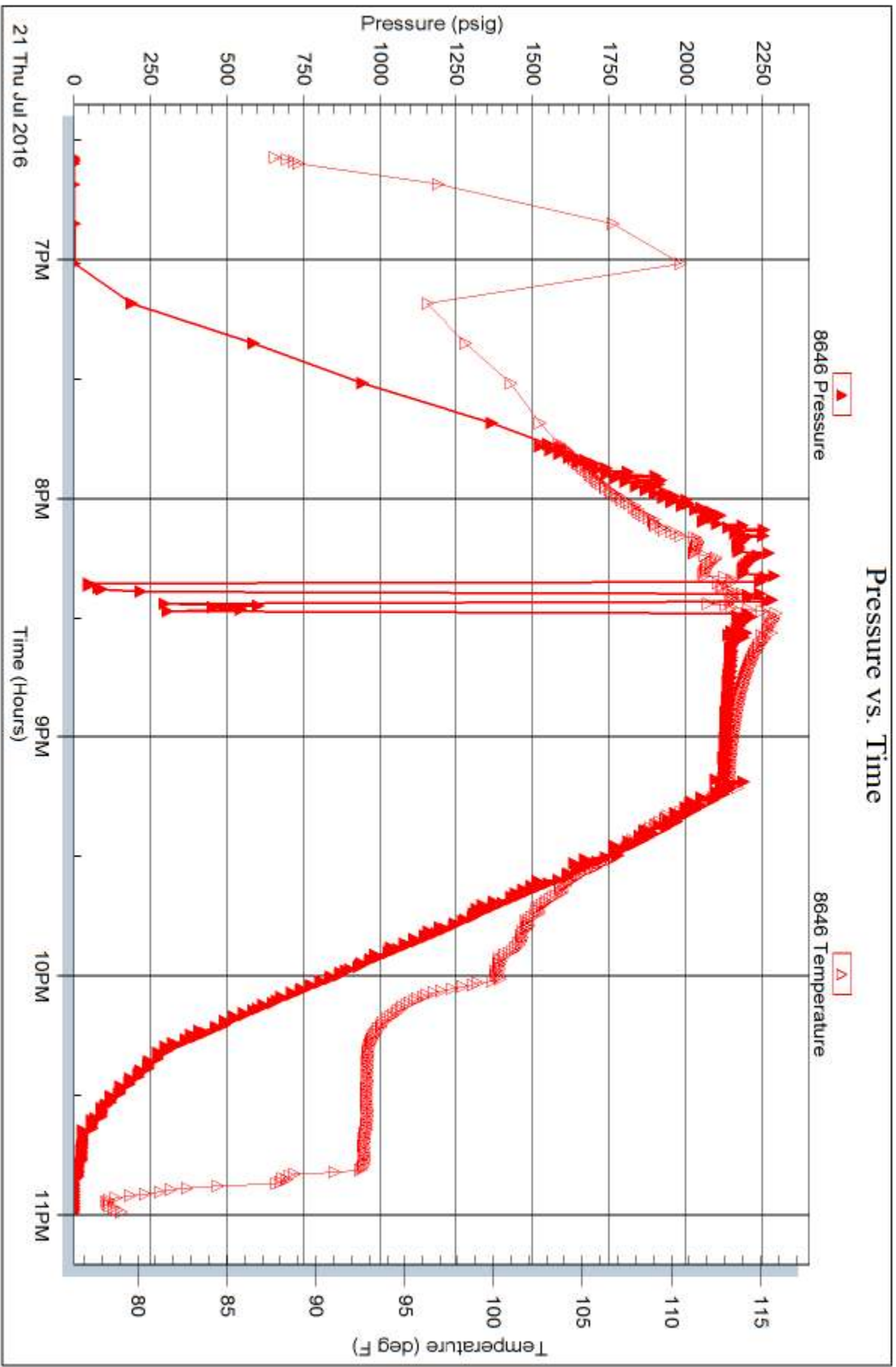
Serial #: 8646

Inside

Shakespeare Oil Company

Koehn 1 24

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64588

Printed: 2016.07.22 @ 06:39:46





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil Company  
 202 West Main Street  
 Salem IL  
 62881  
 ATTN: Tim Priest

**24-16-34 Scott Co KS**

**Koehn 1 24**

Job Ticket: 64589

**DST#: 3**

Test Start: 2016.07.22 @ 01:06:15

## GENERAL INFORMATION:

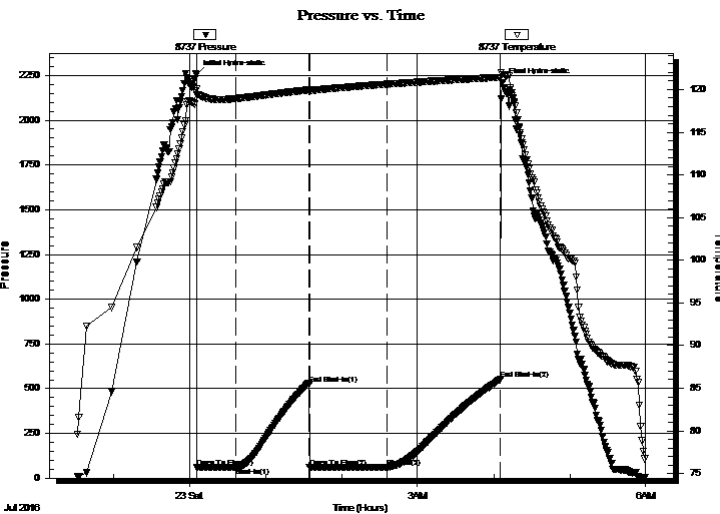
Formation: **Marmaton A-B**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:40:15  
 Time Test Ended: 08:33:45  
 Interval: **4413.00 ft (KB) To 4500.00 ft (KB) (TVD)**  
 Total Depth: 4500.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Mike Roberts  
 Unit No: 81  
 Reference Elevations: 3109.00 ft (KB)  
 3101.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8737**

**Outside**

Press@RunDepth: 60.66 psig @ 4429.00 ft (KB)  
 Start Date: 2016.07.22 End Date: 2016.07.23  
 Start Time: 22:32:00 End Time: 05:59:30  
 Capacity: 8000.00 psig  
 Last Calib.: 2016.07.22  
 Time On Btm: 2016.07.23 @ 00:05:30  
 Time Off Btm: 2016.07.23 @ 04:07:00

TEST COMMENT: IF: Built to 1/8" blow and died in 18 min.  
 IS: No return blow  
 FF: No blow  
 FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2255.51	120.07	Initial Hydro-static
1	58.17	119.36	Open To Flow (1)
32	59.25	118.94	Shut-In(1)
89	523.87	119.95	End Shut-In(1)
90	60.05	119.84	Open To Flow (2)
151	60.66	120.63	Shut-In(2)
240	552.34	121.44	End Shut-In(2)
242	2211.39	121.73	Final Hydro-static

## Recovery

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

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Company

**24-16-34 Scott Co KS**

202 West Main Street  
Salem IL  
62881  
ATTN: Tim Priest

**Koehn 1 24**

Job Ticket: 64589

**DST#: 3**

Test Start: 2016.07.22 @ 01:06:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.78 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 bbf
5.00	mud 100%m	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbf

Num Fluid Samples: 0

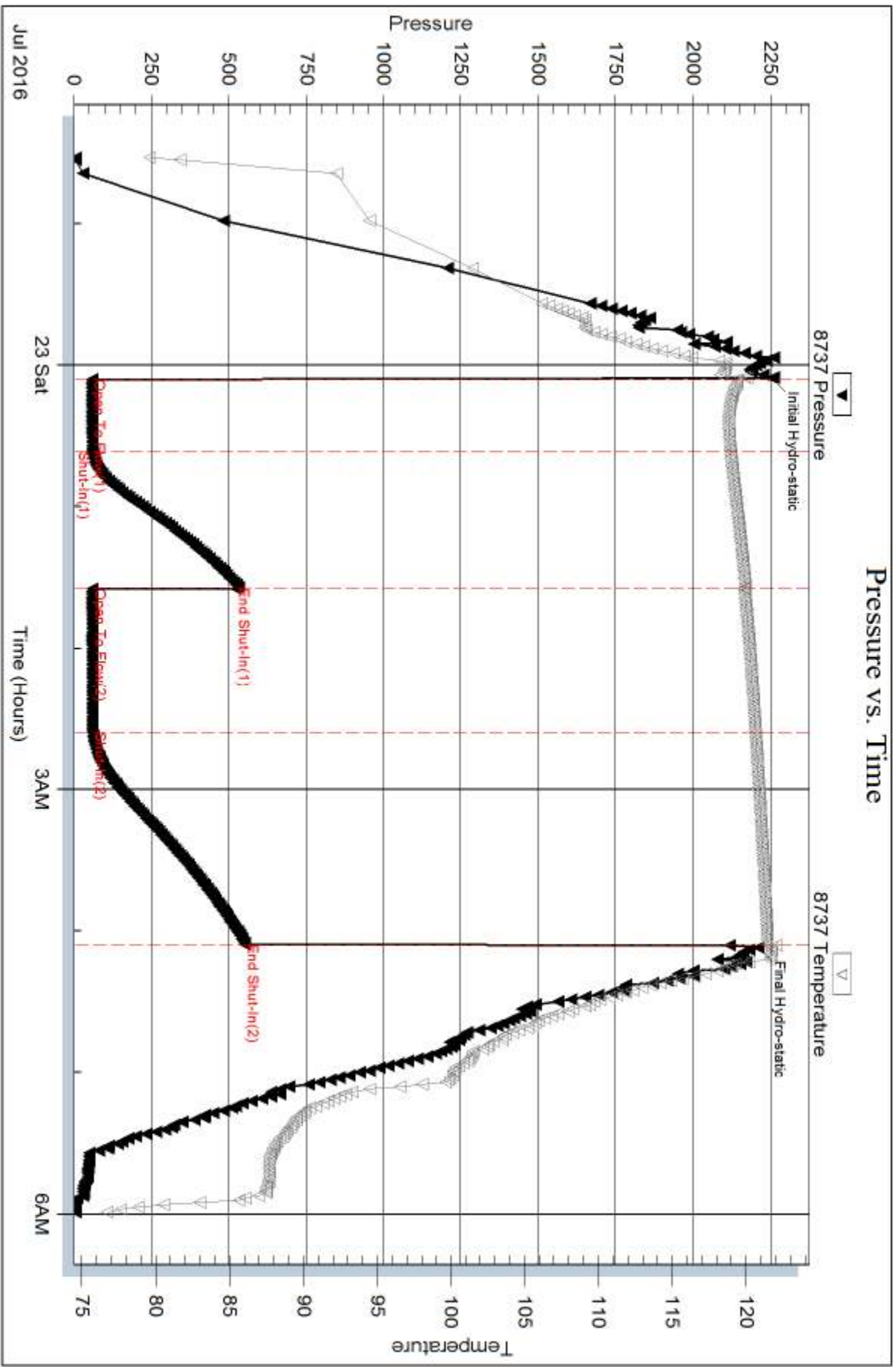
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Shakespeare Oil Company  
 202 West Main Street  
 Salem IL  
 62881  
 ATTN: Tim Priest

**24-16-34 Scott Co KS**

**Koehn 1 24**

Job Ticket: 64590

**DST#: 4**

Test Start: 2016.07.22 @ 23:50:15

## GENERAL INFORMATION:

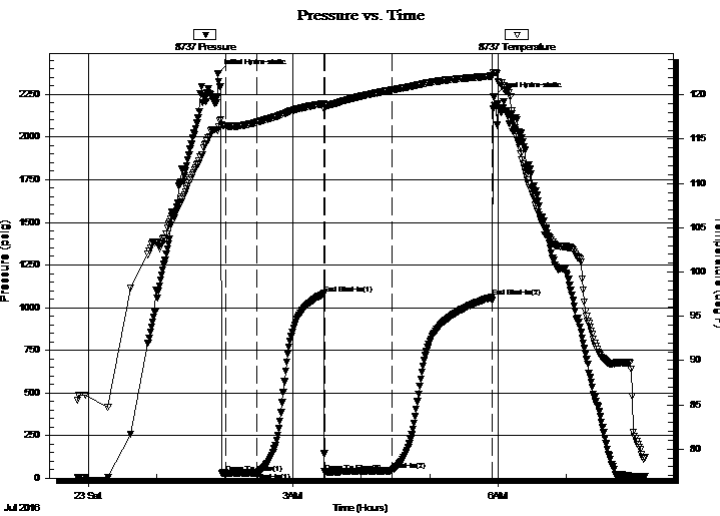
Formation: **Ft. Scott**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 02:00:15  
 Time Test Ended: 08:09:15  
 Interval: **4581.00 ft (KB) To 4610.00 ft (KB) (TVD)**  
 Total Depth: 4610.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Mike Roberts  
 Unit No: 81  
 Reference Elevations: 3109.00 ft (KB)  
 3101.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8737

**Outside**

Press@RunDepth: 44.17 psig @ 4609.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.07.22 End Date: 2016.07.23 Last Calib.: 2016.07.23  
 Start Time: 23:50:15 End Time: 08:09:15 Time On Btm: 2016.07.23 @ 01:53:45  
 Time Off Btm: 2016.07.23 @ 05:56:30

TEST COMMENT: IF: Built to 7 1/2" blow  
 IS: No return blow  
 FF: Built to 8" blow  
 FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2374.00	116.08	Initial Hydro-static
7	27.38	116.50	Open To Flow (1)
35	31.81	116.92	Shut-In(1)
94	1081.76	119.03	End Shut-In(1)
94	36.11	118.77	Open To Flow (2)
154	44.17	120.55	Shut-In(2)
242	1062.03	122.13	End Shut-In(2)
243	2234.30	122.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP = 248 ft	0.00
62.00	gcomw 5%g 20%o 30%m 45%w	0.87

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Company

**24-16-34 Scott Co KS**

202 West Main Street  
Salem IL  
62881  
ATTN: Tim Priest

**Koehn 1 24**

Job Ticket: 64590

**DST#: 4**

Test Start: 2016.07.22 @ 23:50:15

## GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:00:15

Time Test Ended: 08:09:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

**Interval: 4581.00 ft (KB) To 4610.00 ft (KB) (TVD)**

Reference Elevations: 3109.00 ft (KB)

Total Depth: 4610.00 ft (KB) (TVD)

3101.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8646 Inside**

Press@RunDepth: psig @ 4609.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.07.22

End Date:

2016.07.23

Last Calib.:

2016.07.23

Start Time: 23:50:15

End Time:

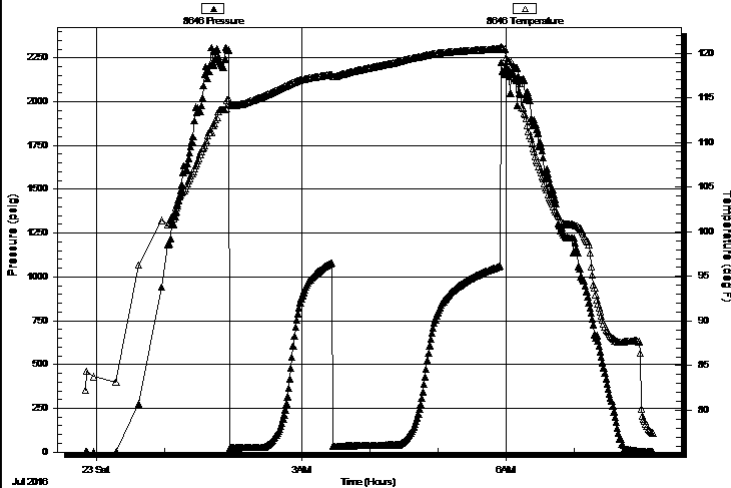
08:09:00

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF:Built to 7 1/2" blow  
IS:No return blow  
FF:Built to 8" blow  
FS:No return blow

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP = 248 ft	0.00
62.00	gcomw 5%g 20%o 30%m 45%w	0.87

## 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 Company

**24-16-34 Scott Co KS**

202 West Main Street  
Salem IL  
62881  
ATTN: Tim Priest

**Koehn 1 24**

Job Ticket: 64590

**DST#: 4**

Test Start: 2016.07.22 @ 23:50:15

### 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:

21000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GIP = 248 ft	0.000
62.00	gcomw 5%g 20%o 30%m 45%w	0.870

Total Length: 62.00 ft      Total Volume: 0.870 bbl

Num Fluid Samples: 0

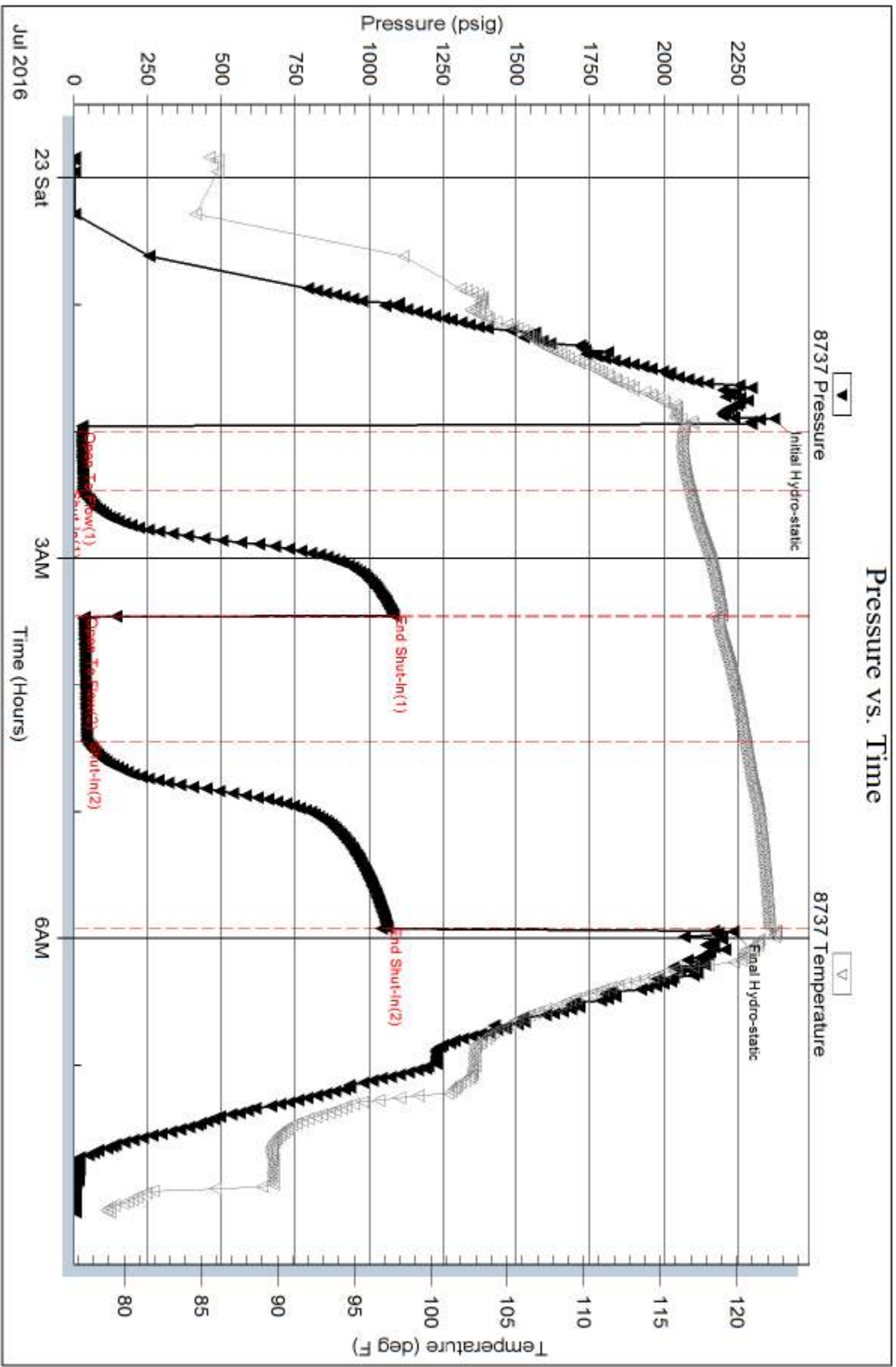
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .621 @ 39.7= 21,000 ppm



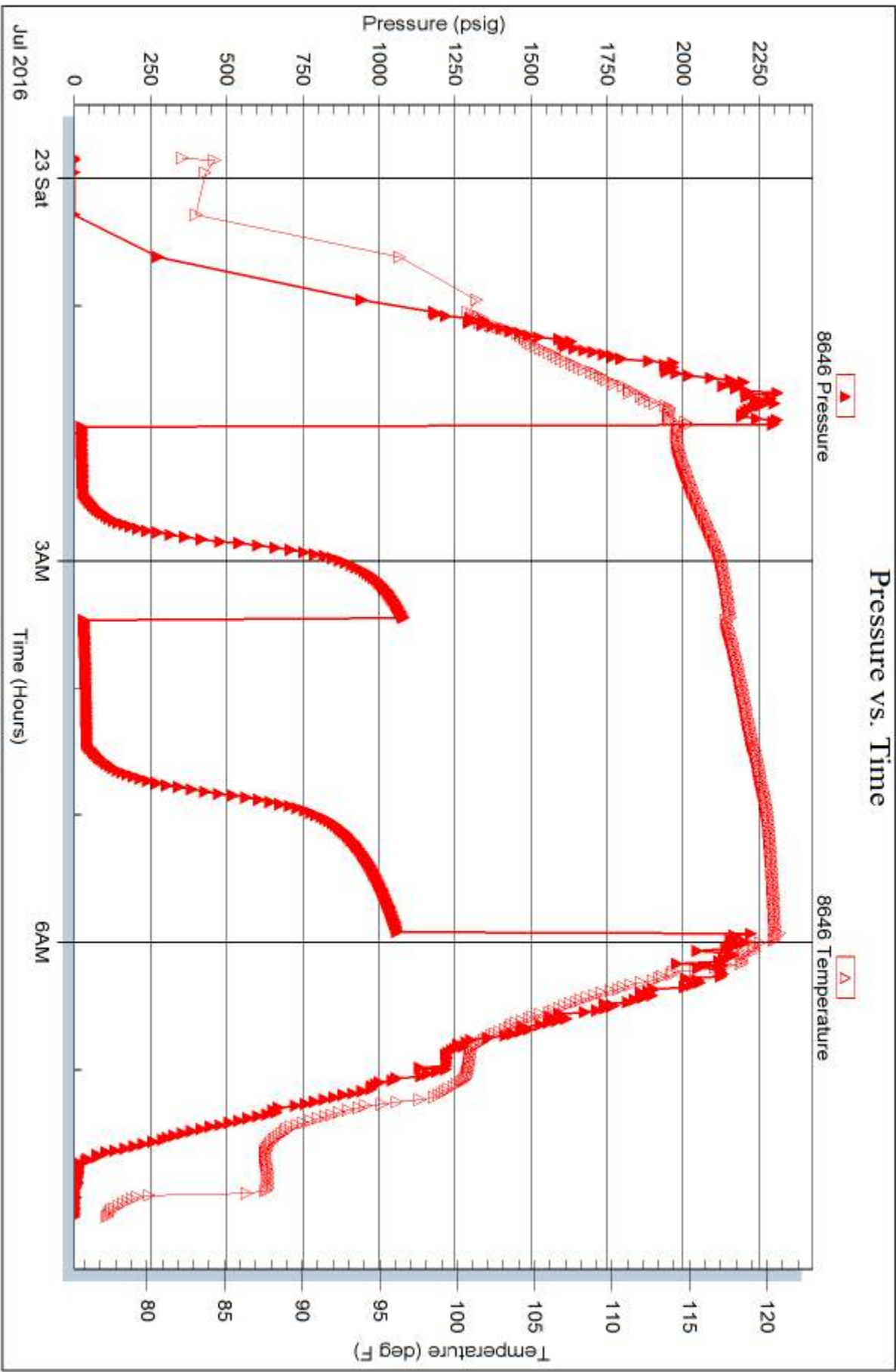
Serial #: 8646

Inside

Shakespeare Oil Company

Koehn 1 24

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 64590

Printed: 2016.07.23 @ 08:37:44



**GEOLOGIST'S REPORT**  
**DRILLING TIME AND SAMPLE LOG**

COMPANY **SHAKESPARE OIL CO.**

LEASE **KOHN-1-24**

FIELD **Witchell**

LOCATION **3357 FSL, 15207 FWL**

SEC **24** T15SP **16S** R0E **34W**

COUNTY **Scott** STATE **Kansas**

CONTRACTOR **Duke Drilling Rig #2**

SPUD **7-13-16** COMP **7-24-16**

RTD **4900'** LTD **4896'**

MUD UP **3600'** TYPE MUD **Chemical**

SAMPLES SAVED FROM **3800'** to RTD

DRILLING TIME KEPT FROM **3800'** to RTD

SAMPLES EXAMINED FROM **3800'** to RTD

GEOLOGICAL SUPERVISION FROM **3950'** to RTD

GEOLOGIST ON WELL **Tim Priest**

By: **Weatherford**

FORMATION TOPS

ELECTRIC LOG

SAMPLE

Anyhrite 2434 (+665) 2439 (+670)

Heebner Shale 3980 (-871) 3985 (-876)

Lansing 4020 (-911) 4025 (-916)

Stark 4303 (-1194) 4308 (-1199)

B/K.C. 4392 (-1283) 4400 (-1291)

Fort Scott 4612 (-1503) 4617 (-1508)

Cherokee Shale 4581 (-1472) 4586 (-1477)

Mississippian 4788 (-1679) 4793 (-1684)

ELEVATIONS

KG 3109'

DF \_\_\_\_\_

GL 3101'

Measurements Are All From **KB**

CASINGS

CONDUCTION **N/A**

SURFACE **8-5/8" @ 264'**

PRODUCTION

By: **Weatherford**

ELECTRICAL SURVEYS

CND/D/SP/P/E

Micro Sonic

By: **Weatherford**

24

4612 (-1503)

4581 (-1472)

4788 (-1679)

4793 (-1684)

4617 (-1508)

4586 (-1477)

4400 (-1291)

4308 (-1199)

4025 (-916)

3985 (-876)

2439 (+670)

2434 (+665)

REMARKS Due to the results of drill stem tests, it was decided to plug and abandon the well.

Respectfully Submitted,  
 Tim Priest  
 Petroleum Geologist

API #15-171-21172-00-00

